APPLICATION AS NOTIFIED

G & D Thomson and HGW Trustee's Limited

(RM220681)

Submissions Close 01.12.2022

FORM 12

File Number RM220681

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:

G & D Thomson and HGW Trustee's Limited

What is proposed:

Consent is sought to establish a 1000m^2 residential building platform and to undertake associated earthworks and landscaping.

The proposed platform will be located in the south eastern corner of the site and will be accessed from a partly formed legal road along the southern boundary. Design controls are proposed relating to the form and bulk of future buildings, and to limit the type of cladding materials and exterior colours that can be used.

It is proposed to raise the finished floor level under future residential buildings by at least 0.5m above existing ground level, as recommended by the applicant's engineer, to mitigate any potential risk associated with shallow surface water flooding from Precipice Creek in extreme rainfall events.

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

The subject site is located adjacent to the Glenorchy-Paradise Road, Glenorchy. The property is located on the Precipice Creek side of the Glenorchy-Paradise Road near the intersection with the Rees Valley Road. The subject site is legally described as Lot 2 Deposited Plan 306479, as contained within Certificate of Tile 25360.

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 RM220681 as the reference https://edocs.qldc.govt.nz/Account/Login

The Council planner processing this application on behalf of the Council is Courtney Briggs, who may be contacted by phone at 03 450 2220 or email at courtney.briggs@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:

1 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 (G & D Thomson and HGW Trustee's) as soon as reasonably practicable after serving your submission to Council:

G & D Thomson and HGW Trustee's
C/- Gabriela Glory
gabriela@vivianespie.co.nz
Vivian Espie Ltd
1/211B Glenda Drive, Frankton, Queenstown

QUEENSTOWN LAKES DISTRICT COUNCIL

_____

(signed by Alana Standish, Team Leader Resource Consents, pursuant to a delegation given under Section 34A of the Resource Management Act 1991)

Date of Notification: 3 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) Geoffrey Lewis Thomson, Diana Thomson and HGW Trustee's

All trustee names (if applicable): Geoffrey Lewis Thomson, Diana Thomson

*Contact name for company or trust: Geoffrey Lewis Thomson

*Postal Address: 1255 Glenorchy-Paradise Road, Glenorchy

*Post code: 9372

*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: mount.earnslaw@gmail.com

*Phone Numbers: Day 03 442 5268

Mobile:

*The Applicant is:

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

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

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

*Name & Company: Gabriela Glory - Vivian Espie Ltd

*Phone Numbers: Day 03 441 4189

Mobile:

*Email Address: gabriela@vivianespie.co.nz

*Postal Address: 1/211B Glenda Drive, Frankton, Queenstown

*Postcode: 9300

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: [ ]
- Post: [ ]

*Attention: Geoffrey Lewis Thomson

*Postal Address: 1255 Glenorchy - Paradise Road, Glenorchy

*Post code: 9372

*Please provide an email AND full postal address.

*Email: mount.earnslaw@gmail.com

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

Owner Name: As above

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: Geoffrey Lewis Thomson

*Email: mount.earnslaw@gmail.com

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:

Glenorchy - Paradise Road, Glenorchy

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

Lot 2 DP 306479 held in Record of title 25360

District Plan Zone(s): Rural General (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 ☑

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:

To establish a building platform with associated access and landscaping, at Lot 2 DP 306479, Glenorchy-Paradise Road, Glenorchy.

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).
Written approval is pending

☑ 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 RMGEOFFREY

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

$2420 - Discretionary (overall consent status)

(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 8/8/22

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.

☑ PLEASE TICK

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

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

Full name of person lodging this form Gabriela Glory

Firm/Company Vivian Espie Ltd

Dated 08/08/2022

**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.

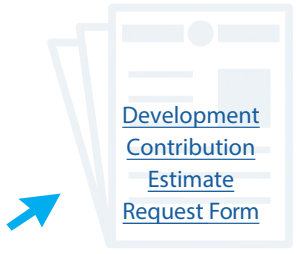
A3 APPENDIX 3 // Development Contributions

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

vivian+espie
resource management and landscape planning

PREPARED FOR
GEOFFREY LEWIS THOMSON AND DIANA THOMSON
5 AUGUST 2022

APPLICATION FOR LAND USE CONSENT

TO ESTABLISH A BUILDING PLATFORM WITH ASSOCIATED LANDSCAPING, AT LOT 2 DP 306479, GLENORCHY-PARADISE ROAD, GLENROCHY.

vivian+espie
resource management and landscape planning

Contents

Attachment **[A]**: Form 9
Attachment **[B]**: Record of Title 25360
Attachment **[C]**: Survey Plan and Landscape Plan
Attachment **[D]**: Landscape Assessment Report
Attachment **[E]**: Infrastructure Feasibility Report
Attachment **[F]**: Power and Telecommunications Confirmation
Attachment **[G]**: Liquefaction Hazard Report
Attachment **[H]**: Flood Hazard Report
Attachment **[I]**: Volunteered consent conditions
Attachment **[J]**: Decision of the Commissioner – RM160421

Quality assurance

Prepared by	Gabriela Glory	Planner/Landscape Technician	5 August 2022
Reviewed by	Blair Devlin	Director/Senior Planner	5 August 2022

1. Key Information

Address	Glenorchy-Paradise Road, RD 1, Glenorchy 9372
Legal Description	Lot 2 DP 306479 held in Record of Title 25360
Site Area	53.9ha
Owners	Diana Thomson, Geoffrey Lewis Thomson, HGW Trustee's Limited
Occupiers	Vacant
Applicant	Diana Thomson, Geoffrey Lewis Thomson
Operative District Plan Zoning	Rural General Zone
Designations & Special Provisions	None
Proposed District Plan Zoning	Rural Zone
Designations & Special Provisions	Outstanding Natural Landscape Wahi Tupuna
Proposed Activity	To establish a building platform with associated access and landscaping, at Lot 2 DP 306479, Glenorchy-Paradise Road, Glenorchy.
Consents Required	**Operative District Plan** <u>Rural General Zone:</u> • Rule 5.3.3.3i(b) for the identification of a residential building platform between 70m^2 and 1000m^2 in size shall be a **discretionary activity**. <u>Transport:</u> It is noted that this rule below has not been triggered, as the vehicle access is existing and formed to Council standards approved under RM160421. • Rule 14.2.2.3 for any activity which does not comply with a site standard shall be a **discretionary activity.** The proposal does not meet the required minimum sight distance from vehicle access under Rule 14.2.4.2iv. **Proposed District Plan** <u>Rural Zone:</u> • Rule 21.4.10 – the identification of a building platform not less than 70m2 and not greater than 1000m2 shall be a **discretionary activity**.

	Transport: It is noted that this rule below has not been triggered, as the vehicle access is existing and formed to Council standards approved under RM160421. • Rule 29.5.17 for a shortfall of minimum sight distance of 170m for residential activity where the posted speed limit is 100km/hr shall be a **restricted discretionary activity.** Overall, the proposal is for a **discretionary** activity.
Written Approvals and Consultation	To be completed, will provide upon receipt.
Other consents/permits	N/A

2. Introduction

This report is submitted as part of the application by Geoffrey Lewis Thomson and Diana Thomson ("the Applicant") for resource consent from Queenstown-Lakes District Council (QLDC or "Council") to establish a building platform at Glenorchy-Paradise Road. The completed Form 9 is appended as Attachment **[A]** and the Record of Title is appended as Attachment **[B]**. The proposed plans (survey plan and landscape plan) are appended as Attachment **[C]**. The Landscape Report is appended as Attachment **[D].** In preparing this assessment, specialist advice has been relied on and is appended to this report as Attachments **[E-H].** Volunteered conditions are appended as Attachment **[I]**. The purpose of this report is to provide sufficient information to enable a full understanding of the proposal and any effects that the proposal may have on the environment.

3. Existing Environment

3.1 Subject site

The site is a 53.9-hectare site located at Glenorchy-Paradise Road, legally described as Lot 2 DP 306479 held in Record of Title 25360. The site is located east of the Rees River and north of Precipice Creek, and is bordered by an unformed and unnamed legal road west and south, and Glenorchy-Paradise Road north and east. The site is bisected by a watercourse known as McConachy's Creek. The site has a generally flat contour, with a number of surface drains crossing the property. At times of high flood these drains feed surface water into the Rees River.

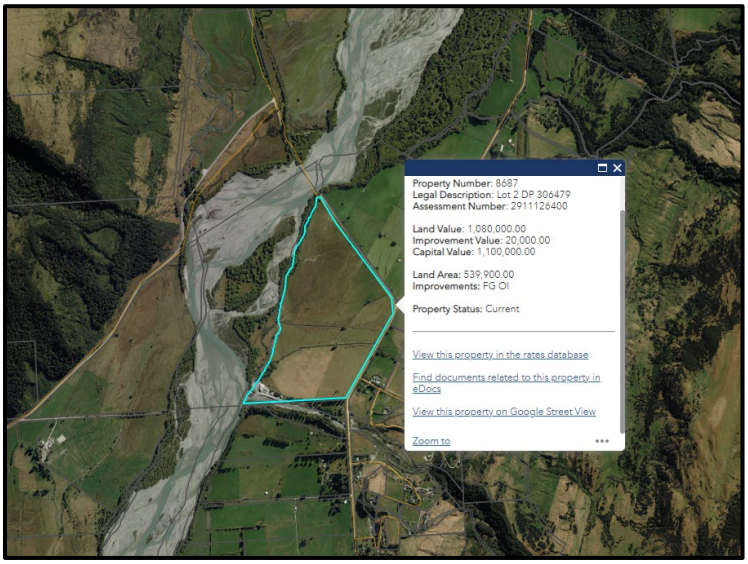


Figure 1: Subject site (outlined in blue) and surrounds

The site consists of open pastoral farmland; no buildings are located on the site. The site has been used primarily for sheep grazing. Stands of willow trees undulate in and out of the property where they extend from the Rees River corridor. A shelterbelt of mature poplar trees grows along the southern boundary adjoining the unformed legal road, extending towards the area where a gravel extraction quarry occurs on the south-west portion of the site (refer RM130073).

RM160421 approved a building platform on the site, however this resource consent has lapsed. The purpose of this application is to re-establish a building platform on the site, in the same location as approved under RM160421 (Attachment **[J]**).

Council's GIS web mapping application identifies several natural hazard risks on the site including seismic liquefaction, flooding, and alluvial fans from the Rees River and Precipice Creek.

3.2 Surrounding environment

Overall, the general context of rural land in the vicinity of the subject site and to the north of Glenorchy Township is classified as an Outstanding Natural Landscape (ONL). The surrounding environment to the east consists of Rural Lifestyle Zoned land, known as the Paradise Park subdivision, and has been subdivided to an average lot size of 2 hectares. Precipice Creek (Crown land managed by the Department of Conservation) and Rees River directly adjoins the subject site. A triangular portion of the neighbouring site contains a relocated building which has resource consent for a veterinary practice, located approximately 32m from the unformed road boundary. To the north is a farm shed in the middle of a paddock.

The nature and activities of the surrounding environment is shown in Figure 2 below.

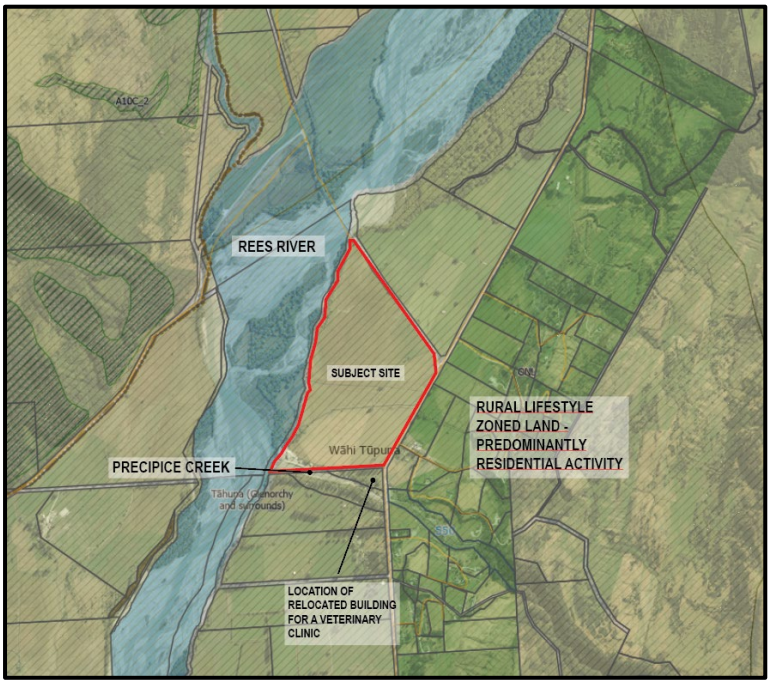


Figure 2: Map of surrounding environment (right) and image showing location of relocated building for a veterinary clinic (left)

3.3 Site history

The following resource consents have been identified through Council's eDocs system, and are considered relevant to this application:

a) Resource consent RM010560 was granted in September 2001, which granted subdivision consent to subdivide three sections held in two certificates of titles, into two new allotments. The resultant of this resource consent is the creation of Lot 1 DP 306479, and the subject site being Lot 2 DP 306479.

b) Resource consent RM050811 was lodged in August 2005 to subdivide the site into two allotments each containing a building platform, and undertake earthworks and landscaping. The consent was publicly notified with five submissions in opposition[1]. This consent has subsequently been withdrawn.

c) Resource consent RM130073 was issued in March 2013 to establish and operate a seasonal gravel extraction, processing and stockpiling operation at the confluence of the Rees River and Precipice Creek. This consent relates to the operations which directly adjoin the Rees River, briefly crossing over the applicant's property. The applicant leases this area of site to Glenorchy Gravel Ltd; the gravel operator, for these operations. This consent is being given effect to and expires in 2023 for both QLDC consent and ORC consent.

[1] A & M Hasselman (Temple Peak Station), J Henderson, the Scott Family (Rees Valley Station), Otago Regional Council and the Glenorchy Community Association.

d) Resource consent RM160421 was issued on 17 October 2016 to identify a residential building platform. This application was publicly notified and received four submissions[2]. This consent however has lapsed and not been given effect to other than with regard to the driveway and access formation, which was completed. Correspondence with QLDC confirmed that insufficient work had been completed under RM160421 to say it had been given effect to.

4. The Proposal

The purpose of this application is to reapply for the same resource consent approved under RM160421, which has lapsed, with additional information and modifications to meet updated Proposed District Plan standards and QLDC requirements.

4.1 Proposed Building Platform

Resource consent is sought to establish a 1000m^2 residential building platform and associated landscaping. The location of the building platform is located in the same location as approved by RM160421 (**Attachment [J]**), as indicated on the Survey Plan appended as **Attachment [C]**. The proposed platform will be located approximately 53m off the southern boundary, and 100m off Glenorchy-Paradise Road at its closest point. The proposed platform will be accessed from a partly formed legal road along the southern boundary. The vehicle access and driveway was constructed under RM160421 before it lapsed.

4.1 Proposed Design Controls

The proposal includes a range of design controls relating to the bulk and form of future buildings to be registered as a land covenant under section 108(2)(d). These design controls are the same design controls approved by RM160421. It is acknowledged that some District Plan standards have changed since the approval of RM160421, and as such the controls have been modified where necessary to meet Proposed District Plan standards. The proposed design controls include the following (note that this is a summary of design controls, a full list of volunteered consent conditions is appended as **Attachment [I]**):

Design controls:

a) The total footprint of the buildings within the building platform shall not exceed 500m^2.
b) The height of any buildings within the building platform shall be restricted to 6.5m above the original ground level as at 16 November 2006.
c) All built elements upon the roof or upper portion of a future building, including but not limited to chimneys, satellite dishes and solar panels, shall not extend beyond the maximum height of 6.5m above the original ground level as at 16 November 2006 and shall be of a colour to match the roof.

[2] Steve Hewland and Katherine Cahill, Otago Regional Council, The Scott Family (neither supported nor opposed the application), Te Ao Marama (submission withdrawn).

d) Any future dwelling shall be designed to have the bulk and form of a traditional farm building i.e., a homestead, woolshed, or barn and shall be constructed from cladding materials typically associated with that type of building.
e) The main roof of any future dwelling shall have a pitched roof, with a slope of at least 25 degrees.
f) Roof and wall claddings are to be coloured in a natural range of greys, cool browns or greens that have a light reflectivity value of between 7% and 20%.
g) Wall cladding materials shall be limited to stacked stone, timber weatherboards, traditional corrugated iron, colour steel or solid plaster, or a combination thereof.
h) All exterior lighting shall be restricted to the building platform and shall be down lighting only. Lighting shall not exceed 1m in height, except where attached to a building where it shall not exceed 3m in height.

4.1 Infrastructure and services

4.1.1 Proposed Access and Roading

The proposed building platform will utilise an existing vehicle access from the unnamed road immediately south of the subject site. Figure 3 below shows a photograph of the existing driveway and aerial view taken from Google Maps. The existing vehicle access has been formed to Council standards under RM160421, and forms part of the existing environment as further discussed in Section 7.1 of this report:

Figure 3: Photograph showing existing driveway (left) and aerial view taken from Google Maps (right)

Resource consent is sought for the shortfall of sight distance to the east from the proposed access. An assessment has been made in this regard. The site access was constructed under RM160421 and is in accordance with the QLDC Code of Practice (COP).

4.1.2 Water Supply

No existing water supply is available on the subject site. A bore was recently constructed on site and water of sufficient quantity and quality was found within the underground aquifer to supply the proposed building platform. The proposal seeks to reticulate water from the bore, in which a bore pump will be installed and pumped to water storage tanks at the time a dwelling is constructed. Water pumped from the bore will need to be treated through filtration and UV disinfection prior to human consumption. A condition of consent is volunteered to ensure that water is filtered and disinfected, and meets the requirements of the Drinking Water Standards for New Zealand

2018. The Infrastructure Feasibility Report prepared by Civilised Ltd which confirms the details above is appended as Attachment **[E].**

4.1.3 Firefighting water supply

Water supply for the development will be provided from the reticulated water from the existing bore discussed above. A consent notice condition is proposed to ensure that tanks provide sufficient water reserve for fire-fighting purposes is maintained and available at the time a dwelling is constructed on the building platform.

4.1.4 Wastewater servicing

There are no community or Council wastewater schemes in close proximity to the subject site. The Infrastructure Report and Hazard Report confirms that soils on site have sufficient capacity to facilitate the disposal of effluent via sub soakage methods, provided some treatment can occur prior to discharge due the proximity of sensitive receivers.

The on-site wastewater disposal system including primary and secondary treatment elements, will need to be designed to provide the necessary level of treatment in a way that minimises effects on the environment. The location of the wastewater disposal system will need to ensure that a minimum clearance of 50m is achieved from the bore, and ensure that provision is made for 20m^2 minimum disposal field area and 20m^2 reserve field area. A condition of consent is volunteered in this regard.

The Infrastructure Report including the water quality test results are appended as **Attachment [E]**.

4.1.5 Stormwater Disposal

The subject site is not currently serviced by QLDC infrastructure. The site currently drains stormwater through a series of drains located across the property, and regularly maintained by the landowner. Rainwater can be collected into the water supply tanks from roof runoff, which will reduce the need for stormwater disposal. However, stormwater will need to be conveyed to allow runoff from roadside access and impermeable parts of the site. It is proposed to construct a roadside drainage swale to convey stormwater form the proposed access, and construct soak pits to drain runoff from impermeable parts of the site. The Infrastructure Feasibility Report confirms that ground conditions are suitable for stormwater disposal by soakage to ground. These systems will need to be specifically designed at the time a building is proposed. A condition of consent is volunteered in this regard.

4.1.5 Power and Telecommunications

Power and telecommunication reticulation has been confirmed as feasible by Aurora Energy Limited and Chorus, a copy of the correspondence can be found in **Attachment [F].**

4.1.6 Natural Hazards

Flooding risk

A flood hazard assessment has been undertaken as part of RM160421, appended as **Attachment [H]**. This assessment is still considered relevant as it assesses the potential risk associated with shallow surface water flooding from Precipice Creek and methods to mitigate future built form during extreme rainfall and flooding events. This proposal adopts the recommendation in the flood hazard report to raise the finished floor level of the future residential building by at least 0.7m above the existing ground level. A consent notice condition is volunteered.

Liquefaction risk

A Geotechnical Report assessing liquefaction hazard has been undertaken as part of RM160421, appended as **Attachment [G]**. The assessment has been carried out to determine geotechnical recommendations in relation to foundation design. The report recommends that the foundations of the building is to be either, a specifically designed TC2 rib-raft foundation, or the construction of a dense geogrid reinforced gravel raft. A consent notice condition is volunteered.

4.2 Proposed Landscaping

The Landscape Concept Plan submitted with the application **Attachment [C]**, has been updated, however it is noted that the location of tree planting is the same as the Structural Landscape Plan approved under RM160421. The only point of difference are the tree species chosen for hedging, to include faster growing species.

The proposed platform is to be landscaped in accordance with the Landscape Concept Plan appended as **Attachment [C]** and the Landscape Assessment Report appended as **Attachment [D]** assesses the effects the proposal has on landscape values, character and visual amenity**.** The planting proposed seeks to mitigate a proposed residential dwelling within the building platform, which will reduce the degree of visibility over a period of approximately 5 years.

Mitigation planting comprises of:

a) A conifer hedge (Cupressus x leylandii 'Leighton green') to the north and east of the building platform - evergreen
b) Lombardy poplars along the southern boundary within the subject site to complement the existing poplars which exist within the unnamed legal road
c) Lombardy poplars along the southwestern fence line

An open pasture space is proposed directly adjoining Glenorchy-Paradise Road on the eastern portion of the site, which is to be kept free of trees and any form of domestication, other than that specified in the Landscape Concept Plan. A conifer shelter hedge is proposed adjoining the building platform to screen the future built form from the Glenorchy-Paradise Road, to ensure that proposed built form is reasonably difficult to see. No additional curtilage area is proposed and all residential activities will be contained within the building platform.

5. Matters Requiring Consent

5.1 National Environmental Standards

The Resource Management (National Environmental Standard for Assessment and Managing Contaminants in Soil to Protect Human Health) Regulations 201 1 ("the NES") came into effect from 1 January 2012 and applies to all subdivision or other activity that will change the use of the land. The NES requires an applicant to demonstrate to the Council that it is highly unlikely that there will be a risk to human health from any activity on the HAIL list.

The application does not require consent under the NES since there has been no known HAIL activities that have taken place on the site. No new records suggesting an activity on the HAIL has taken place on the piece of land which is subject to this application having regard to the information held by the Queenstown Lakes District Council and the Otago Regional Council. As such, the proposal is therefore considered to be a permitted activity under the NES. This approach was accepted under RM160421.

5.3 Operative District Plan

The subject site is zoned Rural General under the Operative District Plan (ODP) and the zoning of the site itself is not under appeal.

Rural General Zone

- Rule 5.3.3.3i(b) for the identification of a residential building platform between 70m^2 and 1000m^2 in size shall be a **discretionary activity**.

Transport Chapter

It is noted that this rule has not been triggered, as the vehicle access is existing and formed to Council standards approved under RM160421.

- Rule 14.2.2.3 for any activity which does not comply with a site standard shall be a **discretionary activity.** The proposal does not meet the required minimum sight distance from vehicle access under Rule 14.2.4.2iv

The relevant Proposed District Plan (PDP) rules listed in Section 5.4 are no longer under appeal, therefore the relevant rules in the ODP must be treated as inoperative pursuant to Section 86F of the RMA. However, the objectives and policies of the ODP are still relevant and will be discussed in Section 9.4 of this AEE.

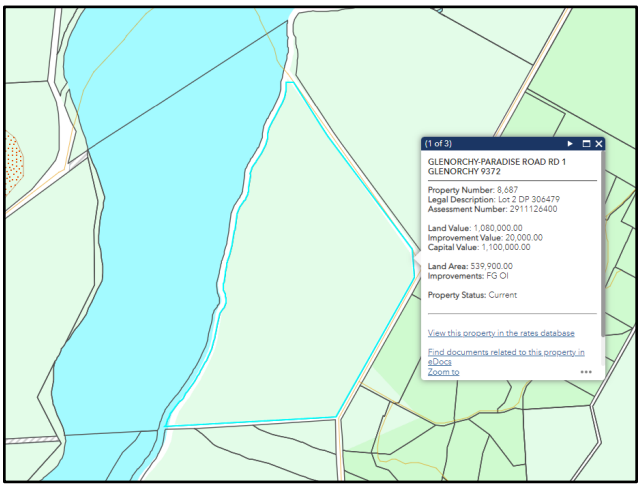


Figure 4: Subject site zoned Rural General under the ODP

5.4 Proposed District Plan (Stage 3 – May 2015 Decisions Version)

The subject site was zoned Rural Zone ONL (Outstanding Natural Landscape) under Stage 1 of the PDP review as shown in the image below:

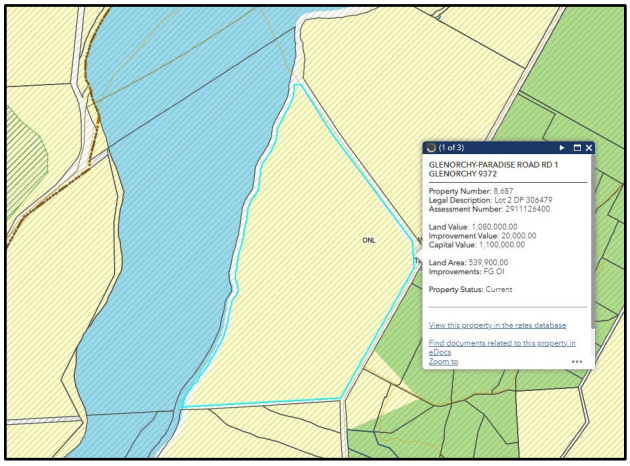


Figure 5: Subject site zoned Rural RCL under the PDP

The proposal requires consent under the PDP for the following matters.

Chapter 21: Rural Zone

- A **discretionary** activity pursuant to Rule 21.4.10 for the identification of a building platform not less than 70m^2 and not greater than 1000m^2 in the Rural Zone. It is proposed to identify a building platform measuring 1000m^2 on the subject site.

Chapter 29: Transport

It is noted that this rule has not been triggered, as the vehicle access is existing and formed to Council standards approved under RM160421.

- A **restricted discretionary** activity pursuant to Rule 29.5.17 for a minimum sight distance of 170m for residential activity where the posted speed limit is 100km/hr, from vehicle access on all roads other than State Highways. The proposed access is located 70m from the Glenorchy-Paradise Road intersection. Council's discretion is limited to the following matters:
    - Effects on safety, efficiency, and amenity of the site and of the transport network, including the pedestrian and cycling environment.

Overall, the proposal requires a **discretionary** resource consent under the Proposed District Plan.

5.6 Scope of Application

This application is for all matters requiring resource consent rather than for the specific list of consent matters / non-compliances identified by the author. If the Council is of the view that resource consent is required for alternative or additional matters to those identified in this AEE, it has the discretion to grant consent to those matters as well as or in lieu of those identified in this AEE. If the Council is of the view that the activity status of any of the matters requiring consent is different to that described in this AEE, or that some or all of the matters requiring consent should be bundled or unbundled in a way that results in a different outcome to that expressed in this AEE, the Council has the ability under Section 104(5) of the Resource Management Act 1991 ("Act") to process the application regardless of the type of activity that the application was expressed to be for.

6. Statutory Considerations

Council's decision on the proposal must give effect to the purpose and principles of the Act, as set out in Part 2 of the Act, and have regard to the relevant matters in sections 104 to 108 of the Act.

6.1 Resource Management Act – Part 2

The purpose of the Act, set out in Section 5, is to promote the sustainable management of natural and physical resources. This is defined as:

"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—

(a) *Sustaining the potential of natural and physical resources (excluding minerals) 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 proposed identification of an additional building platform will provide for the social and economic wellbeing of the current applicant and any future owners by enabling a future residential building to be located on the site. This can be achieved by ensuring the development is not inappropriate relative to the surrounding context and environment. The location of the building platform, with no additional curtilage area means that the property is

able to be utilised for residential activity and agricultural or horticultural use in a similar nature of the existing use. The Landscape Assessment supports that any potential adverse effects that may arise from the building platform can be mitigated through design controls and the Landscape Concept Plan.

The broader principles of the Act are set out in sections 6 to 8 of the Act.

Section 6 identifies a number of matters of national importance. These matters include (relevantly):

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.

(h) the management of significant risks from natural hazards

The site itself is classified as an Outstanding Natural Landscape (ONL) under the Proposed District Plan. The location of the proposed building platform will be mitigated by landscaping to ensure that adverse visual effects from adjoining lots, roads and public places are mitigated. The proposal maintains a significant lot size (no subdivision is proposed) in which future owners are able to utilise the property for both residential activity and agricultural or horticultural activities on the remainder of the site The density of proposal including design controls for future built form is also consistent with the surrounding rural environment. Natural hazard risks have been identified and assessed. Mitigation measures are proposed including raising the floor level by 0.7m and to ensure that foundations are specifically designed to mitigate effects of liquefaction. The proposal is not inappropriate in the ONL.

Section 7 sets out a number of "other matters" to which the Council is required to have regard to.

These matters include (relevantly):

(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 proposed building platform will enable the applicant to develop the site in a manner that will retain the feasibility of continuing agricultural and horticultural activities, whilst allowing for housing for future generations. Design controls will be registered on a land covenant which will ensure that future built form will mitigate adverse effects and maintain amenity values in perpetuity. Furthermore, proposed landscaping will ensure that the amenity values of the ONL is maintained and any potential for adverse effects are mitigated appropriately.

Section 8 requires Council to take into account the principles of the Treaty of Waitangi. The property is identified in Council's GIS web mapping application with a wahi tupuna overlay indicating a site of significance to iwi, being Tahuna (Glenorchy and surrounds). However, given the considerable distance between the waterbodies and the proposed platform, it is considered that the proposal will not create adverse effects with regard to the values of iwi, and as such the proposal is considered consistent with the principles of the Treaty of Waitangi.

Overall, the proposed subdivision is considered to be consistent with the purpose and principles of the Resource Management Act 1991.

6.1.2 Section 104 – Matters for Assessment

Of relevance to this application, Section 104(1) of the Act requires the Council to have regard to the following matters, subject to Part 2 of the Act:

(a) *any actual and potential effects on the environment of allowing the activity; and*

(b) *any relevant provisions of –*

(i) a national environmental standard:

(iii) a national policy statement:

(v) a regional policy statement or proposed regional policy statement:

(vi) a plan or proposed plan; and

(c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

Section 104(2) of the Act states that, in considering the effects on the environment of allowing an activity, a consent authority may disregard an adverse effect if a national environmental standard or the plan permits an activity with that effect.

Section 104(3) states that a consent authority must not have regard to trade competition or the effects of trade competition, or any effect on a person who has given written approval to the application.

6.1.3 Section 104B – Discretionary Activities

Under Section 104B of the Act, a consent authority processing an application for a discretionary activity may grant or refuse the application and can impose conditions under section 108.

An assessment of the effects of the proposal on the environment is provided in section 7 of this AEE while an assessment against the relevant objectives and policies of the relevant plans is provided in section 9 of this AEE.

7. Assessment of Environmental Effects

The assessment matters listed in Chapter 21 Rural (21.21.2) have been used as a basis for this assessment. The assessment has been derived from Policies 3.3.32 (Strategic Directions), 6.3.10 and 6.3.19 - 6.3.29 (Landscape Character).

7.1 Permitted Baseline/Receiving Environment

Section 104(2) of the Act states that, in considering the effects of allowing an activity, a consent authority may disregard an adverse effect if the plan permits an activity with that effect. In the Rural Zone, the identification of a building platform requires a resource consent. In addition, as the existing resource consent has been either formally withdrawn or has lapsed, no consented baseline is considered to apply.

Access to the building platform has been formed under RM160421 prior to it lapsing. The location of the access and driveway is considered to be part of the existing/receiving environment.

7.2 Landscape Effects (Operative District Plan)

The following assessment of effects have been structured using the assessment matters listed under the Operative District Plan Section 5.4.2.2(2) as it relates to Outstanding Natural Landscapes District Wide. It is noted that the application made under RM160421 (the same is proposed as part of this application), has been considered and assessed through hearing and Commissioner Decision has been made. The assessment under the ODP below draws on the decision made by the commissioner and has also been assessed within the Landscape Report appended as **Attachment [D]**.

7.3.1 Potential of the landscape to absorb development

It is noted that the Commissioner Decision under RM160421 (**Attachment [J]**) confirms the following with regard to the suitability of the location of the building platform in relation to the landscape:

> *'The commission is satisfied that future development on the proposed residential building platform will not be visually prominent in this context.'*

The Commissioner Decision has also considered that whilst the location of proposed development is visible from public places, '*future development on the proposed platform will be viewed in the context of that part of the ONL that is located on the valley floor and has been developed for farming, being adjacent to existing Rural Lifestyle Zone.'*

The location of the proposed building platform and future dwelling, including volunteered design controls are appropriate in the context of the surrounding landscape as it is located close to existing development, and located in a manner which will maintain the open agricultural character of the valley floor, backdropped by existing and proposed Lombardy Poplar trees.

This is supported by the Commissioner Decision:

> '*The Commission considers that the landscape has the potential to absorb a future dwelling on the proposed residential building platform subject to the Structural Landscape Plan and appropriate design controls being adhered to.'*

Hedging is proposed to mitigate visual effects of the future building. The effects on landscape are not compromised by this shelter hedge, as shelter hedges are commonly found in colonially settled farming landscapes and mimic vegetation patterns of the surrounding agricultural landscapes. It is noted that this matter has been discussed through hearing under the OPD, and the Commissioner Decision under RM160421 confirms the following:

> *'The Commission notes in this context that the planting associated with the proposed development will not detract from existing natural patterns and processes within the site and surrounding landscape.'*

7.3.2 Effects on openness of landscape

The proposed development will result in a small portion of the site being developed, in an area of land which is immediately backed by a mature line of shelter trees. The Landscape Report confirms that the sense of openness appreciated by observers will not be reduced, that views will not be enclosed and that the landscape will remain overwhelmingly open. Additionally, the remainder of the site will be retained as open pasture and protected by a covenant. This will ensure that the site remains predominantly open, which will therefore ensure that a sense of openness is maintained within the landscape.

The Commissioner Decision agreed with the suitability of location of the proposed development, in which the locating of the proposed development in the south-eastern corner of the site (adjacent to the existing poplars) and bolstering tree planting in this area is an appropriate design response in relation to landscape openness.

7.3.3 Cumulative Effects on Landscape Values

The subject site is located within the farmed valley floors, which the Landscape Report notes are not as natural or dramatic in appearance as elevated mountain slopes, however are an inseparable component of the broader landscape. The experience of this landscape is one of rugged isolation at the edge of human influence over land.

The Landscape Report confirms that whilst the proposal will extend this pattern to the north to a small degree, it will still be experienced as part of the existing built character of the valley floor, rather than a development in isolation with no relationship to the established pattern of development. The proposal is located within an area where there are other residential dwellings and farm sheds in its vicinity. A single dwelling within the building platform, with proposed design controls and planting, surrounded by the expanse of paddock land will be congruent with the open farmed character of the valley floor.

Cumulative effects will be avoided through the preservation of open paddock land, careful consideration of the building appearance through design controls, proposed planting and the backdrop of shelterbelt trees both existing and proposed.

This was agreed upon by the Commissioner in RM160421:

> '*The Commission is satisfied that existing development and/or land use does not represent a threshold with respect to the site's ability to absorb further change as will be provided for on the proposed building platform… [and that] while the Rural Lifestyle Zone exists to the east of the Glenorchy-Paradise Road, further development, as proposed in this application, will not lead to further degradation of natural values or inappropriate domestication of the landscape.'*

Overall, and as the Landscape Report and Commissioner Decision confirms, the proposal will not give rise to adverse cumulative effects on the landscape.

7.3.4 Positive Effects

A positive effect includes the retention of the open space paddock located outside the building platform and proposed planting areas, which will be retained for the purpose of farming uses; consistent with the purpose of the Rural General Zone. This will be protected through design controls, registered on a legally binding land covenant.

By confining the development to the south-east corner of the site, it ensures that the majority of the site will be maintained in its current open pastoral state. The Commissioner Decision considers this a positive effect.

7.3.5 Summary of Landscape Effects (ODP)

Overall, the conclusions of the independent commissioner on RM160421 are accepted and adopted with regard to the effects of the proposal in relation to the ODP assessment matters. This assessment in relation to landscape effects under the ODP concludes that the proposal is strategically located in a portion of land which can absorb development, and can be effectively mitigated through planting and design controls.

7.4 Landscape Effects (Proposed District Plan)

The following assessment of effects have been structured using the assessment matters listed under Proposed District Plan standard 21.21.1 as it relates to Outstanding Natural Landscapes.

7.4.1 Capability of the landscape to absorb change and where buildings, structures and roading are reasonably difficult to see beyond the site boundary

The Landscape Report **Attachment [D]** confirms that the proposed development will be visible from parts of Glenorchy-Paradise Road, Rees Valley Road, the unformed legal road to the south and west, Rees River and private land within Rural Lifestyle zone on the upper elevations to the east.

However, the measures are proposed to mitigate potential adverse effects on visual amenity, which include planting of hedges and trees, restrictions on colours, material and form of the future dwelling. Planting and hedging will grow to maturity over a period of approximately 5 years. Once planting and hedging grows, the future dwelling will be difficult to see from Rees Valley Road, Rees River and the unformed legal road towards the west of the subject site.

In addition, the Landscape Report confirms that whilst the verdant valley floor is a component of the views valued by this particular landscape, it is not the dominant component. It confirms that the proposal will not dominate or detract from views of the surrounding mountainous landscape, and that any views of the future dwelling will be filtered by proposed planting and future built form will be recessive to not appear in contrast with the surrounding environment.

The location of the proposed building platform and future dwelling is appropriate as it is located close to existing development, and located in a manner which will maintain the open agricultural character of the valley floor. The

Landscape Report confirms that a dwelling and tree planting of rural nature is not unexpected in this rural landscape.

7.4.2 Existing vegetation

There are existing poplars located along the southern boundary and willows on the southern and western boundaries of the site. It is not known how long these trees have been on the site, the Landscape Report estimates that the trees are approximately 20 years old. Both willow and poplar trees are strong elements within the rural landscape, due to its prominence on farmed flats and river and creek corridors found in the surrounding environment.

Figure 6: Image of existing poplar trees

The existing poplars identified on the Landscape Plan will be part of visual mitigation of proposed built form particularly from the site's southern boundary. The proposal also seeks to plant additional poplar trees within the subject site, to provide additional mitigation and screening.

7.4.3 Effects on landscape quality and character

The Landscape Report **Attachment [D]** describes the landscape character of this area as open and flat pastoral river valleys of the Rees and the Dart rivers, flanked on either side by impressive snow-capped mountain ranges that form part of Mount Aspiring National Park. Human influence is mostly evident in the valley floor and mainly small in scale, whilst within the surrounding Rural Lifestyle Zone a more domestic character is evident. The elements of the site and wider landscape that are potentially affected by the proposal includes the rural character of the valley floor and the natural character of the wider landscape. Physical, visual and associative/appreciation and cultural attributes are discussed in the Landscape Report.

The subject site is located within the farmed valley floors, which are not as natural or dramatic in appearance, however are an inseparable component of the broader landscape. The experience of this landscape is still one of rugged isolation at the edge of human influence over land. Whilst this is the case, the proposed is located within an area where there are other residential dwellings and farm sheds in its vicinity. The Landscape Report confirms that whilst the proposal will extend this pattern to the north to a small degree, it will still be experienced as part of the existing built character of the valley floor, rather than a development in isolation with no relationship to the established pattern of development.

Design controls, the restriction of any domestication to be contained within the building platform and proposed planting will assist in the mitigation of potential effects on landscape character, as the proposed controls results in a recessive future-built form, of limited height and of vernacular rural design. The Landscape Report confirms that these design controls will assist in a future built form that is coherent with the surrounding character, and it will not appear out of scale or uncharacteristic of the rural landscape. In addition, volunteered consent notice conditions include the restriction of any fencing to be post and wire only, therefore not resulting in any artificial boundaries.

The proposed shelterbelt hedge planting is in keeping with the rural landscape character, and complements existing grid patterns of conifer shelter belt planting found within the surrounding valley floor. Shelterbelt hedge planting is commonly found in colonially settled farming landscapes and mimic vegetation patterns of the surrounding agricultural landscapes.

With regard to openness, the Landscape Report notes that observers of this valley floor experience openness, however some parts of the valley floor are intermittently hidden by lines of shelter planting or terraced landforms. Future built form contained within the building platform will be backdropped by a mature line of shelter trees, including the additional planting of Lombardy Poplars within the boundaries of the subject site, and screened by an evergreen hedge. The front portion and remainder northern portion of the site is proposed to be retained as pastoral farming, thereby retaining the rural farmed land character which is valued on the valley floor. The Landscape Report confirms that the sense of openness will not be noticeably reduced, that views overall will not be enclosed and the landscape will remain overwhelmingly open.

The Landscape Report confirms that the particular site presents an opportunity to appropriately design a dwelling against an existing shelter-belt backdrop, and at the same time preserving the open and agricultural character of the vicinity. It also confirms that the proposed dwelling will have negligible effect on the landscape quality and character. Overall, it can be considered that the proposal will not result in adverse effects that are more than minor on landscape quality and character.

7.4.4 Effects on visual amenity

The visual prominence of the proposed development has been extensively discussed within the Landscape Report **Attachment [D]**. The report concludes that the proposed development will be visible from several public places; including Glenorchy-Paradise Road, Rees Valley Road, unnamed legal roads bordering the subject site, Rees River, Precipice Creek, the Rural Residential Paradise Park subdivision, and neighbouring private properties.

The Landscape Report confirms that the extent of visibility will be mitigated through the proposed shelterbelt hedge, additional planting of Lombardy Poplars which provide a backdrop for future built form, design controls to ensure recessive and rural vernacular future built form and height control. It is noted that the planting proposed will begin to form in height after approximately 5 years. The Landscape Report confirms that a future development within the building platform will not be visually prominent from public or private views once planting matures. The proposal being located on the valley floor, means that it will not break any skylines, ridges, hills or slopes. Overtime, the proposal will have a negligible effect on the wider visual amenity due to the small scale of the proposal, and its location close to an existing pattern of residential development on the valley floor.

7.4.5 Design and density of development

Only one accessway has been established, no other accessways are proposed. The existing access is located in a portion of site where it would be least visible from public places, and forms part of the existing environment. No subdivision is proposed, only the identification of one building platform on a vacant site, strategically placed in a portion of the site which is backdropped by a shelterbelt of trees, and is least sensitive to change. The majority of the site will be retained as open farm land, which will ensure that the sense of openness associated with the landscape character is maintained. Overall, the design and density of development is coherent with the Rural Zone.

7.4.6 Cumulative Effects of development on the landscape

The Landscape report confirms that the proposal will not result in cumulative effects on the landscape quality or character, instead it will be avoided due to the specific location of the proposed residential building platform along with volunteered design controls and the retention of remainder of land as open farm land. This has also been extensively discussed in Section 7.3.3 of this report.

7.4.7 Positive Effects

Positive effects discussed in Section 7.3.4 as it relates to the ODP, however is considered relevant as the same is proposed. To summarise, by confining the development to the south-east corner of the site, it ensures that the majority of the site will be maintained in its current open pastoral state. This is considered to be a positive effect.

7.4.8 Summary of Landscape Effects (ODP)

The assessment in relation to landscape effects under the PDP is similar with that of the ODP. It concludes that the proposal will be reasonably difficult to see from public places, is strategically located in a portion of land which can absorb development, and can be effectively mitigated through planting and design controls.

7.5 Infrastructure Effects

An Infrastructure Feasibility Report has been provided and is appended as Attachment **[E]**. At a high level, the site can be serviced with the infrastructure necessary for the one building platform. The findings have been summarised in the sections below.

