APPLICATION AS NOTIFIED

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

(RM220510)

Submissions Close 09.12.2022

FORM 12

File Number RM220510

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:

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

What is proposed:

Resource consent is sought to undertake a four lot Rural Subdivision across two sites, with Lots ranging from 3.26ha to 9.86ha, with each lot containing a 1000m^2 residential building platform, curtilage area, associated planting and driveway. Earthworks are proposed to prepare the site/create driveways and improve the existing overland flow path onsite. Consent is also sought to vary existing consent notice instruments to provide for the proposed subdivision.

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

Te Awa Road, Hawea. Lot 1 Deposited Plan 303793 and Lot 2 Deposited Plan 303793.

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 RM220510 as the reference https://edocs.qldc.govt.nz/Account/Login

The Council planner processing this application on behalf of the Council is Erica Walker, who may be contacted by phone at 03 443 0024 or email at erica.walker@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:

9 December 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 as soon as reasonably practicable after serving your submission to Council, the applicant's contact details are:

C/- Morgan Shepherd
morgan@brownandcompany.co.nz
Brown and Company Group
PO Box 1467
Queenstown 9348

QUEENSTOWN LAKES DISTRICT COUNCIL

_____

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

Date of Notification: Friday 11 November 2022

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) Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

All trustee names (if applicable):

*Contact name for company or trust: Bernie Kennedy

*Postal Address: 118 Mount Iron Drive, Wanaka

*Post code: 9305

*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: antrimdowns@gmail.com

*Phone Numbers: Day

Mobile: 027 602 8614

*The Applicant is:

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

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

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

*Name & Company: Morgan Shepherd

*Phone Numbers: Day 03 409 2258

Mobile: 021 246 7579

*Email Address: morgan@brownandcompany.co.nz

*Postal Address: PO Box 1467, Queenstown

*Postcode: 9348

INVOICING DETAILS //

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

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

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

*Attention: Bernie Kennedy

*Postal Address: 118 Mount Iron Drive, Wanaka

*Post code: 9305

*Please provide an email AND full postal address.

*Email: antrimdowns@gmail.com

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

Owner Name:

Owner Address:

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

Date:

Names:

DEVELOPMENT CONTRIBUTIONS INVOICING DETAILS //

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

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

Details are the same as for invoicing ☑

Applicant: ☐ Landowner: ☐ Other, please specify:

*Attention:

*Email:

Click here for further information and our estimate request form

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

*Address / Location to which this application relates:

Te Awa Road

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

Lot 1 DP 303793
Lot 2 DP 303793

District Plan Zone(s): Rural General Zone (ODP) Rural Zone (PDP)

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

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

Please make contact prior to a site visit if required.

PRE-APPLICATION MEETING OR URBAN DESIGN PANEL

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

☐ Yes ☑ No ☐ Copy of minutes attached

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

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

☑ 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:

Propose a subdivision to create four lots (two additional lots and building platforms)

APPLICATION NOTIFICATION

Are you requesting public notification for the application?

☑ Yes ☐ No

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

OTHER CONSENTS

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

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

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

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

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

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

OTHER CONSENTS // CONTINUED

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

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

■ Any other National Environmental Standard

☐ Yes ☑ N/A

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 details in the invoicing section are responsible for payment of invoices and in addition will be liable to pay all costs and expenses of debt recovery and/or legal costs incurred by QLDC related to the enforcement of any debt.

MONITORING FEES – Please also note that if this application is approved you will be required to meet the costs of monitoring any conditions applying to the consent, pursuant to Section 35 of the Resource Management Act 1991.

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

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

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

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

PAYMENT // An initial fee must be paid prior to or at the time of the application and proof of payment submitted.

Please reference your payments as follows:

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

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

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

I confirm payment by:

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

*Reference RMKENNE

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

$3100 - Restricted activity more than two lots

(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 6/17/22

Invoices are available on request

APPLICATION & DECLARATION

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

○ If lodging this application as the Applicant:

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

OR:

◉ If lodging this application as agent of the Applicant:

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

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

PLEASE TICK

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

Full name of person lodging this form: Morgan Shepherd

Firm/Company: Brown & Company Planning Group

Dated: 16-06-2022

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

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

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

1 INFORMATION MUST BE SPECIFIED IN SUFFICIENT DETAIL

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

2 INFORMATION REQUIRED IN ALL APPLICATIONS

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

Information provided within the Form above

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

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

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

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

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

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

ADDITIONAL INFORMATION REQUIRED IN SOME APPLICATIONS

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

ASSESSMENT OF ENVIRONMENTAL EFFECTS

Clause 6: Information required in assessment of environmental effects

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

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

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

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

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

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

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

A2 APPENDIX 2 // Information requirements for subdivision

UNDER THE FOURTH SCHEDULE TO THE ACT:

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

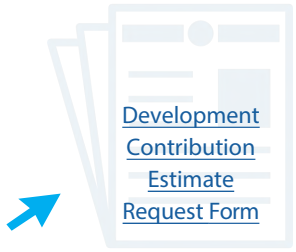
A3 APPENDIX 3 // Development Contributions

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

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

Click here for more information on development contributions and their charges

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



A4 APPENDIX 4 // Fast - Track Application

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

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

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

A5 APPENDIX 5 // Naming of documents guide

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

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

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

Land use and Subdivision Application and Assessment of Effects on the Environment for a 4 lot subdivision and associated residential building platforms.

20 June 2022

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

To: Queenstown Lakes District Council

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

c/- Brown & Company Planning Group Ltd, PO Box 1467, Queenstown, applies for resource consent as follows.

1. The names and addresses of the owner and occupier (other than the applicant) of any land to which the application relates are as follows:

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh are the owners of the property at Te Awa Road, Hawea.

2. The land to which the application relates is:

Address	Identifier	Legal Description	Area
Te Awa Road	15146	Lot 1 DP 303793	16.5428ha more or less
Te Awa Road	15147	Lot 2 DP 303793	4.1107ha more or less

The total land area of the 'Site' is 20.6535ha.

A copy of the Record of Titles is attached at **Attachment B**.

3. The type of resource consents sought are as follows:

Subdivision consent

4. A description of the activity to which the application relates is:

The applicant owns two lots at Te Awa Road that each have an existing building platform and proposes a subdivision to create four lots (two additional lots and building platforms). The subdivision will create rural residential living opportunities with the establishment of building platforms on each new lot.

The proposal is described in detail in Part 3 of the Assessment of Effects on the Environment (**Attachment A**) and in the supporting reports and plans that accompany this application.

5. The following additional resource consents are required in relation to this proposal and have or have not been applied for:

A separate consent from Otago Regional Council will be sought for residential earthworks.

6. I attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects in the detail that

corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

The assessment of effects on the environment is at **Attachment A.**

7. I attach information required to be included in this application by the district plan, and Resource Management Act 1991.

A list of attachments to the application is provided below.

8. Where the application is for subdivision consent:

All information required in relation to the subdivision is shown on the Scheme Plan and Landscape Plans (**Attachment C** and **D**).

Declaration

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

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

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

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

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

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh

20 June 2022

Address for service of applicant:

Bernie Kennedy, Grant Ruddenklau & Zita Cleugh
c/- Brown & Company Planning Group
PO Box 1467
QUEENSTOWN 9348

Attention: Jeff Brown / Morgan Shepherd

Telephone: 03 409 2258
Mobile: 021 715 572
Email: jeff@brownandcompany.co.nz / morgan@brownandcompany.co.nz

Address for invoicing:

Bernie Kennedy
027 602 8614
antrimdowns@gmail.com

Attachments

A. An Assessment of Effects on the Environment in accordance with the Fourth Schedule to the Act.

B. Certificate of Title and Interests

C. Scheme Plan

D. Landscape Masterplan

E. Landscape Assessment

F. Landscape Attachments

G. Earthworks Plans

H. Services Report

I. Geotechnical Report

J. Preliminary Flood Hazard Assessment

K. Affected Party Approvals

L. Form 9 – QLDC

FOURTH SCHEDULE
ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

1. A description of the proposal

1.1. Scope of this Document

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

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

- A description of the site and surrounding locality;
- A description of the proposal;
- Relevant provisions of the QLDC's Proposed District Plan and any Operative provisions that remain relevant;
- An assessment of effects on the environment, including analysis of relevant assessment matters;
- Assessment under Part 2 of the Resource Management Act 1991;

1.2. The Site and Locality

The Site is located on the corner of Te Awa Road and Lake Hawea-Albert Town Road, approximately 2km south of the Lake Hawea Township on the western terrace of the Hawea River towards the toe of Mount Maude. The location and extent of the Site is illustrated in ***Figure 1*** below.

Figure 1. *Location and extent of the site (illustrated in with white/blue box)*

The Site consists of two lots which cumulatively comprise of 20.6535ha of land and contain two building platforms as seen in ***Figure 2*** below.

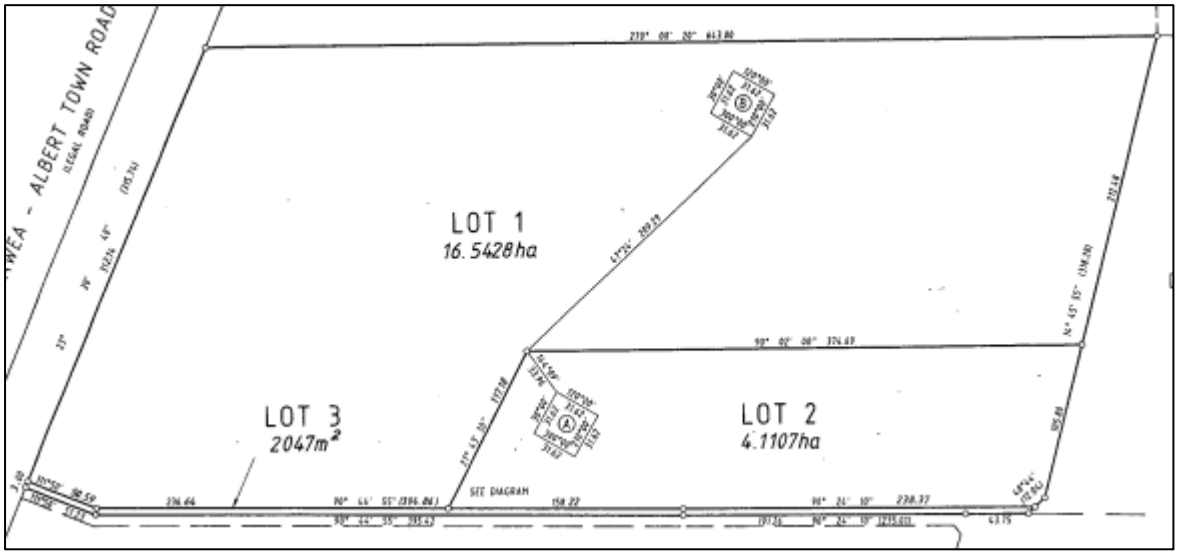


Figure 2. *Title Plan illustrating location of building platforms*

There are two existing accesses to the site off Te Awa Road which will be maintained.

The physical attributes of the Site are described in more detail in the Landscape Assessment by Patch Landscape (**Attachment E**).

1.3. The Proposal

1.3.1. Introduction

The application seeks to subdivide the property to create 4 rural residential lots, ranging in size from 3.26ha to 9.86ha. Each rural residential lot will accommodate a 1000m² residential building platform (of which two have been relocated from the existing title), riparian and ecological planting, curtilage areas, driveways, and associated earthworks. The concept masterplan as seen in ***Figure 3*** below and prepared by Patch Landscape Architecture illustrates the proposal for each lot in detail (**Attachment D**).

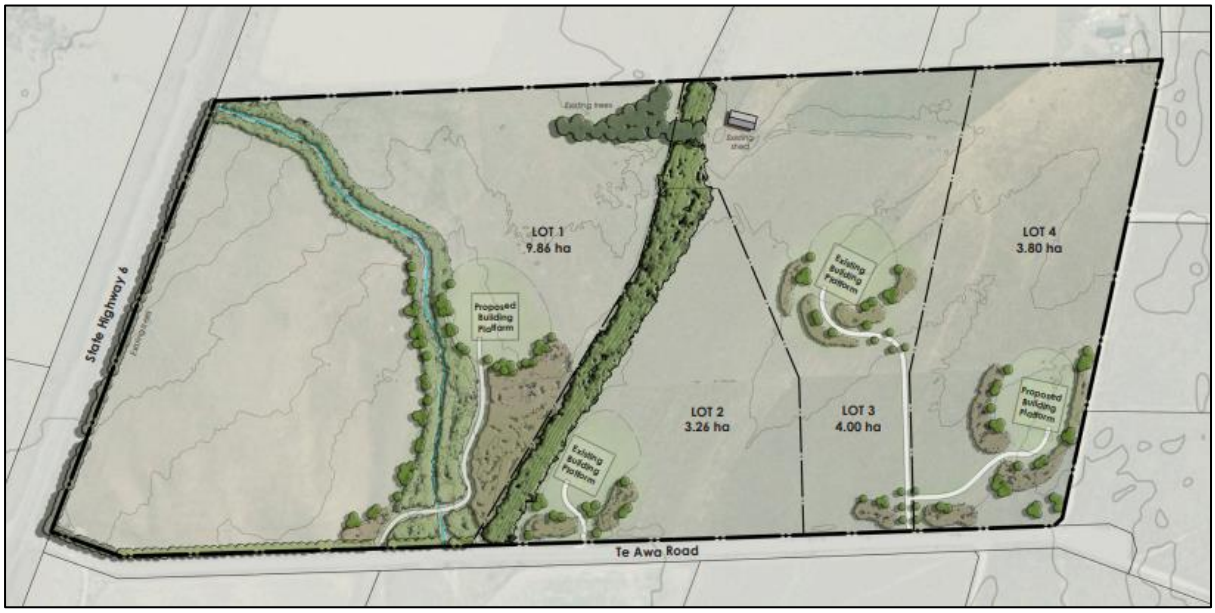


Figure 3. *Subdivision Masterplan*

Access will be obtained from the two existing access points on Te Awa Road and a new access is proposed at the eastern end to service proposed Lots 3 and 4.

The site is relatively flat, therefore only requiring earthworks for the construction of the accessways to the proposed building platforms.

1.3.2. Subdivision

The land will be subdivided to create 4 new rural residential lots as shown on the Scheme Plan at **Attachment C**. The proposed lot sizes are as follows:

Lot Number	Lot Size
Lot 1	9,790m²
Lot 2	3,260m²
Lot 3	3,800m²
Lot 4	3,790m²

1.3.3. Proposed building and activities

Each of the proposed lots contains a registered building platform that will provide for residential use. These building platforms are 1000m² and will be registered to the title of each lot. The building maximum height of any building to be implemented by way of consent notice conditions are as follows:

- Lot 1 – 4.5m
- Lot 2 – 7m
- Lot 3 – 4.5m
- Lot 4 – 4.5m

1.3.4. Landscaping and ecological planting

The high-level extent of the landscaping and planting proposed by the applicant is shown on the plans at **Attachment D.**

Each lot contains a curtilage area around the proposed building platforms that future lot owners will have the ability to landscape in due course. The proposal includes riparian enhancement planting along the overland flow path that exists on proposed Lot 1, and ecological planting along the terrace on proposed Lots 2 and 3. Contextual planting and various tree planting is proposed around the curtilage areas and subdivision.

The applicant volunteers the following controls on vegetation which will be registered as a consent notice condition on the relevant titles:

Applicable to Lots 2, 3 & 4:

- *Boundary planting shall not exceed 5m in height.*
- *Poplar and eucalyptus boundary planting shall not occur.*

As set out in the Landscape Assessment (**Attachment E**) the following conditions are also volunteered:

- *All water tanks shall be located within the domestic curtilage area and either buried or screened from views beyond the boundaries of the subject lot by vegetation. If not buried, water tanks shall be of a dark recessive green, brown or grey colour with an LRV of between 7% and 25%.*
- *All fences shall be post and rail or post and wire only and be a maximum of 1.2m in height. Deer fencing is not subject to the 1.2m height.*
- *All domestic landscaping and structures including but not limited to clotheslines, outdoor seating areas, water tanks, external lighting, parking areas, caravans, boats, swimming pools, tennis courts, pergolas, sheds and amenity gardens and lawns shall be confined to the domestic curtilage area as shown on the certified landscape plan.*
- *All exterior lighting shall be down lighting at a maximum height of 1.2m and to not spill beyond the boundaries of the respective lot.*
- *The maximum building height of future buildings within Lots 1, 3 and 4 shall be 4.5m in height. The maximum building height of a future building on Lot 2 will be 7m from existing ground.*
- *Planting outside the curtilage area shall not exceed 6m in height excluding the proposed mountain beech trees illustrated on the landscape plan.*
- *No exotic conifers are to be planted on any lots.*

The proposed landscaping and planting will be undertaken prior to titles being issued.

1.3.5. Access and parking

Access to the proposed subdivision will be via Te Awa Road. There are two existing access ways that will be upgraded to service proposed Lots 1 and 2. A new access is proposed towards the eastern end

of Te Awa Road to service proposed Lots 3 and 4 which will require an easement over Lot 3 in favor of Lot 4.

Private driveways will be constructed with 150mm GAP40 provided there is a minimum subgrade CBR value of 7.

No new access ways onto the Lake Hawea – Albert Town Road / State Highway 6 are proposed.

1.3.6. Infrastructure

Clark Fortune McDonald and Associates prepared a Services Report (**Attachment H**) to address the infrastructure required for the proposal. The report concludes the following:

Water supply

The applicant has 20 shares of the Hawea Water Service Company Ltd scheme, of which each share equates to 1000 litres of water per day. This will provide each lot with an allocation of 5000 litres per day.

Water testing is currently being undertaken and the results will be provided to Council in due course. Dependent on the outcome of the results, a consent notice condition relating to the treatment of water at such time a dwelling is proposed on the lot may be necessary and is volunteered, in this case.

Firefighting water supply will need to be established on each lot at the time of building in accordance with the District Plan provision. If tanks are proposed by future owners, these shall either be located within the building platform or fully buried outside the platform.

Wastewater

It is proposed that onsite wastewater disposal systems will be installed on all lots. As discussed in the Geotechnical Report (**Attachment I**), the soils on the site have sufficient capacity to facilitate the disposal of effluent to land via sub-soil soakage methods. Detailed design of wastewater disposal systems can be provided at the time of building consent.

Stormwater management

The proposed lots will dispose of stormwater via soak pits. It is proposed to treat and dispose of any increase in stormwater run-off generated from the accessways via grass swales and/or soak pit. Detailed design will be provided at Engineering Approval stage.

Electricity

Power will be supplied from the existing underground infrastructure along Te Awa Road.

Aurora Energy have confirmed electricity supply is available to service the proposed subdivision.

Telecommunications

Telecommunications will be supplied from the existing infrastructure along Te Awa Road.

Chorus has confirmed that telecommunications can be provided to the proposed subdivision.

Summary

The proposed subdivision can be serviced appropriately. All services and infrastructure will be required to be installed underground to serve the proposed building platforms.

1.3.7. Geotechnical and earthworks, and construction management

The Geotechnical Report (**Attachment I**) concludes that the proposed subdivision is geotechnically suitable provided the recommendations in the report are adhered to.

It is proposed to undertake a total volume of 960m³ of earthworks across approximately 4700m² in association with the construction of accessways to the proposed building platforms.

Earthworks are required to improve/enlarge the overland flow path that traverses the upper terrace to ensure it can accommodate a 1% AEP flood event as discussed in the Preliminary Flood Assessment (**Attachment J**). Specific design of the channel will be provided as part of the detailed design documentation that will be required at Engineering Approval stage.

All earthworks will be undertaken in accordance with an Environmental Management Plan required by conditions of consent.

1.4. Consenting history

RM970308 – consent to subdivide the land into eleven rural blocks.

RM010032 – consent to subdivide an existing allotment into two freehold allotments each containing a residential building platform.

RM090557 – consent to relocate an existing building platform within a rural site, to construct a farm building and to vary Consent Notice 5188548.2 relating to the building height

1.5. Zoning and consents required

1.5.1. Operative District Plan (ODP)

The site is within the Rural General Zone of the ODP and is contained within the Visual Amenity Landscape (**VAL**) classification.

There are no relevant rules that remain operative and applicable to this application.

1.5.2. Proposed District Plan (PDP)

The Queenstown Lakes District Council notified Stage 1 of the District Plan review on 26 August 2015. The Stage 1 Decisions were notified on 7 May 2018. The appeal period has closed and rules that are not subject to appeal are to be treated as operative.

The site is within the Rural Zone of the PDP, is contained within the Rural Character Landscape (**RCL**) Classification and within Priority Area 3: West of Hawea River. The relevant provisions are addressed in the tabled below.

Table 1. Subdivision Chapter

Rule	Activity	Status	Consent Required
Chapter 27 – Subdivision			
27.5.11	All subdivision activities in the Rural and Gibbston Character Zones and Airport Zone – Wanaka, unless otherwise provided for.	**Discretionary**	**Yes** – the proposal is a 4-lot subdivision.
27.7.10	Every allotment created for the purposed of containing residential activity shall identify one building platform of	**Non-Complying**	**No –** the proposal includes building

	not less than 70m^2 in area and not greater than 1000m^2 in area.		platforms on every allotment.

Pursuant to Rule 25.3.2.5, earthworks associated with subdivisions under Chapter are exempt from the following rules:

a. Table 25.2 Maximum Volume

b. Rule 25.5.15 Cut Standard

c. Rule 25.5.16 Fill Standard

d. Rule 25.5.21 Cleanfill

All other rules in the Earthworks Chapter apply to earthworks associated with subdivision, these have been assessed and no consent is required under the Chapter 25.

Table 2. Transport Chapter

Rule	Activity	Status	Consent Required
Chapter 29 – Transport			
29.5.14	**Access and Road Design** a. All vehicular access to fee simple title lots, cross lease, unit title or lease, unit title or leased premises shall be in accordance with Table 3.2 (Road Design Standards) of the QLDC Land Development and Subdivision Code of Practice 2018, including the notes within Table 3.2 and Appendices E and F; except as provided for in 29.5.14b.	**Restricted Discretionary**	**No –** the vehicle accesses will be constructed in accordance with the QLDC Land Development and Subdivision Code of Practice.

1.5.3. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

Under the NES, land is considered to be actually or potentially contaminated if an activity or industry on the Hazardous Activities or Industries List (**HAIL**) has been or is more likely than not to have been undertaken on that land.

Therefore, the NES only applies to land that is potentially or actually affected by contaminants because of its historical and/or current use and the type of activities previously undertaken on the site. The land use history is therefore the trigger to determining whether the land is considered by the NES. For the land subject to this application and from the information available it can be concluded that:

(a) The site has historically been used for agricultural purposes, primarily for the light grazing of stock.

(b) There are no, and have never been any, sheep dips, silage storage or pesticide storage areas, or other storage of any chemicals.

