APPLICATION AS NOTIFIED

Canyon Ridge Villas Limited (RM210019)

Submissions Close 27th January 2022

FORM 12

File Number RM210019

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:

Canyon Ridge Villas Limited

What is proposed:

Application under Section 88 of the Resource Management Act 1991 (RMA) for land use consent to construct eight residential units with associated earthworks and landscaping, widening and upgrades to the existing right of way and an 8 lot subdivision to enable each residential unit to be held in their own individual title.

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

Atley Road RD1, Arthurs Point, 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;**
- **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 RM210019 as the reference https://edocs.qldc.govt.nz/Account/Login

The Council planner processing this application on behalf of the Council is Niamh Sheehy, who may be contacted by phone at 03 450 0372 or email at niamh.sheehy@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:

27th January 2022

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 (Canyon Ridge Villas Limited C/Scott Freeman) as soon as reasonably practicable after serving your submission to Council:

C/- Scott Freeman
scott@southernplanning.co.nz
Southern Planning Group
19 Grant Road, Queenstown Central (Frankton)
Building A (Level 1), Tenancy A1-05(c)

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: 09/12/2021

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**

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: (Name Decision is to be issued in) Canyon Ridge Villas Limited

All trustee names (if applicable):

*Contact name for company or trust: Shane Fairmaid

*Postal Address: 4 Peasmoor Road, Lower Shotover, Queenstown

*Post code: 9304

*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: shanef@momentumprojects.co.nz

*Phone Numbers: Day

Mobile: 027 434 0209

*The Applicant is:

- [ ] Owner
- [x] 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: Scott Freeman (Southern Planning Group)

*Phone Numbers: Day 03 409 0140

Mobile: 021 335 998

*Email Address: scott@southernplanning.co.nz

*Postal Address: P O Box 1081
Queenstown

*Postcode: 9348

INVOICING DETAILS //

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

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

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

*Attention: Shane Fairmaid

*Postal Address: 4 Peasmoor Road, Lower Shotover, Queenstown

*Post code:

*Please provide an email AND full postal address.

*Email: shanef@momentumprojects.co.nz

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

Owner Name: Canyon Ridge Limited

Owner Address: 548 Pekerua Road, Kaitaia

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:

Atley Road, Arthurs Point, Queenstown

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

Lot 2 DP 411983

District Plan Zone(s): Lower Density Surburban Residential Zone

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 ☑

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: Niamh Sheehy

CONSENT(S) APPLIED FOR // * Identify all consents sought

☑ Land use consent

☑ Subdivision consent

☐ Change/cancellation of consent or consent notice conditions

☐ Certificate of compliance

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

☐ Existing use certificate

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:

To construct eight residential units and then undertake a staged 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 http://www.mfe.govt.nz/laws/standards/contaminants-in-soil/.

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

Are any additional consent(s) required that have been applied for separately?

- Otago Regional Council

Consents required from the Regional Council (note if have/have not been applied for):

☐ Yes ☑ N/A

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 Applicant is 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)
- [ ] Cheque payable to Queenstown Lakes District Council attached
- [ ] Manual Payment (can only be accepted once application has been lodged and acknowledgement email received with your unique RM reference number)

*Reference: Canyon Ridge

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

$5865 - Comprehensive residential development Low Density Residential zone

(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: 1/21/20

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 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.

☑ PLEASE TICK

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.

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

Full name of person lodging this form Scott Freeman

Firm/Company Southern Planning Group

Dated 19.1.21

**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.

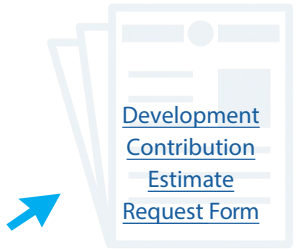
A3 APPENDIX 3 // Development Contributions

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 DEVELOP EIGHT RESIDENTIAL UNITS & UNDERTAKE A STAGED SUBDIVISION

Canyon Ridge Villas Limited

Atley Road, Arthurs Point, Queenstown

July 2021

CONTENTS

1.0 THE APPLICANT AND PROPERTY DETAILS

Site Address:	Atley Road, Arthurs Point, Queenstown
Applicants Name:	Canyon Ridge Villas Limited
Address for Service	Canyon Ridge Villas Limited C/- Southern Planning Group PO Box 1081 Queenstown, 9348 scott@southernplanning.co.nz Attention: Scott Freeman
Site Legal Description:	Lot 1 DP 411983
Site Area	3365m²
Operative District Plan Zoning:	Low Density Residential Zone
Proposed District Plan Zoning:	Lower Density Suburban Residential Zone
Brief Description of Proposal:	Resource consent to develop eight residential units, and to then undertake a staged subdivision
Summary of Reasons for Consent:	Resource consent is required pursuant to the provisions of the Operative District Plan and Proposed District Plan

The following is an assessment of environmental effects that has been prepared in accordance with Schedule 4 of the Resource Management Act 1991. The assessment of effects corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

List of Information Attached:

Appendix [A]	Record of Title
Appendix [B]	Consent Notices 5389650.5 & 8107012.2
Appendix [C]	Architectural Package
Appendix [D]	Subdivision Plan
Appendix [E]	Landscape Concept Plan
Appendix [F]	Urban Design Statement (W&A)
Appendix [G]	Williams & Co Urban Design Peer Review
Appendix [H]	Infrastructure Feasibility Report
Appendix [I]	Earthworks Plan
Appendix [J]	Geotechnical Report
Appendix [K]	Transport Assessment
Appendix [L]	Novo Group Peer Review
Appendix [M]	Sight Distance Assessment
Appendix [N]	Construction Management Plan
Appendix [O]	Assessment of Rock-Breaking Noise Effects
Appendix [P]	Response to the Council RFI
Appendix [Q]	Response to Additional Council RFI
Appendix [R]	Height Review Report
Appendix [S]	Affected Persons Approval

Scott Freeman

16th July 2021

2.0 SITE DESCRIPTION AND RECEIVING ENVIRONMENT

2.1 Site Description

The subject site subject to this application is located to the south of Atley Road, Arthurs Point. The site at present does not have a physical address.

The vacant 3365m² site is legally described as Lot 2 DP 411983. The Record of Title is contained within **Appendix [A]**. The existing net area of the site is 2541m².

The site has an irregular alignment with variable topography. The site presently contains a mixture of exotic scrubs and wilding trees. The site is highlighted below:

In the context of the wider urban settlement at Arthurs Point, the site is located next to the flat plateau that exists to the east and north of the Shotover River.

Access to the site is obtained from Atley Road, and then via a Right of Way (ROW) over Lot 2 DP 423051.

Six properties have a ROW over the site, consisting of Lot 2 DP 307630, Lot 2 DP 337696, Lot 1 DP 337696, Lot 3 DP 310572, Lot 2 DP 310572 and Lot 1 DP 401014.

2.1 Legal Documents

Two Consent Notices are registered on the Record of Title.

Consent Notice 5389650.5 emanated from the resource consent RM010189 and relates to fire-fighting requirements. The requirement of Consent Notice 5389650.5 is not relevant to this proposal contained in this application.

Consent Notice 8107012.2 emanated from the resource consent RM040196 that created the site. This document relates to the requirement to construct a vehicle crossing to Council standards when a residential dwelling is built on the site.

Consent Notices 5389650.5 and 8107012.2 are contained in **Appendix [B]**

2.3 Receiving Environment

In the immediate context of the site, the land to the north-east and east (and to the south of Atley Road) has been developed in a low density residential suburban approach, with standalone residential dwellings on reasonably sized sections. To the south and south-west of the site, the residential sections are marginally larger. To the immediate north of the site, the land between Atley Road and Arthurs Point Road is largely undeveloped.

In a wider sense, the site is contained in one of the three distinct neighbourhoods within Arthurs Point, with such consisting of the western side of the Shotover River, a central area of terraced flats to the north of the Shotover River, and a northern neighbourhood on a higher plateau to the north of the site.

3.0 RESOURCE MANAGEMENT BACKGROUND

A review of Council's edoc's reveals that no resource consents have been issued for the site.

4.0 DESCRIPTION OF THE PROPOSED ACTIVITY

4.1 Overview

Resource consent is sought to construct eight residential units on the site, with associated earthworks and landscaping. The proposal also seeks to subdivide the completed residential units in a staged approach.

The details of the overall proposal are outlined below.

4.2 Proposed Residential Units

The residential units have been designed by Foley Group, with the Architectural Package being contained within **Appendix [C]**.

The eight residential units (or townhouses) have been designed around four building typologies. Each building typology will be addressed below.

<u>Building Typology A</u>

This building typology incorporates five residential units that are located in the mid to southern portion of the site. These residential units will provide four bedrooms over two levels.

The residential units are long narrow structures, running in an approximate north-south orientation. The residential units are partial three level structures.

The lower level of the residential units consists of a two bay garage which will be cut into the site. The ground level will provide three bedrooms, while the first level will provide one bedroom and the living/kitchen area. The overall gross floor area is 213.8m². External decking is provided on the ground and first floor levels.

Vehicle access to these residential units will occur from the existing (and upgraded) ROW located to the immediate south of these buildings.

Building Typology B

This building typology proposes one residential unit, located in the south-eastern corner of the site. The residential unit incorporates three bedrooms within a two level structure.

The residential unit is also a long narrow structure, running in an approximate north-south orientation.

The lower level of the residential unit consists of a two bay garage and two bedrooms while the ground floor level will provide one bedroom and kitchen/living area. The overall gross floor area is 192m². External decking is provided on the lower and ground floor levels.

Vehicle access to the residential unit will occur from the ROW located to the south of the building.

Building Typology C

This building typology consists of one residential unit located in the north-western corner of the site, overlooking Atley Road. The residential unit is a long rectangular shaped building that runs parallel to the northern boundaries of the site.

The lower level of the residential unit consists of four bedrooms, while the ground floor level will provide a two bay garage and kitchen/living area. The overall gross floor area is 235.6m². External decking is provided on the lower and ground floor levels.

Vehicle access to this residential unit will occur via new access that runs parallel to the western boundary of the site.

Building Typology D

This building typology is located in the north-east corner of the site, overlooking an existing ROW. The residential unit is a long rectangular shaped building that runs parallel to the northern boundaries of the site.

The lower level of the residential unit consists of four bedrooms, while the ground floor level will provide a two bay garage and kitchen/living area. The overall gross floor area is 197.2m². External decking is provided on the lower and ground floor levels.

Vehicle access to the residential unit will occur from the eastern side of the building, directly from the existing ROW.

Building Coverage, Height & Setbacks

The Architectural Package indicates the proposed building coverage (based on the associated subdivision, as described below), together with the associated building heights and setbacks.

The building coverage for the eight residential units based on the proposed subdivision ranges from 41.7% to 60.8% (relating to the net area of the proposed allotments). The overall proposed net area for the site is 2334m², taking into account the existing and proposed ROW.

The Architectural Package indicates the proposed setbacks from the exiting external boundaries of the site (both road and internal boundaries), together with the setbacks from the proposed allotment boundaries. Various setback breaches are proposed in terms of the existing and proposed boundaries.

The Architectural Package indicates the applicable 7m building height limit that applies to the site (with all buildings complying with this limit).

The landscaped impervious area within the site will be 30.4%.

External Materials

The external materials that will be used on the residential unit consists of dark profiled metal tray, natural stained vertical timber weatherboards, natural stacked stone and lightly painted timber.

4.3 Proposed Subdivision

The Subdivision Plan has been compiled by Aurum Survey Consultants Limited. The Subdivision Plan is contained within **Appendix [D]**.

The Subdivision Plan indicates the proposed allotment configuration and sizes (both gross and net areas), together with the existing and proposed ROW easements. The net areas of the proposed allotments range in size from 217m² to 436m².

The application proposes that the allotments be allowed to be created in a stage manner (in any order), on the basis that the subject residential unit has been completed (on the allotment to be created), together with the necessary services and access being established.

4.4 Proposed Landscaping

The Landscape Concept Plan has been designed by gdc and is contained within **Appendix [E]**.

The soft and hard landscaping indicated on the Landscape Concept Plan seeks to compliment the style of architecture proposed for the site, while at the same time

providing a natural amenity for future occupants within the residential units, and for nearby neighbours.

The plant species to be used focuses on a native species approach, with the aim of providing a degree of privacy and screening between the residential units, while at the same time, maintaining views from the buildings.

Attention has been given to providing outdoor areas that are appropriately formed and screened where possible from the adjoining or nearby residential units.

As with the subdivision approach, the landscaping will be staged in accordance to how the overall development is proceeded within in the future.

4.5 Urban Design Statement

Weir & Associates Limited (W&A) has produced an Urban Design Statement that addresses the proposal for the site. The Urban Design Statement is contained within **Appendix [F]**.

The Urban Design Statement assesses the proposal against the best practice urban design principles including the 'the 7C's' from the New Zealand Urban Design Protocol, as well guidance contained in the Council's Subdivision Design Guidelines and Residential Zone Design Guide 2019.

The Urban Design Statement then addresses the broader principles and considerations for the proposal, with such consisting of:

- Is this an appropriate location for the type of residential proposed?
- Does the proposal deliver positive outcomes on the external environment?
- Is internal environment providing quality attributes for residents?

The Urban Design Statement addresses the attributes of the site and surrounding context in Arthurs Point. In this context, the Urban Design Statement states the following:

> *Notwithstanding the Sites prominent location and attributes, it has a low visual profile from almost all external vantage points except when crossing the Edith Cavill Bridge heading north. Even then, there is only a fleeting view of the site as the foreground is dominated by the undeveloped road reserve and large land parcel (7.6ha) at 44 Arthurs Point Road.*

The Urban Design Statement provides an assessment from an urban design perspective on the overall development approach for the site, together with addressing the specific characteristics of the building typologies, combined with some general considerations. This assessment will be addressed further below.

Subsequent to the lodgement of the original application, the Council commissioned an Urban Design Peer Review through Williams & Co (dated February 2021) in terms of the Urban Design Statement. The Williams & Co Urban Design Peer Review is contained within **Appendix [G]**.

The Williams & Co Urban Design Peer Review addresses the site and its context, and then undertakes a general urban design assessment, consideration of the Council's 2019 Residential Zone Design Guidelines and 2015 Subdivision Design Guidelines, and finally, the 2020 National Policy Statement – Urban Development.

The Williams & Co urban design peer review recommended three design considerations, that include:

- Resolution of rubbish & recycling storage – potentially address sufficient space/screening for bins at Atley Road
- Addition of lighting / letterbox / unit number details at the entry areas
- Consideration of treatment of detail (honing, saw cuts, finishing) in terms of paved areas (ROW/garage entry)

In terms of the location of rubbish bins associated with the future residential units, such can be temporarily stored on Atley Road, directly below the site, as per the below photograph:

Point 13 on the revised Landscape Concept Plan details that letterboxes associated with the future residential units will located alongside the group of existing letterboxes on Atley Road.

The applicant is comfortable in accepting a condition of consent that ensures appropriately sized numbering is added on the respective front door's of the future residential units.

The revised Landscape Concept Plan has introduced contrast feature paving around the perimeter of the right of and driveway area.

The Urban Design Statement and Williams & Co Urban Design Peer Review will be addressed further, below.

4.6 Infrastructure Feasibility Report

Aurum Survey Consultants Limited has compiled an Infrastructure Feasibility Report that addresses the proposal. A copy of the Infrastructure Feasibility Report is contained in **Appendix [H]**.

The Infrastructure Feasibility Report addresses the following servicing matters:

- Water Supply
- Wastewater Disposal
- Stormwater Disposal
- Other Services (Power and Telecommunications)

The Infrastructure Feasibility Report confirms that the proposal can be adequately serviced to Council standards.

4.7 Earthworks

Aurum Survey Consultants Limited have compiled an Earthworks Plan that details the earthworks that accompanies the development of the site. The Earthworks Plan is contained within **Appendix [I]**.

The Earthworks Plan details the level of excavation and fill on the site, with the following calculations applying:

Area:	2500m²
Cut Volume:	2900m³
Fill Volume:	200m³
Maximum Cut:	5.4m
Maximum Fill:	2.7m

The earthworks listed above will provide for the creation of the building areas on site, together with the access within the site.

The Earthworks Plan also details the physical works to widen the subject right of way (within Lot 2 DP 42305). These earthworks will have an area of 80m², a cut volume of 300m³ and a maximum cut height of 6m.

4.8 Geotechnical Considerations

Bell Geoconsulting Limited has compiled a Geotechnical Report that accompanies the proposed development. A copy of the Geotechnical Report is contained in **Appendix [J]**.

The Geotechnical Report addresses the geotechnical characteristics of the site, provides a geotechnical assessment of the proposed development, and finally considers the earthworks methodology that will be utilised when the site is developed.

The Geotechnical Report considers that the site is geotechnically capable of being developed as proposed, and that with specific investigations adopted for each building, there will be long term stability for each structure.

The Geotechnical Report notes that subject to appropriate engineering design, each building site will allow design in terms of NZS 3604:2011, and any engineered fill is to satisfy the requirements of NZS 4431:1989, and finally, geotechnical input will be required at the design and construction stages for both Lot access and building foundations.

4.9 Transport Assessment

Bartlett Consulting has compiled a Transport Assessment that addresses the proposed development. The Transport Assessment is contained within **Appendix [K]**.

The Transport Assessment has addressed the existing transport network in the vicinity of the site, in particular Atley Road, in terms of its present formation, posted and actual speed environments and the present vehicular use of Atley Road.

The Transport Assessment addresses the existing ROW over Lot 2 DP 423051 that provides access to the site (and other nearby allotments), in terms of its formation and present vehicular use. The Transport Assessment estimates that approximately 60vpd will occur on the ROW. The Transport Assessment addresses the potential increased vehicular traffic usage of the ROW (and Atley Road), with this increased use being calculated as being an extra 80vpd (an estimated 140vpd taking into account both the existing and proposed vehicular use). In relation to this ROW, the Transport Assessment states:

> *The ROW access is formed as a sealed road with a 3.5m typical seal width. This operates as a single traffic lane (two-way traffic flow) road where oncoming vehicles will need to use the unsealed shoulder to pass. The operating speed of the ROW access is likely to be less than 30km/hr as a result of the narrow road width and alignment which restricts forward sight distances.*

In terms of the access to and parking associated with each residential unit, the Transport Assessment notes that on-site manoeuvring can occur for seven of the eight residential dwellings, while an on-site turntable will enable manoeuvring is to be used for residential unit proposed Lot 1.

In relation to the intersection with Atley Road and the ROW over Lot 2 DP423051, the Transport Assessment states:

> *The shared access ROW approach to this intersection has restricted seal width (and legal width) approaching the intersection. The existing sealed width on the shared access ROW is only 3.0m which provides a single traffic lane only. This means that vehicles entering the shared access ROW may be required to wait (on Atley Road) should there be any vehicles exiting the shared access ROW.*

This is because the narrow access width does not provide any passing within the sealed width. At this intersection location there is limited space on Atley Road to accommodate a waiting vehicle without impacting on through traffic, travelling south, to the private (unsealed) road extension of Atley Road. Any queuing at this access intersection is will be a result of shared access ROW users turning left into the shared access ROW.

To mitigate the potential queuing effects at the above intersection, the Transport Assessment has recommended widening the ROW to a minimum 5.5m sealed carriageway, which in turn will be able to accommodate two directional traffic and thus remove queuing effects on Atley Road. The bulk of the existing and proposed ROW's that will service the residential units will have a legal width that is greater than 9m, although the legal width will be reduced down to 6.7m to the immediate south of proposed allotments 4 to 7.

Subsequent to the lodging of the original resource consent application, Novo Group were commissioned by the Council to undertake a peer review of the Transport Assessment that will compiled by Bartlett Consulting. A copy of the Novo Group peer review (dated 7 April 2021) is contained within **Appendix [L]**.

The Novo Group peer review addresses the traffic environment in the vicinity of the site, the areas of non-compliance under the PDP, and an assessment of effects that address a range of matters, and finally consideration of off-site transport effects.

The Novo Group peer review notes that the proposal can be supported from a transportation perspective, on the basis that the following information is supplied:

A 2D plan showing that the available sight distances at the intersection meet the EDD requirements for the operating speeds anticipated.

In response to the request for additional information from Novo Group, Bartlett Consulting compiled an additional report, being titled Sight Distance Assessment (dated 5 July 2021). Following this additional assessment, Bartlett Consulting considers that the shared access arrangements will achieve the minimum sight distance requirements. The Sight Distance Assessment is contained within **Appendix [M]**.

The respective transport assessments will be addressed below.

4.10 Construction Management Plan

Momentum Projects Limited has compiled a Construction Management Plan (CMP) that accompanies the proposed development. The CMP is contained within **Appendix [N]**.

The CMP deals with the following areas associated with construction related matters:

- Construction sequencing and staging
- Construction programme
- Construction management
- Noise and vibration management
- Community Consultation

- Earthworks
- Sedimentation controls
- Works outside the site
- Assessment of effects and mitigations

4.11 Assessment of Environmental Noise

Acoustic Engineering Services (AES) have completed an Assessment of Rock-Breaking Noise Effects, on the basis that this activity will be undertaken during the development of the site. This assessment (dated 11 March 2021) is contained within **Appendix [O]**.

In peer reviewing the Assessment of Rock-Breaking Noise Effects, the Council requested additional information that dealt with the following matters:

1. *As the geotech report has yet to be submitted to Council, can you confirm if the AES report has taking into account the preliminary findings and construction methodologies recommended by the geotech engineer?*

2. *Has the acoustic report and noise modelling taking into account the potential noise effects from rock breaking within the ROW easement area required to widen the road.*

3. *The report states the following assumption which appears to have been factored into the expected noise levels calculated at neighbours boundaries, however there is no corresponding recommendation. Would be keen to clarify if this is requirement to ensure compliance with the noise standards (based on the noise levels outlined in Table 2.1). assumed the use of a rock breaking noise reduction attachment, such as the Duraflex Hushtec Rock Breaker Attachment. We note that the manufacturer's data states that a 7 – 13 dB reduction has been achieved with its use in previous situations. We have based our modelling on the attachment reducing the noise levels by 10 dB.*

In a report dated 6 May 2021, AES responded to the questions above in a report titled Response to the Council RFI (this document is contained in **Appendix [P]**. Following consideration of this response, the Council asked the following additional questions:

1. *Please update the noise level predictions based on a maximum of 5 dB reduction for wrapping the 20 t breaker assessed in the report or provide data to support a higher reduction being assumed. Alternatively, please confirm that the use of a smaller, quieter breaker is practicable for the works and that this is proposed as a noise mitigation measure. In the latter case, updated noise level predictions are not required.*

2. *Please advise the estimated duration of the rock breaking (if available) and the total length of time where noise levels may infringe the PDP permitted construction noise limits.*

3. *Please provide comment on the ability of other construction activities on site to comply with the PDP permitted construction noise limits. Will there be any other high noise activities such as chainsaw works, wood chipping or piling?*

4. *Please confirm the assumed reduction by the proposed 1.8 m and 2.4 m high acoustic screening for the nearest receivers. Will effective screening be possible when noisy works take place at a higher ground level than the receivers?*

In a report dated 24 June 2021 (titled Response to Additional Council RFI, and contained in **Appendix [Q]**), AES responded to the above questions, namely dealing with noise from rock breaking and noise from other activities, and the effectiveness of screening in terms of mitigating noise effects. AES has also recommended eight conditions of consent, that will assist with controlling and mitigating the effects from construction noise. These conditions are volunteered by the applicant.

Based on the proposed conditions of consent, AES considers that the noise limits set out in NZS 6803:1999 *Acoustic – Construction Noise* will be complied with.

4.12 Building Height Assessment

Aurum Survey Consultants Limited have reviewed the height of the proposed buildings in the context of the applicable maximum building height limit (being 7m from the original ground level in the PDP). The Height Review Report compiled by Aurum Survey Consultants Limited is contained within **Appendix [R]**.

Following an assessment of the architectural package, Aurum Survey Consultants Limited have confirmed that the maximum height limit of 7m will be complied with.

4.13 Affected Person's Approval

The applicant has obtained the affected persons approval from the current owner of the site, being Canyon Ridge Limited. The approval is contained within **Appendix [S]**.

5.0 DESCRIPTION OF PERMITTED ACTIVITIES

The consent authority may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect.

It is understood that the provisions of the Lower Density Residential Suburban Zone in the PDP are now beyond challenge, and are therefore deemed to be operative. The permitted baseline for the site is addressed below.

6.0 STATUTORY CONSIDERATIONS

6.1 Operative District Plan

The site is contained within the Low Density Residential Zone under the Operative District Plan ("ODP"). As outlined above, it is understood that the provisions of the Lower Density Suburban Residential Zone (LDSRZ) in the PDP are now beyond challenge, and are therefore deemed to be operative. As such, no rules within the Low Density Residential Zone are triggered in terms of the proposal.

In terms of Section 22 (Earthworks), the proposal requires the following resource consents:

- **Restricted Discretionary Activity** resource consent pursuant to Rule 22.3.3(i)(a) as the volume of earthworks will exceed 300m³.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 22.3.3(i)(b)(i) as the maximum height of cut will exceed 2.4m

- **Restricted Discretionary Activity** resource consent pursuant to Rule 22.3.3(i)(b)(ii) as the maximum height of fill will exceed 2m.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 22.3.3(i)(b)(i) as the vertical height of cut will exceed the distance of the top of the cut from the site boundary.

6.2 Proposed District Plan

The site is contained in the LDSRZ under the PDP. The resource consents required under the PDP are outlined below:

Chapter 3 – Lower Density Suburban Residential Zone

Provision 7.1 of the LDSRZ deals with the purpose of the zone, and with relevant to the style of development proposed for the site, states as follows:

> *Fundamentally the zone provides for both traditional and modern suburban densities and housing forms. Houses will typically be one to two storeys in height, detached and set on sites between 450 and 1000 square metres in area. In addition, and to help meet the needs of the community, the zone also enables increased density by allowing sites down to 300 square metres in area and larger comprehensively designed developments. In addition, non-subdividable residential flats that can be occupied by an independent household are enabled. The overall range of net household densities (including residential flats) could be as high as 1 unit per 150 square metres or as low as 1 unit per 1,000 square metres (or even less). The zone will help to provide a more diverse and affordable housing stock within the District.*

The proposal requires the following resource consents under the LDSRZ:

- **Discretionary Activity** resource consent pursuant to Rule 7.5.5 as the maximum building coverage of 40% will be exceeded on the current site, and once the proposed allotments are created, the future building coverage for the eight allotments will also exceed 40%.

- **Discretionary Activity** resource consent pursuant to Rule 7.5.8 as buildings will be located within the 2m internal setbacks from the existing boundaries, and building will be located within the 2m internal setbacks from the future boundaries.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 7.5.9 as the detached residential units are not separated by the minimum required distance of 4m.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 7.5.10 as the length of the building facades above ground floor level will exceed 16m.

- **Non-Complying Activity** resource consent as only two residential units have a net area that is 300m² (or greater), based on the proposed subdivision of the future residential units.

Chapter 25 – Earthworks

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.4.2 as the volume of earthworks will exceed 300m².

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.11 as earthworks over 2500m² will occur where the slope of the land is 10º or greater.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.15 as the maximum height of cut will exceed 2.4m

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.16 as the maximum height of fill will exceed 2m.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.18 as earthworks greater than 500mm will not be set back the required distances from the sites boundaries.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.21 as more than 300m² of clean fill will be transported by road from the site.

Chapter 27: Subdivision & Development

- **Restricted Discretionary Activity** resource consent pursuant to Rule 25.5.7 for a subdivision within the LDSRZ.

- **Non-Complying Activity** resource consent pursuant to Rule 27.5.19 as the proposed allotments do not meet the minimum allotment size of 450m² (net).

- **Non-Complying Activity** resource consent pursuant to Rule 27.7.15 as the minimum allotment size dimensions are not adhered to.

Chapter 29 – Transport

- **Restricted Discretionary Activity** resource consent pursuant to Rule 29.5.14(a) as the vehicular access does not comply with QLDC Land Development and Subdivision Code of Practice 2018.

- **Restricted Discretionary Activity** resource consent pursuant to Rule 29.5.14(c) as the private access will have the potential to accommodate more than 12 residential units on the site and adjoining sites.

7.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

The matters that must be addressed pursuant to Clauses 6 and 7 of the Schedule 4 of the Resource Management Act 1991 are detailed below.

7.1 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:

The proposed activity will not result in any significant adverse effects on the environment. Any effects there are, will be adequately remedied and mitigated. Alternative locations are therefore not considered necessary.

7.2 An assessment of the actual or potential effect on the environment of the proposed activity.

Introduction

Subject to Part 2 of the Resource Management Act 1991, the Council in considering this application pursuant to Section 104(B) of the Act, shall have regard to any actual or potential effects on the environment of allowing the proposed development to proceed.

In assessing any actual or potential effects on the environment of allowing the proposal to proceed, Schedule 4, Clause 7(1) of the Resource Management Act 1991 states that the following matters must be addressed.

(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.

The following matters are considered in terms of the potential effects of the proposed activity.

Effects on the Environment

The following areas are addressed.

Urban Design Considerations (and Effects)

The consideration of urban design effects takes on board the policy goals in the PDP in terms of appropriate intensification in the LDSRZ and the views expressed in the Urban Design Statement and Urban Design Peer Review.

The purpose of the LDSRZ clearly acknowledges the creation of both traditional and modern suburban densities (more intense densities) and housing forms, when compared to the equivalent ODP Zone.

While the proposed development is more intense than the existing surrounding residential development, this is largely due to the fact that the nearby residential properties were developed under the ODP, which required larger allotments size and less density, when compared to the PDP.

The overall proposal responds to the policy goals in the LDSRZ which seek to provide a mix of compatible suburban densities with high amenity in a low density residential living environment.

In this regard, the Urban Design Statement states the following:

> *The proposal development utilises the slope to shape a built form and landscape response that creates a distinct identity whilst still integrating with the surrounding existing residential environment. The relatively compact and simple dwellings are arranged such that there is separation, differentiation and variety of built form, while the architectural treatment maintains a cohesive overall appearance and character. In combination with a coordinated landscape approach, potential impacts on neighbours such as dominance and privacy, have been minimised*

The Urban Design Statement addresses the design characteristics and level of amenity of the residential units, with this consideration being broken down into the higher residential units (Lots 2 to 7) and lower residential units (Lots 1 and 8).

The Urban Design Statement notes that the higher residential units are defined by long narrow typologies, with the majority of the bedrooms being located on the ground floor and living areas above the bedrooms. Outdoor living areas are provided on each level, while garaging and entranceways are provided on the southern side of these residential units. The garaging is cut into the site, which means from the ROW and the properties to the south, the higher residential units will generally be viewed as two storied buildings.

The Urban Design Statement notes that aside from the residential units within Lots 6 and 7, the upper units are separated by at least 3m (excluding the garaging). This building separation provides for pedestrian access and landscaping. The landscape approach combined with the stepping frontages and variation in finished levels means that there is differentiation and articulation in these buildings when viewed from outside of the site.

The two northern residential units (being within Lots 1 and 8) run in a different orientation to the remainder of the residential units. As the Urban Design Statement notes, that while the norther residential units have a different orientation to the higher units, they appear visually contiguous through the consistency of built form, roof shape and the use of exterior materials.

The Urban Design Statement also addresses the potential effects on the nearby landowners.

Overall, the Urban Design Statement concludes that the development proposed for the site is an appropriate outcome from an urban design perspective.

Further justification on the urban design considerations for the proposal comes form the Urban Design Peer Review, in particular the commentary that deals with the Council's 2019 Residential Zone Design Guidelines. As a whole, the Urban Design Peer Review considers that the proposal generally accords with the stated goals of the 2019 Residential Zone Design Guidelines.

Built Form Effects

The proposal requires a variety of resource consents in relation to a number of bulk and location breaches within the LDSRZ, namely in terms of building coverage, setbacks and the length of building facades. However, the maximum building height limit is complied with.

In terms of the potential effects of the above areas of non-compliance, it is considered that these effects are largely internalised to the site, and that any effects on the surrounding residential neighbours are less than minor. This view is formed on the basis due to the design approach for the overall development, the orientation of the site and built form, and the reasonably large physical separation to the nearby neighbours (which is generally in excess of 10m).

The building coverage (both prior to and following the subdivision) exceeds the maximum building coverage of 40%. However, despite the level of building coverage, the site will be sufficiently planted in landscaping, plus the residential units are setback a reasonable distance from the surrounding landowners.

The residential units (in various locations) breach the 2m internal setback requirement and the 4m separation distance for detached units. By in large, these setback breaches are an internal effect to the proposed development. Through the combination of the style of built form (and window placement) and landscaping, it is considered that the resultant effects will be less than minor,

Minor breaches of the maximum façade length are proposed. Through a combination of the overall design and building articulation, the effects associated with this area of non-compliance will be less than minor.

Residential Density & Proposed Allotment Sizes

Based on the existing net area of the site (being 2541m²), the site can accommodate 5 residential units as a permitted activity from a density perspective (one residential unit per 450m²). Again, based on the existing net area of the site and via a restricted discretionary application, the site can accommodate 8 residential units (one residential per 300m²). Taking into account the proposed net area of the site, the site can accommodate 5 residential units as a permitted activity and 7 residential units as a restricted discretionary activity.

While the number of residential units exceeds the permitted and restricted discretionary status for units in the LDSRZ (and only two of the eight residential units have a defined area in excess of 300m² net for each unit), it is considered that the resultant outcome from an effects perspective is acceptable in this instance. This view is based on the reasonably large size of the site, the design approach, and the separation distances to the nearby residential neighbours.

Further to the above, the definition of a residential unit under the PDP includes a complying residential flat (of up to 70m²). Possible (and unfanciful) development scenarios for the site could include 5 residential flats with complying residential flats, or via a restricted discretionary application, more residential units with complying flats.

While the proposed residential density exceeds the permitted and restricted discretionary status for residential units in the LDSRZ, it is considered that the effects are less than minor due to the development approach proposed, and further, possible development scenarios where less units are provided, but residential flats are included, which bolsters the overall density on the site.

Transportation Effects

The Transport Assessment addresses a variety of transport related matters that are associated with the proposal.

The Transport Assessment makes a number of recommendations in order to mitigate the effects associated with vehicular traffic that will access the site. Such recommendations are addressed below.

The first recommendation suggests that the ROW approach to Atley Road is widened to a 5.5m to 5.7m seal carriageway to allow for two traffic lanes. The widening of this portion of the ROW will mitigate against possible queuing effects as a result of increased traffic using Atley Road and the ROW.

The second recommendation deals with the width of the ROW (new and existing) where it serves more than six residential units. The Transport Assessment recommends that this portion of the ROW should have a sealed carriageway of 5.5-5.7m and a minimum legal width of 6.7m. This access widening will accommodate movement

and parking requirements and will mitigate traffic effects due to increased traffic flows.

The third recommendation deals with the width of the ROW which serves up to six residential units. The Transport Assessment notes that the ROW should include a 2.75m to 3m sealed carriageway within a legal width of 4m. The ROW in this area can be used for vehicle manoeuvring.

The remaining two recommendations deal with swept paths and an agreement for the shared maintenance costs of the upgraded ROW.

In terms of the potential traffic effects associated with the proposal, the Transport Assessment states:

> *I consider that with the above recommendations that the proposed subdivision can be appropriately designed and constructed. I consider that the subdivision will have minimal transport effects on the surrounding transport network, any transport impacts of which will not be noticeable.*

The Transport Peer Review prepared by Novo Group assesses a number of transportation matters, namely queuing space, legal with of the right of way and number of residential units proposed. Novo Group consider that the transportation effects range no effects to effects that are acceptable and less than minor.

Based on the views expressed in the Transport Assessment, it is considered that the traffic related effects will be less than minor.

Earthworks & Construction Effects

The existing topography of the site dictates the level of required earthworks to create a level benches to facilitate the proposed development.

The Geotechnical Report compiled by Bell Geoconsulting Limited has considered the subsoil conditions and identified any geotechnical risks of hazards that could affect the feasibility of developing the proposed building. Following this assessment, Bell Geoconsulting Limited consider that it is technically feasible to develop the building as proposed, subject to compliance with a range of geotechnical parameters and recommendations (which are anticipated to form conditions of consent).

Erosion and sediment controls will be implemented during construction to manage any associated effects.

Nuisance effects from the proposal such as noise, dust and vibration will be temporary whilst the construction of the retaining wall is undertaken. As a result, the proposed earthworks are expected to comply with construction noise standards. Any effects on the amenity values of the surrounding will be temporary and expected to be less than minor.

In relation to construction noise, in particular rock breaking, the assessments by AES have confirmed that all construction activities can comply with the applicable noise standards.

Construction hours will align with daytime hours and avoid Sundays and public hours, further protecting the amenity values of the surrounding area.

Truck movements will occur to cart material from the site. However, these movements will be temporary and any effects are considered to be less than minor.

No persons are considered adversely affected by this proposal in terms of the level of earthworks and construction activities (with such effects being temporary and less than minor). Any nuisance effects as a result of the proposed earthworks on the owners and occupiers of surrounding sites can be managed with the use of site management controls and the temporary nature of the proposed works.

Effects on Persons

The assessment of effects on persons will largely focus on the residential properties that gain access of the subject right of way from Atley Road, namely the properties located at 83 and 85A to 85E Atley Road.

The range of potential effects have been addressed above, but such will be narrowed down to consider the effects on the nearby properties.

Residential Density

The density and style of residential development proposed for the site differs from the existing surrounding residential development, as witnessed by the reasonably large sections for the properties located at 83 and 85A to 85E Atley Road (sizes range between 810m² to 1268m²) which contain traditional standalone residential units. These existing properties were created via the ODP which required a then minimum allotment size of 800m² at subdivision stage.

In contrast to the ODP, the PDP for the LDSRZ now provides for both traditional and modern densities and housing forms. And in terms of meeting the needs of the community, the LDSRZ enables increased residential densities by allowing densitieis down to 300m² in area and for larger comprehensively designed developments to proceed.

Adopting the proposed net area of the site, the site can accommodate 5 residential units as a permitted activity and 7 residential units as a restricted discretionary activity. While a density of 7 residential units cannot form part of the permitted baseline for the site, the LDSRZ does seek to enable non-notified restricted discretionary applications (without approval from affected persons).

As outlined above, each residential unit could contain a complying residential flat, meaning that under a permitted baseline scenario, there could be 5 residential flats with complying residential flats (10 separate living instances), or via a restricted discretionary application, 7 residential units with complying flats (with 14 separate

living instances). As such, the proposal provides a living density that is comparable to a permitted density, and less than a restricted discretionary development.

In terms of the potential effects from a density perspective on the properties 83 and 85A to 85E Atley Road, it is considered that such effects are less than minor based on the permitted and anticipated residential density for the site (including complying residential flats), the development approach for the site, and importantly, the reasonably large separation distances between the site and the nearby properties.

In relation to the fact that the proposal is providing a higher density approach to the nearby development, the Urban Design Peer Review states the following:

> *I therefore consider that the density of development proposed, while higher than the existing development in the surrounds is in principle not inappropriate. The comprehensive nature of the proposal on an existing larger parcel of LDSR zoned land signals that the development of the site could provide a good opportunity to meet the Objectives of the LDSR in relation to encouragement of higher density development / efficient use of land.*

That statement above is agreed with, as the proposal is aligned with the relevant objective and policies in the LDSRZ that seek to allow appropriate intensification in this residential zone.

Due to the location of the site, it is not considered that any other landowner in the immediate and wider vicinity will experience effects that are minor or above.

Residential Amenity Effects

The proposal does seek approval for a number of bulk and location breaches, however, the effects of such breaches are internalised to the site due to the physical separation (via roading) from the properties located at 83 and 85A to 85E Atley Road, and other surrounding properties.

In relation to effects on residential amenity values, the Urban Design Review Report succinctly addresses this issue by the following statement:

> *The design of the proposal however needs to be tested to determine if the balance expressed in the LDSR provisions is achieved (e.g. fit in immediate context and maintenance of amenity values). In this respect I agree with the conclusions of the W&A Statement that the design is sufficient to do so, e.g. that height, bulk and location will appropriately maintain privacy and access to sunlight. In this respect I note that the roading arrangement which provides a buffer between buildings results in an (at least) 10m setback of built form from neighbours, and all built form is contained within the maximum height plane. I do not identify any amenity or adverse urban design outcomes related to the separation between the individual units on the site*.

The Urban Design Review Report is correct to note that there will be some dominance effects upon the immediate neighbours through the physical prominence of the site, however, a range of permitted development on the higher portion of the site would lead to very much the same outcome as proposed for the site. For instance, a slightly

reduced number of residential units (but larger buildings) could be proposed on the southern part of the site, with such buildings presenting very much the same visual effects on the immediate neighbours.

The Urban Design Peer Review is correct to note that the proposal through its design manages the dominance effects through building orientation and design (in particular the compliance with the maximum height limit), with the end result that the dominance effects are at an acceptable level – with this such effects being less than minor.

Overall, it is considered that the residential amenity effects on the immediate neighbours will be less than minor.

Transportation Effects

The proposal has been subject to two independent transportation assessments, with both assessments concluding that the transportation effects are acceptable and less than minor.

The proposal will result in an increase in vehicular movements along the right of way and Atley Road, however, through the upgrading and widening of the right of way, the effects will be mitigated and acceptable upon the immediate neighbours. As such, it is considered that the resultant effects on the neighbours will be less than minor.

Construction Effects

The assessments from AES outlines that all construction activities on site can be undertaken so as to comply with the applicable noise standards.

Construction activities by their very nature does create nuisance effects, however, a range of conditions are proposed so as to ensure that such effects are acceptable and less than minor on the immediate neighbours.

7.3 If 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

N/A

7.4 If the activity includes the discharge of any contaminant, a description of:

1. **The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects; and**
2. **Any possible alternative methods of discharge, including discharge into any other receiving environment.**

N/A

7.5 A description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce actual and potential effects:

No mitigation is considered necessary.

7.6 Identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:

Consultation is currently being undertaken with the owner of Lot 2 DP 423051 in terms of the upgrading of the ROW within this land parcel.

7.7 If the scale or significance of the activities effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved.

No monitoring is required other than standard conditions of consent.

7.8 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).

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

8.0 NOTIFICATION

A consent authority must publicly notify an application if it decides under s95D that the activity will have or is likely to have adverse effects on the environment that are more than minor (s95A(2)(a)).

In addition, Section 95B(1) requires a decision whether there are any affected persons (under s95E) in relation to the activity. As outlined above the proposed activity is not likely to have adverse effects on the environment that are minor or more than minor and no persons are considered adversely affected.

Additionally, the applicant has not requested public notification of the application (s95A(2)(b)), no rule or national environmental standard requires public notification of the application (s95A(2)(c)) and there are no special circumstances that exist in relation to the application that would require public notification (s95A(4)).

Given the foregoing the application should proceed on a non-notified basis.

9.0 SECTION 104 (1)(b) ASSESSMENT

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

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

9.1 National Policy Statement on Urban Development 2020

The National Policy Statement on Urban Development 2020 (NPS-UD) replaced the National Policy Statement on Urban Development Capacity 2016.

The NPS-UD is applicable to the Queenstown Lakes District as the Queenstown Lakes District Council is listed as a Tier 2 Urban Environment.

The NPS-UD sets out the objectives and policies for planning for well-functioning urban environments under the Resource Management Act 1991. Of relevance to the proposal are Objectives 3 and which respectively state:

> *Objective 3: Regional policy statements and district plans enable more people to live in, and more businesses and community services to be located in, areas of an urban environment in which one or more of the following apply:*
>
> *(a) the area is in or near a centre zone or other area with many employment opportunities*
>
> *(b) the area is well-serviced by existing or planned public transport*
>
> *(c) there is high demand for housing or for business land in the area, relative to other areas within the urban environment.*
>
> *Objective 4: New Zealand's urban environments, including their amenity values, develop and change over time in response to the diverse and changing needs of people, communities, and future generations*

In relation to Objective 3 of the NPS-UD, the site to be developed is located in reasonably close proximity to the town centre of central Queenstown, public transport is located reasonably close by, and finally, there is demand for residential housing in Queenstown.

In terms of Objective 4 of the NPS-UD, the zoning in the PDP already recognises that over time, land within this zone will develop and change in response to the needs of various factors. The expected change also includes the expectation that existing amenity values will not remain as per the status quo.

It is considered that the proposal accords with the objectives as listed above in the NPS-UD.

9.2 Operative District Plan

Section 22 - Earthworks

The proposal is considered to not be contrary to Objective 22.1 (and associated policies).

9.3 Proposed District Plan

Relevant chapters in the PDP are Chapter 3 (Strategic Directions), Chapter 4 (Urban Development), Chapter 7 (LDSRZ), Chapter 25 (Earthworks), Chapter 27 (Subdivision and Development) and Chapter 29 (Transport). These PDP chapters are addressed below.

Chapter 3: Strategic Directions

The relevant objective and policies within Chapter 3 are addressed below.

3.2 Strategic Objectives

3.2.2 Urban growth is managed in a strategic and integrated manner.

3.2.2.1 Urban development occurs in a logical manner so as to:

a. Promote a compact, well designed and integrated urban form
b. Build on historical urban settlement patterns.
c. Achieve a built environment that provides desirable, healthy and safe places to live, work and play.

The site is contained in a zone which the PDP anticipates residential development to occur. The development will assist with providing a compact, well designed urban form.

Chapter 4: Urban Development

4.2.2A Objective – A compact and integrated urban form within the Urban Growth Boundaries that:

(i) is coordinated with the efficient provision, use and operation of infrastructure and services.

4.2.2B Objective – Urban development within the Urban Growth Boundaries that maintains and enhances the environment and rural amenity and protects Outstanding Natural Landscapes and Outstanding Natural Features and areas supporting significant indigenous flora and fauna.

4.2.2.1 Integrate urban development with existing or proposed infrastructure so that:

(a) urban development is serviced by infrastructure of sufficient capacity; and

(b) reverse sensitivity effects of activities on regionally significant infrastructure are minimised; and

(c) in the case of the National Grid, reverse sensitivity effects avoided to the extent reasonably possible and the operation, maintenance, upgrading and development of the National Grid is not compromised.

4.2.2.2 Allocate land within Urban Growth Boundaries into zones which are reflective of the appropriate land use having regard to:

(a) its topography;

(b) its ecological, heritage, cultural or landscape significance if any;

(c) any risk of natural hazards, taking into account the effects of climate change;

(d) connectivity and integration with existing urban development;

(e) convenient linkages with public transport;

(f) the need to provide a mix of housing densities and forms within a compact and integrated urban environment;

(g) the level of existing and future amenity that is sought (including consideration of any identified special character areas);

(h) the need to make provision for the location and efficient operation of infrastructure and utilities, including regionally significant infrastructure;

(i) the need to provide open spaces and community facilities that are located and designed to be safe, desirable and accessible;

(j) the function and role of the town centres and other commercial and industrial areas as provided for in Chapter 3 Strategic Objectives 3.2.1.2 - 3.2.1.5 and associated policies;

(k) and the need to locate emergency services at strategic locations.

4.2.2.3 Enable an increased density of well-designed residential development in close proximity to town centres, public transport routes, community and education facilities, while ensuring development is consistent with any structure plan for the area and responds to the character of its site, the street, open space and surrounding area.

Due to the location and size of the site, the proposal adequately responds to the PDP goals on increased intensification on urban zoned land located within the identified Urban Growth Boundaries.

Chapter 7: Lower Density Suburban Residential Zone

The relevant objectives and policies within the LDSRZ are as follows:

Objective 7.2.1

Development within the zone provides for a mix of compatible suburban densities and a high amenity low density residential living environment for residents as well as users of public spaces within the zone.

Policies

7.2.1.1 Ensure the zone and any development within it is located in areas that area well serviced by public infrastructure, and is designed in a manner consistent with the capacity of infrastructure networks.

7.2.1.2 Encourage an intensity of development that maximise the efficient use of the land in a way that is compatible with the scale and character of existing suburban residential development, and maintains suburban residential amenity values including predominately detached building forms, and predominately one to two storey building heights.

7.2.1.3 Ensure the height, bulk and location of development maintains the suburban intensity character of the zone, and maintains the amenity values enjoyed by users of neighbouring properties, in particular, privacy and access to sunlight.