7.5.1 Potable Water

It is proposed to reticulate water from a bore which was recently constructed, to supply water to the building platform. Test pumping of the bore at the time of drilling confirms that there is water of sufficient quality and quantity to supply the proposed building platform. The bore is capable of delivering 1.8 litres per second for an extended period (four hours) without a significant drawdown of water level within the bore. The results indicate that the bore is capable to delivering well in excess of the 2100 litres per day required under the Land and Subdivision Code of Practice.

At the time a dwelling is constructed, a bore pump, bore headworks, proprietary pressure boosting pump will need to be installed, in order for water to be pumped to water storage tanks near the future dwelling. A condition of consent is proposed in this regard.

The Infrastructure Report confirms that the water sourced from the underground aquifer meets the quality requirements of the Drinking Water Standards for New Zealand 2018. However, as the water is sourced from a relatively shallow and unsecure groundwater aquifer, the quality of water will be influenced by the surface water. The Infrastructure Report recommends that water will need to undergo filtration and UV disinfection prior to human consumption, and to provide certainty that it will meet the Drinking Water Standards at all times. A condition of consent is proposed in this regard.

Overall, given the availability of a reliable source of water supply, and subject to compliance with resource consent conditions proposed, the adverse effects with regard to potable water will be less than minor.

7.5.2 Stormwater disposal

Stormwater will be disposed through several methods. The stormwater disposal patterns will change depending on the design of the future built form and the location of impermeable areas. With regard to the management of stormwater for access, roadside drainage swales to receive and dispose of runoff is proposed. These swales will convey stormwater flows to the lower parts of the site and to provide soakage to allow runoff to drain into the ground.

Rainwater from the roof of a future dwelling will be able to be captured into the water storage tanks. Stormwater runoff from the future dwelling and any impermeable areas of the site will need to be directed to specifically constructed soakage galleries. Test pits conducted by Geosolve confirms that ground conditions are suitable for stormwater disposal by soakage to ground.

Stormwater disposal will need to be designed in conjunction with the building designs. As such, a condition of consent is volunteered in this regard. Overall, given the suitability of ground conditions, and volunteered consent conditions, the adverse effects with regard to potable water will be less than minor.

7.5.3 Wastewater disposal

Wastewater will be disposed via an on-site system at the time a future dwelling is constructed. The Infrastructure Report Attachment **[E]** recommends that an on-site wastewater disposal system, which includes a tank system with primary and secondary treatment elements, to be specifically designed to provide the necessary level of treatment prior to discharge. This will ensure that any potential adverse effects on the environment on surrounding sensitive receptors are mitigated through the treatment of wastewater prior to entering land. A condition of consent is volunteered in this regard.

It is noted that the wastewater disposal system must also be located in a way which provides a minimum of 50m clearance from the bore, a minimum disposal field area of 20m^2 and a reserve field area of 20m^2. A condition of consent is volunteered in this regard.

Overall, given that the site is suitable for on-site wastewater disposal and subject to compliance with consent conditions proposed, the adverse effects with regard to wastewater will be less than minor.

7.5.4 Firefighting water supply

A consent notice condition is volunteered to ensure that there is a minimum static 45,000 litre water supply for the purpose of firefighting water reserve on site, prior to the construction of a building on the site. The bore drilling confirms that there is sufficient water for firefighting water purposes.

7.5.5 Electricity and telecommunications

The proposed platform will be connected to power and telecommunications reticulation. Confirmation from Aurora and Chorus is appended as Attachment **[F]**.

7.6 Natural Hazards

The site is subject to three natural hazards as identified in Council's GIS web mapping application. Natural hazards identified in this portion of the site include: alluvial fan risk, floodwater dominated alluvial fan, flooding and rainfall flooding.

Flood assessment report and geotechnical report assessing liquefaction hazard is appended as **Attachment [H] and [G]** respectively**.** There are a number of surface drains on the property which at times of high flood, these drains shed surface water into the Rees River. Mitigation measures have been proposed, including the raising of the proposed building platform by 0.7m above the surrounding ground to mitigate flood risk, and specific foundation designs to reduce the risk of liquefaction susceptibility.

The proposal does not have the potential to exacerbate the risk of natural hazard.

Natural hazards have been assessed under the ODP, and through the Commissioner Decision. The Commission, through the granting of RM160421, is satisfied that with the mitigation measures proposed, the potential adverse effects on natural hazards will be no greater than minor.

Overall, with the mitigation measures proposed, the adverse effects of natural hazards on the proposal will be no more than minor.

7.7 Tangata Whenua

The subject site has been identified as a site of significance to iwi, as indicated as Wahi Tupuna in the GIS web mapping application. It is noted that the proposal does not require consent under the Wahi Tupuna chapter. An assessment has been made regardless. The location of proposed building platform is located approximately 107m away from Precipice Creek, and approximately 460m from Rees River. Due to the location of the proposed platforms relative the waterbodies, the proposal will not degrade any Tangata Whenua values. Residential activities including any future domesticated areas will be contained within the building platform and as identified in the Landscape Concept Plan. Therefore, it is considered that the values associated with Tahuna (Glenorchy and surrounds); including mahika kai, nohoaka, pounamu, kaika, ara tawhito and wahi taoka, will not be adversely affected by this proposal.

7.8 Reverse Sensitivity effects

There are no known activities in the vicinity that cause objectionable effects that could be complained about by future occupiers of the building platform. The purpose of the building platform is to establish a residential activity and for low-intensity farming (grazing) in the northern open paddocks portion of the site.

8. Notification Assessment

8.1 Public Notification

Step 1 – Mandatory notification in certain circumstances (s95A(1)(3):

- The applicant has not requested that the application be publicly notified.
- The applicant has not refused to provide information or agree to the Commissioning of a report.
- The application does not involve exchange of recreation reserve land.

Step 2 – Public notification precluded in certain circumstances (s95(5))

- The proposal is not subject to a rule or NES that precludes public notification
- The proposal is not for a controlled activity or a boundary activity.

Step 3 – (s95(8))

- There are no rules or NES that require public notification.
- The proposal will not have adverse effects that are more than minor.

Step 4 – Special circumstances (s95(9))

- No special circumstances exist in relation to this application.

The application is therefore not precluded from public notification.

8.2 Limited Notification

Step 1 – Certain affected groups and affected persons must be notified (s95B(3))

- No listed statutory persons or groups are affected by the proposal.

Step 2 – Limited notification precluded in certain circumstances (s95B(6))

- There is no rule or NES that precludes limited notification.
- The application is not for a controlled activity.

Step 3 – Certain Affected Persons Must be Notified (s95B(7))

- As set out in the earlier assessment, there are no persons who are considered to be directly affected by the proposal, or with regard to the public generally.

Step 4 – Special circumstances (s95B(10))

- No special circumstances exist in relation to this proposal.

This application can be notified or limited notification or publicly notified. It is requested that the application be processed on a non-notified basis, as the proposal can be effectively mitigated, will be reasonably difficult to see, and does not result in adverse effects that are more than minor.

9. Policy Framework

9.1 Operative Regional Policy Statement (1998)

Section 104(1)(b)(v) requires a consent authority to have regard to any regional policy statement or proposed regional policy statement. The Operative Regional Policy Statement 1998 (ORPS) has now been revoked3.

9.2 Proposed Otago Regional Policy Statement (2021)

The ORC notified its Proposed Regional Policy Statement ("PRPS") on 26 June 2021 and the submissions period closed on 3 September 2021. This policy statement has yet to progress through the submission and hearing process, and as such less weight can be given to this RPS.

3 Otago Regional Policy Statements: https://www.orc.govt.nz/plans-policies-reports/regional-plans-and-policies/otago-regional-policy-statements

The proposed RPS expands on the purpose of the RMA and prioritises environmental, health and safety and social, economic and cultural well-being needs into order. IM-P2 – Decision priorities lists the priorities as the following:

IM-P2 – Decision priorities

Unless expressly stated otherwise, all decision making under this RPS shall:

(1) Firstly, secure the long-term life-supporting capacity and mauri of the natural environment,

(2) Secondly, promote the health needs of people, and

(3) Thirdly, safeguard the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

The proposal has taken into account these priorities, by ensuring that all works will not compromise or degrade the life-supporting capacity and mauri of the natural environment. By enabling this proposal, the proposal will result in a benefit with regard to social, economic and cultural well-being of people.

Objectives and policies MW-O1, P1 and P2 relates to the principles of Te Tiriti O Waitangi and Treaty Obligations. It is noted that the site is located within a site of significance to Iwi or identified as Wahi Tupuna in the GIS web mapping application, however no rules are required to be triggered under the PDP. An assessment has been made in section 7.7 of this report. The proposal ensures that views of the building platform and proposed built form are screened by proposed planting, which mitigates visual prominence from public places. Policy LF-WAI-P3, LF-VM-O2, LF-LS-O12, LF-LS-P16, LF–LS–P21 relates to the Integrated Management/Ki Uta Ki Tai and the vision for Clutha Mata-au FMU, which seeks to manage the use of freshwater and land in accordance with tikaka and kawa using an integrated approach, and to ensure that land uses contribute to achieving environmental outcomes for freshwater. It is recognised that the mountains, land and water are holistically interconnected. The proposal will not result in adverse effects on freshwater. Wastewater discharge will be treated through primary and secondary treatment elements, specifically designed to provide the necessary level of treatment prior to discharge. The proposal has been thoroughly considered and will not compromise or degrade the health of the surrounding water bodies. This approach is aligned with best practice standards and consistent with LF-FW-P15. The proposal seeks to locate only one residential building platform for residential activities on the subject site. The remainder of the site is retained as open space for rural activities. This is aligned with LF-LS-O11 which seeks to ensure that Otago's soil resources are safeguarded. The remaining land is large enough to enable rural activities such low-intensity farming or equine related activity on site.

9.3 Partially Operative Regional Policy Statement (operative 15 March 2021)

Section 104(1)(b)(v) requires a consent authority to have regard to any regional policy statement or proposed regional policy statement. Of the key themes identified in the PORPS, Chapter 1 (Resource Management in Otago is Integrated), Chapter 3 (Otago has high quality natural resources and ecosystems), and Chapter 4 (Communities in Otago are resilient, safe and healthy).

Noting that the PORPS is high level, brief comments in respect of the provisions and the proposed development are set out below:

Objective 1.1 seeks to ensure that resources are used sustainably and promotes economic, social and cultural wellbeing for its people and communities. The proposed subdivision provides for the economic and social wellbeing of the applicant and any future owners, by enabling the creation of one building platform suitable for housing needs whilst being in a rural environment.

Policy 3.1.3 as it relates to water allocation and use, seeks to manage the allocation and use of freshwater. There is sufficient water in the underground aquifer, and has capacity to service one residential dwelling. This has been thoroughly assessed within the Infrastructure Report.

Policy 3.1.7(a)(iv) as it relates to soil values, seeks to maintain or enhance soil function as a buffer or filter for contaminants resulting from human activities. Soils are anticipated to be utilised for the disposal of effluent to land via sub-soil soakage methods. Proposed wastewater system will ensure that effluent is treated through primary and secondary elements prior to the disposal to land.

Policy 3.2.4(c) seeks to protect, enhance or restore outstanding natural features and landscapes by avoiding, remedying or mitigating adverse effects. The design of the proposed subdivision and development of building platforms has considered the overall landscape values of the ONL. The landscape assessment confirms that the ONL will be protected through a range of mitigation measures including planting to screen future built form and design controls. As such, adverse effects are avoided, remedied or mitigated in accordance with this policy.

Objective 4.1 relates to natural hazards and to ensure that potential risk to people and properties are minimised. The subject site has been identified with alluvial fan risk, flooding risk and liquefaction risk on Council's GIS. The proposal is not likely to exacerbate any hazard event, mitigation measures including raising the floor level of the building platform by 0.7m and specifically designed building foundations will reduce the impact on people and properties with regard to hazards.

Policy 5.3.1(e) seeks to minimise the subdivision of productive rural land into smaller lots that may result in a loss of its productive capacity. No subdivision is proposed as part of this application. Productive capacity is retained in the northern portion of the site. As such the proposal is not contrary to this policy.

9.4 Operative District Plan

The Council must have regard to the relevant objectives, policies and assessment criteria of the ODP.

9.4.1 District-wide Objectives and Policies

The subject site is located within an Outstanding Natural Landscape. The following District-wide objectives and policies of the ODP are relevant to this application:

Objective 1 - Nature Conservation Values The protection and enhancement of indigenous ecosystems functioning and sufficient viable habitats to maintain the communities and the diversity of indigenous flora and fauna within the District. Improved opportunity for linkages between the habitat communities. The preservation of the remaining natural character of the District's lakes, rivers, wetlands and their margins. The protection of outstanding natural features and landscapes. The management of land resources of the District in such a way as to maintain and where possible, enhance the quality and quantity of water in the lakes rivers and wetlands. **Policy 1.1** to encourage the long-term protection of ecosystems and geological features. **Policy 1.3** To manage the sensitive alpine environments from adverse effects of development **Policy 1.5** to avoid the establishment of, or ensure the appropriate location, design and management of, introduced vegetation with the potential to spread and naturalise; and to encourage the removal or management of existing vegetation with this potential and prevent its further spread. **Policy 1.17** To encourage the retention and planting of trees, and their appropriate maintenance. **Policy 1.18** To manage and protect the sensitive alpine environments by avoiding, remedying or mitigating any adverse effects of development.	The site is currently predominantly used for pastoral activities and is not high in ecological value. The site is not identified in the PDP as having significant indigenous vegetation or any geological or geomorphological features of significant value. The subject site is located within the valley floor The conifer hedge will not result in the spread of wilding species as the conifer shelter hedges will comprise of plants which do not have a propensity for wilding spread. All proposed planting will be maintained by the landowner in perpetuity. Section 7.3 of this report extensively discusses the potential adverse effects of the development on the surrounding sensitive alpine environments. Where planting is proposed it is primarily in indigenous species. The site will continue to be grazed which will suppress weed species, and the proposal includes the ongoing removal and control of a wide range of invasive non-indigenous species from site allowing for the protection and continued feasibility of indigenous plants. Overall, the proposal is not contrary to these objectives and policies.
Objective 4.2.5 *Subdivision use and development being undertaken in the District in a manner which avoids, remedies or mitigates adverse effects on landscape and visual amenity values.* ***Policy 1 Future Development*** *(a) To avoid, remedy or mitigate the adverse effects of development and/or subdivision in those areas of the*	The development is to occur within the valley floor; an area that has potential to absorb change without detracting from the landscape and amenity values associated with the ONL. A future dwelling on the platform will be small visual interruption to the current open character of the site however, the sense of openness felt by observers in the surrounding landscape will not be noticeably reduced. This is because views will not be enclosed, the dwelling will be immediately backed by the shelter belt of existing poplars in views across the site from the north and effects can be suitably

District where the landscape and visual amenity values are vulnerable to degradation. *(b) To encourage development and/or subdivision to occur in those areas of the District with greater potential to absorb change without detraction from landscape and visual amenity values.* *(c) To ensure subdivision and/or development harmonises with local topography and ecological systems and other nature conservation values as far as possible.* ***Policy 2 Outstanding Natural Landscapes (District-Wide/Greater Wakatipu)*** *(a) To maintain the openness of those outstanding natural landscapes and features which have an open character at present.* *(b) To avoid subdivision and development in those parts of the outstanding natural landscapes with little or no capacity to absorb change* *(c) To allow limited subdivision and development in those areas with higher potential to absorb change.* *(d) To recognise and provide for the importance of protecting the naturalness and enhancing amenity values of views from public roads.* ***Policy 17 Land Use*** *To encourage land use in a manner which minimises adverse effects on the open character and visual coherence of the landscape.*	mitigated through the Landscape Concept Plan and various design controls registered on the covenant. The planting proposed through the Landscape Concept Plan will enhance natural character and mitigate visual amenity effects as viewed from Glenorchy-Paradise Road and from a dwelling located north of the subject site. The proposed design controls will ensure that any future dwelling has the appearance of a traditional farming type building rather than a lifestyle dwelling, which will not appear out of place in the surrounding pastoral landscape. The proposal achieves these policies as adverse effects have been avoided, remedied and mitigated, and the new building platform will not be highly visible from adjoining roads or neighbouring properties.
Policy 8 Avoiding Cumulative Degradation *(a) To ensure that the density of subdivision and development does not increase to a point where the benefits of further planting and building are outweighed by the adverse effect on landscape values of over domestication of a landscape* *(b) To encourage comprehensive and sympathetic development of rural areas.*	Cumulative effects of the proposal have been extensively considered in the landscape assessment report. The proposed density of development will not cause adverse effects of deterioration of the landscape through over domestication. In this instance, the cumulative effects can be avoided due to the specific location of the building platform, design controls, structural landscaping and a large expanse of open paddock that will be retained as pastoral space. The large expanse of land allows agricultural or horticultural activities to be conducted on site, therefore will be sympathetic to the character of the valley floor.
Policy 9 Structures *To preserve the visual coherence of:* *(a) Outstanding natural landscapes and features and visual amenity landscapes by:*	The subject site is flat and the location of the proposed building platform will not affect any skylines, ridges, prominent slopes or hilltops. The proposed location of the building platform contains a backdrop of existing poplars immediately behind and is sufficiently setback from public roads to maintain the amenity values associated with views from public roads. Structural landscaping has also been

• *Encouraging structures which are in harmony with the line and form of the landscape;* • *Avoiding, remedying or mitigating any adverse effects of structures on the skyline, ridges and prominent slopes and hilltops;* • *Encouraging the colour of buildings and structures to complement the dominant colours in the landscape;* • *Promoting the use of local, natural materials in construction.* *(c) all rural landscapes by:* • *providing for greater development setbacks from public roads to maintain and enhance amenity values associated with the views from public roads.*	proposed to further screen a future building from the Glenorchy-Paradise Road, and design controls will ensure that any future dwelling uses recessive, natural colours and materials suitable of a traditional farmhouse/homestead building.
Policy 15 Retention of Existing Vegetation *To maintain the visual coherence of the landscape and to protect the existing levels of natural character by:* *(a) Encouraging the retention of existing indigenous vegetation in gullies and along watercourses;* *(b) Encouraging maintenance of tussock grass-lands and other nature ecosystems in outstanding natural landscapes.* ***Policy 16 Wilding Trees*** *To minimise the adverse effect of wilding trees on the landscape by:* *• supporting and encouraging co-ordinated action to control existing wilding trees and prevent further spread.*	The Landscape Concept Plan also proposes a conifer shelter hedge to the east of the proposed building platform, to mitigate visual effects from Glenorchy-Paradise Road. It is noted that this shelter hedge does not have wilding propensity and will not exacerbate adverse effects relating to the spread of wilding pine and invasive vegetation. Planting listed in the plant schedule of the SLP do not contain any wilding trees which have the potential for further spread.
4.8.3 Natural Hazards ***Objective 1 – Avoid or mitigate loss of life, damage to assets or infrastructure, or disruption to the community of the District, from natural hazards.*** ***Policy 1.4*** *To ensure buildings and developments are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property or other aspects of the environment.* ***Policy 1.5*** *To ensure that within the consent process any proposed developments have an adequate assessment completed to identify any natural hazards and the methods used to avoid or mitigate a hazard risk.*	The subject site has been identified as being potentially susceptible to surface water flooding, alluvial fan and seismic liquefaction hazards. Mitigation has been recommended by Hadley Consultants Limited and GeoSolve Limited, and are adopted for this application. A condition of consent is volunteered to raise the floor level by 0.7m to mitigate these adverse effects. As such, the proposal is not contrary to these objectives and policies as it relates to Natural Hazards.

Policy 1.7 *To avoid or mitigate the likelihood of destruction or damage to residential units and other buildings constructed or relocated into flood risk areas.*	

9.4.2 Rural General Zone Policies

The following objectives and policies are relevant to the proposal and these are assessed with their corresponding relative policies in turn:

Objective 1 Character and Landscape Value To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities. Policy 1.2 allow for the establishment of a range of activities, which utilise the soil resource of the rural area in a sustainable manner	The proposal is for the identification of one residential building platform, to contain a future single residential dwelling within the building platform. The proposed development is not considered to be an inappropriate activity, given that residential activities do not necessarily give rise to objectionable adverse effects on landscape values and character. Landscape values of the rural area will be protected through mitigation planting, proposed design controls volunteered as consent notice conditions and the retiring of remaining land to the north and east of the building platform adjoining Glenorchy-Paradise Road, to be used for farming purposes. This ensures that adverse effects associated with the proposed development is controlled, whilst ensuring that Rural land can still be utilised for farming purposes. This approach is considered to be a balanced way of protecting natural and physical resources valued in the Rural Zone, thereby promoting the sustainable management of Rural land. Managing adverse effects is not the only component of sustainable management. Sustainable management also includes the provision for activities that enable people to meet their needs. This proposal is considered to be a balanced approach for the protection of Rural land whilst enabling the social and economic needs of people. As such, the proposal is not contrary to these objectives and policies.
Policy 1.1 Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone. Policy 1.3 Ensure land with potential value for rural productive activities is not compromised by the inappropriate location of other developments and buildings. Policy 1.4 Ensure activities not based on rural resources of the area occur only where the character of the rural area will not be adversely impacted	Landscape values have been extensively assessed and considered in Section 7.3 and 7.4 of this report. A Landscape Report has been prepared to support the application which discusses such values in greater detail. The proposal is located in a portion of the site that has the potential and capability to absorb change. The chosen location is the same as granted by Commissioner Decision under RM160421. This location is the most appropriate location, as it is nestled into an area closest to other residential activities (being the rural residential zoning to the west) and backed by a shelterbelt of poplar trees both existing and proposed. Locating development in ways which is coherent with surrounding pattern of development is considered avoiding adverse effects of development on the associated landscape values Locating the proposal along the southern boundary ensures that land to the north and east is preserved for agricultural purposes, coherent with the overall purpose of the Rural zone, and maintains a sense of openness which is valued in this particular landscape environment. Mitigation measures including shelter hedge

Policy 1.6 Avoid, remedy or mitigate adverse effects of development on the landscape values of the District Policy 1.7 Preserve the visual coherence of the landscape by ensuring all structures are to be located in areas with the potential to absorb change. Policy 1.8 Avoid, remedy or mitigate the adverse effects of development on the landscape values of the District.	planting and design controls ensure that the proposed development does not detract from the surrounding landscape. Combined with the strategic location of the building platform and proposed planting and design controls, the proposal avoids and mitigates adverse effects of development on the landscape values associated with the Rural zone.

Objective 3 - Rural Amenity Avoiding, remedying or mitigating adverse effects of activities on rural amenity. Policy 3.2 Ensure a wide range of rural land uses and land management practices can be undertaken in the rural areas without increased potential for the loss of rural amenity values. Policy 3.3 To avoid, remedy or mitigate adverse effects of activities located in rural areas. Policy 3.5 Ensure residential dwellings are setback from property boundaries, so as to avoid or mitigate adverse effects of activities on neighbouring properties.	As a whole the proposal is consistent with these objectives and policies. Rural amenity is defined in the District Plan as including privacy, rural outlook, spaciousness, ease of access, clean air and quietness[4]. The site is of a sufficient size to enable the development of one residential dwelling with effects which are less than minor on these rural amenity values identified. Proposed planting, design controls and the location of the building platform ensures that the proposal will avoid, remedy and mitigate adverse effects of developments within a Rural Zone.

Overall, the proposal is consistent with the objectives and policies of the Operative District Plan.

10.4 Proposed District Plan (Stage 1 Appeals Version 2018)

10.4.1 Strategic Direction Objectives and Policies (Chapter 3)

3.2.4 The distinctive natural environments and ecosystems of the District are protected. 3.2.4.1 Development and land uses that sustain or enhance the life-supporting capacity of air, water, soil and ecosystems, and maintain indigenous biodiversity. 3.2.4.2 The spread of wilding exotic vegetation is avoided.	As discussed in previous areas of this report, the proposed platform is strategically located in an area with the capacity to absorb change. This is because the proposed platform is located adjoining an existing shelterbelt of trees, and adjoins other patterns of rural type of development. By placing the proposed platform in this location, it enables the remaining land to be retained for farming and agricultural purposes.

[4] Explanation and Principal Reasons for Adoption – Page 5.

Strategic Policies – Rural Activities 3.3.20 Enable continuation of existing farming activities and evolving forms of agricultural land use in rural areas except where those activities conflict with significant nature conservation values or degrade the existing character of rural landscapes. 3.3.26 Avoid the planting of identified exotic vegetation with the potential to spread and naturalise unless spread can be acceptably managed for the life of the planting.	Whilst exotic vegetation has been chosen for this proposal, the chosen species do not have the propensity to spread.
3.2.5 The retention of the District's distinctive landscapes. 3.2.5.2 Within the Rural Zone, new subdivision, use and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless: a. where the landscape values of Priority Areas of Outstanding Natural Features and Outstanding Natural Landscapes are specified in Schedule 21.22, those values are protected; or b. Where the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are not specified in Schedule 21.22, the values identified according to SP 3.3.45 are protected. **Strategic Policies – Rural Activities** 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 the ONF and ONL, **Strategic Policies – Outstanding Natural Features and Landscapes and Rural Character Landscape** 3.3.30 Protect the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes 3.3.31 Avoid adverse effects on the landscape and visual amenity values and natural character of the District's Outstanding Natural Features and Outstanding Natural Landscapes from residential subdivision, use and development where there is little capacity to absorb change.	The ONL relevant to the subject site has not been identified as a priority area in the notified Schedule 21.22. Little weight is placed on the notified schedule of priority areas. The Landscape Assessment report has assessed the values associated with the surrounding landscape. This has been thoroughly discussed in section 7.3 and 7.4 of this report. To summarise, the landscape values associated with the ONL includes the surrounding mountain ranges and the experience of rugged isolation at the edge of human isolation over land. The subject site is located within the farmed valley floors, although not as natural or dramatic in appearance compared to the surrounding landscape, it is an inseparable component of the broader landscape. The proposal will extend the pattern of development to the north to a small degree, it will still be experienced as part of the existing built character of the valley floor, rather than a development in isolation with no relationship to the established pattern of development. The proposal is located within an area where there are other residential dwellings and farm sheds in its vicinity. A single dwelling within the building platform, with proposed design controls and planting, surrounded by the expanse of paddock land will be congruent with the open farmed character of the valley floor, backdropped by shelterbelt planting.
3.3.25 That subdivision and/or development be designed in accordance with best practice land use management	Aspects of infrastructure services have been thoroughly discussed in section 7.5 of this report. The Infrastructure Report specifies measures

so as to avoid or minimise adverse effects on the water quality of lakes, rivers and wetlands in the District.	which can be taken to ensure best practice land use management, and to avoid adverse effects on surrounding waterbodies. This includes the primary and secondary treatment of wastewater, and to ensure that stormwater runoff is managed and reused whenever appropriate.

Overall, the proposal is not contrary to the strategic objectives and policies.

10.4.2 Landscapes – Rural Character (Chapter 6)

Objective 6.3.2 – Managing activities in the Rural Zone, the Gibbston Character Zone, the Rural Residential Zone and the Rural Lifestyle Zone 6.3.2.1 Avoid urban development and subdivision to urban densities in the rural zone. 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 the sense of remoteness where it is an important part of that character 6.3.2.4 Enable continuation of the contribution low-intensity pastoral farming in the Rural Zone… on large landholdings makes to the District's landscape character. 6.3.2.7 Encourage that subdivision and development in the ONL and RCL in proximity to an ONF or ONL does not compromise the landscape values of that ONF or ONL. 6.3.2.8 Encourage any landscaping to be ecologically viable and consistent with the established character of the area.	The proposal does not seek to subdivide or develop to urban densities. The location of the proposed platform is strategically chosen to ensure that the remaining area of land is retained for farming purposes. This will enable the continuation of low-intensity pastoral farming on a large site, and ensure a sense of remoteness is maintained. As discussed in previous objectives and policies, a land covenant which manages lighting has been proposed, in addition with the relevant rule under the PDP.
6.3.3 Managing activities on Outstanding Natural Features and in Outstanding Natural Landscapes. 6.3.3.1 Recognise that subdivision and development is inappropriate on Outstanding Natural Landscapes unless: a. landscape values are protected; and b. in the case of any subdivision or development, all buildings and other structures and all changes to landform or other physical changes to the appearance of land will be reasonably difficult to see from beyond the boundary of the site in question. 6.3.3.2 Ensure the protection of ONF and ONL includes recognition of any values relating to cultural and historic elements, geological features and matters of cultural and spiritual value to Tangata Whenua, including topuni and wahi tupuna. 6.3.3.5 Maintain the open landscape character of ONF and ONL where it is open at present	The proposal is located in a portion of the site that has the potential and capability to absorb change. The chosen location is the same as granted by Commissioner Decision under RM160421. This location is the most appropriate location, as it is nestled into an area closest to other residential activities (being the rural residential zoning to the west) and backed by a shelterbelt of poplar trees both existing and proposed. Locating development in ways which is coherent with surrounding pattern of development is considered to protect associated landscape values Locating the proposal along the southern boundary ensures that land to the north and east is preserved for agricultural purposes, coherent with the overall purpose of the Rural zone, and maintains a sense of openness which is valued in this particular landscape environment. Mitigation measures including shelter hedge planting and design controls ensure that the proposed development does not detract from the surrounding landscape.

	Combined with the strategic location of the building platform and proposed planting and design controls, the proposal avoids and mitigates adverse effects of development on the landscape values associated with the Rural zone and the associated values of the ONL.

Overall, the proposal is not contrary to the objectives and policies of the Landscapes – Rural Character Chapter.

10.4.3 Rural Zone Objectives and Policies (Chapter 21)

The following objectives and policies of Chapter 21 Rural Zone are of particular relevance and discussed in relation to the proposal:

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. *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.* *21.2.1.4 Minimise the dust, visual, noise and odour effects of activities by requiring them to locate a greater distance from formed roads, neighbouring properties, waterbodies and zones that are likely to contain residential and commercial activity.* *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.* *21.2.1.6 Avoid adverse cumulative impacts on ecosystem services and nature conservation values.* *21.2.1.9 Provide adequate firefighting water and fire service vehicle access to ensure an efficient and effective emergency response.*	The proposed building platform is complying with PDP Rule 21.5.2 in relation to setback from road boundaries. Adverse effects on landscape character and visual amenity are mitigated through proposed planting to screen future built form and design controls. Neighbouring activities are not adversely affected by this proposal, as the proposed platform is located in a portion of land which has capacity to absorb additional development, is backed by a shelterbelt of poplars (existing and proposed), and additional planting to screen future built form. The proposal is for a residential activity, and will not result in dust, noise or odour effects on neighbouring properties, waterbodies and other residential/commercial activities. Visual effects are mitigated through measures discussed above. The proposal will not result in adverse cumulative impacts on ecosystem services and nature conservation values, as the proposed platform is located within the farmed valley floor, not impacting any areas of significant vegetation or of high ecological significance. A land covenant is proposed to ensure lighting and glare is managed appropriately and adverse effects avoided. The land covenant ensures that exterior lighting shall only be within the building platform, no higher than 1m or no higher than 3m if it is attached to the house. The Rural Zone lighting and glare rule also manages lighting with regard to the direction of lights. Adequate firefighting water will be provided as proposed through an ongoing land covenant. This covenant is up to date with current firefighting standards and requirements.
21.2.1.7 Have regard to the spiritual beliefs, cultural traditions and practices of tangata whenua.	The site is located within a Wahi Tupuna overlay 'Tahuna, Glenorchy and surrounds.' The specific values include Nohoaka, mahika kai, pounamu, kāika, ara tawhito, and wāhi taoka.

	No Wahi Tupuna rules are triggered as the proposed building platform is located less than 20m from the lake and Precipice Creek. The proposed building platform as it is in a location which is suitable for additional development, in close proximity to other surrounding development and is appropriately visually mitigated by proposed planting. Sensitive receivers around the subject site have been considered. Wastewater services will be appropriately designed and treated through primary and secondary elements, and stormwater appropriately directed or recycled into potable water tanks. Overall, it is considered that the proposal has regard to the spiritual beliefs, cultural traditions and practices of tangata whenua; including the recognition of ecosystems as a whole and as an interconnectedness of the mountain ranges, river and creek systems and the lakes.
Objective 21.2.2 – The life supporting capacity of soils is sustained. *21.2.2.1 Allow for the establishment of a range of activities that utilise the soil resource in a sustainable manner* *21.2.2.2 Maintain the productive potential and soil resource of Rural Zoned land and encourage land management practices and activities that benefit soil and vegetation cover.* *21.2.2.3 Protect the soil resource by controlling activities including earthworks, indigenous vegetation clearance and prohibit the planting and establishment of identified wilding exotic trees with the potential to spread and naturalise.*	The proposed platform is strategically located in a portion of land which has capability to absorb one additional development, and protects the remainder of land for the purpose of farming/agricultural activities. This way, the life supporting capacity of soils is sustained, as it presents opportunities for the site to be retained for the purpose of productive potential. No earthworks are proposed as part of this application. It is noted that the site is a flat site. No indigenous vegetation will be cleared, and the proposed planting chosen are exotic species that do not have the potential to spread and naturalise.

Overall, the proposal is consistent with the objectives and policies of the Proposed District Plan.

10.5 Weighting of the Proposed and Operative Plans

A weighting exercise is only necessary where there is a difference between the ODP and PDP in respect of anticipated outcomes, which in turn lead to a differing outcome on the resource consent application under the decision-making framework. It is concluded that no difference in those provisions arises between the ODP and PDP. It is my assessment that the proposal is acceptable relative to the relevant provisions of both the PDP and ODP. Accordingly, the Council does not need to consider the weight to be given to the PDP.

11. Other Matters

Section 104(1)(c) of the Act permits Council to have regard to "any other matter the consent authority considers relevant and reasonably necessary to determine the application". No other matters are considered relevant to this proposal.

12. Consultation

Written approval from one party is pending, this will be provided upon receipt.

13. Conclusion

The proposal; including mitigation planting proposed, design controls, and mitigation from natural hazards; mean that the proposed development is not 'inappropriate' with regard to the overall landscape values and visual amenity. Adverse effects are effectively avoided and mitigated, and will not detract from the values associated with the surrounding rural environment. The proposal enables the applicant to provide for their economic and social well-being through the identification of a building platform on the site, where low-intensity farming and grazing is able to be conducted on the remainder of the site. Overall, the proposal is considered to be a balanced approach to protecting valued rural land and Outstanding Natural Landscapes, whilst enabling people to provide for their needs; consistent with the overarching values of sustainable management.

Attachments

Attachment **[A]**: Form 9

Attachment **[B]**: Record of Title 25360

Attachment **[C]**: Survey Plan and Landscape Plan

Attachment **[D]**: Landscape Assessment Report

Attachment **[E]**: Infrastructure Feasibility Report

Attachment **[F]**: Power and Telecommunications Confirmation

Attachment **[G]**: Liquefaction Hazard Report

Attachment **[H]**: Flood Hazard Report

Attachment **[I]**: Volunteered consent conditions

Attachment **[J]**: Decision of the Commissioner – RM160421

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**25360**
Land Registration District	**Otago**
Date Issued	01 May 2002

Prior References
OT14A/273

Estate	Fee Simple
Area	53.9900 hectares more or less
Legal Description	Lot 2 Deposited Plan 306479

Registered Owners
Geoffrey Lewis Thomson, Diana Thomson and HGW Trustee's Limited

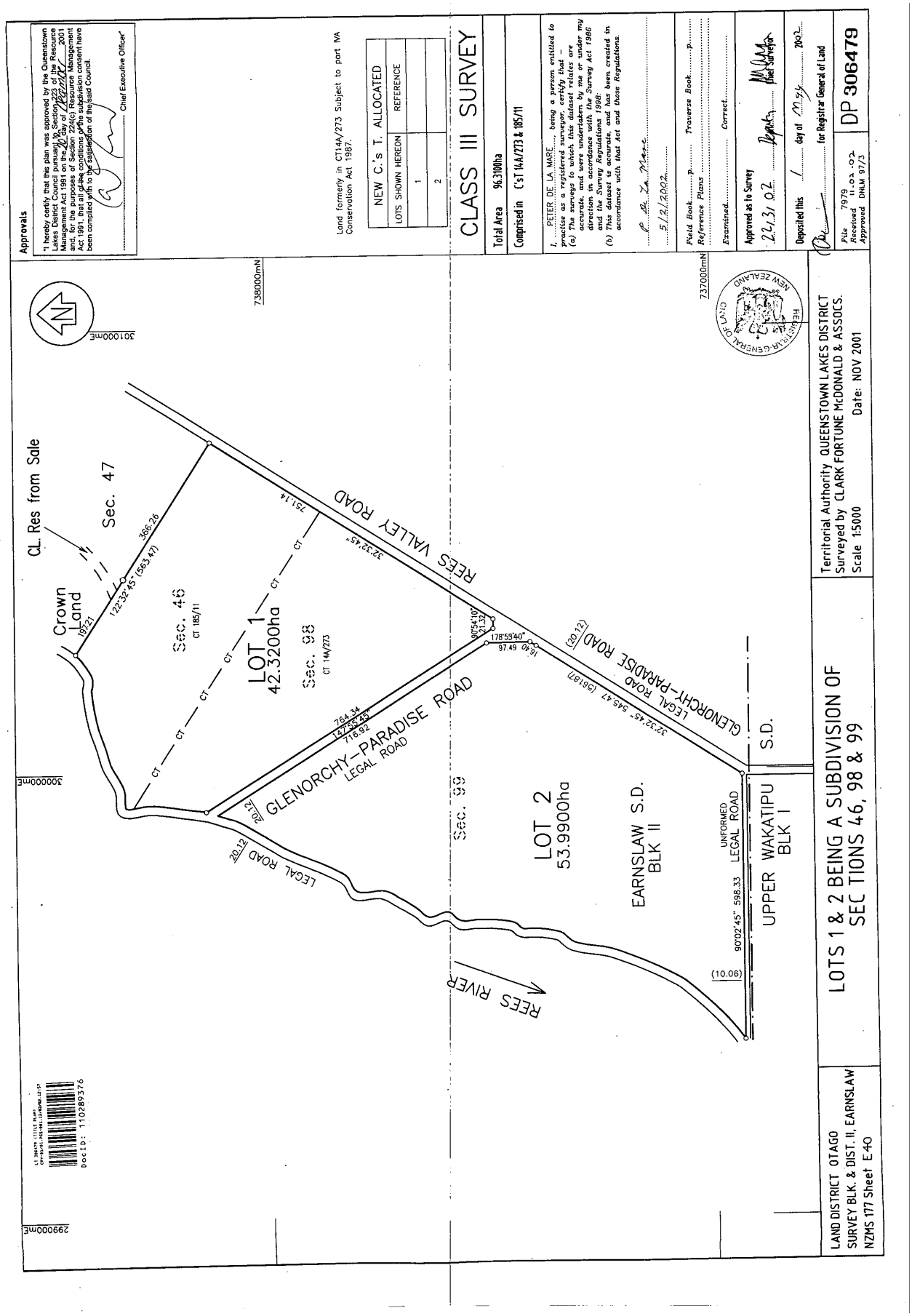
Interests

Subject to Part IV A Conservation Act 1987

Subject to Section 11 Crown Minerals Act 1991 - pursuant to Section 86 Crown Minerals Act 1991

339567 Electricity Agreement pursuant to Electricity Amendment Act 1948 - 21.4.1991 at 9.45 am

10974534.2 Mortgage to ANZ Bank New Zealand Limited - 8.12.2017 at 3:56 pm



LOT 2
DP 306479
CT 25360
53.9900ha

40.0m
1000m^2
25.0m
52.7m offset
71.4m offset
90°02'45" 598.33
32°32'45" 561.87
GLENORCHY - PARADISE ROAD
LEGAL ROAD
FORMED (gravel)

×331.92 × 332.26 332.90× 333.05× 333.29× ×332.38 333.15× ⊗333.34 ×333.31 333.14× ×332.52 333.27 333.73 ×333.83 332.67 333.20×

N

BUILDING PLATFORM ENLARGEMENT
Scale 1:2500

LEGEND:-
- ⊗ Stake
- Fence
- 331.45 × Spot Height
- Building Platform (1000m^2)

(20.12) GLENORCHY-PARADISE ROAD
LEGAL ROAD
147°55'45"
716.92
(20.12) LEGAL ROAD
REES RIVER
LOT 2
DP 306479
CT 25360
53.9900ha
178°59'40" 97.49
561.87
(20.12)
GLENORCHY-PARADISE ROAD
LEGAL ROAD
32°32'45"
refer to enlargement for details
proposed building platform
90°02'45" 598.33
(40.06)
LEGAL ROAD
FORMED (gravel)

NOTES:
- Areas and dimensions subject to final survey.

If this plan is used as the basis for any sale and purchase agreement, then it is done so on the basis that the areas and dimensions are preliminary, and may vary upon completion of the final survey.

REV.	DATE:	REVISION DETAILS:	BY:
A	16.11.06	Initial Issue	BAM

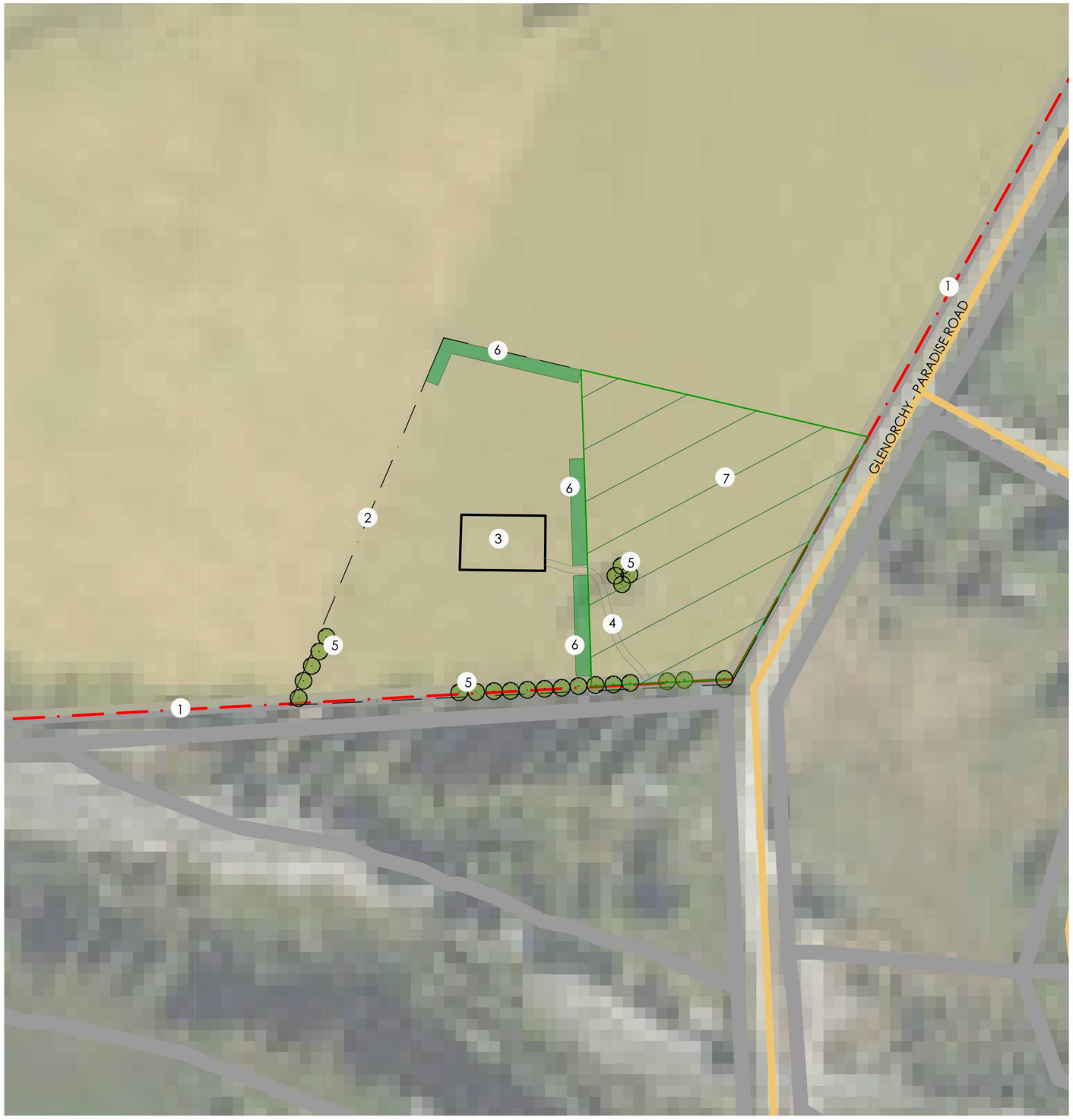
WARNING NOTE:
This resource consent plan has been prepared for Bayswater Trust from field survey and existing records for the purpose of a proposed subdivision on the land. It is to be read in conjunction with our terms of engagement. It should not be used by the client company for any other purpose.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

DATE: 16 November 06
BY: Emily Dykes
Scale 1:5000 Original Plan A3
DRAWING & ISSUE No. 2260.3R.1A

TITLE:

PROPOSED BUILDING PLATFORM PLAN
LOT 2 DP306479, GLENORCHY-PARADISE ROAD
for BAYSWATER TRUST

AURUM SURVEY CONSULTANTS LTD
PO Box 1493
Queenstown
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz



KEY:

1 Property boundary shown as red dashed line.

2 Existing fence line - black dashed line.

3 Proposed 1000m2 building platform.

4 Indicative driveway alignment.

5 Proposed Lombary Poplars (Populus x euramericana 'Crows Nest).

6 Proposed conifer shelterbelt - Cupressus x leylandii 'Leighton Green':

Individual plants are to be spaced at a maximum distance of 1m apart.

