

APPLICATION AS NOTIFIED

S Robertson

(RM230365)

FORM 12

File Number RM230365

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:

S Robertson

What is proposed:

Land use consent is sought to construct and use a residential unit outside an approved building platform and to breach the maximum permitted floor area and to undertake associated landscaping and earthworks that is in breach of various earthworks standards.

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

346 Morven Ferry Road, Queenstown

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

- 74 Shotover Street, Queenstown;
- 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 RM230365 as the reference <https://edocs.qldc.govt.nz/Account/Login>

The Council consultant planner processing this application on behalf of the Council is Vicki Jones, who may be contacted by phone at 021 942 751 or email at vicki.jones@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:

Friday 7th June 2024.

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 (Sharyn Robertson), as soon as reasonably practicable after serving your submission to Council:

C/- Emma Dixon
edixon@cfma.co.nz
Clark Fortune McDonald & Associates
PO Box 553
Queenstown 9348

QUEENSTOWN LAKES DISTRICT COUNCIL



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

Date of Notification: 9th May 2024.

Address for Service for Consent Authority:

Queenstown Lakes District Council
Private Bag 50072, Queenstown 9348
Gorge Road, Queenstown 9300

Phone
Email
Website

03 441 0499
rcsubmission@qldc.govt.nz
www.qldc.govt.nz



APPLICATION FOR RESOURCE CONSENT OR
FAST TRACK RESOURCE CONSENT

FORM 9: GENERAL APPLICATION



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: **Sharyn Robertson**

(Name Decision is to be issued in)

All trustee names (if applicable):

*Contact name for company or trust:

*Postal Address: **5 Bayonet Peak Place, Oraka Drift Bay, Queenstown**

*Post code:

*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: **sharyn.robertson@outlook.com**

*Phone Numbers: Day **0274373106**

Mobile:

*The Applicant is:



Owner



Prospective Purchaser (of the site to which the application relates)



Occupier



Lessee

Other - Please Specify:



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: **Clark Fortune McDonald and Associates, Attn: Emma Dixon**

*Phone Numbers: Day **4416044**

Mobile: **0274046233**

*Email Address: **edixon@cfma.co.nz**

*Postal Address: **PO Box 553, Queenstown**

*Postcode:

9348



INVOICING DETAILS //

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

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

Applicant:



Agent:



Other - Please specify:

Email:



Post:



*Attention: **Sharyn Robertson**

*Postal Address: **as above**

*Post code:

*Please provide an email AND full postal address.

*Email: **sharyn.robertson@outlook.com**



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

Owner Name:

Owner Address:

Owner Email:

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

Date:

Names:



DEVELOPMENT CONTRIBUTIONS INVOICING DETAILS //

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

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

Details are the same as for invoicing



Applicant:



Landowner:



Other, please specify:

*Attention:

*Email:

[Click here for further information and our estimate request form](#)



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

*Address / Location to which this application relates:

346 Morven Ferry Road, Queenstown

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

Lot 2 DP 301531

District Plan Zone(s): Rural General and Wakatipu Basin Amenity Zone



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

Is there a gate or security system restricting access by council?

YES



NO



Is there a dog on the property?

YES



NO



Are there any other hazards or entry restrictions that council staff need to be aware of?

YES



NO



If 'yes' please provide information below



PRE-APPLICATION MEETING OR URBAN DESIGN PANEL

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

Yes

No

Copy of minutes attached

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



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

Land use consent

Subdivision consent

Change/cancellation of consent or consent notice conditions

Certificate of compliance

Extension of lapse period of consent (time extension) s125

Existing use certificate

Land use consent includes Earthworks



QUALIFIED FAST-TRACK APPLICATION UNDER SECTION 87AAC

Controlled Activity

Deemed Permitted Boundary Activity

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



BRIEF DESCRIPTION OF THE PROPOSAL // * Please complete this section, any form stating 'refer AEE' will be returned to be completed with a description of the proposal

*Consent is sought to:

Erect a dwelling outside of a platform and undertake associated earthworks



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 25m³ per 500m²). Therefore the NES does not apply.

I have undertaken a comprehensive review of District and Regional Council records and I have found no record suggesting an activity on the HAIL has taken place on the piece of land which is subject to this application.

NOTE: depending on the scale and nature of your proposal you may be required to provide details of the records reviewed and the details found.



OTHER CONSENTS // CONTINUED

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

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

Any other National Environmental Standard

Yes

N/A

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

Yes

N/A

If Yes have you applied for it?

Yes

No

If Yes supply ORC Consent Reference(s)

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

Yes

No



INFORMATION REQUIRED TO BE SUBMITTED //

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

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

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

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

A site plan at a convenient scale.

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

An Assessment of Effects (AEE).

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



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



PRIVACY INFORMATION

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



FEES INFORMATION

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

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



FEES INFORMATION // CONTINUED

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

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

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

MONITORING FEES – Please also note that the fee paid at lodgement includes an initial monitoring fee of \$273 for land use resource consent applications and designation related applications, as once Resource Consent is approved you will be required to meet the costs of monitoring any conditions applying to the consent, pursuant to Section 35 of the Resource Management Act 1991.

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

A list of Consent Charges is available on the on the Resource Consent Application Forms section of the QLDC website. If you are unsure of the amount to pay, [please call 03 441 0499](tel:034410499) and ask to speak to our duty planner.

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

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



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

Please reference your payments as follows:

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

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

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

- I confirm payment by:
- Bank transfer to account 02 0948 0002000 00 (If paying from overseas swiftcode is – BKNZ22)
 - 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 **RMRRobertson**

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

\$2541 - Discretionary (overall consent status)

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

Date of Payment **5/24/23**

APPLICATION & DECLARATION

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



If lodging this application as **the Applicant:**

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

OR:



If lodging this application as **agent of the Applicant:**

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



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

PLEASE TICK

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

Full name of person lodging this form **Emma Dixon**

Firm/Company **CFMA**

Dated

**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;
- (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.

Information provided within the Form above

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.



UNDER THE FOURTH SCHEDULE TO THE ACT:

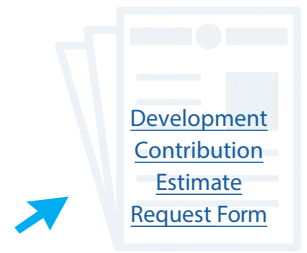
- An application for a subdivision consent must also include information that adequately defines the following:
 - (a) the position of all new boundaries:
 - (b) the areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan:
 - (c) the locations and areas 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.

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 Roding)

[Click here for more information on development contributions and their charges](#)

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



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.

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

Sharyn Robertson

Proposed Residential Dwelling

Earthworks

346 Morven Ferry Road

May 2023

Prepared by: Karen Page/Emma Dixon

Reviewed by: Nick Geddes

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

1.0 A DETAILED DESCRIPTION OF THE PROPOSAL:

1.1 Site Description

The subject site is an irregular shaped rural lifestyle lot legally identified as Lot 2 DP301351 and held in Certificate of Title 5890. It is located at 346 Morven Ferry Road approximately 3 kilometres from the intersection of Lake Hayes Arrow Junction intersection. The site has an area of approximately 18 ha and is accessed directly off Morven Ferry Road via a shared ROW that runs the length of its northern boundary, see figures 1 and 2 below for detail.



Figure 1: Location Plan



Figure 2: Subject Site

The lot is currently vacant of residential development with built form limited to a shed, and stock yards. A residential building platform, however, has been consented under RM00008 and is located adjacent to its northern boundary in the lower portion of the site, see figure 3 below. It is proposed to relinquish this platform should the current application be approved.

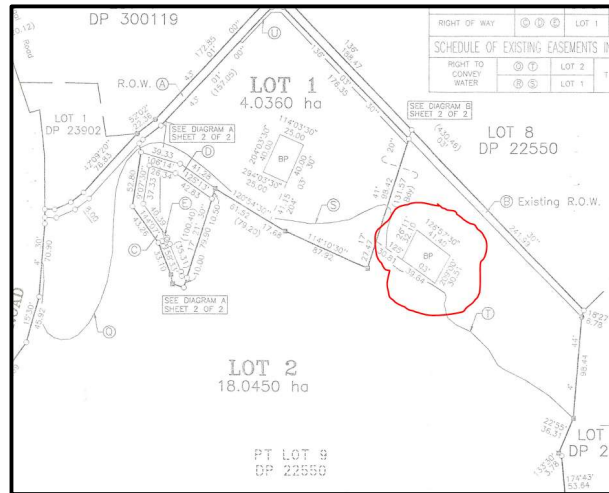


Figure 3: RM00008 and approved building platform.

The site topography is varied. The lower northern and northeastern half of the site is generally flat with a slight rise where it meets the bottom flank of what is known as Punt Hill. From here the topography rises relatively steeply to the rear southern boundary by approximately 60m. Several natural hollows and humps are nestled amongst this slope where it is proposed to provide for the new residential dwelling, as discussed below.

As well as a common access around the northern boundary, an existing farm track runs from the western boundary along the bottom of the hill up to its crest following the natural landform.

This sloping portion of the site is identified under the Proposed District Plan as an Outstanding Natural Landscape, as identified in Figure 4 below.

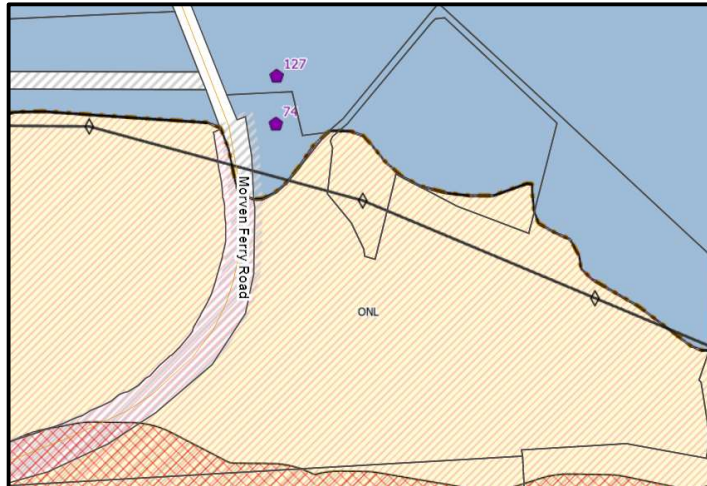


Figure 4: District Plan zoning and ONL

Transpower lines dissect the site in a west to east orientation along the lower slopes of the site, see figure 5 below. A consent notice on the Certificate of Title requires all structures to be set off these lines by a distance of 80m. The development will comply in full with this consent notice.

A water race also dissects the site along the bottom of the slope generally aligning with the ONL demarcation.

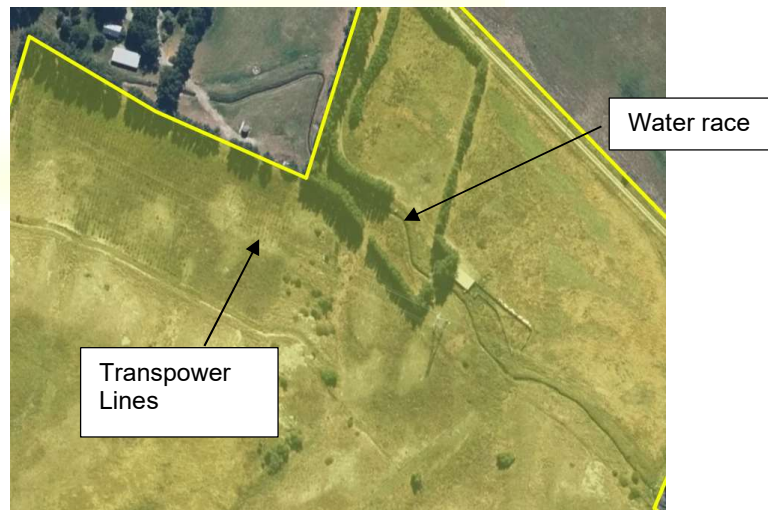


Figure 5: Water race and Transpower lines

There is no significant vegetation identified on site. Site vegetation is largely limited to pasture with established mature trees framing the location of the approved building platform and located sporadically around the site. The existing planting along the southern boundary

The surrounding environment is made up of the northern slopes of the Kawarau River adjacent to the sites southern boundary and the Arrow River approximately 375m from the sites northern boundary. Surrounding land use mainly consists of lifestyle allotments on sites similar or larger to the subject site.

The southwestern corner of the site is identified as being in a Wahi Tupuna area under the QLD Proposed District Plan. The proposed development and any associated works will not be located in this area.

The site is not identified as being subject to any hazards under the QLDC Hazard register.

Notwithstanding the above, a detailed description of the landscape features of the subject site is set out in the Patch Ltd Landscape Assessment.

1.2 The Proposal

Consent is sought to establish a residential dwelling on the site, in the southern corner of the lot as identified in Appendix B, and 7 below:

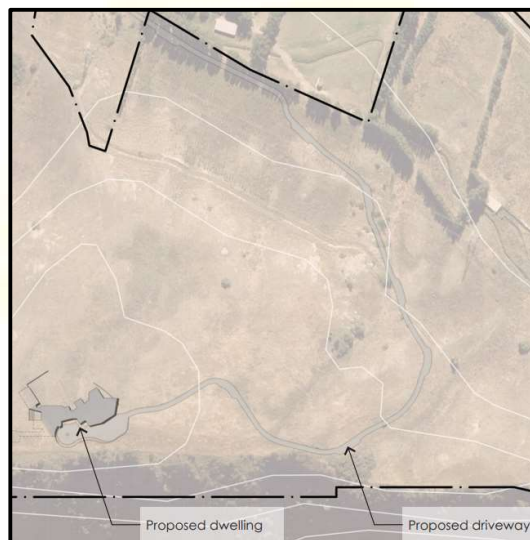


Figure 7: Proposed Building Platform, dwelling and upgraded driveway

The existing building platform will be relinquished as a proposed condition of this consent.

The proposed floor plan for the new dwelling will have an area of 798m². Noting that a reasonable portion of this will be constructed almost completely below current ground level.

The building is proposed as a single level, five-bedroom dwelling with a mono pitch roofline that will have a maximum height of 3.0m above existing ground level. It will utilise a mix of natural materials including shiplap stained cedar weatherboard, stacked stone / schist and powder coated aluminium. The cedar will be stained in Light Oak and the roof aluminium will be in the colour of Matt Flaxpod. This has an LRV of 5%. Approximately 25% of the dwellings roof will be a natural green roof. The remainder of the roof will be finished in Mineral Chip.

A landscape assessment has been undertaken by Patch Landscape Architecture who have been involved in the design of the proposed built form from its outset. In order to integrate the building into this landscape proposed mounding is proposed around the dwelling and north of it, which will slightly increase the existing ridgelines of the landform.

Earthworks are also proposed to upgrade the existing farm access through the site to provide for a suitable all-weather driveway. The access will be finished in gravel for the majority of its length, apart for the motor court area immediately adjacent to the dwelling. This area will be sealed to help suppress dust in the dry summer months.

A detailed earthworks plan is included in Appendix D. The submitted landscape plan is included in Appendix C and includes the location of mounding and levels.

The proposed earthworks include 9,000m³ of cut and 8,300m³ of fill to form a flat buildable area, increase some of the existing ridgelines on the site and upgrade the driveway.

The maximum cut height will be approximately 5.4m around the rear of the dwelling, and for the proposed tunnel, see figure 8 below. The mounding to the north of the dwelling will have a fill height of approximately 4m and will seamlessly blend into the existing topography on completion. The driveway upgrade will make up of the remaining works and will include a mix of cut and fill that will be battered into the slope as per the cross sections included in Appendix B.

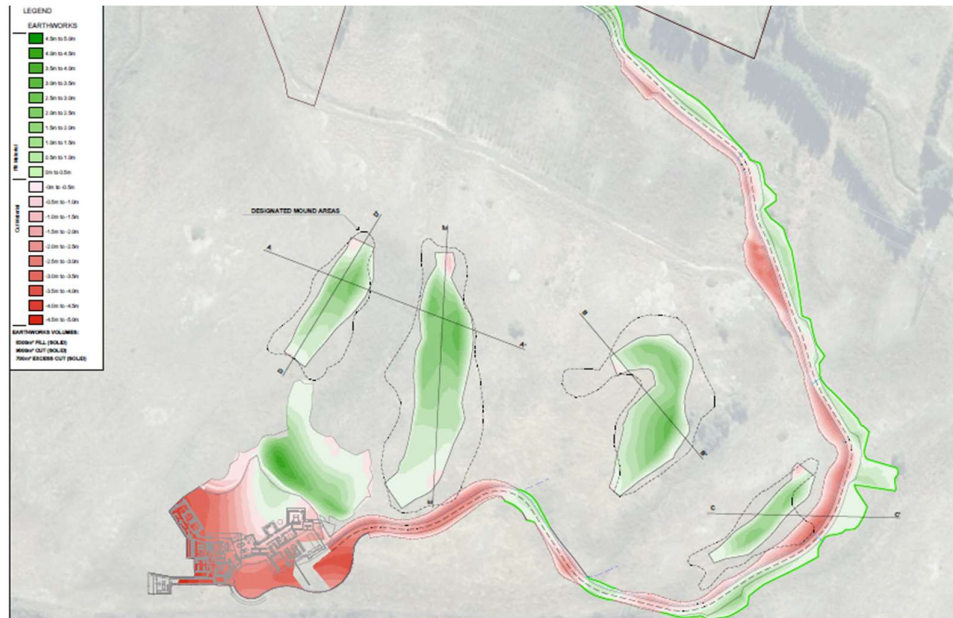


Figure 8: Proposed Cut (Red) and Fill (green) for the dwelling and upper driveway

No additional planting is proposed on site other than curtilage planting that will be undertaken at the discretion of the owner on completion of works. The curtilage area is defined on the Landscape Plans included as Attachment C to this application.

The site will be serviced by on-site sewage and stormwater disposal. The sites suitability to dispose stormwater and effluent to land was assessed and confirmed under RM00008 and from more recent investigations undertaken by Geotago. Standard conditions of consent are anticipated to be included to ensure the recommendations of the reports are adhered to.

The site has access to power and telecommunications supply at the boundary as a result of the underlying subdivision and new title created in 2001.

Water will be sourced via the water scheme to be installed to service the three lot subdivision approved via RM220055. The details of this are outlined in the Services Report included as Attachment [D] to this application.

Affected party approval has been obtained from the following neighbours:

- 297, 219 and Section 33 Block VIII Shotover SD (and associated lots in the same RT) Morven Ferry Road, being land owned by Barnhill Trustee Ltd, M E Bunn, L A Green, HGW Trustees 2020 Ltd, HGW Trustee's Ltd;
- 336 Morven Ferry Road, being land owned by R and G Pettit;

- 351 Morven Ferry Road, being land owned by MSL Quad Ltd
- 307 Morven Ferry Road, being land owned by A Stafford.

A plan included as Attachment E to this application, outlines the locations of the Affected Party Approvals received. The signed Affected Party Approval Forms are included as Attachment E to this application.

1.3 Site History

The following consents have been approved for this site:

- RM030596 for the construction of a deer/ implement shed. Issued 03/09/2003.
- RM000008 to carry out a two-lot subdivision and identified a new building platform. Issued 25/06/2004.

2.0 Statutory Provisions

2.1 Queenstown Lakes Council Proposed District Plan

As depicted in Figure 4 above, under the Proposed District Plan (PDP), the zoning across the subject site is split between the Wakatipu Rural Amenity Zone (**WBRA**) and Rural Zone. The location of the proposed residential dwelling is within the Rural Zone. It is also located partly within an ONL as illustrated in figure 5 above.

Consent is required under the PDP for the following reasons:

- i) A Discretionary Activity consent pursuant to Rule 21.4.9 for the use of the building for residential purposes.
- ii) A Discretionary Activity consent pursuant to Rule 21.4.11 for the construction of a residential dwelling and associated works that is not provided in any other rule. The proposed dwelling is not located within an existing building platform.
- iii) A Restricted Discretionary Activity consent pursuant to Rule 25.4.2 for earthworks that do not comply with the maximum permitted volume outlined in Table 25.2 which restricts earthworks to 1000m³ in the Rural Zone. It is proposed to undertake

approximately 17,300m³ of earthworks on site. This will include 8300m³ of fill and 9000m³ of cut.

- iv) A Restricted Discretionary Activity consent pursuant to Rule 25.5.15 to exceed 2.4m cut. The maximum cut to form a flat buildable area will be 5.0 m. (not sure what this is. Backfill is exempt from this).
- v) A Restricted Discretionary Activity consent pursuant to Rule 25.5.16 that restricts fill height to 2m. The mounding to the north of the dwelling will have a maximum height of 5m from the existing ground level.
- vi) A Restricted Discretionary Activity resource consent pursuant to Rule 25.5.21 that restricts cleanfill transported off site to 300m³. The proposed development will include up to approximately 700m³ of fill removed off site.

Overall, the application is a **Discretionary** activity.

2.2 Queenstown Lakes District Plan(s) Weighting

Strategic Directions - Chapters 3-6

PDP Strategic Chapter 3 is considered to be a significant shift in Council policy. A consolidated version of this Chapter was issued 16th June 2021. As such, the relevant objectives and policies of Chapter 3 have been assessed in part 4 of this application document.

The proposal is not *Urban Development* and the site is not located in an *Urban Zone*. As such, PDP Strategic Chapter 4 *Urban Development* is not a relevant consideration for the current application.

In terms of Chapter 5, the subject site is not within a Wahi Tupuna or recognised as containing any taonga species, habitats of significance to Ngai Tahu while the proposal does not include any buildings. As such, PDP Strategic Chapter 5 *Tangata Whenua* is not a relevant consideration for the current application.

PDP Chapter 6 *Landscapes and Rural Character* is considered to be a significant shift in Council policy. A consolidated version of this Chapter was issued 16th June 2021. As such,

the relevant objectives and policies of Chapter 6 have been assessed in part 3 of this application document.

Chapter 21 - Rural

The PDP Rural Zone is not considered to represent a significant shift in Council policy from the ODP Rural General Zone. Irrespective, this PDP Chapter remains subject to a number of appeals¹. These appeals have been considered as having no bearing on the consideration and determination of the current application. The relevant objectives and policies of Chapter 21 have been assessed in part 3 of this application document.

Chapter 25 - Earthworks

The PDP Earthworks Chapter 25 is not considered to represent a significant shift in Council policy from the ODP Earthworks Part 22. Irrespective, this PDP Chapter remains subject to two outstanding appeals²:

Darby Planning Ltd Partnership ENV-2019-CHC-085	Site-specific relief as part of a Wakatipu Basin rezoning requested in Stage 2: Insert new provisions into Table 25.2 for maximum volume thresholds for the proposed Glendhu Station Zone. Make any further consequential changes to the maximum volume triggers to integrate final activity areas arising from decisions on the Stage 1 hearing for the Glendhu Station Zone: <u>Activity Area R, Activity Area GS(FH), Activity Area GS(C): maximum total volume of 500m3</u>
Cardrona Cattle Company Limited ENV-2021-CHC-034	Site-specific relief as part of a requested rezoning: Add site specific objectives, policies, rules and other methods to provide for the Victoria Flats industrial zone

These two appeals seek site specific relief and related to the Glendhu Station Zone and Victoria Flats Industrial Zone. The subject site is not located in either of these Zones which is considered to confirm that the proposal can be assessed against the relevant provisions of Chapter 25.

Given the above, the dominant provision set for the assessment of the current application is:

- a. Proposed District Plan – Chapter 3;
- b. Proposed District Plan – Chapter 6;
- c. Proposed District Plan – Chapter 21;
- d. Proposed District Plan – Chapter 25;

¹ As of September 2022.

² As of September 2022.

2.3 National Environmental Statements

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2012

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

Under these regulations, land is considered to be actually or potentially contaminated if an activity or industry on the Hazardous Activities or Industries List (HAIL) has been, or is more likely than not to have been, undertaken on that land. Therefore, the NES only applies to land that is potentially or actually affected by contaminants because of its historical and/or current use and the types of activities previously undertaken on the site.

The land use history is therefore the trigger for determining whether the land is considered by the NES. Subclauses (2) below prescribes the methods that the person may use for establishing whether or not a piece of land is as described in regulation 5(7).