In relation to Objective 7.2.1, the proposal will provide a compatible form of residential development in this location, while in turn providing a high quality amenity experience for occupants within the development.

Policy 7.2.1.1 deals with locating development in areas that are serviced with public infrastructure. The proposal accords with this policy.

The proposal accords with Policy 7.2.1.2, in that the proposal efficiently uses the land in a manner that is compatible with the scale of the existing suburban residential development in the vicinity of the site, and due to the design approach and location of the site, the existing residential amenity values in the context of the site will be maintained.

In terms of Policy 7.2.1.3, the overall design of the proposed development will maintain the suburban intensity character of the LDSRZ, and due to the positioning of the site (and built form within in), will maintain the amenity values of the nearby residential properties. The proposal accords with the outcomes envisaged by Policy 7.2.1.3.

Objective 7.2.3

Encourage higher density development where it responds sensitively to the context and character of the locality and is designed to maintain local amenity values.

Policies

7.2.3.1 Encourage densities higher than 1:450 square metres per residential unit where this is designed to fit well with the immediate context, with particular significance attached to the way the development:

a. manages dominance effects on neighbours through measures such as deeper setbacks, sensitive building orientation and design, use of building articulation and landscaping;

b. *achieves a reasonable level of privacy between neighbours through measures such as deeper boundary setbacks, offsetting habitable room windows that face each other, or the use of screening devices or landscaping;*

c. provides activation of streets through the placement of doors, windows and openings that face the street.

7.2.3.3 Encourage landscaped areas to be well-designed and integrated into the development layout and design, providing high amenity spaces for recreation and enjoyment, having particular regard to the visual amenity of streets and street frontages.

The site due to its size, location and general physical separation from the nearby residential neighbours, assists with the acceptability from an effects perspective in terms of enabling a slightly higher level of residential density on the site. Further, these aspects also attribute to the proposal responding sensitively to the context and character of the site, and importantly, maintaining local amenity values. According, the proposal is not considered to be contrary to Objective 7.2.3.

Policy 7.2.3.1 encourages higher residential densities (below one residential unit per 450m²) where a proposal is designed to fit well within the immediate context, with

particular significance given to a range of urban design and residential amenity values.

In relation to Policy 7.2.3.1(a), as outlined the above, the site has a reasonable setback (in an urban sense) from the nearby residential properties, which will considerably reduce a perceived dominance effects on the surrounding properties. Further assisting factors include the orientation of the residential units and landscaping. The considerations which assist the proposal not being contrary to Policy 7.2.3.1(a) also assist the proposal meet the outcomes envisaged by Policy 7.2.3.1(b), in that the large setbacks (primarily due to the width of the ROW) mean that there will little to no loss of privacy for the surrounding residential properties. There will be a degree of street activation towards the ROW for the higher residential units due to the placement of certain windows, thereby assisting with adhering to the outcomes anticipated by Policy 7.2.3.1(c).

In relation to Policy 7.2.3.3, a well-considered landscaping approach for the site will provide amenity for not only the future residents, but also for the surrounding landowners. As such, the proposal is not contrary to Policy 7.2.3.3.

Objective 7.2.6

Development efficiently utilises existing infrastructure and minimises impacts on infrastructure networks.

Policies

7.2.6.1 Ensure access and vehicle parking is located and designed to optimise safety and efficiency of the road network and minimises impacts on on-street vehicle parking.

7.2.6.2 Ensure development is designed consistent with the capacity of existing infrastructure networks and, where practicable, incorporates low impact approaches to stormwater management and efficient use of potable water.

7.2.6.3 Integrate development with all transport networks and in particular, and where practicable, improve connections to public transport services and active transport networks (tracks, trails, walkways and cycleways).

In relation Objective 7.2.6, the proposal will utilise the existing infrastructure in the vicinity of the site.

Via an upgrade to the ROW, vehicular access and parking can be sufficiently catered for in a safe and efficient manner, thereby meeting the outcomes envisaged via Policy 7.2.6.1.

Chapter 25: Earthworks

The relevant objectives and policies within Chapter 25 are as follows:

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.

Policies

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

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

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

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

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

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

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

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

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

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

Overall, the required earthworks can be undertaken and controlled in a manner which leads to an outcome where such are not contrary to the above objectives and policies.

Chapter 27: Subdivision & Development

The relevant objectives and policies within Chapter 27 are as follows:

Objective 27.2.1

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

Policies

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

27.2.1.2 Enable urban subdivision that is consistent with the QLDC Subdivision Design Guidelines 2015, recognising that good subdivision design responds to the neighbourhood context and the opportunities and constraints of the application site.

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

27.2.1.4 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.

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.

Objective 27.2.2

Subdivision design achieves benefits for the subdivider, future residents and the community.

Policies

27.2.2.1 Ensure subdivision design in urban areas provides a high level of amenity for future residents by aligning roads and allotments to maximise sunlight access.

27.2.2.2 Ensure subdivision design maximises the opportunity for buildings in urban areas to front the road.

27.2.2.4 Urban subdivision shall seek to provide for good and integrated connections and accessibility to:

a. existing and planned areas of employment;

b. community facilities;

c. services;

d. trails;

e. public transport; and

f. existing and planned adjoining neighbourhoods, both within and adjoining the subdivision area.

27.2.2.5 Urban subdivision design will integrate neighbourhoods by creating and utilising connections that are easy and safe to use for pedestrians and cyclists and that reduce vehicle dependence within the subdivision.

27.2.2.6 Encourage innovative subdivision design that responds to the local context, climate, landforms and opportunities for views or shelter.

27.2.2.7 Promote informal surveillance for safety in urban areas through overlooking of open spaces and transport corridors from adjacent sites and dwellings and by effective lighting.

It is considered that the proposal is not contrary the Objective 27.2.2 and the relevant supporting policies.

Objective 27.2.5 deals with the provision of infrastructure and services to new subdivisions and developments, while specific policies deal with matters such as transport/access/roads, water supply, wastewater/stormwater disposal.

In relation to the policies that deal with transport related matters, based on the recommendations in the Transport Assessment, it is considered that the proposal is not contrary to such provisions.

In terms of the policies that deal with the three waters, information supplied in the application demonstrates that the proposed development can be properly serviced to the Council standards,

Chapter 29: Transport

The relevant objectives and policies within Chapter 29 are as follows:

Objective 29.2.2

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

a. providing a safe and efficient transport network;

b. compact urban growth;

c. economic development;

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

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

Policies

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

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

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

(i) ensuring that accesses and new intersections are appropriately located and designed and do not discourage walking and cycling or result in unsafe conditions for pedestrians or cyclists;

(ii) avoiding heavy vehicles reversing off or onto any roads; and

(iii) ensuring that sufficient manoeuvring space, or an alternative solution such as a turntable or car stacker, is provided to avoid reversing on or off roads in situations where it will compromise the effective, efficient, and safe operation of roads.

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

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

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

The Transport Assessment has concluded that with the adoption of the recommendations contained within this report, that the transport related effects will be minimal on the surrounding transport networks, and that any transport impacts will not be noticeable. Based on this assessment, it is considered that the proposal is not contrary to Objective 29.2.2 and the relevant supporting policies.

10.0 AN ASSESSMENT OF THE ACTIVITY AGAINST MATTERS IN PART 2

The proposal is consistent with Part 2 of the Act, being the sustainable management of natural and physical resources, whilst also protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

11.0 CONCLUSION

Resource consent is sought to construct eight residential units, and then undertake a staged subdivision once the respective units are completed.

Overall, the activity is assessed as a Non-Complying Activity.

The actual and potential effects on the environment have been outlined in section 7 of this report where it is concluded that the proposed activity is not likely to have any adverse effects on the environment that are less than minor. This assessment is supported by independent reports as detailed in the body of this assessment.

The proposal is considered consistent with the relevant objectives and policies of both the District Plan and the Proposed District Plan and meets the purpose and principles of the Resource Management Act 1991.

Overall, and in accordance with the assessment contained in this report, it is requested that the proposed development is granted as proposed.

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Guaranteed Search Copy issued under Section 60 of the Land Transfer Act 2017

R.W. Muir
Registrar-General
of Land

Identifier **444491**
Land Registration District **Otago**
Date Issued 05 August 2009

Prior References
19198

Estate	Fee Simple
Area	3365 square metres more or less
Legal Description	Lot 2 Deposited Plan 411983

Registered Owners
Canyon Ridge Limited

Interests

Appurtenant hereto is a right to convey water and electricity created by Transfer 821620 - 15.1.1993 at 9:10 am

Appurtenant hereto is a right to convey water specified in Easement Certificate 863574.9 - 26.8.1994 at 9:14 am

Some of the easements specified in Easement Certificate 863574.9 are subject to Section 243 (a) Resource Management Act 1991 (See DP 23786)

Appurtenant to part formerly CT OT16C/172 is a right of way created by Transfer 931834.4 - 20.6.1997 at 1:30 pm

Subject to a right to transmit telephone communications over part marked MA, N DP 411983 and a right to transmit electricity over part marked c-f, f-g, g-d, d-e DP 411983 specified in Easement Certificate 977057.7 - 21.10.1999 at 11:11 am

Appurtenant hereto is a right to convey water specified in Easement Certificate 977057.7 - 21.10.1999 at 11:11 am

Some of the easements specified in Easement Certificate 977057.7 are subject to Section 243 (a) Resource Management Act 1991 (See DP 27351)

5389650.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 1.11.2002 at 9:00 am

Subject to a right of way and right to transmit telephone communications over part marked E, F, FA, G, GA, GB, L, LA, LB, I, J DP 411983, a right to drain sewage over part marked E, F, FA, G, GA, GB, LB DP 411983, a right to convey water over part marked F, FA, G, GA, GB, L, LA, LB, I, J DP 411983 and a right to transmit electricity over part marked J DP 411983 created by Easement Instrument 5389650.8 - 1.11.2002 at 9:00 am

Appurtenant hereto is a right to convey water created by Easement Instrument 5389650.8 - 1.11.2002 at 9:00 am

Some of the easements created by Easement Instrument 5389650.8 are subject to Section 243 (a) Resource Management Act 1991 (see DP 304835)

Subject to an electricity easement (in gross) over parts marked F, FA, K, G, GA, GB, L, LA, LB, I DP 411983 in favour of Dunedin Electricity Limited created by Transfer 5389650.9 - 1.11.2002 at 9:00 am

The easement created by Transfer 5389650.9 is subject to Section 243 (a) Resource Management Act 1991

Subject to a right to drain sewage over part marked E, F, FA, LB DP 411983 created by Transfer 5389650.10 - 1.11.2002 at 9:00 am

The easement created by Transfer 5389650.10 is subject to Section 243 (a) Resource Management Act 1991

Subject to a right to drain sewage over part marked E, F, FA, LB DP 411983 created by Transfer 5389650.11 - 1.11.2002 at 9:00 am

The easement created by Transfer 5389650.11 is subject to Section 243 (a) Resource Management Act 1991

Identifier **444491**

Subject to a right to drain sewage over part marked E, F, FA, LB DP 411983 created by Transfer 5389650.12 - 1.11.2002 at 9:00 am

The easement created by Transfer 5389650.12 is subject to Section 243 (a) Resource Management Act 1991

5812091.1 Court Order modifying the easement area of the right to convey water & electricity created by Transfer 821620 see now DP 322391 - 25.11.2003 at 9:00 am

Subject to a right (in gross) to convey water over part marked GA, FA DP 411983 to Queenstown Lakes District Council created by Easement Instrument 6736219.1 - 1.2.2006 at 9:00 am

8107012.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 5.8.2009 at 9:02 am

Subject to a right to convey water over part marked F, E, EA DP 411983, a right to convey electricity over part marked E, EA DP 411983 and a right to transmit telecommunications over part marked F, FA, E, EA DP 411983 created by Easement Instrument 8107012.4 - 5.8.2009 at 9:02 am

Appurtenant hereto is a right of way, right to drain sewage and stormwater and a right to transmit telecommunications created by Easement Instrument 8107012.4 - 5.8.2009 at 9:02 am

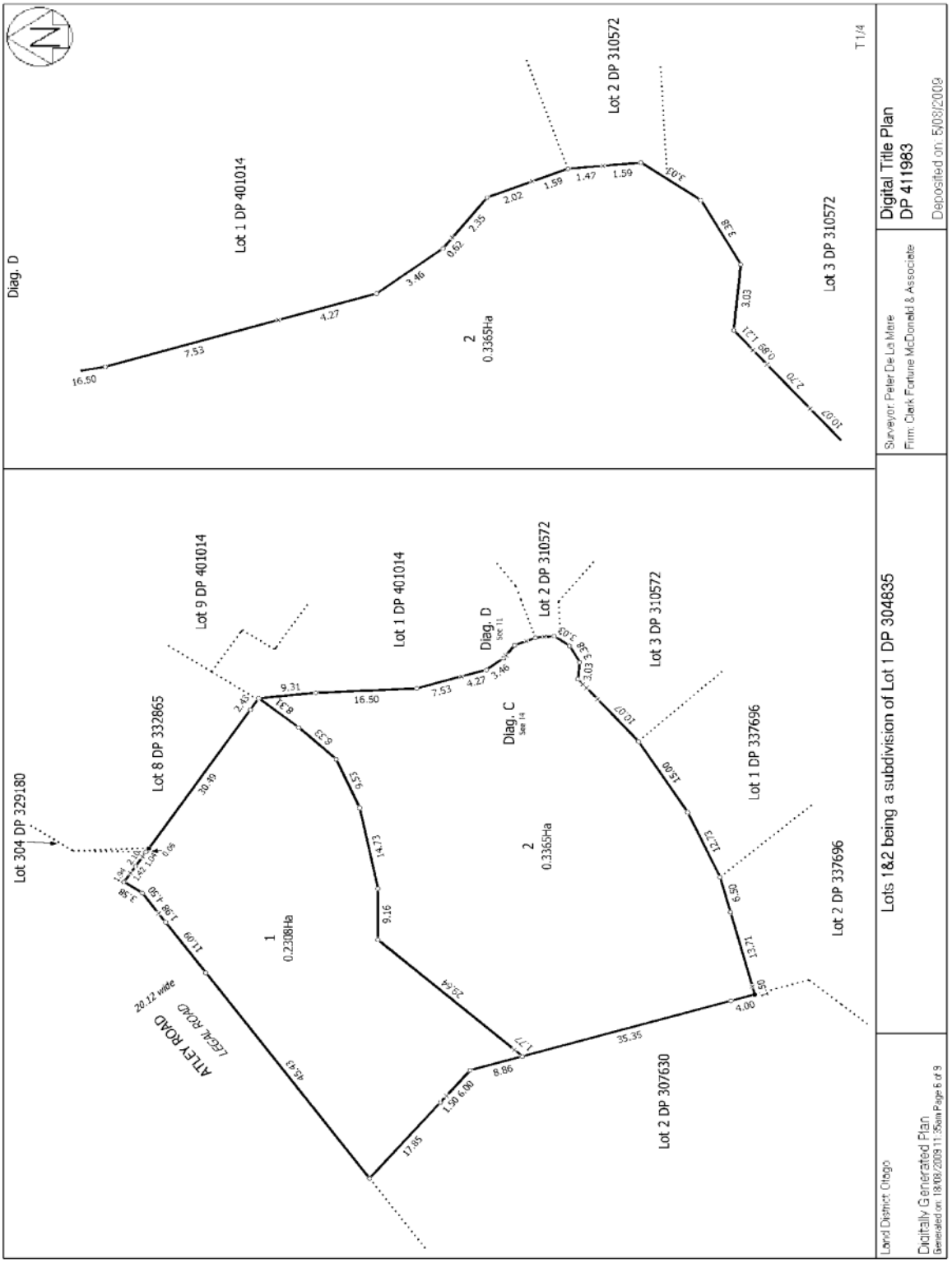
The easements created by Easement Instrument 8107012.4 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way over part marked E, EA, K, F, FA, G, GA, GB, L, LA, LB, I, J, M, MA DP 411983 created by Easement Instrument 8107012.5 - 5.8.2009 at 9:02 am

The easements created by Easement Instrument 8107012.5 are subject to Section 243 (a) Resource Management Act 1991

10039373.2 Mortgage to Westpac New Zealand Limited - 24.4.2015 at 10:50 am

Identifier **444491**



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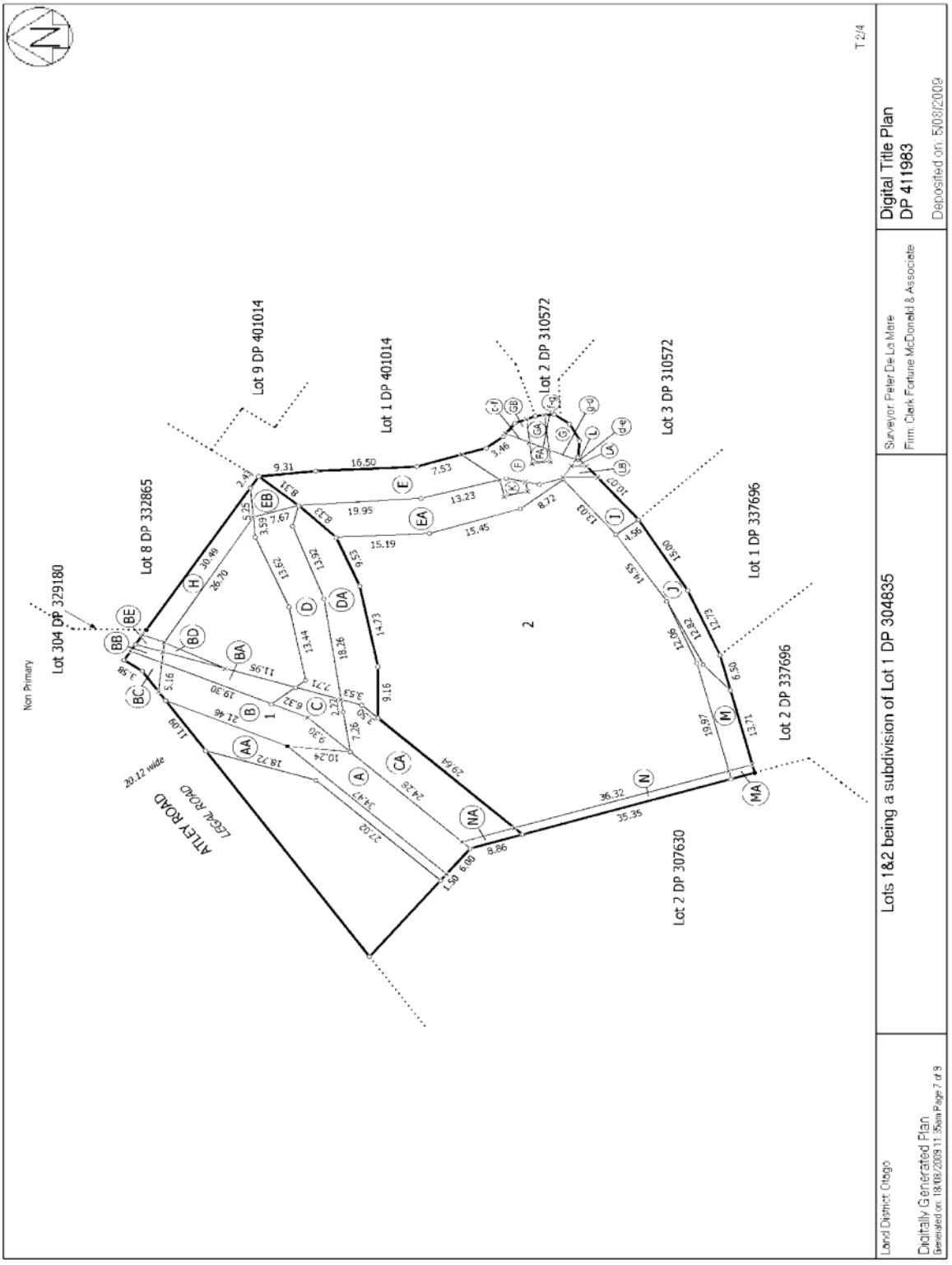

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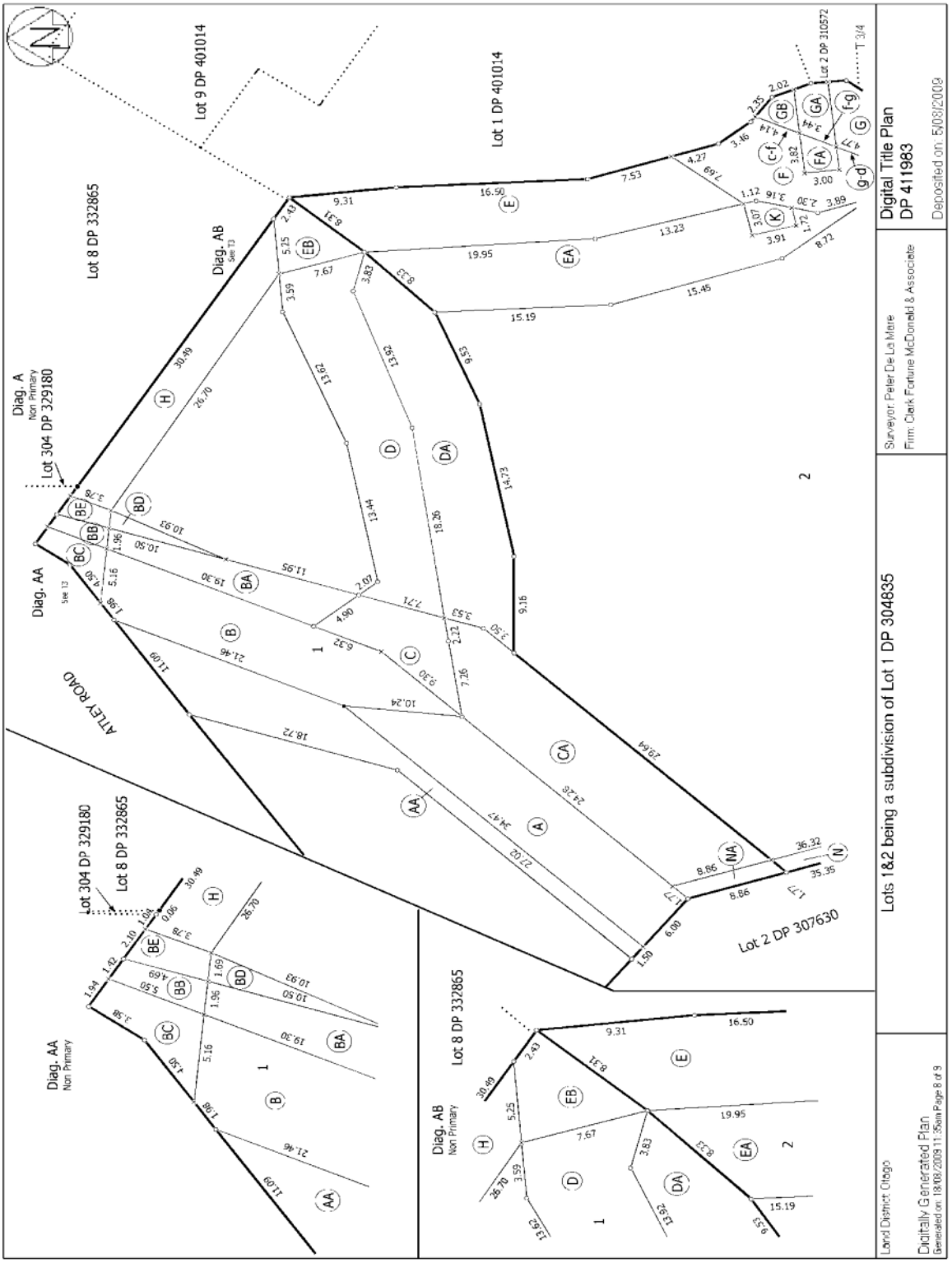

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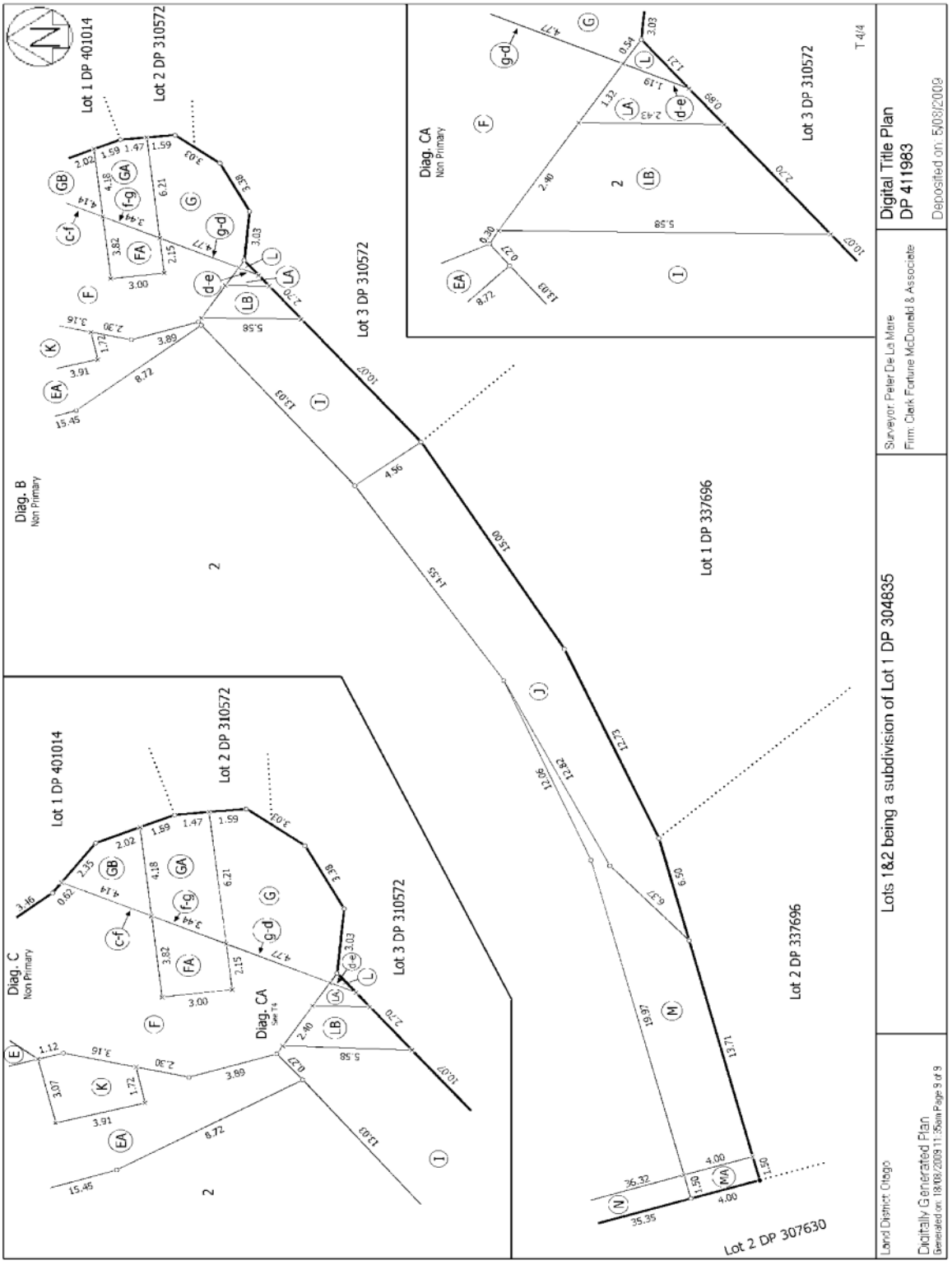


IN THE MATTER OF Section 221 of the Resource Management Act 1991.

AND

IN THE MATTER OF of an Application for Subdivision Consent by M & J Murphy.

CONSENT NOTICE

BACKGROUND

A. M & J Murphy of Queenstown have applied to the Queenstown Lakes District Council pursuant to provisions of the Resource Management Act 1991 for its consent to subdivide land comprised and described in Certificate of Title 19A/559 (Otago Registry) ("the land").

B. Council has granted consent (RM010189) to the proposed subdivision subject to certain conditions which are required to be complied with on a continuing basis by the Owner of the land being those conditions specified in the Operative Part hereof.

OPERATIVE PART

The following conditions pertaining to this Consent Notice are to be registered against the titles of the following allotments:-

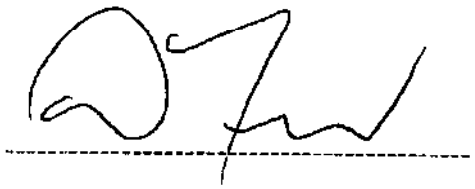
(a) Lot 1, D.P.304835 (C.T.19198)
(b) Lot 2, D.P.304835 (C.T.19199)
(c) Lot 3, D.P.304835 (C.T. 19200)

CONDITIONS

a) At the time a dwelling is erected on Lots 1 to 3 (inclusive), domestic water and fire fighting storage is to be provided by a standard 23,000 litre tank. Of this total capacity, a minimum of 14,000 litres shall be maintained as a static fire fighting reserve. A fire fighting connection is to be located within 90 metres of any proposed building on the site. The connection shall have a hardstand area adjacent to it to allow a fire service appliance to park on it. Access shall be maintained at all times to the hardstand area.

Dated this 17th day of January 2002

SIGNED for and on behalf
of the QUEENSTOWN LAKES
DISTRICT COUNCIL by its
Principal Administrative Officer



View Instrument Details

Instrument No.	8107012.2
Status	Registered
Date & Time Lodged	05 Aug 2009 09:02
Lodged By	Bendikson, Heidi Elise
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Computer Registers	Land District
444491	Otago

Annexure Schedule: Contains 2 Pages.

Signature

Signed by Kerry Amanda ODonnell as Territorial Authority Representative on 04/08/2009 02:48 PM

*** **End of Report** ***

CONSENT NOTICE PURSUANT TO SECTION 221 RESOURCE MANAGEMENT ACT 1991

IN THE MATTER of Section 221 of the Resource Management Act 1991

A N D

IN THE MATTER of subdivision consent by M & J MURPHY, namely RM040196

BACKGROUND

A. M & J MURPHY of Queenstown have applied to the Queenstown Lakes District Council pursuant to provisions of the Resource Management Act 1991 for its consent to subdivide land comprised and described in Certificate of Title 19198 (Otago Registry) ("the land").

B. Council has granted consent to the proposed subdivision subject to certain conditions which are required to be complied with on a continuing basis by the Owner of the land being those conditions specified in the Operative Part hereof.

OPERATIVE PART

The following condition pertaining to this Consent Notice is to be registered against the titles of the following allotments.

Lot 2 D.P.411983

a) At the time a dwelling is erected on Lot 2, the owner for the time being shall construct a vehicle crossing to the lot in accordance with Council's standards at that time.

SIGNED for and on behalf)
Of the **QUEENSTOWN LAKES**)
DISTRICT COUNCIL by its)
Authorised Officer)

DATED the 21st day of May 2009

canyon ridge

resource consent set

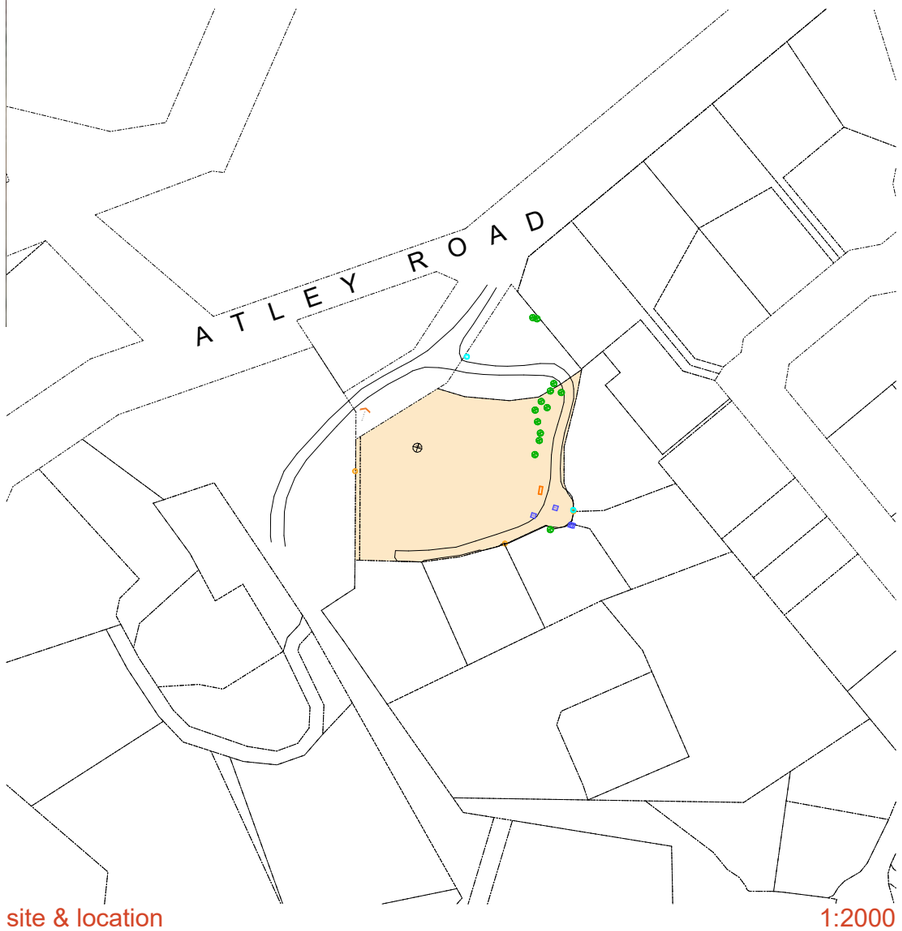
atley road
arthurs point

sheet	drawing
RC.01	plan: existing site & location
RC.02	plan: proposed site
RC.03	plan: lower
RC.04	plan: ground
RC.05	plan: first
RC.06	site elevations: north & east
RC.07	site elevations: south & west
RC.08	site sections: A & B
RC.09	recession plane sections: RP01 - RP03
RC.10	recession plane sections: RP04 - RP05
RC.11	recession plane sections: RP06 - RP07
RC.12	recession plane sections: RP08 - RP10
RC.13	unit plans: type A

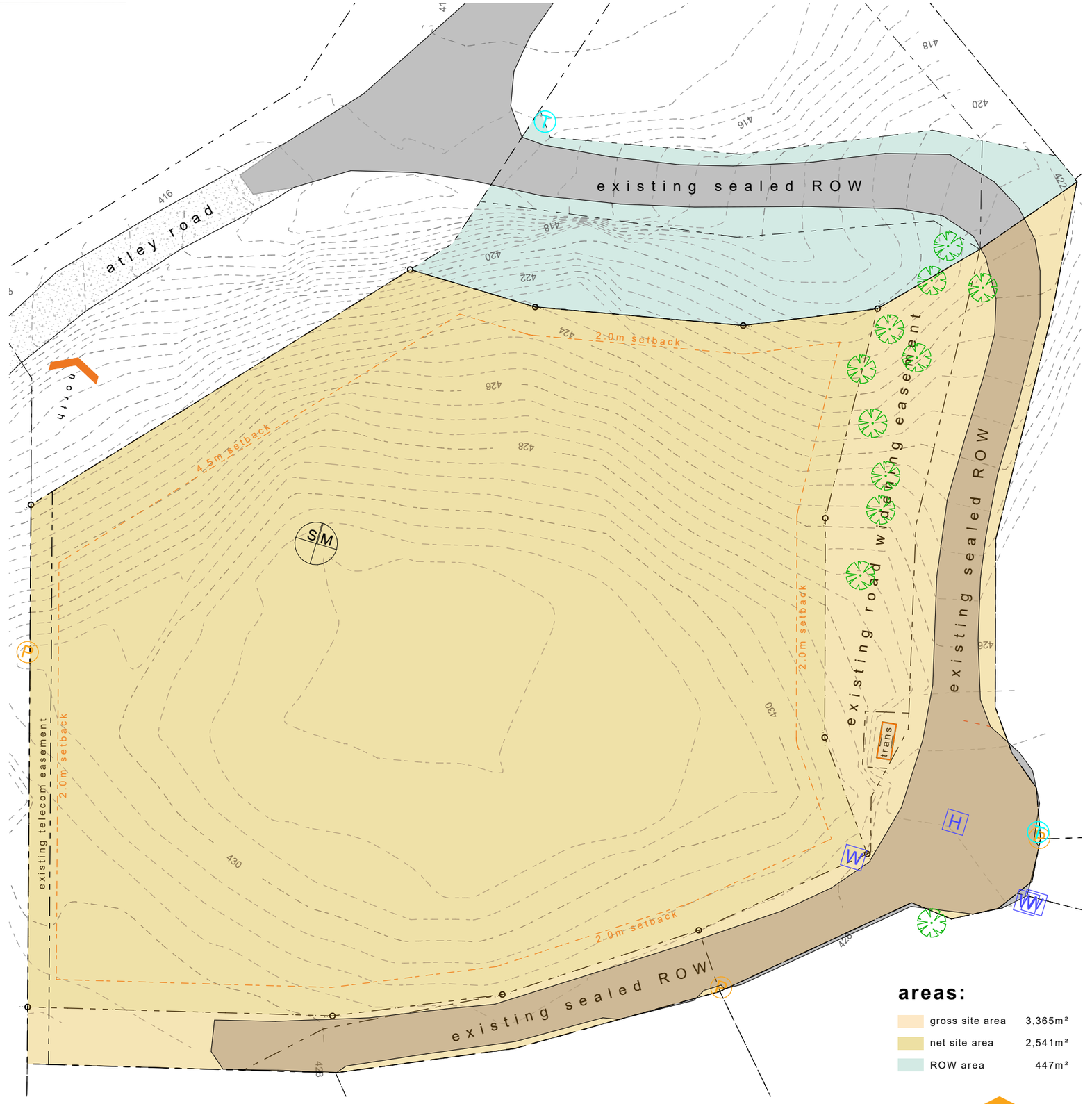
sheet	drawing
RC.14	unit elevations: type A
RC.15	unit elevations: type AB & AC
RC.16	unit elevations: type AD & AE
RC.17	unit plans: type B
RC.18	unit elevations: type B
RC.19	unit plans: type C
RC.20	unit elevations: type C
RC.21	unit plans: type D
RC.22	unit elevations: type D
RC.23	3d view: south boundary
RC.24	3d view: northwest boundary
RC.25	3d view: north boundary

FOLEYGROUP

site & location scale 1 : 10000



site & location 1:2000



areas:

gross site area	3,365m²
net site area	2,541m²
ROW area	447m²

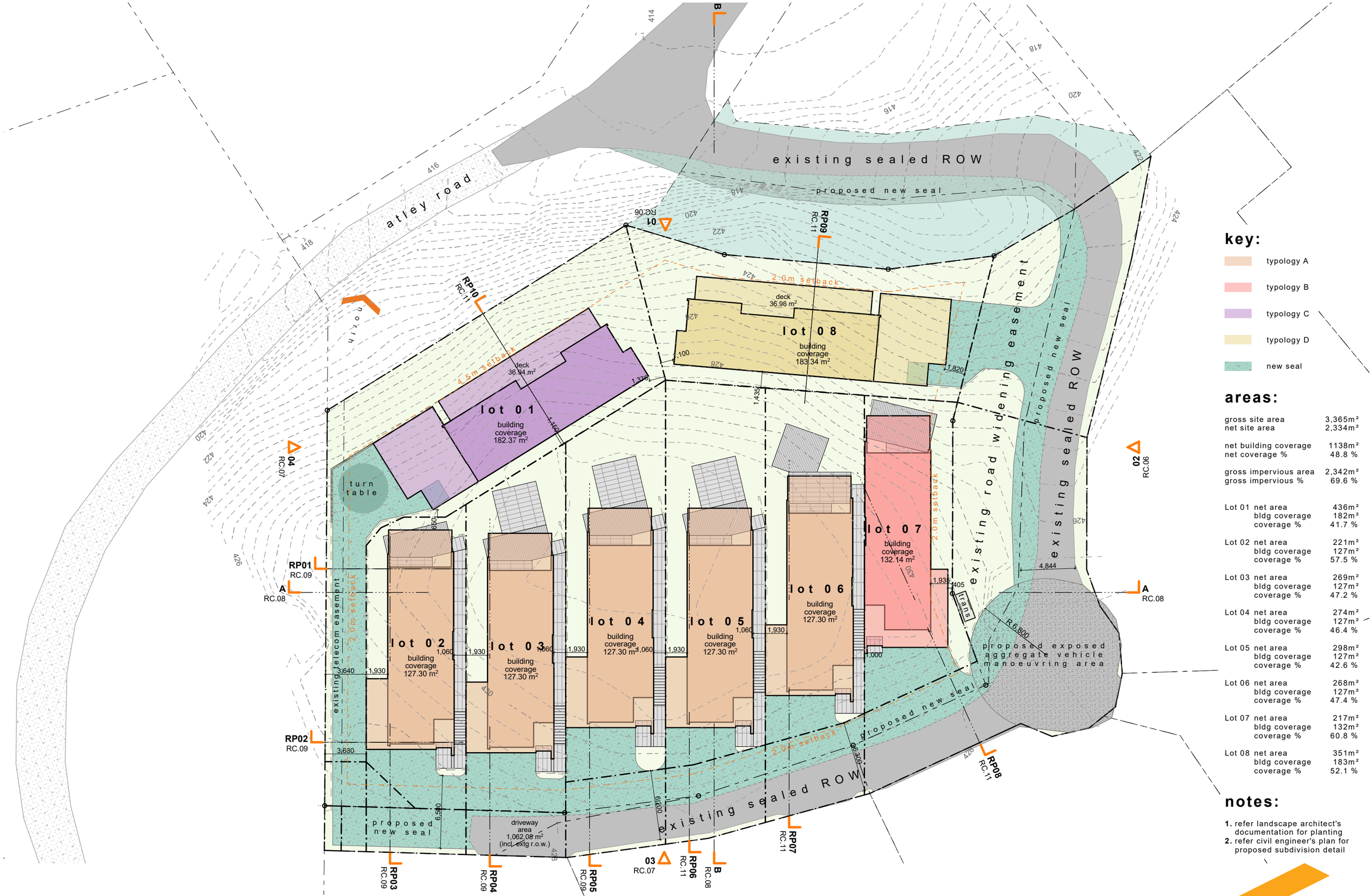
FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

plan: existing site & location

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.01
scale: 1:300
5/07/2021



key:

- typology A
- typology B
- typology C
- typology D
- new seal

areas:

gross site area	3,365m²
net site area	2,334m²
net building coverage	1138m²
net coverage %	48.8 %
gross impervious area	2,342m²
gross impervious %	69.6 %
Lot 01 net area	436m²
bldg coverage	182m²
coverage %	41.7 %
Lot 02 net area	221m²
bldg coverage	127m²
coverage %	57.5 %
Lot 03 net area	269m²
bldg coverage	127m²
coverage %	47.2 %
Lot 04 net area	274m²
bldg coverage	127m²
coverage %	46.4 %
Lot 05 net area	298m²
bldg coverage	127m²
coverage %	42.6 %
Lot 06 net area	268m²
bldg coverage	127m²
coverage %	47.4 %
Lot 07 net area	217m²
bldg coverage	132m²
coverage %	60.8 %
Lot 08 net area	351m²
bldg coverage	183m²
coverage %	52.1 %

notes:

1. refer landscape architect's documentation for planting
2. refer civil engineer's plan for proposed subdivision detail

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

plan: proposed site

03 377 5666 | info@foleygroup.co.nz | www.foleygroup.co.nz | 30 southwark st | po box 22 166 | christchurch 8140

RC.02
scale: 1:300
5/07/2021

2928 | Canyon Ridge | Momentum Projects

plan: lower

FOLEYGROUP architecture

03 377 5666 | info@foleygroup.co.nz | www.foleygroup.co.nz | 30 southwark st | po box 22.166 | christchurch 8140

RC03
scale: 1:250
5/07/2021

Document Set ID: 6980723
Version: 1, Version Date: 23/08/2021

2928 | Canyon Ridge | Momentum Projects

plan: ground

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22.166 | christchurch 8140

FOLEYGROUP architecture

RC04
scale: 1250
5/07/2021

Document Set ID: 6980723
Version: 1, Version Date: 23/08/2021

key:

- typology A
- typology B
- typology C
- typology D

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

plan: first

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.05

scale: 1:250

5/07/2021

EN

north elevation

1:200

materials:

- dark profile metal tray
- natural stained vertical timber weatherboard
- natural stacked stone
- light painted plaster