Plants are to be irrigated by an automatric system until they reach a height of 6m.

The overall hedge is to be maintained at a minimum height of 6m.

7 Open pasture space shown as a green hatched area:

To be kept free of trees, excluding those outlined on this plan.

Michelle Snodgrass
LANDSCAPE ARCHITECT

DRAFT

DATE: 13TH JULY 2022
SHEET NUMBER: 1
SCALE: 1: 2000 @ A3

CONCEPT PLAN

THOMPSON PRECIPICE CREEK
Lot 2 DP 306479 Glenorchy-Paradise Road
Landscape Plan

LOT 2 DP 306479 GLENORCHY-PARADISE ROAD GLENORCHY
LAND USE CONSENT FOR A BUILDING PLATFORM
LANDSCAPE ASSESSMENT REPORT

Michelle Snodgrass
LANDSCAPE ARCHITECT
0275 777 909 | michelle@msla.co.nz
7 Ferry Lane, Central Otago 9383

1.0 Introduction

This report has been prepared for Geoffrey Thomson, the owner of Lot 2 DP 306479, Glenorchy. The purpose of the report is to determine the landscape and visual effects of a building platform and associated landscape works against the relevant assessment matters in the Operative and Proposed QLDC District Plan.

This report describes and quantifies the landscape and visual amenity related effects that will result from the proposed resource consent and focusses on effects as experienced from outside of the site.

The effects assessment methodology that has been used to assess the effects of the dwelling is to assess the degree of visibility, the landscape effects, and the visual effects, including effects on visual amenity, informed by:

- The NZILA Best Practice Note, the Landscape Assessment and Sustainable Management 10.1.'
- *'Guidelines for Landscape and Visual Impact Assessment'* by the Landscape Institute and Institute of Environmental Management & Assessment Third Edition published 2013.
- *'Guidelines for Landscape and Visual Impact Assessment'* by the Landscape Institute and Institute of Environmental Management & Assessment' Second Edition published 2002.
- *'Landscape and Visual Effects Rating Scales'* Consultant landscape assessment reviews for QLDC

The site of the proposed dwelling and associated works is within the Rural General Zone of the Operative District Plan, and the Rural Zone of the Proposed District Plan. The site has an Outstanding Natural Landscape overlay under both District Plans. Mr Thomson is applying for a Discretionary Consent.

Attached to this report, in the appendix, are:

- Attachment A: Landscape and Visual effects rating scales, Consultant Landscape Assessment reviews for QLDC.
- Attachment B: proposed design controls.

- Attachment C: photos from public viewpoints described in the report.
- Attachment D: proposed landscape plan.

1.1 Previous consent history

The site was created by subdivision consent RM 010560 which was granted to RJ Reid on 18 September 2001. The site is subject to an existing land use consent RM 130073 which was granted to Glenorchy Gravel Limited on 20 March 2013.

On 31 August 2005 Baywaters Trust applied for subdivision consent to subdivide the subject site into two allotments and to identify a residential building platform on each allotment. This application was publicly notified and attracted several submissions. RM 050811 was placed on hold at the request of the applicant in 2005 and has never proceeded to a hearing or decision. The application RM 050811 was formally withdrawn at the hearing of the current application RM 160421[1].

RM160421 was subsequently granted for a 1000m2 building platform on Lot 2 DP 306479. The consent has subsequently lapsed, and the current application is for the same consent including the approved design controls and has only been modified where necessary to meet the PDP standards. The approved landscape structure plan has been re-drawn and has not changed any detail of the building platform location, curtilage area, or proposed planting apart from naming the species of poplar tree and the hedge species.

Text from the landscape assessment report prepared for RM050811, and landscape evidence prepared for RM160421, prepared by Ben Espie of Vivian & Espie has been used in this report where the writer agrees with the assessment.

2.0 The Proposal

The proposal is one land use consent to achieve the following:

- A building platform 1000m2 in area with a maximum height of 6.5m above existing ground level and a maximum building coverage of 500m2.
- Roof and wall cladding to be in shades of greys, cool browns, or greens with an LRV between 7% and 20%.
- The dwelling is to be a traditional farm building form.

[1] https://edocs.qldc.govt.nz/Documents/e755d64qlE8n_0mNypap38IqkG4Zk5tf8ypqMsiqm1wqwmVuAup4z-HMDbmdZ2LTHT6dVfp9nHgSoqPswUnQuDcC8LcdtYvJImdTyOEvvLtHgvoaaB8whJC7FPbZk2PgNrl9sGFiNC5A3jOWQycahA/Decision%20of%20the%20Commission%20-%20Bayswater%20Trust%20RM160421%20RE-ISSUE

- The dwelling, accessory buildings and all domestic elements are to be contained within the building platform.
- The area outside the building platform is to be managed by agricultural or horticultural methods.
- An ‘Open Pasture’ space between the proposed hedge and Glenorchy-Paradise Road shall be kept free of trees other than the proposed tree planting.
- The proposed conifer hedges shall be maintained to a minimum height of 6.0m.
- Fencing of the building platform or driveway is to be post and rail only, and the road frontage may only be fenced in post and rail or stone.
- Exterior lighting shall only be within the building platform and no higher than 1m. Lighting attached to the house may be no higher than 3m.

3.0 Permitted baseline

As the building platform consent has lapsed there is no permitted baseline for a house.

4.0 Site and context description

The landscape of which the site is a part, is an ancient glacial valley that now contains the Rees River flowing down the eastern side of Mt Alfred, and the Dart River flowing down the western side. The valley floor is characterised by the braided river pattern of the Rees and flat, verdant pastoral land that abuts the steep slopes of the Humboldt Mountains on the west and the Richardson Mountains on the east. The valley floor contains undulations, small terraces, and small Roche moutonnee landforms (such as Camp Hill) that are resultant of the action of past glaciers. The scale of the valley floor and areas of pastoral land are small, and narrow being squeezed between the Rees River corridor and far larger scale mountain ranges which are close together and steep sided.

The site is a 53.99 ha in area and is currently mainly used for sheep grazing. A gravel quarry and storage yard (RM130073) are in the southwest corner. The site also includes run down stock yards and a small shed, and fenced paddocks. Two creeks bisect the site and appear to be grazed to the creek edge. Stands of willows undulate in and out of the property where they extend from the Rees River corridor. Poplar trees occur on the southern boundary on the northern side of the access road to the quarry and extend into the legal road giving the impression they form the southern boundary of the site.

Near the site to the east on the valley floor and stepped plateau is the Rural Lifestyle Zone which extends south towards the outskirts of the Glenorchy township and north into the Rees Valley which allows subdivision for residential purposes down to an average lot size of 2 hectares. This zone has not yet been developed to its capacity. To the south of the site is a 148ha parcel of land bisected by

Precipice Creek. The triangular shaped part of the property north of the creek and south of the site includes a small house, poplar, and willow trees. The house is located approximately 32m from the edge of the sealed road. To the north, across the Glenorchy-Paradise Road is a farm shed in the middle of the paddock.

The Rees River corridor with extensive naturalised willows forms the western edge of the site. The Glenorchy-Paradise Road curves to the northwest to cross the Rees River and forms the northern edge of the site.

5.0 Landscape classification and character

The C180/99 Environment Court decision[2] did not categorise the landscapes of the Glenorchy area, however, this rural land meets the classification of outstanding natural landscape (district wide) due to its composition that is typical of this landscape category as described in Part 4.2.4(2) of the Operative District Plan:

> *"The outstanding natural landscapes of the district are romantic landscapes – the mountains and lakes."*

The landscape in this area is typified by the open and flat pastoral river valleys of the Rees and the Dart that are flanked on either side by impressive snow-capped mountain ranges that form part of the Mount Aspiring National Park. The rugged forms of these mountains that rise from the more tamed and verdant pastoral valley floors are striking to visitors to the area and are undoubtedly romantic in nature. Although the farmed valley floors are not as natural or dramatic in appearance, they are an inseparable component of the broader landscape. They are too small and narrow to be considered complete landscapes in their own right. Although the valley floor feels tamed to some degree, the experience of being in this landscape is still one of rugged isolation, at the edge of human influence over the land.

6.0 Visibility baseline

Views of the site are restricted to the local area, specifically sections of the Glenorchy-Paradise Road and Rees Valley Road.

Public locations where the building platform location is generally and partially visible from:

- Glenorchy-Paradise Road from the Precipice Creek bridge to the Rees River bridge.

[2] Environment Court decision C180/99, Wakatipu Environmental Society Incorporated vs. Q.L.D.C.

- Rees Valley Road from the intersection with Glenorchy-Paradise Road to approximately the woolshed at 126 Rees Valley Road.
- Rees River corridor

Adjacent private locations where the dwelling location is generally and partially visible from:

- The house on the northern side of Precipice Creek Road at 547 Glenorchy-Paradise Road.
- 126 Rees Valley Road. This property only contains a shed and therefore visual effects from this property have not been assessed.
- Houses in the Rural Lifestyle Zone to the immediate east of the site.

The degree of visibility of the above viewing locations will be discussed further in the next section of this report. I have not been onto the adjacent private properties and have estimated effects.

7.0 The visual effects of the proposal

An assessment of visual effects deals with the effects of change and development on the views available to people, and their visual amenity. The visual amenity effect is the difference between the landscape character of the current site, and the changes to the character from the proposed development. The visibility assessment is an estimate of effects based on poles placed at the corners of the proposed building platform and from a selection of viewpoints.

For each viewpoint, the current visibility of the site, the current visual amenity, the visibility of a future dwelling and associated works, and the effect on visual amenity of a future dwelling will be described. Photos of a selection of representative current viewpoints are provided in Attachment C of this report.

The degree of visibility is described as:

- Nil
- Low
- Moderate
- High

The effect on visual amenity is assessed as per the '*Adverse Visual Effects Rating Scale'* in Attachment A of the report and is described as:

- Very low
- Low
- Moderate-low
- Moderate
- Moderate-high

- High
- Very high

Mitigation planting, as per consent RM160421, has been proposed as follows and will reduce the degree of visibility over a period of approximately 5 years:

- A conifer hedge to the north and the east of the building platform to eventually screen any potential views of a future dwelling and domestic elements from Glenorchy-Paradise Road and Rees Valley Road. The hedge is proposed to be Cupressus x leylandii 'Leighton green' which will reach a height of approximately 7m after 5 years.
- a row of Lombardy poplars along the southern boundary of the site and the southwestern fence line to maintain screening and the rural character from Glenorchy -Paradise Road when the existing row of poplars die.
- a row of Lombardy poplars along the southwestern fence line to screen views of a future house and domestic elements from the legal road on the southern boundary of the site.

Aspects of the proposed development that will potentially have visual effects on the landscape are future dwellings, associated driveways and parking areas, cars, clotheslines etc, lawns, garden and tree planting and the presence of people.

PUBLIC LOCATIONS

Legal and partially formed road on southern and western boundary of site (Photos 1 and 2).

The road is partially formed from the intersection with Glenorchy-Paradise Road to the southern boundary of the site where it crosses over to access the gravel mining yard owned by Glenorchy Gravel Ltd (RM 130073), a distance of approximately 340m. Beyond this point the legal road crosses Precipice Creek and then the true left bank of the creek and ends in the Rees River where it intersects with a legal road that forms the western edge of the site and continues north and south into the river channel.

Photo Points 1 and 8

Existing visibility of site

The site is visible from sections of the legal road that forms the western boundary of the site. Visibility from the legal road is screened in places by existing Willow trees within the legal road boundary, the river corridor and on the site. Photo Point 1 is from a viewpoint on a gravel pile in the gravel yard, and Photo Point 8 is from the horse trekking track that has been created by the horse trekkers constant use. It has been used to illustrate the degree of visibility even though at this point the track is within the applicant's property. There are viewpoints along the track which are closer to the site.

From viewpoint 1 the southern edge of the site is visible including the proposed building platform location. In this view is part of a grazed paddock and an existing poplar tree. The willows on the embankment and the western edge of the site frame the view.

Within the same view, in the background, and directly behind the proposed building platform location are existing houses within the Rural Lifestyle Zone on the eastern side of Glenorchy-Paradise Road and rural tree planting around the houses and along the road edge. The slopes of Precipice Hill are also visible at this viewpoint with a covering of shrub vegetation on the lower slopes.

The degree of visibility is low to moderate from photo point 1.

From photo point 8, the southern end of the site is visible including the proposed location of the building platform. Within this viewpoint the poplars, willows, and conifers south of the site form a dense backdrop. Houses and trees in the Rural Lifestyle Zone, and Precipice Hill are also visible across the open paddock of the site.

The degree of visibility of the site is high.

Existing visual amenity

The visual amenity from photo point 1 is one of a rural gravel road largely enclosed by typical rural trees – Willows and Poplars on the northern side close to the road and restricting views across the paddocks of the site; a smaller open paddock with a small house on the southern side with a back drop of Willows and Pines which opens up to a small view of Precipice Creek, the creek banks and more rural trees on the southern side of the bank and eventually the gravel yard. A viewer also obtains a narrow view of the natural character and visual amenity of Mt Alfred when looking west and Precipice Hill including the residential development on the flats and lower slopes of Precipice Hill when looking east.

The existing visual amenity from photo point 8 is one of a node of residential development on the lower slopes and flats adjacent to Precipice hill, and dense, contiguous stands or rural trees which continue from the Precipice Creek corridor through the rural residential development and up the Precipice Creek gully. Evergreen shrubland extends in natural patterns over the lower slopes of Precipice Hill. Grazed paddocks extend over the flats as far as the willow edged Rees River.

Visibility of a future dwelling

A future dwelling and associated domestic elements within the building platform will be visible from photo point 1.

The degree of visibility will be moderate to low.

A future dwelling and associated domestic elements within the building platform will be visible initially from photo point 8 and other open sections of the track. The proposed evergreen hedge on the northern side of the building platform will screen the future house and associated domestic elements within 5 years of being planted. Depending on the viewing location either on the track or within the river corridor close to the site, parts of the future house and domestic elements will be visible.

The degree of visibility will be moderate to low initially from photo point 8 and will reduce to nil within 5 years. From the remainder of the track and within the river corridor close to the site the degree of visibility will be moderate to nil depending on location.

Effect on visual amenity

From photo point 1 the effect on the visual amenity will be a rural farmhouse with an evergreen hedge immediate backdrop framed by the trees and viewed as part of the node of residential development within a broader visual amenity of rural trees, grey shrubland and the natural character and visual amenity of Precipice Hill. The proposed design controls restricting all structures to the building platform, use of rural trees and evergreen hedges and rural vernacular form of the future house will result in a visual amenity with a rural character.

From photo point 8 the effect on the visual amenity will be a rural farmhouse behind an evergreen hedge with a backdrop of densely planted rural trees viewed with discrete residential development, over open, grazed paddocks within a broader visual amenity of rural trees, grey shrubland and the natural character and visual amenity of Precipice Hill. The proposed hedge, Cupressus x leylandii 'Leighton Green' is a rural hedge species and with the rural vernacular form of the future house will result in a visual amenity with a rural character and visual amenity in keeping with the residential area, while still being subordinate to the broader natural character and part of the natural visual amenity.

Photo Point 2

Existing visibility of site

The site is partially visible between approximately three gaps in the existing trees within the road reserve until it crosses the Precipice Creek bed. The gaps, and consequent views are narrow. Within the same views, in the background, are existing houses within the Rural Lifestyle Zone on the eastern side of Glenorchy-Paradise Road.

The degree of visibility is moderate at the intersection of the legal road and Glenorchy-Paradise Road reducing to low as a viewer travel towards the Rees River.

Existing visual amenity

The visual amenity is one of a rural gravel road largely enclosed by typical rural trees – Willows and Poplars on the northern side close to the road and restricting views across the paddocks of the site; a smaller open paddock with a small house on the southern side with a back drop of Willows and Pines which opens up to a small view of Precipice Creek, the creek banks and more rural trees on the southern side of the bank and eventually the gravel yard. A viewer also obtains a narrow view of the southern end of Mt Alfred when looking west and Precipice Hill including the residential development on the flats and lower slopes of Precipice Hill when looking east.

Visibility of a future dwelling

A future dwelling and associated domestic elements will be visible initially from the gaps between the trees until the proposed poplars have been planted for 5 years by which time the degree of visibility of the house will be very low.

Effect on visual amenity

The effect on the visual amenity will initially be a rural farmhouse glimpsed between the gaps in the trees close to the viewer and the Glenorchy-Paradise Road slightly further from the viewer than the existing small house on the south side of the road. The future house will be viewed within the rural character and visual amenity of the road and surrounds, and the existing houses in the Rural Lifestyle Zone. It is will not be visually isolated and will not be unexpected within the wider context of rural housing.

The future house will have no effect on views of rural trees on either side of the road, Precipice Creek or longer views up and down the road to Mt Alfred or Precipice Hill. It will initially screen the visual amenity of three small views of the paddock at the location of the building platform.

Once the proposed Poplar trees have been planted for 5 years the house will not be visible and the visual amenity will become one of a denser row of Poplars on the northern side of the road. All other aspects of the visual amenity will remain unaffected.

The visual amenity effect will be low.

Glenorchy-Paradise Road (Photo points 3,4,5 and 7)

Existing visibility of site

The site, including the location of the proposed building platform is openly visible on Glenorchy-Paradise Road from the Rees River Bridge (Photo point 7) to the northern end of the Precipice Creek Bridge (Photo point 3) when travelling in both directions.

The degree of visibility is high.

Existing visual amenity

The visual amenity of the section of Glenorchy-Paradise Road in Photo points 3,4,5 and 7 is one of an area of residential settlement amongst trees and shrub vegetation on the flats and up onto the toe of the mountain slopes to the east, and a single dwelling on the west side of the road at Precipice Creek also amongst trees. Views open up across the small and narrow farmed flats which are limited by dense Willows on the edge of the Rees River corridor before views of steep, natural mountain slopes. The scale and enclosure of the mountain slopes and continuous Willows on the river dominate mid and close background views. Both have a strong and dominant natural character. The farmed flats and residential development are smaller in scale and the visual amenity tips strongly in favour of the natural landscape of the river corridor and the mountains.

Visibility of proposed dwelling

The proposed dwelling will be visible initially from the northern end of the Precipice Creek Bridge to the Rees River Bridge when travelling south towards the site. The proposed dwelling will be visible when travelling north from the northern end of the Precipice Creek Bridge (Photo point 3) until a viewer has passed the site. The proposed Poplar and conifer hedge planting will reduce the visibility of the dwelling and associated domestic elements over a 5-year period until the dwelling is not visible from the described viewpoints.

The degree of visibility of the dwelling will initially be high, reducing to nil over 5 years.

Effect on visual amenity

A building of a gabled form that has some resemblance of a traditional farm building will accord with the expected visual character and amenity of the landscape.
Views and the visual amenity of the site from the above-mentioned vantage points are dominated by the mountainous natural landscape that surrounds the flats of the Rees valley. The verdant valley floor is a component of these views, but it is not the dominant component. The level of visibility of the proposed development that will remain from Glenorchy-Paradise Road over a period of 5 years will not be sufficient to dominate these views or to detract from the views of the surrounding mountainous natural landscape. In these views a dwelling will be seen, backed by a mature row of poplars, with a large area of farmed paddock-land in front of the dwelling and near the existing house south of the site and the Rural Lifestyle zone on the eastern side of the road. The location of the proposed building platform allows views to be maintained across the flats towards the river corridor and mountains. Any view of the future dwelling will be filtered by tree planting that surrounds it and the colours of the dwelling will be such that it does not contrast with its setting.

The tree planting shown on the Landscape Masterplan is designed to mitigate the visual effects of future dwellings and to mimic the vegetation patterns in the surrounding agricultural landscape. The exotic tree species are typical of a colonially settled farming landscape and are an element of rural character and rural visual amenity.

The effect on visual amenity will be low.

Rees Valley Road (Photo point 6)

Existing visibility of site

The site is openly visible from Rees Valley Road when travelling south from approximately the entrance to Temple Peak Station to the intersection with Glenorchy-Paradise Road. Beyond this point views are more intermittent due to the existing trees within properties on either side of the road.

The degree of visibility is low-moderate from the entrance to Temple Peak Station due to the viewing distance of approximately 1.9km between the building platform location and the viewer and increases to high at the intersection with Glenorchy-Paradise Road.

Existing visual amenity

The visual amenity experienced from Rees Valley Road is like that experienced from Glenorchy-Paradise Road.

The visual amenity from photo point 6 is one of a rural gravel road enclosed on either side by narrow grazed paddocks edged and broken up by lines and groups of rural trees typical of the area – Poplars, conifers, Eucalyptus and Willows following the creeks that drain into the Rees River and extend to and up the mountain slopes. Houses and rural buildings are dotted amongst the trees and

open paddocks. Views across the valley and up and down the road are short due to the closeness and overwhelming scale of the mountains.

The fenced sides of the road are scruffy with overgrown grass and combined with the trees, the enclosing and dominating visual influence of the mountains and closeness of the Rees River corridor give the landscape a visual amenity where the natural character is strong and dominant and human influence is waning.

The views and the visual amenity of the landscape are dominated by the mountainous natural landscape that surrounds the flats of the Rees valley. The verdant valley floor, and residential development is a component of these views, but it is not the dominant component.

Visibility of proposed dwelling

The proposed dwelling will be visible initially from the same section of Rees Valley Road as the site currently is reducing to nil over a five-year period as the proposed conifer hedge reaches a height of 6m and screens views of the dwelling and domestic activities.

Effect on visual amenity

A building of a gabled form that has some resemblance of a traditional farm building will accord with the expected visual character and amenity of the landscape.
Views and the visual amenity of the site from the above-mentioned vantage point is dominated by the mountainous natural landscape that surrounds the flats of the Rees valley
The level of visibility of the proposed development that will remain from Rees Valley Road over a period of 5 years will not be sufficient to dominate these views or to detract from the views of the surrounding mountainous natural landscape. In these views a dwelling will be seen, backed by a mature row of poplars, over a series of open, farmed paddocks with a large area of farmed paddock-land in front of the dwelling and in the context of the small house south of the site and a farm building in the midground. Any view of the future dwelling will be reduced due to the colours of the dwelling will be such that it does not contrast with its setting but recedes into it and will not be viewed in isolation from residential and rural buildings.
The tree planting shown on the Landscape Masterplan is designed to mitigate the visual effects of future dwellings and to mimic the vegetation patterns in the surrounding agricultural landscape. The exotic tree species are typical of a colonially settled farming landscape and are an element of rural character and rural visual amenity.

The effect on visual amenity will be low.

PRIVATE LOCATIONS

547 Glenorchy-Paradise Road

Existing visibility of site

The site is likely to be partially visible between the poplars within the legal road between the application site and 547 Glenorchy-Paradise Road.

The degree of visibility is likely to be low-moderate from the house at 547 Glenorchy-Paradise Road depending on the season.

Existing visual amenity

The visual amenity experienced from the house at 547 Glenorchy-Paradise Road is likely to be of the gravel road, the stock yards and small shed on the application site, the poplar trees, and glimpses between them to an open paddock. Views to the east from the house at 547 Glenorchy-Paradise Road are open and towards the residential development in the Rural Lifestyle Zone in the foreground and the Richardson Mountains in the midground.

Visibility of proposed dwelling

The proposed dwelling will be visible initially through gaps in the poplar trees on the legal road. The degree of visibility will be low-moderate. Within 5 years the proposed row of poplar trees on the southern boundary of the site would have filled out and reached approximately 6m and views of a future house will be screened. The proposed hedge will also provide screening of a future house. The future house is likely to be partially visible in winter, although this will be to a low-very low degree.

Effect on visual amenity

The effect on the visual amenity from the house at 547 Glenorchy-Paradise Road will be of additional poplar trees and a lesser glimpse view of an open paddock through those trees.
A building of a gabled form that has some resemblance of a traditional farm building will accord with the expected visual character and amenity of the landscape from the house at 547 Glenorchy-Paradise Road. The open views to the east of the Rural Lifestyle Zone development and beyond that the Richardson Mountains will remain unaffected.
The effect on visual amenity will be low.

Houses in the Rural Lifestyle zone immediately east of the site - 618 Glenorchy-Paradise Road, and on the upper elevations of Xenicus Rise and Amphion Way.

Existing visibility of site

The site is likely to be partially visible from the house at 618 Glenorchy-Paradise Road as this property has shrubs and trees planted between the house and Glenorchy-Paradise Road.

The degree of visibility is likely to be low-moderate from the house at 618 Glenorchy-Paradise Road.

From houses on the upper elevations of Xenicus Rise and Amphion Way the site is likely to be partially to openly visible depending on the design of the houses, their orientation and planting and topography between the site and the houses.

The degree of visibility is likely to be moderate-high due to the elevation of the houses.

Existing visual amenity

The existing visual amenity from the house at 618 Glenorchy-Paradise Road is likely partially of the open paddock of the site, and views above the shrubs, trees, and hedge on their property to the Richardson Mountains, Humboldt Mountains and Camp Hill.

Due to the higher elevation of the houses on Xenicus Rise and Amphion Way, they gain expansive views to the north (down Paradise Valley and to Mount Earnslaw), through the west (across the Rees/Dart delta towards Mount Bonpland) and to the southwest (towards Bold Peak). The site is likely a part of the expansive views, but not the primary feature of their visual amenity.

Visibility of proposed dwelling

The proposed dwelling will be visible initially from the house at 618 Glenorchy-Paradise Road until the hedge has reached a height of 6m and will screen a future house and associated domestic elements.

The future house is likely to be visible to a high degree initially reducing to nil over a 5-year period.

Effect on visual amenity

I note that the house at 618 Glenorchy-Paradise Road is further north than the proposed building platform and is likely to maintain views across the Open Pasture Space to the greater part of the site and midground and background views of the Rees River willows, Camp Hill, and the Humboldt Mountains. The immediate and close foreground view will include a 6m height, evergreen hedge and views of vehicles entering and exiting the site. The effect on the visual amenity is likely to be moderate-low.

From properties on the elevated sections of Xenicus Rise and Amphion Way the new elements will appear in views to the west from these properties. The most dramatic and valuable views from these properties are those to the north and northwest.

A future building will be in the mid-ground of views on the flat pastureland and will be immediately adjacent to (and partially behind) the built development at 618 Glenorchy-Paradise Road and at 5 Amphion Way. In this sense, the new development will be part of a cluster of treed built development and will leave the large open paddocks of the site unaffected. The proposed activities will be surrounded and backed by pasture as viewed from the upper elevation properties. They will not affect or obscure the Rees/Dart delta, Mount Alfred, or any part of the Humboldt Mountains in these views.

The proposed planting, which includes new poplars within the subject site to supplement the existing mature poplars, will screen a future building and will entirely screen curtilage activities on the subject site. The curtilage activities of the other rural properties in this view (618 Glenorchy-Paradise Road and 5 Amphion Way) are exposed to view, as is generally the case in relation to rural dwellings or homesteads.

The finished appearance of the proposed activities will take the form of part of a gable- roofed building, visually softened by trees, tied in with existing buildings and trees at the southern edge of open farmland. Therefore, the new elements that will appear in the relevant views will be elements that accord

with the character of the views and maintain a pleasant rural outlook. The new elements will not be offensive or degrading to the quality of views.

Overall, the visual amenity and rural outlook from the elevated properties on Xenicus Rise and Amphion Way will affected to a low degree and in a way that is not particularly adverse.

8.0 The landscape effects of the proposed consent

The level of magnitude of landscape effect will be described as:

- Very low
- Low
- Moderate-low
- Moderate
- Moderate-high
- High
- Very high

The definition of the above level of magnitude is described under *'Adverse Landscape Effects Rating Scale,'* Attachment A.

Landscape effects are those effects on the landscape as a resource, namely its landscape character and the components that make up that character, rather than visual issues.

The elements of the site and wider landscape that are potentially affected by the proposed development are the rural character of the floor of the valley and the natural character of the wider landscape.

The proposed dwelling and associated landscaping are characteristic of a rural landscape character. The location of the proposed building platform is near a concentration of residential development around Precipice Creek bridge, that in the case of the Rural Lifestyle Zone continues north and south for a considerable distance. On the western side of the road, the pattern includes houses and sheds close to the road on the northern and southern side of the creek at 547 Glenorchy-Paradise Road. The location of the proposed building platform will extend this pattern north to a small degree, but it will still be experienced as part of the existing built character on the valley floor rather than isolated development in a location surrounded by open paddocks with no relationship to the established pattern. The design controls will result in a dwelling of a vernacular traditionally rural design, a single storey and with recessive coloured cladding. It will not appear out of scale or uncharacteristic of the rural landscape of the floor of the Rees Valley. The building platform has been located to consolidate the existing pattern of residential development and contain the extent of domestic elements such as gardens, lawns, clothes lines etc. to an area where it is not unexpected.

There will be no effect on the on the natural character of the Rees River corridor or the mountainous surrounds as the proposed building platform and a future dwelling are located within the rural character of the valley floor, and the scale of the proposal is so insignificant in comparison to the scale of the natural landscape as to have no effect.

The proposed design controls, proposed planting and location of the building platform will ensure the rural values of the valley floor are retained as the change to the landscape character is small, and the site is not sensitive to rural dwellings associated with a small farming block.

This particular site offers the opportunity to site an appropriately designed dwelling against an existing shelter-belt backdrop in a way that preserves the open, agricultural character of the vicinity and pattern of building location within that character. The appreciation of the majestic, mountainous, surrounding landscape will not be diminished and the open, rural character of the farmed valley floor (that will be looked over by future dwellings in the Rural Lifestyle Zone) will not be degraded.

The effect on the landscape character will be low.

9.0 Rural General – ONL Assessment under Operational District Plan

The site has a Rural General Zoning and an Outstanding Natural Landscape (District Wide) landscape classification. The relevant assessment matters are under Section 5.4. 2.2 of the Operative District Plan.

(a) Potential of the landscape to absorb development

Aspects of the proposed development that will potentially have visual effects on the landscape are the future dwelling, associated driveways and parking area, cars, a clothesline etc, a lawns, garden and tree planting and the presence of people.

Parts of the future dwelling (and associated curtilage) erected on the proposed residential building platform will be visible initially from parts of Glenorchy-Paradise Road, from the extreme southern end of Rees Valley Road, from parts of the legal road that bounds the western edge of the site and from parts of the Rees River reserve.

Parts of the future dwelling (and associated curtilage) will also be visible initially from neighbouring private land to the east of Glenorchy-Paradise Road. This land is zoned Rural Lifestyle and contains some dwellings, although it is yet to be developed to its capacity. The future dwelling will be visible initially from private land to the south of the unformed legal road.

The extent of the visibility of the proposed building platform and future dwelling will be limited by topography, existing trees, proposed trees, proposed hedge and by the restrictions on colours and materials of the future dwelling. Once proposed tree and hedge planting begins to fill out in form and height (after approximately 5 years), a future dwelling will be difficult to see from Rees Valley Road, from the legal road that bounds the western edge of the site and from the Rees River reserve.

Views of the site from the abovementioned vantage points are dominated by the mountainous natural landscape that surrounds the flats of the Rees valley. The verdant valley floor is a component of these views, but it is not the dominant component. The level of visibility of a future dwelling that will remain from parts of Glenorchy-Paradise Road and from the Rural Lifestyle Zone will not be sufficient to dominate these views or to detract from the views of the surrounding mountainous natural landscape. In these views a single dwelling will be screened by an evergreen hedge and backed by a mature row of poplars, with a large area of farmed paddock-land in front of them. Any views of the dwelling will be filtered by tree planting that surrounds them and the colours of the dwelling will be such that they do not contrast with their setting.

The tree and hedge planting shown on the Landscape Masterplan is designed to mitigate the visual effects of a future dwelling and to mimic the vegetation patterns in the surrounding agricultural landscape. The exotic tree species are typical of a colonially settled farming landscape.

No new boundaries are proposed as the proposal is not a subdivision. Volunteered conditions of consent restrict all future fencing to post-and-wire only.

(b) Effects on openness of landscape

The subject site is within a broadly visible expanse of open landscape when seen from the north, although the poplars in the site's southern boundary limit long views that would otherwise run further to the south. Similarly, the site is not visible from the south due to these poplars.

At a large scale, this part of the Rees River valley is contained by the steep mountain slopes around it. In a general sense, observers on this valley floor experience openness, although some parts of this valley floor are intermittently hidden by lines of shelter planting or by terraced landforms.

The proposed development is sited such that it will not be visible from the north or south as discussed in Section 7.0. The single proposed residential building platform is immediately backed by a mature row of poplars. A single future dwelling, although recessively coloured, will appear as a visual interruption to the current open character of the paddocks of the site. However, because this single dwelling will be immediately backed by a mature line of shelter trees and screened by an evergreen hedge, I do not

consider that the sense of openness that is currently appreciated by observers in the landscape will be noticeably reduced. Views will not be enclosed. The landscape will remain overwhelmingly open.

(c) Cumulative effects on landscape values

There is little existing domestic activity in the vicinity of the subject site that is not associated with a farming use of the land. This situation will change as the Rural Lifestyle Zone is developed in accordance with the provisions of the Plan. The extent of this area of Rural Lifestyle Zone can be seen on Planning Map 9.

The proposal will result in the introduction of a single dwelling and associated curtilage in the Rural General Zone. These elements are not consistent with the natural character of the landscape; however, the finished development will be consistent with the colonial agricultural, or pastoral, character of the vicinity and valley floor. A single dwelling in the proposed location, built in accordance with the proposed design controls, surrounded by the existing expanses of paddock-land, will be congruent with the open, verdant, farmed character of the valley floor lands of the Rees Valley.

A roof pitch control on the future dwelling has been volunteered to ensure that dwellings are designed around a traditional colonial New Zealand architectural form.

The existing level of domestication in this vicinity does not represent a threshold beyond which no further domestication is tolerable; however, given the existence of the Rural Lifestyle Zone, there is the potential that domestication in the Rural General Zone could further degrade the naturalness and rurality of this vicinity. The effect of creating the Rural Lifestyle Zone could potentially be exacerbated by dwellings in the Rural General Zone.

In this instance these potential cumulative effects will be avoided due to the specific location of the proposed residential building platform, the design controls on the future dwelling and the extent of open paddock-land that will be preserved. A future dwelling on the edge of an expanse of paddocks, backed by a mature poplar shelterbelt, will appear as an integral and expected part of this sparsely populated rural vicinity. The openness and rural character of the lands surrounding the Rural Lifestyle Zone will not be degraded by the proposed activity.

(d) Positive effects

A positive effect of the proposal is the retention of the open space of the paddocks outside of the building platform via either agricultural or horticultural methods and the design control to keep the ‘Open Pasture’ area between the conifer shelterbelt and the Glenorchy -Paradise Road free of trees which will maintain views across the paddocks to the broader landscape.

10.0 Rural – ONL Assessment under Proposed District Plan

Chapter 21 Rural, Section 21.21 sets out the assessment matters for rural zoned landscapes with an Outstanding Natural Landscapes classification under the Proposed District Plan.

21.21.1. Outstanding Natural Features and Outstanding Natural Landscapes (ONF and ONL)

21.21.1.1 The proposed building platform and a future dwelling is appropriate and exceptional in this location because it is a single building platform located close to existing development and is located to maintain the open agricultural character of this part of the valley floor. A dwelling and rural tree planting and hedging on a small farm is not unexpected in a rural landscape which is part of a far broader ONL.

21.21.1.2 I am not aware of the exact age of the existing poplars and willows on the southern and western boundaries of the site; however, I would estimate they are at least 20 years old. The trees will partially mitigate views of a future dwelling from viewpoints along the unformed legal roads. The existing trees are appropriate to the location and wider landscape and form part of the permitted baseline. Poplars are typical rural trees found within the unformed legal road, on the site and on the farmed flats between Precipice Creek north to the Rees River and up the Rees Valley. Likewise extensive areas of Willows are the dominant tree species along the Rees River corridor and creeks that feed into the river. Both tree species are strongly rural elements within the landscape.

21.21.1.3 Effects on landscape quality and character

a. Physical attributes

The formative processes have a profound influence on the landscape character as the formation process is clearly legible that the landscape is a glacially formed as seen in the distinctive narrow U-shaped Rees and Dart valley that overshadow the narrow valley floor, and the braided Rees and Dart Rivers which cut a wide swathe through the valley floor. The landscape character and glacial formative process is large scale and overwhelming.

b. Visual attributes

The site and broader landscape include native vegetation in gullies and on mountain slopes where soil is present. The valley floor includes grazed pastoral grass and rural trees such as poplars and conifers. Thick bands of willows line the edges of the braided river systems and extend into the farmed paddocks and along minor water courses. The predominance of grazed pasture and rural trees on the valley floor allows the formative processes, its memorability, naturalness, and transient values to be fully appreciated. Rock outcrops, shadows, the presence of snow and the change in colours throughout the day are clear.

Human influence is the lesser landscape character and is mostly evident on the valley floor where the verdant green, smooth pasture grasses contrast with the darker colours of the rock outcrops, native

grasslands, and beech trees. The scale of human influence is small and utilitarian on the farmed flats and less utilitarian in the Rural Lifestyle Zone where a domestic character is evident.

The areas of human influence provide a contrast in terms of scale and are vastly overwhelmed by the naturalness of the natural landscape.

c. Appreciation and cultural attributes

It is likely the above attributes are shared and recognized in the ONL status of the landscape.

Tangata Whenua have not been contacted in the preparation of this report regarding the cultural and spiritual values of the site and surrounds. The PDP Decisions Maps shows the northern end of Lake Wakatipu and the adjacent land as being Wahi Tupuna, and the site and adjacent land as being Tahuna (Glenorchy).

I am not aware of any settlement or use of the site in particular.

d. The proposed dwelling will have negligible effect on the landscape quality or character. As described in Section 8.0 of this report the effect on landscape character will be low as a dwelling of a vernacular rural design is characteristic with the surrounding landscape.

e. No new boundaries are proposed as no subdivision is proposed. The dwelling and curtilage are defined by an existing fence and stock will not be able to enter the domestic area.

21.21.1.4 Effects on visual amenity

a. The degree of visibility of a future dwelling has been described and assessed in Section 7.0. The dwelling will initially be visible to a low to moderate to high degree from the unformed legal road south and west of the site, Glenorchy-Paradise Road, and Rees Valley Road. Over a period of 5 years visibility of the dwelling and associated domestic activities will reduce to reasonably difficult to see due to the fast-growing Poplars and conifer hedge.

b. A future development will not be visually prominent from public or private views. The site of the proposed building platform is not elevated or located in the centre of the paddock isolated from a visual context of residential development.

The new development will be part of a cluster of treed built development and will leave the large open paddocks of the site unaffected which form the foreground to the views of the ONL. A future dwelling and associated domestic activities will not detract from those views due to its location in the southeastern corner of the site against a line of poplars.

The finished appearance of the proposed activities will take the form of part of a gable- roofed building, visually softened by trees and screened by a hedge, tied in with existing buildings and trees at the southern edge of open farmland. Therefore, the new elements that will appear in the relevant views will be elements that accords with the character of the views and maintain a pleasant rural outlook. The new elements will not be offensive or degrading to the quality of views from public or private viewpoints.

c. The proposed conifer hedge and row of poplars are rural elements seen on the farmed flats of rural landscapes including this one. Poplars are clearly visible and prominent in proximity to the site and on

the wider landscape. An evergreen, usually fast-growing conifer hedge is also a typical rural landscape element seen enclosing the farmhouse. The proposed shelterbelt planting will be very similar to other existing lines of shelter trees in the area to the south of the site and will appear as rural elements, very similar to many existing shelterbelts in the Rees Valley area.

d. The visual amenity values of the wider landscape are and will remain dominated by the natural character of the river corridor and mountain slopes. The proposed building platform and a future dwelling will have negligible effect on that wider visual amenity due to the small scale of the proposal and its location close to an existing residential pattern of development and on the farmed valley floor.

e. The dwelling will not break the line and form of any ridges, hills or slopes as the building platform and future dwelling are on the flat valley floor.

f. The only road proposed is a gravel driveway the building platform which is a rural element. There is no lighting proposed outside of the building platform, and the lighting within the building platform will be screened by the proposed conifer hedge maintaining the impression and visual amenity of rural darkness at night.

The proposed landscaping of poplar trees and a conifer hedge are both typical rural elements and are already part of the visual amenity provided by the site and surrounding landscape. The addition of the trees and hedge to the site will reduce views across the southeast corner of the site of the open paddock but this effect will be momentary when passing the site. The proposed landscaping will not reduce the visual amenity.

21.21.1.5 Design and Density of Development

a. The proposal is a single building platform and there is no requirement to aggregate built form or use shared accessways etc.

b. The dwelling has been located to close to the southeast corner of the site in proximity to the small house at 547 Glenorchy-Paradise Road, where the valley floor is least sensitive to change as residential development in the Rural Lifestyle Zone and on the southern side of Precipice Creek occurs and is established. The majority of the open space on the site is to be retained as farmed land.

c. There is no location within the site that is less visible from public places than the proposed location as the site is flat and open and existing trees tend to occur on the edges of the property. It is the best location in terms of landscape effect and visual amenity effect as it consolidates the building effect to a small area in proximity to existing residential development and leaves the paddocks of the site open and uninterrupted.

21.21.1.6 Cumulative effects of subdivision and development on the landscape

a. Existing development has not degraded the landscape quality or character, but has formed it. I consider that in this instance these potential cumulative effects on the landscape quality or character will be avoided due to the specific location of the proposed residential building platform, the design controls on a future dwelling and the extent of open paddock-land that will be preserved. A future dwelling on the edge of an expanse of paddocks, backed by a mature poplar shelterbelt, screened by

tree planting, will appear as an integral and expected part of this sparsely populated rural vicinity. The openness and rural character of the lands surrounding the Rural Lifestyle Zone will not be degraded by the proposed activity.

b. Existing, consented or permitted development within the Rural Zone has not degraded the visual amenity of the landscape – there is very little development between Precipice Creek, the Rees River and the Rural Lifestyle Zone that is not rural in nature or with elements that are anything other than typically rural such as gravel driveways, rural tree planting, stock fencing and simple building forms. The visual amenity is still dominated by the natural character and visual amenity of the Rees River corridor and the mountainous surrounding landscape.
The future effect that the Rural Lifestyle Zone will have on the landscape could potentially be exacerbated by locating a dwelling in the Rural General Zone. It is considered that in this instance these potential cumulative effects will be avoided due to the specific location of the single proposed residential building platform, the design controls on a future dwelling and the extent of open paddock-land that will be preserved.

11.0 Conclusion

The site of the proposed building platform is in an outstanding natural landscape (district wide) and within the Rural General Zone of the ODP and the Rural Zone of the PDP.