(c) There has been no persistent application of pesticides.

Overall, based on the information available the land is not a HAIL site, and there is no risk to human health resulting from the change of use from farmland to residential use, over part of the land.

The land for which resource consent is being sought is not considered as being a HAIL site under sub clause (7) in section 5 of the NES and no further consideration is necessary.

1.5.4. Summary of consents required

The proposal requires the following consent:

- A **discretionary** activity resource consent pursuant to Rule 27.5.11 for subdivision in the Rural Zone; and

- any other consents that are required and not identified above.

The relevant assessment matters for resource consent application are addressed in detail below in Part 4 below.

2. Where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

The proposal does not result in any significant adverse effects on the environment for the reasons set out in Part 3 below and therefore no alternative locations or methods have been considered in this application.

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

3.1. Introduction

This assessment of effects on the environment addresses:

- The permitted baseline and existing environment;
- Effects on landscape character and visual amenity values;
- Effects on rural amenity;
- Effects of earthworks;
- Effects in relation to servicing and infrastructure;
- Effects in relation to traffic and roading;
- Cumulative effects;
- Assessment matters;
- Summary.

3.2. Permitted baseline and existing environment

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

On this site, permitted activities include:

- Up to 1000m³ of earthworks, provided the contiguous area does not exceed 2500m² and the maximum height of cut does not exceed 2.4m and fill not exceeding 2m and all earthworks are setback more than 10m from any waterbody;

- A fence less than 2 metres high anywhere within the site, including deer fencing, post and rail, post and wire;

- Farming activities that complies with the standards;

- Tree planting across the site for the purposes of farming and/or residential activity; and

- A residential unit (including residential flat and accessory buildings) within the building platforms approved on the site, subject to compliance with the standards regarding building height, colours and materials, building size, firefighting water and access).

The existing environment includes:

Two allotments (Lot 1 = 16.54628ha and Lot 2 = 4.1107ha), each with their own building platform and associated access from Te Awa Road. There is also an existing shed on Lot 1 near the northern boundary.

3.3. Effects on landscape character and visual amenity values

The subject site is part of a Rural Character Landscape (RCL) and contained within the West of Hawea River RCL Priority Area. Patch Landscape prepared a Landscape Assessment (**Attachment E**) which provides an assessment of the actual and potential landscape character and visual amenity effects associated with the proposal.

The assessment concludes the following:

- The nature and scale of the proposal maintains the rural quality of the surrounding landscape with respect to spacious, open, pastoral character and rural amenity.

- The proposal does not adversely affect any Outstanding Natural Landscapes or Features due to the separation distance.

- Existing and proposed landscaping is compatible with the quality and character of the surrounding landscape and allows for view of the surrounding mountains to be maintained from public and private places.

- The proposed buildings platforms will be visible from public places at a significant distance in the short term, however they will not appear prominent or reduce the visual amenity of the rural character landscape to a more than very low degree.

- It will be difficult to view all four building platforms (of which two of those are existing) at any one time due to the terrace riser that intersects the site and will be enhanced with ecological planting.

- The proposal does not cluster development, rather it proposes rural living type development that maintains a spacious quality within discrete parts of the site, consistent with the existing rural living pattern in the area.

- The proposal does not exceed the ability of the landscape to absorb change as the proposed building platforms on Lots 1 and 4 are located in parts of the site that result in the least impact on landscape character.

- The landscape's open and rural character will remain dominant, and views of the wider mountain landscapes will be maintained to a degree that any potential adverse effects are less than minor.

The proposed conditions of consent contained within the Section 6.1 of the Landscape Assessment (**Attachment E**) are volunteered by the applicant.

Overall, the proposal will not give rise to adverse effects on the landscape character and visual amenity values that are minor or more than minor.

3.4. Effects on rural amenity

Rural amenity values include a sense of spaciousness, privacy, quietness and absence of traffic and structures. As previously discussed, there are two existing building platforms on the site and the proposal includes an additional two buildings platforms, which will result in less spaciousness and additional future dwellings. The proposal has been designed to ensure the rural quality of the surrounding landscape with respect to spaciousness, openness and pastoral character values are maintained. The proposed earthworks, driveway alignments, access ways, boundaries and planting are consistent with the existing natural topography and patterns of the RCL. The proposal does not degrade any neighbouring properties' rural amenity due to the nature and scale of the subdivision and the maintenance of views across the landscape to the distant mountains.

Overall, the proposal will not give rise to adverse rural amenity effects that are minor or more than minor.

3.5. Effects of earthworks

The proposal requires a minor amount of earthworks to form the vehicle access ways given the site is relatively flat. As such, there is limited landform modification that will result from the proposal.

Minor earthworks are also required to improve the existing drain / overland flow path so that it can accommodate flood waters. This feature is usually dry and when water is present, does not flow into a river or lake. The proposed earthworks will be undertaken in the dry season and therefore will not result in adverse effects from erosion or sedimentation.

Future earthworks within the proposed lots will be required to install services such as water tanks and wastewater disposal fields and facilitate the construction of residential units, the applicant for the dwelling would need to demonstrate that any further earthworks required would not require resource consent. The applicant will accept the standard environmental management conditions and implement controls as and when required to mitigate any potential adverse environmental effects arising from the proposed earthworks construction phase.

The proposed earthworks are appropriate to facilitate the proposed subdivision and will not result in adverse effects on the environment.

3.6. Effects in relation to services and infrastructure

Wastewater

As discussed in the Geotechnical Report (**Attachment H**) the soils on the site have sufficient capacity to facilitate the disposal of effluent to land via sub-soil soakage methods. The design of each system will need to be considered at the time of building a dwelling in accordance with the recommendations of the Geotechnical Report.

The future wastewater disposal systems can be designed, implemented and maintained to ensure public health and adverse effects on the environment are avoided.

Stormwater

As discussed in the Geotechnical Report (**Attachment I**) stormwater disposal via on-site management system for each lot is feasible. Detailed soakage investigations and stormwater disposal design will be undertaken at the time of building a dwelling on the lots. Where soakage cannot be achieved on site, stormwater detention/dispersal systems and outlets into existing surface water features may be appropriate.

No adverse effects will result from the subdivision in relation to stormwater management.

Potable & Firefighting Water

Adequate water supply can be provided to each lot. At the time of building a dwelling on a lot, each lot will be required to install a small domestic water treatment plant and provide water supply for firefighting purposes at the time of building. The future lot owners will need to comply with New Zealand Fire Fighting Standard PAS SNZ4509:2008 and be in place prior to the occupation of any dwelling. A consent notice condition will require compliance the standard and ensure firefighting reserve is provided on each lot.

Any water tanks or treatment plants are to be located within the building platform and to be adequately screened from neighbouring lots; or completely buried within the boundaries of the lot. This will assist in avoiding any potential visual effects that could arise from installing domestic water tanks in a rural landscape.

Electricity and telecommunications

The provision for underground servicing is available. The respective service providers have confirmed that electricity and telecommunication services are available to each lot and no adverse effects arise on those networks or from the installation of them.

Summary

Overall, the proposed lots will be self-contained and therefore the environmental effects of servicing and infrastructure will be less than minor.

3.7. Effects in relation to traffic and roading

As discussed above, the proposal does not include any new access onto Lake Hawea – Albert Town Road and will make use of the two existing access ways onto Te Awa Road. A third new access will be constructed toward the eastern end of Te Awa Road to service proposed Lots 3 and 4, this has been aligned to ensure vehicle headlights do not shine into the dwellings on the neighbouring property on the south side of Te Awa Road. The required easements will be established, and all crossings will comply with the QLDC Land Development and Subdivision Code of Practice.

Te Awa Road has a legal width of 15m with a sealed formation width of 5.5m and 0.5m gravel shoulders. Te Awa Road currently meets the E3 standard and can serve up to 150 users. The proposed additional two lots do not exceed the capacity of Te Awa Road and therefore upgrades are not required nor proposed as part of the subdivision.

The proposed subdivision will not significantly increase traffic movements, and the additional traffic generated by the two net lots will not have any appreciable effects on the safety and efficiency of the Te Awa Road / State Highway 6 intersection or the wider roading network.

The proposal will not give rise to any adverse traffic generation or roading effects.

3.8. Cumulative effects

As discussed in the Landscape Assessment (**Attachment E**) the Te Awa Terrace area is increasingly rural living in character, with a sense of ruralness and openness due to the spaciousness between

buildings and general density within the landscape. There are a number of smaller rural lifestyle sized lots in the vicinity of the proposal between State Highway 6 and the Clutha River. Many of these lots are visible from State Highway 6, Te Awa Road and the public track on the opposite side of the Hawea River, and the area has a distinctly rural living character when viewed from these locations.

Given the proposed subdivision adds two additional lots (and associated building platforms), it is of a nature and scale that is compatible with the existing pattern of density, any cumulative effects arising from the existing level of development along with the proposed subdivision will be less than minor. The proposal will be consistent with the immediate and wider landscape character of the locality.

3.9. Assessment Matters

The relevant assessment matters are assessed as follows. The asterisk's (*) identifies the provisions that are subject to appeal.

Rural Character Landscape (RCL) Assessment Matters

Assessment Matter	Assessment Matter detail	Assessment
21.21.2.1*	**Existing vegetation that:** a) Was either planted after, or, self-seeded and less than 1 metre in height at 28 September 2002; and, b) Obstructs or substantially interferes with views of the proposed development from roads or other public places, shall not be considered: i. As beneficial under any of the following assessment matters unless the Council considered the vegetation (or some of it) is appropriate for the location in the context of the proposed development; and ii. As part of the permitted baseline	The existing trees (eucalyptus and other rural character trees) along State Highway 6 were planted in 2018 and therefore cannot be considered as beneficial or part of the permitted baseline. The existing conifers in the vicinity of the shed and vegetation across the site was established prior to 2002 and therefore forms part of the permitted baseline.
21.21.2.2	**Effects on landscape quality and character:** The following shall be taken into account: a) Where the site is adjacent to an Outstanding Natural Feature or Landscape, whether and the extent to which the proposed development will adversely affect the quality and character of the adjacent Outstanding natural Feature or Landscape; b) Whether and the extent to which the scale and nature of the proposed development will degrade the quality and character of the surrounding Rural Character Landscape; c) Whether the design and any landscaping would be compatible with or would enhance the quality and character of the Rural Character Landscape.	The site is not adjacent to an ONF or ONL and therefore clause (a) is not relevant. On clauses (b) and (c), as discussed in the Landscape Assessment (**Attachment E**) the proposal is distant from any ONL and ONF and will not degrade the quality and character of the surrounding RCL. The proposal has been designed to be compatible with the quality and the character of the surrounding landscape.
21.21.2.3	**Effects on visual amenity:**	As discussed in the Landscape Assessment (**Attachment E**) the visual amenity as

	Whether the development will result in a loss of the visual amenity of the Rural Character Landscape, having regard to whether and the extent to which: a) The visual prominence of the proposed development from any public places will reduce the visual amenity of the Rural Character Landscape. In the case of proposed development which is visible from unformed legal road, regard shall be had to the frequency and intensity of the present use and, the practicalities and likelihood of potential use of these unformed legal roads as access; b) The proposed development is likely to be visually prominent such that it detracts from private views; c) Any screening or other mitigation by any proposed method such as earthworks and/or new planting will detract from or obstruct views of the Rural Character Landscape from both public and private locations; d) The proposed development is enclosed by confining elements of topography and/or vegetation and the ability of these elements to reduce visibility from public and private locations; e) Any proposed roads, boundaries and associated planting, lighting, earthworks and landscaping will reduce visual amenity, with particular regard to elements which are inconsistent with the existing natural topography and patterns; f) Boundaries follow, wherever reasonably possible and practicable, the natural lines of the landscape or landscape units.	experienced from the site and surrounding sites is embodied in long range views to the distant mountains to the north and east. The proposal includes two new building platforms that will be visible from public places in the short term, however proposed planting will assist to mitigate this visibility whilst still allowing for all views of the surrounding mountains to be maintained. The proposal will not be visibly prominent such that it will detract from the rural character landscape and views to surrounding mountains as viewed from the relevant public and private viewpoints. The proposed access ways, boundaries and associated planting take advantage of the existing topography and vegetation patterns and will assist in reducing visibility from public and private locations.
21.21.2.4	**Design and density of development:** In considering the appropriateness of the design and density of the proposed development, whether and to what extent; a) Opportunity has been taken to aggregate built development to ultilise common access ways including roads, pedestrian linkages, services and open space (i.e. open space held in one title whether jointly or otherwise); b) There is merit in clustering the proposed building(s) or building platform(s) having regard to the overall density and intensity of the proposed development and whether this would exceed the ability of the landscape to absorb change; c) Development, including access, is located within the parts of the site they will be least visible from public and private locations	The lot sizes range from 3.26ha to 9.79ha. The subdivision is accessed via Te Awa Road. The lots are not necessarily clustered however the two new lots and associated building platforms have been located in parts of the site where they will be least visible from public and private viewpoints. Based on this, any adverse effects of the proposal's design and density on the landscape character are less than minor.

	d) Development, including access, is located in parts of the site where they will have the least impact on landscape character.	
21.21.2.5	**Tangata Whenua, biodiversity and geological values:** a) Whether and to what extent the proposed development will degrade Tangata Whenua values including Topuni or nohoanga, indigenous biodiversity, geological or geomorphological values or features and, the positive effects any proposed or existing protection or regeneration of these values or features will have. The Council acknowledges that Tangata Whenua beliefs and values for a specific location may not be known without input from iwi.	There are no historic heritage values listed on the site, nor is the site within the wāhi tūpuna overlay. As such it is understood that no tangata whenua values or wāhi tūpuna sites are affected by the proposal. There are no indigenous biodiversity values on the site, however the proposal includes indigenous vegetation enhancement planting.
21.21.2.6	**Cumulative effects of development on the landscape:** Taking into account whether and to what extent any existing, consented or permitted development (including unimplemented but existing resource consent or zoning) has degraded landscape quality, character, and visual amenity values. The Council shall be satisfied; a) The proposed development will not further degrade landscape quality, character and visual amenity values, with particular regard to situation that would result in loss of valued quality, character and openness due to the prevalence of residential or non-farming activity within the Rural Landscape. b) Where in the case resource consent may be granted to the proposed development but it represents a threshold to which the landscape could absorb any further development, whether any further cumulative adverse effects would be avoided by way of imposing a covenant, consent notice or other legal instrument that maintains open space.	As previously discussed, buildings within the proposed two new building platforms will not be highly visible from public places and future buildings will not appear visually prominent. The proposed subdivision patter is common within this landscape as discussed in the Landscape Assessment (**Attachment E**) and with the inclusion of volunteered design controls and proposed planting, the landscape quality, character and visual amenity values will not be degraded. The proposal is located within an area that has capacity to absorb development given the existing landscape character, and therefore will not give rise to adverse cumulative effects.
21.21.3.1	In the case of proposed residential activity or specific development, whether a specific building design, rather than nominating a building platform, helps demonstrate whether the proposed development is appropriate.	The proposal includes establishing building platforms and a number of volunteered consent notice conditions.
21.21.3.3	In considering whether there are any positive effects in relation to the proposed development, or remedying or mitigating the continuing adverse effects of past subdivision or development, the Council shall take the following matters into account:	The site is a relatively small rural lot which provides for rural living and light grazing. There are no indigenous biodiversity values or opportunities for open space covenants or esplanade reserves, however the proposal does include indigenous vegetation enhancement planting.

	a) Whether the proposed subdivision or development provide an opportunity to protect the landscape from further development and may include open space covenants or esplanade reserves; b) Whether the proposed subdivision or development would enhance the character of the landscape, or protects and enhances indigenous biodiversity values, in particular the habitat of any threatened species, or land environment identified as chronically or acutely threatened on the Land Environments New Zealand (LENZ) threatened environment status; c) Any positive effects including environmental compensation, easements for public access such as walking, cycling or bridleways or access to lakes, rivers or conservation areas; d) Any opportunity to retire marginal farming land and revert it to indigenous vegetation where adverse effects cannot be avoided, mitigated or remedies, the merits of any compensation; e) Whether the proposed development assists in retaining the land use in low intensity farming where that activity maintains the values landscape character.	The existing boundary planting, and additional planting, will be imposed by consent notice, which will protect the current rural amenity. There are no practical opportunities, or the necessity for, any easements for public access. There is no need to retire the land from farming or to revert to indigenous vegetation, however low intensity farming activities can be maintained on the proposed lots.

3.10. Summary of effects on the environment

Any potential adverse effects of the proposal on the environment are less than minor, due to:

- Utilising the existing building platforms and locating the proposed building platforms and lots in a pattern that maintains the visual amenity and landscape character;
- Proposed landscaping and indigenous enhancement planting;
- Improvements to the existing drainage ditch to avoid flood hazards;
- Locating services and infrastructure underground to avoid adverse visual effects;
- Low impact stormwater methods.

4. Objectives and policies of the relevant planning instruments

The relevant planning instruments, and the relevant sections of each, are:

- Queenstown Lakes Proposed District Plan – Chapters 3, 6, 21, 27 and 29;
- The Operative and Proposed Regional Policy Statements.

These are addressed as follows. The asterisk's (*) identifies the provisions that are subject to appeal.

4.1. Proposed District Plan (Strategic Direction, Landscape and Rural Character, Rural, Transport and Subdivision)

Objectives and Policies – Chapter 3 – Strategic Direction

Provision	Detail of Provision	Assessment
Objective 3.2.1	***The development of a prosperous, resilient and equitable economy in the District.***	The proposal will contribute to achieving this objective, in a minor way, through the creation of construction employment and through new residents' contributions to the local economy.
Policy 3.2.1.7	*Agricultural land uses are enabled provided those uses are consistent with:* *a. the protection of the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes;* *b. the maintenance of the landscape character of Rural Character Landscapes and the maintenance or enhancement of their visual amenity values; and* *c. the maintenance of significant nature conservation values.*	The site is currently used for rural living and light grazing purposes. The proposal will continue to enable some agricultural land uses and as previously discussed will maintain the character of the rural landscape. The proposal achieves this policy.
Policy 3.2.1.8	*Diversification of land use in rural areas beyond traditional activities, including farming, provided that:* *a. the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are protected;* *b. the landscape character of Rural Character Landscapes is maintained and their visual amenity values are maintained or enhanced; and* *c. significant nature conservation values and Ngāi Tahu values, interests and customary resources, mare maintained.*	The proposal will diversify the land uses away from traditional farming, by creating additional rural living blocks where owners can undertake rural activities including farming, gardening (productive and amenity), grazing of horses, and so on, while maintaining the landscape character of the Rural Character Landscape. The proposal achieves this policy.
Objective 3.2.5	***The retention of the District's distinctive landscapes.***	The proposal achieves this objective because the distinctive values of the relevant landscapes will be retained, as discussed in the Landscape Assessment.
Policy 3.2.5.5	*Within Rural Character Landscapes, adverse effects on landscape character and visual amenity values from subdivision, use or development are anticipated and effectively managed, through policies and rules, so that:* *a. landscape character is maintained; and* *b. visual amenity values are maintained or enhanced.*	Landscape character and visual amenity values are discussed in detail in the Landscape Assessment (**Attachment E**). Overall, the proposed development is set within wider areas of open space and maintains the existing visual amenity and character of the landscape. The proposal achieves this policy.
Policy 3.2.5.6	*In Rural Character Landscapes, new subdivision, use and development in proximity to any Outstanding Natural*	As discussed in the Landscape Assessment (**Attachment E**), the site is distant from any ONL or ONF and is part of

Provision	Detail of Provision	Assessment
	Feature or Outstanding Natural Landscape does not compromise the landscape values of that Feature or Landscape.	a separate river terrace visual amenity landscape. The proposed subdivision does not compromise the landscape values of any ONL or ONF. The proposal achieves this policy.
Policy 3.2.5.7	*In Rural Character Landscapes of the Upper Clutha Basin:* *a. Priority Areas of Rural Character Landscapes are identified; and* *b. associated landscape character and visual amenity values and related landscape capacity are identified.*	The site is within the West of Hawea River RCL Priority Area.
3.3 – Strategic Policies		
Policy 3.3.21	*Enable continuation of existing farming activities and evolving forms of agricultural land use in rural areas except where those activities conflict with:* *a. protection of the landscape values of Outstanding Natural Features or Outstanding Natural Landscapes; or* *b. maintenance of the landscape character and maintenance or enhancement of the visual amenity values of Rural Character Landscapes.*	The proposal will maintain the potential for rural activities with the rural living lots, including light grazing, equestrian, gardening etc. The landscape character and visual amenity values of the Rural Character Landscape will be maintained as discussed in the Landscape Assessment (**Attachment E**). The proposal achieves this policy.
3.3.22	*Provide for rural living opportunities in areas identified on the District Plan web mapping application as appropriate for rural living developments.*	This policy is not relevant as it is for the purpose of identifying specific Rural Lifestyle and Rural Residential Zones.
3.3.23	*Ensure that the effect of cumulative subdivision and development for the purposes of Rural Living does not compromise:* *a. the protection of the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes; and* *b. the maintenance of the landscape character and maintenance or enhancement of the visual amenity values of Rural Character Landscapes.*	Whilst the Te Awa Road area is increasingly rural living in character, it has maintained a sense of ruralness and openness due to the spaciousness between buildings and general density. The proposal does not give rise to adverse cumulative effects as the addition of two new lots and building platforms, in the locations and manner proposed, will allow the sense of open character and visual amenity values to be maintained. The proposal achieves this policy.
Policy 3.3.25	*That subdivision and / or development be designed in accordance with best practice land use management so as to avoid or minimise adverse effects on the water quality of lakes, rivers and wetlands in the District*	The proposal does not include a significant amount of earthworks, however the construction will be undertaken in accordance with an Environmental Management Plan The proposal achieves this policy.
Policy 3.3.26	*Avoid the planting of identified exotic vegetation with the potential to spread and naturalise unless spread can be*	The proposal does not involve the planting of identified exotic vegetation that has the potential to spread and naturalise. The proposal achieves this policy.

