

Application for resource consent or fast-track resource consent

Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of [Form 9](#)). Prior to, and during, completion of this application form, please refer to [Resource Consent Guidance Notes](#) and [Schedule of Fees and Charges](#) — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement?

☒ Yes ☐ No

2. Type of consent being applied for

(more than one circle can be ticked):

- | | |
|---|--|
| ☒ Land Use | ☐ Discharge: Total volume = <input type="text"/> m ³
<i>Note; volumes >3m³ requires NRC Consent.</i> |
| ☐ Fast Track Land Use* | |
| ☐ Change of Consent Notice (s.221(3)) | ☐ Subdivision |
| ☐ Certificate of Compliance (s.139) | ☐ Existing Use Certificate (s.139A) |
| ☐ Extension of time (s.125) | ☐ Consent under National Environmental Standard
(e.g. Assessing and Managing Contaminants in Soil) |
| ☐ Other (please specify) <input type="text"/> | |

**The fast track is for simple land use consents and is restricted to consents with a controlled activity status.*

3. Would you like to opt out of the fast track process?

☐ Yes ☐ No

4. Consultation

Have you consulted with iwi/hapū? ☐ Yes ☒ No

If yes, which groups have you consulted with?

Who else have you consulted with?

For any questions or information regarding iwi/hapū consultation, please contact:
The Resource Consents Planning Technicians, planning_technicians@fndc.govt.nz

5. Applicant details

Name/s:

Gemscott Hall Ltd

Email:

Phone number:

Postal address:

(or alternative method of service under section 352 of the act)

Postcode

Have you been the subject of abatement notices, enforcement orders, infringement notices and/or convictions under the Resource Management Act 1991? ☐ Yes ☒ No

If yes, please provide details.

6. Address for correspondence

Name and address for service and correspondence (if using an Agent write their details here)

Name/s:

Andrew Hill

Email:

Phone number:

Postal address:

(or alternative method of service under section 352 of the act)

All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.

7. Details of property owner/s and occupier/s

Name and Address of the owner/occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s:

Gemscott Hall Ltd

Property address/
location:

8. Application site details

Location and/or property street address of the proposed activity:

Name/s:

Gemscott Hall Ltd

Site address/
location:

57A Hall Rd, Kerikeri

Postcode

Legal description:

Lot 304 473949

Val Number:

Certificate of title:

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ☐ Yes ☒ No

Is there a dog on the property? ☐ Yes ☒ No

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

Please contact agent before going on site

9. Description of the proposal

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the *District Plan, and Guidance Notes*, for further details of information requirements.

This application is for the construction and use of 58 residential units and associated works at 57A Hall Road, Kerikeri. The new land use consent is intended to provide a single, clean land use approval for the outstanding residential development and works arising from the earlier consent framework already approved under existing consents.

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

The proposal has been prepared in accordance with the following version of the FNDC Engineering Standards:

☐ 2009 ☒ 2023

10. Would you like to request public notification?

☐ Yes ☒ No

11. Other consent required/being applied for under different legislation

(more than one circle can be ticked):

☐ Building Consent

☐ Regional Council Consent (ref # if known)

☐ National Environmental Standard Consent

☒ Other (please specify)

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

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL)? ☐ Yes ☒ No ☐ Don't know

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result? ☐ Yes ☒ No ☐ Don't know

☐ Subdividing land

☐ Disturbing, removing or sampling soil

☐ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

13. Natural hazards (National Policy Statement for Natural Hazards 2025)

Is the site subject to known or potential natural hazards (for example, flooding, coastal inundation, erosion, or unstable land), as contemplated by the National Policy Statement for Natural Hazards 2025? ☐ Yes ☐ No

If yes, please identify the relevant natural hazard(s) by ticking the applicable box(es) below:

☒ Flooding

☐ Active Faults

☐ Landslips

☐ Liquefaction

☐ Coastal Erosion

☐ Tsunami

☐ Coastal Inundation

Please ensure all relevant technical reports are submitted with the application.

14. Assessment of environmental effects:

Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as written approvals from adjoining property owners, or affected parties.

Your AEE is attached to this application ☒ Yes

15. Draft conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ☒ Yes ☐ No

If yes, please be advised that the timeframe will be suspended for 5 working days as per s107G of the RMA to enable consideration for the draft conditions.

16. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write in full)

Gemscott Hall Ltd

Email:

Phone number:

Postal address:

(or alternative method of service under section 352 of the act)

Fees Information

An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees

I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full)

Darren Park

Signature:

(signature of bill payer)

Date 14-Sep-2026

17. Important Information:

Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.

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

Privacy Information:

Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, www.fndc.govt.nz. These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

18. Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name (please write in full)

Signature

Date

A signature is not required if the application is made by electronic means

See overleaf for a checklist of your information...

Checklist of your information

Please tick if information is provided

- ☐ Payment (cheques payable to Far North District Council)
- ☐ A current Certificate of Title (Search Copy not more than 6 months old)
- ☐ Details of your consultation with Iwi and hapū
- ☐ Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- ☐ Applicant / Agent / Property Owner / Bill Payer details provided
- ☐ Location of property and description of proposal
- ☐ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☐ Reports from technical experts (if required)
- ☐ Copies of other relevant consents associated with this application
- ☐ Location and Site plans (land use) AND/OR
- ☐ Location and Scheme Plan (subdivision)
- ☐ Elevations / Floor plans
- ☐ Topographical / contour plans

*Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application.
Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.*



Assessment of Environmental Effects

 57A Hall Road, Kerikeri
Proposed Residential Development

Job No.: 16159

Rev: 0 **Date:** 25 August 2026

Prepared For:
Gemscott Hall Ltd
1 Ara Tai Rd,
Level 1. The Promenade Building,
Halfmoon Bay
Auckland



Revision History

Revision No	Description/comments	Prepared By	Date
0	Original	A Hill	25/08/2026

Document Control

Action	Name	Signed	Date
Prepared by	Andrew Hill		25/08/2026
	Principal Planner		
Reviewed by	H. Anderson		25/08/2026
	Planning Team Leader		

Distribution

Business/company	Attention	Role



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2 Appendices

Appendix	Document	Author	Date
1	Record of Title	LINZ	20/07/2026
2	Civil Drawings	Chester Consultants	11/08/2026
3	Stormwater Design Amendment Memo	Chester Consultants	31/07/2026
4	Architecture Plans	A Studio Architects	21/08/2026
5	Landscape Plans	ESCARP	24/08/2026
6	Meeting minutes with Council	Chester Consultants	17/08/2026



1 Introduction

This dual application seeks land use consent to construct and use 58 residential units, with associated earthworks, at 57A Hall Road, Kerikeri. Consent is required as a **non-complying activity** under the Far North District Council Proposed Plan (PDP Decisions Version). This resource consent relies on the existing approved consenting framework which was consented under 2220714-RMACOM, 2240312-RMACOM, 2240310-RMALUC (Stage 1), 2240381-RMALUC (Stage 3) and 2240459-RMALUC (Stage 4).

This application seeks a new land use consent under section 88 of the Resource Management Act 1991 (RMA) for the construction and use of 58 residential units and associated works at 57A Hall Road, Kerikeri. The new land use consent is intended to provide a single, clean land use approval for the outstanding residential development and works arising from the earlier consent framework, including Stage 2. The earlier consents inform the existing environment and development context, but do not limit the scope of this fresh section 88 application. The application is accompanied by a section 127 application to change or cancel specified conditions of subdivision consent 2240312-RMACOM, principally to reflect the revised stormwater and infrastructure arrangements. The existing stage-specific land use consents are proposed to be surrendered under section 138 of the RMA following grant of the new land use consent, so that there is a single operative land use approval for the residential development.

This application also seeks a change of conditions under s127 of the Resource Management Act 1991 (RMA) as a **discretionary activity** from the Far North District Council. The change relates to the previous subdivision consent granted under 2240312-RMACOM (original consent for all sites) which was approved to subdivide 58 residential lots, with associated infrastructure, at 57A Hall Road, Kerikeri.

Section 88 of the RMA sets out the particular requirements for persons making an application to a local authority for a resource consent. Section 88(2)(b) states that:

"an application must be made in the prescribed form and manner; and include, in accordance with Schedule 4 of the Act, an assessment of environmental effects in such detail as corresponds with the scale and significance of the effects that the activity may have on the environment".

The following assessment has been prepared in accordance with section 88 and Schedule 4 of the RMA for the new land use consent, and with the requirements of section 127 for the proposed changes or cancellations of conditions. The effects assessment considers the proposal on its own terms, while having regard to the established consent framework and the lawful development already authorised. The overall effects of the proposal are considered to be less than minor, subject to appropriate conditions and the engineering and other supporting information identified in this assessment.

The proposal is considered against the relevant objectives and policies of the Operative Far North District Plan, the Proposed Far North District Plan Decisions Version/Appeals Version as applicable, the Northland Regional Plan and other relevant statutory documents. The assessment recognises that the PDP provisions which are not subject to appeal are treated as operative under section 86F, while provisions subject to appeal remain proposed and the corresponding ODP provisions continue to be relevant.

No persons are considered adversely affected by the proposal.

The proposal is considered consistent with Part 2 of the RMA, having regard to the relevant statutory planning framework and the matters addressed in this assessment. It is therefore considered that the application may be processed on a non-notified basis and consent from the Far North District Council may be granted subject to appropriate conditions.



2 Subject Site

2.1 Subject Site Details

Address	57A Hall Road, Kerikeri
Legal Description	Lot 304 DP 473949
Property Area	3.2 hectares
Regional Authority	Northland Regional Council
Territorial Authority	Far North District Council

3 Site and Surrounding Environment

3.1 Site Description

The application site is known as Lot 304 DP 473949, 57A Hall Road, Kerikeri and measures 3.2 hectares in area. The corresponding Records of Title are attached as **Appendix 1** and the site is identified in Figure 1 below.

The site is located at the southern end of Kerikeri at the immediate edge of the existing residential development. The majority of the site is currently pasture and is devoid of buildings.

Freshwater habitats within the site include an unnamed tributary of the Wairoa Stream running through the middle of the site.

To the northeast are commercial properties, the remainder of the site is surrounded by residential properties. As shown in Figure 2, below, the site is located within the Residential Zone in the Far North District Council's District Plan (Operative District Plan). The surrounding area, to the west, south and east are also zoned General Residential and the land to the north and northeast is zoned Commercial.



Figure 1: Site Location (Source: FNDC GIS)

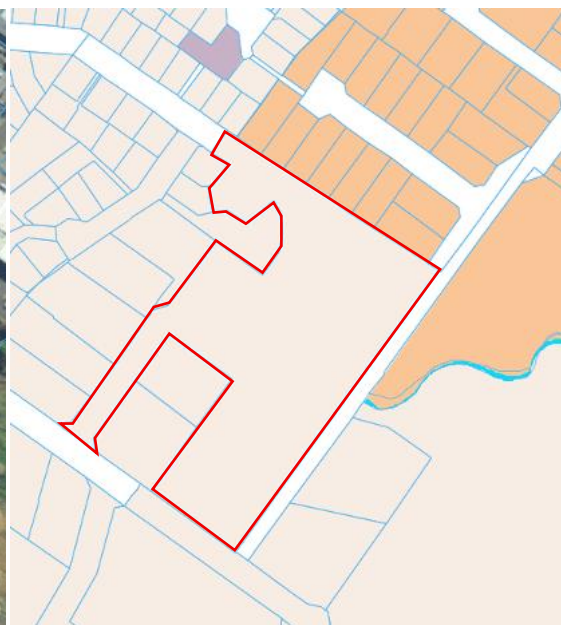


Figure 2: Operative District Plan zoning. (Source: FNDC GIS)



The site is zoned as General Residential under the Proposed Far North District Plan, as shown in Figure 3 below.



Figure 1: Proposed District Plan zoning. Source: FNDC GIS

The subject site has areas through the middle (as shown in Figure 3) that are identified as subject to flooding.

3.2 Surrounding Environment

To the north of the site is a commercial area, the remainder of the site is surrounded by residential developments. The site is on the southern periphery of the Kerikeri township in close proximity to childcare, schools, a grocery store and recreational activities.

4 Background

The site has been laid out and designed by a number of consultants in the past resource consents. These consents were granted by the Far North District Council in the following order:

- Original Land Use and Subdivision Consent: 7 October 2022 under 2220714-RMACOM (covered all 56 sites)
- Subsequent Land Use and Subdivision Consent: 8 April 2025 under 2240312-RMACOM (increased to 58 sites)
- Stage 1: Updated typologies 16 May 2025 under 2240310-RMALUC
- Stage 3: Updated typologies 6 June 2025 under 2240381-RMALUC
- Stage 4: Updated typologies 26 June 2025 under 2240459-RMALUC





Figure 4: Stages of the proposed development

These consents will enable the development to be undertaken and will include the required earthworks to create building platforms, stormwater infrastructure and roading infrastructure, construction of 58 residential units. This will also enable the installation of services including, power, telecoms, wastewater, water, stormwater.

The specific infringements applied for in the previous consent included the following rules (Far North Operative District Plan):

- 7.6.5.1.2 - Residential Intensity
- 7.6.5.1.7 - Setbacks from Boundaries
- 7.6.5.1.5 - Sunlight/Recession Planes
- 7.6.5.1.6 and 7.6.5.2.1 - Stormwater Management
- 15.1.6B.3 - Parking
- 15.1.6C.2 - Access

5 Proposal

5.1 Description of the Proposal

5.1.1 Land Use

Since the previous consents were granted, the proposed dwelling typologies have been revised, principally through a change from the previously approved two-storey forms to single-storey forms. The new land use consent covers the residential development as a whole, including the outstanding Stage 2 typologies, rather than only the changes from the earlier consents. The lot-by-lot development schedule to be included with the application will identify the proposed typology, storey count, applicable consent condition, recession-plane infringement, setback infringement, impervious coverage and finished floor level for each of the 58 lots

The table below reflects what was previously approved under the existing consents and what is being proposed under this application and the new rules triggers under the Proposed District Plan (PDP) which now has legal effect. It should be noted that the application now triggers new Rules NH-R7 and NH-R9



for activities in River Flood Hazard Area under the PDP. These are new rules which did not exist under the previous Operative District Plan, this is discussed further below in Sections 6 and 7.

FNDC ODP Rules	Original Infringements	New Infringements	FNDC PDP Rules
7.6.5.1.2 Residential Intensity	All sites	Unchanged	GRZ-R3
7.6.5.3.4 Sunlight (2m x 45°)	The applicant sought a dispensation for all internal boundaries to have a 3m plus 45-degree recession plane.	Unchanged	GRZ-S2
7.6.5.1.7 Set back from boundaries	2 Lots	2 Lots (3m from road).	GRZ-S3
7.6.5.1.6 and 7.6.5.2.1 Stormwater Management	65% impervious for the entire site	3 Lots over 65% (up to 66.5%)	GRZ-R2
12.3.6.1.3, and 12.3.6.2.2 Excavation and/or Filling	Approximately 12,633m ³ of earthworks are proposed, and will have cut/fill faces which exceed 1.5m in height.	Unchanged	EW-R1
15.1.6A.5.1 Traffic Intensity	The proposal will have a traffic intensity greater than 40	Unchanged	TRAN-R9
15.1.6C.1.1 Private Accessway in All Zones	Lot 100 is to service 9 residential Lots, which is above the permitted allowance.	Unchanged	TRAN-R2
N/A	Not relevant at the time	New infringement	New Flood Hazard Rules NH-R7
N/A	Not relevant at the time	New infringement	New Flood Hazard Rules NH-R9

The proposal also removes the two previously approved communal stormwater attenuation tanks within the road corridor and the in-channel earth weir, and replaces them with individual on-site attenuation tanks associated with each dwelling. The removal of the communal tanks and earth weir is a substantive component of the revised flood and stormwater management proposal and is therefore assessed as part of the land use application as well as the section 127 change to the subdivision consent. The final engineering assessment demonstrates the effects of the revised arrangement are lesser than the effects of the consented arrangement, and can be mitigated. Details relating to this change and the proposed stormwater solution is attached to this application in Appendix 2 and 3.

5.1.2 Subdivision

To reflect the revised stormwater and flood management design, the section 127 application seeks the change and cancellation of specified conditions of subdivision consent 2240312-RMACOM. The requested changes will be set out in a condition schedule identifying each condition in full, the proposed action, the reason for the change, and where the requirement is to be retained in the new land use consent. Conditions relating to public infrastructure to vest will remain with the subdivision consent. Other outstanding works conditions associated with dwelling-related works will be addressed through the new land use consent where appropriate. There are no other proposed changes to the approved subdivision scheme plan, earthworks, roading, access or overall layout.



6 Change of Conditions

For this to occur, there are several conditions of the consent which are required to change.

2240312-RMACOM

Activity A: Subdivision

General Conditions

- The subdivision shall be carried out in accordance with the approved plan of subdivision prepared by CKL NZ Ltd, referenced A22326, Sheets DWG 1501 – 1513, titled “Proposed Subdivision of Lot 304 DP 473949” and dates 10/11/2023, and Combined Engineering Drawings - 57A Hall Road, Kerikeri dated 2026.08.11 and attached to this consent with the Council's “Approved Stamp” affixed to it.

Report title and reference	Author	Revision	Date
Vecta 57A Hall Road Kerikeri Three Waters Resource Consent Design Report For Go Bloodstock New Zealand Limited <u>and Proposed Stormwater Design Amendment Chester Consultants</u>	Adrian Tonks <u>and Jack Chen</u>	Rev 1	14 April 2022 <u>and 31 July 2026</u>
Application for Resource Consent for Subdivision and Land Use Consent for 58 Residential Lots pursuant to s88 of the Resource Management Act 1991 at 57A Hall Road, Kerikeri <u>and 57A Hall Road, Kerikeri Proposed Residential Development, 25 August 2026.</u>	CKL NZ Ltd <u>and Chester Consultants</u>	-	27 February 2024 <u>and 7 August 2026</u>
57A Hall Road – Engineering Infrastructure Memo. Ref: A22326 <u>and Proposed Stormwater Design Amendment Chester Consultants</u>	Ash Vodnala, CKL NZ Ltd <u>and Jack Chen, Chester Consultants</u>	-	9 November 2023 <u>and 31 July 2026</u>
CKL Civil Engineering Drawings for 57A Hall Road, Kerikeri. Project Red: A22326 <u>and Combined Engineering Drawings -</u>	CKL NZ Ltd <u>– Chester Consultants</u>	Rev 1, sheets, 1000, 2000, 2001, 2002, 2003, 3000, 3001, 3002, 3003, 3100, 3101, 4000, 4001, 4002, 4003, 4100, 4101, 4200, 4201.e	6 November 2023 <u>– and 2026.08.11</u>



57A Hall Road, Kerikeri 2026.08.11			
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Delete the following conditions:

Stage 1A – 3(d), 3(e), 5(c)-(e)

Stage 1B – 7(d), 9(c), 9(d)

Stage 2 – 11(d), 13(b), 13(d)

Stage 3 – 15(d), 17(a)-(c)(e)

Stage 4A – 19(d), 21(a)-(c)(e)

Stage 4B – 23(d), 25(a),(b),(d)

2240312-RMACOM

Activity A: Land Use – The new land use consent is intended to replace the existing land use approvals once the relevant earlier land use consents are surrendered under section 138 of the RMA. A condition is proposed to ensure that the new land use consent is not given effect to until the relevant surrender applications have been lodged and accepted by Council, or as otherwise agreed by Council.

7 Statutory Context

7.1 Resource Management Act 1991- Section 127

The changes requested above are made under s127 of the RMA, which states:

127. Change or cancellation of consent condition on application by consent holder –

(1) The holder of a resource consent may apply to a consent authority for a change or cancellation of a condition of the consent (other than any condition as to the duration of the consent).

(3) Sections 88 to 121 apply, with all necessary modifications, as if –

(a) the application were an application for a resource consent for a discretionary activity; and

(b) the references to a resource consent and to the activity were references only to the change or cancellation of a condition and the effects of the change or cancellation respectively.

(4) For the purposes of determining who is adversely affected by the change or cancellation, the local authority must consider, in particular, every person who –

(a) made a submission on the original application; and

(b) may be affected by the change or cancellation.

On the basis of the above the s127 application to change conditions of consent must be assessed as a **discretionary activity**. The requirements above are assessed in the following sections.



7.2 Far North Proposed District Plan

Following the closure of the statutory appeal period, on 12 August 2026, for the Proposed Far North District Plan (Decisions Version) (PDP-DV), resource consent applications must be evaluated under the updated statutory status pursuant to the Resource Management Act 1991 (RMA). Any provisions and rules within the PDP-DV that were not subject to Environment Court appeals are now treated as operative pursuant to section 86F of the RMA, effectively replacing the corresponding provisions of the Operative Far North District Plan (2009).

Resource consent is required under the PDP-DV in respect of the following matters:

- GRZ-R3: The proposed residential development does not comply with the 600m² residential intensity standard; accordingly, this is a **Restricted Discretionary** activity.
- GRZ-S2: The proposed dwellings cannot comply with the Height in Relation to Boundary standard; accordingly, this is a **Restricted Discretionary** activity.
- GRZ-S3: The proposed dwellings cannot comply with the Setback standard; accordingly, this is a **Restricted Discretionary** activity.
- GRZ-R2: The proposed development cannot comply with the Impermeable Surface Coverage standard; accordingly, this is a **Restricted Discretionary** activity.
- EW-R1: The proposed development cannot comply with the applicable earthworks' standards EW-S1 and EW S2; accordingly, this is a **Restricted Discretionary** activity.
- TRAN-R9: The proposed development cannot comply with the applicable trip-generation standard; accordingly, this is a **Restricted Discretionary** activity.
- TRAN-R2: The proposed private accessway cannot comply with the applicable access standard PER 2 as Lot 100 is to service 9 residential Lots, which is above the permitted allowance; accordingly, this is a **Discretionary** activity.
- NH-R7: Buildings are located within the River Flood Hazard Area and cannot comply with RDIS-1 accordingly this is a **Non-Complying** activity.
- NH-R9: Roads are located within the River Flood Hazard Area and accordingly this is a **Restricted Discretionary** activity.

8 Assessment of Environmental Effects

8.1 Existing Resource Consent Framework

The proposed development is supported by an established resource consent framework, but the present application is a fresh section 88 land use application. The earlier consents inform the existing environment, implementation history and development context; they do not restrict the scope of the new application to the changes from those consents. The new consent is intended to consolidate the outstanding land use authorisations into a single approval, with the earlier stage land use consents to be surrendered under section 138 once the new consent is in place. The section 127 application separately addresses the conditions of subdivision consent 2240312-RMACOM that need to be changed or cancelled to reflect the revised infrastructure and stormwater arrangements.



Resource consent 2220714-RMACOM originally established the subdivision and land use framework for the development, providing for 56 residential dwellings. This consent authorised the associated residential development, including infringements relating to residential intensity, sunlight, stormwater management, earthworks and private access, and established the underlying subdivision, roading and access framework.

The development was subsequently revised through resource consent 2240312-RMACOM, which re-established the site-wide subdivision framework and increased the development to 58 residential lots. This consent authorised the associated land use infringements relating to residential intensity, stormwater management, sunlight, earthworks, traffic intensity and private access, as well as the subdivision infringements relating to minimum lot size and allotment dimensions.

The detailed residential development was subsequently progressed through separate land use consents for Stages 1, 3 and 4. These consents authorised the detailed dwelling typologies for those stages and the associated infringements, including residential intensity, sunlight, setbacks, parking and access. The Stage 4 consent also addressed impervious surface requirements.

Collectively, these consents establish the lawful resource consent framework for the development, including the number and arrangement of residential lots, subdivision, earthworks, roading and access, together with the ability to construct residential dwellings subject to the authorised infringements and conditions of consent.

The current application therefore seeks a consolidated land use approval for the 58-lot residential development, while recognising that the subdivision consent remains the appropriate consent for infrastructure intended to vest. The earlier approvals remain relevant to the assessment of effects, implementation status and the existing environment.

8.2 Proposed Land Use Changes

The revised dwelling typologies are single-storey, subject to confirmation in the final lot-by-lot schedule. The new land use consent will cover the residential development across all stages, including Stage 2. The effects assessment below focuses on the actual proposal and uses the earlier approvals as an important reference point for understanding the existing environment and the degree of change in built form.

8.3 Character and Amenity

The RMA defines amenity values as those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes. The surrounding lawfully established physical environment provides a useful context in terms of evaluating character and amenity effects of the proposal on the existing environment.

The following activities are proposed as part of this application which have the potential to effect residential character and amenity are changes in:

- building heights
- sunlight
- setbacks



8.3. 1 Building Height

The previous resource consents included two-storey dwelling typologies. The revised proposal reduces the built form across the development and is single-storey. This reduction in height and bulk is expected to improve privacy, reduce visual dominance and improve sunlight and daylight outcomes when compared with the previously approved forms. including the existing overlooking controls.

8.3.2 Sunlight

The updated plans for Stage 3 and 4 have identified sunlight infringements including 2m + 45degrees on Lot 31 (Stage 3) and Lots 24 and 28 (Stage 4) and 3m + 45degrees on Lots 10, 29, 31 and 58 within Stage 3 and Lots 25, 27 and 28 within Stage 4. All of the identified infringements occur entirely within the development. None of the infringements occur along the external boundaries of the site or affect any adjoining third-party properties.

The purpose of the Sunlight control is to manage the potential effects of building height and bulk on neighbouring sites by protecting access to sunlight, daylight, outlook and a reasonable sense of openness. The rule is primarily directed at managing the interface between development and surrounding properties. In this case, the identified infringements occur between proposed lots within an integrated residential development or adjacent to internal roads that form part of the approved subdivision. Accordingly, the infringements are appropriately characterised as technical breaches rather than infringements that generate substantive adverse effects. In addition, in general, any adverse effects from sunlight control infringements will be considerably reduced from those previously approved.

The internal roads adjoining some of the affected lots provide additional physical separation between built forms and maintain opportunities for sunlight penetration, outlook and visual openness. While the recession plane is measured from the legal boundary, the actual built environment experienced by future residents includes the width of the internal road reserve, resulting in a greater degree of separation than may otherwise occur between conventional residential allotments.

Particular weight should also be given to the approved consenting framework which authorised sunlight infringements affecting all internal lots within the development. All of those infringements were accepted as part of the comprehensive development outcome.

Overall, the infringements are wholly internal to the development, do not affect external site boundaries and do not result in adverse effects on neighbouring landowners. The infringements therefore remain technical in nature and do not undermine the intent of the rule. Having regard to the approved baseline and the integrated design of the development, it is considered that the effects arising from the proposal are less than minor and that no persons are adversely affected by the proposed changes.

8.3.3 Setbacks

The approved Stage 4 consent (2240459-RMALUC) identified that Lots 27 and 28 were unable to achieve the required 50% landscaping within the 2m front yard setback adjoining Ranui Avenue due to the presence of rock armouring and the associated swale infrastructure along the road frontage. This non-compliance was assessed and accepted as part of the original consent process.

Similar infringements affecting other updated lots, resulting from the dwellings encroaching into the 3m road setback area, while the specific lots have changed, the nature of the infringement remains comparable to that previously approved. They relate to frontage landscaping constraints rather than any increase in development intensity, building height, or site coverage. The setback infringements are expected to be limited in extent and confined to the established internal residential development.

When assessed against the approved consenting framework, the proposed non-compliance is of a similar scale and effect to that already anticipated and authorised under the existing consent. The overall landscaping outcomes, visual appearance of the development, and relationship with the adjoining road corridor remain consistent with those previously assessed. Accordingly, the proposal is not considered to



result in any new or materially different adverse effects, and any effects associated with the landscaping infringement are considered less than minor.

The previously authorised earthworks, subdivision, roading, access arrangements and overall site layout remain unchanged and are therefore not being reassessed as new components of the development.

8.4 Stormwater

8.4.1 Stormwater Tanks

The substantive change proposed by this application relates to the detailed stormwater management design. The previous subdivision consent provided for two large communal stormwater attenuation tanks within the road network to service the wider development. The current proposal removes these communal tanks and instead provides individual 1,000L stormwater attenuation tanks associated with each dwelling targeting at stream channel erosion attenuation.

This represents a change to the detailed stormwater management solution, rather than a change to the approved subdivision or development framework. The number and configuration of lots, road layout, access, earthworks and overall site layout remain unchanged.

The revised stormwater system has been designed to provide the required stream channel erosion attenuation and stormwater management for the development, while reducing downstream peak flows and removing the need for the previously proposed communal tanks within the road corridor. The revised approach also provides a simpler long-term maintenance arrangement. The stormwater design amendment has been reviewed by the project civil engineers and discussed with FNDC, with Council providing agreement in principle to the removal of the underground attenuation tanks and associated amendments being progressed through the section 127 process and based on the updated design.

The approved stormwater strategy was based on hydraulic neutrality to the greenfield condition, including attenuation of post-development peak flows for the 2-, 5-, 10- and 100-year storm events and extended detention of frequent storm events. The revised approach continues to manage the stormwater effects of the development, with the engineering assessment identifying that removal of the communal tanks will reduce downstream peak flows and downstream flooding risk.

The section 127 application seeks to change and cancel the relevant subdivision consent conditions so that they reflect the final stormwater and flood management design. The new land use consent will contain the dwelling-related stormwater conditions necessary to ensure the individual tanks are installed, retained and maintained for the life of the development.

The accompanying stormwater assessment addresses the performance of the revised system and demonstrates that the proposed arrangement can appropriately manage stormwater generated by the development.

8.4.2 Site Coverage

The proposed amendments to the approved development result in changes to dwelling typologies and associated site coverage levels across the subdivision. However, when assessed against the approved consenting framework, the extent of impervious surface coverage remains within the stormwater assumptions and design parameters previously assessed and approved through the original resource consent process.

Under the approved consenting framework, impervious surface coverage of up to 65% was anticipated. These levels of development intensity were specifically assessed by CKL as part of the Infrastructure Report supporting the original application, with the stormwater network and associated management systems designed to accommodate runoff generated from this level of site coverage. Consequently, the approved development framework anticipated stormwater effects associated with a significantly greater proportion of highly impervious lots than is now proposed.



Under this application, some lots remain below 50% impervious coverage, with some lots up to 65%, and three lots within Stage 4 having impervious coverage of approximately 66.5%. Overall, the number of lots exceeding the applicable standard remains substantially below the level of development contemplated by the original consent, which was assessed on the basis of up to 65% impervious coverage across the development.

Importantly, the proposed amendments do not increase the overall scale or intensity of development beyond that anticipated by the approved stormwater design. Rather, the revised dwelling typologies result in a redistribution of impervious coverage across the site while remaining within the overall development envelope assessed through the original consent.

The approved stormwater infrastructure was designed to accommodate runoff generated from the originally approved development. There is therefore no material increase in stormwater demand arising from the revised dwelling typologies. The revised stormwater design, including the provision of individual attenuation tanks, provides a further means of managing runoff at source.

While three lots within Stage 4 are proposed to have impervious coverage between 65.5% and 66.5%, this represents only a marginal increase of approximately 0.5% to 1.5% above the 65% level previously assessed. Given the very limited extent of the exceedance and the small area involved, this does not materially alter the stormwater characteristics or performance of the development.

Having regard to the approved development framework, the findings of the CKL Infrastructure Report and the subsequent stormwater engineering assessment, the proposed changes will not result in any material increase in stormwater effects beyond those previously assessed and authorised.

8.4.3 Flooding

The proposed development is located within an area that is identified as being subject to flooding under the Proposed Far North District Plan (PDP). The PDP mapping identifies parts of the development within the River Flood Hazard Area, including areas associated with the 10-year and 100-year ARI flood events.

This represents a new regulatory consideration under the PDP, rather than a change in the underlying flood hazard affecting the site. The flood hazard was identified and specifically considered through the previous resource consent applications and associated engineering assessments. The approved development framework therefore already incorporates measures to manage the effects of flooding and the interaction between the proposed development, site filling, overland flow paths and downstream receiving environments.

The previous resource consent decisions specifically required stormwater and flood risk management infrastructure to address both the 10% AEP event and the 1% AEP event plus climate change, including assessment of overland and secondary flow paths and ensuring that filling or diversion of existing flow paths does not cause or worsen flooding effects on upstream or downstream properties.

The approved earthworks and development platform have been designed having regard to the identified flood hazard. The proposed houses and roads are raised through the approved earthworks such that the finished levels provide separation from the relevant flood levels. In addition, the approved stormwater and flood management strategy incorporates the realigned stream corridor and associated channel infrastructure to manage overland and flood flows.

The current proposal retains the approved development platforms, road layout and general site arrangement, but it does alter the flood management system through removal of the communal tanks and in-channel earth weir. The engineering assessment demonstrates that the revised arrangement does not divert flood flows onto surrounding properties, does not reduce floodplain storage within the 1 in 10 year River Flood Hazard Area, and does not increase flood levels or risks to upstream or downstream properties..

The legal effect of the PDP has, however, resulted in two additional rule triggers that were not identified under the previous district plan framework. This is because the River Flood Hazard Area is now spatially identified in the PDP, whereas the previous district plan mapping did not identify the hazard in the same manner.



These are new rule triggers under the PDP but do not represent new physical effects or a newly identified flood hazard. The underlying flood hazard was present when the previous consents were considered and was addressed through the engineering design, including the approved earthworks, finished building and road levels and stormwater/flood management infrastructure. The previous consent conditions expressly required the flood risk associated with the 1% AEP event and overland flow paths to be assessed and managed and require that filling or diversion of flow paths does not worsen flooding effects on upstream or downstream properties.

The proposed application does not seek to alter those aspects of the approved development. In particular, no change is proposed to the approved earthworks, road layout, building locations, finished levels or flood management approach as a consequence of the current land use application. The new rule triggers therefore arise from the application of the PDP's current spatial flood hazard provisions to the already consented development framework, rather than from a change to the development that would increase exposure to, or generate additional, flooding effects. The stormwater memo has assessed this hazard accordingly and concludes that these flood hazards can be mitigated.

The revised stormwater design is also not expected to adversely affect the existing flood management outcome. Indeed, the current engineering review identifies that removal of the previously approved underground attenuation tanks and in-channel earth weir is expected to reduce downstream peak flows and alleviate downstream flooding hazards.

Accordingly, while the PDP results in the proposed buildings and roads being subject to new activity status requirements under NH-R7 and NH-R9, the underlying flood effects have already been considered as part of the approved resource consent framework. The current application does not introduce a new flood hazard or materially alter the previously assessed relationship between the development and the flood hazard.

The effects of the proposed changes are considered less than minor and can be appropriately accommodated within the capacity of the approved stormwater management system.

8.5 Positive Effects

The proposed amendments to the typologies and stormwater management will result in positive social and economic effects by increasing the availability of affordable and attainable housing within Kerikeri. The revised housing forms provide a greater range of dwelling options that are better aligned with market demand and will assist first home buyers, young families, retirees and other households seeking more affordable home ownership opportunities. By facilitating the delivery of additional housing within an already approved and serviced residential development, the proposal will contribute to addressing ongoing housing demand in Kerikeri while making efficient use of existing infrastructure. The provision of more affordable dwellings will improve housing choice, increase opportunities for home ownership, support community wellbeing and contribute to the sustainable growth of Kerikeri. Accordingly, the proposal will generate significant positive social and economic benefits for future residents while making a meaningful contribution to the supply of housing within the Far North District.

8.6 Cultural Impact Assessment

A Cultural Impact Assessment and addendum, prepared by Celia Witehira of Te Whare Taiao o Ngāti Rehia, as well as an ecological assessment, and a detailed site investigation, were prepared for the previous application.

These documents informed the earlier approvals and remain relevant to the existing environment and for consideration of whether the revised dwelling typologies or stormwater changes alter the previously assessed effects.

The current proposal does not seek to alter the established stream corridor or other freshwater works except for the revised stormwater/flood management changes described in this AEE. Ngāti Rehia will be advised of the application and the relevant supporting information in accordance with the applicant's engagement obligations and Council's pre-application feedback. The implementation status of the earlier



consents is also relevant to the existing environment and to the effect of surrendering earlier land use consents.

8.7 Summary

In summary, the existing resource consents provide the lawful framework for the development and already authorise the subdivision and residential development of the site, including the relevant land use infringements. The current application does not seek to alter that underlying development framework. The changes are limited to:

1. revised dwelling typologies, principally changing the dwellings from two-storey to single-storey buildings, with corresponding changes in the location and configuration of the already authorised land use infringements; and
2. a revised stormwater management system, replacing the two previously approved communal stormwater tanks with individual stormwater tanks associated with each dwelling.

The subdivision, scheme plan, earthworks, roading, access and overall site layout remain unchanged. The assessment therefore focuses on the effects of the revised dwelling typologies and stormwater design within the established resource consent framework.

When considering the approved consenting framework, the effects under the land use application and s127 application, it is only the effects of the changes being sought that need be assessed and considered. As such, this assessment of environmental effects does not re-visit or repeat that provided for the processing of the original application.

Overall, it is considered that the proposal will have effects that are less than minor.

9 Affected Persons

The original resource consent was processed on a non-notified basis, and no submissions were received. The current application does not introduce any materially different effects beyond those previously assessed and authorised.

The proposed change will result in effects on the environment that are less than minor and there are no affected persons.

10 Relevant Provisions of Planning Instruments

The applicable provisions of the relevant planning instruments were assessed in the original decision and application. The conclusions reached in those assessments (refer to original resource consent applications) are unaltered by the proposal to change requested through this application. However, for the purposes of the Proposed District Plan we have included an assessment of the relevant Objectives and Policies in the table below:



Far North Proposed District Plan

General Residential - Objectives	
GRZ-O1 The General Residential zone provides a variety of densities, housing types and lot sizes that respond to: a. housing needs and demand; b. the adequacy and capacity of available or programmed development infrastructure; c. the amenity and character of the receiving residential environment; and d. historic heritage. GRZ-O2 The General Residential zone consolidates urban residential development around available or programmed development infrastructure to improve the function and resilience of the receiving residential environment while creating well-functioning urban environments. GRZ-O4 Land use and subdivision in the General Residential zone is supported where there is adequacy and capacity of available or programmed development infrastructure. GRZ-O5 Land use and subdivision in the General Residential zone provides communities with functional and high amenity living environments. GRZ-O6 Residential communities are resilient to changes in climate and are responsive to changes in sustainable development techniques.	The proposal is considered consistent with the relevant objectives and policies as it remains within the established and consented 58-lot residential subdivision framework. The revised dwelling typologies do not alter the approved density, subdivision pattern, development footprint, roading network, access arrangements. Rather, the proposal represents a refinement to the housing design within a development that has already been assessed and approved for residential purposes. The single-storey dwellings will provide functional and attractive residential accommodation, incorporating appropriate levels of outdoor living space, privacy, sunlight access, and residential amenity for future occupants. The development does not increase the number of approved dwellings or place additional demand on the existing infrastructure network. Stormwater management has been refined through the introduction of individual on-site attenuation tanks, which will assist in managing runoff generated by the dwellings and improve overall stormwater performance. Furthermore, potential flood risk considerations have already been addressed through the approved earthworks, finished floor and ground levels, stormwater channel works, and overland flow path management measures. Accordingly, the proposal continues to support efficient infrastructure provision and appropriate management of natural hazard and stormwater effects while maintaining consistency with the established residential character and approved urban form of the site.
General Residential - Policies	
GRZ-P1 Enable land use and subdivision in the General Residential zone where: a. there is adequacy and capacity of available or programmed development infrastructure to support it; and b. it is consistent with the scale, character and amenity anticipated in the planned residential environment. GRZ-P2 Enable a range of residential developments within the General Residential zone, including terraced housing and apartments, where there is adequacy and capacity of available or	The proposal is consistent with the relevant General Residential Zone policies. The development remains within the scale, density and general layout of the previously authorised residential development, with the proposed single-storey dwelling typologies maintaining the anticipated residential character and reducing the potential for visual dominance and shading compared with the previously approved two-storey typologies. The development continues to provide for appropriate residential amenity, including outdoor living, privacy and access to sunlight, subject to the specific standards addressed elsewhere in this application. The



programmed development infrastructure or programmed development infrastructure. GRZ-P5 Encourage and support the use of on-site water storage to enable sustainable and efficient use of water resources.	approved infrastructure framework remains unchanged, while the proposed individual stormwater tanks provide an appropriate on-site stormwater management solution and support the efficient management of stormwater within the development. The proposal is consistent with the General Residential policies because the new land use consent consolidates the 58-lot residential development within the established urban area and provides for housing choice and appropriate residential amenity. The proposed single-storey forms generally reduce visual dominance and shading compared with the previously approved forms. The stormwater design provides for on-site attenuation, subject to the final engineering evidence and enforceable maintenance requirements.
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Natural Hazards - Objectives

NH-O1 The risks from natural hazards to people, property, infrastructure and the environment are managed, including taking into account the likely long-term effects of climate change, to ensure the health, safety and resilience of communities.

NH-O2 Land use and subdivision does not increase the risk from natural hazards or risks are mitigated, and existing risks are reduced where there are practicable opportunities to do so.

NH-O3 New infrastructure is located outside of identified natural hazard areas unless:

- it has a functional or operational need to be located in that area;
- it is designed to maintain its integrity and function, as far as practicable during a natural hazard event; and

adverse effects resulting from that location on other people, property and the environment are mitigated.

The proposal is consistent with the relevant Natural Hazards objectives. The River Flood Hazard affecting the site is not a new hazard arising from the current application and was identified and assessed through the previous consenting process. The approved development framework includes earthworks and filling to establish the building and road platforms, together with the stormwater channel and associated overland flow arrangements to manage flood flows. These elements remain unchanged by the current application. The proposed changes to dwelling typologies and the detailed stormwater management system do not increase the scale of development or alter the approved flood management arrangements. Accordingly, the proposal does not increase the established natural hazard risk and continues to provide for the management and resilience of the development in relation to the identified flood hazard

Natural Hazards – Policies

NH-P2 Consider the following matters, where relevant, when assessing natural hazard risk for land use and subdivision:

- the nature, frequency and scale of the natural hazard;

The proposal is consistent with the relevant Natural Hazards policies. The nature and extent of the River Flood Hazard have previously been assessed as part of the consenting framework for the development, including consideration of the location of building platforms and vehicle access,



b. not increasing natural hazard risk to other people, property, infrastructure and the environment beyond the site; c. the location of building platforms and vehicle access; d. the use of the site, including by vulnerable activities; e. the location and types of buildings or structures, their design to mitigate the effects and risks of natural hazards, and the ability to adapt to long term changes in natural hazards; f. earthworks, including excavation and fill; g. location and design of infrastructure; h. activities that involve the use and storage of hazardous substances; i. aligning with emergency management approaches and requirements; j. whether mitigation results in transference of natural hazard risk to other locations or exacerbates the natural hazard; k. reduction of risk relating to existing activities; and l. whether the activity has a functional need or operational need to be within an identified natural hazard area and there is no practicable alternative location for the activity. NH-P5 Require an assessment of risk prior to land use and subdivision in areas that are subject to identified natural hazards, including consideration of the following: a. the nature, frequency and scale of the natural hazard; b. the temporary or permanent nature of any adverse effect; c. the type of activity being undertaken and its vulnerability to an event, including the effects of climate change; d. the consequences of a natural hazard event in relation to the activity; e. any potential to increase existing risk or creation of a new risk to people, property, infrastructure and the environment within and beyond the site and how this will be mitigated;	the approved earthworks and filling, and the design of the stormwater channel and overland flow paths. The current application does not amend these elements of the approved development. The proposed buildings remain on the established building platforms, and the approved road and access layout is retained. The revised stormwater design replaces the previously approved communal tanks with individual on-site attenuation tanks and does not alter the approved flood conveyance arrangements. The proposal therefore does not introduce a new flood hazard or increase the established risk to the site or surrounding properties, and the existing mitigation and infrastructure framework continues to provide for appropriate management of the identified flood hazard. The proposal is assessed against NH-P2, including the nature and scale of the River Flood Hazard, the risk to people and property beyond the site, the location of building platforms and access, the vulnerability of residential activity, the effects of earthworks and filling, the design of infrastructure, and the potential for risk transfer. NH-P2(b), NH-P2(j) and NH-P6(f) are specifically addressed in the flooding assessment. The final modelling must demonstrate that removal of the earth weir does not divert flood flows or reduce floodplain storage within the 1 in 10 year River Flood Hazard Area. NH-P5 is also addressed through the risk assessment and consideration of climate change and the consequences of flood events.
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- f. the design, location and construction of buildings, structures and infrastructure to manage and mitigate the effects and risk of natural hazards including the ability to respond and adapt to changing hazards;
- g. the subdivision/site layout and management, including ability to access and exit the site during a natural hazard event; and
- h. the use of natural features and natural buffers to manage adverse effects.

NH-P6 Manage land use and subdivision in river flood hazard areas to protect the subject site and its development, and other property, by requiring:

- a. subdivision applications to identify building platforms that will not be subject to inundation and material damage (including erosion) in a 1 in 100 year flood event;
- b. a minimum freeboard for all buildings designed to accommodate vulnerable activities of at least 500mm above the 1 in 100 year flood event and at least 300mm above the 1 in 100 year flood event for other new buildings;
- c. commercial and industrial buildings to be constructed so they will not be subject to material damage in a 1 in 100 year flood event;
- d. buildings within a 1 in 10 Year River Flood Hazard Area to be designed to avoid material damage in a 1 in 100 year flood event;
- e. storage and containment of hazardous substances so that the integrity of the storage method will not be compromised in a 1 in 100 year flood event;
- f. earthworks (other than earthworks associated with flood control works) do not divert flood flow onto surrounding properties and do not reduce flood plain storage capacity within a 1 in 10 Year River Flood Hazard area;
- g. the capacity and function of overland flow paths to convey stormwater flows safely and without causing damage to property or the environment is retained, unless sufficient capacity is provided by an alternative method; and the provision of safe vehicle access within the site.



11 Relevant Other Matters

11.1 Consideration of Alternatives

An assessment of alternatives is appropriate for the current application because it is a fresh land use consent and includes a change to the flood management system within a mapped flood hazard area. The principal alternatives considered are: retaining the previously approved communal attenuation tanks and earth weir; adopting the proposed individual on-site tanks and removing the weir; and alternative flood/stormwater arrangements that could achieve equivalent attenuation and floodplain performance. The preferred option is the proposed individual-tank arrangement because it is intended to provide attenuation at source, reduce downstream peak flows and simplify long-term maintenance, subject to confirmation through the final engineering modelling that floodplain storage and flood levels are not adversely affected.

11.2 Mitigation Measures

Mitigation measures are required to ensure the effects identified in this assessment remain no more than minor. The proposed mitigation and consent mechanisms include: individual stormwater attenuation tanks to be installed and maintained on each lot; appropriate conditions and, where required, section 221 consent notices to secure those obligations for future owners; retention and protection of approved flood levels and freeboard; maintenance of overland flow paths; controls to prevent diversion of flood flows onto surrounding properties; and any additional measures identified by the final 10% AEP and 1% AEP plus climate change modelling. Conditions will also control the extent of setback encroachments and any required landscaping or screening.

11.3 Section 104D – Non-Complying Activity

As NH-R7 gives the new land use application Non-Complying activity status, section 104D of the RMA must be applied. The first gateway is whether the adverse effects of the activity on the environment will be minor or less than minor. The effects identified in this AEE relate principally to residential intensity and built form, sunlight and setbacks, stormwater, flooding and the relationship of the development with the River Flood Hazard Area. The earlier consents provide relevant evidence of the scale and character of the development and the effects previously assessed, while the revised dwelling forms generally reduce building height and bulk.

The revised stormwater and flood management arrangement is the principal new technical matter and is supported by modelling demonstrating that removal of the earth weir and communal tanks will not increase flood levels, reduce floodplain storage, divert flood flows onto surrounding properties or increase risk to upstream or downstream properties. Subject to that evidence and appropriate conditions, the applicant considers the adverse effects will be no more than minor.

The second gateway is whether the application is contrary to the objectives and policies of the relevant district plan, including the Natural Hazards provisions. The proposal is not contrary to NH-O1 and NH-O2 because the development incorporates flood risk management and the revised stormwater system is intended to reduce downstream peak flows. The proposal is consistent with NH-O3 and NH-P2 to the extent that the development is already established within the urban area and the building platforms, infrastructure and flood management arrangements have been designed to manage the identified hazard. The assessment specifically addresses NH-P2(b), NH-P2(j) and NH-P6(f): the final engineering evidence will demonstrate that the proposal does not increase hazard risk to other persons or property, does not transfer or exacerbate risk through the revised flood management arrangement, and does not divert flood flows or reduce floodplain storage within the 1 in 10 year River Flood Hazard Area. The proposal also



addresses NH-P5 by considering the nature, frequency and scale of the hazard, the consequences of the hazard event, the vulnerability of the proposed residential activity, climate change, and the ability of the design and infrastructure to manage and adapt to those risks. On the information currently available, and subject to the final technical evidence, the proposal is not considered contrary to the relevant objectives and policies. The section 104D gateway is therefore capable of being satisfied.

11.4 Part 2 Matters

The relevant statutory documents are considered a valid, complete and certain planning documents and have already given substance to the principles in Part 2 of the RMA. They were prepared in a manner that reflects Part 2, therefore no further assessment against Part 2 matters are required for this application (R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316).

Regardless, the proposed development is considered to recognise and provide for the relevant matters of Sections 6, 7 and 8 and to represent a sustainable management of the land resource and achieve the purpose of the RMA, as well as give substance to Part 2 of the RMA.

12 Conclusion

In conclusion, the proposal is consistent with the purpose and principles of the RMA in that it enables people to provide for their economic and social wellbeing, whilst maintaining and enhancing the quality and amenity of the local environment and avoiding adverse effects.

In terms of section 104, the proposal will be consistent with the relevant provisions of the Proposed Far North District Plan, the Northland Regional Plan and will have actual or potential effects on the environment which are less than minor and consistent with the environmental outcomes envisaged by the relevant statutory planning framework.

Accordingly, the proposed amendments to the existing subdivision consent and the new land use consent can be granted on a non-notified basis.



Limitations

This assessment contains the professional opinion of Chester Consultants Ltd as to the matters set out herein, in light of the information available to it during the preparation, using its professional judgement and acting in accordance with the standard of care and skill normally exercised by consultants providing similar services in similar circumstances. No other express or implied warranty is made as to the professional advice contained in this report.

We have prepared this report in accordance with the brief as provided and our terms of engagement. The information contained in this report has been prepared by Chester Consultants Ltd at the request of Gemscott Hall Ltd and is exclusively for its Client's use and reliance. It is not possible to make a proper assessment of this assessment without a clear understanding of the terms of engagement under which it has been prepared, including the scope of the instructions and directions given to and the assumptions made by Chester Consultants Ltd. The assessment will not address issues that would need to be considered for another party if that party's particular circumstances, requirements, and experience were known and, further, may make assumptions about matters of which a third party is not aware. No responsibility or liability to any third party is accepted for any loss or damage whatsoever arising out of the use of or reliance on this assessment by any third party.

The assessment is also based on information that has been provided to Chester Consultants Ltd from other sources or by other parties. The assessment has been prepared strictly on the basis that the information that has been provided is accurate, completed, and adequate. To the extent that any information is inaccurate, incomplete, or inadequate, Chester Consultants Ltd takes no responsibility and disclaims all liability whatsoever for any loss or damage that results from any conclusions based on information that has been provided to Chester Consultants Ltd.





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UNDER LAND TRANSFER ACT 2017
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R.W. Muir
Registrar-General
of Land

Identifier **689791**
Land Registration District **North Auckland**
Date Issued 10 March 2015

Prior References
650432

Estate	Fee Simple
Area	3.2735 hectares more or less
Legal Description	Lot 304 Deposited Plan 473949
Purpose	State housing purposes
Registered Owners	
His Majesty the King	

Interests

Subject to a right of way and electricity, water supply and telephonic communications over part marked G on DP 473949 created by Transfer D040496.2 - 3.9.1996 at 10:13 am

The easements created by Transfer D040496.2 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way, a right to convey water and to electricity and telephone rights over part marked G and H on DP 473949 specified in Easement Certificate D118628.5 - 13.3.1997 at 9.12 am

The easements specified in Easement Certificate D118628.5 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way and electricity, telephone and water supply rights over part marked G on DP 473949 created by Transfer D445631.3 - 29.10.1999 at 1.20 pm

The easements created by Transfer D445631.3 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant to the part formerly Lot 7 DP 471446 is a right to convey water and an electricity and telecommunications easement created by Easement Instrument 5976457.4 - 22.4.2004 at 9:00 am

Subject to an electricity and telecommunications easement and a right to convey water over part marked F, G and H on DP 473949 created by Easement Instrument 5976457.4 - 22.4.2004 at 9:00 am

The easements created by Easement Instrument 5976457.4 are subject to Section 243 (a) Resource Management Act 1991
9167777.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 12.10.2012 at 10:30 am (affects the part formerly Lot 7 DP 471446)

Land Covenant in Easement Instrument 9167777.7 - 12.10.2012 at 10:30 am (affects the part formerly Lot 7 DP 471446)

Land Covenant in Easement Instrument 9825801.1 - 2.9.2014 at 2:47 pm (affects the part formerly Lot 7 DP 471446)

9833951.4 Surrender of the subject electricity and telecommunications easement and right to convey water created by Easement Instrument 5976457.4 as appurtenant to Part Lot 304 DP 473949 (contained in CT 639730) - 14.10.2014 at 1:41 pm

Subject to a right of way and right to convey electricity, telecommunications and computer media and water over part marked F, G and H on DP 473949 created by Easement Instrument 9833951.9 - 14.10.2014 at 1:41 pm

The easements created by Easement Instrument 9833951.9 are subject to Section 243 (a) Resource Management Act 1991

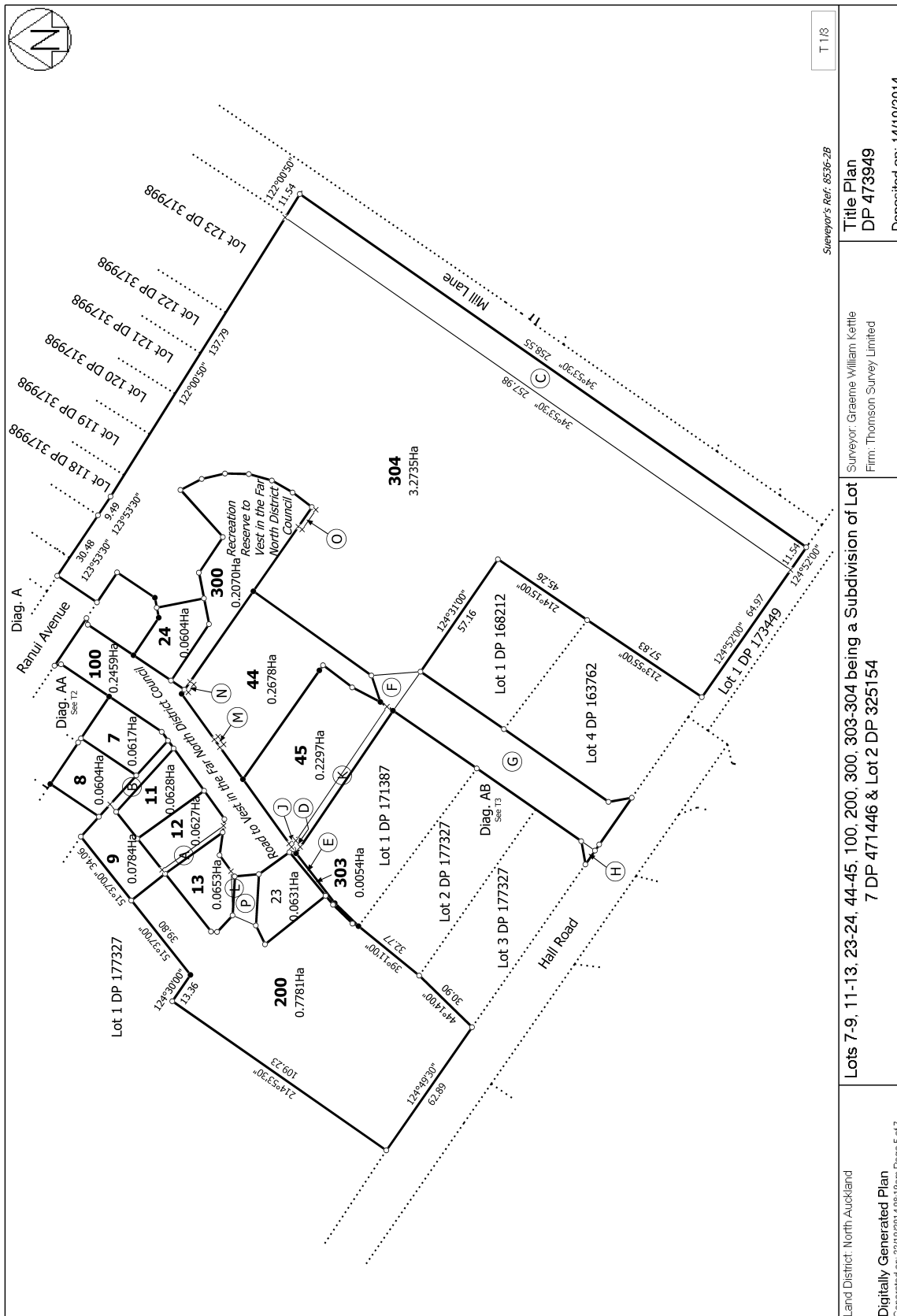
Subject to a right (in gross) to drain water over part marked O on DP 473949 in favour of Far North District Council
created by Easement Instrument 9833951.10 - 14.10.2014 at 1:41 pm

The easements created by Easement Instrument 9833951.10 are subject to Section 243 (a) Resource Management Act 1991
Land Covenant in Easement Instrument 9833951.13 - 14.10.2014 at 1:41 pm

11018747.1 Partial Cancellation of Consent Notice 9167777.2 as to some of the conditions - 2.2.2018 at 3:59 pm

Fencing Covenant in Transfer 12333204.1 - 17.12.2021 at 4:09 pm

13678229.1 CAVEAT BY TOP ENERGY LIMITED - 13.8.2026 at 1:14 pm



Combined Engineering Drawings - 57A Hall Road, Kerikeri

Background:

The development at 57A Hall Road, Kerikeri involves a relatively complex set of engineering design drawings. To assist all parties in reviewing, interpreting, and implementing the design, Chester Consultants has consolidated the current engineering drawings and incorporated relevant annotations where necessary. This has been undertaken to clearly present the latest infrastructure design information, based on our best knowledge and understanding at the time of issue.

Contents and status:

1. **Vecta Engineering Drawings** – RC and EPA Approved. Cover the design for most of the civil infrastructure. Partially superseded by CKL and Chester design.
2. **CKL Subdivision Scheme Plans** – RC Approved, fully supersede Vecta subdivision scheme plans.
3. **CKL Engineering Drawings** – RC and EPA Approved. Cover the design for the JOALs and part of the common 3 water infrastructure, supersede Vecta JOAL and part 3 water design. Partially superseded by Chester design.
4. **Chester Stormwater Amendment Drawings** – To be reviewed by FNDC for RC and EPA amendment, supersede part of the Vecta and CKL civil design.
5. **Chester Riprap Design Drawings** – EPA Approved.
6. **Chester Erosion and Sediment Control Plans** – Reviewed and accepted by NRC via Winter Works approval.
7. **Cirtex MagnumStone Wall Drawings** – BC Approved.
8. **LDE Bridge Design Drawings** – BC Approved.



t2 LeSua Engineering Drawings

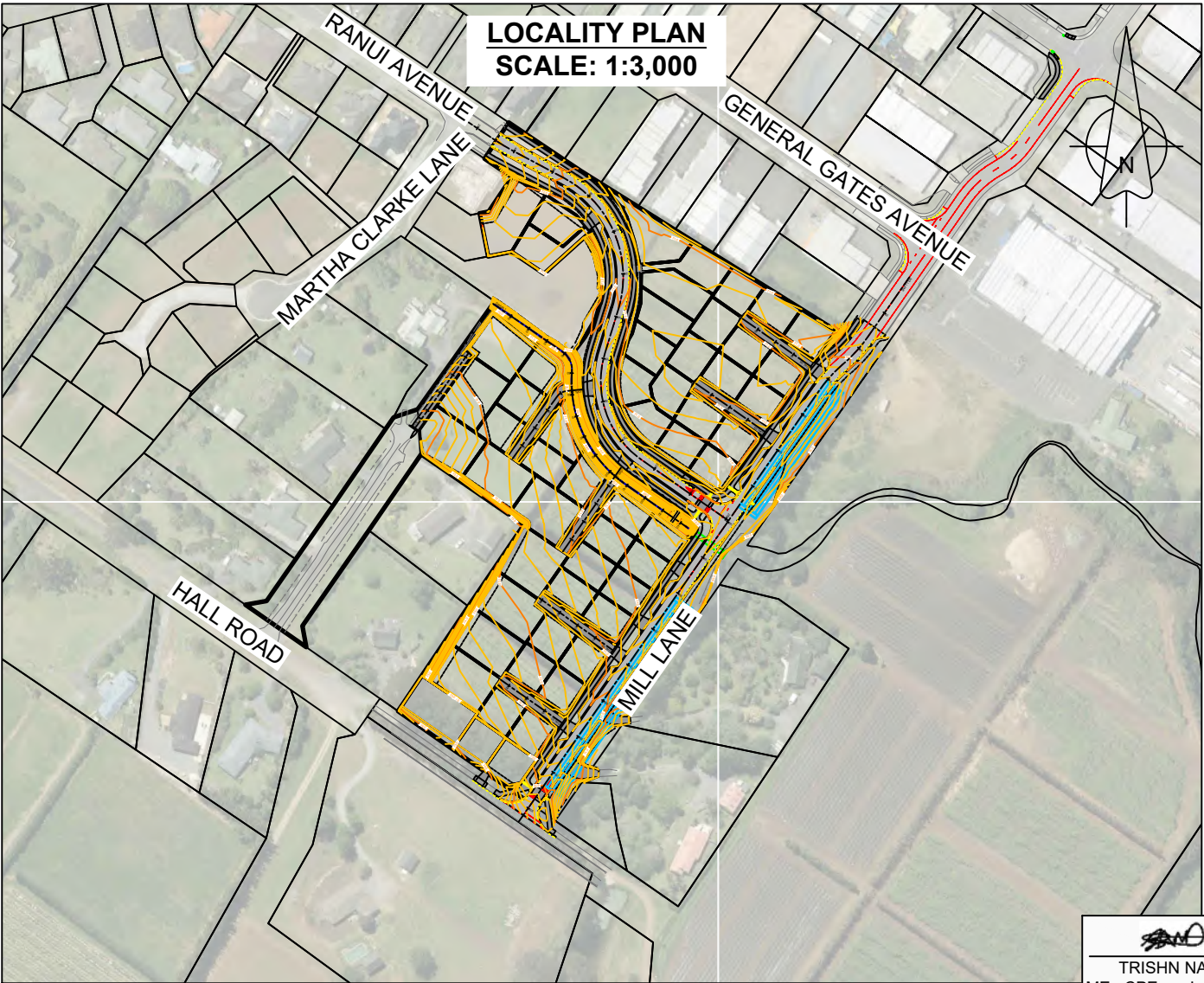
SCHEDULE OF DRAWINGS		
SHEET #	TITLE	REV
DD000	COVER SHEET	D
DD001	CONSTRUCTION NOTES	C
DD100	EXISTING SITE PLAN - OVERVIEW	C
DD101-102	EXISTING SITE PLAN - SHEETS 1 - 2	C
DD200	BULK EARTHWORKS PLAN	C
DD210	EROSION & SEDIMENT CONTROL PLAN - STAGE 1	C
DD211	EROSION & SEDIMENT CONTROL PLAN - STAGE 2	C
DD220-223	EROSION & SEDIMENT CONTROL DETAILS - SHEETS 1 - 4	C
DD300	ROADING PLAN - OVERVIEW	C
DD301-305	ROADING PLAN - SHEETS 1 - 5	C
DD310-312	ROAD TYPICAL SECTIONS - SHEETS 1 - 3	C
DD315	ROAD TYPICAL PAVEMENT, KERB & ROCK REVETMENT DETAILS - SHEET 1	D
DD316	ROAD TYPICAL PAVEMENT, KERB & ROCK REVETMENT DETAILS - SHEET 2	C
DD317	PRAM CROSSING DETAILS & RAISED SPEED TABLE TYPICAL SECTION	C
DD318	COMBINED SERVICE TRENCH & PAVEMENT CHECK OUT DETAILS	C
DD320-323	ROAD LONGITUDINAL SECTIONS - SHEETS 1 - 4	C
DD330-333	ROAD CROSS SECTIONS - SHEETS 1 - 4	C
DD340-341	ROAD KERB RETURNS - SHEETS 1 - 2	C
DD350	ROAD LINEMARKING & SIGNPOSTING PLAN - OVERVIEW	C
DD351-353	ROAD LINEMARKING & SIGNPOSTING PLAN - SHEETS 1 - 3	C
DD360-368	VEHICLE CROSSING PLANS - SHEETS 1 - 9	C
DD370	VEHICLE CROSSING DETAILS	C
DD400	STORMWATER PLAN - OVERVIEW	C
DD401-405	STORMWATER PLAN - SHEETS 1 - 5	C
DD410-411	STORMWATER CATCHMENTS FOR PIPE NETWORKS (100YR + CC) - SHEETS 1 - 2	C
DD420-426	STORMWATER LONGSECTIONS - SHEETS 1 - 7	C
DD430	STORMWATER BOX CULVERT LONGSECTION	C
DD435	STORMWATER ATTENUATION LONGSECTION	C
DD440-RC441	STORMWATER IN CHANNEL EARTH WEIR DETAILS	C
DD450-451	STORMWATER ATTENUATION WEIR DETAILS - SHEETS 1 - 2	C
DD455-456	STORMWATER MANHOLE SIZING AND WEIR DETAILS - SHEETS 1 - 2	C
DD460	SANITARY SEWER PLAN - OVERVIEW	C
DD461-462	SANITARY SEWER PLAN - SHEETS 1 - 2	C
DD470-473	SANITARY SEWER LONGSECTIONS - SHEETS 1 - 4	C
DD480-483	DRAINAGE TYPICAL DETAILS - SHEETS 1 - 4	C
DD500	POTABLE WATER PLAN - OVERVIEW	C
DD501-502	POTABLE WATER PLAN - SHEETS 1 - 2	C
DD510-512	POTABLE WATER DETAILS - SHEETS 1 - 3	C
DD600	REDI ROCK RETAINING WALL DETAILS	A
DD605-DD606	TIMBER RETAINING WALL DETAILS	A
DD610-DD611	BRIDGE ABUTMENT DETAILS	A

CIVIL ENGINEERING DESIGN FOR DETAIL DESIGN ENGINEERING APPROVAL

57A HALL ROAD, KERIKERI

Note : Private Piped sewer, retaining walls and
bridge construction will require building consent.

PROJECT REF: P0442



SCALE 1:3000
120
80
40
0

D	FOR APPROVAL - RESPONSE TO RFI'S 2	16-01-2023	AP	TN
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS	TITLE
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:3000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD000	REVISION D		

GENERAL NOTES:

1. ALL WORKS SHALL COMPLY WITH ALL RELEVANT NZ STANDARDS, THE NZ BUILDING CODE & TERRITORIAL AUTHORITY REGULATION INCLUDING THE CURRENT VERSIONS OF NZS 3604 AND NZS 4404. ANY CONFLICTS TO BE DISCUSSED WITH THE ENGINEER PRIOR TO CONSTRUCTION.
2. ENGINEERING DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS, ARCHITECTURAL, CIVIL AND ENGINEERING SERVICES DOCUMENTS.
3. UNLESS OTHERWISE NOTED ALL LEVELS ARE IN METERS, AND ALL DIMENSIONS ARE METRIC, AND SHALL BE CHECKED BY CONTRACTOR PRIOR TO CONSTRUCTION.
4. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM DRAWINGS.
5. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
6. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT CODES OF PRACTICE EXCEPT WHERE VARIED BY THE SPECIFICATION AND/OR DRAWINGS.
7. WHERE PROPRIETY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PRODUCT FOR APPROVAL.
8. THE CONTRACTOR IS TO DISCUSS THE REQUIREMENTS OF ALL THE SITE INSPECTIONS FOR THE ISSUE OF THE PS4 PRIOR TO CONSTRUCTION.
9. ONLY FNDC APPROVED CONTRACTORS TO BE USED FOR ALL LIVE CONNECTIONS.
- 10.FNDC REQUIRES 24 HOURS NOTICE BEFORE ANY INSPECTION.
- 11.ALL DIMENSIONS AND LEVELS ARE SUBJECT TO FINAL SURVEY.
- 12.ALL WORKS SHALL BE CARRIED OUT UNDER THE CURRENT HEALTH AND SAFETY WORK ACT.
- 13.THESE NOTES APPLY TO THE ENTIRETY OF THE DRAWING SET.

EXISTING SERVICES:

1. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND BASED ON INFORMATION PROVIDED BY TERRITORIAL AUTHORITIES AND NETWORK UTILITY OPERATORS. WE ACCEPT NO LIABILITY FOR THE INACCURACIES.
2. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING SERVICES PRIOR TO CONSTRUCTION.

ROADING:

1. DETAILED PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT AUSTROADS PAVEMENT DESIGN GUIDELINES FOR THE EXTENSIONS OF MILL LANE AND RANUI AVENUE IS TO BE COMPLETED AFTER SUBGRADE STRENGTH IS KNOWN AND REVIEWED BY NTA FOR APPROVAL. ASSUMPTION OF 10% CBR WILL NEED TO BE CONFIRMED AS STATED IN PAVEMENT DESIGN.
2. PAVEMENT AND SURFACE CONSTRUCTION IS TO ONLY OCCUR BETWEEN SEPTEMBER AND MARCH UNLESS APPROVED BY NTA.
3. ALL PAVEMENT MATERIALS AND WORK STANDARDS TO BE IN ACCORDANCE WITH ALL RELEVANT NZ STANDARDS, TERRITORIAL AUTHORITY REGULATION INCLUDING THE CURRENT VERSION OF NZS 4404.
4. THE CONTRACTOR SHALL REINSTATE ALL DAMAGE TO ADJACENT FEATURES CAUSED BY THE WORKS.
5. ROAD MARKINGS AND SIGNAGES SHALL BE IN ACCORDANCE WITH CURRENT NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM). ALL SIGNS TO BE VIP GRADE REFLECTIVITY.

CONCRETE:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS3109 AND NZS3101 SUBJECT TO RELEVANT SECTIONS OF THE SPECIFICATION.
2. NO CONCRETE SHALL BE PLACED UNTIL FNDC HAS HAD THE OPPORTUNITY TO OBSERVE THAT THE DRAWINGS AND SPECIFICATIONS HAVE BEEN COMPLIED WITH.
3. ALL CONCRETE SUPPLY AND PRODUCTION SHALL BE IN ACCORDANCE WITH NZS3104, 3101:2017.
4. WHERE THE LOCATION OF CONSTRUCTION JOINTS IS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, CONSTRUCTION JOINTS SHALL BE COORDINATED WITH THE ENGINEER/FNDC AS REQUIRED. THE CONSTRUCTOR SHALL ALLOW FOR ALL SUCH CONSTRUCTION JOINTS.

CONCRETE PAVEMENTS:

1. UPON EXPOSURE OF SUBGRADE AT PAVEMENT BASE CONTACT FNDC FOR INSPECTION AND INSTRUCTION TO REMOVE AND REPLACE ANY SOFT AREAS PRIOR TO COMMENCING CONSTRUCTION OF PAVEMENT LAYERS. EXCAVATED MATERIAL TO BE REMOVED FROM SITE.
2. SUPPLY AND COMPACT BASECOURSE LAYER IN ACCORDANCE WITH CROSS SECTIONS SUPPLIED.
3. CONCRETE USED SHALL BE SPECIAL GRADE WITH 28 DAY COMPRESSIVE STRENGTH OF 30MPA.
4. ALL JOINTS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SAW CUT JOINTS SHALL BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT.
5. ALL CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER POURING. CURING METHOD SHALL BE PROPOSED TO ENGINEER FOR APPROVAL. SOME PROPRIETARY SURFACE TREATMENTS MAY NOT BE APPROVED.
6. SLAB SURFACE TOLERANCES SHALL NOT EXCEED 5MM DEVIATION IN A 3M STRAIGHT EDGE.
7. SLAB THICKNESSES GIVEN ARE MINIMUM THICKNESSES AND EXCLUSIVE OF ANY APPLIED FINISHES.
8. SLAB SURFACES SHALL BE NEATLY BROOM FINISHED.
9. ALL SLAB JOINTS ARE TO BE SEALED WITH AN APPROVED WATERPROOF FLEXIBLE SEALANT AFTER 28 DAYS AND PRIOR TO PRACTICAL COMPLETION.

EARTHWORKS:

1. ALL EARTH FILL TO BE CONSTRUCTED IN GENERAL ACCORDANCE WITH NZS4431:1989 OR UNLESS SPECIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. COMPACTION IN BASE OF PIPE TRENCHES TO ACHIEVE CLEGG 10.
3. FILL COMPACTION IN MAXIMUM LAYERS OF 200mm THICK WITH A 2 TONNE ROLLER - TRACK ROLLING WITH A DIGGER IS NOT ACCEPTABLE.
4. FILL CONTROL TESTING - FNDC TO INSPECT AND TEST EVERY 3RD LAYER PLACED (600mm INTERVALS).
5. EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH GD05 AND PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR NRC, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

INSPECTIONS / SITE VISITS REQUIRED:

1. PRE-CONSTRUCTION SITE MEETING WITH CONTRACTOR AND FNDC.
2. ALL INSPECTIONS AS REQUIRED IN THE APPROVED INSPECTIONS AND TEST PLAN (ITP). ALL WORKS SHOULD ENSURE THE INSPECTION AND TEST PLAN IS CAREFULLY ACTIONED PRIOR TO PROCEEDING WITH CONSTRUCTION.

EARTHWORKS RESOURCE CONSENT:

1. BULK EARTHWORKS WILL BE CARRIED OUT IN ACCORDANCE WITH THE NORTHLAND REGIONAL COUNCIL RESOURCE CONSENT FILE NUMBER 43943 (EXPIRY DATE: 31/10/2027).

CHANNEL BASE CONSTRUCTION & NATURALISATION:

1. THE CHANNEL INVERT SHALL BE COVERED IN A 100mm THICK LAYER OF D₅₀ = 50mm RIVER GRAVELS.
2. ROUNDED RIVER BOULDERS SHALL BE PLACED IN THE CHANNEL BED. BOULDERS SHALL BE PLACED SUCH THAT THEY DO NOT EXTEND ACROSS THE FULL CHANNEL WIDTH AND THAT A MINIMUM PASSAGE 500mm WIDE IS AVAILABLE ALONG THE FULL WIDTH OF THE CHANNEL. THE BOULDERS SHALL VARY IN SIZE FROM BETWEEN 150mm AND 400mm IN WIDTH, AND 100mm TO 250mm IN HEIGHT. BOULDERS SHALL COVER BETWEEN 30% AND 40% OF THE CHANNEL INVERT AREA AND PLACED IN A RANDOM FASHION, BUT NOT ATOP EACH OTHER. THE BOULDERS SHALL BE EMBEDDED 25-33% DEEP INTO THE UNDERLYING LAYER OF RIVER-GRAVELS.
3. LITTORAL ZONES SHALL BE FORMED ON BOTH SIDES OF THE CHANNEL INVERT. THESE SHALL COMPRISE A LINE OF SUITABLE LITTORAL ZONE SPECIES PLANTED AT A SPACING OF 500mm ALONG BOTH EDGES OF THE CHANNEL INVERT. THE PLANTS SHALL BE LOCALLY SOURCED SEDGE OR RUSH-LIKE SPECIES SUITABLE FOR OCCASIONAL EMERSION. PLANTS SUCH AS CAREX VIRGATA OR MACHAERINA RUBIGINOSA ARE POTENTIAL PLANTS TO BE SUITABLE, BUT THIS IS TO BE CONFIRMED WITH A LOCAL BOTANIST.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023


TRISHN NAND
ME., CPEng., IntPE(NZ)



| www.vecta.co.nz |

C

FOR APPROVAL - RESPONSE TO RFI'S 1

22-12-2022

AP TN

B

FOR APPROVAL

17-11-2022

AP TN

A

1ST ISSUE

09-11-2022

AP --

REV.

REVISION DETAILS

DRAWN

APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

CONSTRUCTION NOTES

DATE CREATED
09-11-2022

DRAWN
AP

DESIGNED
AP

APPROVED
TN

VECTA REF NO
P0442

SCALE
NTS @ A3

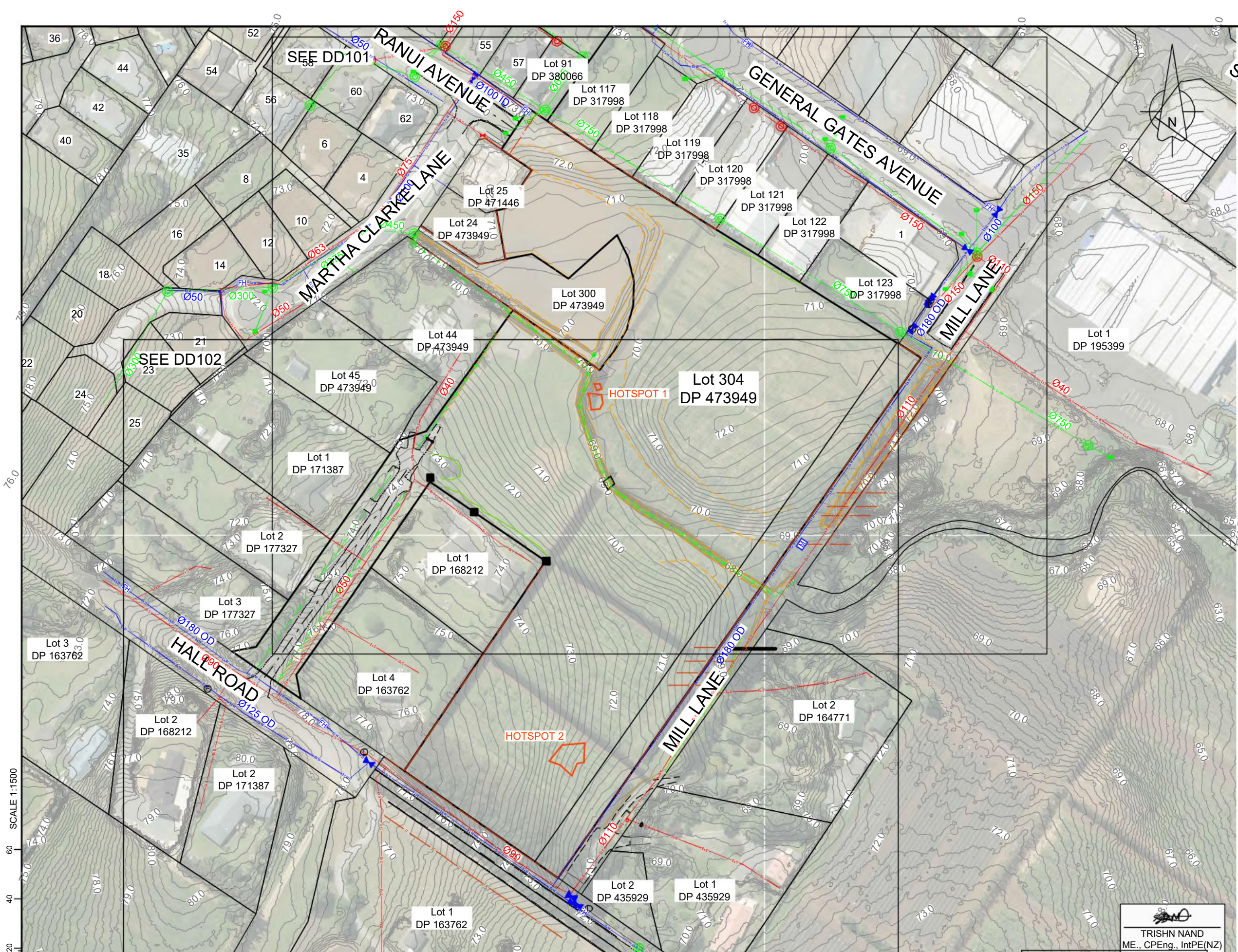
STATUS
FOR APPROVAL

DWG NUMBER

DD001

REVISION

C



- NOTES:
1. EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXIST LOCATIONS.
 2. EXISTING CONTOURS OUTSIDE SITE EXTENTS ARE SOURCED FROM NRC LIDAR DATA 2020 AND ARE SHOWN AT 200mm INTERVALS.

SURVEY NOTES:
THIS SURVEY HAS BEEN COMPLETED UNDER INSTRUCTION BY THE CLIENT FOR ITS INTENDED PURPOSE. THIS DATA MAY NOT BE SUITABLE FOR OTHER PURPOSES AND THEREFORE WRITTEN AUTHORITY IS NEEDED FROM VECTA FOR ANY OTHER USE OR REPRODUCTION.

MAJOR CONTOURS ARE AT 1m INTERVALS
MINOR CONTOURS ARE AT 0.2m INTERVALS
LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL
COORDINATE SYSTEM: NZGD MT EDEN 2000
LEVELS DATUM: ONE TREE POINT DATUM 1964
ORIGIN OF COORDINATES: RM 49 SO 55465
ORIGIN OF LEVELS: RM 49 SO 55465
RL= 106.67m

- LEGEND:**
- Ex W EXISTING WATER
 - Ex SW EXISTING SW
 - Ex S EXISTING SS
 - EXISTING SW MH
 - EXISTING CESSPIT
 - EXISTING SS MH
 - EXISTING FIRE HYDRANT
 - EXISTING WATER METER
 - EXISTING VALVE
 - EXISTING CONTOURS
 - EXISTING POWER POLE
 - EXISTING STREET LIGHT
 - EXISTING TELECOM
 - EXISTING TOP OF BANK
 - EXISTING BOTTOM OF BANK
 - WATER LEVEL
 - EXISTING FENCE
 - DRIPLINE
 - NES CONTAMINATED AREA

SCALE 1:1500

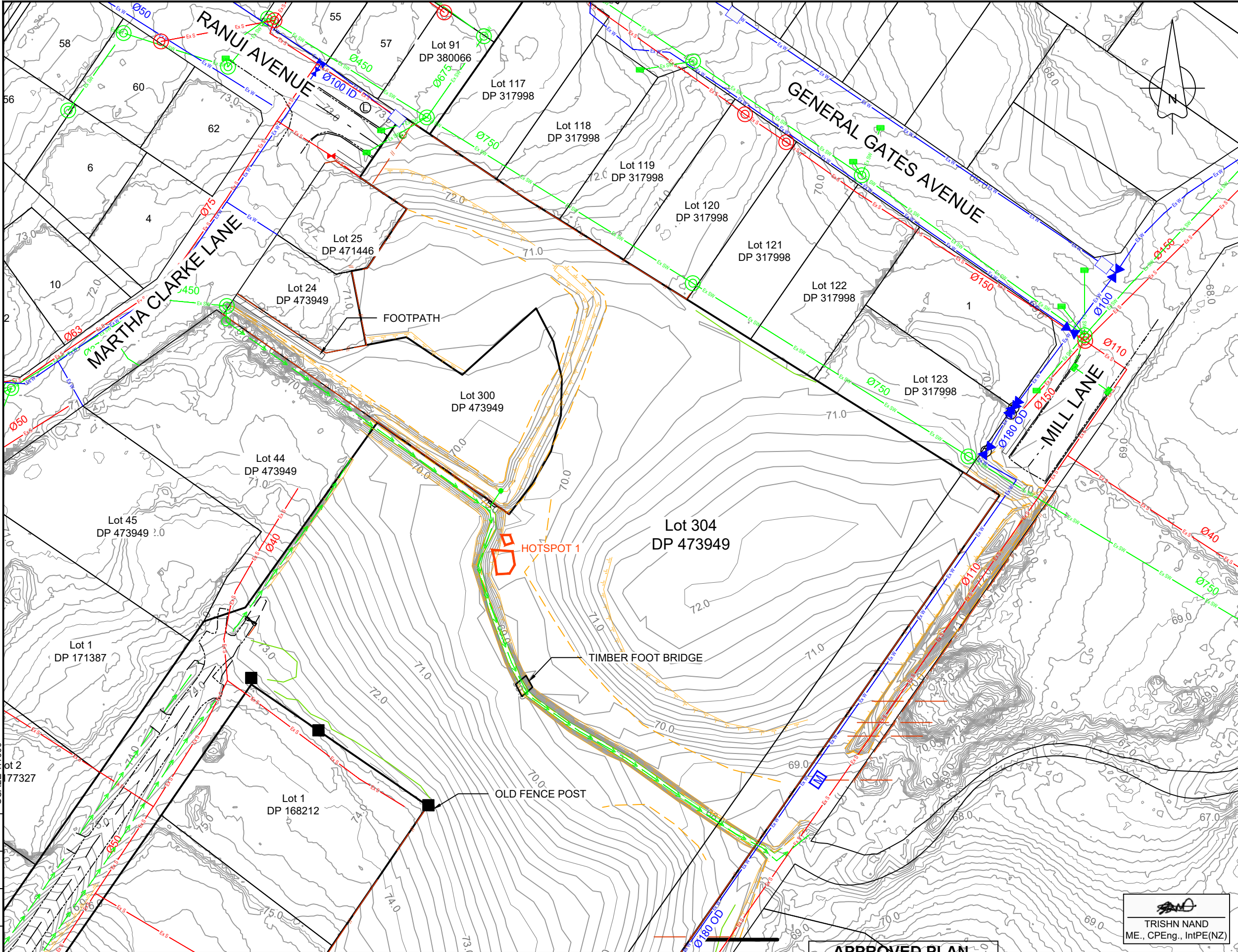


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GCBLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
EXISTING SITE PLAN
ENGINEER RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

DATE CREATED	DRAWN	DESIGNED	APPROVED
09-11-2022	AP	AP	TN
VECTA REF NO	SCALE	STATUS	FOR APPROVAL
P0442	1:1500 @ A3		
DWG NUMBER	DD100	REVISION	C



- NOTES:
- EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
 - EXISTING CONTOURS OUTSIDE SITE EXTENTS ARE SOURCED FROM NRC LIDAR DATA 2020 AND ARE SHOWN AT 200mm INTERVALS.

SURVEY NOTES:
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MAJOR CONTOURS ARE AT 1m INTERVALS
MINOR CONTOURS ARE AT 0.2m INTERVALS
LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL
COORDINATE SYSTEM: NZGD MT EDEN 2000
LEVELS DATUM: ONE TREE POINT DATUM 1964
ORIGIN OF COORDINATES: RM 49 SO 55465
ORIGIN OF LEVELS: RM 49 SO 55465
RL= 106.67m

- LEGEND:**
- Ex W EXISTING WATER
 - Ex SW EXISTING SW
 - Ex S EXISTING SS
 - EXISTING SW MH
 - EXISTING CESSPIT
 - EXISTING SS MH
 - EXISTING FIRE HYDRANT
 - EXISTING WATER METER
 - EXISTING VALVE
 - EXISTING CONTOURS
 - EXISTING POWER POLE
 - EXISTING STREET LIGHT
 - EXISTING TELECOM
 - EXISTING TOP OF BANK
 - EXISTING BOTTOM OF BANK
 - WATER LEVEL
 - EXISTING FENCE
 - DRIPLINE
 - NES CONTAMINATED AREA



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS

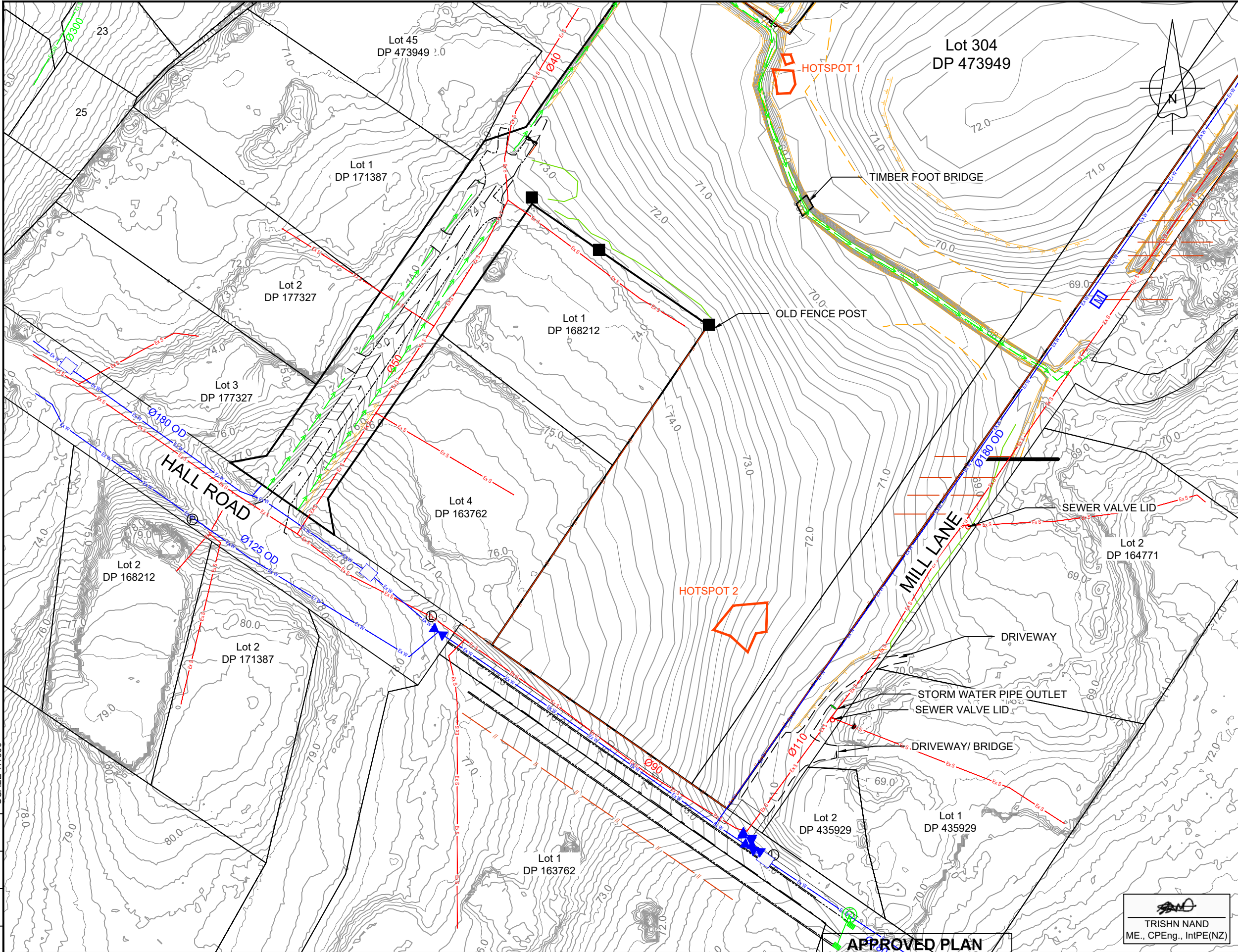
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

EXISTING SITE PLAN
SHEET 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD101	REVISION C		



- NOTES:
- EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
 - EXISTING CONTOURS OUTSIDE SITE EXTENTS ARE SOURCED FROM NRC LIDAR DATA 2020 AND ARE SHOWN AT 200mm INTERVALS.

SURVEY NOTES:
THIS SURVEY HAS BEEN COMPLETED UNDER INSTRUCTION BY THE CLIENT FOR ITS INTENDED PURPOSE. THIS DATA MAY NOT BE SUITABLE FOR OTHER PURPOSES AND THEREFORE WRITTEN AUTHORITY IS NEEDED FROM VECTA FOR ANY OTHER USE OR REPRODUCTION.

MAJOR CONTOURS ARE AT 1m INTERVALS
MINOR CONTOURS ARE AT 0.2m INTERVALS
LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL
COORDINATE SYSTEM: NZGD MT EDEN 2000
LEVELS DATUM: ONE TREE POINT DATUM 1964
ORIGIN OF COORDINATES: RM 49 SO 55465
ORIGIN OF LEVELS: RM 49 SO 55465
RL= 106.67m

LEGEND:	
	Ex W EXISTING WATER
	Ex SW EXISTING SW
	Ex S EXISTING SS
	EXISTING SW MH
	EXISTING CESSPIT
	EXISTING SS MH
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING VALVE
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	EXISTING STREET LIGHT
	EXISTING TELECOM
	EXISTING TOP OF BANK
	EXISTING BOTTOM OF BANK
	WATER LEVEL
	EXISTING FENCE
	DRIPLINE
	NES CONTAMINATED AREA



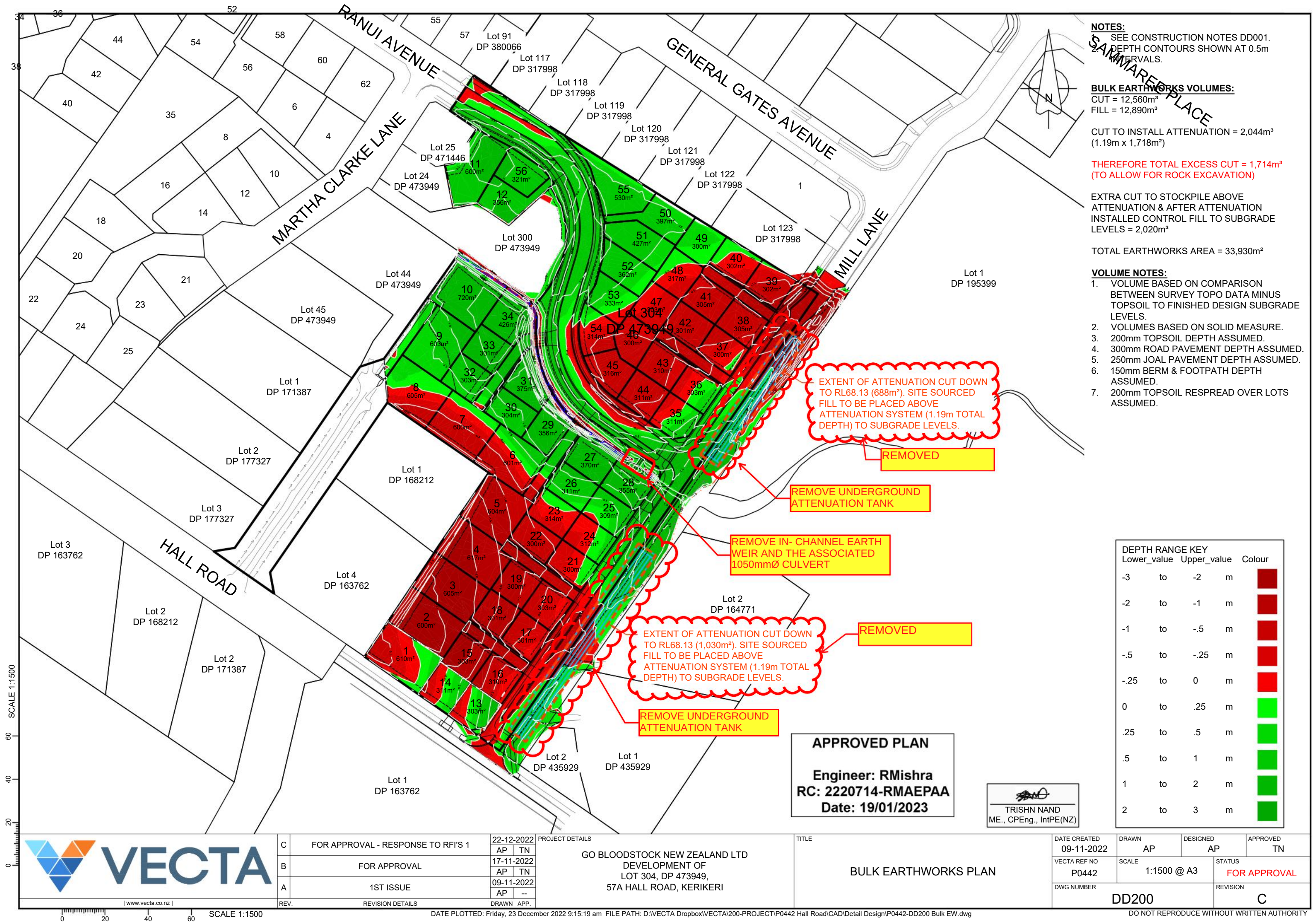
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TITLE
EXISTING SITE PLAN
SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD102			REVISION C



NOTES:
SEE CONSTRUCTION NOTES DD001.
DEPTH CONTOURS SHOWN AT 0.5m INTERVALS.

BULK EARTHWORKS VOLUMES:
CUT = 12,560m³
FILL = 12,890m³

CUT TO INSTALL ATTENUATION = 2,044m³
(1.19m x 1,718m²)

**THEREFORE TOTAL EXCESS CUT = 1,714m³
(TO ALLOW FOR ROCK EXCAVATION)**

EXTRA CUT TO STOCKPILE ABOVE
ATTENUATION & AFTER ATTENUATION
INSTALLED CONTROL FILL TO SUBGRADE
LEVELS = 2,020m³

TOTAL EARTHWORKS AREA = 33,930m²

- VOLUME NOTES:**
- VOLUME BASED ON COMPARISON BETWEEN SURVEY TOPO DATA MINUS TOPSOIL TO FINISHED DESIGN SUBGRADE LEVELS.
 - VOLUMES BASED ON SOLID MEASURE.
 - 200mm TOPSOIL DEPTH ASSUMED.
 - 300mm ROAD PAVEMENT DEPTH ASSUMED.
 - 250mm JOAL PAVEMENT DEPTH ASSUMED.
 - 150mm BERM & FOOTPATH DEPTH ASSUMED.
 - 200mm TOPSOIL RESPREAD OVER LOTS ASSUMED.

EXTENT OF ATTENUATION CUT DOWN TO RL68.13 (688m²). SITE SOURCED FILL TO BE PLACED ABOVE ATTENUATION SYSTEM (1.19m TOTAL DEPTH) TO SUBGRADE LEVELS.

REMOVED

REMOVE UNDERGROUND ATTENUATION TANK

REMOVE IN-CHANNEL EARTH WEIR AND THE ASSOCIATED 1050mmØ CULVERT

EXTENT OF ATTENUATION CUT DOWN TO RL68.13 (1,030m²). SITE SOURCED FILL TO BE PLACED ABOVE ATTENUATION SYSTEM (1.19m TOTAL DEPTH) TO SUBGRADE LEVELS.