The potential visibility of a future dwelling will be reduced by topography, existing trees, proposed trees and by the restrictions on colours and materials of a future dwelling. The level of visibility that will remain from parts of Glenorchy-Paradise Road and from the Rural Lifestyle Zone will not be sufficient to dominate views or to detract from the views of the surrounding mountainous natural landscape. A dwelling on the edge of an expanse of paddocks, backed by a mature poplar shelterbelt, softened by tree planting, will appear as an integral and expected part of this sparsely populated rural vicinity.

A future dwelling will appear as a minor visual interruption to the current open character of the paddocks of the property and views will not be enclosed. The sense of openness that is currently appreciated by observers in the landscape will not be noticeably reduced.

The future effect that the Rural Lifestyle Zone will have on the landscape could potentially be exacerbated by locating dwellings in the Rural General Zone. It is considered that in this instance these potential cumulative effects will be avoided due to the specific location of the proposed residential building platform, the design controls on a future dwelling and the extent of open paddock-land that will be preserved.

In summary, it is considered that the proposal is in accordance with the provisions of both Plans that relate to outstanding natural landscapes. This particular site offers the opportunity to site a single appropriately designed dwelling against a shelter-belt backdrop in a way that preserves the open, agricultural character of the vicinity. The appreciation of the majestic, mountainous, surrounding landscape will not be diminished and the open, rural character of the farmed valley floor (that will be looked over by future dwellings in the Rural Lifestyle Zone) will not be degraded.

ATTACHMENT A: Landscape and Visual effects rating scales, Consultant Landscape Assessment reviews for QLDC

Landscape and Visual Effects Rating Scales

Consultant landscape assessment reviews for QLDC

Adverse Visual Effects Rating Scale

Effect Rating	Use and Definition
Very High:	Total loss of key elements / features / characteristics, i.e. amounts to a very significant negative change in visual amenity.
High:	Major modification or loss of most key elements / features / characteristics, i.e. little of the pre-development visual amenity remains and amounts to a significant negative change in visual amenity values. *Concise Oxford English Dictionary Definition* *High: adjective - Great in amount, value, size, or intensity.*
Moderate - High:	Modifications of several key elements / features / characteristics, i.e. the pre-development visual amenity remains evident but materially changed.
Moderate:	Partial loss of or modification to key elements / features / characteristics, i.e. the pre-development visual amenity remains evident but is changed. *Concise Oxford English Dictionary Definition* *Moderate: adjective - average in amount, intensity, quality or degree*
Moderate - Low:	Small loss of or modification to one or more key elements / features / characteristics, i.e. new elements are not uncharacteristic within the visual environment and do not disturb the pre development visual amenity.
Low:	Very little material loss of or modification to key elements / features / characteristics. i.e. new elements integrate seamlessly into the pre-development visual environment. *Concise Oxford English Dictionary Definition* *Low: adjective- 1. Below average in amount, extent, or intensity.*
Very Low:	Negligible loss of or modification to key elements/ features/ characteristics of the baseline, i.e. visual influence of new elements is barely discernible.

Adverse Landscape Effects Rating Scale

Effect Rating	Use and Definition
Very High:	Total loss of key elements / features / characteristics / values, i.e. amounts to a very significant negative change in landscape character and / or landscape values.
High:	Major modification or loss of most key elements / features / characteristics / values, i.e. little of the pre-development landscape character remains and amounts to a significant negative change in landscape character and / or landscape values. *Concise Oxford English Dictionary Definition* *High: adjective - Great in amount, value, size, or intensity.*
Moderate - High:	Modifications of several key elements / features / characteristics / values, i.e. the pre-development landscape character and / or landscape values remains evident but materially changed.
Moderate:	Partial loss of or modification to key elements / features / characteristics / values, i.e. the pre-development landscape character and / or landscape values remains evident but is changed. *Concise Oxford English Dictionary Definition* *Moderate: adjective - average in amount, intensity, quality or degree*
Moderate - Low:	Small loss of or modification to one or more key elements / features / characteristics / values, i.e. new elements are not uncharacteristic within the receiving landscape and do not disturb the pre development landscape character and / or landscape values.
Low:	Very little material loss of or modification to key elements / features / characteristics / values. i.e. new elements integrate seamlessly into the pre-development landscape character and / or landscape values. *Concise Oxford English Dictionary Definition* *Low: adjective- 1. Below average in amount, extent, or intensity.*
Very Low:	Negligible loss of or modification to key elements/ features/ characteristics / values of the baseline, i.e. influence of new elements on landscape character and / or landscape values is barely discernible.

For the purposes of notification determination, an adverse 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.

NB. These rating scales apply to ***adverse*** effects, not to ***positive*** effects.

ATTACHMENT B: PROPOSED LANDSCAPE DESIGN CONTROLS

1. There shall be no more than one residential unit within the building platform.
2. Landscape planting detailed on the approved Structural Landscape Plan as listed in Condition 1 and as amended in terms of Condition 8a) shall be maintained in perpetuity. If any tree or plant should die or become diseased it shall be replaced in the next available planting season.
3. The Cupressus x leylandii 'Leighton Green' hedges shown on the approved Structural Landscape Plan and as amended in terms of Condition 8a) shall be maintained at a minimum height of 6m.
4. The residential dwelling and any accessory buildings associated with the dwelling shall be located within the building platform.
5. All domestic activities including all car-parking areas, paved areas, decks, domestic gardens, outdoor living areas and furniture, garden sheds, clotheslines, swimming pools, tennis courts and pergolas shall be contained within the building platform.
6. The land outside the building platform shall continue to be managed by agricultural or horticultural means.
7. The area on the approved Structural Landscape Plan as listed in Condition 1 that is marked as "Open pasture space" shall be kept free of trees other than those trees shown on the approved Structural Landscape Plan.
8. Any fencing of the building platform and driveway shall be in the form of a post and wire or post and rail type fence only.
9. Monumental gates or any other road frontage treatments other than simple post and rail or stone fences are prohibited.
10. The following design controls shall apply to any buildings erected on the building platform:
    i. The total footprint of buildings within the building platform shall not exceed 500m2.
    ii. The finished floor level of the future dwelling shall be raised a minimum of 0.5m above existing ground level at XX/XX/XXXX , to protect any future dwelling from potential flooding (shallow sheet flow) caused by breakout from Precipice Creek. If fill is imported for this purpose, it shall be compacted and certified in accordance with the appropriate standard.
    iii. The height of any buildings within the building platform shall be restricted to 6.5m above existing ground level at XX/XX/XXXX .

iv. All built elements upon the roof or upper portion of a future building including but not limited to chimneys, satellite dishes and solar panels shall not extend beyond the maximum height of 6.5m above ground level as at XX/XX/XXXX and shall be of a colour to match the roof.

v. Any future dwelling shall be designed to have the bulk and form of a traditional farm building, i.e., a homestead, woolshed, or barn, and shall be constructed from cladding materials typically associated with that type of building.

vi. The main roof of any future dwelling shall have a pitched form, with a slope of at least 25 degrees.

vii. Roof and wall claddings are to be coloured in a natural range of greys, cool browns or greens that have a light reflectivity value of between 7% and 20%.

viii. Roof colours are to have a matt finish. Transparent or translucent panels are not permitted.

ix. Wall cladding materials shall be limited to stacked stone, timber weatherboards, traditional corrugated iron, coloursteel or solid plaster, or a combination thereof.

x. All exterior lighting shall be restricted to the building platform and shall be down lighting only. Lighting shall not exceed 1m in height, except where attached to a building where it shall not exceed 3m in height.

ATTACHMENT C: PHOTOS FROM PUBLIC VIEWPOINTS DESCRIBED IN THE REPORT

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 1
SCALE: NTS

PHOTO MAP

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 2
SCALE: NTS

PHOTO POINT 1

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 3
SCALE: NTS

PHOTO POINT 2

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 4
SCALE: NTS

PHOTO POINT 3

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 5
SCALE: NTS

PHOTO POINT 4

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 6
SCALE: NTS

PHOTO POINT 5

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 7
SCALE: NTS

PHOTO POINT 6

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 8
SCALE: NTS

PHOTO POINT 7

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 27TH JUNE 2022
SHEET NUMBER: 9
SCALE: NTS

PHOTO POINT 8

LOT 2 DP306479 BUILDING PLATFORM
Precipice Creek Glenorchy-Paradise Road
Visual assessment

ATTACHMENT D: PROPOSED LANDSCAPE PLAN

KEY:

1 Property boundary shown as red dashed line.

2 Existing fence line - black dashed line.

3 Proposed 1000m2 building platform.

4 Indicative driveway alignment.

5 Proposed Lombary Poplars (Populus x euramericana 'Crows Nest).

6 Proposed conifer shelterbelt - Cupressus x leylandii 'Leighton Green':

Individual plants are to be spaced at a maximum distance of 1m apart.

Plants are to be irrigated by an automatric system until they reach a height of 6m.

The overall hedge is to be maintained at a minimum height of 6m.

7 Open pasture space shown as a green hatched area:

To be kept free of trees, excluding those outlined on this plan.

8 Existing Poplars in road reserve.

Michelle Snodgrass
LANDSCAPE ARCHITECT

DATE: 5TH AUGUST 2022
SHEET NUMBER: 1
SCALE: 1: 2000 @ A3

LANDSCAPE PLAN

THOMSON PRECIPICE CREEK
Lot 2 DP 306479 Glenorchy-Paradise Road
Not for construction

Issue 2
July 15, 2022

G & D Thomson – Glenorchy Building Platform

Prepared by: Civilised Ltd

Civilised Ltd

PO Box 1461
Queenstown
Ph 027 223 3036

G & D Thomson – Glenorchy Building Platform

Infrastructure Feasibility Report

Report prepared For: G & D Thomson

Report Prepared By: John McCartney
john@civilised.nz

Report Reference: QV050
2022-06-13 Infrastructure Report.docx

Date: 15th July 2022

Issue	Details	Date
1	Draft for comment	13th June 2022
2	For Resource Consent	15th July 2022

Executive Summary

G & D Thomson propose to create a new domestic building platform on their land at Glenorchy – Paradise Road, near Glenorchy. Civilised Ltd have assessed the necessary development infrastructure in relation to:

- Access
- Water supply
- Wastewater disposal
- Stormwater runoff

We confirm that it is feasible to provide the necessary development infrastructure to service the proposed development.

An existing access from an unnamed side road off Glenorchy – Paradise Road will be utilised to gain access to the building platform. The unnamed side road off Glenorchy – Paradise Road is currently used for a commercial access to a gravel yard adjacent to the Rees River and as a farm access. An existing gated entry off this road will be utilised for the proposed building platform a new driveway from the side road to the platform will be constructed at the time a dwelling is constructed on site.

It is proposed to supply the future dwelling with water from a recently constructed bore on site. Southdrill Ltd constructed an eighteen meter deep bore during April 2022. This bore has been proven to supply water in a suitable quantity and of suitable quality for the proposed building platform and future dwelling. Firefighting water will be provided by a suitable firefighting reserve maintained in a tank in close proximity to each building platform.

Wastewater is able to be treated and soaked to ground on site by way of an individual on site wastewater disposal system. The suitability of the ground for receiving the wastewater flows has been confirmed following test pitting carried out on site.

Stormwater runoff from impervious areas constructed on the site will also be soaked to ground by use of roadside swales and a specifically constructed soakage gallery in association with the future dwelling.

Table of Contents

1 Introduction

G & D Thomson have engaged Civilised Limited (CL) to investigate and report on the feasibility of providing utility services and the necessary development infrastructure for their proposed new building platform on land near Glenorchy.

This report considers the nature of the proposed development, the site conditions affecting the implementation of the necessary development infrastructure and describes the proposed implementation of the following elements;

- Access
- Water supply
- Wastewater collection and disposal
- Stormwater control

The report is to supplement and support the planning submissions made by Vivian + Espie Ltd on behalf of the Thomsons with regard to the application for resource consent to establish the building platform.

2 Description of Proposal

G & D Thomson proposes to establish a new building platform on their existing rural land on the Glenorchy – Paradise Road near Glenorchy. The land is zoned Rural General under the Queenstown Lakes District Council (QLDC) Operative District Plan and zoned Rural under the QLDC Proposed District Plan.

It is proposed to establish a new building platform on Lot 2 DP 306479. A similar building platform was established on the property previously, but the consent for that platform lapsed and hence a new application is to be made to re-establish a building platform on the site.

The new building platform is to be created on flat ground within the allotment. The building platform is intended for rural lifestyle development with incorporation of building restriction and landscape covenant areas to preserve as much of the existing rural landscape as possible. A scheme plan showing the indicative layout of the proposed building platform is contained in Appendix A.

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

3 Site Description

The proposed development is located on terrain lying east of the Rees River and north of Precipice Creek. The site is west of the Glenorchy – Paradise Road and is approximately 5.5 km from

Glenorchy. The site has frontage to the Glenorchy – Paradise Road and to an existing access road within legal road reserve on the southern boundary of the allotment.

The site consists of a large flat paddocks currently used for stock grazing.

Grades in the vicinity of proposed building platform can be described as flat.

The site is contained within a single certificate of title as follows;

- Legal Description: Lot 2 DP 306479
- Certificate of Title: 25360
- Lane area: 53.99 ha

The elevation of the proposed lots is approximately RL 330m above Mean Sea Level (MSL).

Generally, the land within the proposed development area may be described as pasture and includes some trees, brush and ancillary buildings.

During our site visits no evidence of large scale land instability was identified within the boundaries of the proposed rural development.

The land receives approximately 950mm of rainfall per annum and may be subject to drought conditions during the summer months.

4 Access

4.1 Proposed Accesses

The proposed development will utilise an existing vehicle access from the existing unnamed side road that runs from the Glenorchy – Paradise Road to a gravel pit and yard that is located further west on the site. The site currently also has a farm access from Glenorchy – Paradise Road.

The access for the site will come from the unnamed side road off the Glenorchy – Paradise Road.

Survey has been used to measure the actual sight distances from the proposed access from the unnamed side road. The required and available sight distance for the access is as follows:

Table 1 – Sight Distances

Location	Usage	Speed Limit	Required Sight Distance	Actual Sight Distance available
Lot 2 DP 306479	Residential	100 km/hr	170 metres	> 200m to the west ~ 70m to the east

The required sight distances have been taken from 29.5.17 of the QLDC Proposed District Plan.

The sight distance to the east from the proposed access is limited by the intersection of the unnamed side road with the Glenorchy – Paradise Road. The speed environment in this area is much lower than the 100 km/hr speed limit and the available sight distance is sufficient for the proposed usage and the particular road environment in the area of the access.

In accordance with the requirements of QLDC, the access will need to conform to the requirements of the Proposed District Plan. Specifically, the access will need to meet the requirements of Diagram 8, Chapter 29 of the Proposed District Plan. A copy of this diagram is included in Appendix B.

4.2 Proposed Roading

As mentioned above, the proposed new roading to the building platform will be constructed at the time of dwelling construction. The access will need to be constructed in accordance with the QLDC Code of Practice (COP).

The access dimensions have been based on the minimum requirements outlined in Table 3.2 QLDC COP. The proposed roads have a movement lane width of 3.0m. The reasons for this width are as follows:

- The roads correspond to an E1 road in table 3.2 of QLDC COP. This is classed as a lane.
- This features a movement lane of 2.5m width, 0.5 total sealed shoulder width with a water table drain.
- Pedestrians are catered for by the shoulder and berm.
- Cyclists are catered for by sharing the movement lane.

These requirements may be included in the consent as conditions and require the future driveway to be constructed to this standard when constructed as part of the dwelling construction works.

5 Water Supply

5.1 Existing System

There is no known existing water supply available on site.

Southdrill Ltd recently constructed an eighteen meter deep water bore and found water of sufficient quantity and quality to supply the proposed building platform

It is proposed to reticulate water from the bore to the future dwelling.

5.2 Water Demand Assessment

Peak water demand would be expected during the summer holiday period when household irrigation requirements are high and seasonal populations are at their peak.

The following design figures have been adopted.

Peak potable water consumption per allotment	= 1,000 litres/day
Irrigation demand	= 1,100 litres/day
Total Water demand for the Development	= 2,100 litres/day

This level of water demand can be accommodated by the recently constructed water bore on site.

Under Otago Regional Council rules, the bore is permitted to draw up to 25,000 litres per day for use on site. This is greater than the required water supply for the dwelling by some margin.

Test pumping of the bore at the time of drilling showed that the bore was capable of delivering 1.8 litres per second for an extended period (four hours) without a significant drawdown of the water level within the bore (0.18 metres). This demonstrates that the bore is capable of delivering well in excess of the 2,100 litres per day required.

Included in Appendix C is the bore log information from Southdrill Ltd for the recently constructed bore.

5.3 Reticulation Concept

As discussed above, the water supply for the building platform will come from the new private water supply bore.

When a dwelling is to be constructed, a bore pump will be installed along with the necessary bore headworks and water will be pumped to water storage tanks near the future dwelling. A proprietary pressure boosting pump will be used to reticulate water into the dwelling at the appropriate pressure and flowrate.

5.4 Water Treatment

The water is sourced from an underground aquifer. The chemical and bacteriological water testing undertaken at the time of the bore being established indicate a high-quality water supply is available. A copy of the laboratory water quality testing results is included in Appendix C.

The water meets the quality requirements of the Drinking Water Standards for New Zealand 2018.

As the water is sourced from a relatively shallow and unsecure groundwater aquifer, the quality of the water will be influenced by the surface water and as such it is likely to require treatment to ensure that it is of a potable quality at all times. It is recommended that the water undergo filtration and UV disinfection prior to human consumption. This treatment can occur at the dwelling with a

suitable system installed at the time a dwelling is constructed. This will ensure that the water meets the quality requirements of the Drinking Water Standards for New Zealand 2018.

5.5 Fire Fighting Water

The recent decisions associated with the Proposed District Plan require under Rule 21.7.5 that each new building must make the following provisions for firefighting:

- A water supply of 45,000 litres and any necessary couplings.
- A hardstand area adjacent to the firefighting water supply capable of supporting fire service vehicles.
- Firefighting water connection point within 6m of the hardstand, and 90m of the dwelling.
- Access from the property boundary to the firefighting water connection capable of accommodating and supporting fire service vehicles.

At the time that a dwelling is established on the building platform, it is proposed that new tanks near the proposed dwelling will need to be constructed to serve as a firefighting reserve. These tanks should be a minimum of 2 x 30,000 litres of which 45,000 litres is to be maintained at all times as a static firefighting reserve. In addition, vehicular access to the tank is to be maintained at all times and a hardstand area constructed adjacent to the tank to allow a fire appliance to park and pump from the tank. The ongoing requirements for the firefighting water supply should be addressed as conditions of consent.

5.6 Recommendations

The water supply for the development will be provided for by reticulating water from the existing water bore on site.

The following consent notices should be registered on the title of the new residential allotments:

1. *At the time a dwelling is erected on the lot, domestic water and fire fighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static fire fighting reserve within a minimum of 2 x 30,000 litre tanks. Alternatively, a 7,000 litre fire fighting reserve is to be provided for each dwelling in association with a domestic sprinkler system installed to an approved standard. A fire fighting connection in accordance with Appendix B - SNZ PAS 4509:2008 (or superseding standard) is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family*

dwellings. In the event that the proposed dwellings provide for more than single family occupation then the consent holder should consult with the NZFS as larger capacities and flow rates may be required.

The Fire Service connection point/coupling must be located so that it is not compromised in the event of a fire.

The connection point/coupling shall have a hardstand area adjacent to it (within 5m) that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by QLDC's standards for rural roads (as per QLDC's Land Development and Subdivision Code of Practice). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

Underground tanks or tanks that are partially buried (provided the top of the tank is no more than 1 metre above ground) may be accessed by an opening in the top of the tank whereby couplings are not required. A hardstand area adjacent to the tank is required in order to allow a fire service appliance to park on it and access to the hardstand area must be provided as above.

The Fire Service connection point/coupling/fire hydrant/tank must be located so that it is clearly visible and/or provided with appropriate signage to enable connection of a fire appliance.

Firefighting water supply may be provided by means other than the above if the written approval of the New Zealand Fire Service Central North Otago Area Manager is obtained for the proposed method.

6 Wastewater Disposal

6.1 General

No community or Council scheme is available for connection in close proximity to the subject site. It is not sustainable to remove waste from site therefore individual on site wastewater disposal (OSWWD) must be examined.

It can be shown that the development may be advanced on the basis of on-site wastewater disposal system. The feasibility of such a system is discussed below.

6.2 Site and Soil Assessment

A site and soil assessment has been undertaken and the report for this is included in Appendix D of this report. This assessment has been based on the guidelines of AS/NZS 1547:2012. The site and soil assessment was carried out by undertaking a site visit with a detailed walkover inspection along with review of test pit records for a series of four test pits by Geosolve Ltd in 2016 adjacent to the proposed building platform. A copy of the test pit logs and location drawing is included in Appendix E.

6.3 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, however the presence of sensitive receivers (being groundwater, surface water bodies and water bores) requires that the effluent receive some form of treatment prior to discharge.

We confirm that based on our assessment of the likely loadings, 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.

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.

6.4 Recommendations

Given the size of the site we believe it is appropriate and feasible to consider an individual lot system for this development.

An individual lot system that would provide sufficient renovation to effluent from on-site wastewater disposal for this development prior to discharge to land are summarised as follows;

6.4.1 Individual Lot Systems

The individual lot system would 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. This system 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 20 m² and a reserve field area of 20 m².

To maintain high effluent quality such systems 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 designers specification.
- Siting of disposal fields greater than 50m from any surface watercourse or water bore.
- Consideration of potential runoff ponding on the site following prolonged heavy rainfall when siting disposal fields on these allotments.
- Future disposal fields to consider using discharge control trenches to limit accession of nutrients to groundwater.

7 Stormwater Disposal

The intended access arrangements and the development of a future dwelling and associated buildings on the proposed building platforms on the site will alter the existing stormwater run-off patterns from the site catchment.

The proposed stormwater infrastructure on the site will comprise two primary elements as follows:

1) Roadside drainage swales to receive and dispose of the runoff from the proposed access for the building platform.

2) Future soak pits to be constructed to drain runoff from buildings developed on the site.

The roadside swales will be used to convey stormwater flows either to the lower parts of the site and to provide soakage to allow runoff to drain to ground. Subject to detailed design, roadside drainage swales may include specifically constructed soak pits.

The future dwelling and any associated buildings will primarily reticulate roof runoff to water supply tanks. However, there will be various impermeable parts of the site that will need to direct runoff to specifically constructed soakage galleries to dispose of runoff. These areas will include paved areas and overflow provisions from water tanks to allow for rainwater runoff from rooves when the water storage tanks are full.

Subject to specific design in conjunction with the dwelling or associated building designs, the drainage of impermeable paved areas and rainwater tank overflow features will be able to be drained to ground by the use of an appropriately design stormwater soak pit. The test pits that were previously excavated on site confirm that ground conditions are suitable for stormwater disposal by soakage to ground.

8 Limitations

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

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

Appendix A

Proposed Building Platform Drawing

LOT 2
DP 306479
CT 25360
53.9900ha

40.0m
1000m^2
25.0m
52.7m offset
71.4m offset
90°02'45" 598.33
32°32'45" 561.87
GLENORCHY - PARADISE ROAD
LEGAL ROAD
FORMED (gravel)

×331.92 × 332.26 332.90× 333.05× 333.29× ×332.38 333.15× ⊗333.34 ×333.31 333.14× ×332.52 333.27 333.73 ×333.83 332.67 333.20×

N

BUILDING PLATFORM ENLARGEMENT
Scale 1:2500

LEGEND:-
- ⊗ Stake
- Fence
- 331.45 × Spot Height
- Building Platform (1000m^2)

(20.12) GLENORCHY-PARADISE ROAD LEGAL ROAD
147°55'45"
716.92
(20.12) LEGAL ROAD
REES RIVER
LOT 2
DP 306479
CT 25360
53.9900ha
178°59'40" 97.49
561.87
(20.12)
GLENORCHY-PARADISE ROAD LEGAL ROAD
32°32'45"
refer to enlargement for details
proposed building platform
90°02'45" 598.33
(40.06)
LEGAL ROAD
FORMED (gravel)

NOTES:
- Areas and dimensions subject to final survey.

If this plan is used as the basis for any sale and purchase agreement, then it is done so on the basis that the areas and dimensions are preliminary, and may vary upon completion of the final survey.

REV.	DATE:	REVISION DETAILS:	BY:
A	16.11.06	Initial Issue	BAM

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

DATE: 16 November 06
BY: Emily Dykes
Scale 1:5000 Original Plan A3
DRAWING & ISSUE No. 2260.3R.1A

TITLE:

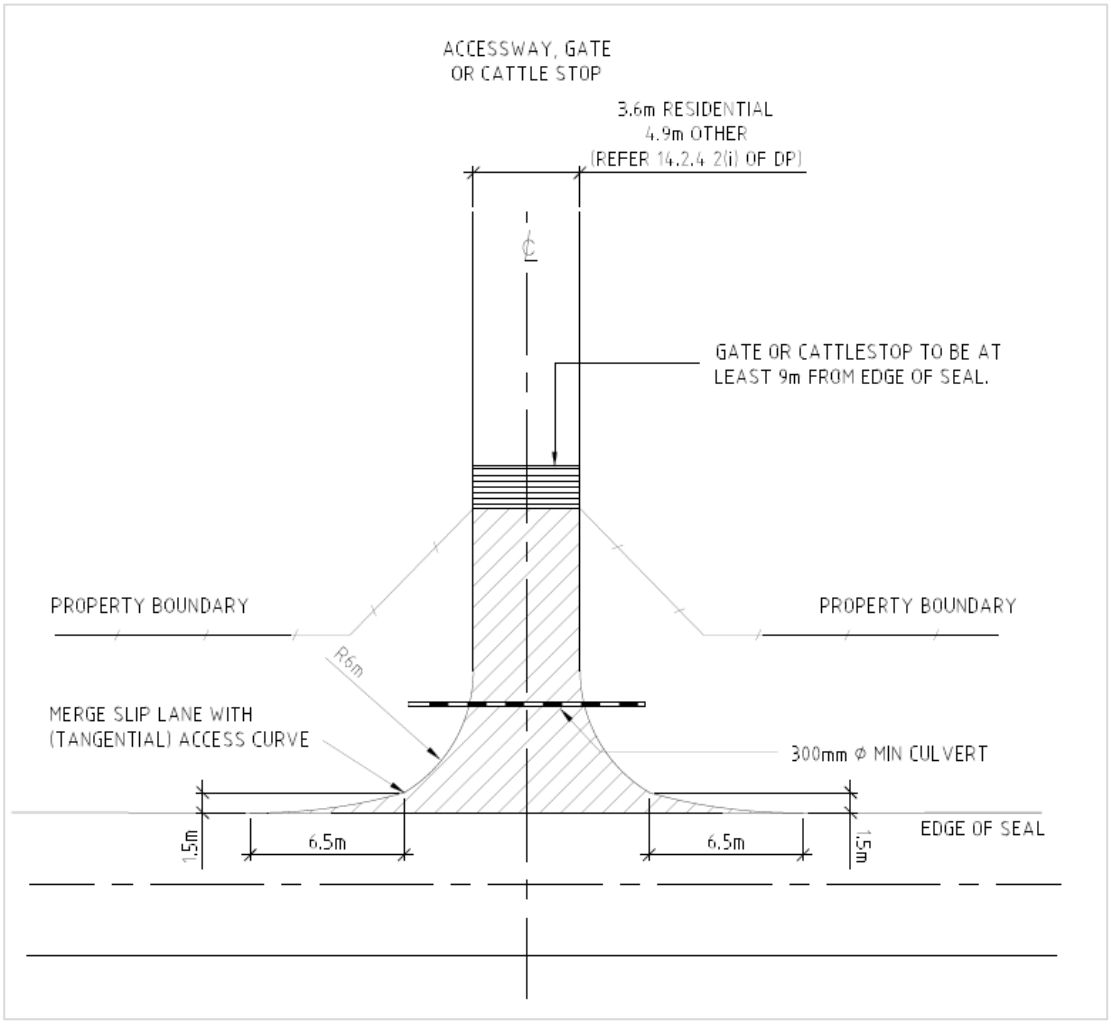
PROPOSED BUILDING PLATFORM PLAN
LOT 2 DP306479, GLENORCHY-PARADISE ROAD
for BAYSWATER TRUST

AURUM SURVEY CONSULTANTS LTD
PO Box 1493
Queenstown
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

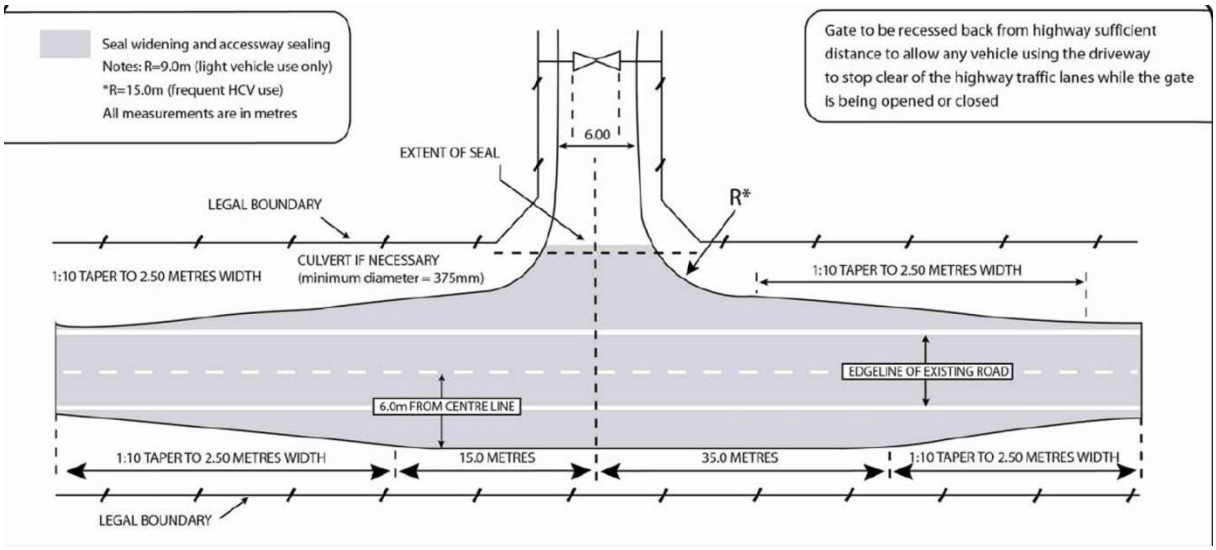
Appendix B

Access Diagram

29.14.8 Diagram 8 - Access Design



29.14.9 Diagram 9 - Access Design



Appendix C

Water Supply Information

Bore Construction Report

SOUTHDRILL
EXPLORATION & PILING

OFFICE USE ONLY		
Date received	Accession number	Signed
Bore number	Entered IRIS date	Invoice date

GENERAL DETAILS								
Client/Consent holders name	**Geoff Thomson**				**Consent number**	RM22.098		
Location/Address	**1255 Glenorchy-Paradise Road**							
Grid reference	E1236004	N5029105	GPS ■	Other ☐	Cell #			
Sketch plan attached	Yes ☐ No ■	**Photos**	Yes ■	No ☐	Home #			
DRILLING DETAILS								
Drilling company	**SouthDrill LTD**			**Driller**	Gracin Meyer-Budge			
Machine/Rig	**DR24**			**Fleet**	2020			
Drill method	Tubex							
BORE CONSTRUCTION DETAILS								
Start date	**1/4/22**			**Finish date**	4/4/22			
Bore diameter	**150mm**	mm		**Casing material**	Steel			
Screen material	Stainless steel							
Screen diameter	Inside	mm		Outside	mm			
Screen slots		mm		Sump diameter	mm			
Overdrilled	Yes ☐ No ■							
PUMPING/WATER DETAILS								
Dry bore	Yes ☐ No ■	**If dry, was casing retrieved?**	Yes ☐	No ☐	**Bore filled in**	Yes ☐	No ☐	
Development period	**3**	hours	**Development method**	air				
Yield/Test pumping	Airlifted ☐	Pumped ■	**Test pump period**	4 hours				
Test pump rate	1.81	litres/second	**Method of measuring rate**	Volumetric Test				
Comments								
Pumped water level	5.70m	metres						
WATER QUALITY ETC								
Bacterial water test	Yes ■	No ☐		**Chemical water Test**	Yes ■	No ☐		
Casing top sealed	Yes ■	No ☐		**Impervious seal at ground**	Yes ■	No ☐		

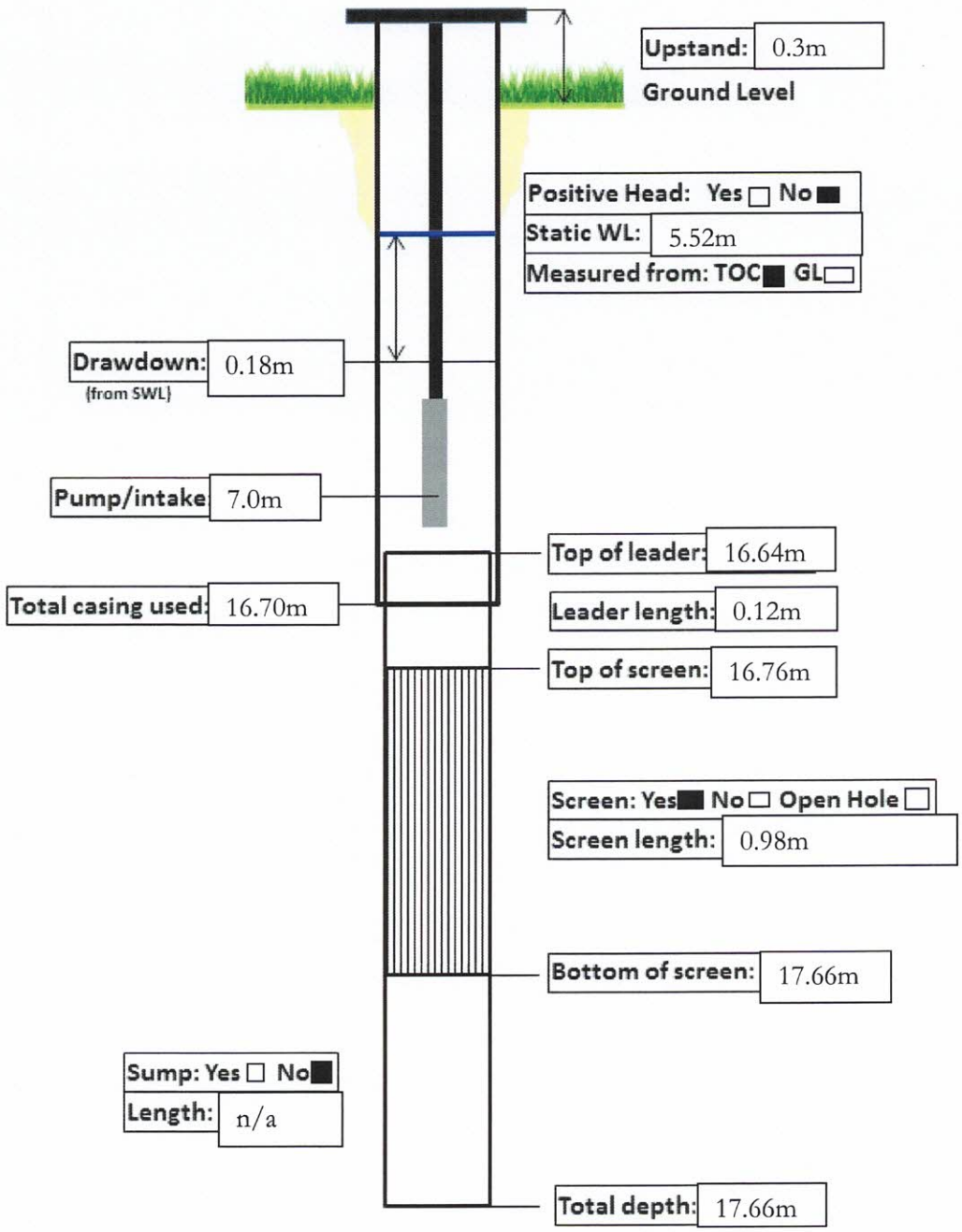
Comments

BORE LOG (METRES BELOW REFERENCE POINT)
0.0m-0.1m top soil
0.1m – 1.5m sandy gravel
1.5m – 3.0m sand
3.0m – 11.5m sandy gravel
11.5m – 18.0m silty, sandy gravels

Do you intend to drill more bores under this Land Use Consent number? Yes ☐ No ☐

If yes, number of bores drilled _____ ***of*** _____ ***Bores drilled*** ***Number bore logs provided*** _____

PTO for bore diagram



Hill Laboratories
TRIED, TESTED AND TRUSTED

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

T 0508 HILL LAB (44 555 22)
T +64 7 858 2000
E mail@hill-labs.co.nz
W www.hill-laboratories.com

Certificate of Analysis

Client:	SouthDrill Limited	**Lab No:**	2945012	DWAPv1
Contact:	SouthDrill Limited	**Date Received:**	05-Apr-2022	
	C/- SouthRoads Limited	**Date Reported:**	11-Apr-2022	
	PO Box 968	**Quote No:**	102422	
	Invercargill 9840	**Order No:**	2295-015	
		Client Reference:	Bore water	
		Add. Client Ref:	Geoff Thomson	
		Submitted By:	SouthDrill Limited	

Sample Type: Aqueous

		Sample Name:	Geoff Thomson 04-Apr-2022 11:00 am	Guideline Value	Maximum Acceptable Values (MAV)
		Lab Number:	2945012.1		
Individual Tests					
Total Cadmium	g/m³		< 0.000053	-	0.004
Total Chromium	g/m³		< 0.00053	-	0.05
Fluoride	g/m³		0.06	-	1.5
Routine Water + E.coli profile Kit					
Escherichia coli	MPN / 100mL		< 1	-	< 1
Routine Water Profile					
Turbidity	NTU		1.58	< 2.5	-
pH	pH Units		7.5	7.0 - 8.5	-
Total Alkalinity	g/m³ as $CaCO_3$		54	-	-
Free Carbon Dioxide	g/m³ at 25°C		3.3	-	-
Total Hardness	g/m³ as $CaCO_3$		63	< 200	-
Electrical Conductivity (EC)	mS/m		13.5	-	-
Electrical Conductivity (EC)	µS/cm		135	-	-
Approx Total Dissolved Salts	g/m³		91	< 1000	-
Total Arsenic	g/m³		< 0.0011	-	0.01
Total Boron	g/m³		< 0.0053	-	1.4
Total Calcium	g/m³		24	-	-
Total Copper	g/m³		< 0.00053	< 1	2
Total Iron	g/m³		0.165	< 0.2	-
Total Lead	g/m³		0.00024	-	0.01
Total Magnesium	g/m³		0.87	-	-
Total Manganese	g/m³		0.0026	< 0.04 (Staining) < 0.10 (Taste)	0.4
Total Potassium	g/m³		0.63	-	-
Total Sodium	g/m³		1.89	< 200	-
Total Zinc	g/m³		< 0.0011	< 1.5	-
Chloride	g/m³		0.8	< 250	-
Nitrate-N	g/m³		0.14	-	11.3
Sulphate	g/m³		4.7	< 250	-

Note: The Guideline Values and Maximum Acceptable Values (MAV) are taken from the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)', Ministry of Health. Copies of this publication are available from https://www.health.govt.nz/publication/drinking-water-standards-new-zealand-2005-revised-2018

The Maximum Acceptable Values (MAVs) have been defined by the Ministry of Health for parameters of health significance and should not be exceeded. The Guideline Values are the limits for aesthetic determinands that, if exceeded, may render the water unattractive to consumers.

Note that the units g/m³ are the same as mg/L and ppm.

This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Routine Water Assessment for Sample No 2945012.1 - Geoff Thomson 04-Apr-2022

pH/Alkalinity and Corrosiveness Assessment
The pH of a water sample is a measure of its acidity or basicity. Waters with a low pH can be corrosive and those with a high pH can promote scale formation in pipes and hot water cylinders.
The guideline level for pH in drinking water is 7.0-8.5. Below this range the water will be corrosive and may cause problems with disinfection if such treatment is used.

The alkalinity of a water is a measure of its acid neutralising capacity and is usually related to the concentration of carbonate, bicarbonate and hydroxide. Low alkalinities (25 g/m^3) promote corrosion and high alkalinities can cause problems with scale formation in metal pipes and tanks.

The pH of this water is within the NZ Drinking Water Guidelines, the ideal range being 7.0 to 8.0.
With the pH and alkalinity levels found, it is unlikely this water will be corrosive towards metal piping and fixtures.

Hardness/Total Dissolved Salts Assessment
The water contains a very low amount of dissolved solids and would be regarded as being slightly hard.

Nitrate Assessment
Nitrate-nitrogen at elevated levels is considered undesirable in natural waters as this element can cause a health disorder called methaemaglobinaemia. Very young infants (less than six months old) are especially vulnerable. The Drinking-water Standards for New Zealand 2005 (Revised 2018) suggests a maximum permissible level of 11.3 g/m^3 as Nitrate-nitrogen (50 g/m^3 as Nitrate).

Nitrate-nitrogen was detected in this water but at such a low level to not be of concern.

Boron Assessment
Boron may be present in natural waters and if present at high concentrations can be toxic to plants.
Boron was not detected in this water.

Metals Assessment
Iron and manganese are two problem elements that commonly occur in natural waters. These elements may cause unsightly stains and produce a brown/black precipitate. Iron is not toxic but manganese, at concentrations above 0.5 g/m^3, may adversely affect health. At concentrations below this it may cause stains on clothing and sanitary ware.

Iron was found in this water at a low level.
Manganese was found in this water at a low level.
Treatment to remove iron and/or manganese should not be necessary.

Bacteriological Tests
The NZ Drinking Water Standards state that there should be no Escherichia coli (E coli) in water used for human consumption. The presence of these organisms would indicate that other pathogens of faecal origin may be present. Results obtained for Total Coliforms are only significant if the sample has not also been tested for E coli.

Escherichia coli was not detected in this sample.

Final Assessment
All parameters tested for meet the guidelines laid down in the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)' published by the Ministry of Health for water which is suitable for drinking purposes.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous

Test	Method Description	Default Detection Limit	Sample No
Routine Water Profile		-	1
Filtration, Unpreserved	Sample filtration through 0.45µm membrane filter. Performed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) 23rd ed. 2017.	-	1
Turbidity	Analysis using a Hach 2100 Turbidity meter. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2130 B 23rd ed. 2017 (modified).	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 4500-H^+ B 23rd ed. 2017. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2320 B (modified for Alkalinity <20) 23rd ed. 2017.	1.0 g/m³ as $CaCO_3$	1
Free Carbon Dioxide	Calculation: from alkalinity and pH, valid where TDS is not >500 mg/L and alkalinity is almost entirely due to hydroxides, carbonates or bicarbonates. APHA 4500-CO_2 D 23rd ed. 2017.	1.0 g/m³ at 25°C	1
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B 23rd ed. 2017.	1.0 g/m³ as $CaCO_3$	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2510 B 23rd ed. 2017.	0.1 mS/m	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. APHA 2510 B 23rd ed. 2017.	1 µS/cm	1
Approx Total Dissolved Salts	Calculation: from Electrical Conductivity.	2 g/m³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.0011 g/m³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.0053 g/m³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.000053 g/m³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.053 g/m³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00053 g/m³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00053 g/m³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00011 g/m³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00053 g/m³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.053 g/m³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m³	1
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.0011 g/m³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.5 g/m³	1
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F^- C 23rd ed. 2017.	0.05 g/m³	1
Nitrate-N	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.05 g/m³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.5 g/m³	1

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Escherichia coli	MPN count using Colilert (Incubated at 35°C for 24 hours) and 97 wells. Analysed at Hill Laboratories - Microbiology; 101c Waterloo Road, Hornby, Christchurch. APHA 9223 B 23rd ed. 2017.	1 MPN / 100mL	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 06-Apr-2022 and 11-Apr-2022. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

Appendix D

Site and Soil Assessment

Onsite Wastewater Disposal Site & Soils Assessment

Use for Subdivision or Land Use Resource Consent

The design standard for waste water treatment and effluent disposal systems is AS/NZS 1547:2012. All references in this form relate to this standard.