Provision	Detail of Provision	Assessment
	acceptably managed for the life of the planting.	
Policy 3.3.27	*Seek opportunities to provide public access to the natural environment at the time of plan change, subdivision or development.*	The proposal does not present opportunities to provide public access.
Values Identification Framework for Priority Areas for Rural Character Landscapes		
Policy 3.3.39	*Identify in Schedule 21.23 the following Rural Zone Priority Areas within the Upper Clutha Rural Character Landscapes shown on maps held on [QLDC reference file]:* *a. Cardrona River/Mt Barker Road RCL PA;* *b. Halliday Road/Corbridge RCL PA;* *c. West of Hāwea River RCL PA;* *d. Church Road/Shortcut Road RCL PA;* *e. Maungawera Valley RCL PA.*	The site is within the West of Hawea River RCL Priority Area.
Policy 3.3.40	*For the Priority Areas listed in SP 3.3.39, according to SP 3.3.41, describe in Schedule 21.23 at an appropriate landscape scale:* *a. the landscape attributes (physical, sensory and associative);* *b. the landscape character and visual amenity values; and* *c. the related landscape capacity.*	This is a plan drafting policy.
Policy 3.3.41	*To achieve SP 3.3.40 for each Priority Area:* *a. identify and describe key public routes and viewpoints both within and in proximity to the Priority Areas (including waterbodies, roads, walkways and cycleways);* *b. identify the key physical, sensory and associative attributes that contribute to the landscape character and visual amenity vales of the Priority Area;* *c. describe in accordance with SP 3.3.43, and then rate, those attributes;* *d. assess and record the relationship between the Priority Area and the wider Rural Character Landscape context;* *e. assess and record the relationship between the Priority Area and the Outstanding Natural Features within the Upper Clutha Basin;* *f. assess and record the relationship between the Priority Area and the Outstanding Natural Landscapes that frame the Upper Clutha Basin; and*	This is a plan drafting policy.

Provision	Detail of Provision	Assessment
	g. assess and record the related landscape capacity for subdivision, use and development activities including but not limited to: *i. commercial recreational activities;* *ii. visitor accommodation and tourism related activities;* *iii. urban expansions;* *iv. intensive agriculture;* *v. earthworks;* *vi. farm buildings;* *vii. mineral extraction;* *viii. transport infrastructure;* *ix. utilities and regionally significant infrastructure;* *x. renewable energy generation;* *xi. forestry;* *xii. rural living.*	
Policy 3.3.42	*The Council shall notify a proposed plan change to the District Plan by 30 June 2022 to implement SPs 3.3.36, 3.3.37, 3.3.39 and 3.3.40.*	This is a plan drafting policy.

Objectives and Policies – Chapter 6 – Landscapes and Rural Character

Provision	Detail of Provision	Assessment
Policy 6.3.1.1	*Categorise the Rural Zoned landscapes in the District as:* *a. Outstanding Natural Feature (ONF);* *b. Outstanding Natural Landscape (ONL);* *c. Rural Character Landscape (RCL)*	The site is within the Rural Character Landscape category.
Managing Activities in the Rural Zone, the Gibbston Character Zone, the Rural Residential Zone and the Rural Lifestyle Zone		
Policy 6.3.2.1	*Avoid urban development and subdivision to urban densities in the rural zones.*	The proposal does not meet the definition of urban development. The proposal achieves this policy.
Policy 6.3.2.2	*Ensure that the location and direction of lights does not cause excessive glare and avoids unnecessary degradation of views of the night sky and of landscape character, including of the sense of remoteness where it is an important part of that character.*	The proposal does not include any lighting, however the relevant lighting and glare standards within the Rural Zone restrict the level of lighting associated with future dwellings within the building platforms. The proposal achieves this policy.
Policy 6.3.2.4	*Enable continuation of the contribution low-intensity pastoral farming in the Rural Zone and viticulture in the Gibbston Character Zone on large landholdings makes to the District's landscape character.*	The proposal will enable the continuation of some low-intensity farming activities; however the site is not a large landholding.
Policy 6.3.2.5	*Avoid indigenous vegetation clearance where it would significantly degrade the*	The proposal does not involve indigenous vegetation clearance.

	visual character and qualities of the District's distinctive landscapes.	The proposal is consistent with this policy.
Policy 6.3.2.6	*Encourage subdivision and development proposals to promote indigenous biodiversity protection and regeneration where the landscape values and nature conservation values would be maintained or enhanced, particularly where the subdivision or development constitutes a change in the intensity in the land use or the retirement of productive farm land.*	The proposal provides for areas of indigenous vegetation enhancement planting which will promote the indigenous biodiversity regeneration on the site. The proposal achieves this policy.
Policy 6.3.2.7	*Ensure that subdivision and development in the Outstanding Natural Landscapes and Rural Character Landscapes in proximity to an Outstanding Natural Feature or Outstanding Natural Landscape does not compromise the landscape values of that Outstanding Natural Feature or Outstanding Natural Landscape.*	The proposal is distant from any ONL or ONF and is part of a separate river terrace visual amenity landscape. The proposed subdivision does not compromise the landscape values of any ONL or ONF. The proposal achieves this policy.
Policy 6.3.2.8	*Encourage any landscaping to be ecologically viable and consistent with the established character of the area.*	The proposed landscaping has been designed by Patch Landscape Architectural and is therefore considered to be ecologically viable and consistent with the established landscape character. The proposal achieves this policy.
Managing Activities in Rural Character Landscapes		
Policy 6.3.4.1	*Recognise that subdivision and development is unsuitable in many locations in Rural Character Landscapes and successful applications will need to be, on balance, consistent with the objectives and policies of the Plan.*	The proposal is not unsuitable as it results in less than minor adverse effects on the rural character and is consistent with the various relevant objectives and policies of the Plan. The proposal achieves this policy.
Policy 6.3.4.2	*Encourage plan changes applying Rural Lifestyle and Rural Residential Zones to land as the appropriate planning mechanism to provide for any new rural lifestyle and rural residential developments in preference to ad-hoc subdivision and development and ensure these zones are located in areas where the landscape can accommodate the change.*	The proposal does not necessitate a plan change as it results in two additional lots which can be addressed appropriately by way of resource consent application, as anticipated by the Zone and subdivision provisions.
Policy 6.3.4.3	*Require that proposals for subdivision or development for rural living in the Rural Zone:* *a. take into account all subdivision and development that is in existence or is consented for all land within the relevant landscape character area as at 14 May 2021; and* *b. assess the potential for adverse cumulative effects on the landscape*	The proposal has taken into account the subdivision and development that is existing or consented and is consistent with the landscape character. The proposal does not result in adverse cumulative effects as discussed in Section 3.7 above. The proposal achieves this policy.

	character of that area and its wider landscape context.	
Policy 6.3.4.4	*Have particular regard to the potential adverse effects on landscape character and visual amenity values where further subdivision and development would constitute sprawl along roads.*	The proposal does not constitute sprawl along roads as there are two existing building platforms on the site and therefore a level of consented residential development. The proposal achieves this policy.
Policy 6.3.4.5	*Ensure incremental changes from subdivision and development do not degrade landscape character, or important views as a result of activities associated with mitigation of the visual effects of proposed development such as screen planting, mounding and earthworks.*	The proposal does not degrade the landscape quality or character as discussed above and in the Landscape Assessment (**Attachment E**). The proposal achieves this policy.
Policy 6.3.4.8	*Avoid adverse effects on visual amenity from subdivision, use and development that:* *a. is highly visible from public places and other places which are frequented by members of the public generally (except any trail as defined in this Plan); or* *b. forms the foreground for an Outstanding Natural Feature or Outstanding Natural Landscape when viewed from public roads.*	The proposal is not highly visible from public places, nor does it form the foreground of any ONL or ONF when viewed from public roads. The proposal achieves this policy.
Policy 6.3.4.10	*In the Upper Clutha Basin, subdivision and development maintains open landscape character where that is the existing character of the Rural Character Landscape.*	As discussed in the Landscape Assessment (**Attachment E**) the proposal will maintain the sense of openness due to the spaciousness between buildings and general density within the landscape. The proposal will not result in adverse effects on the wider open landscape character of the Upper Clutha Basin. The proposal achieves this policy.
Policy 6.3.4.11	*Encourage development to utilise shared accesses and infrastructure, and to locate within the parts of the site where it will minimise disruption to natural landforms and to rural character.*	The proposal makes use of existing accesses and will result in a new shared access to proposed Lots 3 and 4. The proposed boundaries have been located to minimise impact on the natural landform and rural character. The proposal achieves this policy.

Objectives and Policies – Chapter 21 – Rural Zone

Provision	Detail of Provision	Assessment
Objective 21.2.1*	***A range of land uses, including farming and established activities, are enabled while protecting, maintaining and enhancing landscape, ecosystem services, nature conservation and rural amenity values.***	The proposal will provide for rural living and various rural activities including light grazing, gardening, equestrian, etc. The rural amenity values of the site will be maintained. The proposal achieves this objective.

Provision	Detail of Provision	Assessment
Policy 21.2.1.1	*Enable farming activities while protecting, maintaining and enhancing the values of indigenous biodiversity, ecosystem services, recreational values, the landscape and surface of lakes and rivers and their margins*	Farming activities will be able to continue on the site. There are no significant indigenous biodiversity values on the site. The proposal provides for areas of indigenous vegetation enhancement planting which will promote indigenous biodiversity on the site. The landscape values will be maintained by the proposal. The proposal achieves this policy.
Policy 21.2.1.3	*Require buildings to be set back a minimum distance from internal boundaries and road boundaries in order to mitigate potential adverse effects on landscape character, visual amenity, outlook from neighbouring properties and to avoid adverse effects on established and anticipated activities.*	The proposed building platforms are set back the required distance from the internal and road boundaries. The proposal achieves this policy.
*Policy 21.2.1.5**	*Have regard to the location and direction of lights so they do not cause glare to other properties, roads, public places or views of the night sky.*	The proposal does not include buildings; however any future buildings will be required to comply with the lighting and glare standard in the Rural Zone.
Policy 21.2.1.7	*Have regard to the spiritual beliefs, cultural traditions and practices on Tangata whenua*	The site is not of cultural significance.
Policy 21.2.1.9	*Provide adequate firefighting water and fire service vehicle access to ensure an efficient and effective emergency response.*	Adequate water supply can be provided to each lot for firefighting purposes. Firefighting supply tanks will be provided at the time of building. The proposal can achieve this policy
Objective 21.2.2	***The life supporting capacity of soils is sustained.***	For the greater part of the site, the soil will remain undisturbed and therefore the life supporting capacity of the soil will be sustained. The proposal is consistent with this objective.
Policy 21.2.2.1	*Allow for the establishment of a range of activities that ultilise the soil resource in a sustainable manner.*	The proposal allows for rural living and light grazing activities as previously discussed. The proposal achieves this policy.
Policy 21.2.2.2	*Maintain the productive potential and soil resource of Rural Zone lands and encourage land management practices and activities that benefit soil and vegetation cover.*	The productive potential of the soil resource will be maintained. The proposal is consistent with this policy.
Policy 21.2.2.3	*Protect the soil resource by controlling activities including earthworks, indigenous vegetation clearance and prohibit the planting and establishment of identified wilding exotic trees with the potential to spread and naturalise.*	Earthworks are confined to the formation of the access ways. No indigenous vegetation will be cleared, nor will wilding exotic trees be planted. The proposal is consistent with this policy.
Objective 21.2.4*	***Situations where sensitive activities conflict with existing and anticipated***	Conflict between existing rural activities and the proposed rural living opportunities

Provision	Detail of Provision	Assessment
	activities are managed to minimize conflict between incompatible land uses	are not anticipated to arise. A level of residential activity is already enabled on the site, and it is expected that the surrounding farming and rural living activities are acknowledged by any future owner. The proposal is consistent with this objective.
Policy 21.2.4.1	*New activities must recognise that permitted and established activities in the Rural Zone may result in effects such as odour, noise, dust and traffic generation that are reasonably expected to occur and will be noticeable to residents and visitor in rural areas.*	As discussed above, this should be acknowledged by any future owner. The site is not surrounded by highly productive or intensive farming activities; therefore effects are not likely to arise on future residents. There are sufficient setbacks between external boundaries and the new residential building platforms to assist in avoiding or mitigating any potential impacts. The proposal is consistent with this policy.
*Policy 21.2.4.2**	*Control the location and type of non-farming activities in the Rural Zone, so as to minimize conflict between permitted and established activities and those that may not be compatible with such activities.*	The proposal involves rural living activities within a rural environment. Any potential conflicts between activities are unlikely to arise. The proposal is consistent with this policy.
Objective 21.2.9*	***Provision for diversification of farming and other rural activities that protect landscape and natural resource values and maintains the character of rural landscapes.***	The proposal includes rural living where light grazing of stock can continue and other rural activities can be undertaken. As discussed above landscape values and rural amenity values will be maintained. The proposal achieves this policy.
Policy 21.2.9.1	*Encourage revenue producing activities that can support the long-term sustainability of the rural areas of the district and that maintain or enhance landscape values and rural amenity.*	The existing farming activity on this site is not necessarily a revenue producing activity that supports the long-term sustainability of the rural areas of the district. However the proposal will maintain the landscape values and rural amenity as previously discussed. The proposal is consistent with this policy.
*Policy 21.2.9.2**	*Ensure that revenue producing activities utilise natural and physical resources (including existing buildings) in a way that maintains and enhances landscape quality, character, rural amenity, and natural resources.*	The proposal utilises rural land for rural living opportunities and ongoing farming and other rural activities in a way that maintains landscape quality, character and rural amenity, as discussed above. The proposal is consistent with this policy.

Objectives and Policies – Chapter 27 – Subdivision and Development

Provision	Detail of Provision	Assessment
Objective 27.2.1	***Subdivision that will enable quality environments to ensure the District is a desirable place to live, visit, work and play.***	The proposal will create a high amenity rural subdivision that will be a desirable place to live, play and work. The proposal achieves this objective.
Policy 27.2.1.1	*Require subdivision infrastructure to be constructed and designed so that it is fit*	The proposed subdivision infrastructure has been designed so that it is fit for purpose. Wastewater will be designed at

	for purpose, while recognizing opportunities for innovative design.	the time of building and may include opportunities for innovative design. The proposal is consistent with this policy.
Policy 27.2.1.3	*Require that allotments are a suitable size and shape, and are able to be serviced and developed for the anticipated land use under the applicable zone provisions.*	The Services Report (**Attachment H**) provides confirmation that the proposed lots can be serviced accordingly. The proposal achieves this policy.
Policy 27.2.1.5	*Recognise that there is an expectation by future landowners that the key effects of and resource required by anticipated land uses will have been resolved through the subdivision approval process.*	This policy will be achieved through the resource consent process and the subdivision 224c process.
Objective 27.2.2	***Subdivision design achieves benefits for the subdivider, future residents and the community.***	The subdivision design allows the applicants to sell some of their land, whilst maintain a portion of it to potentially build on in the future while retaining the potential for rural activities associated with rural living. The design also provides a high amenity rural subdivision for future residential to enjoy. The proposal achieves this objective.
Policy 27.2.2.6	*Encourage innovative subdivision design that responds to the local context, climate, landforms and opportunities for views or shelter.*	The subdivision design rural subdivision will allow rural living opportunities for future owners without having to own a large rural property or farm. The subdivision design provides for a significant level of amenity and takes advantage of sunlight access. The proposal is consistent with this policy.
Objective 27.2.4	***Natural features, indigenous biodiversity and heritage values are identified, incorporated and enhanced within subdivision design.***	The only natural feature is the terrace that runs through the site. This has been incorporated into the design and will be subject to indigenous vegetation planting to enhance the indigenous biodiversity on the site. The proposal is consistent with this policy.
Policy 27.2.4.1	*Incorporate existing and planned waterways and vegetation into the design of subdivision, transport corridors and open spaces where that will maintain or enhance biodiversity, riparian and amenity values.*	The proposal involves the enhancement of an existing drain / overland flow path, including riparian planting to enhance biodiversity. The proposal achieves this policy.
Policy 27.2.4.4	*Encourage initiatives to protect and enhance landscape, vegetation and indigenous biodiversity by having regard to:* *a. Whether any landscape or vegetation are of a sufficient value that they should be retained and the proposed means of protection;* *b. Where a reserve is to be set aside to provide protection to vegetation and landscape features, whether the value of the land so reserved should be off-set against the development*	The existing vegetation will be maintained and will be protected through the masterplan. The proposal achieves this policy.

	contribution to be paid for open space and recreation purposes.	
Objective 27.2.5	*Infrastructure and services are provided to new subdivisions and developments.*	As discussed in the Services Report (**Attachment H**) he proposal will be serviced accordingly. The proposal achieves this objective.
Transport, Access and Roads		
Policy 27.2.5.1	*Integrate subdivision roading with the existing road networks in a safe and efficient manner that reflects expected traffic levels and the provision for safe and convenient walking and cycling.* *For the purposes of this policy, reference to 'expected traffic levels' refers to those traffic levels anticipated as a result of the zoning of the area in the District Plan.*	The subdivision is integrated with the existing road network of Te Awa Road. Given the proposal is for two additional lots, the levels of traffic generated from the proposal do not exceed the E3 standard of Te Awa Road which can accommodate up to 150 users. The proposal achieves this policy.
Policy 27.2.5.2	*Ensure safe and efficient pedestrian, cycle and vehicular access is provided to all lots created by subdivision and to all developments.*	Each lot will be serviced by individual vehicle accesses, these are to be constructed in accordance with the QLDC Land Development and Subdivision Code of Practice and therefore will provide safe and efficient access. The proposal achieves this policy.
Policy 27.2.5.4	*Ensure the physical and visual effects of subdivision and roading are minimized by utilising existing topographical features.*	Two of the access ways are existing and the third is to be constructed in a location than utilising existing topography and will not result in any visual effects. The proposal is consistent with this policy.
Policy 27.2.5.5	*Ensure appropriate design and amenity associated with roading, vehicle access ways, trails and trail connections, walkways and cycle ways are provided for within subdivisions by having regard to:* *a) the location, alignment, gradients and pattern of roading, vehicle parking, service lanes, access to lots, trails, walkways and cycle ways, and their safety and efficiency;* *b) the number, location, provision and gradients of access ways and crossings from roads to lots for vehicles, cycles and pedestrians, and their safety and efficiency;* *c) the standard of construction and formation of roads, private access ways, vehicle crossings, service lanes, walkways, cycle ways and trails;* *d) the provision and vesting of corner splays or rounding at road intersections;* *e) the provision for and standard of street lighting, having particular regard to siting and location, the provision for public safety and the*	The vehicle crossings and access ways have been designed in accordance with the QLDC Land Development and Subdivision Code of Practice. The proposal is consistent with this process.

	avoidance of upward light spill adversely affecting views of the night sky; *f) the provision of appropriate tree planting within roads;* *g) any requirements for widening, formation or upgrading of existing roads;* *h) any provisions relating to access for future subdivision on adjoining land;* *i) the provision and location of public transport routes and bus shelters.*	
Water supply, stormwater, wastewater		
Policy 27.2.5.6	*All new lots shall be provided with connection to a reticulated water supply, stormwater disposal and/or sewage treatments and disposal system, where such systems are available or should be provided for.*	As discussed above, the proposed lots are self-sufficient and reticulated services are not available.
Policy 27.2.5.7	*Ensure water supplies are of a sufficient capacity, including firefighting requirements, and of a potable standard, for the anticipated land uses on each lot of development.*	Sufficient water can be supplied to each lot via the Hawea Water Service Company as discussed in the Services Report (**Attachment H**). Domestic treatment systems will be installed at the time of building. Each lot will also be required to install their own water tanks at the time of building to provide sufficient static water for firefighting. The proposal achieves this policy.
Policy 27.2.5.9	*Encourage initiatives to reduce water demand and water use, such as roof rain water capture and use and greywater recycling.*	It is likely roof rainwater capture systems will be installed at the time of building on the lots, however sufficient potable water can be supplied. The proposal is consistent with this policy.
Policy 27.2.5.10	*Ensure appropriate water supply, design and installation by having regard to:* *a) the availability, quantity, quality and security of the supply of water to the lots being created;* *b) water supplies for firefighting purposes;* *c) the standard of water supply installed in subdivisions, and the adequacy of existing supply system outside the subdivision;* *d) any initiatives proposed to reduce water demand and water use.*	As previously discussed, sufficient water supply can be achieved for all lots. Each lot will install a domestic treatment plant. Tanks will be required to be installed to provide for firefighting water supply. The proposal achieves this policy.
Policy 27.2.5.11	*Ensure appropriate storm water design and management by having regard to:* *a) any viable alternative designs for stormwater management that minimise run-off and recognises stormwater as a resource through re-*	Low impact design features are proposed, including onsite soakage and grass swales. More detail regarding the stormwater management is contained within the Services Report (**Attachment H**). The proposal is consistent with this policy.

	use in open space and landscape areas; *b) the capacity of existing and proposed stormwater systems;* *c) the method, design and construction of the stormwater collection, reticulation and disposal systems, including connections to public reticulated stormwater systems;* *d) the location, scale and construction of stormwater infrastructure;* *e) the effectiveness of any methods proposed for the collection, reticulation and disposal of stormwater run- off, including opportunities to maintain and enhance water quality through the control of water-borne contaminants, litter and sediments, and the control of peak flow.*	
Policy 27.2.5.13	*Treat and dispose of sewage in a manner that:* *a) maintains public health;* *b) avoids adverse effects on the environment in the first instance; and* *c) where adverse effects on the environment cannot be reasonably avoided, mitigates those effects to the extent practicable.*	The Geotechnical Report (**Attachment I**) confirms the proposed lots are suitable for disposal of wastewater to ground. Each lot will be required to install a wastewater treatment and disposal system at the time of building. These systems will be designed to a standard that maintains public health and avoids potential adverse effects on the environment. The proposal is consistent with this policy.
Policy 27.2.5.14	*Ensure appropriate sewage treatment and disposal by having regard to:* *a) the method of sewage treatment and disposal;* *b) the capacity of, and impacts on, the existing reticulated sewage treatment and disposal system;* *c) the location, capacity, construction and environmental effects of the proposed sewage treatment and disposal system.*	The design and location of all wastewater treatment systems will be assessed at the time they are applied for. The proposal is consistent with this policy.
Policy 27.2.5.15	*Ensure that the design and provision of any necessary infrastructure at the time of subdivision takes into account the requirements of future development on land in the vicinity.*	The proposed subdivision is self-contained and therefore it is not appropriate to take into account the requirements of future development in the near vicinity. Any future development will require resource consent; therefore infrastructure will be considered at that time.
Policy 27.2.5.16	*Ensure adequate provision is made for the supply and installation of reticulated energy, including street lighting, and communication facilities for the anticipated land uses while:* *a) providing flexibility to cater for advances in telecommunication and*	As discussed, and contained within the Services Report (**Attachment H**) Chorus and Aurora Energy have confirmed that electricity and telecommunications can be provided to the proposed subdivision. These services will be installed underground to avoid adverse visual

	computer media technology, particularly in remote locations; *b) ensure the method of reticulation is appropriate for the visual amenity and landscape values of the area by generally requiring services are underground, and in the context of rural environments where this may not be practicable, infrastructure is sited in a manner that minimises visual effects on the receiving environment;* *c) generally require connections to electricity supply and telecommunications systems to the boundary of the net area of the lot, other than lots for access, roads, utilities and reserves.*	effects and provided to the boundary of each lot. The proposal is consistent with this policy.
Policy 27.2.5.17	*Ensure that services, shared access and public access is identified and managed by the appropriate easement provisions.*	The shared access to proposed Lots 3 and 4 requires an easement as detailed in the Scheme Plan (**Attachment C**). The proposal achieves this policy.
Policy 27.2.5.18	*Ensure that easements are of an appropriate size, location and length for the intended use of both the land and easement.*	This policy is acknowledged.