REMOVED

REMOVE UNDERGROUND ATTENUATION TANK

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

DEPTH RANGE KEY					Colour
-3	to	-2	m		
-2	to	-1	m		
-1	to	-.5	m		
-.5	to	-.25	m		
-.25	to	0	m		
0	to	.25	m		
.25	to	.5	m		
.5	to	1	m		
1	to	2	m		
2	to	3	m		



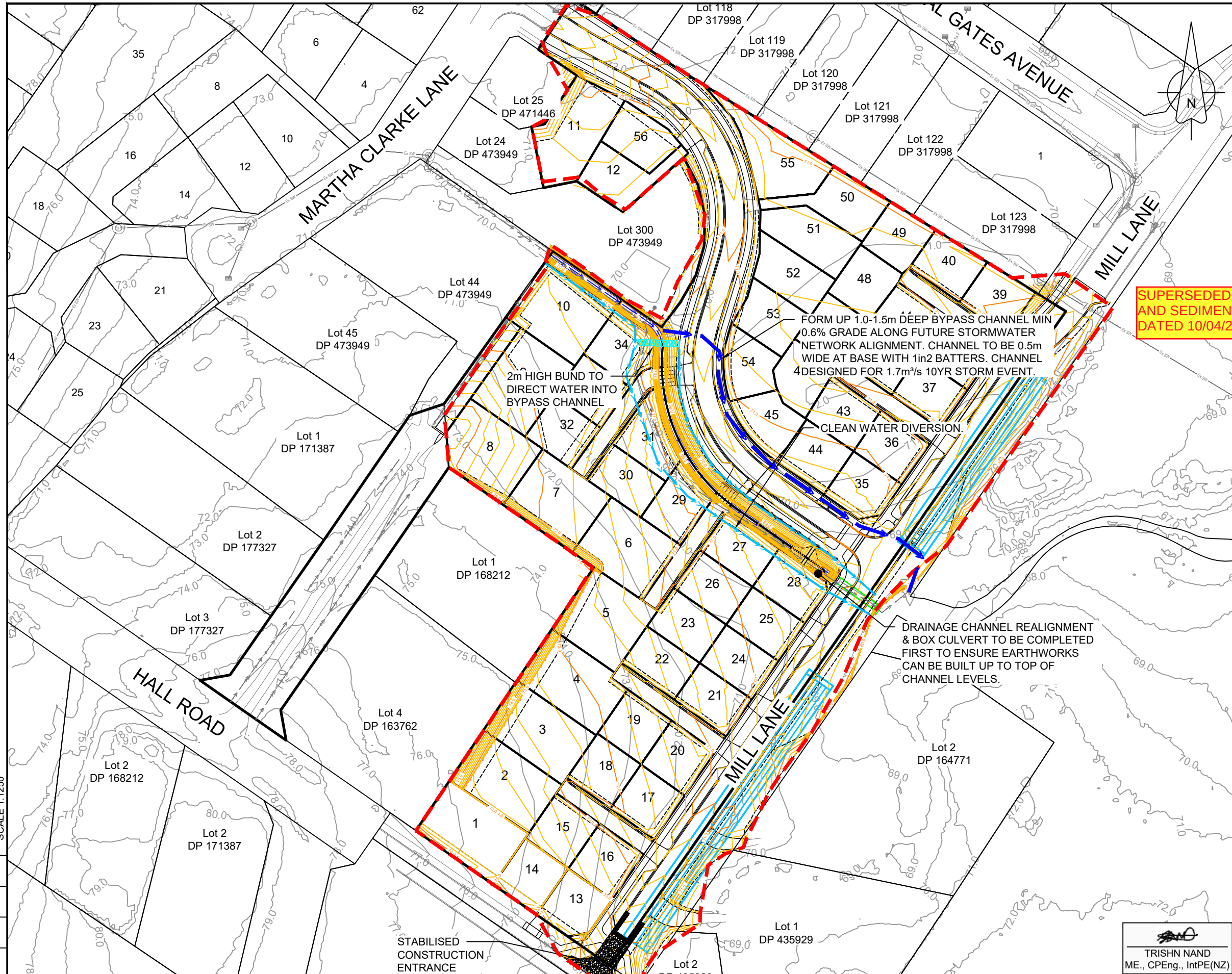
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
BULK EARTHWORKS PLAN

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER	DD200	REVISION C	

SCALE 1:1500
0 20 40 60



- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. DESIGN CONTOURS AT 200mm INTERVALS.
 3. EXISTING CONTOURS AT 1m INTERVALS.
 4. EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH GD05 AND PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR NRC, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

SUPERSEDED BY CHESTER EROSION AND SEDIMENT CONTROL SKETCH DATED 10/04/2026

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

- LEGEND:**
- PROPOSED CONTOURS
 - EXTENT OF EARTHWORKS (33,930m²)
 - DIRTY WATER DIVERSION (EARTH BUND)
 - SEDIMENT RETENTION POND
 - SILT FENCE
 - INDICATIVE TOPSOIL STOCKPILE LOCATION)
 - CLEAN WATER DIVERSION DRAIN
 - OVERLAND FLOWPATH

TRISHNAND
ME., CPEng., IntPE(NZ)

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SCALE 1:1250

C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

**EROSION & SEDIMENT CONTROL PLAN
STAGE 1**

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD210		REVISION C	



- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. DESIGN CONTOURS AT 200mm INTERVALS.
 3. EXISTING CONTOURS AT 1m INTERVALS.
 4. EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH GD05 AND PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR NRC, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

SUPERSEDED BY CHESTER EROSION AND SEDIMENT CONTROL SKETCH DATED 10/04/2026

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

- LEGEND:**
- PROPOSED CONTOURS
 - EXTENT OF EARTHWORKS (33,930m²)
 - DIRTY WATER DIVERSION (EARTHBOUND)
 - SEDIMENT RETENTION POND
 - SILT FENCE
 - INDICATIVE TOPSOIL STOCKPILE LOCATION)
 - CLEAN WATER DIVERSION DRAIN
 - OVERLAND FLOWPATH

SEDIMENT RETENTION POND
TO BE INSTALLED IN ACCORDANCE WITH GD05 AS PER DETAIL ON SHEET DD221.
SEDIMENT POND VOLUME REQUIREMENTS = 200m³/ha
TOTAL DISTURBED AREA = 2.64ha
POND VOLUME REQUIRED = 2.64 x 200 = 528m³
POND SIZE (m) = 33 x 8 x 2 DEEP
DEAD STORAGE VOLUME ($\frac{1}{3}$) = 176m³

SWALE DIVERSION TO DIRECT DIRTY WATER FROM EARTH BUNDS INTO SRP FOREBAY

STABILISED CONSTRUCTION ENTRANCE

TRISHN NAND
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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	---
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

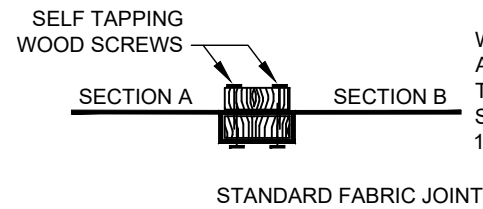
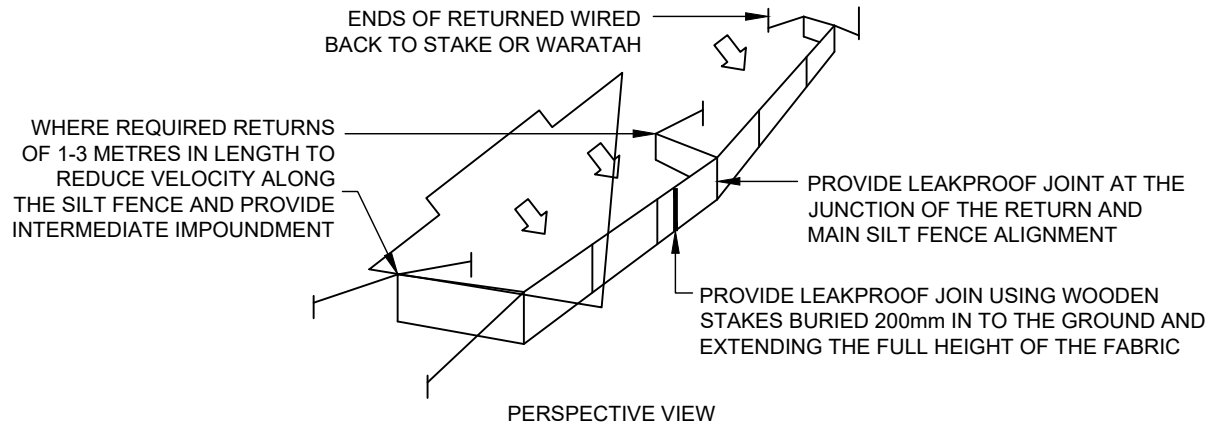
TITLE

**EROSION & SEDIMENT CONTROL PLAN
STAGE 2**

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER	DD211	REVISION C	

SCALE 1:1250

0 10 20 30 40 50

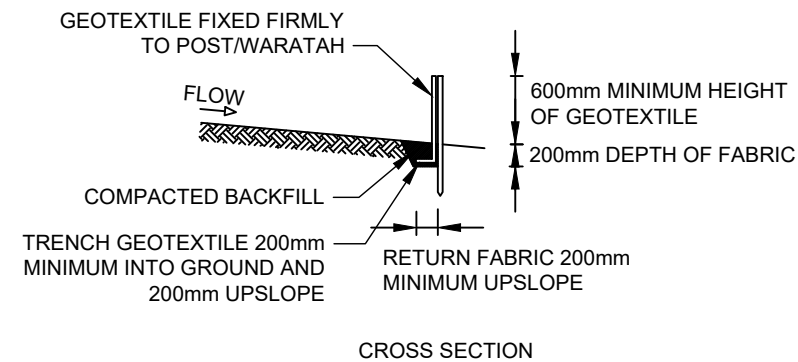
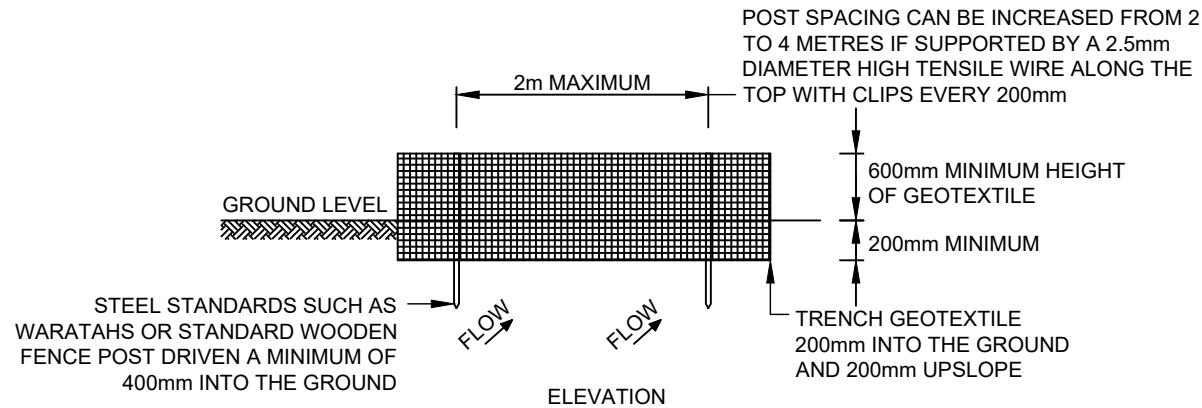


WRAP BOTH ENDS OF THE FABRIC AROUND ONE STAKE AND CLAMP THE OTHER STAKE TO IT USING SELF TAPPING WOOD SCREWS AT 150mm SPACINGS

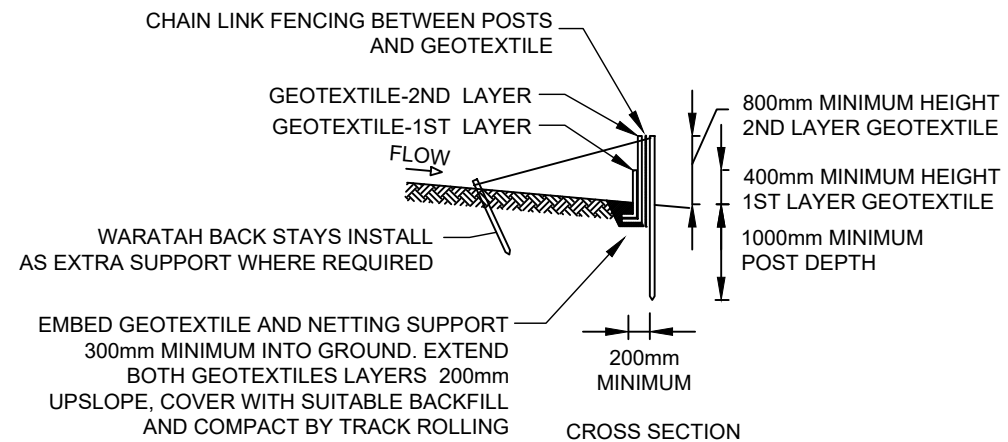
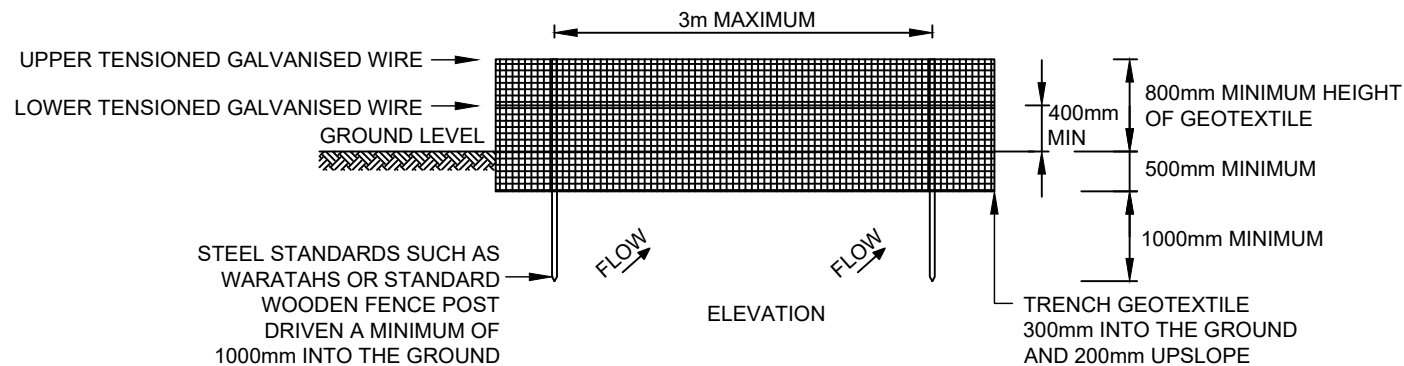
SILT FENCE DESIGN CRITERIA:

SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAX)	SPACING OF RETURNS (m)
< 2%	N/A	UNLIMITED
2-10%	40	60
10-20%	30	50
20-33%	20	40
33-50%	15	30
>50%	6	20

GRAB TENSILE STRENGTH: >440N (ASTM D4632)
TENSILE MODULUS: 0.140 pa (MINIMUM)
APPARENT OPENING SIZE: 0.1-0.5mm (ASTM D4751)



SILT FENCE CONSTRUCTION



SUPER SILT FENCE DESIGN CRITERIA:

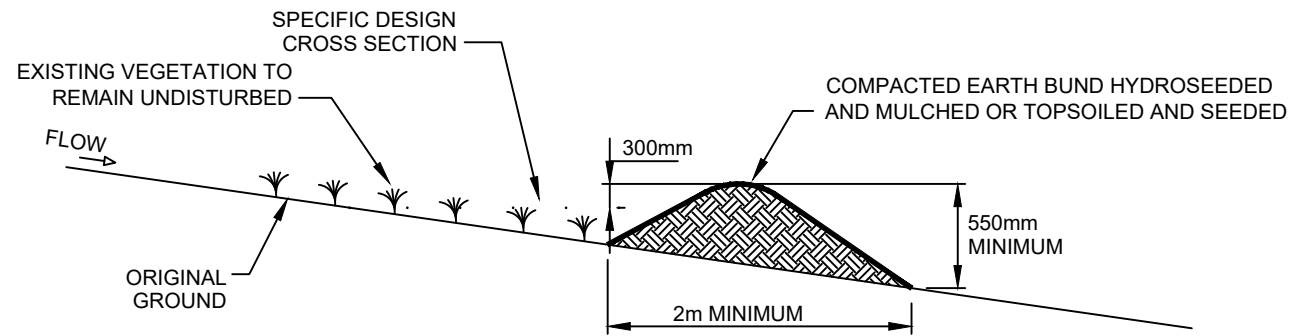
SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAX)	SPACING OF RETURNS (m)
0-10%	UNLIMITED	60
10-20%	60	50
20-33%	30	40
33-50%	30	30
>50%	15	20

APPROVED PLAN

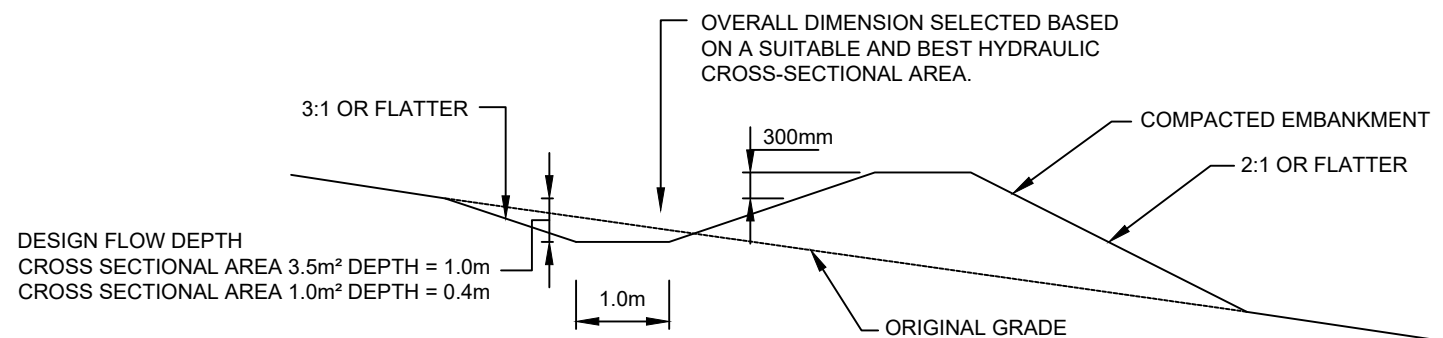
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

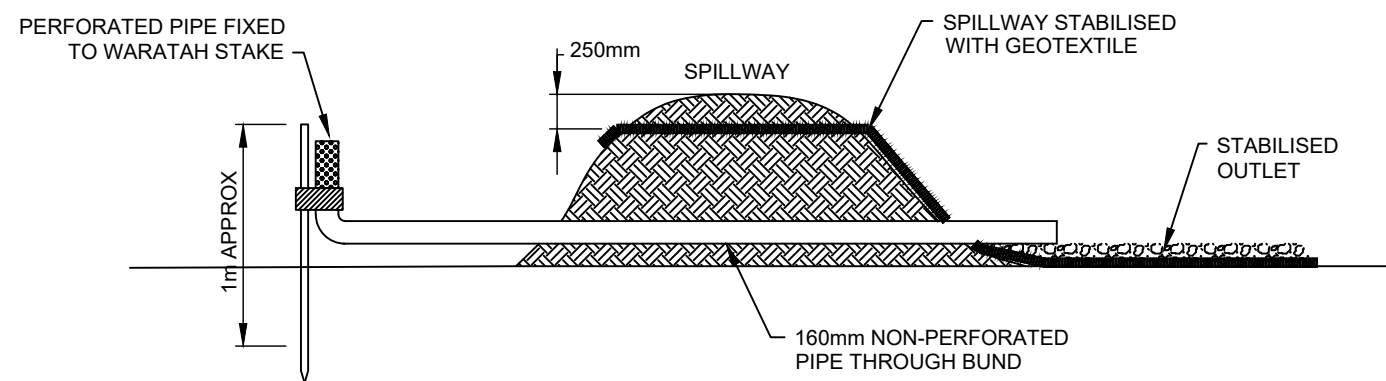
SUPER SILT FENCE CONSTRUCTION



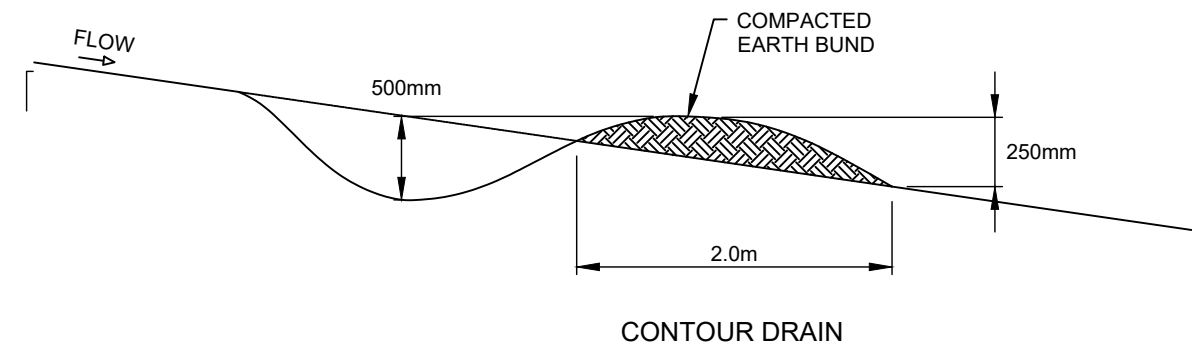
TOPSOIL BUND AND CLEARWATER DIVERSION - CROSS SECTION



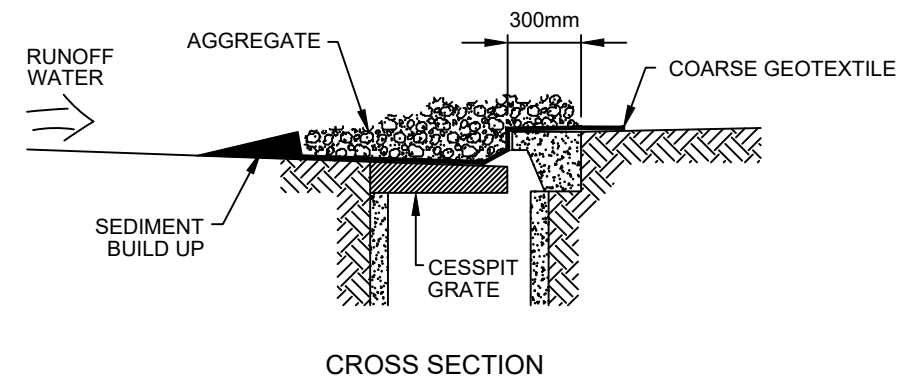
RUNOFF DIVERSION BUND - CROSS SECTION



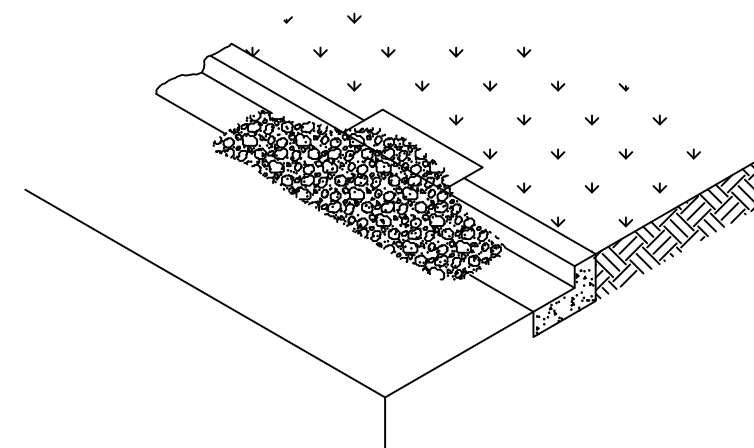
DECANTING EARTH BUND



CONTOUR DRAIN



CROSS SECTION

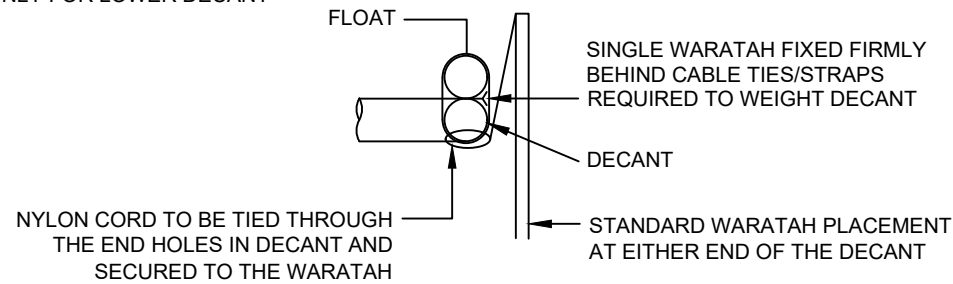
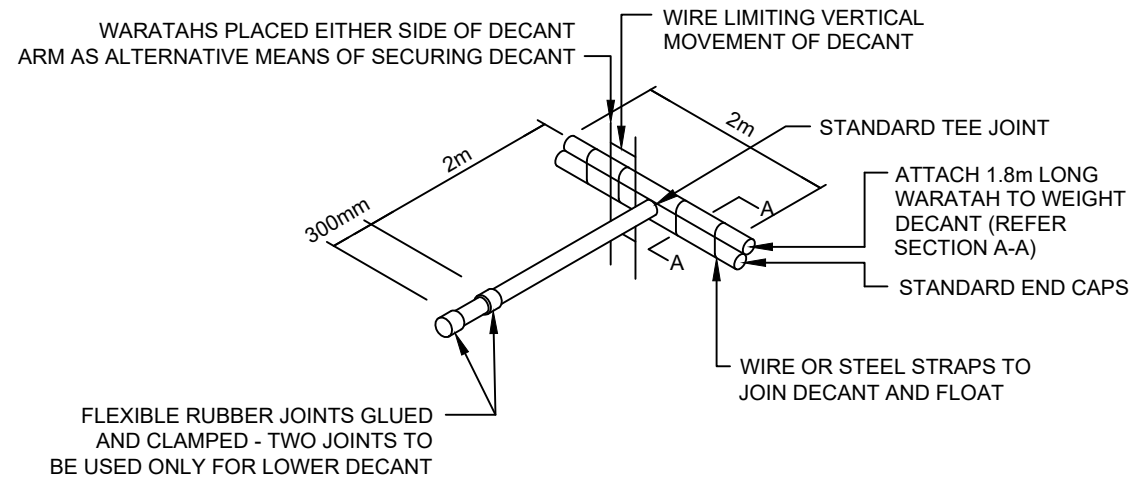


STORMWATER INLET PROTECTION - FILTER MEDIA DESIGN

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

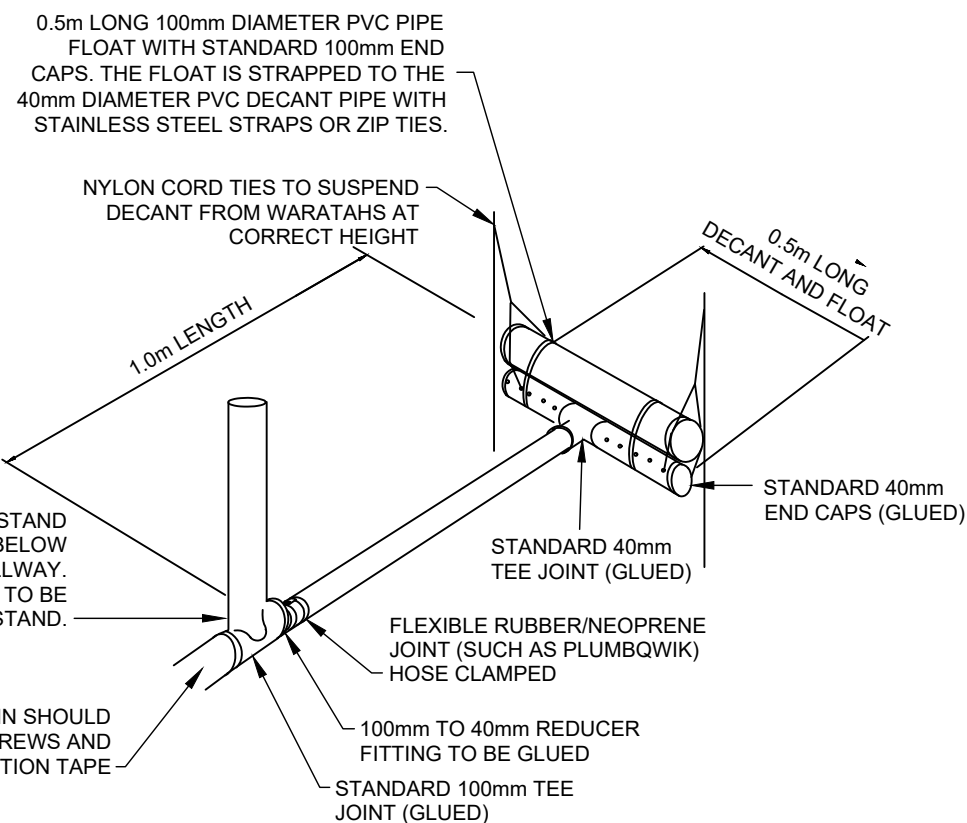
TRISHN NAND
ME., CPEng., IntPE(NZ)



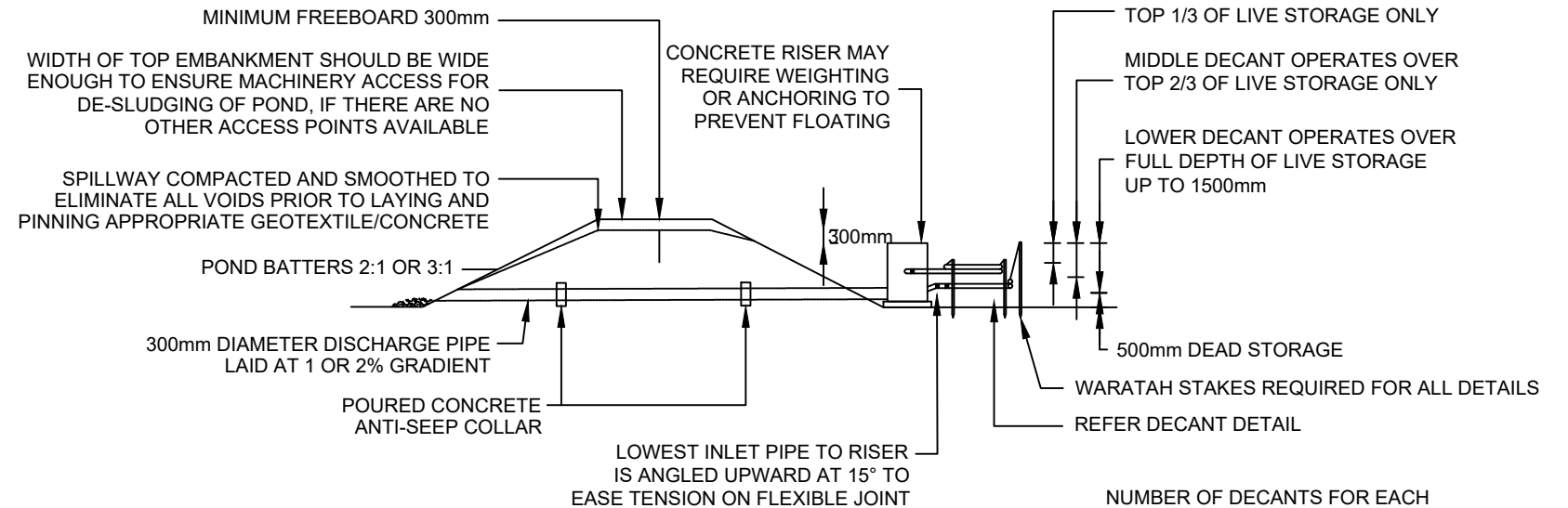
SEDIMENT RETENTION POND - DECANT DETAIL

NOTE: THE 100mm DIAMETER PVC PIPE UPSTAND IS ONLY REQUIRED WHERE THE 2m WIDE EMERGENCY SPILLWAY DISCHARGES TO VULNERABLE AREA OR WHERE THE DISCHARGE IS REQUIRED TO BE PIPED TO A SAFE OUTFALL SUCH AS A STORMWATER MANHOLE. IF THE UPSTAND IS NOT REQUIRED THE DECANT CAN BE CONNECTED DIRECT TO A 40mm DIAMETER OUTFALL PIPE AND THE TREATMENT VOLUME IS MEASURED TO THE INVERT OF THE EMERGENCY SPILLWAY.

NOTE: THE DECANT HAS A 40mm DIAMETER PVC PIPE WITH A 1.3m LONG ARM (INCLUDING FLEXIBLE JOINT), A 0.5m LONG DECANT AND 20 x 10mm DIAMETER EQUALLY SPACED HOLES POSITIONED HORIZONTALLY AT 10 AND 2 OCLOCK



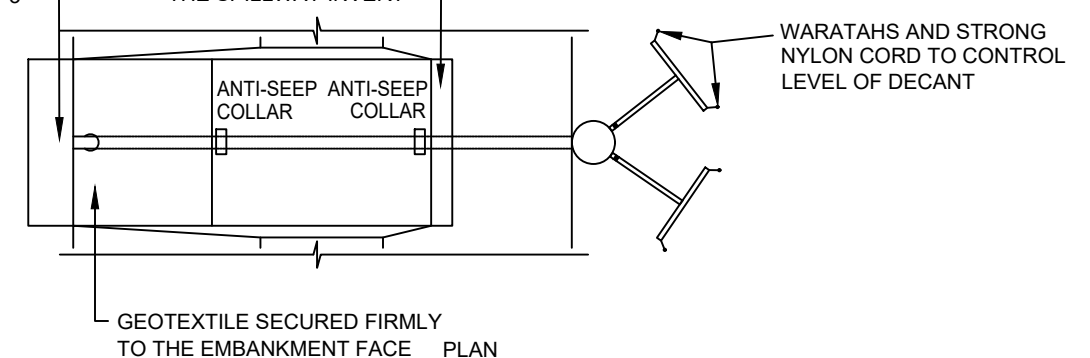
40mm DECANT WITH UPSTAND FOR DECANTING EARTH BUND



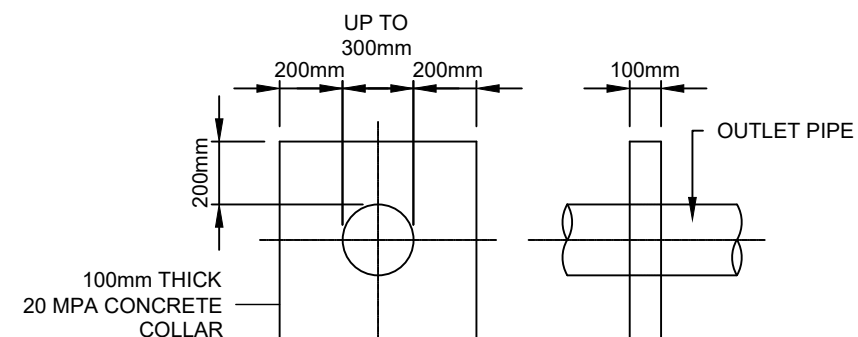
CROSS SECTION

PIPE TO EXISTING STORMWATER MANHOLE 1-3

GEOTEXTILE SHOULD BE LAID INTO THE POND TO A DEPTH OF AT LEAST 500mm BELOW THE SPILLWAY INVERT



SEDIMENT RETENTION POND



ANTI-SEEP COLLAR

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

EROSION & SEDIMENT CONTROL DETAILS
SHEET 3

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD222			REVISION C

STABILISED CONSTRUCTION ENTRANCE
SPECIFICATIONS:

APPLICATION

USE A STABILISED CONSTRUCTION ENTRANCE AT ALL POINTS OF CONSTRUCTION SITE INGRESS AND EGRESS WITH A CONSTRUCTION PLAN LIMITING TRAFFIC TO THESE ENTRANCES ONLY. THEY ARE PARTICULARLY USEFUL ON SMALL CONSTRUCTION SITES BUT CAN BE UTILISED FOR ALL PROJECTS.

DESIGN:

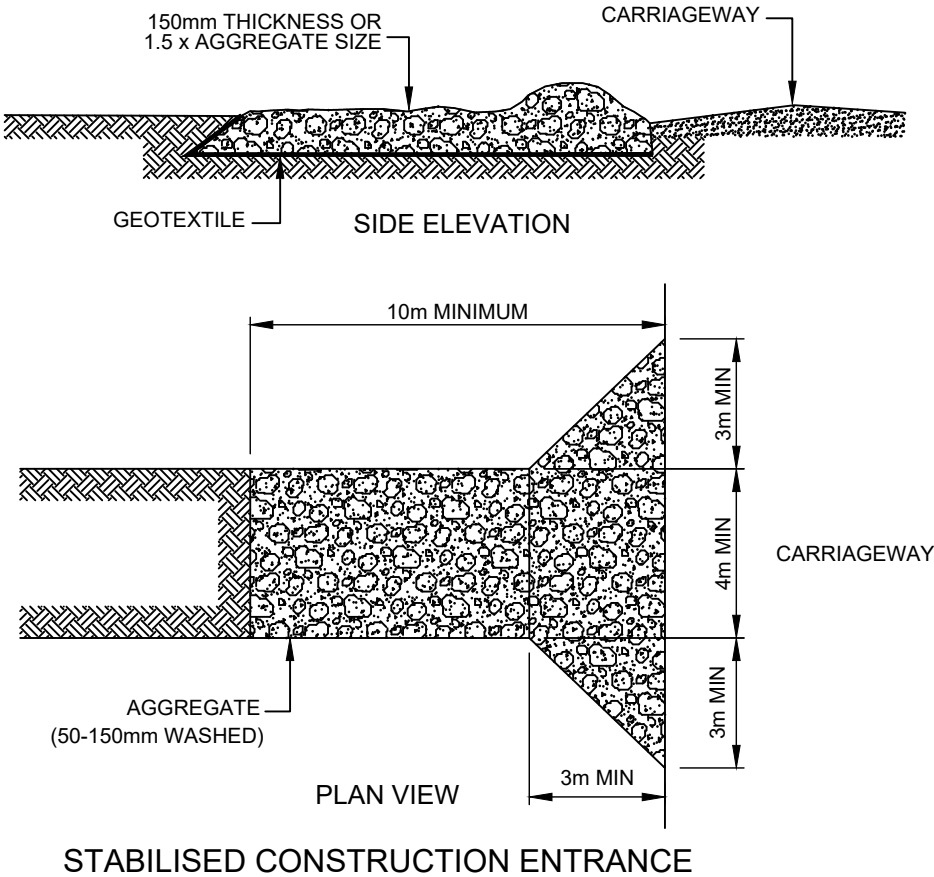
CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS AND OTHER UNSUITABLE MATERIAL AND PROPERLY GRADE IT.

1. LAY WOVEN GEOTEXTILE; PIN DOWN EDGES AND OVERLAP JOINTS.
2. PROVIDE DRAINAGE TO CARRY RUNOFF FROM THE STABILISED CONSTRUCTION ENTRANCE TO A SEDIMENT CONTROL MEASURE.
3. PLACE AGGREGATE TO THE SPECIFICATIONS BELOW AND SMOOTH IT.
4. STABILISED CONSTRUCTION ENTRANCE AGGREGATE SPECIFICATIONS:

AGGREGATE SIZE	5-150mm WASHED AGGREGATE
THICKNESS	150mm MINIMUM OR 1.5 X AGGREGATE SIZE
LENGTH	10m MINIMUM LENGTH RECOMMENDED
WIDTH	4m MINIMUM

MAINTENANCE

1. MAINTAIN THE STABILISED CONSTRUCTION ENTRANCE IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. AFTER EACH RAINFALL INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT FROM THE STABILISED CONSTRUCTION ENTRANCE AND CLEAN OUT AS NECESSARY.
2. WHEN WHEEL WASHING IS ALSO REQUIRED, ENSURE THIS IS DONE ON AN AREA STABILISED WITH AGGREGATE WHICH DRAINS TO AN APPROVED SEDIMENT RETENTION FACILITY.



APPROVED PLAN

Engineer: RMishra

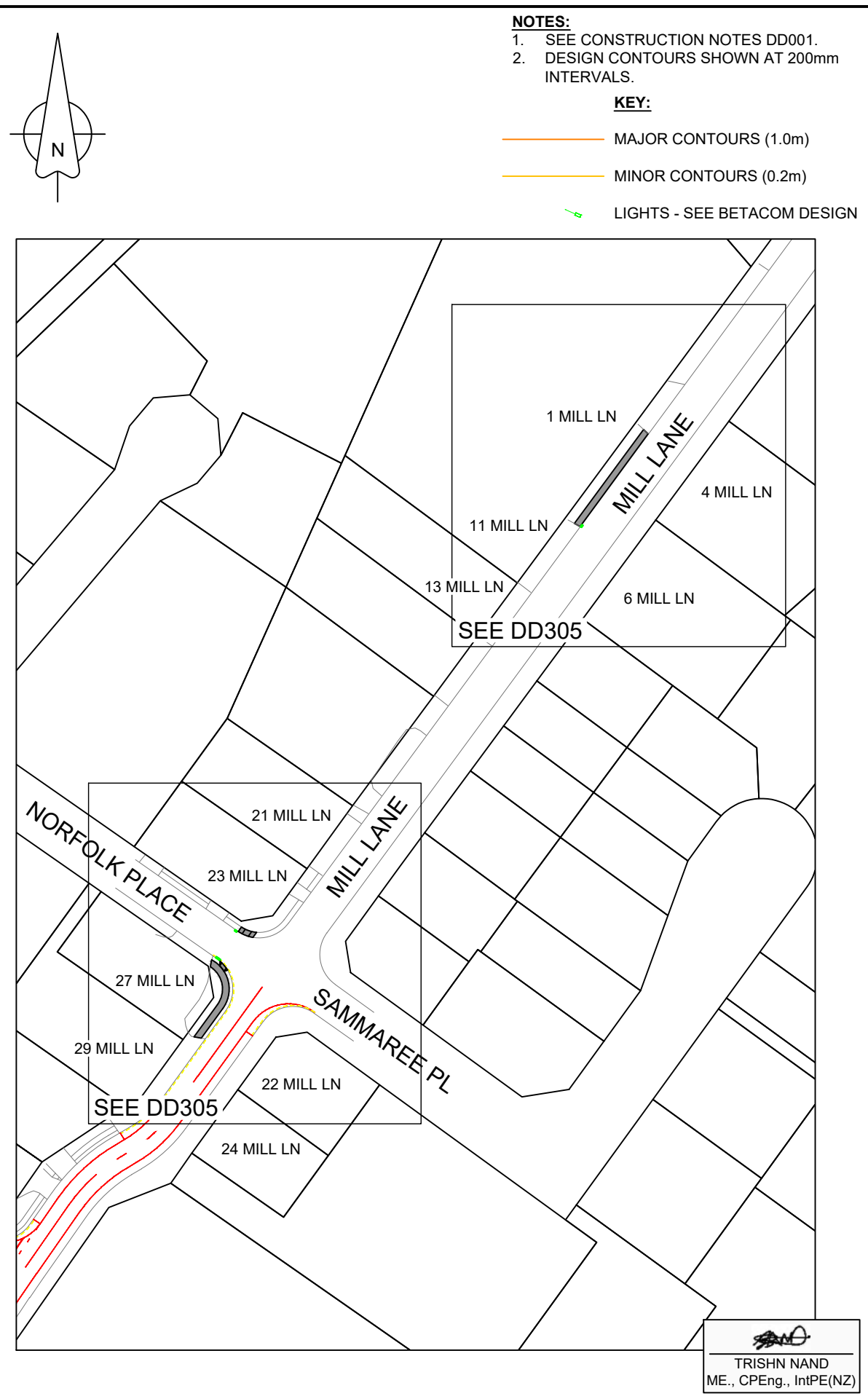
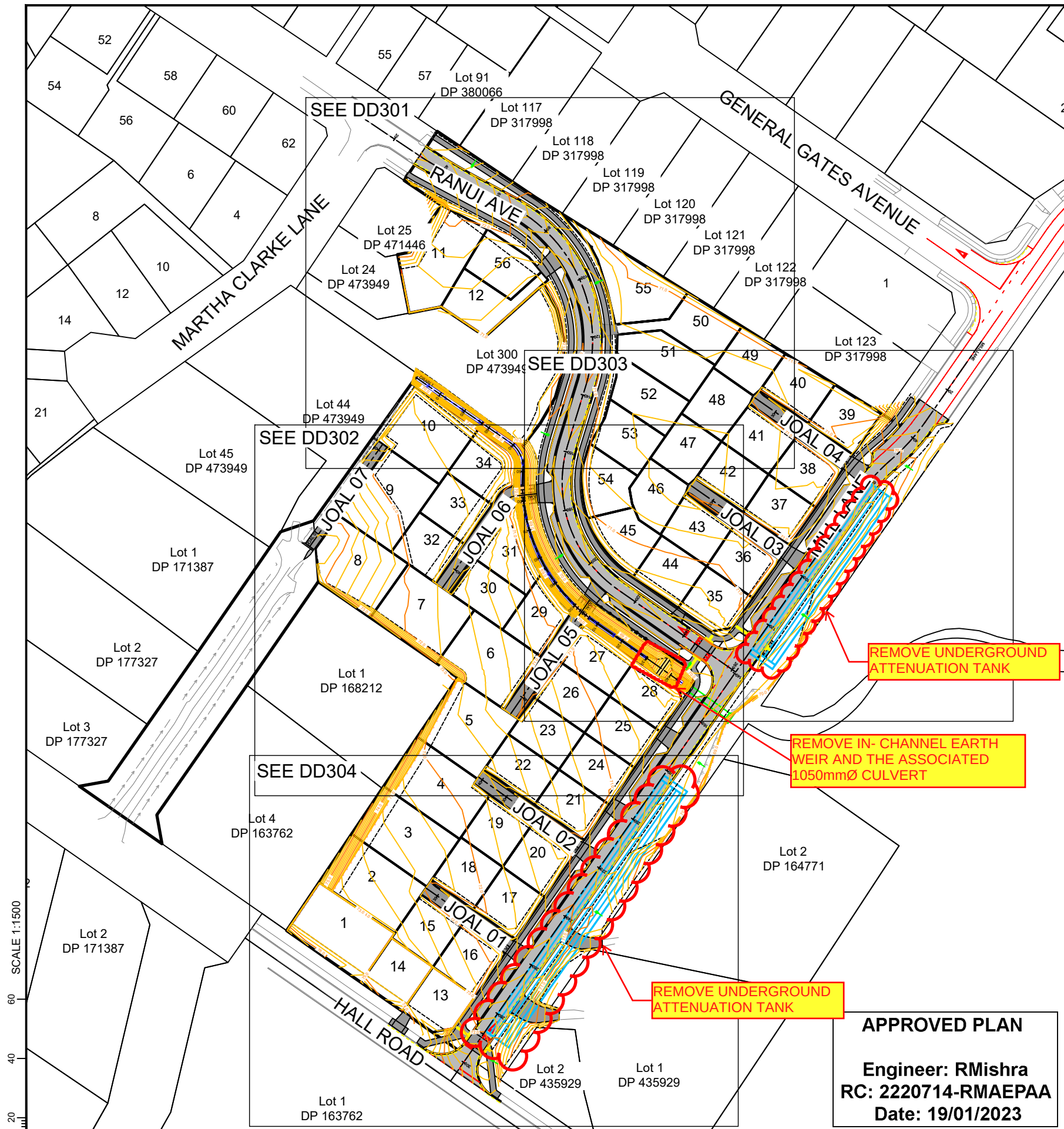
RC: 2220714-RMAEPAA

Date: 19/01/2023

TRISHN NAND

ME., CPEng., IntPE(NZ)

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE EROSION & SEDIMENT CONTROL DETAILS SHEET 4	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN		
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE NTS @ A3	STATUS FOR APPROVAL			
	A	1ST ISSUE	09-11-2022			DWG NUMBER	DD223		REVISION C		
	REV.	REVISION DETAILS	DRAWN APP.								



NOTES:
1. SEE CONSTRUCTION NOTES DD001.
2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

KEY:
MAJOR CONTOURS (1.0m)
MINOR CONTOURS (0.2m)
LIGHTS - SEE BETACOM DESIGN

SCALE 1:1500
0 20 40 60



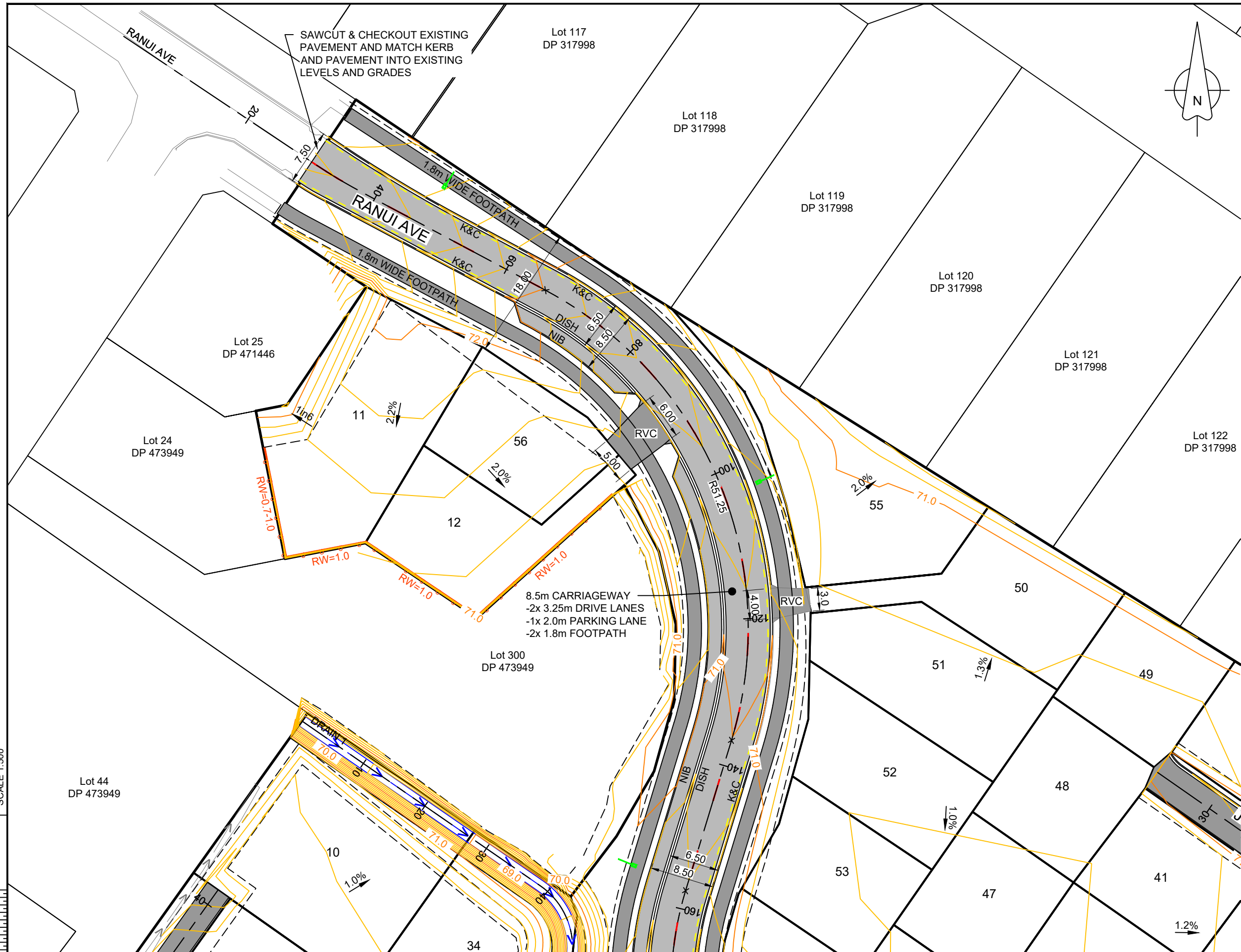
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B	FOR APPROVAL	17-11-2022 AP TN
A	1ST ISSUE	09-11-2022 AP --
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
ROADING PLAN
OVERVIEW

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD300	REVISION C		

TRISHN NAND
ME., CPEng., IntPE(NZ)



- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.
- RW = RETAINING WALL
K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

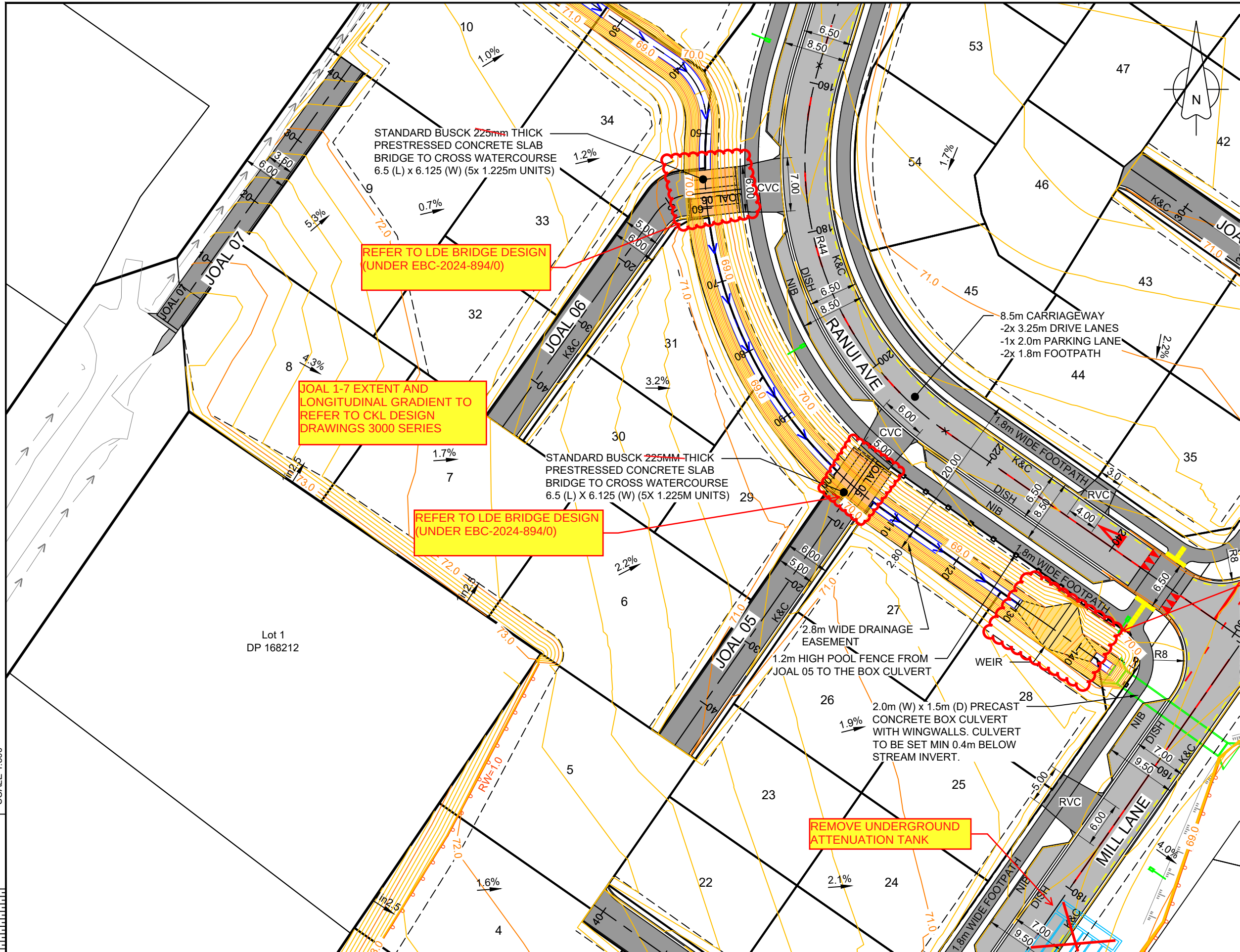
- KEY:**
- MAJOR CONTOURS (1.0m)
 - MINOR CONTOURS (0.2m)
 - LIGHTS - SEE BETACOM DESIGN

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE ROADING PLAN SHEET 1	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022			DWG NUMBER	DD301 C		
	www.vecta.co.nz		REV.			REVISION DETAILS	DRAWN	APP.	



NOTES:
1. SEE CONSTRUCTION NOTES DD001.
2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

RW = RETAINING WALL
K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

KEY:

MAJOR CONTOURS (1.0m)
MINOR CONTOURS (0.2m)
LIGHTS - SEE BETACOM DESIGN

STANDARD BUSCK 225mm THICK
PRESTRESSED CONCRETE SLAB
BRIDGE TO CROSS WATERCOURSE
6.5 (L) x 6.125 (W) (5x 1.225m UNITS)

REFER TO LDE BRIDGE DESIGN
(UNDER EBC-2024-894/0)

JOAL 1-7 EXTENT AND
LONGITUDINAL GRADIENT TO
REFER TO CKL DESIGN
DRAWINGS 3000 SERIES

REFER TO LDE BRIDGE DESIGN
(UNDER EBC-2024-894/0)

STANDARD BUSCK 225mm THICK
PRESTRESSED CONCRETE SLAB
BRIDGE TO CROSS WATERCOURSE
6.5 (L) x 6.125 (W) (5x 1.225m UNITS)

REMOVE IN-CHANNEL
EARTH WEIR AND THE
ASSOCIATED 1050mmØ
CULVERT

REMOVE UNDERGROUND
ATTENUATION TANK

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

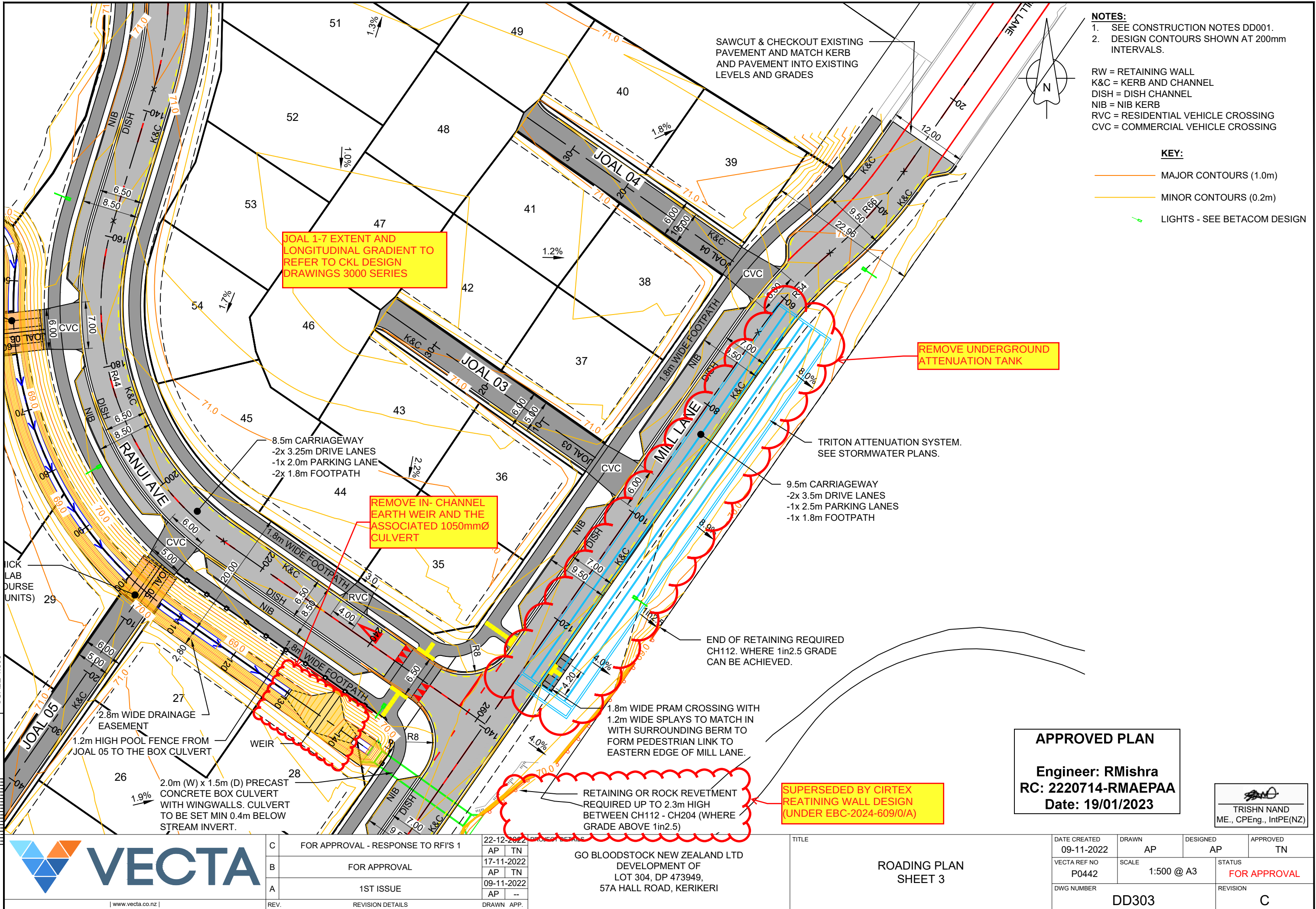
VECTA
www.vecta.co.nz

C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
ROADING PLAN
SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD302	REVISION C		



- NOTES:**
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.
- RW = RETAINING WALL
K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

- KEY:**
- MAJOR CONTOURS (1.0m)
 - MINOR CONTOURS (0.2m)
 - LIGHTS - SEE BETACOM DESIGN

JOAL 1-7 EXTENT AND
LONGITUDINAL GRADIENT TO
REFER TO CKL DESIGN
DRAWINGS 3000 SERIES

REMOVE UNDERGROUND
ATTENUATION TANK

REMOVE IN-CHANNEL
EARTH WEIR AND THE
ASSOCIATED 1050mmØ
CULVERT

SUPERSEDED BY CIRTEX
RETAINING WALL DESIGN
(UNDER EBC-2024-609/0/A)

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

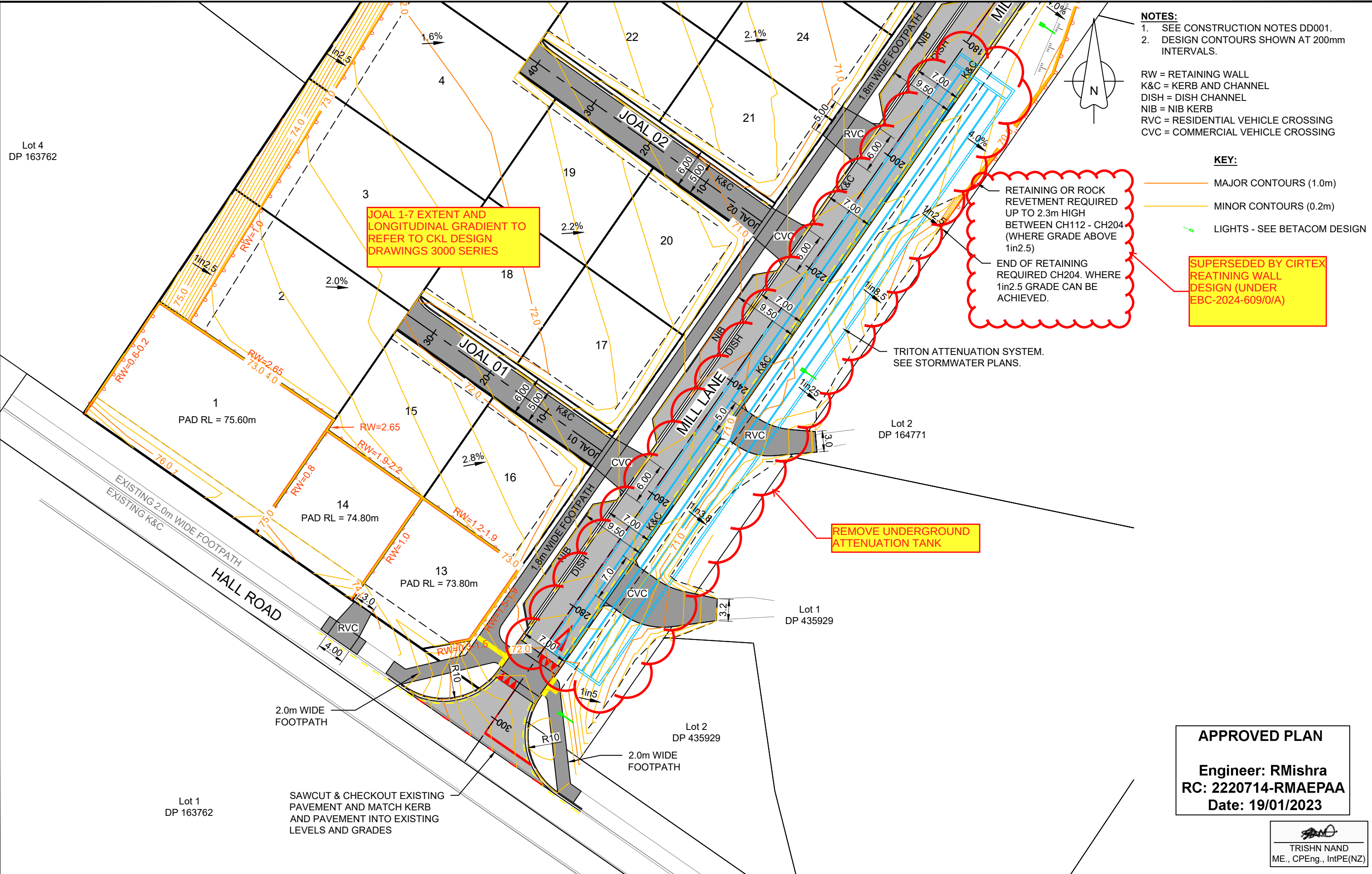
VECTA
www.vecta.co.nz

C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE	ROADING PLAN SHEET 3
-------	-------------------------

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER	DD303	REVISION C	



NOTES:
1. SEE CONSTRUCTION NOTES DD001.
2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

RW = RETAINING WALL
K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

KEY:

- MAJOR CONTOURS (1.0m)
- MINOR CONTOURS (0.2m)
- LIGHTS - SEE BETACOM DESIGN

SUPERSEDED BY CIRTEX REATINING WALL DESIGN (UNDER EBC-2024-609/0/A)

APPROVED PLAN

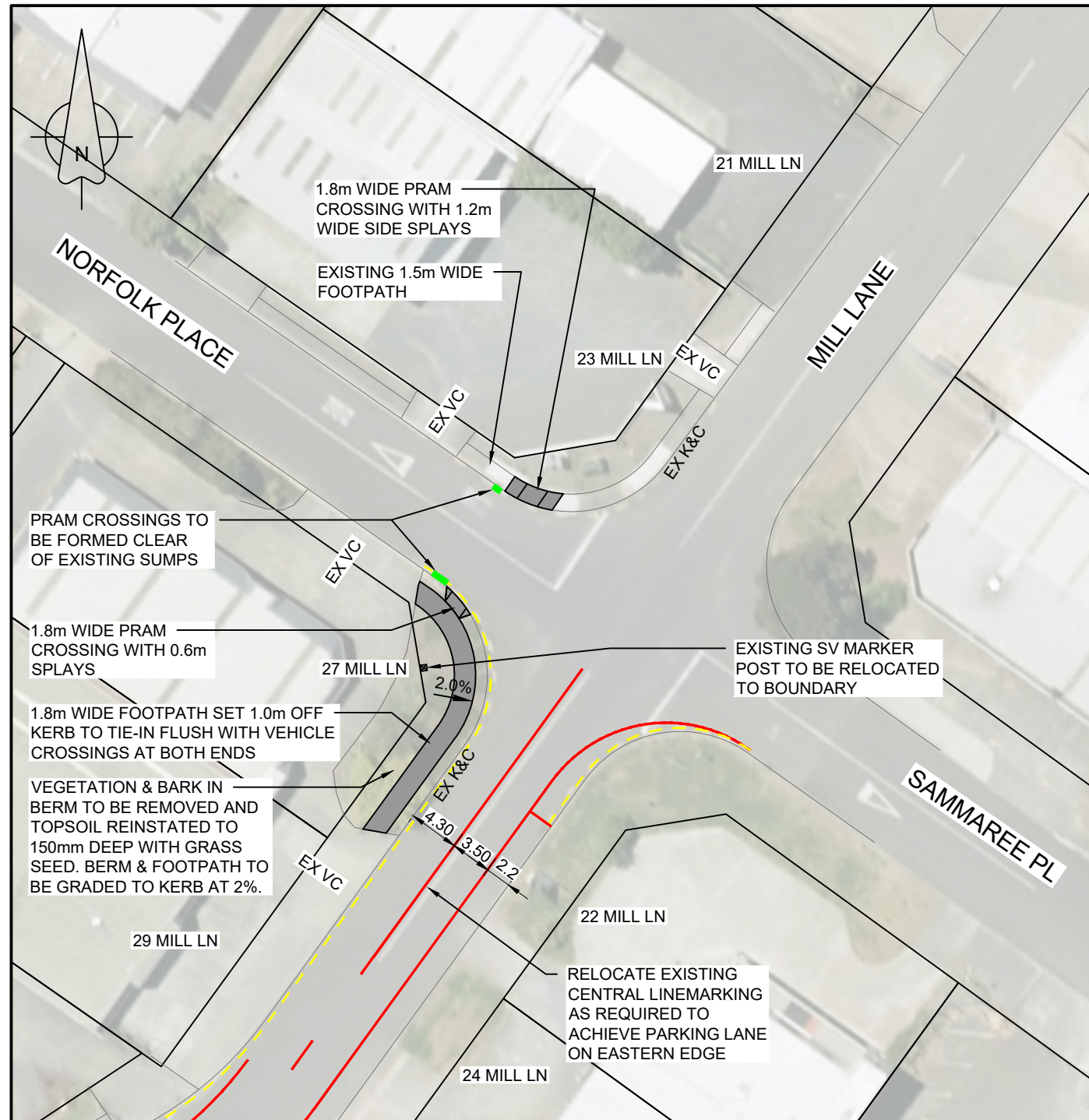
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

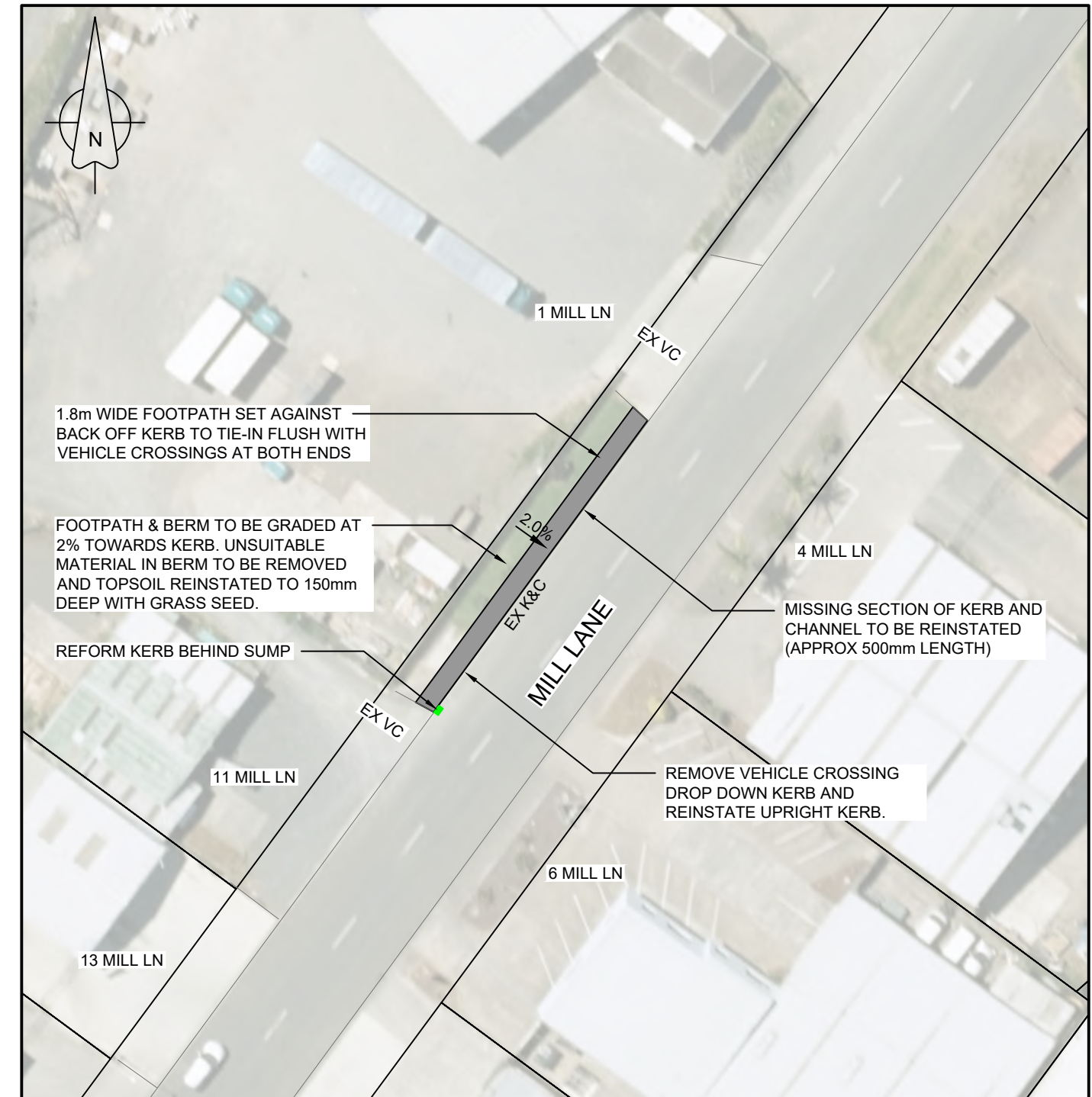
 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE ROADING PLAN SHEET 4	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022			DWG NUMBER	REVISION C		
	REV.	REVISION DETAILS	DRAWN APP.			DD304			

DATE PLOTTED: Friday, 23 December 2022 9:16:14 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD300 Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



INTERSECTION OF MILL LANE & NORFOLK PLACE
FOOTPATH UPGRADE



1 MILL LANE FOOTPATH UPGRADE

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. AERIAL PHOTO SOURCED FROM KOORDINATES AND EXISTING ROAD AND FOOTPATH ARE DIGITISED OFF THIS AERIAL PHOTO AND ARE THEREFORE INDICATIVE ONLY. ALL MEASUREMENT WILL NEED TO BE CONFIRMED ON SITE.

EX K&C = EXISTING KERB AND CHANNEL
EX VC = EXISTING VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

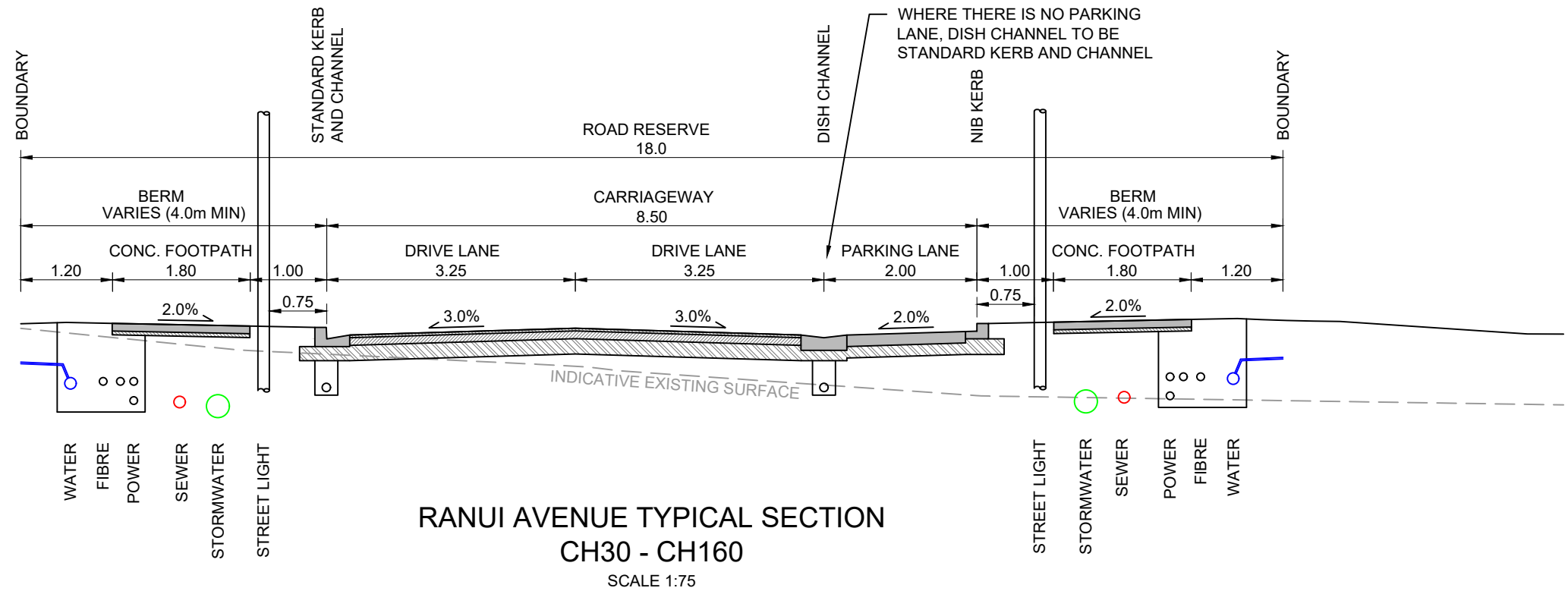
PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
ROADING PLAN SHEET 5

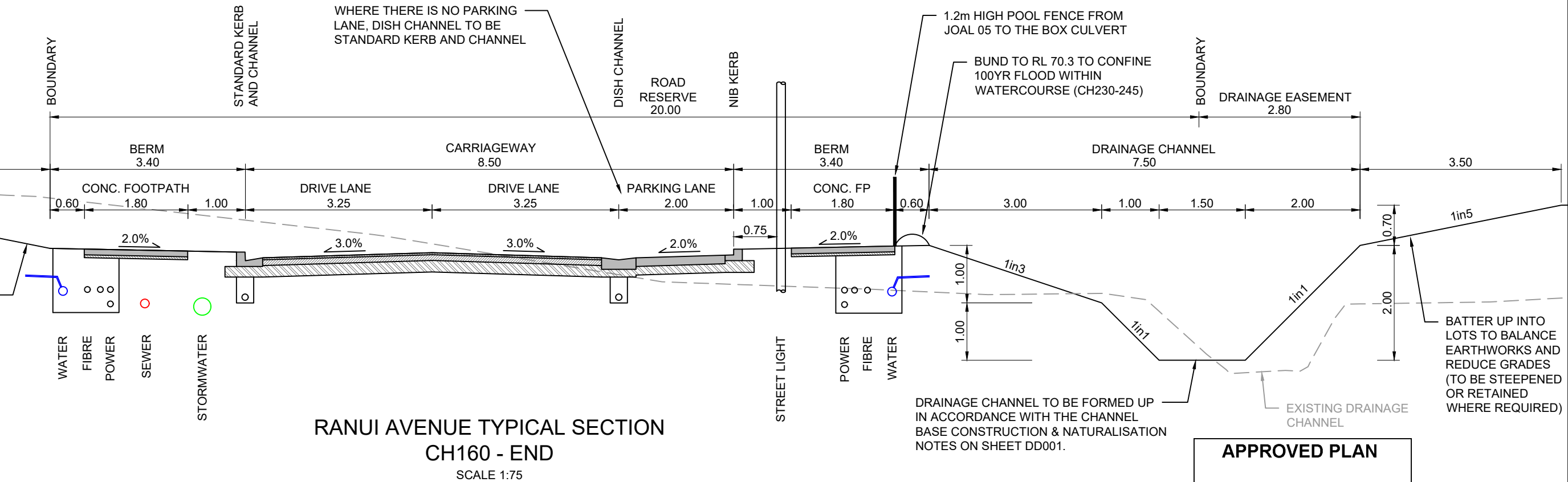
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD305		REVISION C	

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- NOTES:**
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 12. FOOTPATHS ARE TO BE 100mm THICK 20MPa REINFORCED CONCRETE WITH 665 MESH ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 10) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. FNDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - 3. PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 17.



RANUI AVENUE TYPICAL SECTION
CH30 - CH160
SCALE 1:75



RANUI AVENUE TYPICAL SECTION
CH160 - END
SCALE 1:75

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

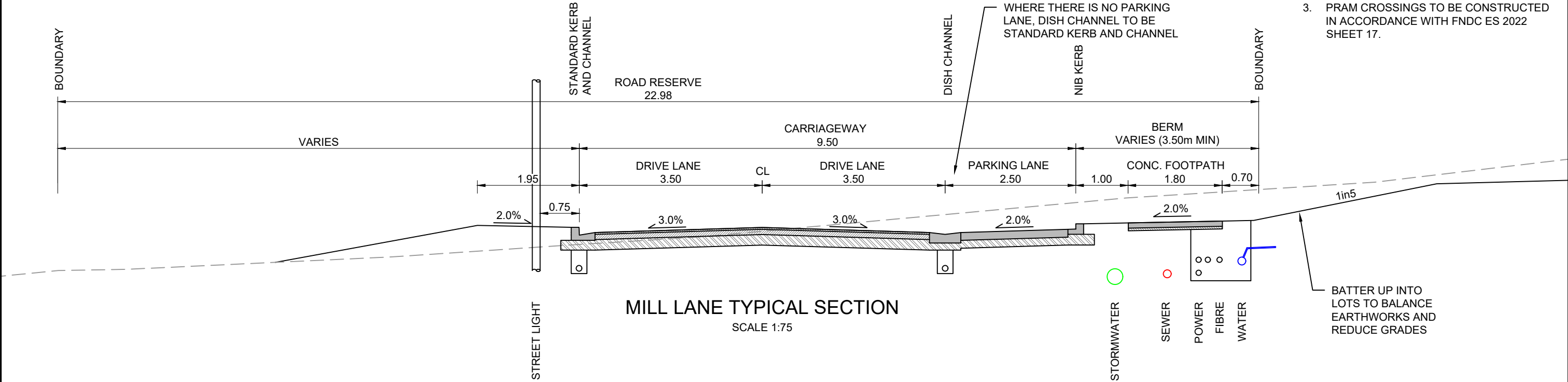
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
TYPICAL ROAD CROSS SECTIONS SHEET 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:75 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD310			REVISION C

- NOTES:**
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 12. FOOTPATHS ARE TO BE 100mm THICK 20MPa REINFORCED CONCRETE WITH 665 MESH ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 10) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. FNDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - 3. PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 17.



MILL LANE TYPICAL SECTION
SCALE 1:75

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

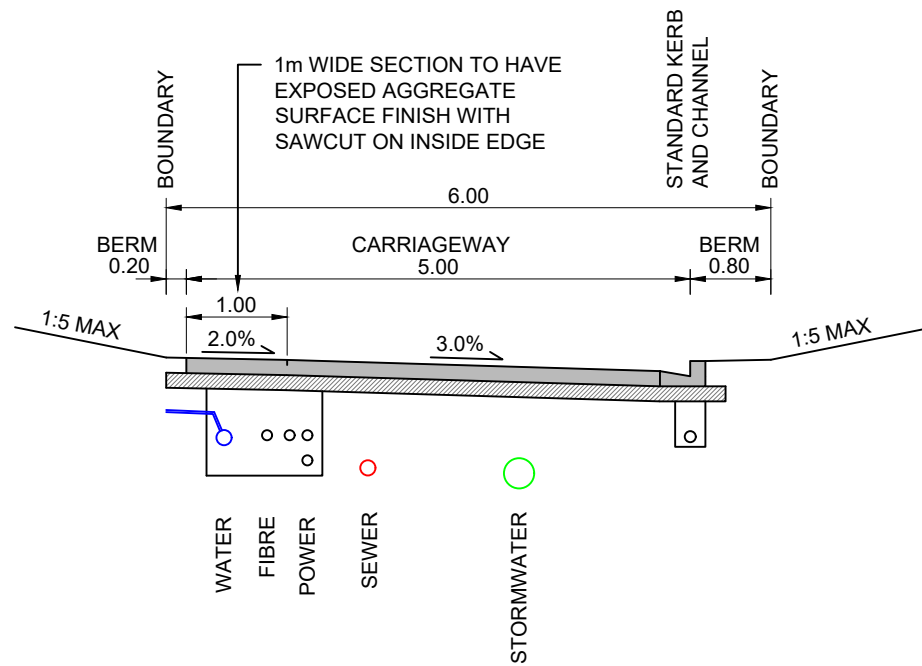
 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS	GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE	TYPICAL ROAD CROSS SECTIONS SHEET 2	DATE CREATED	DRAWN	DESIGNED	APPROVED			
	B	FOR APPROVAL	17-11-2022					09-11-2022	AP	AP	TN			
	A	1ST ISSUE	09-11-2022					VECTA REF NO	SCALE	STATUS				
	REV.	REVISION DETAILS	DRAWN					APP.	P0442	1:75 @ A3	FOR APPROVAL			
								DWG NUMBER	DD311		REVISION			
										C				

SCALE 1:75

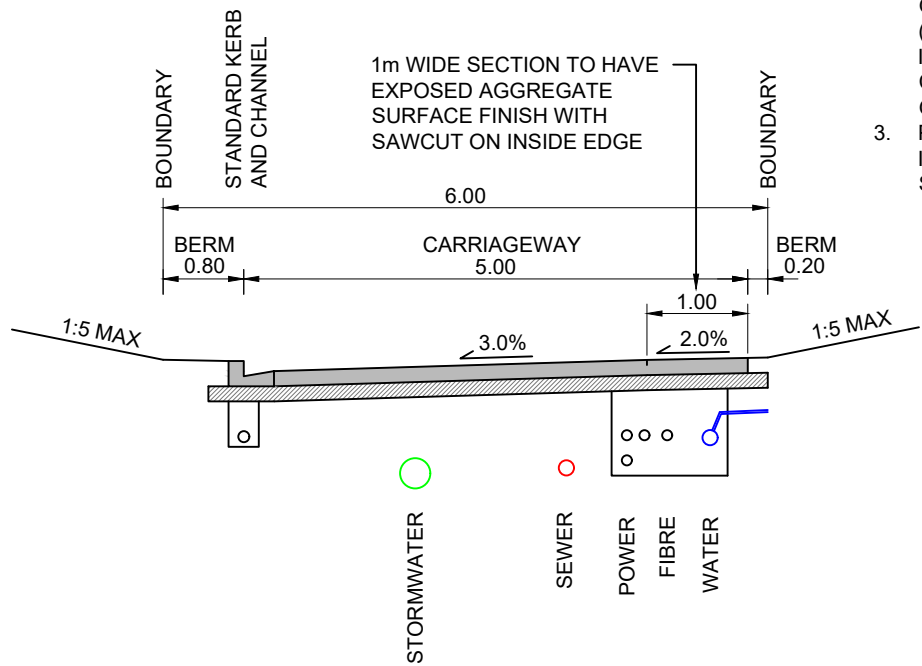
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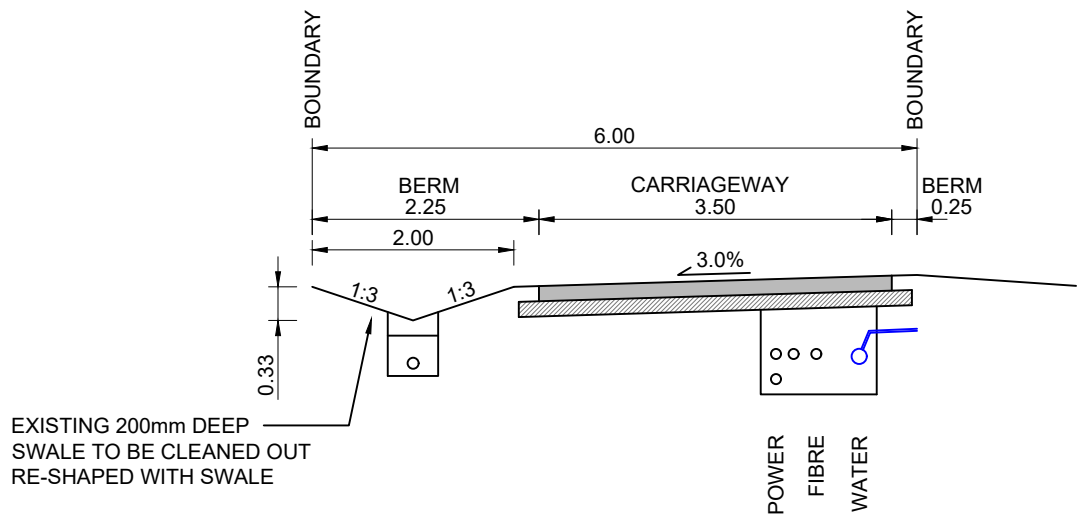
- NOTES:**
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 12. FOOTPATHS ARE TO BE 100mm THICK 20MPa REINFORCED CONCRETE WITH 665 MESH ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 10) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. FNDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - 3. PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH FNDC ES 2022 SHEET 17.



JOAL 1, 2, AND 4
TYPICAL SECTION
SCALE 1:75



JOAL 3, 5 AND 6
TYPICAL SECTION
SCALE 1:75



JOAL 7
TYPICAL SECTION
SCALE 1:75

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023


TRISHN NAND
ME., CPEng., IntPE(NZ)

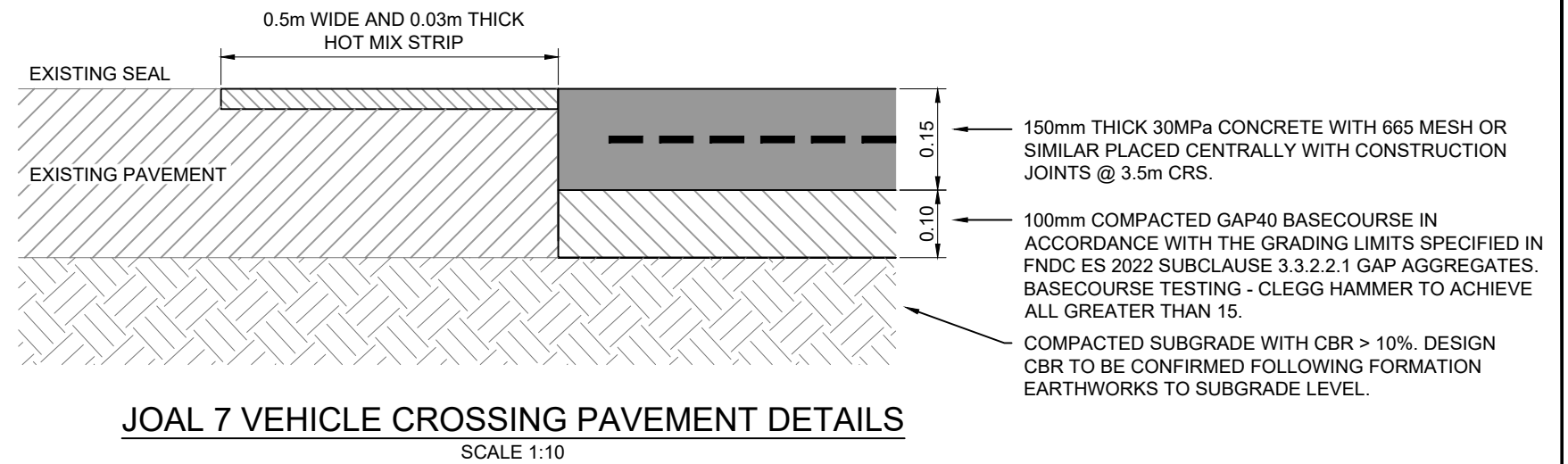
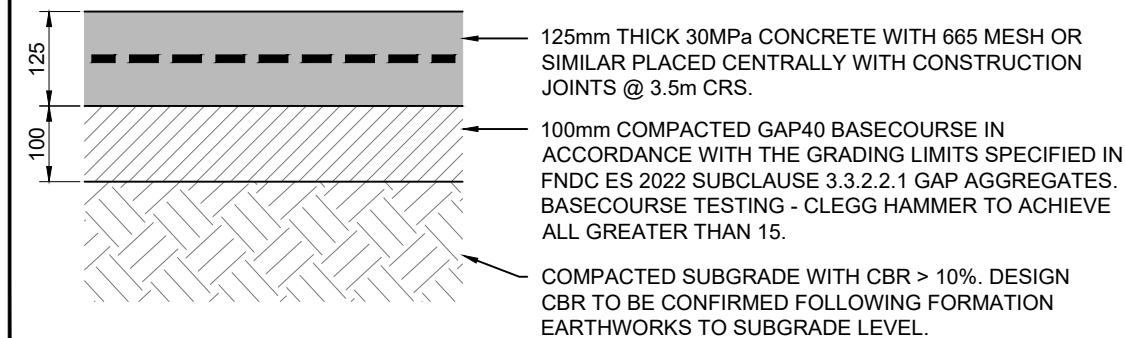
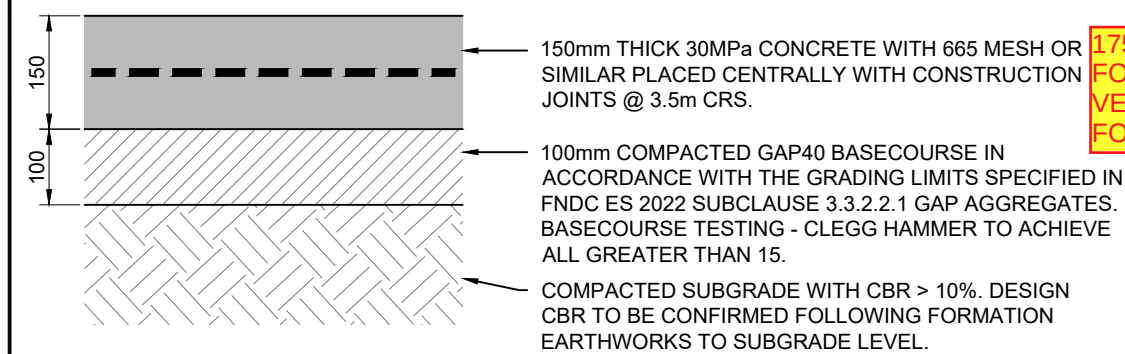
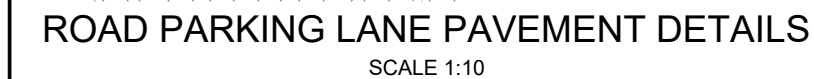
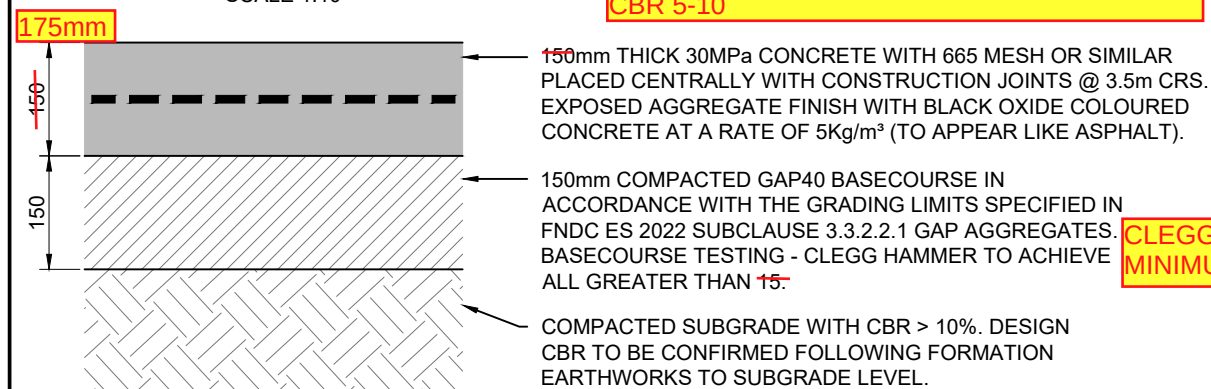
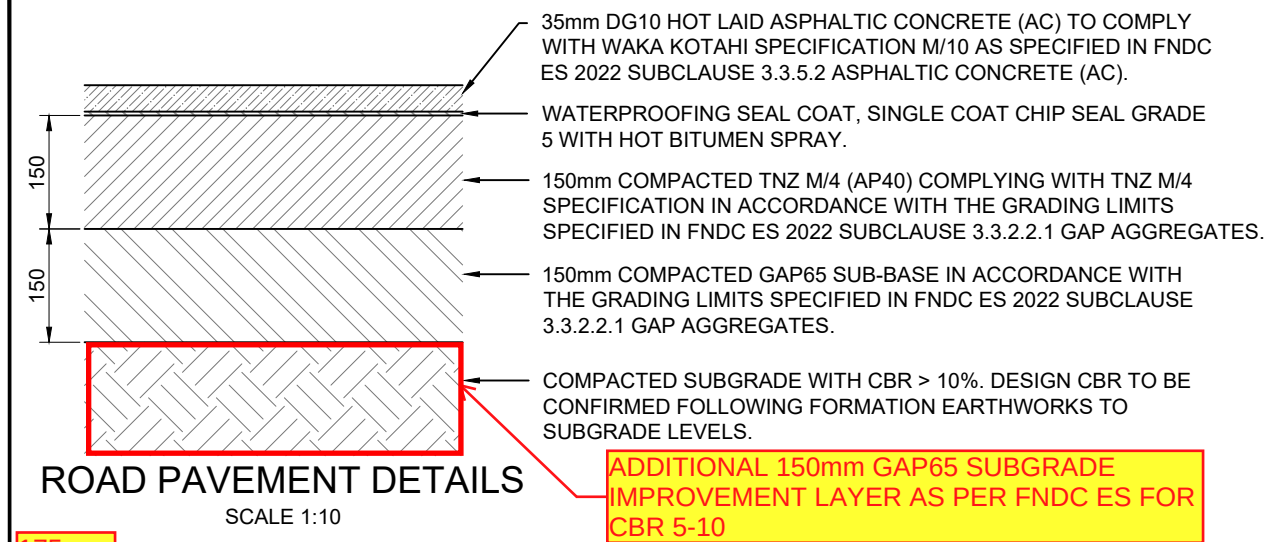


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
TYPICAL ROAD CROSS SECTIONS SHEET 3

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:75 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD312		REVISION C	



PAVEMENT TESTING REQUIREMENTS ROADS

SURFACE TESTING - BENKELMAN BEAM AT 10m CENTRES (STAGGERED) IN THE WHEEL TRACK IN BOTH LANES WITH: MILL LANE ACHIEVING MAX95TH PERCENTILE D0 DEFLECTION OF 1.00mm WITH MAX95TH PERCENTILE CURVATURE OF D0-D200 OF 0.17mm.
& RANUI AVE ACHIEVING MAX95TH PERCENTILE D0 DEFLECTION OF 1.60mm WITH MAX95TH PERCENTILE CURVATURE OF D0-D200 OF 0.20mm.
TEST TO BE COMPLETED PRIOR TO SEALING.

BASECOURSE TESTING - **NUCLEAR DENSOMETER** IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF $\geq 95\%$ MINIMUM AND $\geq 98\%$ MEAN AS PER TNZ B/2. **CLEGG HAMMER** AT 10m STAGGERED ACROSS THE ROAD (30m REPETITION OF TESTING ROWS) AT THE EDGES AND CENTRE OF PAVEMENTS TO ACHIEVE NO VALUE < CLEGG 45. THICKNESS & SHAPE OF BASECOURSE SHALL BE MEASURED BY STRINGING.

SUBBASE TESTING - NUCLEAR DENSOMETER IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF $\geq 92\%$ MINIMUM AND $\geq 95\%$ MEAN AS PER TNZ B/2. THICKNESS & SHAPE OF SUBBASE SHALL BE MEASURED BY STRINGING.

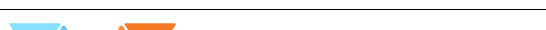
SUBGRADE CBR OF 10 (FIRST 600mm DEEP) - TO ACHIEVE 24mm/BLOW WITH SCALA PENETROMETER. SHAPE OF THE SUBGRADE SHALL BE MEASURED BY STRINGING.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

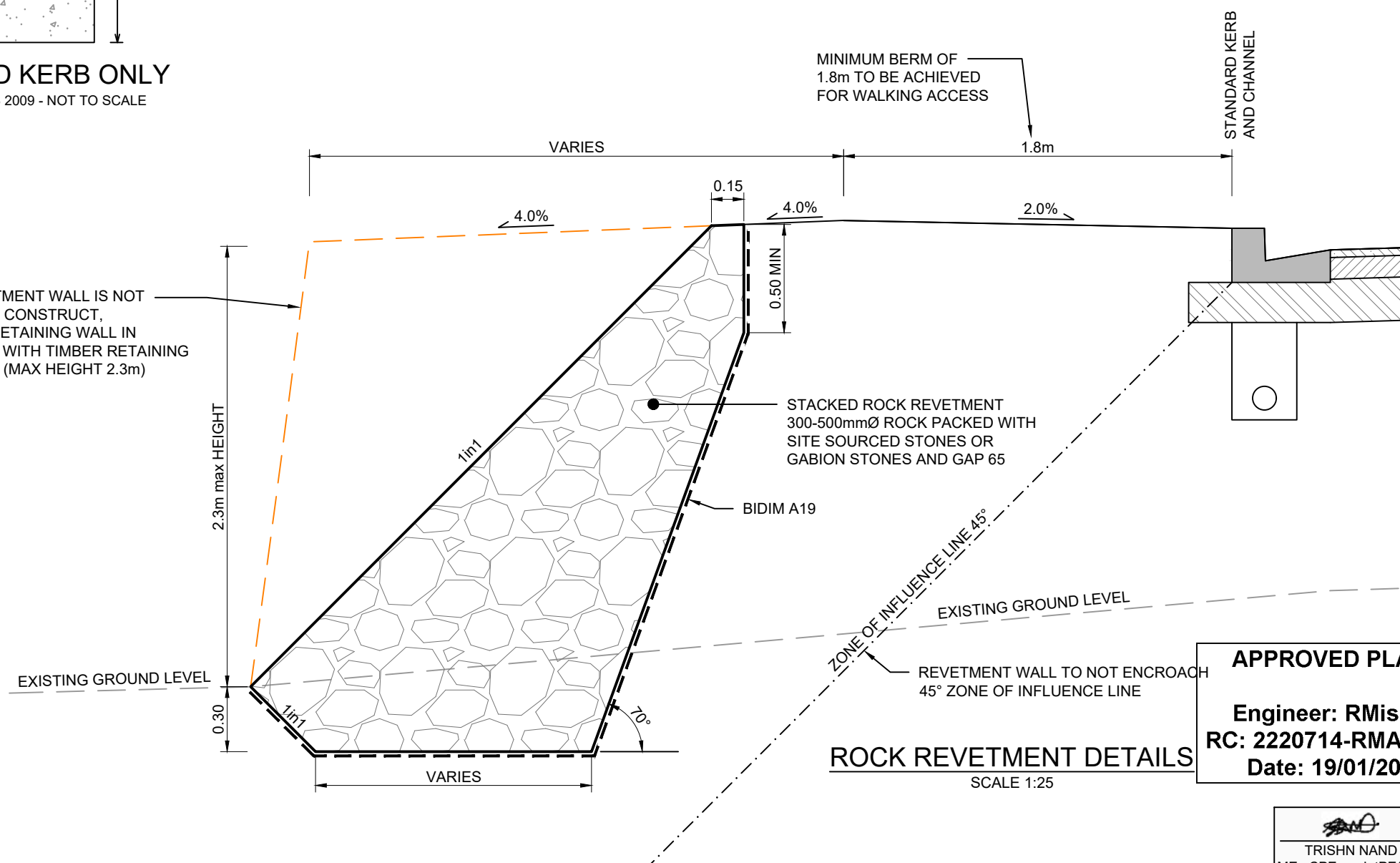
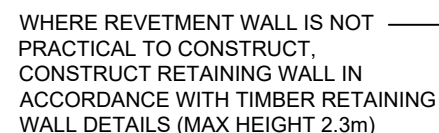
NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. CLEGG >15 REQUIRED UNDER ALL KERBS.

 www.vecta.co.nz	D	FOR APPROVAL - RESPONSE TO RFI'S 2 (REVISE ROAD AC PAVEMENT DETAILS)	16-01-2023 AP TN	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE ROAD TYPICAL PAVEMENT, KERB & ROCK REVTMENT DETAILS SHEET 1	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022 AP TN			VECTA REF NO P0442	SCALE AS SHOWN @ A3	STATUS FOR APPROVAL	
	B	FOR APPROVAL	17-11-2022 AP TN			DWG NUMBER	DD315	REVISION D	
	REV	REVISION DETAILS	DRAWN APP						



- KERB NOTES:**
1. 3/D12 REINFORCING BARS TO BE PLACED AROUND ALL CURVES, AND INTERSECTIONS BETWEEN TANGENT POINTS IN BUSINESS ENVIRONMENTS.
 2. COMMERCIAL & INDUSTRIAL CROSSINGS TO BE ADDITIONAL 50mm IN DEPTH AS WELL AS HAVING 3-D12 REINFORCING BARS EQUALLY SPACED IN THE CHANNEL.
 3. CONCRETE FOR DISHED CHANNEL, PRAM CROSSING, STANDARD KERB AND CHANNEL AND MOUNTABLE KERB AND CHANNEL & FLUSH EDGE BEAM SHALL BE 30MPa AT 28 DAYS.
 4. CRACK CONTROL JOINTS TO BE FORMED AT MAXIMUM OF 3.5 METRE INTERVALS. TO BE A MINIMUM DEPTH OF 30mm.
 5. PROFILES MAY BE MODIFIED SLIGHTLY TO SUIT KERBING MACHINE.
 6. KERB BLOCKS HAUNCHING TO BE 20MPa AT 28 DAYS.