Applications should provide sufficient information to demonstrate that all lots will be capable of accommodating an on-site system.

Site Description

Property Owner: D & G Thomson

Location Address: Glenorchy – Paradise Road

Glenorchy

Legal Description (eg Lot3 DP1234) : Lot 2 DP 306479

List any existing consents related to waste disposal on the site: RM160421 - lapsed

General description of development / source of waste water: Proposed new building platform, to allow the future construction of a new domestic dwellings.

The number and size of the lots being created: No new lots, one new building platform

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

Land use: Grazing/farming

Topography: Flat

Slope angle: 0° to 5°

Aspect: Generally north to northwest

Vegetation cover: Grass/pasture

Areas of potential ponding: The flat paddocks may have some ponding during prolonged heavy rain.

Ephemeral streams: None near the building platform

Drainage patterns and overland paths: Sheet flow leading to shallow water courses, eventually draining to the Rees River. Precipice Creek runs adjacent to the site.

Flood potential (show with return period on site plan): Nil

Distance to nearest water body: ~140 m

Water bores with 50m (reference ORC Maps): Existing water bore within the site and one on adjacent site

Other Site Features: All existing water bores shown on site plan

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable): No slope stability issues noted on site

(Highest potential) Depth to ground water:

Summer > 5m

Winter > 3m

Information Source Assessed given the test pit information

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water?
With appropriate design and disposal field siting, potential for short circuiting will be minimal.

Soil Investigation (Appendix C)

Field investigation date: 20th April 2016

Number of test pit bores (C3.5.4): 4 test pits by Geosolve

Soil investigation addendum to be attached that includes a plan showing test pit or bore location, log results and photos of the site profile.

If fill material was encountered during the soil investigation state how this will impact on the waste water system:
No fill encountered in any test pit

Average depth of topsoil: 300mm

Indicative permeability (Appendix G) : > 1 m/day

Percolation test method (refer to B6 for applicability) : Assessed
(attach report if applicable)

Soil Category *(Table 5.1)*	Soil Texture *(Appendix E)*	Drainage	Tick One
1	Gravel and sands	Rapid	✓
2	Sandy loams	Free	
3	Loams	Good	
4	Clay loams	Moderate	
5	Light clays	Moderate to slow	
6	Medium to heavy clays	Slow	

Reasons for placing in stated category:
The site is underlain by free draining alluvial gravels and sands, floodplain deposits.

Loading rate, DLR (Table L1): 50 mm/day

Explanation for proposed loading rate: The conservative loading rate for secondary treated effluent for category 1 soils is 50mm/day.

Recommendations from site and soils assessment

Specify any design constraints
Specify any areas unsuitable for location of the disposal field
Specify any unsuitable treatment and/or disposal systems
Propose suitable mitigation to enable successful effluent treatment

1) Due to the free draining nature of the gravels and sands underlying the site, it is recommended that future disposal beds/fields utilise discharge control trenches to limit accession of nutrients to groundwater.

2) To avoid potential areas of ponding during heavy and prolonged rainfall events, disposal fields on the site should avoid the lowest parts of each allotment.

3) Disposal fields need to be sited carefully in relation to the bores located on each allotment.

4) Secondary treatment is recommended due to the presence of water bores in the area and due to the free draining nature of the soils on site.

Attachments Checklist

- [X] Copy of existing consents
- [✓] Soil investigation addendum
- [✓] To scale site plan, the following must be included on the plan:
  - Buildings
  - Boundaries
  - Retaining Walls
  - Embankments
  - Water bodies
  - Flood potential
  - Other septic tanks / treatment systems
  - Water bores
  - Existing and proposed trees and shrubs
  - Direction of ground water flow
  - North arrow

Note that an Otago Regional Council (ORC) consent may also be required to discharge domestic waste water to land if any of the following apply:

- Daily discharge volume exceeds 2,000 litres per day
- Discharge will occur in a groundwater protection zone
- Discharge will occur within 50 metres of a surface water body (natural or manmade)
- Discharge will occur within 50 metres of an existing bore/well
- Discharge will result in a direct discharge into a drain/water ace/ground water
- Discharge may runoff onto another persons' property

If any of these apply then we recommend that you correspond with the ORC;

Otago Regional Council
"The Station" (upstairs)
Cnr. Camp and Shotover Streets
P O Box 958
Queenstown 9300

Tel: 03 442 5681

I believe to the best of my knowledge that the information provided in this assessment is true and complete. I have the necessary experience and qualifications as defined in Section 3.3 AS/NZS 1547:2012 to undertake this assessment in accordance with the requirements of AS/NZS 1547:2012:

Company: Civilised Limited

Email: john@mccartneys.nz

Phone number: 027 2233036

Name: John McCartney

Signature: 

Date: 13th June 2022

Queenstown Lakes District Council
Private Bag 50072
10 Gorge Road
QUEENSTOWN 9348

Phone: 03 441 0499
Fax: 03 442 4778
Email: services@qldc.govt.nz
Website: www.qldc.govt.nz

REV	DATE	DESCRIPTION	APPROVED
A	13/6/2022	Initial Issue	JFM

CONSULTANT

Civilised Ltd

CIVILISED LTD
PO BOX 1461
QUEENSTOWN 9348

T: 027 223 3036
E: john@mccartneys.nz

JFM	13/6/2022
DESIGN	DATE
JFM	13/6/2022
DRAWN	DATE
JFM	13/6/2022
CHECKED	DATE

CLIENT

G & D
THOMSON

PROJECT/LOCATION

PROPOSED BUILDING PLATFORM
GLENORCHY - PARADISE ROAD, LOT 2 DP 306479

CONTRACT NUMBER: -

SCALE (AT A3): 1:5000

TITLE

ON SITE WASTEWATER DISPOSAL
OVERALL TOPGRAPHICAL MAP

DRAWING NUMBER: QV050-D-510

REVISION: A

Appendix E

Test Pit Logs

Key

= Test Pit

= Heavy Dynamic Cone Penetrometer Test (HDCP)

Scale 1:1000

0 10 20 30 40 (m)

GEOSOLVE

GEOTECHNICAL ENGINEERING • GEOHYDROLOGY & HYDROLOGY
ENGINEERING GEOLOGY • PAVEMENT STRUCTURAL TESTING

DRAWN	GXS	04/16
DRAFTING CHECKED		
APPROVED		
FILE : PDF		
SCALE: (AT A3 SIZE) 1:1000		
PROJECT No. 160246		

BAYSWATER TRUST
Geotechnical Assessment
Lot 2 DP3063479, Glenorchy- Paradise Road
Site Investigation Plan

FIG No. Appendix A - Figure 1

REV. 0

GeoSolve Ltd
EXCAVATION LOG

EXCAVATION NUMBER: **TP 1**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.4		Grey, silty SAND. Sand is fine. Uniformly graded. Very loose to loose. Massive.	Moist	FLOODPLAIN DEPOSIT
		0.6		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft to firm. Massive.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with some cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Very loose to loose. Rarely medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 2**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.5		Grey, silty SAND and gravelly SAND. Sand is fine to coarse. Gravel is fine to medium. Poorly graded. Very loose to loose. Bedded.	Moist	FLOODPLAIN DEPOSIT
		0.7		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with a trace of cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose. Medium dense from 1.1m. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Some slumping of test pit walls below 0.7m.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 3**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.1		Dark brown, organic SILT with some gravel and rootlets. Gravel is fine to coarse. Soft.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Very loose from 1.0m. Bedded.	Moist	FAN ALLUVIUM
		1.4		Brown grey, sandy SILT with a trace of roots. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM
		2.9		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	3.8		Grey, sandy SILT and SILT. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM

Total Depth = 3.8 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 4**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.2		Dark brown, organic SILT with minor gravel and rootlets. Gravel is fine to coarse. Firm to stiff.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL with a trace of tree roots. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
		2.2		Brown grey, sandy SILT with minor gravel and silty SAND. Sand is fine. Gravel is fine to medium. Poorly graded. Silt: Soft to firm. Stiff to very stiff from 1.9m. Sand: Very loose to loose. Medium dense from 1.9m. Massive.	Moist	FAN ALLUVIUM
		2.6		Grey, gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse. Poorly graded. Medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	4.2		Grey, interbedded silty SAND, sandy SILT and gravelly SAND. Sand is fine. Gravel is fine to coarse. Poorly graded. Silt: Stiff to very stiff. Sand: Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4.2 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

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

12 July 2022

Gabriela Glory
Vivian & Espie

Sent via email only: gabriela@vivianespie.co.nz

Dear Gabriela,

ELECTRICITY SUPPLY AVAILABILITY FOR A PROPOSED NEW DEVELOPMENT.
GLENORCHY – PARADISE ROAD, GLENORCHY. LOT 2 DP 306479.

Thank you for your inquiry outlining the above proposed development.

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

Disclaimer

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

Next Steps

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

Yours sincerely

Niel Frear

CUSTOMER INITIATED WORKS MANAGER

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

Chorus New Zealand Limited

02 August 2022

Chorus reference: 10302545

Your reference: Glenorchy-Paradise Road - Geoffrey Thompson

Attention: Gabriela Glory

Quote: New Property Development

1 connections at Lot: 2, DP: 306479

Your project: Glenorchy-Paradise Road - Geoffrey Thompson

Thank you for your enquiry about having Chorus network provided for the above development.

Chorus is pleased to advise that, as at the date of this letter, we are able to provide reticulation for this property development based upon the information that has been provided:

Copper network	$1,600.00

The total contribution we would require from you is **$1,840.00 (including GST)**. This fee is a contribution towards the overall cost that Chorus incurs to link your development to our network. This quote is valid for 90 days from 02 August 2022. This quote is conditional on you accepting a New Property Development Contract with us for the above development.

If you choose to have Chorus provide reticulation for your property development, please log back into your account and finalise your details. If there are any changes to the information you have supplied, please amend them online and a new quote will be generated. This quote is based on information given by you and any errors or omissions are your responsibility. We reserve the right to withdraw this quote and requote should we become aware of additional information that would impact the scope of this letter.

Once you would like to proceed with this quote and have confirmed all your details, we will provide you with the full New Property Development Contract, and upon confirmation you have accepted the terms and paid the required contribution, we will start on the design and then build.

For more information on what's involved in getting your development connected, visit our website www.chorus.co.nz/develop-with-chorus

Kind Regards

Chorus New Property Development Team

Liquefaction Assessment Report

Lot 2 DP 306479, Glenorchy – Paradise Rd

Report prepared for:

Geoffrey and Diana Thompson

Report prepared by:

GeoSolve Limited

Distribution:

Geoffrey and Diana Thompson

GeoSolve Limited (File)

August 2022

GeoSolve Ref: 220560

Revision	Issue Date	Purpose	Author	Reviewed
0	19/08/2022	Client issue	MBS	PGF

GEOTECHNICAL WATER RESOURCES PAVEMENTS

Table of Contents

1 Introduction

1.1 General

This report presents the results of a liquefaction assessment undertaken by GeoSolve Ltd for Lot 2 DP 306479 located on the Glenorchy-Paradise Road.

Photo 1.1 – Proposed building platform, looking north.

The investigations were undertaken for Geoffrey and Diana Thompson in accordance with GeoSolve Ltd proposal 220560 dated 19 July 2022, which outlines the scope of work and conditions of engagement.

GeoSolve Ltd have previously completed a liquefaction assessment at the site for a previously consented building platform, now lapsed (GeoSolve ref: 160246). This work was undertaken in 2016.

We understand a new consent application is being prepared and updated liquefaction and alluvial fan assessments are required to accompany the application.

The results of the liquefaction assessment are presented in this report. A separate report has been prepared to present the results of the natural hazards assessment undertaken by GeoSolve for the site, titled 'Resource Consent Natural Hazard Assessment, Lot 2 DP 306479, Glenorchy-Paradise Rd', dated 18 August 2022.

1.2 Development

We understand it is proposed to establish a single residential building platform on the site.

We understand the proposed new building platform is in the same location as the previously consented building platform (2016 - RM160421).

The proposed building platform is approximately 1000 m^2 and the location is shown in Figure 1, Appendix A.

No indication of the dwelling's construction type has been provided, however is not required for this assessment.

2 Site Description

2.1 General

The site is situated on farmland to the north of the Glenorchy Township on Glenorchy-Paradise Road. The location of the site is shown on Figure 1 below.

The site is vacant of any structures, and we understand that it has only been used within recent history by the farm for agricultural purposes such as stock grazing. A single dwelling is proposed at the location indicated.

The Rees River is located approximately 470 m to the west and is at an elevation approximately 8 m lower than the site. Additionally, Precipice Creek, is located approximately 170 m to the south.

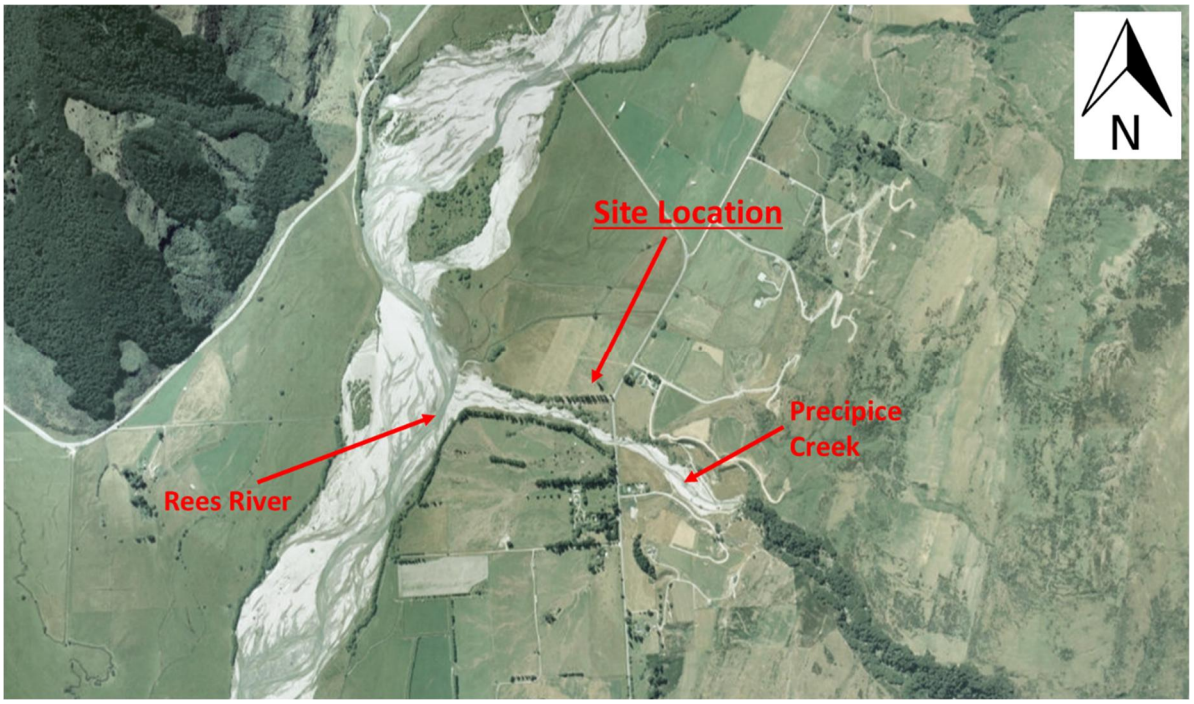


Figure 1. Site location (Source: http://maps.qldc.govt.nz/qldcviewer/).

2.2 Topography and Surface Drainage

The site is located on an area of land which forms part of the Precipice Creek alluvial fan at the base of the Richardson Mountains.

The ground surface within the proposed building platform and across the wider area gently falls at angles of <5° westwards towards the Rees River.

The site is considered to be free draining with no significant man-made drainage features within the immediate area of the proposed building platform. However, it should be noted that an east-west orientated drainage channel is situated 250m to the north of the building platform.

3 Geotechnical Investigations

The liquefaction assessment is based on the results of the geotechnical investigations completed by GeoSolve at the site in 2016, which included:

- 4 test pit excavations (TP 1-4) to a maximum depth of 4.2 m below ground level (bgl) to prepare detailed geological logs of the soil stratigraphy;
- 4 Heavy Dynamic Probe (DPH 1-4) to a maximum depth of 15 m bgl to assess the relative density of the subsoils;
- Installation of 2 standpipe piezometers within DPH 1 and 4 to monitor groundwater levels;

Additionally, we have completed a review of available Otago Regional Council (ORC) well and borehole data.

Test pit and DPH locations and logs are contained in Appendices A and B respectively.

4 Subsurface Conditions

4.1 Geological Setting

The site is located in the Wakatipu basin, a feature formed predominantly by glacial advances. Published references indicate the last glacial event occurred in the region between 10,000 and 20,000 years ago. Glaciations have left deposits of glacial till, glacial outwash and lake sediment overlying ice scoured schist bedrock. Recent alluvial fan deposits are present in low lying areas of the basin, particularly around the lake shore and Rees River valley. The subject property is located on one of these recent alluvial fans formed by deposition from the nearby Precipice Creek.

No active fault traces are known to exist in the immediate vicinity of the site; however, a significant seismic risk exists in the region due to rupture of the Alpine Fault, which runs along the west coast of the South Island. A high probability exists that an earthquake of magnitude 8 or greater will occur on the Alpine Fault within the next 50 years. An earthquake of this magnitude is expected to result in strong and prolonged ground shaking in the vicinity of Glenorchy.

4.2 Stratigraphy

The soil stratigraphy generally comprises topsoil overlying fan alluvium with a veneer of floodplain deposits overlying these soils over the northern extents of the building platform as identified in TP1 and TP2.

The Floodplain deposits extend to a depth of 0.4 to 0.5m across the northern half of the building platform and generally comprise a grey, very loose to loose, silty SAND to gravelly SAND.

The Topsoil is up to 0.2m thick and comprises a dark brown, soft, organic SILT. This unit was buried beneath the floodplain deposits in across the northern half of the building platform (TP1 and TP2).

Fan alluvium was observed in all test pits to underlie the topsoil and buried topsoil and extended to the termination depth of the test pits at a maximum depth of 4.2 m bgl. The fan alluvium generally comprises brown/grey, interbedded sequences of sandy GRAVEL with trace to some cobbles, sandy GRAVEL, gravelly SAND, silty SAND, sandy SILT and SILT. The strength of the fan alluvium varies from very loose to medium dense and soft to very stiff depending upon the soil type.

Materials at depth, beneath the excavation level of the test pits, have not been directly observed, however, DPH results indicate interbedded layers of silt, sand and gravel to the termination depth of the DPH. A bore log contained on the Otago Regional Council (ORC) database for a water well (Well - E40/0102) located approximately 160 m to the south east on the eastern side of Glenorchy-Paradise Road indicates a mixture of silty sand and sandy gravel materials to a depth of 22 m bgl. It is expected that the depth to rock is many 10's of metres in depth.

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

4.3 Groundwater

No groundwater inflow or seepages were observed in any of the test pit excavations.

Water level readings taken from standpipe piezometers installed within DPH 1 and 4 indicate the groundwater table lies at depths of 4.8 and 5.3 m respectively. The groundwater level is expected to fluctuate following periods of prolonged rainfall as the groundwater level within the alluvial fan is recharged from the above catchment.

5 Liquefaction Analysis

5.1 Design Earthquakes

The site has been mapped in a 2019 liquefaction hazard assessment[1] as belonging to Domain B1, which is predominantly underlain by poorly consolidated river or stream sediments with a shallow groundwater table. There is considered to be a low to moderate likelihood of liquefaction-susceptible materials being present in some areas classified as Domain B1, and there is geotechnical evidence for the presence of liquefaction-susceptible materials at least in some locations in the subsurface. In MBIE (2017) terms, liquefaction damage is possible in this area.

Two earthquakes scenarios have been assessed in accordance with NZS 1170 – Structural Design Actions[2] for an Importance Level 2 structure with a 50-year design life.

Peak horizontal ground accelerations and effective magnitudes were calculated using the procedure from the Earthquake geotechnical engineering practice Module 1[3]. Table 5.1 summarises the scenarios considered considering Milford Sound location.

Table 5.1 – Earthquake accelerations and effective magnitudes for liquefaction assessment

Scenario	Performance Requirements	Annual Probability of Exceedance	Peak Horizontal Ground Acceleration (PGA)	Effective Magnitude
Serviceability Limit State (SLS)	*Avoid damage that would prevent the structure being used as originally intended without repair*	1/25	0.16 g	6.1
Ultimate Limit State (ULS)	*Avoid collapse of the structural system*	1/500	0.63g	7.1

5.2 Liquefaction Summary

For the liquefaction assessment groundwater levels of 4.5 m below existing ground level has been adopted, as measured within the DPHs.

Liquefaction occurs when susceptible, saturated soils attempt to move to a denser state under cyclic shearing. In this report, liquefaction is defined as when pore pressures rise to reach the overburden stress. When this occurs, the following effects can happen at flat sites:

- Loss of strength;

[1] Barrell, D.J.A. (2019). Assessment of liquefaction hazards in the Queenstown Lakes, Central Otago, Clutha and Waitaki districts of the Otago Region. Lower Hutt (NZ): GNS Science. 99 p. Consultancy Report 2018/67.
[2] NZS 1170-5 (2004) Structural Design Actions, Part 5: Earthquake Actions – New Zealand.
[3] MBIE (2021) Earthquake geotechnical engineering practice, Module 1 – Overview of the guidelines – New Zealand.

- Ejection of material under pressure to the ground surface (i.e. surface disruptions), and;
- Post-liquefaction volumetric densification as the soils reconsolidate.

In addition, sloping sites or sites with a 'free face' may experience lateral spreading or movement.

The occurrence of liquefaction is dependent on several factors, including the intensity and duration of ground shaking, soil density, particle size distribution, and depth to the groundwater table.

5.2.1 DPH Analysis

Analyses were performed to evaluate the liquefaction potential of the very loose to medium dense/soft to very stiff fan alluvium, utilising the methods recommended by Idriss & Boulanger (2014)[4]. These methods use information obtained from soil logging and in situ testing, such as soil type, fines content, layer thicknesses and blow count.

Adopted water levels were based on the groundwater level measured in the piezometers installed within DPH 1 and DPH 4.

The results of the liquefaction analyses indicate the following:

- Minor liquefaction resulting in up to 40 mm of settlement is predicted under SLS seismic loading;
- Under ULS seismic loading liquefaction is predicted below 4.5 m depth for significant thickness of the soil column. Estimated settlements are shown in Table 5.2 below;
- Liquefaction is triggered at around 0.16 - 0.22 g, which has an approximate AEP of around 1/25 to 1/50.

Full liquefaction assessment results are attached in Appendix C.

A summary of the factors considered to assess the consequences of the predicted liquefaction is presented in Table 5.2 below.

[4] Boulanger R.W. and Idriss, I.M. (2014). 'CPT and SPT Based Liquefaction Triggering Procedures,' Report No. UCD/CMG–14/01, Dept. of Civil & Environmental Engineering, University of California at Davis.

Table 5.2 – Summary of factors considered to assess the consequences of the predicted liquefaction

Factor	Assessment		Implications
Crust thickness	The crust thickness is 4.5 m for both design earthquakes. However, limited thickness is calculated to liquefy in the SLS event Data from the Canterbury earthquake sequence plus other historic earthquakes[5] has been collated and observed surface damage compared with crust thickness. This data indicates that surface damage is likely for crusts of less than about 3.5 m thickness.		Crust sufficiently thick to limit significant surface damage in a ULS seismic event. However, it is possible some localised surface manifestation of liquefaction may occur in moderate to major earthquake events (i.e. above SLS levels).
LSN	1/25 AEP (SLS)	LSN range = 0-5	Little to no surface expression, minor effects.
	1/500 AEP (ULS)	LSN range = 25-35	Moderate to high surface expression of liquefaction likely.
Free field settlement	1/25 AEP (SLS)	10-40 mm (5-25 mm in upper 10 m)	Minor differential settlement possible.
	1/500 AEP (ULS)	180-240 mm (125-170 mm in upper 10 m)	Some differential settlement likely, 50-100 mm estimated in the area tested.
Lateral spread	Lateral spreading risk considered to be low due to the gently sloping site topography, the depth of the liquefiable layers (4.5 m+) and the distance to the nearest free face (Precipice Creek, more than 150 m away).		Lateral spread will not govern design.

A detailed discussion of the process of liquefaction and the various considerations summarised in Table 5.2 above can be found in Appendix C, which also contains the full liquefaction analysis results from DPHs.

[5] Bowen, H.J. and Jacka, M.E. (2013). Liquefaction induced ground damage in the Canterbury Earthquake: Predictions versus reality. Proceedings of the 19th NZGS Geotechnical Symposium. Editor CY Chin. Queenstown, New Zealand.

6 Engineering Considerations

6.1 General

The recommendations and opinions contained in this report are based upon ground investigation data obtained at discrete locations and historical information held on the GeoSolve database. The nature and continuity of subsoil conditions away from the investigation locations is inferred and cannot be guaranteed.

6.2 Site Preparation

The presence of all floodplain deposits, topsoil, buried topsoil layers and any other unsuitable soils should be removed from the beneath the building platform in accordance with the recommendations of NZS 3604.

All fill that is utilised beneath the building platform and foundations should be placed and compacted in accordance with the recommendations of NZS 4431:1989 and certification provided to that effect.

We understand that there are nearby river-run gravels that could be used as engineered fill on site. Boulders and cobbles over 75 mm in size will need to be screened from the engineered fill source. Further details in regards to the fill certification process can be provided on request and/or closer to the time of construction.

6.3 Foundations

The foundations of any building to be constructed at the site will need to consider the effects of liquefaction as discussed in Section 5 of this report.

6.3.1 Concrete floor

Even though significant thickness is calculated to liquefy in the ULS design event, due to the non-liquefiable crust we recommend that MBIE TC2 enhanced foundation system is adopted. Due to the current non-liquefiable crust we recommend that a specifically designed Option 4 waffle slab is used. Some examples of this are a TC2 Rib raft, TC2 Maxraft, TC2 ready super slab or equivalent.

The foundation should be designed as per Section 5.4 of the MBIE TC2 guidelines. This includes requires of the foundations spanning over 4 m soft spots and cantilevering over a 2 m edge. The foundations should be designed for 200 kPa geotechnical ultimate bearing capacity.

As per the recommendations of the Natural Hazard Assessment report, the building platform must be constructed to be 0.5 m higher than the surrounding ground level/the finished floor level to be 0.7 m higher than the surrounding ground level owing to the flooding risk. Additionally, on the north side of the building platform up to approximately 0.7 m of unsuitable soils must be excavated.

Due to the requirement to elevate the platform, and excavate unsuitable materials from the northern side, we expect foundations to bear directly on engineered fill.

6.3.2 Timber Piles

Based on Section 15.4 of the MBIE Guidance (2015) a Type 1 surface structure can be used. This is a modified NZS3604 platform capable of withstanding moderate differential settlements from liquefaction. An ultimate geotechnical bearing capacity of 200 kPa is required and will be achievable provided piles extend a minimum of 1 m below the ground surface and into fan alluvium GRAVEL materials.

We recommend that pile holes be inspected during construction to ensure that piles bear on competent fan alluvium GRAVEL deposits and that no silt and loose sand are located near the pile toe.

6.4 Site Subsoil Category

For detailed design purposes it is recommended the magnitude of seismic acceleration be estimated in accordance with the recommendations provided in NZS 1170.5:2004.

The site is Class D (Deep soil site) in accordance with NZS 1170.5:2004 seismic provisions.

7 Neighbouring Structures/Hazards

Earthquake: The design of any dwelling on the site should consider the effects of seismicity in accordance with NZS1170.5:2004 seismic provisions and/or NZS3604:2011, and in addition any requirements or recommendations discussed in this report.

Natural Hazards: Liquefaction hazard is discussed in Section 5 of this report.

The flooding and alluvial fan hazards are discussed in GeoSolve report titled 'Resource Consent Natural Hazard Assessment, Lot 2 DP 306479, Glenorchy-Paradise Rd', dated 18 August 2022.

Distances to adjoining structures (Noise and Vibration): The site is situated on a rural block with no nearby neighbouring buildings. No adverse geotechnical implications apply for neighbouring properties during construction of the dwelling.

Aquifers: No aquifer resource will be adversely affected by the development.

Erosion and Sediment Control: The site presents very low risk to generate silt runoff and this would naturally drain downslope.

Effective systems for erosion control are runoff diversion drains and contour drains, while for sediment control, options are earth bunds, silt fences, hay bales, vegetation buffer strips and sediment ponds. Only the least amount of subsoil should be exposed at any stage and surfacing established as soon as practical.

Details for implementation are given in Appendix B within the following link

http://ecan.govt.nz/publications/General/FullErosionandSedimentControlGuideline.pdf

Dust: Regular dampening of soil materials with sprinklers should be effective if required.

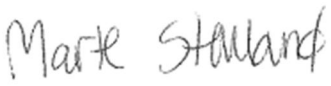
8 Conclusions and Recommendations

- The subsurface materials observed during site investigations typically comprised surficial topsoil, floodplain deposits and buried topsoil overlying alluvial fan deposits;
- Based on groundwater level readings taken from the two standpipe piezometers installed within DPH 1 and DPH 4 the water table lies at a depth of between 4.8 and 5.3 m bgl;
- The subsurface materials observed during site investigations typically comprised surficial topsoil, floodplain deposits and buried topsoil overlying alluvial fan deposits;
- Liquefaction analysis, based on DPH testing, shows that significant liquefaction is predicted under ULS seismic loading as detailed in Section 5;
- Foundation options are detailed in Section 6.3. The foundations will need to be designed to cater for the liquefaction risk outlined in Section 5. The site is classes as TC2 in accordance with the MBIE Guidance for Canterbury;
- All unsuitable materials identified in foundation excavations, particularly those softened by exposure to water, should be undercut and replaced with engineered fill during construction. Any fill that is utilised as bearing for foundations should be placed and compacted in accordance with NZS 4431 and certification provided to that effect;
- A geotechnical practitioner should inspect all excavations and additionally any seepage, spring flow or under-runners that may be encountered during construction.

9 Applicability

This report has been prepared for the sole use of our client, Geoffrey and Diana Thompson, with respect to the particular brief and on the terms and conditions agreed with our client. It may not be used or relied on (in whole or part) by anyone else, or for any other purpose or in any other contexts, without our prior review and written agreement.

During construction, foundation excavations should be examined by an inspector or engineer competent to confirm that subsurface conditions encountered throughout are compatible with the findings of this report. It is important that we be contacted if there is any variation in subsoil conditions from those described in this report.

Report prepared by:	Reviewed for GeoSolve Ltd by:
	
.....	.....
Marte Stemland Engineering Geologist	Paul Faulkner Senior Engineering Geologist

Appendix A: Site Plan

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 1**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.4		Grey, silty SAND. Sand is fine. Uniformly graded. Very loose to loose. Massive.	Moist	FLOODPLAIN DEPOSIT
		0.6		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft to firm. Massive.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with some cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Very loose to loose. Rarely medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 2**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.5		Grey, silty SAND and gravelly SAND. Sand is fine to coarse. Gravel is fine to medium. Poorly graded. Very loose to loose. Bedded.	Moist	FLOODPLAIN DEPOSIT
		0.7		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with a trace of cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose. Medium dense from 1.1m. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Some slumping of test pit walls below 0.7m.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 3**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.1		Dark brown, organic SILT with some gravel and rootlets. Gravel is fine to coarse. Soft.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Very loose from 1.0m. Bedded.	Moist	FAN ALLUVIUM
		1.4		Brown grey, sandy SILT with a trace of roots. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM
		2.9		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	3.8		Grey, sandy SILT and SILT. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM

Total Depth = 3.8 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 4**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.2		Dark brown, organic SILT with minor gravel and rootlets. Gravel is fine to coarse. Firm to stiff.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL with a trace of tree roots. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
		2.2		Brown grey, sandy SILT with minor gravel and silty SAND. Sand is fine. Gravel is fine to medium. Poorly graded. Silt: Soft to firm. Stiff to very stiff from 1.9m. Sand: Very loose to loose. Medium dense from 1.9m. Massive.	Moist	FAN ALLUVIUM
		2.6		Grey, gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse. Poorly graded. Medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	4.2		Grey, interbedded silty SAND, sandy SILT and gravelly SAND. Sand is fine. Gravel is fine to coarse. Poorly graded. Silt: Stiff to very stiff. Sand: Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4.2 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

Appendix B: Investigation Data

Key

TP1 = Test Pit

DPH1 = Dynamic Prove Heavy Test (DPH)

Scale 1:1000

0 10 20 30 40 50 (m)

CADFILE:	Sketch 1.xar	DRAWN	MBS	08/2022
SCALE (AT A3 SIZE):	AS SHOWN	DRAFTING CHECKED	PGF	08/2022
PROJECT No:	220560	APPROVED	PGF	08/2022

GEOSOLVE ENGINEERING CONSULTANTS

GEOTECHNICAL WATER RESOURCES PAVEMENTS

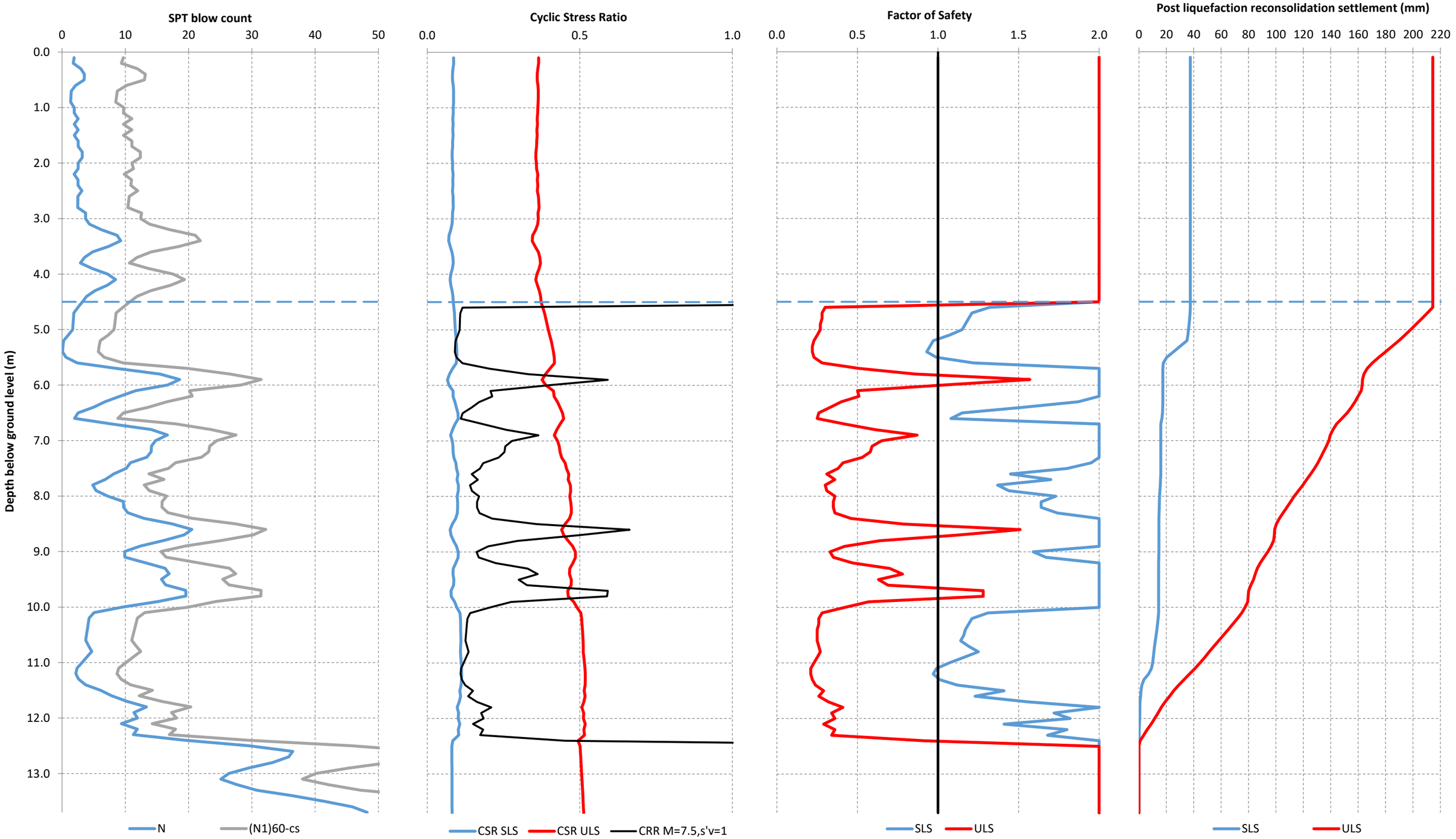
Geoffrey ad Diana Thompson
Liquefaction Assessment Report
Lot 2 DP 306479, Glenorchy-Paradise Rd
Site Investigation Plan

FIG No: FIGURE 1

REV. 1

Appendix C: Liquefaction Analysis

LSN (SLS)	LSN (ULS)	Crust Thickness (SLS)	Crust Thickness (ULS)
5.5	28.2	5.1	4.5

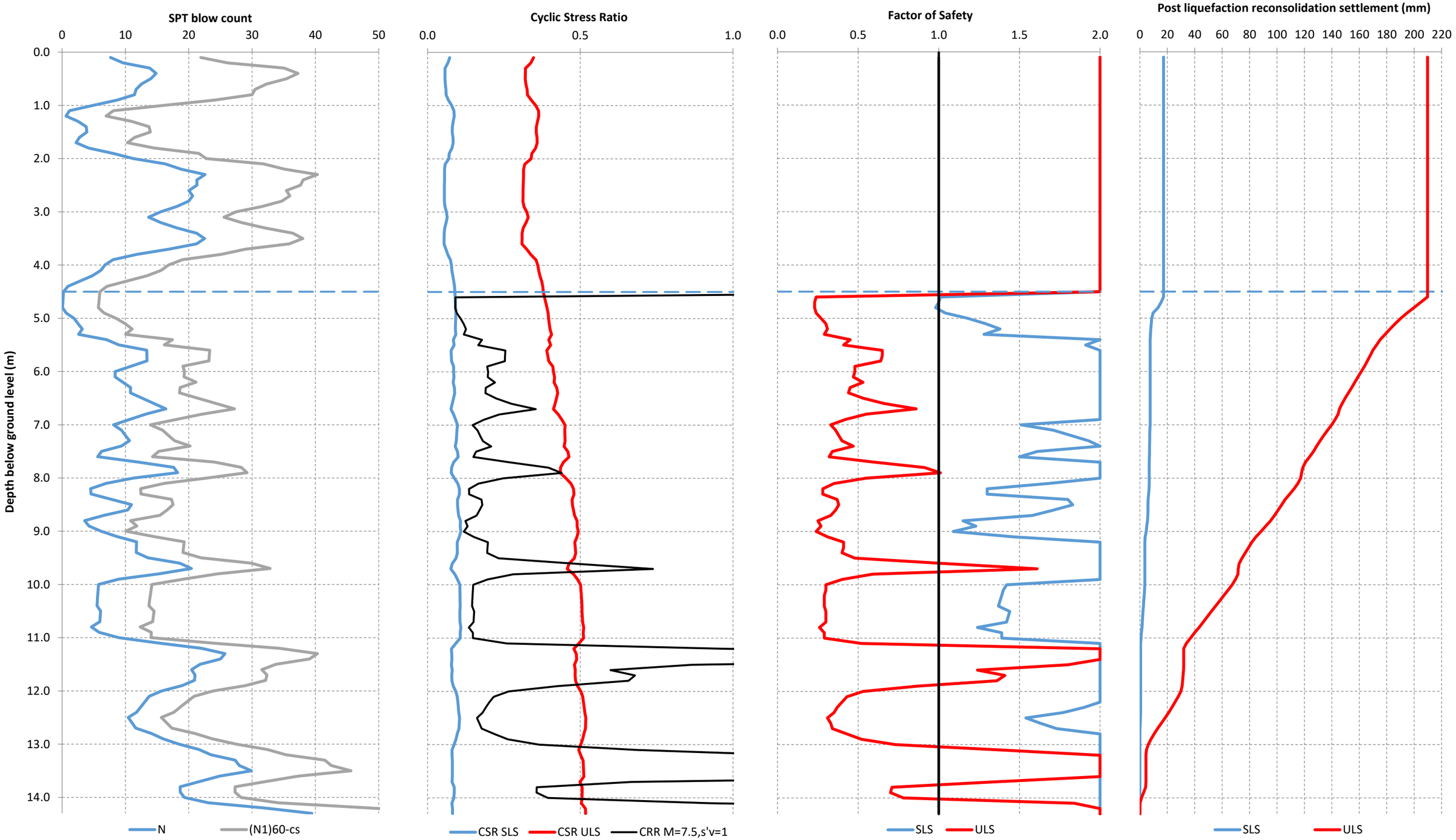


Note: Settlements as per Idriss and Boulanger (2014)

GEOSOLVE

PROJECT	220560 - Lot 2 Glenorchy Paradise Rd
DESCRIPTION	Liquefaction Analysis
LOCATION	Lot 2 Glenorchy Paradise Rd
CLIENT	Geoffrey and Diana Thompson
TEST NUMBER	DPH2
DATE	20/04/2016
LOGGED BY	JAS
ANALYSED BY	MBS
CHECKED BY	PGF

LSN (SLS)	LSN (ULS)	Crust Thickness (SLS)	Crust Thickness (ULS)
2.8	27.5	4.7	4.5

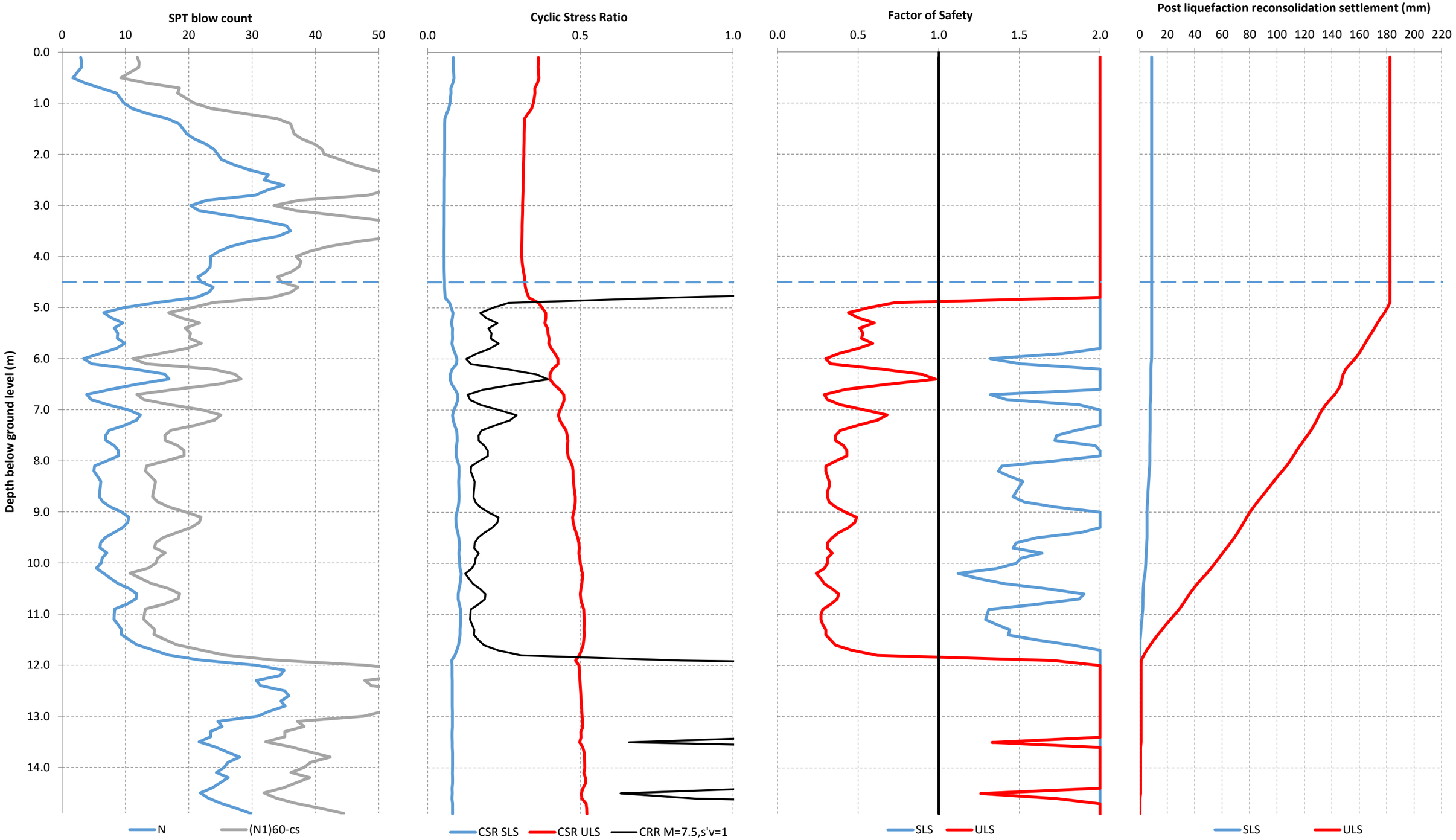


Note: Settlements as per Idriss and Boulanger (2014)