Part 6(2):

One method is by using information that is the most up-to-date information about the area where the piece of land is located that the territorial authority—

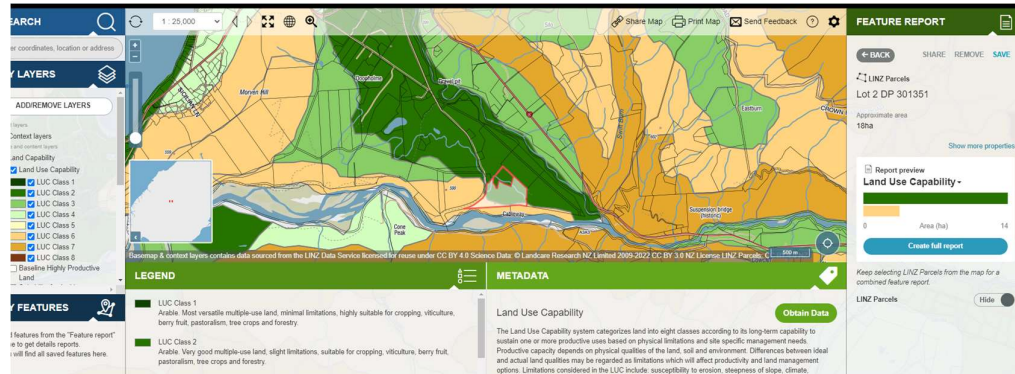
- (a) holds on its dangerous goods files, property files, or resource consent database or relevant registers; or*
- (b) has available to it from the regional council.*

An assessment of any HAIL considerations has been undertaken and given the site of the dwelling is on top of Punt Hill it is highly unlikely that there would have been any activities undertaken on the site that would be considered a risk to human health. Accordingly, the area of land for which resource consent is being sought is not considered as being HAIL land under sub-clause (7) section 5 of the NES. Consent is, therefore, not required.

National Policy Statement for Highly Productive Land 2022

The National Policy Statement for Highly Productive Land 2022 (**NPS-HPL**) was made operative 17th October 2022. The subject site is zoned in part WBRA and Rural Zone.

The subject site is located within a *General Rural Zone* under the NPS-HPL. However, the location of the existing platform appears in LUC 2 and the proposed location in LUC 6:



Snip from 'Our Environment Mapping Tool'

Based upon the mapping, shown above, the proposal does not seek any applications to *use* or *develop* land recognised as being within LUC 1-3. As such, the NPS-HPL is not a relevant consideration for the current application.

3.0 ASSESSMENT OF THE ACTIVITY'S EFFECT ON THE ENVIRONMENT

The proposal will provide for a new residential building dwelling on site with associated earthworks. The dwelling will be located within an Outstanding Natural Landscape but has been designed to ensure that any adverse effects on this environment will be acceptable. The building will be set within an existing hollow on this site/ slope ensuring that it will not be visible from outside the site. A comprehensive landscape assessment of the development has been undertaken and is attached in Appendix C to this report, as discussed further below.

Landscape Effects / Rural Amenity

A detailed landscape assessment has been undertaken by Patch Landscape Architecture (PLA) and concludes that any adverse effects of the character of this landscape will be able to be avoided due to the burying of the dwelling into the existing landform and the earthworks proposed. The development has been designed in consultation with PLA from its onset and as a result will be a sympathetic and discrete addition to this rural environment.

It will have a low lying, single mono pitched roofline that will sit below the surrounding contours ensuring its presence is adequately screened from outside the site, preserving the landscape qualities of this outstanding landscape. This is clearly illustrated in figure 6 below:

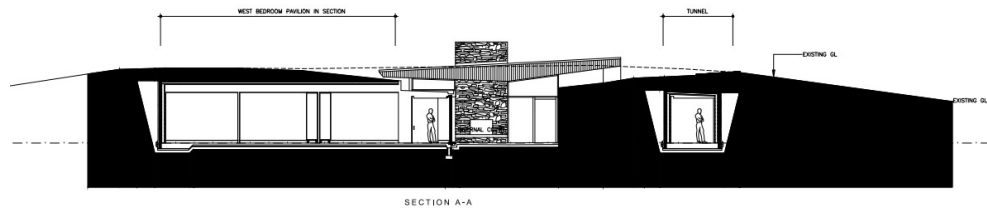


Figure 6: Section through the development. Black – existing ground level.

The PLA assessment concludes the following in this respect to the visibility of the development:

- *Proposed earthworks will screen the proposed dwelling from all SH6 and Queenstown Trail views to the north and east.*
- *Parts of the proposed driveway and associated earthworks will be visible intermittently through off-site vegetation for an approximately 1.6km long portion of SH6.*
- *The western 'tunnel' portion of the dwelling may potentially be visible from a short, distant portion of the Twin Rivers trail approximately 4.13km away. The scale of the tunnel and associated earthworks will be small, and the proposal will be reasonably difficult to see in the context of the broadly visible receiving landscape.*
- *From some limited, elevated, private places on the Crown Terrace the proposal may be visible as it is viewed from above.*

The assessment confirms that the overall development will be reasonably difficult to see from beyond the boundary of this site, which is a key consideration for development within the ONL. The existing hollow in this hillside provides for a unique opportunity for this building to be nestled into this landscape without compromising the surrounding character.

The proposed earthworks, once stabilised and re-grassed will be largely indiscernible when viewed from outside the site and no vegetation will be removed. The viewing distance and

the minimal visibility will together ensure that the earthworks, access and proposed tunnel, as viewed beyond the site boundaries, will have less than minor adverse effects on the character of this ONL. The proposal will:

- a) Be reasonably difficult to see from beyond the site;
- b) Will not detract from public or private views;
- c) Will be appropriately screened;
- d) Will not reduce the visual amenity of the area;
- e) Will not break the ridgeline, and
- f) Will ensure the development does not include lighting, earthworks and landscaping that reduces the visual amenity of the site.

The PLA assessment concludes that:

“The proposed driveway and associated earthworks will be the only part of the proposal which will be visible from a 1km segment of SH6 to the north and east. This driveway will slightly increase the visual effect of the existing farm track. This effect will be experienced from a short portion of land to the north and east of the site. The proposal will not be visually prominent or detract from public or private views.”: and

“The proposed earthworks will slightly alter the skyline as viewed from a small portion of SH6 (Image 2). However, once formed and re-grassed, this will not be a discernible change and will not adversely affect any visual amenity values of the landscape”.

Refer to Landscape Assessment in Appendix C for further detail.

During construction the proposal will have moderate effects on the visual amenity of this site due to the earthworks proposed. The driveway is existing, but it is proposed to widen and upgrade this access to ensure it complies with council standards, which will increase its visibility to a minor degree.

Overall, however, on completion of works any adverse effects on the landscape character and the visual amenity will be avoided for reasons outlined above and in the attached landscape assessment. Furthermore, the development will not increase the density of development on site with the existing platform to be rescinded as a condition of consent.

Anticipated conditions of consent will ensure that all lighting is discrete, domestic planting is defined to the curtilage area, building material is recessive and with a LRV less than 30%, and fencing is restricted to post and wire and around the curtilage area only.

In conclusion the PLA assessment states:

“It is considered that there will be moderate short-term adverse character and visual effects associated with the proposal while the driveway and earthworks are being formed. Once complete the proposal will result in no more than low adverse effects on landscape character and low adverse effects on visual amenity”.

Servicing

It is proposed to discharge wastewater to land via on site disposal. On site soil assessment for the purposes of waste water disposal has been completed by Geotago, a copy of this report is included as Attachment F to this application.

These investigations found the soils to be a Category 3 Soil. It is expected that a package plant home aeration type system will be appropriate to cater for the disposal of secondary treated effluent, according to AS/NZS1547 standards. The disposal will be via a shallow pressure compensating dripper irrigation (PCDI) distribution method.

The design of the systems will be assessed at building consent stage. As a result, it is considered that any adverse effects on this receiving environment as a result of sewage and stormwater discharge on site will be negligible.

Potable water supply is to be sourced from the soon to be installed private system located in the unformed legal road, south west of the subject site.

Telecommunications and power have been supplied to the site boundary along the ROW as part of RM00008 and prior to issue of certificate of title for this lot.

Earthworks

The volume of earthworks proposed for this development will total 8,950m³, with cut and fill heights of approx. 5.4m and 4.0m respectively. The proposal will also need approximately 700m³ of fill removed off site.

The natural topography of this wider area is varied and the majority of sites require additional earthworks to provide for level building platforms. This proposal will comply with all setbacks off the site boundaries.

The deepest location for cut coincides with one of the test pits which was undertaken by the Geotech to enable them to complete their assessment and associated report. Test Pit 101 was dug to a depth of 2.5m with the first 2.0m containing only top soil, the remaining 0.5 metres consisting of sandy silt.

The testpit logs that have been completed by the Geotech engineer in the locations that likely have the deepest cut, do not show any signs of rock, however the maximum test log was 2.5m deep and the cut will likely need to be 5.4m, however at this stage, it is not anticipated that any major rock breaking will be required as part of the proposed earthworks.

Consideration for all earthworks consents must be given to Assessment Matters 25.7.1.1 – 25.7.1.9 in Chapter 25 of the PDP. These include consideration regarding soil erosion, generation and run-off of sediment, landscape and visual amenity effects, effects on infrastructure, adjacent sites and public roads, land stability, effects on water bodies, ecosystem services and biodiversity, cultural, heritage and archaeological sites, nuisance effects, natural hazards and functional and positive effects.

The above matters regarding the earthworks are considered together below:

Soil erosion/ generation and run off of sediment

All works will be appropriately managed to ensure that there is no sediment run off particularly in regard to the works required to upgrade the driveway located in close proximity to the adjacent water race. The following conditions are offered in this respect:

*“The consent holder shall install measures to control and/or mitigate any dust, silt run off and sedimentation that may occur, in accordance with NZS 4404:2004 and “A Guide to Earthworks in the Queenstown Lakes District” brochure, prepared by the Queenstown Lakes District Council. These measures shall be implemented **prior** to the commencement of any earthworks on site and shall remain in place for the duration of the project, until all exposed areas of earth are permanently stabilised”.*

“No earthworks, temporary or permanent, are to breach the boundaries of the sites”.

The applicant has already had an Environmental Management Plan completed by Enviroscope and included as Attachment G to this application. This documents outlines all the necessary mechanisms and strategies that will be required to be utilised by the future contractor to ensure that erosion, sedimentation and dust etc will not cause any adverse effects to the surrounding environment during construction.

Given the above, any adverse effects from the proposal in terms of erosion and sediment runoff from the site will be negligible.

Landscape/ streetscene and visual amenity

The subject site is located in a rural environment where built form is anticipated given the presence of an existing building platform. The scale and location of the proposed work is required to establish a level building footprint that will result in a house that is partially underground and to upgrade the existing driveway. The proposed works will not compromise the visual quality or amenity values associated with this landscape. A detailed landscape assessment has been carried out by PLA and concludes that on completion, the works will be well integrated into this landscape. The larger areas of cut will be screened from outside the site by the dwelling and existing topography. The mounding will be an extension of the existing landform and will be stabilised quickly using a pasture grass mix, therefore will blend into the existing topography and be unable to be discerned on completion, refer to landscape assessment in Appendix C for detail.

The applicant is also happy to accept a condition of consent that requires the proposed mounding to be assessed by a landscape architect, once completed to ensure it achieves its intended purpose, being to screen any potential views of the residential dwelling. If not, then additional works would be required to be undertaken to achieve the desired outcomes.

Effects on infrastructure, adjacent sites and public roads

The proposed earthworks are required to establish the level building foundation and upgrade the driveway on site. All necessary measures will be put in place to ensure there is no sediment run off from these areas during construction. Compliance with anticipated conditions of consent will ensure this. Furthermore, all earthworks will be undertaken in such a way as to avoid any adverse off-site effects on the surrounding roading environment.

The proposal will require approximately 100 truckloads of material to be removed off the site. This will be undertaken intermittently over a period of approximately 18 months as weather permits during the construction phase. Any activity will be limited between the hours of 8am and 5pm weekdays only.

The surrounding roading network has the ability to accommodate this activity without any adverse effects on this infrastructure. Morven Ferry Road is a Council vested road

and is of a sufficient standard that will easily accommodate this increase in traffic movements.

Land stability

The site is not identified as being susceptible to land instability and all works will be located away from the site boundaries.

Effects on water bodies, ecosystem services and biodiversity

As stated above, all necessary sediment and erosion controls required as conditions of consent will be put in place during the proposed earthworks. This will ensure that earthworks are retained on site and there will be negligible adverse effects on the adjacent water race as a result of the works.

Cultural, heritage and archaeological sites

The subject site is not recognised as a site of any cultural heritage value. However, it is anticipated that standard conditions of consent will be imposed to ensure appropriate protocols are followed in the unlikely event that any archaeological sites/finds are discovered during earthworks. Furthermore, no works are proposed in the wahi tupuna area located in the southwestern corner of the site.

Nuisance effects

The proposed works will be temporary in nature, occur intermittently and are expected to have a duration of approximately 18 months. Furthermore, it is anticipated that standard conditions of consent will be imposed to mitigate against any nuisance effects ensuring any potential dust emissions will be adequately mitigated with sufficient water available on site for dust suppression if required.

It is accepted that the proposed heavy vehicle movements to the site will temporarily increase the noise levels in this immediate neighbourhood and generate an increase in traffic from that which currently exists. Any adverse effects on adjacent sites, however, will be negligible and of a temporary nature, noting, noting the nearest residential dwelling is over 300m away from the majority of the work site.

Any possible effects will be limited to Monday to Friday between the hours of 8am and 5pm and therefore will not create a nuisance during the more sensitive weekend days or early mornings and evenings. Furthermore, a construction management plan will be implemented via condition of consent that will ensure any adverse effects will be appropriately mitigated. This will include (but not restricted to) conditions restricting

hours of operation to the above and ensuring all noise levels comply with construction noise standards.

Further to the above affected party approval has been obtained from the majority of all the surrounding neighbours and therefore any adverse effects on these neighbours can be disregarded.

Natural hazards

The subject site is not identified on Councils Hazard mapping as being susceptible to any hazards. It is therefore considered that there will be negligible adverse effects from any potential hazards.

Accordingly, it is for the above reasons that it is considered that the proposed earthworks will have negligible adverse effects on this environment.

4.0 DISTRICT PLAN: OBJECTIVES AND POLICIES ASSESSMENT

The most relevant Objectives and Policies of the Queenstown Lakes District Proposed District Plan are considered below:

PROPOSED DISTRICT PLAN

Chapter 6 Landscape Character

Managing Activities in Outstanding Natural Landscapes

- 6.3.3.1 *Recognise that subdivision and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless:*
- a. landscape values are protected; and*
 - b. in the case of any subdivision or development, all buildings and other structures and all changes to landform or other physical changes to the appearance of land will be reasonably difficult to see from beyond the boundary of the site in question*
- 6.3.3.2 *Ensure that the protection of Outstanding Natural Features and Outstanding Natural Landscapes includes recognition of any values relating to cultural and historic elements, geological features and matters of cultural and spiritual value to Tangata Whenua, including tōpuni and wāhi tupuna*

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

Providing for a dwelling in the location proposed will not compromise the landscape character of this ONL. A detailed landscape assessment has been undertaken of the proposal and concludes that the development will have less than minor adverse effects on this landscape and can be provided in such a way as to protect both landscape and rural character. The development is considered consistent with the objectives and policies of the zone.

6.3.4.5 Ensure incremental changes from subdivision and development do not degrade landscape quality or character, or important views as a result of activities associated with mitigation of the visual effects of proposed development such as screen planting, mounding and earthworks.

The proposed mounding will not degrade the character of this landscape as it has been designed to sympathetically sit amongst the natural landform. As viewed from outside the site, when completed, it will barely be discernible and will appear as part of the natural topography. A comprehensive landscape assessment concludes that the works will have less than minor adverse effects on this environment.

6.3.4.8 Avoid adverse effects on visual amenity from subdivision use and development that; a. is highly visible from public places and other places which are frequented by members of the public generally (except any trail as defined in this Plan or) b. forms the foreground for an Outstanding Natural Landscape or Outstanding Natural Feature when viewed from public roads.

The proposed dwelling will be adequately screened from Morven Ferry Road and will not be highly visible from any public place.

The overall site does form a foreground to and is part of the wider ONL, when viewed from a portion of State Highway 6, as confirmed by the Landscape Assessment completed by PLA.

The development will continue to maintain the visual amenity of the surrounding environment and avoids any adverse visual effects via the partial burying of the dwelling so it fits into the existing landform and by placing fill in locations to enhance the existing topography in such a manner as to ensure the dwelling is not able to be viewed from outside of the site.

Rural Zone Chapter 21

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.

Rural amenity values will be retained as a result of this proposal. The open nature of the majority of the site will not alter from what is currently present as the dwelling, which is located to the rear of the site, will be difficult to discern from outside of the site, as confirmed in the Landscape Assessment included as Attachment [C] to this application.

Policies

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.

All boundary setbacks will be met which assists in maintaining current levels of amenity outlook from neighbouring properties (who have all provided their APA). Further as the only partially visible aspect of this proposal will be the gravel access track, which is simply an upgrade of what predominantly exists on site, the established activity for the site, being grazing will not be adversely impacted by this proposal.

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.

The proposed development will not generate any going on nuisance effects. As noted above there may be some temporary nuisance effects, during the construction period, however these will be short lived and minimised through the use of EMP measures by the contractor.

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.

There is no outdoor lighting proposed as part of this application, however a consent notice can be included to ensure that any future lighting will be directed down in line with the proposed landscape mitigation.

Objective 21.2.2 The life supporting capacity of soils is sustained.

No potential farmland will be compromised as a result of this development.

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.

The proposed development is limited to one rural residential allotment, with an associated dwelling and earthworks. It will not compromise the soil resource of this site.

Earthworks

The relevant objectives and policies under Part 25 of the District Plan relate to earthworks. The proposed development will meet these objectives and supporting policies for reasons outlined in Section 2 above.

Objective 25.2.1

Earthworks are undertaken in a manner that minimises adverse effects on the environment, protects people and communities, and maintains landscape and visual amenity values.

Policies 25.2.1.3 - 25.2.1.7

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

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

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

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

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

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

The proposed earthworks will not compromise the existing landform or surrounding amenity values as they have been carefully designed to ensure they mimic the existing landform when viewed from outside of the site.

All cut and fill areas will be undertaken to ensure on-going site stability. Furthermore, necessary mitigation measures will be put in place to ensure any off-site and nuisance effects are minimised during the construction period, although the vast majority of the earthworks are a long way from neighbouring boundaries, so is unlikely to cause any impacts to adjoining sites.

Any adverse effects as a result of these earthworks and upgraded access will be negligible. Furthermore, the development will have a negligible increase in traffic movements as the earthworks have been designed to accommodate as much of the cut material that is generated by the works, on site, rather than trucking it off site along Morven Ferry Road. All traffic movements will utilise an existing access that has suitable sight distances to allow for safe and efficient movement between this site and the road.

In summary the proposed development is considered consistent with the most relevant Objectives and Policies of the Proposed District Plan.

5.0 RESOURCE MANAGEMENT ACT 1991: PART 2

The proposal aligns with the requirements of the Proposed District Plan's Strategic Chapters as well as the Rural Zone as discussed in detail above. Future development will promote sustainable management of natural and physical resources within the site, whilst ensuring that social, economic, and cultural well-being is provided for. The proposal will avoid, remedy, and mitigate adverse effects of activities on the environment.

Overall, the proposal is in keeping with the purpose and principles of the RMA.

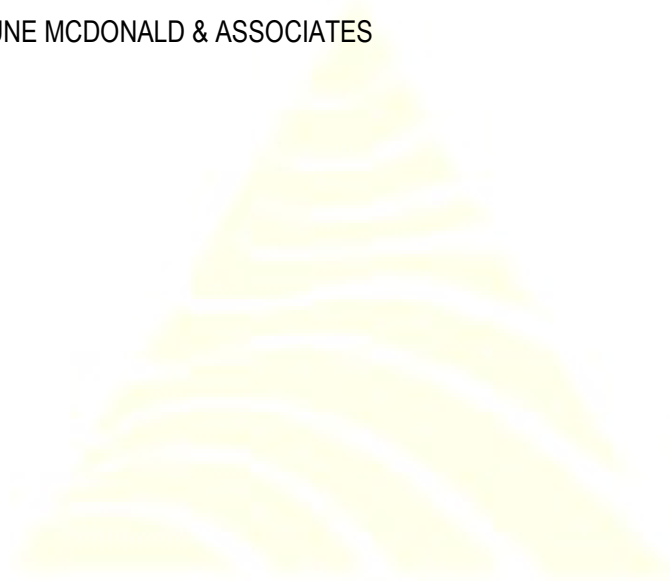
6.0 SUMMARY

Subject to Part 2 of the Act, the application has been considered in terms of applicable matters within the context of Section 104 of the Act. Overall, it is considered that the proposal will either avoid creating any adverse effects or have effects that are considered to be no more than minor on the environment, is consistent with the Objective and Policies of the Proposed District Plan and the purpose and principles of the Act. Consent can therefore be granted subject to the appropriate imposition of conditions of consent.

Prepared by **Karen Page / Emma Dixon**

CLARK FORTUNE MCDONALD & ASSOCIATES

May 2023



APPENDIX A - Record of Title and CN

APPENDIX B – Development Plans

**APPENDIX C – Landscape Assessment
and Plan**

APPENDIX D – Services Report

**APPENDIX E – APA's and Plan showing
location of APA's.**

APPENDIX F – Geotechnical Report

**APPENDIX G – Environmental
Management Plan**





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

AND

IN THE MATTER of Lots 1 & 2 being a subdivision of Part Lot 9 DP22550, Block VIII, Shotover Survey District, being all of the land in Certificate of Title 19C/37 (Otago Land Registry).

CONSENT NOTICE

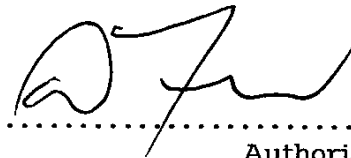
Background

- A. Gordon George Cossens, Margaret Rosalie Cossens, John James Cossens, Patricia Josephine Cossens and Samuel Richard Crush have applied to the Queenstown-Lakes District Council pursuant to the provisions of the Resource Management Act 1991 for its consent to subdivide Part Lot 9 DP22550, Block VIII, Shotover Survey District.
- B. On 18 July 2000, consent was granted by the Queenstown Lakes District Council to the proposed subdivision subject to a condition which is required to be complied with by the subsequent owner(s) of the land being in the condition noted in the Operative Part hereof.

Operative Part

1. The condition pertaining to this Consent Notice is to be registered against the certificates of title issued for Lot 2 of this subdivision consent.
2. The condition which is the subject of this Consent Notice is that:
 - (a) No new structure or part of a new structure constructed on Lot 2 of the subdivision shall be located to preclude existing 4-wheel drive access to the support towers on the lot.
 - (b) No new building or part of a building constructed on Lot 2 of the subdivision shall be located closer than 8.0m from a Transpower line or tower.

DATED at Queenstown this 27th day of April 2001.



.....
Authorised Officer

IN THE MATTER

of Subdivision Consent pursuant to Sections 105, 220 and 221 of the Resource Management Act 1991.

AND

IN THE MATTER

of Lots 1 & 2 being a subdivision of Part Lot 9 DP22550, Block VIII, Shotover Survey District, being all of the land in Certificate of Title 19C/37 (Otago Land Registry).