4.2 Conclusion – Objectives and Policies

The proposal is consistent with and achieves the relevant objectives and policies from the Proposed District Plans.

5. Regional Policy Statement

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

The Partially Operative RPS 2019 (**PORPS2019**) was declared partially operative on 15 March 2021, at which time the RPS 1998 was also revoked. Following a 2019 review of the region's freshwater management framework and the introduction in 2020 of new national regulations, the PORPS2019 has now been reviewed, and the Proposed Otago Regional Policy Statement 2021 (**PRPS2021**) was notified on 26 June 2021. Hearings are scheduled for September 2022. The PRPS2021 identifies eleven significant resource management issues for the region and explains how national direction will be applied in the Otago context. The eleven issues can be broken down into natural asset-based issues, place-based issues, and those issues relating to economic and domestic pressures, cumulative impacts and resilience.

The proposed development has been considered against the objectives and policies of the PORPS2019 and the PRPS2021. The development is generally consistent with the broad policy direction of both Regional Policy Statements, particularly in relation to the life supporting capacity of soils, maintaining highly valued landscapes, and promoting the productive capacity and life supporting capacity of land resource.

The proposed development is consistent with the broad policy direction of the RPS, PORPS19 and PRPS2021.

6. Part 2 of the Resource Management Act 1991

The purpose of the Act is to "*promote the sustainable management of natural and physical resources".* Sustainable management is:

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

The proposal is consistent with this purpose. The proposal allows for rural living opportunities within a smaller block of rural land. The proposal includes re-introducing native species to the site to enhance the indigenous biodiversity of the site. The proposal will not have any adverse landscape character effects and will not be seen as out of character with the surrounding rural living environment.

In relation to Section 6 matters, the land is not within an Outstanding Natural Landscape or Feature; it is not near or adjacent to any waterbody; it does not contain any significant indigenous vegetation or significant habitats of indigenous fauna; it has no cultural values of any significance and no historic heritage values. The existing drain / overland flow path may present a flood risk in a significant rainstorm event and is therefore proposed to be enhanced through the proposal to ensure there are no significant risks from natural hazards.

Regard must be had to the following relevant Section 7 matters:

> ***(b) the efficient use and development of natural and physical resources:***
>
> ***(c) the maintenance and enhancement of amenity values:***
>
> ***(f) maintenance and enhancement of the quality of the environment:***
>
> ***(g) any finite characteristics of natural and physical resources:***

The proposal achieves the relevant matters as the subdivision is an efficient use and development in that it provides for the demand for rural living opportunities where the landscape can absorb such development with minimal actual or potential adverse effects. The amenity values of the areas are to be maintained as the development will not be highly visible from any public place. The reintroduction of indigenous vegetation on site will enhance the quality of the environment. Overall, the proposal aligns with Section 7 of the Act.

The new lots will provide for additional supply of rural lifestyle type lots for people seeking to live in the rural area. The future owner's social and economic wellbeing will be provided for, by creating a desirable location to live and thereby enhancing their quality of life. Overall, there will be positive social and economic effects as a result of the proposal.

As such, the proposal will align with Part 2 of the Act.

7. Where the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment which are likely to arise from such use:

Not applicable.

8. Where the activity includes the discharge of any contaminant, a description of …

Not applicable.

9. Where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or method for undertaking the activity:

The proposal will not result in any significant adverse effects on the environment. No alternative locations or methods have been considered further.

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

Earthworks will be undertaken in accordance with an Environmental Management Plan as required by conditions of consent.

The location and design of the subdivision, including the landscaping and building design controls proposed, are part of the overall mitigation measures adopted to prevent or reduce any actual or potential effects on the environment, as discussed in this application and in the supporting Landscape Assessment (**Attachment E**).

11. An identification of those person interested in or affected by the proposal, the consultation undertaken, and any response to the views of those consulted.

Affected Party Approval (APA) has been provided by the following property owners:

- John & Madelyn Hood – 2 Te Awa Road
- Jana Becker & Tony Dodds – 18 Te Awa Road
- Thomas & Rosanna Bieri – 20 Te Awa Road
- Grant & Jacqueline Barron – 96 Te Awa Road
- Kevin & Wendy Capell – 98 Te Awa Road
- Tony Berben & Diane Lawson – 161 Te Awa Road
- Chris Leith – 1023 Lake Hawea/Albert Town Road
- John & Colleen Leith – 1023 Lake Hawea/Albert Town Road
- Warren Hewson – 67 Crosshill Road
- Paul & Glynys Steegh – Lake Hawea/Albert Town Road (Lot 1 DP 315808)

Copies of these documents are contained at **Attachment K**.

The location of the above properties is identified in ***Figure 4*** below with a yellow star.

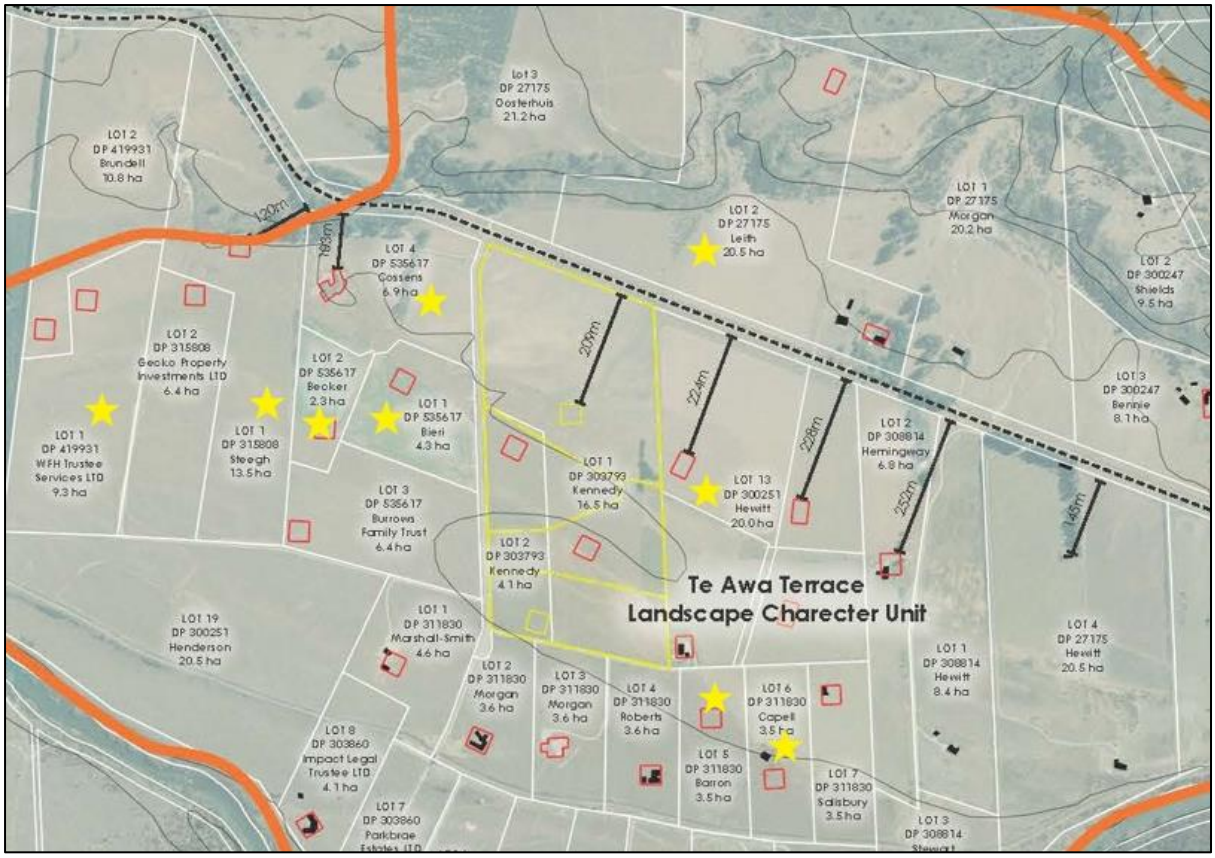


***Figure 4**. Location of APA*

Adverse effects on any other particular person will be less than minor. As such no other APA's have been sought or obtained.

12. Where the scale or significance of the activity's effect are such that monitoring is required, a description of how, once the proposal is approved, effects will be monitored and by whom.

No monitoring is required other than undertaken as part of monitoring of resource consent by the Council.

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **15146**

Land Registration District **Otago**

Date Issued 10 April 2002

Prior References
1930

Estate Fee Simple

Area 16.5428 hectares more or less

Legal Description Lot 1 Deposited Plan 303793

Registered Owners

Bernard William Kennedy, Grant Arthur Ruddenklau and Zita Mary Cleugh

---

Interests

Subject to Section 8 Mining Act 1971

Subject to Section 5 Coal Mines Act 1979

5016824.1 Gazette Notice declaring a (State Highway No.6) adjoining within land to be a Limited Access Road - 21.12.2000 at 9:21 am

5033930.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 9.4.2001 at 9:00 am

5046004.3 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 30.5.2001 at 12:13 pm

Appurtenant hereto is a right to convey electricity and water and store water specified in Easement Certificate 5066243.1 - 1.8.2001 at 3:45 pm

Appurtenant hereto is a Right to Convey Water and a Right to Operate and Maintain Bore Pump and a Right to Convey Electricity created by Deed of Easement 5165434.1 - 4.3.2002 at 3:49 pm

5188548.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 10.4.2002 at 12:17 pm

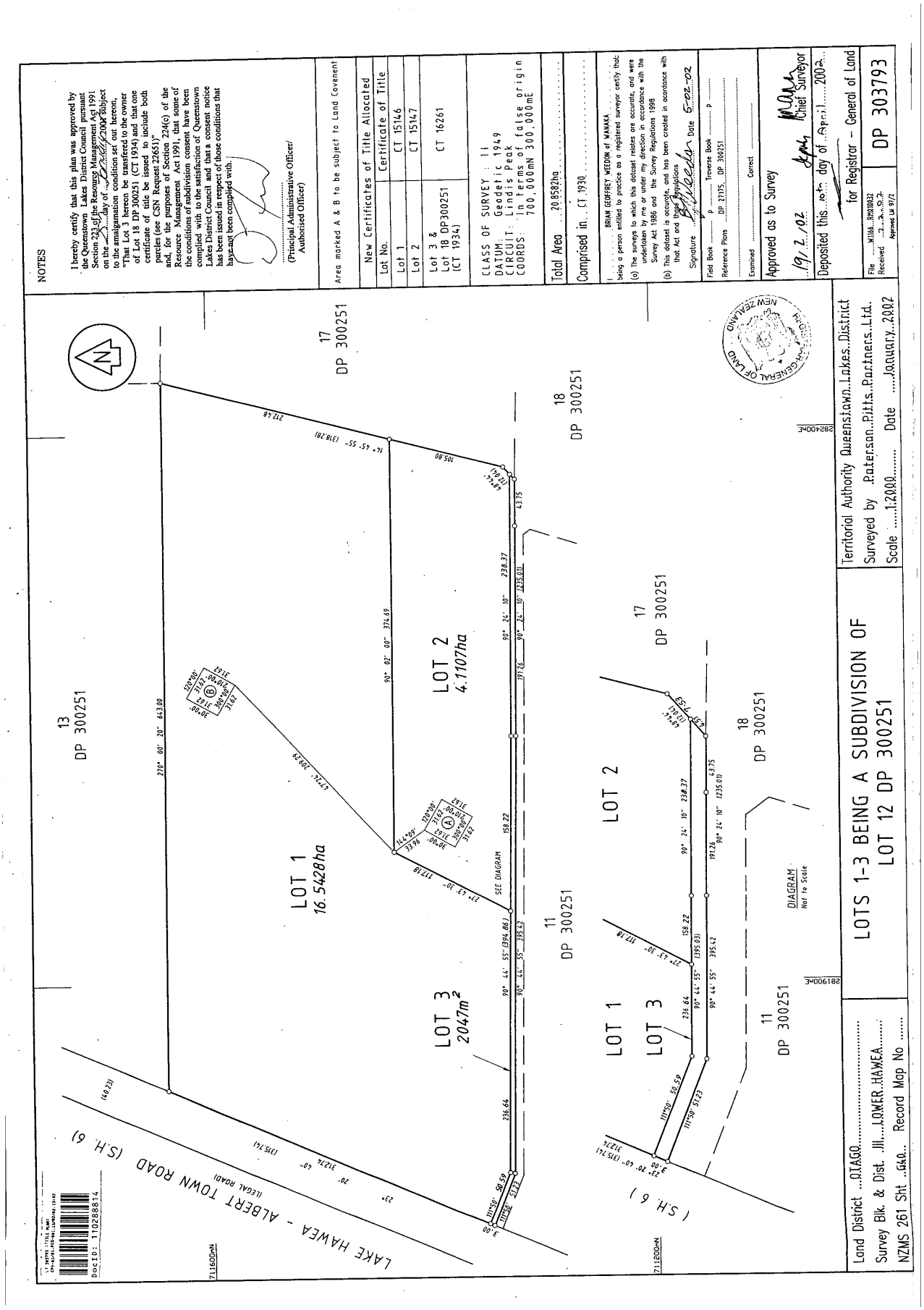
5360557.13 Partial Surrender of the right to convey water specified in Easement Certificate 5066243.1 - 1.10.2002 at 3:29 pm

Appurtenant hereto is a right of way, right to convey water and telelcommunications, right to drain foul sewer and stormwater and a right to convey electricity created by Transfer 5360557.17 - 1.10.2002 at 3:29 pm

The easements created by Transfer 5360557.17 are subject to Section 243 (a) Resource Management Act 1991

5360557.34 Encumbrance to Hawea Water Service Company Limited - 1.10.2002 at 3:29 pm

8427139.1 Variation of Consent Notice 5188548.2 pursuant to Section 221(5) Resource Management Act 1991 - 2.3.2010 at 1:32 pm



RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **15147**

Land Registration District **Otago**

Date Issued 10 April 2002

Prior References
1930

Estate Fee Simple

Area 4.1107 hectares more or less

Legal Description Lot 2 Deposited Plan 303793

Registered Owners

Bernard William Kennedy, Grant Arthur Ruddenklau and Zita Mary Cleugh

---

Interests

Subject to Section 8 Mining Act 1971

Subject to Section 5 Coal Mines Act 1979

5016824.1 Gazette Notice declaring a (State Highway No.6) adjoining within land to be a Limited Access Road - 21.12.2000 at 9:21 am

5033930.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 9.4.2001 at 9:00 am

5046004.3 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 30.5.2001 at 12:13 pm

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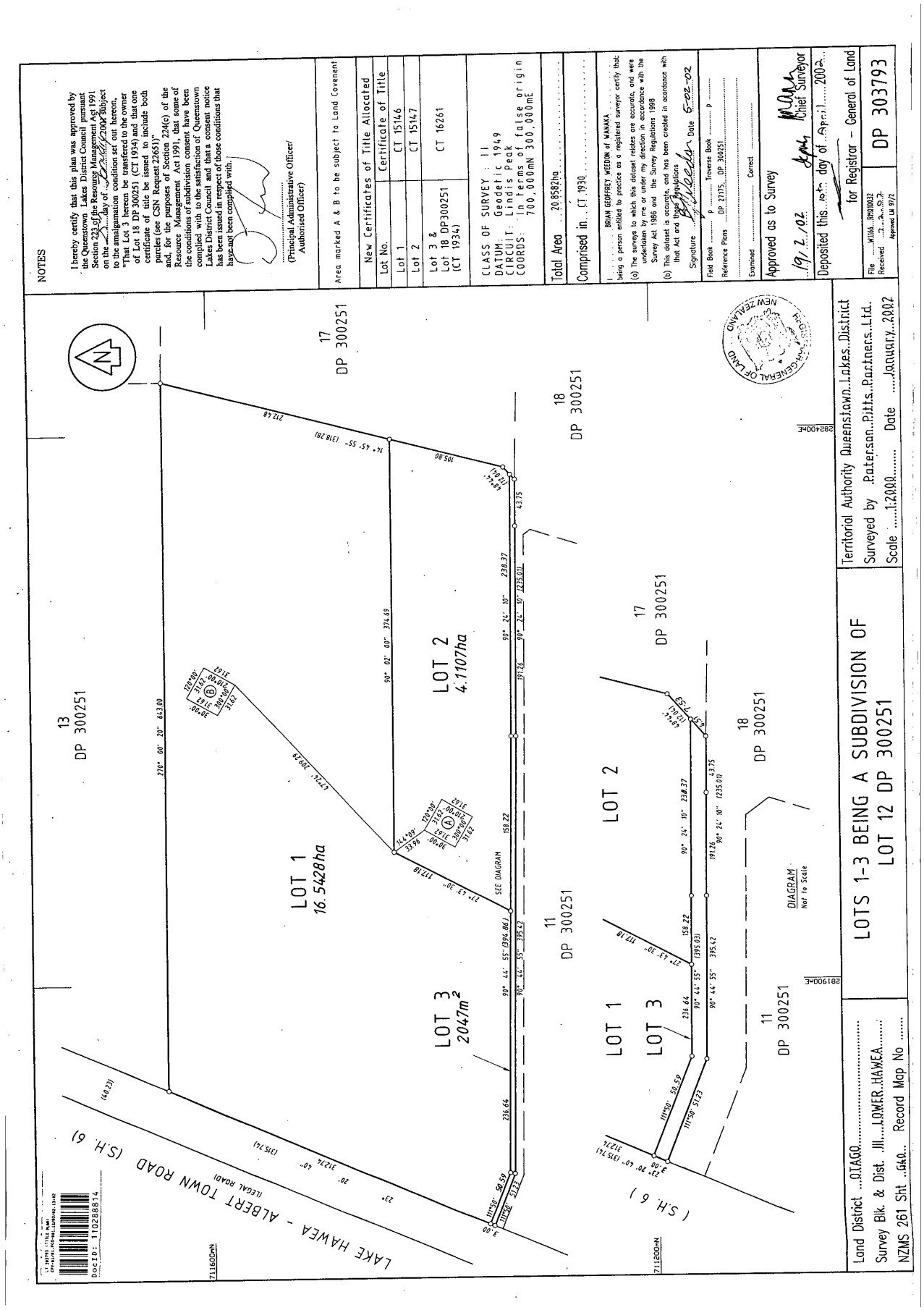
5188548.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 10.4.2002 at 12:17 pm

5360557.13 Partial Surrender of the right to convey water specified in Easement Certificate 5066243.1 - 1.10.2002 at 3:29 pm

Appurtenant hereto is a right of way, right to convey water and telecommunications, right to drain foul sewer and stormwater and a right to convey electricity created by Transfer 5360557.17 - 1.10.2002 at 3:29 pm

The easements created by Transfer 5360557.17 are subject to Section 243 (a) Resource Management Act 1991

5360557.33 Encumbrance to Hawea Water Service Company Limited - 1.10.2002 at 3:29 pm



IN THE MATTER of Lots 10-13 and Lots 16-20 DP 300251

AND

IN THE MATTER of subdivision Consent RM97308

Condition

At the time that a dwelling is erected on Lots 10, 11, 12, 13, 16, 17, 18, 19 and 20 DP 300251 Council will require evidence that each lot is supplied with 1000 litres per day of potable water that complies with the New Zealand Drinking Water Standards. Details shall be provided of any treatment required to achieve the required standard.

Dated this 5TH day of FEBRUARY 2001

.....

Authorised Officer

IN THE MATTER of Lots 10 - 13 and Lots 16 - 20 DP 300251

AND

IN THE MATTER of subdivision Consent RM97308

CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

PATERSON PITTS PARTNERS LTD
REGISTERED SURVEYORS
WANAKA

View Instrument Details

Instrument No	8427139.1
Status	Registered
Date & Time Lodged	02 March 2010 13:32
Lodged By	Wilson, Catherine Virginia
Instrument Type	Variation of Consent Notice Condition under s221(5) Resource Management Act 1991

Affected Computer Registers	Land District
15146	Otago

Annexure Schedule: Contains 2 Pages.

Signature

Signed by Catherine Virginia Wilson as Territorial Authority Representative on 02/03/2010 01:31 PM

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

IN THE MATTER of Section 221(3) of the Resource Management Act 1991

AND

IN THE MATTER a Variation of Consent Notice 5188548.2

VARIATION OF CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

IN THE MATTER of Section 221(3) of the Resource Management Act 1991

AND

IN THE MATTER a Variation of Consent Notice 5188548.2

BACKGROUND

a) Consent Notice 5188548.2 is registered against the Certificates of Title to land contained in Lots 1-3, DP 303793

b) The Consent Notice was imposed as a condition of consent of RM010032 granted by the Queenstown Lakes District Council.

c) A latter decision RM090557 has resulted in the need to vary condition a) and f)(xi) of consent notice 5188548.2 as it relates to Lot 1, DP 303793 (CT 15146)

OPERATIVE PART

1) Conditions a) and f)(xi) specified in Consent Notice 5188548.2 registered on Lot 1, DP 303793 (CT 15146) shall be amended so that conditions a) and f)(xi) shall now read as follows:

"a) "That any future dwelling or accessory building to be erected on Lot 1 DP 303793 shall be located within the building platform annotated and accurately dimensioned on the Covenant Plan, DP 428361"

"f)(xi) "Maximum height of all buildings shall be 7m above the ground level existing as at January 2001. The definition of height shall be as detailed in the Proposed District Plan July 1998, with the exception of a maximum building height of 4.5m approved under resource consent RM090557 in relation to lot 1 Deposited Plan 303793 held in Computer Freehold Register 15146."

2) All other conditions of consent notice 5188548.2 shall continue to apply.

Dated this 17th day of February 2010

.....

Authorised Officer

IN THE MATTER of Lots 1 to 3 Being a subdivision of Lot 12 DP 300251

AND

IN THE MATTER of subdivision Consent RM010032

CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

PATERSON PITTS PARTNERS LTD
REGISTERED SURVEYORS
WANAKA

IN THE MATTER of Lots 1 to 3 Being a subdivision of Lot 12 DP 300251

AND

IN THE MATTER of subdivision Consent RM010032

Conditions

a) That any future dwelling or accessory building to be erected on each lots shall be located within the building platform annotated and accurately dimensioned on the title plan.

b) At the time a dwelling is erected on Lots 1 and 2, 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. The water tank shall not be visible from prominent parts of the site. A fire fighting connection is to be located within 90 metres of any proposed building on the site. The connection shall have hardstand area adjacent to it to allow a fire service appliance to park on it. Access shall be maintained to the hardstand area. Where individual fire fighting storage is not provided, than a communal system shall be installed to comply with the current version of the code of practice for fire fighting water supplies.

c) At the time that a dwelling is proposed on Lots 1 and 2, the owner for the time being shall submit to the Principal, Resource Management Civic Corporation Limited details of any water treatment system to be installed to ensure that the domestic water supply complies with the Drinking Water Standards New Zealand 1995.

d) The construction of the access from Lake Hawea – Albert town Road be in terms of Appendix 7 Diagram 4 of the Proposed District Plan within 2 years from the date of this decision. The access is to be sealed to the Lake Hawea – Albert Town Road boundary and is to comply with the requirements of Transit New Zealand.

e) At the time that a dwelling is proposed on Lots 1 and 2, the owner for the time being shall engage a suitably qualified engineer to design an effluent disposal system that will provide sufficient treatment / renovation to effluent from on-site disposal, prior to discharge to land. The effluent disposal and treatment system is to be designed in accordance with AS/NZS 1547:2000. To maintain high effluent quality such a system would require the following:

- Specific design by a suitably qualified professional engineer

- A requirement that each lot must include systems that achieve the levels of treatment determined by the specific design.
- Regular maintenance in accordance with the recommendations of the system designer and a commitment by the owner of each system to undertake this maintenance.
- Intermittent effluent quality checks to ensure compliance with the system designer's specification.