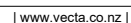


APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

NOTES:

- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. CLEGG >15 REQUIRED UNDER ALL KERBS.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV	REVISION DETAILS	AP TN

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

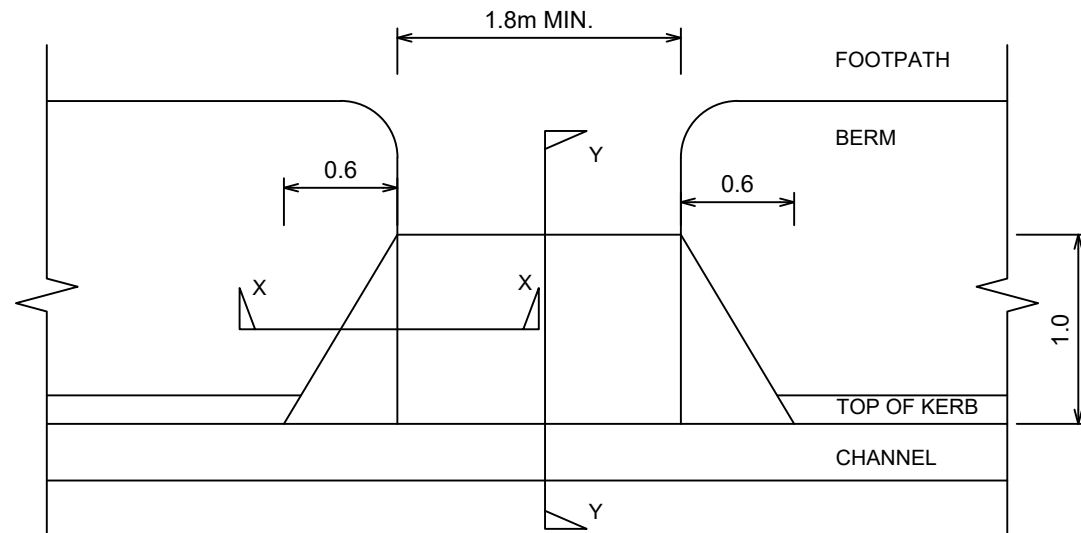
TITLE
ROAD TYPICAL PAVEMENT, KERB & ROCK REVTMENT DETAILS SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE AS SHOWN @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD316		REVISION C	

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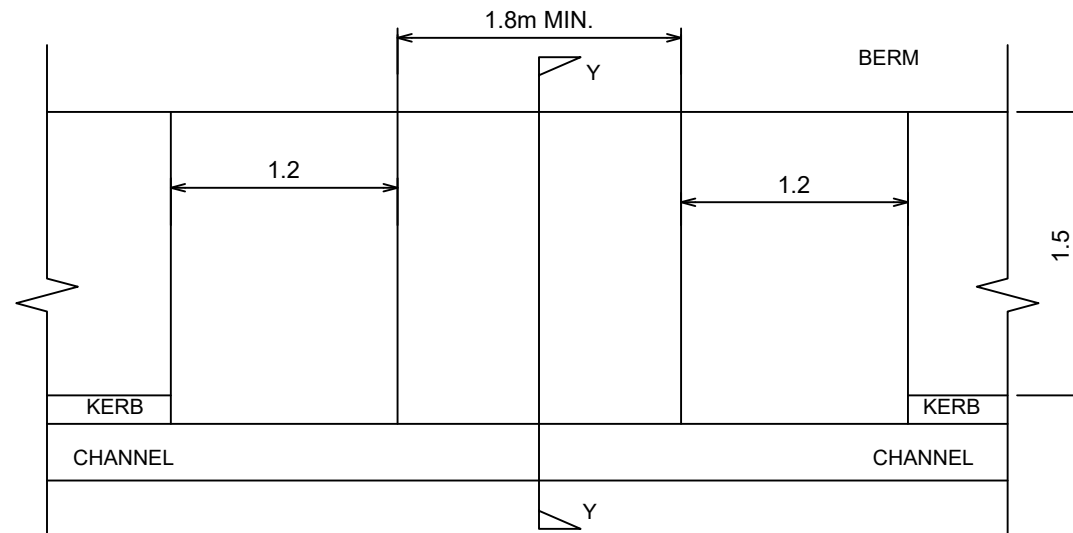
USE DETAIL WHEN FOOTPATH IS NOT AGAINST BERM



PLAN

SHEET 17 FNDC ES 2022 - NOT TO SCALE

USE DETAIL WHEN FOOTPATH IS AGAINST BERM



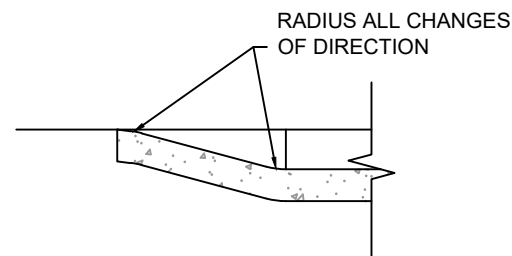
PLAN

SHEET 17 FNDC ES 2022 - NOT TO SCALE

NOTES:

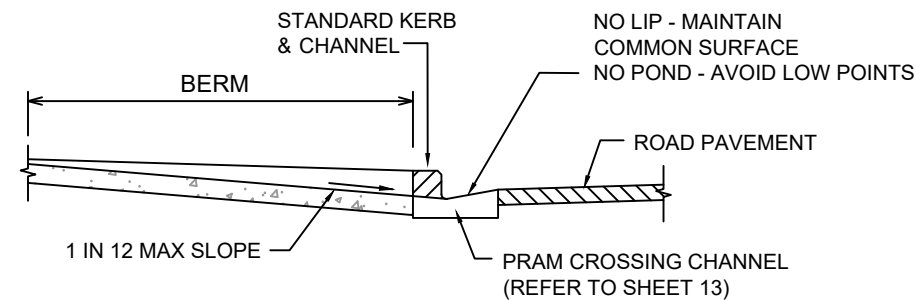
1. SEE CONSTRUCTION NOTES DD001.


TRISHN NAND
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HALF SECTION X-X

SHEET 17 FNDC ES 2022 - NOT TO SCALE



SECTION Y-Y

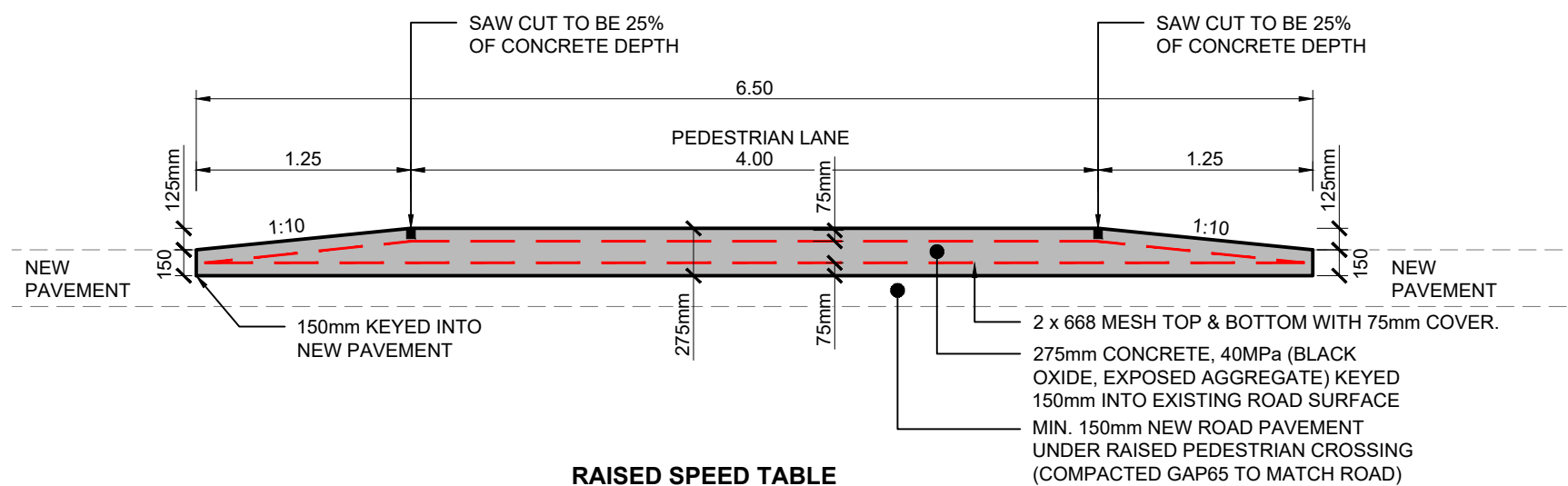
SHEET 17 FNDC ES 2022 - NOT TO SCALE

NOTES:

1. MAXIMUM GRADE IS 1:12
2. EDGE OF CROSSING TO BE FINISHED FLUSH WITH EXISTING CHANNEL.
3. CROSSING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR A CONCRETE FOOTPATH UNLESS OTHERWISE APPROVED - SEE SHEET 12 FNDG ES 2022.

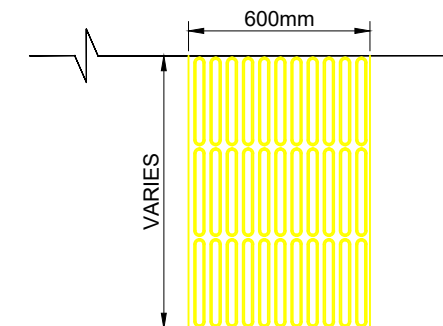
PRAM CROSSING DETAILS

NOT TO SCALE



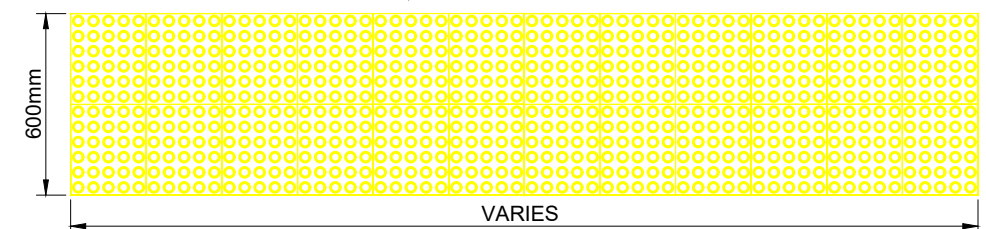
RAISED SPEED TABLE

TYPICAL SECTION A
SCALE 1:40



APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



TACTILE GROUND SURFACE INDICATORS (TGSI)



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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV	REVISION DETAILS	AP TN

2 | PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

	TITLE
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PRAM CROSSING DETAILS & RAISED SPEED TABLE TYPICAL SECTION

DATE CREATED	09-11-2022
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VECTA REF NO
P0442

DWG NUMBER

DRAWN	AP
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SCALE	S
AS SHOWN @ A3	

		R
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DESIGNED AP	APPROVED TN
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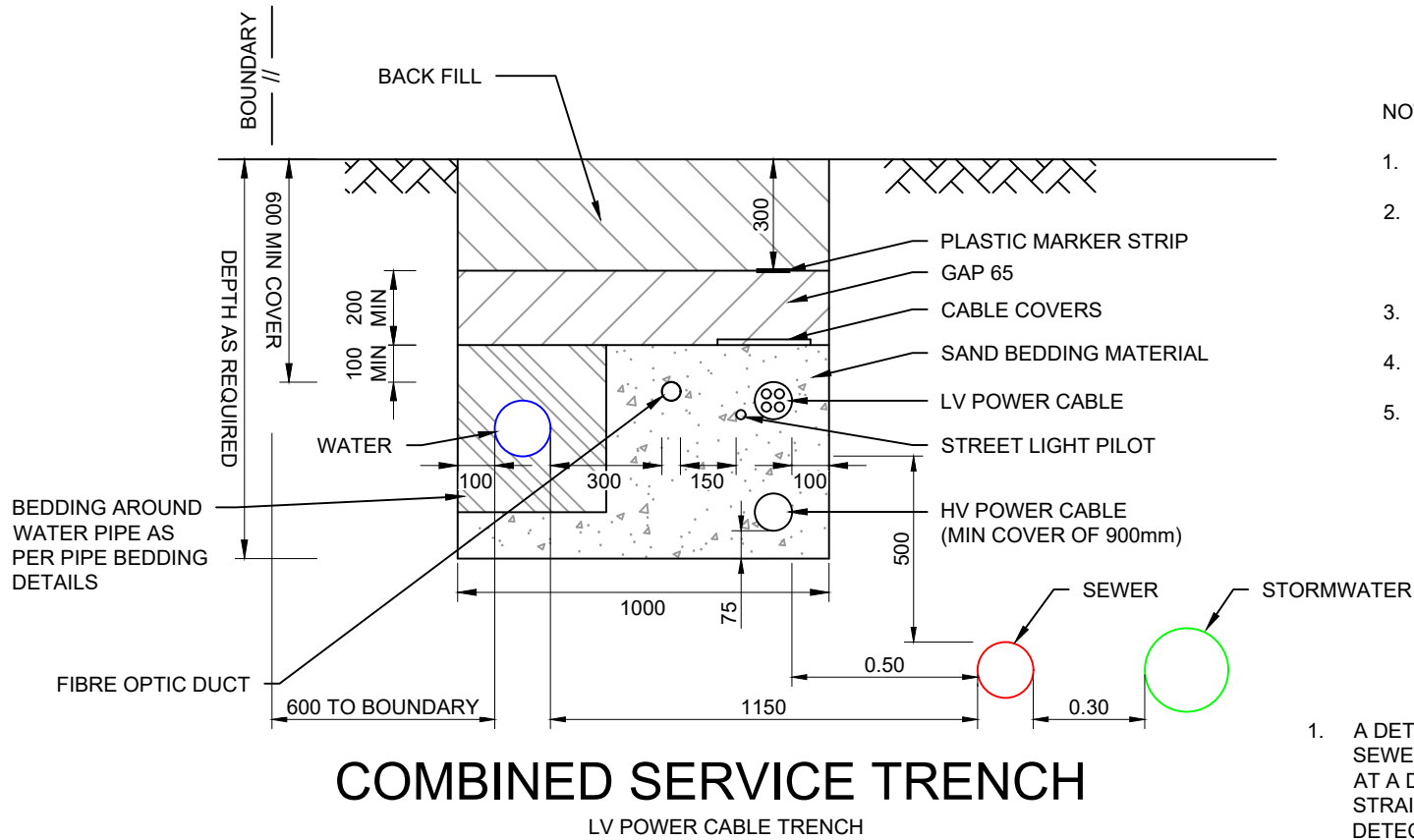
N @ A3	STATUS FOR APPROVAL
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REVISION

DATE PLOTTED: Friday, 23 December 2022 9:16:49 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\0442 Hall Road\CAD\Detail Design\0442-DD315 Pavement Details.dwg

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NOTES:
1. SEE CONSTRUCTION NOTES DD001.



NOTES:

- BEDDING MATERIAL EITHER SAND OR 'CLEAN' SOIL. THERMAL BACKFILL TO BE USED WHERE SPECIFIED
- COVERS TO COMPLY WITH AS/NZS 3000:2000 3.11.3.3 AND AS4705-2000 AND SHALL BE LOCATED 75mm ABOVE CABLES AND DUCTS. CABLE COVERS SHALL BE AT LEAST 150mm IN WIDTH AND OVERLAP AT LEAST 40mm EACH SIDE OF THE CABLE.
- BACKFILL, GENERALLY USE FILL FROM TRENCH BUT ENSURE NO LARGE STONES OR SHARP OBJECTS ARE PLACED BACK IN THE TRENCH.
- MARKER STRIP TO COMPLY WITH AS/NZS 3000:2000 3.11.3.4 AND BE 100mm WIDE, COLOURED ORANGE, WITH THE WORDS 'ELECTRICAL CABLE BELOW'.
- WHERE PRACTICAL PROVIDE SOME SEPARATION (75mm OR GREATER) BETWEEN DIRECT LAID LV AND SL CABLE / FIBRE OPTIC DUCT.

DIRECTLY LAID LV CABLES

NORTHPOWER SHEET 2F250s7

DETECTION/WARNING TAPE

- A DETECTION TAPE SHALL BE LAID DIRECTLY ABOVE ALL RISING MAINS AND ABOVE NEW SEWERS. THE TAPE SHALL HAVE 'SEWERAGE' WRITTEN ON IT IN WHITE AND BE LOCATED AT A DEPTH OF 200-250mm ABOVE THE PIPE CREST. WHERE THE PIPE IS NOT LAID IN A STRAIGHT LINE BETWEEN MANHOLES, THE TAPE SHALL CONTAIN SUFFICIENT METAL TO BE DETECTABLE FROM THE SURFACE BY A STANDARD METAL DETECTOR.
- A METALLIC DETECTION TAPE AND TRACER CABLE SHALL BE LAID DIRECTLY ABOVE ALL NEW NON-METALLIC WATER MAINS INCLUDING RIDER MAINS. DETECTION TAPE SHALL HAVE 'WATER' WRITTEN ON IT IN BLUE, BE LOCATED AT A DEPTH OF 200-250mm BELOW THE FINISHED SURFACE LEVEL, AND CONTAIN SUFFICIENT METAL TO BE DETECTABLE FROM THE SURFACE BY A STANDARD METAL DETECTOR. TRACER CABLE SHALL ALSO BE ATTACHED TO ALL PRINCIPAL MAINS AND RIDER MAINS. THIS WIRE SHALL TAKE THE FORM OF A CONTINUOUS 2.5mm² MULTI-STRAND (POLYTHENE SLEEVED) CABLE, STRAPPED TO THE PIPE WALL BY MEANS OF A MINIMUM OF TWO COMPLETE WRAPS OF HEAVY DUTY ADHESIVE TAPE, AT A MAXIMUM OF 3m INTERVALS. THE TRACER CABLE SHALL BE CONNECTED TO ALL SURFACE BOXES, AND ELECTRICALLY TESTED FOR CONTINUITY BY A REGISTERED ELECTRICIAN FOLLOWING INSTALLATION AND BACKFILLING. RECORDS OF THE ELECTRICAL CONTINUITY TEST SHALL BE PROVIDED BY THE CONTRACTOR.

THE MINIMUM CLEAR DISTANCE BETWEEN SERVICES SHALL BE THE GREATER OF THE REQUIRED CLEARANCES BETWEEN THE RELEVANT SERVICES AS FOLLOWS:

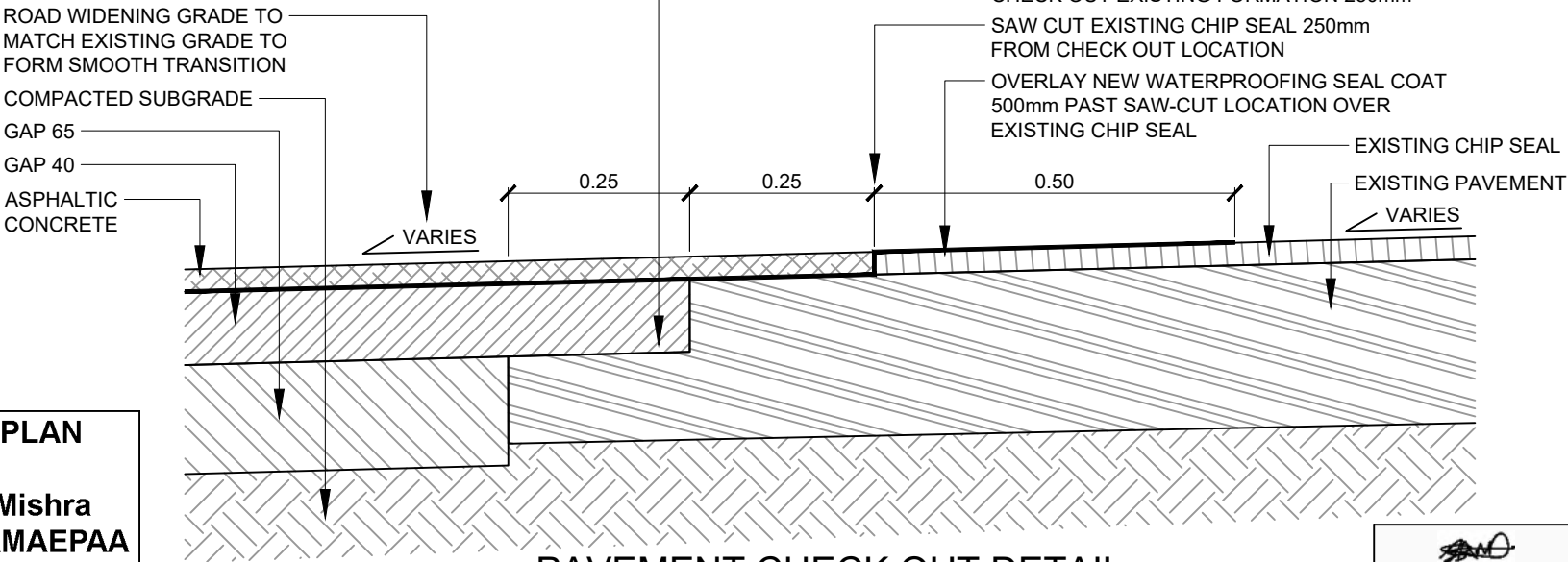
STORMWATER:	300 H, 150 V
WASTERWATER:	300 H, 150 V (EXCEPT WATERMAINS AS FOLLOWS) 1000 H, 500 V OR 600 H, 750 V TO WATERMAINS.
ELECTRICITY:	500 H, 225 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS) 1000 H, 225 V TO WATERMAINS > 200mm ID.
TELECOM & GAS:	300 H, 150 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS) 600 H, 150 V TO WATERMAINS > 200mm ID.
WATERMAINS:	CLEARANCE TO OTHER SERVICES AS ABOVE. CLEARANCE TO OTHER WATERMAINS AS FOLLOWS: 600 H, 500 V WHERE NEW PIPELINE IS > 375mm ID 300 H, 150 V WHERE NEW PIPELINE IS ≤ 200mm ID AND WHERE EXISTING PIPELINE IS ≤ 375mm ID 600 H, 150 V WHERE NEW PIPELINE IS > 200mm ID AND WHERE EXISTING PIPELINE IS < 375mm ID

NOTES:

- ALL DISTANCES IN mm.
- ALL SERVICES SHALL HAVE 600mm MIN. COVER UNDER FOOTPATHS AND BERMS.
- REFER TO TABLE 4.9M 5.6 & 6.1 FNDC ES 2022 FOR FURTHER NOTES.
- VERTICAL CLEARANCES APPLY WHERE SERVICES CROSS, EXCEPT THAT WATERMAINS SHALL ALWAYS MAINTAIN A CLEARANCE ABOVE A PARALLEL WASTEWATER PIPELINE.

MINIMUM CLEARANCES BETWEEN SERVICES

FOR ALL ENVIRONMENTS
FNDC ES 2022 SHEET 30



PAVEMENT CHECK OUT DETAIL

NTS

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--

REV. REVISION DETAILS

22-12-2022	AP	TN
17-11-2022	AP	TN
09-11-2022	AP	--

DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

COMBINED SERVICE TRENCH DETAILS
& PAVEMENT CHECK OUT DETAILS

DATE CREATED
09-11-2022

DRAWN
AP

DESIGNED
AP

APPROVED
TN

VECTA REF NO
P0442

SCALE
AS SHOWN @ A3

STATUS
FOR APPROVAL

DWG NUMBER

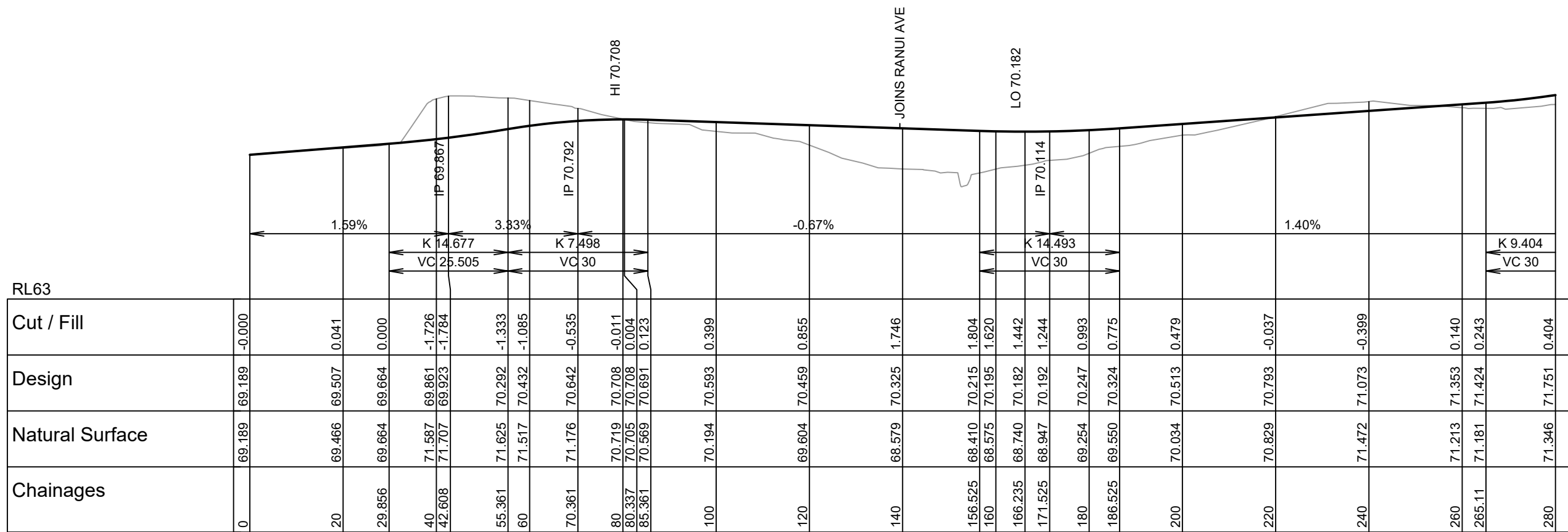
DD318

REVISION

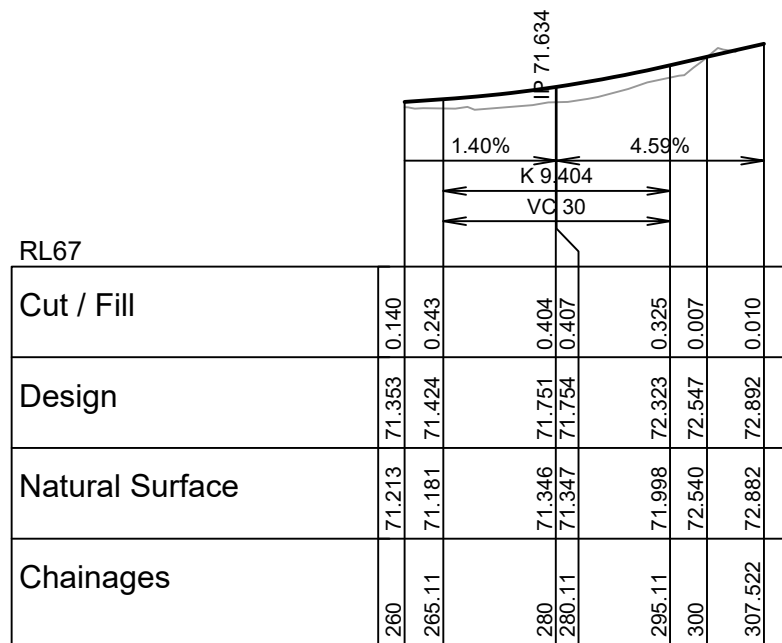
C

10
8
6
4
2
0

SCALE 1:200



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - MILL LANE



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - MILL LANE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
ROAD LONGITUDINAL SECTIONS
SHEET 1

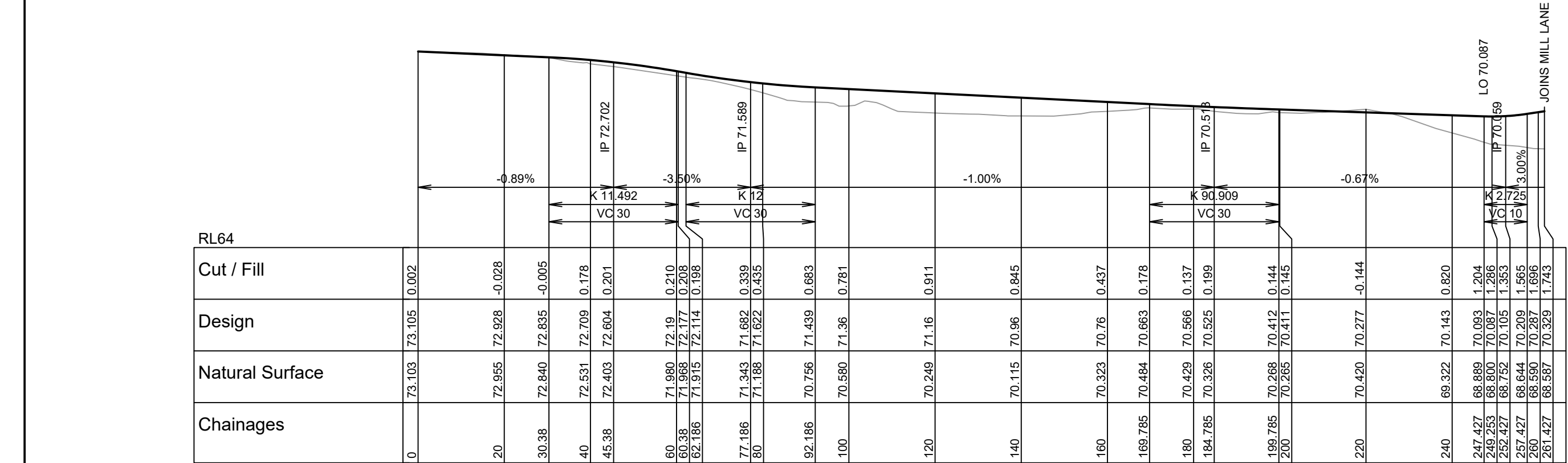
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3		STATUS FOR APPROVAL
DWG NUMBER DD320			REVISION C

SCALE 1:1000

DATE PLOTTED: Friday, 23 December 2022 9:17:00 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD320 Road LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

10
8
6
4
2
0
SCALE 1:200



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - RANUI AVE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023


TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



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SCALE 1:1000

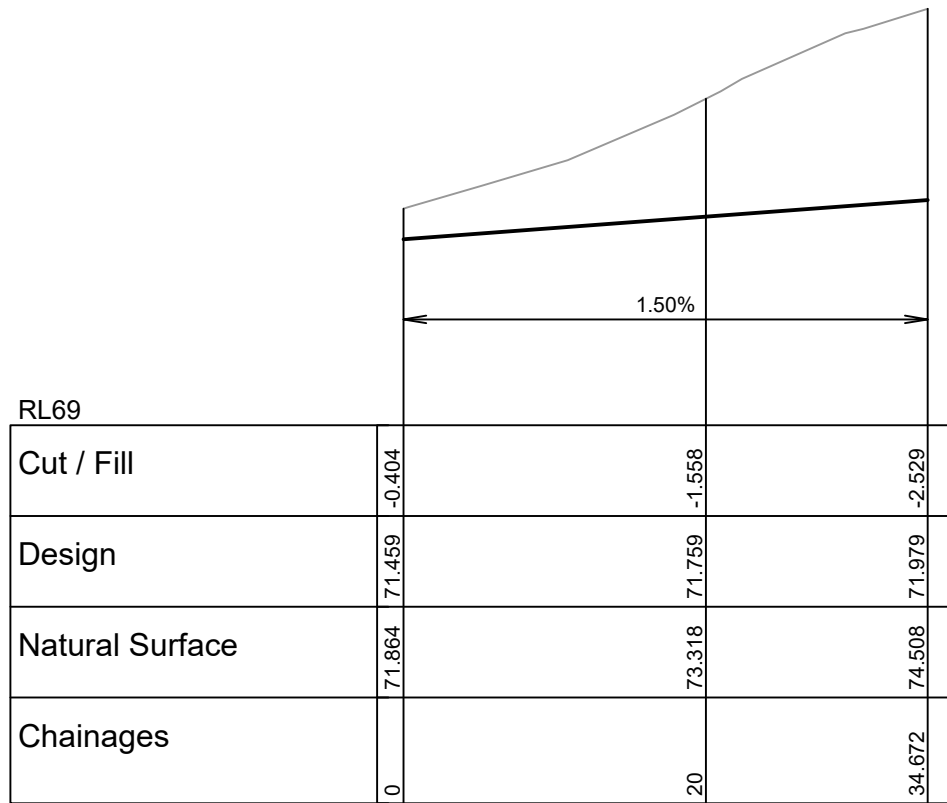
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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
		AP TN
B	FOR APPROVAL	17-11-2022
		AP TN
A	1ST ISSUE	09-11-2022
		AP --
REV. REVISION DETAILS		DRAWN APP.

PROJECT DETAILS	
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	

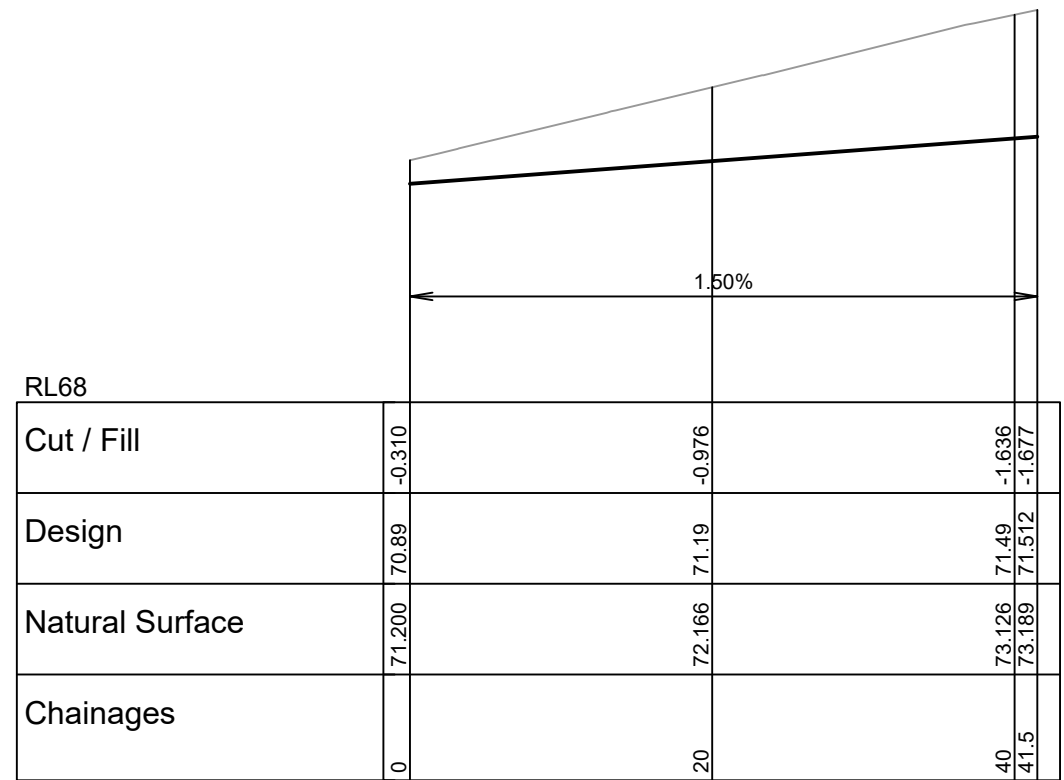
TITLE
ROAD LONGITUDINAL SECTIONS SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
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DWG NUMBER DD321			REVISION C

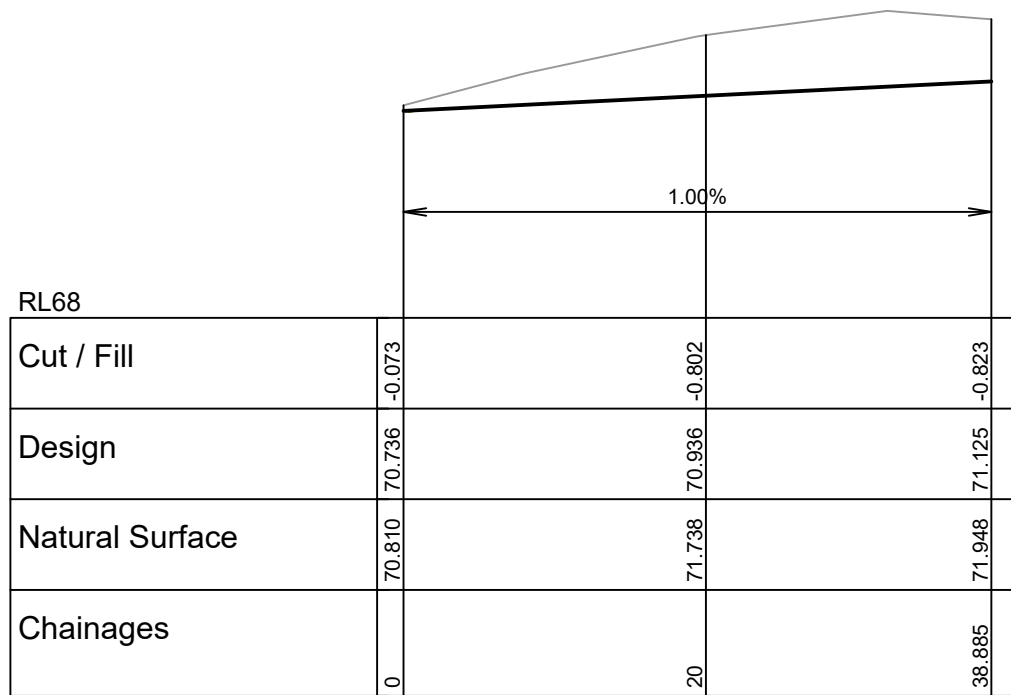


HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 01

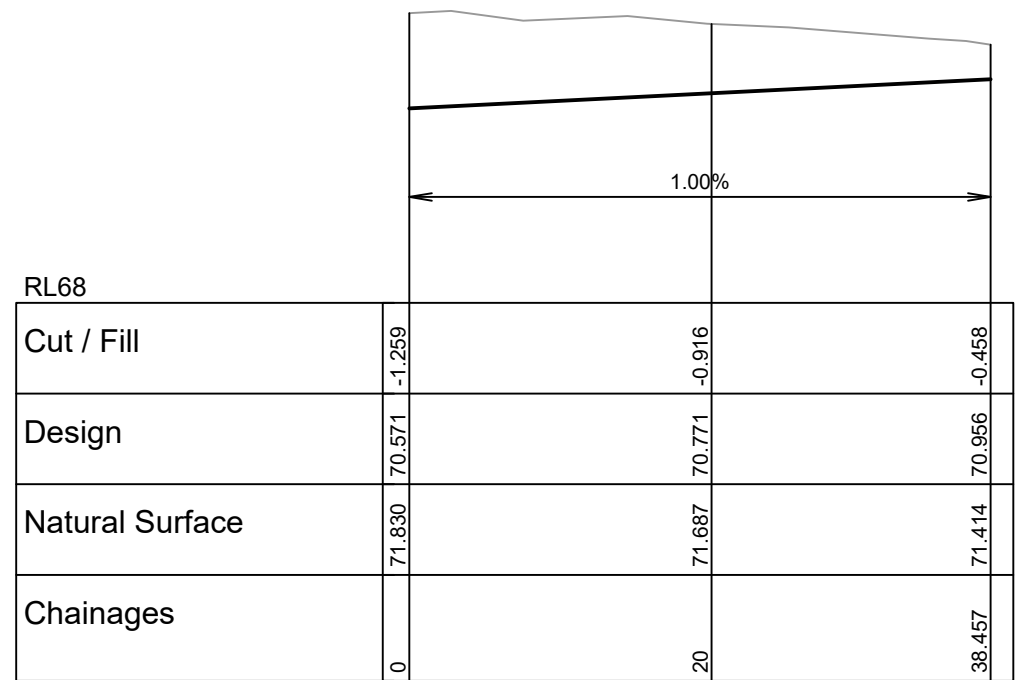
JOAL 1-7 EXTENT AND
LONGITUDINAL GRADIENT TO
REFER TO CKL DESIGN
DRAWINGS 3000 SERIES



HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 02



HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 03



HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 04

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
ROAD LONGITUDINAL SECTIONS
SHEET 3

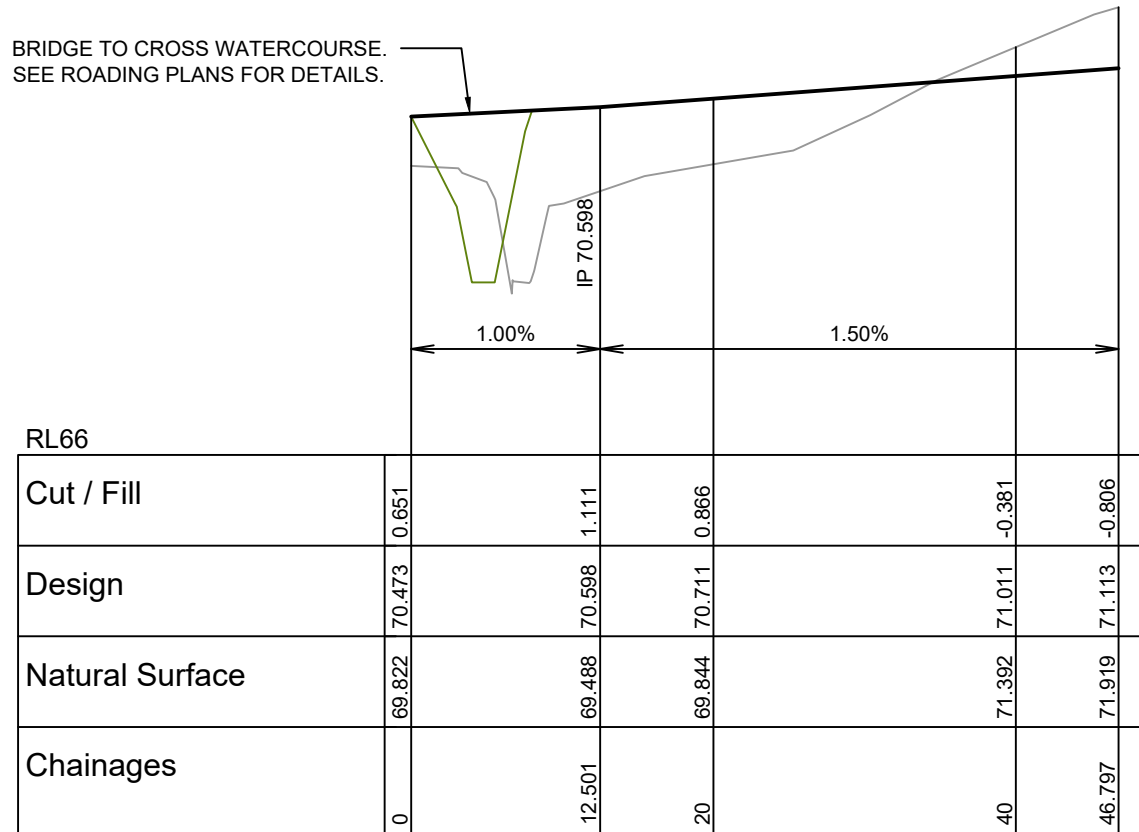
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD322		REVISION C	

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6
4
2
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SCALE 1:200

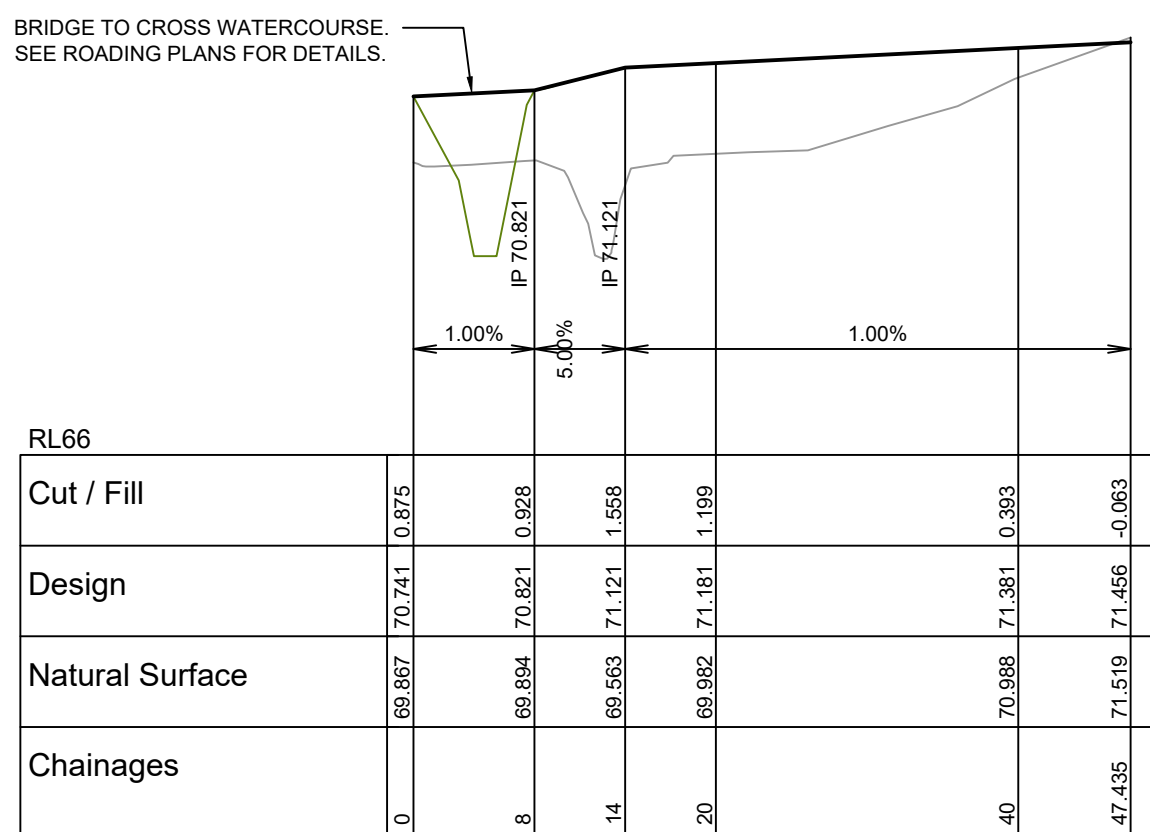
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DATE PLOTTED: Friday, 23 December 2022 9:17:09 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD320 Road LS.dwg

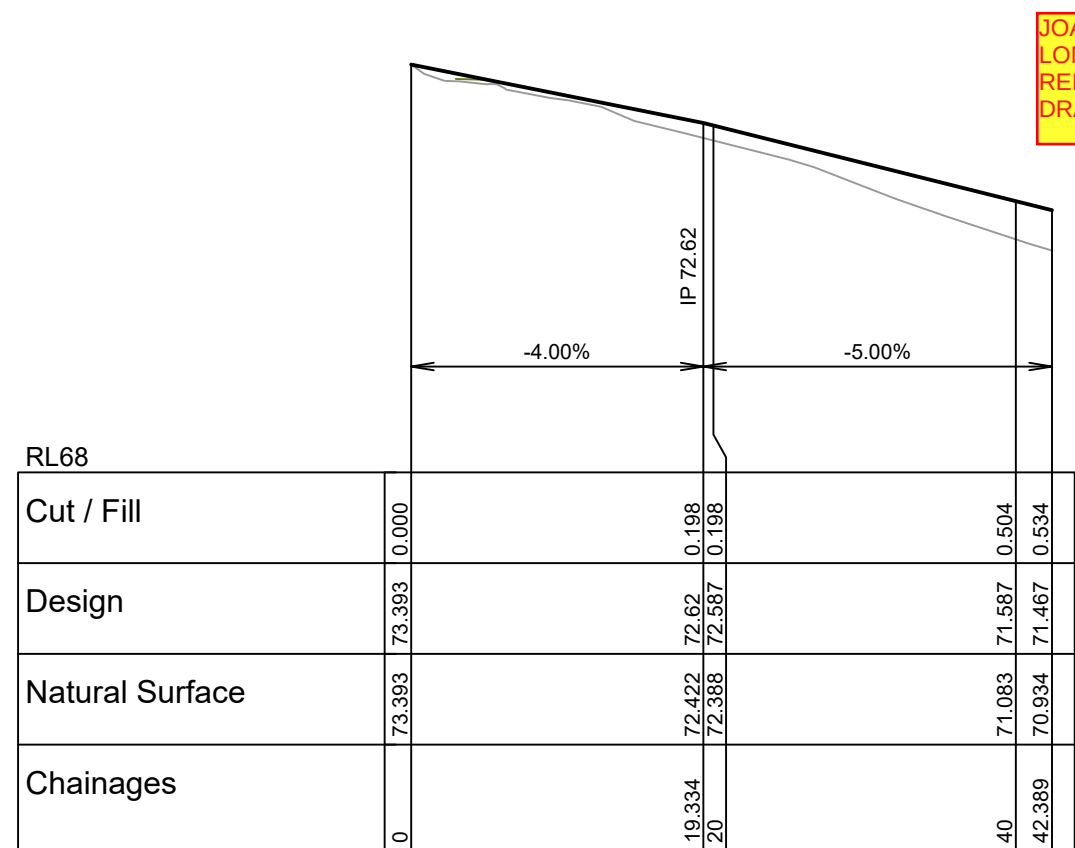
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HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 05



HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 06



HORIZ 1:500 VERT 1:100
LONGITUDINAL SECTION - JOAL 07

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
SEE CONSTRUCTION NOTES DD001.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

ROAD LONGITUDINAL SECTIONS
SHEET 4

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD323	REVISION C		

10
SCALE 1:250
5
0



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REV.

FOR APPROVAL - RESPONSE TO RFI'S 1
FOR APPROVAL
1ST ISSUE
REVISION DETAILS

22-12-2022
AP TN
17-11-2022
AP TN
09-11-2022
AP --
DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

MILL LANE
ROAD CROSS SECTIONS
SHEET 1

DATE CREATED
09-11-2022
VECTA REF NO
P0442
DWG NUMBER

DRAWN
AP
SCALE
1:250 @ A3
DD330

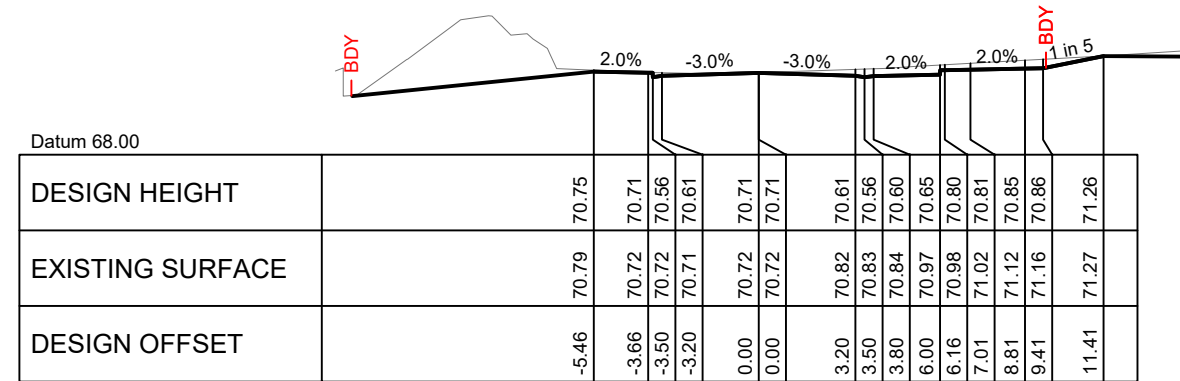
DESIGNED
AP
APPROVED
TN
STATUS
FOR APPROVAL
REVISION
C

NOTES:
1. SEE CONSTRUCTION NOTES DD001.

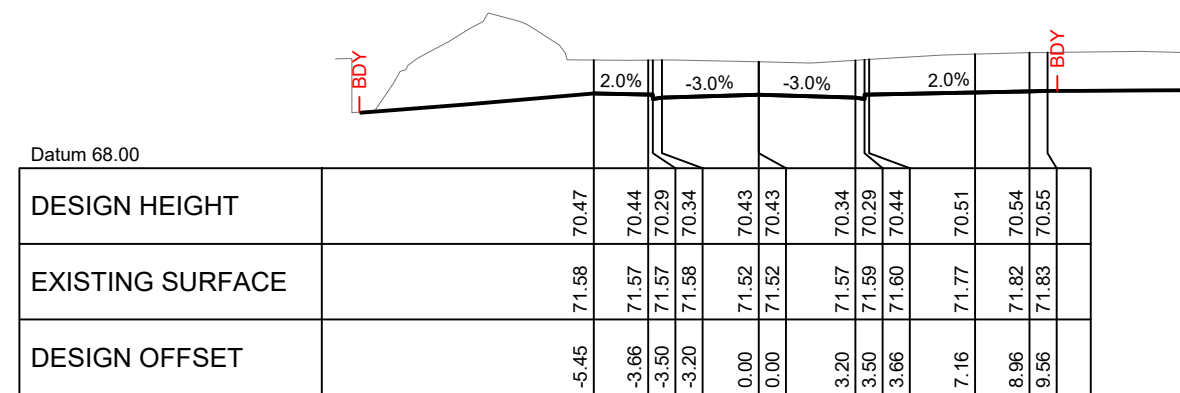
TRISHN NAND
ME., CPEng., IntPE(NZ)

APPROVED PLAN

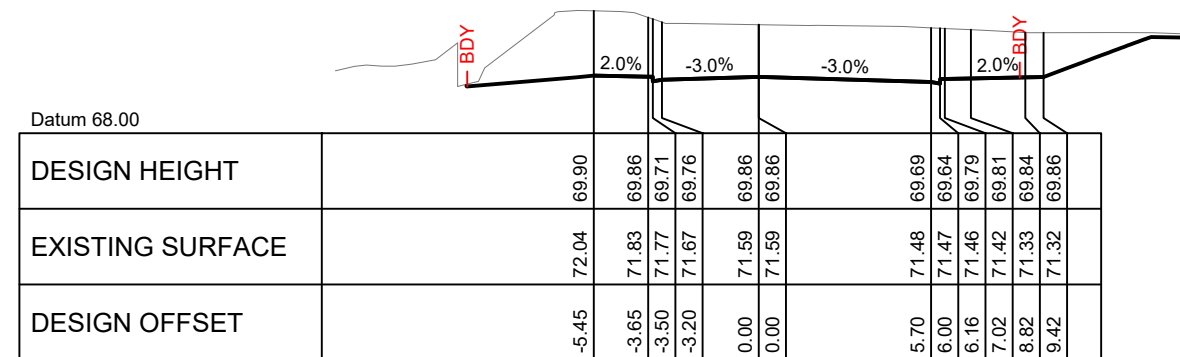
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



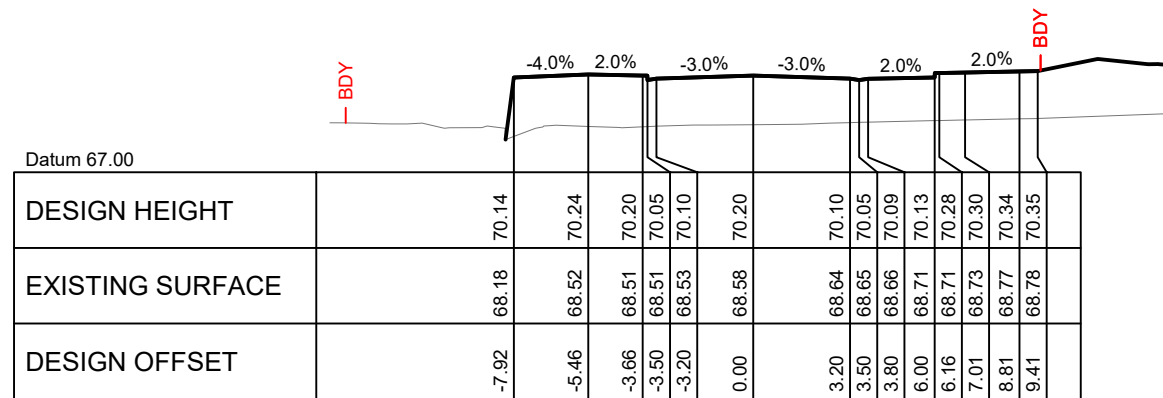
CH. 80.00



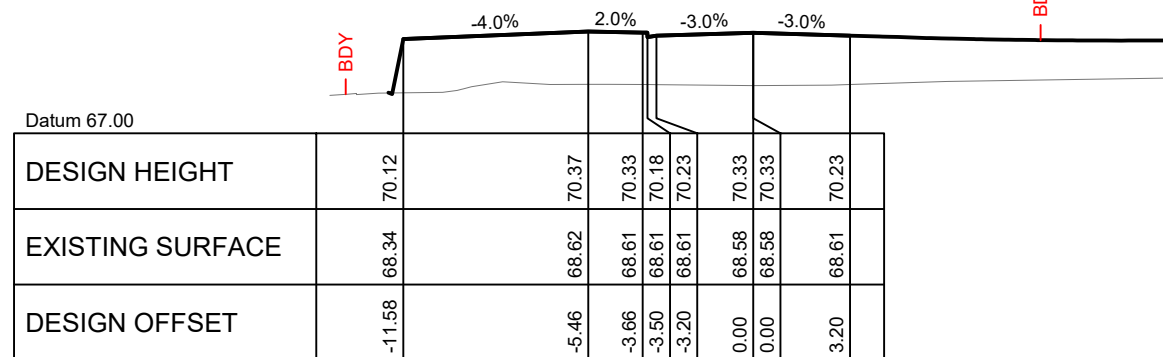
CH. 60.00



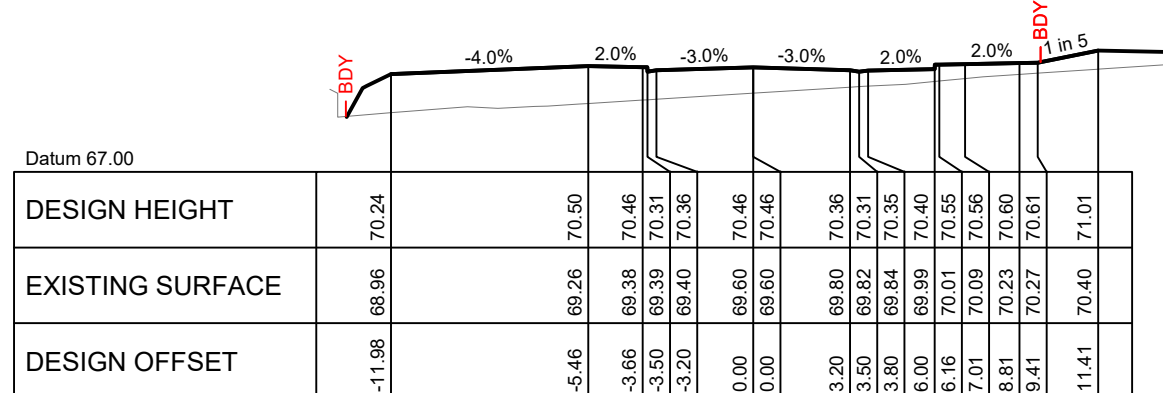
CH. 40.00



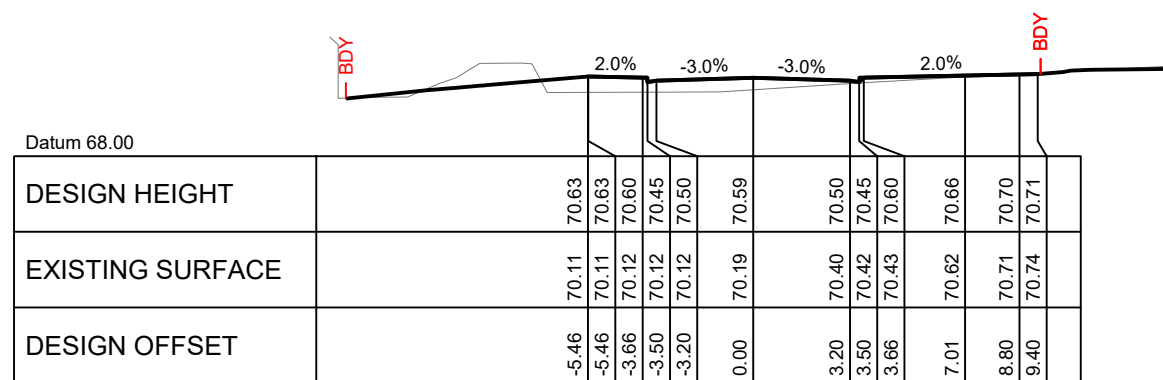
CH. 160.00



CH. 140.00



CH. 120.00



CH. 100.00

10
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0 5 10 SCALE 1:250



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C
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REV.

FOR APPROVAL - RESPONSE TO RFI'S 1

FOR APPROVAL

1ST ISSUE

REVISION DETAILS

22-12-2022
AP TN
17-11-2022
AP TN
09-11-2022
AP --
DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

MILL LANE
ROAD CROSS SECTIONS
SHEET 2

DATE CREATED
09-11-2022

VECTA REF NO
P0442

DWG NUMBER

DRAWN
AP

SCALE
1:250 @ A3

DD331

DESIGNED
AP

APPROVED
TN

STATUS
FOR APPROVAL

REVISION
C

NOTES:

1. SEE CONSTRUCTION NOTES DD001.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023


TRISHN NAND
ME., CPEng., IntPE(NZ)

Datum 69.00

DESIGN HEIGHT		71.11	71.08	70.93	70.98	71.07	71.07	70.98	70.93	70.97	71.01	71.16	71.18	71.21	71.23	71.63
EXISTING SURFACE		71.24	71.32	71.32	71.34	71.47	71.47	71.60	71.62	71.63	71.72	71.73	71.76	71.83	71.86	71.95
DESIGN OFFSET		-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.80	6.00	6.16	7.01	8.81	9.41	11.41

CH. 240.00

Datum 69.00

DESIGN HEIGHT		70.83	70.80	70.65	70.70	70.79	70.79	70.70	70.65	70.80	70.86	70.90	70.91	
EXISTING SURFACE		70.80	70.76	70.76	70.75	70.83	70.83	70.97	70.99	70.99	71.15	71.24	71.26	
DESIGN OFFSET		-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.66	7.01	8.80	9.40	

CH. 220.00

Datum 68.00

DESIGN HEIGHT		70.32	70.55	70.52	70.37	70.42	70.51	70.51	70.42	70.37	70.52	70.58	70.62	70.63	71.03
EXISTING SURFACE		69.30	69.64	69.75	69.76	69.78	70.03	70.03	70.13	70.14	70.15	70.38	70.54	70.59	70.75
DESIGN OFFSET		-11.23	-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.66	7.01	8.80	9.40	11.40

CH. 200.00

Datum 67.00

DESIGN HEIGHT		70.00	70.29	70.25	70.10	70.15	70.25	70.25	70.15	70.10	70.14	70.19	70.34	70.35	70.39	70.40	70.80
EXISTING SURFACE		68.20	68.87	68.95	68.97	68.99	69.25	69.25	69.42	69.44	69.46	69.65	69.67	69.74	69.91	69.96	70.15
DESIGN OFFSET		-12.58	-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.80	6.00	6.16	7.01	8.81	9.41	11.41

CH. 180.00

Datum 69.00

DESIGN HEIGHT		71.79	71.75	71.60	71.65	71.75	71.75	71.65	71.60	71.64	71.69	71.84	71.86	71.89	71.90
EXISTING SURFACE		71.01	71.10	71.10	71.12	71.35	71.35	71.61	71.64	71.67	71.86	71.87	71.93	72.08	72.15
DESIGN OFFSET		-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.80	6.00	6.16	7.01	8.81	9.41

CH. 280.00

Datum 68.00

DESIGN HEIGHT		71.39	71.36	71.21	71.26	71.35	71.35	71.26	71.21	71.21	71.36	71.42	71.46	71.47
EXISTING SURFACE		70.79	71.00	71.01	71.03	71.21	71.21	71.42	71.44	71.45	71.70	71.83	71.87	71.87
DESIGN OFFSET		-5.46	-3.66	-3.50	-3.20	0.00	0.00	3.20	3.50	3.66	7.01	8.80	9.40	9.40

CH. 260.00

DATE PLOTTED: Friday, 23 December 2022 9:17:24 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD330 Road XS.dwg

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10
SCALE 1:250

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C

FOR APPROVAL - RESPONSE TO RFI'S 1

22-12-2022

AP TN

B

FOR APPROVAL

17-11-2022

AP TN

A

1ST ISSUE

09-11-2022

AP --

REV.

REVISION DETAILS

DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

RANUI AVE
ROAD CROSS SECTIONS
SHEET 4

DATE CREATED

09-11-2022

DRAWN

AP

DESIGNED

AP

APPROVED

TN

VECTA REF NO

P0442

SCALE

1:250 @ A3

STATUS

FOR APPROVAL

DWG NUMBER

DD333

REVISION

C

NOTES:

1. SEE CONSTRUCTION NOTES DD001.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

DATE PLOTTED: Friday, 23 December 2022 9:17:34 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD330 Road XS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

Datum 66.00

DESIGN HEIGHT	70.62	70.22	70.21	70.17	70.15	70.00	70.05	70.14	70.14	70.05	70.00	70.04	70.08	70.23	70.25	70.28	70.29
EXISTING SURFACE	70.52	70.21	70.13	69.88	69.76	69.74	69.70	69.32	69.32	69.01	69.00	68.99	68.95	68.95	68.95	68.95	68.95
DESIGN OFFSET	-9.06	-6.66	-6.06	-4.26	-3.40	-3.25	-2.95	0.00	0.00	2.95	3.25	3.55	5.25	5.40	6.25	8.05	8.65

CH. 240.00

Datum 66.00

DESIGN HEIGHT	70.75	70.35	70.34	70.31	70.29	70.14	70.19	70.28	70.28	70.19	70.14	70.18	70.21	70.36	70.38	70.42	70.43	69.21	68.21	68.21	70.21
EXISTING SURFACE	71.33	71.18	71.11	70.91	70.81	70.79	70.76	70.42	70.42	69.99	69.95	69.91	69.72	69.71	69.68	69.59	69.57	69.45	69.25	67.97	69.14
DESIGN OFFSET	-9.06	-6.66	-6.06	-4.26	-3.40	-3.25	-2.95	0.00	0.00	2.95	3.25	3.55	5.25	5.40	6.25	8.05	8.65	11.65	12.65	14.15	16.15

CH. 220.00

Datum 67.00

DESIGN HEIGHT	70.89	70.49	70.48	70.44	70.42	70.27	70.32	70.41	70.41	70.32	70.27	70.31	70.35	70.50	70.51	70.55	70.56	69.39	68.39	68.39	70.39
EXISTING SURFACE	71.35	71.07	71.00	70.78	70.69	70.68	70.65	70.27	70.27	69.90	69.89	69.88	69.85	69.85	69.83	69.80	69.78	69.78	69.79	69.80	69.63
DESIGN OFFSET	-9.06	-6.66	-6.06	-4.26	-3.41	-3.25	-2.95	0.00	0.00	2.95	3.25	3.55	5.25	5.41	6.25	8.05	8.65	11.65	12.65	14.15	16.15

CH. 200.00

REMOVE CASCADE SEPARATOR AND
LOW FLOW BY-PASS

LOT 35

3.0m WIDE LEVEL
CROSSING ONTO
RAISED SPEED TABLE

TACTILE GROUND SURFACE
INDICATORS (TGS).
SEE SHEET 201

1.8m WIDE PRAM
CROSSING

RANUI AVE

REMOVE IN-CHANNEL
EARTH WEIR AND THE
ASSOCIATED 1050mmØ
CULVERT

MILL LANE

REMOVE UNDERGROUND
ATTENUATION TANK

REFER TO CHESTER
PROPOSED RIPRAP DRAWING,
AND CIRTEX RETAINING WALL
DRAWINGS FOR OUTLET
MANHOLE AND PIPE POSITION

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:

- SEE CONSTRUCTION NOTES DD001.
- DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

KEY:

- MAJOR CONTOURS (1.0m)
- MINOR CONTOURS (0.2m)
- LIGHTS - SEE BETACOM DESIGN

RL69

Design

Chainages

Horizontal 1:200 Vertical 1:40
LONGITUDINAL SECTIONKR2

RL69

Design

Chainages

Horizontal 1:200 Vertical 1:40
LONGITUDINAL SECTIONKR1

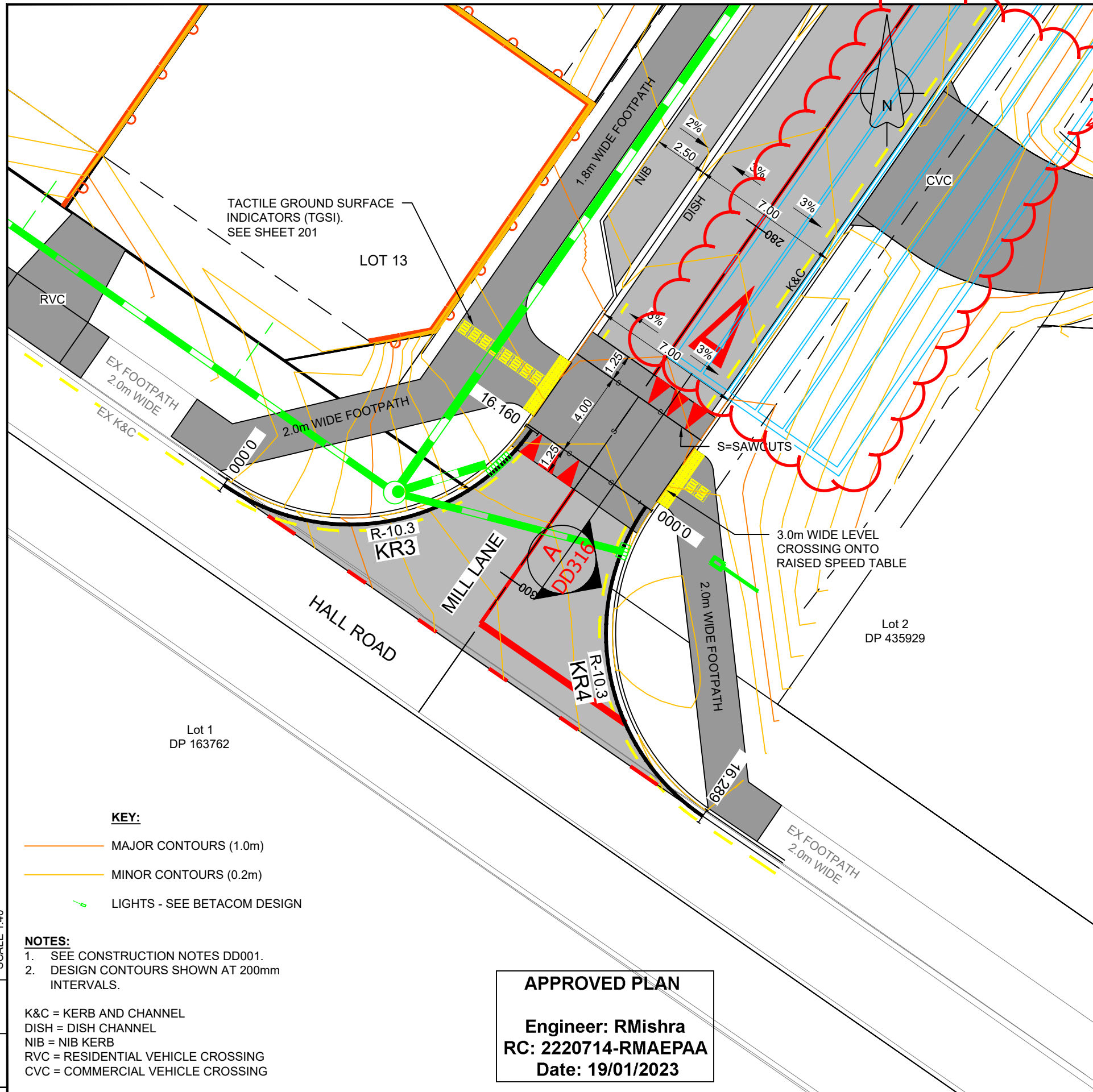


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

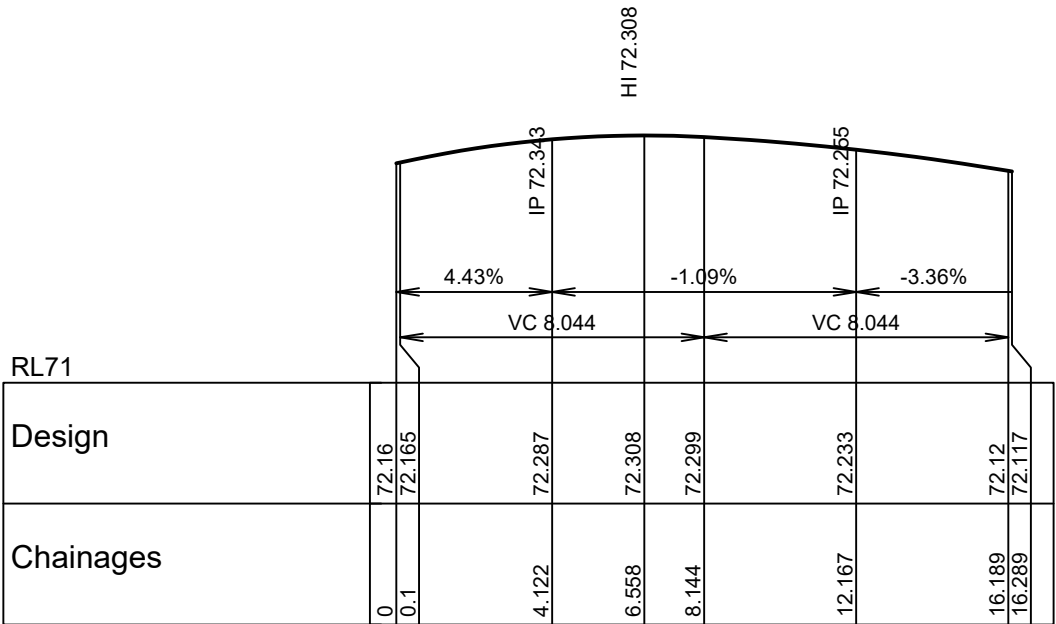
PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
KERB RETURNS INTERSECTION OF MILL LANE & RANUI AVE

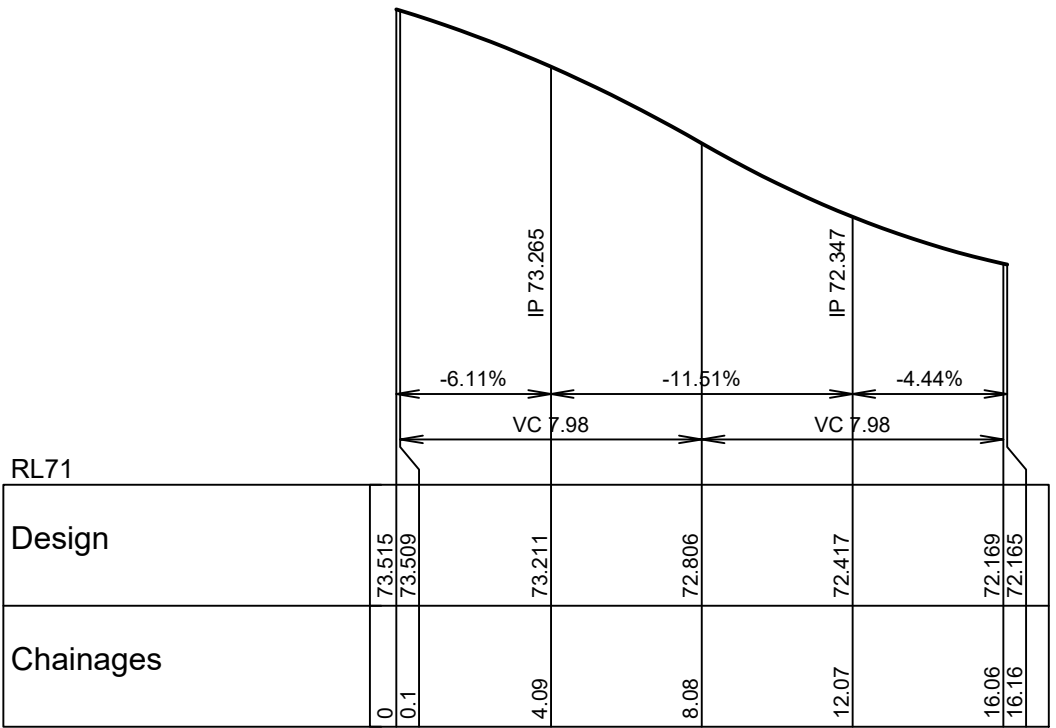
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:200 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD340		REVISION C	



REMOVE UNDERGROUND
ATTENUATION TANK

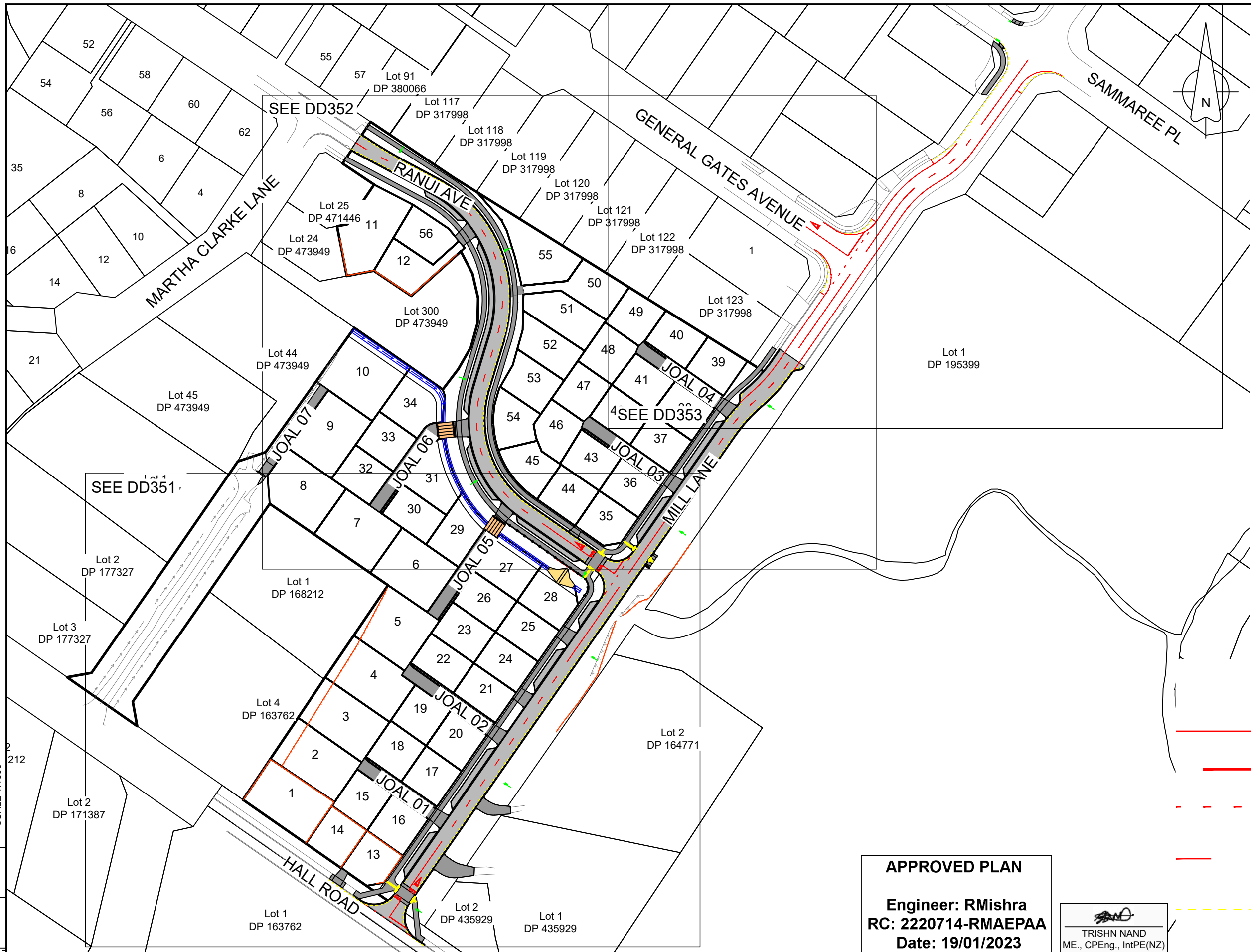


Horizontal 1:200 Vertical 1:40
LONGITUDINAL SECTIONKR4



Horizontal 1:200 Vertical 1:40
LONGITUDINAL SECTIONKR3

TRISHN NAND
ME., CPEng., IntPE(NZ)

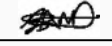


- NOTES:
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. ROAD MARKINGS AND SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM).
 - 3. SPEED HUMP MARKINGS TO BE IN ACCORDANCE WITH NZTA - VERTICAL DEFLECTION DEVICES, MARKINGS, TABLE 14-1 AND FIGURE 14-1.

- LINE TYPE**
- ① 100mm WIDE CONTINUOUS WHITE EDGE LINE/ SOLID CENTRELINE
 - ② GIVE WAY LIMIT LINE 300mm WIDE REFLECTORISED WHITE
 - ③ REFLECTORISED WHITE CONTINUITY LINE 1m STRIP, 3m GAP, 100mm WIDE
 - ④ 100mm WIDE REFLECTORISED WHITE CONTINUOUS CENTERLINE, 3m STRIP, 7m GAP
 - ⑤ NO STOPPING AT ALL TIMES (NSAAT), 100mm WIDE REFLECTORISED YELLOW, 1m STRIP, 1m GAP

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023


TRISHN NAND
ME., CPEng., IntPE(NZ)



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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

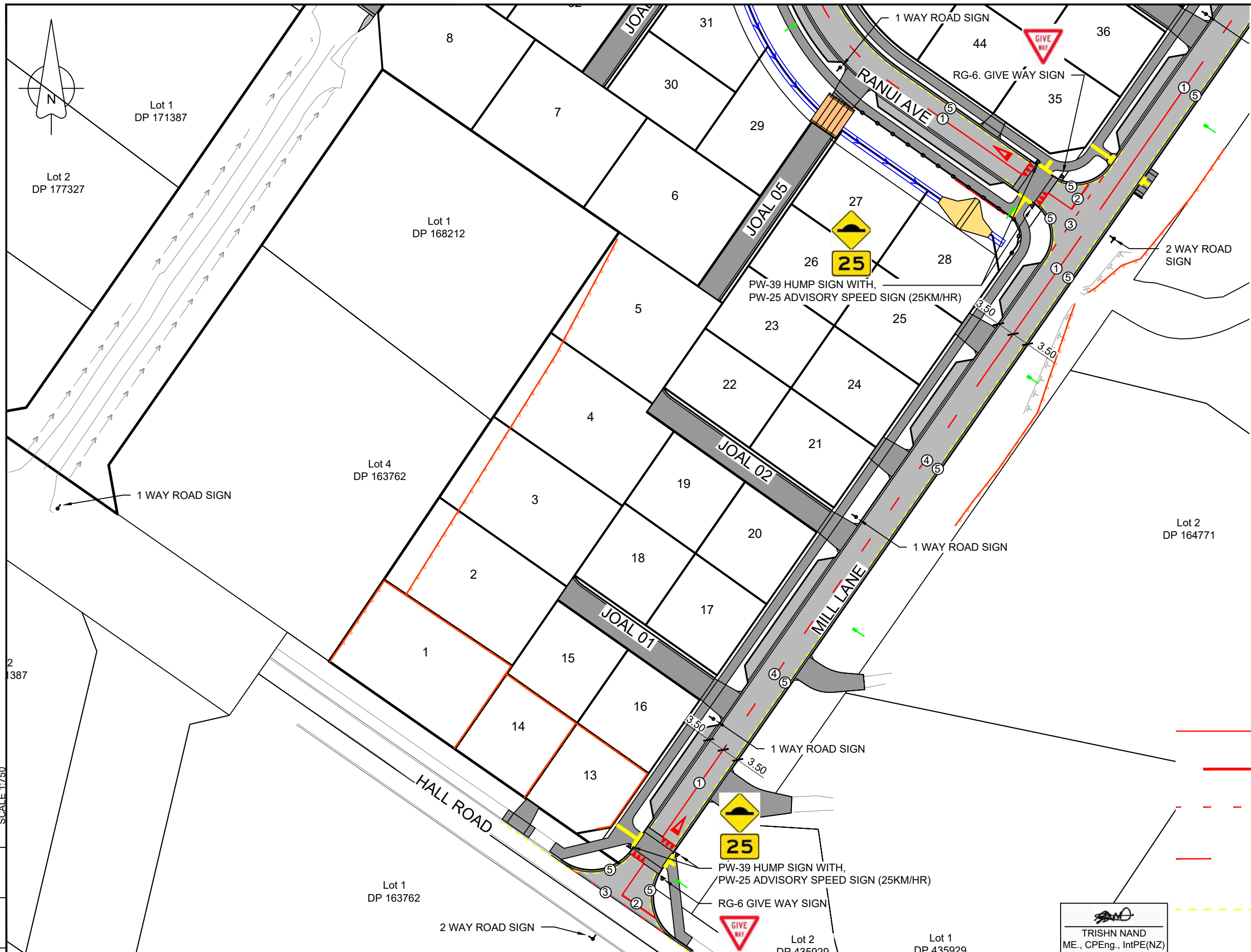
TITLE

ROAD LINEMARKING & SIGNPOSTING PLAN
OVERVIEW

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD350	REVISION C		

DATE PLOTTED: Friday, 23 December 2022 9:17:51 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\TP0442 Hall Road\CAD\Detail Design\TP0442-DD350 Road LM.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. ROAD MARKINGS AND SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM).
 3. SPEED HUMP MARKINGS TO BE IN ACCORDANCE WITH NZTA - VERTICAL DEFLECTION DEVICES, MARKINGS, TABLE 14-1 AND FIGURE 14-1.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

LINE TYPE

- ① 100mm WIDE CONTINUOUS WHITE EDGE LINE/ SOLID CENTRELINE
- ② GIVE WAY LIMIT LINE 300mm WIDE REFLECTORISED WHITE
- ③ REFLECTORISED WHITE CONTINUITY LINE 1m STRIP, 3m GAP, 100mm WIDE
- ④ 100mm WIDE REFLECTORISED WHITE CONTINUOUS CENTERLINE, 3m STRIP, 7m GAP
- ⑤ NO STOPPING AT ALL TIMES (NSAAT), 100mm WIDE REFLECTORISED YELLOW, 1m STRIP, 1m GAP

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REV.	REVISION DETAILS	DRAWN	APP.
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP TN
B	FOR APPROVAL	17-11-2022	AP TN
A	1ST ISSUE	09-11-2022	AP --

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

ROAD LINEMARKING & SIGNPOSTING PLAN
SHEET 1

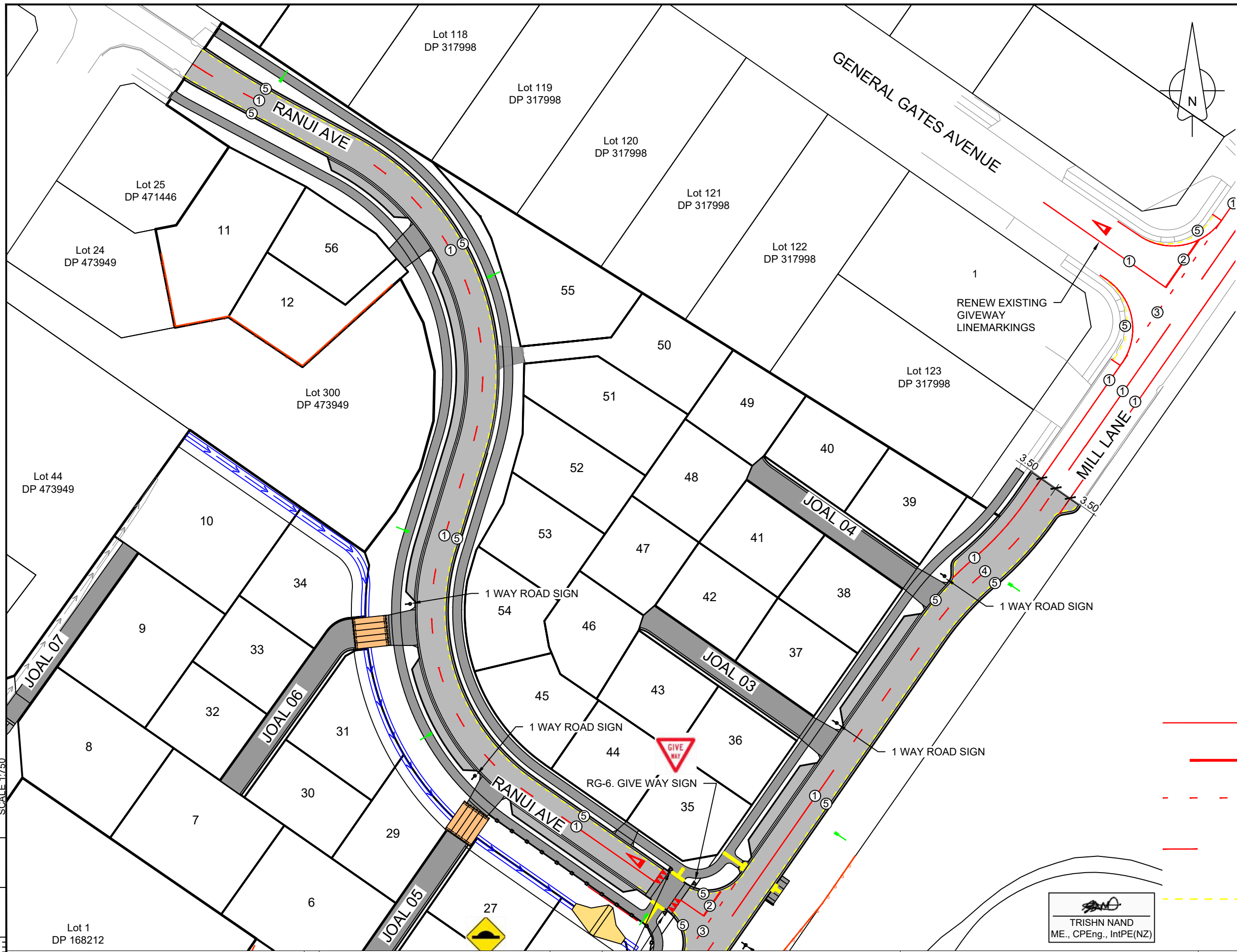
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09-11-2022	AP	AP	TN

VECTA REF NO	SCALE	STATUS
P0442	1:750 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD351	C

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- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. ROAD MARKINGS AND SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM).
 3. SPEED HUMP MARKINGS TO BE IN ACCORDANCE WITH NZTA - VERTICAL DEFLECTION DEVICES, MARKINGS, TABLE 14-1 AND FIGURE 14-1.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

LINE TYPE

- ① 100mm WIDE CONTINUOUS WHITE EDGE LINE/ SOLID CENTRELINE
- ② GIVE WAY LIMIT LINE 300mm WIDE REFLECTORISED WHITE
- ③ REFLECTORISED WHITE CONTINUITY LINE 1m STRIP, 3m GAP, 100mm WIDE
- ④ 100mm WIDE REFLECTORISED WHITE CONTINUOUS CENTERLINE, 3m STRIP, 7m GAP
- ⑤ NO STOPPING AT ALL TIMES (NSAAT), 100mm WIDE REFLECTORISED YELLOW, 1m STRIP, 1m GAP

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SCALE 1:750

C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

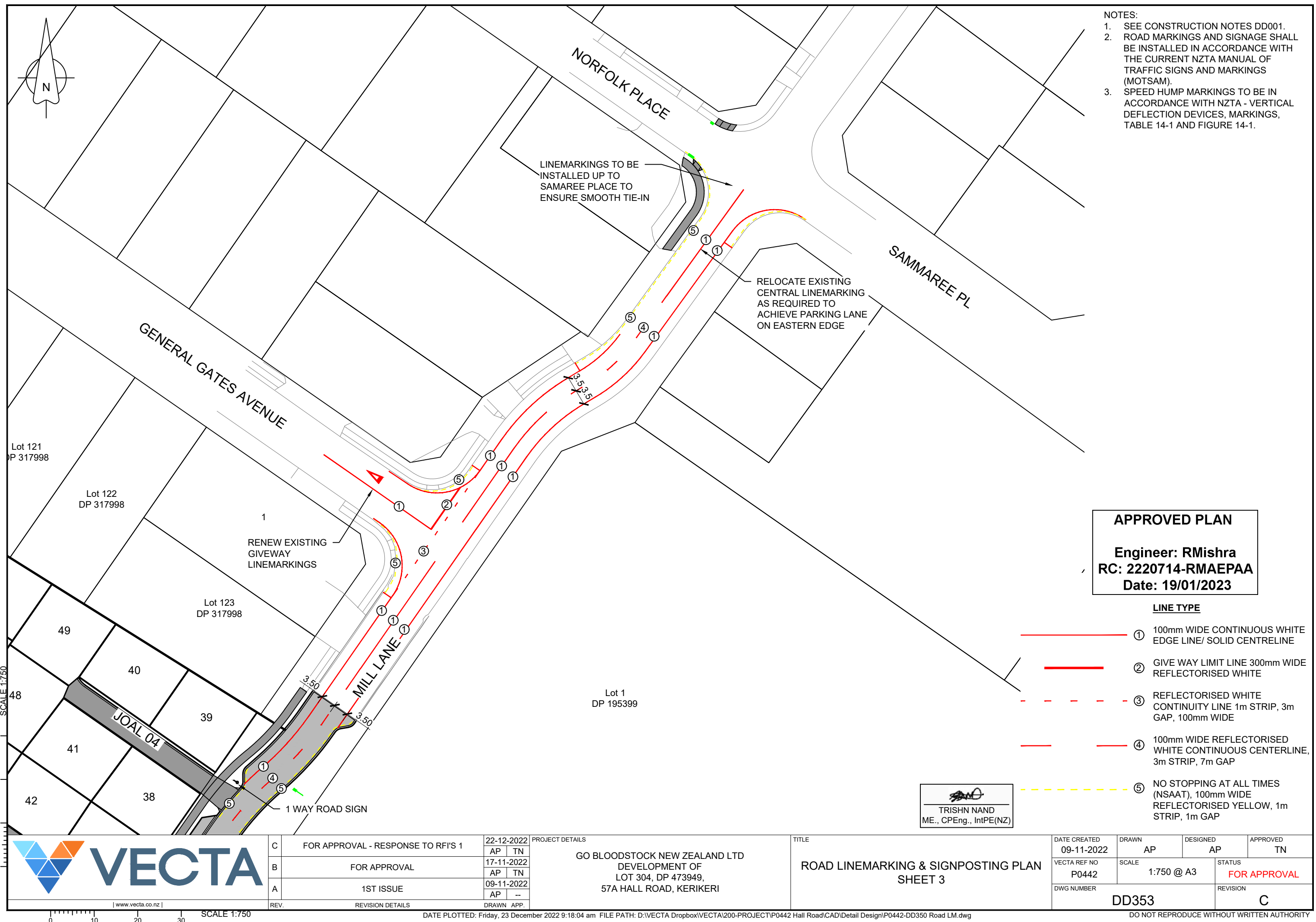
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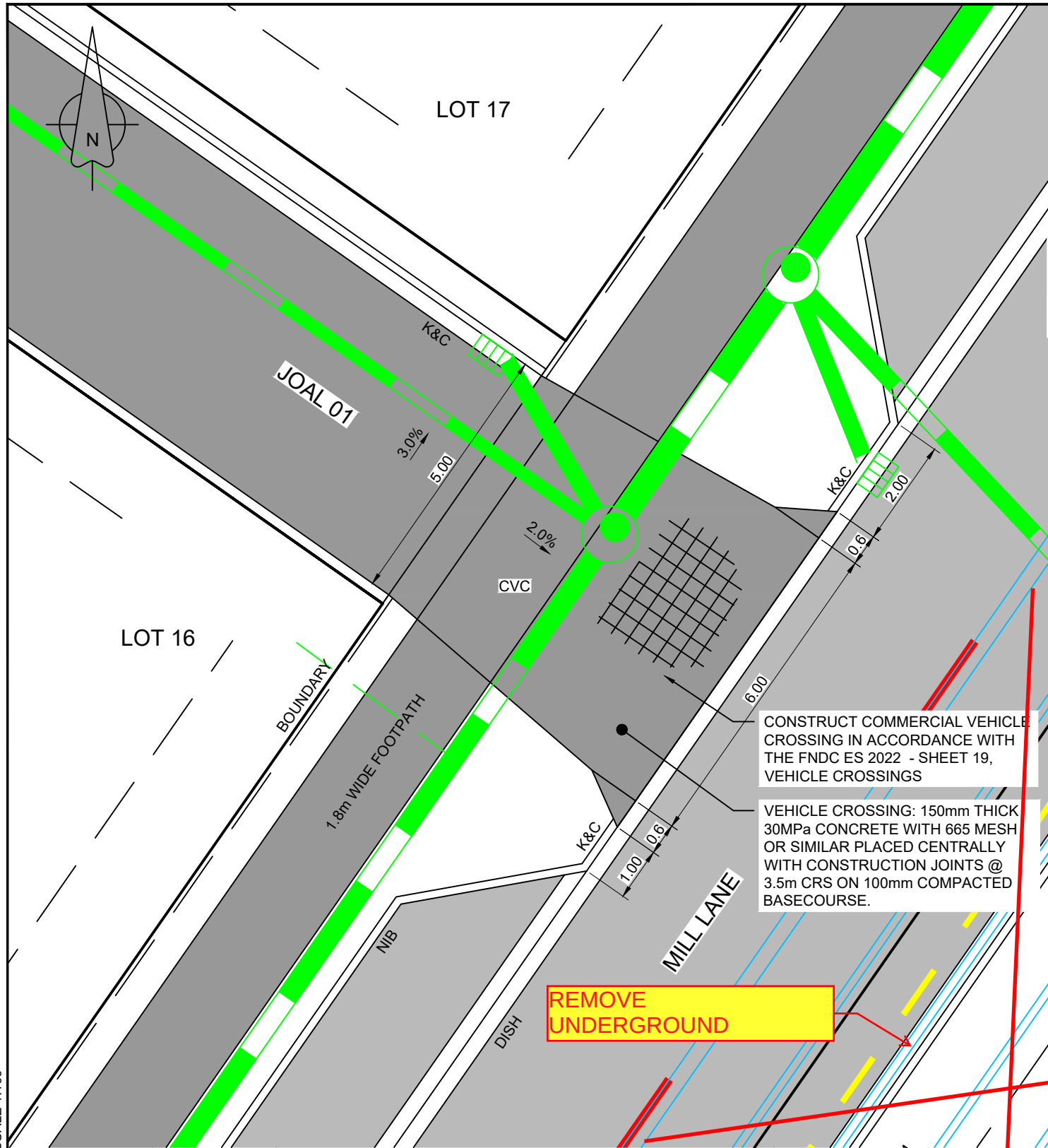
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

ROAD LINEMARKING & SIGNPOSTING PLAN
SHEET 2

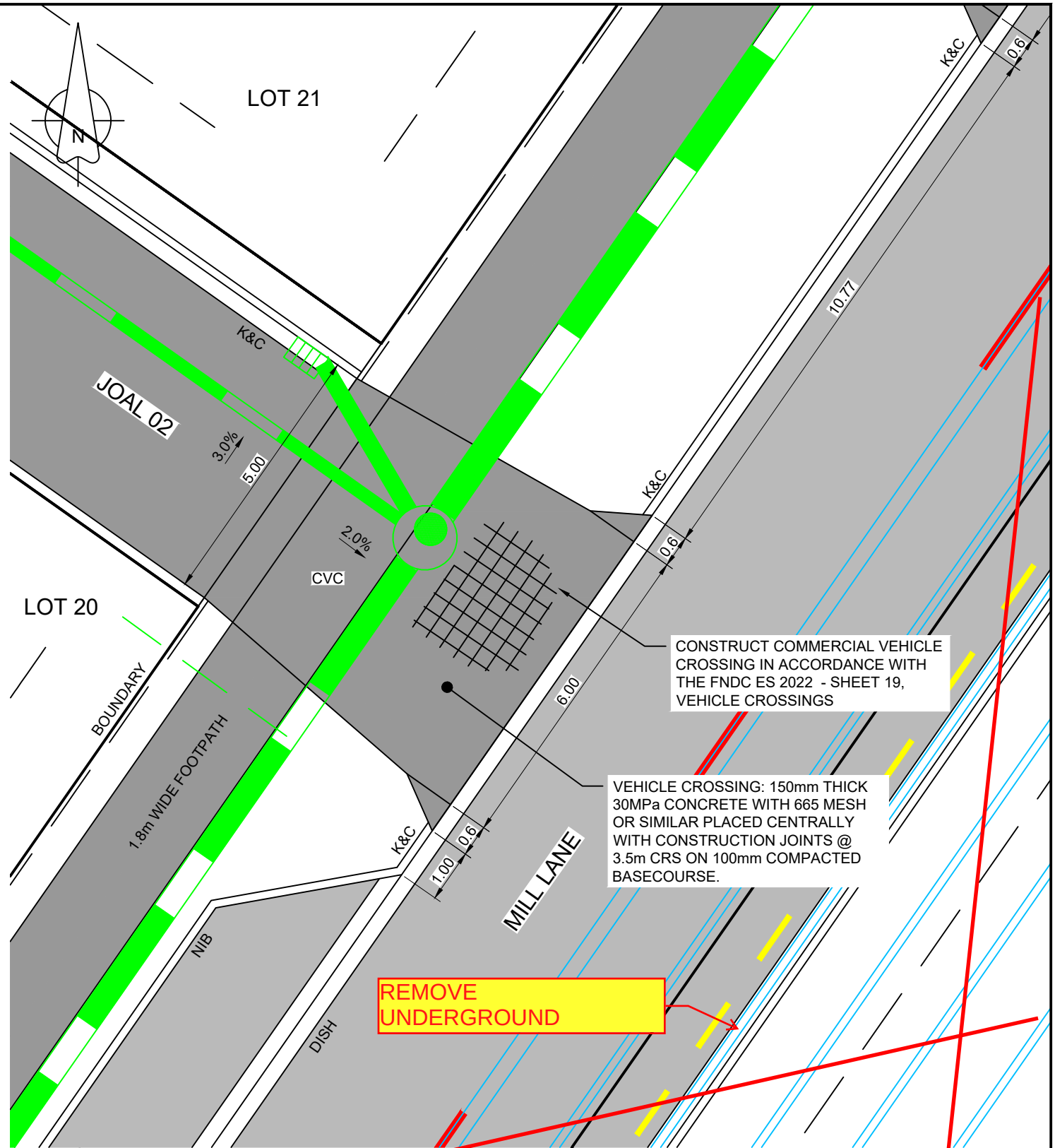
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VECTA REF NO P0442	SCALE 1:750 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD352	REVISION C		