CONSENT NOTICE

**NOEL BONISCH LIMITED
REGISTERED SURVEYORS
QUEENSTOWN**



RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




R.W. Muir
Registrar-General
of Land

Identifier **5890**
Land Registration District **Otago**
Date Issued 09 July 2001

Prior References
OT19C/37

Estate Fee Simple
Area 18.0450 hectares more or less
Legal Description Lot 2 Deposited Plan 301351
Registered Owners
Sharyn Kathleen Robertson

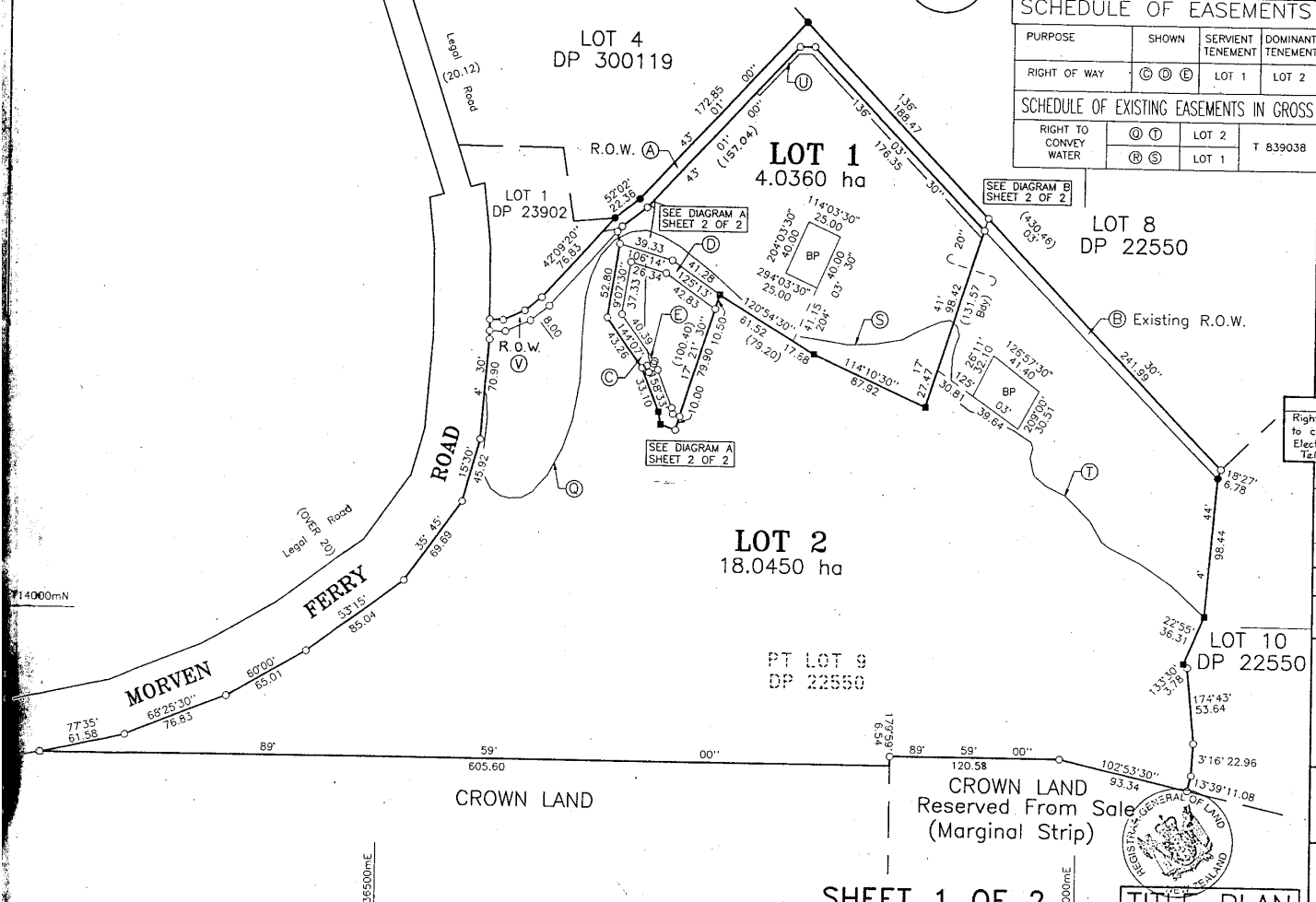
Interests

Appurtenant hereto are rights to convey water specified in Easement Certificate 808908.11 - 3.7.1992 at 11:08 am
Subject to rights of way, rights to convey, water, electricity & telecommunications over parts marked V,A,B DP 301351 specified in Easement Certificate 808908.11 - 3.7.1992 at 11:08 am
The easements specified in Easement Certificate 808908.11 are subject to Section 309 (1) (a) Local Government Act 1974
Fencing Covenant in Transfer 820460.1 - 16.12.1992 at 10.20 am
Land Covenant in Deed 828862.5 - 30.4.1993 at 9.22 am
Subject to a right to convey water in gross over parts marked Q,T DP 301351 in favour of Arrow Irrigation Company Limited created by Transfer 839038 - 22.9.1993 at 10:08 am
Subject to a right of way, right to convey water, electricity & telecommunications over part marked V DP 301351 created by Transfer 985913.3 - 30.3.2000 at 9:28 am
Subject to a right of way, right to convey water, electricity & telecommunications over part marked V DP 301351 created by Transfer 985913.4 - 30.3.2000 at 9:28 am
Land Covenant in Deed 985913.5 - 30.3.2000 at 9.28 am
5056709.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 9.7.2001 at 10:18 am
Appurtenant hereto is a right to convey water and a right of way specified in Easement Certificate 5056709.8 - 9.7.2001 at 10:18 am
Subject to a rights of way, rights to convey water, electricity & telecommunications over parts marked V,A DP 301351 specified in Easement Certificate 5056709.8 - 9.7.2001 at 10:18 am
The easements specified in Easement Certificate 5056709.8 marked V,A & U DP 301351 are subject to Section 243 (a) Resource Management Act 1991
Land Covenant in Deed 5071558.2 - 15.8.2001 at 9:39 am
Appurtenant hereto is a right to convey electricity created by Easement Instrument 8215419.1 - 27.7.2009 at 12:07 pm
Appurtenant hereto is a right to convey water created by Easement Instrument 9393508.5 - 9.5.2013 at 3:13 pm
Subject to a right of way over part marked A on DP 542874 created by Easement Instrument 11734231.1 - 5.8.2020 at 2:03 pm

Appurtenant hereto is a right of way created by Easement Instrument 11734231.1 - 5.8.2020 at 2:03 pm

12188672.2 CAVEAT BY AURORA ENERGY LIMITED - 21.7.2021 at 9:54 am

Subject to a right (in gross) to convey electricity over part marked A and B and right to install and maintain an electricity transformer over part marked B all on DP 564457 in favour of Aurora Energy Limited created by Easement Instrument 12191673.2 - 13.8.2021 at 9:56 am



SCHEDULE OF EXISTING EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
Right of Way, Right to convey Water, Electricity & Telecommunications	(V)	LOT 2	T 985913-3 T 985913-4

SCHEDULE OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
RIGHT OF WAY	(C) (D) (E)	LOT 1	LOT 2

SCHEDULE OF EXISTING EASEMENTS IN GROSS			
RIGHT TO CONVEY WATER	(U) (T) (S)	LOT 2 LOT 1	T 839038

Approvals

I hereby certify that this plan was approved by the Queenstown Lakes District Council pursuant to Section 223 of the Resource Management Act 1991 on the 30th day of MARCH 2001 subject to the granting or restoring of the easement set out in the Memorandum hereon.

[Signature]
Authorised Officer

NOTE 1: BP = Building Platform

NEW C.T.S ALLOCATED

CT 5889 - LOT 1 DP 301351
CT 5890 - LOT 2 DP 301351

MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
RIGHT OF WAY RIGHT TO CONVEY ELECTRICITY WATER AND TELECOMMUNICATIONS	(V) (A)	LOT 2	LOT 1
RIGHT TO CONVEY WATER	(U)	LOT 1	LOT 2

SCHEDULE OF EXISTING EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
Right of Way, Right to convey Water, Electricity & Telecommunications	(V) (A) (B)	LOT 2	T 985913-3 T 985913-4
RIGHT TO STORE WATER	(F)	LOT 1	EC 808908/11
RIGHT TO CONVEY WATER	(C) (H) (I) (J) (K) (L) (M) (N) (O) (P)	LOT 1	

CLASS I SURVEY

Total Area 22.0810 ha

Comprised in CT.0119C/37 (All)

I, Merryn Kay Maguire being a person entitled to practise as a Registered Surveyor certify that -

(a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Survey Act 1986 and the Survey Regulations 1988;

(b) This dataset is accurate, and has been created in accordance with that Act and those Regulations.

Dated at Queenstown, this 15th day of October, 2000. Signature *M.K. Maguire*

Field Book p. Traverse book p.

Reference Plans

Examined Correct

Approved as to Survey

21/6/01 *[Signature]* Chief Surveyor

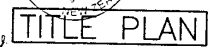
Deposited this 7 day of July, 2009

[Signature] for Registrar General of Land

File Received 18/4/01 Instructions

DP301351

SHEET 1 OF 2



LAND DISTRICT OTAGO

Survey Blk. & Dist. VIII Shotover S.D.

WMS 261 SHT RECORD MAP No

LOTS 1 AND 2 BEING A SUBDIVISION OF PT LOT 9 DP 22550

BLOCK VIII SHOTOVER SURVEY DISTRICT

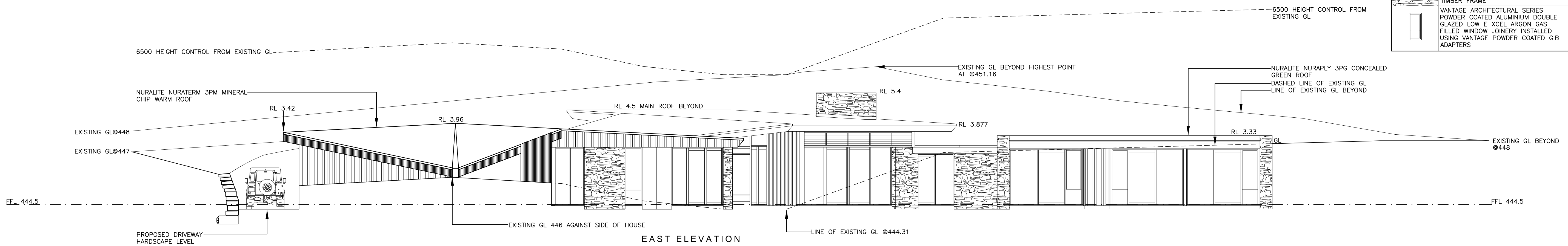
TERRITORIAL AUTHORITY Q-Town Lakes District Council

Surveyed by NOEL BONISCH LIMITED

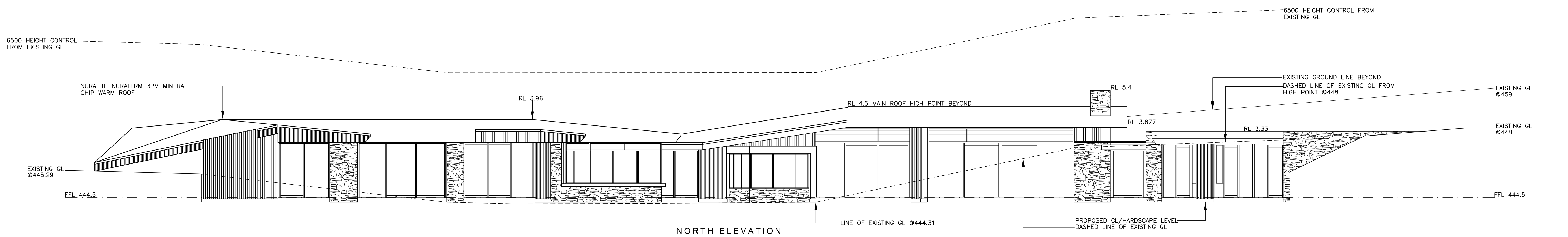
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*APPROVED WITH 97/4

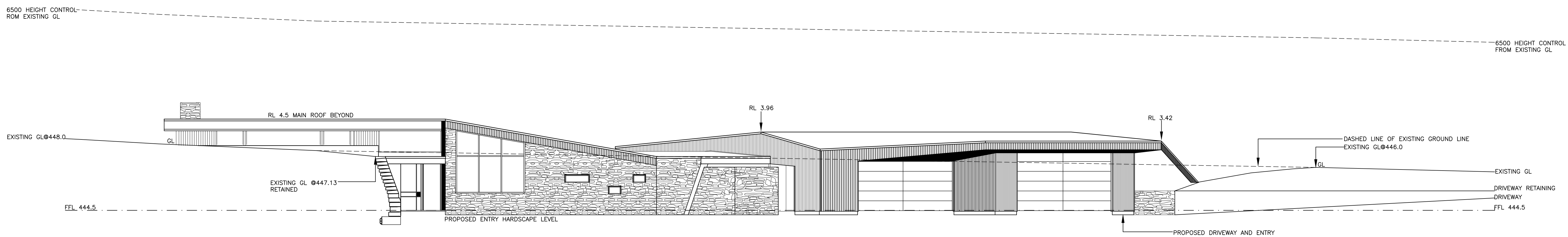
LEGEND	
MATERIAL	CONSTRUCTION
	ROSENFELD KIDSON RK55 VERTICAL SHIP LAP STAINED CEDAR WEATHERBOARD OVER H3.1 20MM CAVITY BATTEN OVER KINGSPAN 30MM RIGID FOIL FACED INSULATION OVER 7MM ECOPLYWOOD RIGID BARRIER OVER FRAME
	200MM STACKED STONE VENEER TIED OVER 4.5 HARDS F.C SHEET OVER 40MM CAVITY OVER KINGSPAN 30MM FOIL FACED RIGID INSULATION OVER 7MM ECOPLY OVER 140MM H1.2 TIMBER FRAME
	VANTAGE ARCHITECTURAL SERIES POWDER COATED ALUMINIUM DOUBLE GLAZED LOW E XCEL ARGON GAS FILLED WINDOW JOINERY INSTALLED USING VANTAGE POWDER COATED GIB ADAPTERS



EAST ELEVATION



NORTH ELEVATION

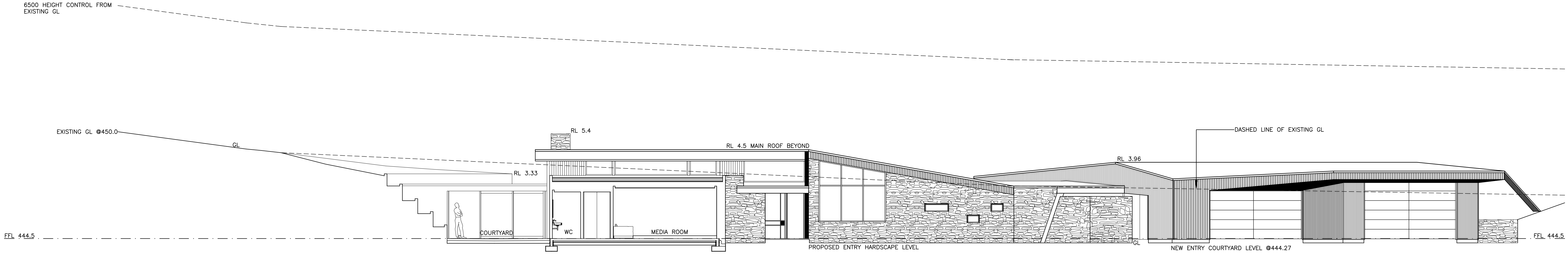


SOUTH ELEVATION

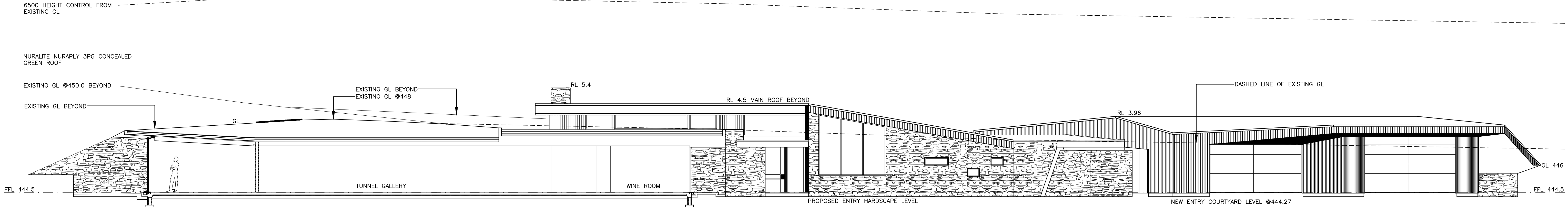
				DESIGNED:	HADEN EMSLIE	JUNE 2020	PROPOSED DWELLING 346 MORVEN FERRY ROAD ARROW JUNCTION, QUEENSTOWN ELEVATIONS	COPYRIGHT ©		
				DRAWN:	HE	JUNE 2020		These drawings shall only be used for the purpose for which they were supplied. Any reuse is prohibited and no part of this document may be reproduced or distributed without the written permission of HEAL.		
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				CONSULTING ENGINEER:			Job No.	Sheet No.	Issue.	
							22 2021	A301	E	
E	GLS, FFL AND RL'S ADDED	12/06/23	HEAL							
D	RL'S ADDED, NOTES ADDED	27/03/23	HEAL							
C	CLIENT DEVELOPED DESIGN CHECK, ELEVATIONS	12/04	HEAL							
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL							
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL							
ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL			



LEGEND	
MATERIAL	CONSTRUCTION
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SOUTH ELEVATION 2



SOUTH ELEVATION 3
THRU LOGGIA, TUNNEL AND WINE ROOM



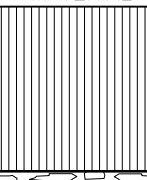
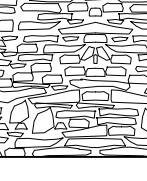
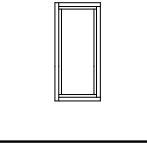
Level 1, 18 Bagley Avenue,
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New Zealand
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www.emalia.co.nz

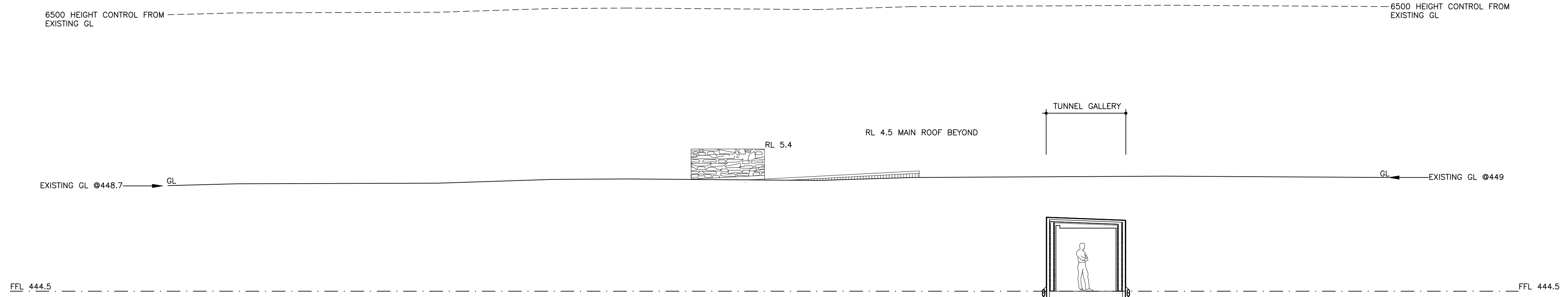
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E	GLS, FFL AND RL'S ADDED	12/06/23	HEAL				

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CONSULTING ENGINEER:		

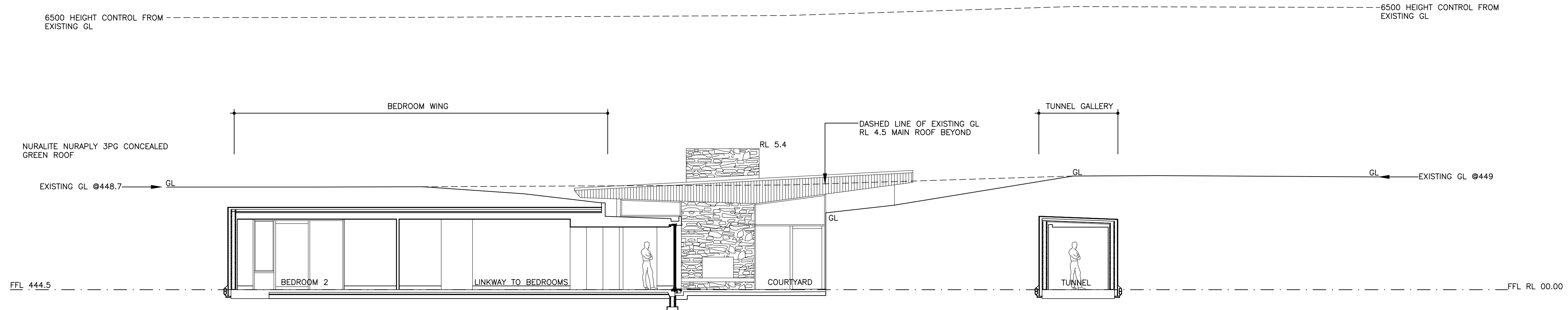
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ELEVATIONS

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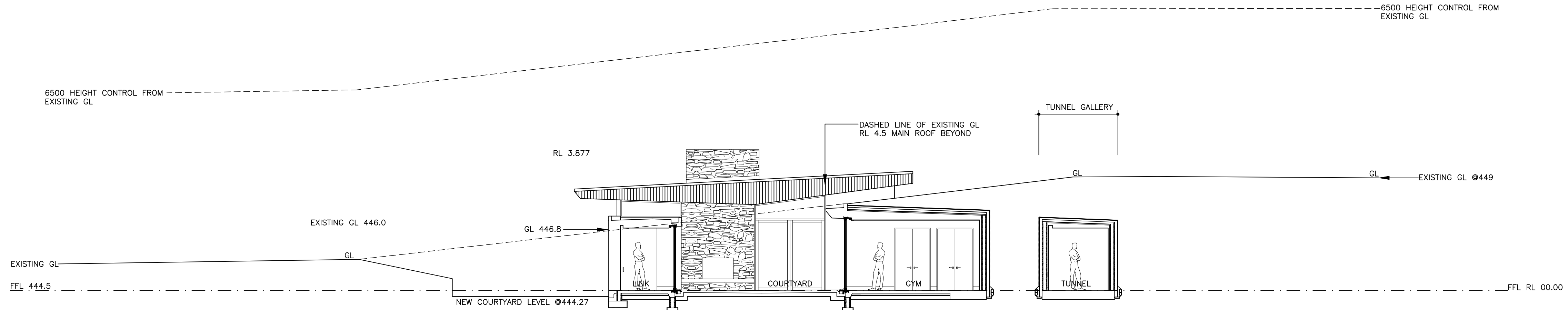
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WEST ELEVATION
TAKEN THRU. TUNNEL AT MID POINT



WEST ELEVATION 2, SECTION AA
TAKEN THRU. BEDROOM WING, CENTRAL COURT AND TUNNEL



WEST ELEVATION 3, SECTION BB
TAKEN THRU. CENTRAL COURT, GYM AND TUNNEL

ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
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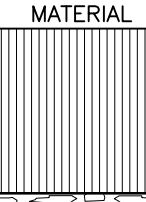

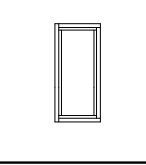
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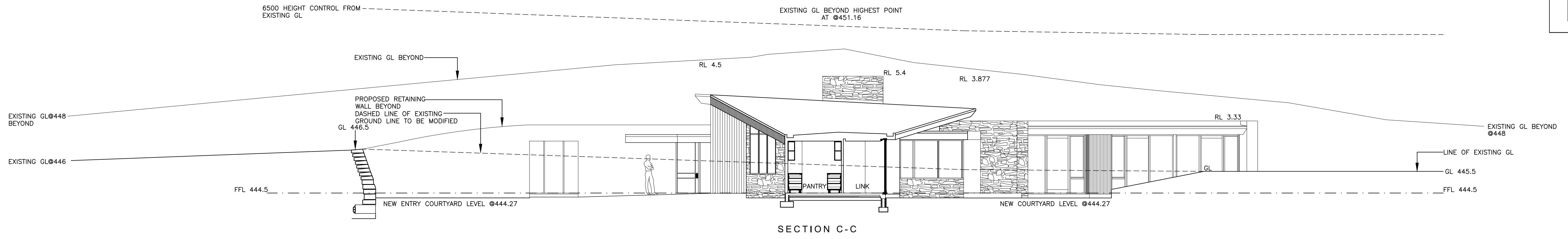
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ELEVATIONS

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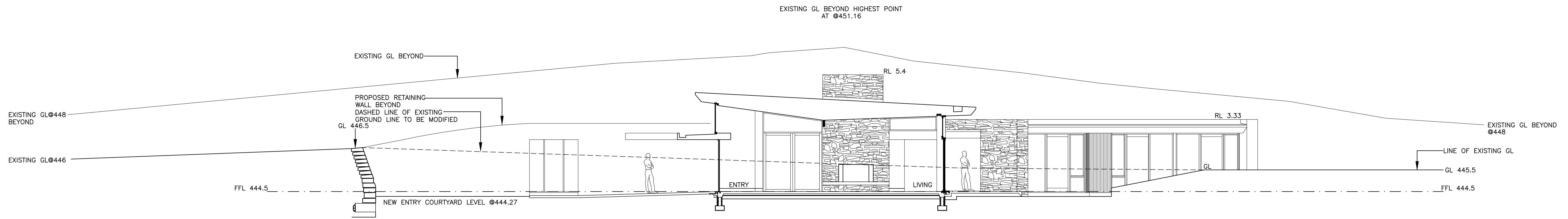