Disposal areas shall be located such that maximum separation (in all instances greater than 50 metres) is obtained from any watercourse and the water supply bore.

(f) That the design and external appearance of any future dwelling on the building platforms located on Lots 1 and 2 shall be in accordance with the following building and design controls offered by the applicant:

(i) Wall claddings shall be in timber, plaster, schist or stone generic to the area.

(ii) Wall colours shall be natural or in the range of browns, tussock, greens or greys.

(iii) All building construction shall be completed within 12 months of the building being used for its intended purpose.

(iv) Roof pitch shall be between 25 to 45 degrees. Flat roofs are permitted as connections between structures and shall not exceed 20 percent of total roof area.

(ix) Roof cladding shall be in steel of natural products such as timber shingles.

(x) Roof colours shall be of low reflectivity and natural, Corrugated iron shall be in one of the following colours: Lignite, Ironsand, Kauri, Grey Friars, New Denim Blue (Colorsteel Colours).

(xi) Maximum height of all buildings shall be 7m above the ground level existing as at January 2001. The definition of height shall be as detailed in the Proposed District Plan July 1998.

Dated this 24th day of January 2002

.....

Authorised Officer

Vegetation Controls:

- On Lots 2, 3 and 4, any boundary planting outside the approved curtilage area shall be maintained to a height of no more than 5m.
- Any boundary planting on Lots 2, 3 and 4 shall exclude poplar or eucalyptus species.
- Any planting outside the approved curtilage area shall grow to a mature height of not greater than 6m.

Key	Botanical name	Common name	Spacing	Percentage
Riparian enhancement planting	*Austroderia richardii*	Toetoe	1.5m	20%
	Carex secta	Makura sedge	1.5m	20%
	Cordyline australis	Cabbage tree	2m	10%
	Juncus edgariae	Wiwi rush	1m	25%
	Phormium tenax	Flax	2m	25%
Tree planting	*Fuscospora cliffortioides*	Mountain beech	As shown	-
Tree planting	*Eucalyptus sp.*	Eucalyptus	2m	-

Key	Botanical name	Common name	Spacing	Percentage
Context planting	*Oleria lineata*	Small-leaved tree daisy	1.5m	15%
	Coprosma propinqua	Mikimiki	1m	15%
	Coprosma robusta	Karamu	1m	15%
	Hoheria populnea	Native Lacebark	1.5m	15%
Escarpment enhancement planting	*Pittosporum tenuifolium*	Black matipo	1m	15%
	Phormium tenax	Flax	2m	15%
	Pseudopanax crassifolius	Lancewood	.8m	5%
	Sophora microphylla	Kowhai	2m	5%

patch
landscape ■ architecture ■ urban

Reference : PA19399 IS07

Scale: 1:1,250@A1 - 1:2,500@A3

0 2.5 5.0 12.5m
SCALE = 1:250 AT A1

Kennedy - Hawea
Landscape Plan
9 June 2022

Landscape Assessment Report

Kennedy – Te Awa Road, Hawea

19 May 2022

Document prepared by	Stephen Skelton
Document reviewed by	Felipe Braga
Status	Draft
Issued	19 May 2022

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1. INTRODUCTION

1.1. This report provides an assessment the actual and potential landscape character and visual amenity effects of a proposal to undertake a boundary adjustment, create two new lots, establish, two new building platforms within the new lots, associated landscaping and access. The site is a combined total area of 20.6598 and is located in the northwestern portion of the Upper Clutha Basin, near Hawea town.

1.2. The report includes the following:

- A description of the landscape,
- A description of the proposal,
- A landscape assessment,
- Conclusion,
- Recommendations,
- Attachments.

2. DESCRIPTION OF THE LANDSCAPE

2.1. The 'site' is the amalgamation of two lots; the larger lot being legally described as Lot 1 DP 303793 which is 16.5428ha in area, and a smaller lot being legally described as Lot 2 DP 30379 which is 4.1107ha in area. The combined site occupies 20.66ha of river terraces river terraces west of the Hawea River and east of the toe of Mount Maude (1315masl) (**Attachment A**). A small terrace escapement runs south/north across the site. SH6 adjoins the site's western boundary. Te Awa Road adjoins the site's southern boundary and a private road adjoins the site to the east.

2.2. The site is part of a rural living landscape where dwellings are set back from the highway and set within pockets of vegetation, landform and wider areas of open space. This landscape is mainly used for rural living activities and dominated by the slopes of Mount Maude to the west and views across the landscape to the distant mountains to the north and east.

2.3. I have undertaken a detailed assessment of what I consider to be the Te Awa Terrace Landscape Character Unit (LCU), in which the site exists (**Attachment B**). This character area is considered to be the land east of the Mount Maude ONL, south of the Lake Hawea dam,

west of the Hawea River and north of the Maungawera Plateau. I consider these character boundaries logically and legibly delineate the LCU.

2.4. The existing rural living / subdivision pattern within the LCU is one dwelling unit per 3.5ha – 4.5ha. However, there are some larger holdings of 20ha and one smaller holding .5 ha.

2.5. The site itself in is almost rectangular in shape. The western, roadside boundary is planted in maturing eucalyptus trees and other sporadic rural character trees. These existing mature eucalyptus trees extend approximately 60 meters along Te Awa Road near the site's southwestern boundary. A water course flowing from Mount Maude enters the site near its northwestern corner and crosses the upper terrace in a southeasterly direction. The southern portion of this watercourse and the area around it contains some existing indigenous vegetation, mostly matagouri. The upper terrace, which is the western half of the site, is predominantly clad in pasture, or used for crops. Near the central northern portion of the site is an existing patch of conifer trees. These trees cut across the terrace riser and exist on both terrace levels. Near the existing conifer trees is a farm shed on the lower terrace. The terrace riser itself also contains some indigenous vegetation, mostly matagouri.

2.6. The lower eastern portion of the site is again mostly clad in pasture, or used for crops. There are two existing approved building platforms; one near the southern portion of the site below the terrace riser and the other located near the central eastern part of the site. These existing building platforms will form a part of the LCU's approved rural living character.

3. DESCRIPTION OF THE PROPOSAL

3.1. The proposal seeks to retain the two existing building platforms in their current location and adjust the boundary between them. Two new lots are proposed to be created, each with a proposed building platform.

3.2. Lot 1 will take in all of the upper terrace, being 9.86 hectares in area. A building platform will be located 209 meters in distance from SH6. The building platform will be surrounded by a residential curtilage area. The proposed building height restriction of a future building within the platform will be 4.5m from existing ground level. It is proposed to enhance the existing watercourse which crosses the upper portion of the site with densely planted riparian

enhancement vegetation. This enhancement planting will also contain groups of mountain beech and cabbage trees. Mountain beech trees will also be planted to the west south and southeast of the proposed building platform on Lot 1. Other indigenous context planting will be planted to the south of the proposed building platform. The building platform will be accessed via an existing access point off Te Awa Road and a driveway will weave its way through the proposed planting to provide access to the building platform.

3.3. Proposed Lot 2 will take in most of the terrace riser and the southwestern portion of the lower terrace containing an area of 3.26 hectares of land adjacent to Te Awa Rd. Proposed Lot 2 will hold the existing building platform, which has a consented maximum building height of 7m from existing ground level. A residential curtilage area is proposed around the approved building platform. A significant area of escarpment enhancement planting is proposed on the terrace riser to provide for natural character enhancement and to support biodiversity values. Other indigenous context planting, including mountain beech trees are proposed to the south of the existing building platform. The building platform will be accessed via the existing access point off Te Awa Road and a gravel driveway will bend through proposed vegetation to access the building platform.

3.4. Proposed Lot 3 will be 4ha in area and will take in the lower central portion of the terrace and will include an existing building platform, existing shed, and the northern extent of the terrace riser. This existing building platform will be accessed off a new access point off Te Awa Rd, extend to the north across the site and then bend through proposed planting to access the approved building platform. The building platforms approved maximum height is 4.5 meters from existing ground. It is proposed to contain residential effects within a domestic curtilage area around the approved building platform. Indigenous context planting including mountain beech trees are proposed near the access point off Te Awa Road and to the east, south and west of the existing building platform. Similar to Lot 2, escarpment enhancement planting will be continued on the terrace riser which will be included as part of Lot 3.

3.5. Proposed Lot 4 will be 3.8 hectares in area and will occupy the eastern portion of the site. The proposed building platform on Lot 4 will share and access off Te Awa Road with Lot 3 and enter the site from the west, bending across the site to access the proposed building platform. Indigenous context planting, including mountain beach is proposed near the

accessway, and to the east, south and West of the proposed building platform. A maximum building height of 4.5 meters is proposed and the building platform will be surrounded by a residential curtilage area.

3.6. The landscape plan and recommendations at the bottom of this report seek to establish vegetation controls on proposed Lots 2, 3 and 4 which will restrict boundary planting to a height of no more than 5m, exclude poplar and eucalyptus boundary planting, and restrict planting outside of the curtilage areas to species which will grow to a mature height of not greater than 6m. This control excludes the proposed mountain beach planting as shown on the proposed landscape plan. The intention of these vegetation controls is to ensure the visual amenity as enjoyed from each building platform and from public and private spaces around the site is largely maintained and not screened by shelterbelt type planting, which is common in the receiving landscape

4. LANDSCAPE ASSESSMENT

Methodology

4.1. In undertaking this assessment, building poles were erected near the centre of each existing and proposed building platform to represent the location of the building platform. These building poles were set a 6m and were used as an indication of visibility and to best determine the effects of building height. In the instance of the Lot 1 and Lot 4's proposed building platform, following the site visit the maximum building height was reduced and is now proposed to be 4.5 meters from existing ground. The profile poles were viewed from key locations along public roads and trails and photographs were taken using a DSLR camera. These photographs are attached to this report (**Attachment A Images 1-18**). The effects of the proposal were then considered against the relevant assessment matters of the Proposed District Plan (PDP).

Extent of Effect

4.2. In assessing the extent of effects, this report uses the following seven-point scale:

very high, high, moderate-high, moderate, moderate-low, low, very low.

An effects rating of moderate-low corresponds to a 'minor' adverse effects rating. An adverse effects rating of 'low' or 'very low' corresponds to a 'less than minor' adverse effects rating.

4.3. This report uses the following definitions:

- **Landscape** – *Landscape embodies the relationship between people and place: It is the character of an area, how the area is experienced and perceived, and the meanings associated with it.*
  An area as perceived by people, including how the area is experienced, understood, interpreted, and regarded.'

- **Landscape effect** - *is a consequence of changes in a landscape's physical attributes on that landscape's values. Change is not an effect: landscapes change constantly. It is the implications of change on landscape values that is relevant.*
  While an effect arises from changes to physical attributes, the consequences on landscape values relate to a landscape's physical, associative, and perceptual dimensions.

- **Visual effects** – *are a subset of landscape effects. They are consequences of change on landscape values as experienced in views.* [1]

Landscape Category

4.4. The site is part of a Rural Character Landscape (RCL) as shown in the PDP. For the purpose of this report it is considered this is the appropriate landscape category for the site and surrounding landscape.

Statutory Considerations

4.5. The site is part of the Rural Zone in the PDP. At the time of writing, the PDP Decisions Version Maps show the site is not subject to appeal. This report will assess the proposal under the relevant matters contained within the PDP part 21.21.2 and part 21.21.3 for Rural Character Landscapes and all landscape categories.

[1] NZILA. Te Tangi a Te Manu Aotearora New Zealand Landscape Assessment Guidelines. April 2021.

Summary of visibility

4.6. The following description of the extent of visibility describes the potential visibility. Refer to **Attachment A** and **Images** for each view location.

4.7. This site is not part of a widely visible landscape, as it is within a low-lying river terrace LCU, which is generally only visible from within the LCU. The terrace riser which bisects the site into an upper western portion and a lower eastern portion, to an extent, restricts views of proposed development to the upper western and lower eastern parts of the landscape.

4.8. There is some potential that parts of the proposed development maybe visible from SH6 with particular regard to the landscaping, driveway and building platform on proposed Lot 1 (**Images 1-6**). The eastern edge of SH6 is generally lined with maturing eucalyptus and other rural character trees which will screen, filter, and mitigate views of the proposed building platform on Lot 1. This building platform will be located 209m from the state highway and will be a maximum height of 4.5m from existing ground level. Proposed indigenous context planting, including mountain beech trees to the west of the proposed building platform will provide a moderate degree of visual screening in the short term, but in the long term this vegetation will provide a high degree of visual screening from SH6 views.

4.9. The proposed building platform on Lot 1 and it's driveway may be visible from the western, upper portion of Te Awa Road (**Images 7 and 9**). Proposed planting on Lot 1 in time will provide a high degree of screening of that building platform such that built development will not be visible from Te Awa Road.

4.10. As Te Awa Road continues to the east near the edge of the terrace riser (**Image 8**), the proposed building platform on proposed Lot 1, the driveway to that building platform and the driveway to the building platform on Lot 4 will come into view. From the part of Te Awa Road on the lower terrace it will be possible to see the two approved building platforms on lots 2 and 3, as well as the proposed building platform on Lot 4, and their associated driveways (**Images 10 – 13**). Proposed planting to the south and west of each building platform will provide a moderate degree of visual screening in the short term, increasing to a high degree of screening in the long term once the mountain beech trees achieve a height of approximately 6m. As the site is large and the building platforms are spread across the site

from east to west it will be difficult for an observer to see all three at once from Te Awa Road, except potentially from the eastern extents of the road (**Image 13**).

4.11. From the private drive which exists on the site's eastern boundary it will be possible to see potentially all four building platforms (**Images 14 – 16**). The closest building platform on proposed Lot 4 will be heavily screened by dense indigenous vegetation between the proposed curtilage and the private drive. All other building platforms will be screened by indigenous context vegetation, including mountain beech trees to the east of the building platforms. In the short term this planting will provide a moderate degree of visual screening, while in the long term this planting will provide a high degree of visual screening as viewed from the private drive to the east of the site.

4.12. From a private drive which extends off Te Awa Road to the south of the site much of the proposed development may be visible in the context of the wider visible landscape. Following a site visit the proposed building platform on Lot 4 was shifted as far east as setbacks will allow, to reduce any potential adverse visual effects of that building platform on users of this private drive and other private places to the south. As discussed above proposed indigenous context planting, including mountain beech trees will provide a moderate degree of visual screening from these southern views in the short term while in the long term this visual screening will increase to a point where buildings will be reasonably difficult to see. As views from these southern private places to the distant northern mountains are highly valued, restrictions on any other plantings with particular regard to shelterbelt style plantings are proposed which will maintain visual access from these private places to the distant mountains.

PDP 21.21.2 PDP Rural Assessment Matters (Landscape), Rural Character Landscape (RCL)

21.21.2.2 Effects on landscape quality andcharacter

4.13. The site's associations to ONL's and ONF's is discussed above in this report. It is considered the site is sufficiently distant from any ONL or ONF and is clearly part of a separate river terrace visual amenity landscape. The proposal will not adversely affect the nearby Mount Maude ONL.

4.14. The scale and nature of the proposal will maintain the rural quality of the surrounding landscape with respect to spacious, open, pastoral character and rural amenity. All existing and proposed landscaping is and will continue to be compatible with the quality and character of the surrounding landscape.

21.21.2.3 Effects on visual amenity

4.15. The overall visibility of development is summarised above in parts 4.6 – 4.12 of this report.

4.16. It is considered the visual amenity as experienced from this part of the LCU is embodied in long range views to the distant mountains to the north and east. Also, forming part of the amenity are views of the slopes of Mount Maude to the west. The subject site and most of the Te Awa Terrace LCU act as foreground to these more distant, highly valued views of the surrounding ONLs. The typical context of these views from within the Te Awa Terrace LCU is of views across a mostly open landscape, often with visible rural living development, associated access and mature trees. In parts of the landscape established vegetation, particularly shelterbelt trees screen views of the wider landscape. All proposed mitigation planting will be near the proposed building platforms and follow existing lines in the landscape such that they will not read as shelterbelts, which provide for blanket screening of wider mountain views. The proposed plantings will instead allow for all views of the surrounding mountains to be maintained to a high degree from public and private places.

4.17. While in the short term the proposed building platforms will be visible from public places, they will be of a significant distance with particular regard to SH6 and Te Awa Road such that the buildings will not appear visually prominent or reduce the visual amenity of the rural character landscape to a more than very low degree. Similarly from private places the proposed building platforms and development will not be visually prominent such that it will detract from those private views to a more than low degree. The proposed landscaping which will provide in the short term a moderate degree of visual screening and in the long term a high degree of visual screening of built development may within approximately 15 years, lead to some obstruction of views from public and private locations. However, that obstruction will not detract from the rural character landscape and the wider visual amenity to a more

than very low degree as the wider mountain ONL landscape will continually to be accessible and dominant and the planting will be sporadic and not lineal.

4.18. The proposed driveways, boundaries and associated planting, lighting, earthworks and landscaping will reduce the visual amenity to a no more than low degree, with time. These elements however will not appear inconsistent with the existing natural topography and patterns of the RCL.

4.19. The terrace riser that cuts across the site provides for some enclosure and acts as a confining element which reduces the visibility of the overall development from public and private places. That is to say that from all public places it will be difficult to see of four proposed building platforms at once as the terrace riser and proposed vegetation will act as enclosing elements which will confine the buildings to their immediate area.

4.20. The proposed boundaries which follow the top of the terrace riser follow a practical, natural line of the landscape. The property boundaries on the lower eastern terrace, which is flat and open, do not follow any natural line of the landscape, because there are no natural lines present. This subdivision pattern is common in the LCU. Design controls which restrict boundary plantings will ensure the proposed boundaries do not act to adversely affect the visual amenity of the RCL to a more than very low degree.

21.21.2.4 Design and density of development

4.21. Development on Lot 3 and 4 has been aggregated to utilise a common access way. Large areas of open space will exist between all areas of built development. The proposal does not seek to cluster development and instead, directs rural living development which maintains a spacious quality and sets development within discrete units of land which are largely follow the existing and approved rural living pattern within the LCU.

4.22. The proposal will not exceed the ability of the landscape to absorb change. Development will be located in parts of the site where it will be least visible from public and private locations. Development, including access, will be located in parts of the site where it will result in the least impact on landscape character.

21.21.2.5 Tangata Whenua, biodiversity and geological values

4.23. There are no known Tanaga Whenua values, nohonga or Topuui sites near the subject site.

4.24. The site contains very little indigenous vegetation. There is a small group of matagouri near Lot 1's watercourse and some on the terrace riser. There are also areas of porcupine scrub. The proposal seeks a significant area of indigenous planting, with particular regard to riparian planting around Lot 1's watercourse and indigenous context planting on the terrace riser. This is considered a positive effect of the proposal and will act to enhance and regenerate the biodiversity values of the site. The proposed planting on the terrace riser will also enhance the appreciation of that geological feature by distinctly highlighting that feature as a contrasting element to the flatter terrace lands.

21.21.2.6 Cumulative effects of development on the landscape

4.25. While the Te Awa Terrace LCU is increasingly rural living in character, it has maintained a sense of ruralness and openness due to the spaciousness between buildings and general density within the landscape. The proposal will not act to further degrade landscape quality, character and visual amenity values, or result in an unacceptable loss of openness due to the prevalence of residential or non-farming activities. Each proposed lot will still maintain a sense of open character which is indicative of the wider character of the LCU.

4.26. The proposal is of a scale, pattern, and character which is similar to the existing pattern and character in the receiving landscape. This development does not seek to impose a covenant, consent notice or other legal instrument that maintains open space as the proposal will not represent a threshold to which the landscape can absorb any further development.

PDP 21.21.2 PDP Rural Assessment Matters (Landscape), Rural Character Landscape (RCL)

Other factors and positive effects, applicable in all the landscape categories (ONF, ONL and RCL)

4.27. No specific building design is proposed for any lot. The Te Awa Terrace LCU contains a variety of building forms and styles. Recommendations with regard to controls on curtilage, fencing and water tanks and landscape are provided at the end of this report. However, it is considered that, with the exclusion of height, building appearance of the future buildings does not need to be controlled beyond the controls set out in Chapter 21 of the PDP in order to maintain the landscape's existing character.

4.28. The proposed development will be consistent with rural activities in the LCU and will maintain and enhance the quality and character of the landscape through positive effects on biodiversity values. The positive effects of the proposal provide opportunities to enhance the character of the landscape and its indigenous biodiversity values by planting significant areas of appropriate and endemic indigenous vegetation. The area around the existing watercourse and the steep escarpment, which are understood to not be productive farm land will be reverted to indigenous vegetation.

4.29. It is considered that the scale of the proposed subdivision and lots will ensure that the landscape is retained in low intensity farming and that the existing rural living character of the LCU is not adversely affected to a more than low degree.

5. CONCLUSION

5.1. The proposal will see an increase in the landscape's rural living character, but this development will be set within wider areas of open space and will maintain the existing patterning, visual amenity and character of the landscape. The landscape's open and rural character will remain dominant and views of the wider mountain landscapes will not be adversely affected to a more than very low degree.

5.2. Overall, it is considered the development will result in no more than low adverse effects on landscape character and very low adverse effects on visual amenity.

6. RECOMMENDATIONS

6.1. I recommend the following conditions be volunteered with the resource consent application:

- All water tanks shall be located within the domestic curtilage area and either buried or screened from views beyond the boundaries of the subject lot by vegetation. If not buried, water tanks shall be of a dark recessive green, brown or grey colour with an LRV of between 7% and 25%.
- All fences shall be post and rail or post and wire only and be a maximum of 1.2m in height. Deer fencing is not subject to the 1.2m height.
- All domestic landscaping and structures including but not limited to clotheslines, outdoor seating areas, water tanks, external lighting, parking areas, caravans, boats, swimming pools, tennis courts, pergolas, sheds and amenity gardens and lawns shall be confined to the domestic curtilage area as shown on the certified landscape plan.
- All exterior lighting shall be down lighting at a maximum height of 1.2m and to not spill beyond the boundaries of the respect lot.
- The maximum building height of future buildings within Lots 1, 3 and 4 shall be 4.5m in height. The maximum building height of a future building on Lot 2 will be 7m from existing ground.
- On lots 2, 3 and 4, any boundary planting outside the approved curtilage area shall be maintained to a height of no more than 5m.
- Any boundary planting on lots 2, 3 and 4 shall exclude poplar or eucalyptus species.
- Any planting outside the approved curtilage areas shall grow to a mature height of not greater than six meters. This excludes the mountain beech trees as shown on the approved landscape plan.