GEOSOLVE

PROJECT	220560 - Lot 2 Glenorchy Paradise Rd
DESCRIPTION	Liquefaction Analysis
LOCATION	Lot 2 Glenorchy Paradise Rd
CLIENT	Geoffrey and Diana Thompson
TEST NUMBER	DPH2
DATE	20/04/2016
LOGGED BY	JAS
ANALYSED BY	MBS
CHECKED BY	PGF

LSN (SLS)	LSN (ULS)	Crust Thickness (SLS)	Crust Thickness (ULS)
0.9	22.8	0.0	4.8

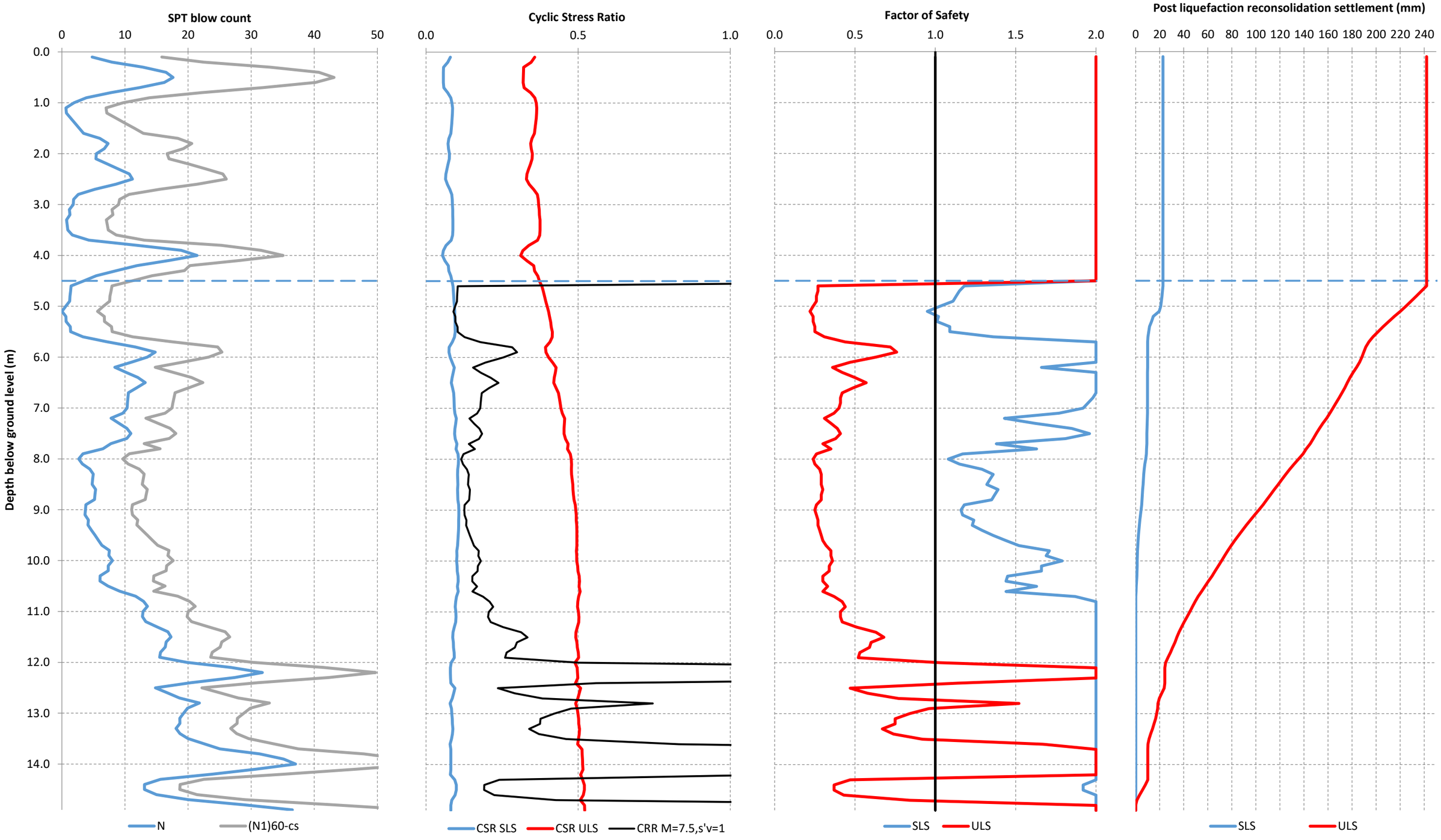


Note: Settlements as per Idriss and Boulanger (2014)

GEOSOLVE

PROJECT	220560 - Lot 2 Glenorchy Paradise Rd	CLIENT	Geoffrey and Diana Thompson	LOGGED BY	JAS
DESCRIPTION	Liquefaction Analysis	TEST NUMBER	DPH3	ANALYSED BY	MBS
LOCATION	Lot 2 Glenorchy Paradise Rd	DATE	20/04/2016	CHECKED BY	PGF

LSN (SLS)	LSN (ULS)	Crust Thickness (SLS)	Crust Thickness (ULS)
3.6	31.4	5.0	4.5



Note: Settlements as per Idriss and Boulanger (2014)

GEOSOLVE

PROJECT	220560 - Lot 2 Glenorchy Paradise Rd
DESCRIPTION	Liquefaction Analysis
LOCATION	Lot 2 Glenorchy Paradise Rd
CLIENT	Geoffrey and Diana Thompson
TEST NUMBER	DPH4
DATE	20/04/2016
LOGGED BY	JAS
ANALYSED BY	MBS
CHECKED BY	PGF

Appendix C - Liquefaction Analysis

General

Liquefaction occurs when susceptible, saturated soils attempt to move to a denser state under cyclic shearing. In this report, liquefaction is defined as when pore pressures rise to reach the overburden stress. When this occurs, the following effects can happen at flat sites:

- loss of strength;
- ejection of material under pressure to the ground surface; and
- post-liquefaction volumetric densification as the materials reconsolidate.

In addition, sloping sites or sites with a 'free face' may experience lateral spreading or movement.

Liquefaction Susceptibility

Soils susceptible to liquefaction have the following characteristics:

- Saturated. Below the ground water level;
- Have "sand like" behaviour[6]; and
- Are in loose or medium dense condition.

Soils which are susceptible to liquefaction require a certain level of earthquake shaking (trigger) to cause them to liquefy. Denser soils require more intense and/or longer duration of shaking (higher trigger) than less dense soil.

Analysis Method

Liquefaction analyses were undertaken on the test data using the Boulanger & Idriss (2014)[7] deterministic method.

Assessment of Consequences of Liquefaction

The following can be assessed to estimate the consequences of liquefaction at this site:

- Crust thickness
- Liquefaction severity index
- Free field settlements
- Lateral spread

Crust Thickness

The non-liquefiable upper layer of soils (crust) provides some protection against ground surface damage as a result of liquefaction. The thicker the crust, the less ground surface damage is expected with significant protection provided by thicknesses of more than 5 m.

Empirical correlations have been developed by Ishihara[7] to quantify the thickness of non-liquefiable crust required to prevent the formation of sand boils resulting from the

[6] "Geotechnical earthquake engineering practice: Module 1 Guideline for the identification, assessment and mitigation of liquefaction hazards", Rev 0, July 2010. New Zealand Geotechnical Society. This document states that soil with: Fc <30%, or; Fc >30% and PI < 7% (where Fc= percent passing a 0.075mm sieve and PI=plasticity index) is considered as "sand-like" and is susceptible to liquefaction.

[7] Ishihara, K. (1985). "Stability of natural deposits during earthquakes," Theme lecture, Proc. 11th Int. Conf. On Soil Mechanics and Foundation Engineering, San Francisco, 2, 321-376pp.

liquefaction of underlying soil layers. These correlations indicate that for a given thickness of liquefiable soil, as the peak ground acceleration increases a greater thickness of non-liquefiable soil is required to prevent liquefaction damage from manifesting on the surface.

Liquefaction Severity Number

Liquefaction severity number (LSN) is a single value which can be calculated from a liquefaction assessment considering the thickness density and depth of liquefiable layers and the intensity of earthquake shaking. Based on observations of ground surface damage in Christchurch an indicative correlation has been developed between ground surface damage from liquefaction and LSN as described below.

As the LSN increases, so does the risk of severe effects on the land and structure. In general, the following surface effects are considered likely at sites with various LSN values.

Table 1C - Liquefaction Severity Number[8]

	Effects from excess porewater pressure and liquefaction	Characteristic LSN	Characteristics of liquefaction and its consequences
L0	Insignificant	< 10	No significant excess pore water pressures (no liquefaction)
L1	Mild	5 – 15	Limited excess pore water pressures; negligible deformation of the ground and small settlements.
L2	Moderate	10 – 25	Liquefaction occurs in layers of limited thickness (small proportion of the deposit, say 10 percent or less) and lateral extent; ground deformation results in relatively small differential settlements.
L3	High	15 – 35	Liquefaction occurs in significant portion of the deposit (say 30 percent to 50 percent) resulting in transient lateral displacements, moderate-to-large differential movements, and settlement of the ground in the order of 100 mm to 200 mm.
L4	Severe	> 30	Complete liquefaction develops in most of the deposit resulting in large lateral displacements of the ground, excessive differential settlements and total settlement of over 200 mm.
L5	Very severe		Liquefaction resulting in lateral spreading (flow), large permanent lateral ground displacements and/or significant ground distortion (lateral strains/stretch, vertical offsets and angular distortion).

Free Field Settlements

This describes the settlement of ground not occupied by a building, occurring due to dissipation of excess pore water pressure generated during earthquake shaking. Where appropriate, we have estimated reconsolidation settlement of any potentially liquefiable layers using the methodology recommended by Idriss & Boulanger (2014)[7].

A component of building settlement may also occur due to yield of any liquefied founding soils. This component of settlement is very difficult to predict and depends on the interaction of the building and the soil it is founded on.

[8] New Zealand Geotechnical Society [NZGS] and Ministry of Business, Innovation and Employment [MBIE] (2021). Earthquake geotechnical engineering practice in New Zealand. Module 3: Identification, assessment and mitigation of liquefaction hazards. Rev 1.

GeoSolve Ref: 220560
18 August 2022

Mt Earnslaw Trust
1255 Glenorchy-Paradise Road
Glenorchy 9372

Attention: Geoffrey and Diana Thomson

Resource Consent Natural Hazard Assessment

Lot 2 DP 306479, Glenorchy – Paradise Road

Dear Geoffrey and Diana,

Introduction and Development

Thank you for engaging Geosolve to undertake a Natural Hazard Assessment for your proposed building platform at Lot 2 DP 306479, Glenorchy – Paradise Road. As previously discussed, Liquefaction and Alluvial Fan Assessments have been completed for the site for a previously consented platform, which have now lapsed. We understand a new consent application is being prepared and updated liquefaction and alluvial fan assessments are required to accompany the application. In order to provide the required assessments Geosolve has undertaken the following work in accordance with the Terms and Conditions outlined in Geosolve job proposal reference 220560:

Alluvial Fan Hazard Assessment:

- Review of the GeoSolve database for existing relevant information, including previous reports, aerial photography, contour plans and geological/geotechnical hazard mapping;
- Preparation of a detailed site geological/geomorphological map;
- Debris flow analysis and outputs for report;
- Flood modelling and analysis using HEC-RAS modelling software to determine impact on the site, analyse channel flow capacity, reviewing mapping observations, create image outputs;
- Review of potential remedial measures, if warranted, and;
- Preparing this report letter summarising the above.

Liquefaction:

A separate report has been prepared to present the results of a liquefaction assessment undertaken by GeoSolve for the site, titled ‘rp220560 Lot2GlenorchyParadise Liquefaction’.

The site is situated on farmland to the north of the Glenorchy Township on Glenorchy-Paradise Road. The location of the site is shown on Figure 1 below.

The site is vacant of any structures, and we understand that it has only been used within recent history by the farm for agricultural purposes such as stock grazing. A single dwelling is proposed at the location indicated.

The Rees River is located approximately 470 m to the west and is at an elevation approximately 8 m lower than the site. Additionally, Precipice Creek, is located approximately 170 m to the south.

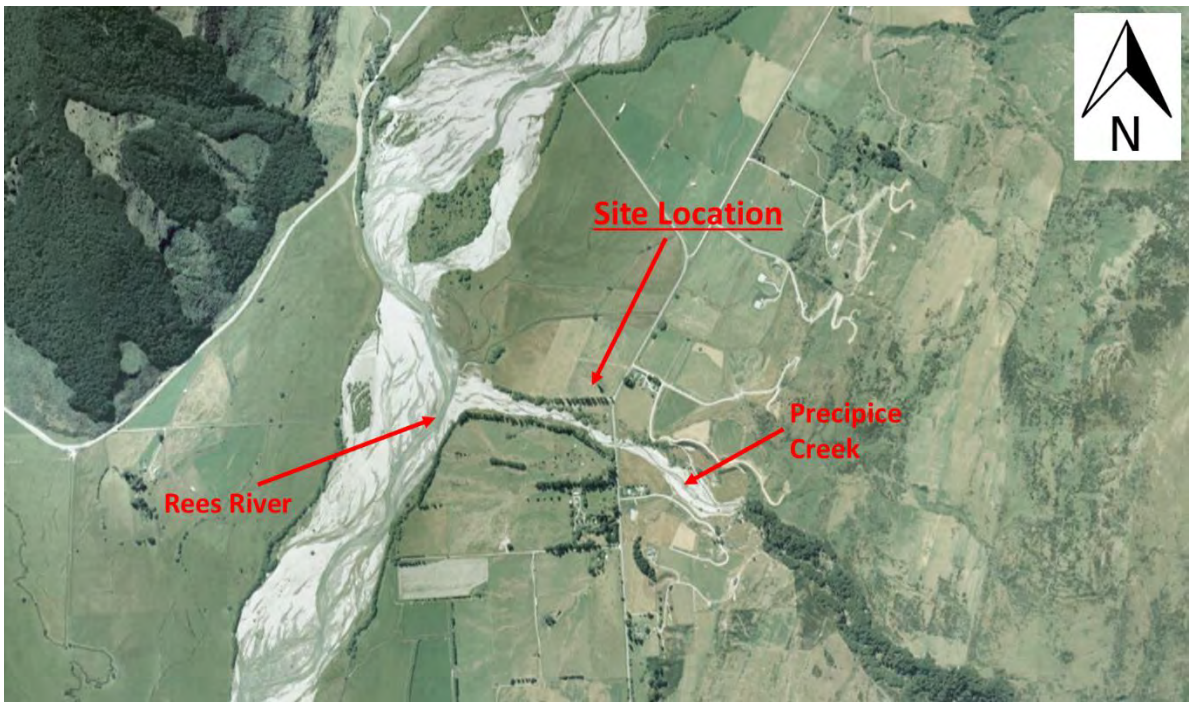


Figure 1: Site Location (source: http://maps.qldc.govt.nz/qldcviewer/)

The site is located on an area of land which forms part of the Precipice Creek alluvial fan at the base of the Richardson Mountains.

The ground surface within the proposed building platform and across the wider area gently falls at angles of <5° westwards towards the Rees River.

The site is considered to be free draining with no significant man-made drainage features within the immediate area of the proposed building platform. However, it should be noted that an east-west orientated drainage channel is situated 250m to the north of the building platform.

QLDC/ORC hazard mapping shows that the site is subject to 'Active Floodwater-Dominated' alluvial fan hazard. An alluvial fan assessment is therefore considered appropriate. Geosolve have completed this assessment and our inputs are summarised below.

Alluvial fan hazard- as shown on Figure 2 below, the site is located within an active floodwater dominated alluvial fan.

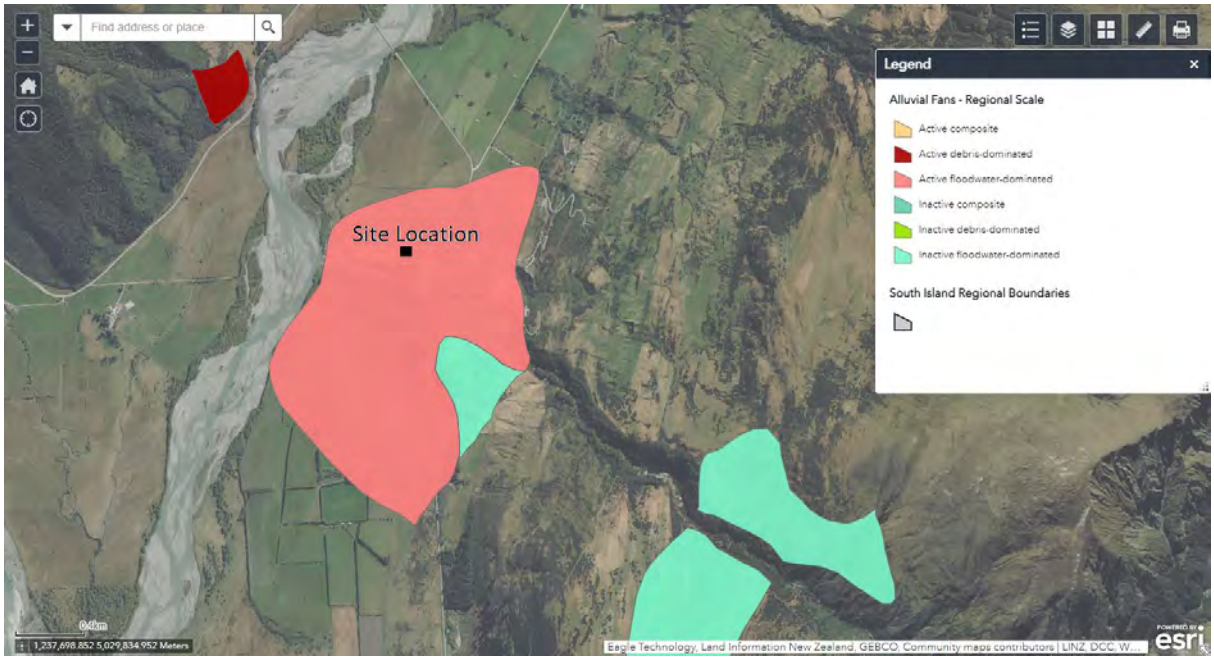


Figure 2: ORC Alluvial Fans Hazard Map including Site Location (source: https://maps.orc.govt.nz/portal)

Ground Model

4 test pits were undertaken on the site, all showing a depth of 0.1-1.2 m of floodplain deposits/topsoil overlying fan alluvium. It is noted that this infers that the site has not historically been subjected to debris flows, as such events would have deposited markedly different material. The test pit locations and their excavation logs are attached as Appendices A and B respectively.

Geomorphological observations

Geosolve undertook a site visit on the 2nd of August in order to supplement the information gained from a desktop study and analysis of previous reports. From a combination of those inputs the following observations have been recorded:

- The catchment feeding into Precipice Creek (a.k.a. Temple Burn) runs primarily east to west and has an area of 16.83 km² according to NIWA NZ River Flood statistics website, but 8.74 km² according to the QLDC Floodplain Report 1999. A GIS estimate based on LINZ 8m DEM is 18.1 km². It is possible that the value in the QLDC report was meant to read 18.74 km². 16.83 km² has been used for the purposes of this report.
- The head of the catchment comprises 2 separate basins, beginning immediately below Temple Peak and Point 1934. An elevation profile/catchment longsection is

provided as Figure 3 below, with the red arrow indicating the approximate site location.

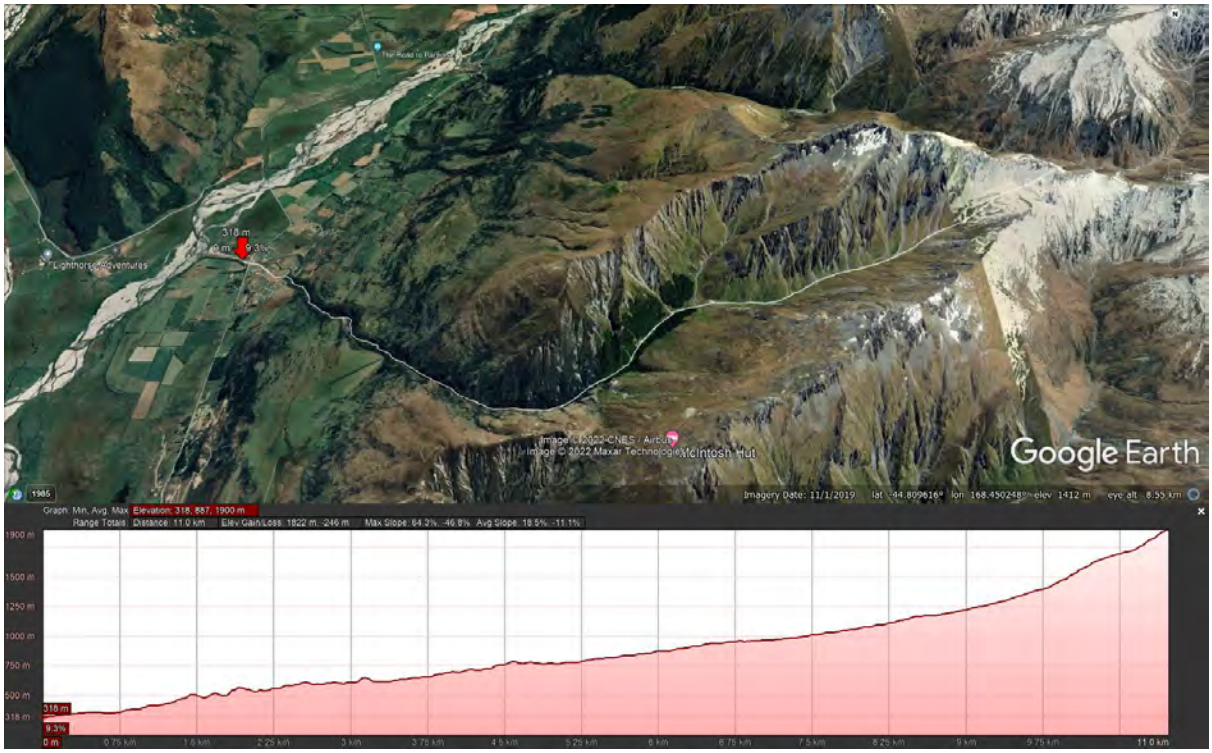


Figure 3: Approximate long section of head of catchment to flowpath adjacent to site location

- Further features such as stopbanks, active/inactive parts of the fan, the road bridge location and other river features are shown on the Geomorphology Plan and in the site photos attached as Appendix C and Appendix D respectively.

Alluvial Fan - Debris Flow Potential

As shown in Figure 2 and Appendix C, the site is located within a floodwater dominated alluvial fan area according to QLDC/ORC hazard mapping. This does not imply risk of debris flow, however Geosolve have undertaken a preliminary assessment of debris flow risk as a precautionary measure as follows:

Evaluation of the test pit logs at the site location show no evidence of soil types that historical debris flow would have deposited. Instead several metres of Fan Alluvium were observed in all 4 of the test pits, indicating an extensive uninterrupted time period of the fan being formed by gradual sedimentation deposition rather than sudden debris movements. Topsoil has also begun to form on that fan alluvium, which is a further indication of age without alluvial activity.

Although the head of the catchment is relatively steep the gorge leading from the upstream basins to the alluvial fan is relatively flat and long, providing a significant area where any debris flow would lose energy, slow and dissipate before exiting the gorge or reaching the site. This is supported by an assessment of the catchment characteristics; published

literature[1] on debris flow that relates runout distance to vertical drop and average path slope angle indicates that a debris flow originating in the upper catchment would not reach the site.

This assessment has been undertaken considering the existing geomorphology and 1% AEP rainfall event, as per the planning requirements. If a large event, with a low likelihood of occurrence and a return period beyond the required planning timeframes, results in major geomorphological change in the catchment, Geosolve recommends that the risk to the site is reassessed.

Flooding Potential from the Rees River

The site is located approximately 470 m east of the Rees River, at an elevation approximately 8 m higher than the riverbed. The Queenstown Lakes District Floodplain Report (November 1999) states the following with regard to Precipice Creek:

> There are additional flooding problems in the Rees catchment associated with the tributaries draining the western faces of the Richardson Mountains. The most significant of these is the Temple Burn (also known as Precipice Creek).
>
> The Temple Burn (catchment area 8.74 sq km) has created flooding problems at the Glenorchy-Paradise Road approximately 7km north of Glenorchy township. In January 1983 the road was cut at this point. The bridge was replaced in 1988 and now has an estimated capacity of the order of 50m³/s. This is substantially greater than the waterway it replaced but it may still be incapable of passing more than about the 10% flood flow without overspill. The Temple Burn also has a tendency to overspill its banks, particularly on the Glenorchy side, some 300 metres upstream of the road.

Figure 4: QLDC Floodplain Report (Nov 1999) extract regarding Precipice Creek (a.k.a. Temple Burn)

The QLDC Floodplain Report also shows the site location as being within the potential floodplain of the Rees River as per Figure 5 below with the site shown in red:

[1] *Initiation and Runout of Post-Seismic Debris Flows: Insights From the 2015 Gorkha Earthquake*, Maxwell P. Dahlquist & A. Joshua West, 2019

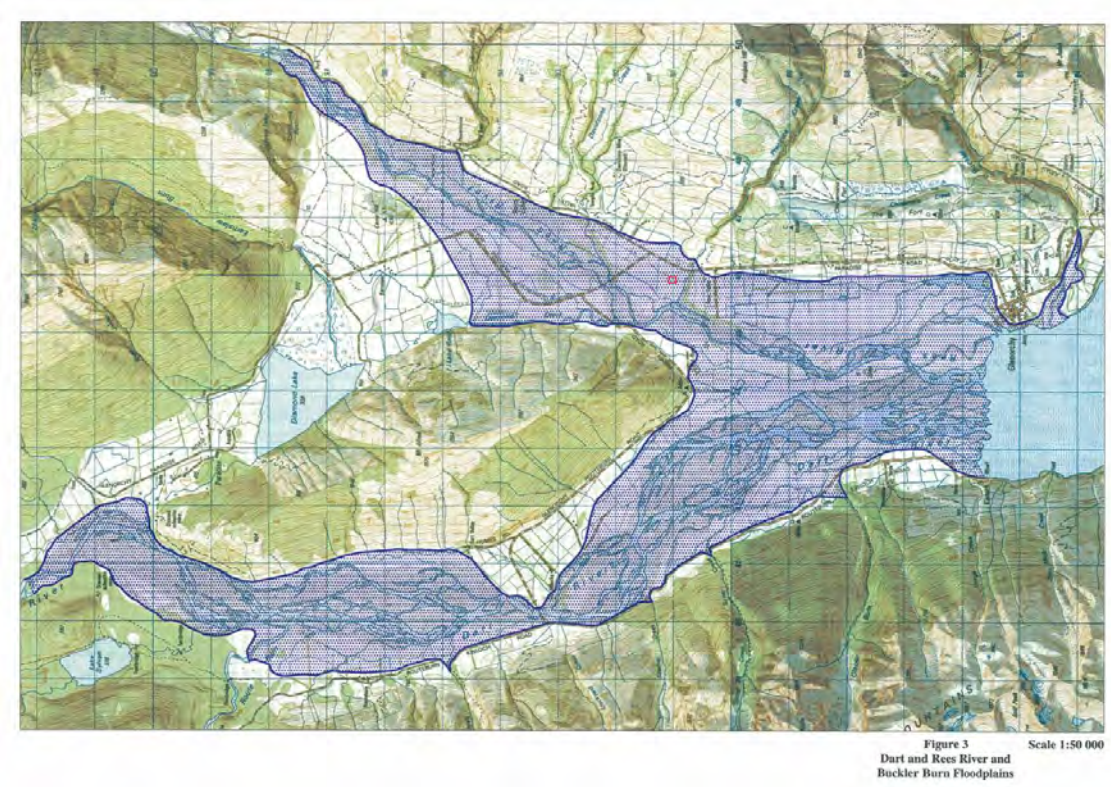


Figure 5: Estimated Dart, Rees and Bucklerburn Floodplains as per the QLDC Floodplains Report 1999

The report however also acknowledges the uncertainty associated with its floodplain estimation explained by the following statement (Figure 3 being the figure above, captioned Figure 5 in this report):

> The flood plain hazard zone for the Dart River shown on **Figure 3** is based on on-site inspection, local comment and historical file notes. The absence of any water level recording sites in the catchment prior to 1996, the remoteness of the area and its inaccessibility, particularly during times of major floods, contribute to the uncertainty regarding the exact extent of the floodplain in many areas. Future flood events may highlight the need for amendments.

Figure 6: QLDC Floodplain Report acknowledgement of limited Rees floodplain estimate accuracy

Geosolve believes that the floodplain estimate provided by the 1999 QLDC report does not sufficiently acknowledge the elevation of the alluvial fan that the proposed building platform is to be located on, and is therefore subject to amendment in that particular area. This is demonstrated by the digital elevation terrain model created from the 2019 LiDAR survey of Glenorchy with the elevation of the site shown by the cursor to be approximately 333 m:

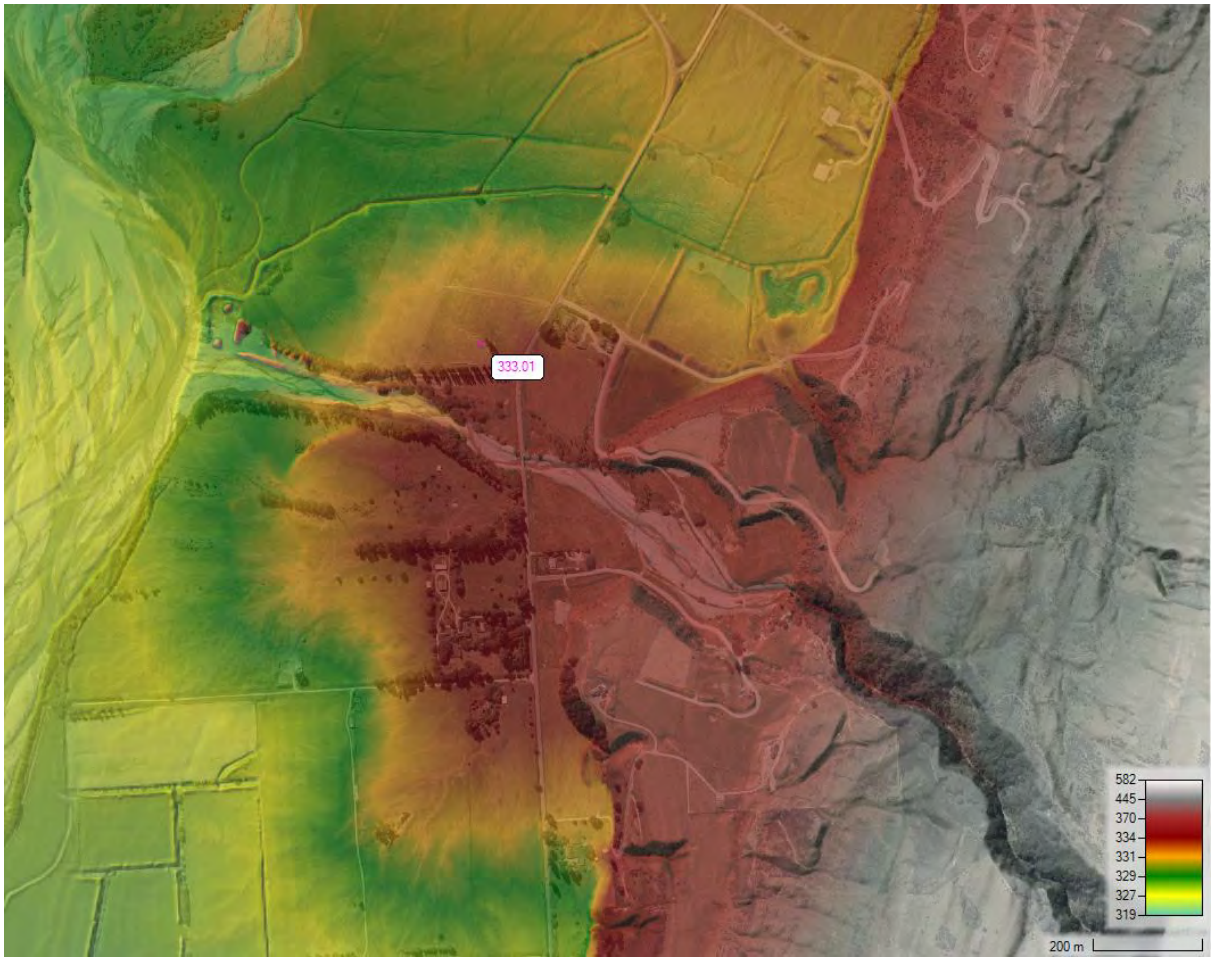


Figure 7: Digital elevation terrain model showing the elevation of the site to be approximately 333 m

Figure 7 above demonstrates that the location of the site on the alluvial fan provides an additional 3-4 m of elevation above the level of the floodplain in adjacent areas, which is sufficient to protect it from flooding of the Rees River in a 1% AEP event. Anecdotal evidence provided by long-time residents of the area confirmed that no flow was observed there during the most extreme recent flooding event, which occurred in 1994. Geosolve believe that the above factors in combination are sufficient to conclude that the site is not at risk of flooding from the Rees River in the design event of a 100 year / 1% AEP event.

Alluvial Fan - Flooding Potential from Precipice Creek

The site is located approximately 170 m north of Precipice Creek, at an elevation approximately 1 m lower than the riverbed. There is a stopbank between the riverbed and the site location, the long-term effectiveness of which is maintained by the ongoing gravel extraction from the riverbed. This results in a height of approximately 2.3 m from the riverbed to the crest of the stopbank, providing significant flood protection. If gravel extraction from the riverbed were to cease in the near future it is likely that the existing flood banks would still provide sufficient flood protection for the design life of the building,

however it is noted that the riverbed would continue to aggrade over time, slowly increasing flood risk on the fan.

In order to simulate flood risk to the development site from a 1% AEP storm the following modelling process was undertaken using the Hydrologic Engineering Centre's River Analysis System computer program known as HEC-RAS:

- An estimated flow value for Precipice Creek during a 1% AEP storm was obtained from the NIWA River Flow Statistics website[2] using the Henderson-Collins regional method (2018). This value was shown to be 35.75 m³/s where Precipice Creek meets the Rees River. The flow modelling was performed from the exit of Precipice Gorge, which is located approximately 1.15km upstream of the Rees confluence, however the 35.75 m³/s flow value was conservatively adopted for that location.
- A 25% increase was applied to that flow to allow for peak rainfall increase due to climate change. This is considered to provide for the RCP 8.5 scenario, the most conservative of climate change estimations, and resulted in an estimated flow of 44.69 m³/s.
- The estimated flow was then multiplied by 1.5 in order to allow for sediment entrainment due to site observations of the catchment, resulting in a total peak flow of 67.03 m³/s.
- The Manning's n roughness of the river channel was estimated to be 0.06, and the roughness of the floodplain to be 0.05, in keeping with published literature[3].
- The Rees River was estimated to be in a 20% AEP flood (a.k.a. 5 year flood) at the time that the 1% AEP flow in Precipice Creek reaches site area. This is based on the difference in Time of Concentration values for the respective catchments. The Time of Concentration is much shorter for Precipice Creek (approximately 2 hours based on catchment calculations), meaning that the peak flood flow from Precipice Creek will reach the site area much more quickly than the peak flow of the Rees. Likewise when the Rees flood reaches its peak, the Precipice Creek flood will have mostly abated.
- A stage height of 331m was used as the downstream boundary condition to simulate the Rees River being in a 20% AEP flood, estimated based on published literature[4,5].
- The Time of Concentration for the Precipice Creek catchment was estimated to be approximately 2 hours based on the length of the catchment and average expected velocity of runoff given the catchment characteristics.
- The SCS Dimensionless Unit Hydrograph method was used to convert the calculated peak flow and Time of Concentration values into a synthetic hydrograph representative of the site, which is shown below as Figure 8. An extended 1 m³/s baseflow has been added to allow the model to stabilise before and after the peak

[2] *https://data-niwa.opendata.arcgis.com/apps/new-zealand-river-flood-statistics-app/explore*
[3] *Roughness Characteristics of New Zealand Rivers*, D Hicks & P Mason, 1991
[4] *Head of Lake Wakatipu Natural Hazards Assessment*, Tonkin & Taylor, 2021
[5] *Dart / Rees Rivers Flood Hazard Modelling*, Land River Sea Consulting, 2022

flow is input. That baseflow value may be higher in reality, however this would not have a meaningful effect on the flooding analysis. The synthesised storm hydrograph is 8 hours long and peaks at 67 m³/s after 2 hours.

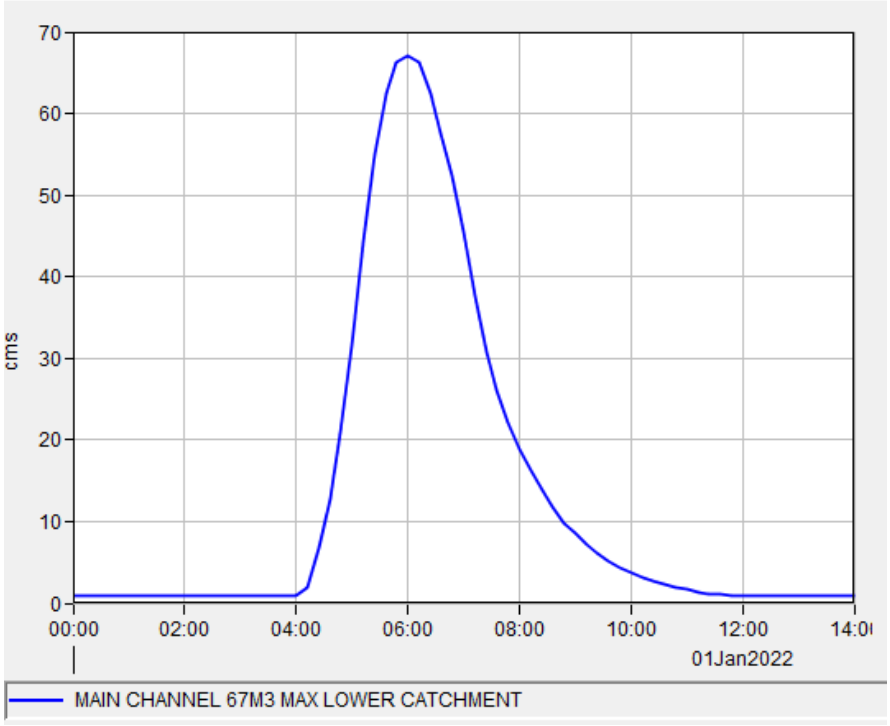


Figure 8: Synthetic hydrograph created to simulate the flow in Precipice Creek in a 1% AEP storm

- A digital elevation model (DEM) was created from the 2019 LiDAR survey of Glenorchy, as shown in Figure 7 above. The terrain was modified to simulate the probable incapacity of the bridge to convey the full flood flow, as per the QLDC Floodplain Report statement (Figure 4), and the likelihood of large vegetation/trees being entrained by flood flow and partially damming the bridge. To allow for these factors the available flow area at the bridge was modelled as being approximately 50% of the existing area.
- The HEC-RAS model was run in 2D using the inputs detailed above, for an area ranging from approximately 750 m upstream of the site to at least 250 m downstream of the site in both the northerly and westerly directions. See Figure 9 below for the results that were output, where the terrain elevation is shaded as per the scale on Figure 7, and the flood depth is shaded dark blue to show areas of greater than 0.3m predicted depth. The output mapping is overlain on aerial imagery for reference purposes.

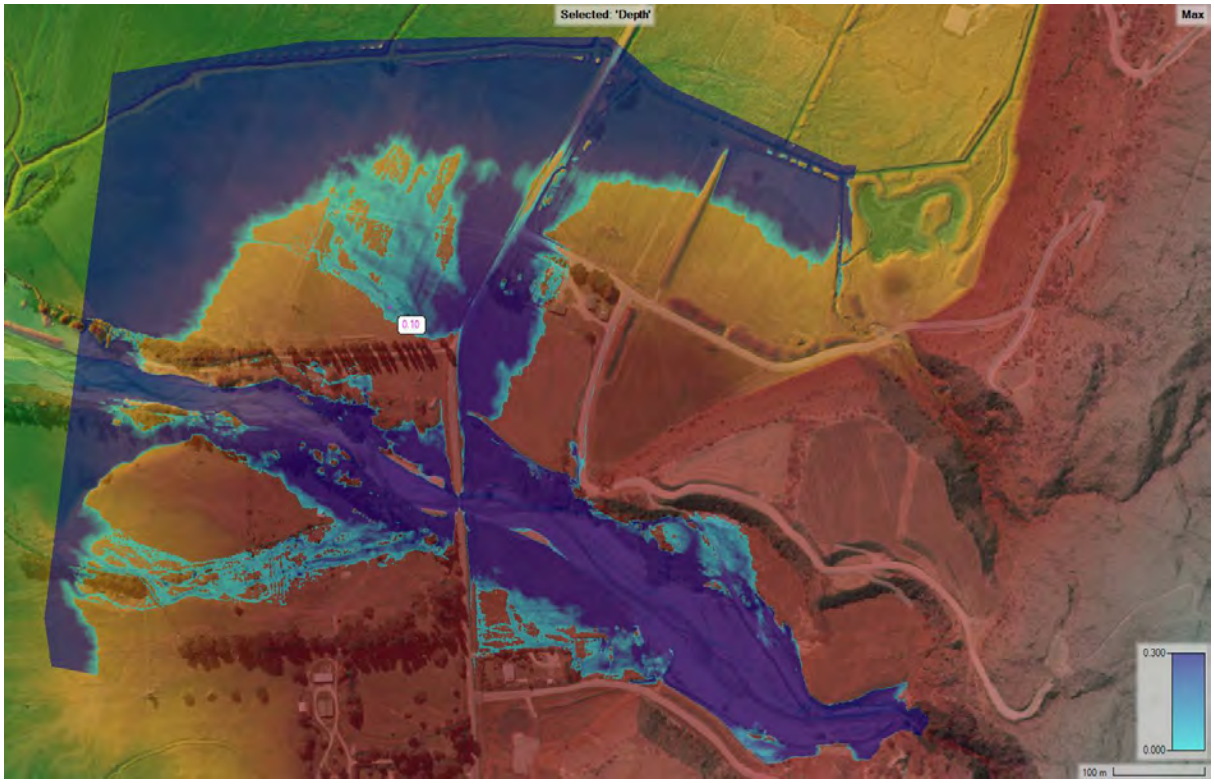


Figure 9: HEC-RAS modelling output showing estimated flooding depth at the proposed dwelling location

The modelled flood depth at the site is shown by the location of the cursor on Figure 9 to be approximately 0.1 m. As can be seen from the figure however, the predicted flood depth in that area ranges from 0 to 0.1 m within a small area, which in reality would spread out evenly over the planar area available, resulting in minor sheet flow/superficial ponding. Given the likelihood of high permeability of the soil types in this location (shown by the test pits in Appendix B and known to be a typical feature of alluvial fans), Geosolve believe that the most practical approach is to treat the ground surface as the maximum anticipated flood level for the purpose of determining the minimum finished floor level in the dwelling's design.