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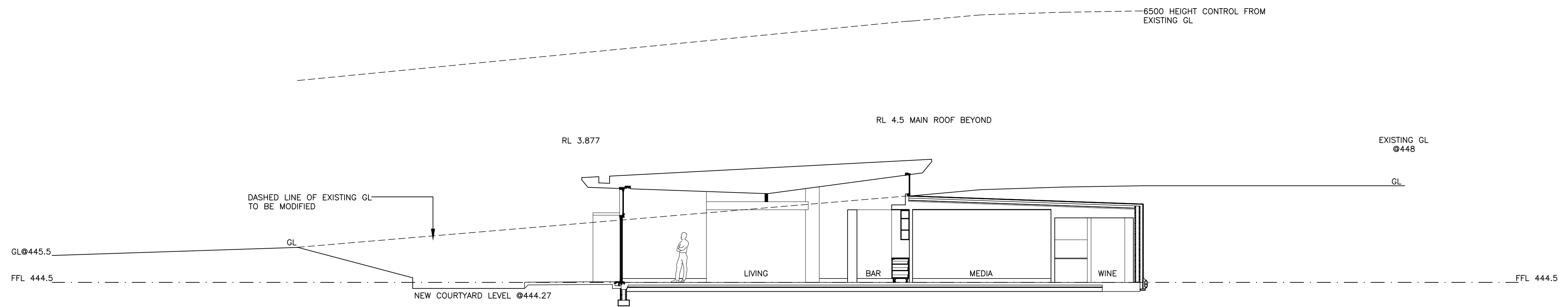
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SECTION C-C



SECTION D-D



SECTION E-E



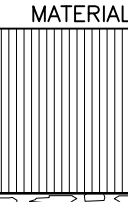

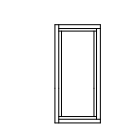
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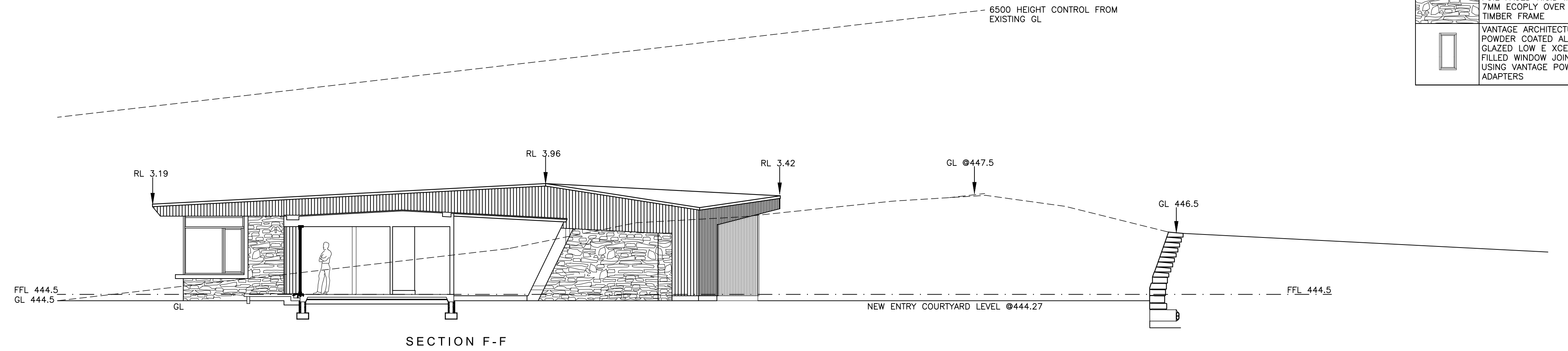
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E	GLS, FFL AND RL'S ADDED	12/06/23	HEAL				

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CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

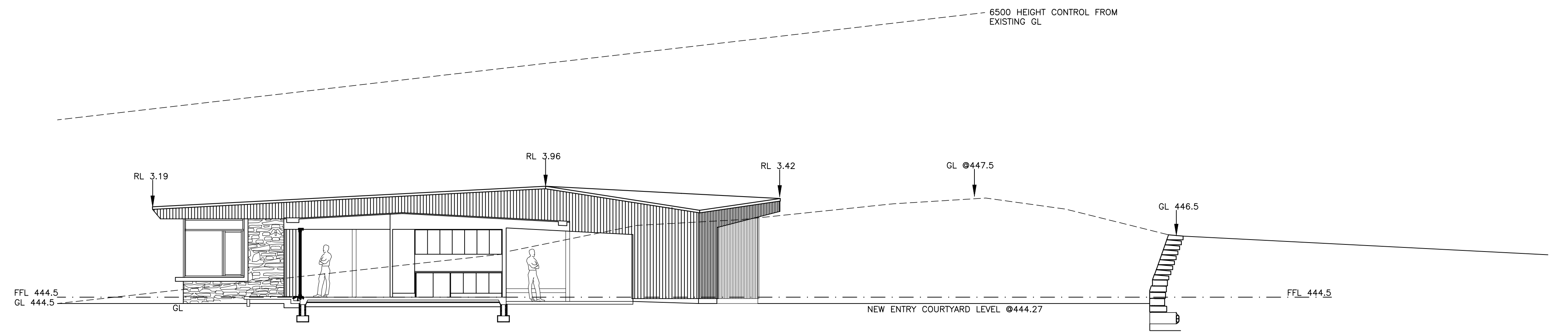
PROPOSED DWELLING 346 MORVEN FERRY ROAD ARROW JUNCTION, QUEENSTOWN	
ELEVATIONS	

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Scale: 1:100		
Job No.	Sheet No.	Issue.
22 2021	A304	E

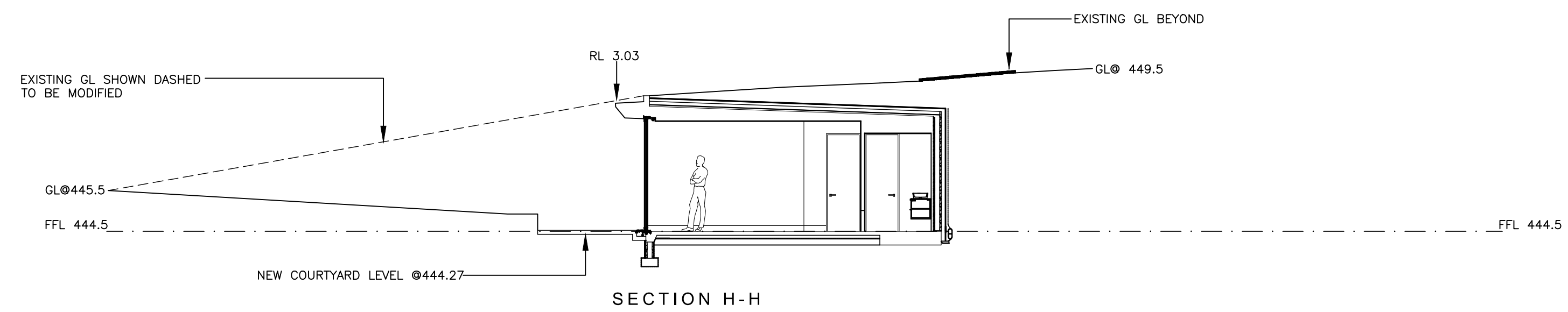
LEGEND	
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SECTION F-F



SECTION G-G



SECTION H-H



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 Christchurch
 New Zealand
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 Email: info@emslie.co.nz
 www.emslie.co.nz

ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
E	GLS, FFL AND RL'S ADDED	12/06/23	HEAL				

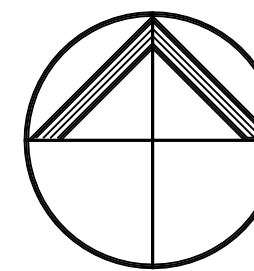
DESIGNED:	HADEN EMSLIE	JUNE 2020
DRAWN:	HE	JUNE 2020
CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING
 346 MORVEN FERRY ROAD
 ARROW JUNCTION, QUEENSTOWN

ELEVATIONS

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Scale: 1:100		
Job No.	Sheet No.	Issue.
22 2021	A305	E





LEGAL DESCRIPTION

LOT 2, DP301351
346 MORVEN FERRY ROAD
LOT AREA 18.0450 ha
CERT TITLE REF: 5890
VAL NUMBER: 2907132308

LOT 8
DP 22550

LOT 1
DP 301351
336 MORVEN FERRY ROAD

LOT 1
DP 23902

MORVEN FERRY ROAD

SECTION 33
BLOCK VIII
SHOTOVER SD

EXISTING BUILDING PLATFORM
RURAL GENERAL ZONE
PDP S1 & S2 DECISIONS: ZONE
ZONEWAKATIPU BASIN RURAL
AMENITY ZONE

EXISTING SHED AND STOCK YARDS

EXISTING OVERHEAD POWER LINES

LOT 2
DP 301351
RT5890
18.045HA

LOT 10
DP22550

EXISTING FENCE LINE

TOP OF BANK

PROPOSED CURTLAGE AREA

EXISTING CONTOURS
DASHED LINE OF EXISTING
CONTOURS TO BE MODIFIED, REFER
TO LANDSCAPE ARCHITECT FOR
DETAILED SITE LEVELS
EXISTING FENCE LINE

EXISTING 4WD TRACK TO BE UPGRADED TO FORM
NEW DRIVEWAY TO PROPOSED DWELLING, REFER TO
CFM DOCUMENT PACKAGE

INTERNAL BDY

PROPOSED DWELLING
FFL 444.5

EXISTING FENCE LINE

EXISTING IRRIGATION TANK

CROWN LAND BLOCK VIII
SHOTOVER SURVEY DISTRICT

KAWARAU RIVER BELOW



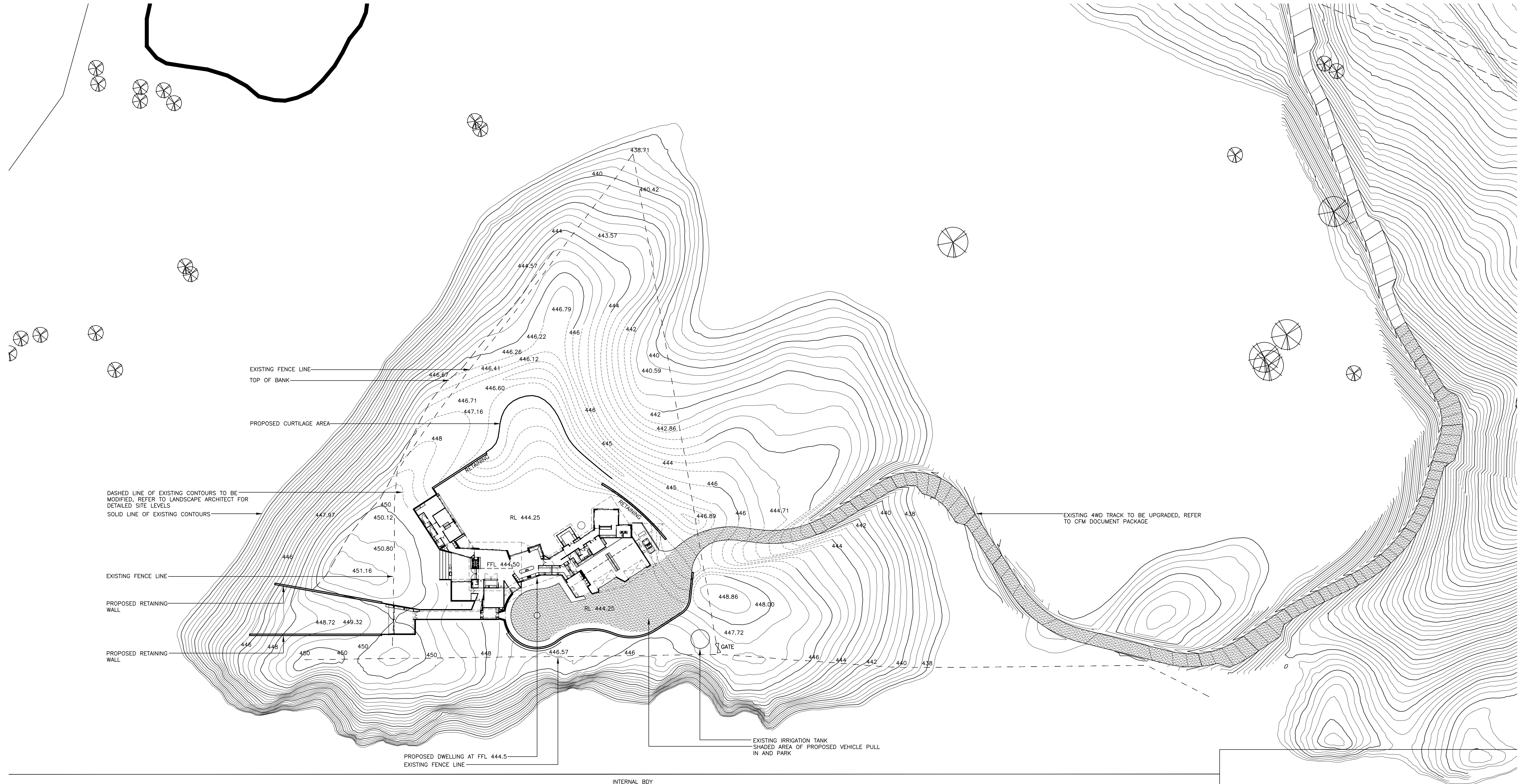
Level 1, 18 Bagley Avenue,
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Tel: +64 3 365 1111
Email: info@heal.co.nz
www.heal.co.nz

ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
C	UPDATE FOR CFM	03/11	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

DESIGNED:	HADEN EMSLIE	JUNE 2020
DRAWN:	HE	JUNE 2020
CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING 346 MORVEN FERRY ROAD ARROW JUNCTION, QUEENSTOWN
LOCATION PLAN

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Date: 23/06/20		
Scale: 1:1500		
Job No. 22 2021	Sheet No. C101	Issue. C



ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
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B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

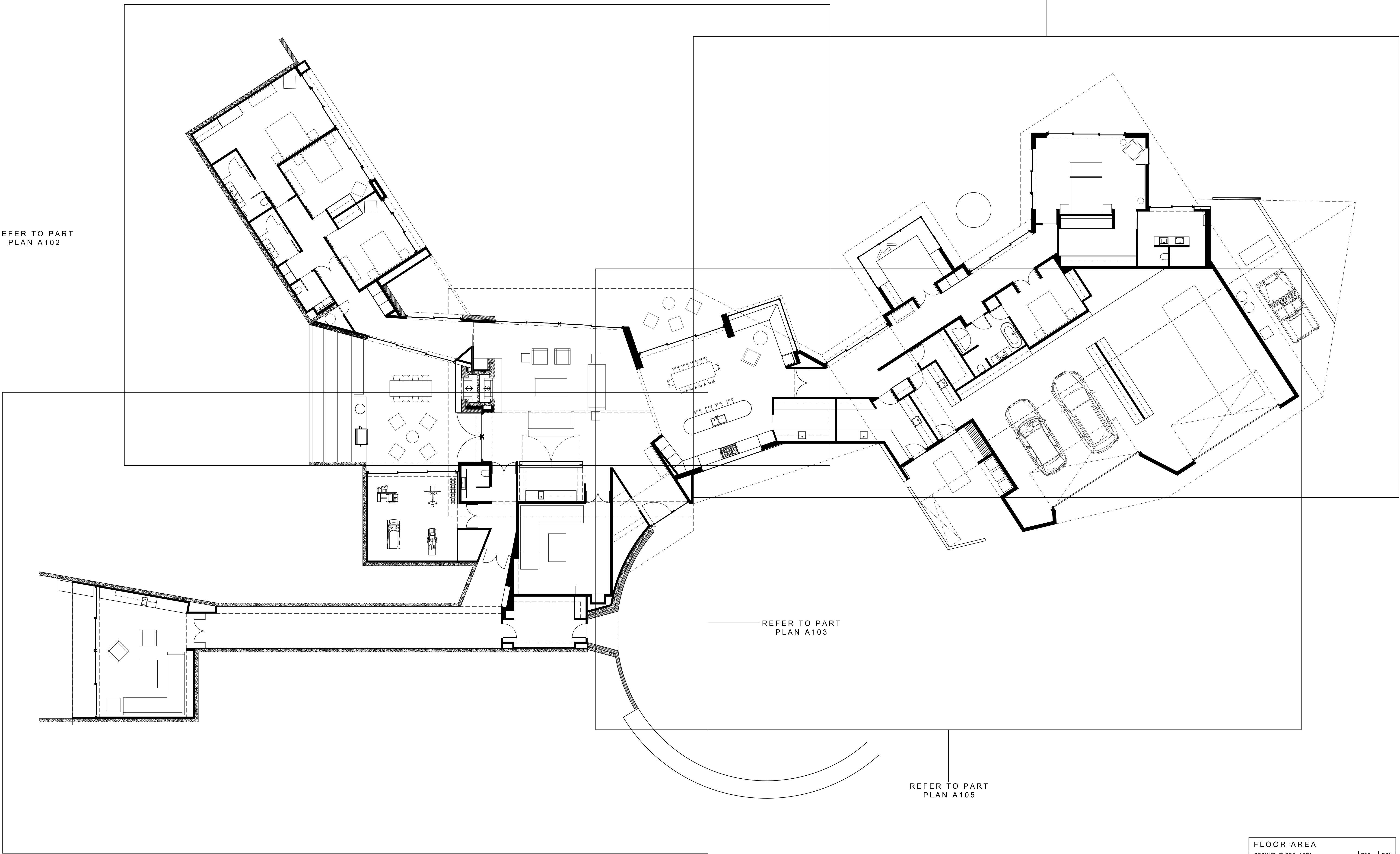
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DRAWN:	HE	JUNE 2020
CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING 346 MORVEN FERRY ROAD ARROW JUNCTION, QUEENSTOWN
SITE PLAN

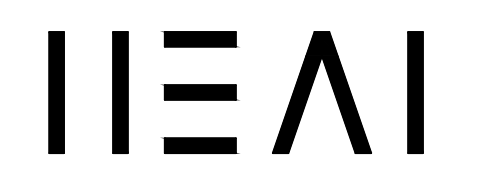
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Job No.	Sheet No.	Issue.
22 2021	C102	C

REFER TO PART
PLAN A104

REFER TO PART
PLAN A102



FLOOR AREA		
GROUND FLOOR AREA	798	SQM
TOTAL FLOOR AREA	798	SQM



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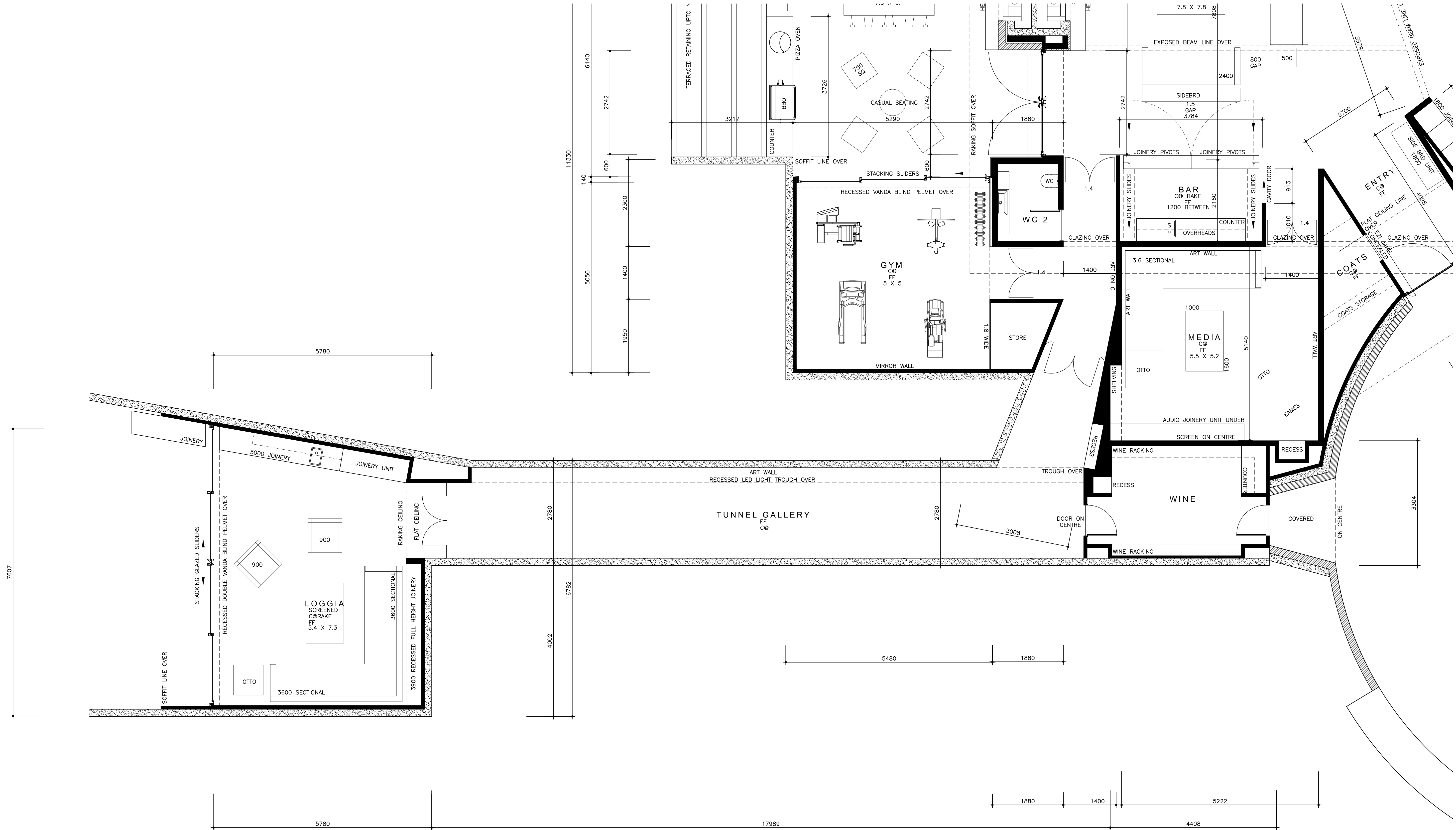
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C	FLOOR AREA ADDED	27/04/23	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

DESIGNED:	HADEN EMSLIE	JUNE 2020
DRAWN:	HE	JUNE 2020
CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING
346 MORVEN FERRY ROAD
ARROW JUNCTION, QUEENSTOWN

MASTER FLOOR PLAN

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22 2021	A101	C



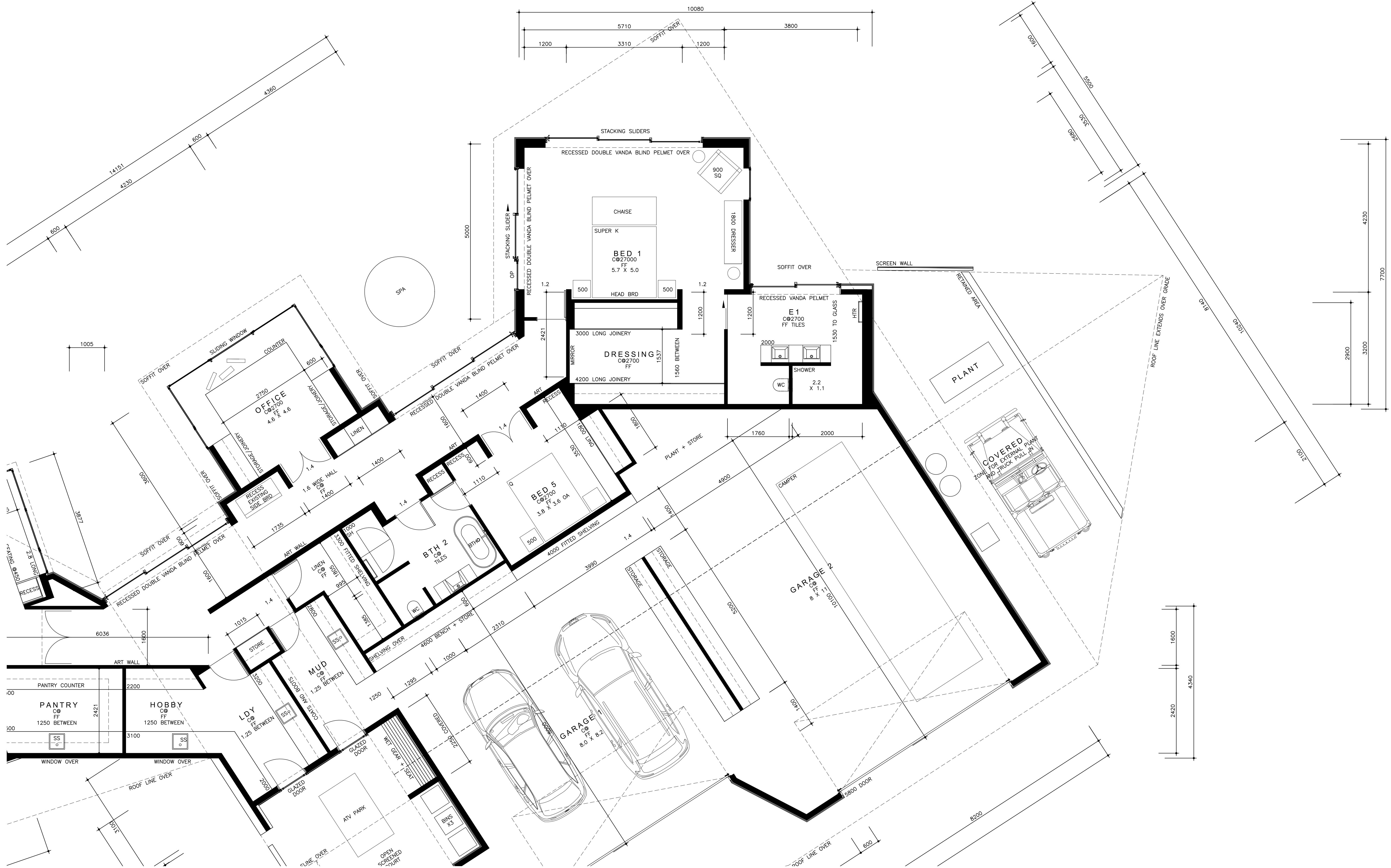
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C	CLIENT DEVELOPED DESIGN CHECK, ELEVATIONS	12/04	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