Steve Skelton

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landscape ■ architecture ■ urban

Reference: PA19399 IS01
Scale: 1:2,500@A1 - 1:5,000@A3

0 25 50 125m
SCALE = 1:2500 AT A1

DRAFT

Kennedy - Hawea
Visual Assessment Locations
19 May 2022

Image 1

25mm photo - 6 April 2022 at 12:27 pm

25mm photo - 6 April 2022 at 12:27 pm

25mm photo - 6 April 2022 at 12:26 pm

25mm photo - 6 April 2022 at 12:25 pm

25mm photo - 6 April 2022 at 12:25 pm

25mm photo - 6 April 2022 at 12:31 pm

25mm photo - 6 April 2022 at 12:19 pm

25mm photo - 6 April 2022 at 12:10 pm

25mm photo - 6 April 2022 at 12:09 pm

25mm photo - 6 April 2022 at 12:08 pm

25mm photo - 6 April 2022 at 12:07 pm

25mm photo - 6 April 2022 at 12:05 pm

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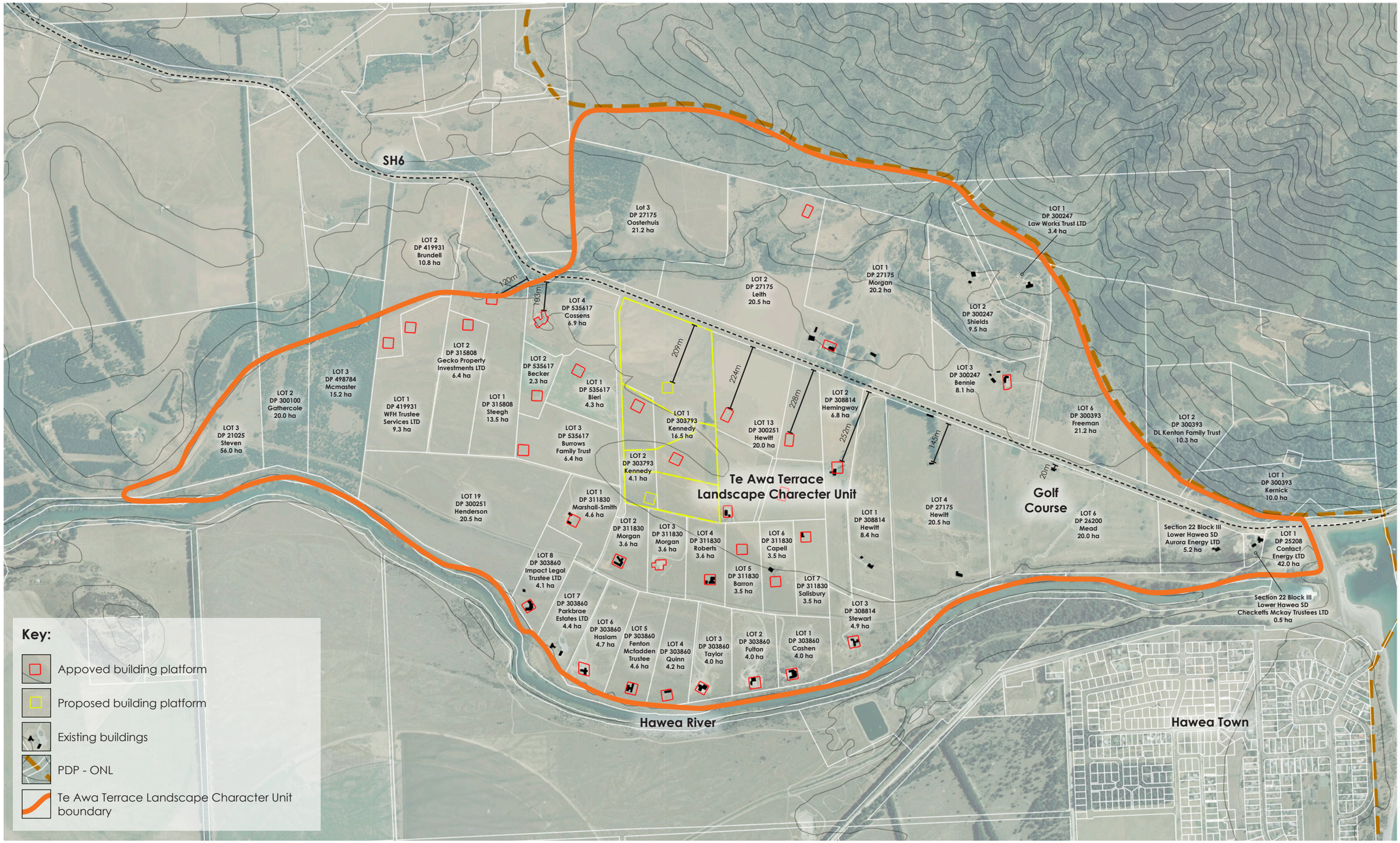
25mm photo - 6 April 2022 at 11:32 am



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landscape ■ architecture ■ urban

Reference: PA19399 IS01
Scale: 1:6,000@A1 - 1:12,000@A3

0 6 12 30m
SCALE = 1:600 AT A1

DRAFT

Kennedy - Hawea
Context Map
19 May 2022

KENNEDY C/- BROWN & COMPANY PLANNING GROUP

LOT 1&2, DP 303796,
TE AWA ROAD,
ALBERT TOWN

PRELIMINARY GEOTECHNICAL ASSESSMENT FOR A PROPOSED SUBDIVISION

REF: R8166-1B
DATE: 31 AUGUST 2022

GCL
Ground Consulting Ltd

REPORT QUALITY CONTROL

REPORT PREPARED BY: **GROUND CONSULTING LIMITED (GCL)**

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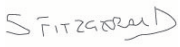
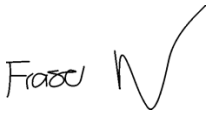
DOCUMENT CONTROL				
REPORT TITLE		PRELIMINARY GEOTECHNICAL ASSESSMENT FOR A PROPOSED SUBDIVISION		
REPORT REFERENCE		R8166-1B	PROJECT NUMBER	8166
CLIENT		KENNEDY C/- BROWN AND COMPANY PLANNING GROUP		
REV	DATE	REVISION STATUS	AUTHOR	REVIEWER
A	09 MAY 2022	DRAFT FOR COMMENT	SHANNON FITZGERALD	FRASER WALSH
B	31 AUGUST 2022	ISSUED TO CLIENT	SHANNON FITZGERALD	
APPROVAL				
AUTHOR SIGNATURE			REVIEWER SIGNATURE	
NAME		Shannon Fitzgerald B.SC, PGDIPSCI, (GEOL), MAIG	NAME	FRASER WALSH CMENGNZ (PENGGEOL)
TITLE		ENGINEERING GEOLOGIST	TITLE	DIRECTOR

EXECUTIVE SUMMARY

Scope of Work		GCL has been engaged to conduct a geotechnical investigation of the ground conditions at Lots 1 & 2, DP303793. Te Awa Road, Albert Town, Hawea 1for the purpose of gaining subdivision consent for a four lot subdivision.
Site Details and Location		The site comprises Lots 1 & 2, DP303793, Te Awa Road, Albert Town, Hawea. The site is located on Te Awa Road, approximately 12.5 km north of the Wanaka township via State High 6 on route to Lake Hawea.
Current Site Status and History		The site is a ~20-hectare Rural General land parcel currently purposed for stock grazing. The site has a single farm utility shed located along the north lot boundary between the upper and lower terrace. GCL is unaware of any former land use applications. 1111
Development Proposal		A lot scheme plan was provided after the investigation had been completed. The proposed development comprises the division of Lots 1 and 2 into four rural lifestyle lots between 3.26 – 9.86ha in size. The development will require a private potable water supply. A network of internal roads extending from Te Awa Road will provide access to individual lots. Stormwater and wastewater will be managed on-site.
Ground Conditions	Previous Investigations	None
	Published Geology	The site is predominantly underlain by OIS2 (Late Pleistocene) River Outwash Deposits comprising unweathered to slightly weathered, well-sorted, sandy gravel forming large outwash terraces in Clutha catchment
	Site Geology	A typical soil profile comprises Topsoil and Loess over, Outwash Deposits.
	Hydrogeology	Depressed groundwater levels across the site. An overland flow path traverses the upper terrace. Some negative topographic features across the lower terrace may detain stormwater accumulations during significant rainfall.
	Environmental Condition	The site is not registered as a HAIL site
Natural Hazards	Liquefaction	Site investigations have proven tightly packed coarse granular soils which are unlikely to liquefy in a seismic event Site investigations have proven coarse granular soils to depth. This, coupled with a regional depressed groundwater regime, allows for a Low to nil potential for liquefaction. Classified as Domain A.
	Alluvial Landforms	The site is mapped on the periphery of regional alluvial landforms features. There is no obvious sign of scouring, erosion or avulsion to suggest recent activity within or near the site.
	Seismic Characteristics	Seismic Soil Class D is considered appropriate. A potential active fault system traverses the central portion of the site. Building design and construction should be cognisant of NZS1170.5.
Geotechnical Considerations	Slope Stability	No slope stability issues
	Building Platform	Building platform locations are yet to be finalised. No significant earthworks are expected to be required in the development.
	Foundations	Option 1 (for soils immediately below the topsoil horizon): Reduced Ultimate Bearing Capacity of 150kPa and will require specifically engineered foundations. Specific site investigations will be required for each Lot. Option 2: (for structures founding within the Outwash Deposits): An ultimate bearing capacity of 300kPa can be relied upon for foundation design.
	Earthworks	Standard conditions apply to align with QLDC Code of practice. Site won material comprising Outwash Deposits is suitable for reuse subject to appropriate specification for field compaction. Loess is not suitable for reuse as engineered fill.
Stormwater Disposal		Stormwater disposal via on-site stormwater management system for each lot is feasible. Specific site investigations will be required for each Lot.
Wastewater Disposal		Disposal of treated effluent onsite for each lot is feasible. Specific site investigations will be required for each Lot.

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APPENDICES

1 INTRODUCTION

1.1 PROJECT BRIEF

GCL has undertaken a preliminary geotechnical assessment for a proposed four Lot residential subdivision of Lot 1 & 2 - DP 303793, Te Awa Road, Albert Town, Hawea at the request of Brown and Company Planning Group on behalf of the client, Mr Kennedy. The site location is presented in Drawing 001.

This geotechnical assessment has been prepared to compile documentation for resource consent submission with Queenstown Lakes District Council (QLDC).

This report includes a summary of the investigations undertaken and provides an assessment of:

- Ground Conditions
- Groundwater Conditions
- Natural Hazards Assessment (RMA Section 106)
- General Building Platform Stability and Foundation Conditions
- Generic stormwater management assessment
- Generic effluent disposal assessment
- Other pertinent constraints and issues identified with the site.

1.2 PROPOSED SITE DEVELOPMENT

The proposed development comprises the following features and components:

- The proposed subdivision will comprise four rural lifestyle lots of potential size from 3.26Ha to 9.86Ha. The intent is to subdivide both the upper and lower terraces, one lot and three lots, respectively.
- The development will be accessed directly off Te Awa Road. It is anticipated that separate access will be made to the upper and lower terraces. An internal roading network/vehicle right of way will provide access to individual lots.
- The subdivision development philosophy is to maintain the natural rural amenity and minimise the environmental impact of necessary subdivision earthworks. The proposed subdivision will not require significant earthworks aside from roading, services lanes and improved drainage channels.
- The development is currently outside QLDC reticulated three-waters system. The development will require a private potable water supply. Stormwater and wastewater are likely to be managed on each lot via on-site to-ground management systems.111111
- Drawing 002 illustrates the proposed lots and associated building platforms relative to topography and the greater area under the management of the incumbent farm.

2 DESKTOP STUDY

2.1 PREVIOUS INVESTIGATIONS

GCL has reviewed the QLDC eDocs facility, which provided limited site investigation documentation for the immediate area.

We are unaware of any previous geotechnical investigations undertaken in the vicinity of the proposed development.

GCL has previously conducted investigations throughout the local area and is therefore familiar with the local geology. Previous GCL reports containing pertinent information relevant to the current site have been reviewed and relied on where appropriate for the benefit of this current report.

2.2 NEW ZEALAND GEOTECHNICAL DATABASE

The New Zealand Geotechnical Database (NZGD) has been viewed, and no geotechnical investigations have been identified in the immediate vicinity of the proposed development.

The nearest record (drillers log) is located on property approximately 200m to the proposed development east. The purpose of the drill assessment was to extract water from a potential underlying aquifer to service domestic and irrigation water requirements. The bore encountered variations of gravel and sand throughout the penetration, terminating at 34.7mBGL. The static water level was identified at 19.85mBGL.

2.3 HISTORIC AERIAL PHOTOGRAPHS

Aerial photographs from Google Earth dating from 1985 to 2021 were studied to observe the site over time and assess the geomorphological setting. The review of historical aerial photography indicates that there has been no significant modification of the site over this period.

The review of historical aerial photography is summarised in the table below:

Table 1: Historic remote imagery summary

YEAR	SITE MODIFICATION
1985 - 2007	• The site presents as grassed with a small pine tree plantation along the north boundary central to the upper and lower terrace. • Subtle 'criss-cross' farm tracks • Little to no change, aside from the change in pastoral type and condition
2007 - 2011	• Construction of a farm utility shed along the north lot boundary on the lower terrace • Possible improvement of the overland flow path that traverses the upper terrace
2011 – Present	• There appears to have been no significant changes to the site surface in the last 10 years, aside from seasonal pastoral change, mole ploughing of some paddocks, and stock feed out tracks.

2.4 PUBLISHED GEOLOGY

The Geological Map of New Zealand, Sheet 18 (Wakatipu), at a scale of 1:250,000, maps the site by the following geological formations.

- The site is predominantly underlain by OIS2 (Late Pleistocene) River Outwash Deposits comprising unweathered to slightly weathered, well-sorted, sandy gravel forming large outwash terraces in the Clutha Catchment
- The northwest site corner is proximal to OIS1 (Holocene) River Fan Deposits comprising loose, commonly angular boulders, gravel, sand, and silt forming alluvial fans; grades into scree (upslope) & valley alluvium.
- The Cardrona-Hawea Fault (formerly known as the Northwest Cardrona Fault) is an active, concealed, reverse fault system that passes through the site's southeast corner. The fault

has an estimated magnitude of 7.0 on a 7,500-year recurrence level and an estimated rupture of 2.0m. The inferred seismic fault trace is not expressed at the surface.

- Given the accuracy of the mapping method used, the site may comprise characteristics of the above-described geological formations and features.
- The figure below illustrates the described geological formations and inferred seismic fault trace relative to Lots 1 and 2.

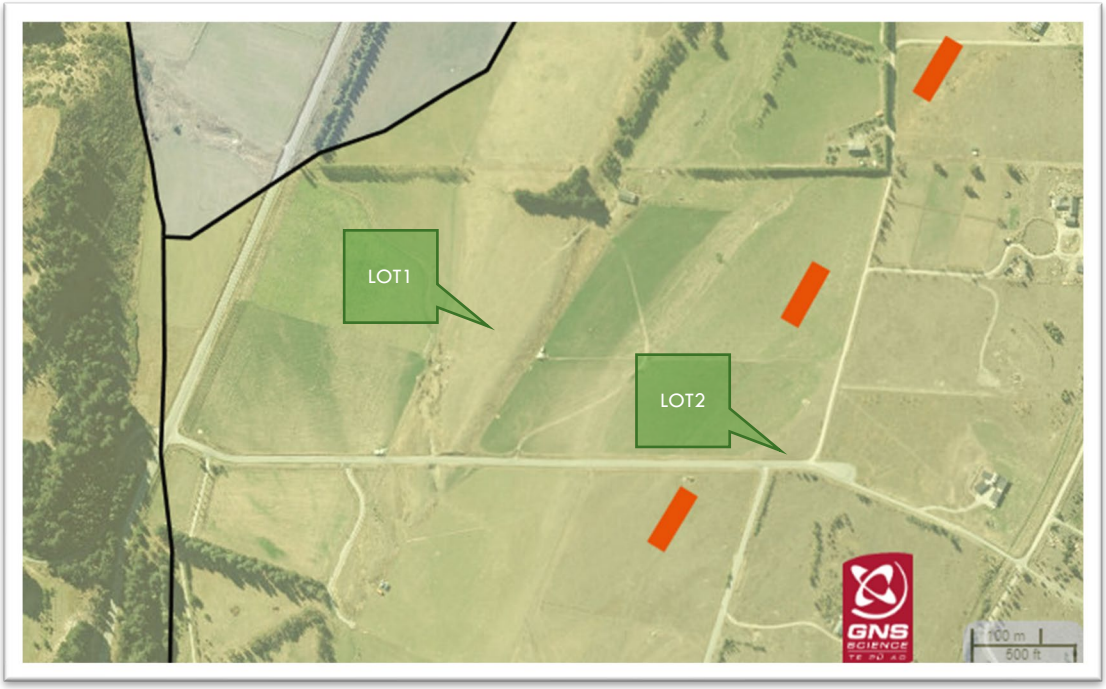


Figure 1: Illustrates geological formations relevant to the prospective area. The 'yellow' shading across the site is River Outwash Deposits. The 'bluish' shading towards the northwest corner is River Fan Deposits. The broken 'red' line towards the southeast corner infers the Cardona-Hawea Fault.

2.5 SITE SERVICES

With reference to the Queenstown Lakes District Council GIS viewer, the property is not serviced by the usual three-waters reticulated services.

- It is understood that a 'dwelling' daily water supply of a minimum of 2,100L/day will be provided to the lot by the local body corporate.
- The site does not contain a public wastewater or stormwater disposal connection. As such, on-site wastewater and stormwater disposal are required for the proposed development.
- It is assumed that the site is provided with electricity and telecommunications infrastructure.
- It is anticipated that some level of non-surveyed infrastructure comprising agricultural irrigation network and/or potable water supply, low voltage electricity and telecommunication services are possibly buried within the prospective area.

2.6 WATER BORES

Six water allocation consents are within a 500m radius of the prospective area. The nearest two are as follows:

- Bore Construction Consent RM19.004.01 is located ~100m north of the northwest development corner
- Bore Construction Consent RM20.004.01 is located ~200m southeast of the southeast development corner

3 SITE CONDITIONS

3.1 SITE DETAILS

The site comprises the following entities:

- The prospective area site comprises Lots 1 and 2, DP 303793, Te Awa Road, Albert Town, Hawea.
- The site is accessed via Te Awa Road off State Highway 6, approximately 12.5km north of the Wanaka township.
- The site is located within a 'Rural General' Zone under QLDC current Operative District Plan,
- The property occupies a land area of approximately 20.6 hectares. The proposed subdivision intends to subdivide the land into 3 -5 lots ranging from 5Ha – 6.5Ha.
- The site is currently surrounded by farmland and rural lifestyle development.
- A site location map is presented in Drawing 001.

3.2 SITE TOPOGRAPHY

The site is a semi-rectangular shape that occupies a total surface area of 206,000m^2. The site is elevated in the northwest lot corner (345mRL) that gently slopes towards the southeast corner (334mASL).

The site topography is best described in two halves as follows:

- Regionally, the site is located towards the western extent of the Hawea Flat adjacent to the east-facing flanks of Mt Maude.
- The site is split into two terraces of roughly equal proportions: the upper terrace (western) and the lower terrace (eastern). The height differential between the upper and lower terrace is estimated at 4 – 5m. The slope angle between the terraces is of gentle to moderate gradient with slope angles between 25 – 35° to the horizontal towards the east.
- A drainage path (not flowing at the time of investigation) originates from a tributary derived from Mt Maude, which enters the site in the northwest site corner and traverses the upper terrace in the east to the southeast direction before departing the site via a 1,000mm diameter corrugated steel culvert beneath Te Awa Road.
- Subtle natural (paleochannels) undulations best described as discrete 'hump' and 'hallow' features traverse the site from northwest to southeast across the upper terrace and northeast to southwest across the lower terrace.
- Overall, the site slopes very gently towards the southeast at slope angles <3° to the horizontal.
- The site surface is slightly undulated, a function of its former agricultural purpose. Currently, the site presents as pastoral land with a single mature pine tree plantation situated between the upper and lower terrace along the north lot boundary.

3.3 EXISTING SITE DEVELOPMENT FEATURES

The site is occupied by a single farm utility shed located along the north lot boundary between the upper and lower terrace. A farm track extends access from Te Awa Road to the establishment described.

3.4 SITE SURFACE WATER FEATURES

The site contains the following surface features:

- A drainage path (not flowing at the time of investigation) originates from a tributary derived from Mt Maude, which enters the site in the northwest site corner and traverses the upper terrace in the east to the southeast direction before departing the site via a 1,000mm diameter corrugated steel culvert beneath Te Awa Road. It is understood that stormwater accumulations disperse to a neighbour's farm paddock before soaking to the ground by diffusion.
- It is anticipated that stormwater accumulations will depart the site via sheet flow in a south-easterly direction unless otherwise captured and redirected by the aforementioned drainage feature.
- Site drainage will be influenced by the development of subdivision roading, and any minor earthworks associated with building platform development.
- It is possible that some of the 'hollow' features (topographic lows) described in Section 3.2 could potentially detain stormwater accumulations during significant rainfall.
- A separate Flood Assessment Report (R8166-2A) is currently being drafted by GCL, which specifically addresses the influence of the Mt Maude primary catchment (watershed), relevant drainage structures and surface water features associated with the proposed development.
- Drawings 002 show the mapped surface water features.

3.5 SLOPE INSTABILITY FEATURES

The site contains no observed or perceived slope instability features. A summary of slope features is provided below:

- The prospective area is gently sloping except for the break-in slope between the upper and lower terraces.
- The slope between the upper and lower terrace, comprising gentle to moderate gradients (25 – 35˚ to the horizontal), was stable at the investigation time. There were no apparent signs of relative mass movement or superficial slump and creep features. Modification to the slope surface between the upper and lower terrace may unearth/dislodge large schist boulders from within the outwash formation
- Generally, the site has no slope instability features.
- The site is remote from steeper slopes that may potentially contain slope instability features.