EE

east elevation

1:200

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

site elevations: north & east

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.06

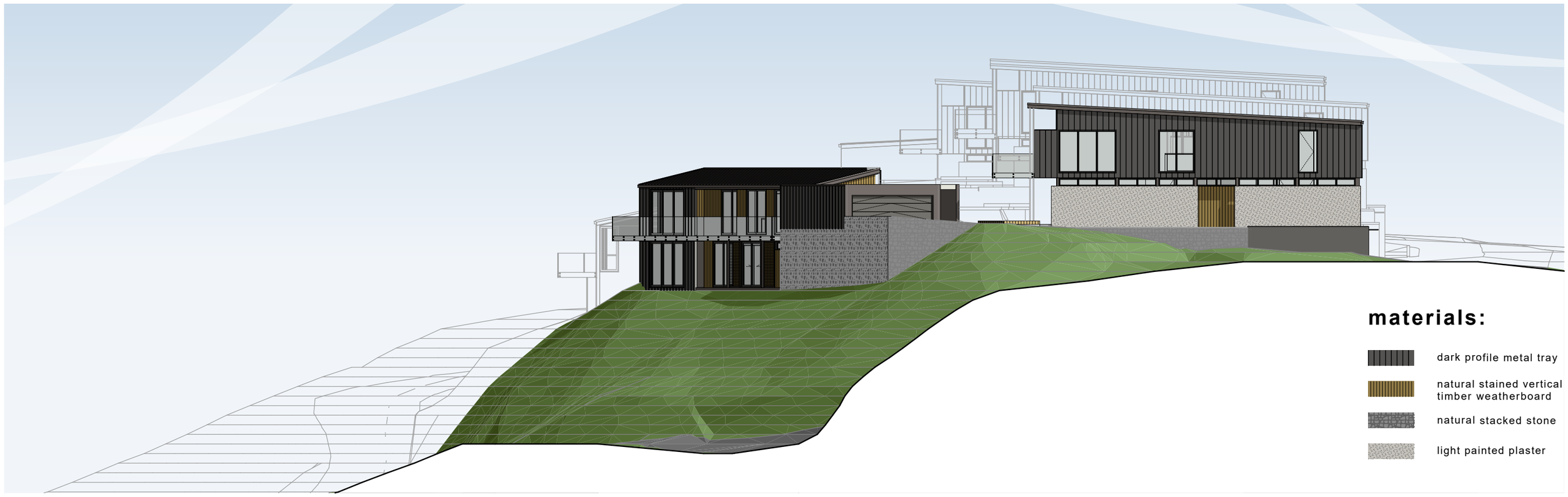
scale: 1:200

5/07/2021

ES

south elevation

1:200



EW

west elevation

1:200

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

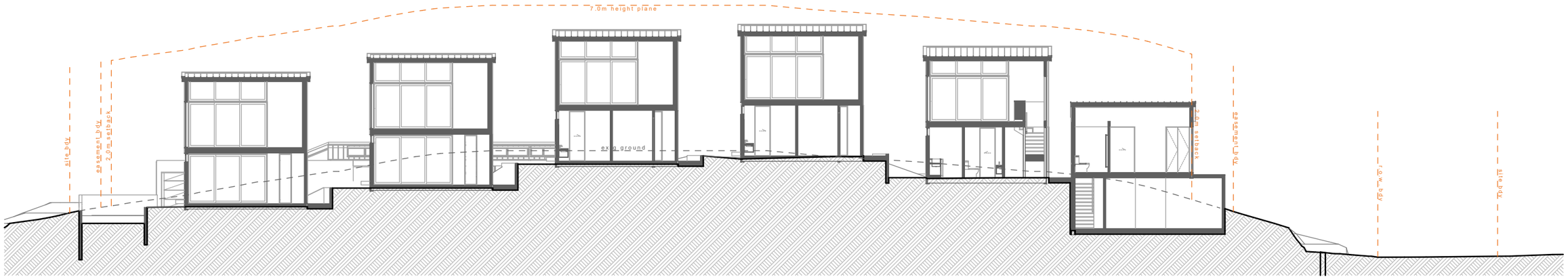
site elevations: south & west

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

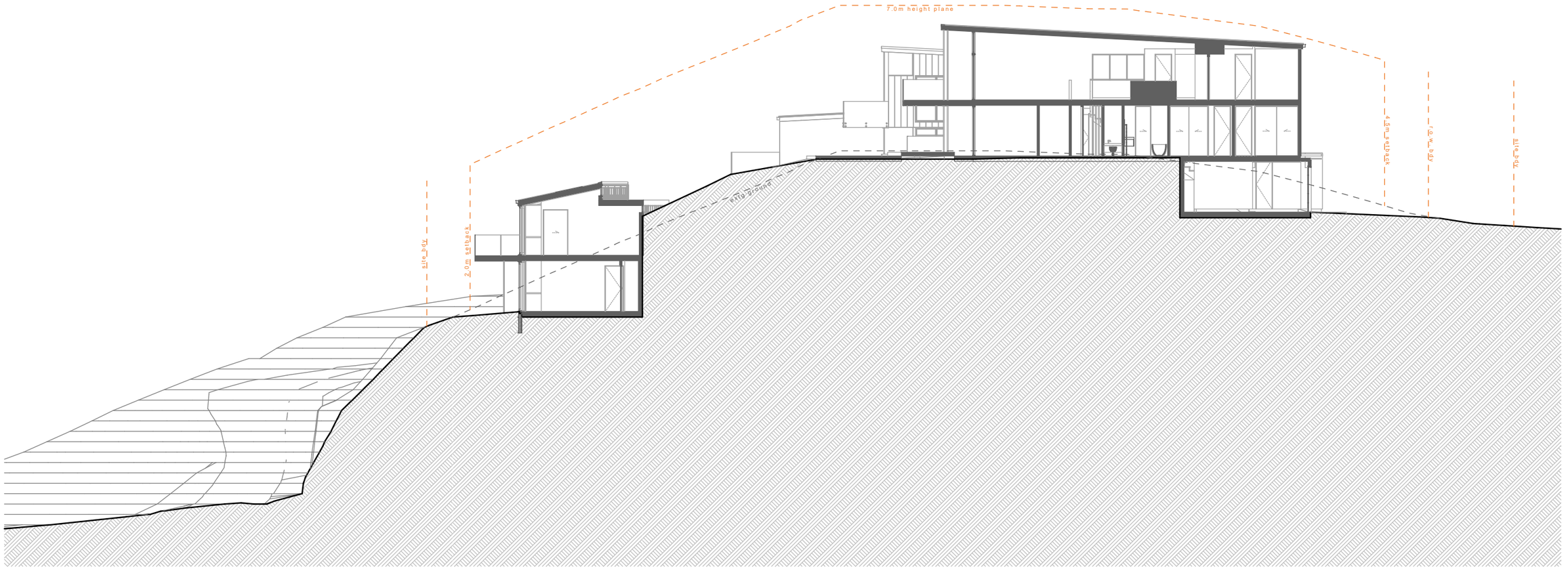
RC.07

scale: 1:200

5/07/2021



section A: across site



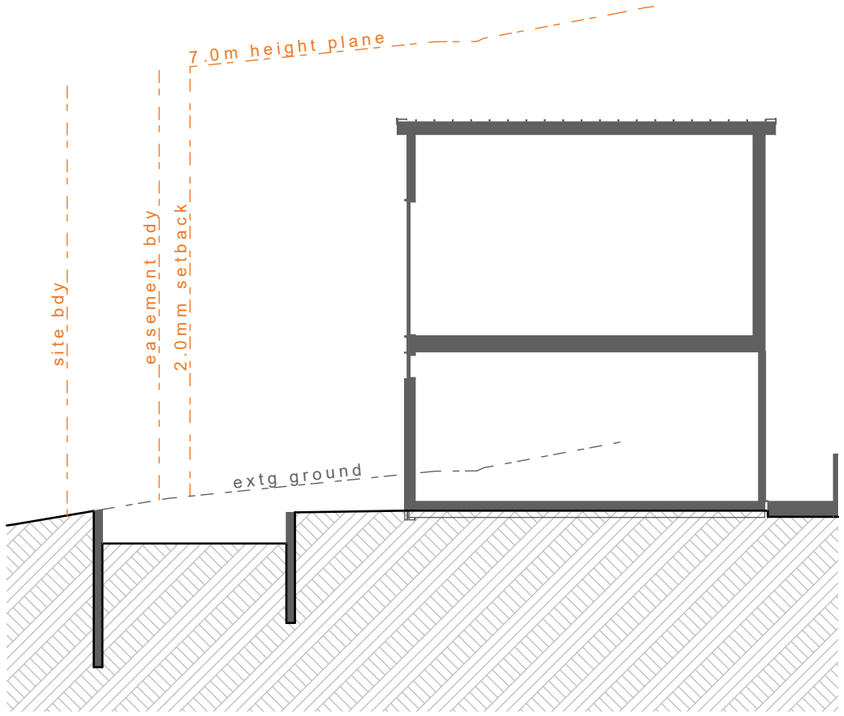
section B: through site

2928 | Canyon Ridge | Momentum Projects

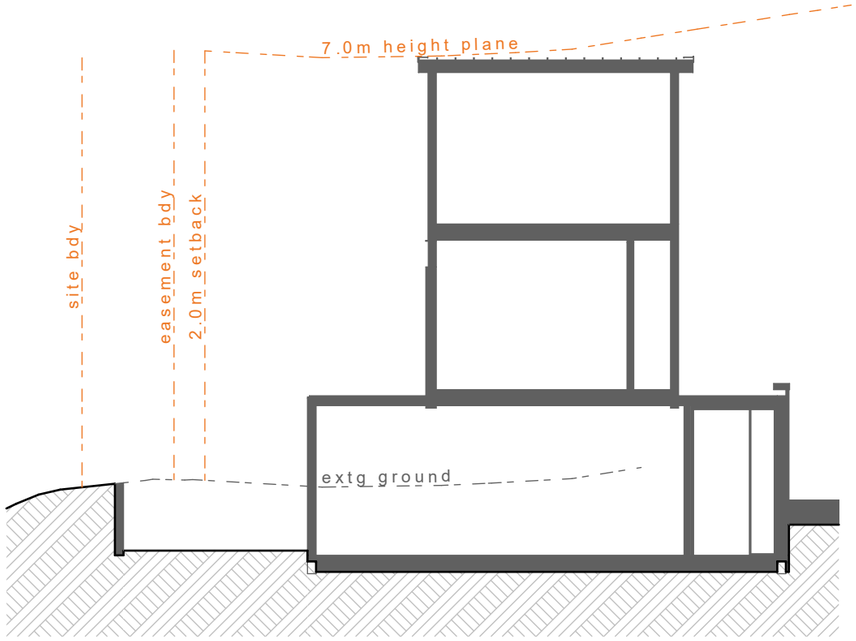
site sections: A & B

03 377 5666 | info@foleygroupconz | wwfoleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

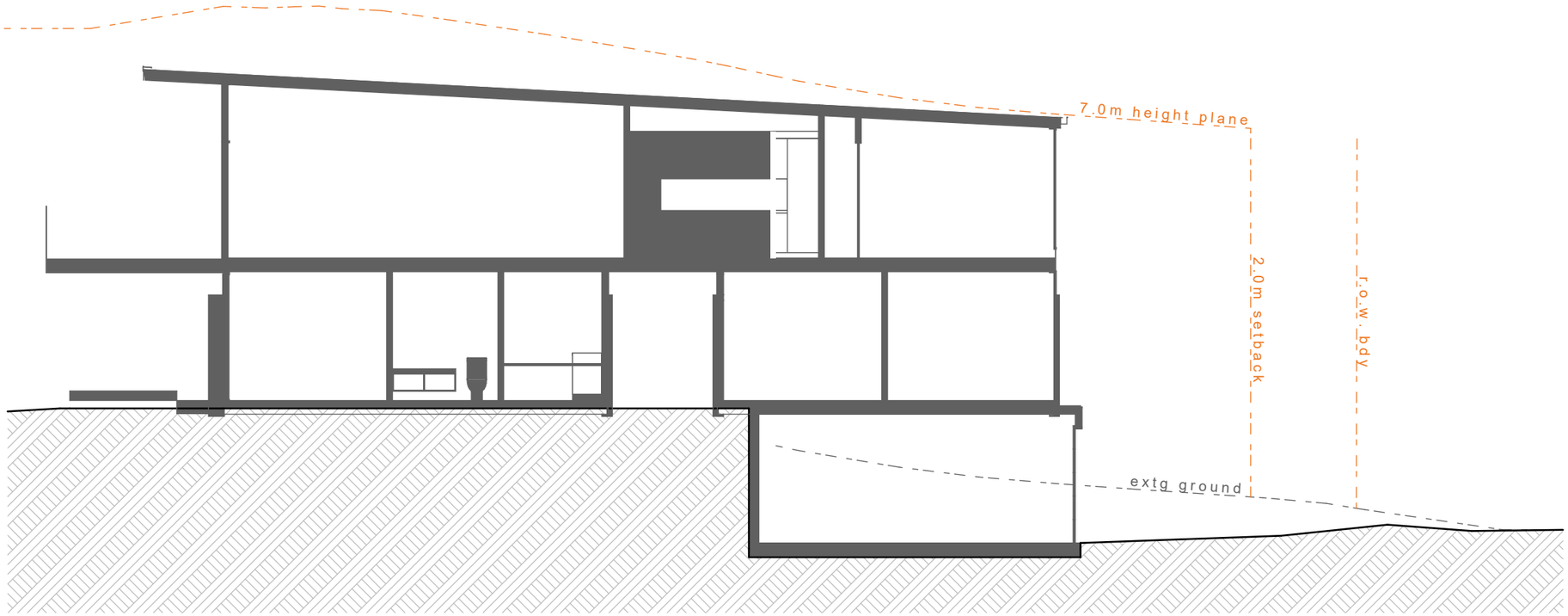
RC_08
scale: 1:200
5/07/2021



RP01



RP02



RP03

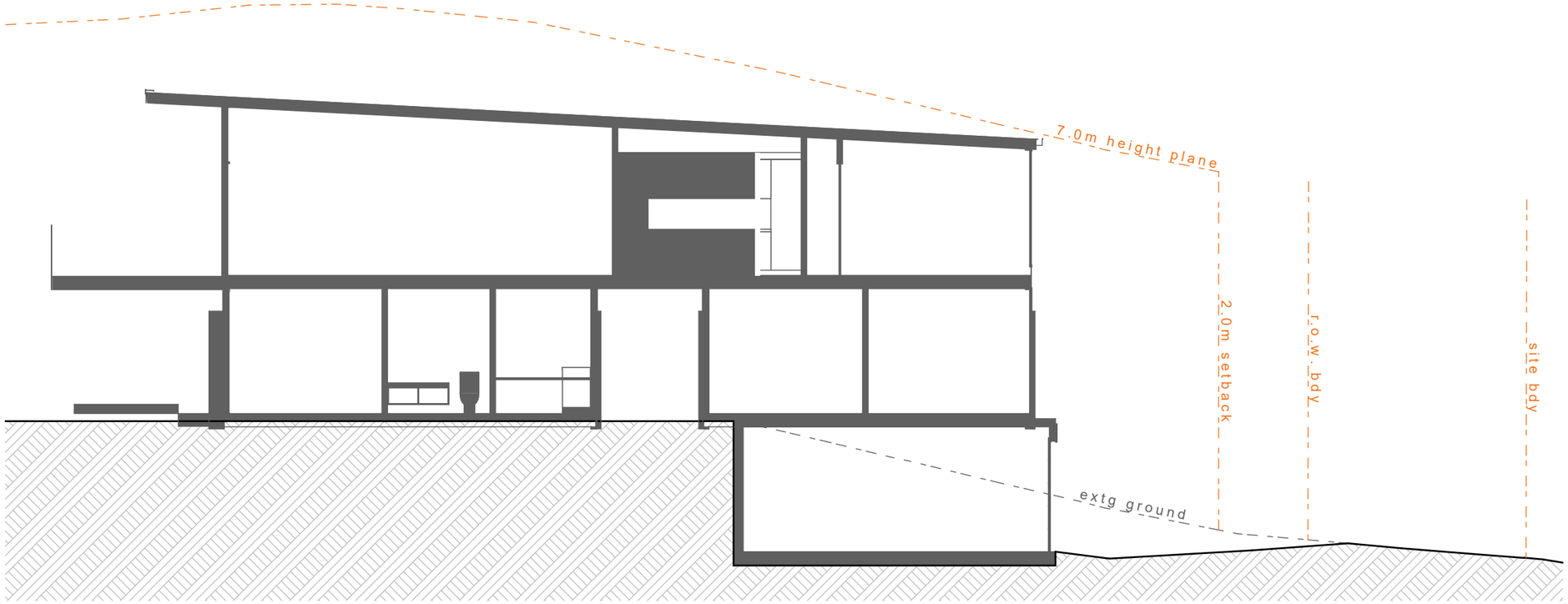
FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

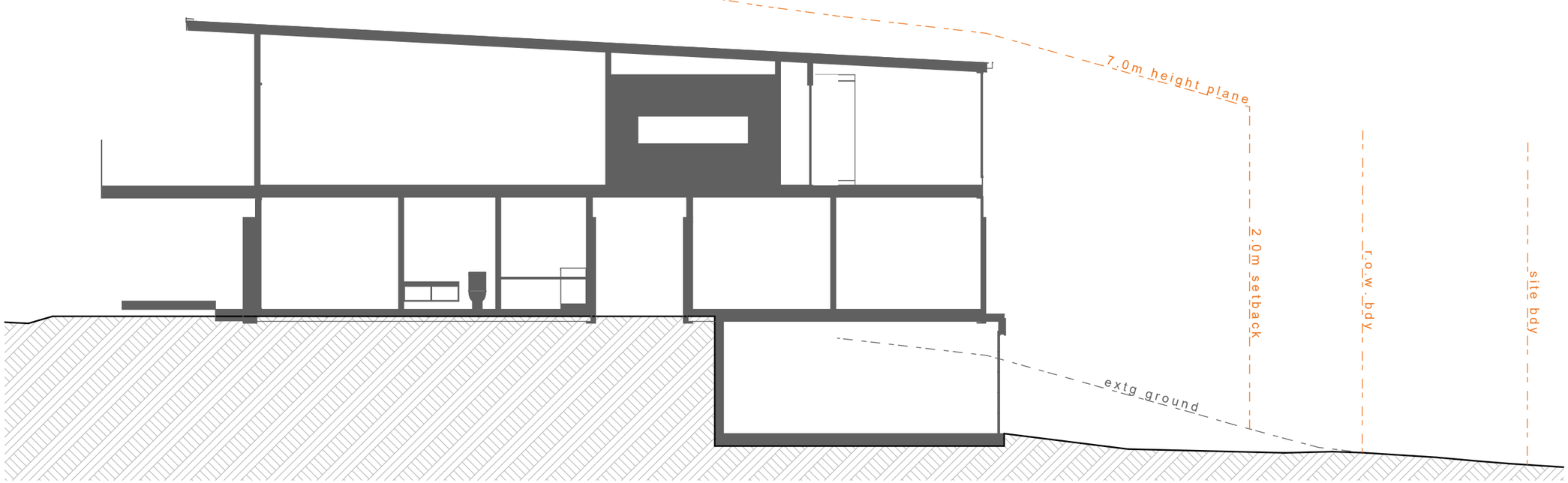
recession plane sections: RP01 _ RP03

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.09
scale: 1:100
5/07/2021



RP04



RP05

FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

recession plane sections: RP04 _ RP05

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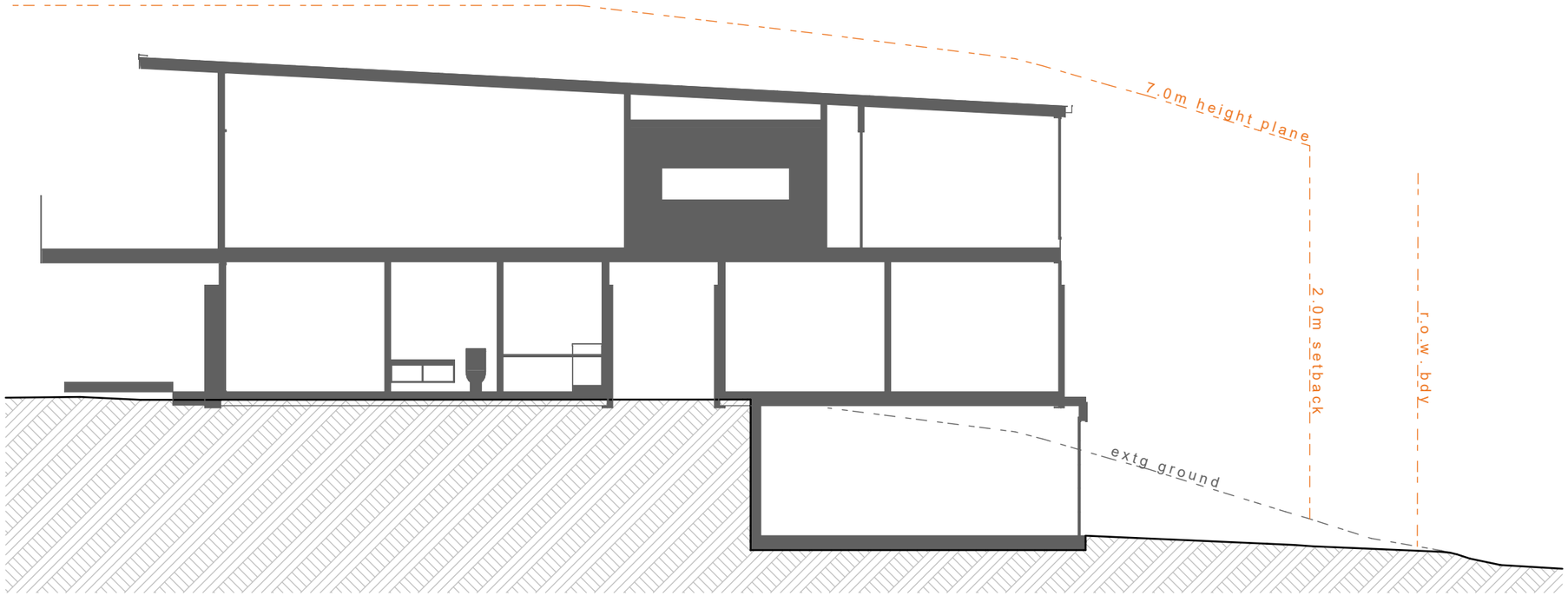
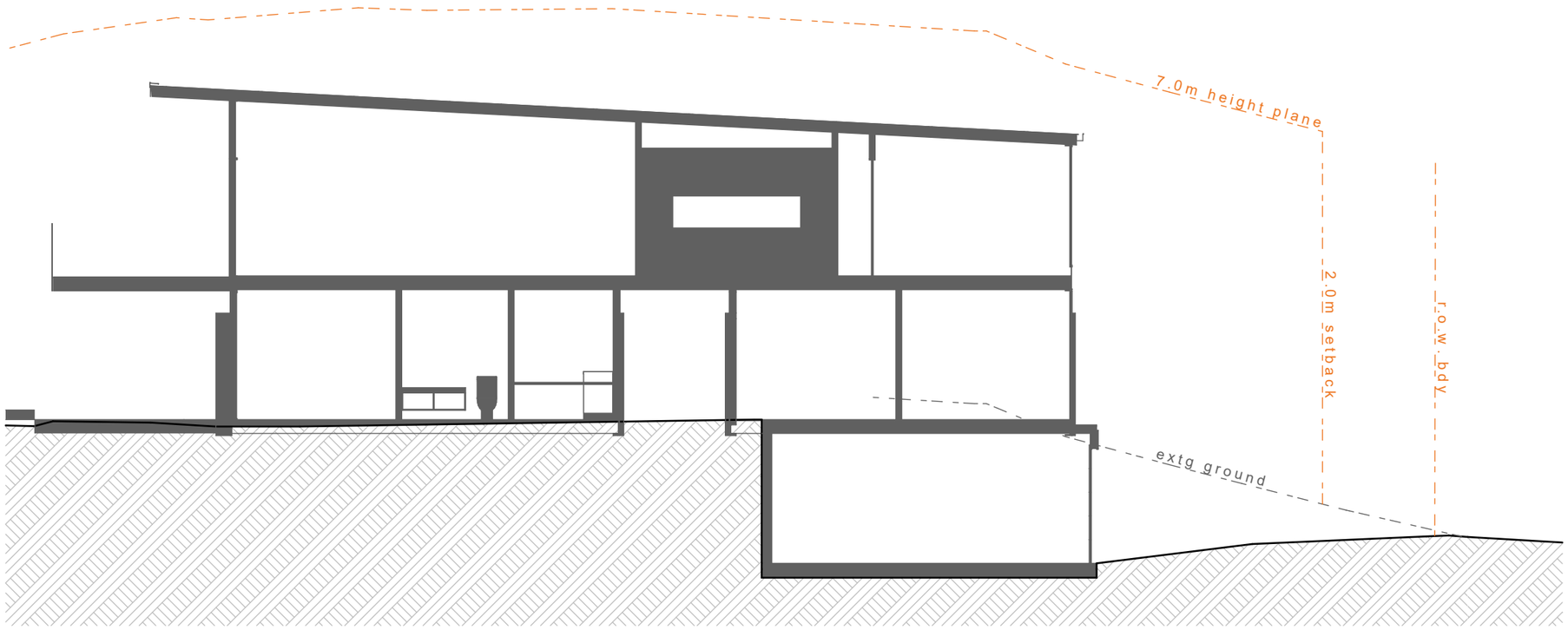
RC 10
scale: 1:100
5/07/2021



RP06



RP07

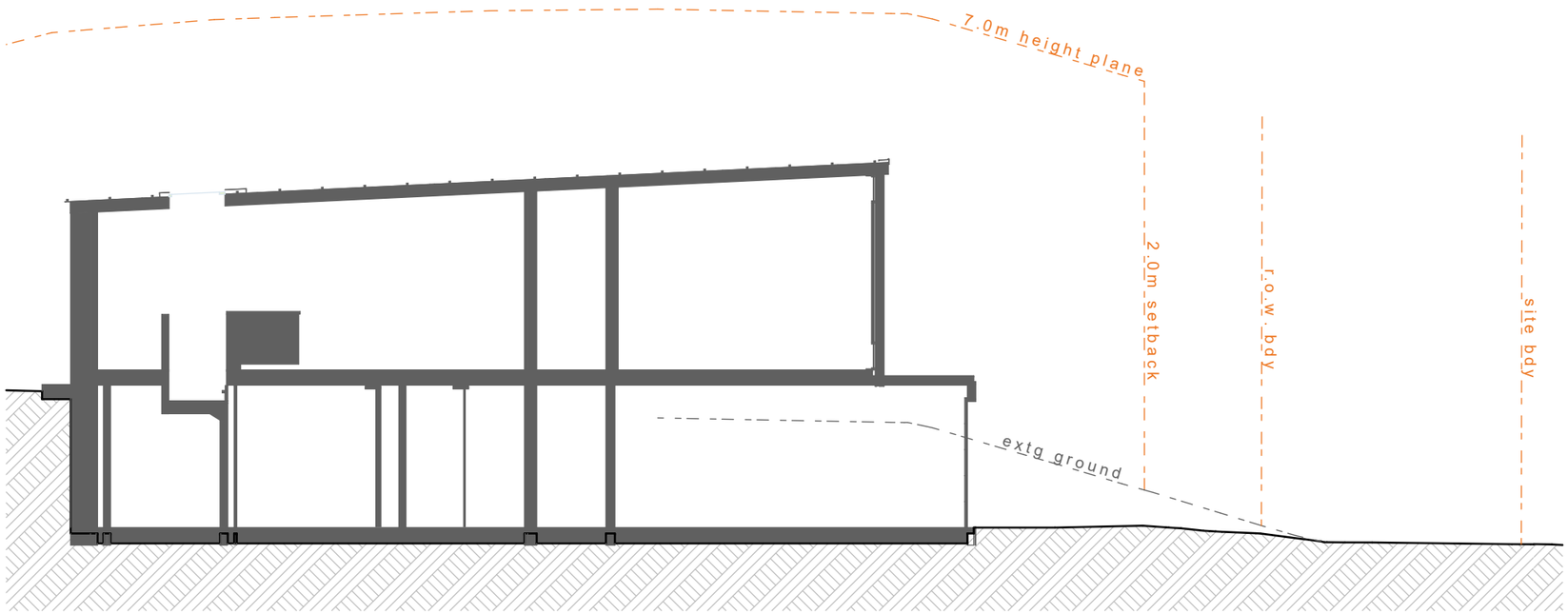
FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

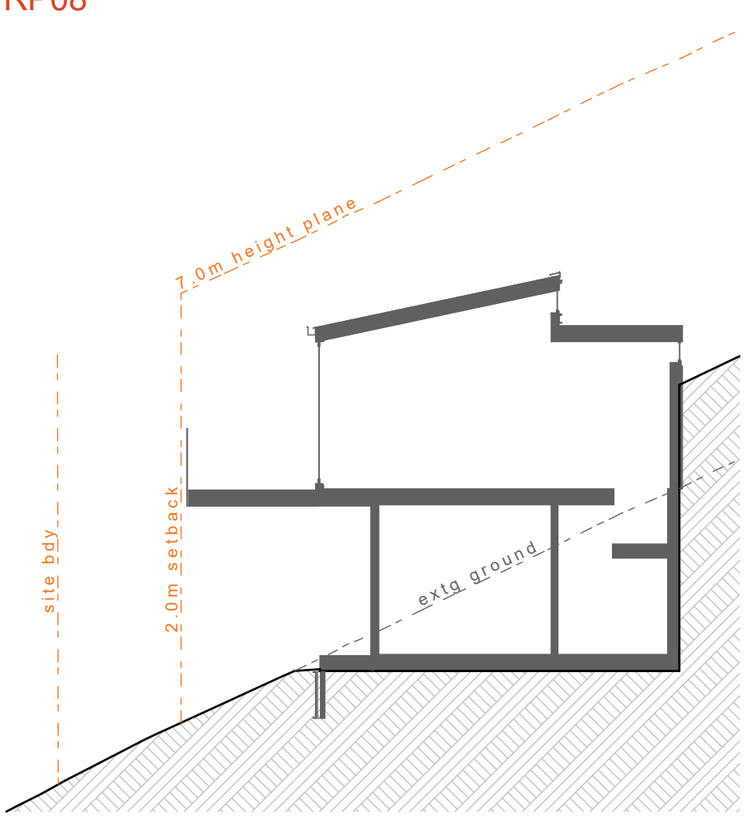
recession plane sections: RP06 _ RP07

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

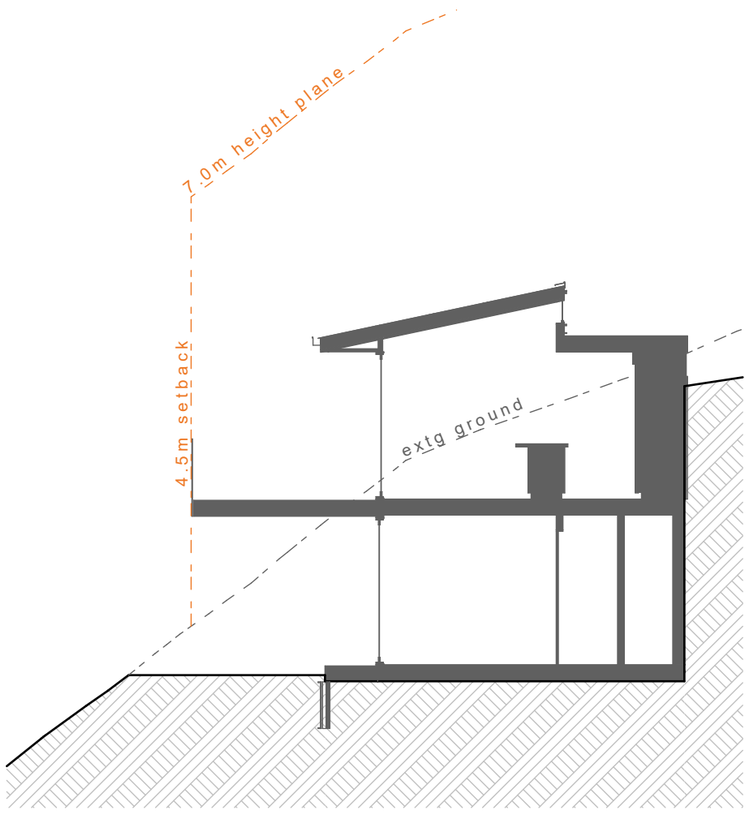
RC.11
scale: 1:100
5/07/2021



RP08



RP09



RP10

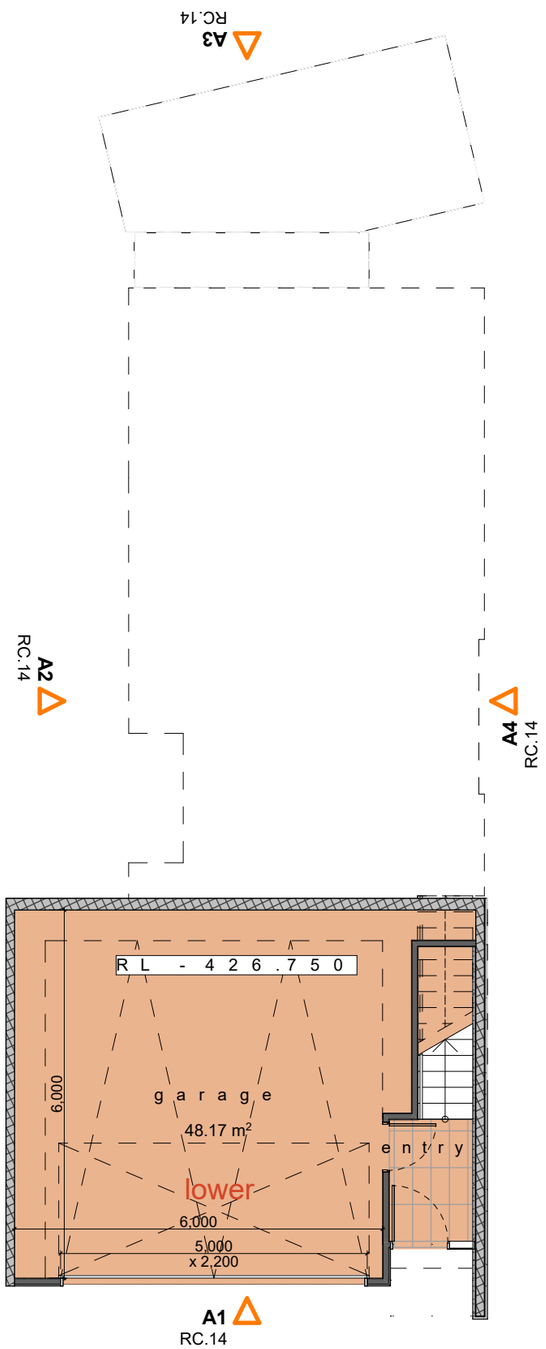
FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

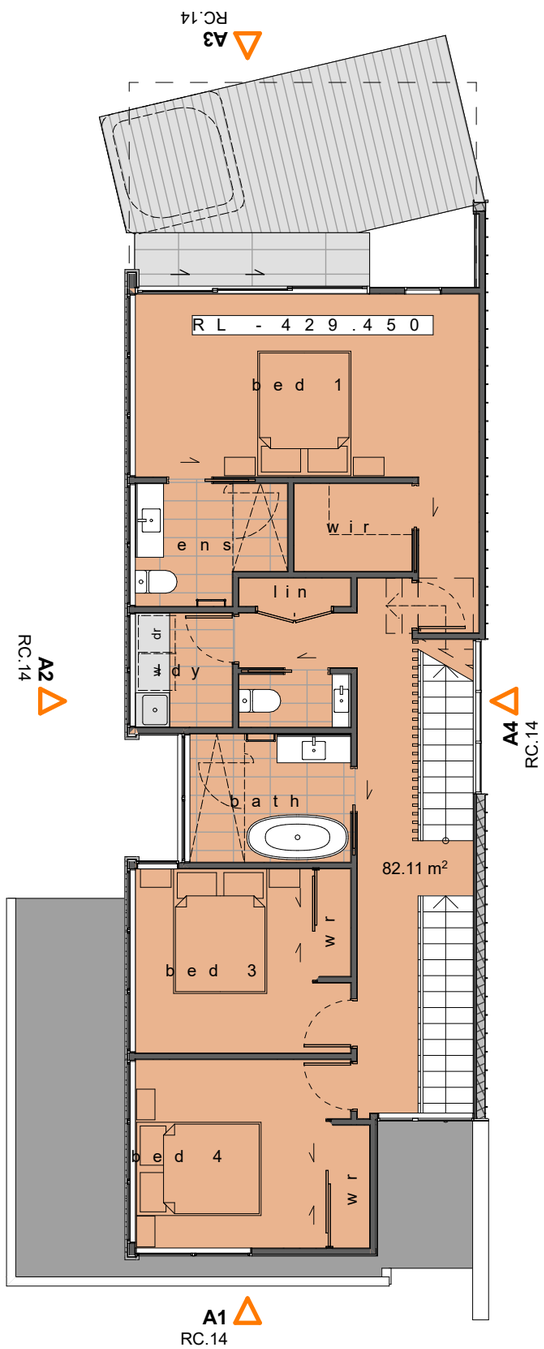
recession plane sections: RP08 _ RP10

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22.166 | christchurch 8140

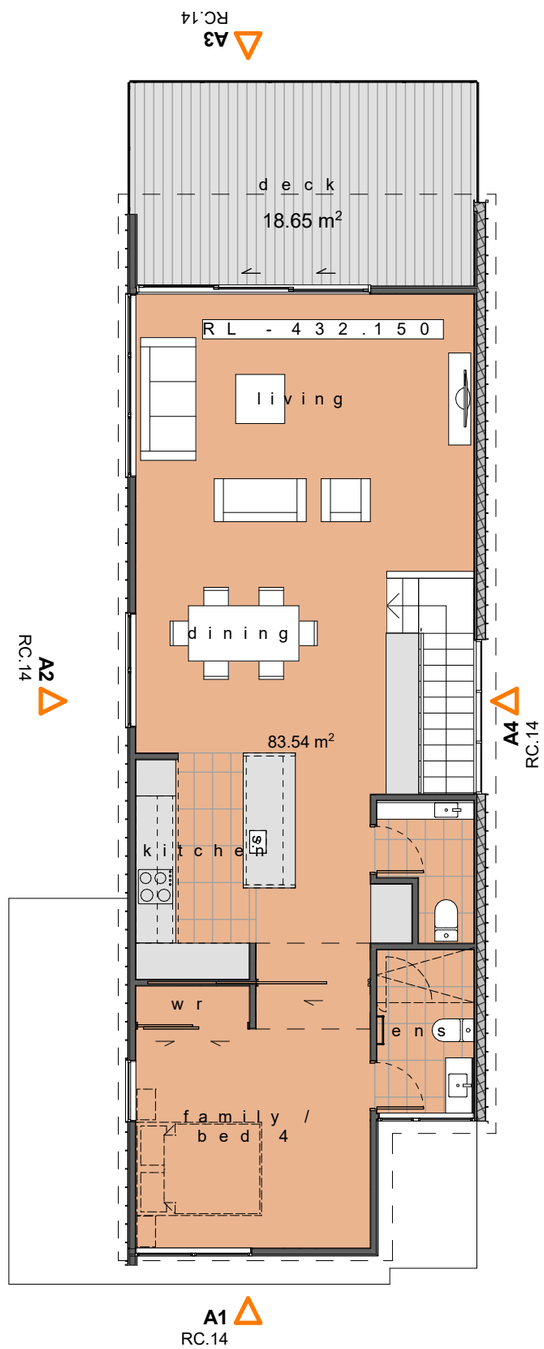
RC.12
scale: 1:100
5/07/2021



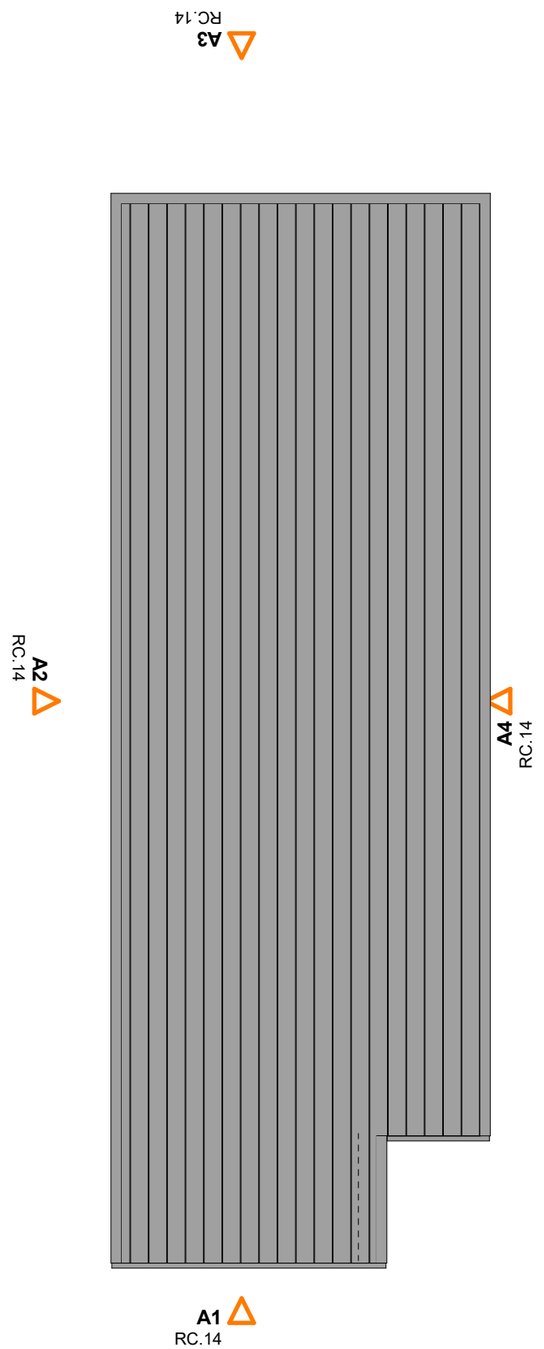
ground



first



roof



FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

unit plans: type A

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.13
scale: 1:100
5/07/2021

A1 type A south elevation

A2 type A west elevation

A3 type A north elevation

A4 type A east elevation

FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

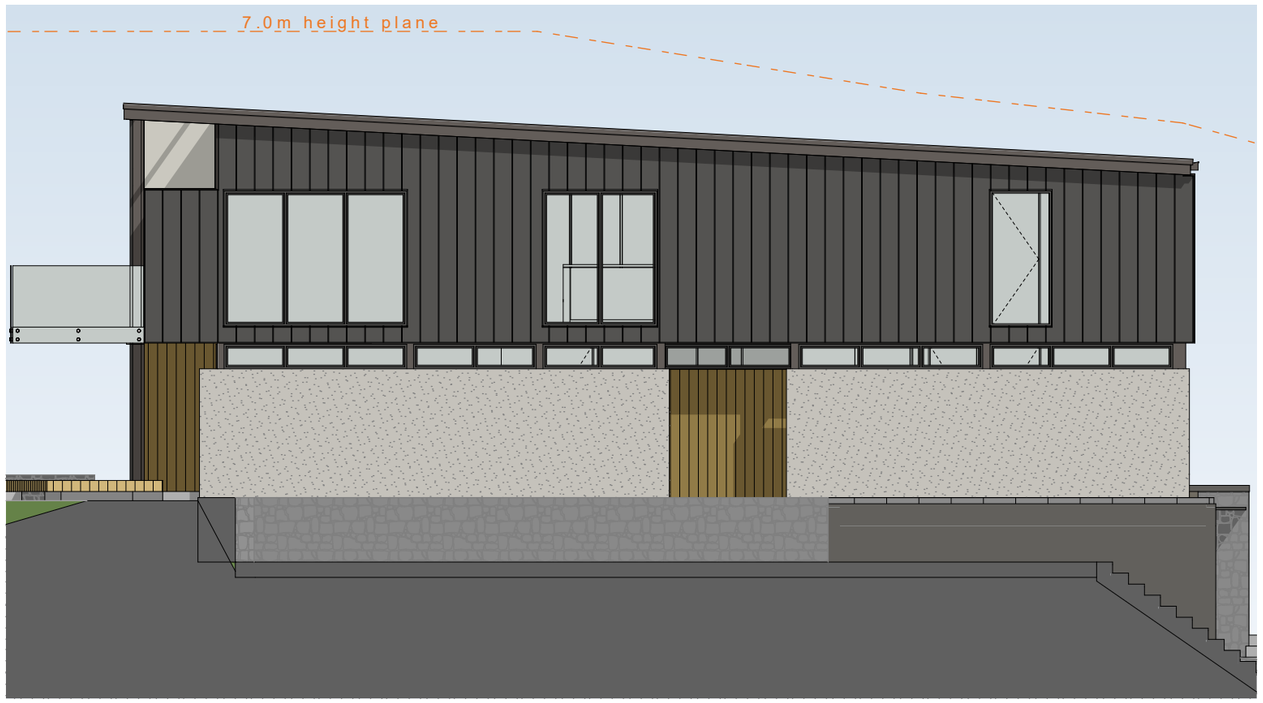
unit elevations: type A

03 377 5666 | info@foleygroupconz | wwfoleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

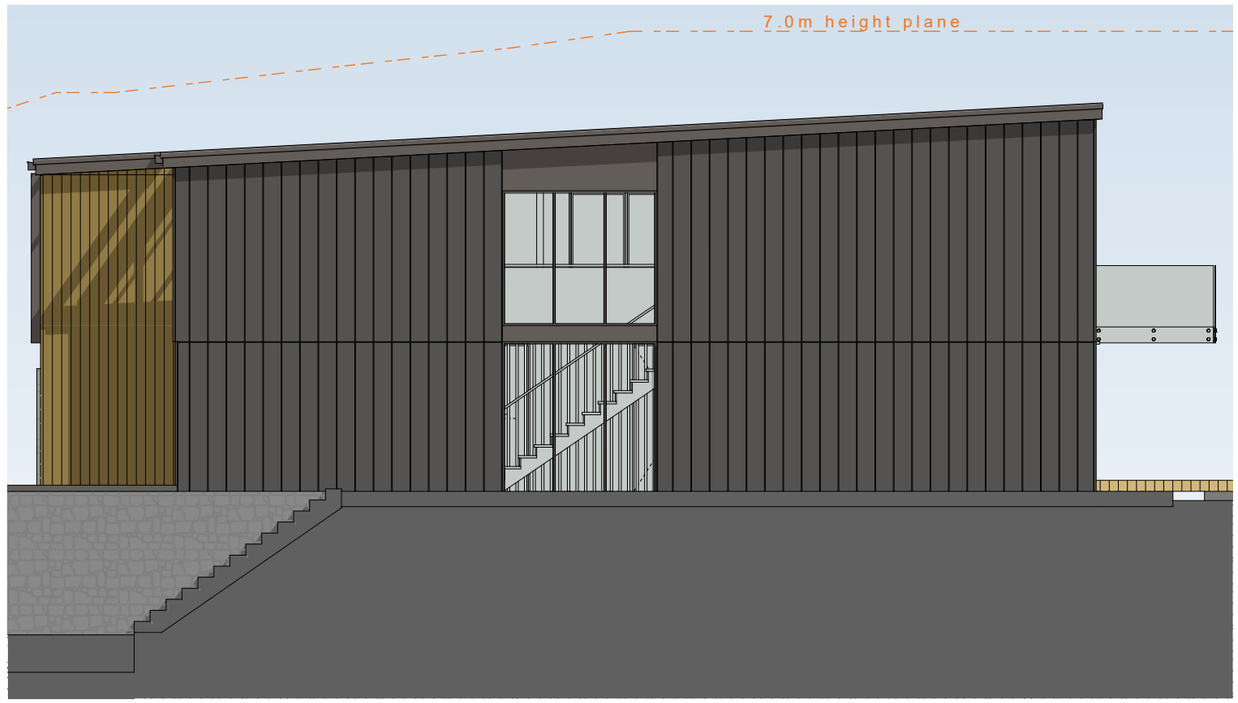
RC.14
scale: 1:100
5/07/2021

AB1 type AB west elevation

AB2 type AB east elevation



AC1 type AC west elevation



AC2 type AC east elevation

FOLEYGROUP
architecture

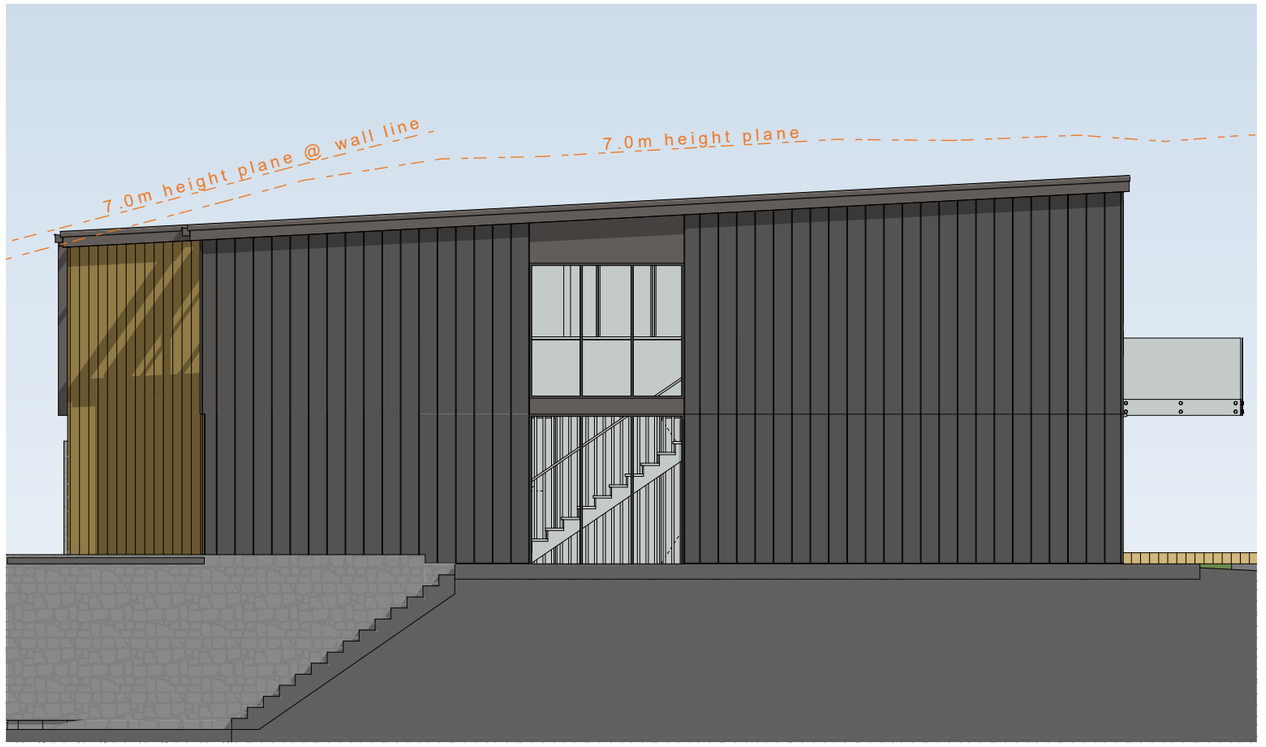
2928 | Canyon Ridge | Momentum Projects

unit elevations: type AB & AC

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

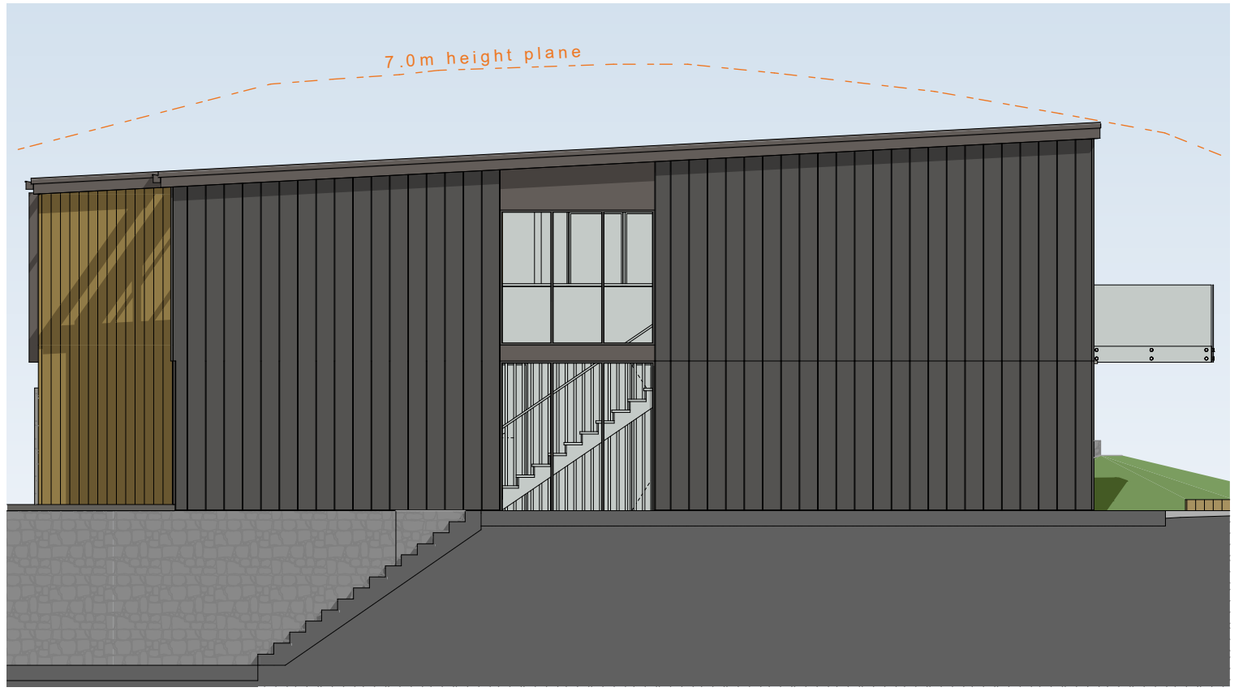
RC.15
scale: 1:100
5/07/2021

AD1 type AD west elevation



AD2 type AD east elevation

AE1 type AE west elevation



AE2 type AE east elevation

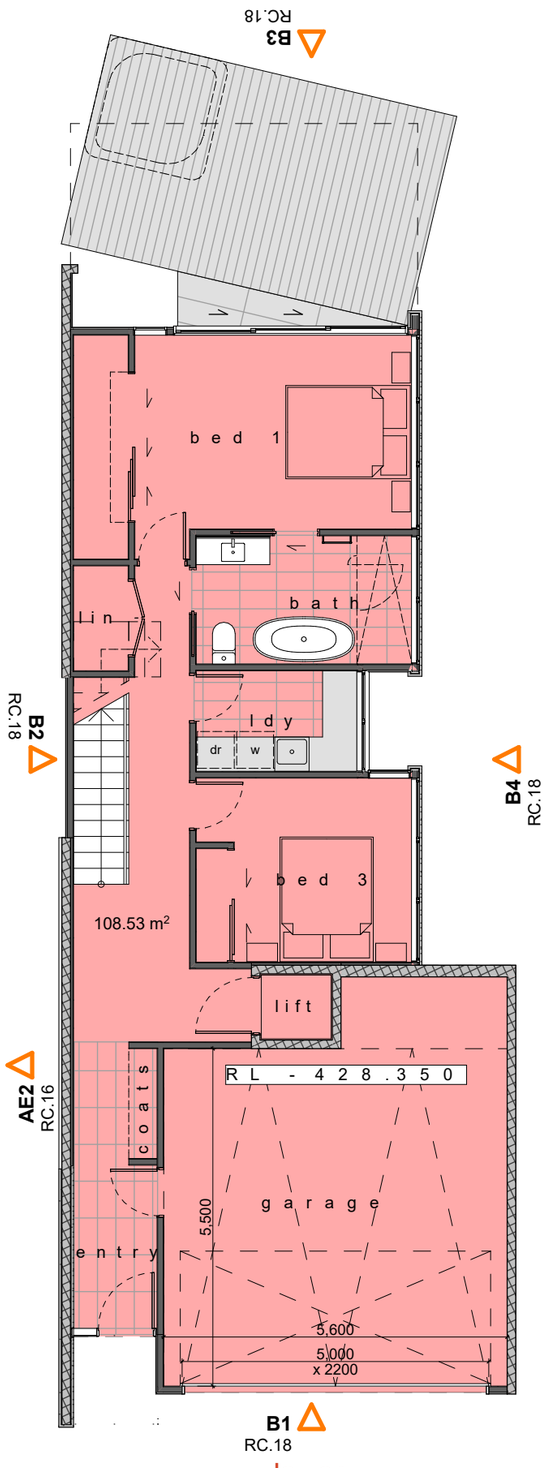
FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