The NZ Standard NZS 4404:2010 Land Development and Subdivision Infrastructure, states:

"*4.3.5.2 Freeboard*

The minimum freeboard height additional to the computed top water flood level of the 1% AEP design storm should be as follows or as specified in the district or regional plan.

Freeboard Minimum Height:

Habitable dwellings (including attached garages) - 0.5 m

Commercial and industrial buildings - 0.3 m

Non-habitable residential buildings and detached garages - 0.2 m

The minimum freeboard shall be measured from the top water level to the building platform level or the underside of the floor joists or underside of the floor slab, whichever is applicable."

This freeboard is to the underside of the floor joists or floor slab. Minimum floor level is thus about 0.7 m above the 1% AEP flood level for habitable dwellings. For this reason Geosolve recommends that the finished floor level is to be 0.7 m above the surrounding ground level.

Given the potential for conditions to change in the future, such as gravel extraction from the Precipice Creek riverbed ceasing within the design life of the dwelling, Geosolve also recommends flood resilient building fit-out.

Conclusion

The site is located in a floodwater dominated alluvial fan hazard zone with the potential for substantial sediment transport over a long period of time. Ongoing gravel extraction from the riverbed of Precipice Creek is currently negating this hazard, and the chance of a debris flow reaching to/near the site and causing rapid channel avulsion is considered to be low enough to be negligible. It is considered that if gravel extraction from the riverbed were to cease in the near future it is likely that the existing flood banks would still provide sufficient flood protection for the design life of the building, however it is noted that the riverbed would continue to aggrade over time, slowly increasing flood risk on the fan.

Based on geomorphological mapping and computer modelling, the out-of-channel effects of a flood resulting from a 1% AEP rainfall event directly impacting the proposed dwelling site are expected to be minor to none for the building's design life. As a precautionary measure, and as the results of the modelling do indicate that it is possible some ponding/sheet flow may reach the dwelling site in an extreme event, Geosolve recommend that the building platform be constructed to be 0.5 m higher than the surrounding ground level/the finished floor level to be 0.7 m higher than the surrounding ground level. In addition Geosolve recommends flood resilient building fit-out, so that in the unlikely event that floodwater reaches the dwelling in the future it is non-destructive.

If an extreme super-design event, with a low likelihood of occurrence and beyond the required planning timeframes, results in major geomorphological change in the catchment, we recommend further assessment be undertaken and appropriate remediation performed if required.

Applicability

This report has been prepared for the benefit of the Mt Earnslaw Trust with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

Report prepared by:

.....

Neil Williman
Senior Water Resources Engineer

Reviewed for GeoSolve Ltd by:

.....

Hank Stocker
Senior Engineer – Water

Appendix A – Test Pit Locations

Key

AH1 = Hand Auger

TP1 = Test Pit

Scale 1:1000

0 10 20 30 40 50 (m)

CADFILE:	Sketch 1.xar	DRAWN	MBS	08/2022
SCALE (AT A3 SIZE):	AS SHOWN	DRAFTING CHECKED	PGF	08/2022
PROJECT No:	220560	APPROVED	PGF	08/2022

GEOSOLVE
ENGINEERING CONSULTANTS

GEOTECHNICAL
WATER RESOURCES
PAVEMENTS

Geoffrey ad Diana Thompson
Liquefaction Assessment Report
Lot 2 DP 306479, Glenorchy-Paradise Rd
Site Investigation Plan

FIG No: FIGURE 1

REV. 1

Appendix B – Test Pit Excavation Logs

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 1**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator	OPERATOR: Ritchie
NORTHING:	mN	INFOMAP NO.	COMPANY: Reid Contracting
ELEVATION:	m	DIMENSIONS:	HOLE STARTED: 20-Apr-16
METHOD:		EXCAV. DATUM:	HOLE FINISHED: 20-Apr-16

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.4		Grey, silty SAND. Sand is fine. Uniformly graded. Very loose to loose. Massive.	Moist	FLOODPLAIN DEPOSIT
		0.6		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft to firm. Massive.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with some cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Very loose to loose. Rarely medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 2**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.5		Grey, silty SAND and gravelly SAND. Sand is fine to coarse. Gravel is fine to medium. Poorly graded. Very loose to loose. Bedded.	Moist	FLOODPLAIN DEPOSIT
		0.7		Brown, organic SILT with a trace of gravel and rootlets. Gravel is fine. Soft.	Moist	BURIED TOPSOIL
	NO SEEPAGE	4.0		Brown grey, sandy GRAVEL with a trace of cobbles. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose. Medium dense from 1.1m. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4 m

COMMENT: Some slumping of test pit walls below 0.7m.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 3**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd		Job Number: 160246
LOCATION: See Site Plan	Inclination: Vertical	Direction:

EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.1		Dark brown, organic SILT with some gravel and rootlets. Gravel is fine to coarse. Soft.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Very loose from 1.0m. Bedded.	Moist	FAN ALLUVIUM
		1.4		Brown grey, sandy SILT with a trace of roots. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM
		2.9		Grey, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	3.8		Grey, sandy SILT and SILT. Sand is fine. Non-plastic. Weakly dilatant. Uniformly graded. Soft to firm. Massive.	Moist	FAN ALLUVIUM

Total Depth = 3.8 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

GeoSolve Ltd

EXCAVATION LOG

EXCAVATION NUMBER: **TP 4**

PROJECT: Lot 2 DP3063479 Glenorchy-Paradise Rd			Job Number: 160246
LOCATION: See Site Plan	Inclination:	Vertical	Direction:

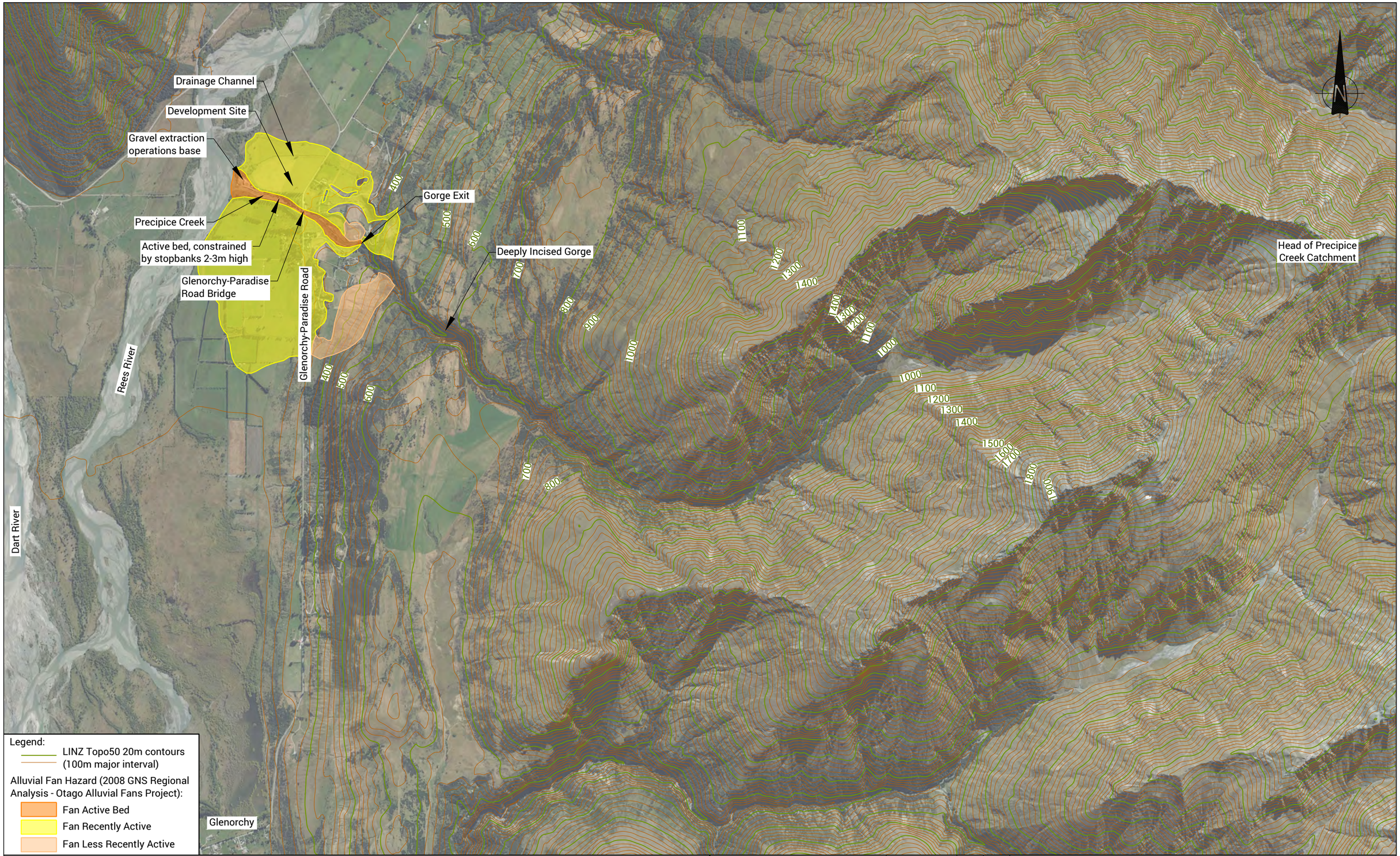
EASTING:	mE	EQUIPMENT: 6T excavator		OPERATOR: Ritchie	
NORTHING:	mN	INFOMAP NO.		COMPANY: Reid Contracting	
ELEVATION:	m	DIMENSIONS:		HOLE STARTED: 20-Apr-16	
METHOD:		EXCAV. DATUM:		HOLE FINISHED: 20-Apr-16	

SCALA PENETRATION	GROUNDWATER / SEEPAGE	DEPTH (m)	GRAPHIC LOG	SOIL / ROCK CLASSIFICATION, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, WEATHERING, SECONDARY AND MINOR COMPONENTS	WATER CONTENT	GEOLOGICAL: SOIL / ROCK TYPE, ORIGIN, MINERAL COMPOSITION, DEFECTS, STRUCTURE, FORMATION
		0.2		Dark brown, organic SILT with minor gravel and rootlets. Gravel is fine to coarse. Firm to stiff.	Moist	TOPSOIL
		1.1		Grey, sandy GRAVEL with a trace of tree roots. Sand is fine to coarse. Gravel is fine to coarse, subrounded. Well graded. Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM
		2.2		Brown grey, sandy SILT with minor gravel and silty SAND. Sand is fine. Gravel is fine to medium. Poorly graded. Silt: Soft to firm. Stiff to very stiff from 1.9m. Sand: Very loose to loose. Medium dense from 1.9m. Massive.	Moist	FAN ALLUVIUM
		2.6		Grey, gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse. Poorly graded. Medium dense. Bedded.	Moist	FAN ALLUVIUM
	NO SEEPAGE	4.2		Grey, interbedded silty SAND, sandy SILT and gravelly SAND. Sand is fine. Gravel is fine to coarse. Poorly graded. Silt: Stiff to very stiff. Sand: Loose to medium dense. Bedded.	Moist	FAN ALLUVIUM

Total Depth = 4.2 m

COMMENT: Test pit walls stood well during excavation - no slumping.	Logged By: JAS
	Checked Date:
	Sheet: 1 of 1

Appendix C – Geomorphology Plan



Legend:

- LINZ Topo50 20m contours (100m major interval)

Alluvial Fan Hazard (2008 GNS Regional Analysis - Otago Alluvial Fans Project):

- Fan Active Bed
- Fan Recently Active
- Fan Less Recently Active

Notes:

1. These drawings have been prepared for the benefit of Geoffrey and Diana Thompson with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

SCALE 1:30,000

0 300 600 900 1200 1500 (m)

GEOSOLVE
Level 1, 70 MacAndrew Road, South Dunedin
www.geosolve.co.nz

DRAWN	WCG	Aug.22
DRAFTING CHECKED		
APPROVED		
CADFILE: 220560.dwg		
SCALES (AT A3 SIZE): 1:30,000		
PROJECT No: 220560		

Geoffrey and Diana Thompson

Lot 2 Glenorchy-Paradise Road, Glenorchy

Geomorphology Plan

FIG No: Appendix A, Figure 1a

REV. 0

Appendix D – Site Photos

Site photo 1: The proposed development site, marked out by white poles

Site photo 2: Looking upstream up Precipice Creek from just east of the road bridge

Site photo 3: Looking upstream towards Precipice Gorge

Site photo 4: Looking upstream into Precipice Gorge

Site photo 5: Looking downstream out of Precipice Gorge

Site photo 6: Looking downstream towards the dwelling adjacent to Nereus Way

Site photo 7: Looking upstream along the gravel extraction area back towards the bridge

Site photo 8: Looking downstream along the gravel extraction area towards the Rees River

Attachment [I]

Volunteered Consent Conditions

Consent notice conditions

General conditions:

1. There shall be no more than one residential unit within the building platform.
2. The residential dwelling and accessory buildings associated with the dwelling shall be located within the building platform.

Design controls:

3. The total footprint of the buildings within the building platform shall not exceed 550m^2.
4. The height of any buildings within the building platform shall be restricted to 6.5m above the original ground level as at [XX/XX/XXXX – date plans stamped approved].
5. All built elements upon the roof or upper portion of a future building, including but not limited to chimneys, satellite dishes and solar panels, shall not extend beyond the maximum height of 6.5m above the original ground level as at [XX/XX/XXXX – date plans stamped approved] and shall be of a colour to match the roof.
6. Any future dwelling shall be designed to have the bulk and form of a traditional farm building i.e., a homestead, woolshed, or barn and shall be constructed from cladding materials typically associated with that type of building.
7. The main roof of any future dwelling shall have a pitched roof, with a slope of at least 25 degrees.
8. Roof and wall claddings are to be coloured in a natural range of greys, cool browns or greens that have a light reflectivity value of between 7% and 20%.
9. Roof colours are to have a matte finish. Transparent or translucent panels are not permitted.
10. Wall cladding materials shall be limited to stacked stone, timber weatherboards, traditional corrugated iron, colorsteel or solid plaster, or a combination thereof.
11. All exterior lighting shall be restricted to the building platform and shall be down lighting only. Lighting shall not exceed 1m in height, except where attached to a building where it shall not exceed 3m in height.

Landscape conditions:

12. Landscape planting detailed on the approved Structural Landscape Plan as listed in Condition 1 and as amended in terms of Condition 8a) shall be maintained in perpetuity. If any tree or plant should die or become diseased it shall be replaced in the next available planting season.
13. The Cupressus x leylandii 'Leighton Green' hedges shown on the approved Structural Landscape Plan and as amended in terms of Condition 8a) shall be maintained at a minimum height of 6m.
14. The area on the approved Structural Landscape Plan as listed in Condition 1 that is marked as "Open pasture space" shall be kept free of trees other than those trees shown on the approved Structural Landscape Plan.

15. All domestic activities, including all car parking areas, paved areas, decks, domestic gardens, outdoor living areas and furniture, garden shed, clotheslines, swimming pools, tennis courts and pergolas shall be contained within the building platform.
16. The land outside the building platform shall continue to be managed by agricultural or horticultural means.
17. Any fencing of the building platform and driveway shall be in the form of a post and wire or post and rail type fence only.
18. Monumental gates or any other road frontage treatments other than simple post and rail or stone fences are prohibited.

Engineering conditions:

1. At the time that a dwelling is proposed, a suitably qualified engineer shall design an effluent disposal system in terms of AS/NZS 1547:2000 that will provide sufficient treatment/renovation to effluent from on-site disposal, prior to discharge to land. To maintain high effluent quality such a system would require the following:

    a. Specific design by a suitably qualified professional engineer
    b. A requirement that each lot must include systems that achieve the levels of treatment determined by the specific design
    c. Regular maintenance in accordance with the recommendations of the system designer and a commitment by the owner of each system to undertake this maintenance
    d. Intermittent effluent quality checks to ensure compliance with the system designer's specifications.

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

2. The site-specific detailed design, the design of the on-site wastewater disposal system, and the location of the EDA shall be submitted to Council prior to the construction of a building on any lot and to be approved by the Council's Building Department.

3. At the time a dwelling is erected, domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static firefighting reserve within a 55,000-litre combination of tanks. Alternatively, a 7,000-litre firefighting reserve is to be provided for each residential unit in association with a domestic sprinkler system installed to an approved standard. A firefighting connection in accordance with Appendix B - SNZ PAS 4509:2008 (or superseding standard) is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source – see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source

- see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family residential units. In the event that the proposed residential units provide for more than single family occupation then the consent holder should consult with the Fire and Emergency New Zealand (FENZ) as larger capacities and flow rates may be required.

The FENZ connection point/coupling must be located so that it is not compromised in the event of a fire.

The connection point/coupling shall have a hardstand area adjacent to it (within 5m) that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by Council's standards for rural roads (as per Council's Land Development and Subdivision Code of Practice). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

Underground tanks or tanks that are partially buried (provided the top of the tank is no more than 1 metre above ground) may be accessed by an opening in the top of the tank whereby couplings are not required. A hardstand area adjacent to the tank is required in order to allow a fire service appliance to park on it and access to the hardstand area must be provided as above.

The FENZ connection point/coupling/fire hydrant/tank must be located so that it is clearly visible and/or provided with appropriate signage to enable connection of a fire appliance.

Firefighting water supply may be provided by means other than the above if the written approval of the Fire and Emergency New Zealand Fire Risk Management Officer is obtained for the proposed method. The firefighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Note: *Fire and Emergency New Zealand considers that often the best method to achieve compliance with SNZ PAS 4509:2008 is through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new residential unit. Given that the proposed residential unit is approximately 11km from the nearest FENZ Fire Station the response times of the New Zealand Volunteer Fire Brigade in an emergency situation may be constrained. It is strongly encouraged that a home sprinkler system be installed in the new residential unit.*

4. The owner for the time being shall treat the domestic water supply by aeration, filtration and disinfection so that it complies with the Drinking Water Standards for New Zealand 2005 (revised 2018).

5. The drinking water supply is to be monitored in compliance with the Drinking Water Standards for New Zealand 2005 (revised 2018), by the lot owner, and the results forwarded to the Environmental Health Team Leader at Council. The Ministry of Health shall approve the laboratory carrying out the analysis. Should the water not meet the requirements of the standard then the consent holder shall be responsible for the provision of water treatment to ensure that the Drinking Water Standards for New Zealand 2005 are met or exceeded.

Hazard mitigation condition:

1. The finished floor level of the future dwelling shall be raised a minimum of 0.7m above existing ground level at [XX/XX/XXXX – date plans stamped approved], to protect any future dwelling from potential flooding (shallow sheet flow) caused by breakout from Precipice Creek. If fill is imported for this purpose, it shall be compacted and certified in accordance with the appropriate standard.
2. Engineered fill must be placed in accordance with NZS4431 to achieve a 300kPA geotechnical Ultimate Bearing Capacity. The design and engineered details of the fill shall be prepared by a suitably qualified professional and approved by the Council.
3. The building foundations shall be specifically designed using TC2 rib-raft foundation, or the construction of a dense geogrid reinforced gravel raft, or otherwise approved by Council.

QUEENSTOWN LAKES DISTRICT COUNCIL

www.qldc.govt.nz

DECISION OF QUEENSTOWN LAKES DISTRICT COUNCIL

RESOURCE MANAGEMENT ACT 1991

Applicant:	**BAYSWATER TRUST**
RM Reference:	RM 160421
Location:	Glenorchy-Paradise Road, north of Glenorchy
Proposal:	Land use consent to identify a residential building platform.
Type of Consent:	Land use consent.
Legal Description:	Lot 2 DP 306479 held in CFR 25360
Valuation Number:	2911126400
Zoning:	Rural General
Activity Status:	Discretionary activity
Notification:	15 June 2016
Commissioner:	W D Whitney
Date of Decision:	28 September 2016
Reissued pursuant to section 133A of the Act:	**17 October 2016** to delete original Condition 11 s) x)
Decision:	**Consent is granted subject to conditions.**

A. INTRODUCTION

A.1 Background

1. The Bayswater Trust has applied to the Queenstown Lakes District Council for land use consent to identify a residential building platform on a property that has frontage to the Glenorchy-Paradise Road north of Glenorchy. The subject site has an area of 53.9900 hectares more or less and is described as Lot 2 DP 306479 as held in Computer Freehold Register Identifier 25360 in the Otago Land Registration District.

2. The site is irregular in shape and has frontage to the Glenorchy-Paradise Road on the north-eastern and south-eastern boundaries. An unnamed legal road adjacent to the southern boundary is partly formed; and an unformed legal road is located adjacent to the (generally) western boundary, with the Rees River being located immediately to the west of that road.

3. Precipice Creek is located generally to the south of the site and the Creek encroaches onto the south-western corner of the site. The site is bisected by a watercourse known as McConachy's Creek. The applicant has advised that a number of surface drains cross the property; and that at times of high flood these drains shed surface water into the Rees River.

4. The site was created by subdivision consent RM 010560 which was granted to RJ Reid on 18 September 2001. The site is subject to an existing land use consent RM 130073 which was granted to Glenorchy Gravel Limited on 20 March 2013.

5. On 31 August 2005 Baywaters Trust applied for subdivision consent to subdivide the subject site into two allotments and to identify a residential building platform on each allotment. This application was publicly notified and attracted several submissions. RM 050811 was placed on hold at the request of the applicant in 2005 and has never proceeded to a hearing or decision. The application RM 050811 was formally withdrawn at the hearing of the current application RM 160421.

6. The site consists of open pastoral farmland with a row of poplars adjacent to the southern boundary. These poplars are located on the partly formed legal road to the south of the site and (further to the west) on the site itself. The only improvements are

external and internal fencing and old stockyards which are located adjacent to the southern boundary of the site.

7. The applicant has advised that the site was, until recently, farmed by a Glenorchy local on behalf of the applicant and used primarily for cattle grazing.

8. Land generally to the west of the Glenorchy-Paradise Road and Rees Valley Road in this locality is located in the Rural General Zone. Land generally to the east of the Glenorchy-Paradise Road and Rees Valley Road is located in the Rural Lifestyle Zone and some of this land has been subdivided as provided for in that Zone, including land to the east of the Glenorchy-Paradise Road opposite the site where access off the Glenorchy-Paradise Road is achieved to rear allotments via Amphion Way and Birley Rise.

A.2 The Proposal

9. Land use consent is sought to identify a residential building platform on Lot 2 DP 306479. The proposed residential building platform is 53 metres off the southern boundary that is shared with the unnamed legal road and (at the closest) 100 metres from the boundary with the Glenorchy-Paradise Road.

10. The proposed residential building platform has an area of 1000m^2 (25m x 40m). The applicant has noted that the proposed residential building platform coincides with the position of the easternmost platform proposed in the context of RM 050811.

11. The applicant has promoted various design controls that are to be registered as a covenant in favour of the consent authority pursuant to section 108(2)(d) of the Resource Management Act 1991 (the Act). Of particular note is that structural landscaping is to be undertaken in accordance with a Structural Landscape Plan which provides for the retention of open pasture adjacent to the Glenorchy-Paradise Road; and that the ground level under a future building will be raised by a minimum of 0.5 metres to protect such development from potential shallow surface water flooding.

12. In the application documentation and prior to and at the hearing the applicant has volunteered a range of conditions [design controls] to mitigate effects. These include the following (or to like effect):

i. The residential dwelling and any accessory buildings associated with the dwelling shall be located within the approved building platform.

ii. All domestic activities associated with a dwelling on the site such as car-parking areas, paved areas, decks, domestic gardens, outdoor living areas and furniture, garden sheds, clotheslines, swimming pools, tennis courts and pergolas shall be contained within the approved building platform area.

iii. The total footprint of buildings within the platform shall not exceed 550m^2.

iv. The finished floor level of the dwelling shall be raised at least 0.5m above existing ground level, to protect the dwelling from potential flooding (shallow sheet flow) caused by any breakout from Precipice Creek. If fill is imported for this purpose it shall be compacted and certified in accordance with the appropriate standard.

v. The height of any future buildings within the building platform shall be restricted to 6.5m above existing ground level.

vi. All built elements upon the roof or upper portion of a future building including but not limited to chimneys, satellite dishes and solar panels shall not extend beyond the building platform height control and shall be of a colour to match the roof.

vii. Any future dwelling shall be designed to have the bulk and form of a traditional farm building, i.e. a homestead, woolshed or barn, and shall be constructed from cladding materials typically associated with that type of building.

viii. The main roof of any future dwelling shall have a pitched form, with a slope of at least 25 degrees.

ix. Roof and wall claddings are to be coloured in a natural range of greys, cool browns or greens that have a light reflectivity value of between 7% and 20%.

x. Roof colours are to have a matt finish. Transparent or translucent panels are not permitted.

xi. Wall cladding materials shall be limited to stacked stone, timber weatherboards, traditional corrugated iron, colorsteel or solid plaster, or a combination thereof.

xii. All exterior lighting shall be restricted to the building platform and shall be down lighting only. Lighting shall not exceed 1m in height, except where attached to a building where it shall not exceed 3m in height.

xiii. The land outside the building platform area shall continue to be managed by agricultural or horticultural means.

xiv. The structural planting shall be planted and maintained in accordance with the approved Structural Landscape Plan and the conifer shelter hedges shall be maintained at a minimum height of 6 metres. The area on the Structural Landscape Plan that is marked as “open pasture space” shall be kept free of trees other than those trees shown on the Structural Landscape Plan.

xv. The future driveway shall be constructed from gravel to a maximum width of 3.5m with grass swales.

xvi. Any fencing of the building platform area and driveway shall be in the form of a post and wire or post and rail type fence only.

xvii. Monumental gates or any other road frontage treatments other than simple post-and-rail or stone fences are prohibited.

xviii. The engineering conditions as detailed at Appendix G to Ms Ellis’s section 42A report subject to an amendment to Condition 11d as promoted by Ms Robertson at the hearing.

xix. The potential was also noted during the hearing to relocate the driveway as shown on the Structural Landscape Plan such that it is located to the west of the proposed conifer shelter hedge which has a north-south axis.

13. The Commission confirms that it has assessed the proposal on the basis of the application as lodged and as amended in terms of the conditions offered by the applicant prior to and at the hearing.

A.3 Zoning

14. The site is zoned Rural General as shown on Map 9 of the Operative Queenstown Lakes District Plan (Operative District Plan/District Plan).

15. Rule 5.3.3.3i(b) provides for the identification of a building platform of not less than 70m^2 in area and not greater than 1000m^2 in area as a discretionary activity in the Rural General Zone.

16. The Commission has considered the proposal as an application for land use consent to a discretionary activity.

A.4 Submissions

17. Three submissions were received within the statutory submission period which closed on 13 July 2016. The submissions by Steve Hewland & Katherine Cahill and by the Otago Regional Council opposed the application; whereas the submission by The Scott Family neither supported nor opposed the application.

18. The Commission has given consideration to the submissions received in response to the application.

19. It is also noted for completeness that a submission from Te Ao Marama Inc was received on 14 July 2016; and that the submitter has withdrawn that submission.

A.5 Reports and Hearing

20. The Commission has had the benefit of a planning report dated 25 August 2016 prepared by Ms Katrina Ellis, a Senior Planner with the Queenstown Lakes District Council; a Landscape Assessment dated 5 July 2016 prepared by Mr Richard Denney, Consultant Landscape Architect for the Queenstown Lakes District Council and an Addendum dated 22 August 2016 that was also prepared by Mr Denney; and an engineering report dated 17 January 2016 prepared by Mr Alan Hopkins a Consulting Engineer. At the hearing on Friday 16 September 2016 the Commission was assisted by Ms Ellis and Mr Denney and Ms Paula Costello, a Senior Planner with the Queenstown Lakes District Council, was also in attendance. Ms Charlotte Evans, Planning Support with the Queenstown Lakes District Council, provided administrative support at the hearing.

21. Prior to the hearing the Commission had the opportunity to consider the application and supporting material; the submissions; the section 42A report; and the pre-circulated written evidence prepared by Ms Robertson and Mr Espie for the applicant. The Commission made a site inspection on the afternoon of 15 September 2016.

22. At the hearing the applicant was represented by Mr Graeme Todd, Lawyer, of GTodd Law; Mr Ben Espie Landscape Architect and Director of Vivian + Espie Limited; and Ms Annemarie Robertson a Resource Management Consultant with John Edmonds & Associates Limited. Mr Rene Kampman of the Bayswater Trust was also in attendance.

23. The submitters were not in attendance at the hearing. A written statement from Steve Hewland and Katherine Cahill dated 8 September 2016 was tabled in support of their submission.

24. The planning, landscape and engineering reports were taken as read and Mr Denney and Ms Ellis were invited to comment following the presentation of the evidence. Following Mr Todd's reply the hearing was adjourned.

A.6 Principal Issues in Contention

25. The principal issues in contention are the effects on the environment of allowing the identification of a residential building platform as proposed on the subject site.

B. EFFECTS ON ENVIRONMENT

B.1 Permitted & Consented Baseline

26. Farming activities (except factory farming), tree planting (with specific exclusions), fencing less than 2 metres high and earthworks which do not breach the site standards contained within Site Standards 22.3.3i-viii are permitted activities in the Rural General Zone.

27. Existing consents are of no particular relevance. As noted above the application RM 050811 was formally withdrawn at the hearing.

B.2 Affected Persons Approvals

28. No affected persons approvals from other parties have been received.

B.3 Assessment Matters

29. The Queenstown Lakes District Plan became fully operative on 10 December 2009. The Operative District Plan contains assessment matters in Part 5 that are relevant to development in the Rural General Zone.

30. The Assessment of Effects on the Environment (AEE) that accompanied the application, the officer's reports and the evidence have assessed the effects of the activity in terms of the relevant assessment matters. This approach is appropriate in this instance, and the Commission has assessed the actual and potential effects of the proposed activity having regard to the relevant assessment matters presented in Part 5 of the Operative District Plan.

B.4 Part 5

31. Clause 5.4.2.1 advises that there are three steps in applying the assessment criteria. These include Step 1 – Analysis of the Site and Surrounding Landscape, Step 2 – Determination of Landscape Category and Step 3 – Application of the Assessment Matters.

32. Mr Espie and Mr Denney have conducted an analysis of the site and surrounding landscape and both landscape architects have determined that the site is part of an Outstanding Natural Landscape (District Wide) – (ONL(DW)). The Commission

acknowledges in this context that rural land in the vicinity of and to the north of Glenorchy is in the ONL(DW).

33. Clause 5.4.2.2(2) contains assessment matters specific to the ONL(DW). Each assessment matter stated in Clause 5.4.2.2(2) is presented in italics below, followed by the Commission's assessment of the proposal in terms of that matter, including the Commission's discussion of effects.

34. The opening paragraphs of Clause 5.4.2.2(2) state as follows:

"These assessment matters should be read in the light of the further guiding principle that existing vegetation which:

(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 landscape (in which the proposed development is set) from roads
- *shall not be considered:*
  (1) as beneficial under any of the following assessment matters unless the Council considers the vegetation (or some of it) is appropriate for the location in the context of the proposed development; and
  (2) as part of the permitted baseline.
- *nor shall removal of such vegetation be considered as a positive effect of any proposal."*

35. The Commission simply acknowledges that the assessment matters in Clause 5.4.2.2(2) are to be read in light of the above guiding principle.

"(a) Potential of the landscape to absorb development

In considering the potential of the landscape to absorb development both visually and ecologically, the following matters shall be taken into account consistent with retaining openness and natural character:

(i) whether, and to what extent, the proposed development is visible from public places;

(ii) whether the proposed development is likely to be visually prominent to the extent that it dominates or detracts from views otherwise characterised by natural landscapes;

(iii) whether any mitigation or earthworks and/or planting associated with the proposed development will detract from existing natural patterns

and processes within the site and surrounding landscape or otherwise adversely effect the natural landscape character;

(iv) whether, with respect to subdivision, any new boundaries are likely to give rise to planting, fencing or other land use patterns which appear unrelated to the natural line and form of the landscape; wherever possible with allowance for practical considerations, boundaries should reflect underlying natural patterns such as topographical boundaries;

(v) whether the site includes any indigenous ecosystems, wildlife habitats, wetlands, significant geological or geomorphologic features or is otherwise an integral part of the same;

(vi) whether and to what extent the proposed activity will have an adverse effect on any of the ecosystems or features identified in (v);

(vii) whether the proposed activity introduces exotic species with the potential to spread and naturalise."

36. Profile poles have been erected at the corners of the proposed residential building platform which have assisted the Commission in assessing the visibility of future development. It is important to note that the Structural Landscape Plan being Appendix 1 as attached to Mr Espie's evidence provides for plantings which would serve to screen built development on the proposed residential building platform.

37. When travelling north on the Glenorchy-Paradise Road to the north of the Precipice Creek Bridge the proposed residential building platform is visible through the poplar trees that are located on the unnamed legal road. It is noted that a 65 kph bend exists on the Glenorchy-Paradise Road immediately adjacent to the south-eastern corner of the site (where the residential building platform is proposed). From this bend motorists are travelling in a north-easterly direction and the orientation of view is towards the mountains in that direction; rather than being directly to the west (towards the proposed residential building platform).

38. When travelling on the Glenorchy-Paradise Road in a south-easterly direction from the Rees River Bridge the proposed residential building platform is visible across the open paddocks within the site. The Commission notes that this vista includes built development, including elevated dwellings, in the Rural Lifestyle Zone. The proposed residential building platform is not visible from the Glenorchy-Paradise Road south of the Precipice Creek Bridge or north of the Rees River Bridge.

39. From the unnamed legal road carriageway to the south of the site the proposed residential building platform is visible between the existing mature poplars. This carriageway is used to achieve access to the gravel pit authorised by RM 130073.

40. Mr Denney informed the Commission that from the unformed legal road alongside the Rees River (adjacent to the western boundary of the site) there are varying views across open paddocks and filtered and intermittent views through riverside vegetation at a range from 500m to in excess of 1 kilometres. From Precipice Creek (being Crown land managed by the Department of Conservation) filtered and intermittent views are available from a range of 100m and greater.

41. Mr Denney also advised us that there may be views from public walking tracks on the surrounding mountains; and that such views would generally be in excess of a 2 kilometre distance and be over a broader landscape context that includes other rural dwellings (including development in the Rural Lifestyle Zone).

42. The Commission finds that the proposed development is visible from public places in terms of Clause 5.4.2.2(2)(i). Future development on the proposed residential building platform will be viewed in the context of that part of the ONL(DW) that is located on the valley floor and that has been developed for farming, being adjacent to the existing Rural Lifestyle Zone.

43. The Commission considers that a dwelling built in accordance with the volunteered design controls would not be visually prominent to the extent that it will dominate or detract from views of the landscape in terms of Clause 5.4.2.2(2)(a)(ii). It is noted in this context that the valley floor provides a contrast to the vast, steep mountain slopes of the area and, having regard to the extent of visibility discussed above, the Commission is satisfied that future development on the proposed residential building platform would not be visually prominent in this context.

44. In terms of Clause 5.4.2.2(2)(a)(iii) it is appropriate to acknowledge that the Structural Landscape Plan provides for Lombardy poplars to be planted at the southern boundary to complement the existing poplars which exist within the unnamed legal road adjacent to that part of the site that is to accommodate the proposed residential building platform; and that conifer shelter hedges are also proposed. The

Commission is satisfied that these plantings will not adversely affect the natural landscape character given that poplar and conifer shelter belts are a feature of the valley floor component of the ONL(DW) as viewed from the Glenorchy-Paradise Road. The Commission notes in this context that when viewed from Valpy's Hill (towards Glenorchy) a grid pattern of conifer shelter belt planting is clearly visible on the valley floor in the ONL(DW).

45. The Commission's conclusion is that the planting associated with the proposed development will not detract from existing natural patterns and processes within the site and surrounding landscape.

46. The Commission also notes in this context that substantial tree planting exists on the Scott property to the south of Precipice Creek and that future tree planting can be anticipated in the immediate locality to complement existing tree planting that exists within the Rural Lifestyle Zone.

47. Clause 5.4.2.2(2)(iv) is of no particular relevance as subdivision is not proposed in this instance.

48. The proposed development will not have an adverse effect on any indigenous ecosystems as the building platform is to be located on land that does not contain such ecosystems. In terms of Rule 5.4.2.2(2)(v)-(vii) the proposed activity will not have an adverse effect on any ecosystems or features; and will not introduce exotic species with the potential to spread and naturalise. Mr Espie confirmed that the proposed conifer shelter hedges will comprise plants which do not have a propensity for wilding spread.

49. Having regard to the above matters the Commission considers that the landscape has the potential to absorb a future dwelling on the proposed residential building platform subject to the Structural Landscape Plan and appropriate design controls being adhered to.

"(b) Effects on openness of landscape.

In considering the adverse effects of the proposed development on the openness of the landscape, the following matters shall be taken into account:

(i) whether and the extent to which the proposed development will be within a broadly visible expanse of open landscape when viewed from any public road or public place and in the case of proposed development in the vicinity of unformed legal roads, the Council shall also consider present use and the practicalities and likelihood of potential use of unformed legal roads for vehicular and/or pedestrian, equestrian and other means of access; and

(ii) whether, and the extent to which, the proposed development is likely to adversely affect open space values with respect to the site and surrounding landscape;

(iii) whether the proposed development is defined by natural elements such as topography and/or vegetation which may contain any adverse effects associated with the development."

50. Mr Espie advised that the proposal will enclose a relatively small part of the property (within the proposed conifer shelter hedges) being approximately 1.4 hectares; while leaving the remainder of the property (approximately 52.6 hectares) in its open state.

51. Land to the south of the proposed residential building platform is relatively broken up by shelterbelt tree planting and other tree planting which exists at or adjacent to the southern boundary of the site, on the banks of Precipice Creek, on the Scott property and further to the south towards Glenorchy. Land to the north of the proposed residential building platform within the site and beyond is much more uniformly open, with fewer trees. Mr Espie noted that the line of poplar trees at the southern boundary of the site is something of a transition point between a somewhat broken pattern of openness to the south, and a more expansive and uniform pattern of openness to the north. He considered that locating the proposed development in the south-eastern corner of the site (adjacent to the existing poplars) and bolstering tree planting in this area, as proposed, is an appropriate design response in relation to landscape openness. The Commission concurs.

52. From the Glenorchy-Paradise Road (heading north) the proposed residential building platform will have no particular effect on the openness of the landscape as viewers will look across the balance of the subject site and/or directly to the north-east. When travelling south on the Glenorchy-Paradise Road viewers will also have the benefit of the openness of the balance of the site and future development will be largely screened by the conifer shelter hedges or viewed against the existing and future poplar plantings at or adjacent to the southern boundary of the subject site.

53. The Commission is satisfied that intermittent views through the poplars from the unnamed legal road immediately to the south of the site will have no particular effect on openness; and that openness will not be compromised as viewed from any other public roads or public places.

54. The Commission notes in the context of the unnamed legal road to the south of the site that Ms Ellis understands that that road is used almost exclusively by the occupiers and visitors to the Scott Family property (being to the part of the Scott property to the south of Precipice Creek) and to service the gravel extraction operation authorised by RM 130073.

55. Potential effects in terms of openness are most relevant in the context of views from the Glenorchy-Paradise Road. The Commission is satisfied that the proposed development is unlikely to adversely affect open space values enjoyed by those who pass along that road. For those travelling from the north the existing poplars to the south of the residential building platform will contain any adverse effects associated with development. Additional plantings as proposed in the Structural Landscape Plan will also serve to contain any adverse effects associated with the development (noting that domestic activities are to be confined to the residential building platform itself).

"(c) Cumulative Effects on Landscape Values

In considering whether there are likely to be any adverse cumulative effects as a result of the proposed development, the following matters shall be taken into account:

(i) whether, and to what extent, the proposed development will result in the introduction of elements which are inconsistent with the natural character of the site and surrounding landscape;

(ii) whether the elements identified in (i) above will further compromise the existing natural character of the landscape either visually or ecologically by exacerbating existing and potential adverse effects;

(iii) whether existing development and/or land use represents a threshold with respect to the site's ability to absorb further change;

(iv) where development has occurred or there is potential for development to occur (ie. existing resource consent or zoning), whether further development is likely to lead to further degradation of natural values or inappropriate domestication of the landscape or feature."

56. The proposal is to identify a residential building platform at the south-east corner of a site which has an area of approximately 54 hectares. Mr Denney considers that the introduction of one rural dwelling on a productive agricultural lot of 54 hectares on the valley flats would be anticipated; and the Commission is satisfied in this instance that future development which adheres to design controls and the Structural Landscape Plan will not result in the introduction of elements which are inconsistent with the natural character of the site and surrounding landscape.

57. Given the absence of residential development between the Glenorchy-Paradise Road and the Rees River to the north of Precipice Creek the Commission is satisfied that the proposal will not further compromise the existing natural character of the landscape in terms of Clause 5.4.2.2(2)(c)(ii).

58. Mr Denney considered that the site is near its threshold to absorb development; and Mr Espie considered that the existing level of domestication in this vicinity does not represent a threshold beyond which no further domestication is tolerable. In all the circumstances the Commission is satisfied that existing development and/or land use does not represent a threshold with respect to the site's ability to absorb further change as will be provided for on the proposed residential building platform.

59. The Commission also considers in terms of Clause 5.4.2.2(2)(c)(iv) that, while the Rural Lifestyle Zone exists to the east of the Glenorchy-Paradise Road, that further development, as proposed in this application, will not lead to further degradation of natural values or inappropriate domestication of the landscape.

60. In all the circumstances the Commission is satisfied that the proposal will not give rise to significant adverse cumulative effects on landscape values.

> *"(d) Positive Effects*
>
> *In considering whether there are any positive effects associated with the proposed development the following matters shall be taken into account:*
>
> *(i) whether the proposed activity will protect, maintain or enhance any of the ecosystems or features identified in (a)(v) above;*
>
> *(ii) whether the proposed activity provides for the retention and/or re-establishment of native vegetation and their appropriate management;*

(iii) whether the proposed development provides an opportunity to protect open space from further development which is inconsistent with preserving a natural open landscape;

(iv) whether the proposed development provides an opportunity to remedy or mitigate existing and potential (ie. structures or development anticipated by existing resource consents) adverse effects by modifying, including mitigation, or removing existing structures or developments; and/or surrendering any existing resource consents;

(v) the ability to take esplanade reserves to protect the natural character and nature conservation values around the margins of any lake, river, wetland or stream within the subject site;

(vi) the use of restrictive covenants, easements, consent notices or other legal instruments otherwise necessary to realise those positive effects referred to in (i)-(v) above and/or to ensure that the potential for future effects, particularly cumulative effects, are avoided."

61. The proposed development does not offer any positive effects in terms of protecting, maintaining or enhancing ecosystems; or in terms of retention and/or re-establishment of native vegetation and their appropriate management.

62. The Structural Landscape Plan provides for the land to the east of the north-south axis conifer shelter hedge to be kept as open pasture space. Confining the proposed development to the south-east corner of the site results in most of the site being maintained in its current open pastoral state. The Commission therefore finds that the proposal has positive effects in terms of Clause 5.4.2.2(2)(d)(iii).

63. The proposal does not offer any positive effects in terms of Clause 5.4.2.2(2)(d)(iv) and (v) given that no built development (apart from the stockyards) exists on the site and as the proposal is not for subdivision (when esplanade reserves or strips are a consideration).

64. The Commission again acknowledges in the context of Clause 5.4.2.2(2)(d)(vi) that design controls are to be provided for in a covenant that is to be registered pursuant to section 108(2)(d) of the Act.

65. The Commission acknowledges that limited positive effects are associated with the proposed development, as discussed above.

B.5 Other Effects

66. Mr Hopkins's report discusses the provision of services. In essence a future dwelling on the proposed building platform can be adequately serviced.

67. Access is to be achieved via the unnamed legal road to the south of the site and Mr Todd confirmed that the applicant is agreeable to a condition to the effect that the on-going maintenance of the initial section of gravel track carriageway located within the unnamed legal road to the driveway is to be the responsibility of the property owner.