JOAL 1 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100



JOAL 2 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100

- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
 DISH = DISH CHANNEL
 NIB = NIB KERB
 RVC = RESIDENTIAL VEHICLE CROSSING
 CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
 ME., CPEng., IntPE(NZ)

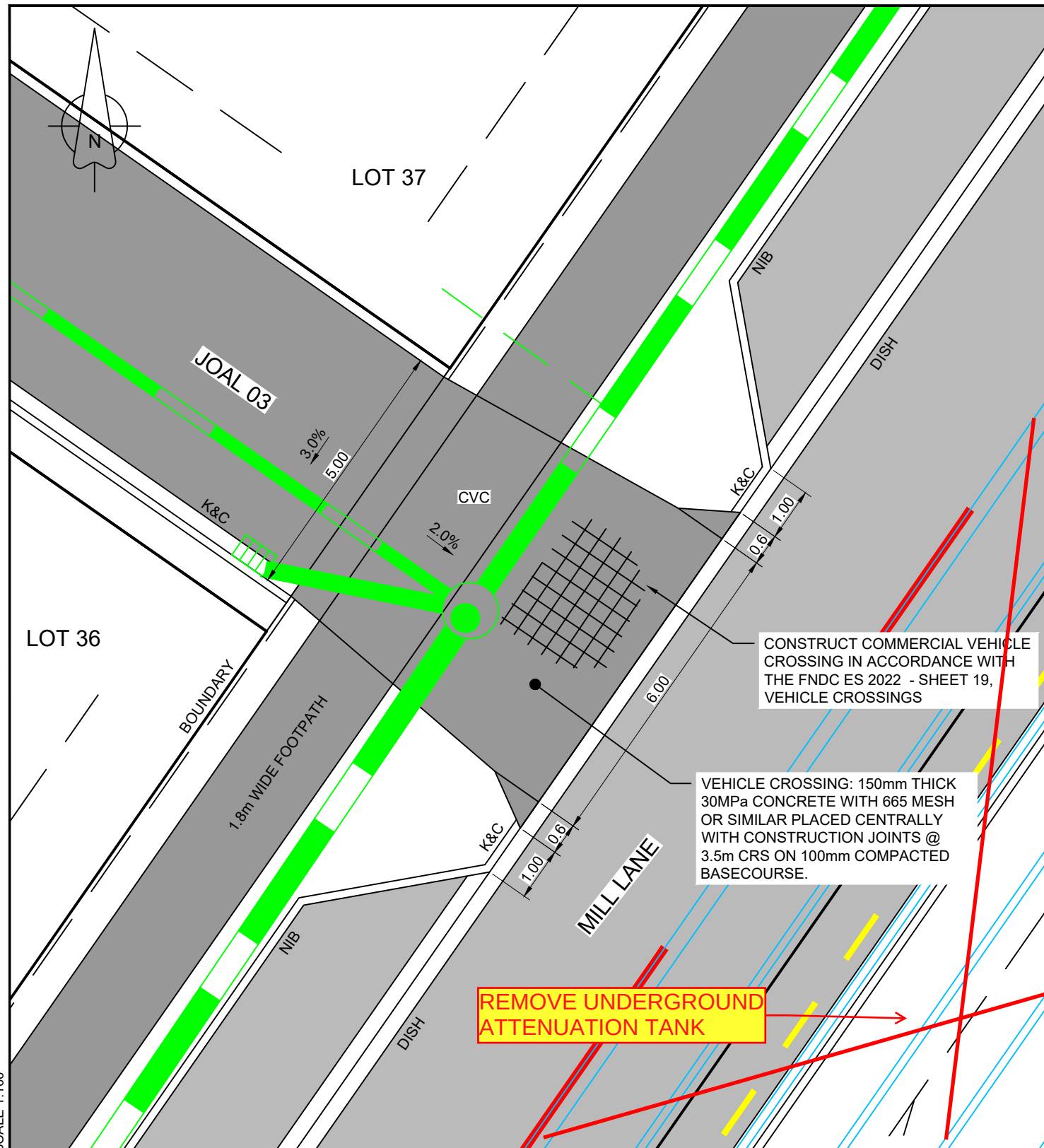
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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
 GO BLOODSTOCK NEW ZEALAND LTD
 DEVELOPMENT OF
 LOT 304, DP 473949,
 57A HALL ROAD, KERIKERI

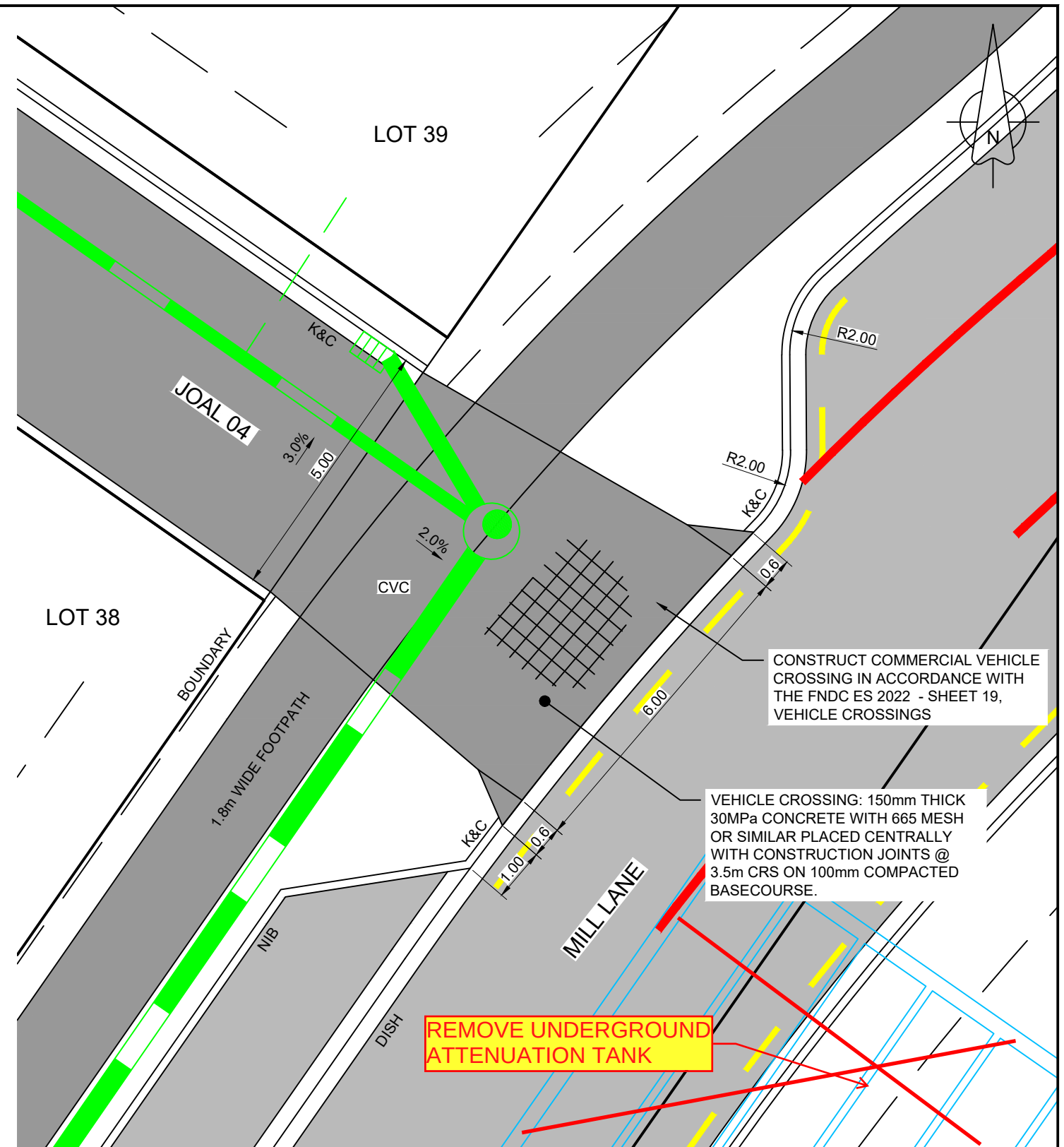
TITLE
 VEHICLE CROSSINGS
 JOAL 1 & 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD360			REVISION C



JOAL 3 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100



JOAL 4 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
 DISH = DISH CHANNEL
 NIB = NIB KERB
 RVC = RESIDENTIAL VEHICLE CROSSING
 CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
 ME., CPEng., IntPE(NZ)

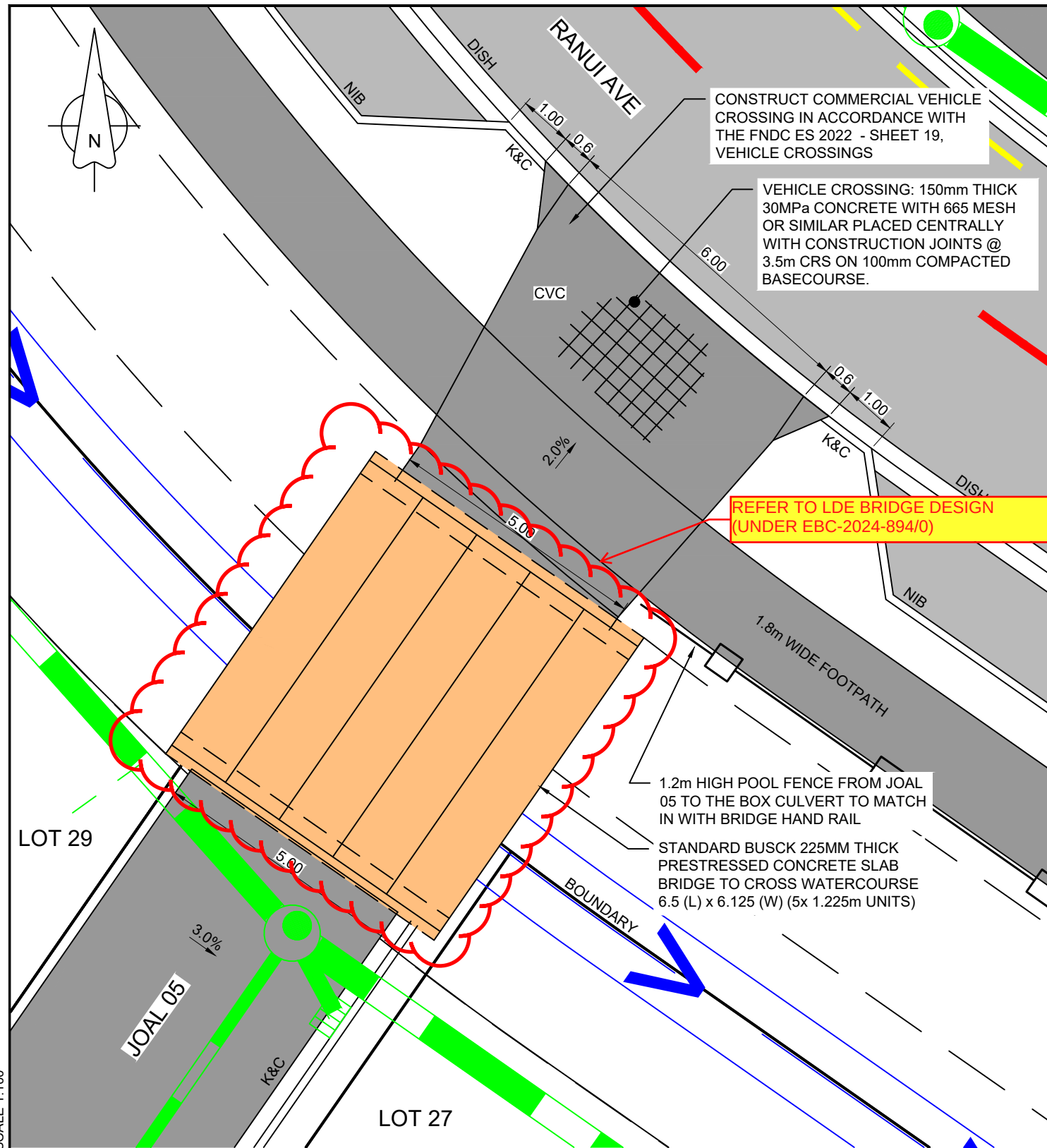


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

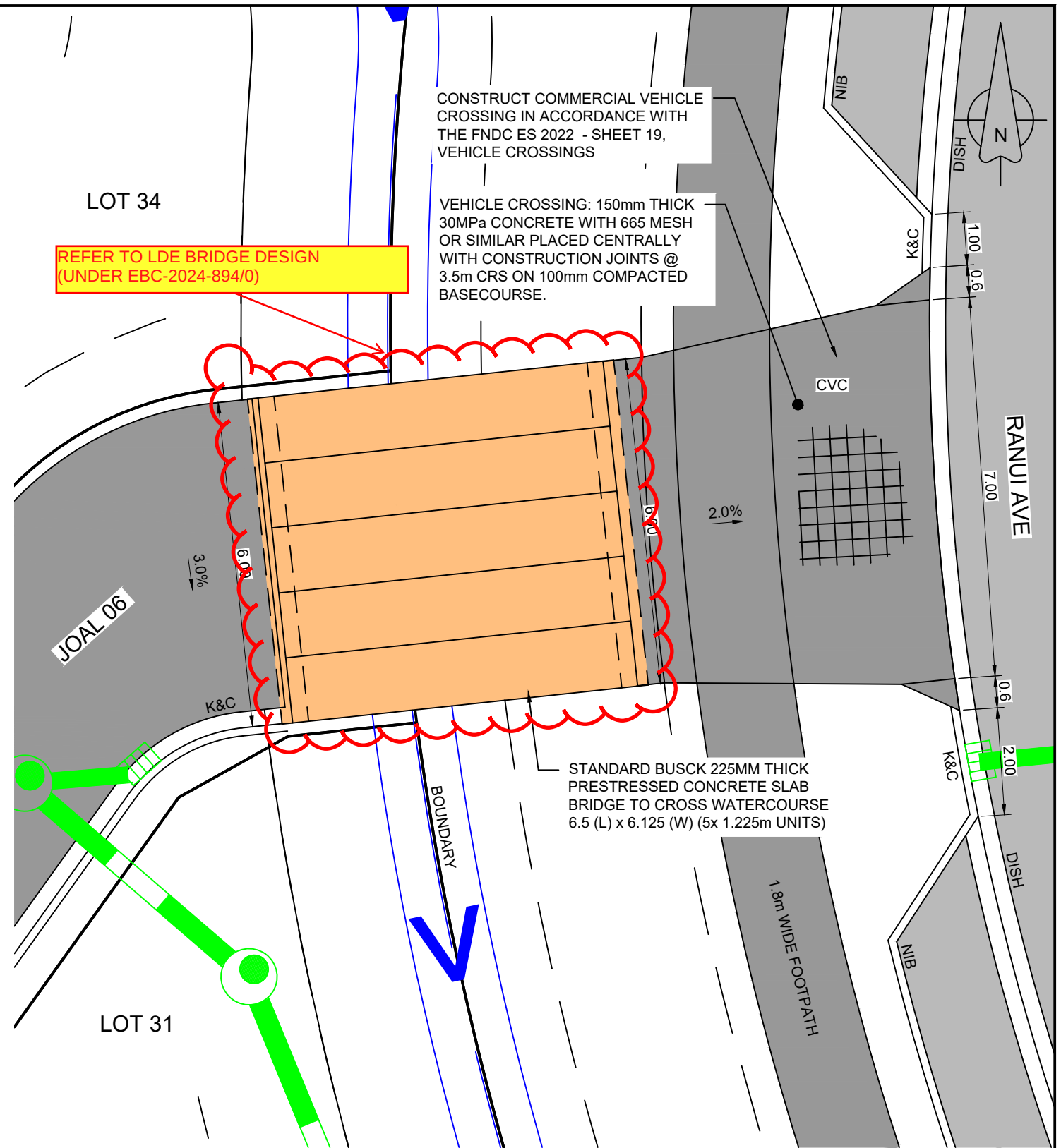
TITLE
VEHICLE CROSSINGS JOAL 3 & 4

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD361			REVISION C



JOAL 5 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100



JOAL 6 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

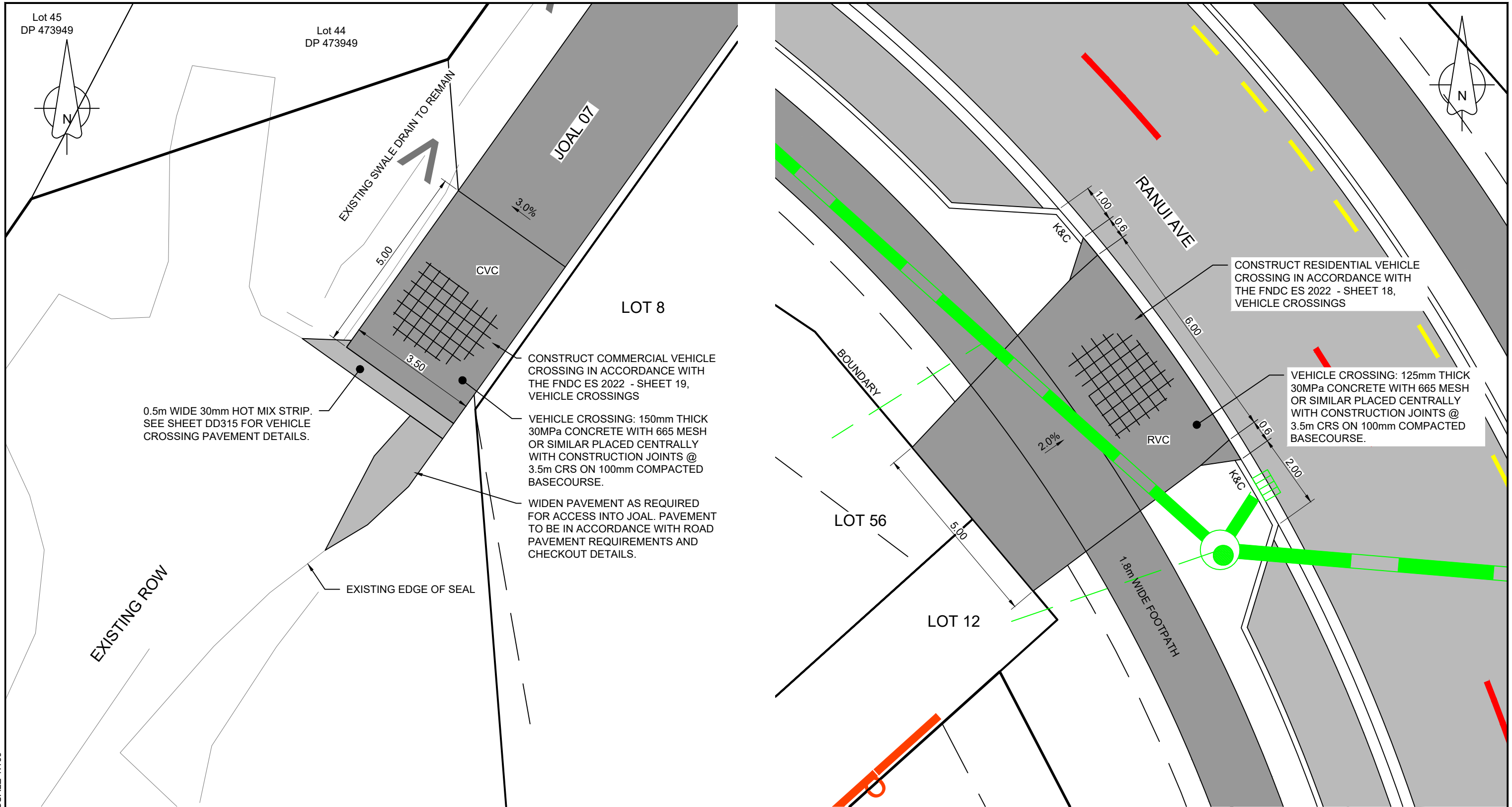


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B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
VEHICLE CROSSINGS JOAL 5 & 6

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD362			REVISION C



JOAL 7 - COMMERCIAL VEHICLE CROSSING

SCALE 1:100

LOT 12 & 56 - DOUBLE RESIDENTIAL VEHICLE CROSSING

SCALE 1:100

- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. SEE PAVEMENT DETAILS ON SHEET DD315.

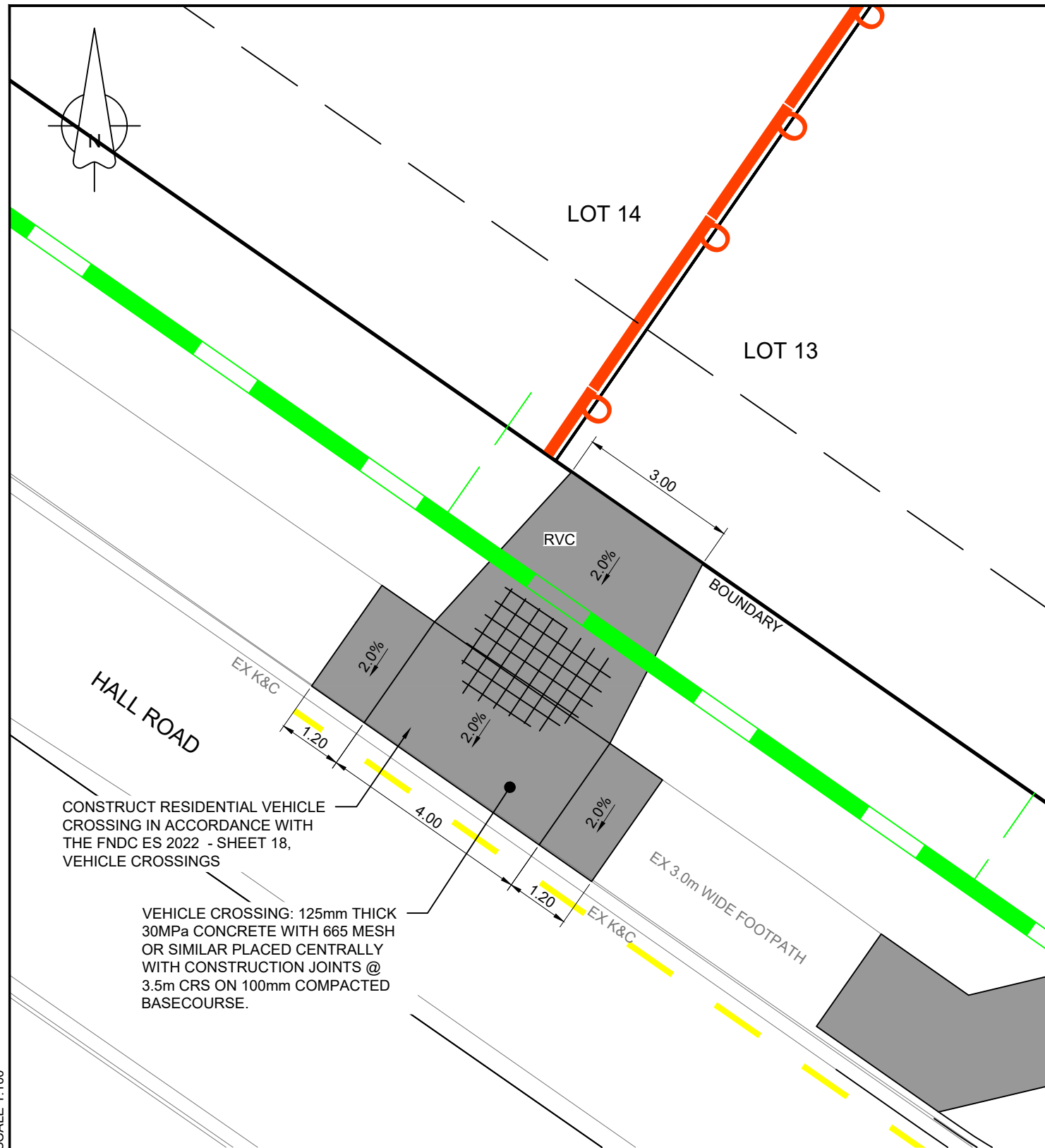
K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

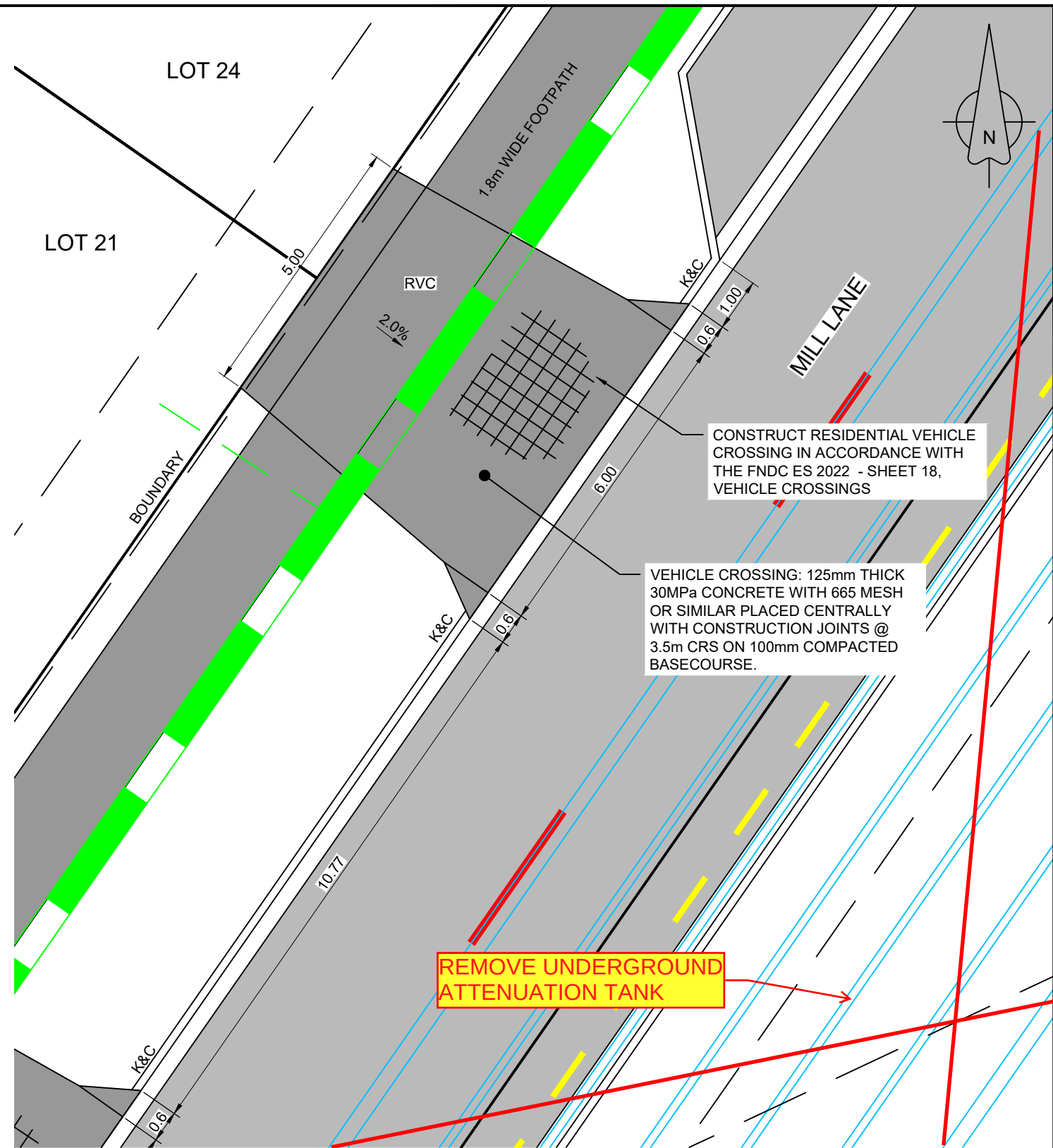

TRISHN NAND
ME., CPEng., IntPE(NZ)

	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS	GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE	VEHICLE CROSSINGS JOAL 7 & LOT 12/56	DATE CREATED	DRAWN	DESIGNED	APPROVED	
			AP					TN	09-11-2022	AP	AP	TN
	B	FOR APPROVAL	17-11-2022									
	A	1ST ISSUE	09-11-2022									
			AP					--				
www.vecta.co.nz			REV.	REVISION DETAILS	DRAWN	APP.		DD363		C		



LOT 13 - RESIDENTIAL VEHICLE CROSSING

SCALE 1:100



LOT 21 & 24 - DOUBLE RESIDENTIAL VEHICLE CROSSING

SCALE 1:100

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

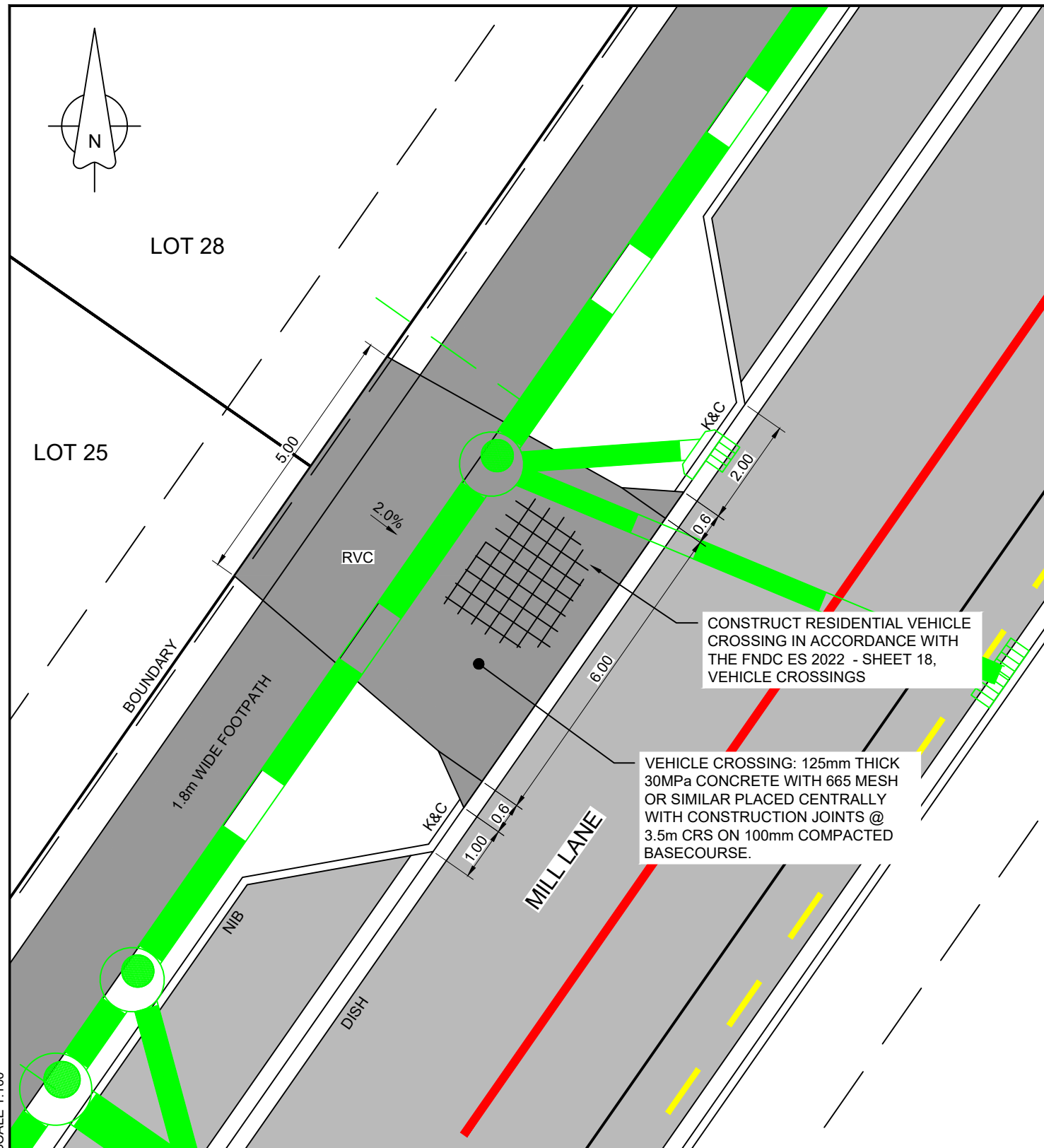


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

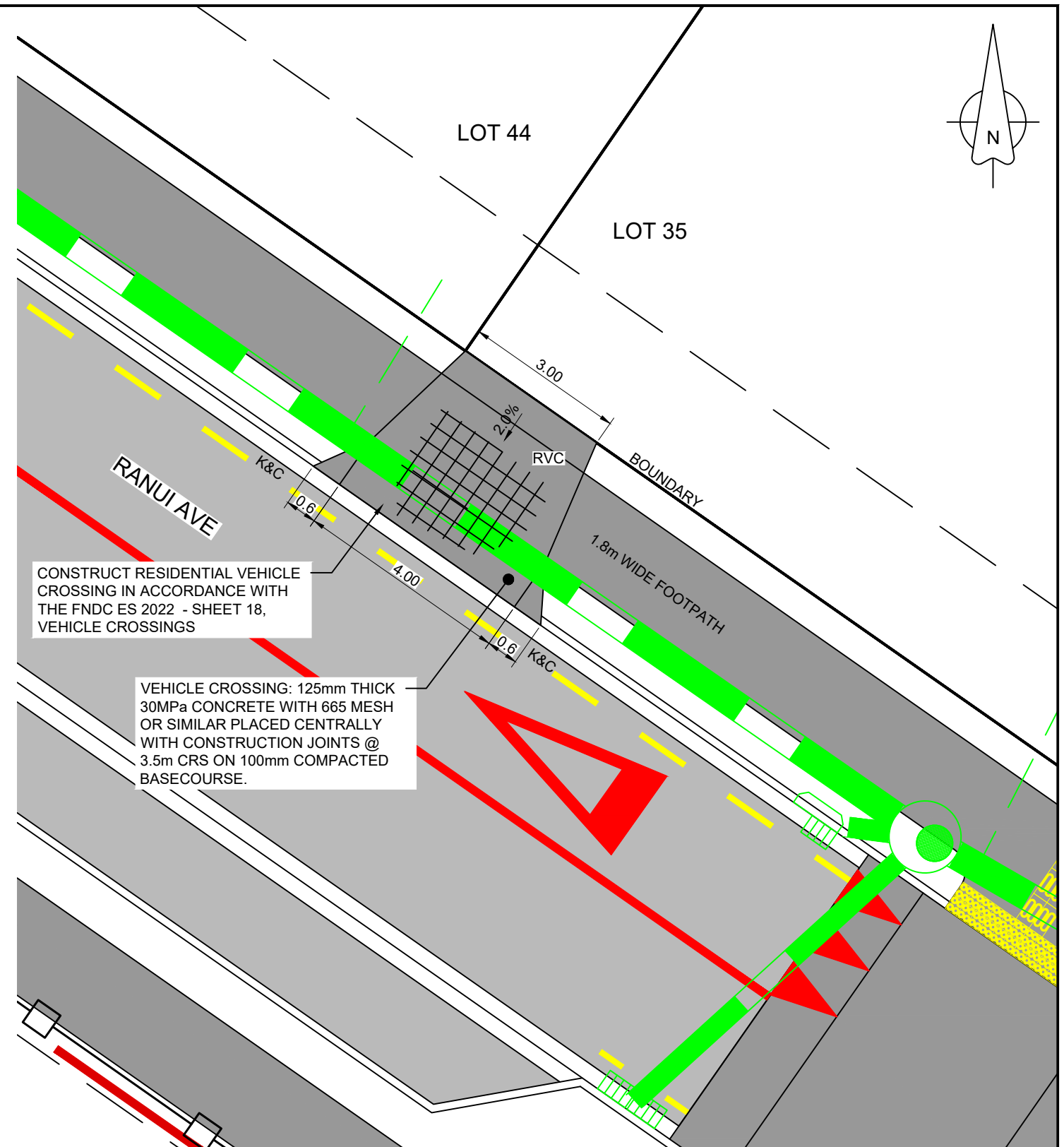
TITLE
VEHICLE CROSSINGS LOT 13 & LOT 21/24

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD364			REVISION C



LOT 25 & 28 - DOUBLE RESIDENTIAL VEHICLE CROSSING

SCALE 1:100



LOT 35 - RESIDENTIAL VEHICLE CROSSING

SCALE 1:100

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
 DISH = DISH CHANNEL
 NIB = NIB KERB
 RVC = RESIDENTIAL VEHICLE CROSSING
 CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



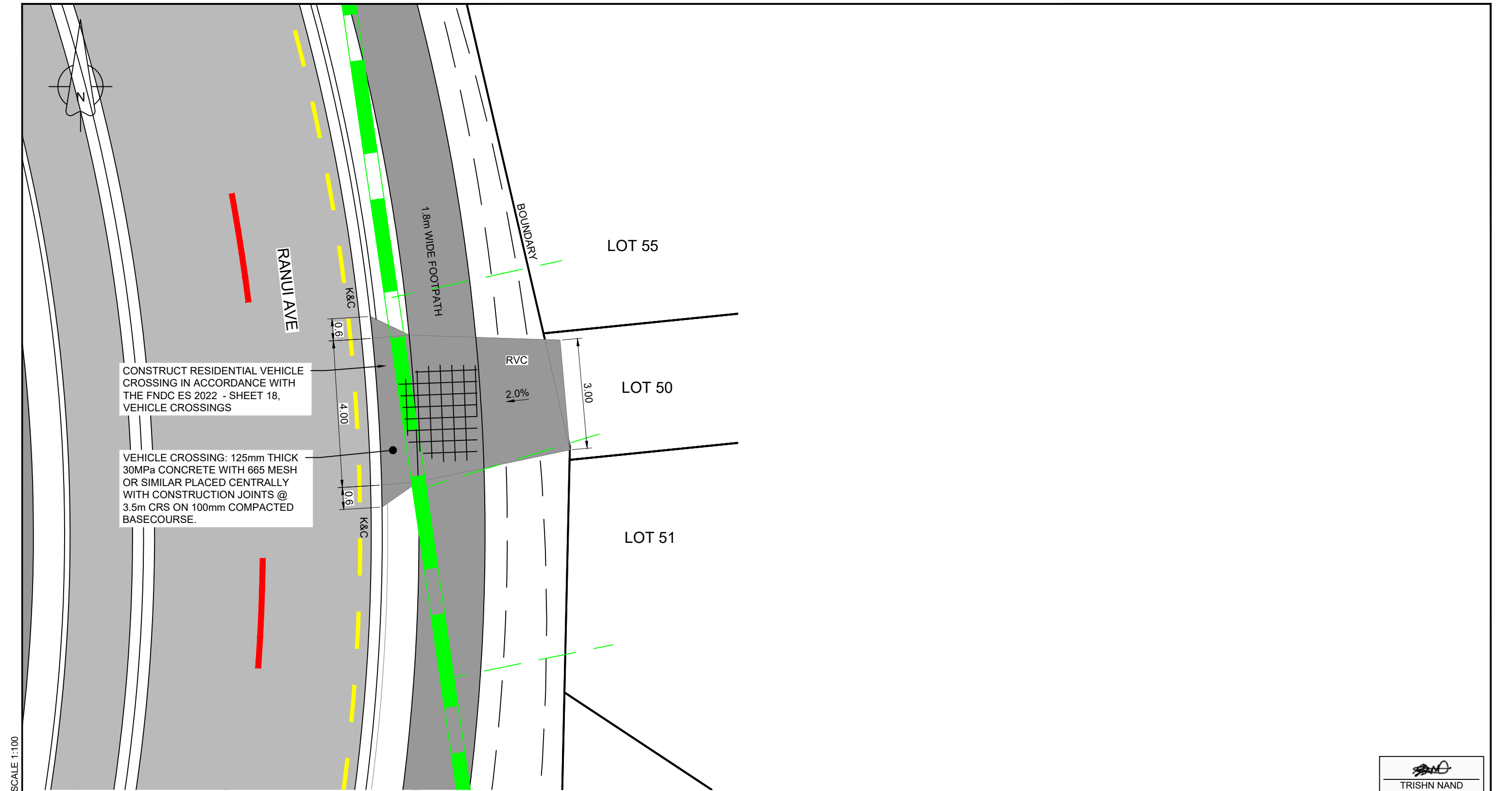
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
VEHICLE CROSSINGS LOT 25/28 & LOT 35

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD365			REVISION C

TRISHN NAND
 ME., CPEng., IntPE(NZ)



LOT 50 - RESIDENTIAL VEHICLE CROSSING

SCALE 1:100

TRISHN NAND
ME., CPEng., IntPE(NZ)

- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

VEHICLE CROSSINGS
LOT 50

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD366		REVISION C	

4 SCALE 1:100

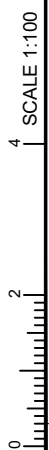
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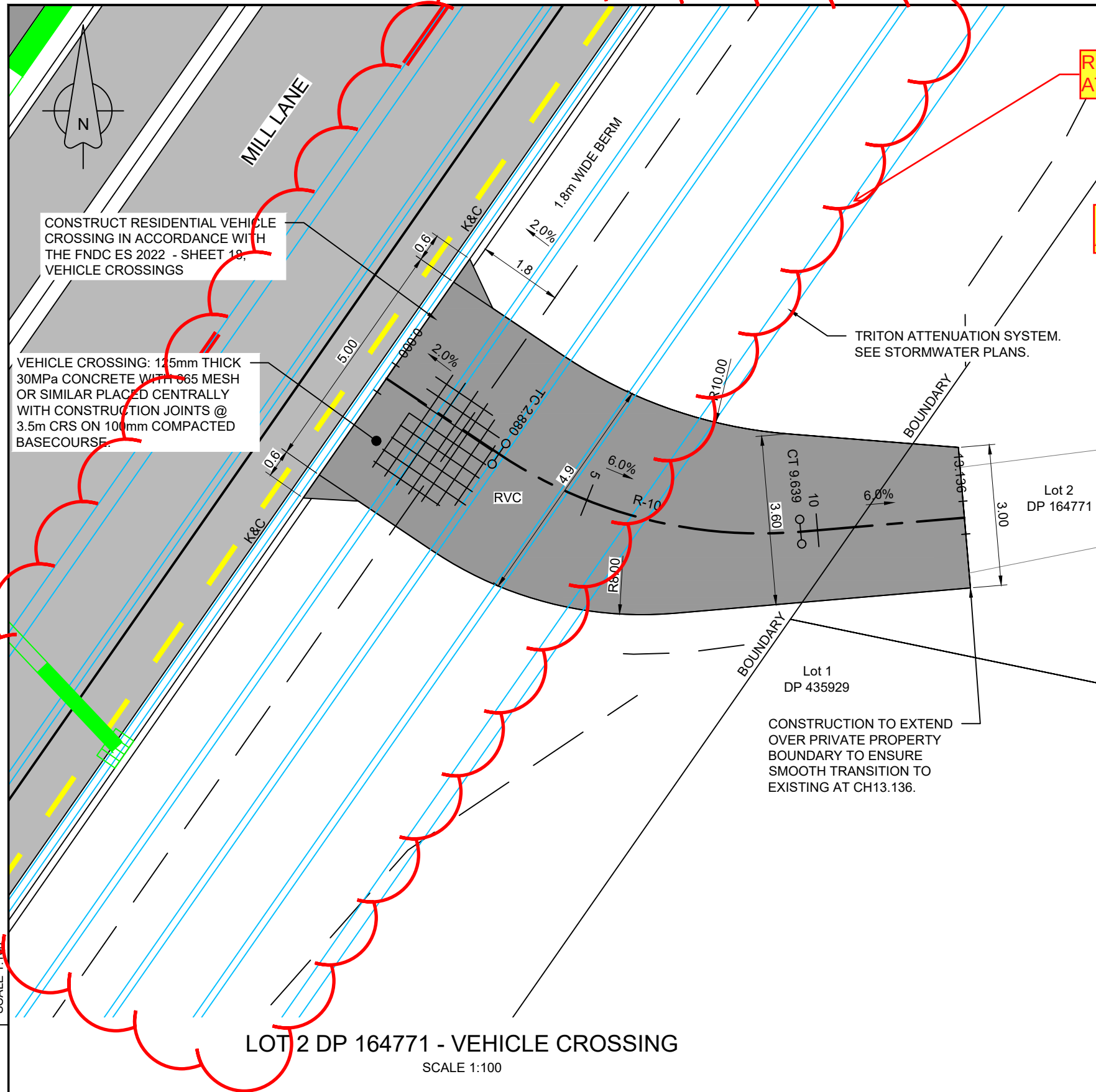
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0 2 4 SCALE 1:100

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RL67				
Cut / Fill		-0.282	-0.171	0.025
Design		70.994	71.033	70.361
Natural Surface		71.275	71.204	70.337
Chainages		0	1.95	13.136

HORIZ 1:200 VERT 1:40
LONGITUDINAL SECTION - Lot 2 DP164771

TRISHN NAND
ME., CPEng., IntPE(NZ)

APPROVED PLAN

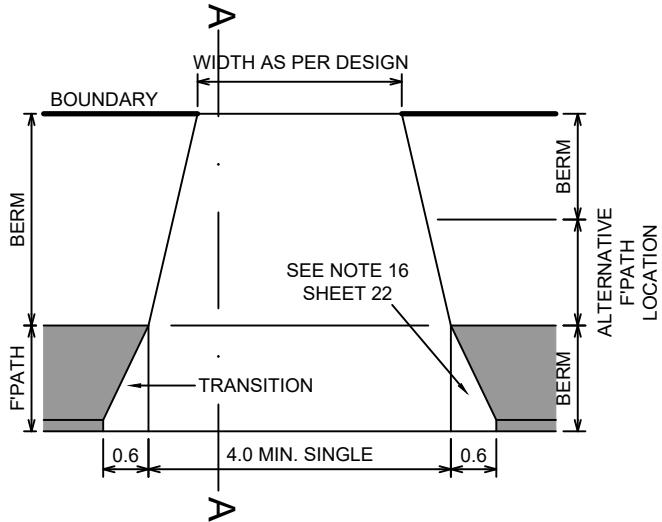
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

- NOTES:**
- SEE CONSTRUCTION NOTES DD001.
 - SEE PAVEMENT DETAILS ON SHEET DD315.

K&C = KERB AND CHANNEL
DISH = DISH CHANNEL
NIB = NIB KERB
RVC = RESIDENTIAL VEHICLE CROSSING
CVC = COMMERCIAL VEHICLE CROSSING

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE VEHICLE CROSSINGS ADJOINING PROPERTY - LOT 2 DP 164771	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022			DWG NUMBER DD368	REVISION C		
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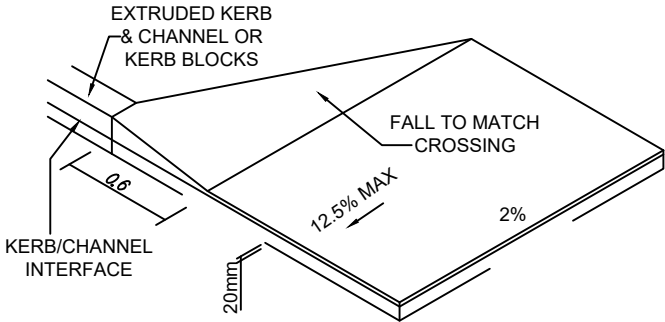
NOTES:
1. SEE CONSTRUCTION NOTES DD001.



VEHICLE CROSSING PLAN

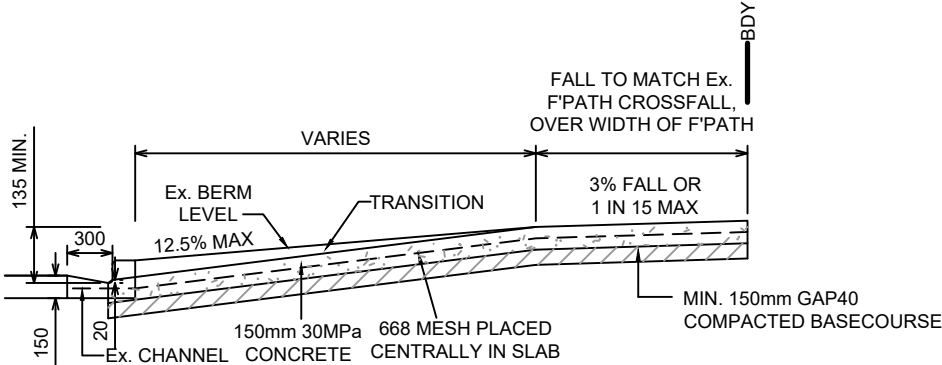
COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 FNDC ES 2022 - NOT TO SCALE

- 1. ALL CONCRETE TO BE 30MPa STRENGTH AT 28 DAYS.
- 2. CROSSINGS TO BE CONSTRUCTED TO MATCH EXISTING FOOTPATH AND CHANNEL LEVELS AND BE GRADED TO GIVE SUFFICIENT CLEARANCE TO THE UNDERSIDE OF ALL VEHICLES.
- 3. IF NO FOOTPATH, ALLOWANCE SHALL BE MADE FOR SUCH WITH A 3% CROSSFALL TO THE KERB.
- 4. GRADIENT OF CROSSING NOT TO EXCEED 12.5% (1 IN 8)
- 5. CROSSINGS FOR ALL PRIVATEWAYS SHALL BE COMMERCIAL GRADE (PER SHEET 19)
- 6. EDGES OF FOOTPATH AND BACK OF CHANNEL TO BE SAWCUT.
- 7. ALL CROSSINGS REQUIRE COUNCIL INSPECTION PRIOR TO POURING CONCRETE.
- 8. IF THE EDGE OF THE CROSSING IS WITHIN 1m OF A CRACK OR JOINT IN AN EXISTING FOOTPATH THEN THAT SECTION OF FOOTPATH IS TO BE REPLACED.
- 9. COMMERCIAL AND INDUSTRIAL CHANNELS TO BE REINFORCED WITH AN EXTENSION OF THE 668 MESH.
- 10. WHERE A STREET SUMP IS LOCATED WITHIN THE PROPOSED CROSSING, THE SUMP SHALL BE RELOCATED TO THE SIDE OF THE CROSSING AND BE RECONNECTED TO THE COUNCIL STORMWATER SYSTEM.



KERB TRANSITION DETAIL

COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 FNDC ES 2022 - NOT TO SCALE



CROSSING SECTION A-A

COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 WDC EES 2010 - NOT TO SCALE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

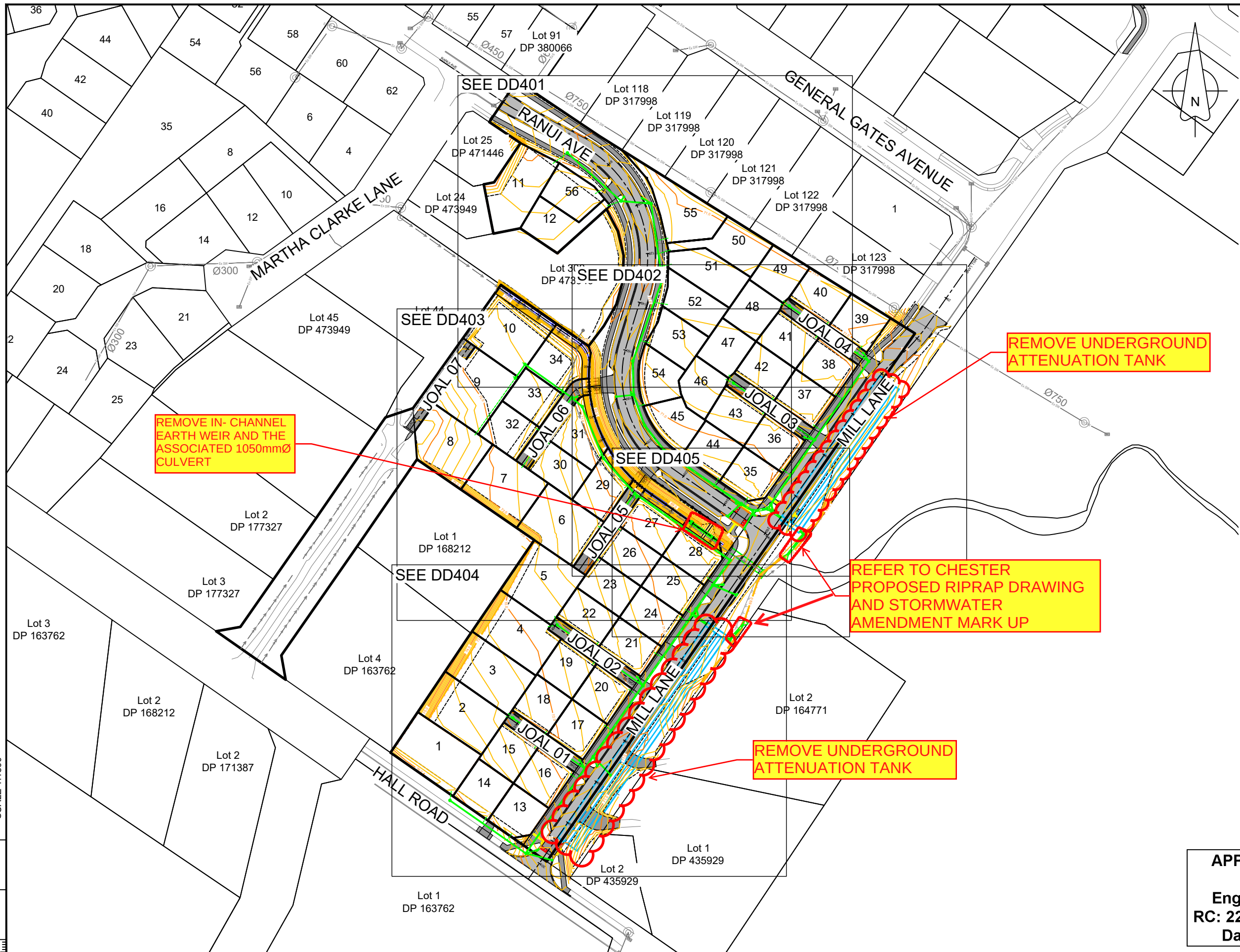


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
		AP TN
B	FOR APPROVAL	17-11-2022
		AP TN
A	1ST ISSUE	09-11-2022
		AP --
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
VEHICLE CROSSING DETAILS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE AS SHOWN @ A3	STATUS FOR APPROVAL	
DWG NUMBER	DD370	REVISION C	



- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.
 3. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

REMOVE IN-CHANNEL
EARTH WEIR AND THE
ASSOCIATED 1050mmØ
CULVERT

REMOVE UNDERGROUND
ATTENUATION TANK

REFER TO CHESTER
PROPOSED RIPRAP DRAWING
AND STORMWATER
AMENDMENT MARK UP

REMOVE UNDERGROUND
ATTENUATION TANK

SCALE 1:1500
0 20 40 60



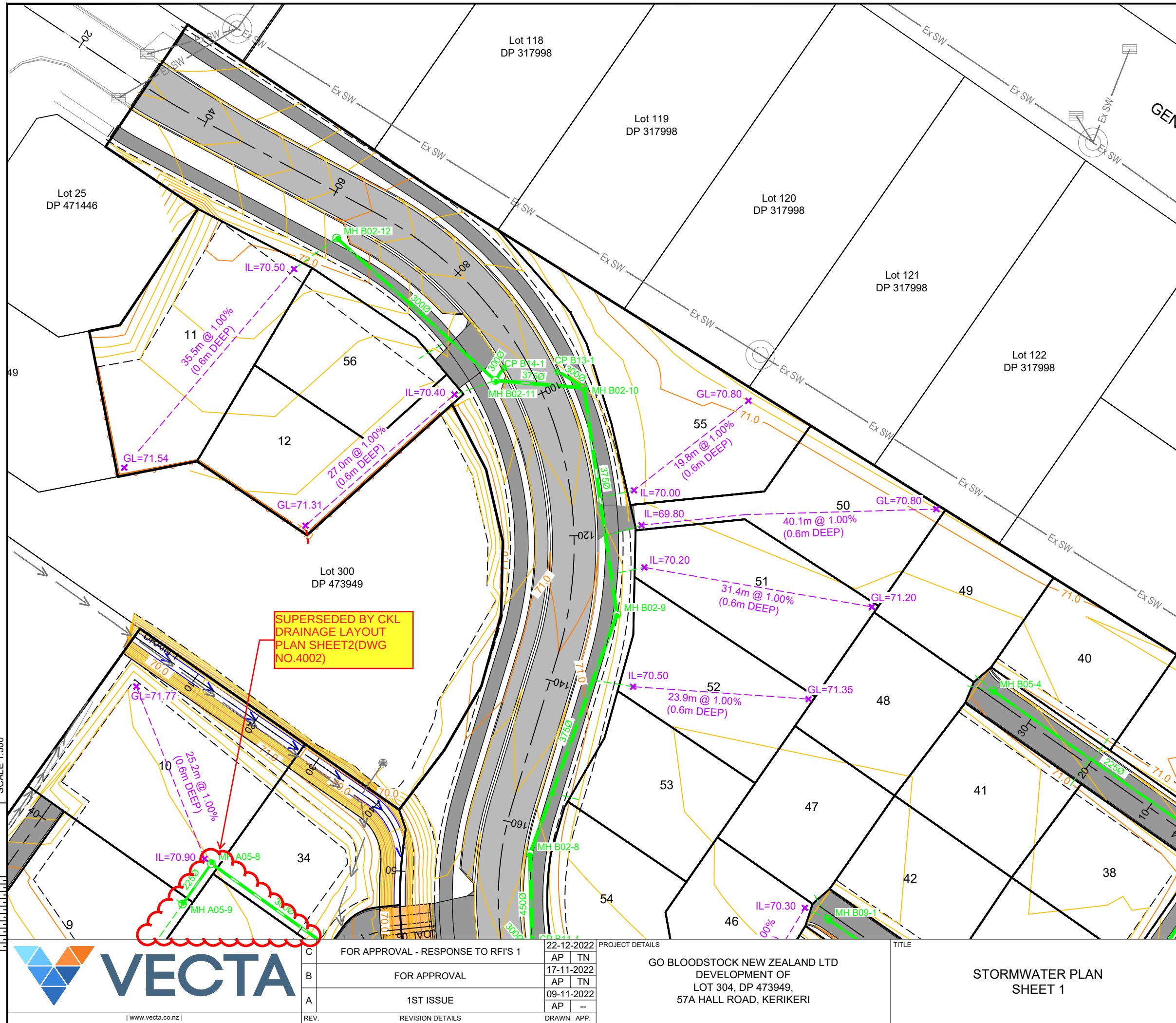
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B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
STORMWATER PLAN
OVERVIEW

APPROVED PLAN			
Engineer: RMishra			
RC: 2220714-RMAEPAA			
Date: 19/01/2023			
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD400	REVISION C		

TRISHN NAND
ME., CPEng., IntPE(NZ)



- NOTES:**
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.
 - DESIGN CONTOURS SHOWN AT 200mm INTERVALS.
- LEGEND:**
- DESIGN CONTOURS (200mm)
 - EXISTING STORMWATER
 - STORMWATER PIPE
 - STORMWATER LOT CONNECTION
 - MH 1050Ø STORMWATER MANHOLE UNLESS OTHERWISE SPECIFIED
 - SDMH SCRUFFY DOME MANHOLE (BOLTED DOWN)
 - CP SINGLE CATCHPIT
 - DCP DOUBLE CATCHPIT
 - SCP HYNDS STREET CATCHPIT (TYPE 'S' ARRANGEMENT)
 - ATTENUATION HATCHES (1.3m WIDE BY LENGTH SPECIFIED)
 - GL = DESIGN LEVEL
 - IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1% GRADE
 - RETAINING WALL SUBSOIL CONNECTION

APPROVED PLAN

Engineer: RMishra
 RC: 2220714-RMAEPAA
 Date: 19/01/2023

TRISHN NAND
 ME., CPEng., IntPE(NZ)

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD401		REVISION C	



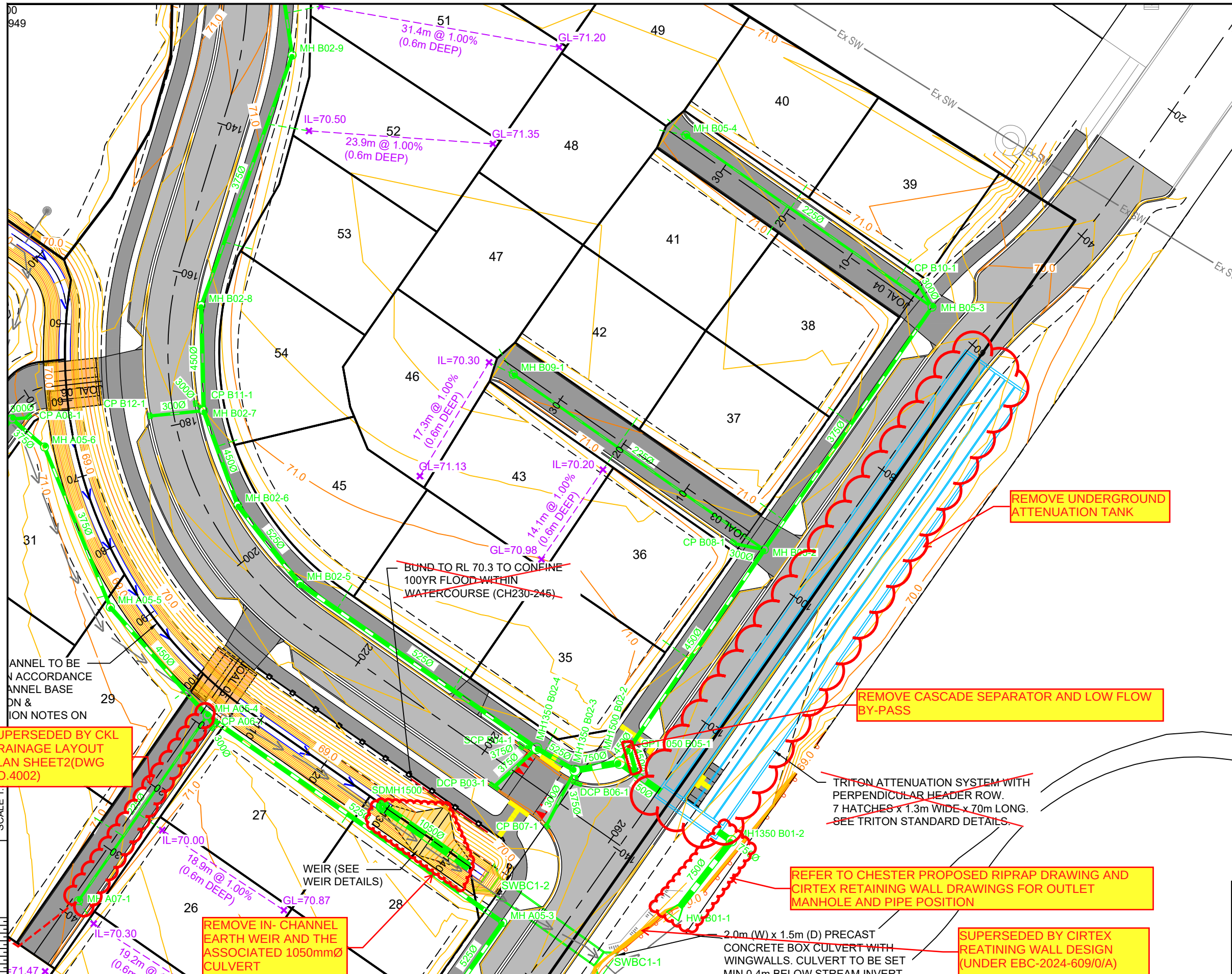
FOR APPROVAL - RESPONSE TO RFI'S 1		22-12-2022
C	AP	TN
FOR APPROVAL		17-11-2022
B	AP	TN
1ST ISSUE		09-11-2022
A	AP	--
REVISION DETAILS		DRAWN APP.
REV.		

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
 DEVELOPMENT OF
 LOT 304, DP 473949,
 57A HALL ROAD, KERIKERI

TITLE

STORMWATER PLAN
 SHEET 1



- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.
 3. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

LEGEND:

- DESIGN CONTOURS (200mm)
- EXISTING STORMWATER
- STORMWATER PIPE
- STORMWATER LOT CONNECTION
- 1050Ø STORMWATER MANHOLE UNLESS OTHERWISE SPECIFIED
- SCRUFFY DOME MANHOLE (BOLTED DOWN)
- SINGLE CATCHPIT
- DOUBLE CATCHPIT
- HYNDS STREET CATCHPIT (TYPE 'S' ARRANGEMENT)
- ATTENUATION HATCHES (1.3m WIDE BY LENGTH SPECIFIED)
- GL = DESIGN LEVEL
- IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1% GRADE
- RETAINING WALL SUBSOIL CONNECTION

SUPERSEDED BY CKL DRAINAGE LAYOUT PLAN SHEET2(DWG NO.4002)

REMOVE UNDERGROUND ATTENUATION TANK

REMOVE CASCADE SEPARATOR AND LOW FLOW BY-PASS

TRITON ATTENUATION SYSTEM WITH PERPENDICULAR HEADER ROW. 7 HATCHES x 1.3m WIDE x 70m LONG. SEE TRITON STANDARD DETAILS.

REFER TO CHESTER PROPOSED RIPRAP DRAWING AND CIRTEX RETAINING WALL DRAWINGS FOR OUTLET MANHOLE AND PIPE POSITION

SUPERSEDED BY CIRTEX RETAINING WALL DESIGN (UNDER EBC-2024-609/0/A)

REMOVE IN-CHANNEL EARTH WEIR AND THE ASSOCIATED 1050mmØ CULVERT



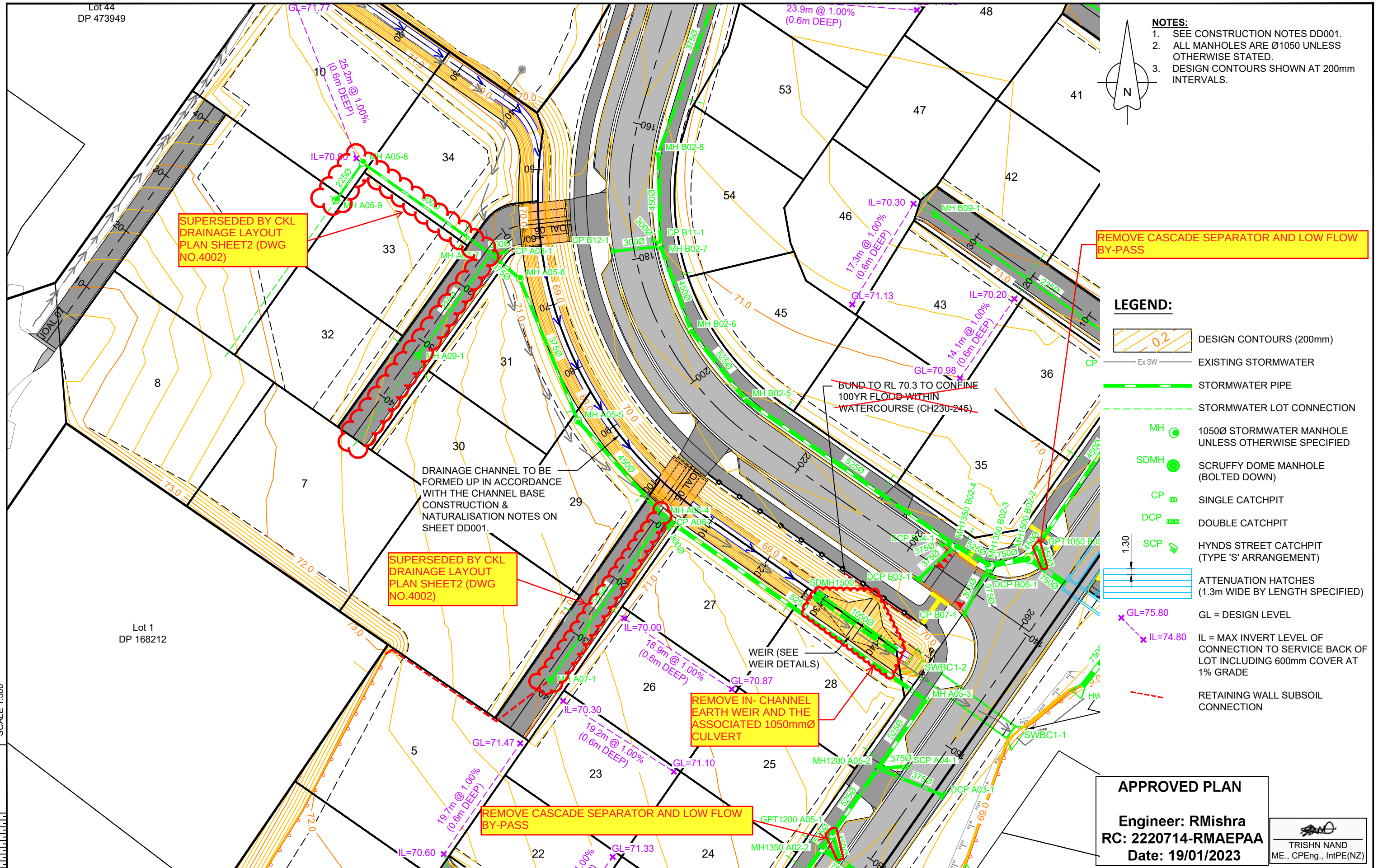
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

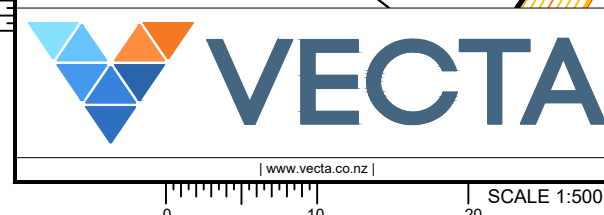
PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
STORMWATER PLAN
SHEET 2

APPROVED PLAN			
Engineer: RMishra			
RC: 2220714-RMAEPAA			
Date: 19/01/2023			
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD402	REVISION C		

TRISHN NAND
ME., CPEng., IntPE(NZ)





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C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN	GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	STORMWATER PLAN SHEET 2
B	FOR APPROVAL	17-11-2022	AP	TN		
A	1ST ISSUE	09-11-2022	AP	--		
REV.	REVISION DETAILS	DRAWN	APP.			

DATE CREATED	09-11-2022	DRAWN	AP	DESIGNED	AP	APPROVED	TN
VECTA REF NO	P0442	SCALE	1:500 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD403	REVISION				C	

DATE PLOTTED: Friday, 23 December 2022 9:19:15 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\IP0442 Hall Road\CAD\Detail Design\IP0442-DD400 SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

SUPERSEDED BY CKL DRAINAGE LAYOUT PLAN SHEET2 (DWG NO.4001)

SUPERSEDED BY CKL DRAINAGE LAYOUT PLAN SHEET2 (DWG NO.4001)

SUPERSEDED BY CKL DRAINAGE LAYOUT PLAN SHEET2 (DWG NO.4001)

- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.
 3. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

REMOVE CASCADE SEPARATOR AND LOW FLOW BY-PASS

REFER TO CHESTER PROPOSED RIPRAP DRAWING AND CIRTEX RETAINING WALL DRAWINGS FOR OUTLET MANHOLE AND PIPE POSITION

LEGEND:

- DESIGN CONTOURS (200mm)
- EXISTING STORMWATER
- STORMWATER PIPE
- STORMWATER LOT CONNECTION
- MH 1050Ø STORMWATER MANHOLE UNLESS OTHERWISE SPECIFIED
- SDMH SCRUFFY DOME MANHOLE (BOLTED DOWN)
- CP SINGLE CATCHPIT
- DCP DOUBLE CATCHPIT
- SCP HYNDS STREET CATCHPIT (TYPE 'S' ARRANGEMENT)
- ATTENUATION HATCHES (1.3m WIDE BY LENGTH SPECIFIED)
- GL = DESIGN LEVEL
- IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1% GRADE
- RETAINING WALL SUBSOIL CONNECTION

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

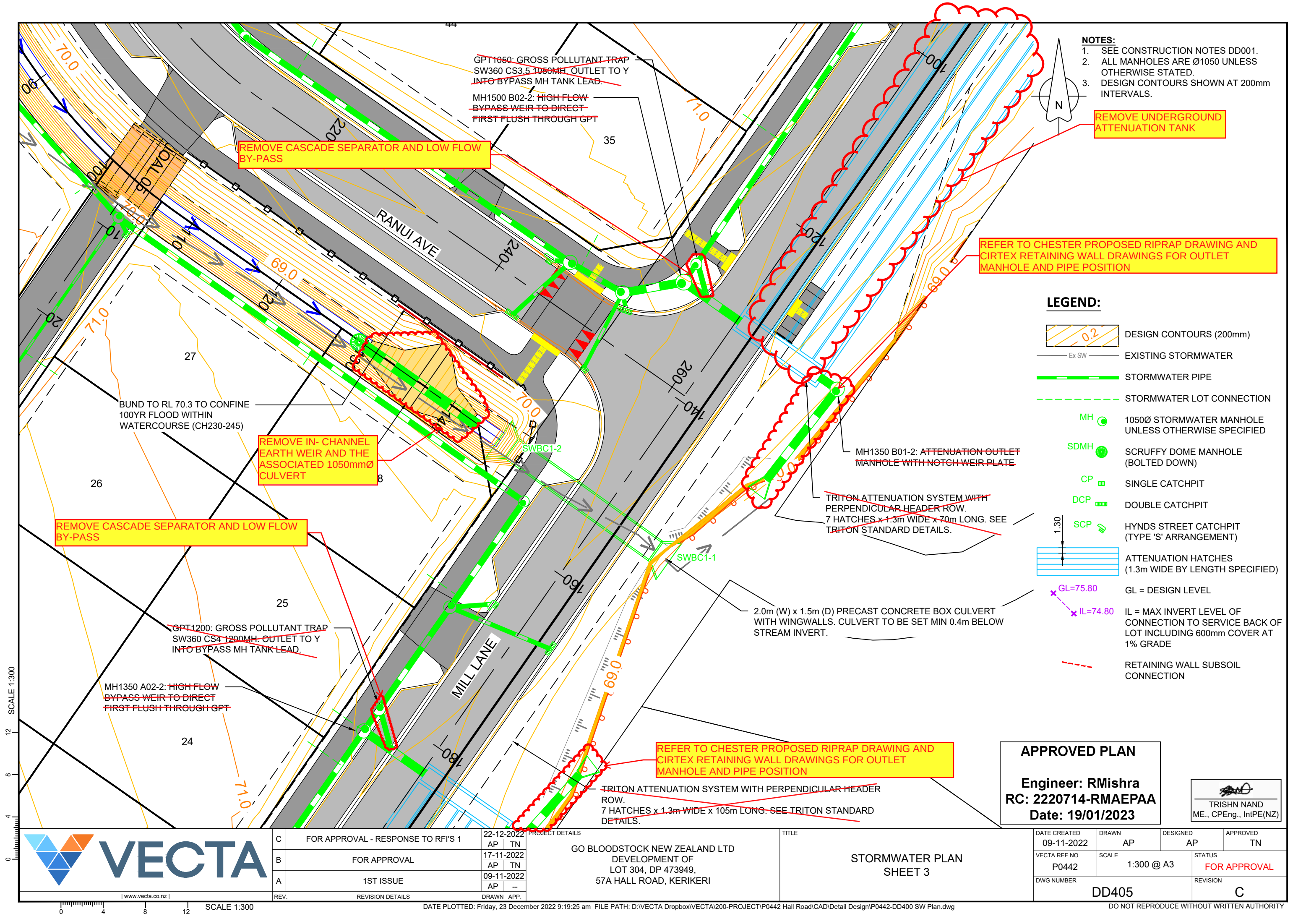
PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

STORMWATER PLAN
SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:500 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD404			REVISION C



- NOTES:**
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.
 - 3. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

- LEGEND:**
- DESIGN CONTOURS (200mm)
 - EXISTING STORMWATER
 - STORMWATER PIPE
 - STORMWATER LOT CONNECTION
 - MH 1050Ø STORMWATER MANHOLE UNLESS OTHERWISE SPECIFIED
 - SDMH SCRUFFY DOME MANHOLE (BOLTED DOWN)
 - CP SINGLE CATCHPIT
 - DCP DOUBLE CATCHPIT
 - SCP HYNDS STREET CATCHPIT (TYPE 'S' ARRANGEMENT)
 - ATTENUATION HATCHES (1.3m WIDE BY LENGTH SPECIFIED)
 - GL = DESIGN LEVEL
 - IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1% GRADE
 - RETAINING WALL SUBSOIL CONNECTION

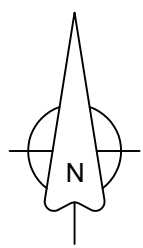
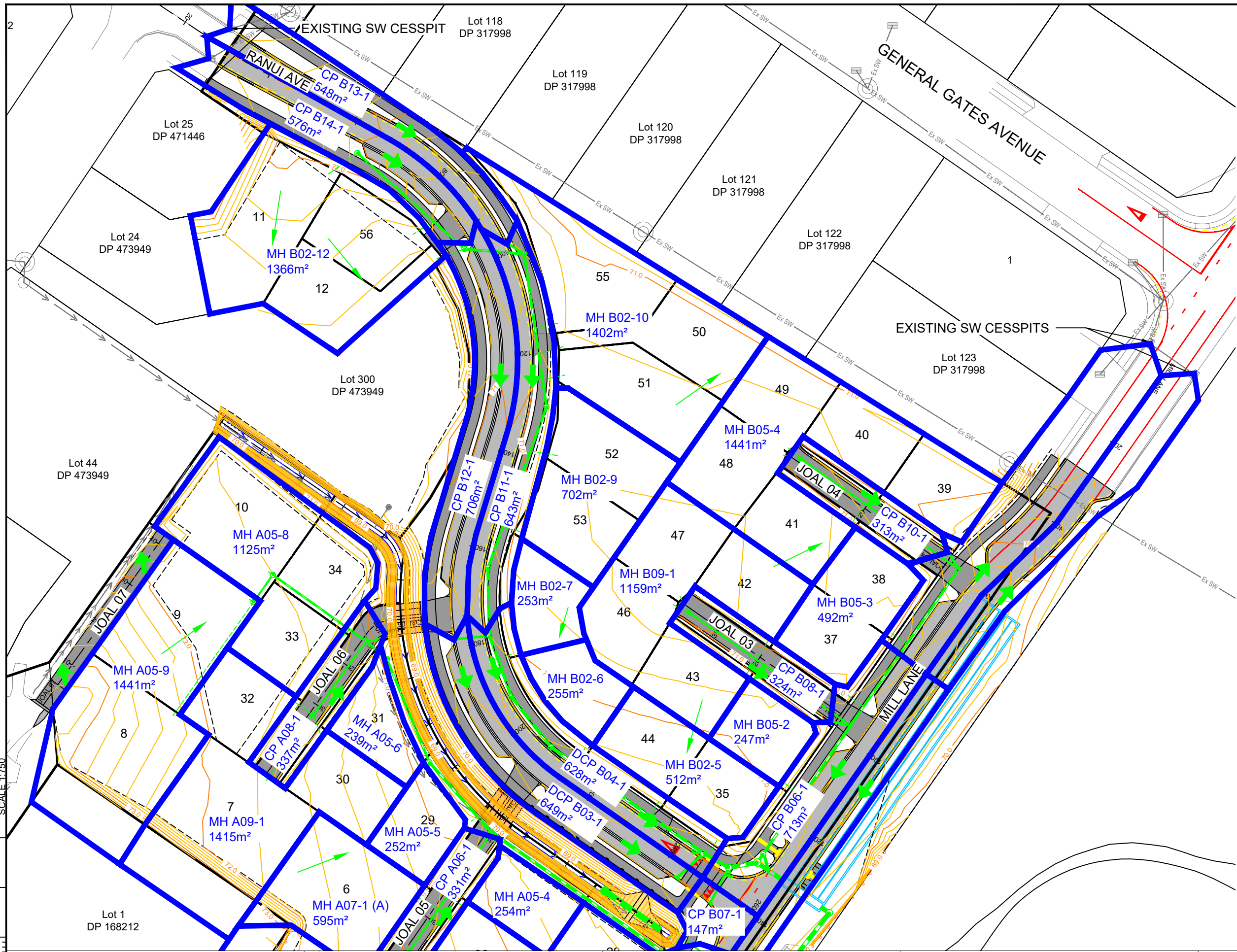
APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:300 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD405	REVISION C		

C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN	PROJECT DETAILS	GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE STORMWATER PLAN SHEET 3
B	FOR APPROVAL	17-11-2022	AP	TN			
A	1ST ISSUE	09-11-2022	AP	--			
REV.	REVISION DETAILS	DRAWN	APP.				

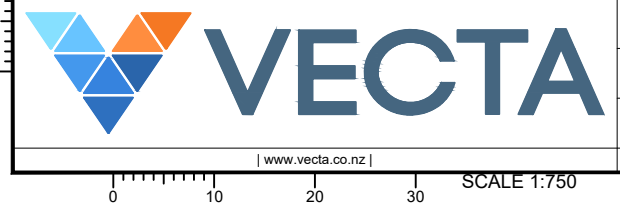


APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

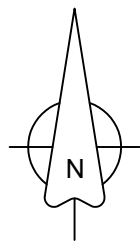
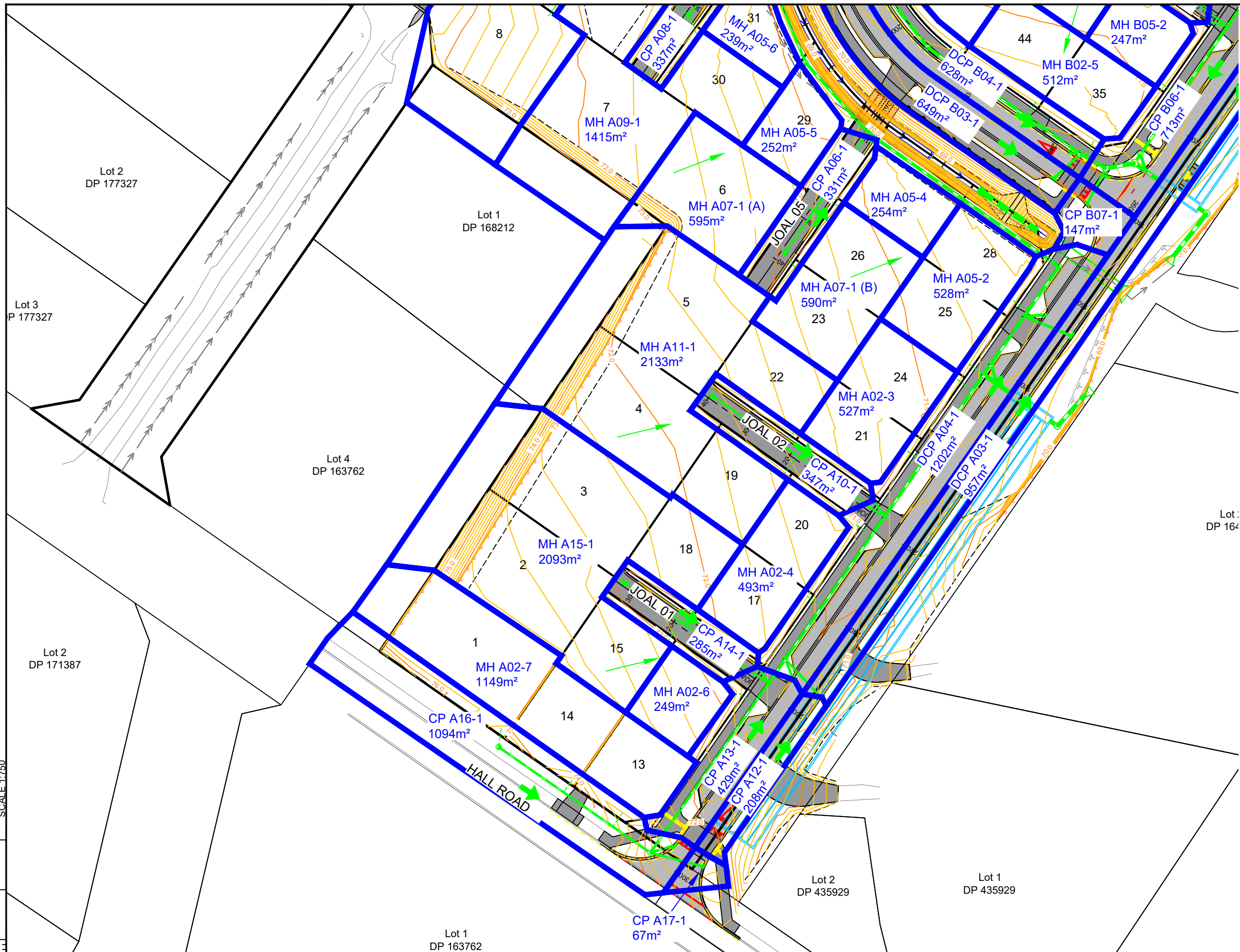
PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

STORMWATER CATCHMENTS PLAN
SHEET 1

DATE CREATED	DRAWN		DESIGNED		APPROVED
09-11-2022	AP		AP		TN
VECTA REF NO	SCALE			STATUS	
P0442	1:750 @ A3			FOR APPROVAL	
DWG NUMBER				REVISION	
DD410				C	



APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:
1. SEE CONSTRUCTION NOTES DD001.

	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE STORMWATER CATCHMENTS PLAN SHEET 2	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE 1:750 @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022			DWG NUMBER	REVISION C		
	REV.	REVISION DETAILS	DRAWN APP.			DD411			

- NOTES:**
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

HW A01-1 MH1350 A01-2 A01-3 A01-3 A02-1 MH1350 A02-2 MH1200 A02-3 MH A02-4 MH A02-5 MH A02-6 MH A02-7 MH1200 A05-2 DCP A03-1

MH1350 A01-2 TO HW A01-1:
Ø750 @ 0.15% 7.5m LENGTH
IL (US): 68.20
IL (DS): 68.19

MH1350 A02-2 TO MH1350 A01-2:
Ø750 @ 0.15% 15.5m LENGTH
IL (US): 68.29
IL (DS): 68.26

Flow (L/s)	489	489
Vn - Velocity (m/s)	1.11	1.11
Pipe Size/Type	Ø750 RCRRJ Class 4	Ø750 RCRRJ Class 4
Grade (%)	0.15%	0.15%
Datum	51.000	
Depth To Invert	0.750	0.750
HGL Levels	68.615	68.671
Invert Levels	68.185	68.197
Finished Surface	68.935	70.083
Chainage	0.000	8.382

489	489	489	489	243	163	133	69	31	25
1.11	1.11	0.29	1.11	2.39	1.85	1.76	2.34	2.46	1.44
Ø750 RCRRJ Class 4	Ø750 RCRRJ Class 4	Ø1400x1190 TANK	Ø750 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø450 RCRRJ Class 4	Ø450 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø300 RCRRJ Class 4	Ø375 RCRRJ Class 4
0.15%	0.15%	0.01%	0.15%	1.52%	1%	1%	3.45%	7.09%	2%
51.000		54.000							51.000
0.750	0.750	1.886	2.336	1.826	1.898	1.878	1.989	1.989	1.898
68.615	68.671	68.803	68.779	68.787	68.912	68.914	68.922	68.936	68.912
68.185	68.197	67.747	68.257	68.260	68.280	68.280	68.280	68.280	68.260
68.935	70.083	70.158	70.269	70.378	70.494	70.516	70.622	70.622	70.036
0.000	8.382	10.270	10.270	10.270	10.270	10.270	10.270	10.270	10.270

LINE A01

LINE A02

LINE A03

REFER TO CHESTER PROPOSED RIPRAP DRAWING, AND CIRTEX RETAINING WALL DRAWINGS FOR OUTLET MANHOLE AND PIPE POSITION

SUPERSEDED BY CKL STORMWATER LONG SECTIONS SHEET1 (DWG NO.4100)

STORMWATER DESIGN NOTE:
STORMWATER PIPE NETWORK DESIGNED FOR 100 YEAR ARI + CLIMATE CHANGE TO DIRECT STORMWATER INTO ATTENUATION TANKS. FREEBOARD OF 0.3m ACHIEVED THROUGHOUT NETWORK.

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
STORMWATER LONGSECTIONS SHEET 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
MACRO REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD420	REVISION C		

- NOTES:
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

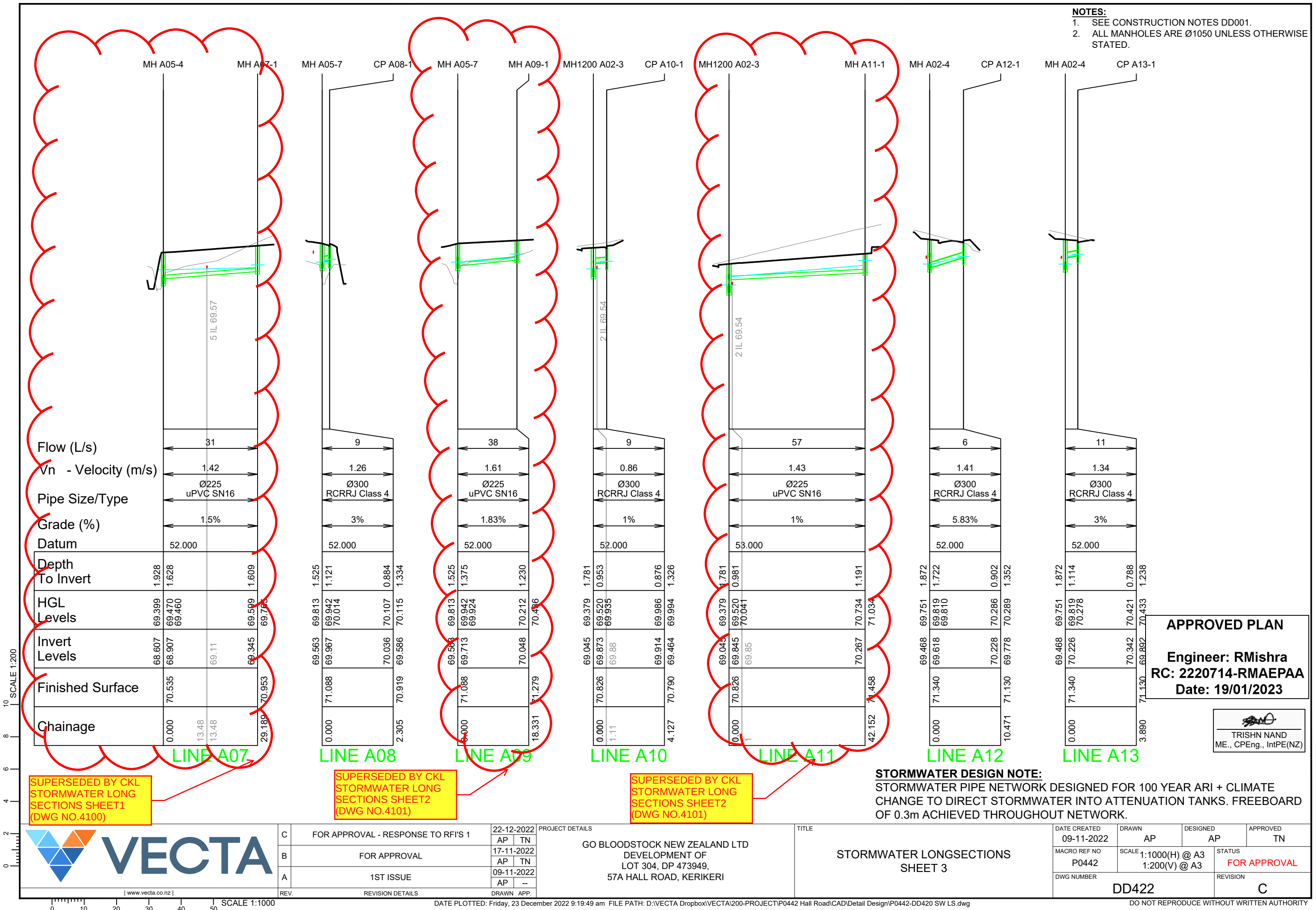
SUPERSEDED BY CKL
STORMWATER LONG
SECTIONS SHEET1
(DWG NO.4100)

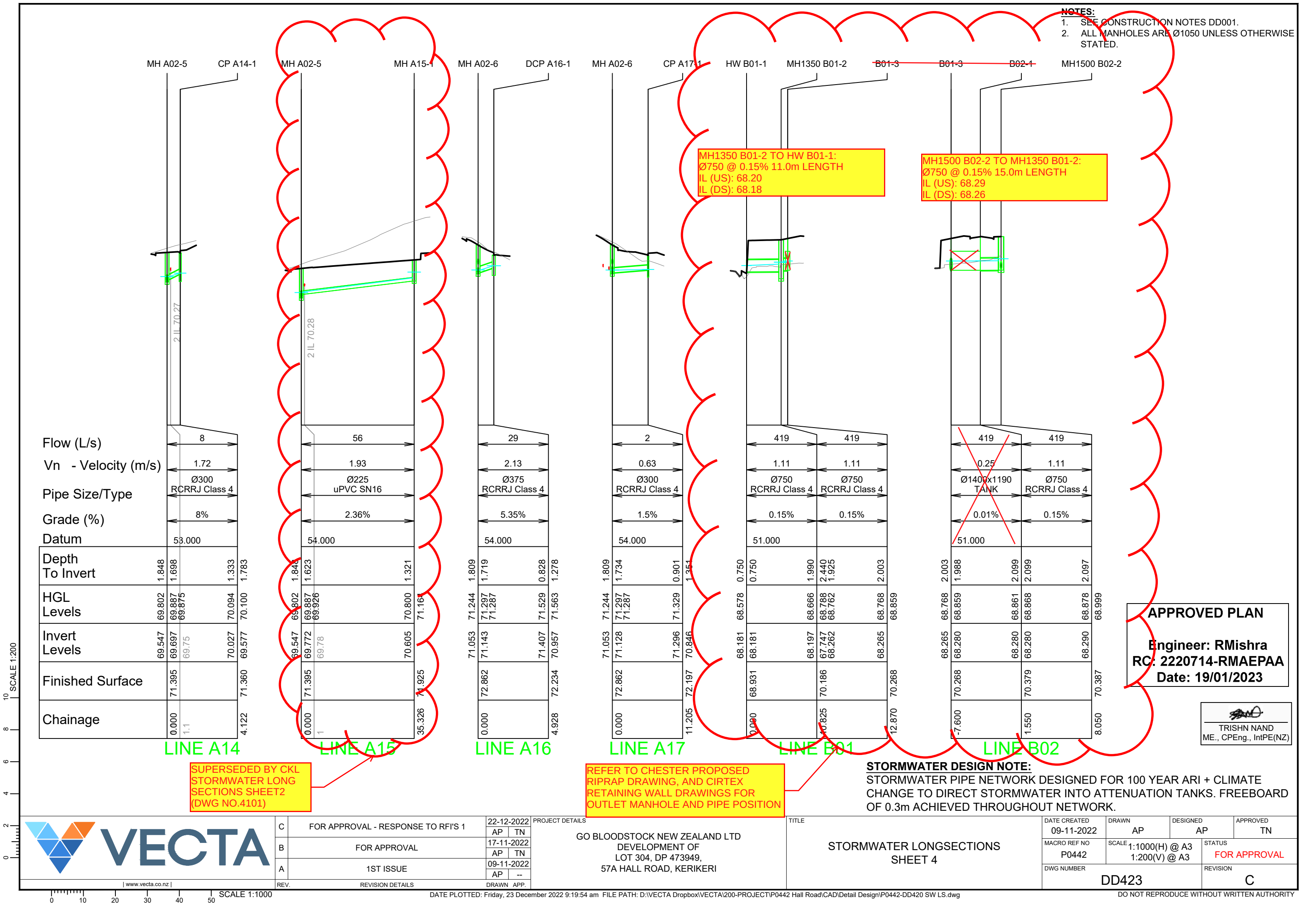
Flow (L/s)
Vn - Velocity (m/s)
Pipe Size/Type
Grade (%)
Datum

Depth To Invert	1.871	1.157	0.858	1.318
HGL Levels	69.126	69.253	69.232	69.306
Invert Levels	68.379	69.094	69.178	68.718
Finished Surface	70.251			70.036
Chainage	0.000			4.182

LINE A04

246	246	175	175	128	121	115	68	38
1.14	1.14	1.11	1.11	2.17	1.54	3.03	1.73	1.27
Ø525 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø450 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø300 RCRRJ Class 4	Ø225 uPVC SN16
0.01%	0.25%	0.25%	0.25%	1.8%	0.76%	4.78%	1.48%	1%
51.000								
68.936	2.087							
69.102	2.048							
69.066								
69.074	2.020							
69.088	3.220							
69.232	2.000							
69.126	1.871							
69.253	1.851							
69.232								
69.252	1.886							
69.338	1.826							
69.321								
69.399	1.928							
69.470	1.853							
69.460								
69.497	1.611							
69.552	1.536							
69.543								
69.650	1.496							
69.785	1.466							
69.761								
69.813	1.525							
69.942	1.450							
69.924								
70.183	1.821							
70.312	1.746							
70.290								
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APPROVED PLAN
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
STORMWATER LONGSECTIONS
SHEET 4

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
MACRO REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	REVISION C

SCALE 1:200
SCALE 1:1000
DATE PLOTTED: Friday, 23 December 2022 9:19:54 am
FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD420 SW LS.dwg
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

- NOTES:
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

MH1500 B02-2 MH1350 B02-3 MH1350 B02-4 MH B02-5 MH B02-6 MH B02-7 MH B02-8 MH B02-9 MH B02-10 MH B02-11 MH B02-12 MH1350 B02-4 DCP B03-1 MH1350 B02-4 SCP B04-1



Flow (L/s)	292	264	223	207	199	147	147	125	62	44			
Vn - Velocity (m/s)	1.05	3.14	1.13	1.13	1.25	2.36	1.33	1.13	1.06	1.03			
Pipe Size/Type	Ø750 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø525 RCRRJ Class 4	Ø450 RCRRJ Class 4	Ø450 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø375 RCRRJ Class 4	Ø300 RCRRJ Class 4			
Grade (%)	0.15%	2.97%	0.25%	0.25%	0.3%	2.06%	0.4%	0.4%	0.43%	0.5%			
Datum	52.000												
Depth To Invert	2.097	2.057											
HGL Levels	68.878	68.999	68.985										
Invert Levels	68.290	68.330	68.33										
Finished Surface	70.387												
Chainage	8.050	10.59											

	21												
	1.07												
	Ø375 RCRRJ Class 4												
	1%												
	51.000												
	1.399	1.203											
	68.734	69.082	69.172	69.158									
	68.930												
	69.006	69.153	0.974										
	68.734	69.061	69.118	69.219	0.862	1.322							
	70.133												
	0.000												

LINE B02

LINE B03

LINE B04

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

STORMWATER DESIGN NOTE:
STORMWATER PIPE NETWORK DESIGNED FOR 100 YEAR ARI + CLIMATE CHANGE TO DIRECT STORMWATER INTO ATTENUATION TANKS. FREEBOARD OF 0.3m ACHIEVED THROUGHOUT NETWORK.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS	
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	

TITLE	
STORMWATER LONGSECTIONS SHEET 5	

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
MACRO REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD424		REVISION C	

- NOTES:
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

MH1500 B02-2 ~~GPT1050 B05-1~~ MH B05-2 MH B05-3 MH B05-4 MH1350 B02-3 DCP B06-1 MH1350 B02-3 CP B07-1 MH B05-2 CP B08-1 MH B05-2 MH B09-1

Flow (L/s)
Vn - Velocity (m/s)
Pipe Size/Type
Grade (%)
Datum

Depth To Invert	2.097	2.032	2.098	3.228 1.924	2.052	1.977	1.648	1.498	1.522
HGL Levels	68.878	68.999 68.985	68.989	68.998	69.056	69.131 69.118	69.175	69.233 69.223	69.580
Invert Levels	68.290	68.355	68.355	67.225 68.529	68.623	68.698	68.851	69.001 69	69.390
Finished Surface	70.387		70.453		70.675		70.499		70.912
Chainage	0.000		2.101		33.403		71.634 72.52		110.573

LINE B05

Flow (L/s)	23
Vn - Velocity (m/s)	1.62
Pipe Size/Type	Ø375 RCRRJ Class 4
Grade (%)	3%
Datum	51.000
Depth To Invert	1.792
HGL Levels	68.339
Invert Levels	68.339
Finished Surface	70.131
Chainage	0.000

LINE B06

Flow (L/s)	5
Vn - Velocity (m/s)	1.06
Pipe Size/Type	Ø300 RCRRJ Class 4
Grade (%)	3%
Datum	51.000
Depth To Invert	1.792
HGL Levels	68.339
Invert Levels	68.339
Finished Surface	70.131
Chainage	0.000

LINE B07

Flow (L/s)	10
Vn - Velocity (m/s)	1.30
Pipe Size/Type	Ø300 RCRRJ Class 4
Grade (%)	3%
Datum	51.000
Depth To Invert	2.052
HGL Levels	68.623
Invert Levels	68.623
Finished Surface	70.675
Chainage	0.000

LINE B08

Flow (L/s)	37
Vn - Velocity (m/s)	1.26
Pipe Size/Type	Ø225 uPVC SN16
Grade (%)	1%
Datum	52.000
Depth To Invert	2.052
HGL Levels	68.623
Invert Levels	68.623
Finished Surface	70.675
Chainage	0.000

LINE B09

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

STORMWATER DESIGN NOTE:
STORMWATER PIPE NETWORK DESIGNED FOR 100 YEAR ARI + CLIMATE CHANGE TO DIRECT STORMWATER INTO ATTENUATION TANKS. FREEBOARD OF 0.3m ACHIEVED THROUGHOUT NETWORK.