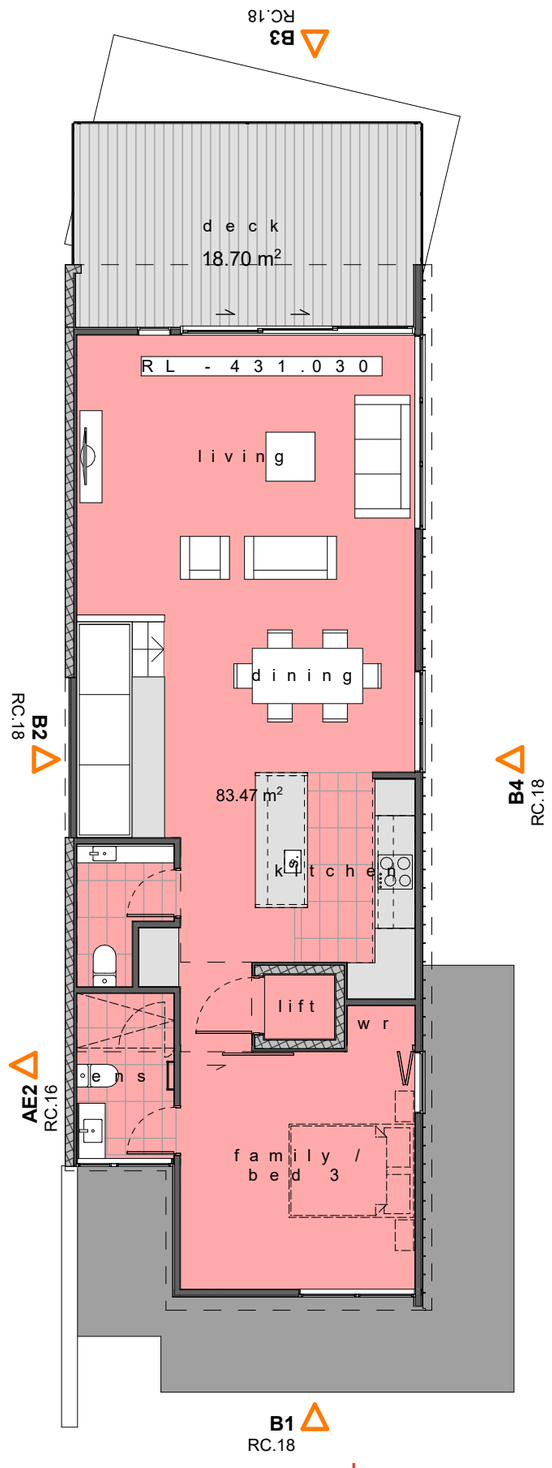
unit elevations: type AD & AE

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

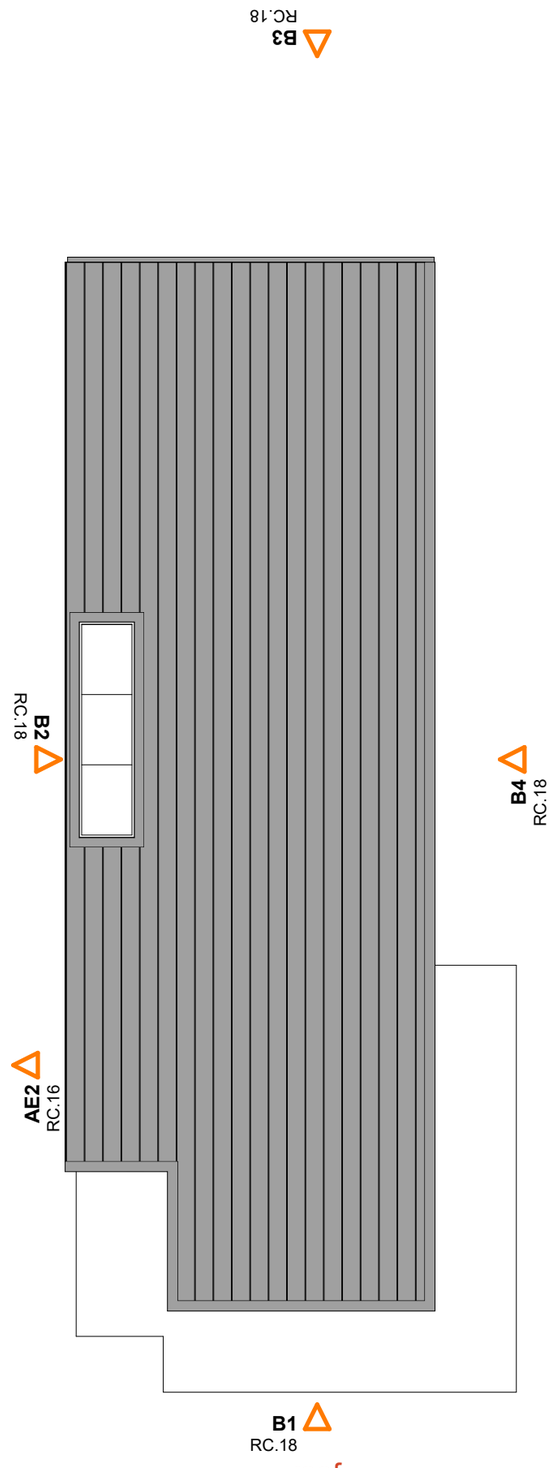
RC.16
scale: 1:100
5/07/2021



lower



ground



roof

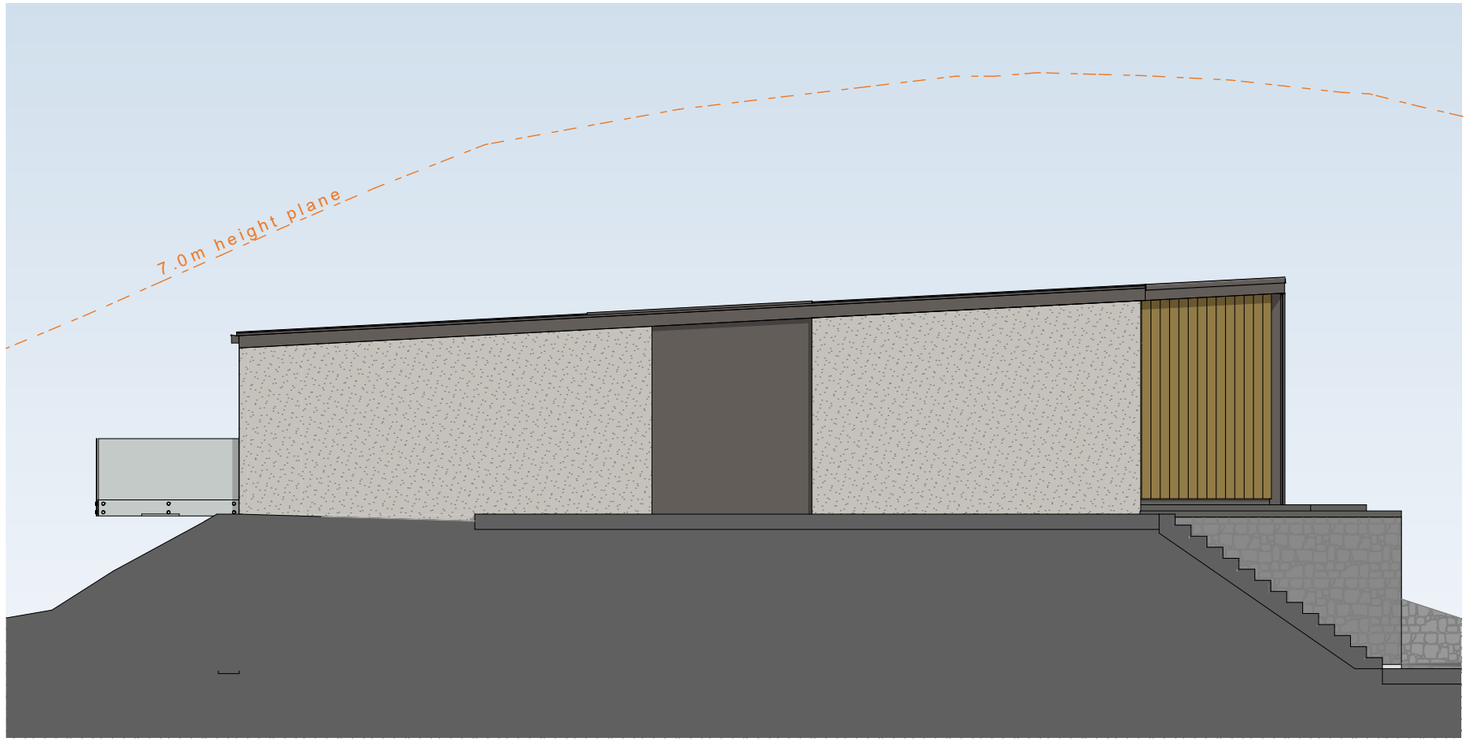
2928 | Canyon Ridge | Momentum Projects

unit plans: type B

03 377 5666 | info@foleygroupconz | wwfoleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.17
scale: 1:100
5/07/2021

B1 type B south elevation



B2 type B west elevation

B3 type B north elevation

B4 type B east elevation

FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

unit elevations: type B

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

RC.18
scale: 1:100
5/07/2021

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

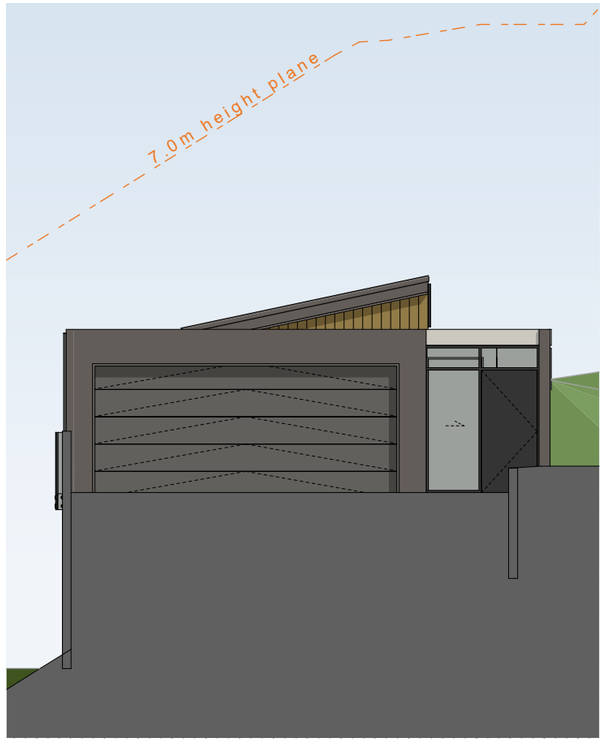
unit plans: type C

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC 19

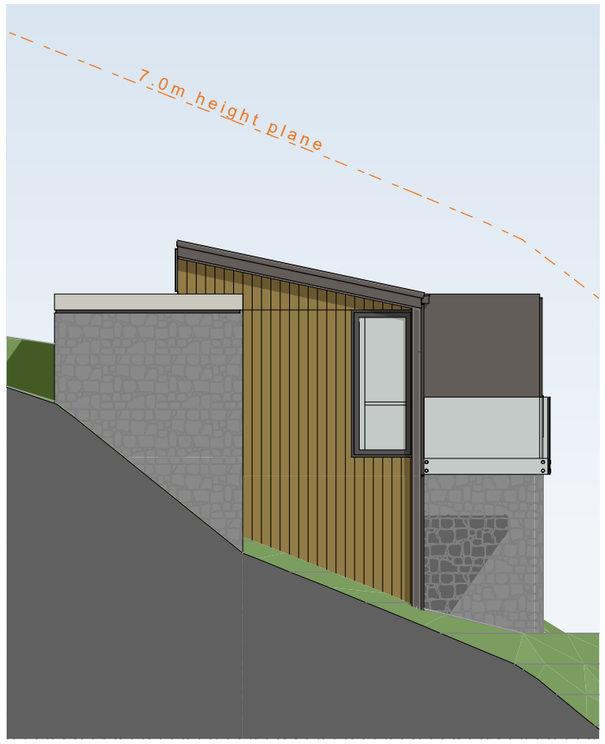
scale: 1:100

5/07/2021

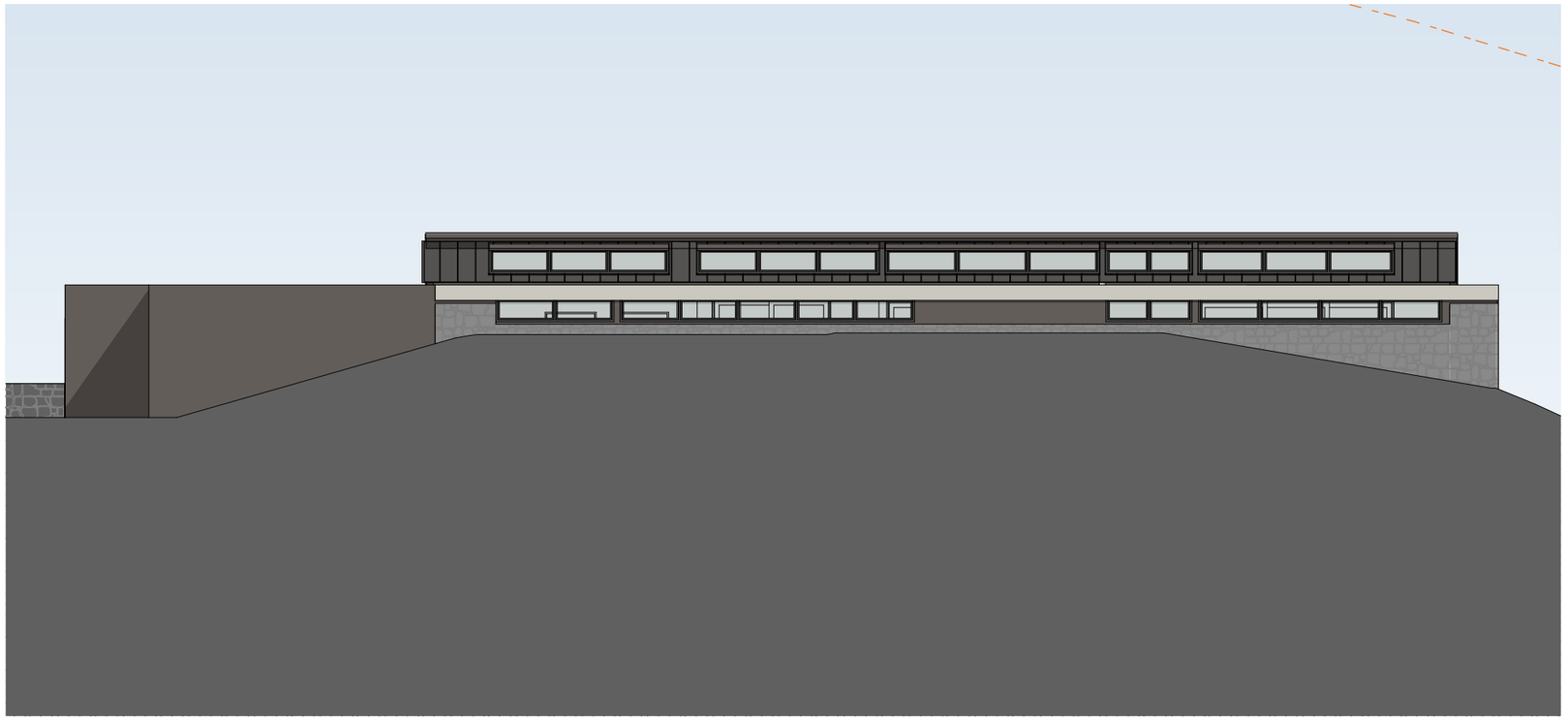


C1 type C southwest elevation

C2 type C northwest elevation



C3 type C northeast elevation



C4 type C southeast elevation

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unit elevations: type C

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RC.20

scale: 1:100

5/07/2021

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unit plans: type D

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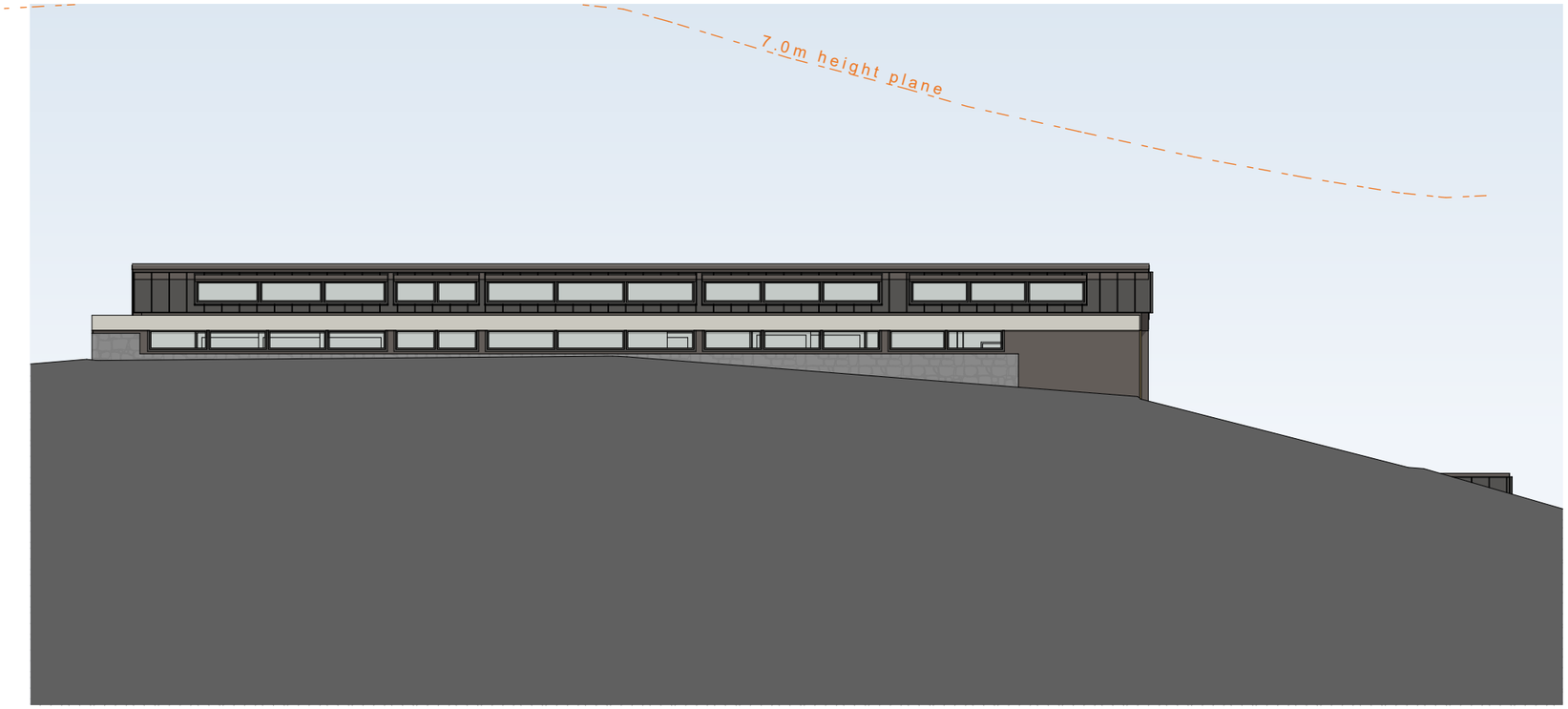
RC.21

scale: 1:100

5/07/2021

D1 type D east elevation



D2 type D south elevation

D3 type D west elevation

D4 type D north elevation

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

unit elevations: type D

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22-166 | christchurch 8140

RC 22

scale: 1:100

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planting shown is indicative only - refer landscape architects documents for detail

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3d view: south boundary

03 377 5666 | info@foleygroupconz | wwfoleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

RC.23

scale: 12.08

5/07/2021

planting shown is indicative only - refer landscape architects documents for detail

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3d view: northwest boundary

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RC.24
scale: 12.08
5/07/2021

planting shown is indicative only - refer landscape architects documents for detail

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3d view: north boundary

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RC.25

scale: 12.08

5/07/2021

planting shown is indicative only - refer landscape architects documents for detail

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3d view: east boundary

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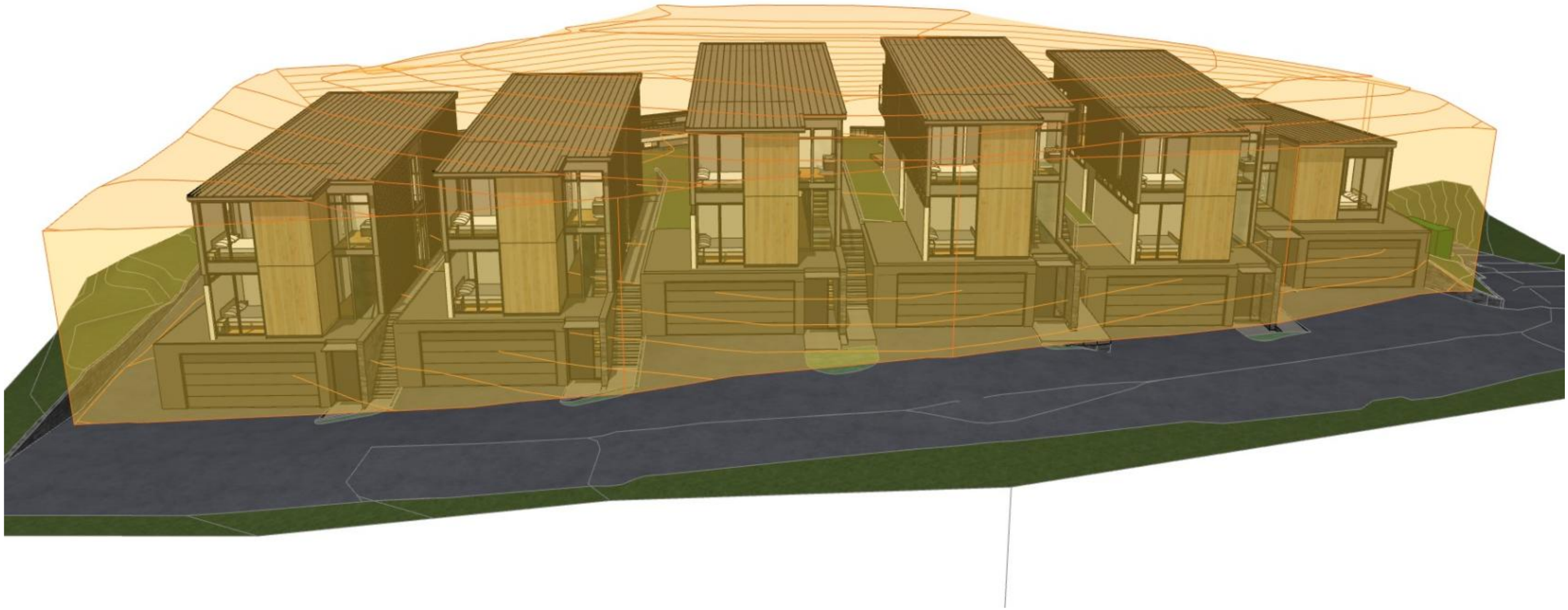
RC_26
scale: 12.08
5/07/2021



orange tint represents buildable envelope
building elements **not** tinted yellow project through envelope

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architecture

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3d view: envelope south

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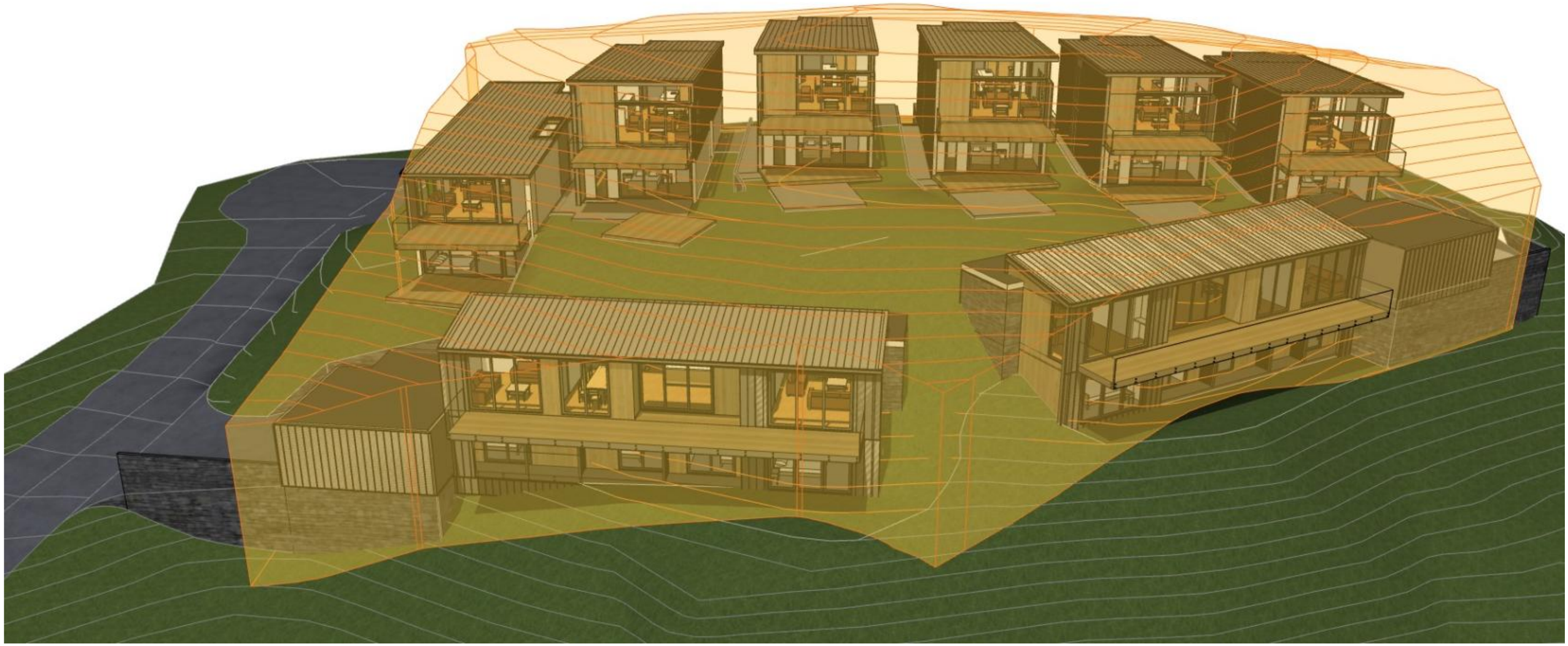
RC.27

5/07/2021



orange tint represents buildable envelope
building elements **not** tinted yellow project through envelope

FOLEYGROUP
architecture

2928 | Canyon Ridge | Momentum Projects

3d view: envelope north

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22_166 | christchurch 8140

RC_28

5/07/2021

orange tint represents buildable envelope
building elements **not** tinted yellow project
through envelope

FOLEYGROUP
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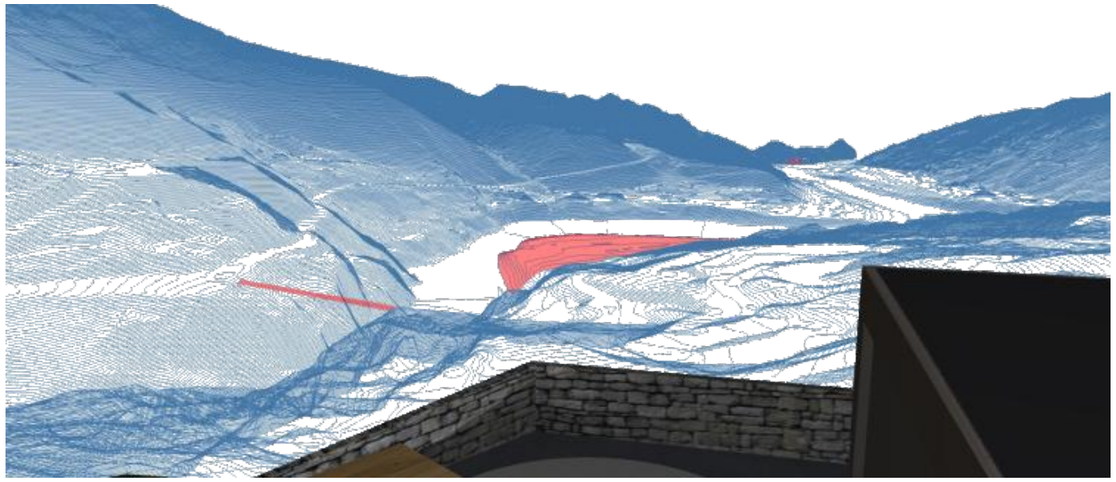
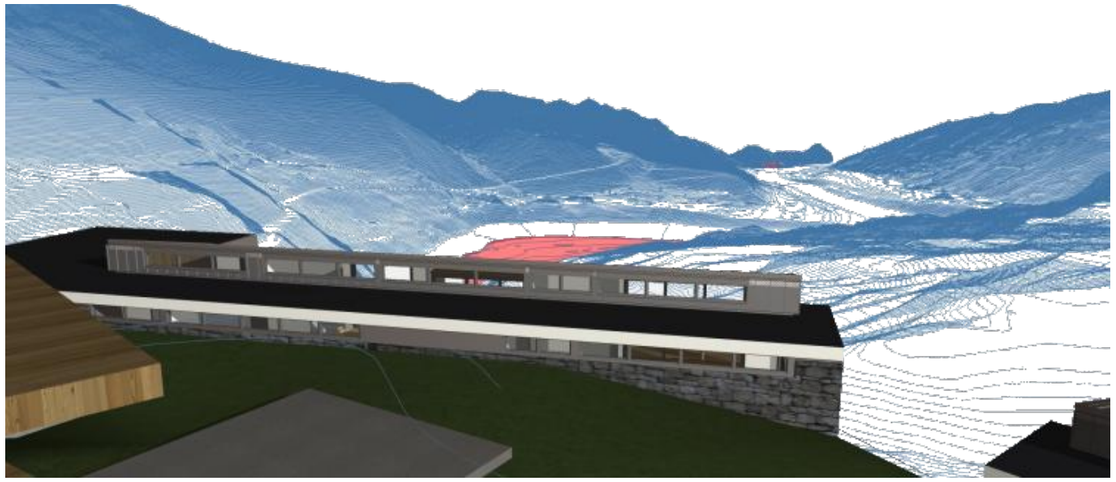
3d view: envelope plan

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

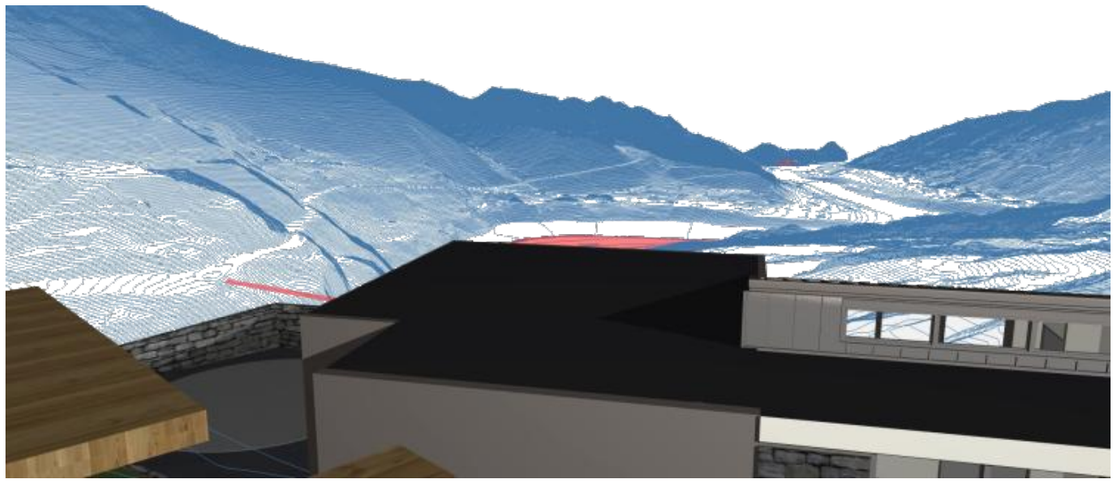
RC 29
scale
5/07/2021



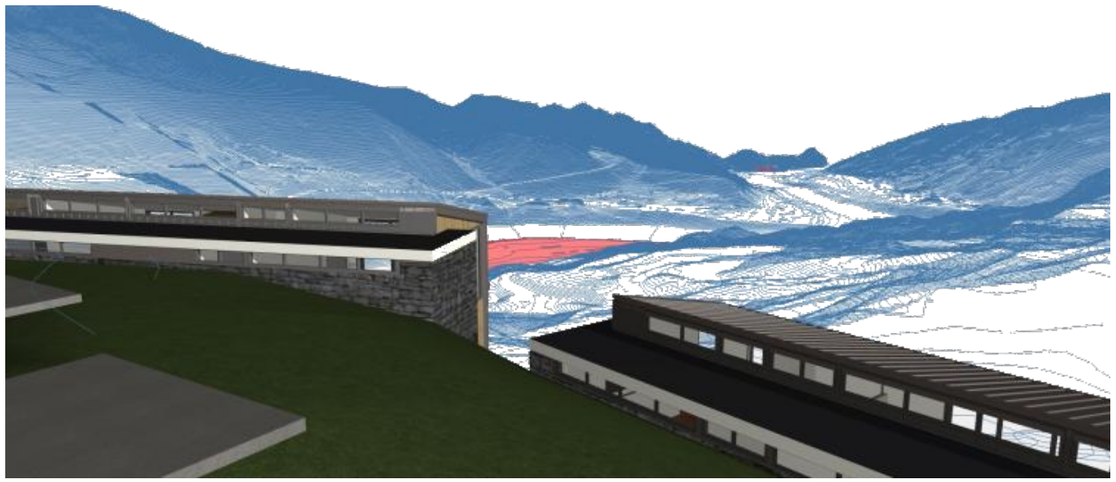
shotover from unit 2



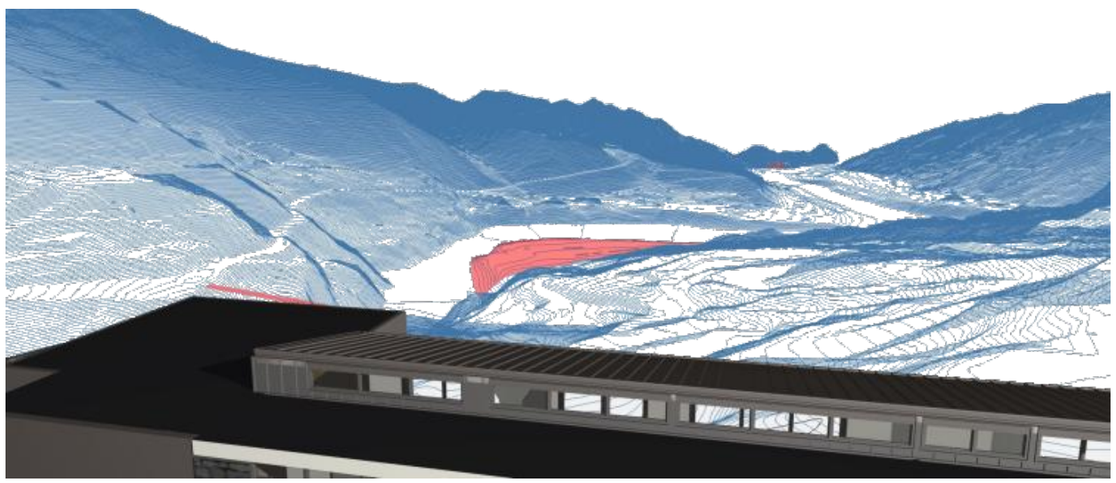
shotover from unit 5



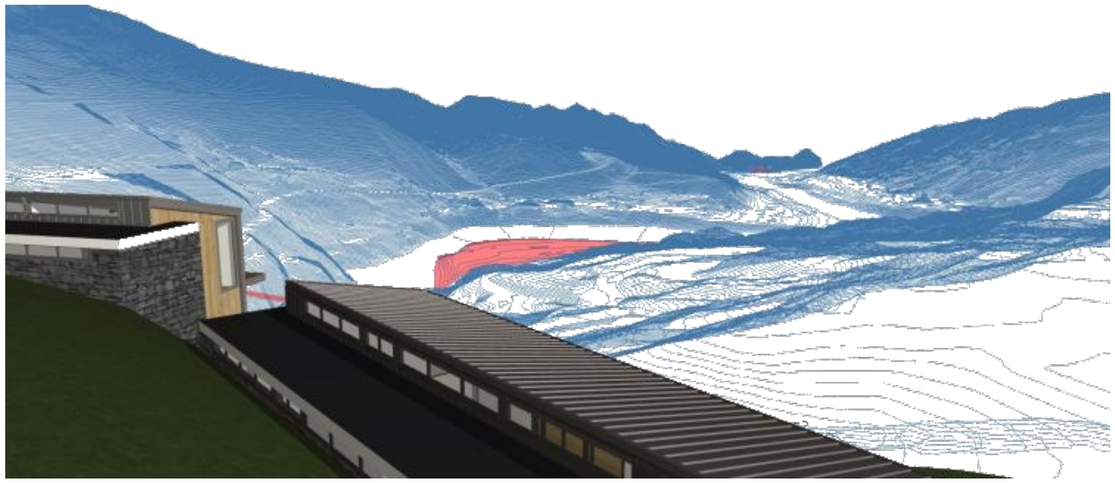
shotover from unit 3



shotover from unit 6



shotover from unit 4



shotover from unit 7

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3d views: shotover river

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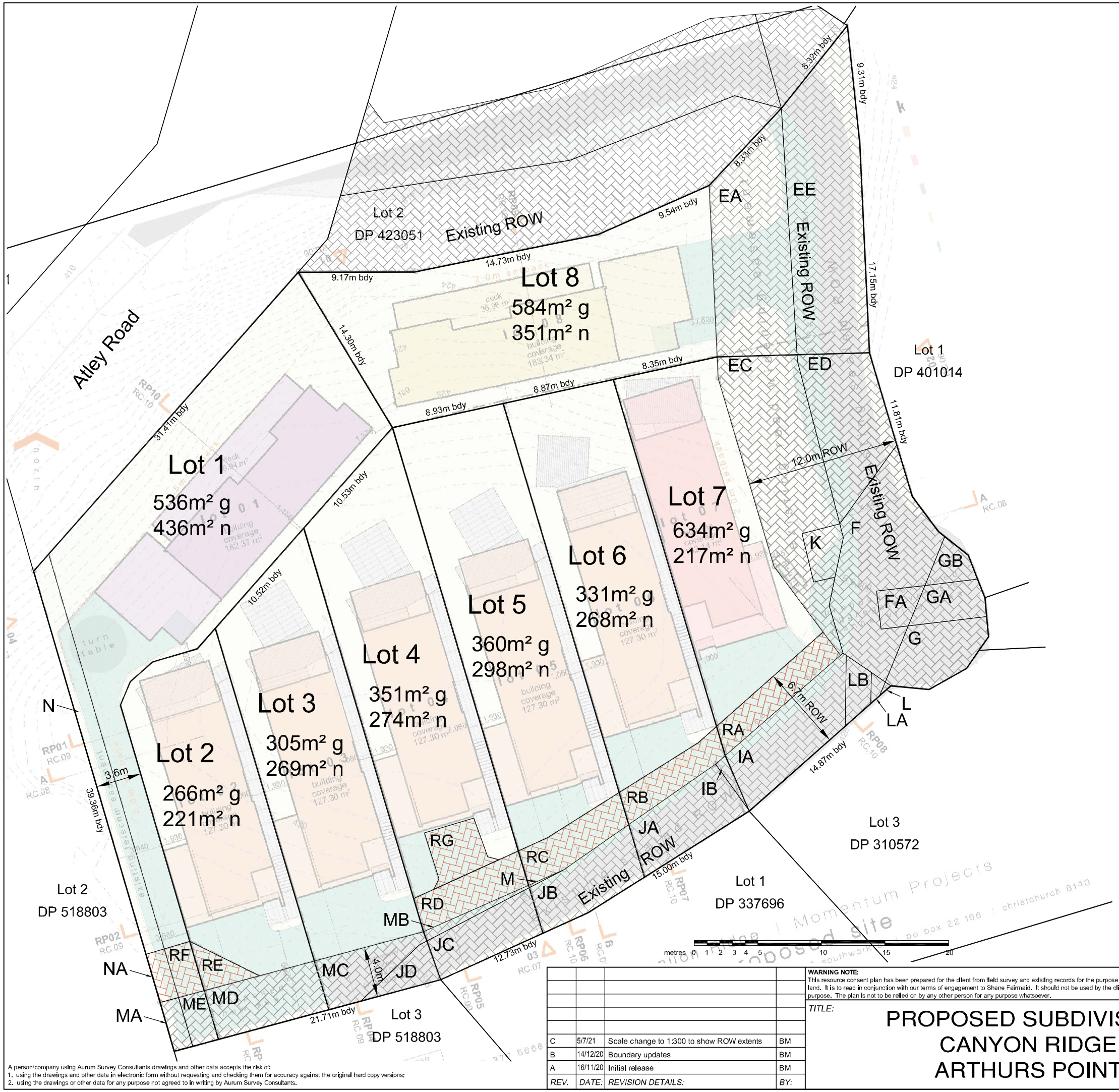
RC 30

5/07/2021



PROPOSED R.O.W. EASEMENTS			
Purpose	Servient	Shown	Dominant
Right of Way	Lot 8	EA, EE	Lots 1-7
	Lot 7	EC, ED, K, F, GB, GA, G, FA, L, LA, LB, RA, IA	Lot 1-6, 8
	Lot 6	IB, JA, RB	Lot 1-5 & 7
	Lot 5	JB, RC, M	Lot 1-4 & 6
	Lot 4	JC, RD, RG, MB	Lot 1-3 & 5
	Lot 3	JD, MC	Lot 1, 2, 4
	Lot 2	MD, RE	Lot 1 & 3
	Lot 1	RF, ME, NA, MA	Lot 2

Note that additional easements will be provided for electricity, telecommunications, water, sewage and stormwater as and where necessary following detailed design of those services.

Area Totals

Lot 2 DP 411983 (the site): 3365m² gross
Existing ROW areas: 824m²
Existing net area: 2541m² (317m² / dwelling)

New ROW areas: 137m²
Areas of proposed lots <6m wide: 70m²
Resultant net area: 2334m² (292m² / dwelling)

A person/company using Aurum Survey Consultants drawings and other data accepts the risk of:
1. using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions;
2. using the drawings or other data for any purpose not agreed to in writing by Aurum Survey Consultants.

REV.	DATE:	REVISION DETAILS:	BY:
C	5/7/21	Scale change to 1:300 to show ROW extents	BM
B	14/12/20	Boundary updates	BM
A	16/11/20	Initial release	BM

WARNING NOTE:
This resource consent plan has been prepared for the client from field survey and existing records for the purpose of a proposed subdivision on the land. It is to read in conjunction with our terms of engagement to Shane Fairmaid. It should not be used by the client company for any other purpose. The plan is not to be relied on by any other person for any purpose whatsoever.