3.6 NATURAL HAZARDS

3.6.1 QLDC Liquefaction Hazard Zoning

In 2012, T&T published their Queenstown Lakes District Liquefaction Hazard Assessment Report, a summary of which is usually attached to the LIM for any property. The report indicates that the site does not lie within mapped liquefaction zones. This is interpreted to mean that the site has a low to nil perceived risk for liquefaction.

In addition, good engineering practice promotes site investigation to satisfy the requirements of NZS3604 and determine 'good ground' is available and that there are no saturated fine-grained soils present that are prone to liquefaction.

3.6.2 ORC Liquefaction Hazard Zoning

The ORC hazard mapping now refers to the recent GNS report "Assessment of liquefaction hazards in the Queenstown Lakes, Central Otago, Clutha and Waitaki Districts, Otago (2019)".

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

3.6.3 GIS Hazard Mapping

With reference to the ORC and QLDC GIS hazard mapper and database, the site area has the following characteristics listed and illustrated in the below table and figure respectively:

Table 2: Provides a summary of recognised hazards for the site

DATA SOURCE	HAZARD		NOTE
QLDC	Environmental	The site is not mapped within a building hazard Act/HAIL Site	n/a
QLDC & ORC	Seismic	The Cardrona-Hawea Fault (formerly known as the Northwest Cardrona Fault) traverses the southeast site corner	A 1:2500-year seismic event will cause significant shaking and damage to inappropriately designed structures.
QLDC	Flooding	The site is not in a flood hazard zone	n/a
QLDC & ORC	Alluvial Fans	The site is mapped with the following known active landslides: • An active, composite alluvial fan is mapped immediately outside the northwest lot corner • Alluvial Fan (Fan less recently active)	There is no obvious sign or scouring, erosion or allusion within or near the site indicating the coarsely mapped feature is outside the lot boundary or of age.
QLDC	Liquefaction	The site is mapped as 'Domain A', whereby the main underlying ground conditions comprise rock or firm sediments with a low to zero liquefaction potential.	Refer to Section 3.6.1 & 3.6.2
QLDC	Other	The site is not mapped within any other land hazards.	n/a
ORC	Fan Landform	The site is mapped to contain a terrace riser (as described in Section 3.2)	Map Accuracy+/-20m, NZMG1949

ORC	Landform Channels	The site contains two types of channels: 1) Primary overland flow path 2) Drainage lineation (negative topographic features)	Refer to Section 3.4
ORC	Landslides	The site is not mapped within a landslide zone	n/a
ORC	Ground Classification (Seismic Soil Class)	The seismic soil classification for the area is Class D for deep or soft soils	n/a

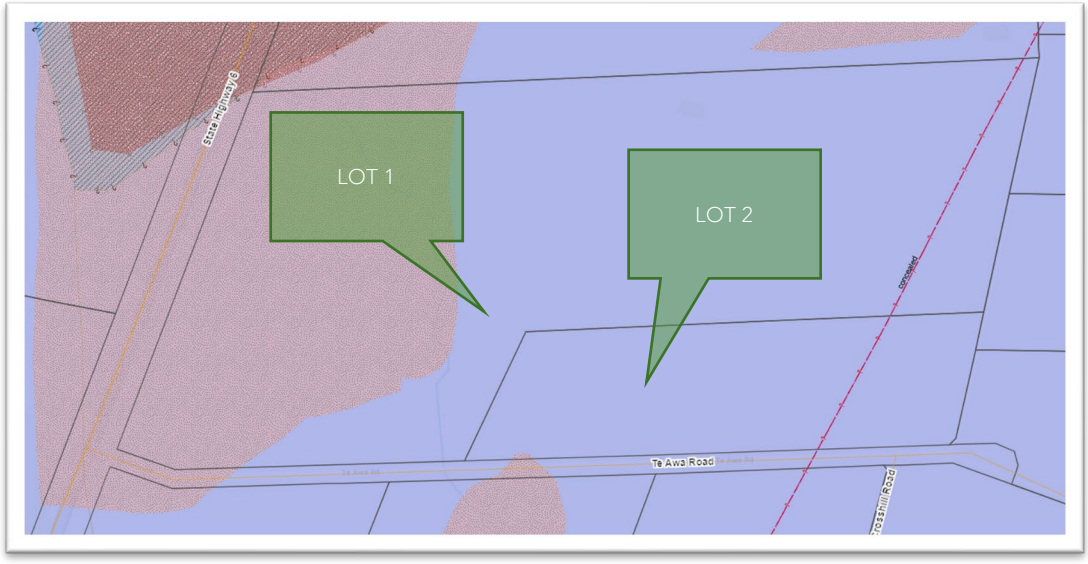


Figure 2, Excerpt from QLDC online GIS Natural Hazards Database Viewer; illustrates the fan deposit features onlapping from the west and inferred seismic fault line in traversing the eastern lot boundary.

4 SUBSURFACE CONDITIONS

4.1 FIELD INVESTIGATIONS

The investigations were constructed to assess the sub-surface conditions in the vicinity of the development and were undertaken by a suitably qualified engineering geologist from GCL.

The investigation locations were determined with construction and topographic plans provided by the client, a handheld GPS and the Queenstown Lakes District Council GIS viewer.

The sub-surface investigation consists of the following assessments.:

- 16 mechanically excavated test pits (TP101 – 116) were completed to a maximum depth of 3.0m to assess the ground conditions across the proposed development. Test pits were distributed broadly across the entire prospective area and locally to integrate distinctive geomorphic surface features and areas of ground disturbance required for developing a sound geological model. Test pit excavation ceased once geology had been established or excavator refusal met.
- The purpose of the test pits was to establish the ground conditions that may influence or impact foundation design for lightweight residential construction. Secondly, determine the soil category class according to AS/NZS1547:2012 for the on-site treated wastewater and infiltration parameters for stormwater disposal.
- Two Scala penetrometer tests (SPT) were completed to establish the soil density/strength of a typical soil profile relative to the upper and lower terrace. SPT met with refusal achieving a maximum depth of 0.90m.
- The approximate locations of the sub-surface investigations are shown in Drawing 002.
- Refer to Appendix A for a comprehensive account of soil arisings and Appendix B for photos of test pit excavations.

4.2 INVESTIGATION LOGGING

Soils recovered from the investigations have been logged and presented in Appendix A. Logging of the soil encountered has been undertaken according to NZ Geotechnical Society Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes.

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

4.3 GROUND CONDITIONS

A summary of the sub-surface conditions identified in the investigations undertaken is presented below in order of depth from the ground surface. The sub-surface conditions have been extrapolated between the investigations undertaken. Whilst care has been taken to provide sufficient sub-surface information, following best practice for the purposes of building consent, no guarantee can be given on the validity of the inference made. As such, it should be appreciated that ground conditions may vary between the investigations undertaken.

4.3.1 Topsoil (Native)

Topsoil underlies the entire site to 0.1 - 0.40m below the ground level. Topsoil typically comprises minor sand, silt and grass rootlets and occasional gravel that extends the soil profile. The deeper topsoil profile was generally associated with paddocks subject to mole ploughing underlain by non- coarse granular layers. On the other hand, a thinner topsoil profile was observed towards the eastern half of the lower terrace Topsoil was generally dry and loose on the day of investigation.

4.3.1 Fan Deposits (River)

A thin layer (200mm) of Fan Deposit material comprising light brown, sandy GRAVEL was identified in TP101 (northwest lot corner only) between 0.1 – 0.3m BGL. Gravel is fine to coarse in size and subrounded to subangular in shape. Sand is fine to coarse-grained. The described material was dry and loosely dense on the day of the investigation.

4.3.2 Loess (Aeolian Deposit)

By and large, Loess mantles the entire prospective area to a maximum depth of 3.0mBGL as identified in TP101. Loess is best described as a light brown, dry, medium dense, micaceous silty SAND/sandy SILT that forms the bulk material between the overlying Topsoil and the underlying predominate formation (Outwash Deposits). Loess is often presented with a 'soapy' texture. Arisings from the excavation of test pits often contain 'blocky' clasts, a testament to the competency of the material. On occasion, subtle jointing structures could be observed within the pit wall exposure.

4.3.3 Outwash Deposits (River)

River Outwash Deposits comprising variations of light brown to light grey SAND and GRAVEL and lesser amounts of silt, cobbles, and boulders are fundamental to the predominant underlying formation. Sand is medium to coarse. Gravel is fine to coarse in size and subrounded to subangular in shape. Oversize material comprising subrounded to subangular cobbles and boulders (200 – 500mm diameter) consistently formed part of the material makeup. On rare occasions, large schist boulders were encountered between 1 – 2m in diameter.

Subtle stratograded structures were present throughout. Thicker layer features comprised poorly graded fine to medium-sized gravel often manifested as 'running gravels' when unconfined.

Outwash gravels presented as dry and dense on the day of investigation.

4.3.4 Relative Soil Strength

Two methods assessed soil strength parameters for both the Loess and Outwash Deposits:

- Observations were made during the excavation of each pit which considered the effort required to excavate the pit and the structural integrity of pit walls to remain vertical and not collapse over time.
- Completion of Scala Penetrometer Tests (SPT) at TP105 & TP112

By observation, generally, the finer material (Loess) exhibited a lower relative density in the order of loose to medium dense, as opposed to the coarser material (Outwash Deposits), where a soil density of medium dense to dense could be applied.

This was augmented by the SPT's completed, where Scala's typically met with refusal or by 'blow default' (10+ blows per 100mm Scala rod advancement) at the interface between the Loess horizon and coarser underlying granular material (Outwash Deposits).

4.3.5 Soil Category Class

The Soil Category Class in accordance with AS/NZS 1547:2012 and the US Department of Agriculture for Loess and Outwash Deposits are listed in the table below:

Table 3: Provides a summary of Soil Category Class

SOIL TYPE	SOIL DESCRIPTION	APPROXIMATE SOIL DEPTH (M)	SOIL CATEGORY CLASS	DRAINAGE CHARACTERISTICS	INDICATIVE PERCOLATION RATE (UNFACTORED. MM/HR)
Loess	Dry to moist, medium dense Silty SAND / sandy SILT	Up to 3.0m in places on both upper and lower terrace	3 – 4 (Loams)	'Good' to 'Moderate'	<50
Outwash Deposits	Dry, dense SAND & GRAVEL	Generally accounted from around 1mBGL across the upper and lower terrace	1 – 2 (Gravel and Sands + Sandy Loams)	'Rapid' to 'Free'	1,500

4.3.6 Groundwater

Groundwater was not encountered within any of the investigations undertaken to a depth of at least 3.0m BGL. Groundwater is susceptible to seasonal variation, and it should be noted that the investigations were undertaken during early May 2022 (Autumn).

The coherent (static) groundwater level has been identified in a neighbouring bore at 19.85m below ground level. Refer to Section 2.2 for further detail

Given the elevated nature and topography of the site, it is unlikely that a coherent groundwater table would rise significantly to the extent that it would interfere with shallow foundations or the wastewater land application area.

5 NATURAL HAZARDS ASSESSMENT

5.1 GENERAL

In accordance with Section 106 of the Resource Management Act, we have undertaken a qualitative natural hazards risk assessment for the proposed subdivision. The natural hazard consequence and likelihood of occurrence has been assessed by means of the overall risk matrix as shown in Table 1, with the risk classifications defined in Table 2.

Table 4: Risk Matrix

POTENTIAL CONSEQUENCES	LIKELIHOOD				
	VERY UNLIKELY (0 – 5%)	UNLIKELY (5 – 45%)	POSSIBLE (45 – 55%)	LIKELY (55 – 95%)	ALMOST CERTAIN (95 – 100%)
SEVERE	Low	Low	Moderate	High	Very high
MODERATE	Negligible	Low	Moderate	Moderate	High
MINOR	Negligible	Low	Low	Moderate	Moderate
NEGLIGIBLE	Negligible	Negligible	Negligible	Low	Low

Table 5: Summary of Risk Classification

RATING SCALE	SECTION 106 COMPLIANCE	DISCUSSION
VERY HIGH	Non-compliant	There is a high probability that severe damage to the site could arise from an identified source without appropriate remedial action
HIGH	Non-compliant	The proposed house site is likely to experience significant damage from an identified source without remedial action
MODERATE	Non-compliant	It is possible that damage could arise to the site, but it is unlikely that such damage would be significant
LOW	Compliant	It is possible that damage could arise to the site from an identified source though this is likely to be mild or unlikely
NEGLIGIBLE	Compliant	The presence of the identified source does not give rise to the potential to cause significant damage to the site

5.2 SUBDIVISION ASSESSMENT

5.2.1 Cardrona-Hawea Fault

The Cardrona-Hawea Fault (formally the NW Cardrona Fault) is inferred close to the south-eastern corner of the site and oriented in a general north-east to south-west direction by NZGS. The fault is considered to be active with a recurrence interval in the order of 2500 years. The down-thrown side is to the south-east and up-thrown side to the north-west.

The site contains a prominent scarp feature which marks the eastern edge of the upper terrace and western edge of the lower terrace. The scarp extends in a general north-east to south-west orientation within the central portion of the site and extends considerably further to the north and south. Given the close proximity of the scarp with the inferred Cardrona-Hawea Fault trace, parallel orientation and matching land throws, we consider the scarp may be the surface expression of the Cardrona-Hawea Fault or an adjacent fault splinter.

As a prudent measure, therefore, we consider that the scarp should be marked as a "potential fault rupture hazard zone" and the extent of this is shown on Drawing 002. The extent of the feature is determined by a 20m set-back from the top and base of the scarp feature. A larger setback is not considered necessary given the well-defined extent of the scarp feature.

The above does not preclude development within the potential fault rupture hazard zone but would require a site-specific geotechnical assessment.

5.2.2 Risk Register

Table 6 shows a risk register for the proposed subdivision and appropriate mitigation measures if applicable based on Tables 4 & 5.

Table 6: Risk Register

RISK	POTENTIAL CONSEQUENCES	LIKELIHOOD	RISK CLASSIFICATION	COMMENT	MITIGATION MEASURES
SLOPE INSTABILITY	Moderate	Very unlikely	Negligible	See Section 7	n/a
ROCK FALL	Moderate	Very unlikely	Negligible	See Section 7	n/a
GROUND SUBSIDENCE	Severe	Very unlikely	Negligible	See Section 7	n/a
SOIL SHRINK/SWELL	Moderate	Very unlikely	Negligible	See Section 7	n/a
EARTHQUAKE	Severe	Possible	Moderate	The site contains a scarp which may form the surface expression of a fault trace.	No building construction within 20m of the site scarp feature (labelled "potential fault rupture zone" in Drawing 002)
LIQUEFACTION	Moderate	Very unlikely	Negligible	See Section 3.5	n/a
DEBRIS FLOW	Moderate	Unlikely	Negligible	See Section 7	n/a
FLOODING	Assessed separately in GCL report ref: R8166-2A				
TSUNAMI	Moderate	Very unlikely	Negligible	Elevated site	n/a
VOLCANIC ERUPTION/ASH FALL	Moderate	Very unlikely	Negligible	Remote from active volcanic centre	n/a

5.3 CONCLUSIONS

Table 6 indicates the risk classification for the identified natural hazards is low to negligible for all assessed hazards, apart from earthquakes which is addressed in Section 5.2.1.

However, it is important to note that the Wanaka region and surrounding area are at significant seismic risk from potentially strong ground shaking, likely associated with a rupture of the Alpine Fault, located along the West Coast of the South Island. There is a moderate probability that an earthquake with an expected magnitude of over 8 will occur along the Alpine Fault within the next 50 years.

The proximity of the Cardrona-Hawea Fault (formerly known as the Northwest Cardrona Fault) should also be taken into account during detailed design as the effects from a rupture along

this fault line would likely be more significant than the Alpine Fault activity. Consequently, any engineering design of the proposed structure must be cognisant of the region's seismic risk and be designed in accordance with NZS1170.5.

We consider the proposed subdivision fulfils Section 106 of the Resource Management Act based on the assessment completed.

6 GROUND MODEL

6.1 GENERAL

We have developed a ground model for the site based on the investigations undertaken to date, including a desktop study, site mapping, and sub-surface tests. A summary of the ground model is provided as follows in the vicinity of the proposed development:

- The site is primarily an active sheep farm with one on-site establishment comprising a general farm utility shed.
- The proposed subdivision occupies two river gravel terrace risers located towards the western extent of the Hawea Flats (uniform regional outwash deposit feature). The upper and lower terraces are elevated between 345m and 334mRL and slope gently towards the site east. A break in slope characterised by gentle to moderate slope angles and vertical offset of 4-5m defines the two terraces. The site and terrace slope does not display any slope instability features and is remote from steeper slopes and/or slopes that show active instability features.
- The site is underlain Loess and Outwash Deposits. Loess is best described as light brown silty SAND / sandy SILT, which extends to 3.0m depth in places, but generally thins to nominal amounts in the east. Outwash deposits comprising variations of dense SAND and GRAVEL with lesser amounts of oversize underlies the entire site. Occasional large schist boulders were observed in the Outwash Deposit formation, which may protrude into the overlying Loess horizon. The site is mantled with an organic topsoil layer. The upper soils (Loess, excluding the topsoil horizon) typically provide a reduced bearing capacity based on the Scala penetrometer tests completed and observations of the effort required to excavate each test pit. The coarser granular material (Outwash Deposits) identified below the Loess layer provides a more consistent and competent soil type.
- The site contains a drainage path (not flowing at the time of investigation) that derives stormwater accumulations from the southern tributary of Mt Maude. The flow path enters the site in the northwest corner traversing the upper terrace in the east to southeast direction before departing via a 1,000mm diameter corrugated steel culvert beneath Te Awa Road. It is understood that stormwater accumulations disperse to a neighbour's farm paddock before soaking to-ground by diffusion. Drainage lineation's / negative low topographic features may 'pond' during significant rainfall, especially across the lower terrace. Generally, surface run-off from rainfall events will likely disperse as sheet flow in an easterly direction unless intercepted by the described overland flow path.
- The site contains depressed groundwater levels, and no groundwater inflows were identified in the sub-surface investigations. Given the elevated nature and topography of the site, it is unlikely that a coherent groundwater table would rise significantly to the extent that it would interfere with shallow foundations or the wastewater land application area.
- The site contains no observed or perceived slope instability features. The site is generally very gently sloping and contains no slope instability features, except for the 'slope break' between the upper and lower terrace, defined by a gentle to moderate slope gradient.

The site is remote from steeper slopes that may potentially contain slope instability features.

- An active fault zone traverses the southeast site corner, the Cardrona-Hawea Fault (formerly known as the Northwest Cardrona Fault). All structures should be designed and constructed cognisant of NZS1170. Section 5.2.1 addresses potential fault rupture within the site.
- The site is not considered susceptible to liquefaction due to the depressed groundwater levels and the dense nature of the granular materials.
- The immediate northwest site corner is mapped within two overlapping regional alluvial landform features mainly associated with the tributaries that drainage Mt Maude. A thin layer of sandy GRAVEL identified in TP101 is indicative of the mapped features. Although, there is no obvious sign of scouring, erosion, or avulsion to indicate any recent activity.
- The ground model developed above has been utilised to consider the various geotechnical aspects of the proposed development, presented in the following sections of this report.

6.2 GEOTECHNICAL RISK

The ground model presented in this report is based on the investigations undertaken to date. It should be appreciated that there is an inherent risk with the formulation of a ground model. In particular, we note the following:

- Ground conditions can vary between investigations undertaken, and there is always some natural variability in ground conditions.
- Discrete sub-surface investigations may not identify small-scale ground irregularities, particularly those associated with human disturbance such as offal pits, drainage line backfills, and landscaping works.
- Ground strength varies with changes in water content, soil type, and ground loading. As such, it should be appreciated that weaker ground conditions may develop over that measured due to periods of wet weather and during the winter months.
- The potential geotechnical effects of climate change are not well defined for New Zealand. Effects may include changes in groundwater levels, soil saturation, and surface water characteristics, affecting the proposed development.

Given the potential risk profile provided above, we have adopted a conservative approach when considering the geotechnical aspects of the proposed development.

7 GEOTECHNICAL CONSIDERATIONS

7.1 GENERAL

The geotechnical aspects of the proposed development have been considered principally with the aim of demonstrating that safe and stable conditions are presently available or are achievable with appropriate remedial works/constraints. This has been considered with respect to the following information, standards, guidelines, and codes:

- The ground model developed in Section 6 of this report.
- NZS 3604:2011: 'Timber-framed buildings'.
- AS 2870:2011: 'Residential slabs and footings'.
- NZS 1170:2004: 'Structural design actions'.

- New Zealand Building Code: Clauses B1, E1
- District and Regional Plan provisions on residential development.
- Council development codes, standards, and guides on residential development.

Of note, is NZS 3604:2011 and the New Zealand Building Code which provide a set of criteria for determining whether safe and stable conditions or "good ground" are achieved, whereby "good ground" allows for the design of standard foundations in accordance with the provisions of the standards. In summary, "good ground" defines conditions where the risk of foundation failure is considered to be low to nil. Foundation failure is possible via the following mechanisms which are addressed in this report as follows:

- Slope instability: This includes foundation failure associated with slope derived instability and is addressed in Section 7.3 of this report.
- Weak ground: This includes foundation failure associated with poor bearing capacity and is addressed in Section 7.4 of this report.
- Ground settlement/consolidation. This includes ground consolidation associated with building loads, earthworks load, and dewatering and is addressed in Section 7.5 of this report.
- Soil expansiveness: This includes soil shrink/swell associated with drying and wetting of the soil profile and is addressed in Section 7.6 of this report.
- Seismicity: This includes the effects of ground shaking associated with a seismic event and is addressed in section 7.7 of this report.

7.2 SUBDIVISION EARTHWORKS AND BUILDING PLATFORM DEVELOPMENT

- Depending on the building or structure proposed, some level of ground improvement and /or specific foundation design is likely required for developments wishing to establish shallow foundations in contact with the Loess Formation.
- It is also recommended that a site-specific investigation be carried out when building plans come available to assist with foundation design.
- Depending on the nature and depth of earthworks required for the proposed development, allowance should be made for excavating and rehandling large schist boulders and floaters, which may prove problematic should undersized earth moving equipment be employed.
- This site has been used for agricultural purposes over the life of the property, which may lead to localised areas of ground disturbance associated with normal farm activities, Undercutting and appropriate ground remediation when forming a building platform should be expected.
- The overland flow path described in Section 3.4 will likely undergo a level of improvement and resizing. Details specific to this project element will be covered in a separate report currently being drafted by GCL (R8166-2A).
- Installation of a new community water bore should consider the potential influence of the treated effluent Land Application Areas (LAA) associated with each Lot. It is recommended that the water bore be positioned/separated at least 50m from any existing (neighbouring) and/or proposed LAA.

7.3 SLOPE STABILITY

7.3.1 General

The proposed Lots are located on mostly level to gently sloping topography which is underlain by variable ground conditions. In addition, the site is remote from steeper slopes and/or slopes prone to the development of slope instability features.