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PROPOSED DWELLING	
346 MORVEN FERRY ROAD	
ARROW JUNCTION, QUEENSTOWN	
PART FLOOR PLAN 2	

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22 2021	A103	B



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C	CLIENT DEVELOPED DESIGN CHECK, ELEVATIONS	12/04	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

DESIGNED:	HADEN EMSLIE	JUNE 2020
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CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING
 346 MORVEN FERRY ROAD
 ARROW JUNCTION, QUEENSTOWN

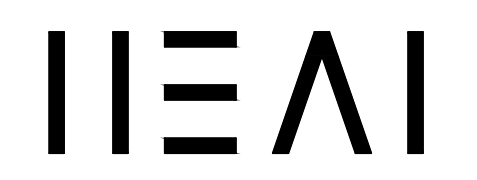
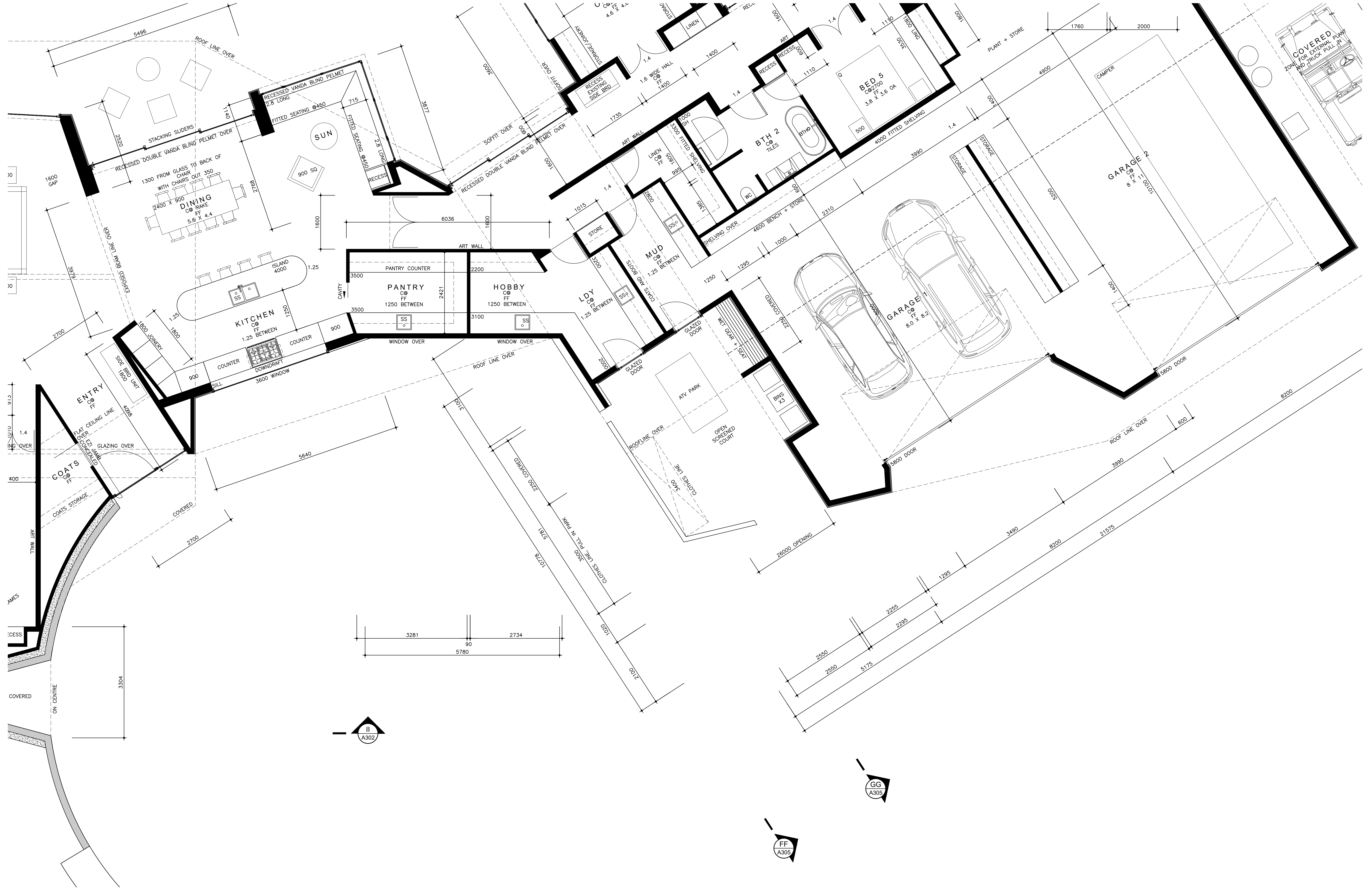
PART FLOOR PLAN 3

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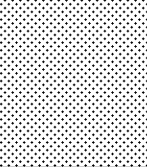

ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
C	CLIENT DEVELOPED DESIGN CHECK, ELEVATIONS	12/04	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

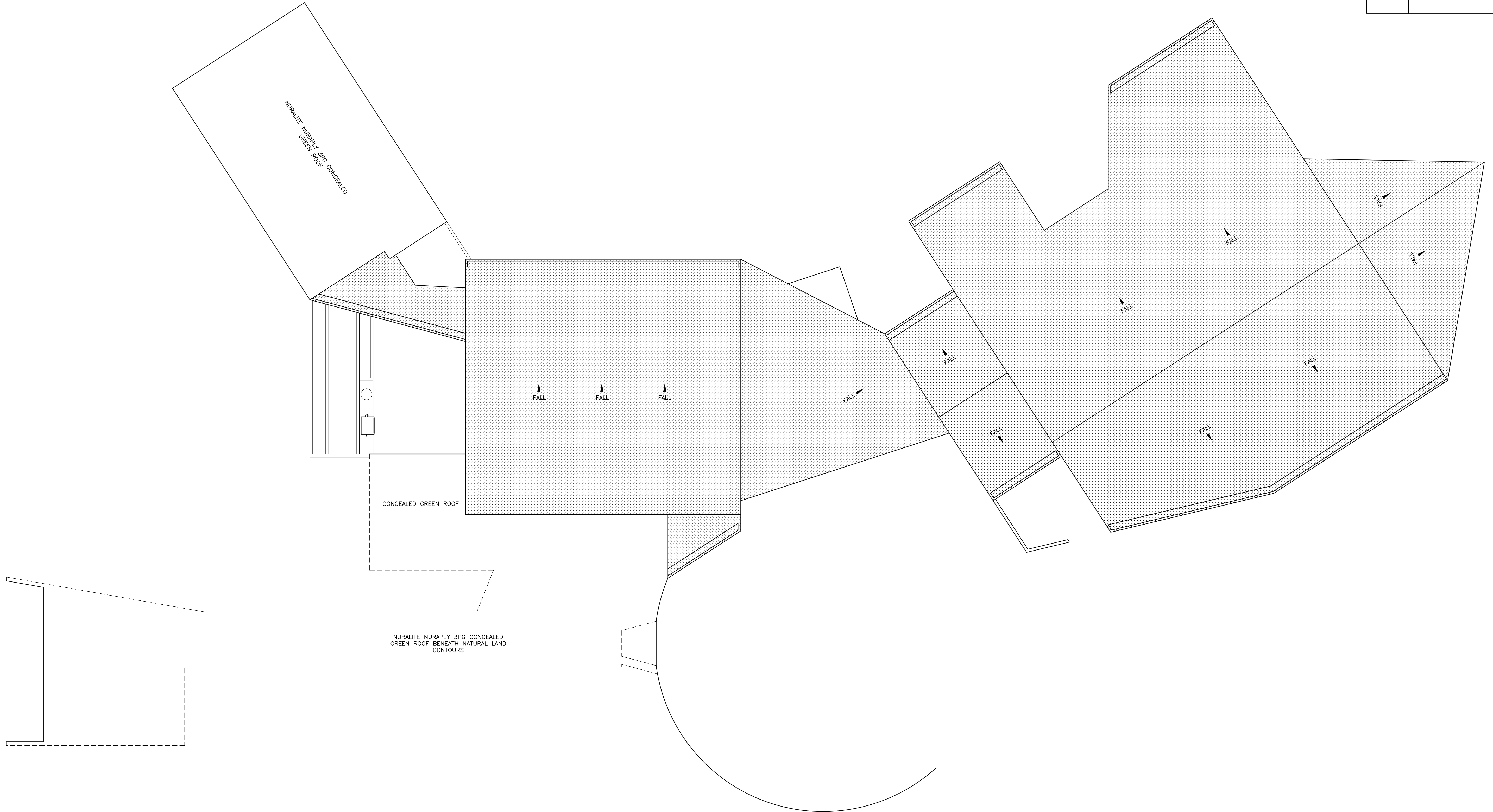
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22 2021	A105	B

PROPOSED DWELLING
 346 MORVEN FERRY ROAD
 ARROW JUNCTION, QUEENSTOWN

PART FLOOR PLAN 4

ROOFING KEY	
	NURALITE NURATERM 3PM MINERAL CHIP WARM ROOF
	NURALITE NURAPLY 3PG CONCEALED GREEN ROOF BENEATH NATURAL LAND CONTOURS



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ISSUE	AMENDMENTS	DATE	INITIAL	ISSUE	AMENDMENTS	DATE	INITIAL
D	KEY AND HATCH PATTERN ADDED	27/03/23	HEAL				
C	CLIENT DEVELOPED DESIGN CHECK, ELEVATIONS	12/04	HEAL				
B	HOUSE FOOTPRINT SHIFT	03/03	HEAL				
A	CLIENT DEVELOPED DESIGN CHECK	16/02	HEAL				

DESIGNED:	HADEN EMSLIE	JUNE 2020
DRAWN:	HE	JUNE 2020
CHECKED:		
CAD REF:	2020 : 2021 HENSMAN	
CONSULTING ENGINEER:		

PROPOSED DWELLING 346 MORVEN FERRY ROAD ARROW JUNCTION, QUEENSTOWN
ROOF PLAN

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22 2021	A105	D

Landscape Assessment Report

Robertson

346 Morven Ferry Road

19 June 2023



Document prepared by	Steve Skelton
Document reviewed by	Felipe Braga
Status	Resource Consent
Issued	19 June 2023

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1. INTRODUCTION

1.1. This report provides an assessment of the actual and potential landscape character and visual amenity effects of a proposed dwelling, establishment of a residential building platform (BP), associated access, earthworks, and landscaping on a site located at Morven Ferry Road. The report includes the following:

- A description of the landscape,
- A description of the proposal,
- Methodology,
- A landscape assessment,
- Conclusions,
- Recommendations,
- Appendix A – Assessment Table,
- Attachment A and Images.

2. DESCRIPTION OF THE LANDSCAPE

2

2.1. The subject site is legally described as Lot 2 DP 301351. It is irregular in shape and occupies 18.045ha of land near the eastern extents of the Wakatipu Basin. A small portion of the site's lower, northern extents occupies a part of the flatlands which are included in Landscape Character Unit 18, Morven Eastern 'Foothills' (LCU 18). The larger balance of the site occupies the hill slopes of a hill east of the feature known as Punt Hill (Pt 500). The site's hill feature is part of the Kawarau River Outstanding Natural Feature (ONF). For the balance of this report, the site's hill feature will be referred to as 'Punt Hill East'.

2.2. The site occupies most of the north, east and west facing, gentle and undulating slopes of Punt Hill East. The southern site boundary runs virtually across the southern crest of the hill. The land south of this crest and boundary is steep, densely vegetated land which drops down to the Kawarau River. The steep hill slopes south of the site are managed by the Department of Conservation (DoC). The easternmost, formed portion of Morven Ferry Road ends near the site's western boundary where a legal, unimproved portion of road continues to the west and south to access the Kawarau River. A private road follows the site's north-western and northern boundary, providing access to adjacent rural and rural living properties.

- 2.3. The site is predominantly covered in low producing grassland and weeds. It's cover perpetuates a modified character of degraded pastureland atop an otherwise natural landform. Near the northern base of Punt Hill East, the western extents of the Arrow Irrigation Scheme cross the site. The ONF / LCU18 boundary generally follows this water race. North of the water race, on a flatter portion of the site is an approved BP (RM000008) which will be relinquished as part of the proposal. The area around this approved BP is framed by mature trees. Just east of the trees is an existing implement shed and stock yards.
- 2.4. An existing farm track accesses the site from the west, crosses the lower slopes of Punt Hill East, then climbs up the northern and eastern faces of the mount to reach the rolling pastoral humps and hollows on the upper portions of Punt Hill East. The dwelling is proposed in the central hollow of the hill.
- 2.5. The site is part of a complex landform at the eastern extents of the Wakatipu Basin, near where the Basin, the Kawarau River ONF, the Arrow River ONF, The Remarkables ONL and the Crown Terrace ONL intersect. It is identified as part of the Kawarau River ONF Landscape Priority Area 21.22.9.
- 2.6. The Kawarau ONF is a dramatic river corridor, originating from the outlet of Lake Wakatipu's Frankton Arm and extending to the surface of Lake Dunstan near Bannockburn. The river is largely characterised by the gorges and steep hillslopes which contain it and the usual bright blue colour the river surface highlights the landscape. The river's margins are clad in pockets of native vegetation and weed species (briar), often corresponding to gullies and gaps in exposed schist escarpments. The steep relief which often dominates the Kawarau River corridor is broken by areas where natural landslides, alluvial terraces and deposited gravel banks provide flat areas of land. These flat areas are generally grazed, if accessible and the river edge is mostly lined in willows.
- 2.7. To the north of the Kawarau River (and west of the site) is the *Roche Moutonnée* feature known as Morven Hill (Pt 750). Morven Hill is the dominant landscape feature north of the Kawarau River and south and southwest of the Crown Terrace. The mounts Punt Hill and Punt Hill East present as 'little sitters' to their much larger Morven Hill relative to the west.

- 2.8. Other notable landscape features in the area include the Arrow River Gorge which exists approximately 400m north of the site, the Swiftburn Falls which cascade down from the Crown Terrace approximately 1km east of the site and the rock feature known as the Judge and Jury which protrude into the skyline approximately 1.6km east of the site. The land east of the Judge and Jury is part of the Gibbston Valley.
- 2.9. Public walking and biking trails contour across the surrounding landform. The Twin Rivers portion of the Queenstown Trail follows the northern margins of the Kawarau River, from the Frankton Arm outlet to the confluence of the Shotover River. Then the trail passes near the peri-urban areas of Shotover Country and Lake Hayes Estate before crossing the steep, southern foot of Morven Hill. The Twin Rivers Trail meets The Arrow River Bridges Trail near the intersection of Morven Ferry Road and Arrow Junction Road. The Arrow River Bridges Trail crosses the Arrow River gorge north of the subject site and then contours around the base of the Crown Terrace, before accessing the Gibbston area, east of the Judge and Jury feature.
- 2.10. While the subject site is mostly within the Kawarau River ONF, the east, north and west facing slopes are closely associated with the pasturelands of LCU 18 in terms of colour, texture and landcover. When viewed in isolation, the mounts of Punt Hill and Punt Hill East are certainly outstanding. However, in the context of the memorable qualities of the surrounding ONF and ONL features described above, Punt Hill and Punt Hill East play a minor role in forming the overall appreciation of the landscape and its outstanding and memorable qualities.

3. DESCRIPTION OF THE PROPOSAL

- 3.1. The complete details of the proposal are contained within the Assessment of Environmental Effects. In summary, the proposal seeks approval for a proposed dwelling, BP, associated access and earthworks.
- 3.2. The proposed dwelling will be a low, architecturally designed house set in the southern part of the property within an existing hollow in the landform near the upper part of Punt Hill East. It will be near the hill's southern crest which drops down to meet the Kawarau River.
- 3.3. The proposed dwelling will be no more than 4.5m in height from proposed ground (with a chimney at 5.4m). It will cover a total floor area of 798m². It will have a sloping, mono-pitch roof form. It will be clad in a mix of vertical shiplap cedar weatherboard with a 'Lightoak' stain and

recessed mortar, local schist stone. Joinery will be powder coated aluminium in an Matt Flaxpod (LRV 6%). The roof will be flat and covered in either earth (vegetated) or a dark 'slated' mineral chip. mix of X (LRV x %) and earth. Where the roof is earth, it will be covered in pasture grass or tussock.

- 3.4. The landscape design will nest the proposed dwelling into an existing hollow on the hill and proposed earthworks which will mimic the landform and completely mitigating public views of the dwelling from SH6. The earthworks will see an increase in the landform's subtle ridge, north and northeast of the proposed dwelling, increasing the height of the landform. Other landform modification is proposed east of the dwelling to mitigate views of the dwelling form easterly locations. A part of the proposed dwelling will extend through the landform to access the west slope of the Punt Hill East via an underground tunnel. Areas of fill are proposed on the slopes below the proposed dwelling. The proposed earthworks will mimic the soft, rolling contours of the land as viewed externally while internally, minor retaining walls will create two small flat areas for circulation to the south of the building and residential amenity to the north.
- 3.5. A set of recommendations are provided at the end of this report. These recommendations seeks to ensure that the development, once complete and with particular regard to earthworks, will appear consistent with the landscape's rural and natural character values and will not act to highlight any domestic effects.
- 3.6. The proposed dwelling will be accessed by a 675m long, gravel driveway. The driveway will enter the site near the existing farm track access off Morven Ferry Road. The proposed driveway will follow the line of trees near the site's northern boundary before meandering up the lesser slopes to meet the existing farm track cut across Punt Hill East's easter slopes. The driveway will require passing bays and earthworks and associate earthworks

4. METHODOLOGY

- 4.1. Patch was involved in this project from the initial design phase. We worked closely with the architect to develop a plan which sets the dwelling into the landform while allowing for subtle earthwork modification which will render the building not visible from public places. Working in computer modelling software, using field studies and surveyed building poles, we set the proposed finished floor level of the dwelling and circulated landform modification plans to the surveyors for confirmation and calculation. The proposed driveway was designed by others.

4.2. In undertaking the assessment, profile poles were erected on site at selected corners of the proposed dwelling and near the peak of the proposed earthworks. The profile poles were viewed from key locations along public roads and trails. Photographs were taken using a DSLR camera. We created visual simulations to depict what parts of the proposal may be visible and determine how the landform modification may change landscape character and visual amenity values. These photographs and simulations are attached to this report (**Attachment A and Images 1-8**).

4.3. The effects of the proposal were then considered within the frame of the Proposed District Plan.

Extent of Effect

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

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

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

4.5. This report uses the following definitions:

- **Landscape** – embodies the relationship between people and place: It is the character of an area, how the area is experienced and perceived, and the meanings associated with it. An area as perceived by people, including how the area is experienced, understood, interpreted, and regarded.
- **Landscape effect** – is a consequence of changes in a landscape's physical attributes on that landscape's values. Change is not an effect: landscapes change constantly. It is the implications of change on landscape values that are relevant. While an effect arises from changes to physical attributes, the consequences on landscape values relate to a landscape's physical, associative, and perceptual dimensions.
- **Visual effects** – are a subset of landscape effects. They are consequences of change on landscape values as experienced in views¹.

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

- Landscape – “Landscape embodies the relationship between people and place: it is the character of an area, how the area is experienced and perceived, and the meanings associated with it.”²

Landscape Category

4.6. In terms of the PDP, the site is in the Rural Zone and is shown as being part of the Kawarau River ONF. The site is located on parts of Punt Hill East near the Kawarau River. It is considered that ONF is the appropriate landscape category of the site.

Statutory Considerations

4.7. This report will provide an assessment of the proposal against the landscape relevant matters contained within Chapter 21, Rural Zone, Section 21.21.1 – Assessment Matters for Outstanding Natural Features and Outstanding Natural Landscapes and Chapter 25, Earthworks, 25.8.3 – Assessment Matters Landscape and Visual Amenity Values.

4.8. The notified Landscape Priority area for the Kawarau River ONF is also considered.

5. LANDSCAPE ASSESSMENT

Visibility Overview

5.1. The proposed earthworks will screen the dwelling from almost all public and private views. The following provides comment on the site’s visibility and what parts of the proposal may be visible from defined locations.

5.2. Below is a summary of the proposal’s potential visibility (**Attachment A and Images**).

- Proposed earthworks will screen the proposed dwelling from all SH6 and Queenstown Trail views to the north and east (**Images 1-7**).

² Ibid.

- Parts of the proposed driveway and associated earthworks will be visible intermittently through off-site vegetation for an approximately 1.6km long portion of SH6 (**Images 2 to 4**).
- The western ‘tunnel’ portion of the dwelling may potentially be visible from a short, distant portion of the Twin Rivers trail approximately 4.13km away (**Image 8**). The scale of the tunnel and associated earthworks will be small, and the proposal will be reasonably difficult to see in the context of the broadly visible receiving landscape.
- From some limited, elevated, private places on the Crown Terrace the proposal may be visible as it is viewed from above.

21.21.1 Proposed District Plan - Chapter 21 - Rural Zone

5.3. The PDP Assessment Matters in 21.21.1 are considered in detail and described in table format in **Appendix 1** to this report. The following is a summary of that more detailed assessment.

Effects on Landscape Quality and Character

5.4. The Kawarau River ONF is a river corridor between the Frankton Arm of Lake Wakatipu to Lake Dunstan (note, the District ends at Roaring Meg). The steep sided cliffs, mountain sides and terrace edges adjacent to the river margins creates a dynamic, incised feature across the landscape. That feature is punctuated by the mostly lightly blue colour of the surface of the Kawarau River. The other surrounding features such as Morven Hill, The Remarkables, The Arrow River Gorge, Swiftburn Waterfall, and Judge and Jury combine to render a memorable landscape. The lesser hills of Punt Hill and Punt Hill East, while certainly outstanding, are not physical features of distinction in the context of the wider, highly memorable receiving landscape. The proposal seeks to nest development into a hollow near the top of the lesser Punt Hill East and the dwelling will not be visible from the wider landscape. Once complete, the proposal will maintain the aesthetic values of the broader landscape, including memorability and naturalness to a very high degree.

5.5. The development will not be visible from or seen in the context of the Kawarau River and it will not have an adverse effect on the quality and character of the river. The legibility and expressiveness of the ONF and its formative processes will not be adversely affected by the proposal. The proposal will not have an adverse effect on the transient values of the landscape.

It will maintain the quality and character of the existing settlement and land management patterns and will appear subservient to the broader natural physical elements of the surrounding landscape while not adversely affecting any vegetation patterns. Overall, the proposal will protect the landscape values of the ONL.