DATE: 5 July 2021
BY: B McLeod
Scale 1:300 Original Plan A3
DRAWING & ISSUE No. 4924.3R.1C

TITLE:

PROPOSED SUBDIVISION CANYON RIDGE ARTHURS POINT

AURUM SURVEY
PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

Document Set ID: 6980721
Version: 1, Version Date: 23/08/2021

Date 28 March 2021
Scale 1:250 @A3
Dwg No. 1.3
ISSUE

A difficult area to retain for little additional benefit to living area, this large sloped area is to be mass planted with natives, 1-3 species only and growing to a maximum height of 2m (excluding flower plumes). The natural foreground view will enhance the amenity of the overall picture.

If earthworks allow, the lower floor deck areas of Lot 1 and 8 may be extended to a natural earthworks edge.

DESIGN NOTES

1. Outdoor spaces are oriented towards the Shotover River view, working with the lie of the contour.
2. The level strategy is to drop courtyards with a floating step which can be used as informal seating with greenery under. This gives bedrooms an outlook onto as little hardscape as possible, drawing attention to the view and natural surroundings. In some cases it will give additional privacy into bedrooms from neighbouring properties. The strategy also reduces earthworks and the height required for retaining walls.
3. Deck and glass balustrade to match architectural design specs.
4. Timber vertical slat screening is semi-permeable to match a similar profile to building cladding. Should have a high quality finish. Where fencing follows the slope of the land it should remain truely vertical.
5. Screening will give a degree of privacy and security between lots, while blending the architectural and natural context.
6. Outdoor living areas are designed for add-ons: BBQ/fire, pergola, spa, additional terraces
7. Steps generally have 250mm risers
8. Retaining walls are shown in dark grey, they are generally between 0.6-1.0m high and located adjacent to hardscape areas. Depending on engineering contsraints and location, walls will be constructed of stone, concrete, masonry block or timber.
9. Service locations should be designed with consideration of tree locations as in this plan.
10. See Aurum documentation for civil engineering details.
    See Foleys documentation for details on buildings.
    See Weir Associates documentation for planning and urban design detail.
    All elements to comply with QLDC Land Development and Subdivision Code of Practice.
    Street tree planting to comply with QLDC Street Tree Planting Guidelines and Electrical (Hazards from Trees) Regulations 2003.
11. There are no lawn areas, all areas shown in green are to be mass planted or natural rock face.
12. Indicative plant species include: Hoheria angustifolia, Fuscospora cliffortoides, Pseudopanax ferox, Astelia sp., Phormium sp., Cortaderia sp., Carex sp.
13. Group letterboxes and parcel box will be located for easy access to the rural postie alongside existing established mailboxes on Atley Road.
14. Rubbish and recycling bins will be stored within each unit garage with space available near and under stairwells. The established collection point for the area is on the Atley road berm.

Rocks dug from excavations on site will be retained as features and mulch within the mass planting where possible.

Lot 6 and Lot 7 have decks that allows the land to drop away beneath them naturally. This approach to these lots avoids extensive retaining, and gives a more subtle view towards the site as people travel up the ROW, particularly surrounded with native planting. Glass balustrading will be used to fence the deck for safety.

Lot 6 and 7 outdoor living areas are orientated to best fit the lands contour, reducing the need for earthworks and retaining walls.

Typical outdoor living area arrangement consists of two floating steps and a large hardscape living area with feature garden. If the site allows, a second living area steps down to the north.

Relocated transformer

A stone wall on this corner levels the approach into Lot 7 driveway, and ensures a tidy and safe edge.

Gate entrance to ground floor level, typical

Typical entranceway arrangement consists of a deck with part glass balustrading that is level with the building entrance and corresponding stairway and below a garden and tree at driveway/ROW level. Unit numbers are located on doors.

A rythm of native trees at each entrance gives a strong identity to the site helping form sense of place. Trees compliment and contrast the architectural form, reinforcing each as a feature.

Contrast feature paving frames the ROW accessway and driveways. Incorporates buildings into the streetscape improving the feeling of community by sharing the high quality aesthetic space. Important to maintain a safe, practical surface under topographic and climate conditions for vehicles and pedestrians.

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Momentum Projects.
CANYON RIDGE

LANDSCAPE CONCEPT PLAN
FOR RESOURCE CONSENT

PJT REF 1078

Date **10 Dec 2020**
Scale **not to scale**
Dwg No. **1.5**
ISSUE

Native trees such as Hoheria angustifolia and shrub planting to the south of the building soften the built form of Lots 2-7, helping to blend them into the natural mountainous backdrop.

Building entranceways are level with their exterior access to the upper level. This forms a natural boundary to the neighbouring property with the associated level change and an ideal space for a garden to direct stormwater runoff and absorb slope change

Native trees such as Fuscospora cliffortoides alongside the right of way screen buildings for those viewing from the road, and neighbours to the north of the site.

Mass planting of native species anchors the buildings a natural setting that compliments both the built form and natural ecology of the area.

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PJT REF 1078

SOUTH ELEVATION - LANDSCAPE CONCEPT
FOR RESOURCE CONSENT

Date **10 Dec 2020**
Scale **not to scale**
Dwg No. **1.6**
ISSUE

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PJT REF 1078

NORTH ELEVATION - LANDSCAPE CONCEPT
FOR RESOURCE CONSENT

Date **28 March 2021**
Scale **N/A**
Dwg No. **1.7**
ISSUE

NOTES ON PLANT SELECTION

Plants have been selected from Landcare Research's database of plants according to coordinate location. All plants have been identified as currently or previously native to this particular site, soil type and ecological area.

Selected plants have been cross-referenced with planting plans designed and implemented within the area by council and private developers/residents.

Further, plants are also identified in the Wakatipu Restoration Trust's booklet *Growing Native Plants in the Wakatipu* (2017).

Objectives:

- Enhance/ extend the diversity and density of vegetation in Arthurs Point.
- Improve the visual amenity of the site.
- Control weeds and pests such as Old man's beard, hawthorn, broom, buddleia, sycamore, conifers, rank grass and animal pests (goats and possums)
- Establish healthy looking plants that require minimum maintenance for QLDC and residents

CONDITONS

Street tree planting to comply with QLDC Street Tree Planting Guidelines and Electrical (Hazards from Trees) Regulations 2003.

Planting shall occur within the optimum planting season where possible.

Specimen trees are to be planted following accepted industry standard procedures.

Trees are to be well structured, healthy specimens an average 2.5m high and range from 2.0-3.0m high.

Pruning shall be undertaken by a suitlibly qualified arborist to recognised arboricultural practices.

Ensure all damaged, vandalised, stolen or dead plants are replaced to maintain numbers and unity of display

Plants are to be well structured, healthy specimens that meet schedule specifications.

The applicant shall maintain any landscaping on the road reserve and reserves for three years after planting.

TREE PLANTING

Ground free from debris and rubbish, cultivated to a depth of 1x1x1. Crumble sides of planting holes. Incorporate topsoil into upperlevel of planting holes. Fertilise with slow release fertiliser as per manufactureres recommendations. Final planted depth consistent with finished ground level. Adequately staked with ground treated timber stakes to be removed once the trees are stable. Secured with expandable ties at approx 1/3 their height. Soil firmed to force air pockets from planting holes, water trees immediately after planting.

Radially mulch trees to 500mm or to drip line, whichever is greater at a depth of 100mm.

SHRUB PLANTING

Ensure friable topsoil for shrubs and groundcover appropriate to the depth of the root ball. Plants at a miminum size of PB3 or RT where appropriate. Plants shall be spaced unevelny.

Shrubs & grasses larger than 500mm @ maturity are to be planted a minimum of 500mm from the kerb or footpath plus their radius

Indicative Plant Species List

Botanic Name	Common Name	Size	Remarks
Carex buchananii	Leatherleaf sedge	RT	Plant @ 600mm centres
Chionochloa rigida	Narrow-leaved Snow Tussock	RT	Plant @ 800mm centres
Corokia cotoneaster	Korokio	2L	Plant @ 1600mm centres
Fuscospora sloandri	Mounain Beech	2500	Plant as shown
Griselinia littoralis	Kapuka/Broadleaf	2L	Plant at 1800mm centres
Hoheria sexstylosa	Houhere	2500	Plant as shown
Muehlenbeckia complexa	Shrub pohuehue	2L	Plant @ 800mm centres
Phormium spp.	Dwarf Flax	RT	Plant @ 800mm centres

Plant species from top to bottom:
Carex buchananii
Chionochloa rigida
Corokia cotonester
Griselinia littoralis
Muehlenbeckia complexa
Phormium cookianum 'Emerald Green'

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CANYON RIDGE

PLANT SELECTION
FOR RESOURCE CONSENT

PJT REF 1078

URBAN DESIGN STATEMENT

CANYON RIDGE

Atley Road, Arthurs Point, Queenstown

13 January 2020

The following assessment is based on review of Foley Architects architectural plans (Resource Consent plan set, dated 21.12.2020) and the landscape plan (dated 10.12.2020) from Gilchrest Design for the proposed 8 Lot Townhouse development proposed for the site.

These plans against the key 'best practise' urban design principles including the '7C's' from the Ministry for the Environments's Urban Design Protocol, as well as guidance contained in Queenstown Lakes District Council's (QLDC) Subdivision Guidelines and Residential Design Guides[1]. For clarity, the broader principles and considerations have been disseminated into three broad challenges to address:

- Is this an appropriate location for the type of residential proposed?
- Does the proposal deliver positive outcomes on the external environment?
- Is internal environment providing quality attributes for residents?

While the report does not look specifically at the dwellings proposed, where appropriate comment will be made with respect to urban design-related issues and how they interface with their surrounding context.

I am familiar with both Arthurs point and the site, and I conducted site visit on the 29th October to refamiliarize myself with it for this assessment.

CONTEXT

The Canyon Ridge site (The Site) is located in Arthurs Point, approximately 5.5km (by road) of the Queenstown Town Centre.

Figure 1. Location Plan

[1] QLDC Subdivision Design Guidelines 2015 and Residential Zone Design Guide 2019

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Arthurs Point itself is essentially split into three distinct neighbourhoods – one on the western side of Shotover River, a central area on the terraced flats to the north of the Shotover River, and a northern neighbourhood on a higher plateau to the north. Each area, whilst being geographically distinct, also has differentiated character. The central area in which the site sits is a relatively recent suburban development and generally features a heavily modified landscape.

The site is located at the southern end of Atley Road which, in addition to being the sole entry to development on the eastern site of Arthurs Point Road, is also the primary link road through the area from north to south.

Figure 2. Site location over aerial

While there is limited urban amenity in the area, there is a local convenience store roughly 5 minutes walk (500m) to the north at the Top 10 Holiday Park off Atley Road, and a restaurant-bar (Canyon Brewing) at the Shotover rafting base some 200m west ('as the crow flies') across Arthurs Point Road[2]. There are no local sports fields although there is a local pocket park off Mathias Cres 5mins (400m) walk away via road.

The development sits within a 3,365m^2 (more or less) land parcel that includes an existing access route for 7 properties from Atley Road in the north. This sealed access lane follows the eastern boundary and then tapers to a Right of Way (ROW) which services 85C–E Atley Road on the southern boundary. Atley Road itself terminates at no. 111 just below The Site entry point. Albeit a relatively large lot (5,427m^2), 111 Atley Road is a common access lot that services all remaining dwellings (being 94–115 Atley Road) to the west of the site and therefore (to all intense purposes) can be considered road. This means the site is essentially surrounded by, and separated from surrounding residential, by accessways on all boundaries.

2 Although the lack of a pedestrian connection makes this almost a 1km journey which is safer by car.

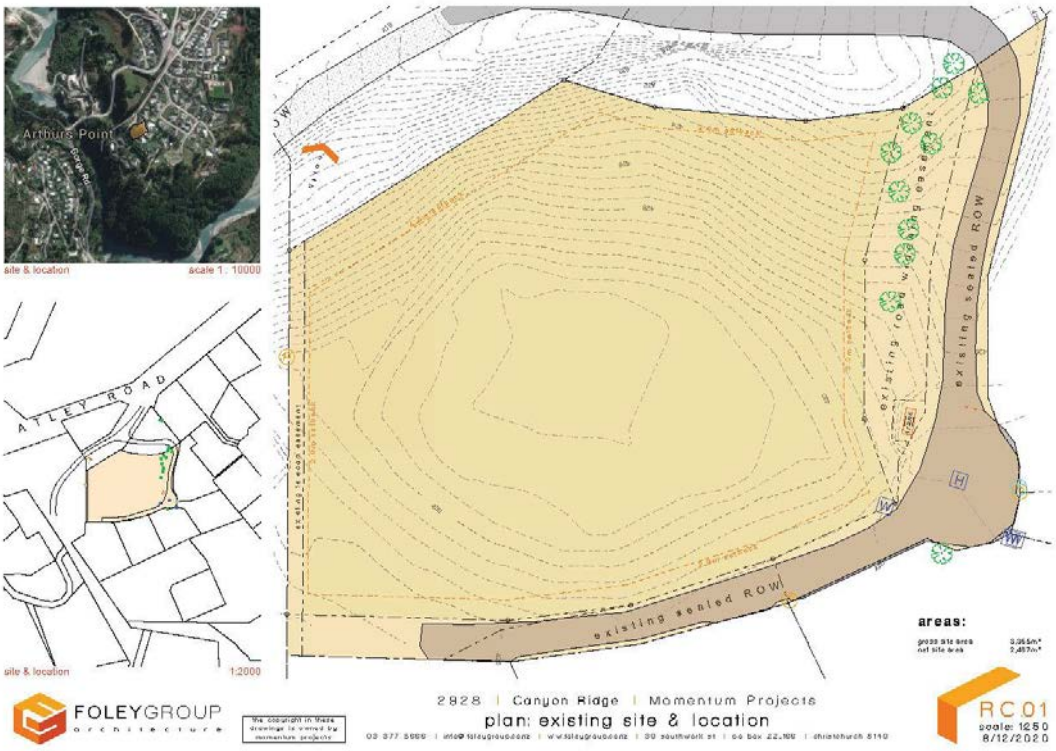

Figure 3. The Site with contour and access route delineation

The Site rises approximately 8.5m from the Atley Road boundary (GL423) to a low knoll (GL431.5) in the centre of the site. It then falls approximately 2m down to the existing ROW in the south. It contains a mixture of exotic scrub and trees including wilding pines which will be cleared for the development.

Notwithstanding The Sites prominent location and attributes, it has a low visual profile from almost all external vantage points except when crossing the Edith Cavill Bridge heading north. Even then, there is only a fleeting view of the site as the foreground is dominated by the undeveloped road reserve and large land parcel (7.6ha) at 44 Arthurs Point Road.

Figure 4. Streetview view from the Edith Cavill Bridge looking north-east up Arthurs Point Road.
Number 80 Atley Road is visible, however The Site is largely obscured behind the trees on the right.

ZONING PROVISIONS

The site is zoned Low Density Residential (LDR) under the Operative District Plan (ODP) and is proposed to be Lower Density Suburban Residential (LDSR) under the Proposed District Plan (PDP). Given that all Variations to parts of this chapter have been decided by Council[3] and that appeal and section 274 periods for the Stage 1 and 2 Decisions have closed, the PDP is the sole reference document for this assessment.

Under the LDSR zone (Chapter 7), the zone is generally focussed on 450–1,000m^2 lot sizes with single level construction, but does anticipate lots down to 300m^2 (net size) for comprehensively designed developments such as this proposal. Overall, the zone anticipates a density as high as 1 unit per 150m^2 through by using a range of housing typologies that includes residential flats. There are two key Objectives (and associated Policies) which are pertinent to this application – 7.2.1 and 7.2.3 as detailed below.

> *7.2.1 Objective - Development within the zone provides for a mix of compatible suburban densities and a high amenity low density residential living environment for residents as well as users of public spaces within the zone*.

This Objective is given effect to through four policies that ensure development occurs in serviced areas and that is complementary to existing suburban residential environments. Of particular note are:

> *7.2.1.2 Encourage an intensity of development that maximises the efficient use of land in a way that is compatible with the scale and character of existing suburban residential development, and maintains suburban residential amenity values including predominantly detached building forms, and predominantly one to two story building heights.*

And

> *7.2.1.3 Ensure that the height, bulk and location of development maintains the suburban-intensity character of the zone, and maintains the amenity values enjoyed by users of neighbouring properties, in particular, privacy and access to sunlight.*

Alongside this Objective 7.2.3 focusses more on more intensive outcomes within the zone:

> *7.2.3 Objective - Encourage higher density development where it responds sensitively to the context and character of the locality and is designed to maintain local amenity values.*

Policies related to this of relevance are:

> *7.2.3.1 Encourage densities higher than 1:450 square metres per residential unit where this is designed to fit well with the immediate context, with particular significance attached to the way the development:*
>
> *a. manages dominance effects on neighbours through measures such as deeper setbacks, sensitive building orientation and design, use of building articulation and landscaping;*
> *b. achieves a reasonable level of privacy between neighbours through measures such as deeper boundary setbacks, offsetting habitable room windows that face each other, or the use of screening devices or landscaping;*
> *c. provides activation of streets through the placement of doors, windows and openings that face the street.*
>
> *7.2.3.3 Encourage landscaped areas to be well-designed and integrated into the development layout and design, providing high amenity spaces for recreation and enjoyment, having particular regard to the visual amenity of streets and street frontages.*

This assessment focussed on the design aspects of the development as they relate theses Objectives and Policies. Refer to the planning report for a more comprehensive review of other relevant zoning (including,

[3] On 7 March 2019

but not limited to Chapter 4 – Urban Development) and provisions contained within these that are pertinent to this application.

THE PROPOSAL

The Proposal is for 8 freestanding townhouses based around 3, two and three-level 'typologies'. These dwellings are generously sized (192–235m^2 plus decks) but have compressed footplates on compact lots (ranging from 217m^2 to 436m^2). For further detail, see the architectural plan set.

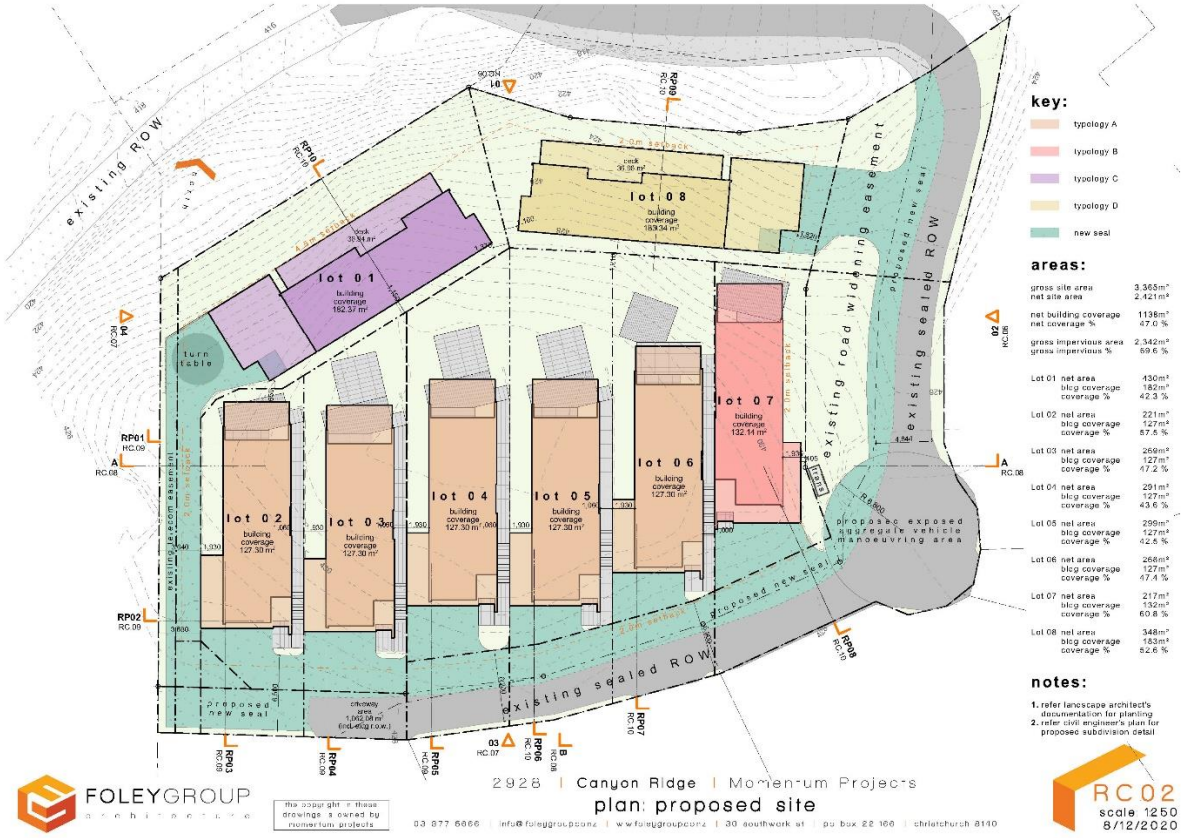

Figure 5. Proposed Site Plan

Excluding the common accessway (existing and proposed), the net site area is 2,334m^2. This delivers an average net density of 1 dwelling per 292m^2. All dwellings are accessed from the shared existing sealed (but widened) ROW along the southern and eastern boundaries.

ASSESSMENT

For each of reference the following assessment has been broken into three parts – Southern (or Upper) Lots, Northern (or Lower) Lots and general commentary about the development.

SOUTHERN LOTS (2–7)

The design is defined by use of long-narrow typologies (being the 4 bedroom[4] and 3 bedroom[5] types) on the upper part of the site that extend from west to east, across the southern half of the site, largely

4 Coloured orange in Figure 5 above

5 Coloured pink in Figure 5 above

following the existing terrain. These types feature the majority of bedrooms on the ground floor with an associated north-facing patio, with living area on the upper level and featuring a large north-facing deck. These dwellings sit elevated above the two front lots (Lots 1 and 8) so that the outlook north up the Shotover River is unrestricted.

Figure 6. South and west elevations

Garages and entranceways for these dwellings are cut into the existing terrain so that they are largely hidden except from the widened ROW space on the southern boundary, and as a result they present as two-levels only from all other external vantage points. The buildings step back from each other down the ROW.

Figure 7. Section through the site illustrating habitable levels of the 'upper' dwellings in relation to existing contour

These upper dwellings are separated from each other but at least 3m, except for Lots 6 and 7 at the eastern end where the separation in down to approximately 1m. This separation provides a private pedestrian accessway (1m wide) on the eastern side of each lot through to the north patio and yard of each dwelling. The balance of the separation is maintained as a landscaped area for the opposite dwelling to the east.

The landscape approach features entranceways and side yard access paths for each dwelling that are defined by differentiated paving as well as specimen trees between each dwelling. This approach, combined with the stepping of frontages and variation in finished levels, means there is intrinsic differentiation and articulation of these group of buildings when viewed externally.

Figure 8. Landscape Plan

This approach:

- Provides access to both public front doors and private rear lanes in an efficient manner
- Breaks the expanse of paving – visually narrowing the ROW whilst still ensuring adequate vehicle access and manoeuvring
- Diminishes the visual impact of garage doors

The landscape plan proposes both upper level decks and ground level patios to be angled from the dwelling to better orientate towards the view and with the lie of the contour. While this is not a critical design aspect, it does create some added amenity for residents, particularly on the more physically-constrained lots (Lots 2, 3 and 7).

Even with relatively simple building forms (structure and roof), the architects (Foley Group) have used a limited palette of materials and cladding to accentuate variation whilst ensuring overall design cohesion.

Figure 9. RC14 – 3d view of the southern frontage

Figure 10. RC15 – 3d view of the eastern frontage illustrating a varied roof line even with the simple roof forms

The buildings present a predominantly blank façade to the west at ground level with bedrooms having either wider southern, or narrow north-facing windows for their aspect and outlook. The landscape side yard therefore, while adding little value at ground level to its parent dwelling, does provide for western windows on the upper living level as well as natural lighting and outlook to/from the stairwell of the dwelling opposite, without compromising privacy for either dwelling.

Figure 11. Landscape Concept – South Elevation

As illustrated above in Figure 11 (the Landscape Concept – South Elevation), the proposed development features a more intensive built form than the adjacent existing residential on the southern side of the ROW at the top end[6] .Notwithstanding, these properties feature large dwellings with garages located to the ROW (see Figure 12 below) which make them also appear more-intensively developed, and therefore there is a relatively close alignment in built form between existing and proposed. Furthermore, as the

6 Being 85C-E Atley Road.

landscape treatment matures the perception of intensity of the new development, like the existing dwellings, will be reduced.

Figure 12. Concept plan in context

NORTHERN LOTS (1 & 8)

The two northern lots are quite different to the remainder of the development in that they run west-east lower down the slope in the northern part of the site. Both lots feature the same internal layout (albeit 'flipped') with full-length decks on the northern side accessing the living areas on the upper level, and bedrooms on the lower level.

While both buildings feature internal retaining to respond to the challenging terrain (a fall of roughly 1:3 to the north), they are accessed quite differently – Lot 8's garaging is accessed from the ground level directly from the shared ROW at the eastern end, while Lot 1 has its own driveway along the western boundary accessed from the head of the ROW (see Figure 8 - Landscape plan) above) to an upper level garage and relies on a turntable for vehicle manoeuvring.

Figure 13. RC06 – East elevation showing Lot 1 (on the right) in relation to northern lots. Lot 7 (at left) is the lowest of these.

As the site is also falling slightly to the east towards the ROW on that boundary, Lot 8 sits lower than Lot 1.

Figure 14. RC06 – North elevation – Lot 8 at left and Lot 1 at right.

Both of these northern lots require significant cuts into the embankment to ensure stable building platforms for the main bodies of the buildings, and as a result also feature to feature extensive retaining (up to 3m high) for the garage and driveway areas. The upper level decks extend to the setback delineation and the associated height in relation to boundary (HIRB) envelope – but do not breach it.

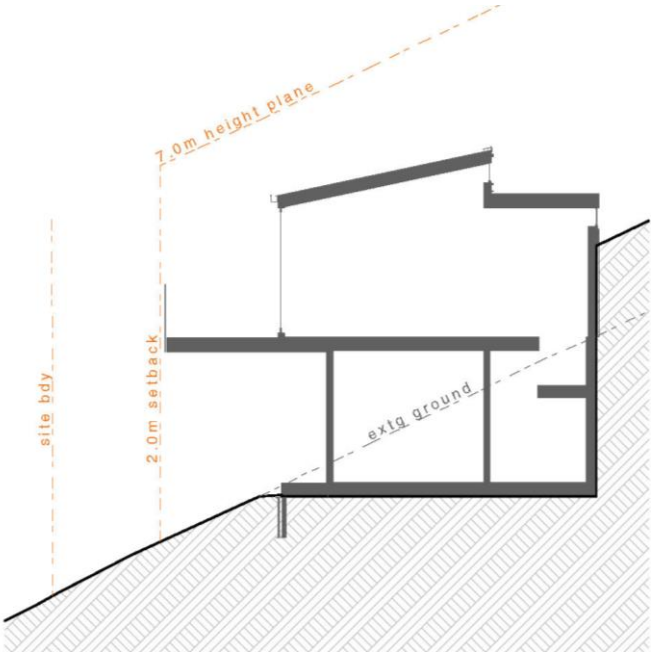

Figure 15. Recession plane section – RP09

The retaining appears much taller in the elevations above (Figures 13 and 14) due to safety-balustrade height requirements. As illustrated in the modelling, in reality these walls and retain features are not as physically dominant in reality and suit both the local and wider context – particularly with the use of the stone treatment proposed.

Figure 16. RC22 - 3d View of development from the eastern boundary

Figure 17. RC21 3d View of development from the northern boundary

Although the proposed dwellings on Lots 1 and 8 ('Lower Lots') are aligned almost 90 degrees to the other dwellings, they appear visually contiguous with the Upper Lots through the consistency of form, roof shape and material. These dwellings are built to the edge of the required setbacks, however by merging the limited lot landscapes with that within the shared access lot (containing the ROW) the overall landscape on this lower edge feels much more expansive and provides a significant buffer and visual amenity to both surrounding neighbours and ROW users.

Figure 18. Landscape Concept – North Elevation

The landscape buffer on the lower boundary appears larger still due to the ROW[7] being located well below the site. While the landscaping on the ROW area cannot be relied on in terms of mitigating effects from both immediate neighbours (80 Atley Road) and further afield, as illustrated in Figure 18 above, the slope of the hillside helps to make the landscape area appear larger and reduce that of the buildings.

GENERAL CONSIDERATIONS

In terms of vehicle access and traffic loading, there are numerous opportunities for passing and accommodating heavy vehicles (trucks). This includes where sealed ROW meets Atley Road, at the top of the ROW where an informal turning head is already formed, and the juncture of the ROW and Lot 1's driveway. In addition, there is sufficient space in front of dwelling garages to accommodate at least one car park without impeding traffic. Therefore there would appear to be no physical impediment to accommodating the density and type of development proposed.

It is always a challenge to balance the demand for internal amenity, outlook and activation of the public realm (for CPTED[8] reasons) for individual dwellings against the requirement (under Chapter 4 of the PDP – 7.2.3.1) to manage dominance effects on, and privacy for neighbours. In this instance, as illustrated in Figures 5 (Proposed Site Plan) and 12 (Concept Plan in Context) above, all proposed buildings are separated from neighbouring property boundaries by at least 10m by the ROW. This means that, at the 2 levels proposed (and anticipated by the zone), and with a varied and separated built form, there is little risk of dominance (or overshadowing) on any neighbouring properties.

In terms of impact on neighbour's privacy, this too is minimised by the physical separation. The closest dwellings are 85C&D Atley Road on the southern boundary. As illustrated in Figure 18 (Architecture Plan – Ground Level) below, all dwellings feature their living areas to the north. Those dwellings (being Lots 2–4) which face these existing dwellings to the south, feature bedrooms toward the ROW and therefore represent a relatively benign interface.

7 Servicing 94–119 Atley Road

8 Crime Prevention Through Environmental Design (CPTED)

Figure 19. Architecture Plan – ground level

Furthermore (once again reference Figure 12) 85C&D Atley Road feature their garages and landscaping to the front (towards the ROW) with their living areas behind this. As the proposed dwellings are angled from the alignment of these dwellings, there are a few opportunities for direct line-of-sight from the bedrooms to the living courts.

85E Atley Road is the only existing dwellings that might be directly impacted by the proposal as its living court is located to the north of the lot, and the angle of the proposed dwellings on Lots 2-4 face that area. Notwithstanding, the living court is set back further (roughly 15m – or the width of a local road) and proposed specimen tree planting at the front of these new dwellings will augment that already at the front of 85E – serving to minimise any potential direct-overlooking.

To all other boundaries (west, north and east) the separation distances to front boundaries, let alone living courts are even greater, meaning potential dominance and amenity effects on neighbours will be less than minor – and accordingly, have not been commented on further. The dwellings themselves work well with 3 two-level typologies being employed. All types feature bedrooms on the lower level with internal living areas (which open to generous deck areas) on upper levels. Garages, while integrated with the dwellings, are placed so as to provide the most efficient access which means the level of these varies depending on the specific site. As illustrated below (Figure 20), to the south at ground level the ROW is dominated by garages doors, but view as an elevation in total, this impact is greatly reduced. Irrespective, this reflects what is already occurring on the opposite ide of the ROW with the existing housing.

Figure 20. 3D View: South Boundary

Whilst some living courts for the proposed dwellings are relatively small (Specifically Lots 2and 7 at either end), careful consideration has been made to ensure outlook (an therefore amenity) has been maintained by 'lowering' the building in front down the slope, and ensuring they face benign functions (such as garages or circulation spaces) which won't unduly impact either dwelling.

SUMMARY

Arthurs Point, particularly the central neighbourhood, is already a heavily modified suburban environment. The site is zoned for residential development and planning provisions support well-shaped comprehensive development with greater intensity. In my opinion the Canyon Ridge proposal delivers a thoughtful, context-appropriate solution for a relatively challenging site that fulfils Council's aspirations and guidance to provide more intensive residential outcomes for a site such as this.

Figure 21. Concept plan in wider context

While the development is undoubtedly more intense than surrounding existing housing (as the site is quite large compared to the majority of the existing residential lots) it responds positively to the outcomes sought for comprehensive developments in the zone – specially Objectives 7.2.1 and 7.2.3 and their associated (relevant) policies.

The proposal development utilises the slope to shape a built form and landscape response that creates a distinct identity whilst still integrating with the surrounding existing residential environment. The relatively compact and simple dwellings are arranged such that there is separation, differentiation and variety of built form, while the architectural treatment maintains a cohesive overall appearance and character. In combination with a coordinated landscape approach, potential impacts on neighbours such as dominance and privacy, have been minimised

Overall, the proposed dwellings work well both within the site, in their immediate context and when viewed from further afield. They are well considered and of high quality. The positioning of windows, and placement of living areas and courts means the development will improve surveillance of the ROW on all boundaries.

The Canyon Ridge development will, in my opinion, be an asset for Arthurs Point and the wider Queenstown community.

Kind regards

Bruce Weir
Urban Designer, Urban Planner – B.Plan, M.UD
Weir & Associates Ltd

WILLIAMS & CO.

PLANNING / URBAN DESIGN / DEVELOPMENT

RM210019: CANYON RIDGE VILLAS LIMITED
URBAN DESIGN REVIEW
FEBRUARY 2021

A: INTRODUCTION

RM210019 is an application by Canyon Ridge Villas Limited to develop a site at Atley Road Arthurs Point, to establish 8 residential units and the subsequent subdivision of these units so that each is held in its own Record of Title.

The zoning of the property is Lower Density Suburban Residential under the Proposed District Plan.

QLDC have requested an Urban Design Review of the application as submitted and in particular a peer review of the Urban Design assessment provided with the application being the **Weir & Associates**: *Urban Design Statement: Canyon Ridge* (13 January 2021), hereafter referred to as the 'W&A Statement'.

The following documentation has been reviewed as part of this assessment:

- W&A Statement
- AEE and proposed plans as per QLDC Edocs File RM210019 in particular:

  Foley Group Architecture – *Architectural Plans* (dated 21 December 2020)
  gdc – *Landscape Plans* (dated 10 December 2020)
  Aurum – Subdivision Plan (dated 14 December 2020)
  Southern Planning Group – *AEE* (dated 19 January 2021)

- QLDC Proposed Plan *Chapter 7 Lower Density Suburban Residential and 27 Subdivision & Development*

A site visit was undertaken by the author on 25 February 2021.

B: SITE & CONTEXT

The site and context are described within *Section 2.0* of the AEE submitted with the application and within the *Context* section of the W&A Statement (p1-3). In summary the site is 3365m2 in area (2541m2 net), currently undeveloped with topography forming a 'knoll', and accessed off a ROW from Atley Road, Arthur's Point.

As described within the AEE, the current context of the site within this area of Arthur's Point is characterised by low density residential development on relatively large suburban sections. Roading formation, and the nature of lots becomes progressively more 'rural' or spacious in character to the southwest while development around Mathias

Terrace to the east of the site is a more regular pattern of suburban development. Land to the north has an undeveloped character with topography sloping towards the river / road and provides a buffer type environment.

As described in the W&A Statement the site is effectively surrounded by roading of different forms on each side, making it somewhat of an 'island' of undeveloped land. As such the site forms a backdrop to the immediately surrounding lots which access off the ROW, including in particular 85A-E Atley Road.

In summary the site is a relatively large parcel of land in the context of surrounding established low density type residential development, the site is undeveloped with variable topography and has reasonable prominence in the immediate environment.

C: PROPOSAL

As described in the AEE submitted with the application (Section 4.0), consent is sought to establish 8 stand-alone residential units on the subject site, with associated earthworks and landscaping. Consent is also sought for the subsequent staged subdivision of these units to create individual lots for each.

Of note the design includes:

- Three different typologies which make up the total of 8 townhouse type units, each with double garage
- Six of the units located on the site running generally north south and accessed from the ROW to the south, with the remaining two units sitting perpendicular to the north at lower elevation, accessed from each end of the ROW
- Generally garaging located at ground level with floors (1 or 2) above. All built form compliant with 7m height limit.
- Materials for the units in dark profile metal tray, natural stained vertical timber weatherboard, painted plaster and feature stacked stone
- Each unit provided outdoor decking and, in some cases, paved areas.
- Landscaping around all units in a comprehensive design including planting and entry treatment, where most units have a dedicated pedestrian entry separate to garaging.

D: ASSESSMENT

The application for consent is accompanied by an urban design statement (the W&A Statement) which provides an assessment of the proposal for each of the component areas of the site and then generally.

The Statement has developed three 'broad challenges to address' at the outset of the report. These are identified as:

- Is this an appropriate location for the type of residential proposed?
- Does the proposal deliver positive outcomes on the external environment?
- Is internal environment providing quality attributes for residents?

The Objectives and Policies of the LDSR zone are also set out in the Statement (p4) in order to frame the analysis (e.g. what is anticipated in the zone).

This is considered an appropriate methodology. In terms of limitations it is noted that while the statement refers to the MfE 7C's[1] and the QLDC Subdivision Design Guidelines 2015 and Residential Zone Design Guide 2019, these matters are not each explicitly assessed in the W&A Statement. I do however consider that the assessment provided – focusing on the three challenges to address - considers the general principles and guidance of these documents.

I note further that the NPS UD 2020 is not addressed in the statement (or AEE).

These matters are addressed in the analysis below.

D1 UD Assessment – General

In general I confirm that I am in agreement with the assessment and conclusions found within the W&A Statement.

In assessing the appropriateness of the proposal in urban design terms it is considered that the approach of the W&A Statement - to firstly outline the *Objectives* for the zone – is necessary, as the considerations around density need to be made in a framework of what is permitted/anticipated by the plan. In other words, to answer the W&A question: *Is this an appropriate location for the type of residential proposed?* it is necessary to understand what type of residential activity is anticipated by the plan for this location.

The planning framework for the LDSR zone provides a pathway for development at the proposed density, based upon the restricted discretionary status of 1 dwelling per 300 net site area[2]. The W&A Statement also identifies correctly that the ability to establish a residential flat associated with each dwelling (not proposed in this case) means essentially an even higher residential density is feasible under the plan provisions.

I therefore consider that the density of development proposed, while higher than the existing development in the surrounds is *in principle* not inappropriate. The comprehensive nature of the proposal on an existing larger parcel of LDSR zoned land signals that the development of the site could provide a good opportunity to meet the Objectives of the LDSR in relation to encouragement of higher density development / efficient use of land.

The design of the proposal however needs to be tested to determine if the balance expressed in the LDSR provisions is achieved (e.g. fit in immediate context and maintenance of amenity values). In this respect I agree with the conclusions of the W&A Statement that the design is sufficient to do so, e.g. that height, bulk and location will appropriately maintain privacy and access to sunlight. In this respect I note that the roading arrangement which provides a buffer between buildings results in an (at least) 10m setback of built form from neighbours, and all built form is contained within the maximum height plane. I do not identify any amenity or adverse urban design outcomes related to the separation between the individual units on the site.

While there will be some dominance effects on immediate neighbours by way of development of the site (given its prominence in this area of the neighbourhood) I also agree that the design manages the dominance effects of the proposal through building orientation and design, and articulation and landscaping, to an acceptable level.

[1] As per MfE (www.mfe.govt.nz) : The Urban Design Protocol
[2] Rule 7.4.8

Further assessment of the proposal to test its appropriateness in terms of good design elements can be undertaken against the QLDC Residential Zone Design Guide 2019 which is outlined within section **D2** below

Lot Areas & Subdivision

The processing planner has requested comment on the urban design impact associated with an interpretation of net area rule that would require illustration of a 300m2 'area' around each unit at land use consent stage. The possible impact of 'non-compliance' with this principle would in my view be associated with ensuring that each residential unit had sufficient outdoor living space. I consider space for quality outdoor living for each unit has been achieved given the decking & other outdoor living spaces provided in the design.

The proposed subdivision plan illustrates the intended spatial separation of the units in terms of their legal boundaries, or the land allocated to each unit. There is no minimum allotment size or dimensions necessary to be shown at subdivision stage[3] however the overall appropriateness of the lot layout & dimensions is to be considered[4]. As above again it is considered that each lot as proposed adequately provides for land associated with each unit including sufficient outdoor living space with no adverse urban design outcomes.

D2 QLDC Residential Zone Design Guide 2019

The proposal can be considered against the *Design Elements* of the Residential Zone Design Guide:

01. *Housing Diversity & Adaptability*
The design provides for a choice of compact modern townhouse housing which is currently limited in the immediate environment. Factors such as the solar orientation and efficient use of land contribute to sustainability principles.

02. *Well-defined entrances and detailing to improve legibility*
Whilst a run of garaging is located along the southern ROW, effort has been made to achieve a level of legibility with clear defined entrances and landscape detailing. There is no 'street' environment in the traditional sense to respond to. The end unit at the east is differentiated from the remainder as are the 'front' units. Addition of letterboxes/unit numbers at the access to units could assist with custodianship/wayfinding.

03. *Building Dominance and Sunlight Access*
Some dominance & loss of sunlight will result from buildings when appreciated from properties to the immediate south/east however the proposed building height is compliant. The design provides variation in the roof form achieved by each unit sitting at different levels over the site.

04. *Connections to Open Space to create safe, high amenity spaces*
There are no public/communal spaces created however this is considered appropriate given the scale of the development. Landscaping proposed is of a high quality and will provide character and amenity.

[3] Rule 27.7.17
[4] Rule 27.5.7

05. Providing Outdoor Living Space for Resident's Amenity

Each unit is provided a private outdoor living space accessible from the main living area. The primary outdoor living spaces for each unit are generally north / north west facing for good solar access, and are designed to allow privacy in the context of attached units. This is a positive element of the design.

06. Creating High Levels of Accessibility for All Transport Modes

To the limited extent that this matter is relevant it is considered to be sufficiently met. The garaging at the ROW has been considered in terms of its design with landscaping proposed to break up and define this area, and with visible doors/pedestrian entry paths provided.

07. How to integrate service areas so as to not affect amenity

Plans do not illustrate provision for rubbish/recycling and as such it is assumed bins would be kept individually within garages. The ROW access is understood to mean that each unit would need to transport bins to Altey Road for collection, this is not necessarily efficient and options for communal storage could be considered, and/or the space and screening for individual bins at Atley Road detailed.

08. Creating safe and private environments

The proposal is considered to meet the principles expressed in this design element. In particular outdoor living areas have been carefully designed to best conserve privacy between units, as detailed on the gdc plans, and window placement on units to the south

09. Site Coverage and LID solutions to reduce infrastructure demands

Site coverage and permeable area requirements are understood to be met with the design. A large area of new sealing will be required in order to provide for vehicle manoeuvring and while no LID features are proposed (for example permeable pavers) it is anticipated that stormwater will be addressed as per the QLDC Code of Practice.

10. Building Materials and Environmental Sustainability

No information has been provided in respect of sustainability of the proposed building materials or lighting design. Low intensity lighting in accordance with the Southern Light strategy at the entry areas off the ROW could assist with safety and useability.

11. Landscape Materials and Planting

The proposed landscape plan is considered to create high quality, human scale and low maintenance spaces which encourage custodianship, and are integrated with the built form. Hard landscaping to break up paved/sealed areas as described in the guideline (honing, saw cuts, finishing) has not been adopted (with the exception of exposed aggregate manoeuvrings circle) and could be considered in order to provide further amenity of the ROW space adjacent garaging.

D3 QLDC Subdivision Design Guide 2015

The Subdivision Design Guideline is not considered of relevance in this case given that it is developed for larger scale and greenfields subdivision rather than infill subdivision as proposed here. However, the proposed subdivision is considered to be supported by the guideline to the extent that it is a logical subdivision response to the units that will be established on the site, that it integrates the proposed access with existing roading in the neighbourhood, and provides opportunity for infill housing.

D4 NPS UD 2020

The National Policy Statement on Urban Development 2020 (NPS-UD) is considered relevant to the overall assessment of this application. Of particular relevance is the focus of the NPS-UD on encouraging intensification of urban areas and creation of well-functioning urban environments[5].

One of the three key provisions of the NPS-UD is intensification[6], and specifically intensification in areas where there is greatest benefit in order to contribute to well-functioning urban environments. The subject site is located within the suburban area of Arthurs Point which has reasonable proximity to Queenstown and is serviced by public transport providing direct connection to the town centre. Arthurs Point has a limited but developing collection of local services and good access to recreational amenities. As such I consider that the proposal generally contributes to a well-functioning urban environment given it provides housing options in a location with accessibility to jobs, community services, natural and open spaces, and public transport (Objective 1, Policy 1 and Objective 3).

I also note that Policy 6 of the NPS-UD is relevant in this case. When considering the infill of this density and type of housing on the site, it is noticeably different to the existing pattern of low density residential development (single level dwellings on larger lots). As such it is appropriate to test if this change will result in negative externalities on existing residents in particular. However the NPS-UD does provide particular direction on this point in Policy 6, identifying that in achieving the intensification goals of the Policy Statement, that change must be expected, and then secondly that change may detract from amenity values, however this should not be considered adverse. In essence, to ensure that future generations and communities have the necessary increased housing supply and types, there will be some necessary impact.

In this case I consider that development of the site as proposed is supported by the NPS-UD as it is intensification of housing which, while introducing change, does not have unacceptable local effects due to the considered design.

E: CONCLUSIONS

The methodology utilised within the W&A Statement to assess the proposal, with a focus on the Chapter 7 Objectives and structured around three general challenges (context, externalities and internal amenity) is considered appropriate, with two additional areas of assessment being the *QLDC Residential Zone Design Guideline* and the *NPS-UD 2020* identified and addressed above.

In general, the assessment and conclusions of the W&A Statement are agreed with, and the proposal is, while introducing a higher density of units than exist in the local environment, not considered to result in unacceptable dominance or privacy impacts when considering the response of the design to its surrounding residential neighbours. The appropriateness of the design is further confirmed when reviewed against the QLDC Residential Zone Design Guide and is aligned with the outcomes sought by the NPS-UD 2020.

Matters of design detail that could be addressed further to improve amenity and or useability generated from the QLDC Residential Zone Design Guide are detailed in the recommendations below.

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[5] Queenstown is identified as a Tier 2 Urban Environment under the NPS-UD

[6] Ministry for the Environment 2020. *Introductory Guide to the National Policy Statement on Urban Development 2020*, p6

F: RECCOMENDATIONS

Further design consideration could be made in terms of the following details to improve overall amenity:

- Resolution of rubbish & recycling storage – potentially address sufficient space/screening for bins at Atley Road

- Addition of lighting / letterbox / unit number details at the entry areas

- Consideration of treatment of detail (honing, saw cuts, finishing) in terms of paved areas (ROW/garage entry)

Paula Costello
BRS, MUDD
26 February 2021

87 Atley Road

Queenstown

Infrastructure Feasibility Report

November 2020

AURUM SURVEY CONSULTANTS

Document Control

Atley Road

Eight Lot Subdivision

Infrastructure Feasibility Report

Report prepared for: Canyon Ridge Limited

Report prepared by: Antony White

Document Set ID: 4924L-1

Date: November 2020

Version	Date	Revision Details	Typist	Author	Verifier	Approver
1	14 December 2020	Initial for SPG	AW	AW		BM
2						
3						
4						

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Aurum Document Set ID: 4924L-1
Version: 1, Version Date: 14 December 2020

Document Set ID: 6980722
Version: 1, Version Date: 23/08/2021

Contents

List of Information Attached:

1.0 INTRODUCTION

Canyon Ridge Limited has engaged Aurum Survey Consultants Limited (ASCL) to investigate and report on the feasibility of providing utility services and the necessary development infrastructure for the proposed subdivision at 87 Atley Road.

This report considers the nature of the proposed development, the site conditions affecting the connection of the necessary development infrastructure and describes the proposed options for implementation of the following:

- Water supply and fire-fighting compliance
- Wastewater disposal
- Storm water disposal
- Telecommunications
- Power supply

This report is to read in conjunction and support the planning application prepared and submitted by Southern Planning Group on behalf of Canyon Ridge with regard to the application for subdivision consent.

2.0 DESCRIPTION OF PROPOSAL

The application proposes to create eight allotments on the property at 87 Atley Road. The land is currently zoned Low Density Residential in the Queenstown Lakes District (QLDC) Operative District Plan and Lower Density Suburban Residential under the QLDC Proposed District Plan.