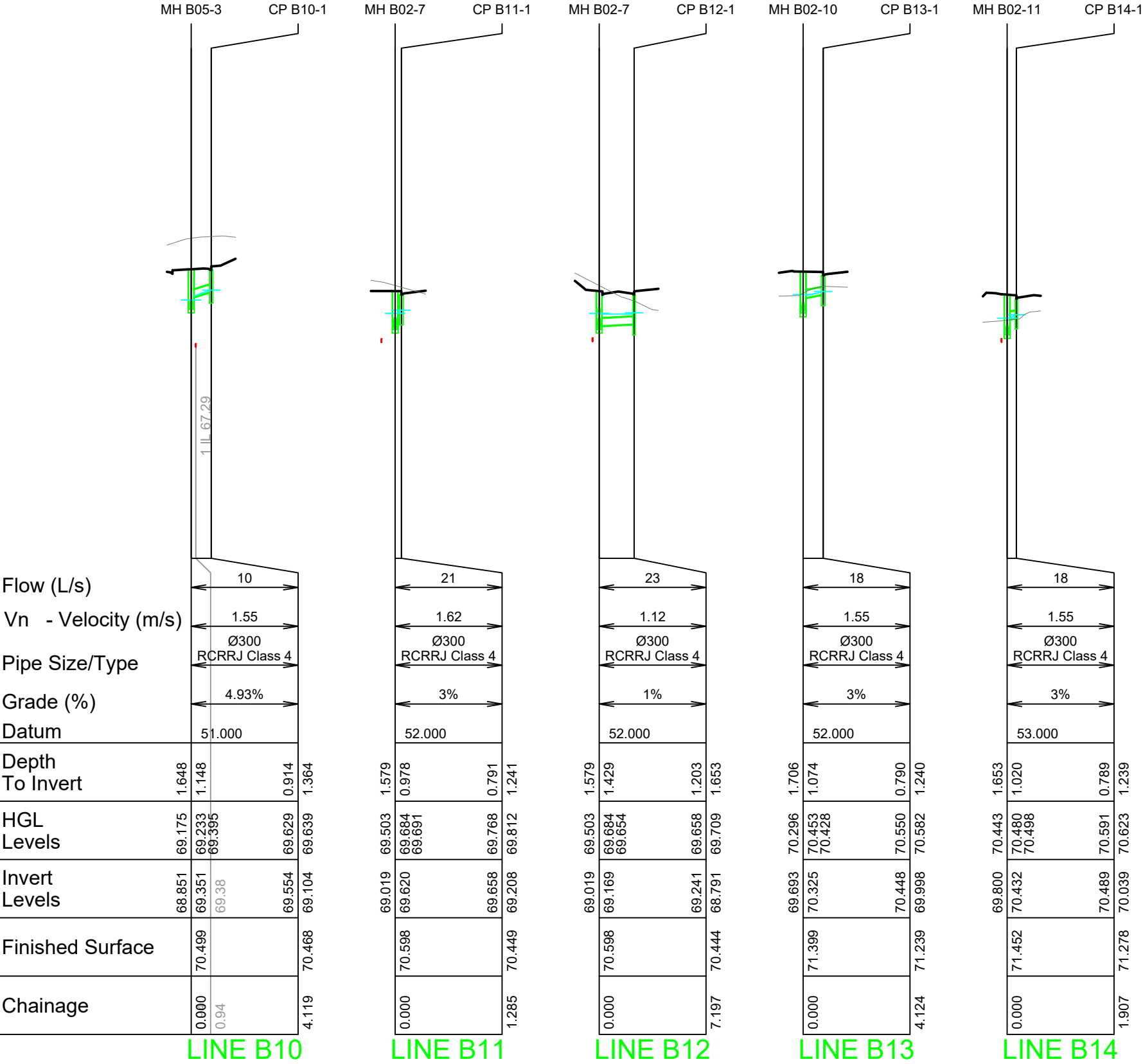
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
STORMWATER LONGSECTIONS SHEET 6

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
MACRO REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	REVISION C
DWG NUMBER DD425			

- NOTES:
- SEE CONSTRUCTION NOTES DD001.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.



APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

STORMWATER DESIGN NOTE:
STORMWATER PIPE NETWORK DESIGNED FOR 100 YEAR ARI + CLIMATE CHANGE TO DIRECT STORMWATER INTO ATTENUATION TANKS. FREEBOARD OF 0.3m ACHIEVED THROUGHOUT NETWORK.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

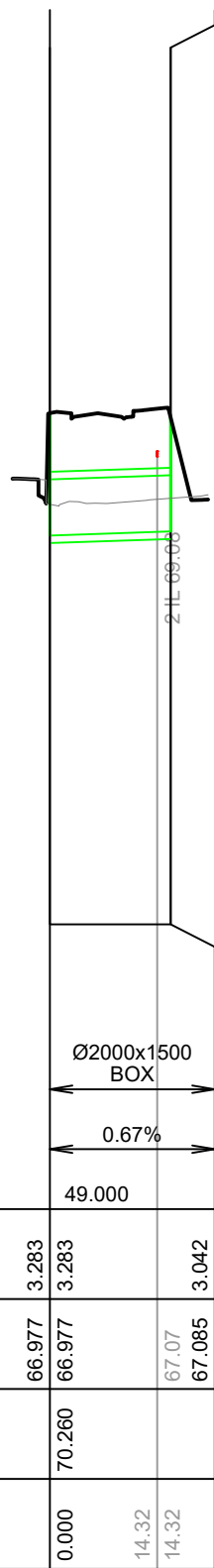
PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
STORMWATER LONGSECTIONS SHEET 7

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
MACRO REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER	DD426	REVISION C	

NOTES:
1. SEE CONSTRUCTION NOTES DD001.

SWBC1-1 SWBC1-2



Pipe Size/Type

Grade (%)

Datum

Depth
To Invert

Invert
Levels

Finished Surface

Chainage

LINE SWBC1

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C

FOR APPROVAL - RESPONSE TO RFI'S 1

22-12-2022
AP TN

B

FOR APPROVAL

17-11-2022
AP TN

A

1ST ISSUE

09-11-2022
AP --

REV.

REVISION DETAILS

DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

STORMWATER BOX CULVERT LONGSECTION

DATE CREATED
09-11-2022

DRAWN
AP

DESIGNED
AP

APPROVED
TN

VECTA REF NO
P0442

SCALE 1:1000(H) @ A3
1:200(V) @ A3

STATUS
FOR APPROVAL

DWG NUMBER

DD430

REVISION

C

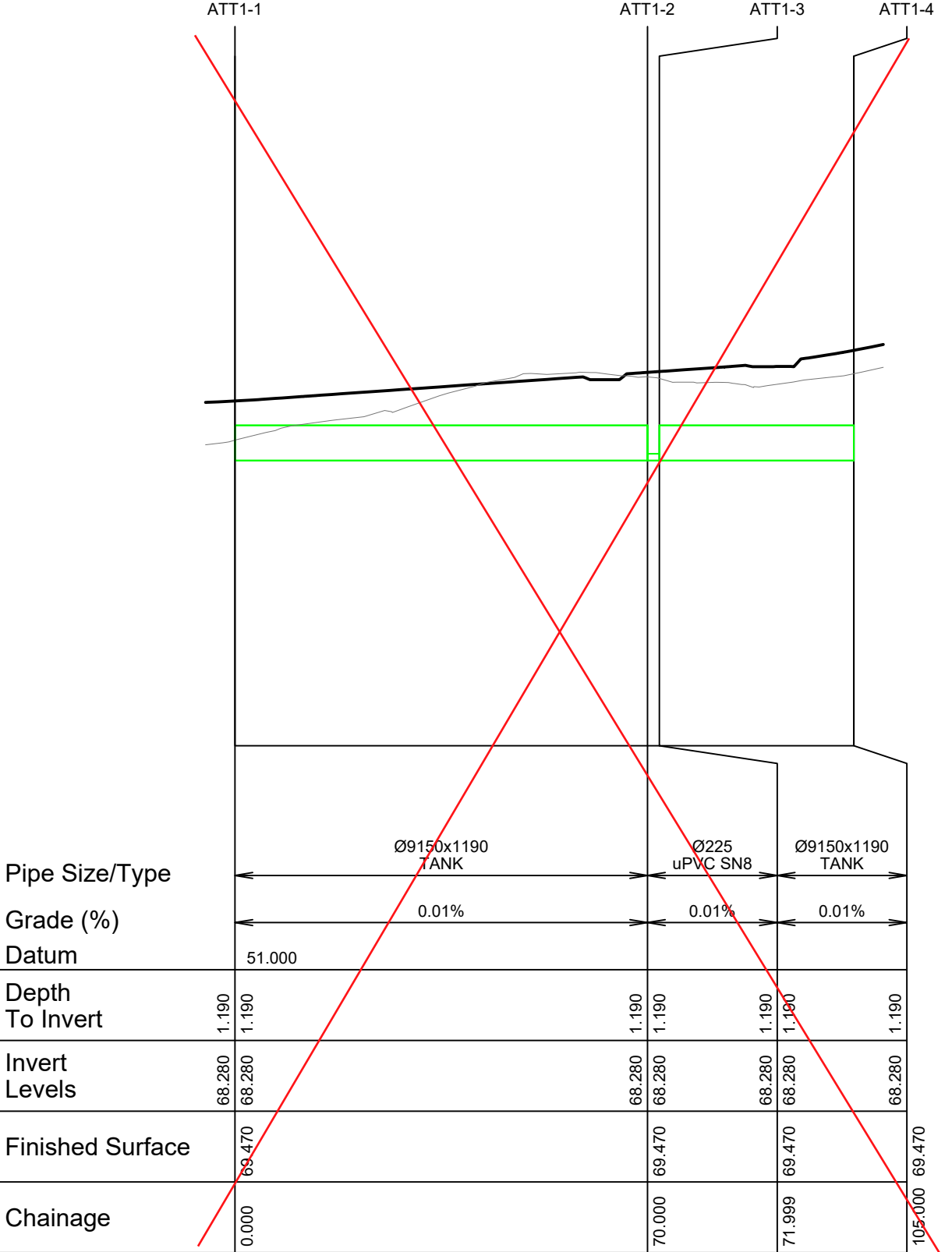
| www.vecta.co.nz |

SCALE 1:1000

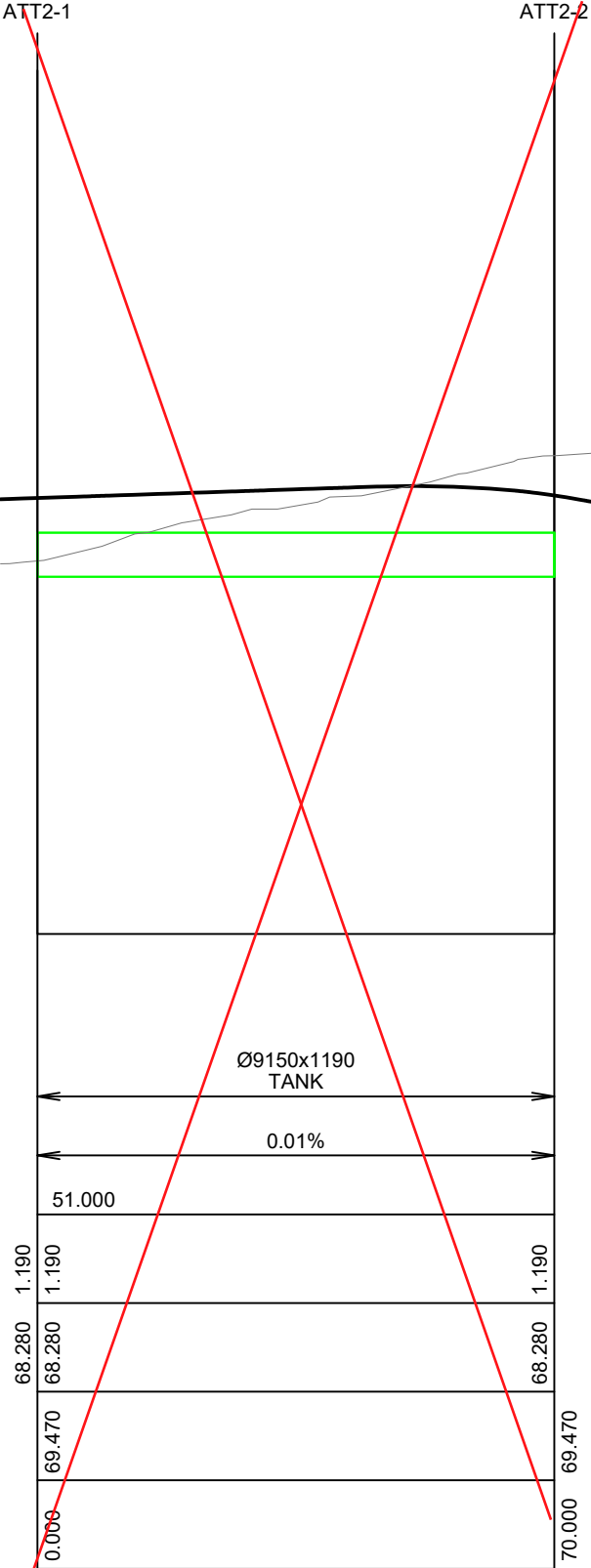
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DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



LINE ATT1

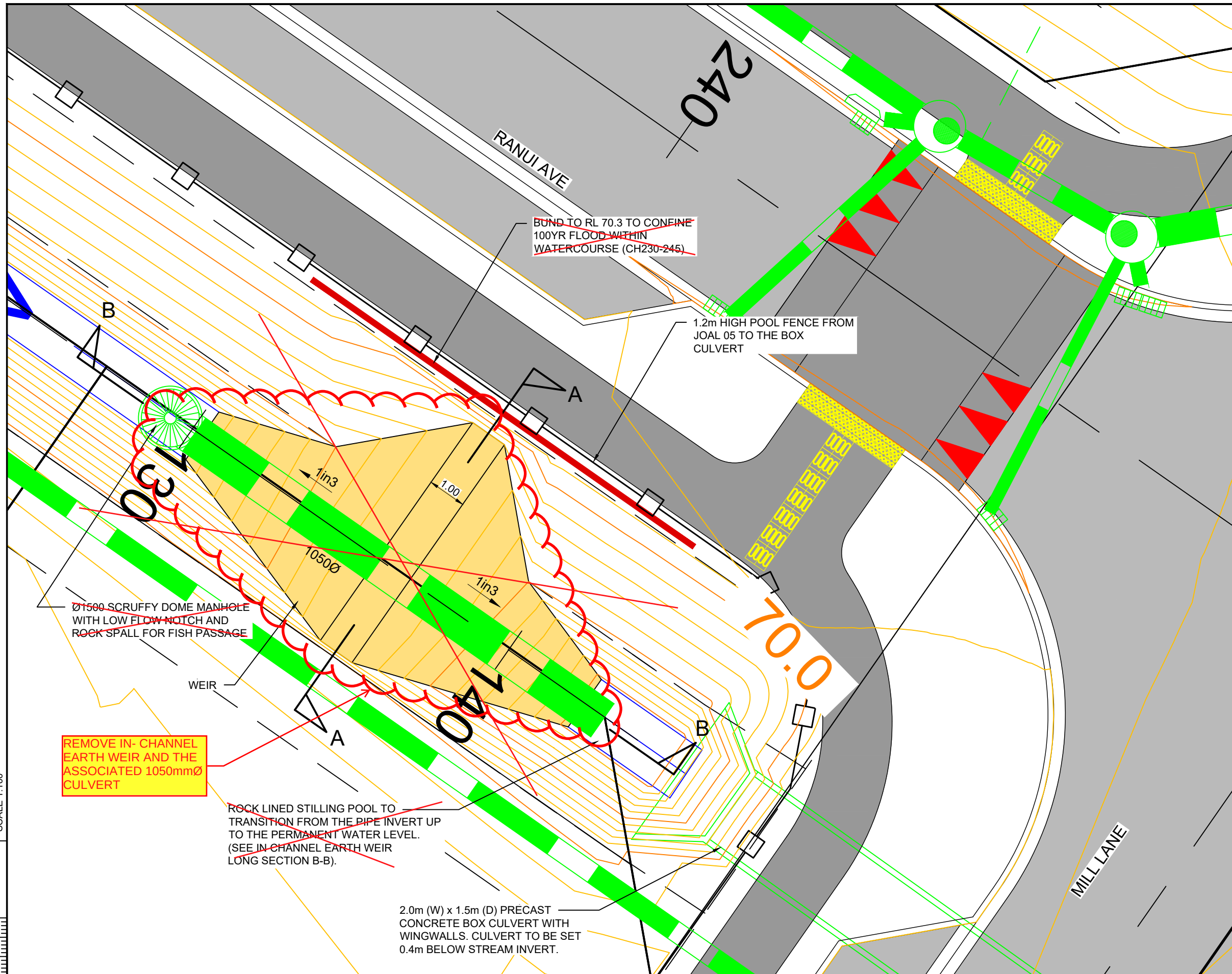


LINE ATT2

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. DESIGN CONTOURS SHOWN AT 200mm INTERVALS.

- LEGEND:**
- DESIGN CONTOURS (200mm)
 - EXISTING STORMWATER
 - STORMWATER PIPE
 - STORMWATER LOT CONNECTION
 - MH 1050Ø STORMWATER MANHOLE UNLESS OTHERWISE SPECIFIED
 - SDMH SCRUFFY DOME MANHOLE (BOLTED DOWN)
 - CP SINGLE CATCHPIT
 - DCP DOUBLE CATCHPIT
 - SCP HYNDS STREET CATCHPIT (TYPE 'S' ARRANGEMENT)
 - ATTENUATION HATCHES (1.3m WIDE BY LENGTH SPECIFIED)
 - GL = DESIGN LEVEL
 - IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1% GRADE
 - RETAINING WALL SUBSOIL CONNECTION

REMOVE IN-CHANNEL EARTH WEIR AND THE ASSOCIATED 1050mmØ CULVERT

ROCK LINED STILLING POOL TO TRANSITION FROM THE PIPE INVERT UP TO THE PERMANENT WATER LEVEL. (SEE IN-CHANNEL EARTH WEIR LONG SECTION B-B).

2.0m (W) x 1.5m (D) PRECAST CONCRETE BOX CULVERT WITH WINGWALLS. CULVERT TO BE SET 0.4m BELOW STREAM INVERT.

BUND TO RL 70.3 TO CONFINED 100YR FLOOD WITHIN WATERCOURSE (CH230-245)

1.2m HIGH POOL FENCE FROM JOAL 05 TO THE BOX CULVERT

APPROVED PLAN

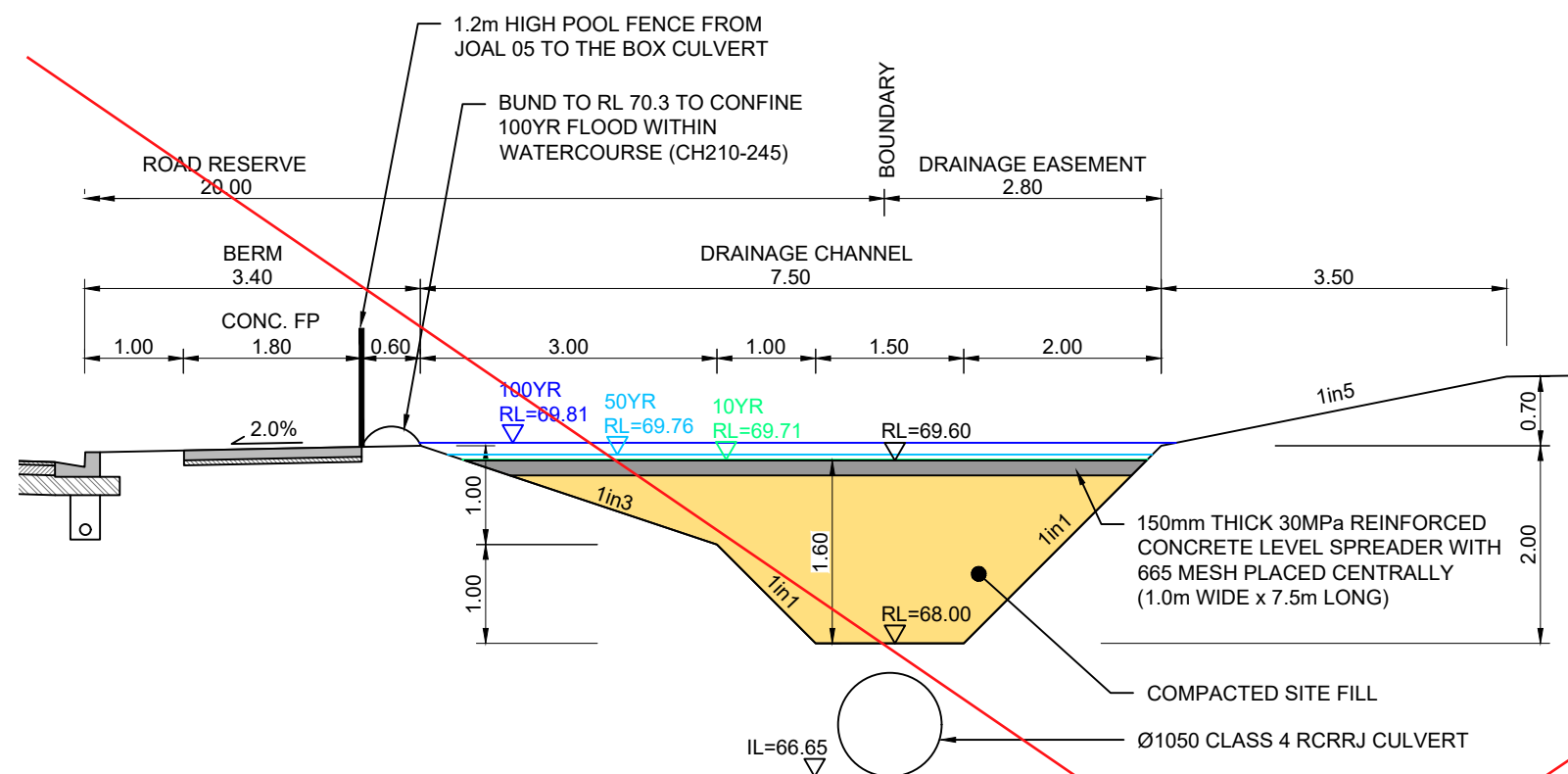
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS		GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE STORMWATER IN CHANNEL EARTH WEIR DETAILS PLAN VIEW	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN	
	B	FOR APPROVAL	17-11-2022	AP	TN			VECTA REF NO P0442	SCALE 1:100 @ A3	STATUS FOR APPROVAL		
	A	1ST ISSUE	09-11-2022	AP	--			DWG NUMBER	DD440	REVISION C		
	REV.	REVISION DETAILS	DRAWN	APP.								

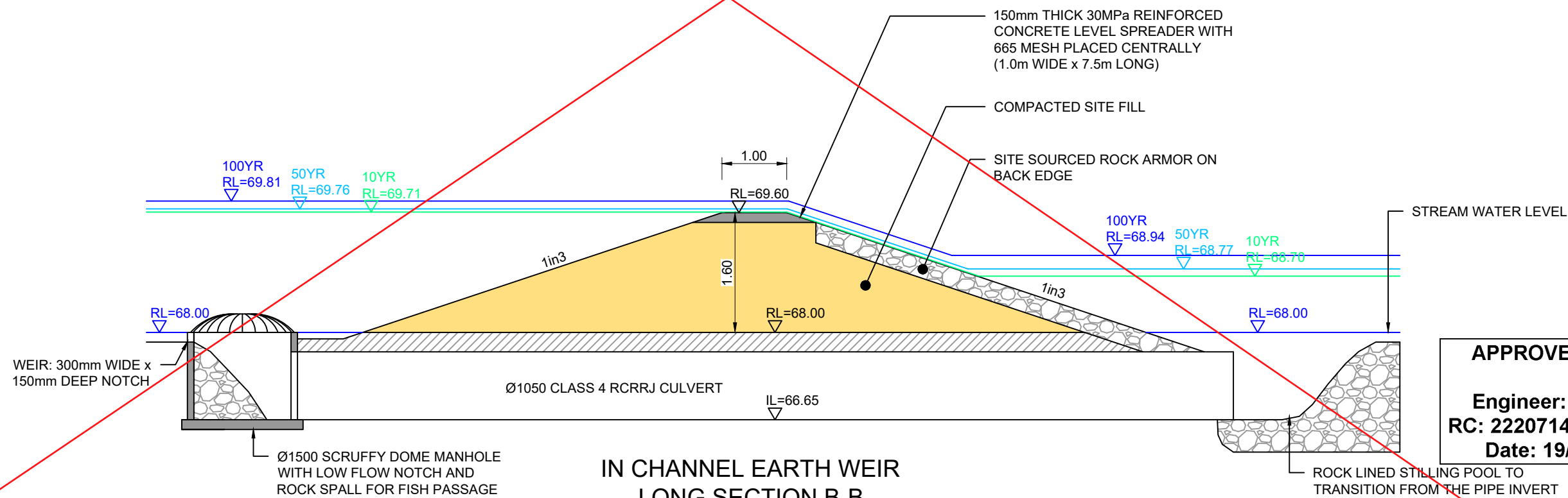
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NOTES:
1. SEE CONSTRUCTION NOTES DD001.



IN CHANNEL EARTH WEIR
CROSS SECTION A-A

SCALE 1:75



IN CHANNEL EARTH WEIR
LONG SECTION B-B

SCALE 1:75

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

ROCK LINED STILLING POOL TO
TRANSITION FROM THE PIPE INVERT
UP TO THE PERMANENT WATER LEVEL

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

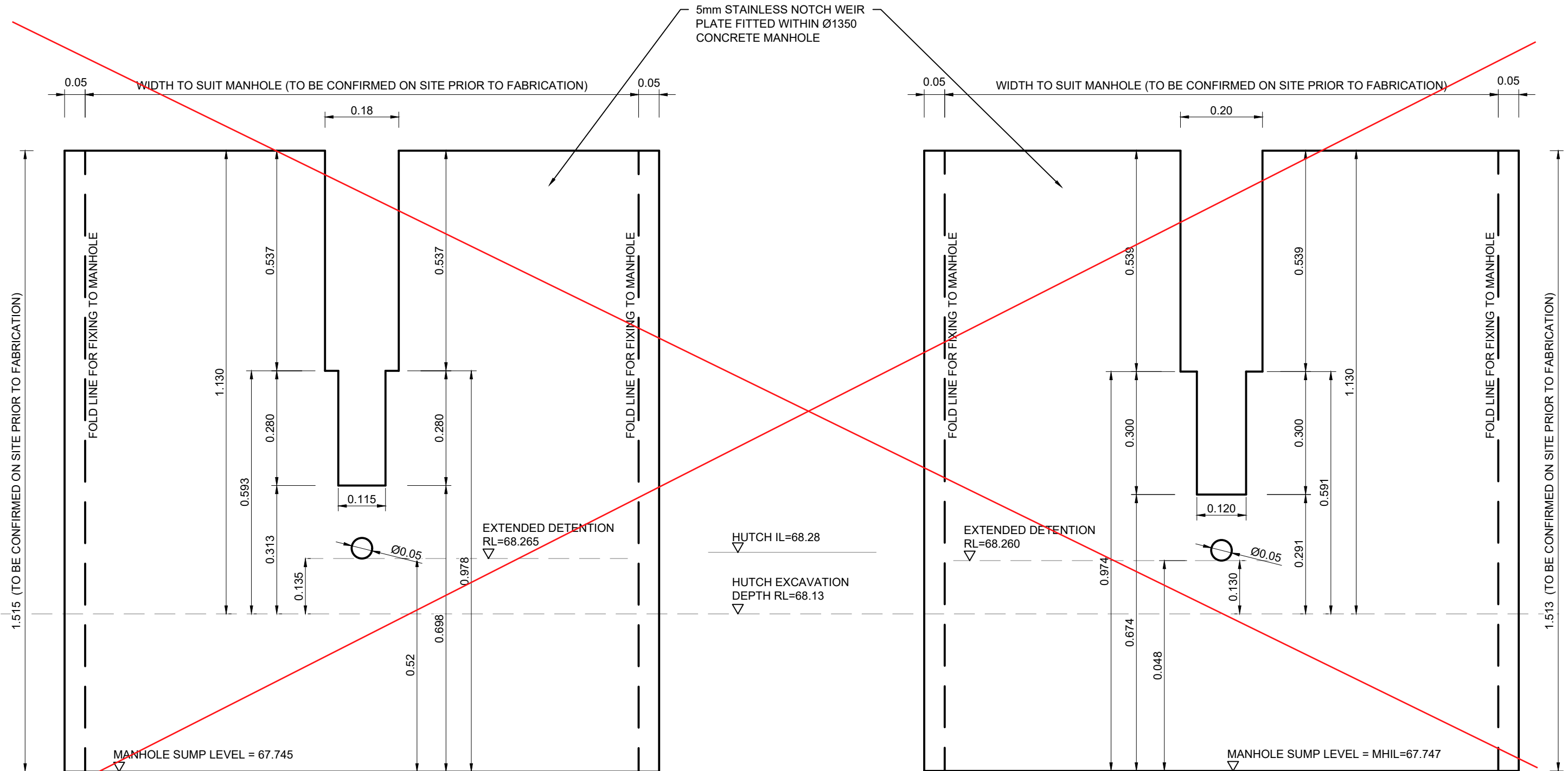
TITLE
STORMWATER IN CHANNEL EARTH WEIR DETAILS CROSS SECTIONS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:75 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD441	REVISION C		

DATE PLOTTED: Friday, 23 December 2022 9:20:29 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD440 WEIR DETAILS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



MH1350 B01-2:
NORTHERN ATTENUATION OUTLET
MANHOLE NOTCH WEIR PLATE
SCALE 1:10

MH1350 A01-2:
SOUTHERN ATTENUATION OUTLET
MANHOLE NOTCH WEIR PLATE
SCALE 1:10

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



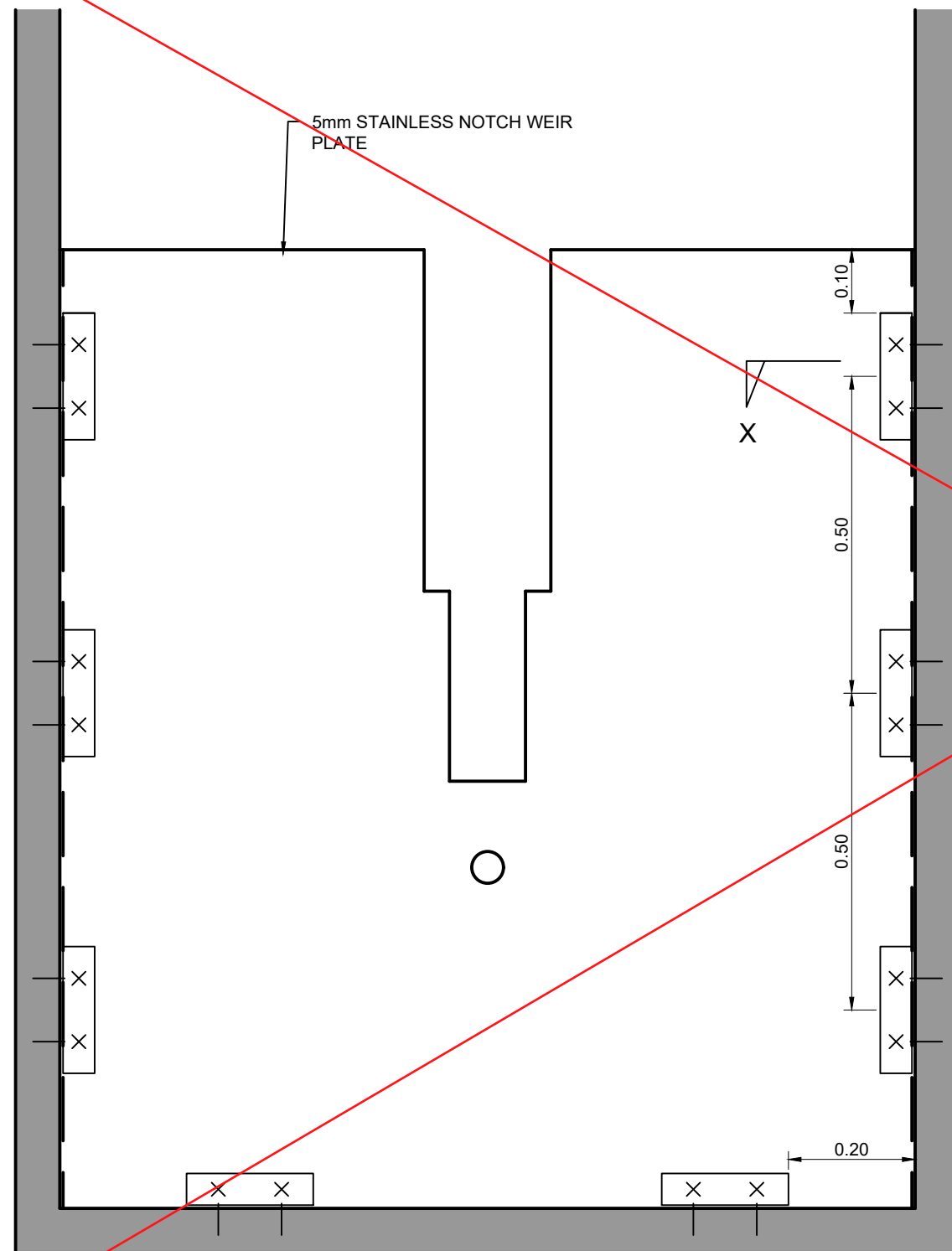
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

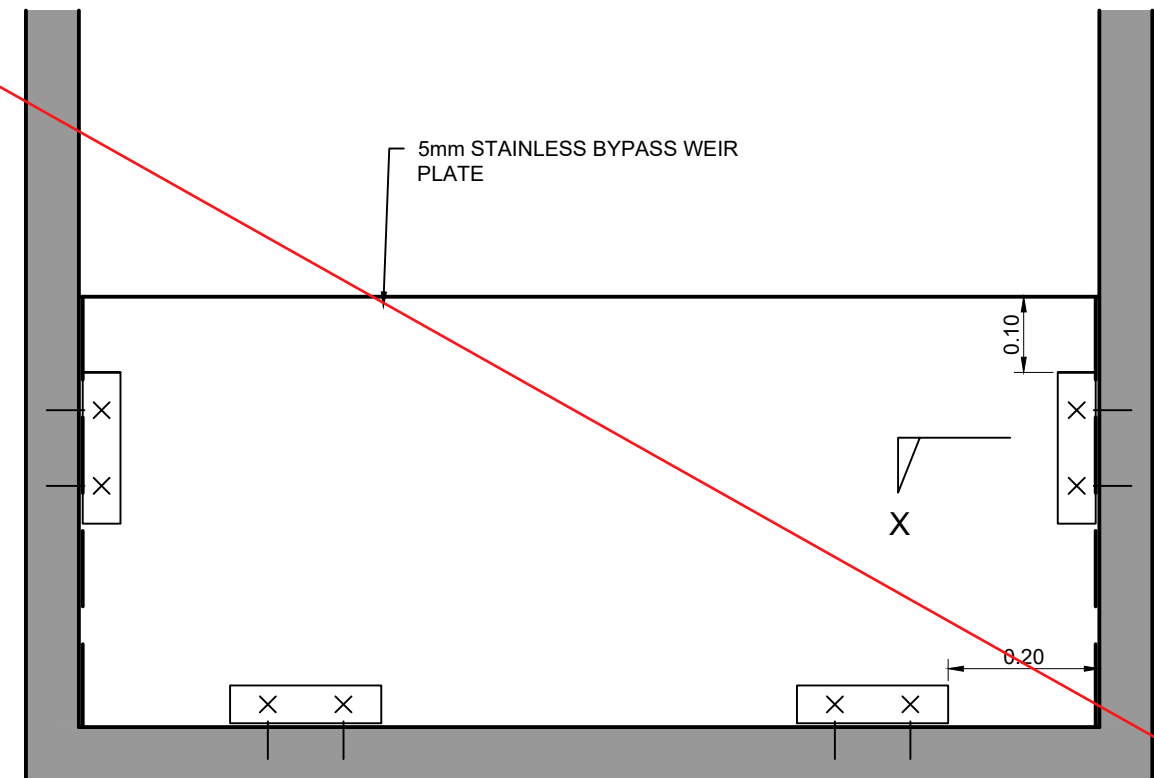
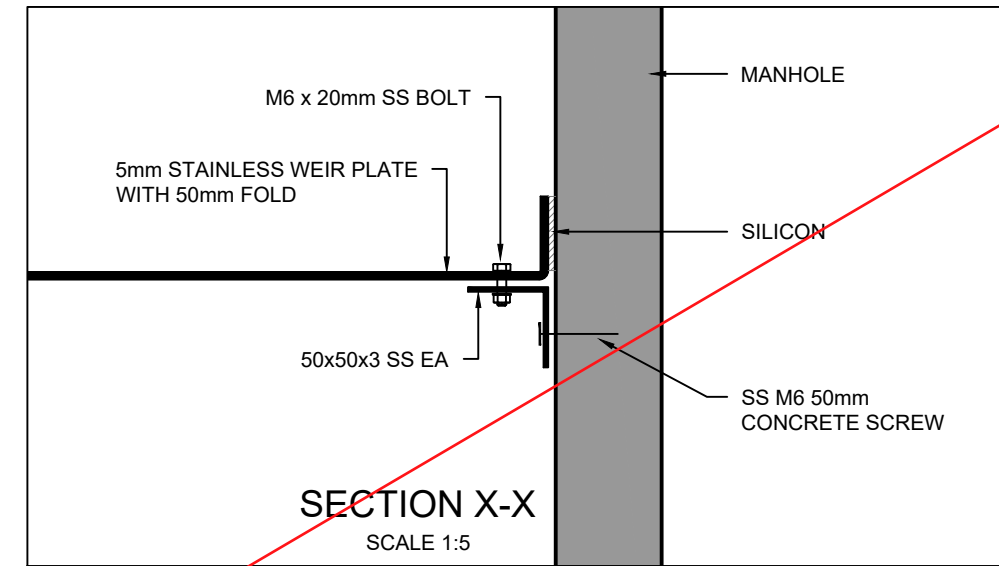
TITLE
STORMWATER ATTENUATION WEIR DETAILS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:10 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD450			REVISION C

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



TYPICAL NOTCH WEIR PLATE FIXING DETAILS
SCALE 1:10



TYPICAL BYPASS WEIR PLATE FIXING DETAILS
SCALE 1:10

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

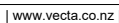
TITLE

STORMWATER ATTENUATION WEIR
FIXING DETAILS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:10 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD451			REVISION C

TRISHN NAND
ME., CPEng., IntPE(NZ)

1. SEE CONSTRUCTION NOTES DD001.



DATE PLOTTED: Friday, 23 December 2022 9:20:44 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD440 WEIR DETAILS.dwg

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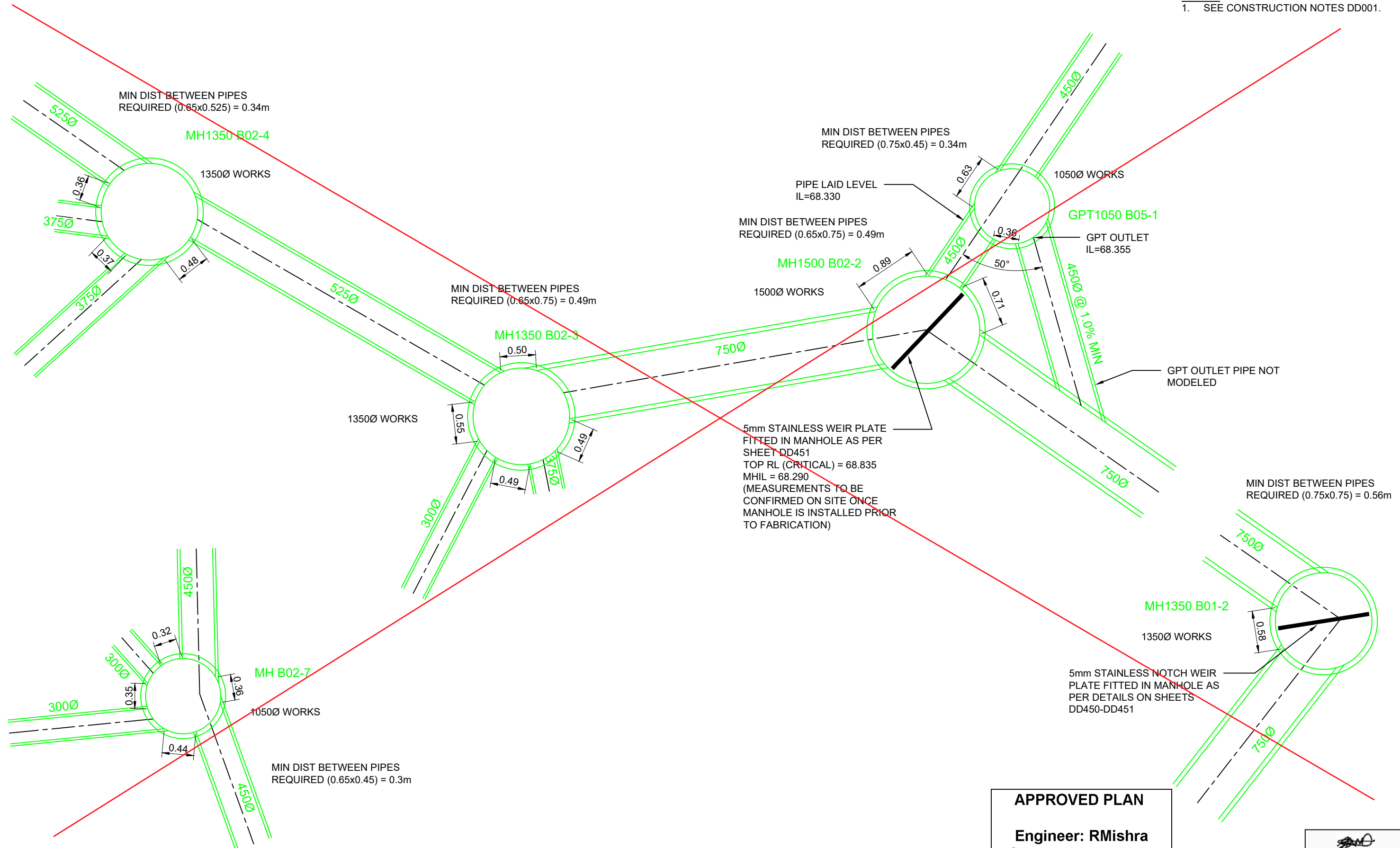
PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:50 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD455		REVISION C	

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
STORMWATER MANHOLE SIZING AND WEIR DETAILS (SHEET 2)

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:50 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD456	REVISION C		

DATE PLOTTED: Friday, 23 December 2022 9:20:49 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD440 WEIR DETAILS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



- NOTES:**
1. SEE CONSTRUCTION NOTES DD001.
 2. EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
 3. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

LEGEND:

- SS — 150mmØ uPVC SN16 SEWER PIPE
- - - 100mmØ uPVC SEWER LOT CONNECTION (1.65% MIN GRADE)
- MH Ø1050 SEWER MANHOLE (UNLESS OTHERWISE STATED)
- TMS TERMINAL MAINTENANCE SHAFT
- Ex S — EXISTING SEWER
- ⊙ EXISTING SS MANHOLE
- GL=75.80 GL = DESIGN LEVEL
- IL=74.80 IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1.65% GRADE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
SANITARY SEWER PLAN OVERVIEW

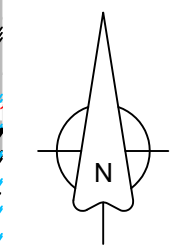
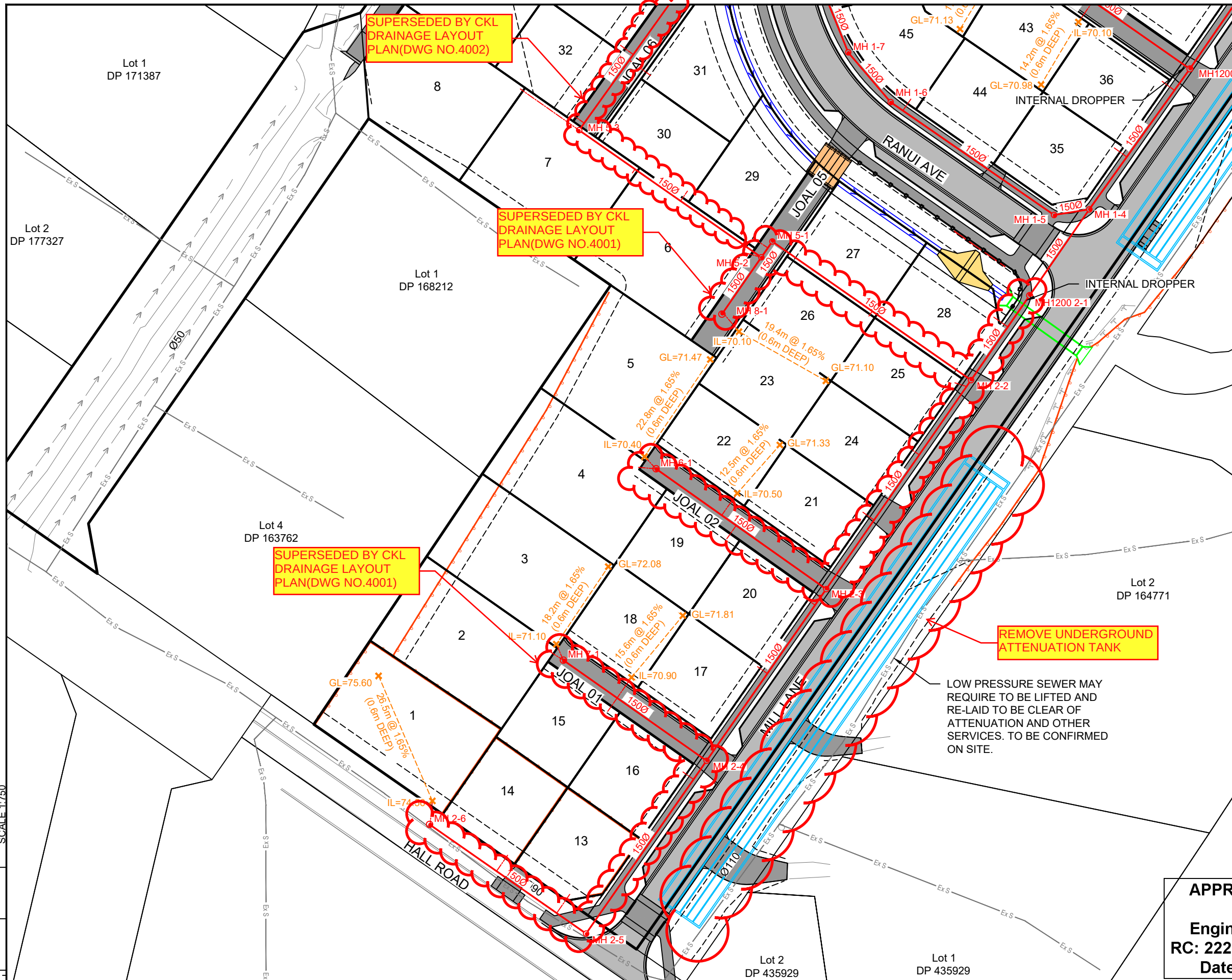
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD460			REVISION C

SCALE 1:1500

SCALE 1:1500

DATE PLOTTED: Friday, 23 December 2022 9:20:56 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD460 Sewer Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



- NOTES:**
- SEE CONSTRUCTION NOTES DD001.
 - EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
 - ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

- LEGEND:**
- SS 150mmØ uPVC SN16 SEWER PIPE
 - 100mmØ uPVC SEWER LOT CONNECTION (1.65% MIN GRADE)
 - MH Ø1050 SEWER MANHOLE (UNLESS OTHERWISE STATED)
 - TMS TERMINAL MAINTENANCE SHAFT
 - Ex S EXISTING SEWER
 - EXISTING SS MANHOLE
 - GL = DESIGN LEVEL
 - IL = MAX INVERT LEVEL OF CONNECTION TO SERVICE BACK OF LOT INCLUDING 600mm COVER AT 1.65% GRADE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE SANITARY SEWER PLAN SHEET 2	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN	
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE 1:750 @ A3	STATUS FOR APPROVAL		
	A	1ST ISSUE	09-11-2022			DWG NUMBER DD462	REVISION C			
	REV.		REVISION DETAILS			DRAWN	APP.			

<

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

- | | | | | | | | | | | |
|----------|------------|------------|--------|--------|--------|--------|--------|--------|---------|---------|
| EXMH 1-1 | MH1200 1-2 | MH1200 1-3 | MH 1-4 | MH 1-5 | MH 1-6 | MH 1-7 | MH 1-8 | MH 1-9 | MH 1-10 | MH 1-11 |
|----------|------------|------------|--------|--------|--------|--------|--------|--------|---------|---------|



SEWER LS LINE 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD470		REVISION C	

SUPERSEDED BY CKL
WASTEWATER LONG
SECTIONS SHEET1
(DWG NO.4200)

- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

SUPERSEDED BY CKL
WASTEWATER LONG
SECTIONS SHEET1
(DWG NO.4200)

	MH 1-11	MH 1-12	MH 1-4	MH1200 2-1	MH 2-2	MH 2-3	MH 2-4	MH 2-5	MH 2-6
Pipe Size/Type	Ø150 uPVC SN16		Ø150 uPVC SN16		Ø150 uPVC SN16		Ø150 uPVC SN16		Ø150 uPVC SN16
Grade (%)	1%		1.19%		0.67%		0.67%		1.8%
Datum	51.000		52.000		52.000		52.000		52.000
Depth To Invert	2.025	1.985	2.652	2.632	2.632	2.632	2.632	2.632	2.632
Invert Levels	69.253	69.293	67.820	67.85	68.06	69.063	69.08	69.11	69.197
Finished Surface	71.278	71.278	70.452	70.452	70.345	70.345	70.345	70.345	70.345
Chainage	276.077	278.26	0.000	3.11	20.384	83.583	26.97	40.387	70.275

SEWER LS LINE 1

	MH1200 2-1	MH 2-2	MH 2-3	MH 2-4	MH 2-5	MH 2-6
Pipe Size/Type	Ø150 uPVC SN16		Ø150 uPVC SN16		Ø150 uPVC SN16	
Grade (%)	1.19%		0.67%		0.67%	
Datum	52.000		52.000		52.000	
Depth To Invert	2.652	2.632	2.632	2.632	2.632	2.632
Invert Levels	67.820	67.85	68.06	69.063	69.08	69.11
Finished Surface	70.452	70.452	70.345	70.345	70.345	70.345
Chainage	0.000	3.11	20.384	83.583	26.97	40.387

SEWER LS LINE 2

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3		STATUS FOR APPROVAL
DWG NUMBER DD471			REVISION C

- NOTES:
1. SEE CONSTRUCTION NOTES DD001.
 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

MH1200 1-2

MH 3-1

MH1200 1-3

MH 4-1

MH 2-2

MH 5-1

MH 5-2

MH 5-3

MH 5-4

MH 5-5

INTERNAL DROPPER

INTERNAL DROPPER

PIPE PROTECTION REQUIRED WHERE COVER IS <900mm UNDER TRAFFICABLE AREAS. SEE DETAIL ON SHEET DD482.

SUPERSEDED BY CKL WASTEWATER LONG SECTIONS SHEET1 (DWG NO.4200)

Pipe Size/Type

Grade (%)

Datum

Depth To Invert

Invert Levels

Finished Surface

Chainage

Ø150
uPVC SN16

2.2%

50.000

3.254

1.633

67.299

68.920

70.563

70.953

SEWER LS LINE 3

Ø150
uPVC SN16

2.2%

51.000

3.150

1.631

67.555

69.074

70.705

71.123

SEWER LS LINE 4

Ø150
uPVC SN16

0.67%

51.000

69.197

1.079

69.262

1.014

70.275

70.763

SEWER LS LINE 5

Ø150
uPVC SN16

0.67%

1.185

1.120

69.578

69.643

70.819

71.782

Ø150
uPVC SN16

0.67%

1.151

1.086

69.668

69.733

70.022

70.087

Ø150
uPVC SN16

1%

1.759

1.694

70.413

70.478

71.158

71.822

Ø150
uPVC SN16

1%

0.745

0.680

70.703

71.118

SANITARY SEWER LONGSECTIONS
SHEET 3

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 3

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1000(H) @ A3 1:200(V) @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD472		REVISION C	

- NOTES:
- 1. SEE CONSTRUCTION NOTES DD001.
 - 2. ALL MANHOLES ARE Ø1050 UNLESS OTHERWISE STATED.

MH 2-3 MH 6-1 MH 2-4 MH 7-1 MH 5-2 MH 8-1

SUPERSEDED BY CKL
WASTEWATER LONG
SECTIONS SHEET2
(DWG NO.4201)

Pipe Size/Type

Grade (%)

Datum

Depth
To Invert

Invert
Levels

Finished Surface

Chainage

Ø150
uPVC SN16

1.7%

52.000

1.318

1.253

69.548

69.613

70.867

0.000

Ø150
uPVC SN16

1.3%

53.000

1.136

1.071

70.300

70.365

71.436

0.000

Ø150
uPVC SN16

1.65%

51.000

1.151

1.131

69.668

69.688

70.819

0.000

Ø150
uPVC SN16

1.65%

51.000

1.111

69.910

69.910

71.021

13.454

SEWER LS LINE 6

SEWER LS LINE 7

SEWER LS LINE 8



C

FOR APPROVAL - RESPONSE TO RFI'S 1

22-12-2022

AP TN

B

FOR APPROVAL

17-11-2022

AP TN

A

1ST ISSUE

09-11-2022

AP --

REV.

REVISION DETAILS

DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

SANITARY SEWER LONGSECTIONS
SHEET 4

DATE CREATED
09-11-2022

DRAWN
AP

DESIGNED
AP

APPROVED
TN

VECTA REF NO
P0442

SCALE 1:1000(H) @ A3
1:200(V) @ A3

STATUS
FOR APPROVAL

DWG NUMBER

DD473

REVISION

C

TRISHN NAND
ME., CPEng., IntPE(NZ)

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

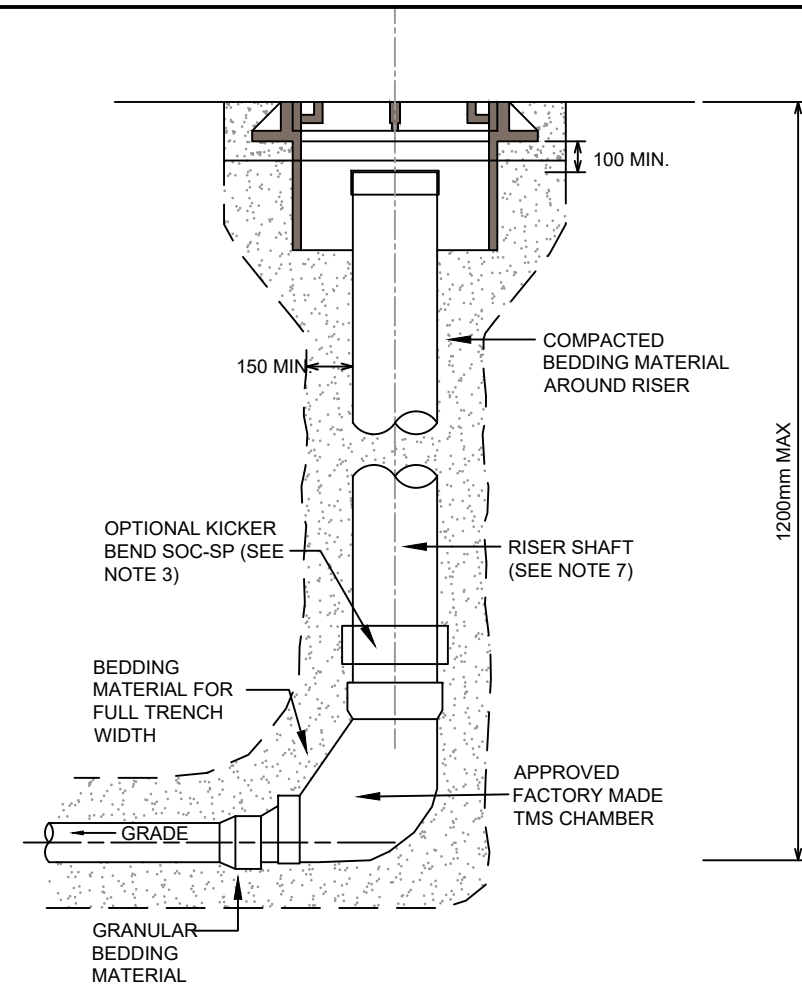
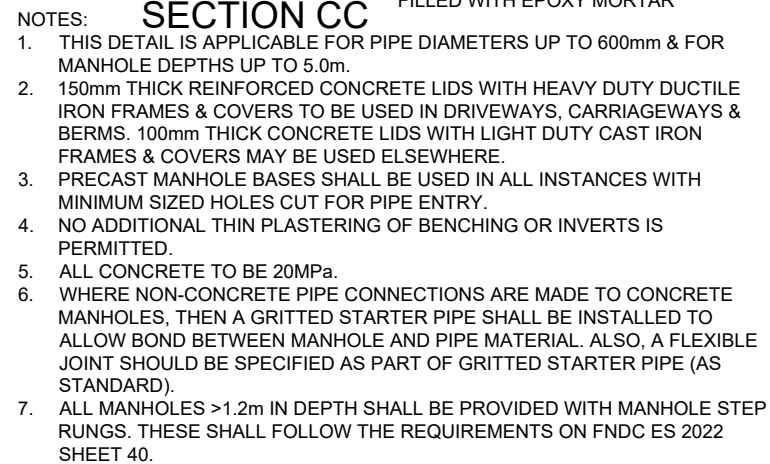
SCALE 1:200

SCALE 1:1000

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DATE PLOTTED: Friday, 23 December 2022 9:21:24 am FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\IP0442 Hall Road\CAD\Detail Design\IP0442-DD470 SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



200mm
MAX

EPOXY MORTAR
AROUND PIPE

LONDON
JUNCTION

SHORT - NO LONGER
THAN 1000mm

DROPPER PIPE FOR
SEWER ONLY
(SINGLE PIECE)

WHERE THE HEIGHT OF DROP
EXCEEDS 1.5m THE DROPPER PIPE
SHALL BE RIGIDLY ATTACHED TO
THE WALL OF THE MANHOLE WITH
APPROVED GRADE 316 SS OR
PLASTIC SUPPORTS AT 1.5m
CENTRES MAX.

88° BEND SET
IN BENCHING

HALF PIPE CHANNEL
(CERAMIC OR uPVC)

FOR STORMWATER MANHOLES ONLY, STEPPED RUNGS AT 300mm CENTRES (DROPPER OF SAFETY TYPE, HOT DIP GALV.)

550 MAX
150

B

DUCTILE IRON MANHOLE FRAME & COVER TO BE FLUSH WITH GROUND SURFACE

GALVANISED TIE BOLTS (MIN 3 PER JOINT)

APPROVED RUBBER/ BITUMEN OR EPOXY SEALING STRIP (MORTAR FINISH BOTH SIDES OF JOINT)

BOLT HOLES TO BE MORTAR SEALED

C

MORTAR AROUND PIPE

STANDARD 1050DIA PRECAST MANHOLE RISER. USE MAXIMUM HEIGHT AVAILABLE TO MINIMISE NUMBER OF JOINTS

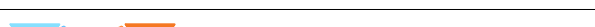
50mm LAYER OF 20 MPa CONCRETE

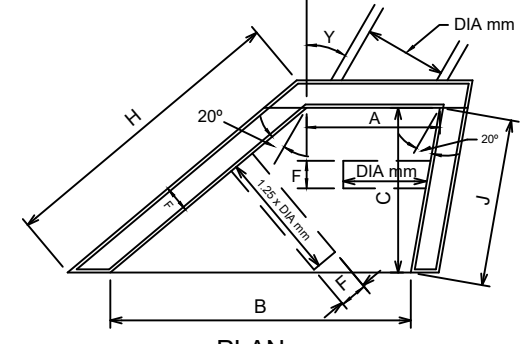
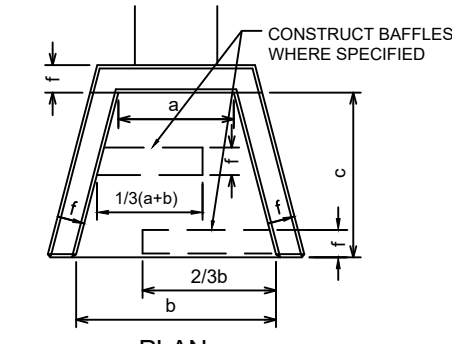
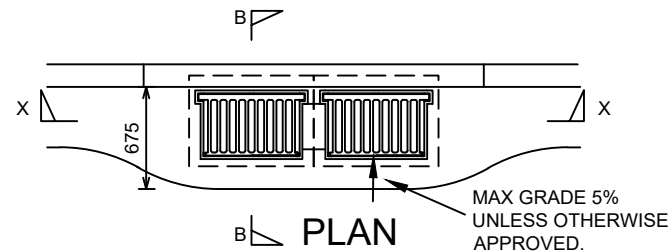
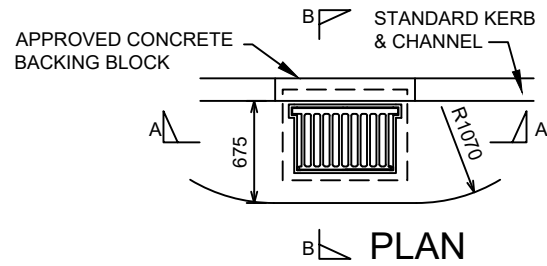
MAKE WATER-TIGHT JOINT BY COATING uPVC FOR FULL EMBEDMENT LENGTH WITH SOLVENT CEMENT THEN COATING WET CEMENT WITH DRY SAND & ALLOWED TO SET.

STANDARD PRECAST MANHOLE (SEWER & STORMWATER)

NOTE:

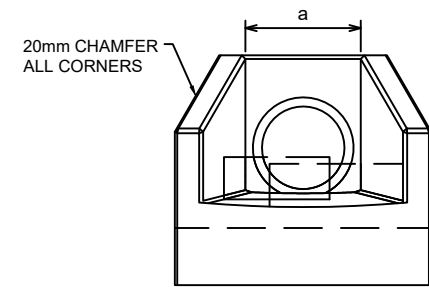
1. IF A DROPPER IS REQUIRED, THE MANHOLE SHALL BE 1200mm DIA MINIMUM.
2. THIS DETAIL IS APPLICABLE FOR PIPE DIAMETERS UP TO 250mm & FOR MANHOLE DEPTHS UP TO 5.0m & FOR MANHOLE DIAMETERS > 1200mm.
3. EXTERNAL DROPS SHALL NOT BE USED.

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE DRAINAGE TYPICAL DETAILS - SHEET 1 TYPICAL MANHOLE DETAILS	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022			VECTA REF NO P0442	SCALE NTS @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022			DWG NUMBER	DD480	REVISION C	

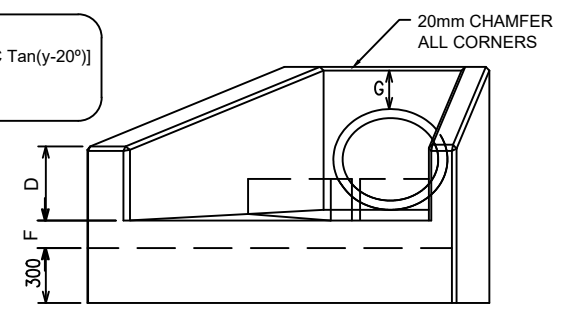


SHEET 35 FNDC ES 2022 - NOT TO SCALE

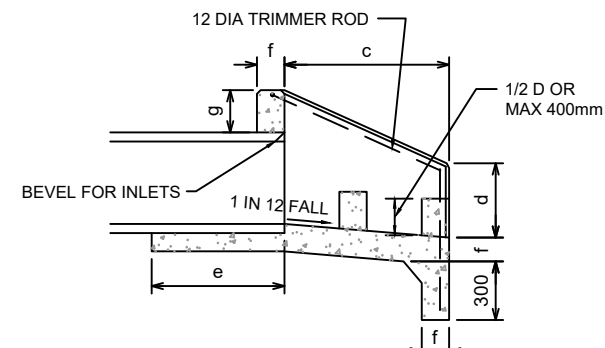
SHEET 35 FNDC ES 2022 - NOT TO SCALE



SHEET 35 FNDC ES 2022 - NOT TO SCALE



SHEET 35 FNDC ES 2022 - NOT TO SCALE



SHEET 35 FNDC ES 2022 - NOT TO SCALE

PRINCIPAL DIMENSIONS (mm)							
DIA OF PIPE	a	b	c	d	e	f	g
150	300	450	600	200	325	100	150
230	380	600	700	250	425	100	150
300	450	750	750	300	525	100	150
375	550	900	850	350	625	100	150
450	630	1100	900	400	725	150	230
525	700	1200	1000	450	825	150	230
600	800	1400	1100	550	900	150	230
750	1000	1700	1200	600	1050	150	300
900	1170	2000	1450	650	1225	150	300
1050	1380	2300	1700	750	1375	150	300
1200	1520	2600	2100	750	1550	150	450
1350	1680	2800	2400	750	1725	150	450

NOTES:

- REINFORCE FLOORS & WALLS WITH:

150 - 375	665 MESH
450 - 600	633 MESH OR D10 RODS AT 250 CRS
675 - 900	D12 RODS AT 250 CRS
1050 - 1350	D12 RODS AT 150 CRS
- ALL REINFORCEMENT SHALL BE PLACED CENTRALLY IN WALLS AND FLOOR, AND SHALL BE CONTINUOUS BETWEEN WALLS AND FLOOR.
- LAPS IN STRUCTURAL GRADE BARS TO BE 300 MIN.

- THERE SHALL BE A LEAST 2 BARS - WHETHER MESH OR M.S. OVER THE TOP OF THE PIPE.
- CONCRETE IS TO BE 20MPa AT 28 DAYS AS PER NZS3104:2021.
- BAFFLES ARE TO BE CONSTRUCTED AS SHOWN WHEN OUTLET VELOCITIES AND SOIL CONDITIONS DICTATE, IN EXTREME CASES SPECIFIC DESIGN MAY BE REQUIRED BY THE COUNCIL.
- INLET STRUCTURES SHALL HAVE REVERSE APRON FALL AND NO BAFFLES.

INLET AND OUTFALL STRUCTURES

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

NOTES:

- SEE CONSTRUCTION NOTES DD001.



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

DRAINAGE TYPICAL DETAILS - SHEET 2

TYPICAL SUMP & HEADWALL DETAILS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD481			REVISION C

REINSTATE TO PREVIOUS
SURFACE (WHERE PRACTICABLE)

W	TYPE OF PIPE
D + 600	STEEL, DI
D + 450	CONCRETE
D + 450	VITRIFIED CLAY
D + 400	uPVC, PE & PP

VARIATIONS IN W
REQUIRE ADDITIONAL
DESIGN COMPENSATION.

GAP 65 OR APPROVED
SELECTED EXCAVATED
MATERIAL COMPACTED IN
150mm MAX. LAYERS

COMPACTED GAP 20 BEDDING OR
APPROVED ALTERNATIVE THAT SATISFIES
COMPACTION TESTS, FREE OF SHARP,
SOFT OR LARGE OBJECTS, VEGETABLE
OR OTHER UNSUITABLE MATTER.

PE PIPE BEDDING AGGREGATE SHALL NOT
EXCEED 5% OF THE NOMINAL PIPE DIA. AS
PER AS/NZS 2566.

CONC., DI, STEEL OR VC PIPE

SHEET 31 FNDC ES 2022 - NOT TO SCALE
(PVC NOT APPROVED FOR WATER SUPPLY)

BEDDING NOTES

- CONCRETE PIPES TO BE RCRRJ TO AS/NZS 4058 INSTALLED TO MANUFACTURER'S REQUIREMENTS.
- ORDINARY BACKFILL SHALL BE FREE FROM STONES OR ROCKS GREATER THAN 150mm NOMINAL DIAMETER COMPACTED IN 300mm LAYERS.
- REPLACE TOPSOIL TO ORIGINAL DEPTH AS NECESSARY.
- EXISTING SEALED ROADWAY EXCAVATIONS ARE TO BE RESURFACED WITH 50mm OF ASPHALTIC CONCRETE.
- CLEGG HAMMER TEST:
 - 0-300mm DEPTH RANGE CLEGG READING NOT LESS THAN 45.
 - 300mm-1.5m DEPTH RANGE READING NOT LESS THAN 30.
 - 1.5m-TOP OF PIPE BEDDING MATERIAL CLEGG READING NOT LESS THAN 25.
- PRIVATEWAY BASE COURSE METALLING WITHIN PIPE TRENCHES MAY BE IN ACCORDANCE WITH THE PRIVATEWAY STANDARDS.
- TRENCH WIDTH SHALL NOT EXCEED W AT THE PIPE CROWN LEVEL.
- UNSATISFACTORY TRENCH MATERIAL IS TO BE UNDERCUT AND REPLACED WITH COMPACTED HARDFILL. IN POOR SOILS SUCH AS SWAMP, PEAT, AND IN ROCK THE MINIMUM DEPTH OF GRANULAR BEDDING MATERIAL BELOW THE INVERT IS TO BE 200mm OR SPECIFIC DESIGN AS NECESSARY.
- PIPELINES AT 1:8 GRADIENT OR STEEPER SHALL HAVE CEMENT STABILISED BEDDING AND/OR SURROUNDS.
- PIPELINES AT 1:3 GRADIENT OR STEEPER SHALL HAVE WEAK MIX CONCRETE BEDDING (10Mpa) IN ACCORDANCE WITH FNDC ES 2022 SHEET 32. LARGE PIPES WILL REQUIRE SPECIFIC PIER DESIGN.
- CONCRETE BEDDING SHALL BE ALLOWED TO CURE FOR 48 HOURS PRIOR TO BACKFILLING.
- BACKFILLING - CARRIAGEWAYS MAY BE WITH 'FLOWABLE FILL' (LOW STRENGTH FLY-ASH CONCRETE).
- GRANULAR BEDDING IS TO SATISFY N.Z.S. 7643 APPENDIX B.
- MINIMUM COVER OVER PIPES (UNLESS SPECIFICALLY DESIGNED OR PROTECTED IN ACCORDANCE WITH SHEET 32).
 - 600mm IF NOT SUBJECTED TO TRAFFIC LOADING
 - 900mm UNDER CARRIAGEWAYS AND TRAFFICKED AREAS.
- SAND IS NOT PERMITTED AS PE PIPE BEDDING.

REINSTATE TO PREVIOUS
SURFACE (WHERE PRACTICABLE)

W	TYPE OF PIPE
D + 600	STEEL, DI
D + 450	CONCRETE
D + 450	VITRIFIED CLAY
D + 400	uPVC, PE & PP

VARIATIONS IN W
REQUIRE ADDITIONAL
DESIGN COMPENSATION.

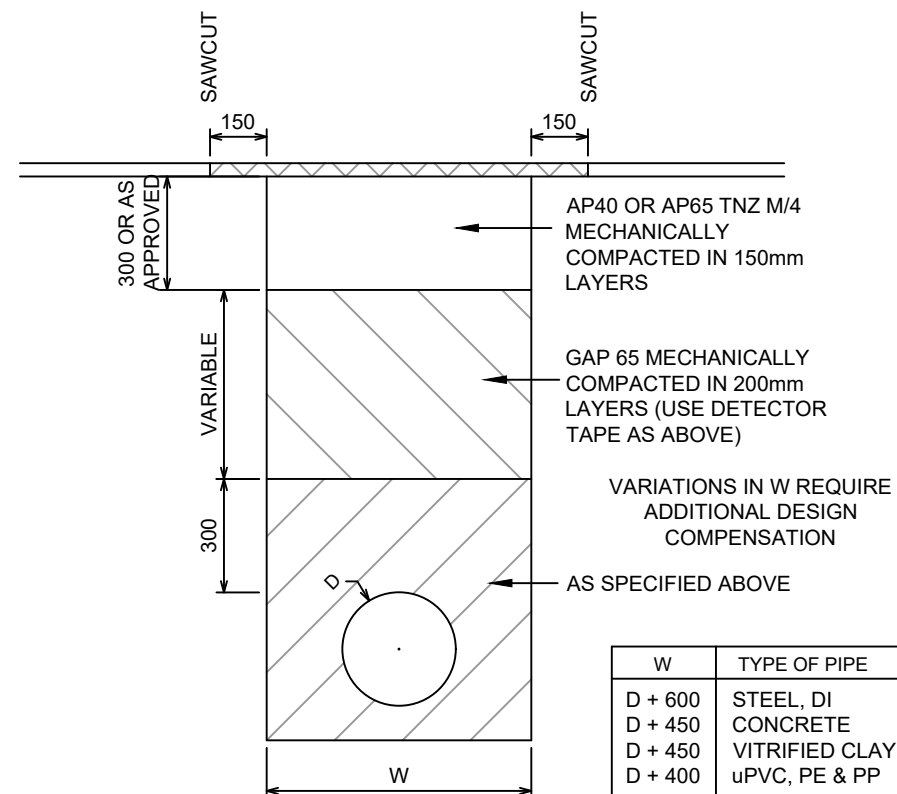
GAP 65 OR APPROVED
SELECTED EXCAVATED
MATERIAL COMPACTED IN
150mm MAX. LAYERS

COMPACTED BLUE METAL FINES OR
APPROVED SIMILAR ALTERNATIVE THAT
SATISFIES COMPACTION TESTS, FREE OF
SHARP, SOFT OR LARGE OBJECTS,
VEGETABLE OR OTHER UNSUITABLE
MATTER.

PE PIPE BEDDING AGGREGATE SHALL NOT
EXCEED 5% OF THE NOMINAL PIPE DIA. AS
PER AS/NZS 2566

PVC, PE & PP PIPE BEDDING

SHEET 31 FNDC ES 2022 - NOT TO SCALE
(PVC & PP NOT APPROVED FOR WATER SUPPLY)

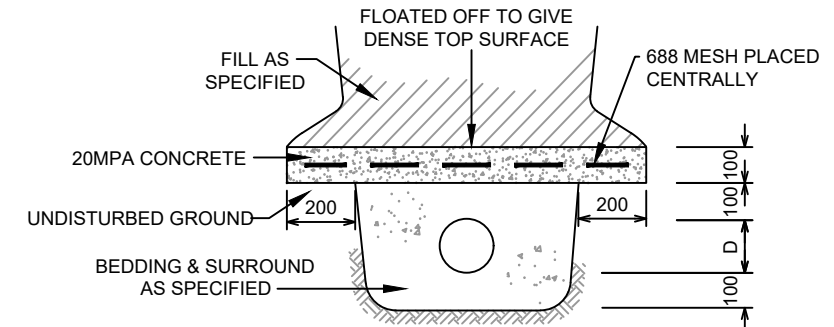


ADDITIONAL BACKFILL REQUIREMENTS UNDER CARRIAGEWAYS

(ALL TYPES OF PIPE)
NOT TO SCALE

CONCRETE SLAB PROTECTION NOTES:

- ALL CONCRETE TO BE 20MPa AT 28 DAYS AS PER NZS 3104:2021.
- CEMENT STABILISED BEDDING AND BACK FILL: 1 PART CEMENT TO 20 PARTS AGGREGATE.
- ALLOW 48 HOURS CURING PRIOR TO BACK FILLING ANY CONCRETE OR STABILISED MATERIAL.
- SLAB PROTECTION TO BE LAID IN LENGTHS NO GREATER THAN 2.0m.



REINFORCED CONCRETE SLAB PROTECTION FOR STORMWATER AND WASTEWATER

(WHERE ADDITIONAL LOADING OR OTHER REQUIREMENTS NECESSITATE)
SHEET 32 FNDC ES 2022 - NOT TO SCALE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

NOTES:

- SEE CONSTRUCTION NOTES DD001.

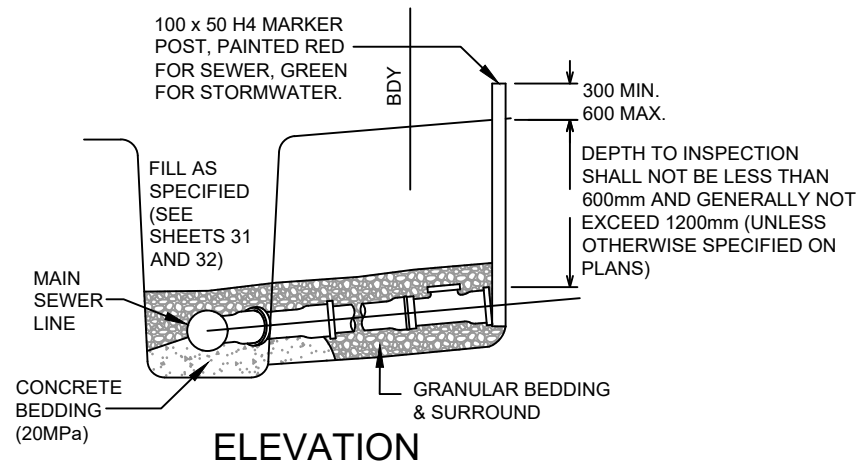


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
DRAINAGE TYPICAL DETAILS - SHEET 3
TYPICAL PIPE BEDDING DETAILS

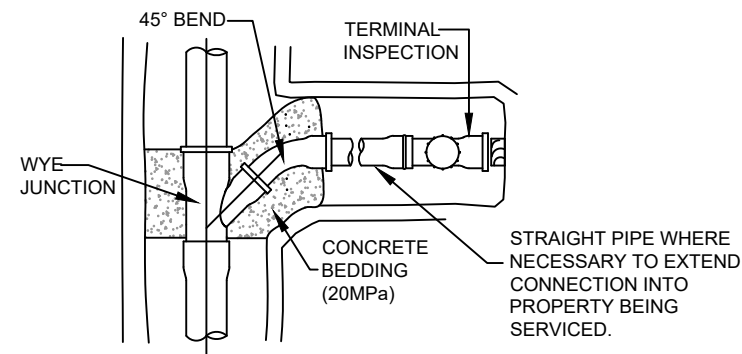
DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD482			REVISION C



MARKING OF SS & SW CONNs

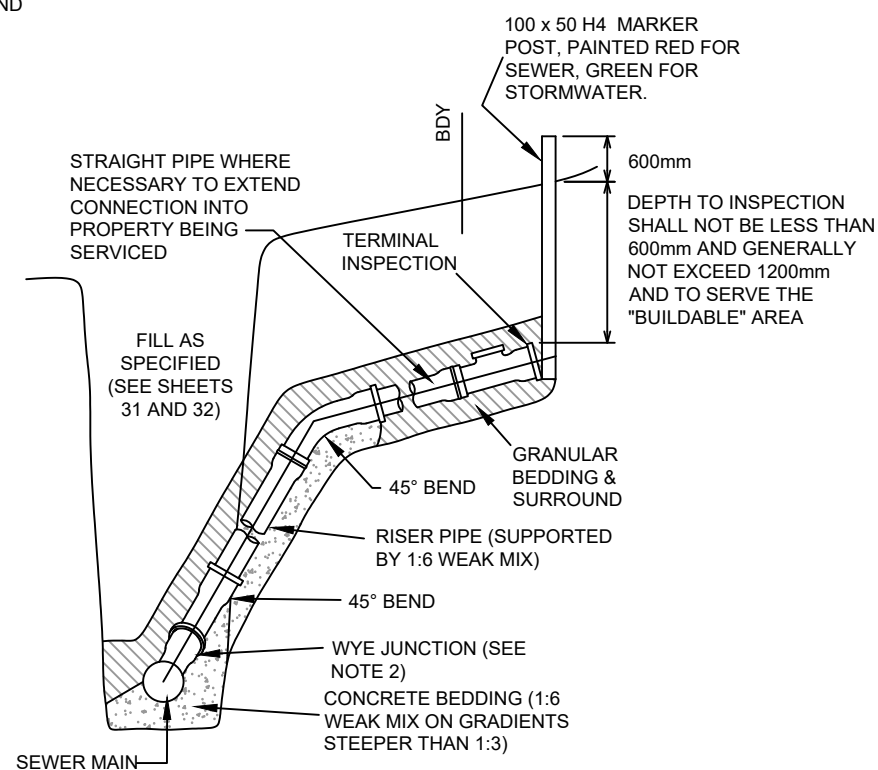
CONNECTIONS SHALL BE SEALED WITH REMOVABLE CAPS UNTIL REQUIRED. THE CAPS ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE END CAP.
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.

POSITIONS ARE ALSO TO BE MARKED WITH A WOODEN STAKE (MIN 100x50) EXTENDING FROM THE INVERT OF THE CONNECTION TO 600mm ABOVE GROUND LEVEL. STAKES ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE STAKE
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.



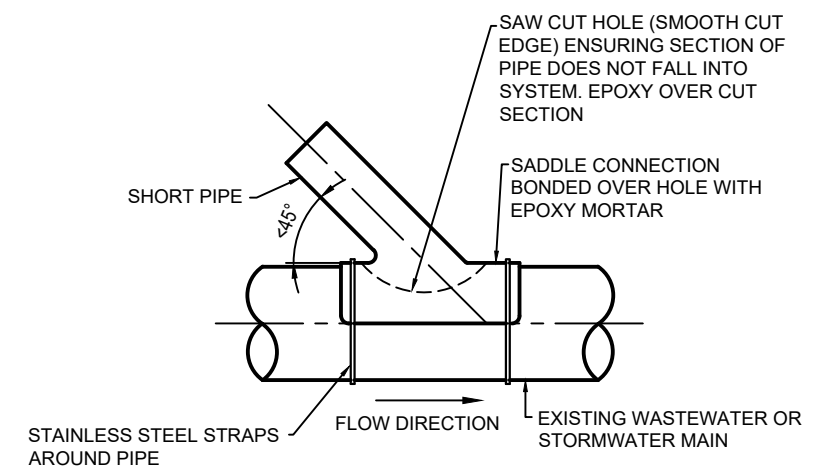
NOTES:

- THE TERMINAL INSPECTION SHALL BE LOCATED NOT LESS THAN 300mm INSIDE THE PROPERTY BEING SERVICED AND BE FREE OF OBSTRUCTIONS.
- FOR STORMWATER CONNECTIONS, JUNCTIONS TO BE (IN ORDER OF PREFERENCE):
 - PREFABRICATED STANDARD WYE JUNCTIONS
 - PREFABRICATED FACTORY SPECIAL CONNECTION, EPOXY MORTARED SADDLED FLANGE CONNECTION WITH APPROPRIATE INSERT ADAPTOR >DN 225.
- TERMINAL BLANK END REQUIRED FOR STORMWATER CONNECTIONS.
- PIPES AND FITTINGS ARE TO BE SEWER GRADE uPVC, OR CONCRETE TO RELEVANT NZ STANDARD.
- PIPELINES THAT ARE LIKELY TO CARRY COMMERCIAL OR INDUSTRIAL WASTE ARE TO SATISFY THE MANUFACTURER'S REQUIREMENTS.
- SPECIFIC DESIGN MAY BE REQUIRED IN POTENTIALLY UNSTABLE AREAS.
- JOINT FLEXIBILITY IS TO BE MAINTAINED WHERE PIPELINES ARE IN CONTACT WITH CONCRETE. PIPES SHALL BE SEPARATED FROM CONCRETE USING DPC.
- AS-BUILT PLANS ARE REQUIRED FOR ALL CONNECTIONS.



RAMPED RISER CONNECTION

SHEET 37 FNDC ES 2022 - NOT TO SCALE
(REQUIRES SPECIFIC APPROVAL)



SADDLE CONNECTION

IF MAIN > 225mm

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

NOTES:

- SEE CONSTRUCTION NOTES DD001.

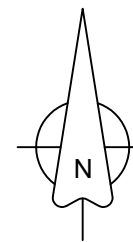


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
DRAINAGE TYPICAL DETAILS - SHEET 4
TYPICAL STORMWATER CONNECTION DETAILS

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD483			REVISION C



NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
3. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
4. ALL WATER PIPES TO BE PE100 PN12.5.
5. 150mm MOWING STRIP TO BE LAID AROUND ALL MULTIBOXES AND VALVES IN BERM.
6. WATER MAIN SIZES & HYDRANT FLOWS TO BE CONFIRMED AT DETAIL DESIGN STAGE.

LEGEND:

	Ø150 (180OD) PE100 PN12.5 WATER MAIN
	Ø100 (125OD) PE100 PN12.5 RIDER MAIN
	Ø50 (63OD) PE100 PN12.5 RIDER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED MULTI WATER BOX
	PROPOSED SLUICE VALVE
	PROPOSED PEET VALVE
	PROPOSED WATER METER
	PROPOSED JOAL/LOT CONNECTION
	EXISTING WATER
	EXISTING FIRE HYDRANT
	EXISTING VALVE
	EXISTING WATER METER

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

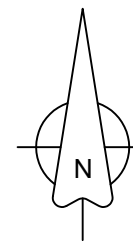
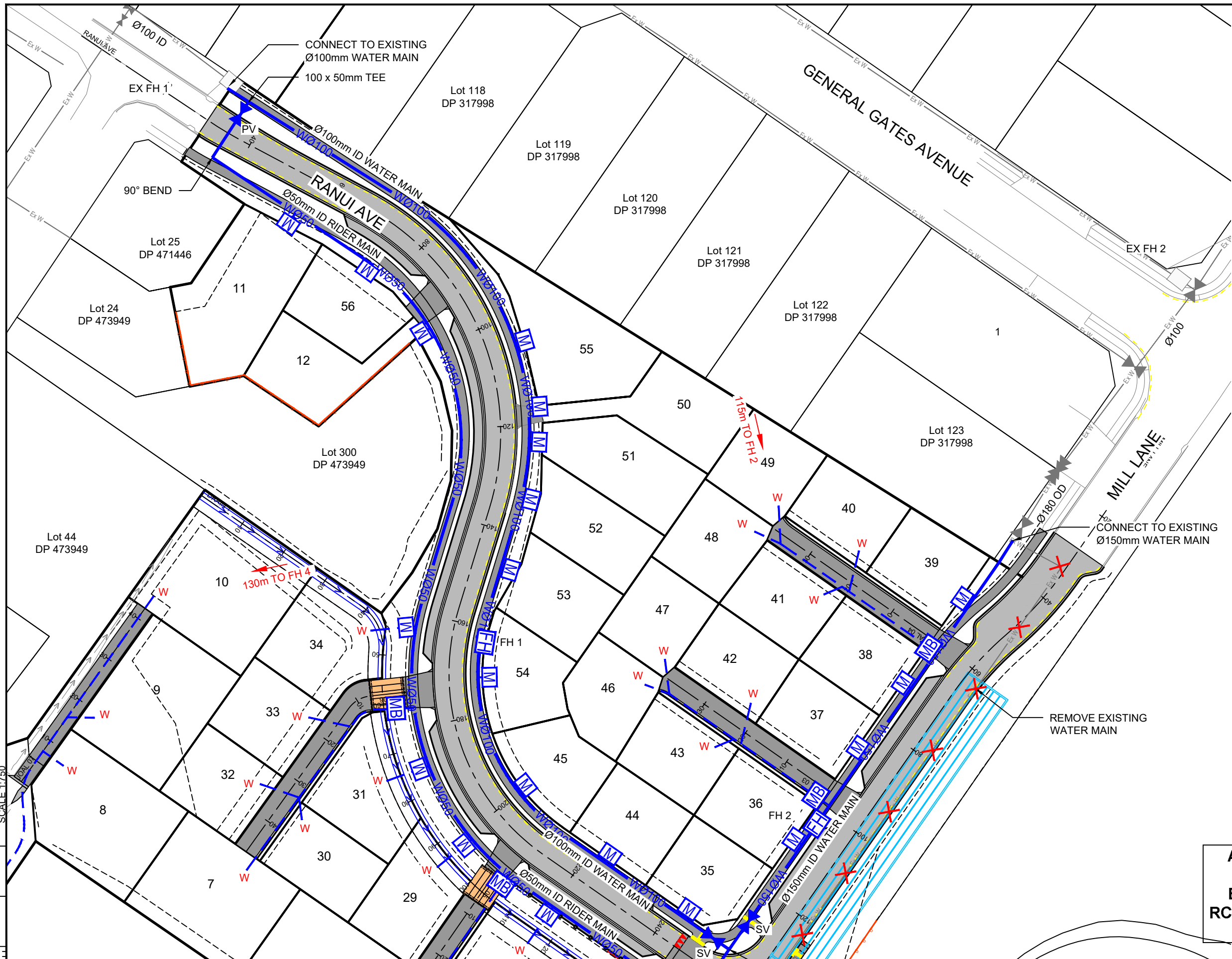


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
POTABLE WATER PLAN
OVERVIEW

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:1500 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD500			REVISION C



NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
3. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
4. ALL WATER PIPES TO BE PE100 PN12.5.
5. 150mm MOWING STRIP TO BE LAID AROUND ALL MULTIBOXES AND VALVES IN BERM.
6. WATER MAIN SIZES & HYDRANT FLOWS TO BE CONFIRMED AT DETAIL DESIGN STAGE.

LEGEND:

	Ø150 (180OD) PE100 PN12.5 WATER MAIN
	Ø100 (125OD) PE100 PN12.5 RIDER MAIN
	Ø50 (63OD) PE100 PN12.5 RIDER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED MULTI WATER BOX
	PROPOSED SLUICE VALVE
	PROPOSED PEET VALVE
	PROPOSED WATER METER
	PROPOSED JOAL/LOT CONNECTION
	EXISTING WATER
	EXISTING FIRE HYDRANT
	EXISTING VALVE
	EXISTING WATER METER

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

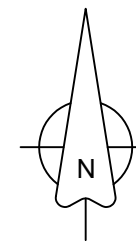
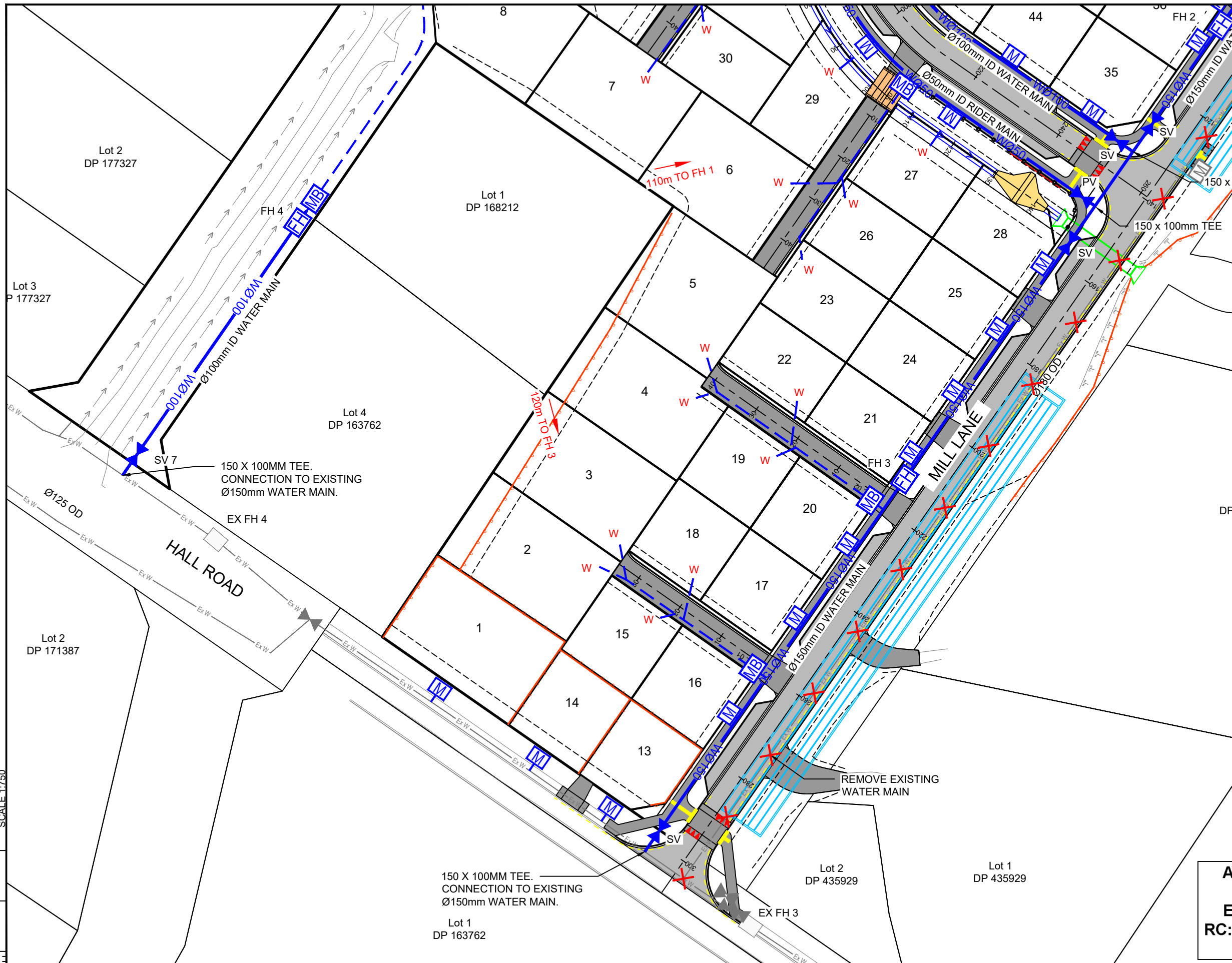


C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
B	FOR APPROVAL	17-11-2022
A	1ST ISSUE	09-11-2022
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

TITLE
POTABLE WATER PLAN SHEET 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:750 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD501			REVISION C



NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. EXISTING SERVICES BASED ON FAR NORTH DISTRICT COUNCIL GIS. CONTRACTOR TO LOCATE ALL EXISTING SERVICES & UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM EXACT LOCATIONS.
3. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
4. ALL WATER PIPES TO BE PE100 PN12.5.
5. 150mm MOWING STRIP TO BE LAID AROUND ALL MULTIBOXES AND VALVES IN BERM.
6. WATER MAIN SIZES & HYDRANT FLOWS TO BE CONFIRMED AT DETAIL DESIGN STAGE.

LEGEND:

- WØ150 Ø150 (180OD) PE100 PN12.5 WATER MAIN
- WØ100 Ø100 (125OD) PE100 PN12.5 RIDER MAIN
- WØ50 Ø50 (63OD) PE100 PN12.5 RIDER MAIN
- FH PROPOSED FIRE HYDRANT
- MB PROPOSED MULTI WATER BOX
- SV PROPOSED SLUICE VALVE
- PV PROPOSED PEET VALVE
- M PROPOSED WATER METER
- - - W PROPOSED JOAL/LOT CONNECTION
- Ex W EXISTING WATER
- FH EXISTING FIRE HYDRANT
- SV EXISTING VALVE
- M EXISTING WATER METER

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)

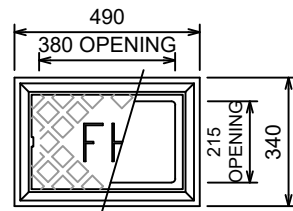
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B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

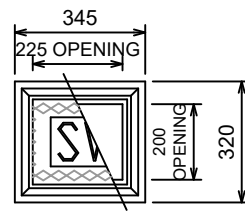
TITLE
POTABLE WATER PLAN
SHEET 2

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE 1:750 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD502			REVISION C

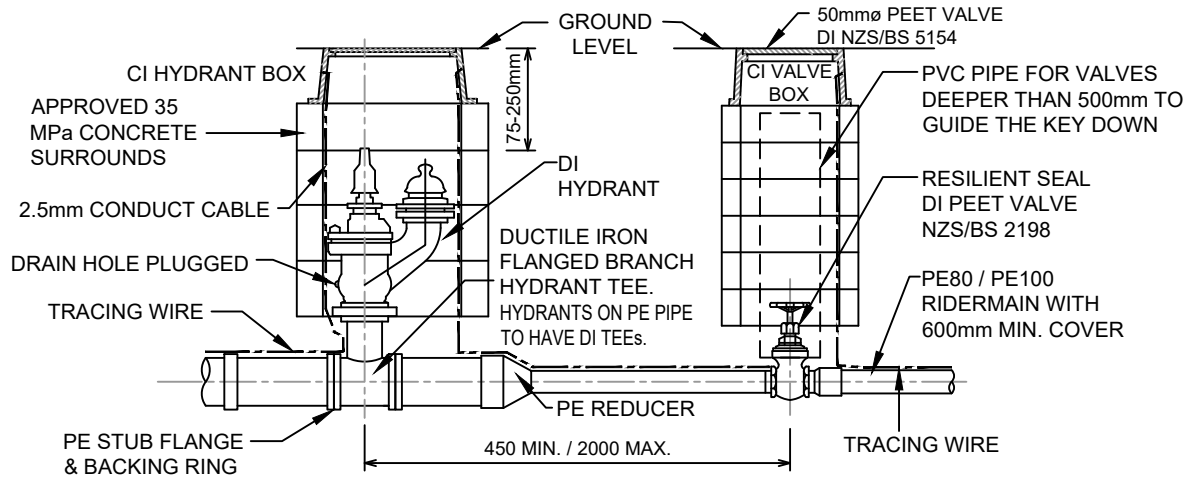
"TALL TYPE" SCREW DOWN DI HYDRANT TO NZS 4522:2010. TO CLOSE CLOCKWISE WHEN VIEWED FROM ABOVE.



CAST IRON HYDRANT BOX



CAST IRON VALVE BOX



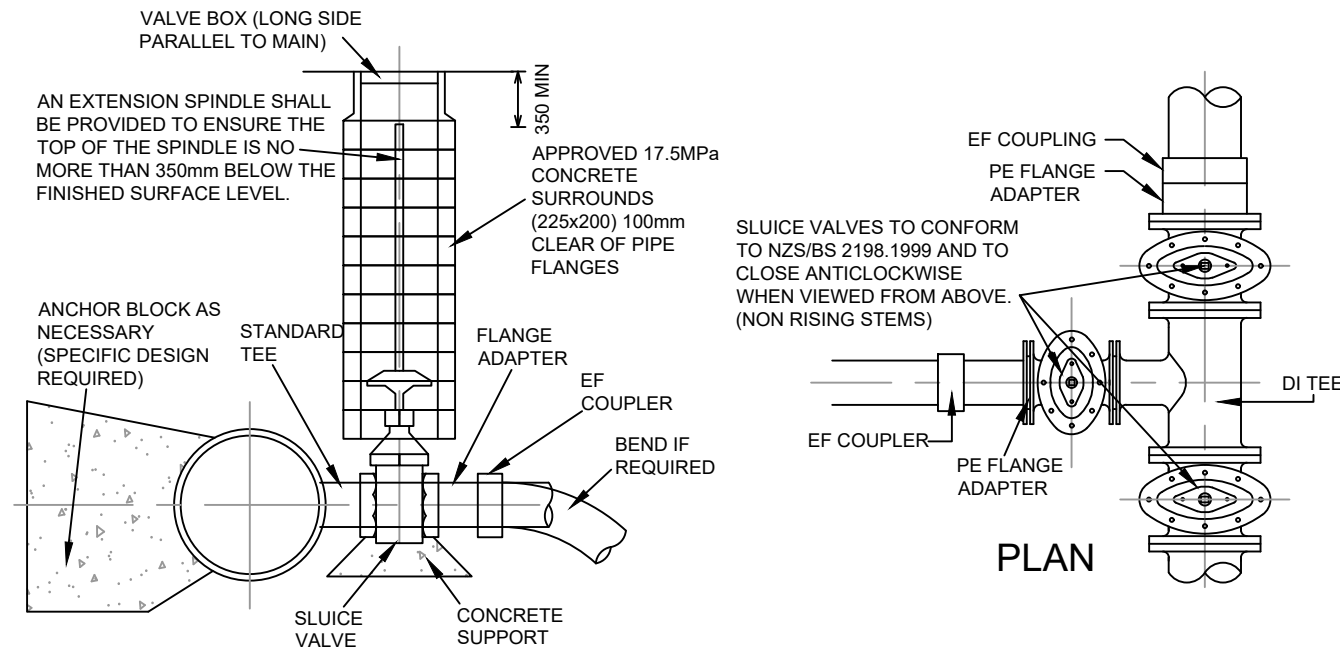
ELEVATION

NOTES

1. DEFLECTION OF JOINTS IS NOT TO EXCEED THE MANUFACTURER'S RECOMMENDATION.
2. WHERE THERE ARE MORE THAN 15 CONNECTIONS FROM A RIDER MAIN, AN ISOLATING PEET VALVE SHOULD BE PROVIDED IN THE MIDDLE OF THE RIDER MAIN.
3. ALL UNDERGROUND BOLTS TO BE STAINLESS STEEL AND WRAPPED WITH DENSO TAPE, MASTIC AND POLYTAPE.
4. SERVICE CONNECTIONS TO TERMINATE JUST OUTSIDE FRONT BOUNDARY WITH AN APPROVED MANIFOLD, METER BOX (INCLUDING BASE) AND DIAPHRAGM VALVE INCLUDING DUAL CHECK VALVE.
5. DIMENSIONS TO BE SUPPLIED WITH AS-BUILTS.