Effects on Visual Amenity

- 5.6. A series of images and simulations attached (**Attachment A and Images**) to this report provide a good indication of the proposal's visibility. Overall, the proposed dwelling will be well mitigated by earthworks such that it will not be visible from public places. The proposed driveway and associated earthworks will be the only part of the proposal which will be visible from a 1km segment of SH6 to the north and east.
- 5.7. During construction there will be some temporary visual effects associated with the formation of the driveway and the earthworks. Once earthworks are complete and re-grassed, it will be difficult to discern any change in the upper portion of the hill. The proposal will use existing landscape elements; particularly the gully depression on the upper part of the hill, combined with proposed earthworks to screen views, and those mitigating elements will be keeping the character of the landscape. Built development will be reasonably difficult to see and the only visible constructed element will be the proposed driveway. This driveway will slightly increase the visual effect of the existing farm track. This effect will be experienced from a small portion of land to the north and east of the site. The proposal will not be visually prominent or detract from any public or private views.
- 5.8. No structures will break the line and form of any ridges, hills and slopes. The proposed earthworks will slightly alter the skyline as viewed from a small portion of SH6 (**Image 2**). However, once formed and re-grassed, this will not be a discernible change and will not adversely affect any visual amenity values of the landscape.
- 5.9. During the time of construction, the proposal will reduce the visual amenity values of the wider landscape to a moderate degree as earthworks are spread and before affected areas are re-grassed. However once the driveway and mitigation earthworks are complete, any adverse visual effects will be limited to the driveway, those adverse effects will be low in extent and the overall landscape values of the wider ONL will be protected.

Design and Density of Development

- 5.10. The proposed building will be located within a hollow on a hill. The natural terrain and proposed earthworks will render this area less sensitive to development change. This proposal will surrender an approved BP on a lower paddock to the north and the anticipated density of development within the landscape will not be changed. Also, the proposed access will largely utilise the existing farm track.
- 5.11. The proposal is considered appropriate within the scale of the receiving landscape and will not be a highly visible feature. The proposal will accord with the surrounding landscape character values and it will not adversely affect the overall character or visual amenity to more than a low degree.

Cumulative Effects

- 5.12. The subject site has an approved BP which will be surrendered as part of this proposal. This will ensure the proposal will result in no cumulative adverse effects associated with density, as the anticipated density of the landscape will be maintained. Also, the proposed driveway will mostly follow an existing farm track which will limit the potential cumulative effects of that part of the proposal.
- 5.13. The siting of the dwelling in a hollow on a hill will result in some increase in cumulative adverse effects on the landscape's natural character values. However, in the context of the much wider receiving landscape, it is considered the proposal will result in no more than low adverse cumulative effects on the landscape's character.
- 5.14. Visually, the proposed dwelling will not be visible from the surrounding landscape and the only visual effects will be with regard to the proposed earthworks and the driveway. As the driveway will mostly follow an existing farm track and the proposed mitigation earthworks, once complete will be indiscernible from the natural lay of the land, it is considered cumulatively, the adverse effects of the proposal on visual amenity will be low in extent and the overall landscape values of the wider ONL will be protected.

25.8.3 Proposed District Plan - Chapter 25 – Earthworks Rural Zone

- 5.15. The area around the proposed dwelling will be modified to set the dwelling into the land form and to screen the built development from wider landscape views. There will be areas of fill on the slopes which face the state highway but those fill areas will mimic the natural topography of the site and will be read as sympathetic to that natural topography.
- 5.16. It is proposed to limit the duration of earthworks required, particularly the areas of earthworks which may be visible from the highway to no more than 18 months. As discussed I consider that the earthworks, during their formation, present the highest level of visual effect, being moderate in extent. However once the earthworks are formed and re-grassed they will be integrated with the natural topography and will be read as an integral part of the mountain slopes. I consider that the earthworks once complete will not result in unacceptable adverse effects on the landscape's physical, visual or cultural attributes. Similarly the earthworks will not change the character or the quality of the landscape, once complete.
- 5.17. The proposal will not result in cumulative effects on the natural form of the landscape and once earthworks are complete the areas which have been modified, with the exception of the area around the dwelling, will be indiscernible from the surrounding natural form of the landscape.
- 5.18. The proposed access road will follow an existing farm track and while it may slightly increase the visibility of that existing cut across the slope, overall the visual quality and amenity of the landscape will be adversely effected to a very low degree by the new road.
- 5.19. Overall, it is considered that the extent of earthworks, once complete will appear consistent with the natural topography and land use patterns and will not effect visual amenity values from any public or private place.

Landscape Priority Area

- 5.20. The subject site forms part of the notified Kawarau River ONF as shown in the Landscape Schedules 21.22.9. I have reviewed this schedule and consider there is very little in the priority area description which is relevant to the site. I attached that description (Attachment B) and I

have highlighted the areas where I consider the text addresses any attributes and values which are present on the existing site.

5.21. It is my opinion that while the site adjacent to the Kawarau River, that it is more clearly associated with the attributes and values of Morven Hill. I understand the Landscape Schedules are subject to significant submissions in opposition, that the hearing process is forthcoming and that they should be given little weight.

6. CONCLUSION

- 6.1. The proposal seeks to surrender an existing 1000m² building platform and to establish a proposed dwelling in a different location. The proposed dwelling will be located in a hollow on a hill and access to that dwelling will mostly follow an existing farm track. Earthworks are proposed to screen the dwelling such that it will not be visible from the surrounding landscape.
- 6.2. While the proposed dwelling will be near the top of a hill feature, that feature is a small part of a dynamic and memorable landscape where the Crown Terrace, Arrow River, Kawarau River and Remarkable Mountains converge, rendering the dwelling site less sensitive to development change. Proposed earthworks will render the dwelling completely indiscernible from public places. The only part of the development which will be visible is the proposed mitigation earthworks which will follow the natural lay of the land and the driveway, which will largely follow an existing farm track.
- 6.3. It is considered that there will be moderate short-term adverse character and visual effects associated with the proposal while the driveway and earthworks are being formed. Once complete the proposal will result in no more than low adverse effects on landscape character and low adverse effects on visual amenity and the overall landscape values of the wider ONL will be protected.

7. Recommendations

- 7.1. Earthworks shall be complete within 18 months of first starting construction.
- 7.2. Earthworks shall mimic the natural underlying topography of the landforms humps, hollows, ridges and gullies. Where the earthworks meet natural ground, that intersection shall blend seamlessly so as to render it difficult to discern the transition between natural and formed land.

7.3. Following the completion of earthworks, all areas of cut and fill shall be seeded through an appropriate method (hydroseed), with a grass cover composed of species compatible with the existing cover of pasture grass. This includes the spoil below the formed driveway and any cut surfaces which are not predominantly rock.

7.4. All lighting, exterior and interior shall be housed such that no light spill occurs outside the boundaries of the proposed curtilage area.

Stephen Skelton



Registered Landscape Architect



APPENDIX A – Proposed District Plan Decisions Version

21.21 Assessment Matters (Landscape)

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

The assessment matters set out below are derived from Policies 3.3.30, 6.3.10 and 6.3.12 to 6.3.18 inclusive. Applications shall be considered with regard to the following assessment matters:

21.21.1.1 *In applying the assessment matters, the Council will work from the presumption that in or on Outstanding Natural Features and Landscapes, the applicable activities are inappropriate in almost all locations and that successful applications will be exceptional cases where the landscape or feature can absorb the change and where the buildings and structures and associated roading and boundary changes are reasonably difficult to see from beyond the boundary of the site the subject of application.*

21.21.1.2 *Existing vegetation that:*

- a. was either planted after, or, self-seeded and less than 1 metre in height at 28 September 2002; and,*
- b. obstructs or substantially interferes with views of the proposed development from roads or other public places, shall not be considered:*
 - i. as beneficial under any of the following assessment matters unless the Council considers the vegetation (or some of it) is appropriate for the location in the context of the proposed development; and*
 - ii. as part of the permitted baseline.*

Assessment Criteria	Assessed Effects
<p>21.21.1.3 <i>Effects on landscape quality and character</i></p> <p><i>In considering whether the proposed development will maintain or enhance the quality and character of Outstanding Natural Features and Landscapes, the Council shall be satisfied of the extent to which the proposed development will affect landscape quality and character, taking into account the following elements:</i></p> <p><i>a. Physical attributes:</i></p> <p><i>i. geological, topographical, geographic elements in the context of whether these formative processes have a profound influence on landscape character;</i></p> <p><i>ii. vegetation (exotic and indigenous);</i></p>	<p>The Kawarau River ONF is characterized as a river corridor between the Frankton Arm of Lake Wakatipu to Lake Dunstan (Note, the District ends at Roaring Meg). The steep sided cliffs, mountain sides and terrace edges adjacent to the river margins creates dynamic, incised feature across the landscape. That feature is punctuated by the mostly lightly blue colour of the surface of the Kawarau River.</p> <p>The formative processes of the Kawarau River have a profound influence on the landscape, making the area a unique feature in the region. The other surrounding features such as Morven Hill, The Remarkables, The Arrow River Gorge, Swiftburn Waterfall, and Judge and Jury combine to render a memorable landscape. The subject hills of Punt Hill and Punt Hill East, while certainly outstanding, are not physical features of distinction in the context of the receiving landscape.</p> <p>The proposal will be nested into a hollow near the top of the lesser Punt Hill East. It will be subservient to the broader geological, topographical, geographic elements.</p> <p>The site is predominantly covered with pasture grass and no vegetation is proposed to be removed as part of this proposal.</p>

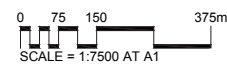
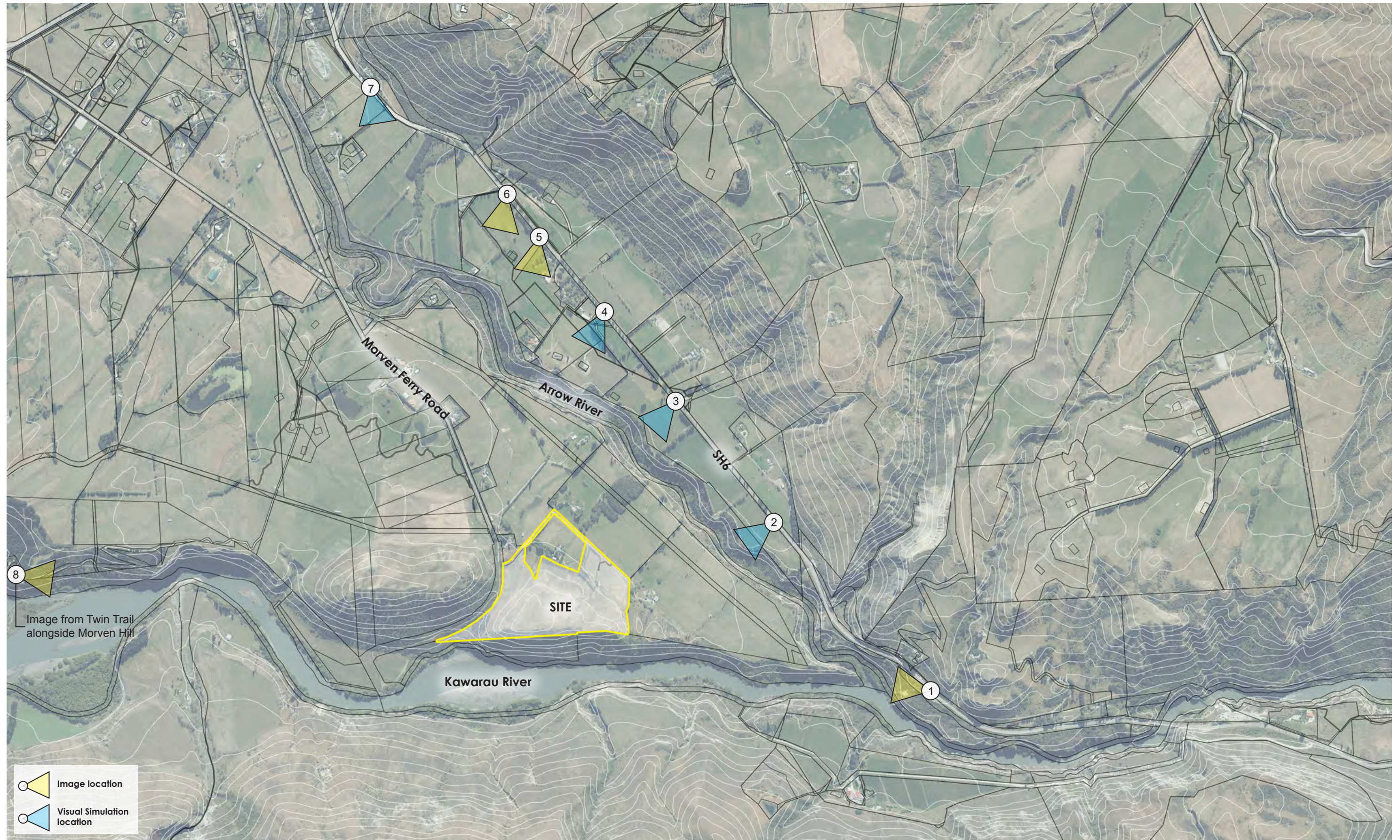
Assessment Criteria	Assessed Effects
<p data-bbox="456 384 1077 443"><i>iii. the presence of waterbodies including lakes, rivers, streams, wetlands.</i></p> <p data-bbox="423 647 658 671"><i>b. Visual attributes:</i></p> <p data-bbox="468 719 1122 778"><i>i. legibility or expressiveness – how obviously the feature or landscape demonstrates its formative processes;</i></p> <p data-bbox="468 823 1010 882"><i>ii. aesthetic values including memorability and naturalness;</i></p> <p data-bbox="456 983 1088 1042"><i>iii. transient values including values at certain times of the day or year;</i></p> <p data-bbox="456 1106 1122 1165"><i>iv. human influence and management – settlements, land management patterns, buildings,</i></p> <p data-bbox="423 1270 864 1294"><i>c. Appreciation and cultural attributes:</i></p>	<p data-bbox="1149 256 2018 347">The proposal will not result in any adverse effects on the landscape’s vegetation patterns and the natural character of the ONL's vegetation will not be adversely affected by the proposal.</p> <p data-bbox="1149 387 2033 542">The site is near to the Kowarau River. The proposal will be approximately 150m from the river’s edge and approximately 150m above the river. The land between the proposed BP and the water’s edge is a steep, densely vegetated slope. The proposal will not be visible from and seen in the context of the Kowarau River and will not have an adverse effect on the quality and character of the river.</p> <p data-bbox="1149 703 2018 762">The legibility and expressiveness of the ONF and its formative processes will not be adversely affected by the proposal.</p> <p data-bbox="1149 823 2040 946">The proposal will be located on Punt Hill East, which is considered to be the least aesthetic and memorable, natural feature in the ONF and surrounding landscape context. The proposal will maintain the aesthetic values of the landscape including memorability and naturalness of the broader landscape.</p> <p data-bbox="1149 983 1984 1007">The proposal will not have an effect on the transient values of the landscape.</p> <p data-bbox="1149 1106 2033 1197">The proposal will enhance an existing farm track and will see a dwelling located in a pastoral landscape. The proposal will maintain the quality and character of the landscape’s existing settlement and land management patterns.</p>

Assessment Criteria	Assessed Effects
<p>i. <i>Whether the elements identified in (a) and (b) are shared and recognised;</i></p> <p>ii. <i>Cultural and spiritual values for tangata whenua;</i></p> <p>iii. <i>Historical and heritage associations.</i></p> <p><i>The Council acknowledges that Tangata Whenua beliefs and values for a specific location may not be known without input from iwi.</i></p> <p>d. <i>In the context of (a) to (c) above, the degree to which the proposed development will affect the existing landscape quality and character, including whether the proposed development accords with or degrades landscape quality and character, and to what degree.</i></p> <p>e. <i>any proposed new boundaries will not give rise to artificial or unnatural lines (such as planting and fence lines) or otherwise degrade the landscape character.</i></p>	<p>The values identified above are shared and recognised and will be maintained by the proposal.</p> <p>The site has no known spiritual values for tangata whenua.</p> <p>The site has no known heritage or historical associations.</p> <p>The proposal will be in accordance with the existing landscape’s quality and character. It will see a dwelling set within an existing hollow on a hill, and will not be visible from beyond the boundaries of the site, with the exception of the proposed driveway which will largely follow an existing farm track. The proposed development will not act to degrade the landscape’s quality and character to a more than low degree.</p> <p>There are no new boundaries proposed.</p>
<p>21.21.1.4 <i>Effects on visual amenity</i></p> <p><i>In considering whether the potential visibility of the proposed development will maintain and enhance visual amenity, values the Council shall be satisfied that:</i></p>	

Assessment Criteria	Assessed Effects
<p>a. <i>the extent to which the proposed development will not be visible or will be reasonably difficult to see when viewed from public roads and other public places. 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, cycling, equestrian and other means of access;</i></p> <p>b. <i>the proposed development will not be visually prominent such that it detracts from public or private views of and within Outstanding Natural Features and Landscapes;</i></p> <p>c. <i>the proposal will be appropriately screened or hidden from view by elements that are in keeping with the character of the landscape;</i></p> <p>d. <i>the proposed development will not reduce the visual amenity values of the wider landscape (not just the immediate landscape);</i></p> <p>e. <i>structures will not be located where they will break the line and form of any ridges, hills and slopes;</i></p>	<p>The proposed dwelling will be well mitigated visually such that it will not be visible from public places. The proposed driveway and associated earthworks will be visible from a 1km segment of SH6 to the north and east.</p> <p>The proposed earthworks to screen the dwelling will be visible. During construction there will be some temporary visual effects associated with the formation of the driveway and the mitigating earthworks. However once earthworks are finished re-grassed it will be difficult to discern any change in the landscape’s visual amenity.</p> <p>The proposal will not be visually prominent or detract views from public places. With regards to private views, the proposal may be visible from areas on the southern edge of the Crown Terrace, but it will not be prominent or detract from views of the wider ONL/Fs.</p> <p>The proposal will use existing landscape elements; particularly the hollow depression on the upper part of the hill, combined with proposed earthworks to screen views. The proposed grades of the earthworks will mimic the landform’s existing slope and the recommendation to re-seed these in pasture grass will ensure the mitigating earthworks will be in keeping with the character of the landscape.</p> <p>Built development will be reasonably difficult to see and the only visible element will be the proposed driveway. The formation of this driveway will only slightly increase the existing visual effect of the farm track. This effect will be low and only visible from a short portion of land to the north and east. The proposal will not reduce the visual amenity values of the wider landscape to a more than low degree.</p> <p>The proposal does not include any structures that will break the line and form of any ridges, hills and slopes. The proposed earthworks will slightly alter the skyline as viewed from a small portion of SH6 (Image 2). However, once formed and re-grassed, this will not be a discernible change and will not adversely affect any visual amenity values of the landscape.</p>

Assessment Criteria	Assessed Effects
<p><i>f. any roads, access, lighting, earthworks and landscaping will not reduce the visual amenity of the landscape.</i></p>	<p>The proposed driveway will generally follow an existing farm track. This will slightly amplify the existing effect of the farm track. However, recommendations will see the spoil and cut of the driveway re-grassed such that the overall change in effect will be small. The proposed driveway will reduce the visual amenity of the landscape to a low degree.</p>
<p>21.21.1.5 <i>Design and density of Development</i></p> <p><i>In considering the appropriateness of the design and density of the proposed development, whether and to what extent:</i></p> <p><i>a. opportunity has been taken to aggregate built development to utilise common access ways including roads, pedestrian linkages, services and open space (i.e. open space held in one title whether jointly or otherwise);</i></p> <p><i>b. there is merit in clustering the proposed building(s) or building platform(s) within areas that are least sensitive to change;</i></p> <p><i>c. development, including access, is located within the parts of the site where it would be least visible from public and private locations;</i></p> <p><i>d. development, including access, is located in the parts of the site where it has the least impact on landscape character.</i></p>	<p>The proposal aggregates built development by utilizing portions of the existing farm track as the driveway to the dwelling. The approved BP will be surrendered as part of this proposal and the wider, open landscape will be retained in its existing state.</p> <p>The anticipated density of the landscape will not be changed by this proposal.</p> <p>The proposal includes the surrender of an approved building platform but does not cluster development. While Punt Hill East is more sensitive to development than the approved BP site, the location of the dwelling within a hollow of the hill and the proposed mitigation earthworks will render that part of the landform least sensitive to development and the proposed dwelling will be less visible than the approved BP.</p> <p>The proposed driveway will largely follow an existing farm track, which will slightly exacerbate the existing effect. However this location is least visible as it is largely screened by landform from wider views.</p> <p>The proposed dwelling will be located in a hollow on a hill. The proposal will render the building not visible from the wider landscape. The driveway will generally follow the existing farm track and slightly exacerbate that existing effect. It is considered the proposal will result in no more than low adverse effects on landscape character.</p>

Assessment Criteria	Assessed Effects
<p>21.21.1.6 <i>Cumulative effects of subdivision and development on the landscape</i></p> <p><i>Taking into account whether and to what extent existing, consented or permitted development (including unimplemented but existing resource consent or zoning) may already have degraded:</i></p> <p><i>a. the landscape quality or character; or,</i></p> <p><i>b. the visual amenity values of the landscape.</i></p> <p><i>The Council shall be satisfied the proposed development, in combination with these factors will not further adversely affect the landscape quality, character, or visual amenity values.</i></p>	<p>The proposed dwelling will be well screened by landform and the anticipated density of development will not be changed. The receiving landscape’s quality and character will not be adversely effected to a more than low degree by the proposal (noting that there will be moderate adverse effects during construction).</p> <p>The proposal will not change the anticipated density of the landscape..</p> <p>The proposed dwelling will not be visible from the wider landscape and the existing farm track will be improved to accommodate the proposed driveway. This will result in very low adverse cumulative visual amenity effects on the landscape.</p>





50mm photo - 29 July 2022 at 2:53 pm



Existing

50mm photo - 29 July 2022 at 2:56 pm



Proposed earthworks, driveway and house



Wireframe



Existing

50mm photo - 29 July 2022 at 2:58 pm



Proposed eartworks, driveway and house

50mm photo - 29 July 2022 at 2:58 pm



Wireframe

50mm photo - 29 July 2022 at 2:58 pm



Existing

50mm photo - 29 July 2022 at 3:02 pm



Proposed earthenworks, driveway and house

50mm photo - 29 July 2022 at 3:02 pm



Wireframe

50mm photo - 29 July 2022 at 3:02 pm



50mm photo - 29 July 2022 at 3:05 pm



50mm photo - 29 July 2022 at 3:06 pm



Existing

50mm photo - 29 July 2022 at 3:08 pm



Proposed earthworks, driveway and house

50mm photo - 29 July 2022 at 3:08 pm



Wireframe

50mm photo - 29 July 2022 at 3:08 pm

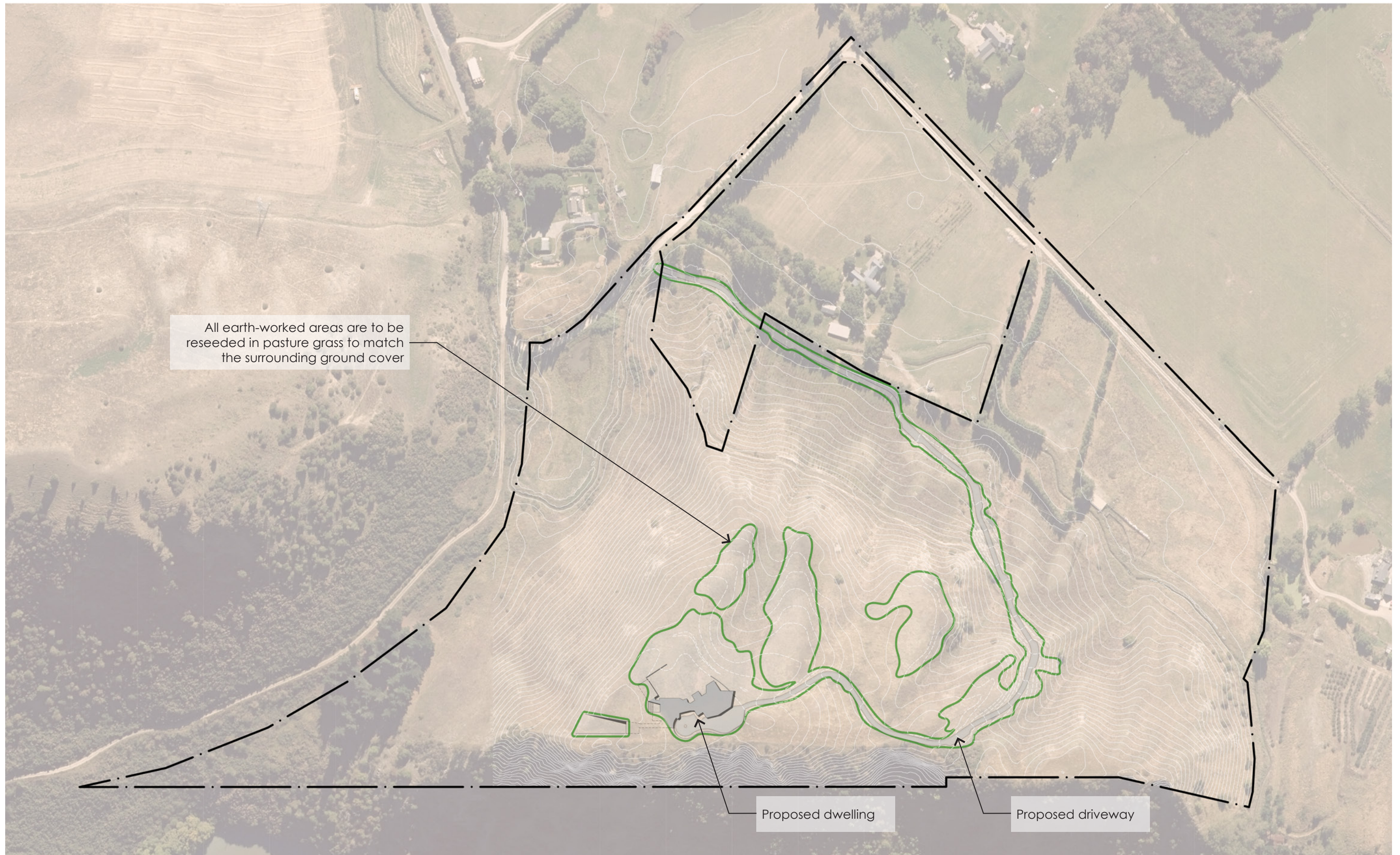


Reference : PA22605 IS03

Robertson - 346 Morven Ferry Road
Visual Assessment Images
29 March 2023



50mm photo - 15 August 2022 at 5:32 pm





SERVICES ASSESSMENT REPORT

Sharyn Robertson
Proposed Residential Dwelling
Lot 2 DP 301351, Morven Ferry Road, Queenstown
APRIL 2023



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

Revision No	Date	Description	Prepared by	Checked by	Approved by
-	May 23		ESMD	HK	ESMD

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1 INTRODUCTION

Clark Fortune McDonald & Associates (CFM) has been engaged by Sharyn Robertson to assess servicing options for a proposed residential dwelling that is located on a rural site.