The proposed development is located on land legally described as Lot 2 DP 411983 and held in Register of Title 444491. The allotment has a size of 3365m².

The proposal is to subdivide the site into eight allotments ranging in size from 266m² to 646m² with each lot containing a 2-3 bedroom residential dwelling and garaging.

We note that this assessment of the necessary development infrastructure is limited to consideration of the scale of the development as it is currently proposed.

Refer to Appendix A for the proposed Development Plans.

3.0 SITE DESCRIPTION

The proposed development is located on prominent knob located between an existing right of way that serves five residences and Atley Road. The site contains the existing access as a right of way along the eastern and southern boundaries of the site. The site also has legal frontage to Atley Road, however this is the steepest part of the site and no direct vehicle access will be along this frontage. There are also some existing service easements within the site.

The elevation of the site ranges from 415m to 431m above sea level.

The land receives approximately 800mm rainfall per year and maybe subject to drought conditions over the summer months.

The development site is located inside the QLDC Arthurs Point Scheme boundary for water, storm water and wastewater. Refer to Appendix B for existing services and scheme boundary information.

4.0 WATER SUPPLY

4.1 Existing System

This area is serviced via a 100mm council water main from the Atley Terrace Subdivision that passes through private property. There is also a 200mm council water main located within Atley Road.

It is intended that the council reticulation is extended into the site and used for the water supply to the eight allotments. Firefighting requirements are provided by existing hydrants.

4.2 Water Demand Assessment

An assessment request was submitted to QLDC Property and Infrastructure team late October 2020. A report was issued by Mott MacDonald dated 10th December 2020 confirming that the existing network is able to supply the development. Refer to Appendix F for the report.

4.3 Firefighting Water

There is an existing fire hydrant located within the right of way turning head adjacent to the site. This hydrant is within 135m of the proposed allotments. There is a second fire hydrant within 270m of the proposed development located at the north western corner of 80 Atley Road. QLDC water modelling report has confirmed that the existing hydrant 113875 (in the right of way immediately adjacent to the site) is able to provide a flow greater than 25l/s. The development will meet the requirements of FW2 under PAS NZ 4509:2008 from the existing hydrant.

4.4 Council Approval

This site is included within the Arthurs Point Water Scheme boundary. The scale of the development proposed is expected within the scheme boundary and the demand requirements would be as anticipated.

Richard Powell (Infrastructure Development Engineer) made the following recommendation by email dated 11 December 2020:

"Water – Confirmed our level of service can be achieved."

In addition, development contributions would be required to be paid for the eight new connections.

4.5 Reticulation Concept

It is proposed that a new rider main would be installed from the existing council main located in the right of way to service the new allotments. This would be located on the northern side of the right of way along the frontage of the new allotments. Acuflow connections would be provided for each of the new allotments.

The QLDC CoP allows up to 15 dwelling units off a one end supply provided the pressure is greater than 400 kPa as per the table below:

Table 6.3 – Empirical guide for sizing rider mains

DN 50 Rider mains		
Pressure	**Maximum number of dwelling units**	
	One end supply	**Two end supply**
High > 600 kPa	20	40
Medium 400 – 600 kPa	15	30
Low < 400 kPa	7	15

The council modelling report confirms that 50mm ID is appropriately sized.

The proposed reticulation layout is shown on the drawing included within this report in Appendix C.

4.6 Recommendations

The water supply for the development will be provided for by way of connecting to the existing council water main within the right of way adjacent to the site and that individual connections be installed to each allotment in accordance with the QLDC CoP and bylaws. This has been confirmed by Council's Property and Infrastructure engineer Richard Powell.

5.0 WASTEWATER

5.1 General

Council reticulation is located adjacent to the site within the right of way. A 150DN lateral was provided to the site when it was created by RM040196. It is intended to connect the proposed development to this lateral and the main located within the right of way.

5.2 Wastewater Generation Assessment

An assessment request was submitted to QLDC Property and Infrastructure team late October 2020. Hydraulic Analysis issued a report on the wastewater demand dated 4th December 2020. The modelling report has identified that there is a capacity problem within the existing network and that upgrades need further investigation.

Flow modelling was completed using a 150mm ID pipe size. . Refer to Appendix F for the report.

5.3 Council Approval

This site is located within the Arthurs Point Wastewater Scheme boundary.

The scale of the development proposed is expected within the scheme boundary and the demand requirements would be as anticipated.

Richard Powell (Infrastructure Development Engineer) made the following recommendation by email dated 11 December 2020:

"Wastewater – Although this development combined with other consented development would push the current system over capacity, this development on its own is fine, the other development are at a scale that would require the upgrades anyway so I am satisfied that this development can connect as is."

It is proposed that the network and infrastructure within the site would be private.

In addition, development contributions would be required to be paid for the eight new connections.

5.4 Reticulation concept

The development could be serviced by a conventional gravity system utilising a 150 DN main and a combination of cleaning eyes and manholes to drain to the existing infrastructure located within the right of way and Atley Road. Appendix D shows a proposed reticulation plan.

Alternatively, a low pressure system could also be used to service each of the allotments. This would also discharge to the existing infrastructure on the northern side of Arthurs Point Road. Each lot would be provided with a storage/grinder/pump system near the building footprint which would then discharge via a small diameter polyethylene pipe to the manhole at the boundary. Ecoflow are able to provide systems of this type.

Effectively, this type of system is sealed and also diurnal peaks smoothed out due to buffering volume of each storage tank per lot. No allowance needs to be made for diurnal or wet weather peaking. In this the scenario the peak wastewater generation would be as follows:

Table 1: Peak Wastewater Generation Assessment – Low Pressure System

Description	Population	Flow rate	Daily Volume (Litres/day)
Per Lot	4-6 people	250L/person/day	1,500
Total for 8 Lots			12,000

5.5 Recommendations

Given the location of the site, proximity of the Council reticulation and being within the Arthurs Point Wastewater Scheme Boundary, the wastewater drainage for the development will be provided by way of connecting to the existing Council wastewater network within Atley Road. This has been confirmed by Council's Property and Infrastructure engineer Richard Powell.

6.0 STORMWATER DISPOSAL

The proposed development of the site, including residences and hardstand areas will alter the existing storm water run-off patterns from the site. When the site was created a 200mm storm water lateral was installed as per RM040196 to the site boundary at the south east corner.

The QLDC CoP requires that a low impact design is preferred. Due to the existing topography which is primarily a localised knob, the development does not alter or have any impact on the upstream catchment and can be dealt with in isolation.

On this basis the design needs to replicate pre-development hydrological regime whereby the maximum rate of discharge and peak flood levels post-construction are no greater than pre-development.

A basic analysis of the site was conducted and is summaries in the table below:

Table 2: Pre and Post Development Storm Water Generation

STORMWATER CALCULATIONS

PROJECT		Canyon Ridge Job #4924				DESIGNED BY	ADPW					
CLIENT		Momentum Projects				DATE	6/10/2020					
LOCATION		AREA		FLOW			PIPE DATA					COMMENT
From	To	Area HA.	Shown	C*	Intensity mm/hr	Design Flow Incr.	Accum.	Capacity l/sec	Slope %	Pipe Dia.	Velocity	
Design Constraint 2 (QLDC CoP 4.3.5.1) - Discharging to known capacity network - Max discharge to network = 5% AEP (1 in 20yr) post-development flow												
Pre-Development	200mm lat	0.3360	blue outline	0.65	43.4	26						5% AEP (1 in 20yr) Post-development
Post-Development	200mm lat	0.3360	blue outline	0.75	43.4	30						5% AEP (1 in 20yr) Post-development
						26	l/s max allowable discharge from site to **known** network					
Design Constraint 3 (QLDC CoP 4.3.5.1) - Overland flow discharge - Max discharge downstream = 1% AEP (1 in 100 yr) pre-development flow												
Pre-Development		0.3360	blue outline	0.65	62.3	38						1% AEP (1 in 100yr) Pre-development
Post-Development		0.3360	blue outline	0.75	62.3	44						1% AEP (1 in 100yr) Post-development
					Pre vs Post	6	l/s to be attenuated/soakage onsite					

The runoff from the existing right of way is already dealt with by the existing network. The maximum allowable discharge from the site pre-development is 26l/s based on a 5% AEP one hour event utilising a C value of 0.65 (standard residential site for brown fields infill) If we assume that the 200mm lateral is laid at minimum grade of 1 in 60, its capacity would be in the order of 40l/s. Therefore the existing network should be able to cater for the intended flow.

Post-development flow causes the design flow to increase slightly to due to increase in density of development from normally anticipated. The increase is in the order of 4l/s. The peak flow rate post-post development is still less than the capacity of the existing lateral.

The secondary overflow is by way of the existing drainage channel along the western side of the right of way drains to the low point of Atley Road into a double sump.

It is therefore proposed that the roof areas, driveways and parking areas will discharge via down pipes and surface sumps to a storm water reticulation network that will enter treatment device to remove contaminates and waterborne particles before discharging to the existing network.

Subject to specific design in conjunction with the detailed dwelling design, car parking and access, the drainage of impermeable areas will be able to be drained to existing network by the use of an appropriately designed storm water reticulation system.

7.0 OTHER SERVICES

7.1 Power

Aurora Energy Limited has been contacted regarding the proposed development. They have provided a letter confirming their ability to make an electricity supply available for this development. A copy of correspondence to and from Aurora is included in Appendix E.

7.2 Telecommunications

Chorus have been contacted regarding the proposed development and have confirmed that the development is able to be connected to the existing fixed telecommunications network. They have provided confirmation to this effect and a copy of the correspondence to and from Chorus is included in Appendix E.

8.0 LIMITATIONS

This report has been written for the particular brief to Aurum Survey Consultants Ltd from their client and no responsibility is accepted for the use of the report for any other purpose, or in any other context or by any third party without prior review and agreement.

In addition, this report contains information and recommendations based on information obtained from a variety of methods and sources including inspection, sampling or testing at specific times and locations with limited site coverage and by third parties as outlined in this report. This report does not purport to completely describe all site characteristics and properties and it must be appreciated that the actual conditions encountered throughout the site may vary, particularly where ground conditions and continuity have been inferred between test locations. If conditions at the site are subsequently found to differ significantly from those described and/or anticipated in this report.

Aurum Survey Consultants Ltd must be notified to advise and provide further interpretation.

Yours faithfully
Aurum Survey Consultants

Antony White
Registered Professional Surveyor
Mobile 027-2288504
mailto:awhite@ascl.co.nz

AURUM SURVEY CONSULTANTS

Appendix [A]

Development Plans

existing ROW

north

RP10 RC.11

RP09 RC.11

01 RC.07

04 RC.08

02 RC.07

RP01 RC.10

A RC.09

RP02 RC.10

RP03 RC.10

RP04 RC.10

RP05 RC.10

03 RC.08

RP06 RC.11

B RC.09

RP07 RC.11

RP08 RC.11

4.5m setback

2.0m setback

deck 38.23 m²

building coverage 184.79 m²

lot 01
lot area 550.55 m²

lot area 516.07 m²

total site area 3,366.35 m²

turn table

building coverage 184.61 m²

lot 08
lot area 346.08 m²

deck 38.23 m²

proposed new seal

existing road widening easement

existing sealed ROW

building coverage 132.14 m²

lot 07
lot area 216.76 m²

lot area 315.33 m²

building coverage 127.30 m²

lot 06
lot area 270.72 m²

lot 05
lot area 324.63 m²

lot 04

lot 03
lot area 270.37 m²

lot 02
lot area 233.60 m²

existing telecom easement

driveway area 1,001.78 m² (incl. extg r.o.w.)

trans

4,844

5,500

3,000

service vehicle

99%ile car

90 %ile car

areas:

total site area	3,366m²
building coverage	1,136m²
coverage %	33.7 %
impervious area	2,283m²
impervious %	67.8 %

notes:

1. lot boundaries are indicative only and to be confirmed during sub division setout
2. refer landscape architect's documentation for planting

FOLEYGROUP architecture

2928 | Canyon Ridge | Momentum Projects

plan: proposed site

03 377 5666 | info@foleygroupconz | www.foleygroupconz | 30 southwark st | po box 22 166 | christchurch 8140

RC.02
scale: 1:250
27/11/2020

Appendix [B]

QLDC Existing Services and Arthurs Point Scheme Boundaries

QLDC Services Map

QUEENSTOWN LAKES DISTRICT COUNCIL

0 0.02 0.04 0.07 km

Scale: 1:564

Map Date: 5/10/2020

N

QLDC Scheme Boundaries

QUEENSTOWN LAKES DISTRICT COUNCIL

0 0.05 0.1 0.2 km

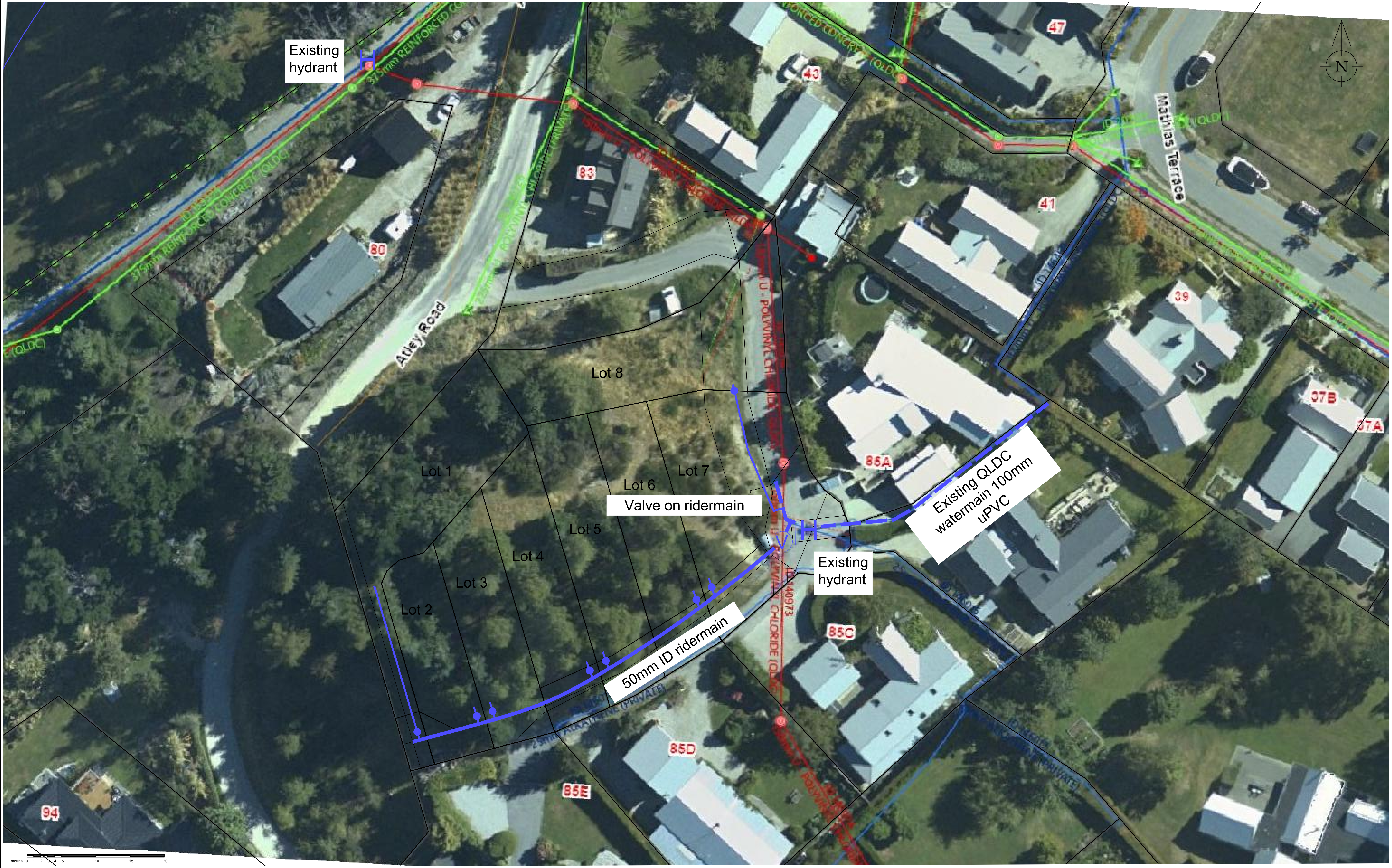
Scale: 1:2,000

Map Date: 4/12/2020

N

Appendix [C]

Water Supply Plan



KEY

proposed 50mm ID ridermain
proposed acuflow connection
allotment connection

A person/company using Aurum Survey Consultants drawings and other data accepts the risk of:
1. using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions;
2. using the drawings or other data for any purpose not agreed to in writing by Aurum Survey Consultants.

REV.	DATE:	REVISION DETAILS:	BY:
A	04/12/20	Initial release	BM

WARNING NOTE:
This resource consent plan has been prepared for the client from field survey and existing records for the purpose of a proposed subdivision on the land. It is to read in conjunction with our terms of engagement to Shane Fairmaid. It should not be used by the client company for any other purpose. The plan is not to be relied on by any other person for any purpose whatsoever.

TITLE:

PROPOSED WATER CANYON RIDGE ARTHURS POINT

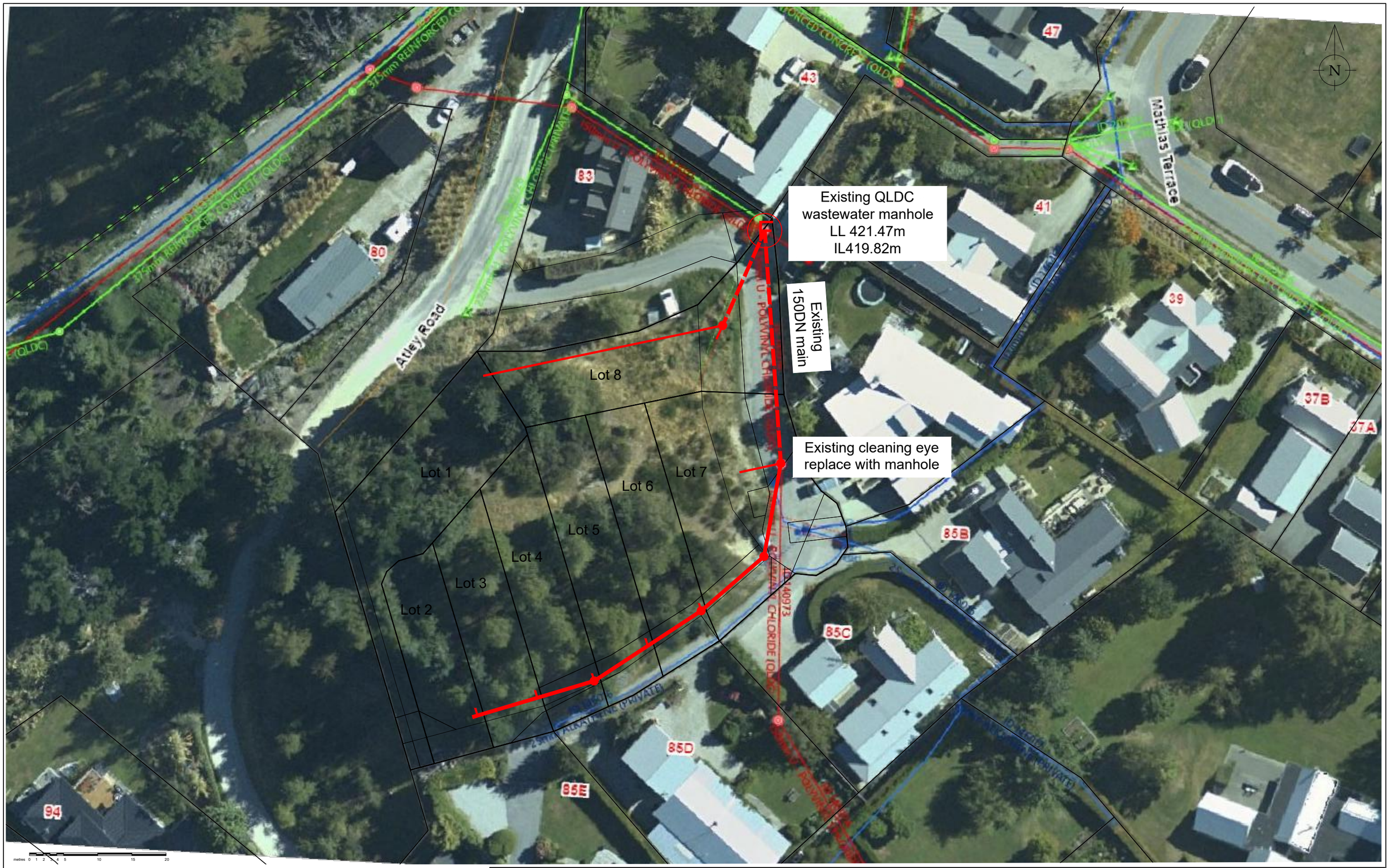
DATE: 04 Dec 2020
BY: A White
Scale 1:500
Original Plan A3
DRAWING & ISSUE No. 4924.5E.1A

AURUM SURVEY

PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

Appendix [D]

Wastewater Drainage Plan



KEY

proposed 150DN main
proposed manhole
existing 150DN lateral
allotment connection

REV.	DATE:	REVISION DETAILS:	BY:
A	04/12/20	Initial release	BM

WARNING NOTE:
This resource consent plan has been prepared for the client from field survey and existing records for the purpose of a proposed subdivision on the land. It is to read in conjunction with our terms of engagement to Shane Fairmaid. It should not be used by the client company for any other purpose. The plan is not to be relied on by any other person for any purpose whatsoever.

DATE: 04 Dec 2020
BY: A White
Scale 1:500 Original Plan A3
DRAWING & ISSUE No. 4924.5E.2A

TITLE:

PROPOSED WASTE WATER CANYON RIDGE ARTHURS POINT

AURUM SURVEY
PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

Appendix [E]

Letters confirming supply of services

AURORA ENERGY LIMITED
PO Box 5140, Dunedin 9058
PH 0800 22 00 05
WEB www.auroraenergy.co.nz

5 October 2020

Antony White
Aurum Survey

Sent via email only: awhite@ascl.co.nz

Dear Antony,

ELECTRICITY SUPPLY AVAILABILITY FOR A PROPOSED EIGHT LOT SUBDIVISION.
ATLEY ROAD, ARTHURS POINT. LOT 2 DP 411983.

Thank you for your inquiry outlining the above proposed development.

Subject to technical, legal and commercial requirements, Aurora Energy can make a Point of Supply[1] (PoS) available for this development.

Disclaimer

This letter confirms that a PoS **can** be made available. This letter **does not** imply that a PoS is available now, or that Aurora Energy will make a PoS available at its cost.

Next Steps

To arrange an electricity connection to the Aurora Energy network, a connection application will be required. General and technical requirements for electricity connections are contained in Aurora Energy's Network Connection Standard. Connection application forms and the Network Connection Standard are available from www.auroraenergy.co.nz.

Yours sincerely

Niel Frear
CUSTOMER INITIATED WORKS MANAGER

[1] Point of Supply is defined in section 2(3) of the Electricity Act 1993.

Chorus Conformation: QST60480 - Atley Road, Arthur's Point. 8 Lots (Lots 1-8) - Estimate

From Chorus Property Developments
to Ant White

Wed 7/10/2020 8:41 pm

Development Scheme Plan.pdf (1.4 MB)

Hi Antony,

Thank you for providing an indication of your development plans in this area. I can confirm that we have infrastructure in the general land area that you are proposing to develop. Chorus will be able to extend our network to provide connection availability. However, please note that this undertaking would of course be subject to Chorus understanding the final total property connections that we would be providing, roll-out of property releases/dates and what investment may or may not be required from yourselves and Chorus to deliver the infrastructure to and throughout the site in as seamless and practical way as possible.

The cost involved would be a standard fee of $1200 per lot/connection excluding GST. This cost can only be finalised at the time that you are ready to proceed.

Chorus is happy to work with you on this project as the network infrastructure provider of choice. What this ultimately means is that the end customers (business and home owners) will have their choice of any retail service providers to take their end use services from once we work with you to provide the physical infrastructure.

Please reapply with a detailed site plan when you are ready to proceed.

Thanks

Geordie Rumbles
Property Development Coordinator

T 0800 782 386 opt 1
E Develop@chorus.co.nz

PO Box 9405
Hamilton
www.chorus.co.nz

CHORUS

Appendix [F]

Water and Wastewater modelling reports

MOTT MACDONALD

Technical Memo
Queenstown Lakes District Council

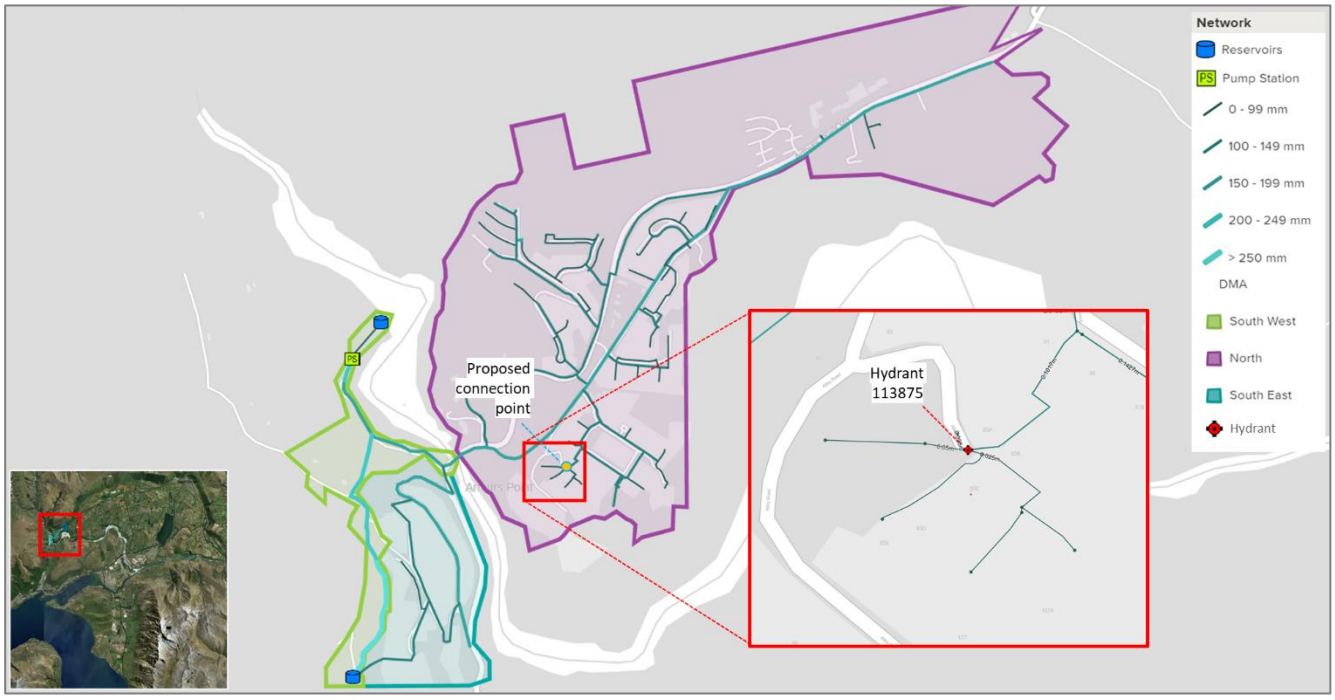
Project:	QLDC water supply modelling (Arthur's Point)		
Our reference:	418190-QLDC-AB02-DQ-005	**Revision**	Draft - A
Prepared by:	Giulio Pozzuto	**Date:**	10 December 2020
Approved by:	Julie Plessis	**Checked by:**	Tom Lecomte
Subject:	Atley Road: Water supply developer query		

In December 2020, Mott MacDonald was commissioned by the Queenstown Lakes District Council (QLDC) to integrate and model a proposed development located on Atley Road, situated within the stand-alone water supply (WS) model. This study provides a basic summary of the results, in terms of pressure variation and the pipeline head losses, which were simulated using the existing peak day scenario (no other proposed developments were considered in the modelling).

1 Location and connection point

As informed by the QLDC, Figure 1.1 provides an approximation of the development site and the connection point to the WS network, via the existing 102 mm pipe on Atley Road.

Figure 1.1: Development location and connection point within Arthur's Point WS network.



Document Set ID: 6980722
Version: 1, Version Date: 23/08/2021

2 Model assumption

The information provided in Table 2.1 was used to undertake the study and were provided by the QLDC. The maximum pipe length within the proposed development has been modelled at the proposed connection point on Atley Road. In terms of firefighting capacity, FW2 (25 l/s and no sprinkler system) has been modelled during the diurnal time when the WS usage is equal to 60% of the peak day demand. The closest hydrant 113875 (see in Figure 1.1) is located at the end of Atley Road and appears to be within 135 metres of the development.

Table 2.1: Proposed development breakdown

Development breakdown	
Scenario baseline	Existing Peak Day
Number of residential units	8
Connection point	Via the existing 100 mm pipeline on Atley Road
Pipe length and internal diameter	60 m and 50 mm (ID)
Firefighting class required	FW2 – 25 l/s (no sprinkler system)
Elevation (mRL)	
lowest	428
highest	429
WS Demand (instantaneous peak demand - l/s)	
Residential	1.81

3 Model results

The remainder of the memo details the results of the modelling work, which were undertaken using EPAnet (version 2.2) and are based solely on the data provided by the QLDC (see Section 2).

Table 3.1: Results before and post-development (within the existing network)

	Existing peak day	
	Pre-development	**Post-development**
Minimum pressure at the connection point (m)	77.3	77
Maximum head loss upstream from connection pipe (m/km)	0.2	2.8

Table 3.2: Results within the proposed development

	Existing peak day
Minimum pressure at the **lowest** elevation (m)	75.1
Maximum pressure at the **lowest** elevation (m)	80
Minimum pressure at the **highest** elevation (m)	73.3
Maximum pressure at the **highest** elevation (m)	79
Maximum head loss along the 60 m pipeline (m/km)	68
Firefighting capacity	
FW2 (25 l/s and no sprinkler) test at hydrant 113875	**Pass**
Residual pressure (m)	51
Pressure drop (m)	27
Drop below null within the remainder of the network	No

QUEENSTOWN LAKES DISTRICT COUNCIL

ATLEY ROAD (CANYON RIDGE) DEVELOPMENT IMPACT ASSESSMENT

DECEMBER 2020

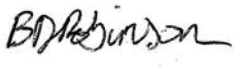
HAL HYDRAULIC ANALYSIS LIMITED

QUALITY SECTION

AUTHOR

Name	Title	Organisation	Signature
Sherine Sathiasothy	Experienced 3-Waters Engineer	Hydraulic Analysis Ltd	

REVIEWED

Name	Title	Organisation	Signature
Brian Robinson	Director	Hydraulic Analysis Ltd	

REVISION HISTORY

Revision	Publication Date
Draft	23 Nov 2020
Final	4 Dec 2020

CONTENTS

1. INTRODUCTION

1.1. OBJECTIVE

The objective of this study is to utilise the existing hydraulic model (Wakatipu Wastewater Model with HAL updates, 2018) of the Queenstown wastewater network to assess the impact of the proposed Canyon Ridge, Atley Road development on the wastewater network. The current population (2015) scenario has been used for this assessment.

1.2. BACKGROUND

The Canyon Ridge site is located at the Southern end of Atley Road, adjacent to the Shotover River. The development application seeks approval for subdivision of an existing vacant site (Lot 2 DP 411983) into 8 residential dwelling lots, with 3-4 bedroom dwellings proposed.

The development proposes a gravity connection to the existing Atley Road 150mm uPVC wastewater network in the Arthurs Point catchment. The network flows southwest via gravity to the Oxenbridge Tunnel Road Pump Station (WWPS).

2. SCOPE

The following tasks have been undertaken as part of this assessment:

- Calculation of design flows for the Atley Road (Canyon Ridge) development
- Assessment of the Atley Road (Canyon Ridge) development impact on the existing network for the current (2015) development scenario

Each of these tasks is discussed in more detail in the following sections.

3. ATLEY ROAD (CANYON RIDGE) DESIGN FLOWS

3.1. OVERVIEW

The Atley Road development proposal seeks approval for subdivision of an existing vacant site into 8 residential dwelling lots, with 3-4 bedroom dwellings proposed. The location of the proposed development is shown in Figure 3-1 below.

FIGURE 3-1 ATLEY ROAD (CANYON RIDGE) DEVELOPMENT SITE LOCATION

The development proposes a gravity connection to the existing Atley Road 150mm uPVC wastewater network in the Arthurs Point catchment, as shown in Figure 3-2 below. The network flows southwest via gravity to the Oxenbridge Tunnel Road WWPS.

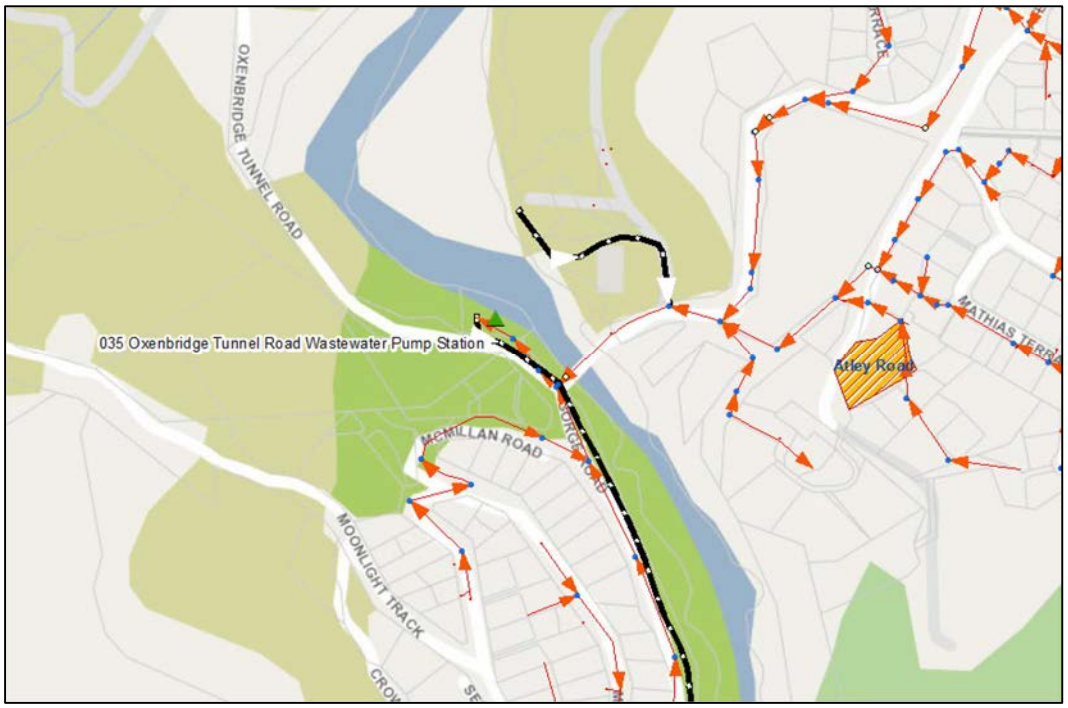


FIGURE 3-2 ATLEY ROAD (CANYON RIDGE) PROPOSED WASTEWATER CONNECTION

3.2. DEVELOPMENT DESIGN FLOWS

The Atley Road proposal seeks to develop 8 residential dwelling lots, with 3-4 bedroom dwellings proposed.

The design wastewater flows have been calculated using the QLDC 'Land Development and Subdivision Code of Practice', which assumes an average dry weather flow of 250 litres/person/day, a dry weather diurnal peaking factor of 2.5, and a wet weather dilution/infiltration factor of 2 (i.e. a peak wet weather flow (PWWF) of 5x average dry weather flow (ADWF)).

The development proposes subdivision of 8 new residential dwelling lots with a mixture of 3-4 bedrooms, and an assumed conservative occupancy of 8 people per dwelling. This equates to a design PWWF of 0.93 l/s, as shown in

Table 3-1 below.

TABLE 3-1: ATLEY ROAD (CANYON RIDGE) DEVELOPMENT DESIGN FLOWS

	Residential Lots
No. of Units	8
Occupancy	8
Population	64
ADWF (l/p/day)	*250*
ADWF (l/s)	0.19 l/s
DWF Peaking Factor	*x2.5*
PDWF (l/s)	0.46 l/s
WWF Peaking Factor	*x2*
PWWF (l/s)	0.93 l/s

4. ATLEY ROAD DEVELOPMENT IMPACT ASSESSMENT

4.1. PRE-DEVELOPMENT SCENARIO

The existing Wakatipu wastewater model (with 2018 HAL updates) was refined with new manhole level and pipe invert survey information collected by QLDC in 2019. The model was run under the current (2015) population scenario, without the proposed Atley Road development. A monthly seasonal DWF profile was applied to the model to represent increased visitor numbers during peak periods, with a maximum peaking factor of 1.1x calibrated DWF over the Dec/Jan period. The network was assessed against a 5-year ARI design storm.

As shown in the Figure 4-1 long section below, the existing 150mm local wastewater network shows some evidence of pipe surcharge near the base of the catchment flowing to Oxenbridge WWPS. However, as Manhole ID:105021 at 1 Arthurs Point Road is now known to be a sealed access point, the modelled surcharge does not result in any uncontrolled manhole overflow.

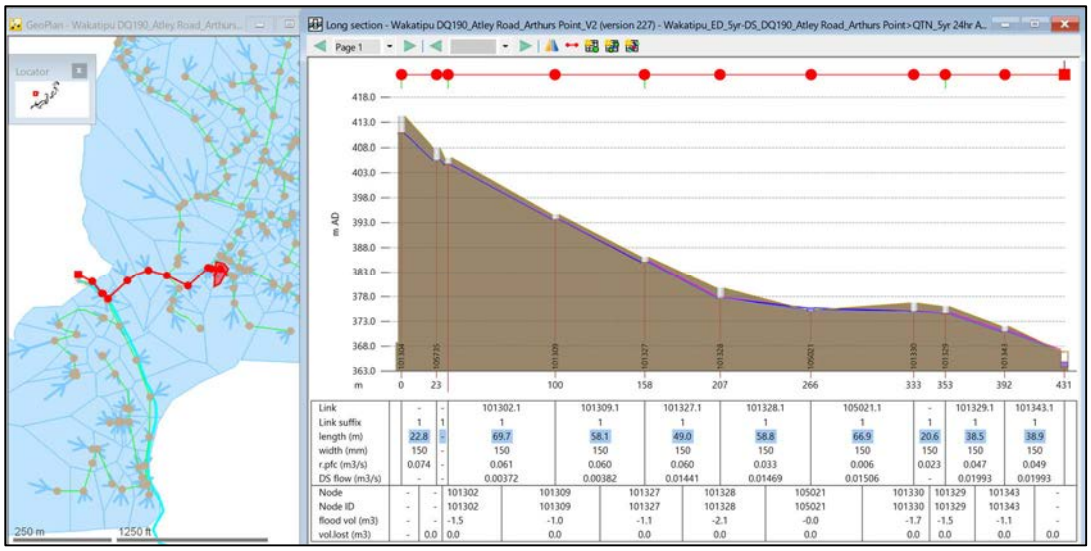


FIGURE 4-1 EXISTING (2015) LONG-SECTION – 5 YEAR ARI DESIGN STORM

4.2. POST-DEVELOPMENT SCENARIO – ATLEY ROAD

The Wakatipu wastewater model (with 2018 HAL updates) was run under the current (2015) population scenario, with the additional peak wet weather flow of 0.93 l/s from the proposed Atley Road development. The flows were added in as a direct gravity connection to Manhole ID:101304 on the existing 150mm uPVC wastewater line crossing Atley Road. The development impact was assessed against a 5-year ARI design storm to understand the performance of the network.

As shown in the Figure 4-2 long-section below, the existing 150mm local network shows evidence of increased pipe surcharge flowing to Oxenbridge Tunnel Road WWPS. However, the additional development flows do not result in any uncontrolled manhole overflow events within the downstream network flowing to the Oxenbridge WWPS.

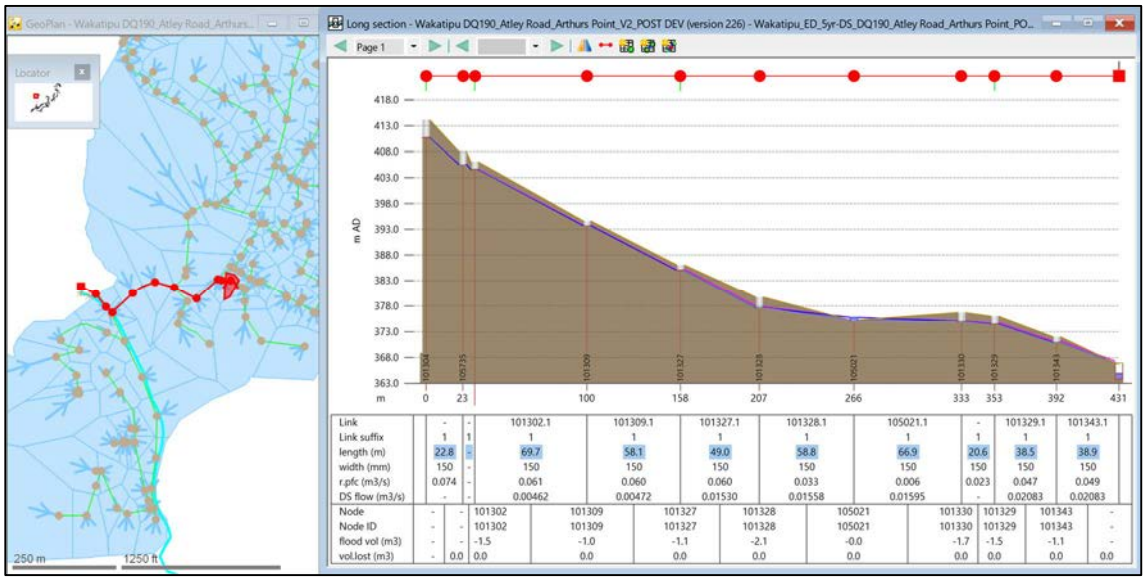


FIGURE 4-2 ATLEY ROAD (0.93 L/S) LONG-SECTION – 5 YEAR ARI DESIGN STORM

4.3. POST-DEVELOPMENT SCENARIO – ATLEY ROAD & TREESCAPE, ONSEN, ARTHURS PT

There are additional known developments within the Arthurs Point wastewater catchment, which have recently applied for development Resource Consent with QLDC. These are the Treescape development, 182 Arthurs Point development and a proposed expansion of the Onsen Hot Pools site, with a calculated PWWF of 3.2 l/s, 12.52 l/s and 0.91 l/s respectively. The location of these development is shown in Figure 4-3 below.

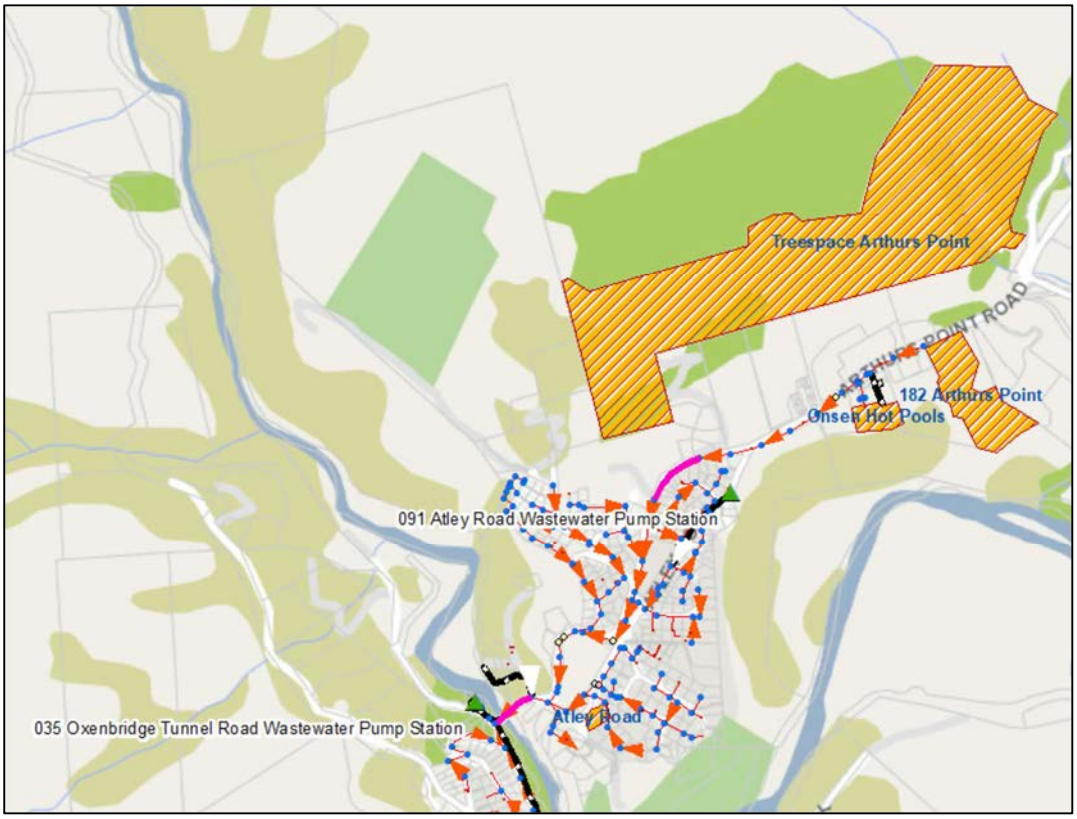


FIGURE 4-3 PLANNED DEVELOPMENTS UPSTREAM OF ATLEY ROAD SITE

The model has been run with the additional PWWFs of the three upstream developments added in, to assess the capacity of the network to receive the cumulative proposed development flows. As shown in the long-section in Figure 4-4 below, this results in increased surcharge in the downstream network from the proposed Atley Road development site, to the point of uncontrolled overflows at two different locations, the details of which are summarised in Table 4-1.

TABLE 4-1: CUMULATIVE DEVELOPMENT MANHOLE OVERFLOW VOLUMES (5-YEAR ARI)

Manhole ID	Overflow Volume (m^3)	
	Atley Road	Atley Road + Treescape + Onsen + Arthurs Point
101328	0	22.4 m^3

107914 (Oxenbridge PS)	0	35 m^3

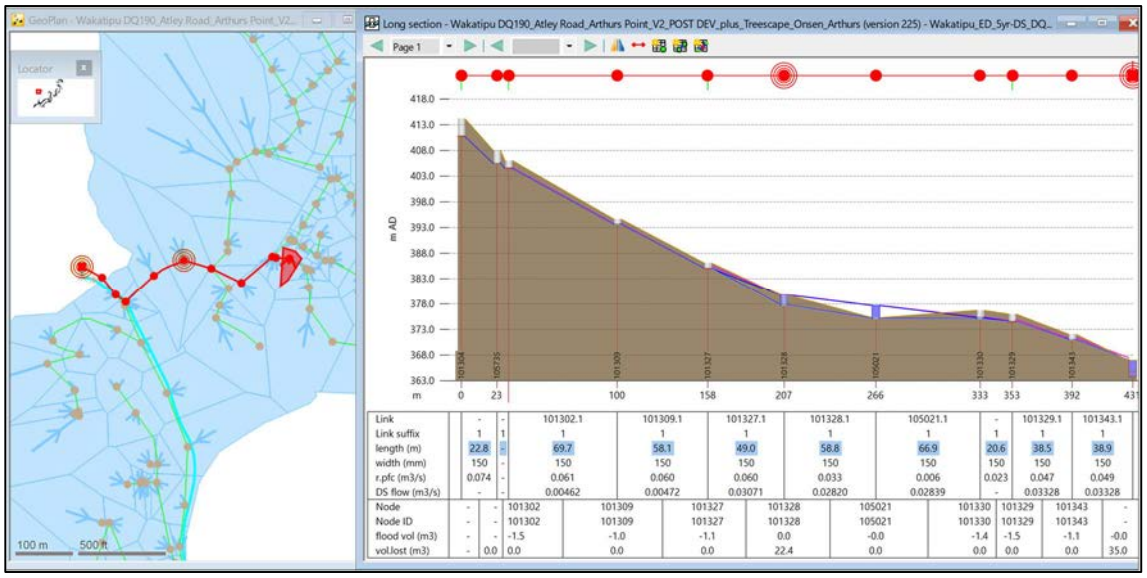


FIGURE 4-4 ATLEY ROAD + TREESCAPE + ONSEN + 182 ARTHURS POINT – 5 YEAR ARI DS

4.4. INDICATIVE NETWORK UPGRADES FOR CUMULATIVE DEVELOPMENT

The development proposal for 182 Arthurs Point was assessed by HAL in September 2020. The assessment showed the existing network was unable to support the additional development flows from this proposal, and recommended the below network upgrades:

1. Upgrade 180m of existing pipeline 150mm to 225mm from MH ID:101372 to MH ID:101377 (upstream of Atley Road development) as shown in Figure 4-5 below.
2. Upgrade 130m of existing pipeline 150mm to 225mm from MH ID:101328 to MH ID:101330, (downstream of Atley Road development) as shown in Figure 4-6 below.