FH & VALVE INSTALLATION DETAILS

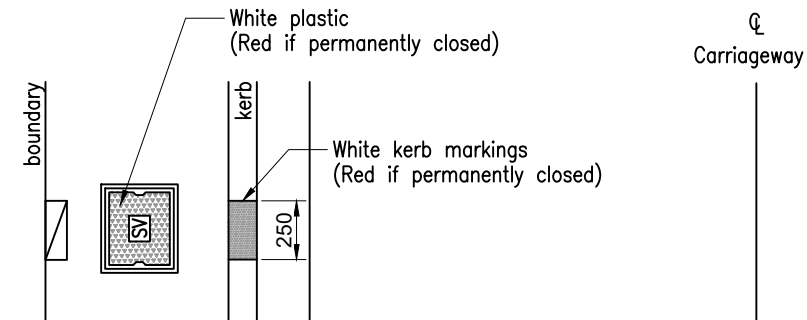
SHEET 45 FNDC ES 2022 - NOT TO SCALE



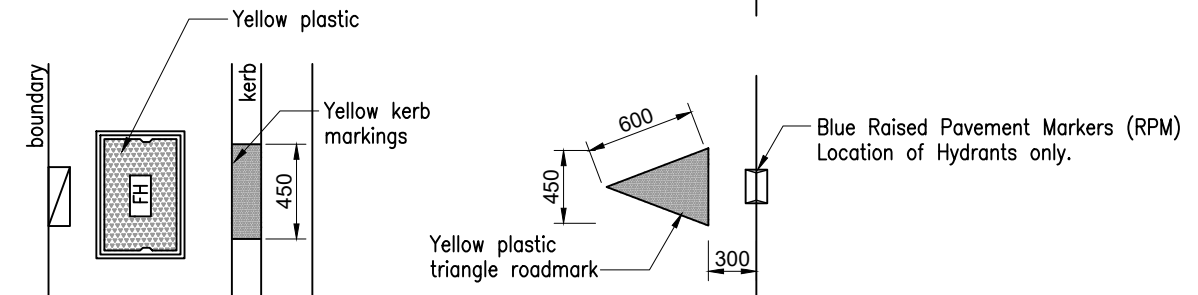
ELEVATION

VALVE INSTALLATION DETAILS

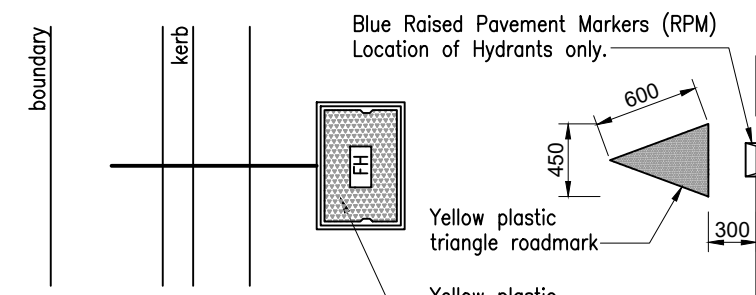
SHEET 49 FNDC ES 2022 - NOT TO SCALE



SLUICE VALVE MARKING

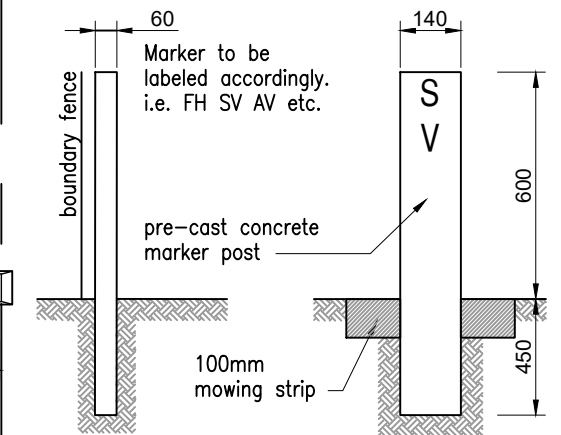


Hydrant located in Berm area



Hydrant located in Carriageway

HYDRANT MARKINGS



HYDRANT / SLUICE VALVE

MARKER POSTS

NOTES

1. PRE-CAST CONCRETE MARKER POST TO BE PAINTED WHITE FOR VALVES AND YELLOW FOR HYDRANTS, USING NZTA M7:2009 CLASS B PAINT, OR AT THE DISCRETION OF THE DISTRICT COUNCIL ASSET MANAGER.
2. SURFACE BOX LIDS SHALL MEET AS3996:2019, AND SHALL BE PAINTED IN ACCORDANCE TO THIS DRAWING SHEET USING NZIA M7:2009 CLASS B PAINT OR AT THE DISCRETION OF THE DISTRICT COUNCIL'S ASSET MANAGER.
3. SURFACE BOX LIDS SHALL BE TRAFFICABLE IN CARRIAGEWAYS.

VALVE & HYDRANT MARKERS

SHEET 48 FNDC ES 2022 - NOT TO SCALE

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



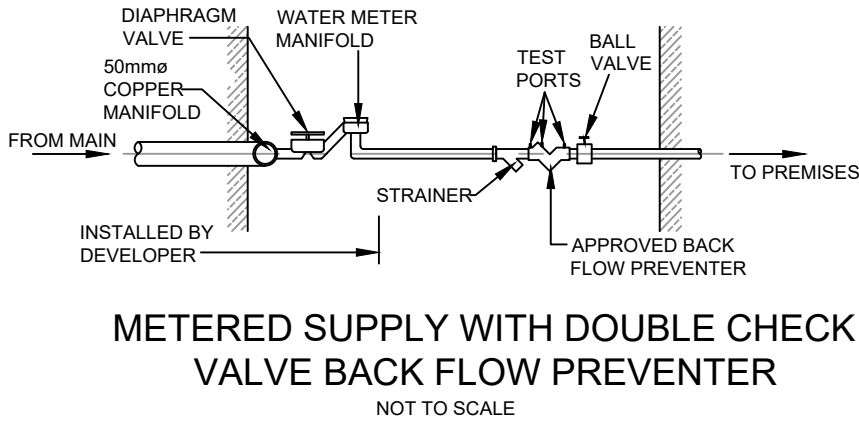
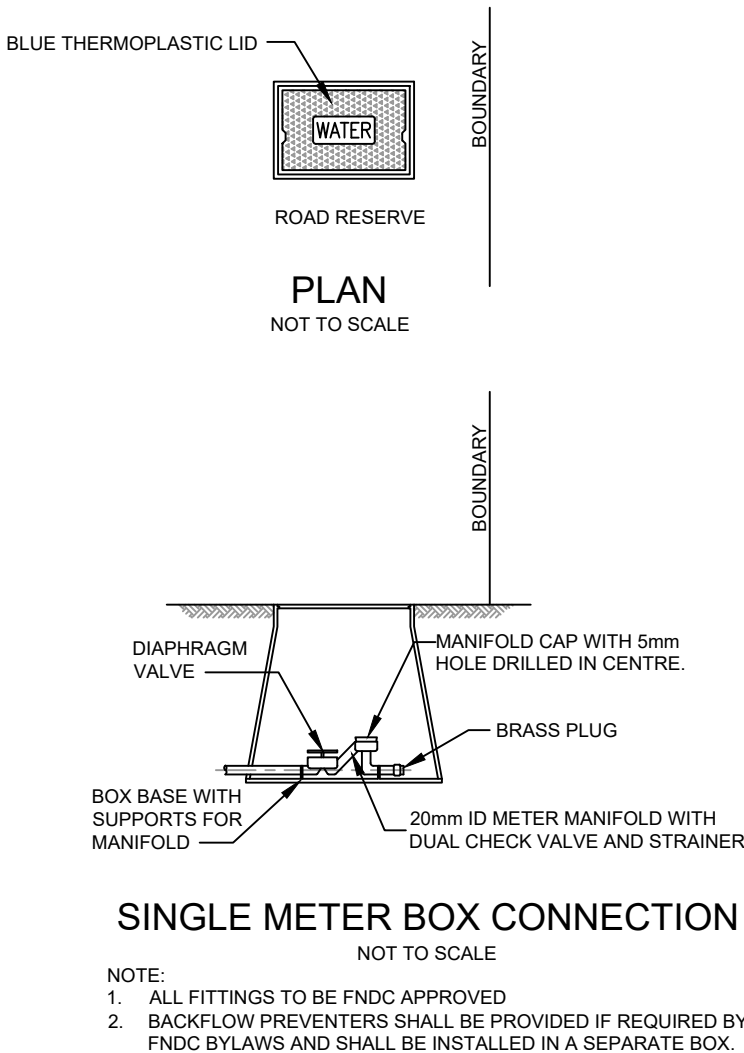
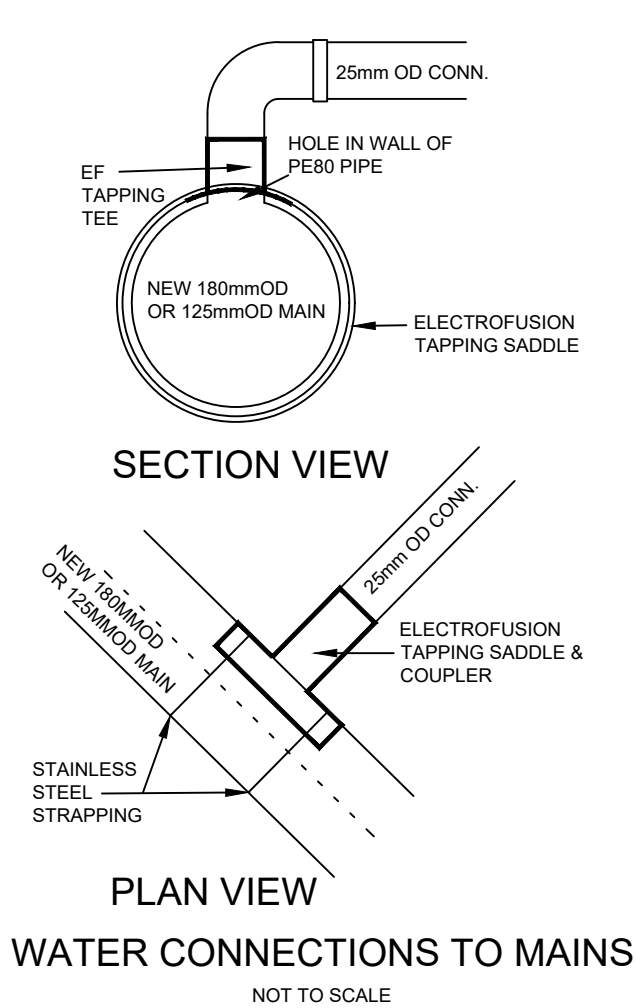
C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022
		AP TN
B	FOR APPROVAL	17-11-2022
		AP TN
A	1ST ISSUE	09-11-2022
		AP --
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI

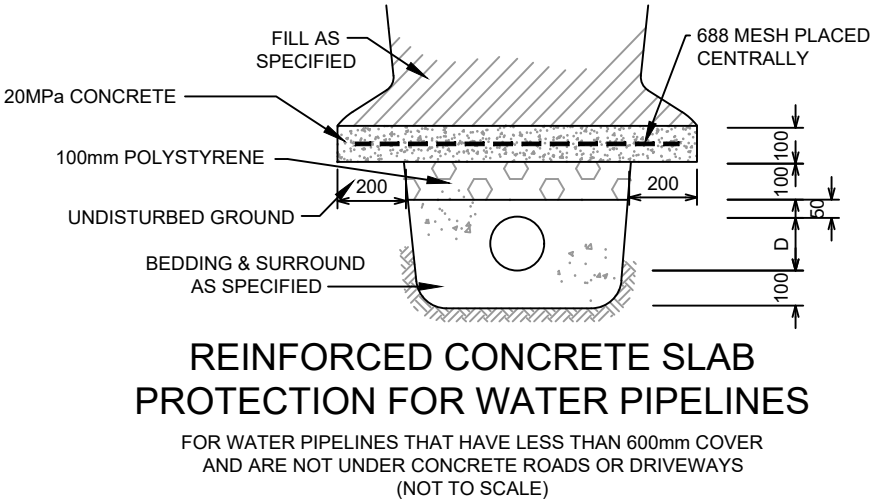
TITLE
POTABLE WATER TYPICAL DETAILS SHEET 1

DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
VECTA REF NO P0442	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD510			REVISION C

NOTES:
1. SEE CONSTRUCTION NOTES DD001.



- CONCRETE SLAB PROTECTION NOTES:
1. ALL CONCRETE TO BE 20MPa AT 28 DAYS AS PER NZS 3104:2021.
 2. CEMENT STABILISED BEDDING AND BACK FILL: 1 PART CEMENT TO 20 PARTS AGGREGATE. ALLOW 48 HOURS CURING PRIOR TO BACK FILLING ANY CONCRETE OR STABILISED MATERIAL.
 3. SLAB PROTECTION TO BE LAID IN LENGTHS NO GREATER THAN 2.0m.



APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

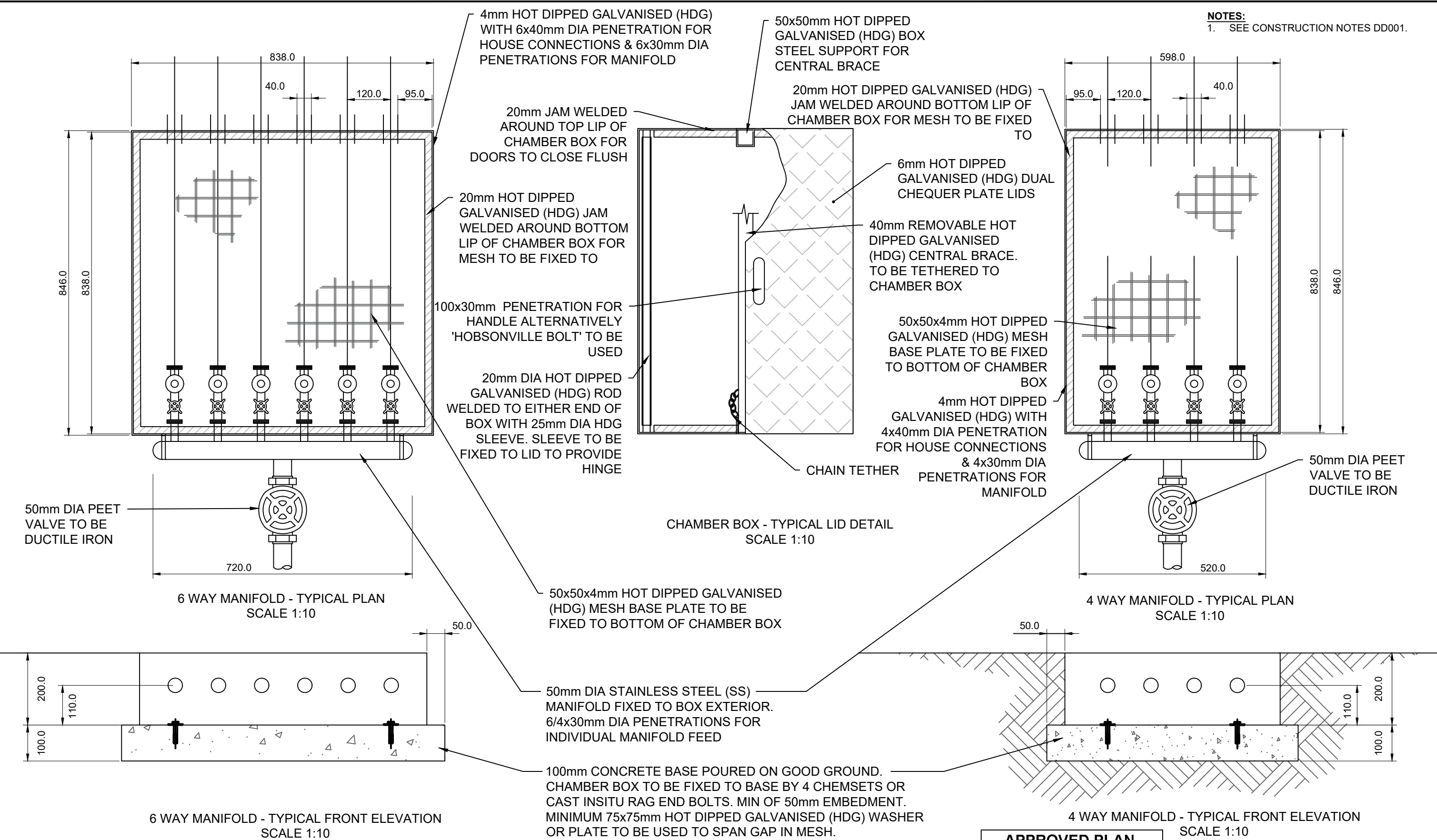
TRISHN NAND
ME., CPEng., IntPE(NZ)

 www.vecta.co.nz	C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022 AP TN	PROJECT DETAILS GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949, 57A HALL ROAD, KERIKERI	TITLE POTABLE WATER TYPICAL DETAILS SHEET 2	DATE CREATED 09-11-2022	DRAWN AP	DESIGNED AP	APPROVED TN
	B	FOR APPROVAL	17-11-2022 AP TN			VECTA REF NO P0442	SCALE NTS @ A3	STATUS FOR APPROVAL	
	A	1ST ISSUE	09-11-2022 AP --			DWG NUMBER	REVISION C		
	REV.	REVISION DETAILS	DRAWN APP.						

DATE PLOTTED: Friday, 23 December 2022 9:22:09 am

FILE PATH: D:\VECTA Dropbox\VECTA\200-PROJECT\P0442 Hall Road\CAD\Detail Design\P0442-DD510 Water Details.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



MULTIPLE WATER CONNECTIONS
SHEET 47 FNDC ES 2022 - NOT TO SCALE

APPROVED PLAN
Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023

TRISHN NAND
ME., CPEng., IntPE(NZ)



C	FOR APPROVAL - RESPONSE TO RFI'S 1	22-12-2022	AP	TN
B	FOR APPROVAL	17-11-2022	AP	TN
A	1ST ISSUE	09-11-2022	AP	--
REV.	REVISION DETAILS	DRAWN	APP.	

PROJECT DETAILS
GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE
POTABLE WATER TYPICAL DETAILS
SHEET 3

DATE CREATED	09-11-2022	DRAWN	AP	DESIGNED	AP	APPROVED	TN	
VECTA REF NO	P0442	SCALE	NTS @ A3		STATUS			FOR APPROVAL
DWG NUMBER	DD512				REVISION			C

TABLE 1.0

DESIGN PARAMETERS: $\phi = 30^\circ$, 3.0kPa LIVE AND 5.0kPa DEAD SURCHARGE, $k_h = 0.095$

RETAINED HEIGHT	MAX # OF 1524mm BLOCKS (A)	MAX # OF 1030mm BLOCKS (B)	MAX # OF 710mm BLOCKS (C)	MIN H* (mm)
2.3 - 2.65m	5	1	1	450
1.4 - 2.3m	3	2	1	350
0 - 1.4m	0	3	1	350

RETAINING WALL DESIGNED TO BACKSLOPE AND/OR SURCHARGE AS SHOWN. NO OTHER LOADS HAVE BEEN ALLOWED FOR (eg. EXISTING RETAINING WALL, POOL, STRUCTURES etc.). IF CONDITIONS ARE CONTRARY TO SPECIFICATIONS/DETAILS, VECTA SHALL BE CONTACTED PRIOR TO ANY EXCAVATION/WORK.

APPROVED POST BASE
FIXING DETAIL

EXTENT OF REDI-ROCK
CAP BLOCK BELOW

EXTENT OF
CONCRETE CAP

2-D12

D12 STARTER BAR, MIN
75mm EDGE DISTANCE
IN BLOCK BELOW

R6 LINK E.S. OF
BASEPLATE

PLAN VIEW OF BARRIER FIXING
(MESH NOT SHOWN FOR CLARITY)

SCALE: NTS

NOTES:

1. SEE CONSTRUCTION NOTES DD001.
2. FINAL REDI-ROCK BLOCK ARRANGEMENT TO BE CONFIRMED BY VECTA PRIOR TO ORDERING BLOCKS.
3. AN ULTIMATE GEOTECHNICAL BEARING CAPACITY OF 300kPa HAS BEEN ASSUMED FOR DESIGN. GEOTECHNICAL ENGINEERING TO CONFIRM DURING CONSTRUCTION.
4. CONSTRUCTION METHODOLOGY TO BE CONFIRMED WITH ENGINEER PRIOR TO CONSTRUCTION.
5. ALL DRIVEWAY/SURCHARGE LOADS TO BE SET BACK 1.5m MIN FROM EDGE OF WALL.
6. AS WALL HEIGHT DECREASES, REDUCE NUMBER OF B TYPE BLOCKS, PRIOR TO REDUCING NUMBER OF A TYPE BLOCKS.
7. MOVE BLOCKS FORWARD TO ENGAGE SHEAR KNOBS (TYPICAL).
8. FILL WEDGES BETWEEN ADJACENT BLOCKS WITH DRAINAGE METAL.
9. ALL BLOCKS SOLID U.N.O.

900mm WIDE x 140mm DEEP 20Mpa REINFORCED CONCRETE MOWING STRIP. 2/D12 LONGITUDINAL BARS - WITH R6 LINKS EITHER SIDE OF EACH POST. SE72 MESH 50mm TOP COVER, CRANK AS REQUIRED. PROVIDE 2/D12 STARTER BAR WITH STD RETURN TO E.S OF POST, WITHIN 150mm OF POST CL @2.4m CRS. GROUT INTO TOP OF REDIROCK BLOCK AND FIX WITH EPCON C6 WITH 100mm EMBEDMENT. FORM CHANNEL DRAIN TO FALLS AS PER GEOTECH REPORT.

INDICATIVE EXISTING GROUND PROFILE

MIN 2.0m

APPROVED FENTEC VERTICAL RAIL
BARRIER TO COMPLY WITH F4/AS1
- TO BE APPROVED BY ENGINEER

PLANTING/ MULCHING OF AREA ABOVE WALL
TO PROVIDE LOW-MAINTENANCE SOLUTION

MAX BACKSLOPE 5 DEG

CLAY CAPPING COMPACTED IN
ACCORDANCE WITH LDE GEOTECH REPORT

40/20 DRAINAGE METAL OR COMPACTED
HARDFILL BEHIND WALL

TEMPORARY CUT FACE TO BE PROTECTED FROM WEATHER
DURING CONSTRUCTION: REFER GEOTECH ENGINEER.

NON-WOVEN GEOTEXTILE (FILTER CLOTH)
TO WRAP DRAINAGE METAL
Ø100 HIWAY GRADE DRAIN COIL, MINIMUM 100mm
SURROUND. OUTLET TO STORMWATER SYSTEM

150mm COMPACTED HARDFILL BASE

SUBGRADE MINIMUM 500mm BELOW
EXISTING GROUND LEVEL

REINSTATE NATURAL GROUND IN
FRONT OF WALL. COMPACT WELL.

TOPSOIL DEPTH VARIES
- 100mm MIN

NATURAL GROUND

RETAINED HEIGHT (m)

H* (REFER TABLE)

150mm

150mm

REDI-ROCK RETAINING WALL TYPE 1 - 5 DEGREE BACKFILL SLOPE

SCALE 1:20

APPROVED PLAN

Engineer: RMishra
RC: 2220714-RMAEPAA
Date: 19/01/2023



C			
B			
A	FOR APPROVAL	09-11-2022	JY CL
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT 304, DP 473949,
57A HALL ROAD, KERIKERI

TITLE

REDI-ROCK RETAINING WALL DETAILS

DATE CREATED
09-11-2022

DRAWN
JY

DESIGNED
KW

APPROVED
CL

VECTA REF NO
P0442

SCALE
1:20 @ A3

STATUS
FOR APPROVAL

DWG NUMBER

DD600

REVISION

A

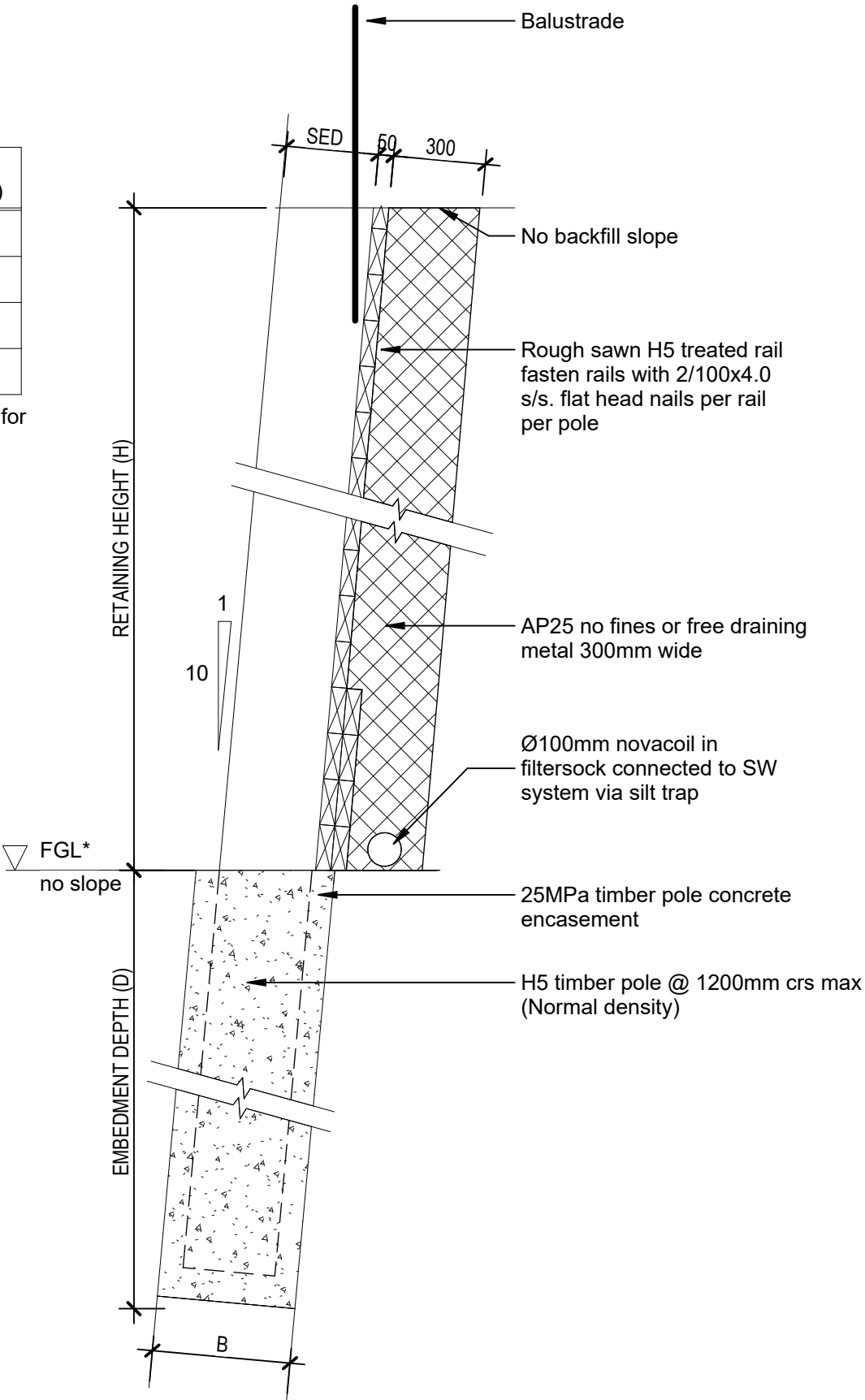
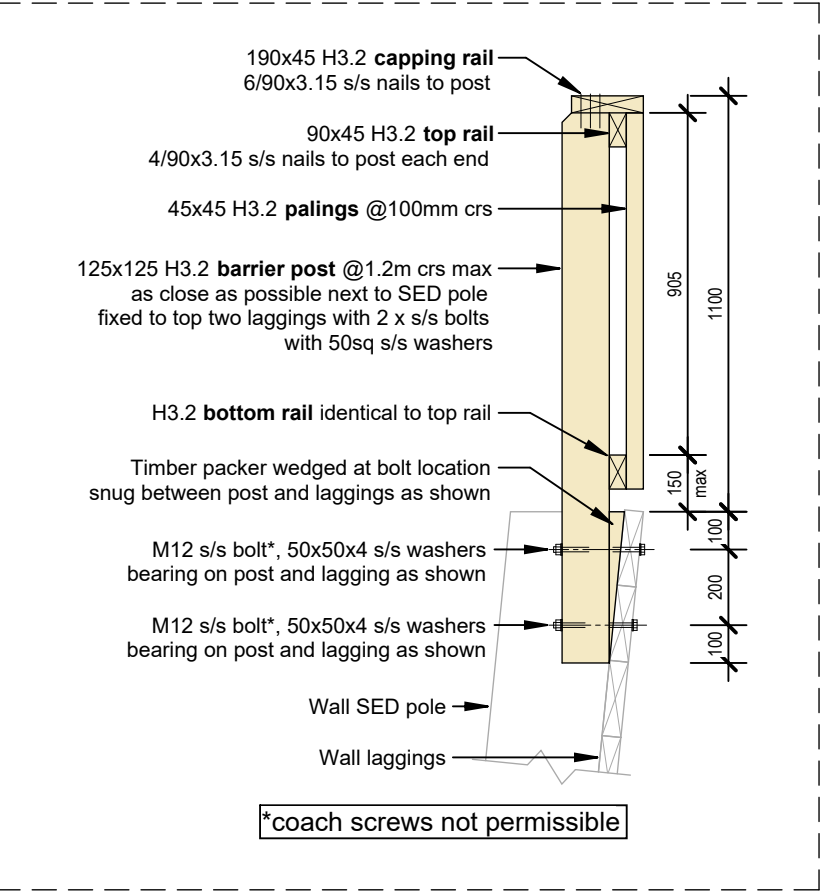
TABLE 1.0

Design parameters: Ø = 30°, 3.0kPa live and 5.0kPa dead surcharge, kh = 0.095

MAX. RETG HEIGHT (H)	POLE SED DIA.	RAIL SIZE	MIN. HOLE DIAMETER (B)	EMBEDMENT DEPTH (D)	STD. POLE LENGTH (L)
1000	150mm	Lagging to be all single rough sawn 200x40 H5	450Ømm	1500mm	2500mm
1500	200mm		450Ømm	1700mm	3200mm
2000	275mm		450Ømm	2200mm	4200mm
2500	325mm		600Ømm	2600mm	5100mm

Retaining wall designed to backslope and/or surcharge as shown. No other loads have been allowed for (eg. existing retaining wall, pool, structures etc.). If conditions are contrary to specifications/details, Vecta shall be contacted prior to any excavation/work.

BALUSTRADE DETAIL



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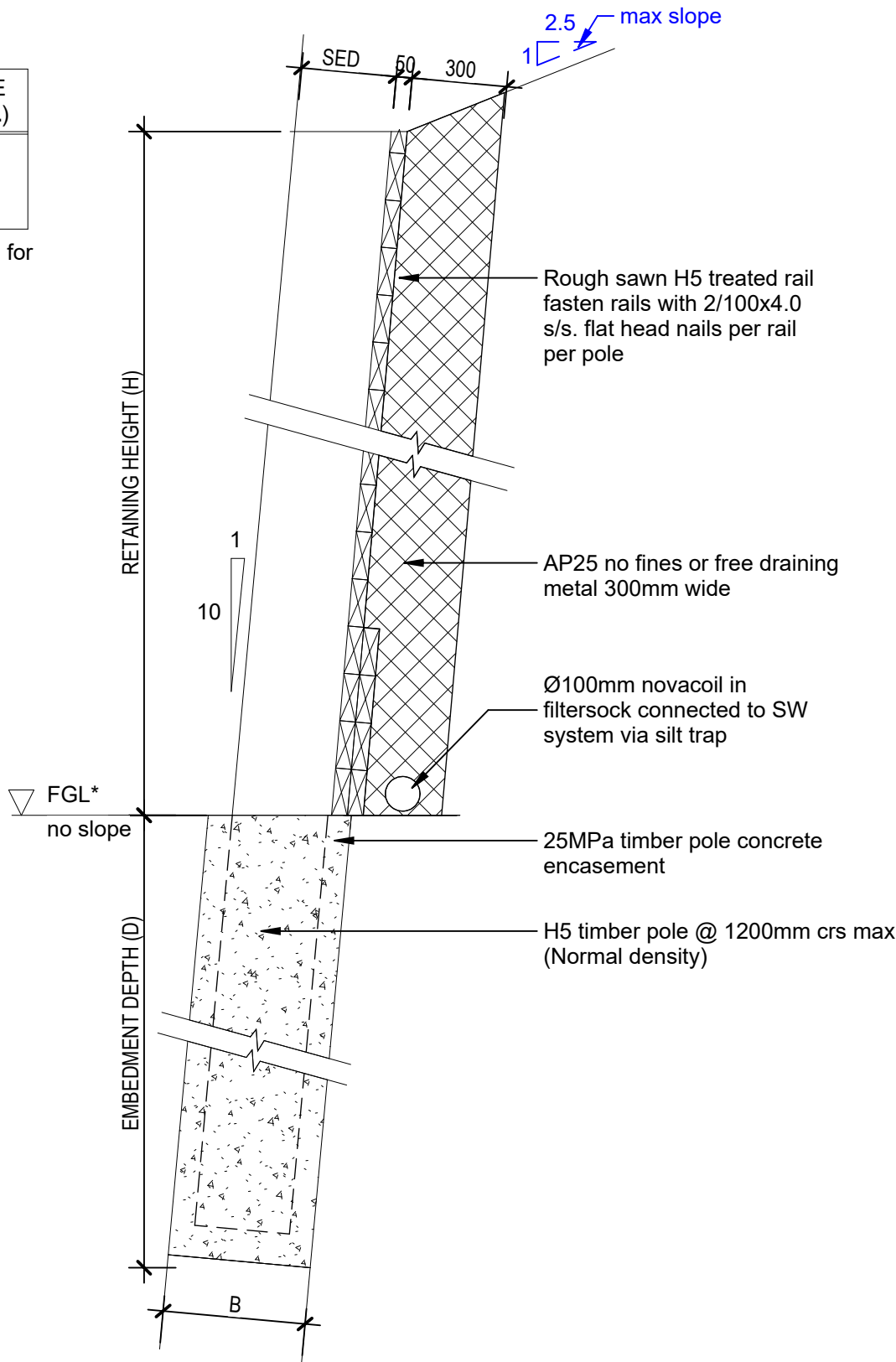
REVISIONS:			
A	First Issue	TL	01/11/2022
REV	REVISION DETAILS	DRAWN	DATE
www.vecta.co.nz			
PROJECT DETAILS			
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949 57A HALL ROAD, KERIKERI			
TITLE			
TYPE 2 TIMBER POLE RETAINING WALL			
DATE	DRAWN	DESIGNED	APPROVED
01/11/2022	TL	TL	CL
VECTA REF	SCALE	STATUS	
P0442	1 : 20 @ A3	For Approval	
DRAWING NO	REVISION		
DD605	A		

TABLE 2.0

Design parameters: Ø = 30°, 3.0kPa live and 0.0kPa dead surcharge, kh = 0.095

MAX. RETG HEIGHT (H)	POLE SED DIA.	RAIL SIZE	MIN. HOLE DIAMETER (B)	EMBEDMENT DEPTH (D)	STD. POLE LENGTH (L)
1000	150mm	Lagging to be all single rough sawn 200x40 H5	450Ømm	1500mm	2500mm

Retaining wall designed to backslope and/or surcharge as shown. No other loads have been allowed for (eg. existing retaining wall, pool, structures etc.). If conditions are contrary to specifications/details, Vecta shall be contacted prior to any excavation/work.



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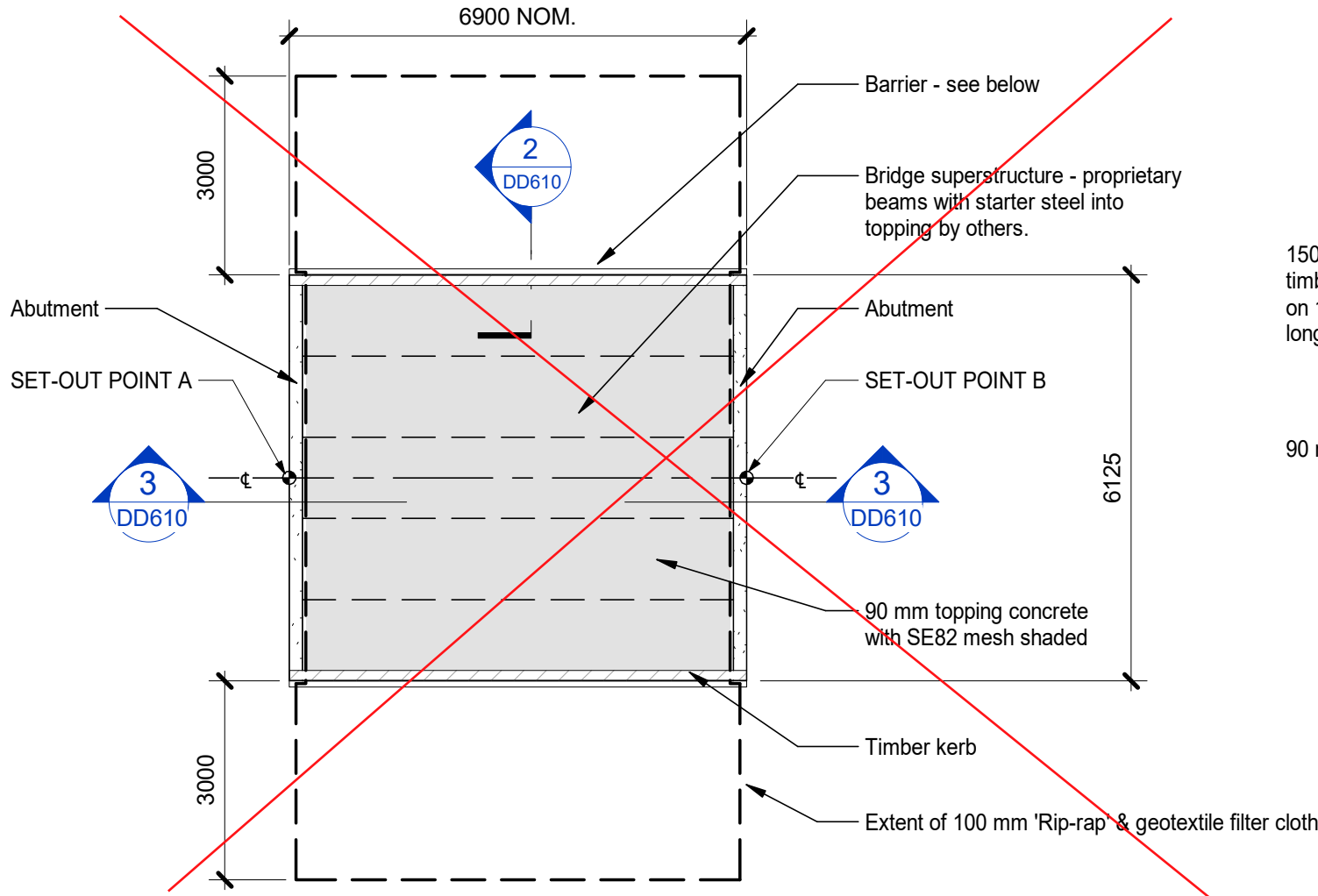
REVISIONS:			
A	First Issue	TL	01/11/2022
REV	REVISION DETAILS	DRAWN	DATE

			
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PROJECT DETAILS			
GO BLOODSTOCK NEW ZEALAND LTD DEVELOPMENT OF LOT 304, DP 473949 57A HALL ROAD, KERIKERI			
TITLE			
TYPE 3 TIMBER POLE RETAINING WALL			
DATE	DRAWN	DESIGNED	APPROVED
01/11/2022	TL	TL	CL
VECTA REF	SCALE	STATUS	
P0442	1 : 20 @ A3	For Approval	
DRAWING NO	REVISION		
DD606	A		

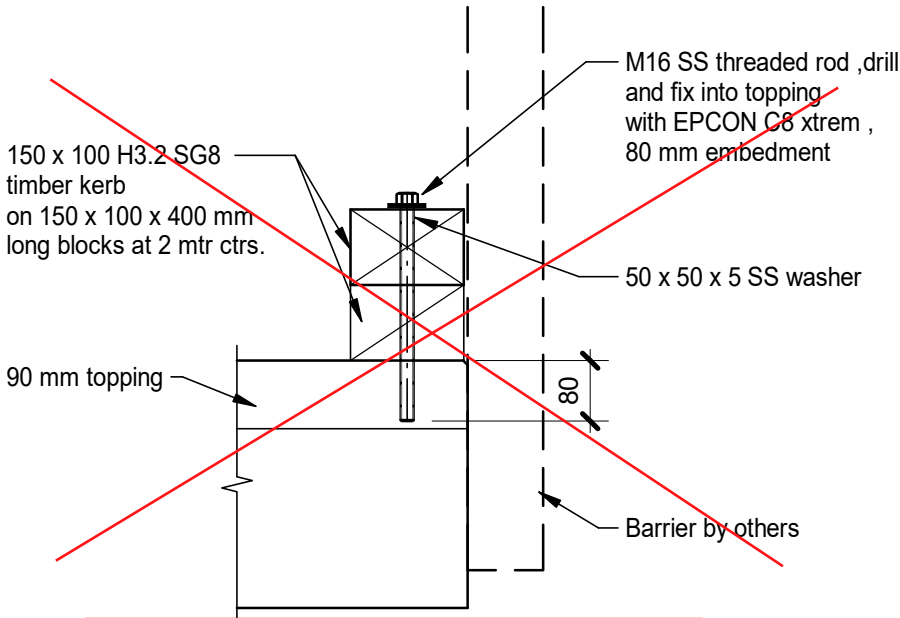
3

TIMBER POLE RETAINING WALL TYPE 3 - 20deg BACKFILL SLOPE

1 : 20

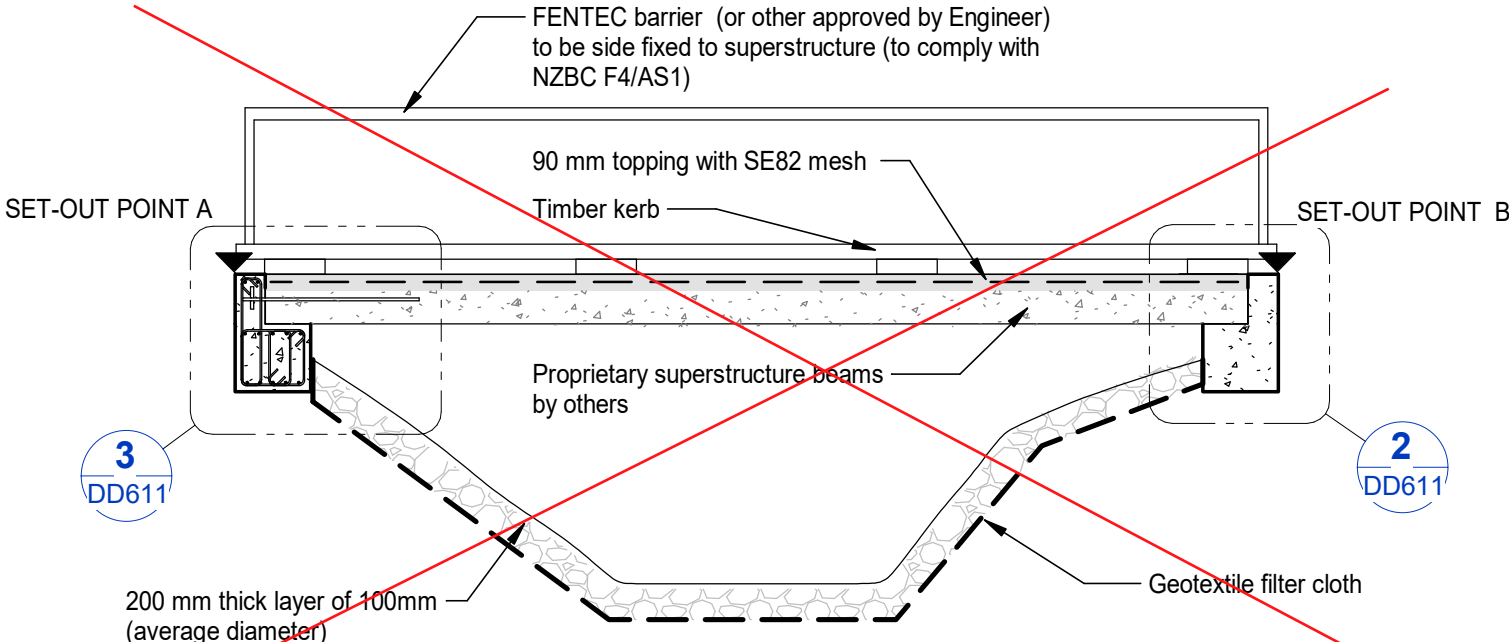


1 PLAN
1 : 100



REFER TO LDE BRIDGE DESIGN
(UNDER EBC-2024-894/0)

2 KERB DETAIL
DD610 1 : 10



3 TYP. SECTION
DD610 1 : 50

Notes:

Bridge designed to .85HN in accordance with WK Bridge Manual , Appendix D

Refer to BUSCK drawings for superstructure proprietary beams

Abutment and topping slab concrete strength to be 40 MPa

Abutment reinforcing cover to be 40mm

Topping slab reinforcing cover to be 45mm

Exposed surfaces to be F4 / U2 finishes . Road surface to be U5 broom finish

Concealed surfaces to be F1/ U1 finishes

Set-out points to be the road centreline (JOAL 05 & JOAL 06 respectively) heights and chainages as shown on the civil drawings or as agreed with Engineer . Bridges to have a 1% longitudinal fall (no cross fall) as per civil drawings.

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without permission of Macroventures Limited. No liability shall be accepted for unauthorised use of this design and drawing.

REVISIONS:

REV	First Issue	REVISION DETAILS	KJ	01/11/2022
A				



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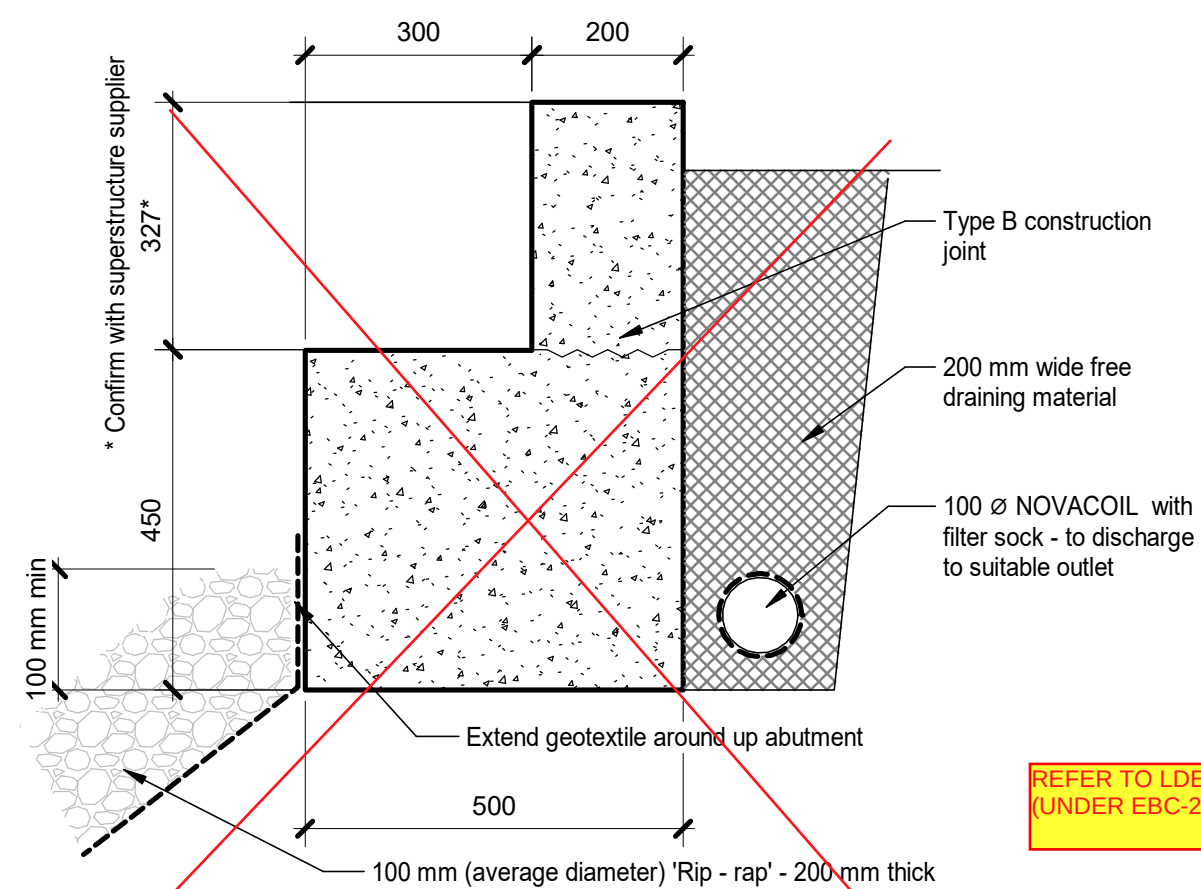
PROJECT DETAILS

GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT34, DP 473949
57A HALL ROAD , KERIKERI

TITLE

ABUTMENT PLAN & SECTION FOR BRIDGES ON JOAL 05 & 06

DATE CREATED 01/11/2022	DRAWN KJ	DESIGNED CL	APPROVED CL
VECTA REF NO P0442	SCALE A3 As indicated	STATUS For Approval	
DWG NUMBER DD610	REVISION A		



Set-out points to be the road centreline (JOAL 05 & JOAL 06 respectively) heights and chainages as shown on the civil drawings or as agreed with Engineer . Bridges to have a 1% longitudinal fall (no cross fall) as per civil drawings.

1 SHC BEAM / IN SITU CAP JOINTS
DD611 1 : 2

2 ABUTMENT CONCRETE
DD610 1 : 10

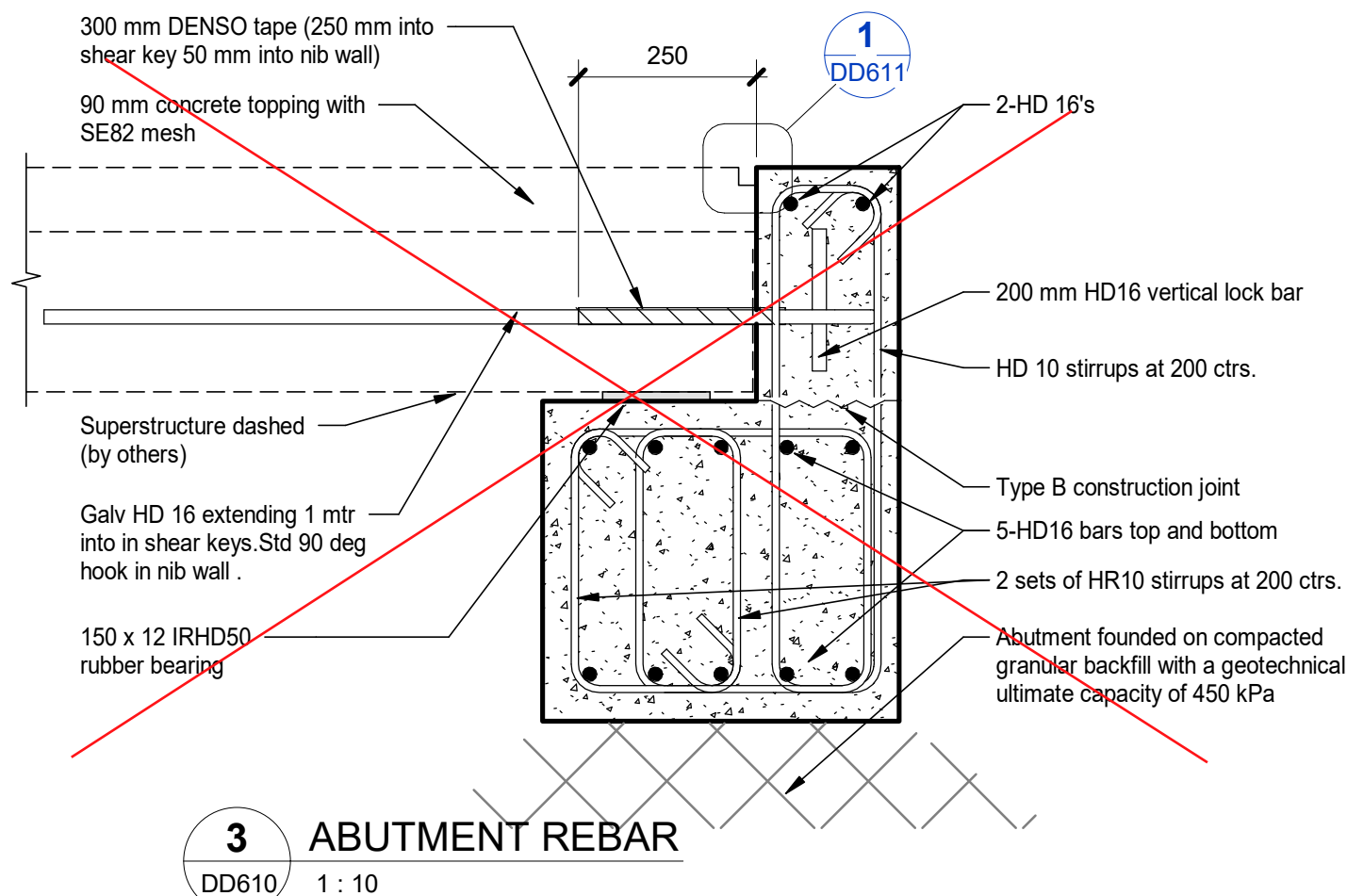


Diagram illustrating the reinforcement layout for a concrete slab, showing a cross-section and a plan view.

Labels:

- HD16 bars
- HD10 stirrups
- HD16 lock bar
- Galv. HD16

The diagram shows a cross-section of a concrete slab with HD16 bars and HD10 stirrups. A plan view of the slab is shown below the cross-section, illustrating the layout of the HD16 bars and Galv. HD16. A red 'X' is drawn over the plan view, indicating that this reinforcement layout is not recommended.

4 TYP. REBAR SCHEMATIC

A	First Issue	KJ	01/11/2022
REV	REVISION DETAILS	DRAWN	DATE



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	PROJECT DETAILS
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GO BLOODSTOCK NEW ZEALAND LTD
DEVELOPMENT OF
LOT34,DP 473949
57A HALL ROAD , KERIKERI

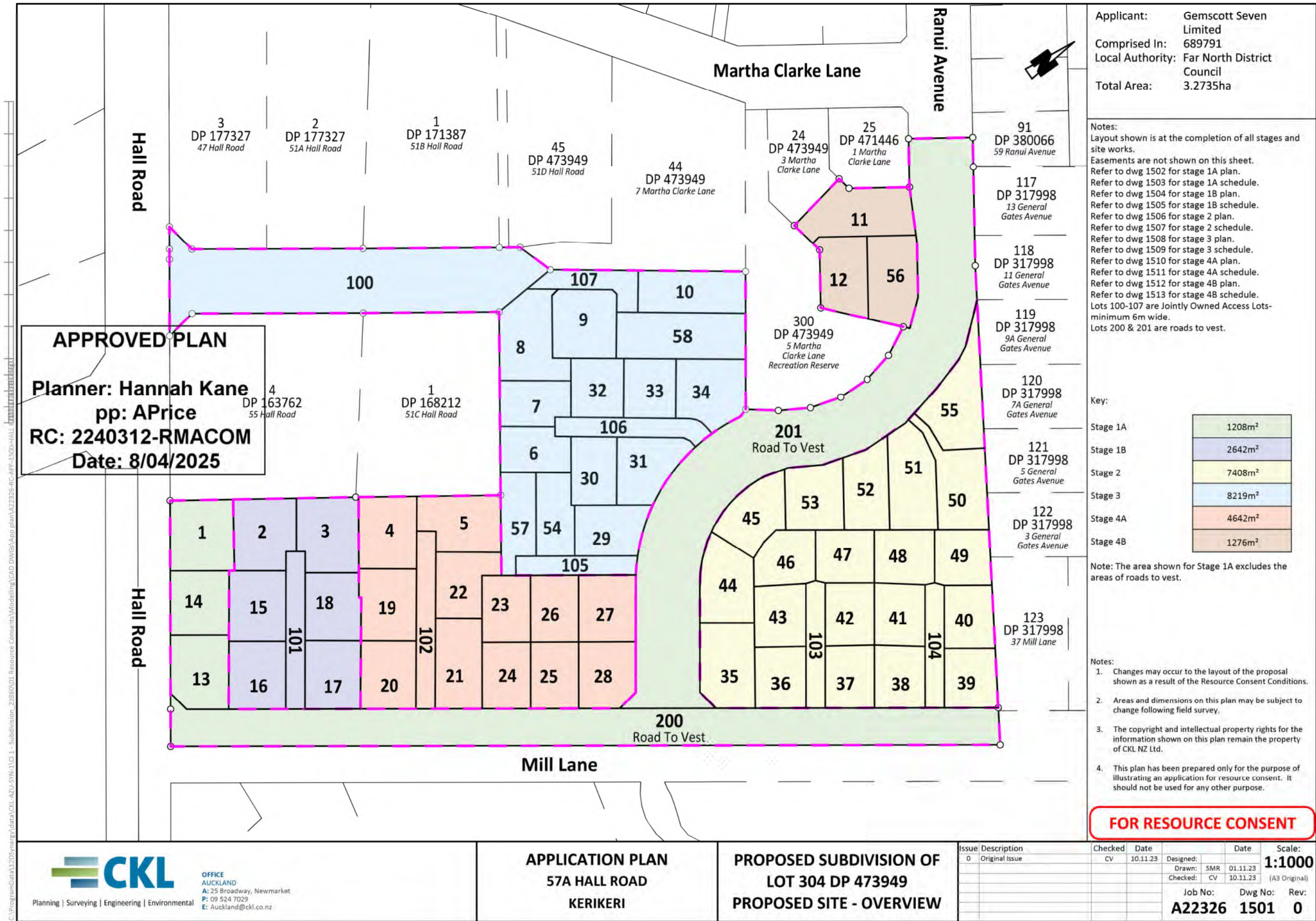
TITLE

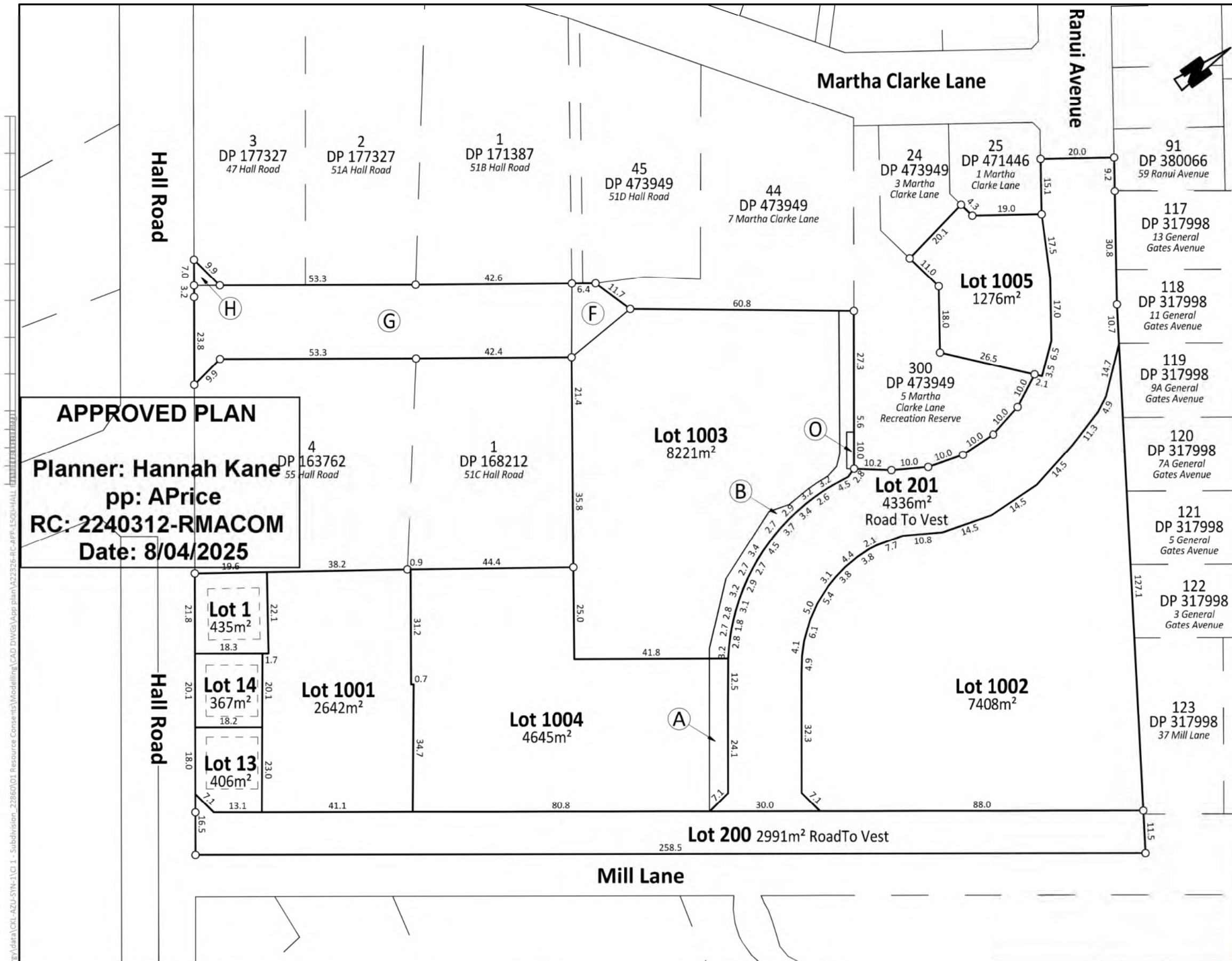
ABUTMENT DETAILS FOR BRIDGES ON JOAL 05 & 06

DATE CREATED 01/11/2022	DRAWN KJ	DESIGNED CL	APPROVED CL
VECTA REF NO P0442	SCALE A3 As indicated	STATUS For Approval	
DWG NUMBER DD611		REVISION A	

v2 CVh P3bdi4ision PSpeme 6kns

CHeSTER





Applicant: Gemscott Seven Limited
Comprised In: 689791
Local Authority: Far North District Council
Total Area: 3.2735ha

Notes:
Refer to dwg 1502 for stage 1A plan.
Refer to dwg 1503 for stage 1A schedule.
Refer to dwg 1504 for stage 1B plan.
Refer to dwg 1505 for stage 1B schedule.
Refer to dwg 1506 for stage 2 plan.
Refer to dwg 1507 for stage 2 schedule.
Refer to dwg 1508 for stage 3 plan.
Refer to dwg 1509 for stage 3 schedule.
Refer to dwg 1510 for stage 4A plan.
Refer to dwg 1511 for stage 4A schedule.
Refer to dwg 1512 for stage 4B plan.
Refer to dwg 1513 for stage 4B schedule.
Shape factors shown are 14x14m primarily, or 8x15m secondarily. Non compliant shown in pink.
Front yard set back = 3.00m.
Side yard set back = 1.2m.

The existing land covenant shown C on drawing 1500 is to be revoked.

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FOR RESOURCE CONSENT

C:\ProgramData\1205energy\data\CKL-AZU-SVN-1\G 1 - Subdivision_22060\01 Resource Consents\Modelling\CAD DWG\Kup plan\A223206-RC-APP-1500-HALL.dwg

Land Registration District	Plan Number
North Auckland	
Territorial Authority (the Council)	
Far North District Council	

Schedule of Existing Easements			
Purpose	Shown	Burdened Land (Servient Tenement)	Created By
Right of Way Right to Convey Electricity, Telecommunications & Computer Media Right to Convey Water	F, G, H	Lot 100	9833951.9
Right of Way Right to Convey Electricity, Telecommunications	G		D040496.2 D445631.3
Right to Convey Water	G, H		D118628.5

Schedule of Existing Easements in Gross			
Purpose	Shown	Burdened Land (Servient Tenement)	Created By
Right to Drain Water	O	Lot 34	9833951.10

Schedule of Covenant to be Revoked			
Purpose	Shown	Burdened Land (Servient Tenement)	Created By
Land Covenant	C DP 473949	Lot 304 DP 473949	9833951.13

Schedule of Easements in Gross			
Purpose	Shown	Burdened Land (Servient Tenement)	Grantee
Right to Drain Water	A	Lot 1004	Far North District Council
	B	Lot 1003	

Land Registration District	Plan Number
North Auckland	
Territorial Authority (the Council)	
Far North District Council	

Parcels to Vest		
Parcel	Area	Purpose
Lot 200	0.2991 Ha	Vesting on Deposit for Road
Lot 201	0.4336 Ha	Vesting on Deposit for Road

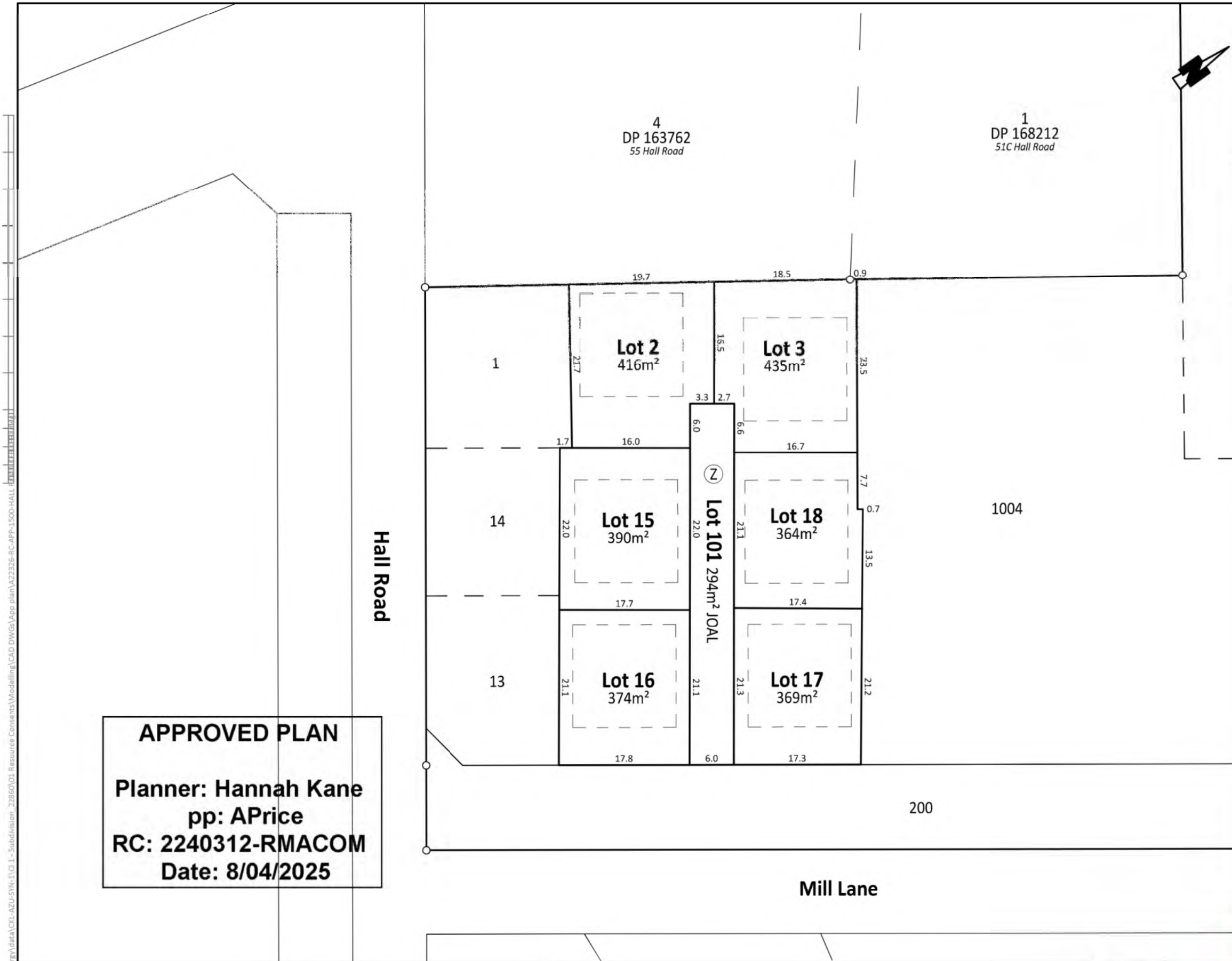
Applicant: Gemscott Seven Limited
Comprised In: 689791
Local Authority: Far North District Council
Total Area: 3.2735ha

APPROVED PLAN

Planner: Hannah Kane
pp: APrice
RC: 2240312-RMACOM
Date: 8/04/2025

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FOR RESOURCE CONSENT



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Refer to dwg 1503 for stage 1A schedule.
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Refer to dwg 1505 for stage 1B schedule.
Refer to dwg 1506 for stage 2 plan.
Refer to dwg 1507 for stage 2 schedule.
Refer to dwg 1508 for stage 3 plan.
Refer to dwg 1509 for stage 3 schedule.
Refer to dwg 1510 for stage 4A plan.
Refer to dwg 1511 for stage 4A schedule.
Refer to dwg 1512 for stage 4B plan.
Refer to dwg 1513 for stage 4B schedule.
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FOR RESOURCE CONSENT

Land Registration District
North Auckland

Plan Number

Territorial Authority (the Council)
Far North District Council

Schedule of Easements			
Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right to Convey Electricity Right to Convey Telecommunications Right to Convey Water Right to Drain Water Right to Drain Sewage	Z	Lot 101	Lots 2, 3, 15, 16, 17 & 18

Amalgamation Conditions

That Lot 101 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 2, 3, 15, 16, 17 & 18 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.

APPROVED PLAN

Planner: Hannah Kane
pp: APrice
RC: 2240312-RMACOM
Date: 8/04/2025

Applicant: Gemscott Seven Limited

Comprised In: 689791

Local Authority: Far North District Council

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Refer to dwg 1506 for stage 2 plan.
Refer to dwg 1507 for stage 2 schedule.
Refer to dwg 1508 for stage 3 plan.
Refer to dwg 1509 for stage 3 schedule.
Refer to dwg 1510 for stage 4A plan.
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FOR RESOURCE CONSENT



Planning | Surveying | Engineering | Environmental

OFFICE
AUCKLAND
A: 25 Broadway, Newmarket
P: 09 524 7029
E: Auckland@ckl.co.nz

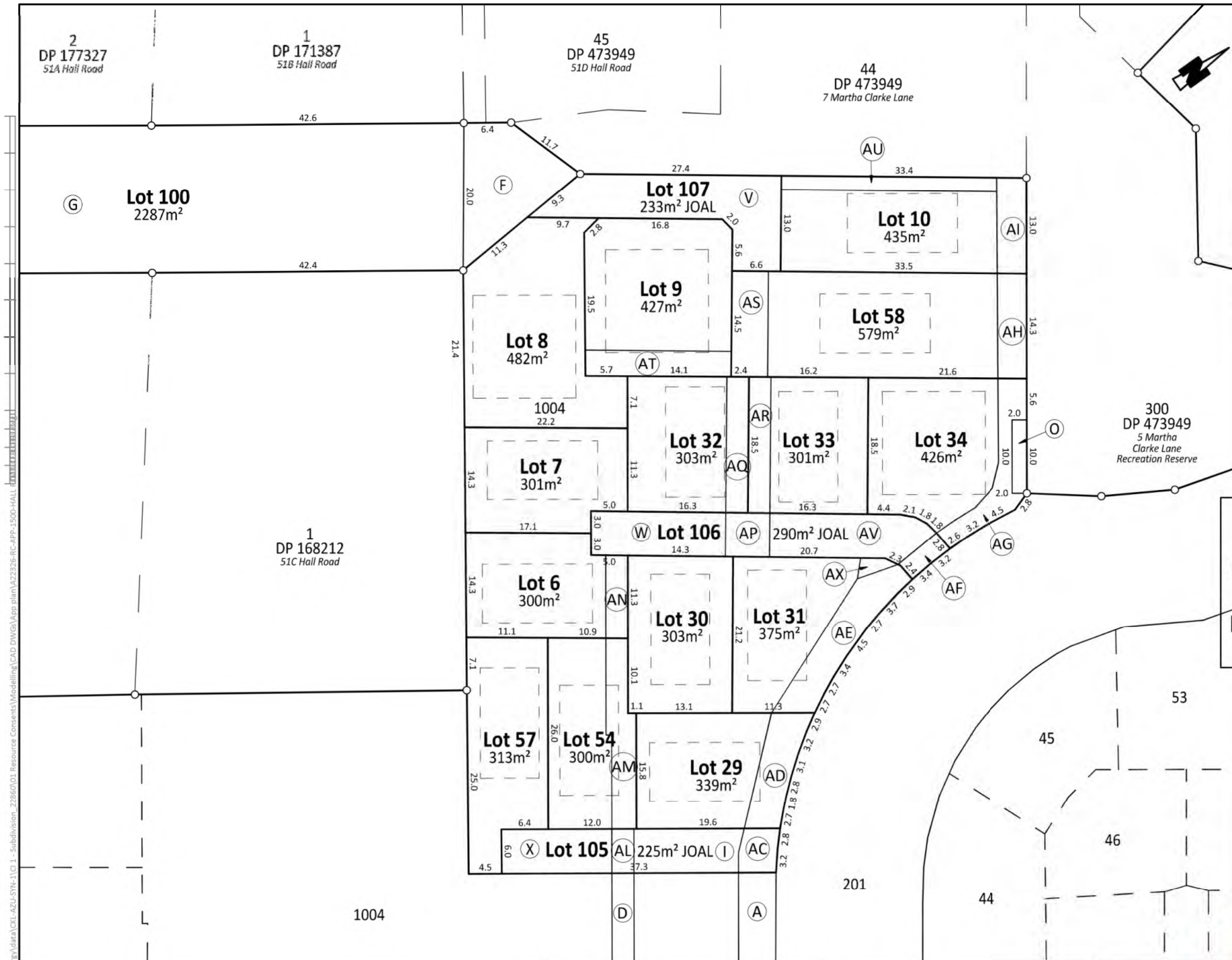
APPLICATION PLAN
57A HALL ROAD
KERIKERI

PROPOSED SUBDIVISION OF
LOT 1002
PROPOSED SITE - STAGE 2

Issue	Description	Checked	Date	Designed	Date	Scale
0	Original Issue	CV	10.11.23	Drawn: SMR	01.11.23	1:500
				Checked: CV	10.11.23	(A3 Original)
				Job No:	Dwg No:	Rev:
				A22326	1506	0

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Land Registration District North Auckland		Plan Number																																											
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Local Authority: Far North District Council		Total Area: 3.2735ha																																											
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Right to Convey Telecommunications Right to Convey Water	N	Lot 47	Lot 46																																										
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Right of Way	J	Lot 50	Lot 55																																										
	K	Lot 55	Lot 50																																										
<table><tr><th colspan="2">Amalgamation Conditions</th></tr><tr><td colspan="2">That Lot 103 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 36, 37, 42, 43, 46 & 47 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.</td></tr><tr><td colspan="2">That Lot 104 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 38, 39, 40, 41, 48 & 49 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.</td></tr></table>				Amalgamation Conditions		That Lot 103 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 36, 37, 42, 43, 46 & 47 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.		That Lot 104 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 38, 39, 40, 41, 48 & 49 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.																																					
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APPROVED PLAN Planner: Hannah Kane pp: APrice RC: 2240312-RMACOM Date: 8/04/2025																																													
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 Planning Surveying Engineering Environmental		APPLICATION PLAN 57A HALL ROAD KERIKERI																																											
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Applicant: Gemscott Seven Limited
Comprised In: 689791
Local Authority: Far North District Council
Total Area: 3.2735ha

Notes:
Refer to dwg 1502 for stage 1A plan.
Refer to dwg 1503 for stage 1A schedule.
Refer to dwg 1504 for stage 1B plan.
Refer to dwg 1505 for stage 1B schedule.
Refer to dwg 1506 for stage 2 plan.
Refer to dwg 1507 for stage 2 schedule.
Refer to dwg 1508 for stage 3 plan.
Refer to dwg 1509 for stage 3 schedule.
Refer to dwg 1510 for stage 4A plan.
Refer to dwg 1511 for stage 4A schedule.
Refer to dwg 1512 for stage 4B plan.
Refer to dwg 1513 for stage 4B schedule.
Shape factors shown are 14x14m primarily, or 8x15m secondarily. Non compliant shown in pink.
Front yard set back = 3.00m.
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APPROVED PLAN
Planner: Hannah Kane
pp: APrice
RC: 2240312-RMACOM
Date: 8/04/2025

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FOR RESOURCE CONSENT

C:\ProgramData\1205\energy\data\CKL\AZU-SYN-1\G 1 - Subdivision - 2240312-RMACOM\plan\A22326-RC-APP-1500-HALL.dwg

Land Registration District	Plan Number
North Auckland	
Territorial Authority (the Council)	
Far North District Council	

Schedule of Existing Easements			
Purpose	Shown	Burdened Land (Servient Tenement)	Created By
Right of Way Right to Convey Electricity, Telecommunications & Computer Media Right to Convey Water	F, G, H	Lot 100	9833951.9
Right of Way Right to Convey Electricity, Telecommunications Right to Convey Water	G		D040496.2 D445631.3
	G, H		D118628.5

Schedule of Existing Easements in Gross			
Purpose	Shown	Burdened Land (Servient Tenement)	Created By
Right to Drain Water	O	Lot 34	9833951.10

Schedule of Easements			
Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right to Convey Electricity	X, AL, I, AC	Lot 105	Lots 29, 54, 57 & 1004
Right to Convey Telecommunications Right to Convey Water	W, AP, AV	Lot 106	Lots 6, 7, 30, 31, 32, 33 & 34
Right to Drain Water	V	Lot 107	Lots 8, 9, 10 & 58
Right to Drain Sewage	F, G, H	Lot 100	Lots 8, 9, 10 & 58

APPROVED PLAN

Planner: Hannah Kane
pp: APrice
RC: 2240312-RMACOM
Date: 8/04/2025

Land Registration District	Plan Number
North Auckland	
Territorial Authority (the Council)	
Far North District Council	

Schedule of Easements in Gross			
Purpose	Shown	Burdened Land (Servient Tenement)	Grantee
Right to Drain Water	A	Lot 1004	Far North District Council
	AC	Lot 105	
	AD	Lot 29	
	AE, AX	Lot 31	
	AF, AV, AP	Lot 106	
	AG	Lot 34	
	AH	Lot 58	
	AI, AU	Lot 10	
	AQ	Lot 32	
	AS	Lot 58	
Right to Drain Sewage	AT	Lot 9	
	D	Lot 1004	
	AL	Lot 105	
	AM	Lot 54	
	AN	Lot 6	
	W, AP	Lot 106	
	AR	Lot 33	
	AS	Lot 58	
	AT	Lot 9	

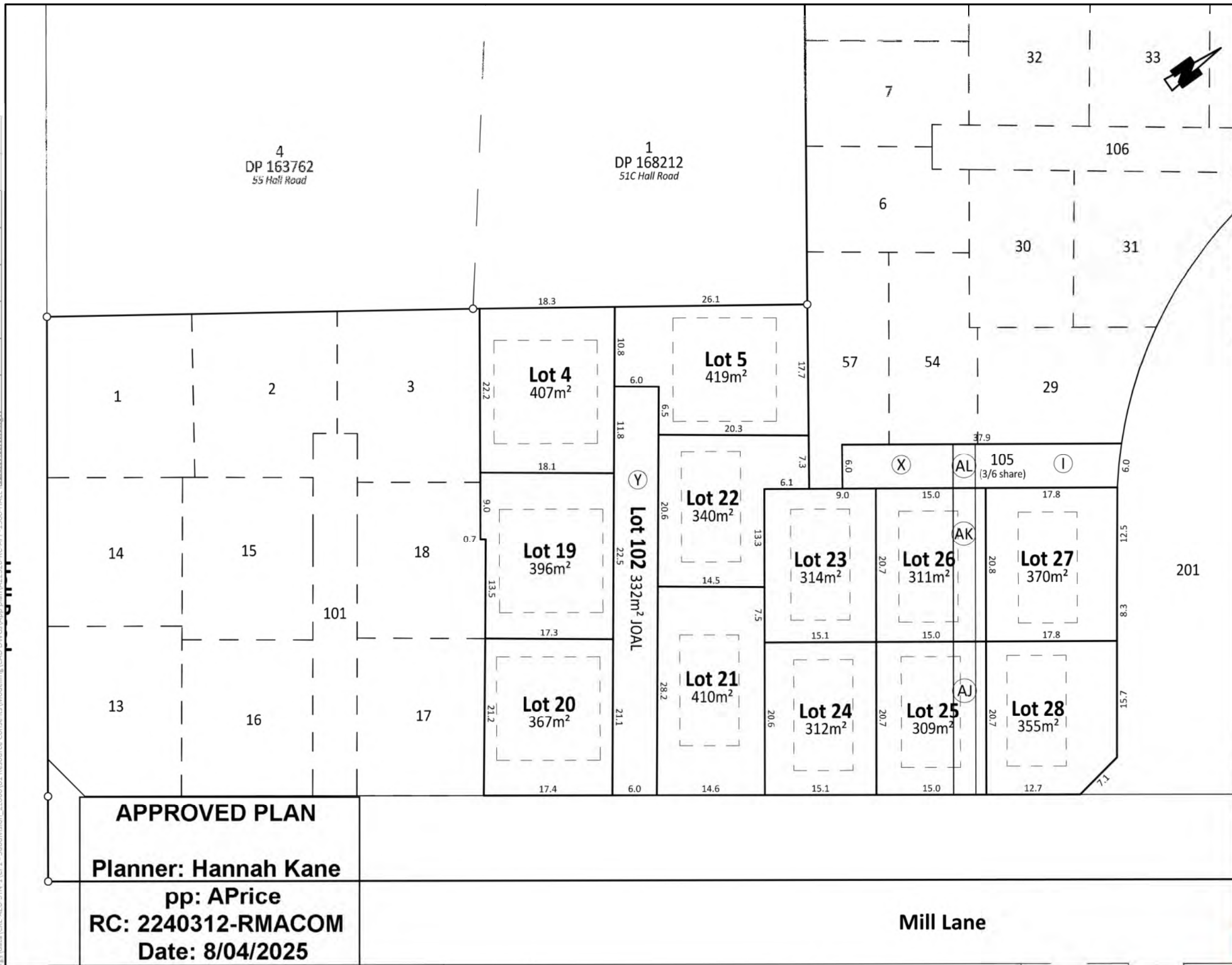
Amalgamation Conditions	
That Lot 100 (legal access) be held as to four undivided 1/4th shares by the owners of Lots 8, 9, 10 & 58 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.	
That Lot 105 (legal access) be held as to three undivided 1/6th shares by the owners of Lots 29, 54 & 57 hereon and three undivided 1/6th shares by the owner of Lot 1004 as tenants in common in the said shares and that individual record of title be issued in accordance therewith.	
That Lot 106 (legal access) be held as to seven undivided 1/7th shares by the owners of Lots 6, 7, 30, 31, 32, 33 & 34 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.	
That Lot 107 (legal access) be held as to four undivided 1/4th shares by the owners of Lots 8, 9, 10 & 58 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.	

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FOR RESOURCE CONSENT

C:\ProgramData\120\energy\data\CKL-A22326-1\G1 - Subdivision_22960\01 Resource Consents\Modelling\CAD DWG\A22326-RC-APP-1500-HALL.dwg



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Land Registration District

North Auckland

Plan Number

Territorial Authority (the Council)

Far North District Council

Schedule of Easements			
Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right to Convey Electricity	Y	Lot 102	Lots 4, 5, 19, 20, 21 & 22
Right to Convey Telecommunications			
Right to Convey Water			
Right to Drain Water	X, AL, I	Lot 105	Lots 23, 26 & 27
Right to Drain Sewage			

Schedule of Easements in Gross			
Purpose	Shown	Burdened Land (Servient Tenement)	Grantee
Right to Drain Sewage	AJ	Lot 25	Far North District Council
	AK	Lot 26	
	AL	Lot 105	

Amalgamation Conditions

That Lot 102 (legal access) be held as to six undivided 1/6th shares by the owners of Lots 4, 5, 19, 20, 21 & 22 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.

That Lot 105 (legal access) be held as to three undivided 1/6th shares by the owners of Lots 23, 26 & 27 hereon as tenants in common in the said shares and that individual record of title be issued in accordance therewith.

APPROVED PLAN

Planner: Hannah Kane

pp: APrice

RC: 2240312-RMACOM

Date: 8/04/2025

Applicant: Gemscott Seven Limited

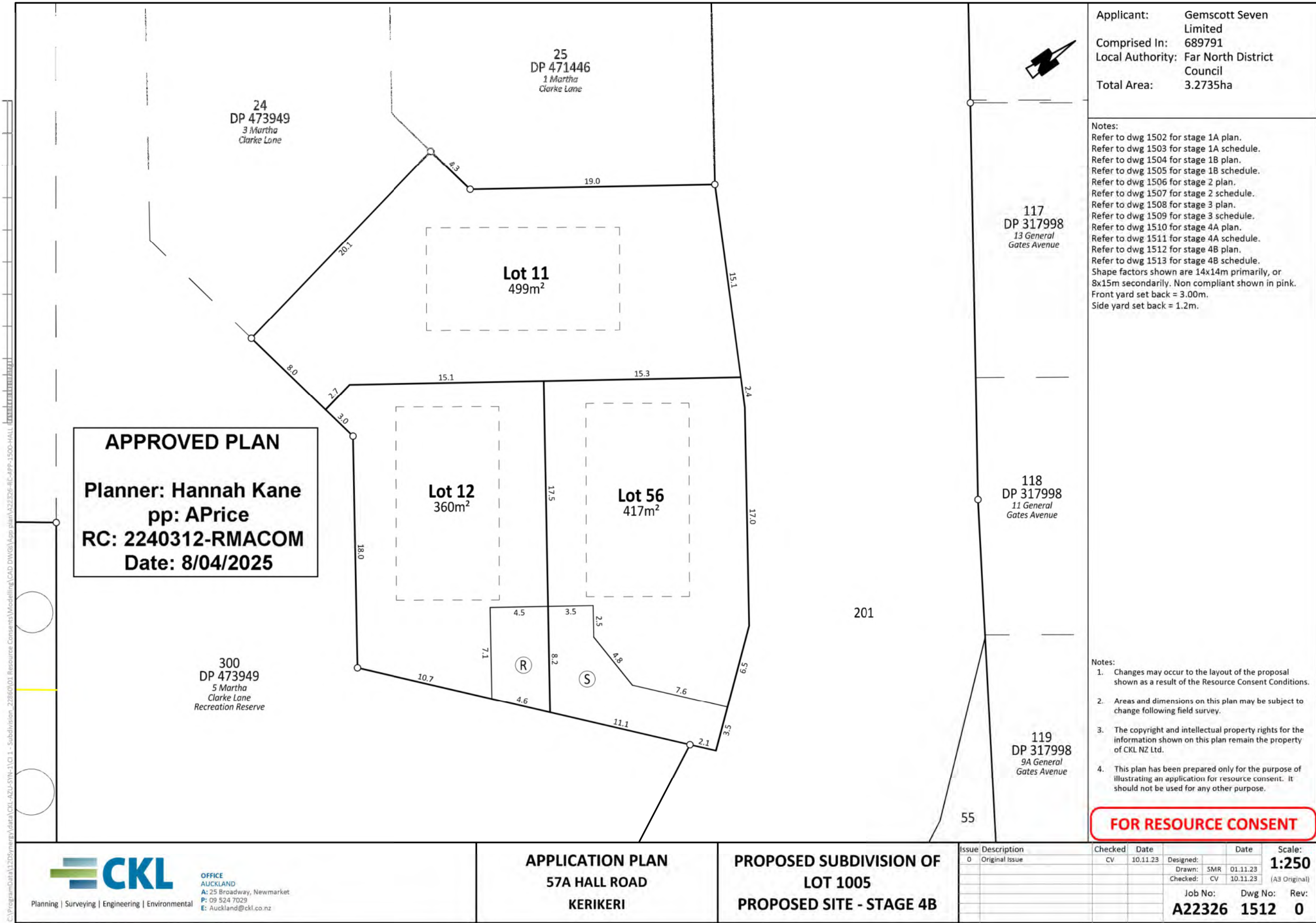
Comprised In: 689791

Local Authority: Far North District Council

Total Area: 3.2735ha

- Notes:
- Changes may occur to the layout of the proposal shown as a result of the Resource Consent Conditions.
 - Areas and dimensions on this plan may be subject to change following field survey.
 - The copyright and intellectual property rights for the information shown on this plan remain the property of CKL NZ Ltd.
 - This plan has been prepared only for the purpose of illustrating an application for resource consent. It should not be used for any other purpose.

FOR RESOURCE CONSENT



Land Registration District

North Auckland

Plan Number

Territorial Authority (the Council)

Far North District Council

Applicant: Gemscott Seven Limited
Comprised In: 689791
Local Authority: Far North District Council
Total Area: 3.2735ha

Schedule of Easements

Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right of Way Right to Convey Electricity Right to Convey Telecommunications Right to Convey Water Right to Drain Water Right to Drain Sewage	S	Lot 56	Lot 12
Right of Way	R	Lot 12	Lot 56

APPROVED PLAN

Planner: Hannah Kane
pp: APrice
RC: 2240312-RMACOM
Date: 8/04/2025

- Notes:
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 - Areas and dimensions on this plan may be subject to change following field survey.
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FOR RESOURCE CONSENT



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OFFICE
AUCKLAND
A: 25 Broadway, Newmarket
P: 09 524 7029
E: Auckland@ckl.co.nz

APPLICATION PLAN
57A HALL ROAD
KERIKERI

PROPOSED SUBDIVISION OF
LOT 1005
SCHEDULE - STAGE 4B

Issue	Description	Checked	Date	Designed	Date	Scale
0	Original Issue	CV	10.11.23	Drawn: CV	01.11.23	NTS
				Checked: CV	10.11.23	(A3 Original)
				Job No:	Dwg No:	Rev:
				A22326	1513	0

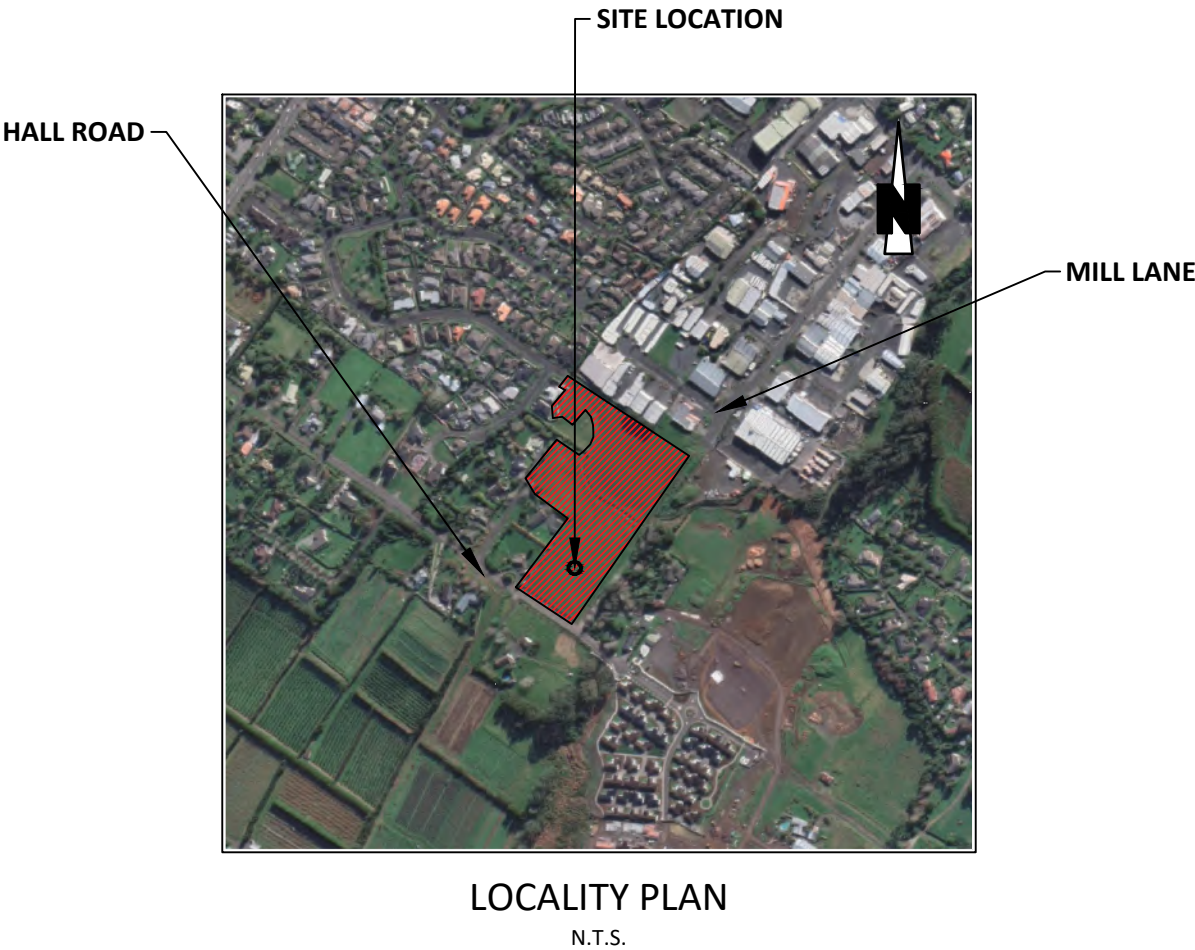
x2 CVh Engineering Drawings

CHeSTER

GEMSCOTT HALL LTD

57A HALL ROAD, KERIKERI

CIVIL ENGINEERING DRAWINGS



DRAWING INDEX		REVISION AND ISSUE DATE	
Sheet Number	Sheet Title	08.12.2023	24.06.25
		-	-
A22326 - 0000	COVER SHEET	A	A
A22326 - 1001	CONSTRUCTION STAGING PLAN		
A22326 - 3000	ROADING AND JOAL OVERVIEW PLAN	A	B
A22326 - 3001	ROADING AND JOAL LAYOUT PLAN SHEET 1	A	A
A22326 - 3002	ROADING AND JOAL LAYOUT PLAN SHEET 2	A	A
A22326 - 3003	ROADING AND JOAL LAYOUT PLAN SHEET 3	A	B
A22326 - 3100	JOAL LONG SECTIONS SHEET 1	A	A
A22326 - 3101	JOAL LONG SECTIONS SHEET 2	A	A
A22326 - 4000	DRAINAGE LAYOUT OVERVIEW PLAN	A	B
A22326 - 4001	DRAINAGE LAYOUT PLAN SHEET 1	A	A
A22326 - 4002	DRAINAGE LAYOUT PLAN SHEET 2	A	A
A22326 - 4003	DRAINAGE LAYOUT PLAN SHEET 3	A	B
A22326 - 4100	STORMWATER LONG SECTIONS SHEET 1	A	A
A22326 - 4101	STORMWATER LONG SECTIONS SHEET 2	A	A
A22326 - 4200	WASTEWATER LONG SECTIONS SHEET 1	A	A
A22326 - 4201	WASTEWATER LONG SECTIONS SHEET 2	A	A
A22326 - 6000	WATER SUPPLY OVERVIEW PLAN	-	A
A22326 - 6001	WATER SUPPLY LAYOUR PLAN SHEET 1	-	A
A22326 - 6002	WATER SUPPLY LAYOUR PLAN SHEET 2	-	A
A22326 - 6003	WATER SUPPLY LAYOUR PLAN SHEET 3	-	A
A22326 - 6004	WATER SUPPLY LAYOUR PLAN SHEET 4	-	A

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

CKL PROJECT NUMBER : A22326
DATE OF ISSUE : JUNE 2025
ISSUED FOR : FOR EPA



Planning | Surveying | Engineering | Environmental

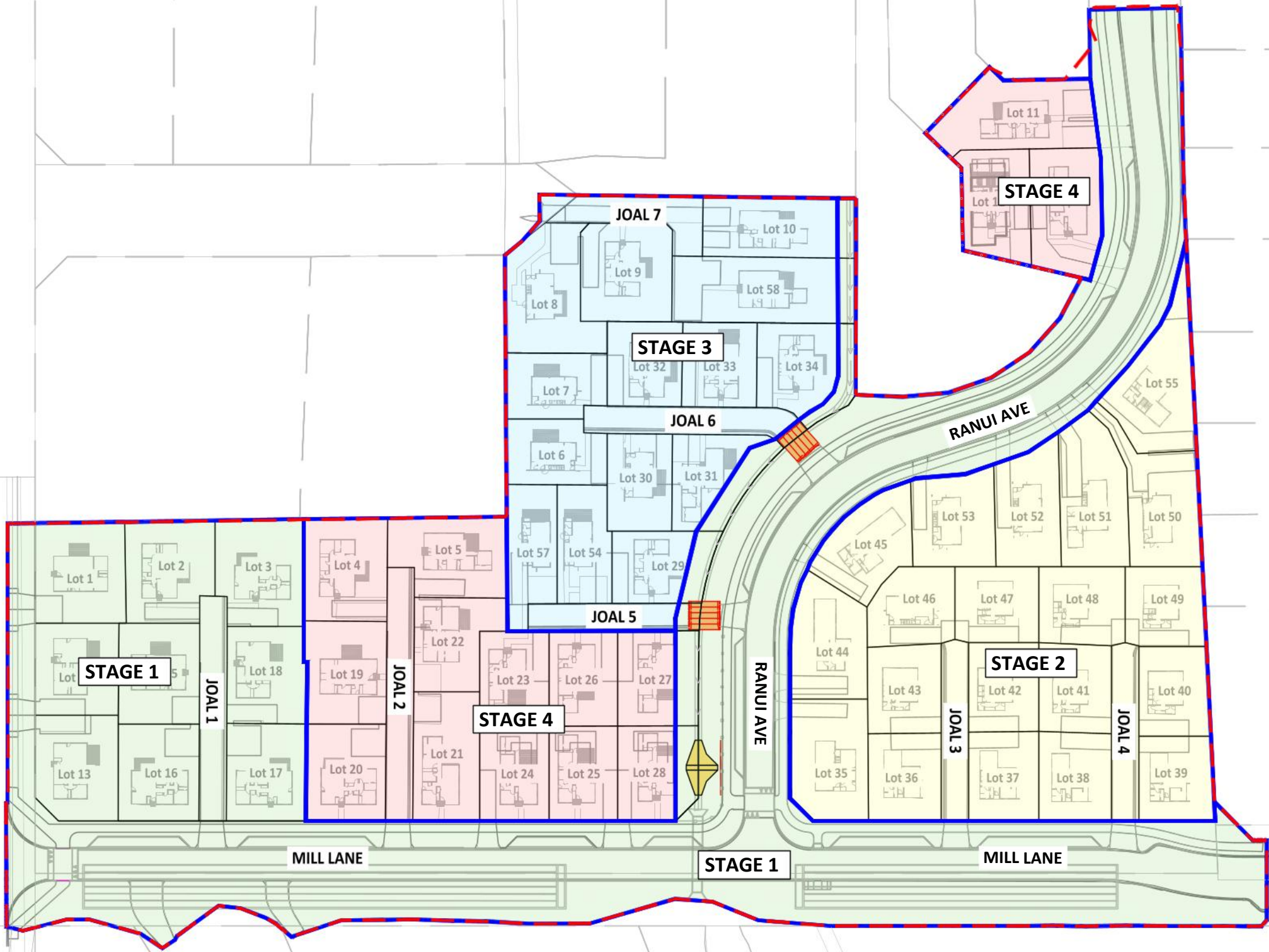
AUCKLAND Office
A: 25 Broadway, Newmarket
P: 09 524 7029
E: Auckland@ckl.co.nz

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HALL ROAD

HALL ROAD

GENERAL GATES AVE



LEGEND:

[Green Box]	STAGE 1
[Yellow Box]	STAGE 2
[Light Blue Box]	STAGE 3
[Pink Box]	STAGE 4
[Red Dashed Line]	PROPOSED EARTHWORKS BOUNDARY
[Blue Solid Line]	PROPOSED STAGE BOUNDARY

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



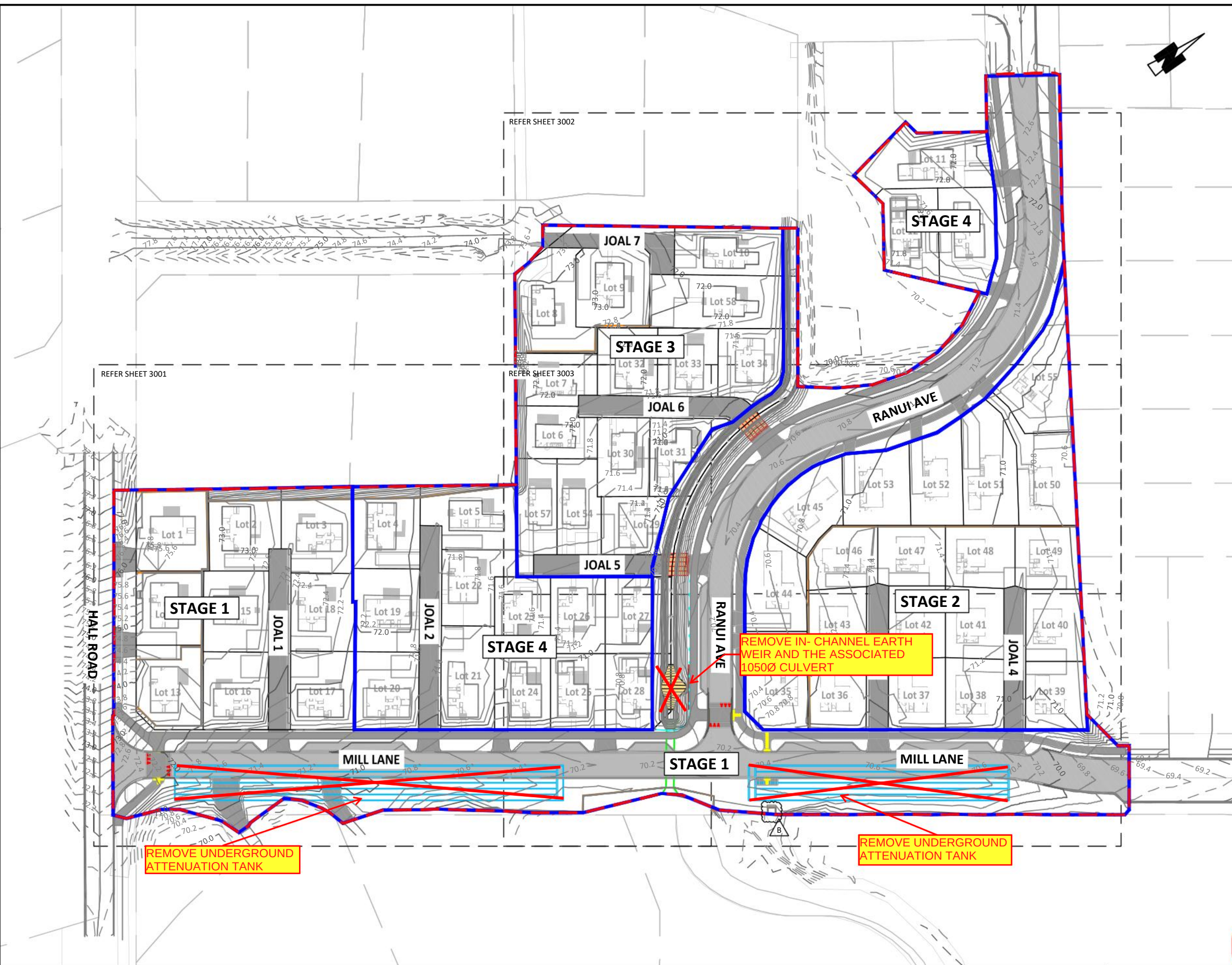
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Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

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57A HALL ROAD
KERIKERI, NORTHLAND

CONSTRUCTION
STAGING PLAN

Issue	Description	Checked	Date	Designed	Date	Scale
A	FOR EPA	SJ	18.12.23	AV	27.09.23	1:1000
				AV	27.09.23	(A3 Original)
				SJ	18.12.23	
		Job No:		Dwg No:	Rev:	
		A22326		1001	A	

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ROADING AND PAVEMENT NOTES:

- 1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH FAR NORTH DISTRICT COUNCIL (FNDC) ENGINEERING STANDARDS..
- 2. ALL EXTRUDED/INSITU CONCRETE TO BE MIN. 20 MPa STRENGTH AT 28 DAYS.
- 3. ALL UNDERCHANNEL DRAINS TO BE LAID IN TNZ F/2 DRAINAGE MATERIAL AND HAVE FREE-FLOWING OUTLET TO NEAREST DOWNSTREAM CATCHPIT.
- 4. ALL FOOTPATHS TO COMPRISE 100mm THICK 20MPa BROOM FINISH CONCRETE ON MIN. 100mm COMPACTED DEPTH GAP40 BASECOURSE.
- 5. ALL REINFORCING SHALL BE PLACED ON APPROVED CHAIRS AND IS TO BE PLACED CENTRALLY OR AS PER DESIGN PLANS.
- 6. ALL FOOTPATH SAWCUTS ARE TO COINCIDE WITH KERB SAWCUTS AT 3m CRS TYP. UNLESS NOTED OTHERWISE.
- 7. PAVEMENT DESIGN IS PROVISIONAL ONLY AND INSITU SUBGRADE STRENGTH SHALL BE CONFIRMED VIA SCALA PENETROMETER TESTING FOLLOWING GULLETTING OF THE CARRIAGEWAYS TO CONFIRM FINAL PAVEMENT THICKNESS AND ANY SUBGRADE IMPROVEMENT WORKS i.e. UNDERCUTTING OR STABILISATION. THE ENGINEER IS TO INSPECT, TEST AND APPROVE ALL SUBGRADES PRIOR TO AGGREGATE PLACEMENT.
- 8. LIME/CEMENT REACTIVITY TESTS ARE TO BE COMPLETED PRIOR TO STABILISING TO CONFIRM APPLICATION RATE, CONFIRM WITH THE ENGINEER.
- 9. ALL SUBGRADES SHALL BE TRIMMED WITHIN +/- 10mm TOLERANCE TO DESIGN LEVELS AND SHALL BE STRUNG AND APPROVED PRIOR TO METAL COURSE PLACEMENT.
- 10. VEHICLE CROSSING LOCATIONS AS SHOWN SERVING DEVELOPMENT LOTS (ASIDE FROM ROWs) AND ARE INDICATIVE ONLY (UNLESS NOTED OTHERWISE). THE POSITIONS SHOWN ARE ONLY FOR THE PURPOSE OF THE STREETSCAPE LAYOUT. LOT VEHICLE CROSSINGS SHALL BE INSTALLED INDIVIDUALLY BY THE LOT OWNER AT THE TIME OF BUILDING DEVELOPMENT.