The proposal is fully outlined in the AEE prepared by Clark Fortune McDonald and Associates. In summary, the application will result in a large residential dwelling that is to be constructed partially underground, in the upper reaches of what is known as Punt Hill East. There is an existing residential building platform approved on the site, north of and at a lower elevation than the dwelling proposed in this application. Access to the platform will be predominantly from an established farm track, that will be required to be upgraded and extended to provide suitable access to the dwelling.

The site is currently legally described as Lot 2 DP 301351 and is irregular in shape. The southern boundary of the site is at the highest point and adjoins the marginal strip of the Kawarau River. A portion of the north east and north west boundaries contains a right of way easement, currently providing access to three other rural residential properties.

The site has overhead pylon towers running across it on the lower slopes from west to east. The topography of the site is predominantly flat near the northern boundary and rises steeply up to the southern boundary and includes Punt Hill East.

This report is preliminary and for the purposes of consent only. Further information and detailed engineering design will be required if development proceeds.

2 SCOPE OF WORK

The scope of work includes the examination of existing private and QLDC as-built records, the supply agreement with a private water supply company, confirmation of capacity of existing services to determine the adequacy of the existing infrastructure, and recommendation of infrastructure servicing options.

3 DESIGN STANDARDS & REPORTS

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

- QLDC Land Development and Subdivision Code of Practice adopted 8/10/2020.
- NZS4404:2010
- Drinking-Water Standards for New Zealand 2005.
- NZS PAS 4509:2008, New Zealand Fire Service Fire-fighting Water Supplies Code of Practice.
- Water for Otago, Otago Regional Council regional water plan.
- Document for New Zealand Building Code Surface Water - Clause E1 / Verification Method 1.

4 BACKGROUND

Lot 2 DP 301351 was part of a two lot subdivision which was completed in 2001. One lot was 4.0ha and the other lot, the subject site has an area of 18.0ha. As part of this subdivision a residential building platform was identified on both lots that were created. The surrounding area consists of rural residential allotments of similar size to the two that were created under DP 301351.

There is no council owned reticulated services available to this site, instead a private water supply, on site disposal for water and waste water, will be utilised.

Electricity and telecom are installed in the adjoining road and right of way and serves the neighbouring residential dwellings.

An existing crossing has already been formed off the right of way portion that is located on the subject site and is how the owner currently obtains access to her property.

5 WASTEWATER

There is no reticulated waste water available to service this rural residential property, therefore on site disposal is the only option.

It is proposed to install an onsite waste water system as part of the building consent process. The geotechnical investigations and associated report indicate that a package plant home aeration type system would be appropriate for the disposal of secondary treated effluent. This would be disposed of via a shallow pressure compensating dripper irrigation distribution method, which is appropriate for the category 3 soils encountered on site.

Given the large expanse of north facing land available for the dripper irrigation it is not anticipated that there will be any impediments to providing a suitably functioning waste water disposal system on this site.

No development contributions for waste water disposal will be payable by the applicant.

6 STORMWATER

There is no reticulated stormwater disposal system available to service this rural residential property, therefore on site disposal is the only option available for stormwater disposal.

The construction of the residential dwelling and associated access will increase the amount of stormwater runoff that is currently present on the site. There is also the potential for this stormwater runoff to introduce contaminants into the receiving environment.

There are two options available on this site, for the appropriate disposal of stormwater, one being to ground via soak pits and the other to a pond that will potentially be created on site for irrigation purposes.

It is proposed to dispose of any stormwater generated from the gravel access way, via grassed or rip rap lined swales. Culverts will be installed at low points along the access to allow water to discharge into natural gullies within the property. The majority of these culverts are offset from the boundaries a sufficient distance to ensure inundation of surrounding neighbours is unlikely.

Stormwater generated by the construction of the dwelling can be discharged to suitably sized soak pits. The ground investigations completed by the Geotech engineer suggest that the soil profile is suitable for on site disposal, if required.

No development contributions for Stormwater Will be required as this is a private network.

In summary, stormwater will need to be disposed of on site as no reticulation is available. Given the size of the site and the ground conditions encountered there are suitable options available for this to occur. Suitable calculations and design plans will need to be prepared as part of the detailed engineering design process.

7 WATER SUPPLY

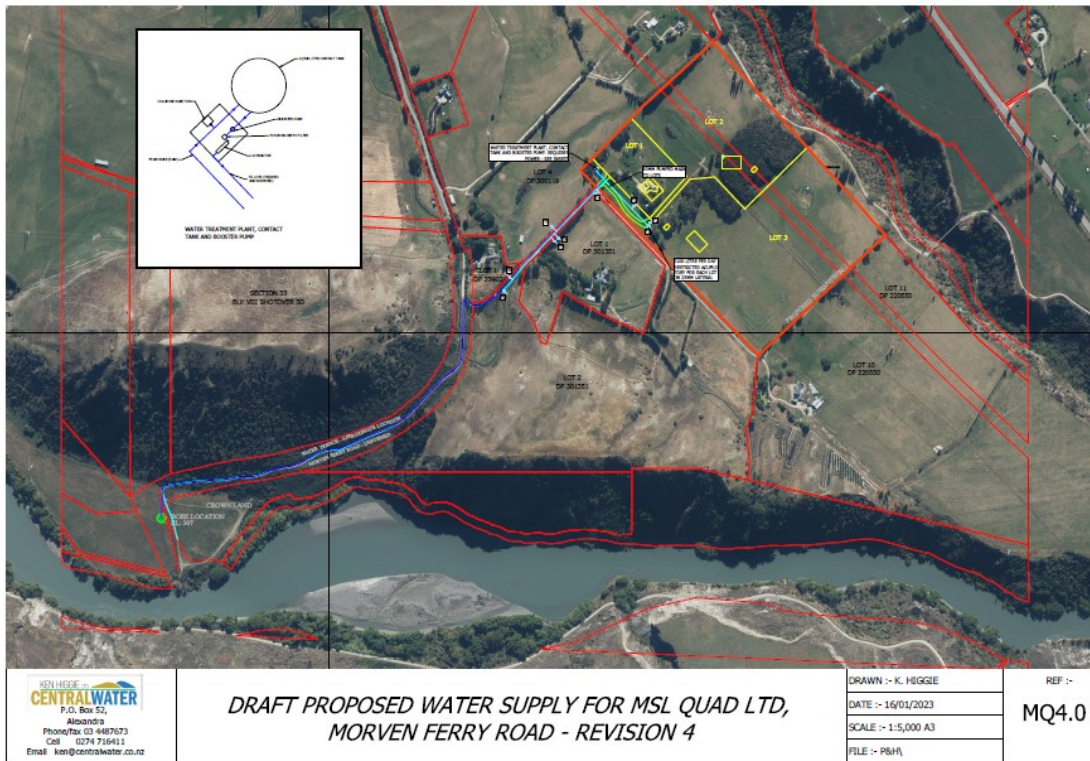
7.1 Water supply

There is no reticulated council owned, water supply available for this site. There are three possible options available for a potable water supply to the new dwelling.

Firstly, the site is currently provided potable water from an existing shared bore which is located on the neighbouring property, at 336 Morven Ferry Road. We understand there to be some questions around the consistency of supply from this bore.

Secondly, a recently approved nearby three lot rural residential subdivision (RM220055) included the construction of a new water supply scheme which is to obtain a water supply from a bore located west of the site, within the extents of the legal road reserve of the southern most end of Morven Ferry Road. This part of Morven Ferry Road is simply a gravel track and provides access to the banks of the Kawarau River.

It is proposed to install a water pipe within the bounds of Morven Ferry Road and extend it as far as the subject site for RM220055, being 351 Morven Ferry Road, via the existing right of way established on the subject site to this report. A water treatment plant will be constructed on Lot 3 of RM220055, which will also include water treatment and a booster pump. A copy of the Proposed Water Scheme Plan is shown below:



Water scheme layout for adjoining subdivision

Condition 24e of RM220055 restricts the users of this private water scheme to 12. The subject site that is to contain the proposed residential dwelling subject to this report, is identified as one of the allowable 12 users.

The water supply system has been designed to provide 2,100 litres per lot per day via a 25mm lateral, which complies with council standards. This supply will be a trickle supply to a storage tank.

From the 25mm lateral and toby that is provided to the boundary of the subject site, it is likely that a 10,000 litre tank will need to be installed inside the boundary of the subject site. From the tank the water supply is pumped up to the new dwelling. There is a height difference from the toby position to the level of the dwelling of approximately 70m, therefore it is unlikely that the booster pump being installed on Lot 3 of RM220055 as part of the water supply system, will be strong enough to pump up to this height.

If the pump is strong enough to pump up to the same level as the proposed dwelling then a 10,000l buffering tank will only be required near the dwelling, rather than at the western boundary of the subject site.

Engineering acceptance for RM220055 had not issued at the time this report was written.

A third option for water supply for the new dwelling is rain collection off the portion of the roof that will not be a green/living roof. Given the relatively low levels of rain in the Wakatipu, being approximately 670mm year, and the area of the roof that will not be a green roof being 810m², the resulting water supply from this arrangement is expected to be approximately in 542m³ of rainfall being collected. This equates to approximately 1,480l/day. As this rainfall is sporadic throughout the year, additional tanks, over and above the 10,000 litre buffering tank required under the first two options, would be required on site, to ensure sufficient water was able to provided year round.

The third water supply option noted above, is probably best considered as a supplementary option to either supplies promoted as option 1 and 2.

However, it can be confirmed that a suitable potable water supply is available to the new dwelling.

7.2 Fire fighting

As there is no reticulated water supply available to this site, fire fighting water supply will be required to be provided via water storage tanks. A minimum volume of 45,000 litres will need to be provided in order to comply with the Fire Fighting Standards. There is plenty of room on the bank behind the motor court to locate sufficient tanks, either above ground or partially buried, to satisfy the minimum volume requirements.

The sealed motor court area will be sufficiently sized to enable it to be used as a hard stand area for a fire appliance. It also directly adjoins the location of the tanks, therefore will meet the 6m minimum requirement from tanks to hardstand, that is specified in the NZ Fire Fighting Standard (SNZ PAS 4509:2003).

8 POWER AND TELECOMMUNICATIONS

There are existing Chorus and Aurora infrastructure located in the right of way that connects to Morven Ferry Road, which has been extended into the site at the time the original building platform for the site, was established.

It is not anticipated that there will be any supply or capacity issues for these services and connection will be made available from the existing infrastructure provided to the site. Below is a snip from the Aurora GIS showing the existing connection to the site.



Aurora GIS Image

9 EARTHWORKS

Earthworks are required to be undertaken to provide a complying access to the building platform, prepare the platform for the construction of the dwelling and to enhance existing landforms across the site to prevent views of the dwelling from surrounding public places.

Earthworks will be carried out in accordance with the following standards:

- NZS 4404:2010, Land Development and Subdivision Engineering
- QLDC Land Development and Subdivision Code of Practice, adopted by QLDC on 8 October 2020
- The Queenstown Lakes Proposed District Plan
- New Zealand Standard NZS4431:1989/2022

A detailed EMP will also be prepared by a suitably qualified person which will outline best practice methods for the contractor to employ to ensure that sediment, erosion, dust and noise do not create adverse effects to nearby neighbours.

The geotechnical engineer will be required to supervise any areas of certified fill and the suitably qualified environmental expert will be required to monitor and supervise all EMP measures during the construction period, especially after periods of heavy rain.

The proposed earthworks despite being relatively extensive, will result in only a small amount of material being required to be transported off site to an approved cleanfill site by the contractor.

10 HAZARDS

The QLDC GIS does not identify any hazards on the subject site. The geotechnical report that has been completed for the site indicate that they concur with what is shown on councils GIS.

11 ROADING

An existing gravel track is proposed to be utilised for access to the new dwelling. This access includes an established vehicle crossing off the right of way that provides access to three other rural residential properties.

The current vehicle crossing is constructed in gravel and adjoins a gravel access. This crossing will need to be upgraded to ensure that it complies with the Code of Practice. This will require the crossing to have a minimum width of 3 metres, but can be up to 6 metres wide. As the surface of the access that the crossing is adjoining is gravel, it will be acceptable for the crossing to be constructed out of 150mm compacted AP40, on top of 200mm of AP65, with a target CBR value of minimum 7.

The existing gravel track that provides access into the site up the hill will be required to be upgraded and extended to ensure it meets council standards. It is proposed that the access will be constructed as follows: 150mm of compacted GAP40 with a 20mm running course layer of AP20.

Council standards require that a private rural driveway be formed to a minimum width of 3.5m, single crossfall to shed water to a grass or rip rap swale. Passing bays of width 5.5m and length approximately 16 metres are proposed to be provided every 50-70m along the road, this is in line with council requirements.

The maximum grade of a private driveway is required to be a maximum of 1:6 or 16%, however a portion of it can be steepened up to 1:5 (20%), provided the average does not exceed 1:6. The access proposed to service the new dwelling will likely have a stretch that exceeds 1:6 due to the existing topography, however this will be for a maximum distance of 106 metres. The average grade across this access will not exceed 1:6.

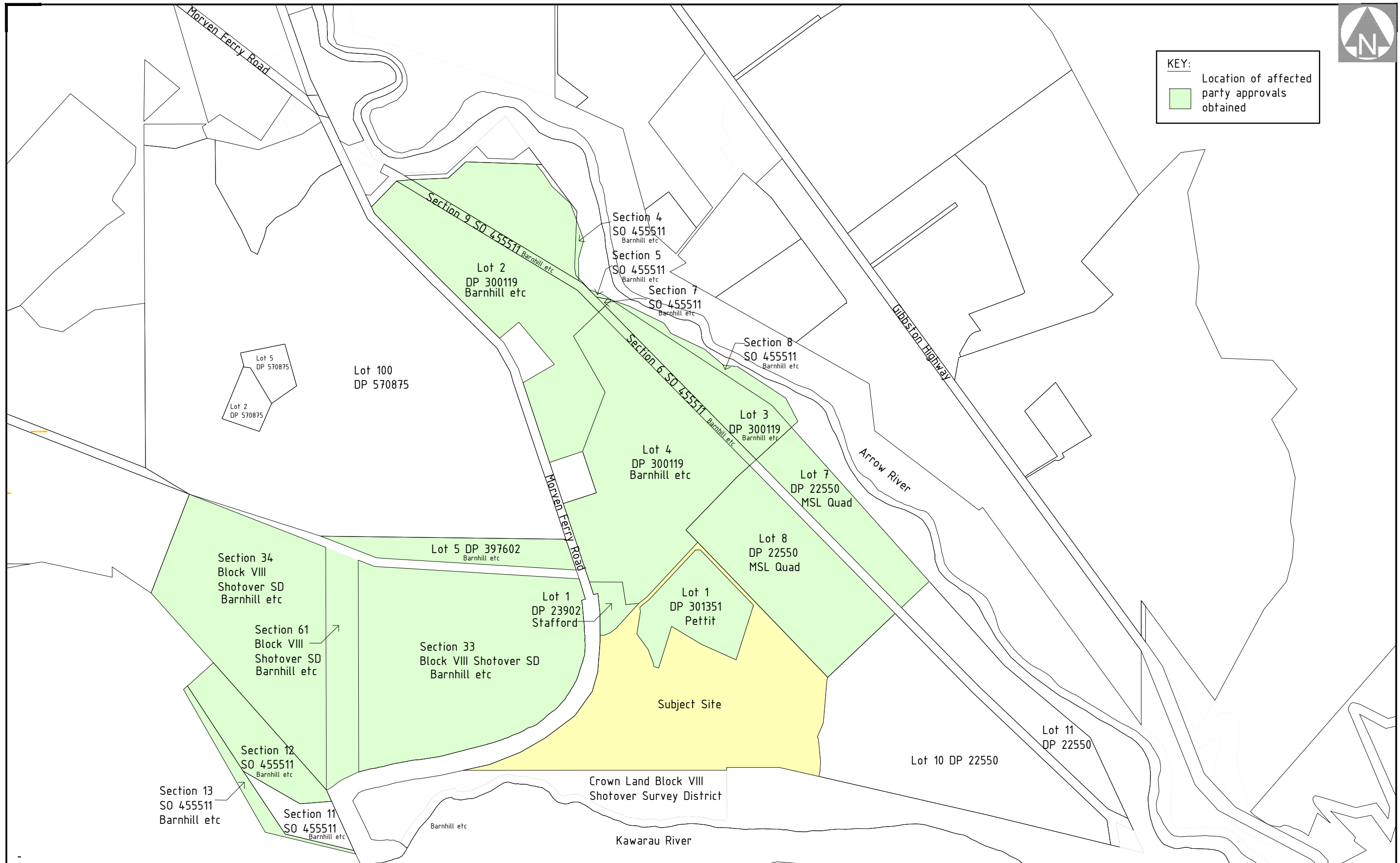
In summary, the vehicle crossing and access that is proposed to be constructed as part of this application is able to be undertaken in such a manner so as to satisfy Council Standards.

12 CONCLUSION

The proposed development can be adequately serviced via existing and proposed infrastructure.



KEY:
 Location of affected party approvals obtained



CLARK FORTUNE McDONALD
 LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
 QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE
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 Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By

**RESIDENTIAL DWELLING AT 346 MORVEN FERRY RD
 - PLAN SHOWING AFFECTED PARTY
 APPROVALS OBTAINED**

Client	ROBERTSON	Surveyed	-	Date	-	Job No.	13905	Drawing No.	03
Drawn	ED	Date	MAY 23	Scale	1:4000 @ A1 1:8000 @ A3	Datum & Level	----	Rev.	-
Checked	-	Date	-						

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



Sharyn Robertson

346 Morven Ferry Road, Arrow Junction

**GEOTECHNICAL ASSESSMENT
FOR A PROPOSED NEW BUILDING
PLATFORM AND DWELLING**

DATE: 5 DECEMBER 2021

REF: GL21-067.1



geotago
Engineering Geology & Geotechnics

Report Quality Control

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

Document Control

Report Title	Geotechnical Assessment for a Proposed New Building Platform and Dwelling
Project Number	21-067
Document Reference	GL21-067.1
Client	Sharyn Robertson

Rev	Date	Revision Status	Author
A	5 Dec 2021	Issued to Client	Peter Forrest

Approval

Reviewer	Title	Date Signed
Peter Forrest BSc PhD FGS CEngNZ (PEngGeol)	Director Principal Engineering Geologist	5 December 2021



Signature of reviewer

Executive Summary

Scope of Work		Geotago Ltd has been engaged to conduct a geotechnical investigation of the ground conditions at 346 Morgan Ferry Road and make appropriate recommendations for resource consent for foundations, earthworks, stormwater, and wastewater disposal.
Current Site Status		The site is open northeast facing pasture at approximately 450m AOD.
Development Proposals		Single building platform with onsite stormwater and effluent disposal systems. Proposed dwelling excavated into the landscape and covered with a green (turf) roof
Site Details	Location	Lot 2 DP301351, 346 Morgan Ferry Road, Arrow Junction
	History	Open pasture and with no history or previous development.
Ground Conditions	Published Geology	Aspiring lithologic association pelitic schist of the Rakaia terrane.
	Previous Investigations	None
	Site Geology	Sandy and silty gravels (glacial till) to approximately 1.5 to 2.4m + overlying weathered Rakaia terrane foliated schist.
	Hydrogeology	Depressed groundwater at the building platform.
	Environmental Condition	No environmental hazards are expected.
Natural Hazards	Liquefaction	Site investigations have proven relatively dense soils over shallow rockhead and a depressed groundwater therefore not prone to liquefaction. ORC Domain A.
	Alluvial landforms	Nothing to influence the site.
	Seismic characteristics	Seismic Soil Class B considered appropriate. No active faults in proximity but design should be cognisant of NZS1170.5.
Geotechnical Considerations	Slope Stability	No stability issues.
	Building Platform	Earthworks required to form a cut to fill platform. Nominal excavation in rock most likely but will be easily achievable with traditional plant.
	Foundations	NZS3604 "good ground" present which will provide an ultimate bearing capacity of 300kPa for traditional shallow foundations or waffle slab-on-ground solutions.
	Earthworks	Standard conditions apply to align with QLDC Code of Practice. Site won material is suitable for reuse subject to appropriate screening.
Stormwater Disposal	Stormwater disposal most likely to be direct to the proposed pond to be used for irrigation and storage, with the driveway shaped appropriately to shed stormwater to the verges.	
Wastewater Disposal	Category 3 Soils. A package plant home aeration type system capable of the disposal of secondary treated effluent according to AS/NZS1547 standards via a shallow pressure compensating dripper irrigation (PCDI) distribution method is considered appropriate.	

Limitations

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

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Drawings

Drawing 001: Site Location Plan

Drawing 002: Site Investigation Plan

Drawing 003: Stormwater & Effluent Disposal Layout Plan

Appendices

Appendix A: Scheme Plan

Appendix B: Engineering Logs

Appendix C: QLDC Site & Soils Assessment

Appendix D: Site Photographs

1 Introduction

1.1 Project Brief

Geotago Ltd has been commissioned by the client Ms Sharyn Robertson to carry out a geotechnical assessment for the purposes of gaining resource consent for a new building platform and dwelling on 346 Morven Ferry Road, Arrow Junction.

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

- Site conditions
- Ground and groundwater conditions
- Natural hazards
- Building platform preparation
- Geotechnical considerations for foundations, retention and earthworks
- On-site stormwater assessment
- On-site effluent disposal assessment

The site location is presented in Drawing 001.

1.2 Proposed Development

The proposed dwelling comprises an irregular shaped single storey main residence with four bedrooms, a tunnel to an indoor/outdoor living space and an integral garage. The dwelling is designed to blend into the surrounding landscape by cutting into the slope such that existing contours and the new roof line are relatively seamless. The roof will also be designed as a green roof with significant grass coverage.

The structure will likely comprise light weight timber framing with concrete and steel elements, on traditional shallow foundations.

Earthworks would be required with cuts of up to 4.0m to accommodate the dwelling. The access driveway will mainly follow existing contours to minimise its visual impact, but some cut to fill will be required to ensure an appropriate gradient. The tunnel structure will be formed as a simple cut and cover exercise.

A pond is also likely to be built down slope of the dwelling for the purposes of storing water for irrigation and also as a retention pond for stormwater generated from the development.