FIGURE 4-5 ARTHURS POINT ROAD 225MM UPGRADE (UPSTREAM ATLEY ROAD)

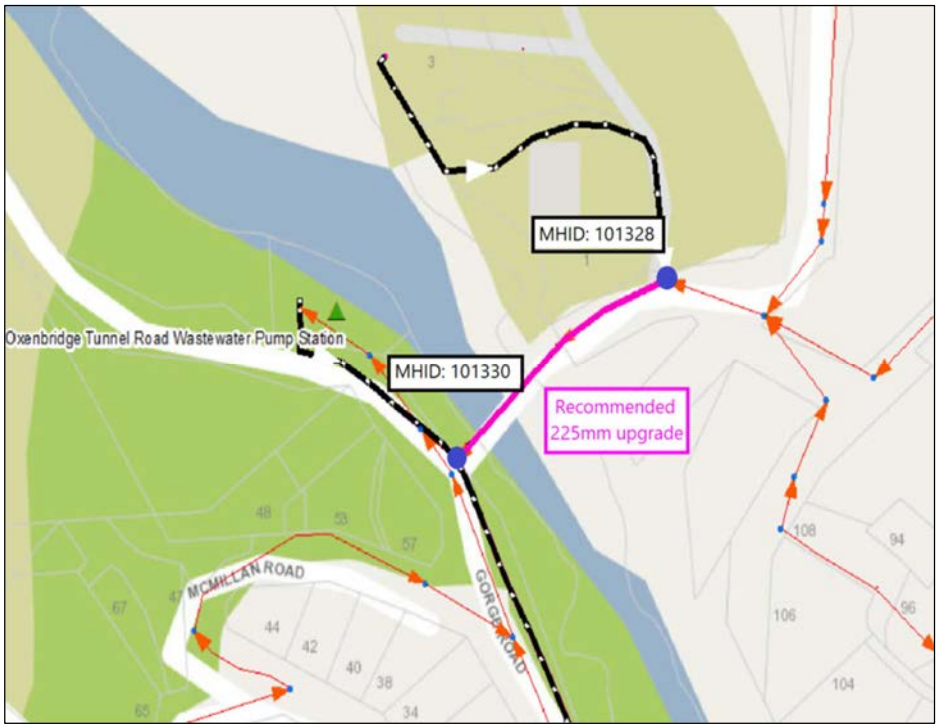


FIGURE 4-6 ARTHURS POINT ROAD 225MM UPGRADE (DOWNSTREAM ATLEY ROAD)

4.5. OXENBRIDGE TUNNEL ROAD PUMP STATION ASSESSMENT

The local Arthurs Point Road 150mm uPVC network flows south, discharging via gravity to the Oxenbridge Tunnel Road WWPS located at the base of the Arthurs Point catchment.

The Oxenbridge Tunnel Road WWPS has a maximum capacity of 28 l/s with one pump operating (based on QLDC records). With a modelled peak inflow of 21 l/s in the 5-year ARI design storm for the post development scenario, the pump station and associated rising main have ample capacity to receive the additional Atley Road development flows, as shown in Figure 4-7 below.

However, when considering the cumulative PWWF of 16.61 l/s from the three additional proposed upstream developments, this results in an increase in peak inflow to the WWPS of approximately 37 l/s under a 5-year ARI design storm. Hence, the existing pump station does not have the capacity to receive the additional cumulative development flows from all four proposed developments. This capacity constraint simulates an uncontrolled manhole overflow at MH ID:107914 at the Oxenbridge WWPS site.

It is recommended that options for resolving predicted overflows at the Oxenbridge Tunnel Road WWPS are investigated, in order to cater for the ultimate future proposed flows for the Arthurs Point catchment. This may involve a pump station upgrade or provision of additional storage on site. It should be noted that any upgrade of Oxenbridge WWPS is likely to trigger downstream network upgrades, specifically the Gorge Road balance tank and gravity network upgrades. Hence any upgrade of Oxenbridge WWPS should be considered by QLDC in conjunction with the nature and timing of downstream network upgrades.

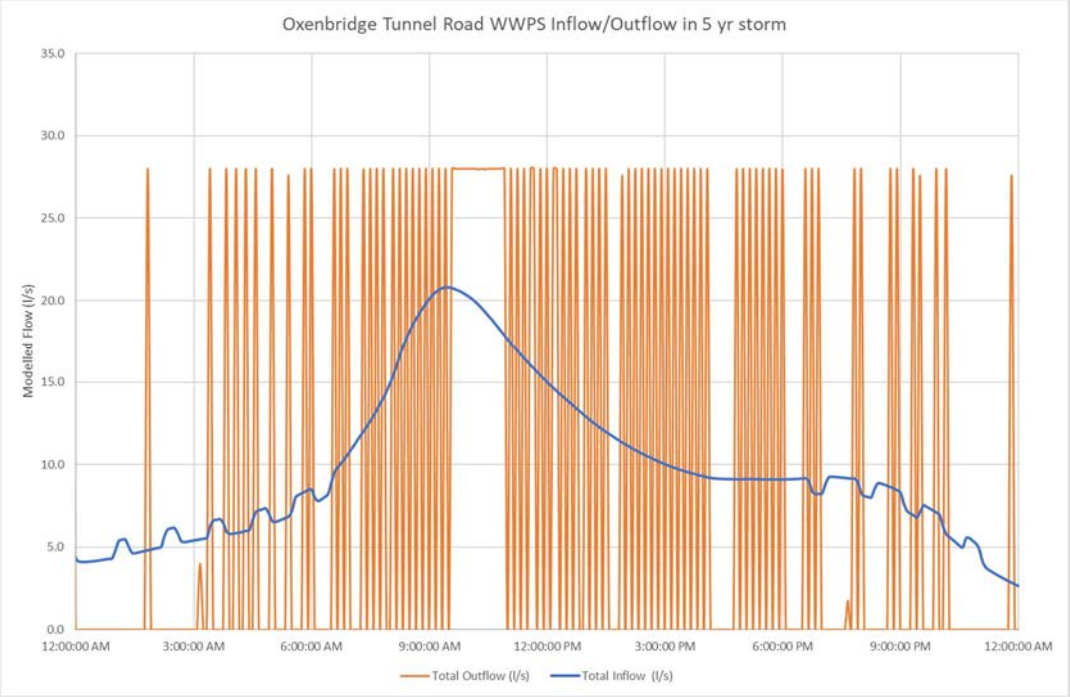


FIGURE 4-7 MODELLED ATLEY ROAD WWPS FLOWS – 5 YEAR ARI DESIGN STORM

5. MODEL ASSUMPTIONS AND LIMITATIONS

The model assumptions should be read in conjunction with the following reports.

- 'Wakatipu Wastewater Model Build & Calibration Report' (Beca, August 2016)
- 'Wakatipu Wastewater Network Future System Performance Report' (Beca, August 2017)
- 'Wakatipu Wastewater Model Review & Update – High & Medium Priority Fixes Memo' (HAL, 2018)

The following limitations apply to the modelling undertaken as part of these studies:

- The model was originally calibrated against flows developed from field data collected in 2015 and supplemented by QLDC pump station SCADA data. The 2018 model review undertaken by HAL has determined only a medium degree of confidence in the accuracy of the model. Additional flow gauging and model re-calibration is proposed for 2019.
- The distribution of the modelled population is an approximation based on the 2013 census residential population, factored up for a high population scenario. No allowance has been made for additional growth since 2013, other than known development areas.
- Modelled network asset data for manholes and pipes is generally as provided in the BECA calibration model, and its origin is not clear. Manhole and pipe level data has not been validated against QLDC's GIS, as-builts or survey data as part of this assessment, or as part of the HAL model review/update. Where potential network constraints are identified, it is recommended asset data in these areas is confirmed through manhole survey.
- Pump station model parameters have been determined based on information provided by the QLDC planning team, SCADA data (where available) and pump station manuals, and the accuracy has not been validated as part of these studies.
- Other than the proposed Treescape Development, 182 Arthurs Point Road & Onsen Hot Pools expansion, this assessment excludes information on any additional recently consented neighbouring developments in the contributing catchment.
- This assessment focuses on the wastewater network downstream of the site, and does not consider sizing of infrastructure within the proposed site to service future development upstream of the site.
- It has been assumed that no existing overarching structure plan has been developed by QLDC for servicing this area.

6. CONCLUSION

The objective of this study was to utilise the existing hydraulic model of the Wakatipu wastewater network to assess the impact of the proposed Atley Road (Canyon Ridge) development.

The model was run under the current (2015) scenario, with the additional peak wet weather flows of 0.93 l/s from the Atley Road development added into the model at MH ID:101304. The development impact on the wastewater network was assessed against a 5-year ARI design storm to understand the performance of the local network with the development flows.

In the pre-development scenario, the existing 150mm local network shows evidence of some pipe surcharge near the base of the catchment flowing to Oxenbridge Tunnel Road WWPS. However, as Manhole ID:105021 at 1 Arthurs Point Road is now known to be a sealed access point, the modelled surcharge does not result in any uncontrolled manhole overflow.

In the post-development scenario, the existing 150mm local network shows evidence of increased pipe surcharge flowing to Oxenbridge Tunnel Road WWPS. However, the modelling suggests that the additional Atley Road development flows would not result in any uncontrolled overflow within the downstream network as far as the Oxenbridge Tunnel Road WWPS.

There are three additional developments upstream of the Atley Road site that have recently applied for Resource Consent with QLDC; the Treescape development (3.2 l/s), 182 Arthurs Point development (12.52 l/s), and a proposed expansion of the Onsen Hot Pools site (0.91 l/s).

The cumulative wet weather flows from all four proposed developments causes increased surcharge in the downstream network, resulting in two uncontrolled overflow events downstream of the Atley Road development site. The HAL capacity assessment undertaken for the 182 Arthurs Point development (12.52 l/s) in September 2020 recommended an indicative upgrade of two short sections of 150mm pipeline as follows:

1. Upgrade 180m of existing pipeline 150mm to 225mm from MH ID:101372 to MH ID:101377 (upstream of Atley Road development)
2. Upgrade 130m of existing pipeline 150mm to 225mm from MH ID:101328 to MH ID:101330, (downstream of Atley Road development)

Based on QLDC records, the Oxenbridge Tunnel Road WWPS has a maximum capacity of 28 l/s with one pump operating. With a modelled peak inflow of 21 l/s in the 5-year ARI design storm for the post-development scenario, the pump station and associated rising main have ample capacity to receive the additional Atley Road development flows.

However, the cumulative PWWF from the three additional proposed upstream developments results in a peak inflow increase to approximately 37 l/s under a 5-year ARI design storm. The existing pump station does not have capacity to receive the cumulative upstream development flows.

It is recommended that options for resolving predicted overflows at the Oxenbridge Tunnel Road WWPS are investigated, in order to cater for the ultimate future proposed flows for the Arthurs Point catchment. This may involve a pump station upgrade or provision of additional storage on site. Any upgrade of Oxenbridge WWPS should be considered by QLDC in conjunction with the nature and timing of downstream network upgrades.

Reply Reply All Forward

Richard Powell <richard.powell@qldc.govt.nz> Bruce McLeod; Ant White; Shane Fairmaid 2 Fri 11/12

RE: Re[2]: Fw[2]: Proposed Development Lot 2 DP 411983 - Atley Road, Arthurs Point

Message Atley Road WS DQ - 418190-QLDC-AB02-DQ-005-A.pdf (214 KB) Atley Road Arthurs Point_V1.pdf (2 MB)

Hi Bruce,

See attached findings form the water and wastewater modelling.

Water – Confirmed our level of service can be achieved.

Wastewater – Although this development combined with other consented development would push the current system over capacity, this development on its own is fine, the other development are at a scale that would require the upgrades anyway so I am satisfied that this development can connect as is.

Let me know if you need anything further.

Thanks

Rich

Off site excavation

Area 80m²
Volume of cut 300m³
Max cut height 6m

Excavate rock

Lot 1
DP 423051

Lot 2
DP 423051

Lot 1
DP 401014

Lot 2
DP 310572

Lot 3
DP 310572

Lot 1
DP 337696

Lot 2
DP 518803

Lot 3
DP 518803

Atley Road

Existing Vehicle Access

Existing Vehicle Access

Proposed Driveway
1:8 ->
1.3m cut near bdy

Lot 8
Lower Level
FL = 424.27
Excavation RL = 423.97
4m cut
(from ground)
Garage
FL = 424.17
Excavation RL = 423.87
2.5m
retained fill
Driveway
1:10->

Lot 1
Lower Level
FL = 426.17
Excavation RL = 425.87
5.4m max cut
(from original ground)
2.7m fill
retained fill
Garage
FL = 428.77
Excavation RL = 428.47

Lot 2
DP 411983
444491
3365m²

Lot 7
Lower Level
FL = 428.35
Excavation RL = 428.05

Upper Level
FL = 430.85
Excavation RL = 430.55
Lot 6
3.6m cut
(from ground)
Garage
FL = 428.15
Excavation RL = 427.85
Driveway
1:50->

Upper Level
FL = 431.90
Excavation RL = 431.60
Lot 5

Upper Level
FL = 431.50
Excavation RL = 431.20
Lot 4
2.5m cut
(from ground)
Garage
FL = 429.20
Excavation RL = 428.90
Driveway
<-1:18

Upper Level
FL = 430.35
Excavation RL = 430.05
Lot 3
2.6m cut
(from ground)
Garage
FL = 428.80
Excavation RL = 428.50
Driveway
1:11->

Upper Level
FL = 429.45
Excavation RL = 429.15
Lot 2
3.5m cut
(from ground)
Garage
FL = 427.65
Excavation RL = 427.35
Driveway
1:13->

3.5m cut
(from ground)
Garage
FL = 426.75
Excavation RL = 426.45
Driveway
<-1:30
Driveway
<-1:10

A
B
C
D

8.33m bdy
9.31m bdy
9.54m bdy
14.73m bdy
9.17m bdy
17.15m bdy
31.41m bdy
10.53m bdy
11.81m bdy
14.87m bdy
15.00m bdy
12.73m bdy
39.36m bdy
21.71m bdy

N

EARTHWORKS DEPTH

CUT	FILL
Depth 6.0m to 99m	
Depth 5.0m to 6.0m	
Depth 4.0m to 5.0m	
Depth 3.0m to 4.0m	
Depth 2.5m to 3.0m	
Depth 2.0m to 2.5m	
Depth 1.5m to 2.0m	
Depth 1.0m to 1.5m	
Depth 0.5m to 1.0m	
Depth 0.0m to 0.5m	

EARTHWORKS SUMMARY

Areas Earthworks area	Areas 2500m²
Volumes Cut Fill	Volumes 2900m³ 200m³
Max Cut Max Fill	5.4m 2.7m

Note:
-0.7m offset allowed
around foundation line
-data in terms of Lidar

REV.	DATE:	REVISION DETAILS:	BY:
C	25/6/21	ROW rock area shown	BM
B	03/15/21	Add cross sections & lot boundaries	RVB
A	10/11/20	Initial release	BM

DATE: 25 June 2021
BY: B McLeod
Scale 1:300 Original Plan A3
DRAWING & ISSUE No. 4924.2R.1C

TITLE:

EARTHWORKS PLAN
CANYON RIDGE
ARTHURS POINT

AURUM SURVEY
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Document Set ID: 6980702
Version: 1, Version Date: 23/08/2021

BELL GEOCONSULTING LIMITED
ENVIRONMENTAL AND ENGINEERING GEOLOGY
PO BOX 31-031, ILAM, CHRISTCHURCH 8444

23 August 2021 BGL Reference 2012/02

Shane Fairmaid
Director – Momentum Projects

Email: *shanef@momentumprojects.co.nz*
Copy: *bmcleod@ascl.co.nz*

Dear Shane

Re: Geotechnical Report – Proposed Canyon Ridge Development – Arthurs Point

1. Introduction

The proposed eight-lot residential development at Canyon Ridge, Arthurs Point, involves subdivision of Lot 1 DP 411983 comprising 3,865m^2 as shown on Aurum Survey Plan 4924.2R.1B dated 10 November 2020 (Appendix One). Floor levels have been established for garage and dwelling on each lot, with total earthworks volumes of 2,900m^3 cut and 200m^3 fill: the maximum cut height is 5.4m, and the maximum fill depth is 2.7m (Appendix Two). The Canyon Ridge site is cored by flat-lying schist bedrock, which is exposed in bluffs above Atley Road and up the right-of-way to existing dwellings on the north and east sides of the property. In the cul-de-sac head at least 2m of Shotover River-derived gravels are present in a small cut face overlying the schist bedrock, and these relate to the Morningstar Terrace sequence on which extensive residential housing has taken place (Bell Geoconsulting Ltd, 2020; Gilbert, 2020).

A detailed site inspection was undertaken on 17 November 2020 following earlier visits to the site, and a summary letter-report was prepared (BGL Reference 2012/01; 18 November 2020) confirming the suitability of the proposed development. This was apparently rejected by Queenstown Lakes District Council as being inadequate because 1) temporary batter slopes exceed 2V:1H (63°) and 2) suitable construction methodologies were not identified. I record that Bell Geoconsulting Ltd (BGL) has prepared more than 30 geotechnical reports on the Arthurs Point area since 1988, and is currently responsible for five ongoing subdivision projects there. BGL has also reported in detail on the snow-making ponds constructed on Coronet Peak Skifield in 2007-2008, including geotechnical certification of the Rocky Gully, Sarah-Sue and Elephant Pit structures.

2. Site Description

The bedrock-cored ridge on which the proposed Canyon Villas Ltd development is to be located rises approximately 15m from Atley Road to the upslope cul-de-sac head (Appendix Two). Cross sections A to D have been constructed by Aurum Survey Consultants Ltd (Aurum) at my request, and these indicate the proposed garage and dwelling levels on each of the eight lots. The bedrock surface itself will be irregular due to fluvial erosion, and the sandy gravel alluvium is expected to be a maximum of 4m in thickness on Lots 2 to 7: Lots 1 and 8 will involve excavation into and local filling on schist bedrock. Construction methodologies are provided for flat-lying schist bedrock in Section 4 of this report, and it is noted that the schist dips consistently to the south at 10 ± 5°, with a dip direction of 190 ± 10° being recoded at several locations. Jointing is widely spaced at 1-2m, joint sets are orthogonal, and steeply dipping at 70-90°: there is no evidence for rock mass instability such as wedge failure, and photographs are included in Appendix One confirming that the bedrock is fresh to slightly weathered only.

The Arthurs Point area has evolved geomorphologically in response to episodic glaciation in the Wakatipu Basin, with schist foliation attitude and strength controlling landscape evolution (Bell, 1992):

1. The Coronet Peak Landslide developed by extensive foliation-controlled landsliding at least as far back as the Penultimate Glaciation (Q6; Turnbull, 2000): it has an estimated volume of $10^9 m^3$ (Bell, 1992; Bell and Riddolls, 1992; Willetts, 2000). Early in the Last Glaciation (c.28-22,000 years before present) a distributary lobe of ice from the Wakatipu Glacier advanced north-eastwards into the Arrowtown Basin in the valley now occupied by Gorge Road, at the same time covering much of Queenstown Hill. The ice limit and terminal moraine are visible just past the Skippers Road turnoff.

2. At the same time ice occupied the upper Shotover Valley about as far as present-day Skippers, and as ice retreated between about 22,000 and 17,000 years before present (BP) fluvial processes dominated in the lower Shotover with the deposition of the Morningstar terraces that dominate the Arthurs Point landscape. These infilled a deep channel cut into schist bedrock by the ancestral Shotover River, and the river deposits at Canyon Ridge correspond to the Morningstar 2 Terrace in terms of their elevation (Gilbert, 2020; Bell Geoconsulting Ltd, 2020).

3. For a brief time the Shotover River may have back-flowed along the Gorge Road valley into an enlarged Lake Wakatipu, with the +45m lake beach estimated to have formed about 10,000 years ago (Bell, 1992). The Shotover River then eroded into bedrock in the Lower Shotover Gorge, and re-established a connection with the earlier Morningstar channel. The +26m lake beach in Lake Wakatipu has been dated at 8,930 years BP from a wood sample (Bell, 1992), and progressive lowering has established the present landscape with the Dart Glacier the main ice remnant.

From this brief discussion it is concluded that the Canyon Ridge site formed around 15,000 years BP, and that there has been no significant change since that time apart from anthropogenic modifications.

3. Geotechnical Assessment

From my analysis of the data supplied by Aurum (Appendix Two) the earthworks plan comprises the following, with cut dominating for the development of the individual building lots:

Lot Number	*Maximum Garage Cut (m)*	*Maximum Dwelling Cut (m)*	*Geotechnical Implications*
1	1.6	5.3	Cuts into rock at 4V:1H; retained fill for garage
2	3.6	1.9	House into gravel/rock?; garage cut exposes rock;
3	3.6	1.4	House cut into gravel; garage cut exposes rock
4	2.5	0.3	House cut into gravel; garage may expose rock
5	2.6	0.0	House may require fill; garage may expose rock
6	3.6	1.0	House cut into gravel; garage cut exposes rock
7	1.8	1.8	House into gravel/rock?; garage may expose rock
8	2.6	4.2	Cuts into rock at 4V:1H; retained fill for garage

Garage excavations for Lots 2 to 7 are expected to intersect schist bedrock at the deepest part of the cut, although Lot 7 may still be in Shotover River gravels at this depth (1.8m). This will allow founding of anchored concrete block retention as part of the structural design, which is a Building Consent matter. For Lot 1 and Lot 8 garages engineered fill retention (heights 2.7 and 2.5m, respectively) is proposed.
Dwelling footprints for Lots 2 to 7 will involve cuts between zero and 1.9m into the ridge surface, with the expectation that Shotover gravels will be present at the base of the excavation, but with the proviso

that locally bedrock may be exposed by cutting. Depths listed above relate to the base of excavation, which is notionally 300mm below finished floor level (FL; Appendix Two), with the expectation that ~200mm of compacted AP40 (or AP65) will be placed beneath the reinforced concrete slab. For Lot 1 and Lot 8, excavation of ~4m to 5m will expose schist bedrock at shallow depth on the northern side of Atley Road and the right-of-way, where there is already significant exposure of rock (Appendix One). As the schist is flat-lying and there is no likelihood of instability, cuts are to be made at 4V:1H (76°) or vertical, with batters at 2V:1H (63°) or 1V:1H (45°) in overlying Shotover gravels subject to thickness.

The Aurum cross sections show cut batters at both 2V:1H and 4V:1H: site-specific decisions will be required at the Building Consent stage for each Lot following testing within the proposed footprint at the design stage, and the adoption of specified cut angles (eg 2V:1H) is rejected as being geotechnically unsound. At the Canyon Ridge site the low (~10°) dip of the schist foliation to the south, and the widely-spaced sub-vertical jointing, means that batter instability is not an issue: on the other hand the Coronet Peak Landslide has developed in dominantly pelitic (micaceous) schist dipping at 20-30°, with failure surfaces propagating through ridge crests in the headscarp area. At Canyon Ridge each excavation into rock and overlying gravel will require site-specific design, including local rockbolting if zones of close fracturing are identified. Long-term stability is assured subject to appropriate design and certification.

In regard to planned widening of Atley Road to achieve a 5.5m width, having an estimated cut volume of 300m^3 and a maximum cut height of 6m (Appendix Two; Appendix Three), BGL comments as follows:

- Cut batters shown at 4V:1H are appropriate, but will likely be steepened to vertical following site-specific assessment with earthmoving machinery on site. Flat-lying schist stands vertically in the immediate vicinity (Photo 01; Appendix One), and this will reduce the cut height to ~3m.
- Cross sections C and D (Appendix Two) show a maximum cut height between ~0.6 and ~3.0m. Following marking out, earthworks will involve drilling of vertical boreholes along the excavation line, and mechanical breaking out of the schist to form a pre-split line where practical.
- If local schist blocks are already loosened, or if potential wedge release is identified, site-specific decisions will be required on the excavation/remediation strategy. It is intended that a geotechnical specialist will be available for frequent inspections and contractor liaison.

BGL is satisfied that the earthworks planned for widening of Atley Road pose no risk of instability, and are subject only to regular inspection by a geotechnical specialist at the time of cut construction. It is assumed that a competent contractor experienced in local rock work will be engaged for the project.

4. Earthworks Methodology

The Aurum Earthworks Plan drawings for Canyon Ridge are entirely appropriate for subdivision consent purposes (Appendix One; Appendix Two), recognising that cuts into schist at 4V:1H are suited to the flat-lying schist foliation attitude. Each building site will require test-pitting or trenching at the Building Consent stage to allow final design, and geotechnical data input (including construction supervision and certification) is required. The following earthworks methodology is advised for Canyon Ridge:

1. For each building lot a site-specific engineering geology report is required for consent purposes, and is to include necessary geotechnical data to facilitate foundation design.
2. Close liaison is to be maintained with the structural engineer to ensure that the excavation/filling design follows good practice, including slope or batter retention if or where required.
3. Any localised areas of more intense fracturing are to be identified, and particular attention is to be paid to the (unlikely) presence of thin foliation-parallel shear zones.
4. Rock remedial design (if required) is to be identified, and guidance provided for contractors during the construction process. This includes groundwater control if necessary.
5. Where cuts are made into loose to medium dense Shotover gravels, either slope battering (eg at 1V:1.5H = 34°) or engineered retention is required at the direction of the design engineer.

6. Cut and fill construction for each lot is to be supervised and certified by a geotechnical specialist, including issuing of PS1 Design and PS4 Construction certification to Council.
7. Retaining walls for engineered fill are to be designed by a suitably experienced practitioner, and fill placement is to be in lifts with NDM testing in accordance with NZS 4431:1989.
8. Given the ground conditions at the Canyon Ridge site building design in terms of NZS 3604:2011 should be technically realistic once cut and fill slopes are constructed appropriately.

BGL is satisfied that there are no undisclosed issues of a geotechnical nature for the Canyon Ridge site, but earthworks supervision and certification by an experienced geotechnical practitioner is essential. There is no requirement for further site investigation at the subdivision consent stage, as the land is stable and lot-specific design investigations will allow refinement of the earthworks construction strategy. In terms of s71 of the Building Act 2004, BGL confirms that the Canyon Ridge site is not subject to erosion, falling debris, subsidence, slippage or inundation, and that construction of works as outlined above will ensure that none of these hazards will affect future site occupancy.

5. Conclusions

- BGL considers that the proposed Canyon Ridge development on a site underlain by stable schist bedrock at shallow depth is realistic geotechnically, and that lot-specific investigation for individual building sites will ensure long-term stability of the as-built structures.

- The schist bedrock is flat-lying, with foliation dipping to the south at 10 ± 5°, and joint sets are sub-vertical with spacing typically of 1-2m. The rock is fresh to slightly weathered, and the bedrock is overlain by Shotover River-derived sandy gravels forming part of the Morningstar terrace sequence.

- Lots 2 to 7 involve garage cuts most probably into bedrock, with dwellings founded on Shotover-derived gravels with slab-on-grade foundations on ~200mm of compacted AP65 (or AP40). Lots 1 and 8 will involve cuts into bedrock of 4-5m, and placement of retained engineered fill ~2.5m deep.

- Proposed building sites are not subject to erosion, falling debris, subsidence, slippage or inundation in terms of s71 of the Building Act 2004, but site-specific foundation investigations will be required for individual buildings including retention and drainage at the building consent stage.

- Subject to appropriate engineering each building site will allow design in terms of NZS 3604:2011, and any engineered fill is to satisfy the requirements of NZS 4431:1989. Geotechnical input will be required at the design and construction stages for both Lot access and building foundations.

6. References

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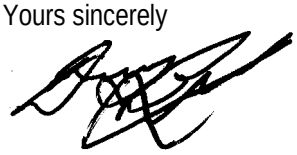
WILLETTS, A J (2000) The Geology and Geomorphology of the Coronet Peak and Arthurs Point Landslide Complexes *Unpublished MSc (Eng Geol) Thesis, University of Canterbury Library*

Yours sincerely



David H Bell
CMEngNZ Registration No 113121

Appendix One: Proposed Subdivision Plan (Aurum) and Site Photographs

Lot 1
DP 423051

Lot 2
DP 423051

9.17m bdy

9.54m bdy

Atley Road

31.41m bdy

Near continuous out crop of flat lying Schists bedrock

2.5m retained fill

Driveway 1:10->

Garage
FL = 424.17
Excavation RL = 423.87

Lower Level
= 424.27
n RL = 423.97

Photo 01

4m cut
(from ground)

Lot 1
DP 401014

17.15m bdy

11.81m bdy

Existing Vehicle Access

Lot 2
DP 411983
444491
3365m²

Lower Level
FL = 426.17
Excavation RL = 425.87

5.4m max cut
(from original ground)

2.7m fill

retained fill

Garage
FL = 428.77
Excavation RL = 428.47

Shotover gravels ≤4m deep on schist bedrock

Upper Level
FL = 430.85
Excavation RL = 430.55

Lower Level
FL = 428.35
Excavation RL = 428.05

Photo 02

Upper Level
FL = 431.90
Excavation RL = 431.60

Upper Level
FL = 431.50
Excavation RL = 431.20

Upper Level
FL = 430.35
Excavation RL = 430.05

3.6m cut
(from ground)

Garage
FL = 428.15
Excavation RL = 427.85

Driveway
1:50->

Lot 2
DP 310572

Upper Level
FL = 429.45
Excavation RL = 429.15

2.5m cut
(from ground)

Garage
FL = 429.20
Excavation RL = 428.90

Driveway
<-1:18

Proposed Driveway
1:8 ->

1.3m cut near bdy

39.36m bdy

2.6m cut
(from ground)

Garage
FL = 428.80
Excavation RL = 428.50

3.5m cut
(from ground)

Garage
FL = 427.65
Excavation RL = 427.35

Driveway
1:11->

14.87m bdy

3.5m cut
(from ground)

Garage
FL = 426.75
Excavation RL = 426.45

Schist bedrock at depths <4m

Driveway
1:13->

Driveway
<- 1:30

Driveway
<-1:10

Existing Vehicle Access

15.00m bdy

12.73m bdy

21.71m bdy

Lot 3
DP 310572

Lot 1
DP 337696

Lot 2
DP 518803

Lot 3
DP 518803

N

EARTHWORKS DEPTH

CUT	FILL
Depth 6.0m to 99m	
Depth 5.0m to 6.0m	
Depth 4.0m to 5.0m	
Depth 3.0m to 4.0m	
Depth 2.5m to 3.0m	
Depth 2.0m to 2.5m	
Depth 1.5m to 2.0m	
Depth 1.0m to 1.5m	
Depth 0.5m to 1.0m	
Depth 0.0m to 0.5m	

EARTHWORKS SUMMARY

Areas Earthworks area	Areas 2500m²
Volumes Cut Fill	Volumes 2900m³ 200m³
Max Cut Max Fill	5.4m 2.7m

Note:
-0.7m offset allowed around foundation line
-data in terms of Lidar

REV.	DATE:	REVISION DETAILS:	BY:
A	10/11/20	Initial release	BM

WARNING NOTE:
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DATE: 10 Nov 2020
BY: B McLeod

Scale 1:250
Original Plan A3

DRAWING & ISSUE No.
4924.2R.1A

TITLE:

EARTHWORKS PLAN
CANYON RIDGE
ARTHURS POINT

AURUM SURVEY
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Photo 01. Flat-lying schist outcrop adjacent to right-of-way and Atley Road junction

Photo 02. Small schist bedrock outcrop on upper part of property – approximate location Lot 06.

Appendix Two: Earthworks Plan & Cross Sections for Canyon Ridge

Lot 1
DP 423051

Lot 2
DP 423051

Atley Road

Lot 1
DP 401014

Lot 2
DP 310572

Lot 3
DP 310572

Lot 1
DP 337696

Lot 2
DP 518803

Lot 3
DP 518803

Lot 1
Lower Level
FL = 426.17
Excavation RL = 425.87
5.4m max cut
(from original ground)
2.7m fill
retained fill
Garage
FL = 428.77
Excavation RL = 428.47

Lot 2
DP 411983
444491
3365m²

Lot 8
Lower Level
FL = 424.27
Excavation RL = 423.97
4m cut
(from ground)
2.5m
retained fill
Garage
FL = 424.17
Excavation RL = 423.87
Driveway
1:10->

Lot 7
Lower Level
FL = 428.35
Excavation RL = 428.05

Lot 6
Upper Level
FL = 430.85
Excavation RL = 430.55

Lot 5
Upper Level
FL = 431.90
Excavation RL = 431.60

Lot 4
Upper Level
FL = 431.50
Excavation RL = 431.20

Lot 3
Upper Level
FL = 430.35
Excavation RL = 430.05
3.6m cut
(from ground)
Garage
FL = 428.15
Excavation RL = 427.85
Driveway
1:50->

Lot 2
Upper Level
FL = 429.45
Excavation RL = 429.15
2.5m cut
(from ground)
Garage
FL = 429.20
Excavation RL = 428.90
Driveway
<-1:18
2.6m cut
(from ground)
Garage
FL = 428.80
Excavation RL = 428.50
Driveway
1:11->
3.5m cut
(from ground)
Garage
FL = 427.65
Excavation RL = 427.35
Driveway
1:13->
3.5m cut
(from ground)
Garage
FL = 426.75
Excavation RL = 426.45
Driveway
<-1:30
Driveway
<-1:10
Proposed Driveway
1:8 ->
1.3m cut near bdy

Existing Vehicle Access
Existing Vehicle Access

8.33m bdy
9.54m bdy
14.73m bdy
9.17m bdy
31.41m bdy
10.53m bdy
9.31m bdy
17.15m bdy
11.81m bdy
14.87m bdy
15.00m bdy
12.73m bdy
21.71m bdy
39.36m bdy

A
B
C
D

N

EARTHWORKS DEPTH

CUT	FILL
Depth 6.0m to 99m	
Depth 5.0m to 6.0m	
Depth 4.0m to 5.0m	
Depth 3.0m to 4.0m	
Depth 2.5m to 3.0m	
Depth 2.0m to 2.5m	
Depth 1.5m to 2.0m	
Depth 1.0m to 1.5m	
Depth 0.5m to 1.0m	
Depth 0.0m to 0.5m	

EARTHWORKS SUMMARY

Areas Earthworks area	Areas 2500m²
Volumes Cut Fill	Volumes 2900m³ 200m³
Max Cut Max Fill	5.4m 2.7m

Note:
-0.7m offset allowed around foundation line
-data in terms of Lidar

REV.	DATE:	REVISION DETAILS:	BY:
B	03/15/21	Add cross sections & lot boundaries	RVB
A	10/11/20	Initial release	BM

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DATE: 10 Nov 2020
BY: B McLeod
Scale 1:300 Original Plan A3
DRAWING & ISSUE No. 4924.2R.1B

TITLE:

EARTHWORKS PLAN
CANYON RIDGE
ARTHURS POINT

AURUM SURVEY
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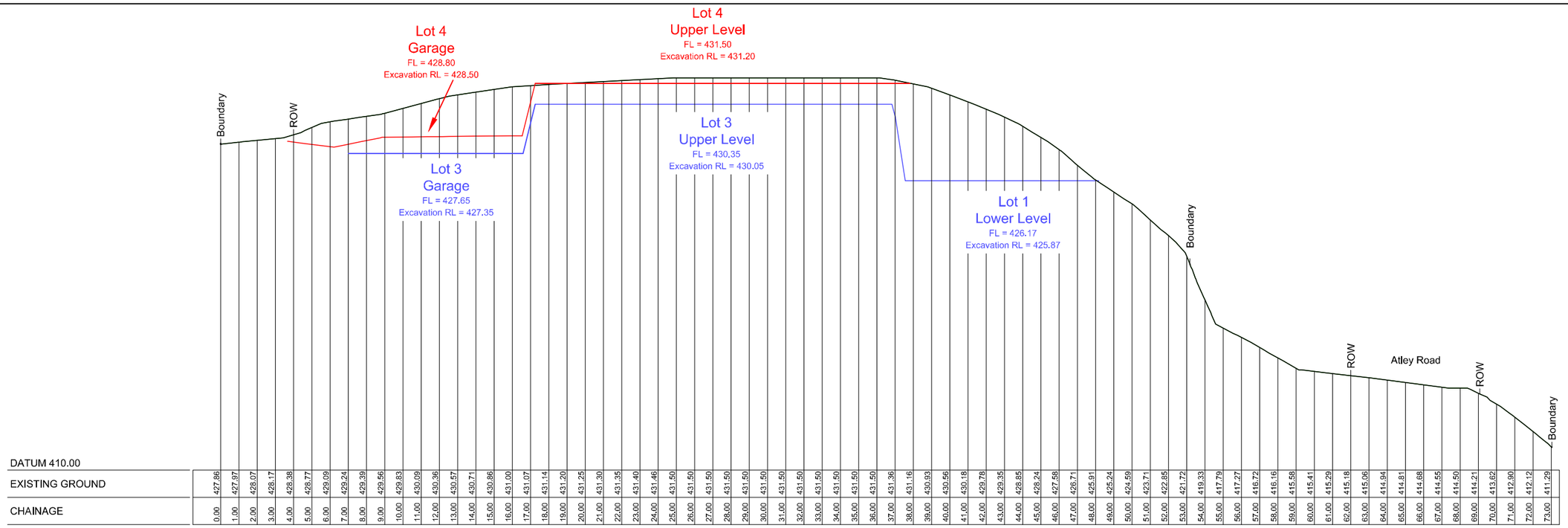
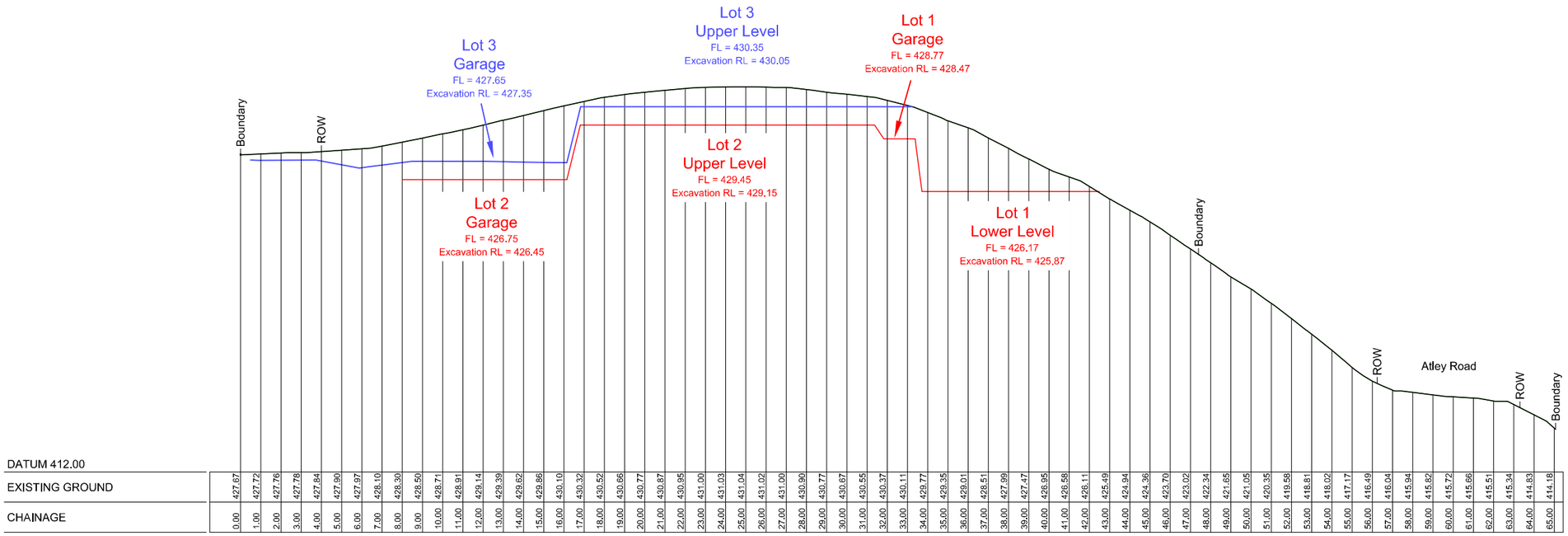
Email admin@ascl.co.nz



CROSS SECTION B



CROSS SECTION A

REV.	DATE:	REVISION DETAILS:	BY:
A	13/15/21	Initial release	RVB

WARNING NOTE:
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DATE: 15 Mar 2021
BY: R Baker
Scale 1:250
Original Plan A3
DRAWING & ISSUE No. 4924.2R.2A

TITLE:

EARTHWORKS CROSS SECTION PLAN CANYON RIDGE, ARTHURS POINT

AURUM SURVEY
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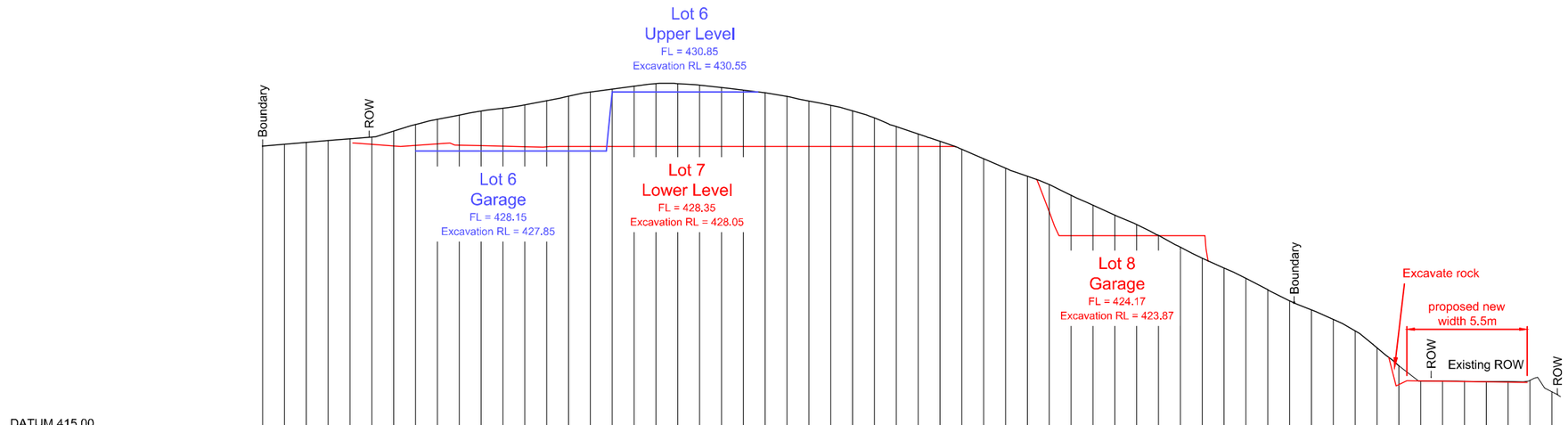

Excavation RL = 430.55

DATUM 415.00

CHAINAGE	EXISTING GROUND
0.00	428.07
1.00	428.16
2.00	428.24
3.00	428.32
4.00	428.40
5.00	428.49
6.00	428.76
7.00	429.06
8.00	429.29
9.00	429.49
10.00	429.67
11.00	429.80
12.00	429.95
13.00	430.14
14.00	430.35
15.00	430.54
16.00	430.68
17.00	430.82
18.00	430.93
19.00	430.93
20.00	430.86
21.00	430.75
22.00	430.63
23.00	430.51
24.00	430.35
25.00	430.14
26.00	429.94
27.00	429.68
28.00	429.36
29.00	428.96
30.00	428.63
31.00	428.29
32.00	427.93
33.00	427.50
34.00	427.06
35.00	426.69
36.00	426.31
37.00	425.83
38.00	425.37
39.00	424.92
40.00	424.49
41.00	423.99
42.00	423.45
43.00	422.94
44.00	422.49
45.00	422.02
46.00	421.51
47.00	420.99
48.00	420.58
49.00	420.15
50.00	419.62
51.00	418.86
52.00	418.03
53.00	417.50
54.00	417.38
55.00	417.21
56.00	417.19
57.00	417.19
58.00	417.10
59.00	416.84

CROSS SECTION D

DATUM 413.00

CHAINAGE	EXISTING GROUND
0.00	428.23
1.00	428.34
2.00	428.42
3.00	428.50
4.00	428.50
5.00	428.50
6.00	428.75
7.00	429.09
8.00	429.48
9.00	429.81
10.00	430.16
11.00	430.51
12.00	430.81
13.00	431.07
14.00	431.25
15.00	431.43
16.00	431.50
17.00	431.50
18.00	431.50
19.00	431.50
20.00	431.50
21.00	431.50
22.00	431.50
23.00	431.50
24.00	431.50
25.00	431.50
26.00	431.50
27.00	431.50
28.00	431.50
29.00	431.50
30.00	431.43
31.00	431.27
32.00	431.06
33.00	430.76
34.00	430.42
35.00	430.09
36.00	429.75
37.00	429.40
38.00	428.97
39.00	428.56
40.00	428.05
41.00	427.59
42.00	427.11
43.00	426.60
44.00	426.16
45.00	425.72
46.00	425.28
47.00	424.83
48.00	424.38
49.00	423.92
50.00	423.55
51.00	423.10
52.00	422.43
53.00	421.61
54.00	420.26
55.00	418.30
56.00	416.29
57.00	415.75
58.00	415.70
59.00	415.64
60.00	415.59
61.00	415.50
62.00	415.29
62.51	415.12

CROSS SECTION C

Lc

REV.	DATE:	REVISION DETAILS:	BY:
A	13/15/21	Initial release	RVB

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DATE: 15 Mar 2021
BY: R Baker

Scale 1:250
Original Plan A3

DRAWING & ISSUE No.
4924.2R.3A

TITLE:

EARTHWORKS
CROSS SECTION PLAN
CANYON RIDGE, ARTHURS POINT

AURUM SURVEY

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Email admin@ascl.co.nz

Appendix Three: Aurum Plan dated June 2021 – Atley Road rock excavation

Off site excavation

Area 80m²
Volume of cut 300m³
Max cut height 6m

Excavate rock

Lot 1
DP 423051

Lot 2
DP 423051

Lot 1
DP 401014

Lot 2
DP 310572

Lot 3
DP 310572

Lot 1
DP 337696

Lot 3
DP 518803

Lot 2
DP 518803

Atley Road

Existing Vehicle Access

Existing Vehicle Access

Proposed Driveway
1:8 ->
1:3m cut near bdy

Lot 8
Lower Level
FL = 424.27
Excavation RL = 423.97
4m cut
(from ground)
Garage
FL = 424.17
Excavation RL = 423.87
2.5m
retained fill
Driveway
1:10->

Lot 1
Lower Level
FL = 426.17
Excavation RL = 425.87
5.4m max cut
(from original ground)
2.7m fill
retained fill
Garage
FL = 428.77
Excavation RL = 428.47

Lot 2
DP 411983
444491
3365m²

Lot 7
Lower Level
FL = 428.35
Excavation RL = 428.05

Lot 6
Upper Level
FL = 430.85
Excavation RL = 430.55

Lot 5
Upper Level
FL = 431.90
Excavation RL = 431.60

Lot 4
Upper Level
FL = 431.50
Excavation RL = 431.20
3.6m cut
(from ground)
Garage
FL = 428.15
Excavation RL = 427.85
Driveway
1:50->

Lot 3
Upper Level
FL = 430.35
Excavation RL = 430.05
2.5m cut
(from ground)
Garage
FL = 429.20
Excavation RL = 428.90
Driveway
<-1:18

Lot 2
Upper Level
FL = 429.45
Excavation RL = 429.15
2.6m cut
(from ground)
Garage
FL = 428.80
Excavation RL = 428.50
Driveway
1:11->

3.5m cut
(from ground)
Garage
FL = 427.65
Excavation RL = 427.35
Driveway
1:13->

3.5m cut
(from ground)
Garage
FL = 426.75
Excavation RL = 426.45
Driveway
<-1:30
Driveway
<-1:10

9.31m bdy
8.33m bdy
9.54m bdy
14.73m bdy
9.17m bdy
17.15m bdy
11.81m bdy
31.41m bdy
10.53m bdy
39.36m bdy
14.87m bdy
15.00m bdy
12.73m bdy
21.71m bdy

A
B
C
D

N

EARTHWORKS DEPTH

CUT	FILL
Depth 6.0m to 99m	
Depth 5.0m to 6.0m	
Depth 4.0m to 5.0m	
Depth 3.0m to 4.0m	
Depth 2.5m to 3.0m	
Depth 2.0m to 2.5m	
Depth 1.5m to 2.0m	
Depth 1.0m to 1.5m	
Depth 0.5m to 1.0m	
Depth 0.0m to 0.5m	

EARTHWORKS SUMMARY

Areas Earthworks area	Areas 2500m²
Volumes Cut Fill	Volumes 2900m³ 200m³
Max Cut Max Fill	5.4m 2.7m

Note:
-0.7m offset allowed
around foundation line
-data in terms of Lidar

REV.	DATE:	REVISION DETAILS:	BY:
C	25/6/21	ROW rock area shown	BM
B	03/15/21	Add cross sections & lot boundaries	RVB
A	10/11/20	Initial release	BM

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DATE: 25 June 2021
BY: B McLeod
Scale 1:300 Original Plan A3
DRAWING & ISSUE No. 4924.2R.1C

TITLE:
EARTHWORKS PLAN
CANYON RIDGE
ARTHURS POINT

AURUM SURVEY
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Email admin@ascl.co.nz

22 December 2020

Canyon Ridge

C/- Momentum Projects
By email

Attention: Shane Fairmaid

Dear Shane,

Atley Road, Arthurs Point, Residential Development Transport Assessment

The purpose of this letter is to provide a transport assessment for the proposal that seeks to develop eight residential units and associated subdivision to create eight residential lots and access roads at Lot 2 DP 411983 Atley Road, Arthurs Point. This assessment considers the access from the local road network and the onsite road network serving the proposed residential lots and houses.