68. The AEE described two potential sources of domestic water supply to the platform; being either from the Paradise Park subdivision's communal water supply system or by constructing a new bore within the site. Ms Robertson confirmed that the Trust has recently obtained verbal approval from the Paradise Park residents to connect to their water supply; and she took this as confirmation that this is a feasible option. The AEE also confirmed that the proposed platform is to be connected to power and phone reticulation and that wastewater is to be disposed of via an on-site system.

69. The Commission is satisfied that any adverse effects associated with services can be avoided, remedied or mitigated.

70. Mr Hopkins's report identified that the site is subject to a flood hazard associated with the Rees River and Precipice Creek; an alluvial fan hazard associated with Precipice Creek; and that the site is susceptible to liquefaction.

71. The applicant has provided a report from Hadley Consultants Limited dated 13 May 2016 with respect to the flood and alluvial fan hazards. That report recommends that the proposed building platform be raised a minimum of 0.5 metres above the surrounding ground. Mr Hopkins supports this recommendation.

72. The applicant has also provided a Liquefaction Assessment Report dated June 2016 which has been prepared by GeoSolve Limited. That report identifies two options for foundations based on the susceptibility of the site to liquefaction. Again Mr Hopkins supports the findings of the GeoSolve report.

73. In all the circumstances the Commission is satisfied that any potential adverse effects in terms of natural hazards will be no greater than minor.

B.6 Summary : Effects and Assessment Matters

74. The Commission finds that the proposal will not have significant adverse effect in terms of the potential of the landscape to absorb development, in terms of the openness of landscape or in terms of cumulative effects on landscape values. The proposal will have limited positive effects in terms of retaining open space between the north-south axis conifer shelter hedge and the Glenorchy-Paradise Road. The ultimate question to be addressed is whether granting consent will better serve to achieve the purpose of the Act (as discussed below).

C. THE QLDC DISTRICT PLAN : OBJECTIVES & POLICIES

75. Parts 4 and 5 of the Operative District Plan contain objectives and policies for the whole district and for rural areas, respectively. The objectives and policies from Parts 4 and 5 have been presented in the AEE and in Ms Robertson's evidence and have been discussed in Ms Ellis's report. To a large degree the objectives and policies relate to matters discussed in the context of the assessment matters. It is neither desirable or necessary, therefore, to undertake a line by line analysis of every objective and policy as this would involve a significant amount of repetition without materially advancing the Commission's analysis of this application.

C.1 Part 4

76. Section 4.2 relates to Landscape and Visual Amenity and Section 4.2.4(2) confirms that the outstanding natural landscapes are the romantic landscapes – the mountains and the lakes – landscapes to which section 6 of the Act applies. The key resource management issues within outstanding natural landscapes are their protection from inappropriate subdivision, use and development, particularly where activity may threaten the landscapes openness and naturalness.

77. Objective 4.2.5 is:

> ***"Objective:***
>
> ***Subdivision, use and development being undertaken in the District in a manner which avoids, remedies or mitigates adverse effects on landscape and visual amenity values."***

78. Objective 4.2.5 is supported by a number of policies. Policies of relevance include Policy 1 Future Development which relates to the effects of development; Policy 2 that relates to Outstanding Natural Landscapes (District-Wide/Greater Wakatipu); Policy 8 that relates to Avoiding Cumulative Degradation; Policy 9 that relates to Structures; Policy 16 that relates to Wilding Trees; and Policy 17 that relates to Land Use.

79. Policy 1 – Future Development – is to avoid, remedy or mitigate the effects of development and/or subdivision in those areas of the District where the landscape and visual amenity values are vulnerable to degradation; to encourage development and/or subdivision to occur in areas of the District that have a greater potential to absorb change without detraction from landscape and visual amenity values; and to ensure that subdivision and/or development harmonises with local topography and ecological systems and other nature conservation values as far as possible.

80. The Commission is satisfied that this policy is satisfied in this instance. The development is to occur in an area that has potential to absorb change without detraction from landscape and amenity values.

81. Policy 2 – Outstanding Natural Landscapes (District-Wide/Greater Wakatipu) states as follows:

> *"**2 Outstanding Natural Landscapes (District-Wide/Greater Wakatipu)***
>
> *(a) To maintain the openness of those outstanding natural landscapes and features which have an open character at present.*
>
> *(b) To avoid subdivision and development in those parts of the outstanding natural landscapes with little or no capacity to absorb change.*
>
> *(c) To allow limited subdivision and development in those areas with higher potential to absorb change.*
>
> *(d) To recognise and provide for the importance of protecting the naturalness and enhancing amenity values of views from public roads."*

82. In terms of Policy 2(a) a future dwelling on the proposed building platform will maintain the openness of the ONL(DW); is located in a part of the ONL(DW) with capacity to absorb change; and will minimise adverse effects in terms of amenity values of views from public roads. Ms Ellis considered that overall the development would affect landscape values but that these effects can be suitably mitigated and that therefore

the proposal will be consistent with the relevant ONL(DW) objectives and policies. Ms Robertson agreed with this assessment.

83. The Commission's conclusion is that the proposed development is acceptable in terms of Policy 2(a)-(d).

84. In terms of Policy 8 – Avoiding Cumulative Degradation – the Commission is satisfied that the proposed density of development will not increase to the point where the benefits of further planting and building are outweighed by adverse effects on landscape values of over domestication of the landscape. The Commission is satisfied that the proposal is consistent with Policy 8(a); and having regard to the design controls offered, the Commission considers that the proposal will be sympathetic to the rural area in terms of Policy 8(b).

85. Policy 9 – Structures refers specifically to preserving the visual coherence of outstanding natural landscapes as follows:

> "***9. Structures***
>
> *To preserve the visual coherence of:*
>
> *(a) outstanding natural landscapes and features and visual amenity landscapes by:*
>
> - *encouraging structures which are in harmony with the line and form of the landscape;*
> - *avoiding, remedying or mitigating any adverse effects of structures on the skyline, ridges and prominent slopes and hilltops;*
> - *encouraging the colour of buildings and structures to complement the dominant colours in the landscape;*
> - *encouraging placement of structures in locations where they are in harmony with the landscape;*
> - *promoting the use of local, natural materials in construction.*
>
> *...."*

86. The proposal will result in an opportunity for a future dwelling to be located on the residential building platform. While a structure is not proposed *per se* a structure is clearly anticipated in future being a dwelling (as evidenced by the design controls).

87. The proposed residential building platform is located in the south-eastern corner of the site close to the unnamed legal road and the line of existing poplars. The AEE notes that this is a location where one might expect a traditional farmhouse to be located and the Commission concurs with this statement. Future development on the residential building platform will not affect any skylines, ridges, prominent slopes or hilltops.

88. Having regard to the design controls which are to be subject to a covenant the Commission is satisfied that the proposal is consistent with Policy 9.

89. In terms of Policy 16 – Wilding Trees – Mr Espie confirmed that the conifer shelter hedges as provided for on the Structural Landscape Plan will not have wilding propensity. The proposal is therefore consistent with Policy 16.

90. Policy 17 – Land Use – encourages land use in a manner which minimises adverse effects on the open character and visual coherence of the landscape. It is again acknowledged in this context that the residential building platform is located in the south-east corner of the site and that the area between the north-south axis conifer shelter hedge and the Glenorchy-Paradise Road will be kept as open pasture space. The proposal is therefore consistent with Policy 17.

91. Objective 4.8.3.1 and its supporting policies which relates to hazards state as follows:

> *"**4.8.3 Objective and Policies***
>
> ***Objective 1***
>
> ***Avoid or mitigate loss of life, damage to assets or infrastructure, or disruption to the community of the District, from natural hazards.***
>
> ***Policies:***
>
> *1.1 To increase community awareness of the potential risk of natural hazards, and the necessary emergency responses to natural hazard events.*
>
> *1.2 To continually develop and refine a hazards register in conjunction with the Otago Regional Council, as a basis for Council decisions regarding subdivision and building development.*
>
> *1.3 In conjunction with the Otago Regional Council to continually assess the need for additional protection measures either through the District Plan or as protection works.*

1.4 To ensure buildings and developments are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property or other aspects of the environment.

1.5 To ensure that within the consent process any proposed developments have an adequate assessment completed to identify any natural hazards and the methods used to avoid or mitigate a hazard.

1.6 To discourage subdivision in areas where there is a high probability that a natural hazard may destroy or damage human life, property or other aspects of the environment.

1.7 To avoid or mitigate the likelihood of destruction or damage to residential units and other buildings constructed or relocated into flood risk areas."

92. As previously noted Mr Hopkins has addressed the potential flood, alluvial fan and liquefaction hazards relating to the subject site. Mr Hopkins has agreed with the recommendations contained in the Hadley Consultants Limited and GeoSolve Limited reports; and the applicant is agreeable to conditions consistent with those recommendations. Accordingly the Commission finds that the proposal is not contrary to Objective 4.8.3.1 and its supporting policies.

C.2 Part 5

93. Part 5 of the District Plan contains objectives and policies that specifically relate to rural areas. These objectives and policies seek to allow the establishment of a range of activities that are managed in such a way as to protect the character and landscape values of the rural area.

*"**Objective 1 – Character and Landscape Value***

To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.

Policies:

1.1 Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone.

1.2 Allow for the establishment of a range of activities, which utilise the soil resource of the rural area in a sustainable manner.

1.3 Ensure land with potential value for rural productive activities is not compromised by the inappropriate location of other developments and buildings.

1.4 Ensure activities not based on the rural resources of the area occur only where the character of the rural area will not be adversely impacted.

1.5 Provide for a range of buildings allied to rural productive activity and worker accommodation.

1.6 Avoid, remedy or mitigate adverse effects of development on the landscape values of the District.

1.7 Preserve the visual coherence of the landscape by ensuring all structures are to be located in areas with the potential to absorb change.

1.8 Avoid remedy or mitigate the adverse effects of the location of structures and water tanks on skylines, ridges, hills and prominent slopes."

94. In terms of Policy 1.1 the district wide landscape objectives and policies have been considered fully above. In terms of Policy 1.2 the proposed activity will enable a future dwelling on the south-eastern corner of the property, with most of the property being available for rural productive activities which will not be compromised. The Commission concurs with Mr Ellis that the proposed development will not change or compromise the productive rural potential of the land. In terms of Policy 1.6 the proposal will adequately avoid, remedy and mitigate adverse effects of development on the landscape values of the District. In terms of Policy 1.7 the proposal provides for a future structure (being a future dwelling on the residential building platform) that is located in an area with the potential to absorb change. In terms of Policy 1.8 future built development will not be on skylines, ridges, hills and prominent slopes as viewed from the Glenorchy-Paradise Road albeit that some skyline breach may be experienced from the unnamed legal road (which is little used) to the south of the site.

95. Objective 3 and its associated policies relate to avoiding, remedying or mitigating adverse effects on rural amenity. The Commission is satisfied that the proposal will avoid, remedy and mitigate adverse effects of activities on rural amenity. The Commission finds that overall the proposal is not contrary to Objective 3 and its associated policies.

96. The Commission concurs with Ms Ellis that the proposal gives effect to the relevant Part 5 objectives and policies.

C.3 Summary : Objectives and Policies

97. Following the above analysis, the Commission finds that the proposal is generally consistent with those objectives and policies that are relevant to the application; and

that this is a location in the ONL(DW) where the proposed activity is appropriate in terms of Clause 1.5.3iii(3) of the District Plan.

D. PROPOSED DISTRICT PLAN

98. The Proposed District Plan was publicly notified on 26 August 2015 being a date prior to the date that the application was lodged being on or about 13 May 2016.

99. The AEE presented objectives and policies from Part Two – Chapter 6 – Landscapes and Part Four – Chapter 21 – Rural Zone of the Proposed District Plan. Ms Robertson noted that the proposed provisions are generally similar to the existing objectives, policies and assessment matters in the Operative District Plan albeit that the Commission notes that Policy 6.3.1.3 states that subdivision and development is inappropriate in almost all locations in the ONL, and that successful applications will be exceptional cases. Mr Todd noted that this policy had attracted a substantial response through submissions on the Proposed District Plan.

100. Ms Ellis and Ms Robertson concluded that the proposed development will be consistent with the relevant objectives and policies of the Proposed District Plan; and the Commission accepts this assessment. The Commission also notes that given the inchoate status of the provisions of the Proposed District Plan that minimal weight can be given to those provisions at this early stage.

101. The Commission has concluded that the proposal will not be contrary to the objectives and policies of the Proposed District Plan.

E. OTHER MATTERS

102. Section 104(1)(c) requires the consent authority to have regard to any other matter the consent authority considers relevant and reasonably necessary to determine the application.

E.1 Precedent

103. Precedent is a relevant consideration albeit that the activity has status as a discretionary activity (see J Scurr v Queenstown Lakes District Council Dec C060/2005 para 44). In the current instance the Commission is satisfied that this is a location in the ONL(DW) where the proposed activity is appropriate in terms of Clause

1.5.3(iii)(3) of the District Plan and accordingly the Commission is satisfied that the proposal, having regard to the suite of design controls proposed, will not establish a significant precedent.

E.2 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

104. The National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) came into effect on 1 January 2012. The applicant has advised that the site is not identified as contaminated or potentially contaminated; and that there is no historical evidence of land use which would trigger the NES. The applicant has reviewed the information held about the site by the Queenstown Lakes District Council and the Otago Regional Council. Following such review in terms of Regulation 6(2) of the NES the applicant has found no record of activities with the potential to contaminate the site. Accordingly the Commission is satisfied that no Hazardous Activities and Industries List (HAIL) activities are being, have been, or are more likely than not to have been, undertaken on the subject site. The proposal can therefore be considered as a permitted activity under the NES.

E.3 Matters Raised by Submitters

105. The statement from Steve Hewland and Catherine Cahill dated 8 September 2016 raised several matters for consideration.

106. The Commission records that Mr Espie advised that there would be no great advantage in planting the conifer shelter hedges at a height of 1.5 metres as proposed. He emphasised that in, say, 5 years time there would be no difference in terms of the height of the hedges. Both Mr Espie and Mr Denney opposed the suggestion that the conifer shelter hedges be maintained at a minimum height of 8 metres and not 6 metres; as such greater height would block solar access for future residents of the residential building platform.

107. Mr Todd advised that the applicant is unwilling to offer a condition to the effect that further subdivision of the site is prevented. Mr Todd emphasised that the applicant wishes to keep its options open in the event that the Council changes it's thinking with respect to future subdivision. Mr Todd emphasised that under the current regime any further subdivision would be subject to a notified application.

108. In all the circumstances the Commission has chosen not to apply conditions with respect to the minimum height of trees when planted, the maintenance of such trees at a height of 8 metres or the covenant which prevents further subdivision, as suggested by the submitters.

109. The submission by The Scott Family raised the issue of reverse sensitivity with respect to farming operations.

110. The Commission concurs with Ms Ellis that given the level of rural activity and noise found in this locality; specific mitigation conditions are not required with respect to reverse sensitivity in this instance.

111. No other matters appear to have any particular relevance in this instance in terms of section 104(1)(c).

F. PART 2 OF THE ACT

112. Part 2 of the Resource Management Act contains sections 5 to 8. These are referred in reverse order.

113. Section 8 requires the Commission, in exercising it's functions on this application, to take into account the principles of the Treaty of Waitangi. No issues were raised in reports or evidence in relation to section 8.

114. Section 7 directs that in achieving the purpose of the Act particular regard is to be had to certain matters which include, of relevance here, the efficient use and development of natural and physical resources; the maintenance and enhancement of amenity values; and the maintenance and enhancement of the quality of the environment. The identification of the residential building platform that will be subject to the design controls offered by the applicant will serve to achieve efficient use and development of natural and physical resources; and will maintain and enhance amenity values, and of the quality of the environment. There are no other matters stated in section 7 which are of any particular relevance to the current application.

115. Section 6 sets out a number of matters which are declared to be of national importance and directs the Commission to recognise and provide for them. Section 6(b) confirms that the following is a matter of national importance:

> *"(b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:"*

116. The Commission is satisfied that in this instance the proposal does not represent inappropriate use and development in terms of section 6(b). The Commission concurs with Ms Ellis that the proposed development is appropriate within the ONL(DW) and sufficiently protects the values of that landscape on the basis that the proposed mitigation measures are implemented.

117. There are no other matters stated in section 6 which are of any particular relevance to the application.

118. Section 5 sets out the purpose of the Act – to promote the sustainable management of natural and physical resources. Taking into account the definition of sustainable management contained in section 5(2), the Commission is satisfied that the application will achieve the purpose of the Act.

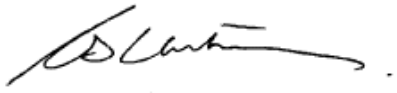
119. Sustainable management means managing the use, development and protection of natural and physical resources within certain parameters. The physical resources of this site will be developed in such a way that the social and economic wellbeing of the applicant is provided for, while the potential of natural and physical resources will be sustained to meet the reasonably foreseeable needs of future generations. The life-supporting capacity of ecosystems will not be compromised and any adverse effects of the activity can be avoided, remedied or mitigated by adherence to appropriate conditions of consent.

G. OUTCOME

120. Section 104 directs that when considering an application for resource consent and any submission received in response to it, the Commission must, subject to Part 2, have regard to the actual and potential effects on the environment of allowing the

activity together with the relevant provisions of the Operative District Plan and of the Proposed District Plan. In the course of considering the application and submission and in reaching this decision the Commission has followed this process. Under section 104B the Commission has discretion to grant consent to the application and the Commission hereby does so subject to the imposition of conditions as attached in a Schedule to this decision.

This decision on RM 160421 is dated 28 September 2016.



W D Whitney
COMMISSIONER

SCHEDULE : CONDITIONS OF LAND USE CONSENT FOR RM 160241 : BAYSWATER TRUST

General Conditions

1. The development shall be undertaken/carried out in accordance with the plans:

   - "Proposed Building Platform Plan Lot 2 DP 306479, Glenorchy-Paradise Road for Bayswater Trust" Drawing No. 2260.3R.1A, Revision A, dated 16/11/2006 prepared by Aurum Survey Consultants Limited.

   - "Structural Landscape Plan Kampman-Glenorchy Paradise Road, Glenorchy", Drawing No. 0078-SLP4 dated 30/8/2016 prepared by Vivian + Espie Limited.

   stamped as approved on 28 September 2016, and the application as submitted, with the exception of the amendments required by the following conditions of consent.

2a. This consent shall not be exercised and no work or activity associated with it may be commenced or continued until the following charges have been paid in full: all charges fixed in accordance with section 36(1) of the Resource Management Act 1991 and any finalised, additional charges under section 36(3) of the Act.

2b. The consent holder is liable for costs associated with the monitoring of this resource consent under section 35 of the Resource Management Act 1991 and shall pay to Council an initial fee of $145. This initial fee has been set under section 36(1) of the Act.

3. All engineering works shall be carried out in accordance with the Queenstown Lakes District Council's policies and standards, being QLDC's Land Development and Subdivision Code of Practice adopted on 3rd June 2015 and subsequent amendments to that document up to the date of issue of any subdivision consent.

   Note: The current standards are available on Council's website via the following link: http://www.qldc.govt.nz/planning/resource-consents/qldc-land-development-and-subdivision-code-of-practice/

4. All works on site within the building platform and driveway to the building platform shall be undertaken in accordance with the Ngāi Tahu ki Murihiku Accidental Discovery Protocol.

To be completed prior to the commencement of any works on-site

5. The owner of the land being developed shall provide a letter to the Principal Resource Management Engineer at Council advising who their representative is for the design and execution of the engineering works and construction works required in association with this development and shall confirm that this representative will be responsible for all aspects of the works covered under Sections 1.7 & 1.8 of QLDC's Land Development and Subdivision Code of Practice, in relation to this development.

6. Prior to any work commencing on the site, the consent holder shall provide to the Principal Resource Management Engineer at Council for review and certification, copies of specifications, calculations and design plans as is considered by Council to be both necessary and adequate, in accordance with Condition 3, to detail the following engineering works required:

   a) The provision of a water supply to service the building platform in accordance with Council's standards. The building platform shall be supplied with a minimum of 2,100

litres per day of potable water that complies, or can be treated to comply with, the requirements of the Drinking Water Standard for New Zealand 2005.

b) The provision of a Design Certificate for engineering works associated with this development submitted by a suitably qualified design professional (for clarification this shall include all water reticulation). The certificate shall be in the format of the QLDC's Land Development and Subdivision Code of Practice Schedule 1A Certificate.

New Building Platform to be registered

7. In order to give effect to this consent, the consent holder shall provide a "Land Transfer Covenant Plan" showing the location of the approved building platform (as per Aurum plan titled "Proposed Building Platform Plan Lot 2 DP306479, Glenorchy-Paradise Road for Bayswater Trust", Dwg No. 2260.3R.1A, Revision A, dated 16/11/2006). The consent holder shall register this "Land Transfer Covenant Plan" on the Computer Freehold Register and shall execute all documentation required to register this plan. The costs of doing so are to be borne by the consent holder.

Prior to the registration of the building platform on the Computer Freehold Register

8. Prior to the building platform being registered on the Computer Freehold Register:

   a) The landscape planting as detailed in the Structural Landscape Plan listed in Condition 1 shall be amended to provide for a continuous conifer shelter hedge on the north-south axis; to delete the indicative driveway alignment which is located to the east of that hedge; and the conifer shelter hedge plantings are not to have wilding propensity. A copy of the amended Structural Landscape Plan shall be provided to the Council for it's records.

   b) The consent holder shall ensure that the approved Structural Landscape Plan for the site as listed in Condition 1 and as amended in terms of Condition 8a) shall be implemented. The plants shall thereafter be maintained and irrigated during the establishment phase in accordance with that amended plan. If any plant or tree should die or become diseased it shall be replaced within the next available planting season.

9. Prior to the building platform being registered on the Computer Freehold Register, the consent holder shall complete the following:

   a) The consent holder shall provide "as-built' plans and information required to detail all engineering works completed in relation to or in association with this development to the Principal Resource Management Engineer at Council. This information shall be formatted in accordance with Council's 'as-built' standards and shall include water (including private laterals and toby positions).

   b) A digital plan showing the location of the building platform as shown on the survey plan shall be submitted to the Principal Resource Management Engineer at Council. This plan shall be in terms of New Zealand Transverse Mercator 2000 coordinate system (NZTM2000), NZGDM 2000 datum.

   c) The completion of the work detailed in Condition 6 above.

   d) The consent holder shall either:

      - provide laboratory confirmation that the water supply installed under Condition 6a) complies with the New Zealand Drinking Water Standard, OR

      - register a covenant on the title to ensure that at the time a dwelling is constructed, suitable water treatment is installed to ensure compliance with the New Zealand Drinking Water Standard.

   e) The provision of a gravel vehicle crossing to the site from the gravel track carriageway located within the legal road south of the site and running parallel to Precipice Creek

from Glenorchy-Paradise Road. This crossing shall be in terms of Diagram 2, Appendix 7 of the District Plan and located a minimum 25m off-set from Glenorchy-Paradise Road and to the west of the conifer shelter hedge that has a north-south axis as shown on the approved Structural Landscape Plan. This crossing shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Provision shall be made to continue any roadside drainage.

f) Written confirmation shall be provided from the electricity network supplier responsible for the area, that provision of an underground electricity supply has been made available (minimum supply of single phase 15kva capacity) to the building platform.

g) Written confirmation shall be provided from the telecommunications network supplier responsible for the area that provision of underground telephone services has been made available to the building platform.

h) The submission of Completion Certification from both the Contractor and Approved Engineer for all engineering works completed in relation to or in association with this development (for clarification this shall include water reticulation). The certificate shall be in the format of a Producer Statement, or the QLDC's Land Development and Subdivision Code of Practice Schedule 1B and 1C Certificate.

Ongoing Conditions/Covenants

10. At the time that the building platform is registered on the Computer Freehold Register for the site pursuant to Condition 7, the consent holder shall register the following condition as a covenant pursuant to section 108(2)(d) of the Resource Management Act 1991 if laboratory confirmation has not been provided in terms of Condition 9d):

    a) At the time a future dwelling is constructed on the building platform the existing water supply shall be fitted with a treatment system to ensure ongoing compliance with the New Zealand Drinking Water Standard.

11. At the time that the building platform is registered on the Computer Freehold Register for the site pursuant to Condition 7, the consent holder shall register the following conditions as a covenant pursuant to section 108(2)(d) of the Resource Management Act 1991 to be carried out at the time a dwelling is constructed:

    a) The ongoing maintenance of the initial section of gravel track carriageway located within the legal road reserve between Glenorchy-Paradise Road and the driveway crossing to the site is the responsibility of the site owner and not Queenstown Lakes District Council. Where this carriageway is used by others for access to gravel extraction operations to the west, it is the responsibility of the site owner to enter into private agreements for shared maintenance as required.

    b) The provision of an access way to the building platform that complies with the guidelines provided for in QLDC's Land Development and Subdivision Code of Practice shall be formed at the time a dwelling is constructed within the building platform. The access way shall be located to the west of the proposed conifer shelter hedge which has a north-south axis as shown on the Structural Landscape Plan and shall have a minimum formation standard of 150mm compacted AP40 with a 3.5m minimum carriageway width. Provision shall be made for stormwater disposal from the carriageway.

    c) At the time a dwelling is constructed within the building platform, a suitably qualified and experienced structural or geotechnical engineer shall design the foundations and/or ground preparation works for the dwelling taking into consideration the findings and recommendations of the GeoSolve Ltd – Liquefaction Assessment Report ref 160246 dated June 2016. This work shall also take into consideration the recommendations of the Hadley Consultants Limited flood hazard report ref 152825 dated 13 May 2016.

d) At the time a dwelling is constructed within the building platform, the level of the platform shall be raised by a minimum of 0.5 m above surrounding ground in accordance with the Hadley Consultants Limited report ref 152825 dated 13 May 2016. This work shall take into consideration the recommendations of the GeoSolve Ltd – Liquefaction Assessment Report ref 160246 dated June 2016.

e) At the time a dwelling is constructed within the building platform, the owner at the time shall engage a suitably qualified professional, as defined in Section 1.7.2 of QLDC's Land Development and Subdivision Code of Practice, to design a stormwater disposal system that is to provide stormwater disposal from all impervious areas within the site. The proposed stormwater system shall be subject to the review of Council prior to implementation.

f) At the time a dwelling is constructed, the owner at the time shall engage a suitably experienced person, as defined in sections 3.3 & 3.4 of AS/NZS 1547:2012, to design an on-site effluent disposal system in compliance with AS/NZS 1547:2012. The design shall take into account the site and soils investigation report and recommendations by Boulder Consultants ref 410005 dated 16 June 2005. The proposed wastewater system shall be subject to Council review prior to implementation and shall be installed prior to occupation of the dwelling.

g) The drinking water supply is to be monitored in compliance with the Drinking Water Standards for New Zealand 2005, by the consent holder, and the results forwarded to the Principal: Environmental Health at Council. The Ministry of Health shall approve the laboratory carrying out the analysis. Should the water not meet the requirements of the standard then the consent holder shall be responsible for the provision of water treatment to ensure that the Drinking Water Standards for New Zealand 2005 are met or exceeded.

h) In the event that the number of persons to be accommodated on the dwelling is to be greater than 3, then the Queenstown Lakes District Council will require commensurate increases in the water supply to that dwelling at the rate of 700 litres per extra person per day.

i) At the time of construction of dwelling within the building platform, domestic water and fire fighting storage is to be provided. A minimum of 20,000 litres shall be maintained at all times as a static fire fighting reserve within a 30,000 litre tank. Alternatively, a 7,000 litre fire fighting reserve is to be provided for each dwelling in association with a domestic sprinkler system installed to an approved standard. A fire fighting connection in accordance with Appendix B - SNZ PAS 4509:2008 is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family dwellings. In the event that the dwelling provides for more than single family occupation then the consent holder should consult with the NZFS as larger capacities and flow rates may be required.

   The Fire Service connection point/coupling must be located so that it is not compromised in the event of a fire.

   The connection point/coupling shall have a hardstand area adjacent to it that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by QLDC's standards for rural roads (as per QLDC's Land

Development and Subdivision Code of Practice adopted on 3 June 2015 and subsequent amendments to that document). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

Underground tanks or tanks that are partially buried (provided the top of the tank is no more than 1 metre above ground) may be accessed by an opening in the top of the tank whereby couplings are not required. A hardstand area adjacent to the tank is required in order to allow a fire service appliance to park on it and access to the hardstand area must be provided as above.

The Fire Service connection point/coupling/fire hydrant/tank must be located so that it is clearly visible and/or provided with appropriate signage to enable connection of a fire appliance.

Fire fighting water supply may be provided by means other than the above if the written approval of the New Zealand Fire Service Operational Planning Officer for the Southern Fire Region is obtained for the proposed method.

The fire fighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Advice Note: The New Zealand Fire Service considers that due to distance to the nearest fire station the best method to achieve compliance with SNZ PAS 4509:2008 may be through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new dwelling.

j) There shall be no more than one residential unit within the building platform.

k) Landscape planting detailed on the approved Structural Landscape Plan as listed in Condition 1 and as amended in terms of Condition 8a) shall be maintained in perpetuity. If any tree or plant should die or become diseased it shall be replaced in the next available planting season.

l) The conifer shelter hedges shown on the approved Structural Landscape Plan and as amended in terms of Condition 8a) shall be maintained at a minimum height of 6m.

m) The residential dwelling and any accessory buildings associated with the dwelling shall be located within the building platform.

n) All domestic activities including all car-parking areas, paved areas, decks, domestic gardens, outdoor living areas and furniture, garden sheds, clotheslines, swimming pools, tennis courts and pergolas shall be contained within the building platform.

o) The land outside the building platform shall continue to be managed by agricultural or horticultural means.

p) The area on the approved Structural Landscape Plan as listed in Condition 1 that is marked as “Open pasture space” shall be kept free of trees other than those trees shown on the approved Structural Landscape Plan.

q) Any fencing of the building platform and driveway shall be in the form of a post and wire or post and rail type fence only.

r) Monumental gates or any other road frontage treatments other than simple post-and-rail or stone fences are prohibited.

s) The following design controls shall apply to any buildings erected on the building platform:

   i. The total footprint of buildings within the building platform shall not exceed 550m^2.

   ii. The finished floor level of the future dwelling shall be raised a minimum of 0.5m above existing ground level at 28 September 2016, to protect any future dwelling from potential flooding (shallow sheet flow) caused by breakout from Precipice

Creek. If fill is imported for this purpose it shall be compacted and certified in accordance with the appropriate standard.

iii. The height of any buildings within the building platform shall be restricted to 6.5m above existing ground level at 28 September 2016.

iv. All built elements upon the roof or upper portion of a future building including but not limited to chimneys, satellite dishes and solar panels shall not extend beyond the maximum height specified in Condition 11s) iii above and shall be of a colour to match the roof.

v. Any future dwelling shall be designed to have the bulk and form of a traditional farm building, i.e. a homestead, woolshed or barn, and shall be constructed from cladding materials typically associated with that type of building.

vi. The main roof of any future dwelling shall have a pitched form, with a slope of at least 25 degrees.

vii. Roof and wall claddings are to be coloured in a natural range of greys, cool browns or greens that have a light reflectivity value of between 7% and 20%.

viii. Roof colours are to have a matt finish. Transparent or translucent panels are not permitted.

ix. Wall cladding materials shall be limited to stacked stone, timber weatherboards, traditional corrugated iron, coloursteel or solid plaster, or a combination thereof.

x. All exterior lighting shall be restricted to the building platform and shall be down lighting only. Lighting shall not exceed 1m in height, except where attached to a building where it shall not exceed 3m in height.

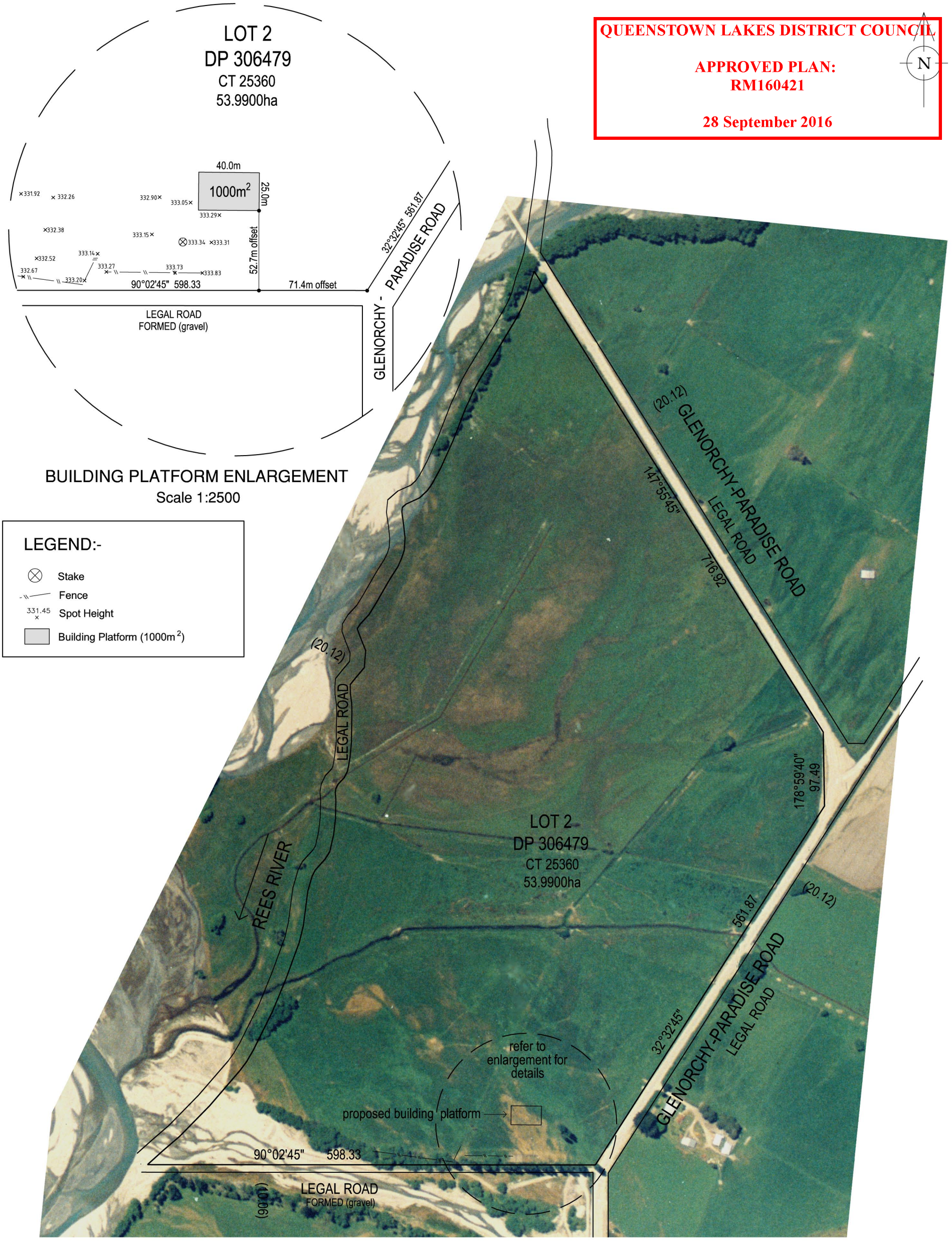
Advice Note:

1. This consent triggers a requirement for Development Contributions, please see the attached information sheet for more details on when a development contribution is triggered and when it is payable. For further information please contact the DCN Officer at Council.

QUEENSTOWN LAKES DISTRICT COUNCIL

APPROVED PLAN:
RM160421

28 September 2016



BUILDING PLATFORM ENLARGEMENT
Scale 1:2500

LEGEND:-

- Stake
- Fence
- 331.45 Spot Height
- Building Platform (1000m²)

NOTES:
- Areas and dimensions subject to final survey.

If this plan is used as the basis for any sale and purchase agreement, then it is done so on the basis that the areas and dimensions are preliminary, and may vary upon completion of the final survey.

REV.	DATE:	REVISION DETAILS:	BY:
A	16.11.06	Initial Issue	BAM

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

DATE: 16 November 06
BY: Emily Dykes
Scale 1:5000 Original Plan A3
DRAWING & ISSUE No. 2260.3R.1A

TITLE:

PROPOSED BUILDING PLATFORM PLAN
LOT 2 DP306479, GLENORCHY-PARADISE ROAD
for BAYSWATER TRUST

AURUM SURVEY CONSULTANTS LTD
PO Box 1493
Queenstown
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

LEGEND

- Property boundary.
- Existing fence line.
- Existing overhead power line.
- Proposed 1000m² building platform.
- Indicative driveway alignment.
- Proposed lombardy poplars.
- Proposed conifer shelter hedge.
  - Individual plants are to be spaced at a maximum distance of 1m apart.
  - Plants are to be irrigated by an automatic system until they reach a height of 6m.
  - The overall hedge is to maintained at a minimum height of 6m.
- Open pasture space.
  - To be kept free of trees, excluding those outlined on this plan.

Lot 2
DP 306479
53.9900ha

QUEENSTOWN LAKES DISTRICT COUNCIL

APPROVED PLAN:
RM160421

28 September 2016

REF: 0078 - SLP4
DATE: 30.08.2016
SCALE: 1:2000 @ A3

APPENDIX 1:

Structural Landscape Plan

Kampman - Glenorchy Paradise Road, Glenorchy

vivian+espie
resource management and landscape planning
vivian+espie Limited Resource Management and Landscape Planning
PO Box 2514 Queenstown
Physical Address Unit 15 70 Glenda Drive Frankton Queenstown
Tel +6434414189 Fax +64 3 441 4190 Web www.vivianespie.co.nz

AFFECTED PERSON'S APPROVAL

FORM 8A

QUEENSTOWN LAKES DISTRICT COUNCIL

Resource Management Act 1991 Section 95

RESOURCE CONSENT APPLICANT'S NAME AND/OR RM

Geoffrey and Diana Thomson

AFFECTED PERSON'S DETAILS

I/We

Are the owners/occupiers of

DETAILS OF PROPOSAL

I/We hereby give written approval for the proposal to:

Establish a building platform with associated landscaping.

at the following subject site(s):

Lot 2 DP 306479, Glenorchy - Paradise Road, Glenorchy.

☑ PLEASE TICK I/We understand that by signing this form Council, when considering this application, will not consider any effects of the proposal upon me/us.

☑ PLEASE TICK I/We understand that if the consent authority determines 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.

WHAT INFORMATION/PLANS HAVE YOU SIGHTED

☑ PLEASE TICK I/We have sighted and initialled ALL plans dated and approve them.

Survey Plan [16/11/06] and Landscape Plan [13/07/22]

APPROVAL OF AFFECTED PERSON(S)

The written consent of all owners / occupiers who are affected. If the site that is affected is jointly owned, the written consent of all co-owners (names detailed on the title for the site) are required.

A

Name (PRINT) Katherine Cahill

Contact Phone / Email address 021926887

Signature [signature] Date 8/09/22

B

Name (PRINT) Steve Hewland

Contact Phone / Email address 021 942099

Signature [signature] Date 8/9/22

C

Name (PRINT)

Contact Phone / Email address

Signature Date

D

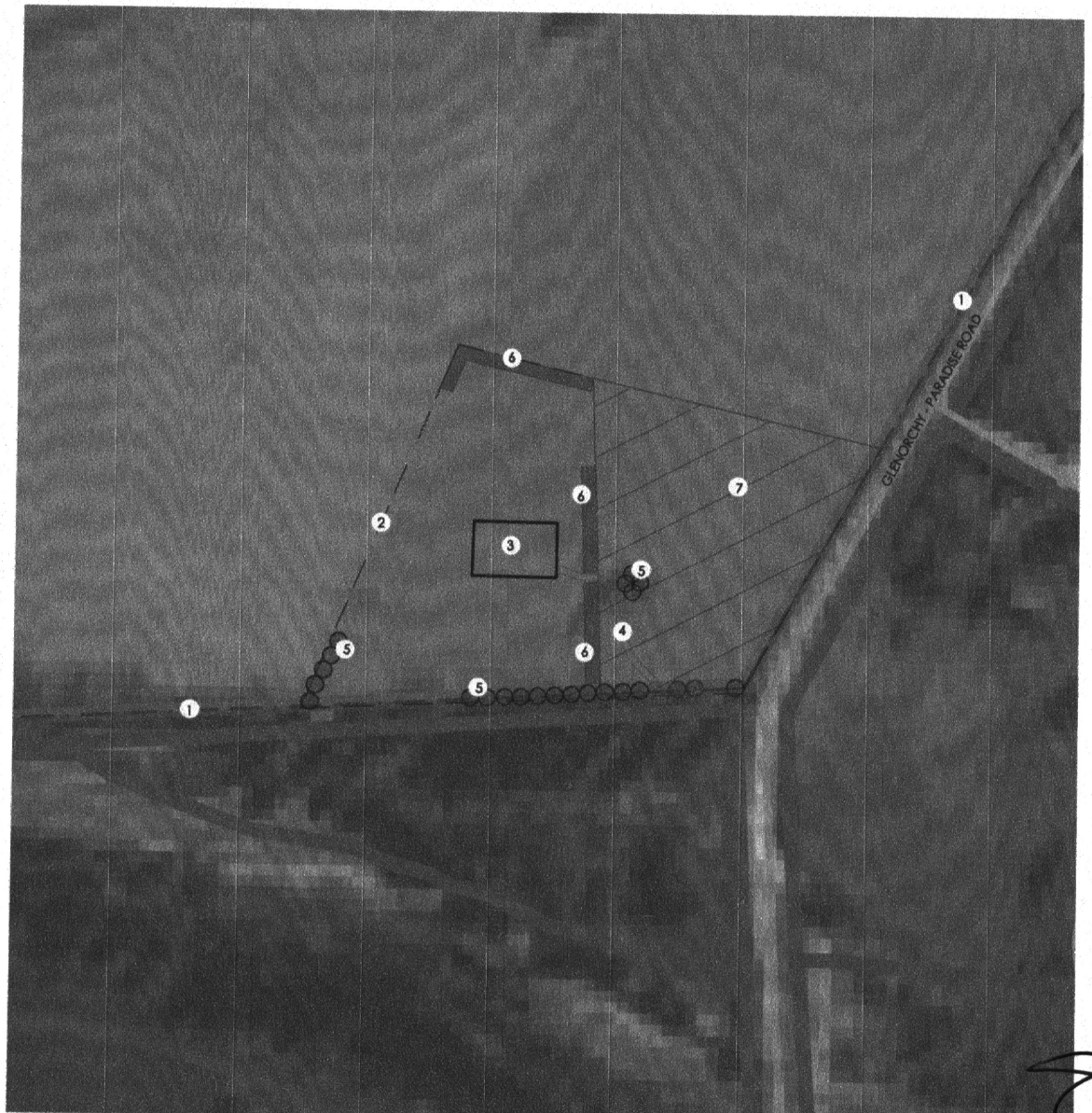
Name (PRINT)

Contact Phone / Email address

Signature Date

Note to person signing written approval

Conditional written approvals cannot be accepted.
There is no obligation to sign this form, and no reasons need to be given.
If this form is not signed, the application may be notified with an opportunity for submissions.
If signing on behalf of a trust or company, please provide additional written evidence that you have signing authority.



KEY:

1 Property boundary shown as red dashed line.

2 Existing fence line - black dashed line.

3 Proposed 1000m2 building platform.

4 Indicative driveway alignment.

5 Proposed Lombary Poplars (Populus x euramericana 'Crows Nest).

6 Proposed conifer shelterbelt - Cupressus x leylandii 'Leighton Green':

- Individual plants are to be spaced at a maximum distance of 1m apart.
- Plants are to be irrigated by an automatic system until they reach a height of 6m.
- The overall hedge is to be maintained at a minimum height of 6m.

7 Open pasture space shown as a green hatched area:

- To be kept free of trees, excluding those outlined on this plan.

60 Arapiki Way
8/9/22

Michelle Snodgrass
LANDSCAPE ARCHITECT

DRAFT

DATE: 13TH JULY 2022
SHEET NUMBER: 1
SCALE: 1: 2000 @ A3

CONCEPT PLAN

THOMPSON PRECIPICE CREEK
Lot 2 DP 306479 Glenorchy-Paradise Road
Landscape Plan