The layout of the proposed building platform and access is shown on Drawing 002.

2 Site Information

2.1 Site Description

The site identified for the new build is located at the southern end of Morven Ferry Road, within an elevated section of the wider property; the dwelling is located at approximately 445-448m AOD. The legal description of the property is Lot 2, DP301351.

To the immediate south of the building platform are the steep slopes that drop down to the Kawarau River valley at approximately 310m AOD, with steep slopes also to the immediate west of the building area, dropping down to the level of Morven Ferry Road some 40m below the site. The access track to the elevated site is roughly formed, entering the build area from the east.

The site is undulating with a general northerly aspect towards the Crown Range. The site is laid to open pasture with a small number of trees across the slope. The site is zoned as rural and an area of outstanding natural landscape.

2.2 Topography

The site has a north easterly aspect forming a reasonably uniform slope with local undulations at an average gradient of 7° reducing to <4° to the horizontal moving through the site from south west to north east. A small shallow gully trending to the north east is apparent in the landscape in the area forward of the proposed dwelling. The area at the rear (south) of the building area is relatively flat. Although climbs to the highest point in the south west corner at 450m AOD.

The southern boundary of the property is the crest of the steep slope that drops down to the Kawarau River at a gradient of 50-60°. The north west boundary is also a crest to the slope that falls to the dry valley along which Morven Ferry Road is situated at a gradient of 30-32°.

The slopes to the north east of the dwelling site, identified as suitable for future effluent disposal areas have a more northerly aspect at slope angles of approximately 15° to the horizontal.

The main features of the site's topography is shown on Drawing 002.

2.3 Surface Water and Drainage

The gully feature may well be an ephemeral surface water course albeit with a very limited catchment, but at the time of investigation it was dry at the surface. Site drainage will be via sheet flow towards the north east, reporting to the gully feature.

The Kawarau River is some 100m to the south of the site and approximately 130m below the site.

2.4 Site History and Aerial Photography

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

The site has remained open pasture throughout the period. There are no discernible geomorphological features of note other than the natural slopes to the south and west of the development area.

2.5 Services and Utilities

The site will be self-sufficient in terms of stormwater and effluent disposal, with potable water coming from a private bore (yet to be installed for the wider community in the southern Morven Ferry Road area) and allocation from the Arrow Irrigation scheme.

2.6 Previous Site Investigations

There are no previous site investigations for the site or for the immediate vicinity. The author has however undertaken investigations within the Morven Ferry area and is therefore familiar with the ground conditions.

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

3 Site Investigation Details

3.1 Site Assessment

Geotago Ltd completed an engineering geological assessment of the subject property on 19 November 2021, which included a general site walkover and subsurface investigations. The geotechnical investigation comprised seven test pits advanced to a maximum depth of 2.4m where they met with effective refusal from the excavator on dense material or the limit of the excavator's reach. No Scala penetrometer tests were completed on the grounds that the majority of the building areas will be on cut ground extending beyond the depth of any Scala test.

The investigations were located in the vicinity of the building platform and outdoor living area as shown on Drawing 002.

3.2 Investigation Logging

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

4 Subsurface Conditions

4.1 Geological Setting

The Geological Map of New Zealand, Sheet 18 (Wakatipu), at a scale of 1:250,000 maps the site as being underlain by Aspiring lithologic association pelitic schist of the Rakaia terrane. The Rakaia terrane consists of abundant laminated pelitic greyschist and subordinate psammitic greyschist; minor greenschist and metachert.

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

4.2 Ground Conditions & Stratigraphy

Apart from the thin layer of surficial topsoil, the site is underlain by weathered glacial till overlying the weathered surface of the Rakaia terrane schist. The weathered till extends to a maximum encountered depth of 2.1m in TP102, which coincides with a high point on the western ridge line. When encountered, the weathered horizon of the schist was easily excavated for approximately 200-500mm before becoming too competent for the excavator to break out.

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

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

4.2.1 Topsoil

Topsoil comprises organic sandy SILT, brown, with roots to depths of approximately 0.2 to 0.4 m. The exception to this is TP101, located in the area of the outdoor/indoor living space in the west of the building platform. Here topsoil was encountered to depth (2.4m) and can only be explained as a deep pocket formed in the small gully and depression at that point of the site.

4.2.2 Weathered Glacial Till

Weathered till underlies the topsoil in all of the test pits to depths of between 1.4m and >2m. The material comprises sandy SILT, silty SAND with some gravels and silty sandy GRAVELS. The sands were generally medium to coarse and the gravels fine to medium coarse, subangular to subrounded.

Based on the observations within the test pits, the glacial till is described as loose to tightly packed, its relative density increasing with depth in the profile.

4.2.3 Rakaia Terrane Schist

Weathered Rakaia terrane schist was clearly encountered in test pits TP104 at 1.4m and TP106 at 1.7m, although hard digging in TPs 102, 103 and 105 prohibited further excavation, indicating rockhead was in close proximity to the base of the pits.

The rock is described as moderately weathered blue grey SCHIST, moderately weak and foliated, although the latter could not be sufficiently mapped to provide orientations. Given the general regional dip on schist throughout the district, this is anticipated to be to the south west.

4.3 Groundwater

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

No borehole information was available from the ORC borehole database.

5 Natural Hazards

5.1 General

The Otago Regional Council Natural Hazards Portal has been reviewed for the purposes of identifying potential natural hazards that may impact the site. The information from the database is used together with our observations from the site investigation to inform the discussion below.

5.2 Alluvial Fan

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

5.3 Flooding

The site is not prone to flooding.

5.4 Liquefaction

The project site is classified as Domain A. This classification suggests that the ground is predominantly underlain by rock or firm sediments, with a low to zero liquefaction potential. This is aligned with our site investigation data and the fact that the site is close to the crop out position of the Rakaia terrane Schist. In addition, there is no groundwater likely within at least 25m of ground level.

5.5 Slope Stability

Although the site is defined by the two crests of slopes along the southern margin and along the western ridgeline to the development area, the slopes below are stable with no topographical expression or geomorphological evidence of any instability. This is fundamentally due to the underlying geology of the area being the schist bedrock.

The hazard database does show landslip on the steep slopes of the Kawarau river valley/gorge, although there is no definitive information provided. These features are sufficiently distant from the proposed build not to influence the stability of the site in any form.

5.6 Seismic

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

No active faults were mapped in the field, however, the active NW Cardrona fault shown on the published Qm 18 is approximately 2.5km east from the site and the Moonlight Fault some 25km to the west. There is a significant seismic risk to the Wakatipu region when the rupture of the alpine fault system occurs; recent probability predictions estimate a magnitude 7.5 or greater is highly likely within the next 45 years. Significant ground shaking is expected from this type of event.

6 Geological Ground Model & Residual Risk

6.1 Ground Model

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

- The site is presently undeveloped and does not appear to have been significantly modified in any form other than for pasture.
- The site is located on gently sloping topography which does not display any slope instability features. Whilst the site is defined by steep slopes to the immediate west and south of the building area, the slopes are not prone to the development of slope instability features.
- The site is underlain by competent ground conditions consisting of weathered coarse glacial till underlain the Rakaia terrane schist basement. Topsoil mantles the till to a depth of 200mm to 400mm.
- The building platform has no surface water features. Given the site's topography surface water will flow to the north east via sheet flow, reporting to the shallow north east trending shallow gully situated to the north of the proposed build.
- Ground water was not encountered in any of the test pits. Given the elevated and geomorphological position of the site, groundwater is anticipated to be deep.
- Groundwater is susceptible to seasonal variations and it is feasible that groundwater levels may rise, or seepage rates increase, over those observed following a period of prolonged rainfall and during the winter months, but not to the extent that it would interfere with foundations.
- The site is not located in the vicinity of an active fault zone but should be considered as seismically active in line with the wider Otago region.
- The site is not considered be risk of liquefaction due the relatively dense, coarse sediments, the presence of shallow rockhead and depressed groundwater levels in the vicinity of the building platform.

6.2 Geotechnical Risk and Limitations

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

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

7 Geotechnical Considerations

7.1 General

Based on our ground model developed for the site, we are of the opinion that the site is generally suitable for the proposed residential development comprising the single storey structure.

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

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

Other relevant Codes and Standards include but not restricted to:

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

Specific comments and recommendations are provided in the sections below.

7.2 Site Preparation

7.2.1 Building Platform

A building platform will need to be developed through a cut to fill exercise, creating the irregular shaped platform, with cuts anticipated to be 4m in height in places. Given the position of the house relative to the topography some areas of the platform will require fill placement.

The outdoor/indoor living area will be reached through a tunnel structure. This will require extensive cut, construction of the corridor and then backfilling to form the tunnel effect. There is only nominal cover of soils to the roof of the tunnel.

7.2.2 Standard Preparation

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

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

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

With respect to topsoil, this would be stockpiled and used as material placed on the green roof structures.

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

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

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

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

7.3 Batter Slopes

Recommended temporary and permanent batter angles for cut slopes up to a maximum of 3.0m in both wet and dry conditions are presented below in Table 1. The batters provided should be adhered to where more than one soil type is present within the slope or defaulted to the shallower angle where appropriate.

Table 1: Batter angles for soil slopes

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

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

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

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

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

7.4 Specific Rock Cut Considerations

Rock cuts of up to approximately 1.0m to 2.0m total height may be required in the southern and western areas of the site in order to create the building platform. The schist bedrock stability is governed by the presence of the main schistosity or foliation, other secondary defects or discontinuities such as joints and fractures, and the strength and orientation of these features. The interaction between these structural elements may result in the potential for wedge or block failure.

The mitigation for such instability commonly includes the installation of rock bolts, dowels or anchors or dentition/shotcreting the face. The cut face may also require retention or being cut back to more shallow angles. Given the relatively modest height of the cuts in this area these measures are not likely to be required but depends on the condition of the rock mass.

The site specific interaction between the foliation, secondary defects and the angle/orientation of cut required will dictate the overall stability of the excavations. As such, it is recommended that the bulk excavations near the northern boundary should be undertaken in a staged manner, comprising a number of small or discrete steps and observations made by a suitably qualified geotechnical engineer or engineering geologist to assess for rock instability as the cuts progress, so that appropriate mitigation and or support can be implemented.

Based on observations of cut rock faces in the immediate area, batters in the schist bedrock should be formed at an angle of 1(h) to 4(v) or approximately 76° from the horizontal (See Table 1).

Given the nature of the weathered schist, its excavation should be easily achieved with use of traditional heavy plant such as a 20 or 30 tone excavator with a toothed bucket. The pelitic and foliated nature of the rock mass will lend itself to be easily peeled away with such plant. Where necessary, a pneumatic rock breaker could be used to expedite the excavation.

Given the remoteness of the site and the limited amount of rock breaking needed, noise and vibration nuisance are not considered to be problematic. Excavated rock is a suitable source of engineered fill.

7.5 Engineered Fill Slopes

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

7.6 Construction Monitoring and Certification

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

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

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

7.7 Services

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

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

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

7.8 Slope Stability

The proposed building platform is located on moderate sloping topography which is underlain by competent ground conditions. Whilst the platform area is in proximity to steeper slopes they are not prone to the development of slope instability features.

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

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

Site earthworks are required to provide a suitable level building platform within the existing slopes, and we consider that appropriate site development constraints are required in order to maintain safe and stable conditions. This is addressed in Sections 7.3 and 7.4 of this report.

7.9 Retaining Walls

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

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

Table 2 provides geotechnical parameters for the engineered retaining wall design as required:

Table 2: Retaining Wall Design Parameters

Unit	Cohesion (c')	Friction Angle (ϕ')	Ultimate Bearing Capacity (kPa)	Unit Weight (γ)
Glacial Till	0 kPa	28-32°	200-300kPa*	18kN/m ³
Schist Bedrock	>100kPa	30°	900kPa	27kN/m ³
Schist Defects	0 along defect	22-25° along defect	-	-

* Site specific testing will be required to prove bearing capacity at foundation level.

All retaining walls should be constructed with appropriate toe drainage and backfilled to their full height with lightly compacted free draining granular material or other appropriate drainage solution. Toe drainage should be discharged at a point that will not impact or influence the construction works on site or alternatively be connected to the reticulated stormwater system.

7.10 Foundation Recommendations

7.10.1 Foundation Design Options

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

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

7.10.2 Bearing Capacity & Settlement

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

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

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

Where weathered schist bedrock is encountered, the material will likely exceed the criteria of NZS3604 and provide an ultimate bearing capacity of 900kPa.

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

7.11 Soil Expansivity

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

7.12 Site Subsoil Category

For detailed design purposes it is recommended the magnitude of seismic acceleration be estimated in accordance with the recommendations provided in NZS 1170.5:2004 assuming Class B subsoil conditions exists across the site.

7.13 Unsuitable Materials

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

- A suitably qualified person should inspect all foundation excavations.
- Care should be taken to ensure that all unsuitable material such as the topsoil layer, weak ground, areas of non-engineered fill and or hard spots are removed from the building platform prior to building construction.
- The undercut for the building footprint should extend for a horizontal distance equivalent to the undercut depth beyond the footprint. Where this is not possible excavation should be staged and retention structures constructed in a timely manner. The undercut should be backfilled with engineered fill up to the required formation level unless specified otherwise by a suitably qualified person.

8 Stormwater Management

8.1 General

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

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

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

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

8.2 Site Suitability for Stormwater Disposal

Given the green nature of the roof, it is not particularly suitable for the harvesting of roof water for potable purposes. The property will also be adequately catered for in terms of private reticulated water supply from a private bore and water scheme. In addition there is water available to the property from the Arrow irrigation scheme. Consequently, stormwater from the property can be managed on site without the need for dual use detention tanks to harvest potable and irrigation water.

The proposed pond downslope of the dwelling can therefore provide the required retention of stormwater from the dwelling and associated hardstand, subject to detailed design of volumes and freeboard at building consent stage.

The access driveway will be gravel/metalled and as such should be appropriately shaped to shed surface water to the grass verges. If necessary, dispersal trenches could be developed at required points along the driveway to manage any larger catchments that can't be shed to the side.

A likely layout of stormwater management in the vicinity of the house is provided on Drawing 003.

9 Wastewater Management

9.1 General

For the purposes of resource consent and based on the site investigation information gained, a site and soil evaluation can be completed in order to demonstrate that the site is capable of wastewater disposal to ground through an appropriate land application system.

There is sufficient design information on the dwelling to calculate occupancy rates and discharge volume to provide a detailed design, but in the first instance, this report is restricting wastewater design to the QLDC Site & Soils Assessment application.

9.2 Site & Soil Evaluation

The proposed new lot area will be in excess of 1Ha with suitable areas to the immediate north east of the building platform for a land application system. The selected area was investigated by means of test pit TP107, is on a north facing moderate slope of approximately 15° with no evidence of natural instability identified during our site investigations. Test Pit 107 recorded silty SAND with some gravels to at least 1.5m below ground level, with no indication of any groundwater.

During the winter months the area is subject to frost, snow and potential ground freezing.

Based on the soil profiles observed in the test pits, the soils can be categorised as Class 3 in accordance with AS/NZS 1547:2012 Table L1. This reflects the moderate permeability anticipated in the weathered glacial soils.

A QLDC Wastewater Disposal Site and Soil Assessment Form has been completed and is presented in Appendix C.

9.3 Potential Wastewater System

For the purposes of resource consent, the following design is considered appropriate but is mainly to demonstrate that the site is capable of effluent disposal to ground. Detailed design of the system will be required for building consent.

A package plant home aeration type system is considered suitable for the site. The package plant system should consist of the disposal of secondary treated effluent according to AS/NZS1547 standards via a shallow pressure compensating dripper irrigation (PCDI) distribution method. This method incorporates a series of dripper lines placed within areas of low trafficked lawn, planted gardens and bush. The dripper lines should be buried to at least 400mm below ground level to mitigate against frost and frozen ground.

This type of system and application is considered suitable for the site due to the flexibility provided with system placement, the secondary treatment of effluent and its suitability to be used areas of moderate soakage (Class 3) soil conditions.

A suitable area for the package plant system is shown on Drawing 003 taking into account the following set-backs in accordance with QLDC and ORC plans and policies and AS/NZS1547.

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

Drawings



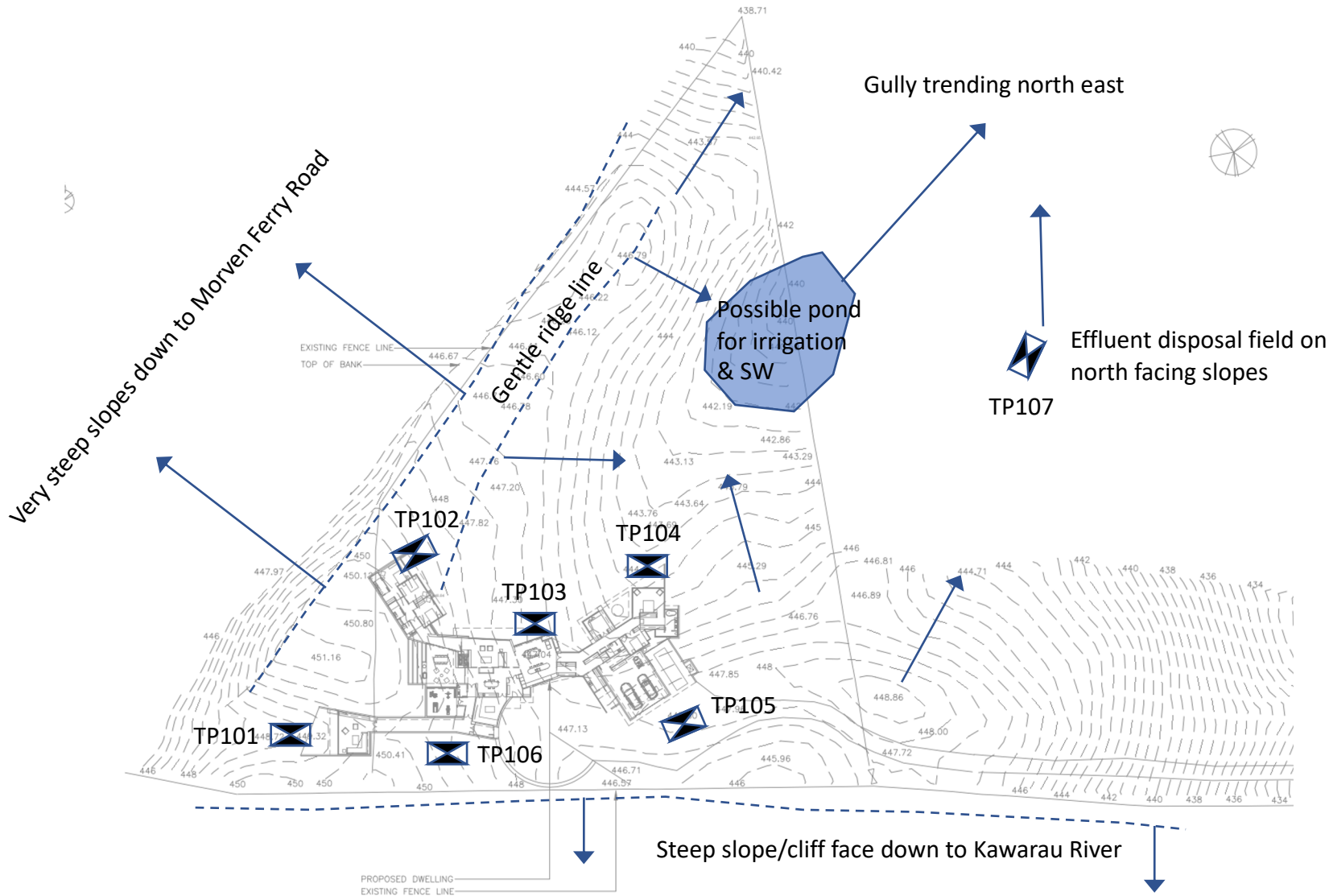
ROBERTSON RESIDENCE
 346 MORVEN FERRY ROAD, ARROW JUNCTION

SITE LOCATION PLAN

SCALE: NOT TO SCALE

REF:
 GL21-067.1 DRW001

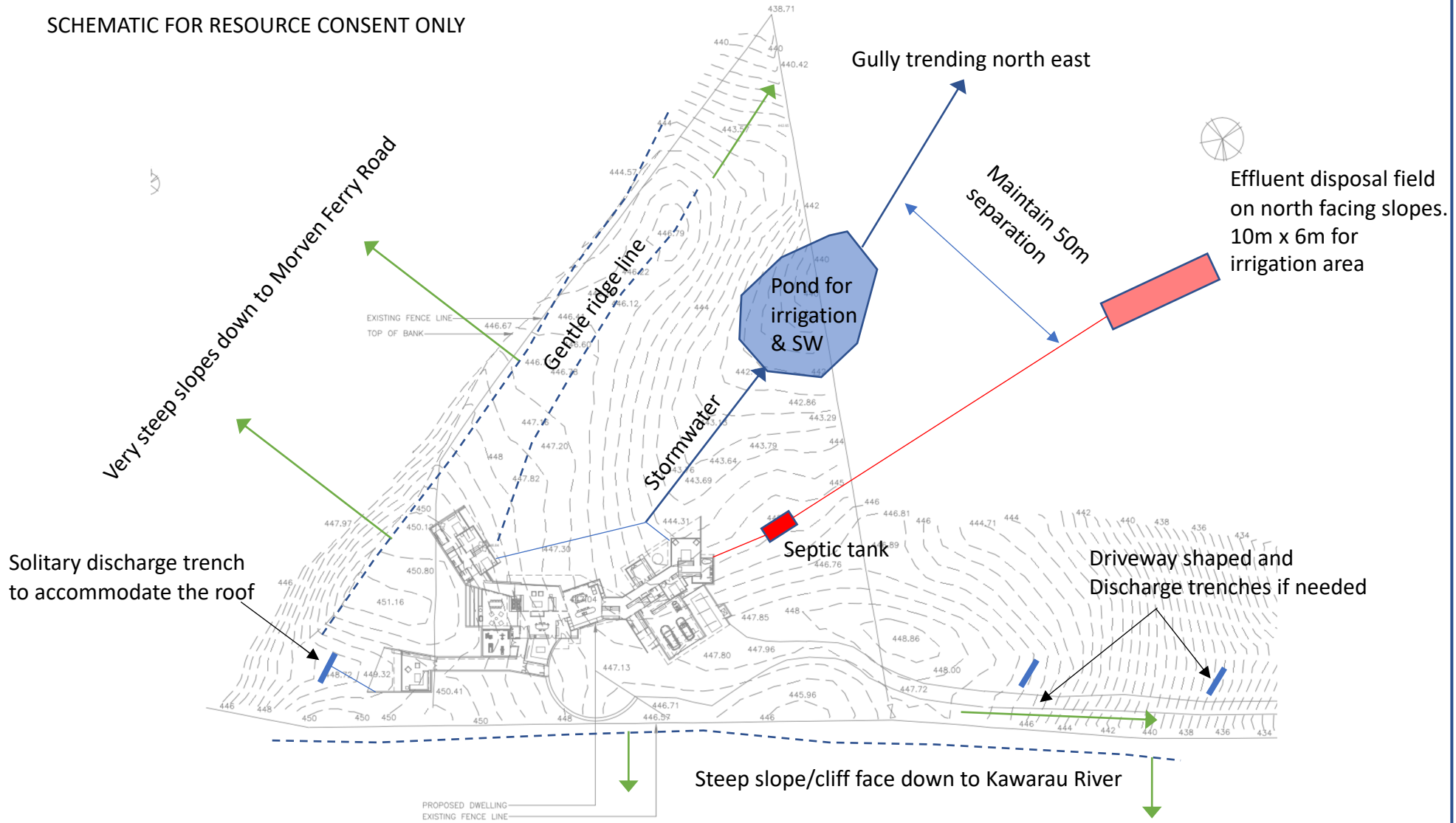
DATE:
 22 NOVEMBER 2021



ROBERTSON RESIDENCE
 346 MORVEN FERRY ROAD, ARROW JUNCTION
SITE INVESTIGATION PLAN

SCALE: 1:1000 Approximately	
0m 40m	
REF: 21-067.1 DRW002	DATE: 22 NOVEMBER 2021

SCHEMATIC FOR RESOURCE CONSENT ONLY



ROBERTSON RESIDENCE
 346 MORVEN FERRY ROAD, ARROW JUNCTION
STORMWATER & EFFLUENT DISPOSAL LAYOUT

SCALE: 1:1000 Approximately



REF:
21-067.1 DRW002

DATE:
22 NOVEMBER 2021

Appendix A – Scheme Layout