1 Introduction

1.1 Site Location

The site, Lot 2 DP 411983, is an undeveloped residential lot which is accessed via a private road from Atley Road. The site and surrounding area is within the Lower Density Suburban Residential Zone under the Proposed District Plan (PDP).

1.2 Existing Transport Network

The site is accessed via a private road from Atley Road which is classified as a local road under the PDP. Atley Road provides access to a significant residential area of Arthurs Point. A large area of land to the south and west of the site is also serviced by Atley Road which has not yet been developed. During the PDP hearings it was accepted that Atley Road is likely to serve a total of 89 additional residential lots which may be developed on the land to the south of the site now zoned as Lower Density Suburban Residential. It is noted that it was accepted by the PDP hearing panel that Atley road and the surrounding local road network are able to accommodate the additional traffic as a result of the Lower Density Suburban Residential rezoning.

Atley Road has a posted speed limit of 40km/hr, this has recently reduced through the QLDC Speed Limit Bylaw (2019). Due to the narrow alignment of Atley Road near to the site it is likely that the operating speed at the site will be less than 35km/hr southbound (from Arthurs Point Road). To the south the private shared access extension of Atley Road has a very narrow width and tight curve with an unsealed (gravel) surface, the likely northbound operating speed (towards Arthurs Point Road) will be less than 30km/hr.

Atley Road is provided as two parts, the section to the north (Mathias Terrace to Arthurs Point intersection is a local road operated by QLDC. The section of Atley Road from the site access (an unnamed private road) for approximately 30m is identified as a Atley Road (Private) although it is owned by QLDC.

PO Box 1383 | Queenstown | 9348
jason@bartlettconsulting.co.nz | 027 555 8824 | 03 442 3103

Traffic count data estimates from QLDC suggests an average traffic flow of 585 vehicles per day (vpd). Atley Road is formed as a sealed road at Mathias Terrace (to the North) and has a sealed carriageway width of 6m and reduces to 4.5m at the site access.

The nearest footpath to the site is to the north of Mathias Terrace. There are no cycle facilities near to the site.

The nearest public transport route, Arthurs Point to Arrowtown via Queenstown passes close to the site with bus stops on Arthurs Point Road approximately 420m to the north of the site. The bus service operates every 30 minutes from 6am to 8am, and 5pm to 7pm and every 60 minutes from 8am to 4pm, and 8pm to 10pm. It is possible to change to other public bus services in Queenstown or Frankton to access other location with the Wakatipu area.

The site, and 6 other residential lots, are accessed via an unnamed shared access which is provides as a legal Right of Way (ROW) access over 83 Atley Road (Lot 2 DP423051) and the site. This shared access ROW serves a total of 7 (existing) residential lots including the site and 83 Atley Road. This shared access ROW passes through a portion of the site as a legal ROW providing access to a total of 6 residential lots including the site. The peak traffic flow on this access is estimated at 60vpd based on the current 6 developed lots (10vpd per dwelling). The ROW access is formed as a sealed road with a 3.5m typical seal width. This operates as a single traffic lane (two-way traffic flow) road where oncoming vehicles will need to use the unsealed shoulder to pass. The operating speed of the ROW access is likely to be less than 30km/hr as a result of the narrow road width and alignment which restricts forward sight distances.

1.3 Network Changes

There are a number of possible transport network projects in the vicinity of the site, these include:

- Edith Cavell Bridge upgrades - Initially planning allowed for bridge upgrades in 2028. It is understood that QLDC have been working with NZTA to bring forward additional funding to allow for the provision of a new, two lane, bridge over the Shotover River to increase the capacity of the existing bridge. It is unknown when this will occur.
- Arthurs Point pedestrian and cycle network – QLDC have provided concepts for pedestrian and cycle infrastructure improvement. This will improve the pedestrian and cycle networks between Queenstown and Arthurs Point including a new and separate pedestrian/cycle bridge over the Shotover River.

2 Proposed Development

It is proposed to develop eight residential units on the site, and then undertake a subdivision to create eight residential lots with access Right or Way (ROW). Details of this proposed onsite development are provided in Appendix A.

2.1 Traffic Generation

The proposed development will create 8 residential lots onsite which will increase the traffic flow on the ROW access by approximately 80vpd, based on 10vpd per dwelling. This is an effective increase of 7 new lots (70vpd) on the shared access ROW.

2.2 Site Access

The site will retain the current shared access from Atley Road, this includes a ROW over 83 Atley Road. This existing shared access ROW provides access to a total of 7 residential lots. The traffic flow on this access will increase from approximately 60vpd to 140vpd (14 residential lots/dwellings) as a result of the proposed development. The drawings provided show the

general layout of the proposed on-site access to serve the proposed new lots and the existing (off-site) lots which rely on this ROW access.

2.3 On-site Development

The proposed development will include 8 new residential dwellings each with double garages (2 car parks) which are to be accessed via the ROW access. For these new residential dwellings manoeuvring will be undertaken on-site utilising the existing ROW areas. One of the lots (Lot 1) will include an on-site turntable to enable manoeuvring/turning on-site.

3 District Plan Requirements

The PDP Transport Chapter (Chapter 29) provides a number of site standards to manage potential transport effects, refer Section 29.5. An assessment of the proposed onsite activity against the PDP parking and access site standards (Sections 29.5.1 to 29.5.24) has been undertaken, this assessment is provided in Appendix B. A number of breaches of the PDP site standards have been identified, these are:

- 29.5.9 Queuing, no queue length is provided at the shared access ROW entry from Atley Road (over 83 Atley Road). At this point the existing access width is only 3.0m which allows a single traffic lane only.
- 29.5.14 Access and Road Design, the existing shared access ROW (onsite and over 83 Atley Road) does not meet the minimum width (legal or sealed) for the number of lots served.

The potential transport effects as a result of these breaches, along with recommendations to manage and mitigate the breaches, is provided in the following Section.

4 Transport Effects

4.1 Off-site Transport Effects

The off-site transport effects of the proposed residential subdivision are likely to be a result of additional traffic within the local road network. This will include additional turning traffic at the existing intersection of the shared access ROW and Atley Road. At this point the shared access ROW passes over 83 Atley Road. This shared access ROW currently serves 7 residential lots including 83 Atley Road, 85 (A, B, C, D & E) Atley Road and the site. The proposed subdivision of the site will increase the number of properties served to 14 residential lots which could result in a total traffic flow of 140vpd.

The available sight distance at shared access ROW from Atley Road is:

- 60m to the north (towards Arthurs Point Road), and
- 50m to the south (to the private road continuation of Atley Road).

The available sight distances will meet the minimum safe intersection sight distances (SISD[1]) for the approach sight distances of:

- 57m[2] to the north (towards Arthurs Point Road) based on a 35km/hr operating speed, and

[1] Refer Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD).
[2] Calculated based on Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD) using Equation 2 with R_T=1.5sec. V=35km/hr, d=0.36 without grade correction (a=0).

- 47m[3] to the south (to the private road continuation of Atley Road) based on a 30km/hr operating speed.

It is noted that the SISD at this intersection only just meet the minimum Austroads requirement. Austroads allows for the use of their Extended Design Domain for existing intersections, this is a reduced requirement which would apply in this situation. Additionally, as shared driveway from a local road the reduced requirements of the NZTA guidance (RTS 6, Guidelines for Visibility at Driveways) would also apply. It is therefore considered that the available sight distances at the existing shared access ROW intersection with Atley Road are appropriate.

The shared access ROW approach to this intersection has restricted seal width (and legal width) approaching the intersection. The existing sealed width on the shared access ROW is only 3.0m which provides a single traffic lane only. This means that vehicles entering the shared access ROW may be required to wait (on Atley Road) should there be any vehicles exiting the shared access ROW. This is because the narrow access width does not provide any passing within the sealed width. At this intersection location there is limited space on Atley Road to accommodate a waiting vehicle without impacting on through traffic, travelling south, to the private (unsealed) road extension of Atley Road. Any queuing at this access intersection is will be a result of shared access ROW users turning left into the shared access ROW.

To mitigate potential queuing effects at the existing intersection of the shared access ROW it is recommended that the shared access ROW is widened to a minimum 5.5m sealed carriageway which will accommodate two directional traffic and remove any queuing effects from Atley Road. This may also mean amending the current ROW agreement over 83 Atley Road to accommodate the recommended widening, the minimum legal ROW width may also need to be widened. Ideally the minimum legal ROW width would be 9m[4], although an absolute minimum of 6.7m[5] may be acceptable if this accommodates the widened sealed carriageway (5.5m) and all services necessary, this will be acceptable to accommodate the traffic requirements of the ROW.

4.2 Onsite Road Network

The proposed site plan (Appendix A) provides a conceptual layout of the onsite shared access ROW to serve the proposed lots and the existing lots with access via the shared access ROW.

The conceptual layout provides some details of the proposed road network improvements in order to serve the new/additional residential lots. The existing shared access ROW arrangement would breach the QLDC Proposed District Plan site standards on a number of design elements under rule 29.5.14 Access and Road Design. This site standard requires the minimum road design provided in Table 1 below.

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[3] Calculated based on Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD) using Equation 2 with R_T=1.5sec. V=30km/hr, d=0.36 without grade correction (a=0).

[4] Based on QLDC, Land Development and Subdivision Code of Practice, Table 3.2 Road Design Standards, minimum legal width 9m for greater than 6 residential lots.

[5] Based on QLDC Proposed District Plan, Chapter 29 Transport, Standard 29.5.14, Part b. (i) which is appropriate for 12 residential units.

Table 1 – Required Road Network for QLDC District Plan and Code of Practice

Subdivision Road	Requirement	General Provision/Departures
To serve all 14 possible residential units. This is the section or shared access ROW over 83 Atley Road and includes the hairpin bend and access to the proposed Lot 8.	Figure E11 road type[6] able to serve up to 20 residential units.	5.5m-5.7m sealed with for shared movement lane and parking. 9m minimum legal width ROW. It is likely that this will have a minimum legal width of 6.7m and include provision for all required services. Maximum design gradient 16% measured on the centreline.
To serve between 6-12 residential units. Serving on-site residential units (Lots 1-7) and existing residential units (lots) at 85 A, B, C, D & E Atley Road.	QLDC Proposed District Plan, Rule 29.5.14, Part b. (i).	5.5m-5.7m sealed width for shared movement lane and parking. 6.7m minimum legal width ROW. Maximum design gradient 1 in 6 (16.67%) measured on the centreline. Possible turning area provided for a car with single reverse manoeuvre (T or Y turning) at the curve adjacent to proposed Lot 7 and existing 85 A & B Atley Road included in ROW.
To serve between 1-6 residential units. Serving on-site residential units (Lots 1-4) and existing residential units (lots) at 85 D & E Atley Road.	QLDC Proposed District Plan, Rule 29.5.14, Part b. (i).	2.75m-3.0m sealed width for shared movement lane. 4.0m minimum legal width ROW. Maximum design gradient 1 in 6 (16.67%) measured on the centreline. Turning area provided for a car with a single reverse manoeuvre (T or Y turning).

It is noted that refuse is collected at the intersection of the shared access ROW and Atley Road, this will remain. Therefore, any larger vehicles (delivery vehicles may be able to turn using private land associated with the lot being served. It is anticipated that these larger vehicles will be rare and any larger vehicle turning (8m medium rigid truck) should be considered as a check vehicle only to test for emergency access.

The proposed road design will therefore breach site standards as a result of:

- Legal width of ROW serving all lots (proposed and existing, 14 total) will be less than the 9m requirement of the QLDC Code of Practice, refer rule 29.5.14 part a. The ROW width should have a minimum width of 6.7m and include for all associated services. This reduce legal width is based on the provisions of 29.5.14 part b. (i) which applies a limit of 12 residential units, and
- The shared access ROW will (as a private road) serve a total of 14 residential lots which is greater than the limit (12) under rule 29.5.14 part c.

It is proposed to widen the sealed carriageway width of the shared access ROW to 5.5m where necessary to provide for the proposed development and mitigate effects of the increased traffic. This includes the section or shared access ROW over 83 Atley Road which is owned by others. Based on the widened sealed access width these breaches are unlikely to have any effect on the operation or efficiency of the shared access ROW.

[6] Refer QLDC, Land Development and Subdivision Code of Practice, Table 3.2 Road Design Standards.

To manage the access widening it is recommended that the detailed design of the proposed access design is provided to Council for review and approval at the engineering approvals stage. The shared access design is to include for a minimum 5.5m minimum sealed carriageway with where the access will serve greater than 6 residential units. This will include the portion of shared access ROW over 83 Atley Road which is owned by others.

To allow for the ongoing maintenance and management of the shared access an appropriate, and legally binding, agreement should be drafted. It is recommended that a ROW agreement is drafted for shared maintenance costs of the ROW which allows for the existing ROW users and their current agreements. It is recommended that this new agreement is provided to Council for review and approval at the engineering approvals stage prior to the proposed subdivision. With an appropriate ROW agreement the proposed shared access ROW will be appropriate and acceptable to serve both the proposed residential lots (subdivision) and existing residential lots.

4.3 Property Access

The proposed house designs each have 2 garaged car park spaces each accessed via the onsite driveways.

The proposed development will form vehicle crossings to individual residential lots. The residential zoning and activity requires that each lot has a vehicle crossing from the shared access ROW formed to Diagram 6[7].

Based on the proposed subdivision layout all lots would be considered as rear lots. This means that access to and from each garaged car park must be achieved with only one reverse manoeuvre, it is acceptable to use the shared access ROW to complete this manoeuvre. It is recommended that a swept path for a B85 car is provided at the house design/building consent stage[8]. It is noted that the swept requirements cannot be achieved for Lot 1, this lot has a vehicle turntable provided to allow for manoeuvring, an acceptable solution for a residential unit (refer rule 29.5.7, part h).

5 Summary

It is proposed to undertake a residential development and subdivision at Lot 2 DP 411983 at Atley Road, Arthurs Point. The proposed subdivision will create a total of 8 residential lots. Each of the proposed lots will contain a residential dwelling. This will be a net increase of 7 residential lots which will be accessed from an existing shared access ROW. The shared access ROW will serve a total of 14 residential lots.

It is proposed that the subdivision will include improvements to the shared access ROW including widening a portion to include a 5.5m minimum width sealed access to accommodate a movement lane and parking, this sealed carriageway will be appropriate for up to 20 residential units. The shared access ROW will have a reduced minimum legal ROW width of 6.7m. The ROW width will include the widened access road and all services where necessary and is considered acceptable for the total 14 residential lots which will be served by the shared access.

This assessment makes a number of recommendations regarding the shared access ROW, this includes:

- That the shared access ROW approach at the intersection with Atley Road is to be widened to a 5.5m-5.7m sealed carriageway to allow for 2 traffic lanes. This portion of the

[7] Refer QLDC Proposed District Plan, Chapter 29 Transport, Section 29.5.16 and Schedule 29.2 Diagram 6 – Residential Access Design
[8] Refer QLDC Proposed District Plan, Chapter 29 Transport, Section 29.5.7, part f.

shared access ROW (over 83 Atley Road) should have a minimum legal width of 6.7m. Widening of that shared access ROW at the approach to Atley Road will mitigate possible queuing effects as a result of the increased traffic using the shared access.

- That the shared access ROW serving more than 6 residential lots (new and existing) is provided with 5.5m-5.7m sealed carriageway width and a minimum legal (ROW) width of 6.7m which is to include the full sealed carriageway and any necessary services. The sealed carriageway width is to accommodate both movement lane and parking. Widening of the shared access sealed carriageway width is to accommodate movement and parking requirements and to mitigate traffic effects of the increased traffic flow.
- That the shared access ROW serving up to 6 residential lots (new and existing) is to include a 2.75m-3.0m sealed access within a 4m minimum legal width ROW. This portion of the shared access ROW is to include turning (T or Y turning) such that a car can turn with a single reverse manoeuvre within the ROW area.
- That a swept path is provided for each new property access to show the swept path for each garaged car park space such that a car can turn (using the shared access ROW) with only 1 reverse manoeuvre. Where this cannot be achieved (Lot 8) a vehicle turntable is to be provided. This is to provide turning requirements for a rear lot such that no such vehicle (B85 car) is required to reverse either onto or off Atley Road.
- That a ROW agreement is drafted for shared maintenance costs of the shared access ROW, which is to allow for the existing ROW users (and their current agreements). This is to allow for future funding of the on-going maintenance of the shared access.

It is recommended that that these elements are provided to Council for review and approval at the engineering approvals stage prior to the subdivision. These recommendations may be managed through appropriately worded consent conditions.

I consider that with the above recommendations that the proposed subdivision can be appropriately designed and constructed. I consider that the subdivision will have minimal transport effects on the surrounding transport network, any transport impacts of which will not be noticeable.

Should you require any further information please contact me.

Yours sincerely,

Jason Bartlett

CEng MICE, MEngNZ
Transport Engineer

Appendix A Development Drawings

The following Foley Group Architecture development drawing have been reviewed when undertaking this assessment:

- Canyon Ridge, RC01 to RC30, dated 21 December 2020.

In addition the following Aurum Survey development drawings have been reviewed when undertaking this assessment:

- Proposed Subdivision, Canyon Ridge, Arthurs Point, drawing 4924.3R.1B, dated 14 December 2020, and
- Indicative Access Widening, Canyon Ridge, Arthurs Point, drawing 4924.4R.1B, dated 18 December 2020.

Appendix B QLDC Proposed District Plan, Compliance Assessment

The table provided below outlines the proposed development's compliance against the Transport site standards for the Lower Density Suburban Residential Zone, under the QLDC Proposed District Plan (Chapter 29, Transport, Table 29.3).

Table – QLDC Proposed District Plan Assessment

Rule	Requirement	Provided	Compliance
29.5.1	Minimum Parking Requirements 2 per unit for a suburban residential.	Each unit will have 2 garaged car park spaces.	Yes
29.5.2	Location and Availability of Parking Spaces	All car parks provided within garages at each residential unit. These are all serviced from a shared (ROW) access lane which serves all properties onsite and 6 other existing (off-site) properties. Lot 1 has access along a private driveway with manoeuvring achieved using a vehicle turntable.	Yes
29.5.3	Size of Parking Spaces and Layout Refer 29.11 Car Parking Sizes and Layout, Table 29.7. using Class 1 user for residential.	Car park bays are 2.4m minimum bay width (residential) with 0.3m off set to internal garage walls (5.4m minimum overall width). Effective aisle width is greater than 7m. Lot 1 has a vehicle turntable to improve vehicle manoeuvring as a result of reduced effect aisle width. The car park sizes are appropriate for Class 1 (residential) user.	Yes
29.5.4	Gradient of Parking Spaces and Parking Areas Maximum gradient no more than 1 in 20.	Garaged car parks have a level floor.	Yes
29.5.5	Mobility Parking Spaces Not required for residential units.	Not Provided.	N/A
29.5.6	Drop Off/ Pick Up (set down) Areas For day care, education or health care facilities.	Not day care, education or health care facilities.	N/A

Rule	Requirement	Provided	Compliance
29.5.7	Reverse Manoeuvring Refer part f. required for such that no vehicle is required to reverse onto or from a local road (Atley Road). Refer part h. a vehicle turntable is acceptable for a residential unit.	Lots 1 requires a vehicle turntable to achieve required manoeuvring to/from the garaged car parks. The other lots (Lots 2 – 8) will turn using the shared access ROW allowing vehicle to turn from each garaged car park with a single reverse manoeuvre.	Yes
29.5.8	Residential Parking Space Design For residential, Garaged car parks with 2.4m door width and 5.5m garage length (bay depth).	All garaged spaces have a door width greater than 2.4m (all 5m) and a garage length (bay depth) of 5.5m.	Yes
29.5.9	Queuing 6m queuing required for 3 to 20 onsite car parks.	Each lot only provides 2 car park spaces, onsite queuing for each on-site lot entry from the shared ROW is not required. The narrow shared access ROW (over 83 Atley Road) will limit traffic at the ROW. As vehicles enter the ROW (from Atley Road) they may be required to give way to other vehicles exiting the ROW (to Atley Road). It is possible that this may result in queuing on Altey Road.	No Queuing Length not provided at the entry to the shared access ROW as this passes over 83 Atley Road.
29.5.10	Loading Spaces Not required for Zone.	Not provided.	N/A
29.5.11	Surface of Parking Spaces, Parking Areas, and Loading Spaces Parking and first 10m of the access are to be sealed.	All parking and access areas will have a sealed surface.	Yes
29.5.12	Lighting of Parking Areas Not required for residential or parking areas of less than 10 spaces.	All required car parks are garage.	N/A
29.5.13	Bicycle Parking and the Provision of Lockers and Showers Not required for residential.	Not provided.	N/A

Rule	Requirement	Provided	Compliance
29.5.14	Access and Road Design For zone and activities; greater that 12 residential dwellings access is to comply with the Code of Practice (Table 3.2). For 1-12 units the access is to comply with Part b, table (i).	The shared access ROW widths (legal or sealed) do not meet the minimum requirements. The Code of Practice will require a 9m legal access width, 5.5m minimum seal width for greater than 6 residential lots. In total the portion of the shared access ROW over 83 Atley Road will serve more than 12 residential lots.	No Shared access ROW width (legal and sealed) does not provide the minimum width for the number of lots served. A binding ROW easement should be provided for the new lots which is to include for existing users (14 total users)
29.5.15	Width and Design of Vehicle Crossings – Urban Zones 3m and 6m for residential. Construction as per Schedule 29.2, Diagram 6 with appropriate breakover angles. The access crosses the property boundary at an angle of between 45° and 90°and intersects the carriageway at 90° +/- 15°.	Each lot will have a vehicle crossing with a maximum 6m vehicle crossing length. Each lot access crosses the adjacent ROW boundary at 90°. Vehicle crossing will be constructed as per the QLDC Land Development and Subdivision Code of Practice, Appendix B, Drawing B5-21: Vehicle Crossing – Residential. This detail is the same as Schedule 29.2, Diagram 6 – Residential Vehicle Crossing.	Yes
29.5.16	Width and Design of Vehicle Crossings – Rural/Lifestyle Zones	Not Rural/Lifestyle Zones.	N/A
29.5.17	Maximum Gradient for Vehicle Access Maximum Access gradient is 1 in 6 and meets appropriate breakover angles.	The maximum access gradient within the existing shared access ROW is less than 1 in 6.	Yes
29.5.18	Minimum Sight Distances from Vehicle Access on all Roads other than State Highways No minimum for 40km/hr speed limit.	Residential activity in 40km/hr speed limit.	N/A
29.5.19	Minimum Sight Distances from Vehicle Access onto State Highways	Not a state highway access.	N/A

Rule	Requirement	Provided	Compliance
29.5.20	Maximum Number of Vehicle Crossings The frontage length allows 2 vehicle crossings.	Each new lot will have a single vehicle crossing from the shared access road.	Yes
29.5.21	Minimum Distance Between Vehicle Crossings onto State Highways	Not a state highway access.	N/A
29.5.22	Distances of Vehicle Crossings from Intersections Requires a minimum separation distance of 25m.	No vehicle crossing will be within 25m of an intersection due to the length of the shared access through 83 Atley Road.	Yes
29.5.23	Minimum distances of Vehicle Crossings from Intersections onto State Highways	Not a state highway access.	N/A
29.5.24	Service Stations	Not a service station.	N/A

7 April 2021

Novo Group Limited
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O - 03 365 5570
info@novogroup.co.nz

Queenstown Lakes District Council

Attention: Arsalan Ali

By email: arsalan.ali@qldc.govt.nz

Dear Arsalan,

TRANSPORT PEER REVIEW
RESIDENTIAL SUBDIVISION, ATLEY ROAD, ARTHURS POINT
RM210019

1. You have requested a peer review of the transport related effects for the above development. This includes development of eight residential units and an associated subdivision to create eight lots – with shared vehicle access retained to Atley Road.

2. The application documents for the purposes of this peer review include:

    - Transport Assessment (TA) prepared by Bartlett Consulting dated 22 Dec 2020.

The Traffic Environment

3. The TA Report describes the traffic environment in detail. In summary, the following key points are reiterated:

    - The site is accessed via a Right Of Way (ROW) from Atley Road.
    - Atley Road is a local road which provides access to around 180 residential units. at Arthurs Point.
    - Atley Road is formed and sealed at Mathias Terrace (to the North) and has a carriageway width of 6.0m that reduces to 4.5m at the site access.
    - The posted speed limit of Altey's Road is 40 km/h although this is only defined by the speed limit bylaw up to 83 Atley Road. Beyond that, there is no speed limit, however, the report suggests that the operating speeds will be between 30 – 35 km/hr due to narrow road alignments and the surface of the road.
    - We understand that further development is planned to the south and west of the site off Atley's Road. We understand that Atley Road is able to accommodate the additional traffic of a further 89 additional residential lots planned to the south of this site (as conveyed during Proposed District Plan (PDP) hearings).
    - The nearest footpath to the site is to the north of Mathias Terrace.
    - There are no cycle facilities along Atley Road.

- The current ROW serves a total of 6 (existing) residential lots. This includes the following:
    - 83 Atley Road (Lot 2 DP423051).
    - Five existing Lots (85A, 85B, 85C, 85D and 85E).

  This will be expanded to include the Application site (1 lot) which will be subdivided into eight lots. This will result in a total of 14 lots proposed from the ROW.

- The total daily traffic volume is estimated to increase from 60 vehicles per day (vpd) to 140 vpd. Thus, an effective increase of 80 vpd on the shared access ROW.

- The site will retain the current shared access from Atley Road, this includes a ROW over 83 Atley Road.

The District Plan Compliance Assessment

4. The application site is zoned *Lower Density Suburban Residential* in the Proposed District Plan.

5. The following District Plan transport non-compliances have been identified – noting that these differ slightly from the non-compliances identified in the application:

Proposed District Plan

- Rule 29.5.9: Given that 28 parking spaces are provided (8x2 [proposed]+ 6 x2 [existing] = 28), a queuing length of 12m is required back from the road. The TA report states that there is no queue length provided at the shared access ROW entry from Atley Road (over 83 Atley Road) with the existing access width being only 3.0m which allows a single traffic lane only.

- Rule 29.5.14a. Based on Table 3.2 within the Code of Practice, a 9.0m road reserve width is required with a 5.5m minimum seal width for between 7 and 20 dwellings. The existing shared access ROW width of 3.0m does not provide the minimum sealed width for the number of lots to be served.

- Rule 29.5.14b. Based on the Table a minimum legal width of 6.7m is permitted for between 7 to 12 units. A minimum legal width of 6.7m is proposed for the shared ROW that serves 14 lots.

- Rule 29.5.14b. Based on the Table a minimum legal width of 4m is required for a shared access way serving between 1-6 units. A minimum legal width of 3.64m is proposed for the ROW that serves Lot 1 only.

- Rule 29.5.14b. No private way or private vehicle access or shared access in any zone shall serve sites with a potential to accommodate more than 12 units on the site and adjoining sites. The shared ROW is proposed is accommodate more than 14 lots.

6. The District Plan transport non-compliances identified above require assessment as a restricted discretionary activity.

Assessment

7. The key traffic issues relate to the District Plan non compliances listed above and are addressed in turn.

Queuing Space

8. The applicant has proposed to mitigate potential queuing effects at the existing intersection of the shared access ROW by widening it to a minimum of 5.5m. This will accommodate two opposing vehicles and remove any queuing effects from Atley Road. This is proposed along the section or shared access ROW over 83 Atley Road and includes the hairpin bend and access to the proposed Lot 8.

9. The application also states that this will require amendment of the current ROW agreement over 83 Atley Road to accommodate the recommended widening. For the purposes of this assessment, it is assumed that these amendments will in fact be made as this is considered to be an important mitigating feature. If this is implemented, there would be **no queuing effects** with the proposed development.

Legal Width (First Section)

10. The applicant proposes increasing the legal ROW width to 6.7m rather than 9.0m along the first section of the ROW serving all 14 units. The QLDC Proposed District Plan (Chapter 29 Transport), Standard 29.5.14, Part b suggests a minimum legal width of 6.7m is adequate for up to 12 units. However, a total of 14 lots are proposed off this shared ROW.

11. The difference between 12 and 14 units will not be noticeable – for example, a 6.7m ROW will be able to easily cater for two-way flow. Accordingly, the effects on this non-compliance is considered to be **acceptable** and **less than minor.**

Legal Width (Third Section)

12. The applicant proposes a 3.64m wide ROW to serve Lot 1 along with a 3.0m wide sealed movement lane. The legal width of 3.64m is considered adequate for a single lot – nothing that the traffic generation for a single residential lot is typically less than one vehicle in the peak hour. For comparative purposes, it is noted that the Christchurch District Plan permits a minimum legal width of 3.0m for a shared access serving 1-3 units.

13. Any effects are considered to be **acceptable** and **less than minor**.

Number of Units

14. Rule 29.5.14b. No private way or private vehicle access or shared access in any zone shall serve sites with a potential to accommodate more than 12 units on the site and adjoining sites. The shared ROW is proposed is accommodate 14 lots (14 units in total).

15. There is limited space for further units that could access the shared ROW. This means that traffic is effectively only increased by an additional 20 trips daily on the ROW. This equates to around 2 extra trips in the peak hour. Considering the site, the effects on the traffic environment are considered to be **acceptable and less than minor.**

Off Site Transport Effects

16. The applicant has assessed the Safe Intersection Sight Distance based on the Extended Design Domain (EDD) for Intersections. According to the Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, EDD may be considered when:

    - Reviewing the geometry of existing intersections
    - New intersections are being retrofitted on existing roads in constrained location.
    - Improving the standard of existing intersections in constrained locations
    - Building temporary intersections

    As this is an existing intersection in a constrained location, the applicant's justification for the visibility splays are adequate, provided the operating speeds of 30km/h and 35km/h are accurate at the shared access ROW from Atley Road. A Council Engineer (Arsalan Ali) has confirmed that the reduced operating speeds mentioned are a fair and reasonable assumption. However, we require a 2D plan that confirms the available sight distances at the intersection.

17. We have noted on the Crash Analysis System (CAS) that there have been no crashes over the last five full years at the shared access ROW from Atley Road.

Conclusion

18. For all of the reasons discussed above, the application for 1 lot to be subdivided into 8 separate residential lots can be supported from a transport perspective, provided the following is achieved:

    - A 2D plan showing that the available sight distances at the intersection meet the EDD requirements for the operating speeds anticipated.

Yours sincerely,

Novo Group Limited

Simon de Verteuil

Senior Transport Engineer

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013014

5 July 2021

Canyon Ridge

C/- Momentum Projects
By email

Attention: Shane Fairmaid

Dear Shane,

Atley Road, Residential Development
Sight Distance Assessment

The purpose of this letter is to provide further information in response to the transport peer review undertaken by Novo Group (dated 7 April 2021).

1 Background

The peer review requests the following further information.

> *A 2D plan showing that the available sight distances at the intersection meet the EDD requirements for the operating speeds anticipated.*

2 Available Sight Distances

In preparing this information the available sight distances have been remeasured with respect to the requirements of Austroads methodology[1] which differs slightly from the methodology under the Proposed District Plan (**PDP**).

In remeasuring the sight distances it is noted that the shared access driveway which would serve the proposed development has been repaired. New asphalt provided at the access means that the centre of the access is better defined and moves slightly to the south. Within this remeasuring the drivers position within the carriageway has been better considered particularly with respect to the sight distances to the south within the narrow single lane private gravel road approach. This amends the measured sight distance at the shared access driveway.

The available sight distances from the centre of the current access driveway are:

- 36m to the south at a point 5m from the edge of the Atley Road carriageway, this increases to 38m when considering the 3m (minimum) from the edge of Atley Road carriageway. The sightline in this direction is restricted by a bank within the road reserve.
- 54m to the north at a point 5m from the edge of the Atley Road carriageway, this increases to 60m when considering the 3m (minimum) from the edge of Atley Road carriageway. The sightline in this direction is restricted be a tree within the road reserve.

[1] Refer Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD).

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Sketches showing the available sight distance are provided in Appendix A and photos of the sight distances dated 4 November 2020 and 27 April 2021 are provided in Appendix B. The photos provided show the repairs undertaken to the shared access driveway.

3 Site Criteria

In calculating the Safe Intersection Sight Distance (**SISD**)[2] a number of site criteria are required. The following data has been collected from the site to allow the calculation of SISD.

- To the south the northbound vehicle speed is assessed as being less than 30km/hr *(V)*, in this direction the sealed road surface extends 11m (to the south) beyond the centre of the intersection. The road has a (downhill) gradient towards the intersection of -7% *(a)*.
- To the north the southbound vehicle speed is assessed as being less than 35km/hr *(V)*, the road has a (uphill) gradient towards the intersection of 4% *(a)*.

These site criteria are shown in sketches provided in Appendix A.

4 Safe Intersection Sight Distance (SISD)

The calculation of SISD includes variables for driver reaction time and coefficient of deceleration.

Reaction time *(R_T)* is based on driver alertness as a result of the driving environment, Austroads guidance provides appropriate reaction times for different driving environments[3]. For a low speed urban environment with narrow carriageway widths where oncoming vehicles should be anticipated which may require stopping or manoeuvring results in a high driver alertness and a reaction time of 1.5 seconds is considered appropriate. The SISD calculation also includes an observation time *(O_T)* which is a set value of 3 seconds.

Coefficient of deceleration *(d)* is based on the road surface friction. The braking areas on each side of the intersection, or possible collision areas, are sealed. The typical coefficient of deceleration value is 0.36 based on the 90th percentile value for braking on wet, sealed roads.

Based on these values, and the site criteria above, the SISD values for each intersection approach are:

- 50m to the south[4]. This is not achieved from the shared access driveway.
- 56m to the north. This can only be achieved from the minimum observation point at the shared access driveway, this is the point 3m from the edge of the Atley Road carriageway.

The minimum SISD can only be achieved to the north. Sketches provided in Appendix A show the SISD sightlines in each direction from the shared access driveway.

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[2] Refer Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD), Equation 2.
[3] Refer Austroads Guide to Road Design Part 3: Geometric Design, Section 5.2.2 Driver Reaction Time.
[4] This includes a calculated 12m braking length of which 11m has a sealed surface.

5 Extended Design Domain

Austroads guidance allows for the use of Extended Design Domain[5] (**EDD**) in a number of circumstances. In this case the shared access driveway intersection is an existing intersection which is to be improved in order to serve additional residential dwellings. The intersection is within the existing, constrained, road network.

In using the EDD criteria the observation time and coefficient of deceleration have been altered to calculated SISD EDD requirements.

Observation time *(O_T)* may be reduced to 1.5 seconds for a T-intersection on a single carriageway road with a low traffic volume (<4,000vpd).

Coefficient of deceleration *(d)* may be increased based on through traffic being mainly cars with local drivers on a lower volume road of less importance within a lower speed urban area. In this case a coefficient of deceleration value of 0.46 may be used being a mean value for braking on a wet sealed road for a hazard. This is the maximum value of deceleration applicable at an intersection.

Based on these revised values, and the site criteria above, the SISD EDD values for each intersection approach are:

- 34m to the south[6]. This can be achieved from the desired observation point 5m from the edge of the Atley Road carriageway.
- 39m to the north. This can be achieved from the desired observation point 5m from the edge of the Atley Road carriageway.

The SISD EDD can be achieved in both directions. Sketches provided in Appendix A show the SISD EDD sightlines in each direction from the shared access driveway.

6 Guidelines for Visibility at Driveways

The shared access driveway will serve a total of 14 residential lots with a possible traffic generation of up to 140vpd. The shared access driveway is from Altey Road which is a local road with a traffic flow of less than 1,000vpd.

The Land Transport Safety Authority (now Waka Kotahi, NZTA) document RTS 6 Guidelines for visibility at driveways provides minimum sight distance requirements for a low volume driveway (less than 200vpd) from a local road (less than 1000vpd). In this case the minimum sight distance is based on the absolute minimum stopping sight distance (SSD)[7]. The calculated minimum sight distances are:

- 20m to the south. This can be achieved at the shared access driveway based on the RTS requirements.
- 25m to the north. This can be achieved at the shared access driveway based on the RTS requirements.

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[5] Refer Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, Appendix A Extended Design Domain (EDD) for Intersections.
[6] This includes a calculated 9m braking length within the 11m seal length approach.
[7] Refer Austroads Guide to Road Design Part 3: Geometric Design, Section 5.3.1 Car Stopping Sight Distance.

7 Summary

This sight distance assessment is provided in response to the request for further information following the transport peer review undertaken by Nova Group.

The shared access driveway intersection with Atley Road has restricted sight distance to the south and to the north. The available sight distances have been remeasured following recent improvements to the existing intersection.

Austroads guidance would require that the shared access has Safe Intersection Sight Distance as an intersection. The shared access driveway only achieves minimum Safe Intersection Sight Distances to the north. To the south this is not achieved.

Atley Road is a low volume road and a constrained driving environment. In these circumstances it is acceptable to consider the Austroads Extended Design Domain. The access intersection will achieve safe intersection sight distance sightlines in both directions under the extended design domain.

Sketches of the available and required sight distances are attached (refer Appendix A).

Alternatively, RTS 6 Guidelines for visibility at driveways consider the shared access driveway to be a low volume driveway. Based on these requirements for a driveway the shared access driveway will achieve minimum driveway sight distance requirements in both directions.

Overall, I consider that the location of the shared access driveway will achieve minimum sight distance requirements as set out in current design guidance. I consider that any impacts as a result of the restricted sight distances are acceptable.

Should you require any further information please contact me.

Yours sincerely,

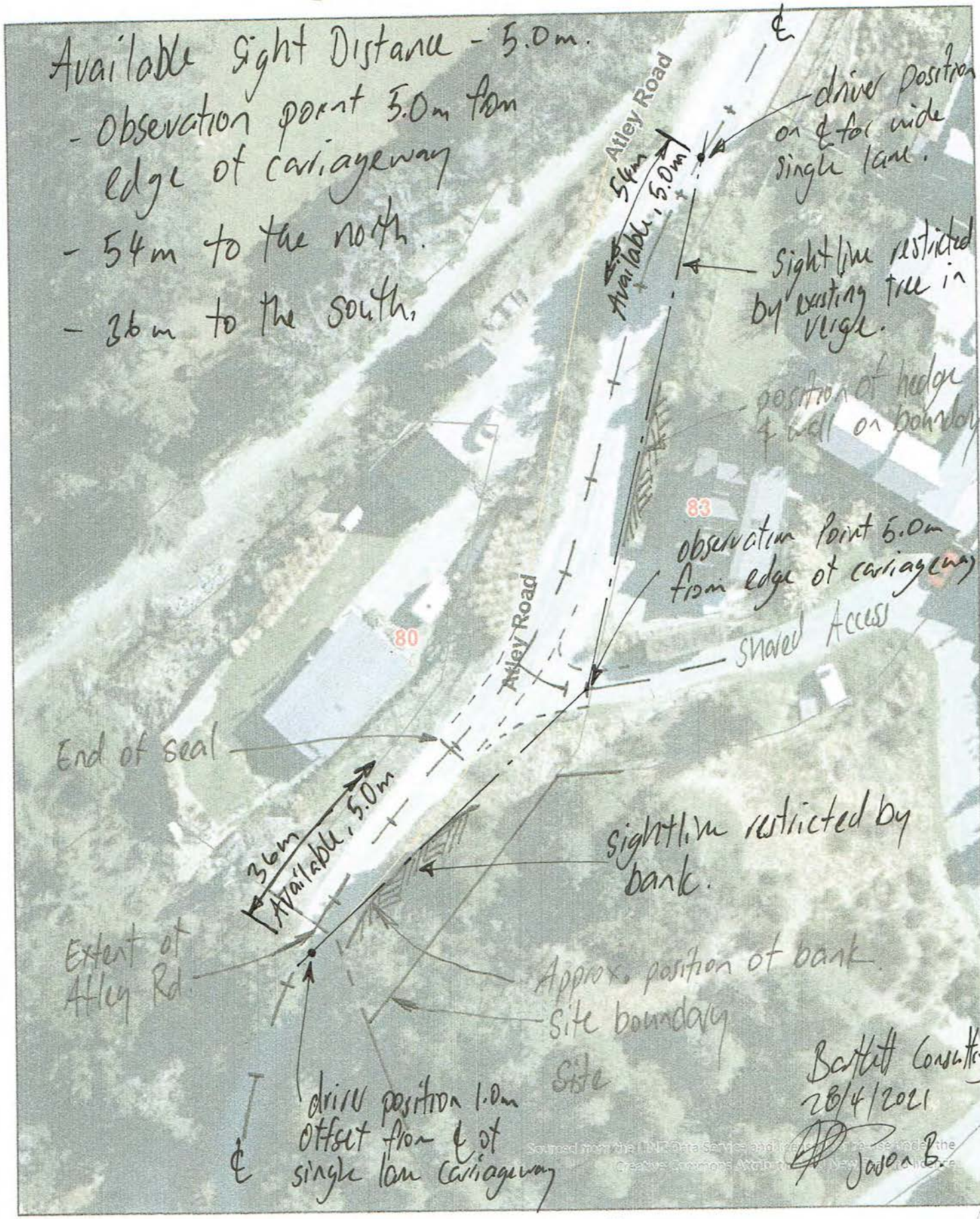
Jason Bartlett
CEng MICE, MEngNZ
Transport Engineer

Appendix A Sight Distance Sketches

The following sketches are attached:

- Available Sight Distance – 5.0m.
- Available Sight Distance – 3.0m.
- Site Criteria.
- SISD Requirements.
- SISD EDD Requirements.

QLDC Imagery



0 15 30 60 m

Scale: 1:500

Map Date: 28/04/2021

N

Canyon Ridge - Available Sight Distance - 5.0m

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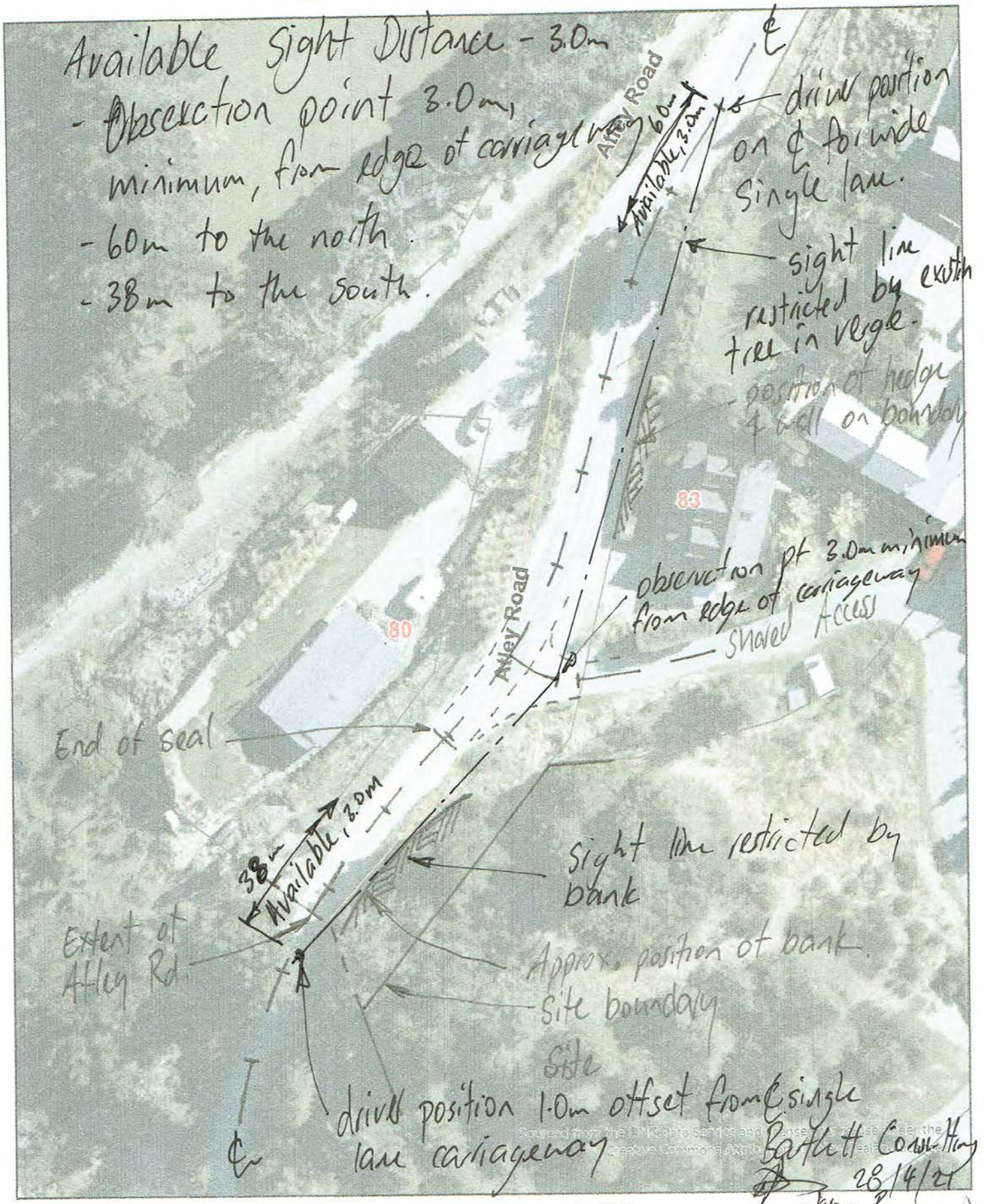
QLDC Imagery



0 15 30 60 m

Scale: 1:500

Map Date: 28/04/2021

N

Canyon Ridge - Available Sight Distance - 3.0m.

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