Given the gentle to level slope and appropriately designed foundations, there is no reason that the ground conditions across the proposed subdivision will not provide a safe and stable building platform with respect to slope stability conditions.

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

Section 8 provides recommendations on earthworks constraints associated with the proposed site development works in order to maintain safe and stable conditions

7.4 BEARING CAPACITY

7.4.1 General

Bearing capacity is discussed in this report in terms of ultimate limit state design methods outlined in AS/NZS 1170. As such, in accordance with AS/NZS 1170, we have provided "ultimate" bearing capacity values and an appropriate "dependable" bearing capacity for foundation design. The dependable bearing capacity has been determined from a strength reduction factor of 0.5 (i.e., a factor of safety of 2) which is in general accordance with the requirements of AS/NZS 1170.

In addition, the 'Allowable Bearing Capacity', where the ultimate is factored by a safety of 3, is included for reference.

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

It is also assumed that engineering fill will be placed to specification to provide an ultimate bearing capacity of 300kPa.

7.4.2 Shallow Foundation Solutions (Constructed within Outwash Deposits)

Table 7 outlines design bearing capacities for a shallow pad/strip footing solution. The design capacities are based on a minimum foundation embedment depth of 450mm into the competent ground. Competent material is considered the granular material associated with Outwash Deposits.

The embedment depth requirement for this foundation will be subject to formal engineering design and in general accordance with AS 2870. In addition, the below parameters are considered appropriate for waffle slab-on-ground foundation solutions, subject to subgrade inspection.

Table 7: Shallow Pad/Strip Footing Design Parameters

LOAD CASE	ULTIMATE BEARING CAPACITY	STRENGTH REDUCTION FACTOR	DEPENDABLE BEARING CAPACITY	(ALLOWABLE BEARING CAPACITY)
Ultimate Limit State Design	300kPa	0.5	150kPa	100kPa

7.4.3 Rib-Raft / Waffle Slab Solution (Constructed within the upper soils – Loess Horizon)

Table 8 outlines design bearing capacities for a rib-raft/waffle slab solution.

Table 8: RIB-RAFT/Waffle Slab Design Parameters

LOAD CASE	ULTIMATE BEARING CAPACITY	STRENGTH REDUCTION FACTOR	DEPENDABLE BEARING CAPACITY	ALLOWABLE BEARING CAPACITY)
Ultimate Limit State Design	150kPa	0.5	75kPa	50kPa

7.4.4 Foundation Service Bridging

We recommend that where a service line and associated backfilled trench are located within a 45° loading line taken from the base of a load-bearing structure foundation bridging is required.

Service line trenching and backfilling should be in accordance with recommendations provided in Section 7 of the report.

7.4.5 Retaining Walls

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

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

Table 9 provides geotechnical parameters for the engineered retaining wall design as required:

Table 9: Retaining Wall Design Parameters

COHESION (c')	FRICTION ANGLE (□')	ULTIMATE BEARING CAPACITY	UNIT WEIGHT (□)
0kPa	32°	300kPa	18kN/m^3

All retaining walls should be constructed with appropriate toe drainage and backfilled to their full height with lightly compacted free-draining granular material or other appropriate drainage solution. Toe drainage should be discharged at a point that will not impact or

influence the construction works on-site or alternatively be connected to the reticulated stormwater system.

7.5 GROUND SETTLEMENT

The site's ground conditions consist of aeolian derived silts and sands and outwash deposits comprising variations of sand and gravel. Provided foundation designs are site-specific, ground settlement is not considered a credible hazard.

The ground conditions are considered to be at least normally consolidated. They should accommodate low to moderate loads without inducing significant ground consolidation and associated differential ground settlement within Building Code limits (a maximum differential settlement ratio of 1 in 240).

As a prudent measure, however, ground loading constraints are recommended as follows:

- A maximum building UDL of 12kPa (includes live + dead loads).
- A maximum footing width of 1.0m.
- A maximum fill depth of 1.5m.

Should the proposed development exceed these constraints, we recommend that a specific settlement analysis be undertaken for the development and may require more extensive investigations than that undertaken to date.

7.6 SOIL EXPANSIVENESS

The site soil is considered not to be susceptible to the development of significant soil shrink/swell associated with changes in soil moisture content. Based on the logging of the test pits across the subdivision, we consider the site soil to be non-expansive according to AS 2870. The soil expansivity class is based on our experience of the type of soils encountered within the subdivision and is considered to provide a suitable qualitative assessment of soil shrink/swell.

Specific engineered foundation design to resist shrink/swell is therefore not required and is in compliance with NZS 3604:2011.

7.7 SEISMIC CONSIDERATIONS

7.7.1 Seismic Soil Class

Desktop study and site investigations across the proposed subdivision have demonstrated deep soils across the prospective area. We consider the site Sub-soil Class D appropriate according to NZS1170.5.

7.7.2 Liquefaction

The subdivision is not considered to be at any risk from liquefaction due to the dense, coarse nature of the soils and the depressed groundwater regime. Where recent silt is present, the absence of groundwater makes liquefaction unlikely.

7.7.3 Earthquakes

The Queenstown Lakes region, as for most of New Zealand, has been identified as prone to seismic activity. An appropriate allowance for seismic loading should be made during the detailed design of the proposed building, foundations, retaining structures, and earthworks.

Also refer to Section 5.2.1 for potential fault rupture within the site.

8 SITE DEVELOPMENT CONSTRAINTS

8.1 GENERAL EARTHWORKS DISCUSSION

While the expected site development works are unlikely to involve significant earthworks, Topsoil and Loess are considered unsuitable for reuse as engineered fill. The site won Outwash Deposits comprising variations of SAND and GRAVEL should provide suitable material for site won engineered fill subject to its field performance in context of NZS4431.

8.2 SUBDIVISION ROADING

The following aspects should be taken into consideration during detailed road design.

- The ground conditions identified in the completed test pitting revealed a mixture of soil types. Loess, which inherits a reduced bearing capacity, was identified up to 3.0m depth below ground level across parts of the proposed development. As such, detailed road design should consider the level of earthworks required to potentially undercut portions of the road alignment to establish a suitable roading subgrade.

8.3 SITE PREPARATION

During the earthworks, all Topsoil and organic matter and other unsuitable materials should be removed from the construction areas in accordance with the recommendations of NZS 4431:1989. The subgrade should be inspected prior to fill being placed and or foundations being constructed to establish it has suitable bearing capacity and is clear of unsuitable materials.

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

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

Where fill is utilised as bearing for foundations it should be placed and compacted in accordance with the recommendations of NZS 4431:1989 and certification provided to that effect.

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

8.4 EXCAVATIONS

Recommendations for temporary and permanent slope batters are provided in Table 10 below. Slopes that are required to be steeper than those described below should be structurally retained or subject to specific geotechnical design.

All slopes should be periodically monitored during construction for signs of instability and excessive erosion, and, where necessary, corrective measures should be implemented to the satisfaction of a Geotechnical Engineer or Engineering Geologist. Should construction and earthworks be undertaken during the winter period, the frequency of the inspections should increase, with site inspections being made after any significant weather event.

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

Table 10: Batter angles for soil slopes

MATERIAL TYPE	RECOMMENDED MAXIMUM BATTER ANGLES FOR TEMPORARY CUT SLOPES FORMED IN SOILS		RECOMMENDED MAXIMUM BATTER ANGLES FOR PERMANENT CUT SLOPES FORMED IN DRY (DRAINED) SLOPES
	WET GROUND	DRY GROUND	
Topsoil	3h:1v	2.5h:1v	2h:1v (grassed/planted)
Engineered Fill	2h:1v	1h:1v	2h:1v (unretained, drained)
Loess[1]	3h:1v	1h:1v to sub vertical	1h:1v
Outwash Deposits	2h:1v	0.5h:1v	2h:1v or by assessment

[1] Loess can perform well when cut vertically for batters <1.5m in height as surface flow is less likely to rill the material.

During construction, an inspection of soil cuts will be required to confirm the above recommendations have been fulfilled and are appropriate. Based on the site observations, a reduction in batter angles from those provided above may be required. Conversely, if materials are performing, steepened of batter angles may be permissible if site conditions and construction sequencing/programme are favourable.

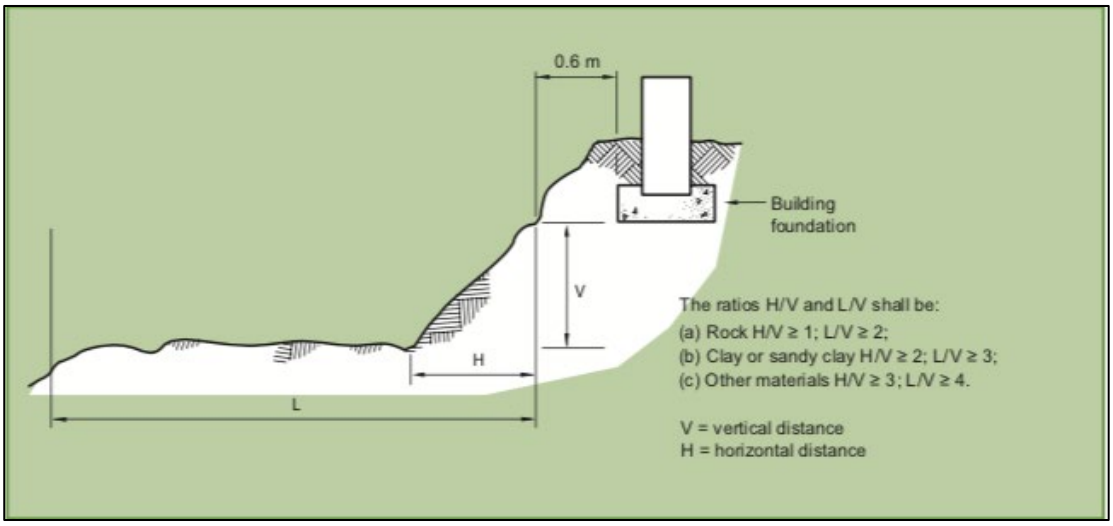
8.5 ENGINEERED FILL SLOPE

As recommended in Table 10 above, unretained engineered fill slopes should be formed at 2H:1V (or flatter), providing they are well-drained and compacted to the appropriate specification based on NZS4431. If steeper grades are required, the fill will require geogrid reinforcement to form slopes up to 45° but subject to specific engineering design from a chartered professional engineer.

8.6 FOUNDATION PROVISIONS (NZS3604)

With reference to NZS3604, Section 3.1.2 (b), any foundation for a building erected at the top of a bank, shall be 600mm behind the ground line as shown in the figure below. The horizontal distance (H) from the top to the bottom shall not exceed 3m. The slope beyond the bank shall not exceed 10° degrees for a distance of 10m.

Figure 3.1 After NZS3604



With reference to NZS3604, Section 3.1.2 (c) fill, including hard fill, placed over undisturbed ground or certified fill, shall not exceed 600mm in depth above natural ground level, if within 3m of a foundation. Where this condition cannot be met, the fill shall be tested and certified to be of appropriate density/strength.

8.7 SUITABILITY OF SITE-WON MATERIAL AS ENGINEERED FILL

Site won Outwash Deposits comprising variations of SAND & GRAVEL are suitable for reuse as engineered fill. Although, it's important to note that the depth of excavation required to encounter this material is potentially unfeasible.

Should there be a requirement to utilise site won fill in an engineering capacity, a trial process must be initially conducted to finalise optimum moisture content and fill placement methodology.

8.8 CONSTRUCTION MONITORING AND CERTIFICATION

It is likely that some level of earthworks will be required to establish roading, installation of services and forming building platforms should a future development eventuate. As such, the earthworks and placement of fill should be undertaken in general accordance with Queenstown Lakes District Council's Land Development and Subdivision Code of Practice (incorporating NZS4404) and NZS4431.

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

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

8.9 SERVICES

We recommend that all underground services are backfilled with adequately compacted backfill (bedding <12mm size fraction) to minimise the risk of significant trench consolidation and settlement.

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

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

8.10 UNSUITABLE MATERIALS

Recommendations for foundation design provided in Section 7 of this report are based on foundations embedded within "good ground" according to NZS 3604:2011. To achieve "good ground" we recommend the following:

- A suitably qualified person should inspect all foundation excavations.
- Care should be taken to ensure that all unsuitable material such as the topsoil layer, weak ground, areas of non-engineered fill and or hard spots are removed from the building platform prior to building construction.
- The undercut for the building footprint should extend for a horizontal distance equivalent to the undercut depth beyond the footprint. The undercut should be backfilled with engineered fill up to the required formation level unless specified otherwise by a suitably qualified person.

9 STORMWATER MANAGEMENT

9.1 GENERAL

Stormwater disposal will need to be managed on-site for each Lot. Stormwater disposal should comply with the operative District & Regional Plans, the Building Code and recognised New Zealand standards and guidelines. In summary, this requires the following:

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

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

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

9.2 SOIL SOAKAGE POTENTIAL

Specific percolation testing was not undertaken as part of this investigation. However, a qualitative assessment based on ground conditions observed within the completed test pits was considered appropriate at this point in the subdivision feasibility appraisal process

The following soil category classifications cognisant with NZS1547:2012 (Table 5.1) are summarised in Table 11 below.

Table 11: Inferred soil drainage characteristics

SOIL TYPE	SOIL CATEGORY CLASS	INDICATIVE PERCOLATION RATE (UNFACTORED. MM/HR)
Loess (Silty SAND/SANDY SILT)	3 – 4 (Loams)	<50mm/hr
Outwash Deposits (SAND & GRAVEL)	1 – 2 (Gravel and Sands + Sandy Loams)	1,500mm/hr

9.3 SPECIFIC STORMWATER DISPOSAL DESIGN

The soakage potential summarised in the table above is considered fair and conducive for soakage to ground structures. Specific soakage testing should be undertaken during detailed design to ensure a suitable designed and appropriately sized stormwater device is constructed.

Where soakage to-ground cannot be achieved given localised poor soakage ground conditions, stormwater disposal via detention/dispersal structures and outlets into existing surface water features may also be appropriate.

10 EFFLUENT DISPOSAL

10.1 GENERAL

A qualitative assessment of the soil type was undertaken during test pitting. Interpretation of the soil type and potential to transmit an amount of treated effluent is summarised below:

It's important to note that the proposed subdivision and associated lots are proximal to surface water features that require consideration when designing and siting a wastewater disposal management system / effluent disposal area.

10.2 SITE AND SOIL ASSESSMENT

The site and soil assessment were completed in conjunction with the site investigations undertaken. This assessment has been based on the guidelines of AS/NZS 1547:2012.

QLDC Application Form for Onsite Wastewater Disposal is included in Appendix C of this report.

Based on the site investigation findings, two distinct soil classification types are present that would be considered appropriate for the disposal of effluent on land. These are summarised in Table 12 below.

Table 12: Soil Classification

SOIL TYPE	SOIL DESCRIPTION	SOIL CATEGORY CLASS	DRAINAGE CHARACTERISTICS
Loess	Dry to moist, medium dense Silty SAND / sandy SILT	3 – 4 (Loams)	'Good' to 'Moderate'
Outwash Deposits	Dry, dense SAND & GRAVEL	1 – 2 (Gravel and Sands + Sandy Loams)	'Rapid' to 'Free'

10.3 CONCLUSIONS

Based on our investigations to date, the soils on the site have sufficient capacity to facilitate the disposal of effluent to land via sub-soil soakage methods.

Given the likely loadings associated with the type of residential development, on-site wastewater treatment and disposal systems may be designed to provide the necessary level of treatment such that the risk of causing significant adverse environmental effects is minimised.

For this development, given the size of the lots to be created and the large amount of land area available, it is expected that the on-site sewage and disposal systems should be designed for individual sewage management per Lot.

We confirm that a tank system, in conjunction with primary and secondary treatment elements, may be designed, implemented, and maintained to ensure a "means of treating and disposing of sewage, which is consistent with maintaining public health and avoids or mitigates adverse effects on the environment", therefore satisfying council policy.

10.4 RECOMMENDATIONS

Given the size of the proposed rural lots, we believe it is appropriate and feasible to consider individual lot systems for this development.

Individual lot systems that would provide sufficient renovation to effluent from on-site wastewater disposal for this development prior to discharge to land would likely comprise a multi-chamber septic tank or similar filtered type tank to each Lot combined with a secondary treatment element. Sewage from the treatment system would be pump or siphon dosed at a controlled daily rate to a disposal field of shallow depth.

Such systems could be designed to provide sufficient treatment/renovation of effluent prior to discharge to land. Provision should be made at site planning stage for a minimum disposal field area of between 50 and 100m^2 with reserve field areas duplicated to cater for the Class 2 to Class 4 soils.

Systems design should consider the following to maintain a high level of treated effluent quality,

- Specific design by a suitably qualified professional engineer.
- A requirement that each Lot must include systems that achieve the levels of treatment determined by the specific design.
- Regular maintenance in accordance with the recommendations of the system designer and a commitment by the owner of each system to undertake this maintenance.

- Intermittent effluent quality checks to ensure compliance with the system designer's specifications.
- Siting of disposal fields greater than 50m from any surface watercourse or water bore.

11 LIMITATIONS

11.1 GENERAL

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

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The sub-surface conditions have been extrapolated between the investigations undertaken. Whilst care has been taken to provide sufficient sub-surface information following best practice, no guarantee can be given on the validity of the inference made and it must be appreciated that actual conditions could vary from the assumed model.

11.2 FURTHER INVESTIGATION REQUIRED

This assessment has been undertaken for the proposed site development to date. Any structural changes, alterations and additions made to the proposed development should be checked by a suitably qualified person and may require further investigations and analysis.

Further geotechnical investigations will be required during for building consent stage to assess site slopes, foundation excavations, retaining walls and other geotechnical aspects of the development. In addition, such investigations will be used to inform the specific stormwater and effluent disposal system designs required for each Lot. This is to ensure ground conditions encountered are in accordance with the findings of this assessment. If ground conditions differ from those presented in this report, advice on design and construction modifications should be sought from a suitably qualified person.

DRAWINGS

GCL Ground Consulting Ltd

BROWN & COMPANY PLANNING GROUP

LOT 1 & 2, DP 303793, TE AWA ROAD, ALBERT TOWN

SITE LOCATION PLAN

Rev	Date	Status	Drafted	Reviewer
A	04/05/2022	Issued	S.F.	F.W.

File Ref. 8000/8166/R8166-1A/R8166-1A-DRW001.ai

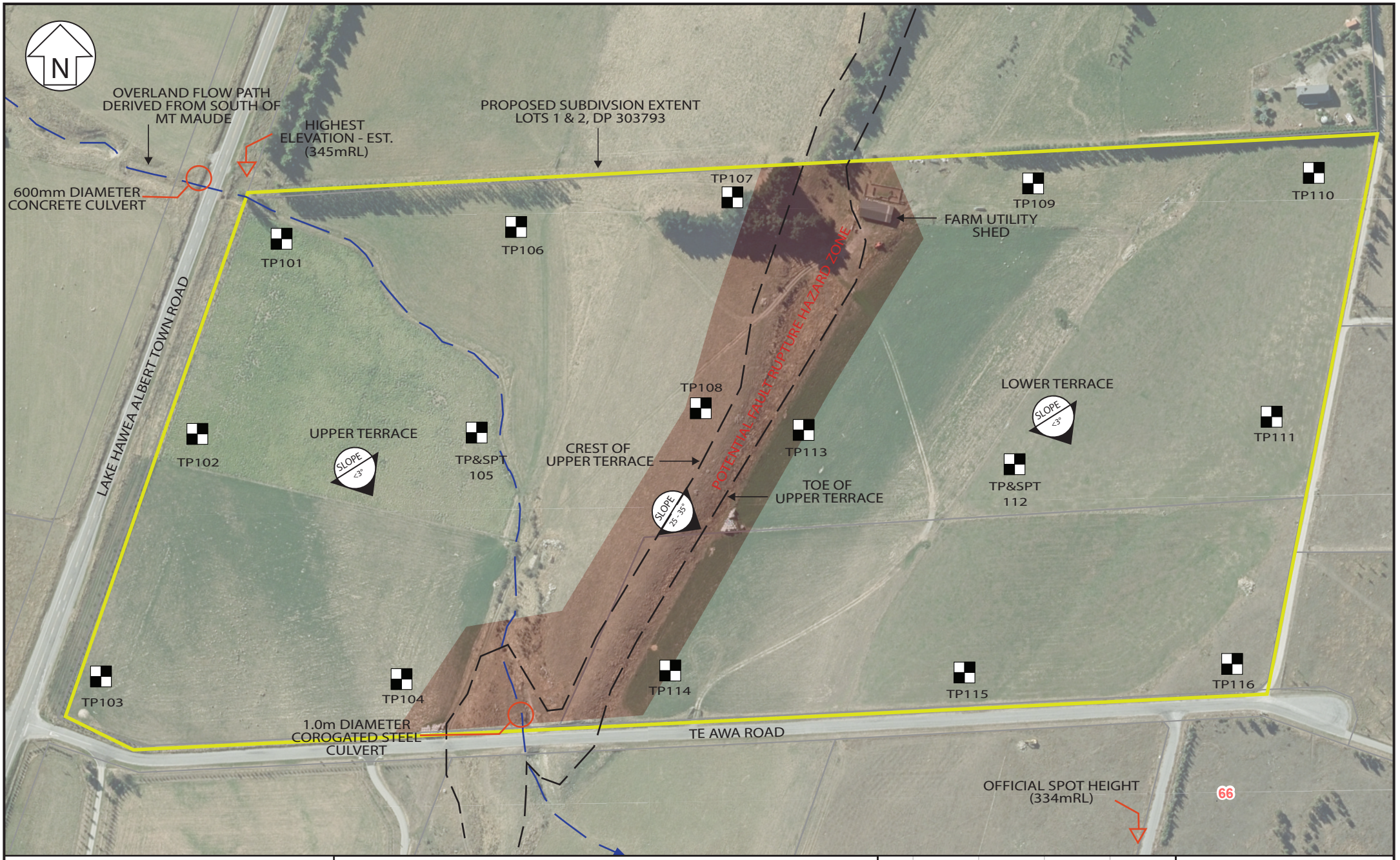
Scale (A4) 1:20,000

0 80 400 800m

Project No. 8166

Report Ref. R8166-1A

Drawing No. 001



GCL Ground Consulting Ltd

BROWN & COMPANY PLANNING GROUP

LOT 1 & 2, DP 303793, TE AWA ROAD, ALBERT TOWN

SITE INVESTIGATION PLAN

Rev	Date	Status	Drafted	Reviewer
A	04/05/2022	Recalled	S.F	F.W
B	31/08/2022	Issued	S.F	

File Ref. 8000/8166/R8166-1B/R8166-1B-DRW002.ai

Scale (A4) NOT TO SCALE

Project No. 8166

Report Ref. R8166-1B

Drawing No. 002

APPENDIX A: TEST PIT LOGS