APPROVED PLAN

Engineer: RMishra

RC: RC2240312 - EPA/B

Date: 20/11/2025

NOTES:

ALL PROPOSED FGLs IN MILL LANE AND RANUI AVENUE INCL. STREAM DIVERSION AND ALL JOAL CROSS SECTIONS REMAIN AS PER DESIGN APPROVED UNDER RC 2220714-RMACOM.

- LEGEND:
- 49.0 — EXISTING CONTOURS - MAJOR (1.0m)
 - 49.2 — EXISTING CONTOURS - MINOR (1.0m)
 - FINISHED CONTOURS - MAJOR (1.0m)
 - FINISHED CONTOURS - MINOR (0.2m)
 - FFL 22.00 FINISH FLOOR LEVELS
 - FINISH SURFACE FALL DIRECTION
 - - - PROPOSED EARTHWORKS BOUNDARY
 - PROPOSED STAGE BOUNDARY

FOR CONSTRUCTION

OFFICE
Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

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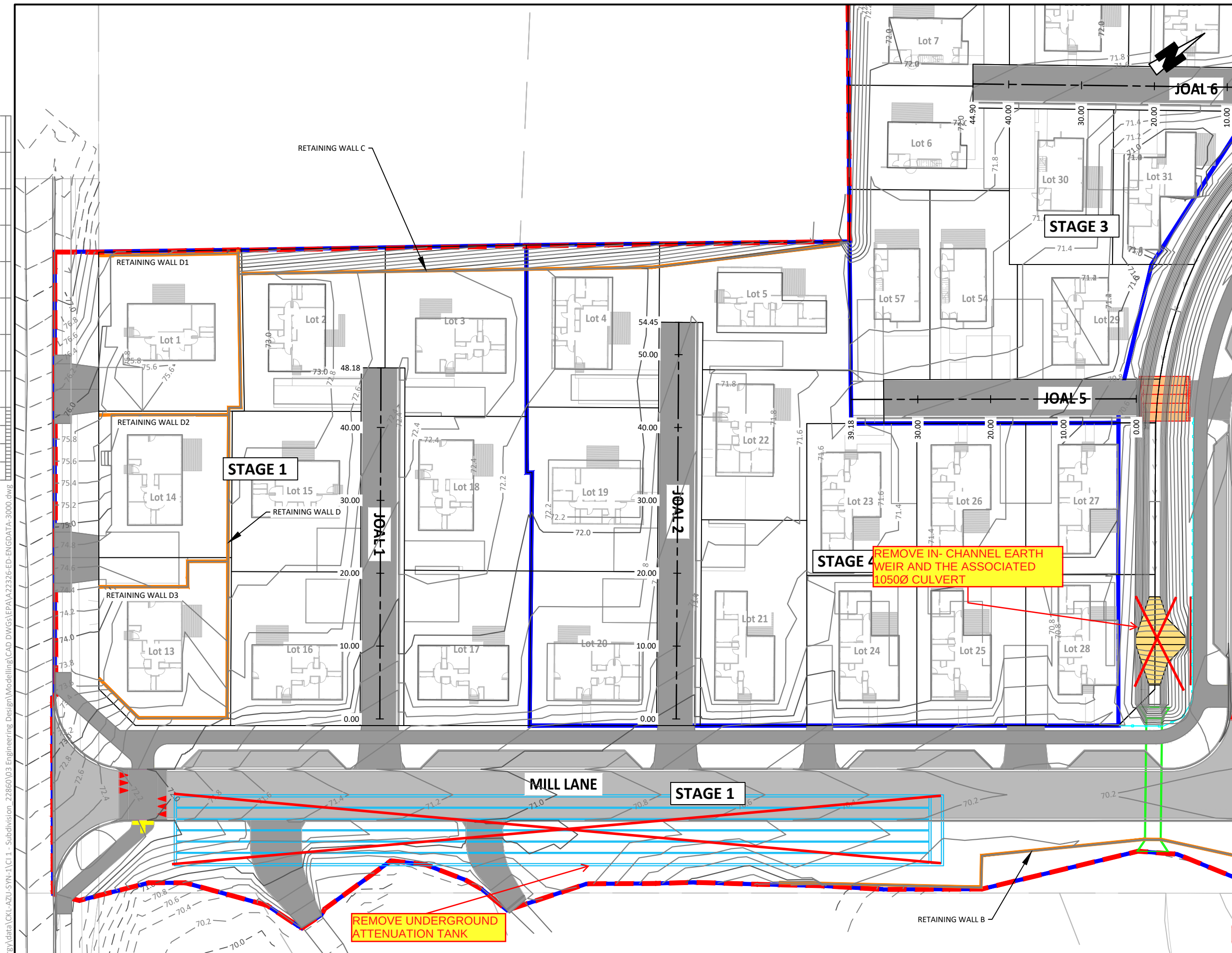
57A HALL ROAD

KERIKERI, NORTHLAND

ROADING AND JOAL

OVERVIEW PLAN

Issue	Description	Checked	Date	Designed:	Date	Scale:
A	FOR EPA	SJ	08.12.23	AV	27.09.23	1:1000
B	FOR EPA	SJ	24.06.25	AV	27.09.23	(A3 Original)
				Checked:	SJ	08.12.23
				Job No:	A22326	
				Dwg No:	3000	
				Rev:	B	



- ROADING AND PAVEMENT NOTES:**
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APPROVED PLAN

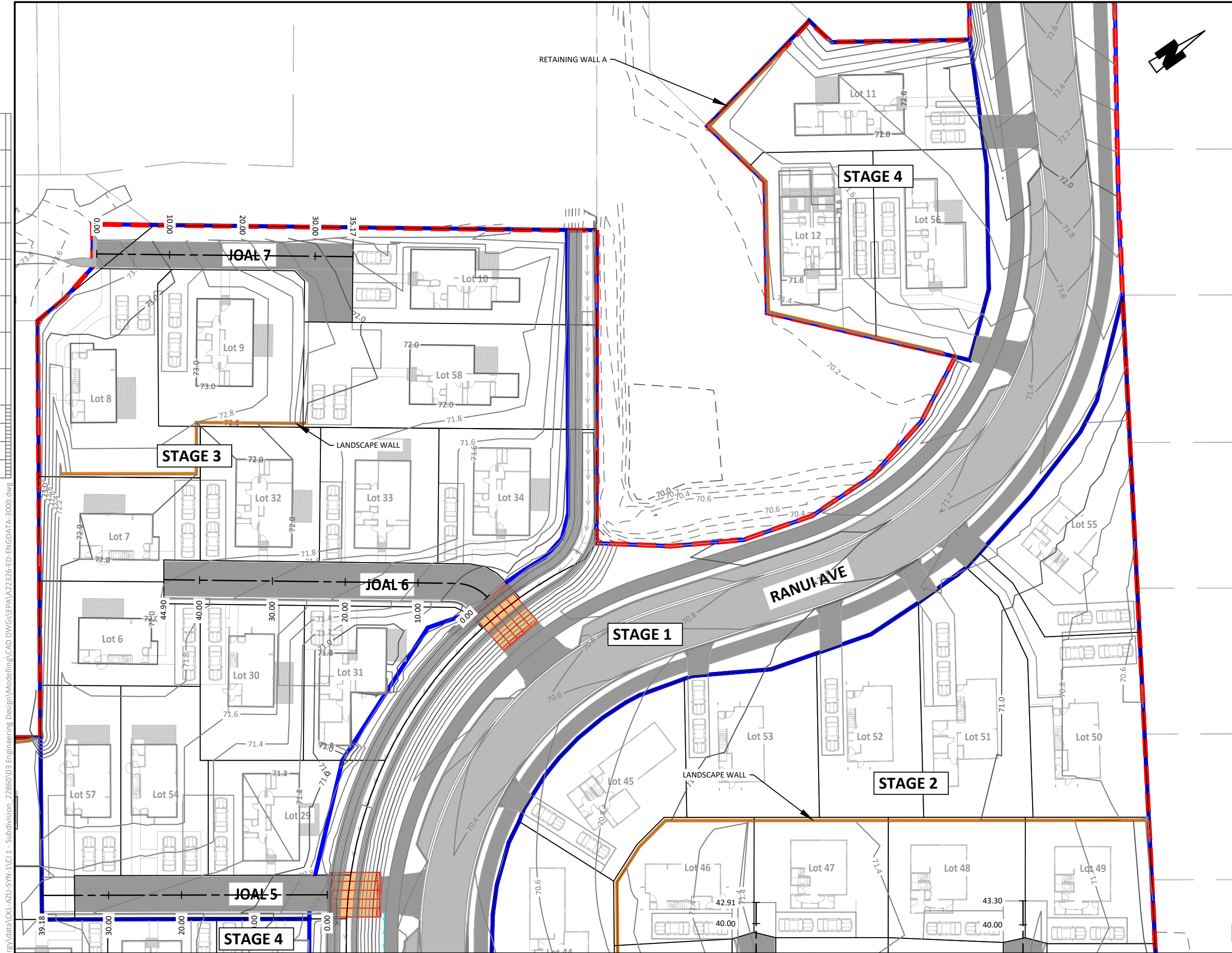
Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

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ALL PROPOSED FGLS IN MILL LANE AND RANUI AVENUE INCL. STREAM DIVERSION AND ALL JOAL CROSS SECTIONS REMAIN AS PER DESIGN APPROVED UNDER RC 220714-RMACOM.

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 - F.F.L. 22.00 FINISH FLOOR LEVELS
 - FINISH SURFACE FALL DIRECTION
 - - - PROPOSED EARTHWORKS BOUNDARY
 - PROPOSED STAGE BOUNDARY

FOR CONSTRUCTION



ROADING AND PAVEMENT NOTES:

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APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

NOTES:

ALL PROPOSED FGLs IN MILL LANE AND RANUI AVENUE INCL. STREAM DIVERSION AND ALL JOAL CROSS SECTIONS REMAIN AS PER DESIGN APPROVED UNDER RC 2220714-RMACOM.

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FOR CONSTRUCTION



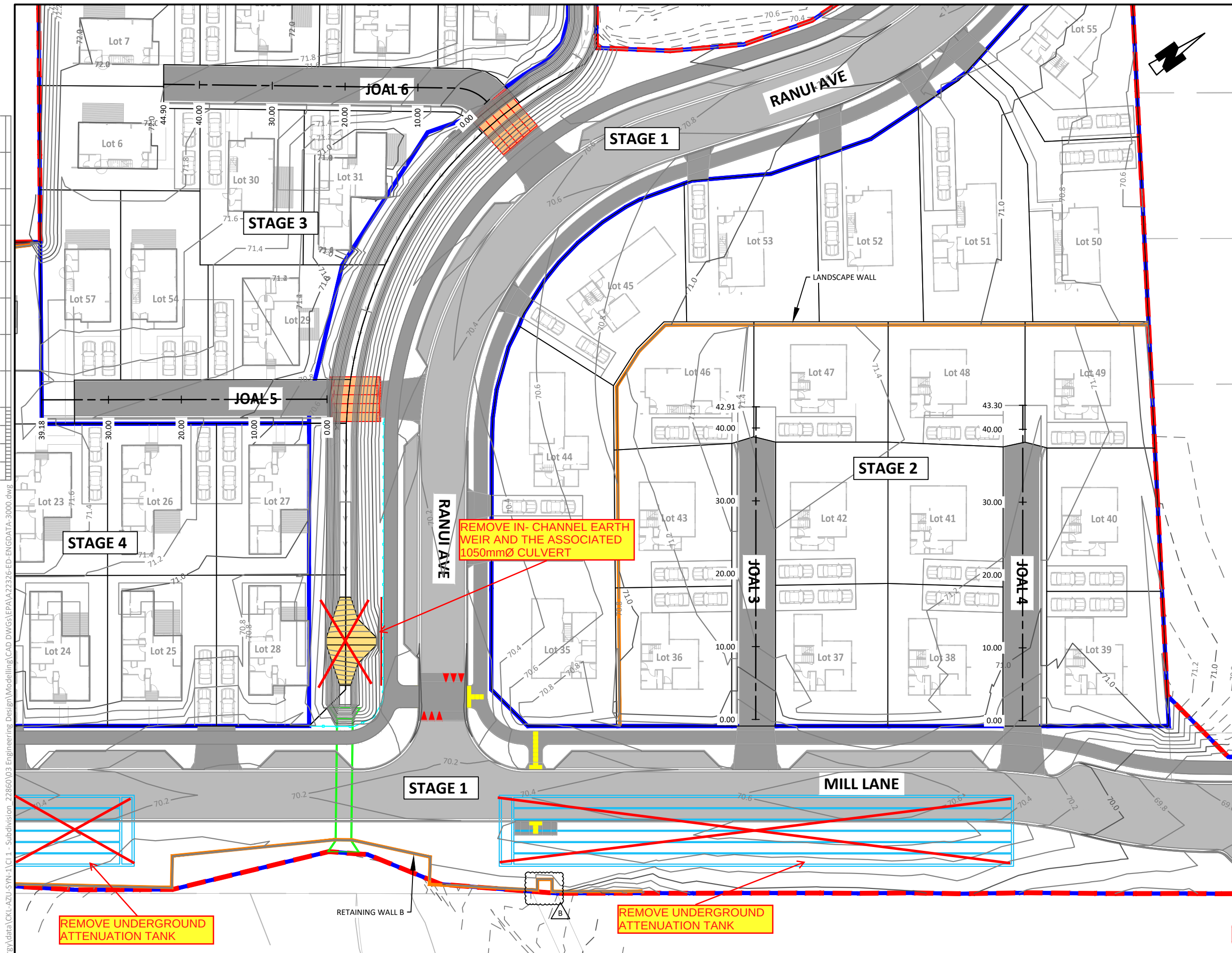
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OFFICE
Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

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KERIKERI, NORTHLAND

ROADING AND JOAL
LAYOUT PLAN
SHEET 2

Issue Description		Checked	Date	Date	Scale:
A	FOR EPA	SJ	08.12.23	Designed: AV 27.09.23	1:500 (A3 Original)
				Drawn: AV 27.09.23	
				Checked: SJ 08.12.23	
				Job No: A22326	Dwg No: 3002
					Rev: A



ROADING AND PAVEMENT NOTES:

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APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

NOTES:

ALL PROPOSED FGLs IN MILL LANE AND RANUI AVENUE INCL. STREAM DIVERSION AND ALL JOAL CROSS SECTIONS REMAIN AS PER DESIGN APPROVED UNDER RC 2220714-RMACOM.

LEGEND:

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- FINISHED CONTOURS - MAJOR (1.0m)
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- FINISH SURFACE FALL DIRECTION
- - - PROPOSED EARTHWORKS BOUNDARY
- PROPOSED STAGE BOUNDARY

FOR CONSTRUCTION



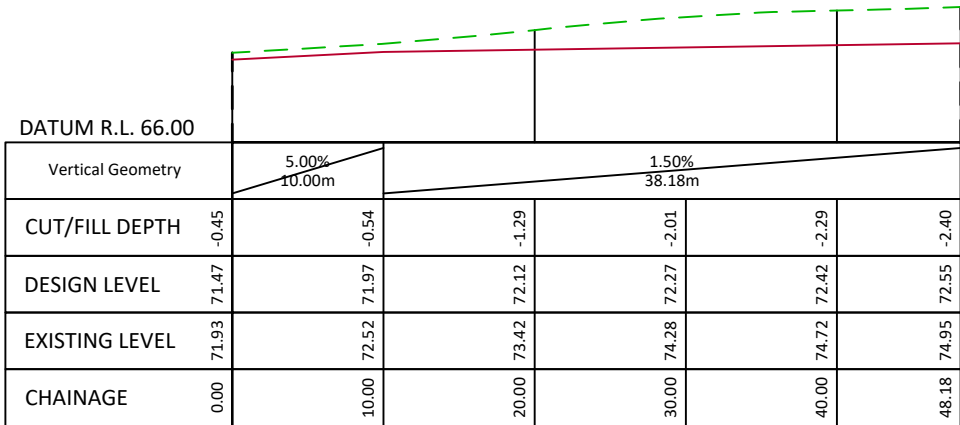
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Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

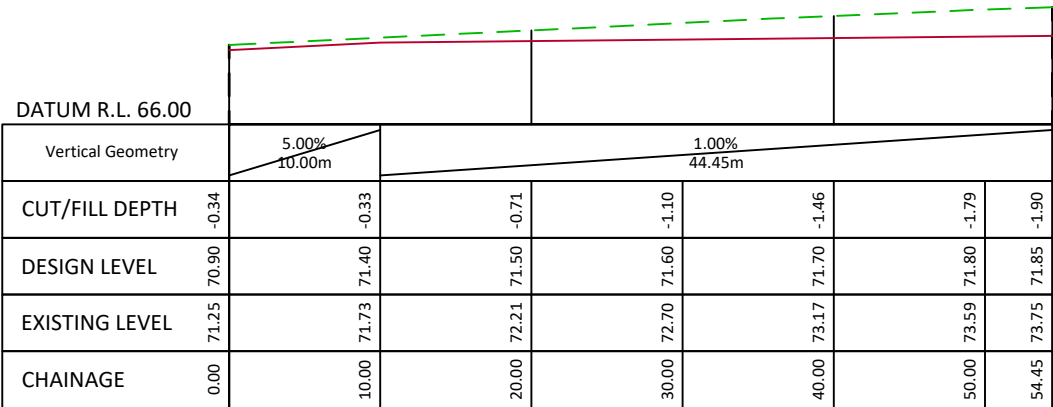
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KERIKERI, NORTHLAND

ROADING AND JOAL
LAYOUT PLAN
SHEET 3

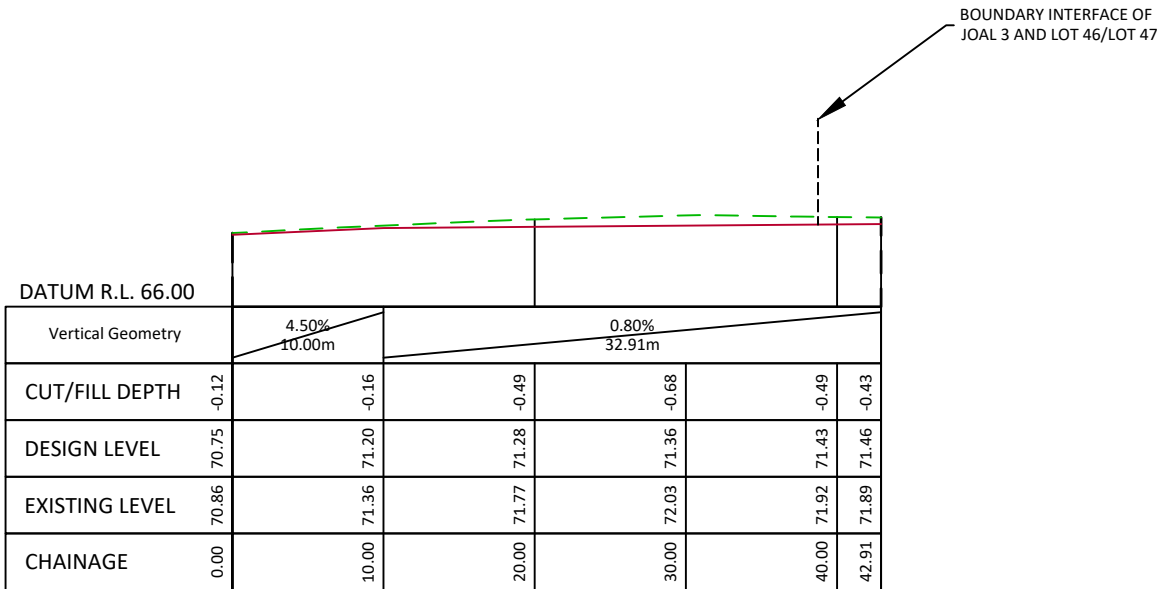
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				Checked: SJ	08.12.23	
				Job No:	Dwg No:	Rev:
				A22326	3003	B



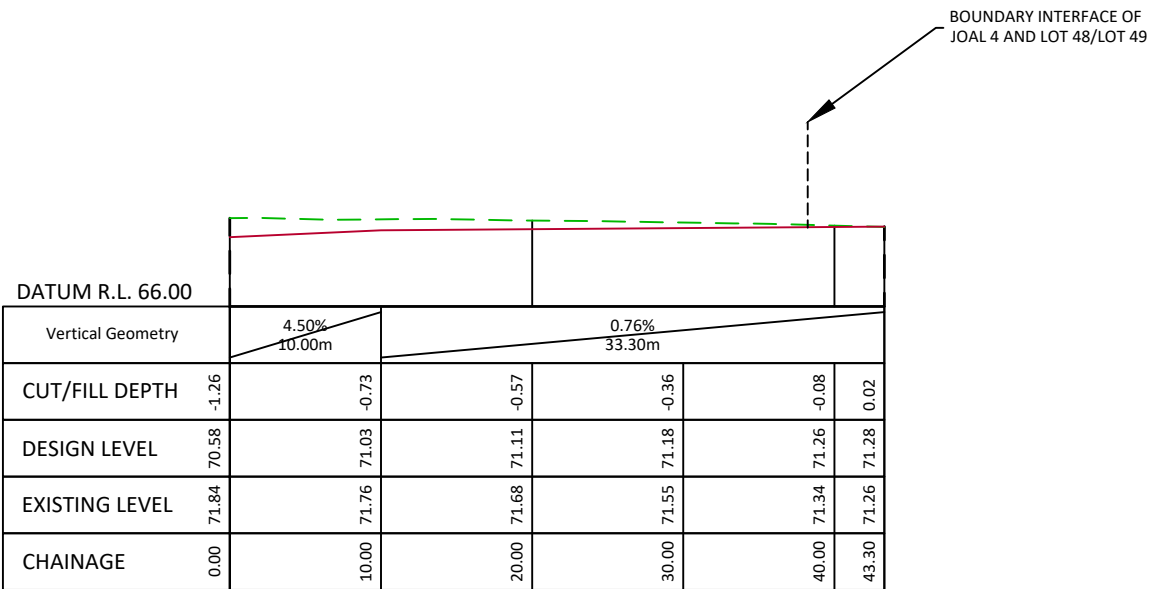
LONGITUDINAL SECTION FOR JOAL 1



LONGITUDINAL SECTION FOR JOAL 2



LONGITUDINAL SECTION FOR JOAL 3



LONGITUDINAL SECTION FOR JOAL 4

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

LEGEND:

— FINISHED GROUND LEVEL
- - - EXISTING GROUND LEVEL

FOR CONSTRUCTION



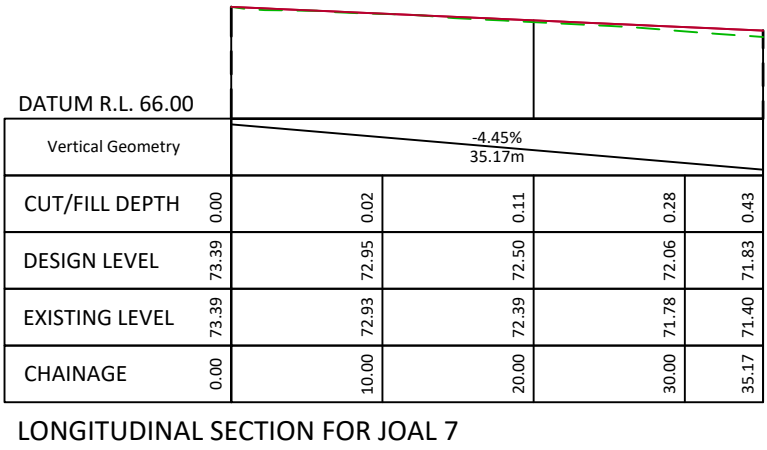
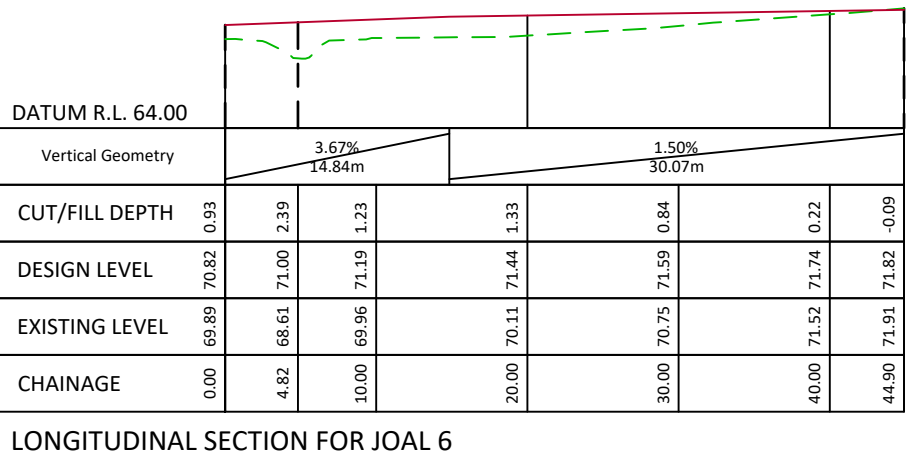
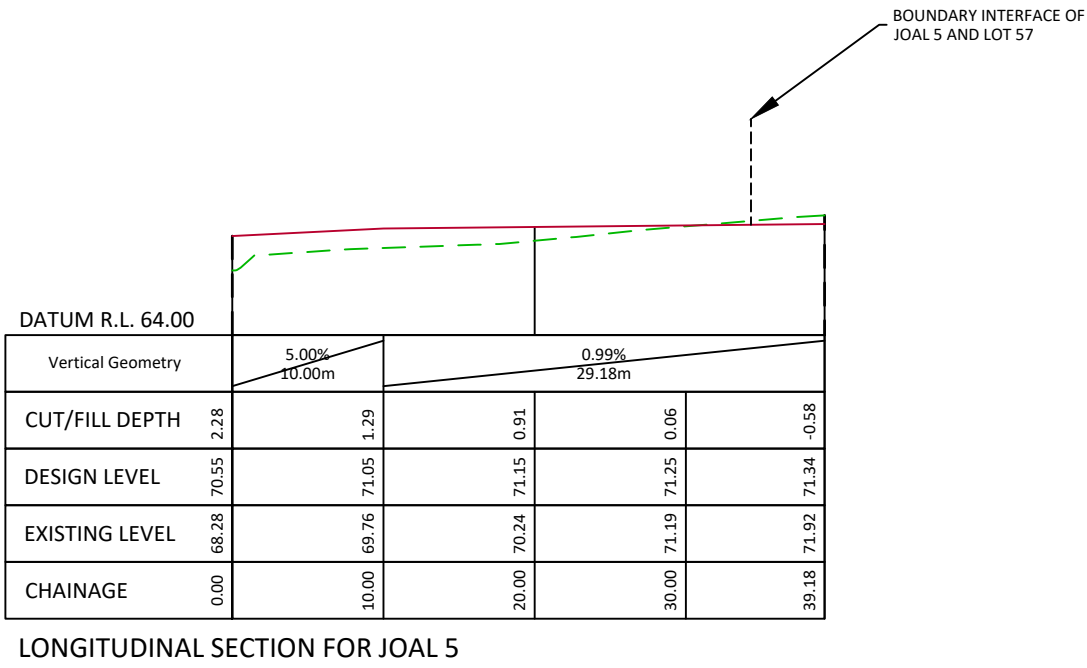
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OFFICE
Auckland
A: 25 Broadway, Auckland
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KERIKERI, NORTHLAND

JOAL
LONG SECTIONS
SHEET 1

Issue	Description	Checked	Date	Designed:	AV	Date	Scale:
A	FOR EPA	SJ	08.12.23	Drawn:	AV	27.09.23	1:500
				Checked:	SJ	08.12.23	(A3 Original)
				Job No:	A22326	Dwg No:	3100
				Rev:	A		



APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

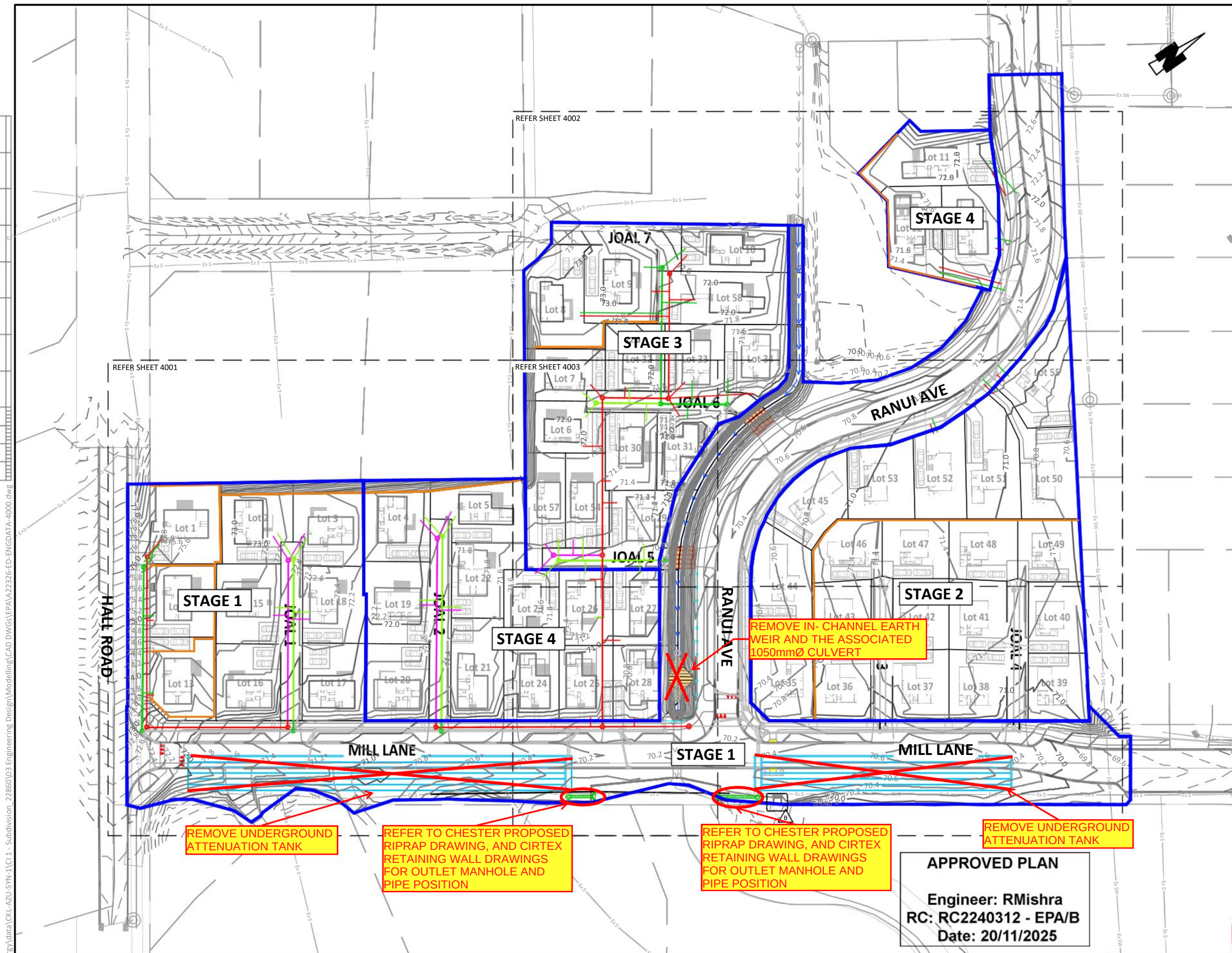
LEGEND:

———— FINISHED GROUND LEVEL
- - - - - EXISTING GROUND LEVEL

FOR CONSTRUCTION

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- DRAINAGE NOTES:**
- ALL PUBLIC DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH FAR NORTH DISTRICT COUNCIL (FNDC) ENGINEERING STANDARDS.
 - ALL PRIVATE DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE NEW ZEALAND BUILDING CODE (NZBC) AND APPLICABLE STANDARDS.
 - ALL WASTEWATER AND STORMWATER LOT CONNECTIONS WILL BE DN100 uPVC SN16 UNLESS SHOWN OTHERWISE.
 - ALL PIPE CROSSINGS UNDER CARRIAGEWAYS/TRAFFIC AREAS TO BE HARDFILL BACKFILLED WITH APPROVED GAP65 TO 1.0m BEYOND EXTENT OF CARRIAGEWAY. TRENCH HARDFILL BACKFILL TO BE WELL COMPACTED TO ACHIEVE MIN. CLEGG HAMMER CIV = 25.
 - ALL DRAINAGE WORKS SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A REGISTERED DRAIN LAYER AND IN ACCORDANCE WITH CURRENT HEALTH AND SAFETY PRACTICES. WHERE REQUIRED, DRAINAGE WORKS TO BE UNDERTAKEN BY AN APPROVED LICENSED CONTRACTOR (A.L.C.).
 - THE CONTRACTOR SHALL LIAISE WITH THE UTILITY PROVIDER FOR THE STANDARD CLEARANCE REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING SERVICES WITHIN THE EXTENT OF THE WORKS PRIOR TO WORKS COMMENCEMENT. ALL TESTING AND POTHOLING SHALL BE AT THE CONTRACTOR'S EXPENSE.
 - ALL EXISTING BERMS, CARRIAGEWAYS AND CROSSINGS TO BE RE-INSTATED AS PER COUNCIL/CONTROLLING AUTHORITY REQUIREMENTS.
 - A COPY OF THE SITE SPECIFIC HEALTH AND SAFETY PLAN SHALL BE AVAILABLE ON SITE.
 - ALL TRAFFIC MANAGEMENT AND CORRIDOR ACCESS PERMIT(S) SHOULD BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION WITH THE ROAD CORRIDOR/RESERVE.

- PRE-CONSTRUCTION NOTES:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND ACCURATELY CONFIRM INVERT AND LID LEVELS OF EXISTING STORMWATER MANHOLES AND CONNECTION POINTS PRIOR TO COMMENCING CONSTRUCTION. WHERE LEVELS DIFFER TO THOSE SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER ACCORDINGLY.
 - THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

- DRAINAGE LEGEND:**
- SW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
 - PROPOSED SW (PUBLIC)
 - PROPOSED SW CONNECTION (PUBLIC)
 - PROPOSED SW (PRIVATE)
 - PROPOSED SW CONNECTION (PRIVATE)
 - WW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
 - PROPOSED WW (PUBLIC)
 - PROPOSED WW CONNECTION (PUBLIC)
 - PROPOSED WW (PRIVATE)
 - PROPOSED WW CONNECTION (PRIVATE)
 - PROPOSED RETAINING WALL
 - PROPOSED STAGE BOUNDARY

FOR CONSTRUCTION



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Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

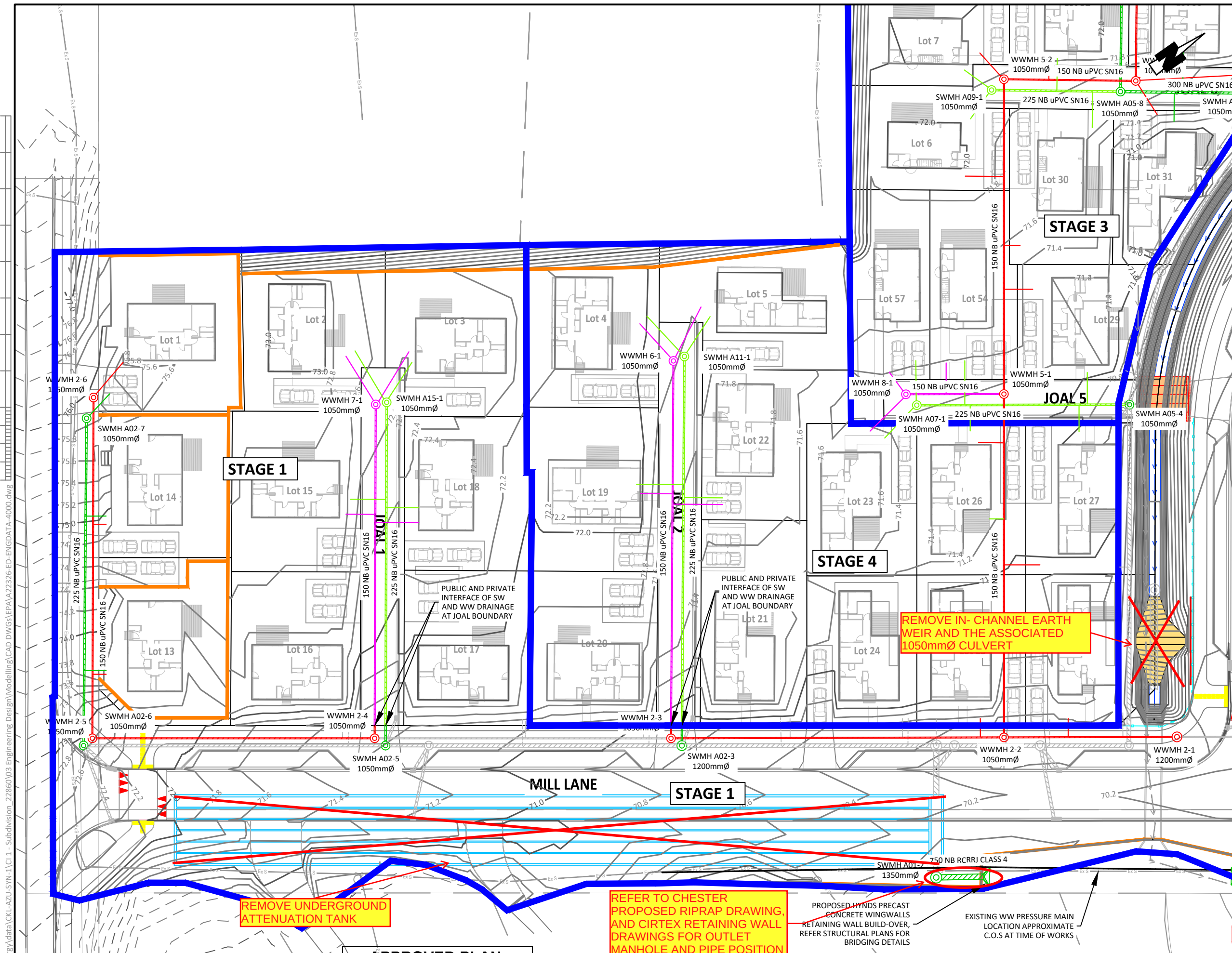
GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

DRAINAGE
OVERVIEW PLAN

APPROVED PLAN
Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

Issue	Description	Checked	Date	Designed:	Date	Scale:
A	FOR EPA	SJ	08.12.23	AV	27.09.23	1:1000 (A3 Original)
B	FOR EPA	SJ	24.06.25	AV	27.09.23	
				SJ	08.12.23	
		Job No:		Dwg No:	Rev:	
		A22326		4000	B	

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- DRAINAGE NOTES:**
- ALL PUBLIC DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH FAR NORTH DISTRICT COUNCIL (FNDC) ENGINEERING STANDARDS.
 - ALL PRIVATE DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE NEW ZEALAND BUILDING CODE (NZBC) AND APPLICABLE STANDARDS.
 - ALL WASTEWATER AND STORMWATER LOT CONNECTIONS WILL BE DN100 uPVC SN16 UNLESS SHOWN OTHERWISE.
 - ALL PIPE CROSSINGS UNDER CARRIAGEWAYS/TRAFFIC AREAS TO BE HARDFILL BACKFILLED WITH APPROVED GAP65 TO 1.0m BEYOND EXTENT OF CARRIAGEWAY. TRENCH HARDFILL BACKFILL TO BE WELL COMPACTED TO ACHIEVE MIN. CLEGG HAMMER CIV = 25.
 - ALL DRAINAGE WORKS SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A REGISTERED DRAIN LAYER AND IN ACCORDANCE WITH CURRENT HEALTH AND SAFETY PRACTICES. WHERE REQUIRED, DRAINAGE WORKS TO BE UNDERTAKEN BY AN APPROVED LICENSED CONTRACTOR (A.L.C.).
 - THE CONTRACTOR SHALL LIAISE WITH THE UTILITY PROVIDER FOR THE STANDARD CLEARANCE REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING SERVICES WITHIN THE EXTENT OF THE WORKS PRIOR TO WORKS COMMENCEMENT. ALL TESTING AND POTHOLING SHALL BE AT THE CONTRACTOR'S EXPENSE.
 - ALL EXISTING BERMS, CARRIAGEWAYS AND CROSSINGS TO BE RE-INSTATED AS PER COUNCIL/CONTROLLING AUTHORITY REQUIREMENTS.
 - A COPY OF THE SITE SPECIFIC HEALTH AND SAFETY PLAN SHALL BE AVAILABLE ON SITE.
 - ALL TRAFFIC MANAGEMENT AND CORRIDOR ACCESS PERMIT(S) SHOULD BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION WITH THE ROAD CORRIDOR/RESERVE.

- PRE-CONSTRUCTION NOTES:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND ACCURATELY CONFIRM INVERT AND LID LEVELS OF EXISTING STORMWATER MANHOLES AND CONNECTION POINTS PRIOR TO COMMENCING CONSTRUCTION. WHERE LEVELS DIFFER TO THOSE SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER ACCORDINGLY.
 - THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

- DRAINAGE LEGEND:**
- SW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
 - PROPOSED SW (PUBLIC)
 - PROPOSED SW CONNECTION (PUBLIC)
 - PROPOSED SW (PRIVATE)
 - PROPOSED SW CONNECTION (PRIVATE)
 - WW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
 - PROPOSED WW (PUBLIC)
 - PROPOSED WW CONNECTION (PUBLIC)
 - PROPOSED WW (PRIVATE)
 - PROPOSED WW CONNECTION (PRIVATE)
 - PROPOSED RETAINING WALL
 - PROPOSED STAGE BOUNDARY

FOR CONSTRUCTION



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Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

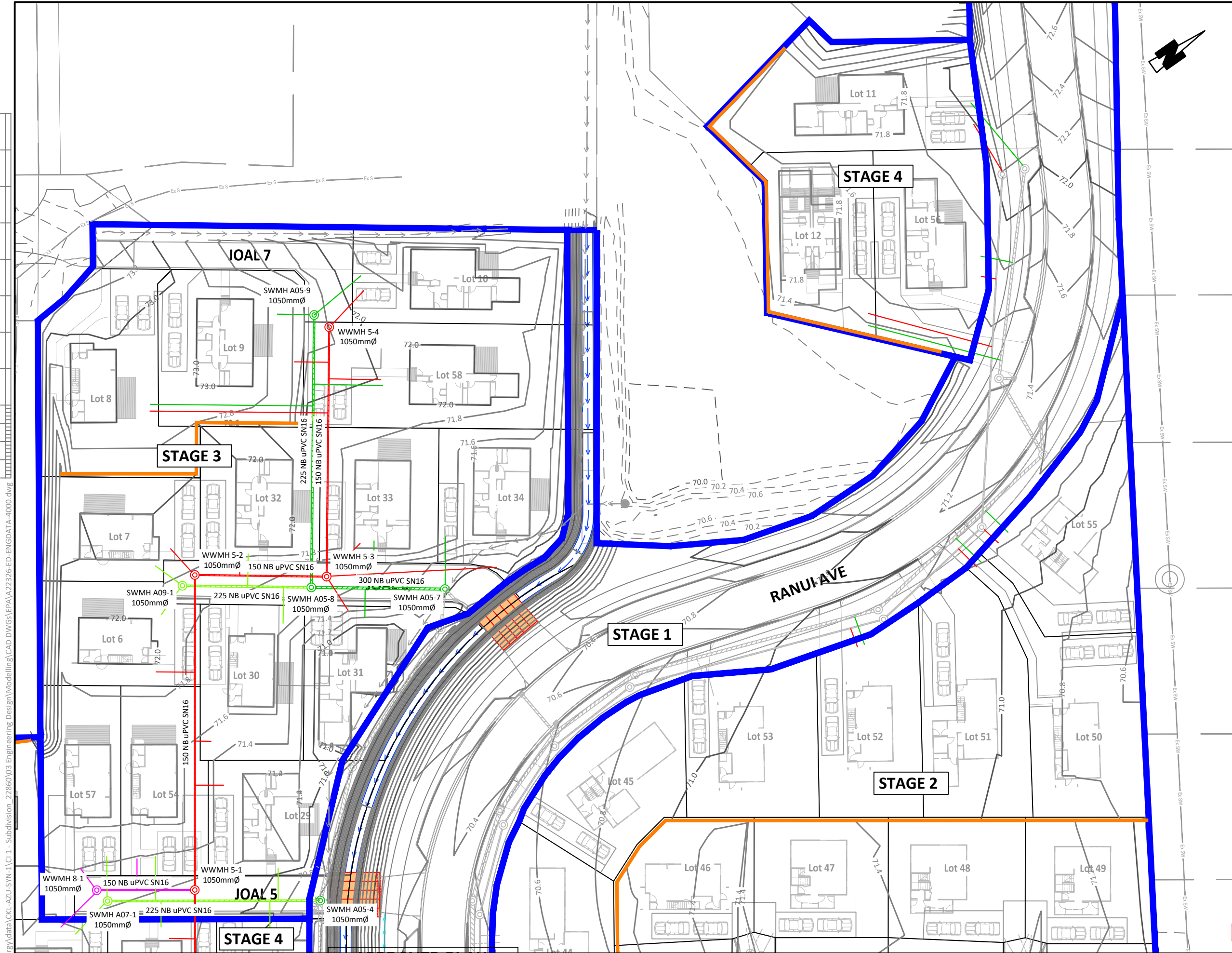
APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

DRAINAGE
LAYOUT PLAN
SHEET 1

Issue		Description	Checked	Date		Date		Scale:
A		FOR EPA	SJ	08.12.23	Designed:	AV	27.09.23	1:500 (A3 Original)
					Drawn:	AV	27.09.23	
					Checked:	SJ	08.12.23	
					Job No:		Dwg No:	Rev:
					A22326		4001	A



DRAINAGE NOTES:

1. ALL PUBLIC DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH FAR NORTH DISTRICT COUNCIL (FNDC) ENGINEERING STANDARDS.
2. ALL PRIVATE DRAINAGE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE NEW ZEALAND BUILDING CODE (NZBC) AND APPLICABLE STANDARDS.
3. ALL WASTEWATER AND STORMWATER LOT CONNECTIONS WILL BE DN100 uPVC SN16 UNLESS SHOWN OTHERWISE.
4. ALL PIPE CROSSINGS UNDER CARRIAGEWAYS/TRAFFIC AREAS TO BE HARDFILL BACKFILLED WITH APPROVED GAP65 TO 1.0m BEYOND EXTENT OF CARRIAGEWAY. TRENCH HARDFILL BACKFILL TO BE WELL COMPACTED TO ACHIEVE MIN. CLEGG HAMMER CIV = 25.
5. ALL DRAINAGE WORKS SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A REGISTERED DRAIN LAYER AND IN ACCORDANCE WITH CURRENT HEALTH AND SAFETY PRACTICES. WHERE REQUIRED, DRAINAGE WORKS TO BE UNDERTAKEN BY AN APPROVED LICENSED CONTRACTOR (A.L.C.).
6. THE CONTRACTOR SHALL LIAISE WITH THE UTILITY PROVIDER FOR THE STANDARD CLEARANCE REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING SERVICES WITHIN THE EXTENT OF THE WORKS PRIOR TO WORKS COMMENCEMENT. ALL TESTING AND POTHOLING SHALL BE AT THE CONTRACTOR'S EXPENSE.
7. ALL EXISTING BERMS, CARRIAGEWAYS AND CROSSINGS TO BE RE-INSTATED AS PER COUNCIL/CONTROLLING AUTHORITY REQUIREMENTS.
8. A COPY OF THE SITE SPECIFIC HEALTH AND SAFETY PLAN SHALL BE AVAILABLE ON SITE.
9. ALL TRAFFIC MANAGEMENT AND CORRIDOR ACCESS PERMIT(S) SHOULD BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION WITH THE ROAD CORRIDOR/RESERVE.

PRE-CONSTRUCTION NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND ACCURATELY CONFIRM INVERT AND LID LEVELS OF EXISTING STORMWATER MANHOLES AND CONNECTION POINTS PRIOR TO COMMENCING CONSTRUCTION. WHERE LEVELS DIFFER TO THOSE SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER ACCORDINGLY.
2. THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

DRAINAGE LEGEND:

- SW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
- PROPOSED SW (PUBLIC)
- PROPOSED SW CONNECTION (PUBLIC)
- PROPOSED SW (PRIVATE)
- PROPOSED SW CONNECTION (PRIVATE)
- WW DRAINAGE (APPROVED UNDER EPA 2220714-RMAEPAA)
- PROPOSED WW (PUBLIC)
- PROPOSED WW CONNECTION (PUBLIC)
- PROPOSED WW (PRIVATE)
- PROPOSED WW CONNECTION (PRIVATE)
- PROPOSED RETAINING WALL
- PROPOSED STAGE BOUNDARY

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A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

APPROVED PLAN

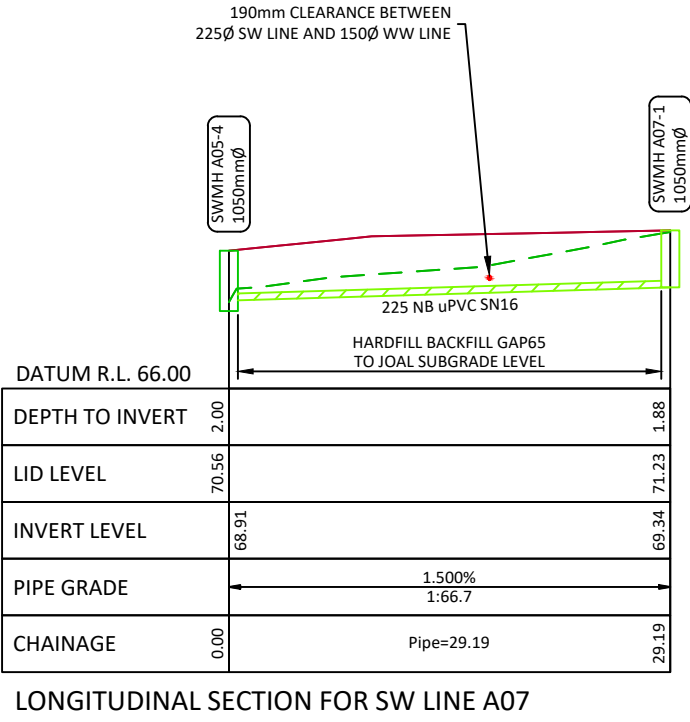
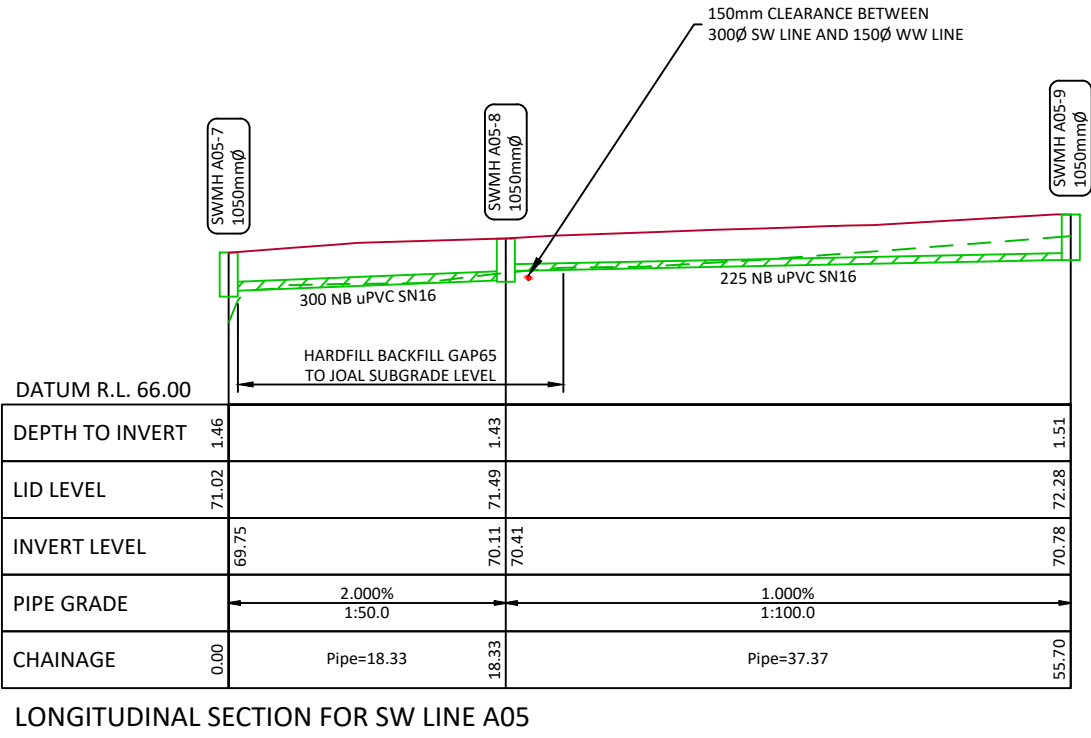
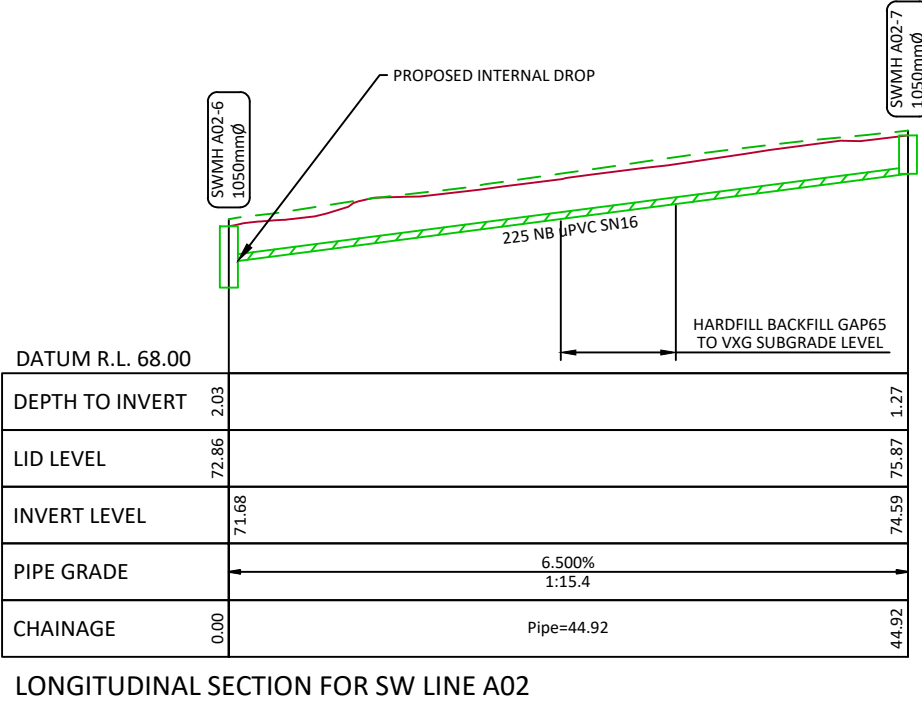
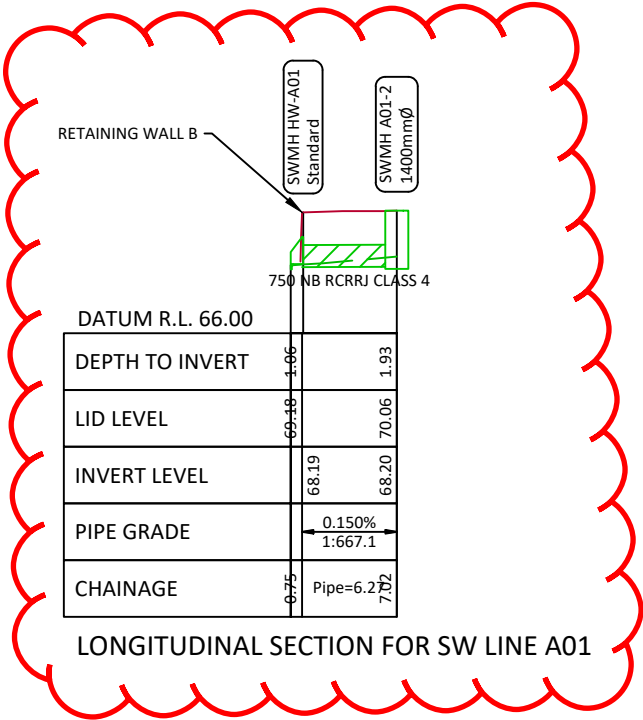
Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

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57A HALL ROAD
KERIKERI, NORTHLAND

DRAINAGE
LAYOUT PLAN
SHEET 2

Issue		Description		Checked	Date	Date	Scale:
A	FOR EPA			SJ	08.12.23	Designed: AV Drawn: AV Checked: SJ	27.09.23 27.09.23 08.12.23
						Job No: A22326	Dwg No: 4002
							Rev: A

REFER TO CHESTER
MARKUP ON VECTA
DESIGN DRAWING
DD420



LEGEND:

FINISHED GROUND LEVEL

EXISTING GROUND LEVEL

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



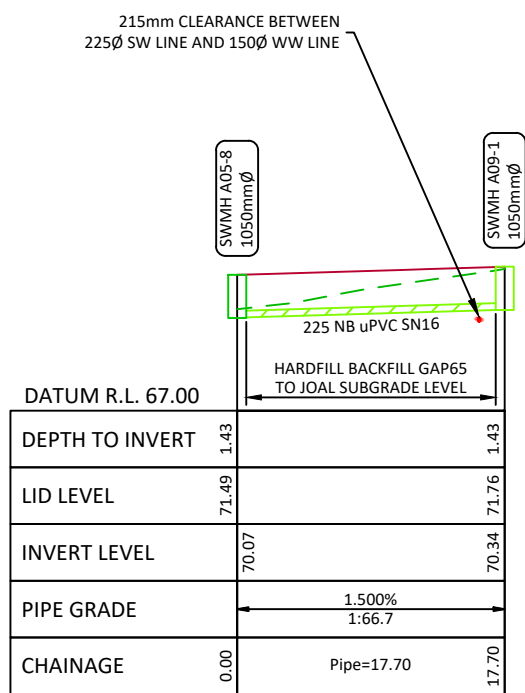
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P: 09 524 7029
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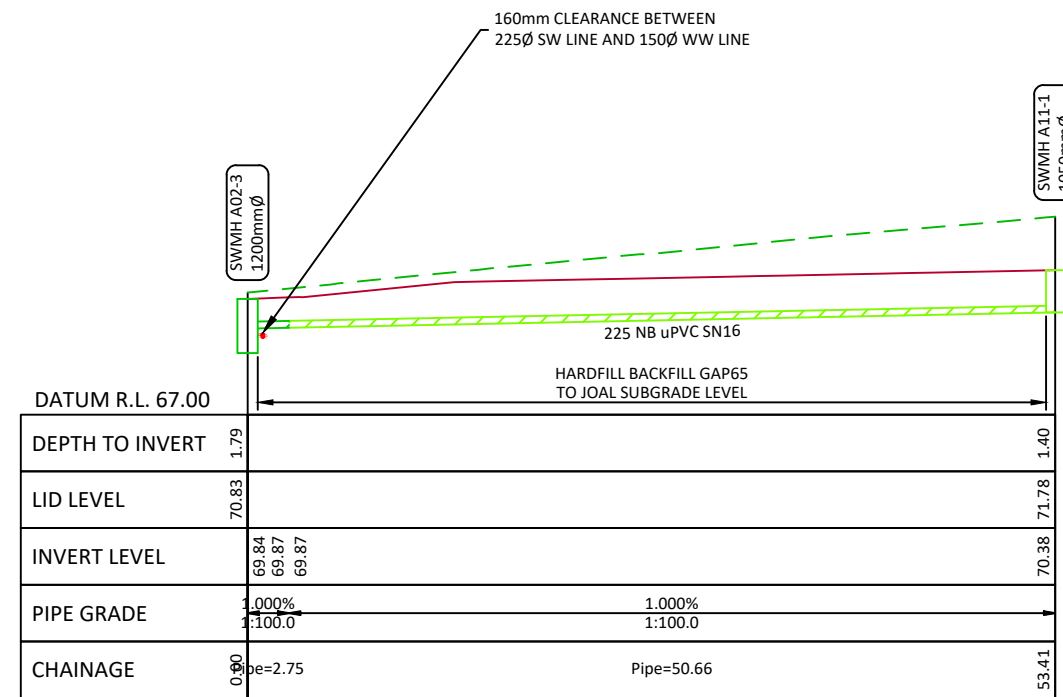
GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

**STORMWATER
LONG SECTIONS
SHEET 1**

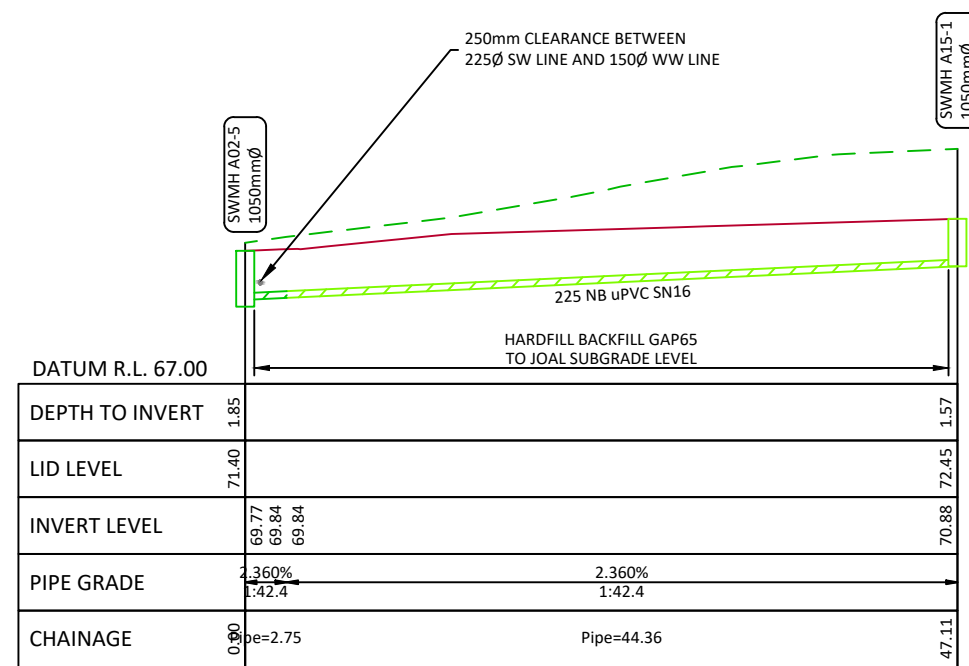
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				Drawn:	AV	27.09.23	
				Checked:	SJ	08.12.23	(A3 Original)
				Job No:		Dwg No:	Rev:
				A22326		4100	A



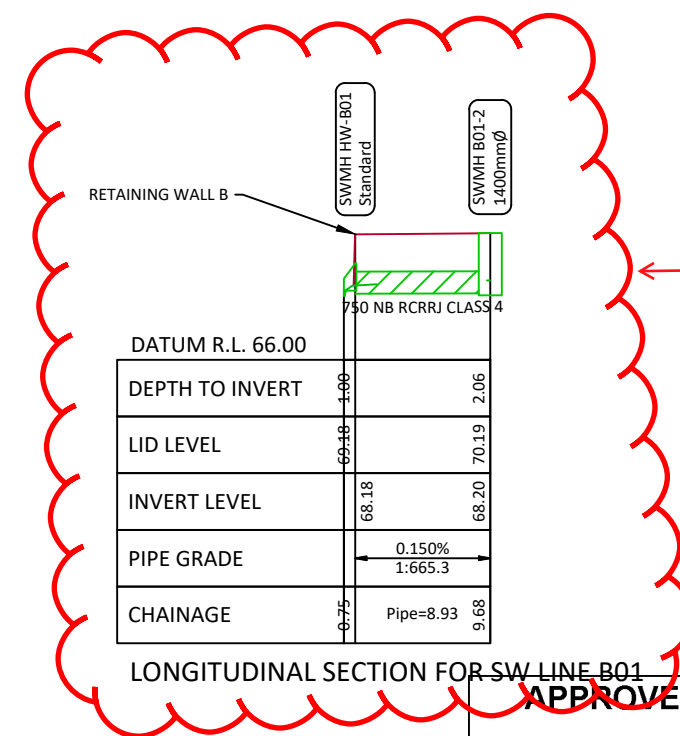
LONGITUDINAL SECTION FOR SW LINE A09



LONGITUDINAL SECTION FOR SW LINE A11



LONGITUDINAL SECTION FOR SW LINE A15



LONGITUDINAL SECTION FOR SW LINE B01

REFER TO CHESTER
MARKUP ON VECTA
DESIGN DRAWING
DD420

LEGEND:

— FINISHED GROUND LEVEL
- - - EXISTING GROUND LEVEL

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



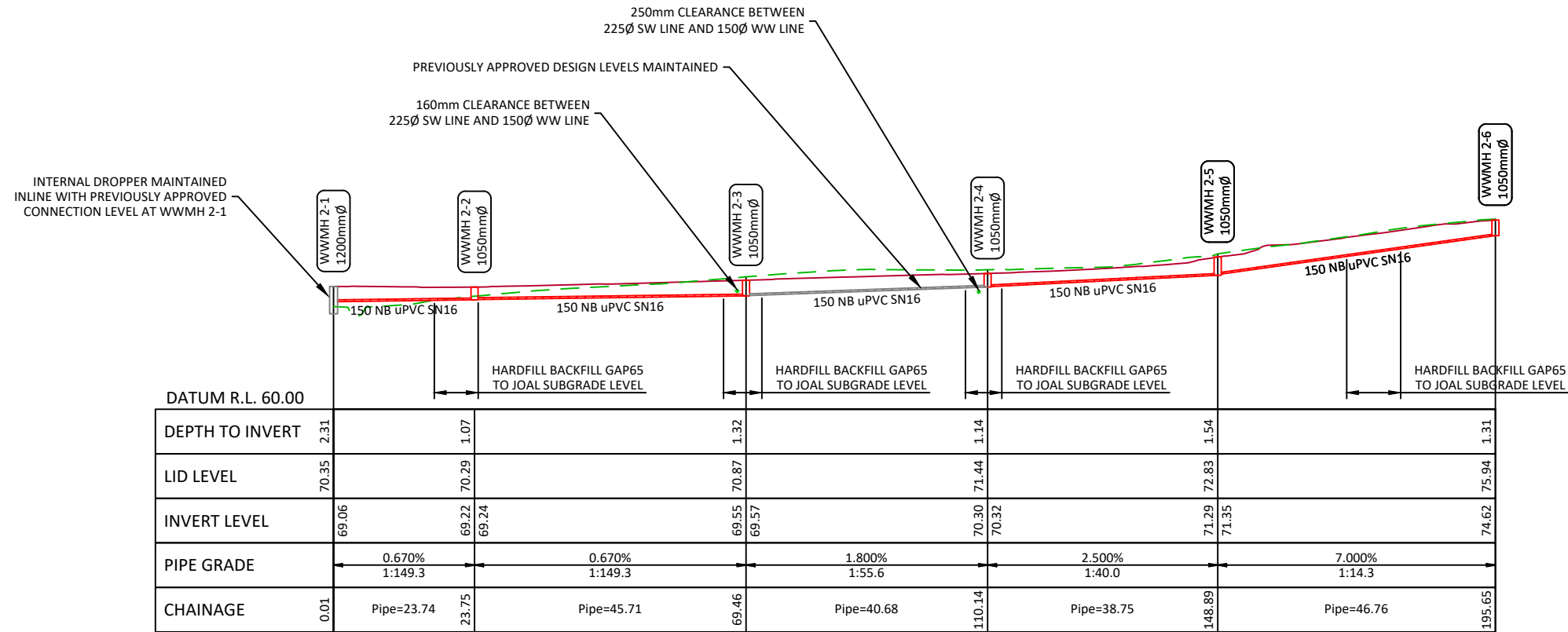
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P: 09 524 7029
E: Auckland@ckl.co.nz

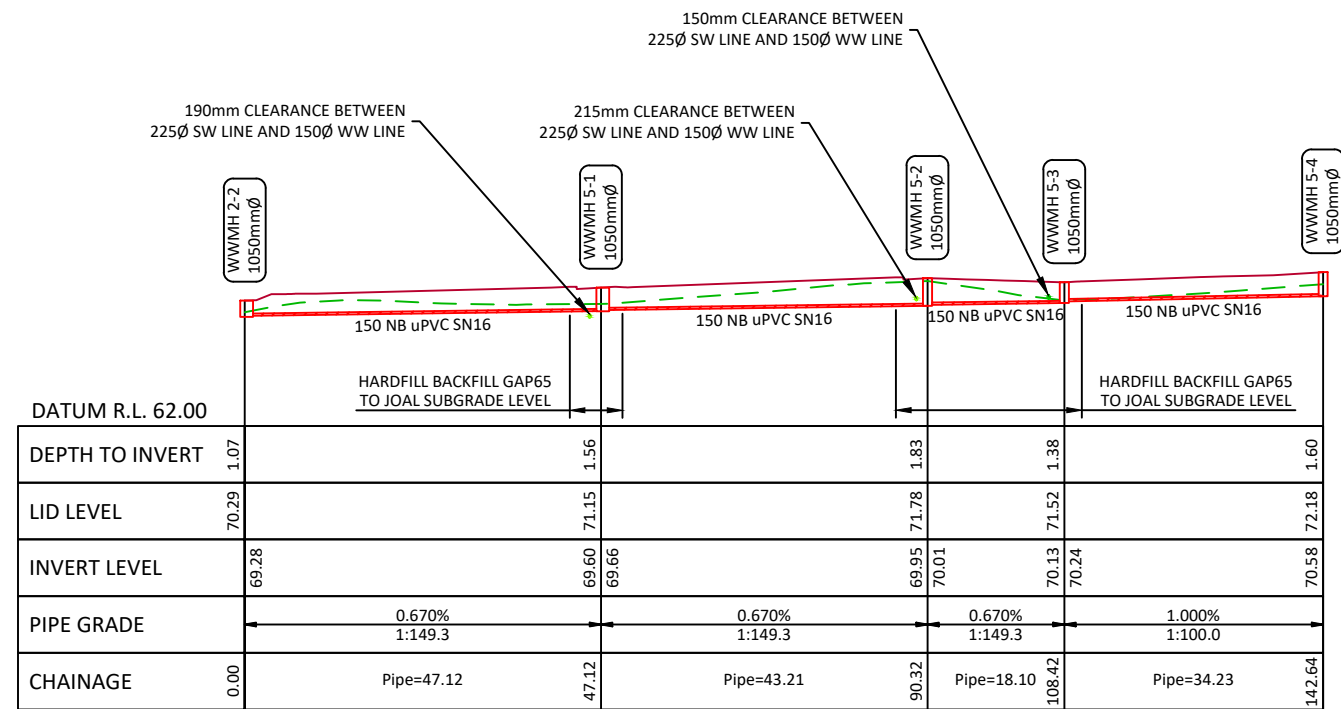
GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

STORMWATER
LONG SECTIONS
SHEET 2

Issue	Description	Checked	Date	Designed	Date	Scale
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				Drawn:	AV	(A3 Original)
				Checked:	SJ	
				Job No:	Dwg No:	Rev:
				A22326	4101	A



LONGITUDINAL SECTION FOR WW LINE 2



LONGITUDINAL SECTION FOR WW LINE 5

LEGEND:

— FINISHED GROUND LEVEL

- - - EXISTING GROUND LEVEL

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



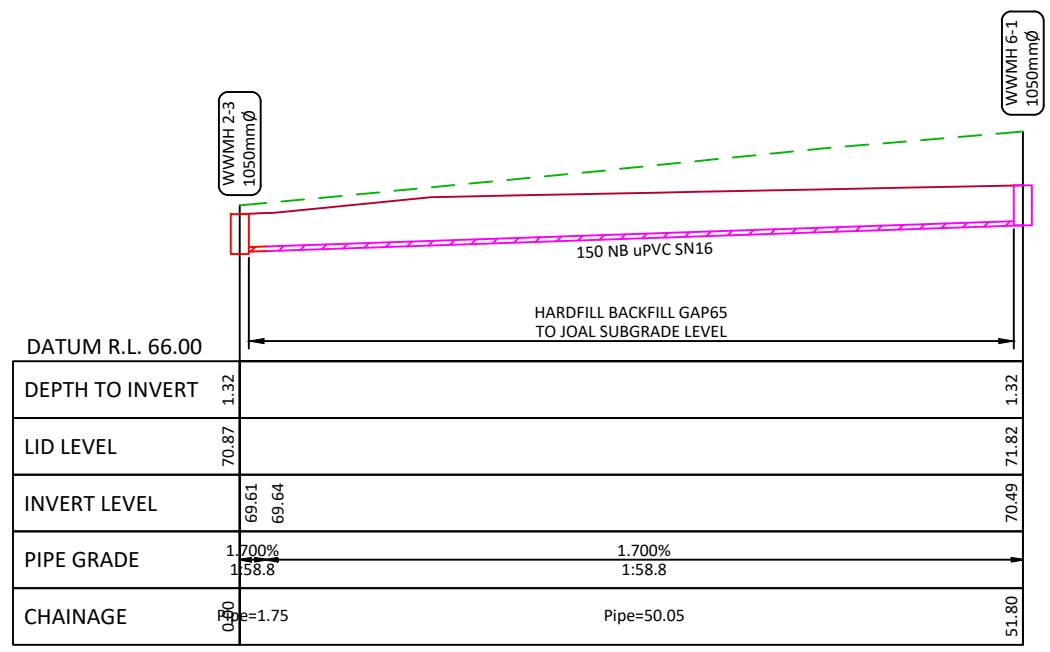
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57A HALL ROAD
KERIKERI, NORTHLAND

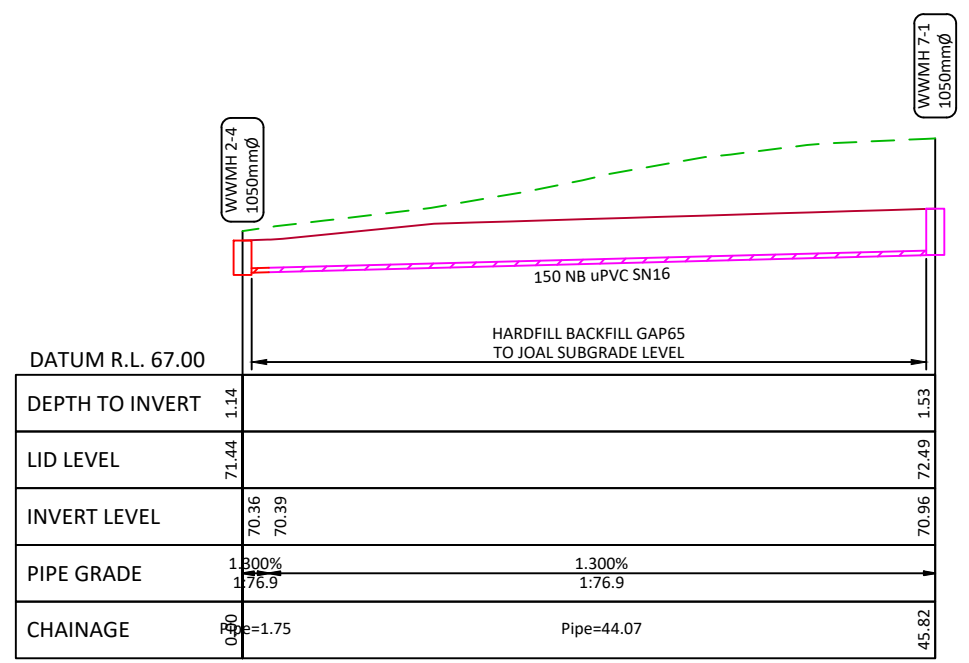
WASTEWATER
LONG SECTIONS
SHEET 1

Issue	Description	Checked	Date		Date	Scale:
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				Job No:	Dwg No:	Rev:
				A22326	4200	A

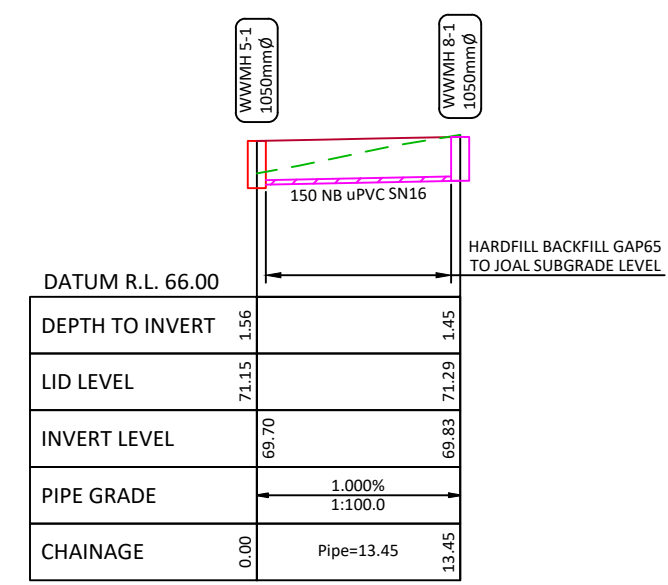
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LONGITUDINAL SECTION FOR WW LINE 6



LONGITUDINAL SECTION FOR WW LINE 7



LONGITUDINAL SECTION FOR WW LINE 8

APPROVED PLAN

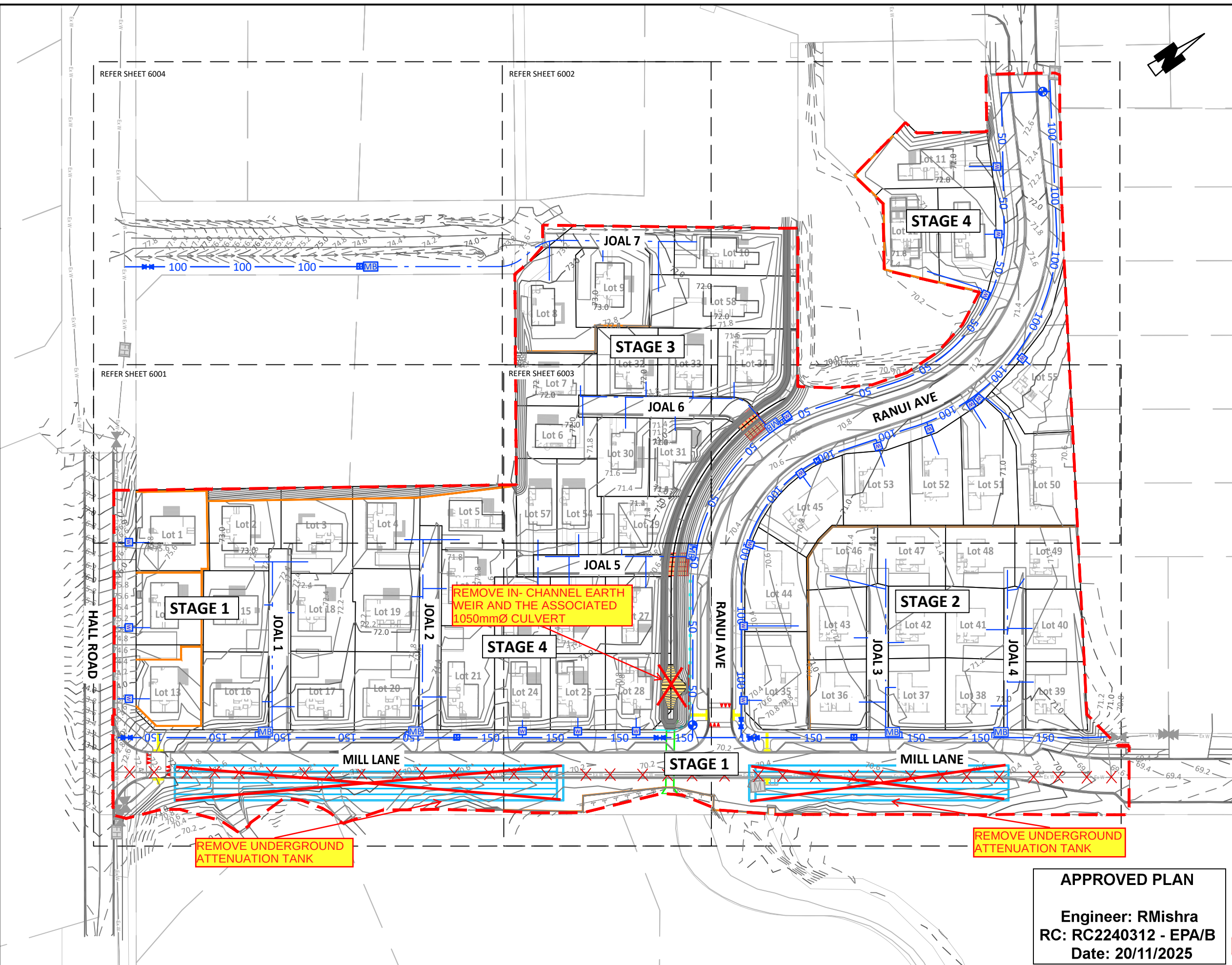
Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

LEGEND:

— FINISHED GROUND LEVEL
- - - EXISTING GROUND LEVEL

FOR CONSTRUCTION

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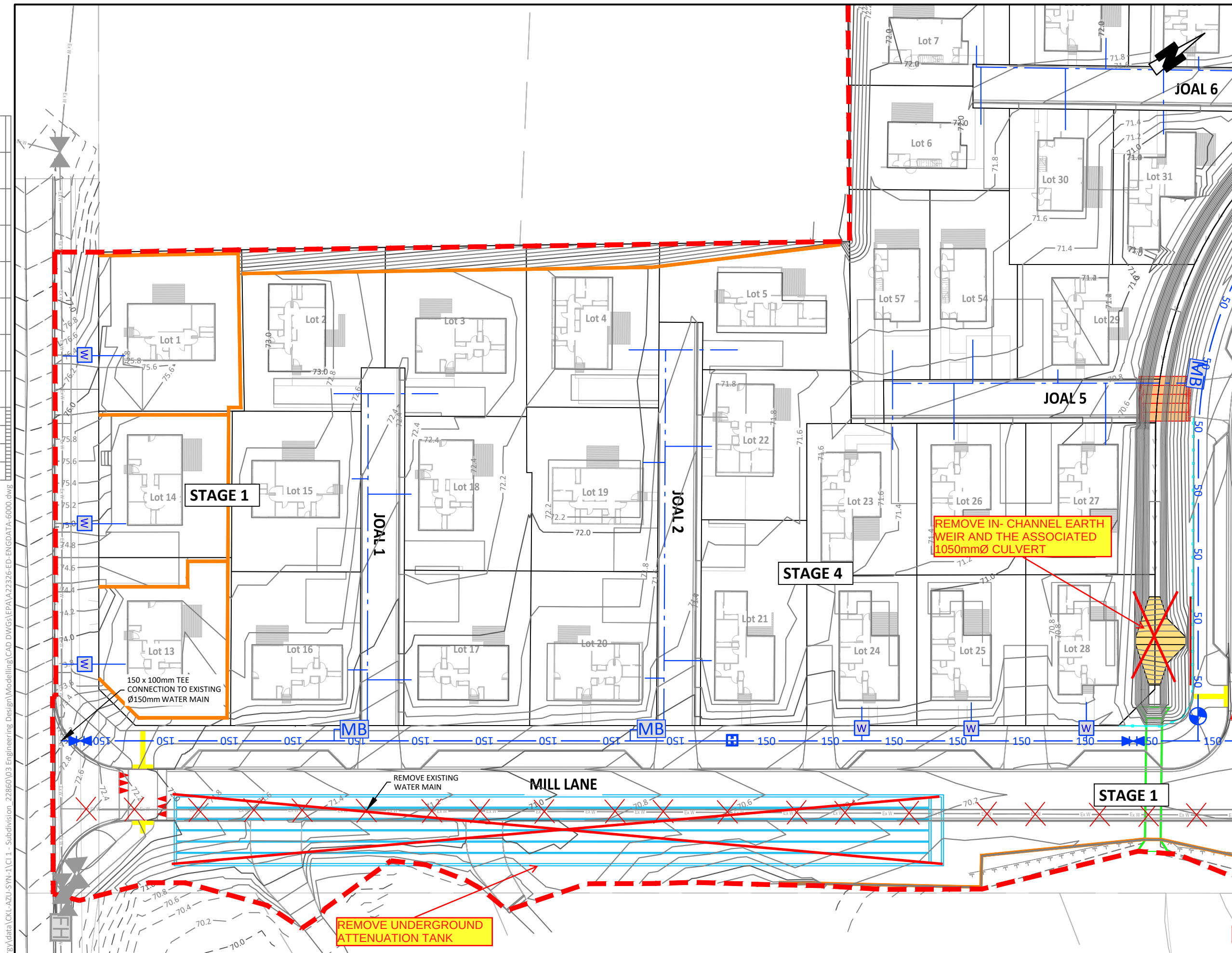
- WATER SUPPLY NOTES:**
- ALL WATERMANS ARE TO BE POSITIONED IN ACCORDANCE WITH COMMON SERVICES TRENCH DETAILS UNLESS SHOWN OTHERWISE.
 - ALL WATERMANS SHALL HAVE MIN. 600mm COVER IN BERMS AND MIN. 900mm COVER IN CARRIAGEWAYS.
 - ALL WORKS ON THE EXISTING WATER NETWORK IS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER THE SUPERVISION OF PINE HARBOUR WATER REPRESENTATIVES FOLLOWING PRESSURE TESTING, AS-BUILTS & CERTIFICATIONS.
 - ALL SERVICE CONNECTIONS TO BE DN 20 UNLESS SHOWN OTHERWISE.
 - ALL RIDERMAINS/WATERMANS DN 50-355 TO COMPRISE PE80B/PE100 AS/NZS 4130/2003 PN12.5 SDR11/SDR13.6 COLOURED BLUE AND INCLUDE TRACER WIRE.
 - THE CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND OR DEPTH OF THE PROPOSED WATERMAIN.
 - ALL TRENCHES UNDER THE CARRIAGEWAY ARE TO BE BACKFILLED HARDFILL. ALL ROAD CROSSINGS SHALL HAVE MINIMUM 900mm COVER.
 - ALL FITTINGS ARE TO BE PE. NO DI FITTINGS PERMITTED.
 - ALL VALVES ARE TO BE LAID IN GRASS BERMS, WHERE VALVE/HYDRANT BOXES ARE REQUIRED LIDS TO BE FLUSH WITH CONCRETE FINISHED LEVEL.
 - THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

- WATER SUPPLY LEGEND:**
- 50 50 PROPOSED 50NB/63OD RIDER MAIN (PUBLIC)
 - 100 100 PROPOSED 100NB/125OD WATER MAIN (PUBLIC)
 - 150 150 PROPOSED 150NB/180OD WATER MAIN (PUBLIC)
 - LOT CONNECTION (PRIVATE)
 - PROPOSED PEET VALVE
 - PROPOSED SLUICE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED METER BANK
 - PROPOSED WATER METER
 - EXISTING WATER MAIN

APPROVED PLAN
Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION

Issue	Description	Checked	Date	Designed	Date	Scale
A	FOR EPA	SJ	24.06.25	AV	27.09.23	1:1000
				AV	27.09.23	(A3 Original)
				SJ	24.06.25	
Job No:		Dwg No:		Rev:		
A22326		6000		A		



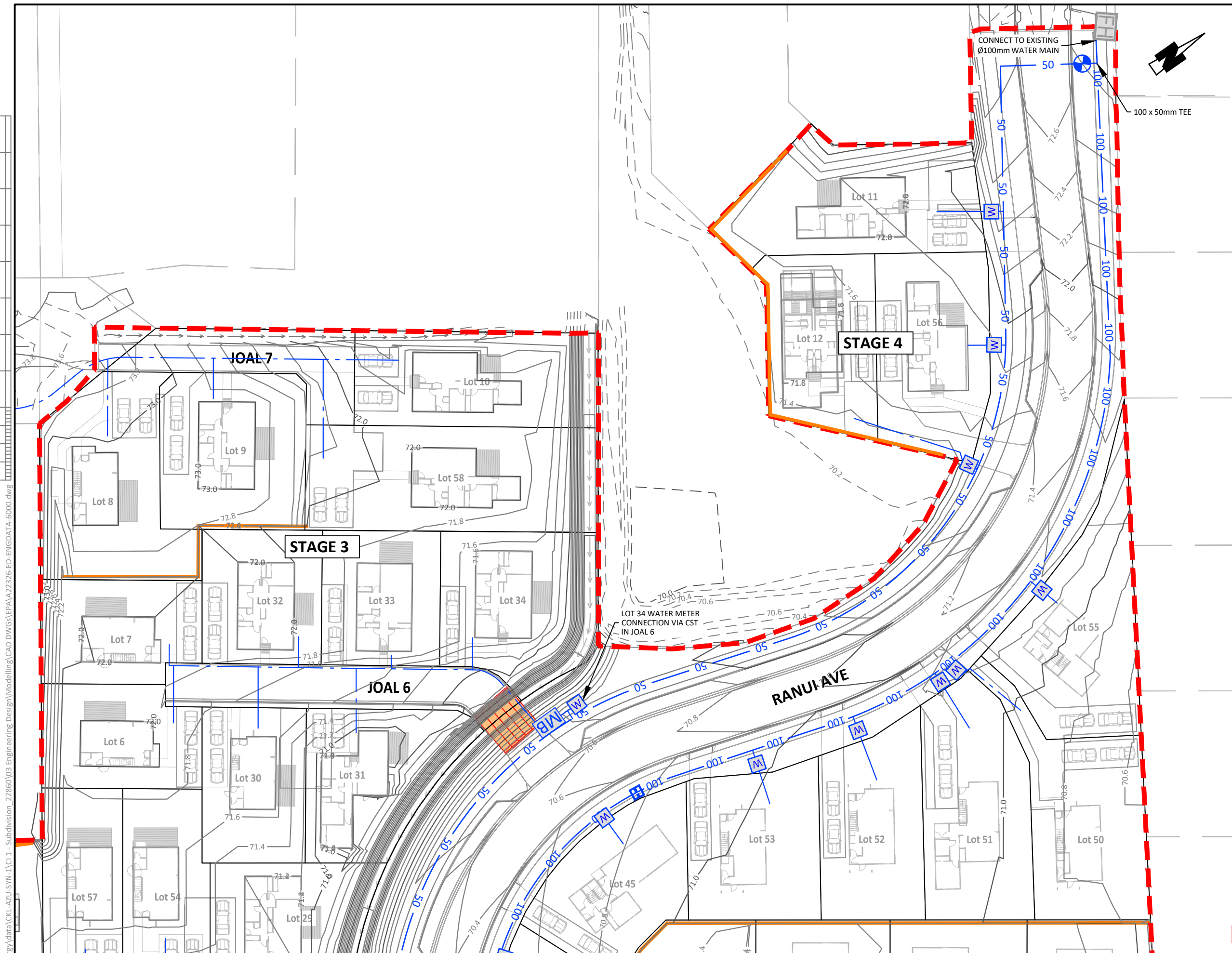
- WATER SUPPLY NOTES:**
1. ALL WATERMAINS ARE TO BE POSITIONED IN ACCORDANCE WITH COMMON SERVICES TRENCH DETAILS UNLESS SHOWN OTHERWISE.
 2. ALL WATERMAINS SHALL HAVE MIN. 600mm COVER IN BERMS AND MIN. 900mm COVER IN CARRIAGEWAYS.
 3. ALL WORKS ON THE EXISTING WATER NETWORK IS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER THE SUPERVISION OF PINE HARBOUR WATER REPRESENTATIVES FOLLOWING PRESSURE TESTING, AS-BUILTS & CERTIFICATIONS.
 4. ALL SERVICE CONNECTIONS TO BE DN 20 UNLESS SHOWN OTHERWISE.
 5. ALL RIDERMAINS/WATERMAINS DN 50-355 TO COMPRISE PE80B/PE100 AS/NZS 4130/2003 PN12.5 SDR11/SDR13.6 COLOURED BLUE AND INCLUDE TRACER WIRE.
 6. THE CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND OR DEPTH OF THE PROPOSED WATERMAIN.
 7. ALL TRENCHES UNDER THE CARRIAGEWAY ARE TO BE BACKFILLED HARDFILL. ALL ROAD CROSSINGS SHALL HAVE MINIMUM 900mm COVER.
 8. ALL FITTINGS ARE TO BE PE. NO DI FITTINGS PERMITTED.
 9. ALL VALVES ARE TO BE LAID IN GRASS BERMS, WHERE VALVE/HYDRANT BOXES ARE REQUIRED LIDS TO BE FLUSH WITH CONCRETE FINISHED LEVEL.
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- WATER SUPPLY LEGEND:**
- 50 50 PROPOSED 50NB/630D RIDER MAIN (PUBLIC)
 - 100 100 PROPOSED 100NB/1250D WATER MAIN (PUBLIC)
 - 150 150 PROPOSED 150NB/1800D WATER MAIN (PUBLIC)
 - LOT CONNECTION (PRIVATE)
 - PROPOSED PEET VALVE
 - PROPOSED SLUICE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED METER BANK
 - PROPOSED WATER METER
 - EXISTING WATER MAIN

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



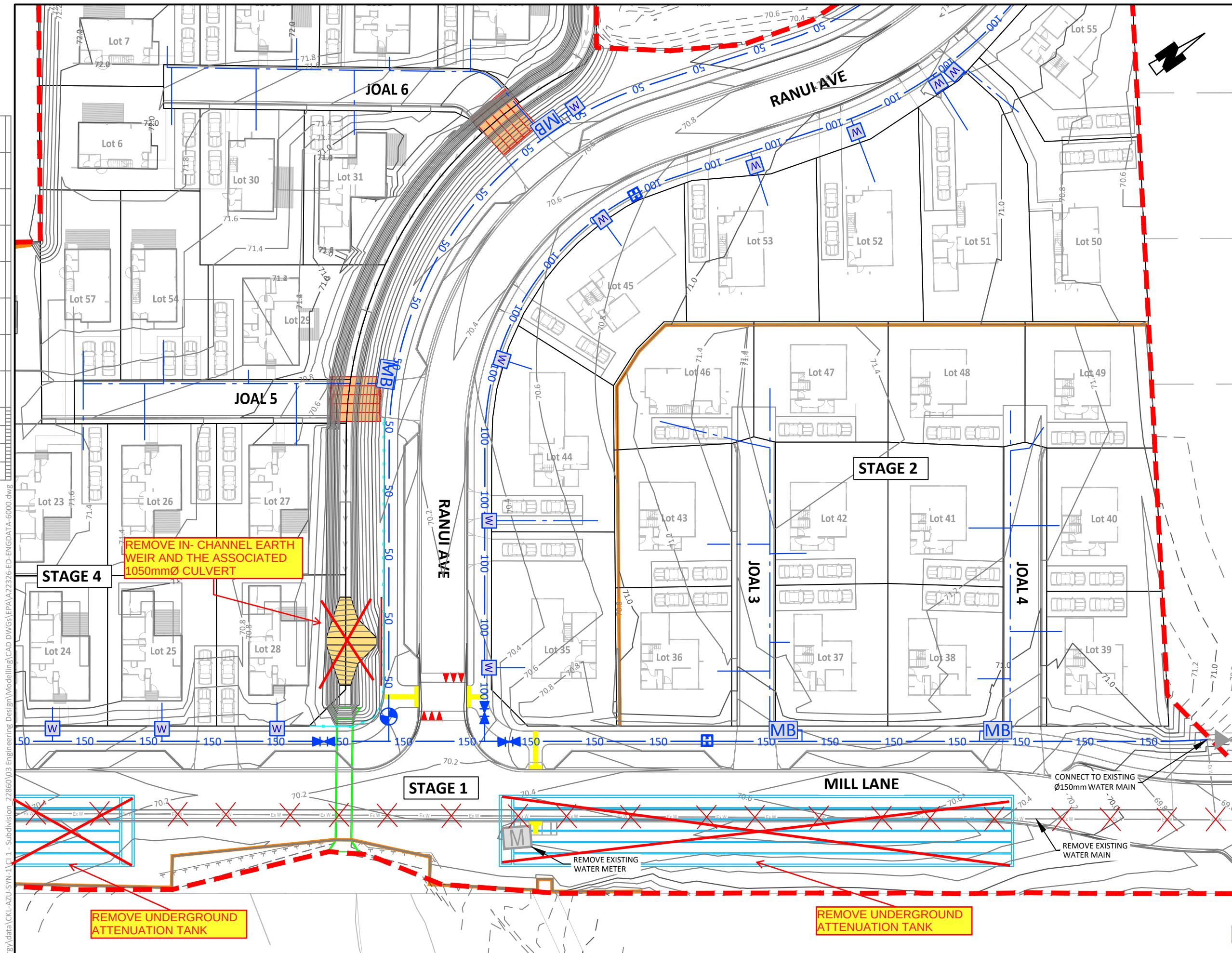
- WATER SUPPLY NOTES:**
1. ALL WATERMAINS ARE TO BE POSITIONED IN ACCORDANCE WITH COMMON SERVICES TRENCH DETAILS UNLESS SHOWN OTHERWISE.
 2. ALL WATERMAINS SHALL HAVE MIN. 600mm COVER IN BERMS AND MIN. 900mm COVER IN CARRIAGEWAYS.
 3. ALL WORKS ON THE EXISTING WATER NETWORK IS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER THE SUPERVISION OF PINE HARBOUR WATER REPRESENTATIVES FOLLOWING PRESSURE TESTING, AS-BUILTS & CERTIFICATIONS .
 4. ALL SERVICE CONNECTIONS TO BE DN 20 UNLESS SHOWN OTHERWISE.
 5. ALL RIDERMAINS/WATERMAINS DN 50-355 TO COMPRISE PE80B/PE100 AS/NZS 4130/2003 PN12.5 SDR11/SDR13.6 COLOURED BLUE AND INCLUDE TRACER WIRE.
 6. THE CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND OR DEPTH OF THE PROPOSED WATERMAIN.
 7. ALL TRENCHES UNDER THE CARRIAGEWAY ARE TO BE BACKFILLED HARDFILL. ALL ROAD CROSSINGS SHALL HAVE MINIMUM 900mm COVER.
 8. ALL FITTINGS ARE TO BE PE. NO DI FITTINGS PERMITTED.
 9. ALL VALVES ARE TO BE LAID IN GRASS BERMS, WHERE VALVE/HYDRANT BOXES ARE REQUIRED LIDS TO BE FLUSH WITH CONCRETE FINISHED LEVEL.
 10. THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

- WATER SUPPLY LEGEND:**
- 50 50 PROPOSED 50NB/630D RIDER MAIN (PUBLIC)
 - 100 100 PROPOSED 100NB/1250D WATER MAIN (PUBLIC)
 - 150 150 PROPOSED 150NB/1800D WATER MAIN (PUBLIC)
 - LOT CONNECTION (PRIVATE)
 - PROPOSED PEET VALVE
 - PROPOSED SLUICE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED METER BANK
 - PROPOSED WATER METER
 - EXISTING WATER MAIN

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



- WATER SUPPLY NOTES:**
1. ALL WATERMAINS ARE TO BE POSITIONED IN ACCORDANCE WITH COMMON SERVICES TRENCH DETAILS UNLESS SHOWN OTHERWISE.
 2. ALL WATERMAINS SHALL HAVE MIN. 600mm COVER IN BERMS AND MIN. 900mm COVER IN CARRIAGEWAYS.
 3. ALL WORKS ON THE EXISTING WATER NETWORK IS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER THE SUPERVISION OF PINE HARBOUR WATER REPRESENTATIVES FOLLOWING PRESSURE TESTING, AS-BUILTS & CERTIFICATIONS.
 4. ALL SERVICE CONNECTIONS TO BE DN 20 UNLESS SHOWN OTHERWISE.
 5. ALL RIDERMAINS/WATERMAINS DN 50-355 TO COMPRISE PE80B/PE100 AS/NZS 4130/2003 PN12.5 SDR11/SDR13.6 COLOURED BLUE AND INCLUDE TRACER WIRE.
 6. THE CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND OR DEPTH OF THE PROPOSED WATERMAIN.
 7. ALL TRENCHES UNDER THE CARRIAGEWAY ARE TO BE BACKFILLED HARDFILL. ALL ROAD CROSSINGS SHALL HAVE MINIMUM 900mm COVER.
 8. ALL FITTINGS ARE TO BE PE. NO DI FITTINGS PERMITTED.
 9. ALL VALVES ARE TO BE LAID IN GRASS BERMS, WHERE VALVE/HYDRANT BOXES ARE REQUIRED LIDS TO BE FLUSH WITH CONCRETE FINISHED LEVEL.
 10. THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

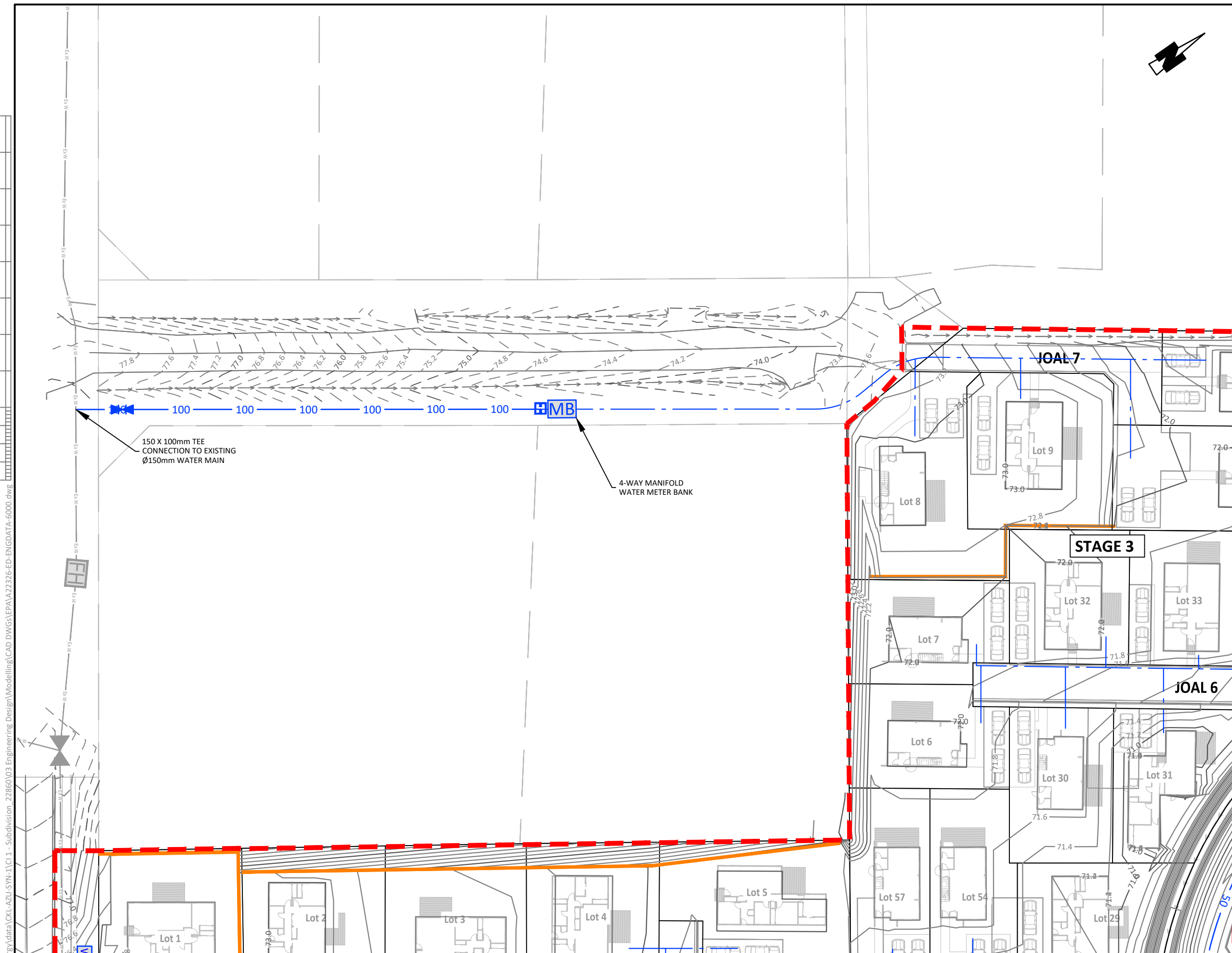
- WATER SUPPLY LEGEND:**
- 50 50 PROPOSED 50NB/630D RIDER MAIN (PUBLIC)
 - 100 100 PROPOSED 100NB/1250D WATER MAIN (PUBLIC)
 - 150 150 PROPOSED 150NB/1800D WATER MAIN (PUBLIC)
 - LOT CONNECTION (PRIVATE)
 - PROPOSED PEET VALVE
 - PROPOSED SLUICE VALVE
 - PROPOSED FIRE HYDRANT
 - MB PROPOSED METER BANK
 - W PROPOSED WATER METER
 - Ex W EXISTING WATER MAIN

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION

C:\ProgramData\12D\Synergy\data\CKL-AZU-SVN-1\CI-1-Subdivision_22860\03 Engineering Design\Modelling\CAD DWGs\EPA\A22326-EP-ENGDATA-6000.dwg



- WATER SUPPLY NOTES:**
1. ALL WATERMAINS ARE TO BE POSITIONED IN ACCORDANCE WITH COMMON SERVICES TRENCH DETAILS UNLESS SHOWN OTHERWISE.
 2. ALL WATERMAINS SHALL HAVE MIN. 600mm COVER IN BERMS AND MIN. 900mm COVER IN CARRIAGEWAYS.
 3. ALL WORKS ON THE EXISTING WATER NETWORK IS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER THE SUPERVISION OF PINE HARBOUR WATER REPRESENTATIVES FOLLOWING PRESSURE TESTING, AS-BUILTS & CERTIFICATIONS .
 4. ALL SERVICE CONNECTIONS TO BE DN 20 UNLESS SHOWN OTHERWISE.
 5. ALL RIDERMAINS/WATERMAINS DN 50-355 TO COMPRISE PE80B/PE100 AS/NZS 4130/2003 PN12.5 SDR11/SDR13.6 COLOURED BLUE AND INCLUDE TRACER WIRE.
 6. THE CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND OR DEPTH OF THE PROPOSED WATERMAIN.
 7. ALL TRENCHES UNDER THE CARRIAGEWAY ARE TO BE BACKFILLED HARDFILL. ALL ROAD CROSSINGS SHALL HAVE MINIMUM 900mm COVER.
 8. ALL FITTINGS ARE TO BE PE. NO DI FITTINGS PERMITTED.
 9. ALL VALVES ARE TO BE LAID IN GRASS BERMS, WHERE VALVE/HYDRANT BOXES ARE REQUIRED LIDS TO BE FLUSH WITH CONCRETE FINISHED LEVEL.
 10. THE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.

- WATER SUPPLY LEGEND:**
- 50 50 PROPOSED 50NB/630D RIDER MAIN (PUBLIC)
 - 100 100 PROPOSED 100NB/1250D WATER MAIN (PUBLIC)
 - 150 150 PROPOSED 150NB/1800D WATER MAIN (PUBLIC)
 - LOT CONNECTION (PRIVATE)
 - PROPOSED PEET VALVE
 - PROPOSED SLUICE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED METER BANK
 - PROPOSED WATER METER
 - EXISTING WATER MAIN

APPROVED PLAN

Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

FOR CONSTRUCTION



CKL

Planning | Surveying | Engineering | Environmental

OFFICE
Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@ckl.co.nz

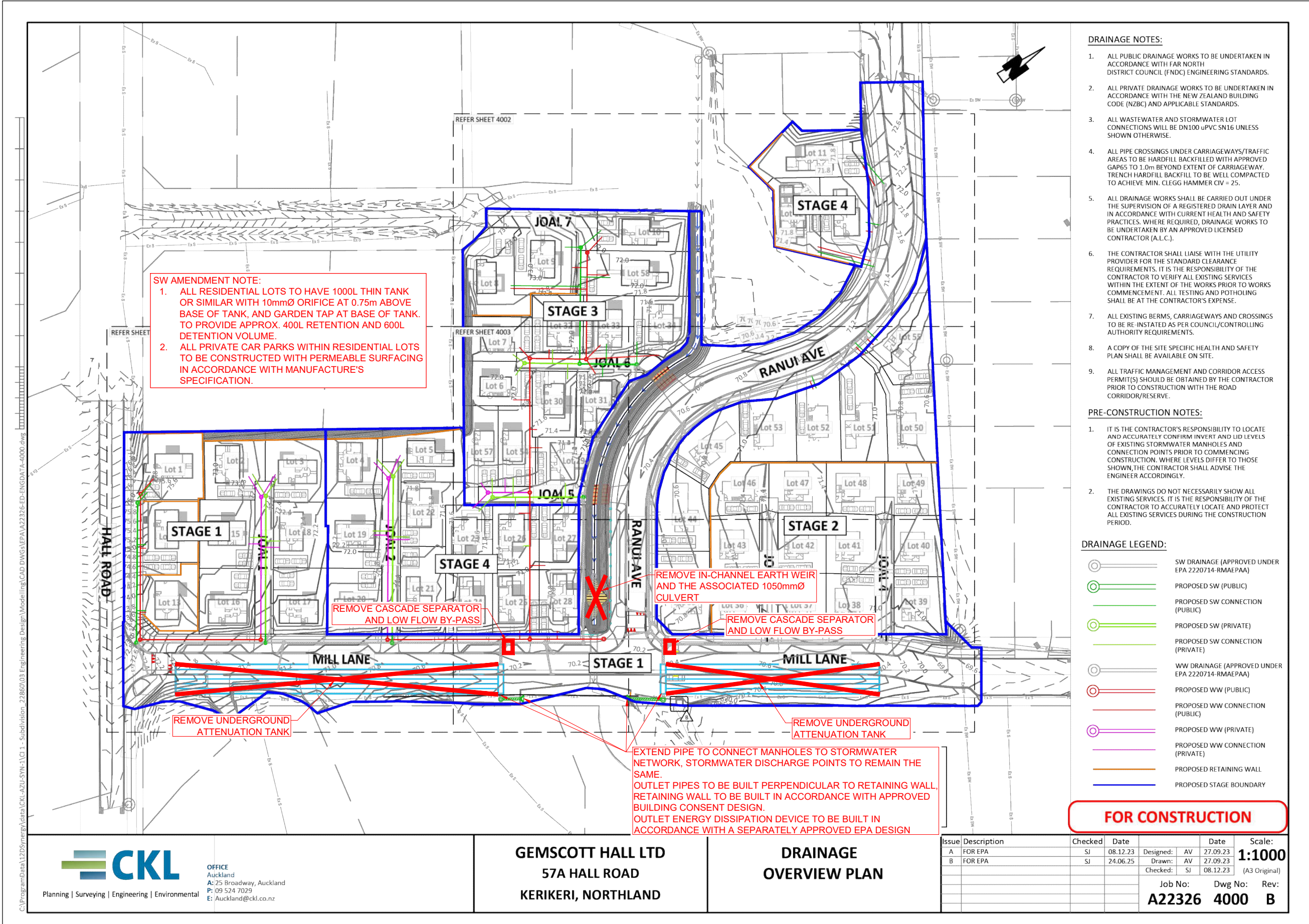
GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

WATER SUPPLY
LAYOUT PLAN
SHEET 4

Issue		Description		Checked		Date		Date		Scale:	
A	FOR EPA			SJ		24.06.25		Designed: AV	27.09.23	1:500 (A3 Original)	
								Drawn: AV	27.09.23		
								Checked: SJ	24.06.25		
				Job No:		Dwg No:		Rev:			
				A22326		6004		A			

M2 Cpesur Pwrmwaur l mendmenuDrawings

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Auckland
A: 25 Broadway, Auckland
P: 09 524 7029
E: Auckland@cckl.co.nz

GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

DRAINAGE
OVERVIEW PLAN

Issue	Description	Checked	Date	Designed	Date	Scale
A	FOR EPA	SJ	08.12.23	AV	27.09.23	1:1000
B	FOR EPA	SJ	24.06.25	AV	27.09.23	(A3 Original)
		Checked	SJ	08.12.23		
		Job No:	Dwg No:		Rev:	
		A22326	4000		B	

CLIENT: GEMSCOTT HALL LTD

ADDRESS: 57A HALL ROAD, KERIKERI

DRAWING: STORMWATER AMENDMENT MARK UP

SCALE: NTS

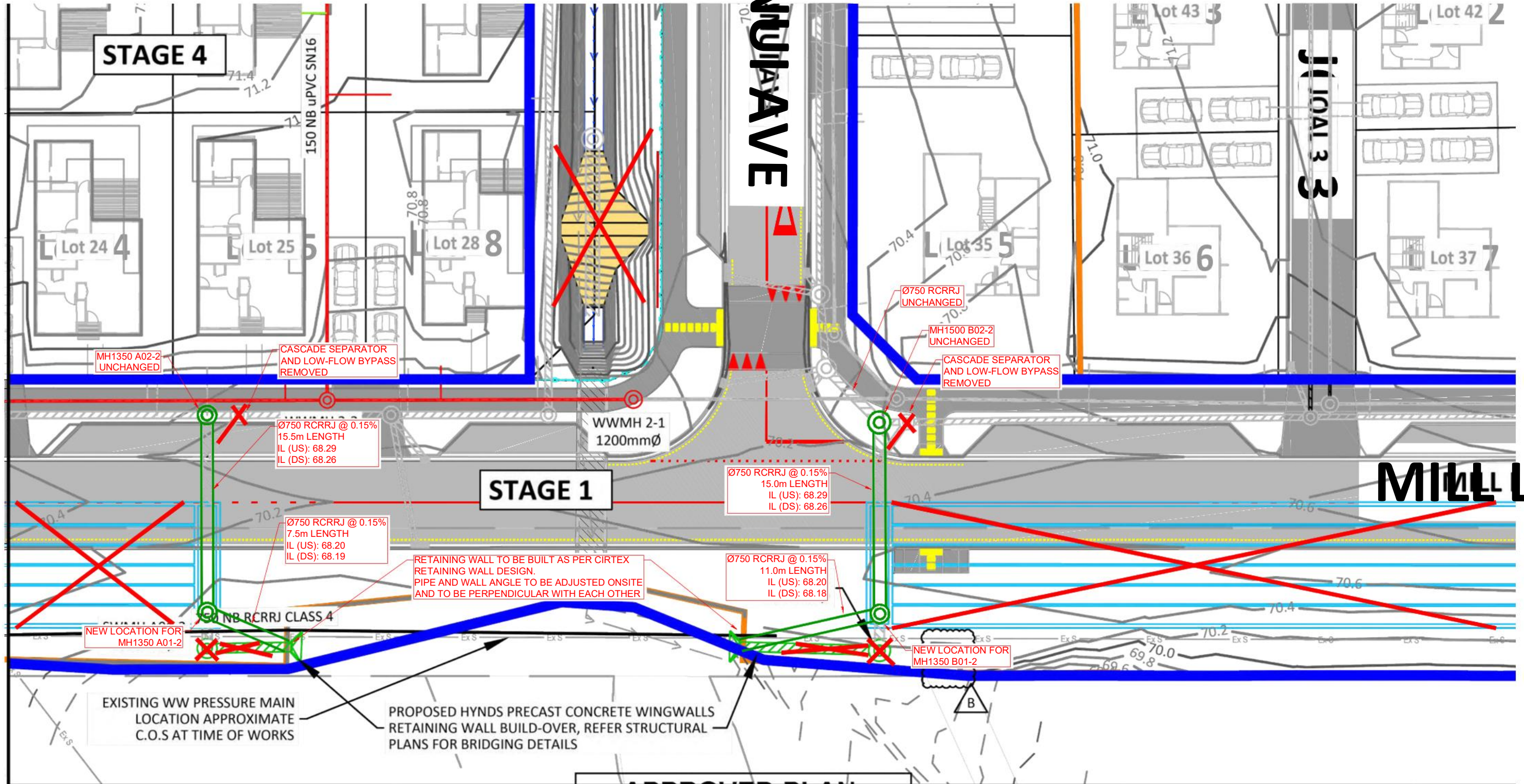
PROJECT: 16159

DATE: 30/07/2026

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DRAWING IS INTENDED FOR COORDINATION, NOT FOR CONSTRUCTION

DRAWING SET TO A1 DIMENSIONS AND CONTAINS ELEMENTS PLOTTED IN COLOUR



Engineer: RMishra
RC: RC2240312 - EPA/B
Date: 20/11/2025

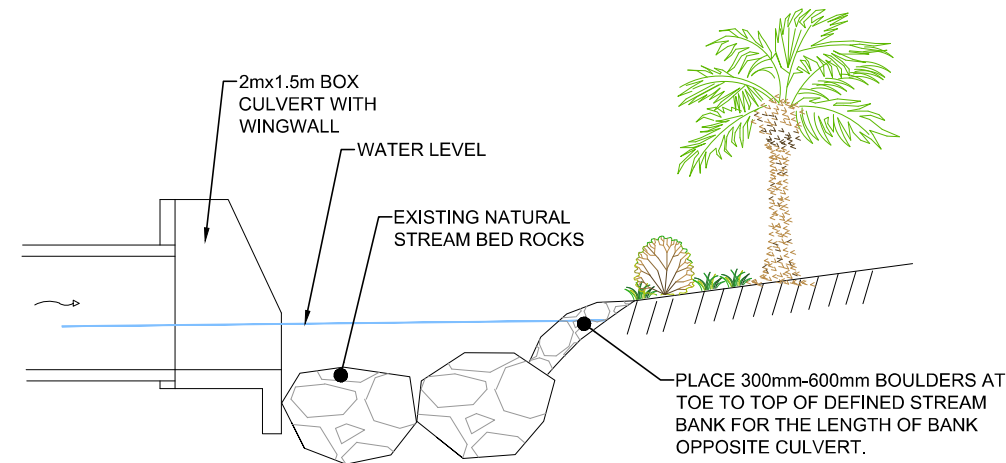
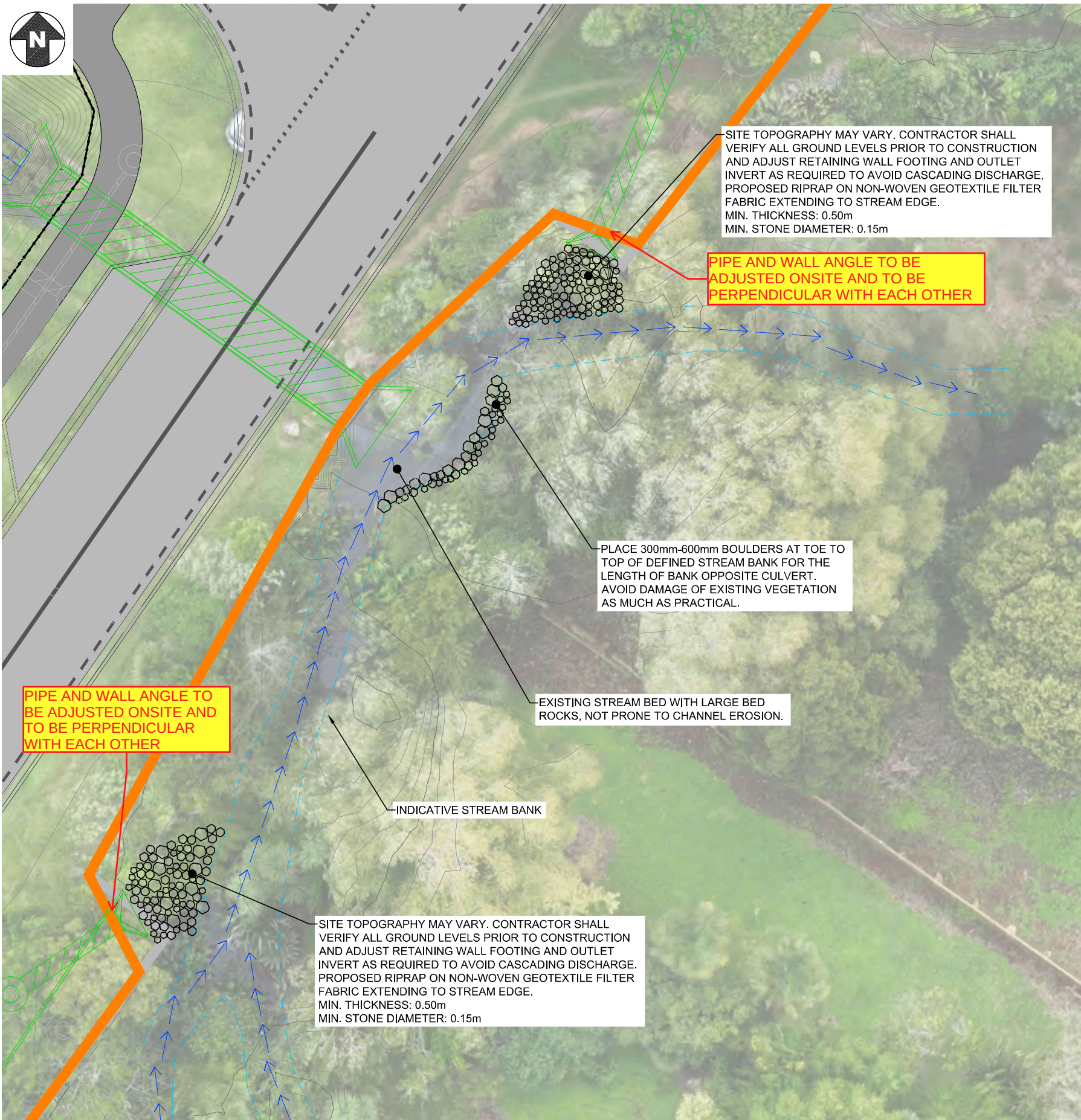
GEMSCOTT HALL LTD
57A HALL ROAD
KERIKERI, NORTHLAND

CLIENT: GEMSCOTT HALL LTD
ADDRESS: 57A HALL ROAD, KERIKERI
DRAWING: STORMWATER AMENDMENT MARK UP - 2

SCALE: NTS
PROJECT: 16159
DATE: 11/08/2026

72 Computer 1 iWaaWDesign Drawings

C:\Users\Bower\OneDrive\Documents\Central Library - 16159 - Hall 57A\3.0 Design\3.2 CIVIL\3.2.1 ACAD\DWG Layouts\16159-C-SKT-PRO RIPRAP.dwg 7/27/2026 11:21 am LAST SAVED BY: BOWERLUU
DRAWING SET TO A1 DIMENSIONS AND CONTAINS ELEMENTS PLOTTED IN COLOUR
DRAWING IS INTENDED FOR COORDINATION, NOT FOR CONSTRUCTION
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1 BOX CULVERT & STREAM BANK CROSS SECTION



2 EXAMPLE OF EXPECTED BOULDER PLACEMENT AT TOE OF STREAM BANK

APPROVED PLAN

Engineer: RMishra
RC: RC2240312-RMACOM
Date: 3/08/2026

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CLIENT: GEMSCOTT HALL LTD

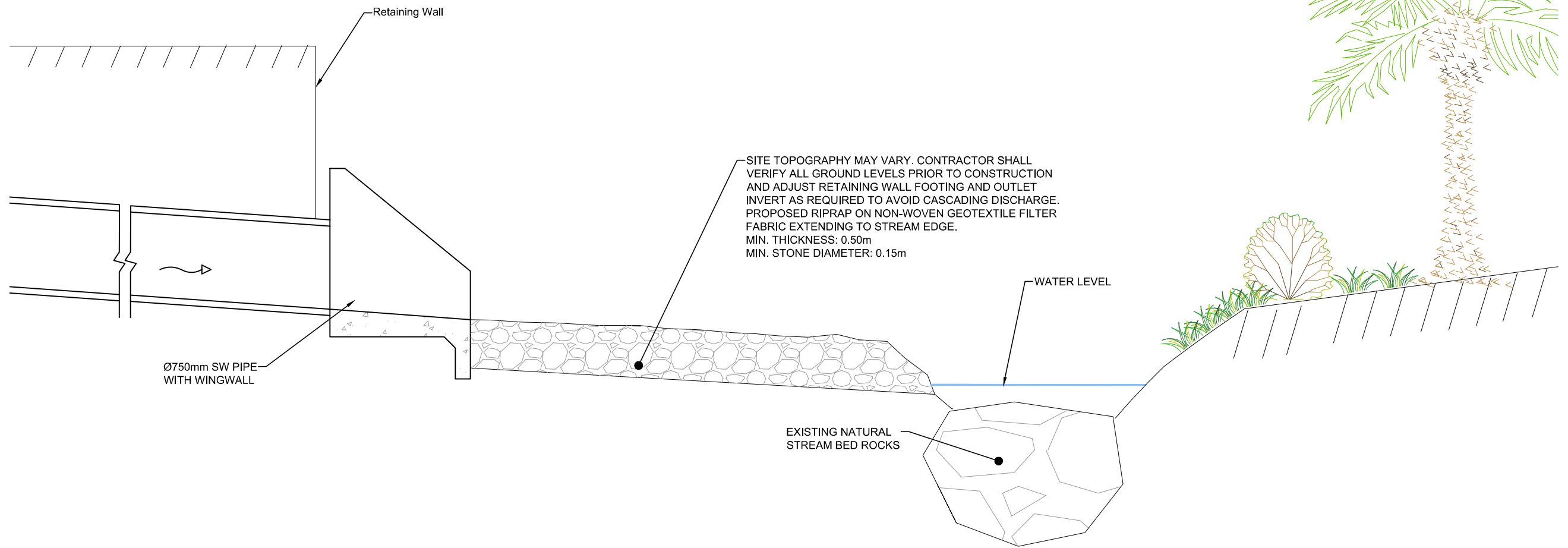
ADDRESS: 57A HALL ROAD, KERIKERI, NORTHLAND

DRAWING: PROPOSED RIPRAP EROSION PROTECTION WORKS

SCALE: 1:100 @ A1

PROJECT: 16159

DATE: 22/07/2026



3 Ø750mm SW PIPE & STREAM BANK CROSS SECTION

CLIENT: GEMSCOTT HALL LTD

ADDRESS: 57A HALL ROAD, KERIKERI, NORTHLAND

DRAWING: SW PIPE PROPOSED RIPRAP EROSION PROTECTION CROSS SECTION

SCALE: 1:20 @ A1

PROJECT: 16159

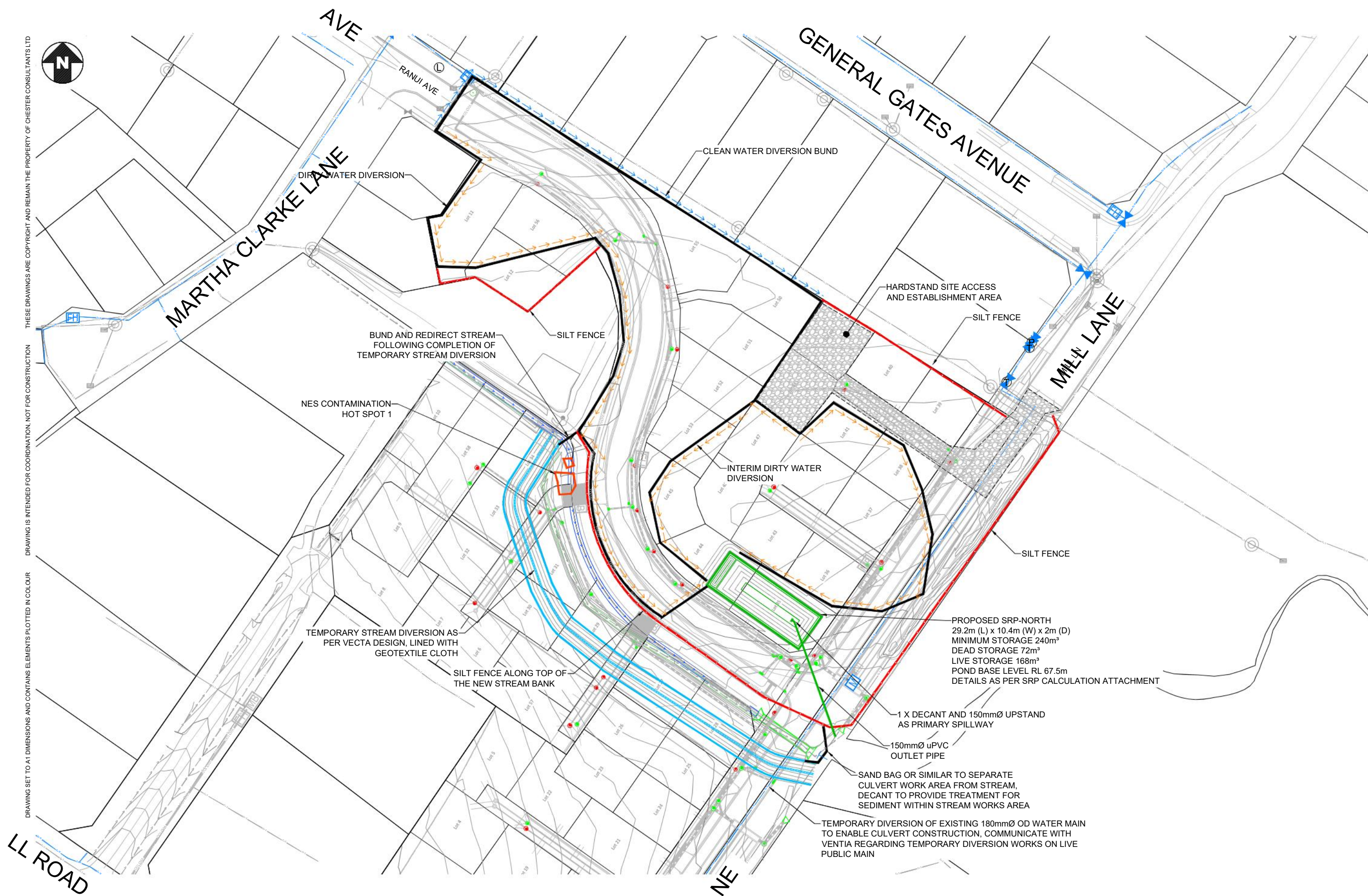
DATE: 22/07/2026

APPROVED PLAN

Engineer: RMishra
RC: RC2240312-RMACOM
Date: 3/08/2026

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6. Chester Erosion and Sediment Control Plans



CLIENT: GEMSCOTT HALL LTD

ADDRESS: 57A HALL ROAD, KERIKERI, NORTHLAND

DRAWING: EROSION AND SEDIMENT CONTROL - STAGE 1

SCALE: 1:500 @ A1

PROJECT: 16159

DATE: 10/04/2026



CLIENT: GEMSCOTT HALL LTD

ADDRESS: 57A HALL ROAD, KERIKERI, NORTHLAND

DRAWING: EROSION AND SEDIMENT CONTROL - STAGE 2

SCALE: 1:750 @ A1

PROJECT: 16159

DATE: 10/04/2026

A2 CirueB1 agn3mPwne' aKKDrawings

CHeSTER

MAGNUMSTONE[®] RETAINING WALL

57a HALL ROAD, KERIKERI

DRAWING NUMBER

TITLE

REVISION

SITE LOCALITY

DRG - 001	COVER PAGE	2
DRG - 002	GENERAL NOTES	2
DRG - 003	HOLD POINTS	2
DLP - 001	WALL LAYOUT - SHEET 1 OF 1	2
DSN - 001	RWB SECTION AND DESIGN DETAILS	2
DSN - 002	PIPE PENETRATION DETAILS	1
DEL - 001	RWB WALL ELEVATION - SHEET 1 OF 2	2
DEL - 002	RWB WALL ELEVATION - SHEET 2 OF 2	2
DDE - 001	MAGNUMSTONE UNIT DETAILS	1
DDE - 002	MAGNUMSTONE CORNER DETAILS	1
DDE - 003	MAGNUMSTONE CONSTRUCTION DETAILS	1
DDE - 004	MAGNUMSTONE EXTENDER DETAILS	1



FOR CONSTRUCTION

2	27/05/2026	Revised Section and Elevation	JAV	SHS
1	05/05/2026	Issued for Construction	JAV	SHS
Rev	Date	Description	Drwn	Chkd



125 Ngati Maru Highway
Kopu 3578
New Zealand
www.cirtex.co.nz

Title:

COVER PAGE

Client: GEMSCOTT HALL LTD		Drwg No.:
Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Designed: ADM	DRG-001
	Drawn: JAV	
	Checked: SHS	
	Date: 27/05/2026	
Proj No: 14889		Size: A3
Scale: NTS		Rev: 2

- **ALL SET OUT DIMENSIONS AND LEVELS SHOWN ON DRAWINGS TO BE VERIFIED BEFORE CONSTRUCTION.**
- DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.
- ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
- THE WALL DESIGNS HAVE RELIED ON PLANS AND SITE DRAWINGS PROVIDED TO CIRTEX . IF SITE CONDITIONS ARE FOUND TO DIFFER FROM THOSE ASSUMED IN THE DESIGN THEN CIRTEX SHOULD BE CONSULTED TO REFINE THE DESIGN (IF REQUIRED)
- THE MAGNUMSTONE RETAINING WALL HAS BEEN DESIGNED TO MEET A MINIMUM DESIGN LIFE OF 100 YEARS.
- **THIS DESIGN HAS BEEN CHECKED FOR INTERNAL STABILITY, OVERTURNING, SLIDING AND GLOBAL STABILITY.**
- RETAINED AND FOUNDING SOIL DESIGN PARAMETERS ARE BASED ON TYPICAL SOIL PARAMETERS NOMINATED IN LDE GEOTECHNICAL REPORT TITLED GEOTECHNICAL SUITABILITY REPORT FOR PROPOSED SUBDIVISION, 57A HALL ROAD, KERIKERI, PROJECT REFERENCE: 25528, REV A, DATED 31/10/2023 & LDE GEOTECHNICAL REPORT TITLED GEOTECHNICAL SUITABILITY REPORT FOR PROPOSED SUBDIVISION, HALL ROAD, KERIKERI, PROJECT REFERENCE: 21196, REV B, DATED 6/04/2022
- DESIGN SOIL PARAMETERS: AS PER DESIGN SECTIONS
- DESIGN LOADS: AS PER DESIGN SECTIONS
- **STRUCTURE CLASSIFICATION: B**
- SUBSOIL DRAINAGE LINES ARE TO BE CONNECTED TO THE NEAREST LEGAL POINT OF DISCHARGE/PIT, UNLESS NOTED OTHERWISE.
- NO IMPACT LOAD THAT IS EXERTED UPON COLLISION OF A VEHICLE WITHIN THE CRASH BARRIER HAS BEEN ALLOWED IN THE DESIGN OF THE RETAINING WALLS, UNLESS NOTED ON THE DESIGN SECTION. CRASH BARRIER AND SLIP JOINT TO BE DESIGNED AND INSTALLED BY OTHERS AS REQUIRED
- THE DESIGN ASSUMED NO PRESENCE OF WATER TABLE IN FRONT, BEHIND & UNDER THE RETAINING WALLS

- MAGNUMSTONE WALL TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- MAGNUMSTONE BLOCK WALL TO HAVE A FACE SLOPE OF 1H:24V
- ALL SUBSOIL (AG) PIPES SHALL BE SN8 (CLASS 400) UNLESS SUBJECT TO HEAVY VEHICLE TRAFFIC, IN WHICH CASE SN20 (CLASS 1000) SHALL BE PROVIDED.
- DRAINAGE GRAVEL AROUND THE AG PIPE TO BE 20 mm SINGLE SIZE WITH NO FINES.
- THE FIRST LAYER OF EXTENSION BLOCKS IN THE RETAINING WALL ARE TO HAVE FULL CONTACT WITH LEVELING PAD
- ALL BLOCKS ARE TO BE INTERLOCKED AS PER THE MANUFACTURERS SPECIFICATIONS.
- ANY STRUCTURE APPLYING LOADING GREATER THAN THE DESIGN SURCHARGE WITHIN THE ZONE OF INFLUENCE (ZOI) SHALL BE PIERED MIN. 300mm BELOW THE ZOI. THE ZOI SHALL BE ASSUMED TO ACT AT 45° FROM THE BASE OF THE BACK THE EXTENDERS
- A MAGNUMSTONE WALL IS A FLEXIBLE STRUCTURE AND MAY EXPERIENCE SOME POST-CONSTRUCTION MOVEMENT. ALL STRUCTURES (EG PAVEMENTS, CONCRETE SLABS ETC.) SHOULD BE DESIGNED TO HANDLE SOME GROUND MOVEMENT AND NOT BE CONNECTED DIRECTLY TO THE WALL UNITS.
- ENGINEERING HOLD POINT INSPECTIONS SHOULD BE UNDERTAKEN AS PER THE HOLD POINT DRAWING

- CONTROLLED FILL TO HAVE A MAXIMUM PARTICLE SIZE OF 75 mm
- ALL RETAINED SOILS SHOULD BE EITHER COMPETENT NATURAL MATERIALS OR CONTROLLED FILL IN ACCORDANCE WITH NZS4431:2022
- MAXIMUM LAYER THICKNESS OF LIGHT EQUIPMENT ZONE TO BE AT THE DIRECTION OF THE ON SITE GEOTECHNICAL ENGINEER SUPERVISING THE LEVEL 1 WORKS
- ALL CONTROLLED FILL IS TO BE UNIFORMLY COMPACTED AND ACHIEVE A MINIMUM 95% STANDARD COMPACTION WITHIN 2% OF THE OPTIMAL MOISTURE CONTENT.

- MUST BE 20-40mm FREE DRAINING AGGREGATE WITH NO FINES AND MUST NOT BREAK DOWN UNDER COMPACTION, WETTING OR EXPOSURE TO AIR
- MIN DENSITY = 1.55t/m³
- WET/DRY VARIATION <35%
- RECYCLED CONCRETE AGGREGATE IS NOT ACCEPTABLE

- NO CONSTRUCTION LOADS SHALL BE APPLIED WITHIN 1.5m FROM THE REAR OF THE MAGNUMSTONE BLOCKS.
- HAND HELD COMPACTION EQUIPMENT SHALL BE USED WITHIN 1.5m OF THE REAR OF THE MAGNUMSTONE BLOCK.
- MAXIMUM LAYER THICKNESS OF HAND COMPACTION ZONE TO BE AT THE DIRECTION OF THE ON SITE GEOTECHNICAL ENGINEER SUPERVISING THE LEVEL 1 WORKS
- SITE DRAINAGE MUST BE WELL MAINTAINED AND WATER PREVENTED FROM CONCENTRATING AT THE CREST OR BASE OF THE WALL BOTH DURING AND AFTER CONSTRUCTION.
- DENSITY TESTING SHOULD BE UNDERTAKEN TO CONFIRM MINIMUM COMPACTION LEVELS HAVE BEEN ACHIEVED AS PER THE HOLD POINT DRAWING

- CONCRETE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZS-3101.1 (2006)
- CONCRETE STRENGTH
 - BLOCK IN FILL AND LEVELING PAD = 30MPa
 - CONCRETE COLLAR = 40MPa
- CONCRETE COVER = 50mm
- MAXIMUM AGGREGATE SIZE = 20mm
- DO NOT ADD WATER ON SITE
- REINFORCEMENT TO AS/NZS 4671
- REINFORCEMENT TO BE DUCTILITY CLASS 500E
- REINFORCEMENT BAR LAPS AS FOLLOWS.
 1. HD12 = 500mm
 2. HD16 = 600mm
 3. HD16 = 800mm
 4. HD25 = 1000mm

FOR CONSTRUCTION

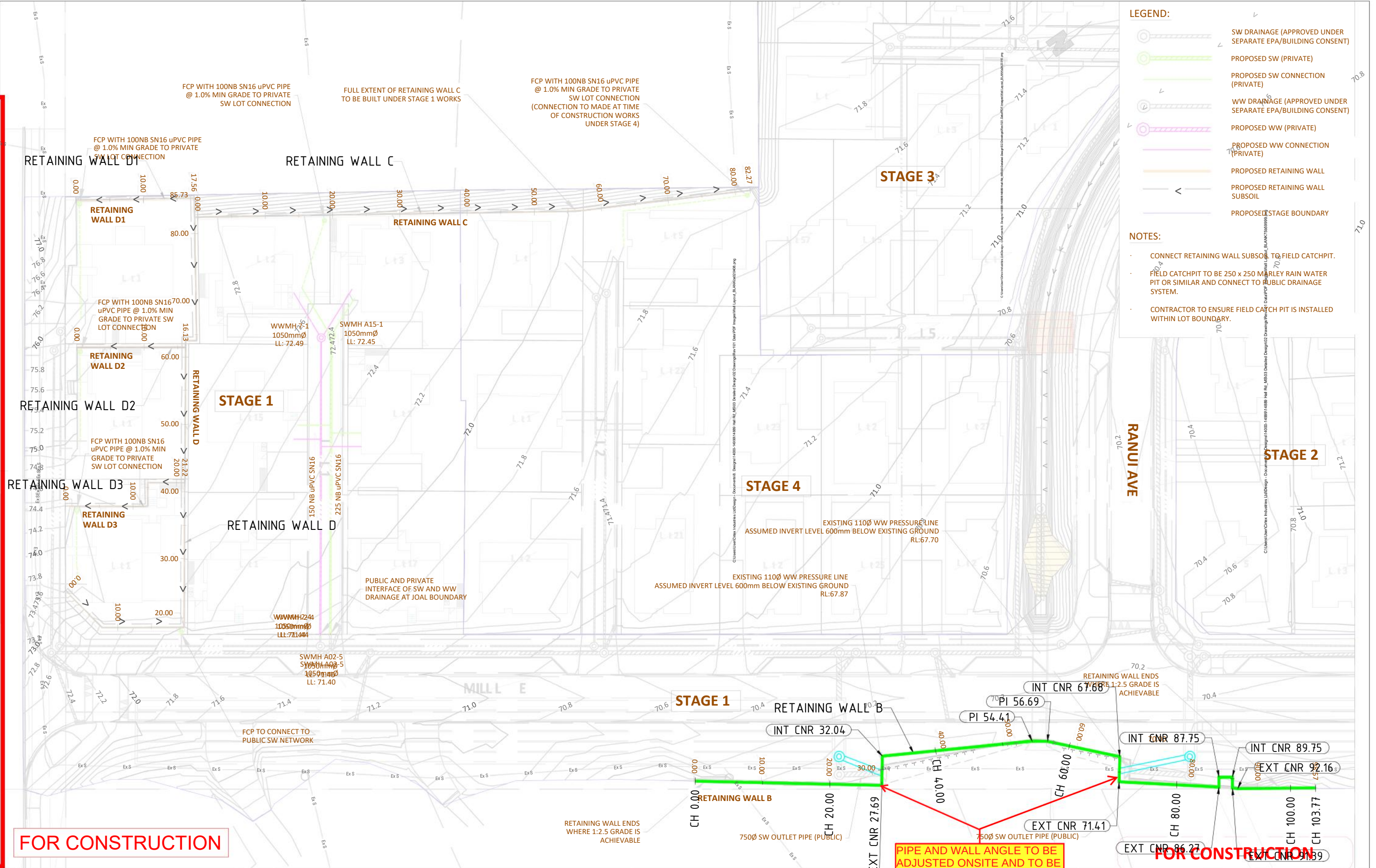
						 125 Ngati Maru Highway Kopu 3578 New Zealand www.cirtex.co.nz	Title: <
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2

FOR CONSTRUCTION

ORIGINAL FIGURE PRINTED IN COLOUR

FNDC - Approved Building Consent Amendment Document - EBC-2024-609/0/A - Pg 4 of 17 - 29/05/2026 - GM



Rev	Date	Description	Drwn	Chkd
2	27/05/2026	RW A, C & D removed	JAV	SHS
1	05/05/2026	Issued for Construction	JAV	SHS



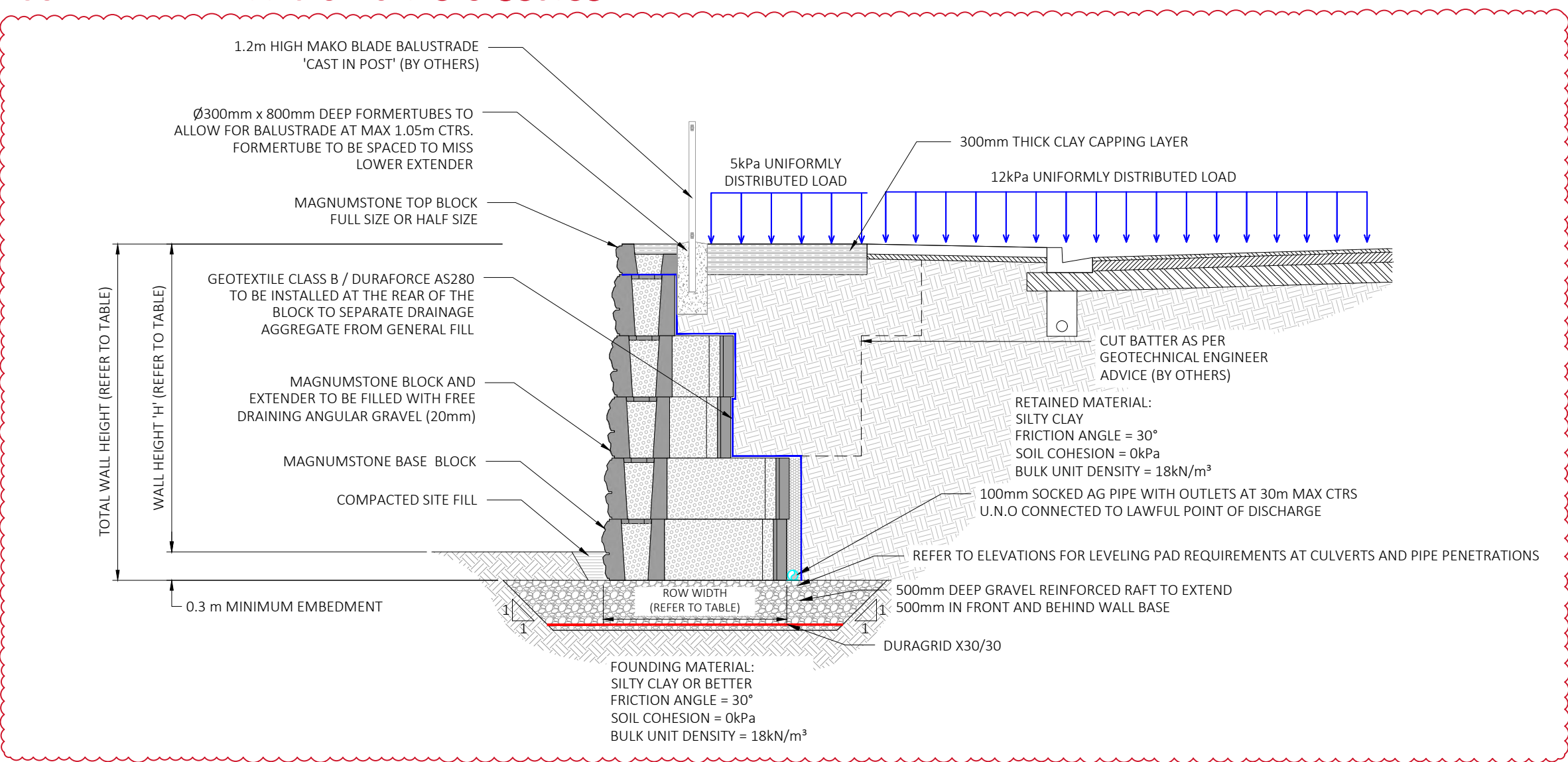
Title:

WALL LAYOUT - SHEET 1 OF 1

Client: GEMSCOTT HALL LTD	Designed: ADM	Drwg No.:
Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Drawn: JAV	DLP-001
	Checked: SHS	
Proj No: 14889	Date: 29/05/2026	Size: A3
	Scale: NTS	Rev: 2

RWB DESIGN TABLE

TOTAL WALL HEIGHT (m)	MIN EMBEDMENT 'E' (m)	WALL HEIGHT 'H' (m)	NUMBER OF BLOCKS	ROW WIDTH (m)					
				1st (top)	2nd	3rd	4th	5th	6th
0.91	0.30	0.61	1.5	0.61	0.61				
1.22	0.30	0.92	2.0	0.61	1.22				
1.52	0.30	1.22	2.5	0.61	0.61	1.22			
1.83	0.30	1.53	3.0	0.61	0.61	1.22			
2.13	0.30	1.83	3.5	0.61	0.61	1.22	1.22		
2.44	0.30	2.14	4.0	0.61	0.61	1.22	1.22		
2.74	0.30	2.44	4.5	0.61	0.61	1.22	1.22	1.83	
3.05	0.30	2.75	5.0	0.61	0.61	1.22	1.22	1.83	
3.35	0.30	3.05	5.5	0.61	0.61	1.22	1.22	1.83	1.83



FOR CONSTRUCTION

RWB SECTION
SCALE 1:50

Rev	Date	Description	Drwn	Chkd
2	27/05/2026	Revised section and design table	JAV	SHS
1	05/05/2026	Issued for Construction	JAV	SHS



Title:

RWB
SECTION AND DESIGN DETAILS

Client: GEMSCOTT HALL LTD

Project:
MAGNUMSTONE RETAINING WALL
57a HALL ROAD, KERIKERI

Proj No: 14889

Designed: ADM

Drawn: JAV

Checked: SHS

Date: 27/05/2026

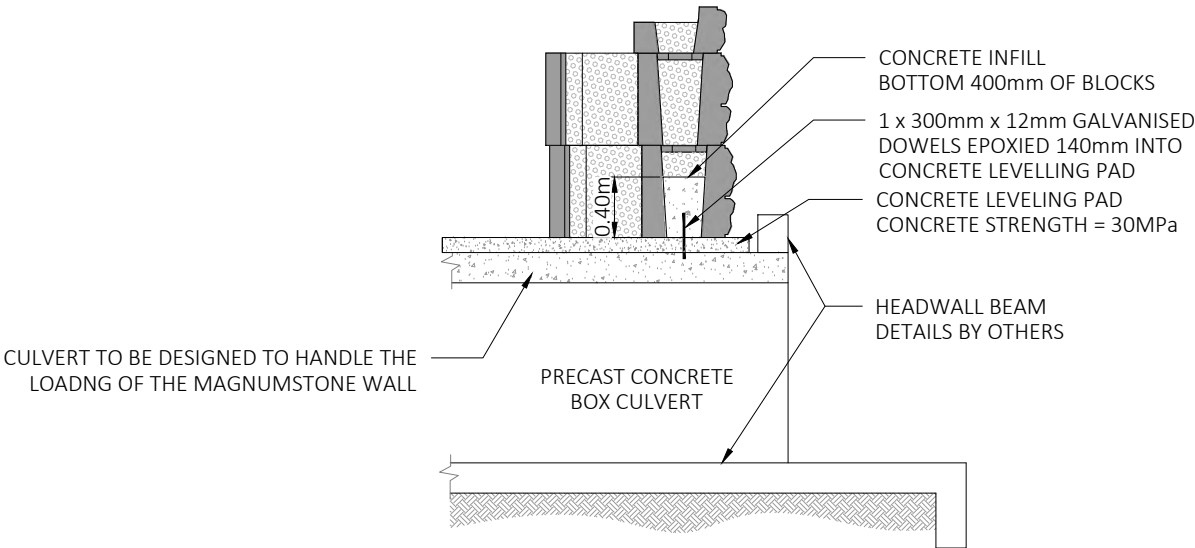
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Drwg No.:

DSN-001

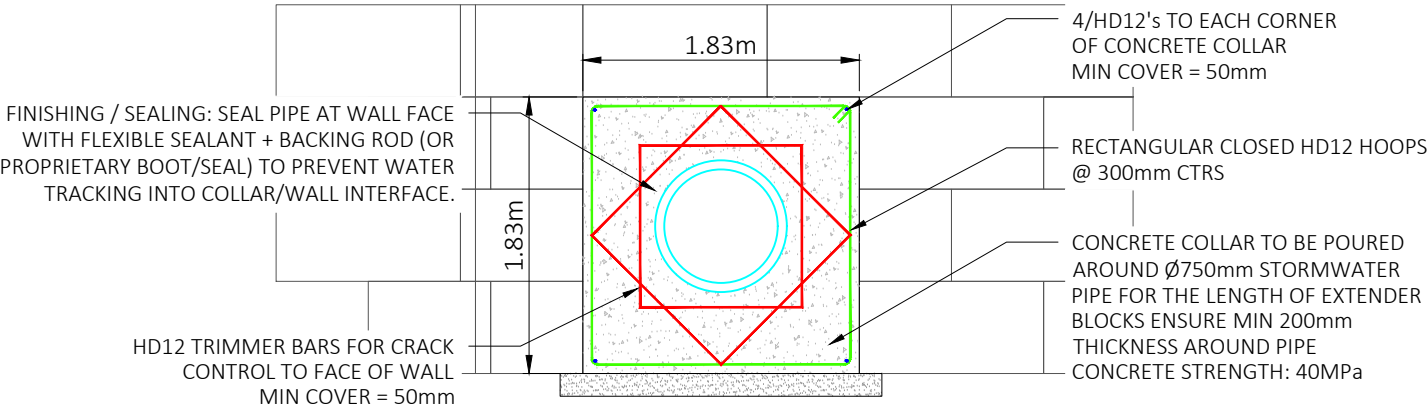
Size: A3

Rev: 2



CULVERT BRIDGING SECTION
SCALE 1:50

NOTE - REINFORCEMENT TO BE ORIENTATED ON SITE SO SUIT ACTUAL PIPE PENETRATION THROUGH BLOCKS. ENSURE COVER IS MAINTAINED



Ø750 PIPE PENETRATION DETAIL
SCALE 1:50

FOR CONSTRUCTION

1	05/05/2026	Issued for Construction	JAV	SHS
Rev	Date	Description	Drwn	Chkd



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Title:

PIPE PENETRATION DETAILS

Client: GEMSCOTT HALL LTD		Drwg No.:
Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Designed: ADM	DSN-002
	Drawn: JAV	
	Checked: SHS	
	Date: 05/05/2026	Size: A3
Proj No: 14889		Scale: AS STATED
		Rev: 1

MAGNUMSTONE BLOCK LEGEND:

TOP BLOCK HALF (TOTAL WIDTH = 0.61m)

STD BLOCK FULL (TOTAL WIDTH = 0.61m)

STD BLOCK + 1.22m EXT (TOTAL WIDTH = 1.83m)

CORNER BLOCK

TOP BLOCK FULL (TOTAL WIDTH = 0.61m)

STD BLOCK + 0.61m EXT (TOTAL WIDTH = 1.22m)

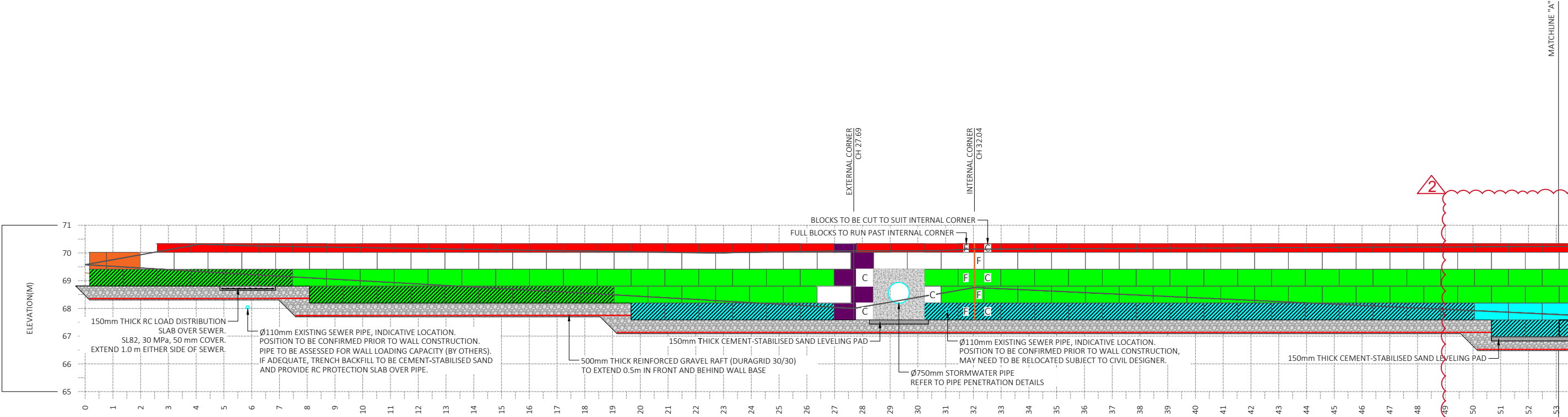
HATCHING DENOTES - BASE BLOCK

LEVELING PAD HATCHING LEGEND:

GRAVEL

CONCRETE

STABILISED SAND



MIN. BEARING (kPa)	100	100	100	100	100
TOP COURSE WIDTH (m)	0.61	0.61	0.61	0.61	0.61
2ND COURSE WIDTH (m)	1.22	0.61	0.61	0.61	0.61
3RD COURSE WIDTH (m)		1.22	1.22	1.22	1.22
4TH COURSE WIDTH (m)			1.22	1.22	1.22
5th COURSE WIDTH (m)				1.83	1.83
6th COURSE WIDTH (m)					
MIN EMBEDMENT (m)	0.3	0.3	0.3	0.3	0.3
COURSES	2	2.5	3.5	4.5	
TOTAL HEIGHT(m)	1.22	1.52	2.13	2.74	
TOP(RL)	70.03	70.33	70.33	70.33	
BASE(RL)	68.81	68.81	68.2	67.59	
CHAINAGE(m)	0.16	2.6	8.08	19.67	50.67

RWB WALL ELEVATION - SHEET 1 OF 2
SCALE 1:150

FOR CONSTRUCTION

2	27/05/2026	Revised elevation	JAV	SHS
1	05/05/2026	Issued for Construction	JAV	SHS
Rev	Date	Description	Drwn	Chkd

125 Ngati Maru Highway
Kopu 3578
New Zealand
www.cirtex.co.nz

Title:

RWB WALL ELEVATION - SHEET 1 OF 2

Client: GEMSCOTT HALL LTD

Project:
MAGNUMSTONE RETAINING WALL
57a HALL ROAD, KERIKERI

Proj No: 14889

Designed: ADM

Drawn: JAV

Checked: SHS

Date: 27/05/2026

Scale: AS STATED

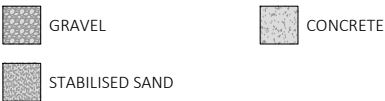
Drwg No.:
DEL-001

Size: A3

Rev: 2

ORIGINAL FIGURE PRINTED IN COLOUR

LEVELING PAD HATCHING LEGEND:



SCALE 1:150

FOR CONSTRUCTION

2	27/05/2026	Revised elevation		JAV	SHS
1	05/05/2026	Issued for Construction		JAV	SHS
Rev	Date	Description		Drwn	Chkd



Title:

RWB WALL ELEVATION - SHEET 2 OF 2

Client: GEMSCOTT HALL LTD

Project:
MAGNUMSTONE RETAINING WALL
57a HALL ROAD, KERIKERI

Proj No: 14889

Designed: ADM

Drawn: JAV

Checked: SHS

Date: 27/05/20

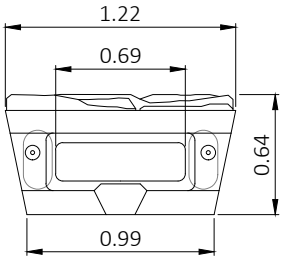
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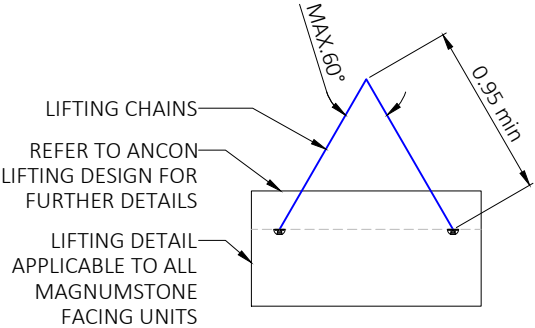
DEL-002

Size: A3

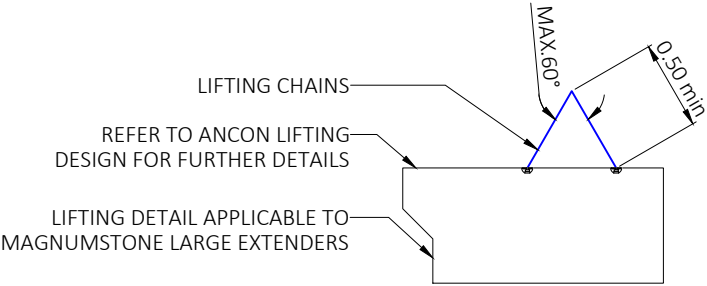
Rev: 2



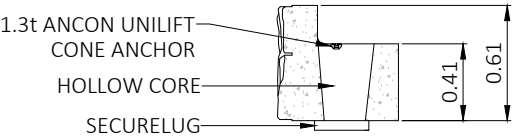
TYPICAL PLAN



MAGNUMSTONE BLOCK LIFTING DETAIL
BACK VIEW

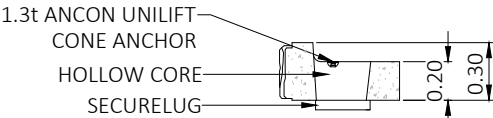


LARGE EXTENDER LIFTING DETAIL
SIDE VIEW



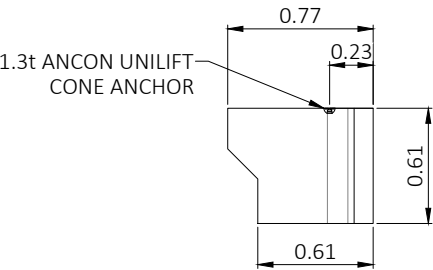
CROSS SECTION

STANDARD TOP BLOCK
Weight (±) = 570 kg

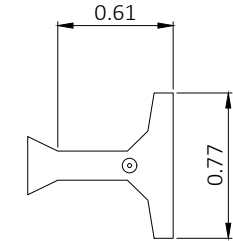


CROSS SECTION

HALF-HIGH TOP BLOCK
Weight (±) = 295 kg

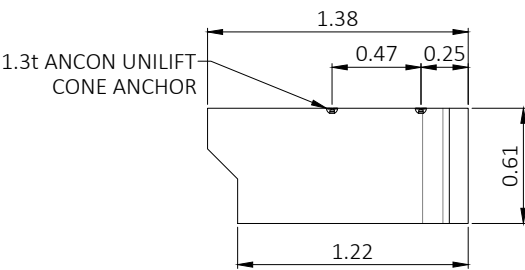


CROSS SECTION

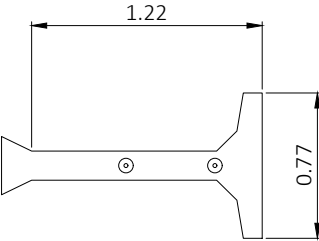


TYPICAL PLAN

MS SMALL EXTENDER
Weight (±) = 290 kg

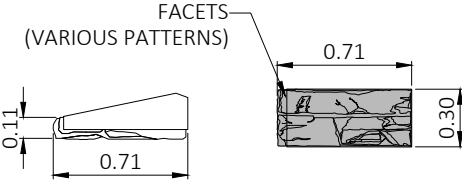


CROSS SECTION



TYPICAL PLAN

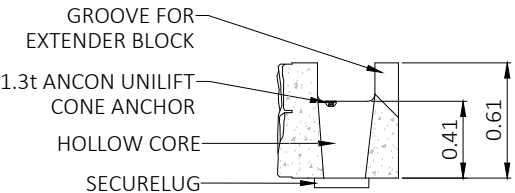
MS LARGE EXTENDER
Weight (±) = 435 kg



TYPICAL PLAN

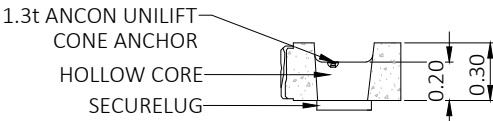
FRONT VIEW

HALF-HIGH CORNER / END UNIT
Weight (±) = 70 kg



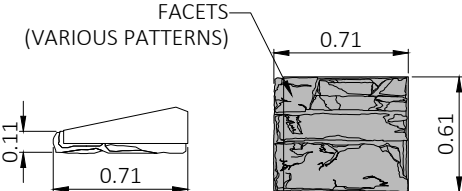
CROSS SECTION

STANDARD BLOCK
Weight (±) = 630 kg



CROSS SECTION

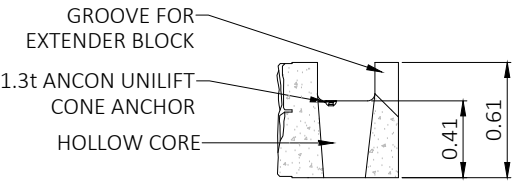
HALF-HIGH BLOCK
Weight (±) = 320 kg



TYPICAL PLAN

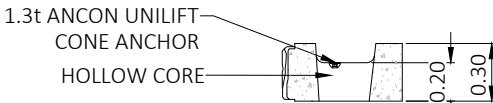
FRONT VIEW

STANDARD CORNER / END UNIT
Weight (±) = 156 kg



CROSS SECTION

STANDARD BASE BLOCK
Weight (±) = 625 kg



CROSS SECTION

HALF-HIGH BASE BLOCK
Weight (±) = 310 kg

FOR CONSTRUCTION

1	05/05/2026	Issued for Construction	JAV	SHS	
Rev	Date	Description	Drwn	Chkd	



Title:

MAGNUMSTONE RETAINING WALL
UNIT DETAILS

Client: GEMSCOTT HALL LTD

Project:
MAGNUMSTONE RETAINING WALL
57a HALL ROAD, KERIKERI

Proj No: 14889

Designed: ADM

Drawn: JAV

Checked: SHS

Date: 05/05/2026

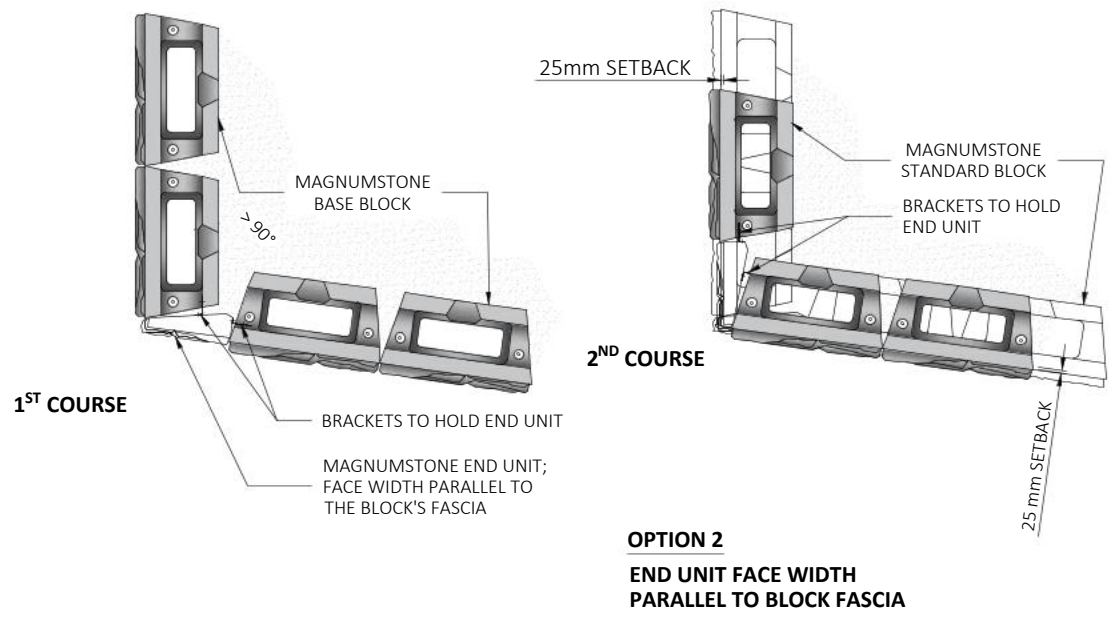
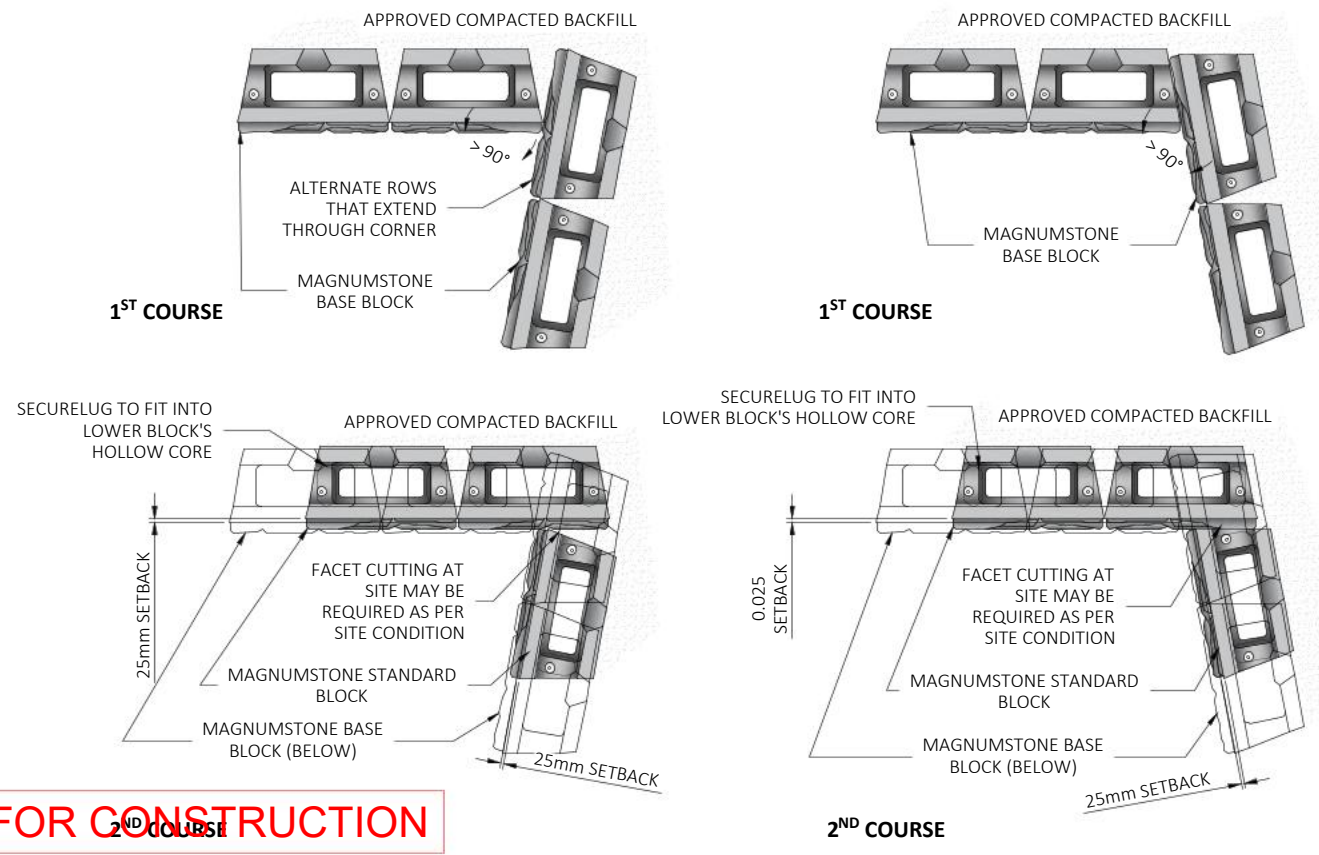
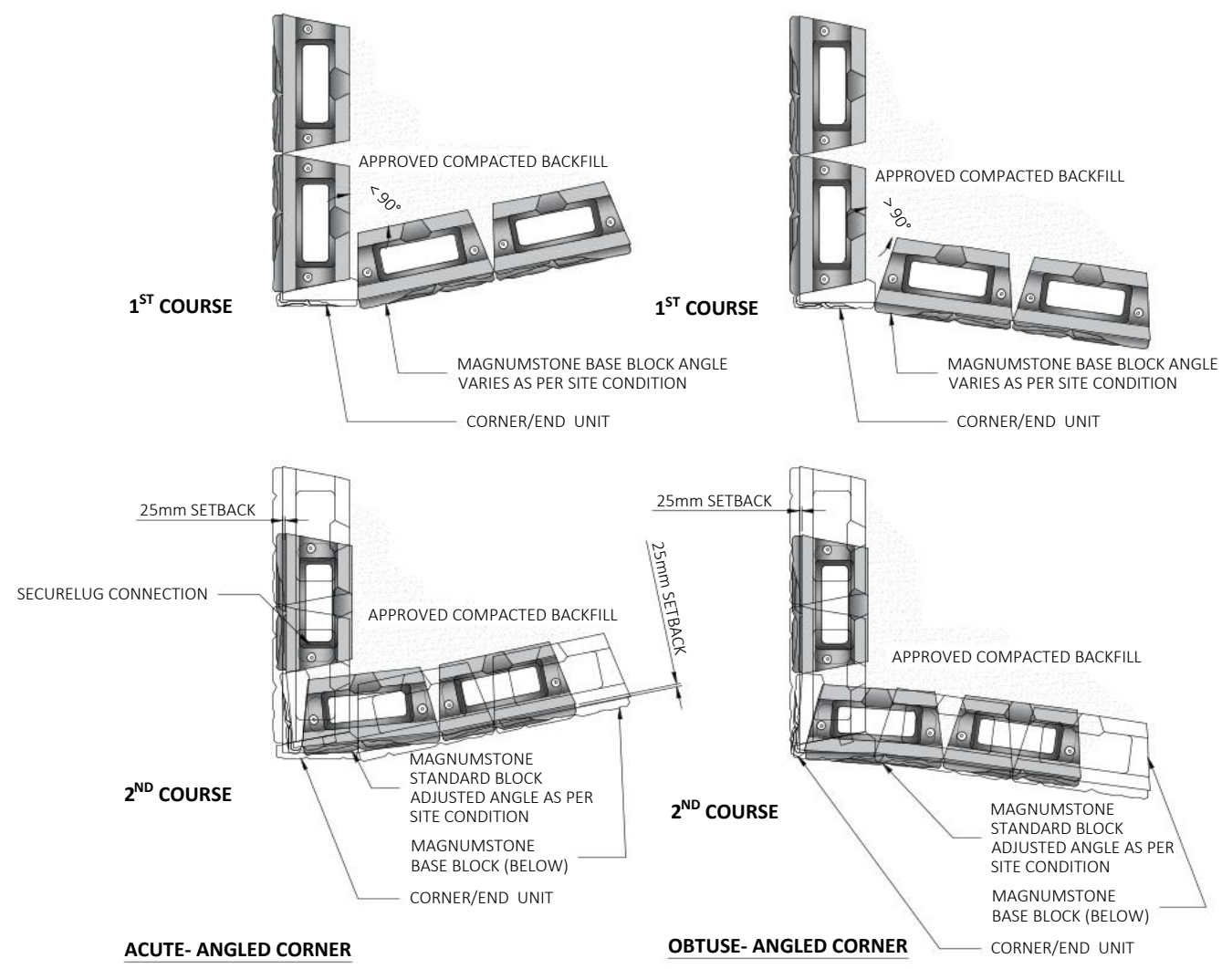
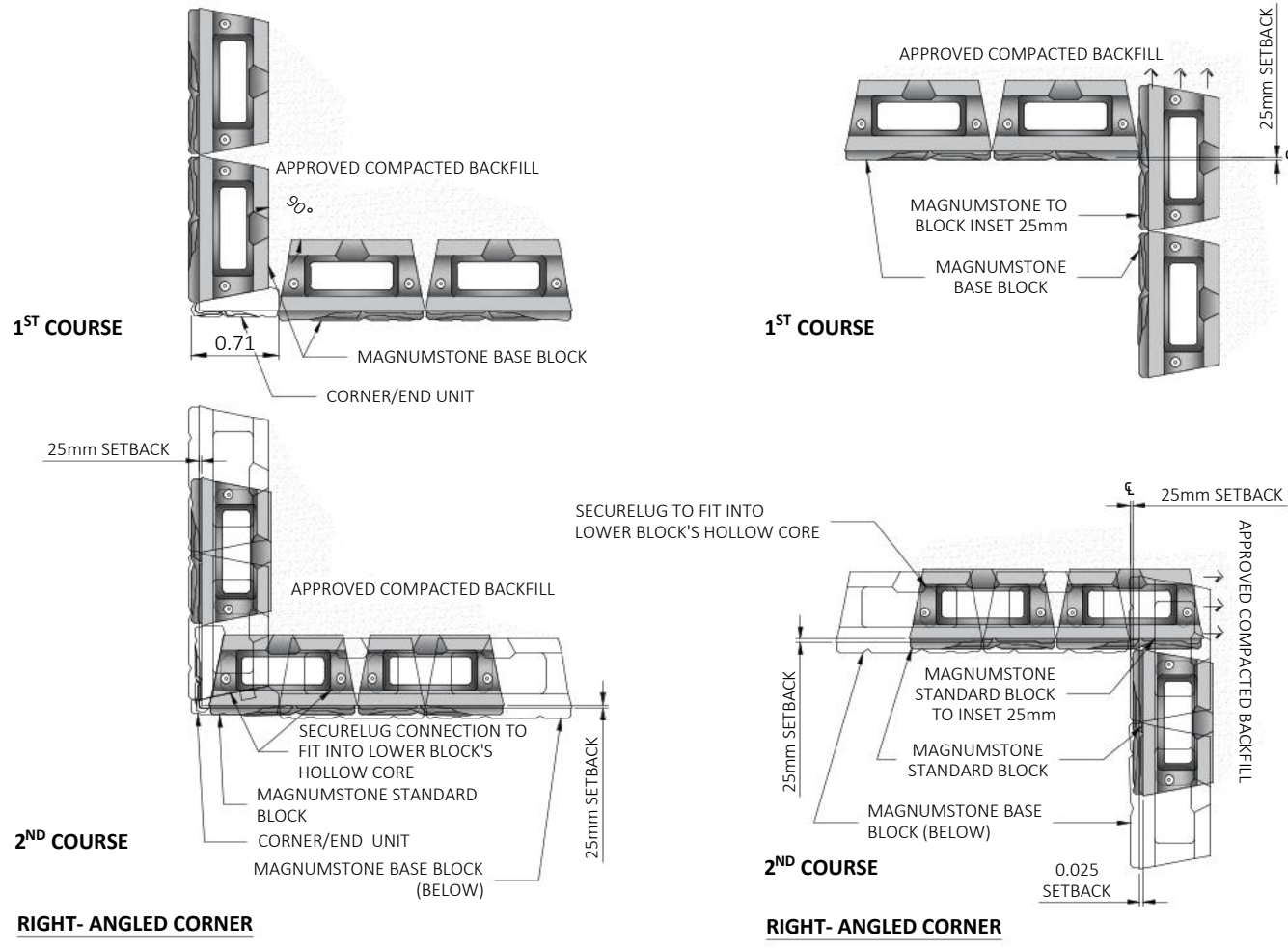
Scale: NTS

Drwg No.:

DDE-001

Size: A3

Rev: 1

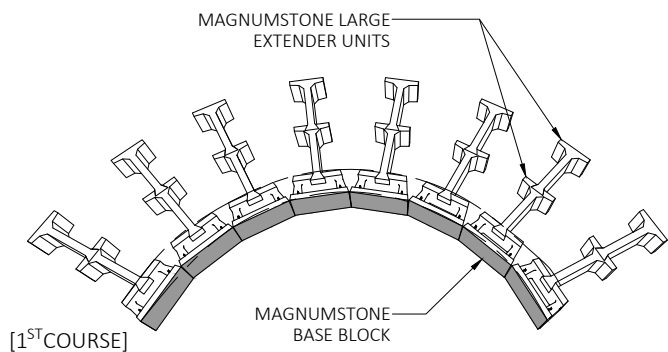
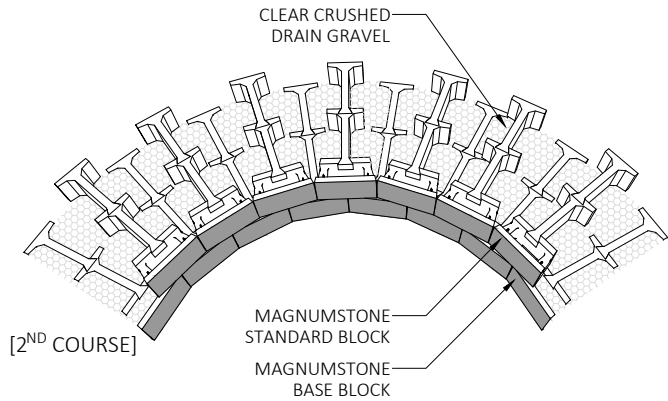


FOR CONSTRUCTION

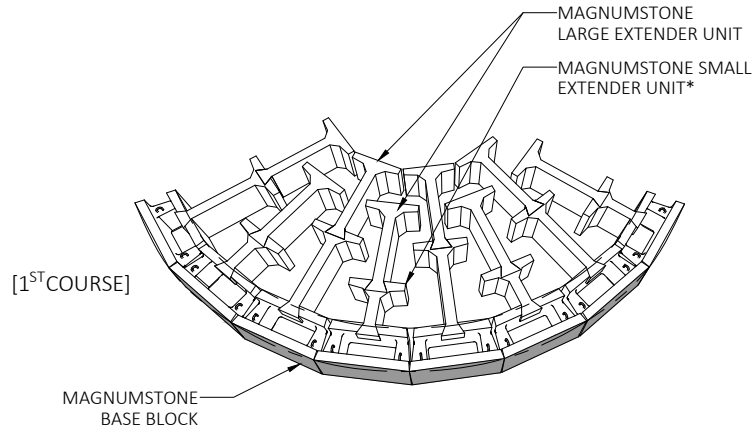
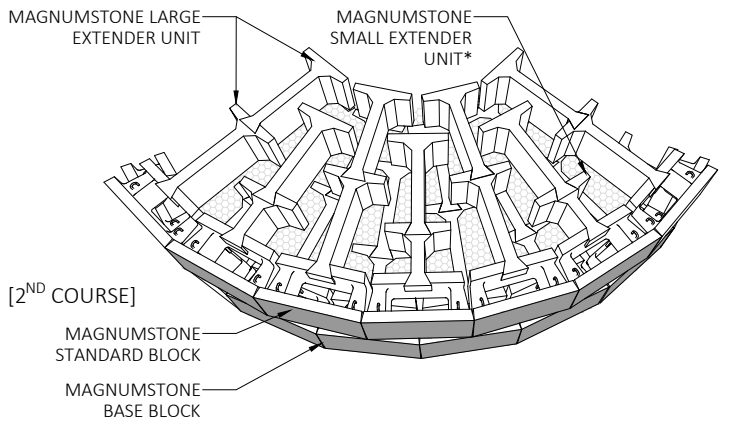
Rev	Date	Description	Drwn	Chkd
1	05/05/2026	Issued for Construction	JAV	SHS


125 Ngati Maru Highway
Kopu 3578
New Zealand
www.cirtex.co.nz

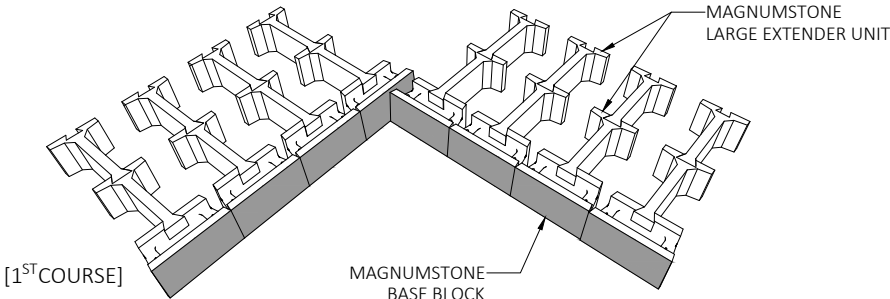
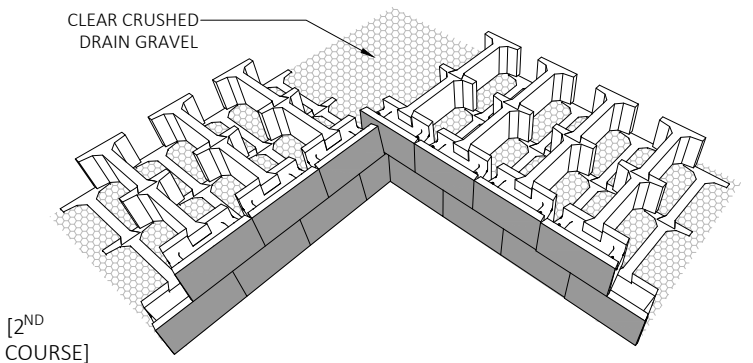
Title: MAGNUMSTONE RETAINING WALL CORNER DETAILS			Client: GEMSCOTT HALL LTD		Drwg No.: DDE-002
			Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Designed: ADM	Size: A3
				Drawn: JAV	
				Checked: SHS	
			Date: 05/05/2026	Scale: NTS	Rev: 1
			Proj No: 14889	ORIGINAL FIGURE PRINTED IN COLOUR	



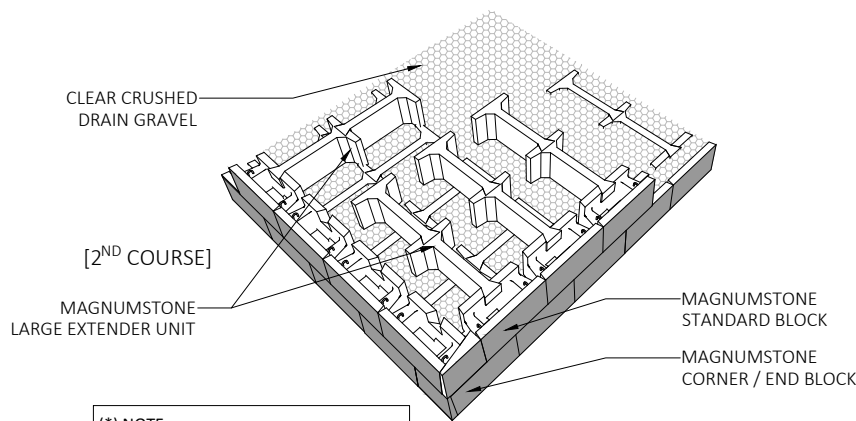
INSIDE CURVE



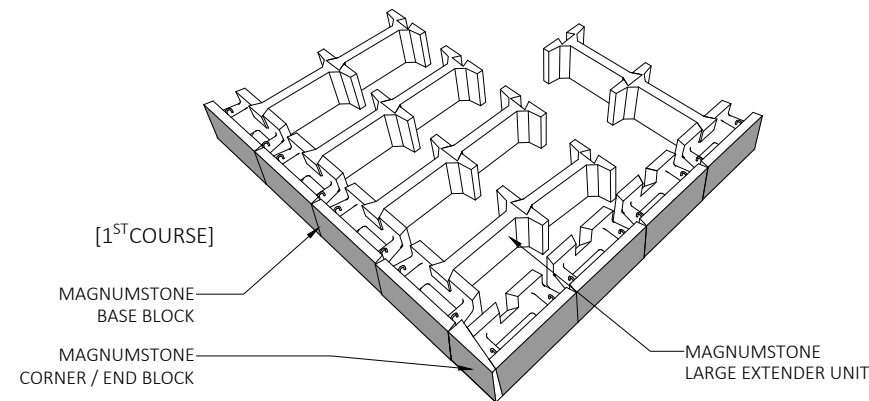
OUTSIDE CURVE



INSIDE CORNER



(*) NOTE:
LAYOUT OF EXTENDERS ADJUSTED TO FIT
TIGHT CURVES WHERE SPACE ALLOWS



OUTSIDE CORNER

FOR CONSTRUCTION

1	05/05/2026	Issued for Construction	JAV	SHS
Rev	Date	Description	Drwn	Chkd



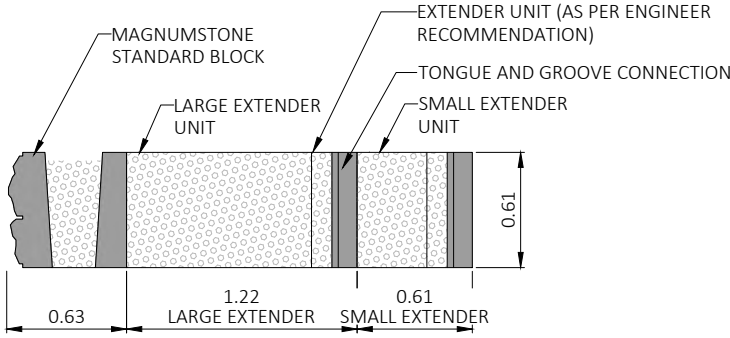
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MAGNUMSTONE RETAINING WALL
CONSTRUCTION DETAILS

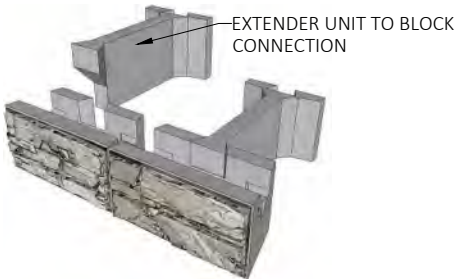
Client: GEMSCOTT HALL LTD		Drwg No.:	
Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Designed: ADM		DDE-003
	Drawn: JAV		
	Checked: SHS		
	Date: 05/05/2026		
Proj No: 14889		Size: A3	
Scale: NTS		Rev: 1	

EXTENDER UNIT - GENERAL NOTE:

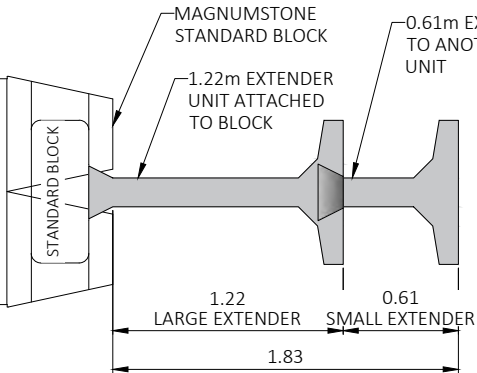
- EXTENDER UNITS TO BE ATTACHED ONTO MAGNUMSTONE® STANDARD, BASE BLOCK OR ANOTHER EXTENDER UNIT TO CREATE DEEPER BLOCKS AND ADD MASS FROM THE STANDARD MAGNUMSTONE® BLOCK
- EXTENDER UNITS USE A TONGUE-AND-GROOVE CONNECTION TO LOCK INTO THE BACK OF A PROVIDED GROOVE OF THE STANDARD MAGNUMSTONE® BLOCK OR LARGE EXTENDER UNIT
- EXTENDER UNITS ARE CHAINED TOGETHER IN 2' [610 mm] INCREMENTS. THE NUMBER OF EXTENDERS MAY BE DETERMINED BY THE ENGINEER ON RECORD THROUGH THE DESIGN ANALYSIS SOFTWARE.



TYPICAL CROSS SECTION



ISOMETRIC VIEW
BLOCK-TO-EXTENDER UNIT

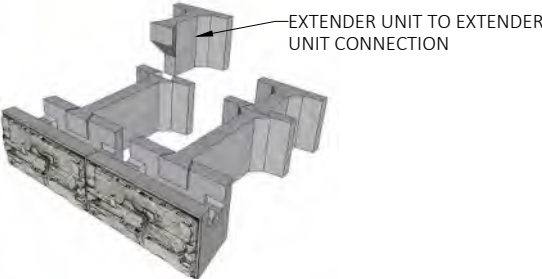


EXTENDER OPTION 01

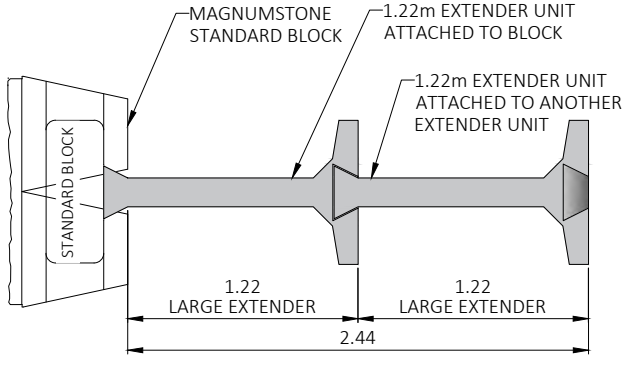
EXTENDER OPTION 02

LARGE EXTENDER

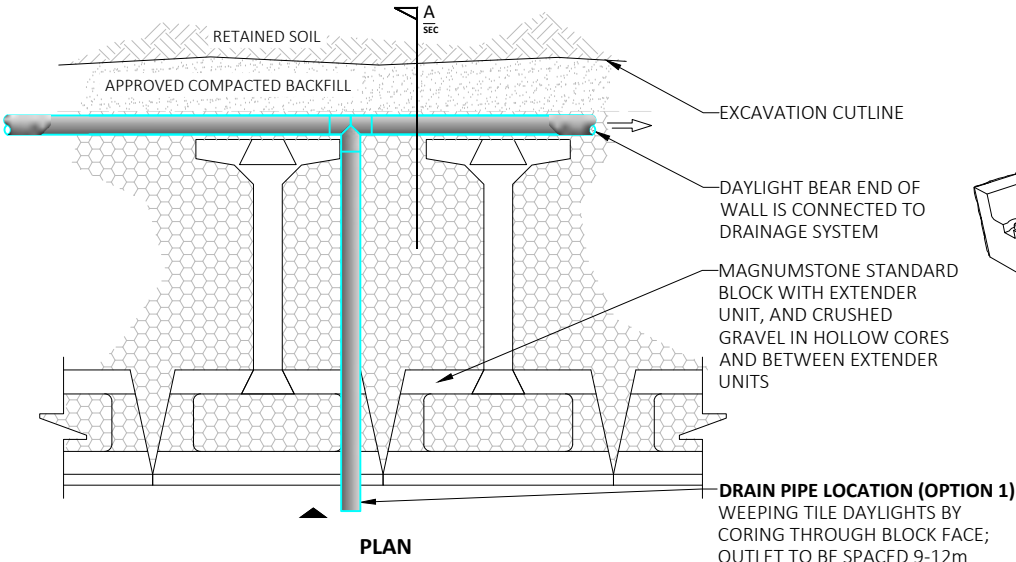
SMALL EXTENDER



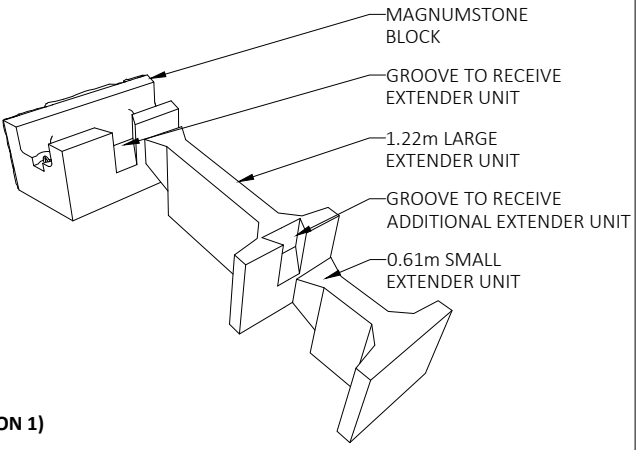
ISOMETRIC VIEW
EXTENDER-TO-EXTENDER UNIT



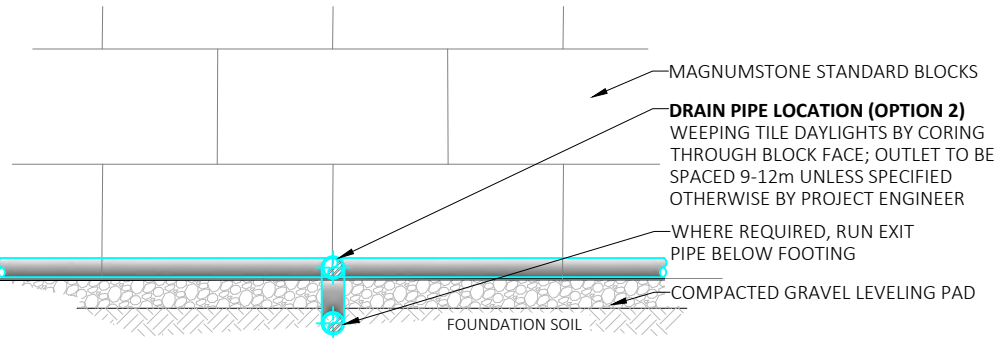
EXTENDER OPTION 03



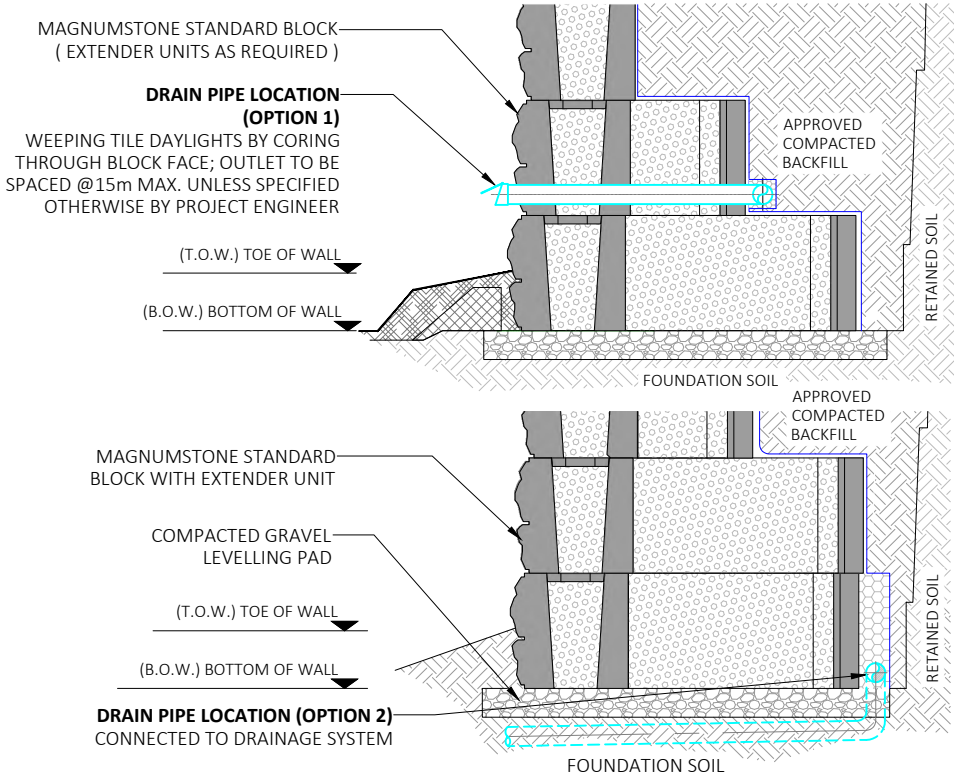
PLAN



ISOMETRIC VIEW



FRONT ELEVATION
DRAIN PIPE OPTIONAL LOCATION



FOR CONSTRUCTION

Rev	Date	Description	Drwn	Chkd
1	05/05/2026	Issued for Construction	JAV	SHS



Title:

MAGNUMSTONE RETAINING WALL
EXTENDER DETAILS

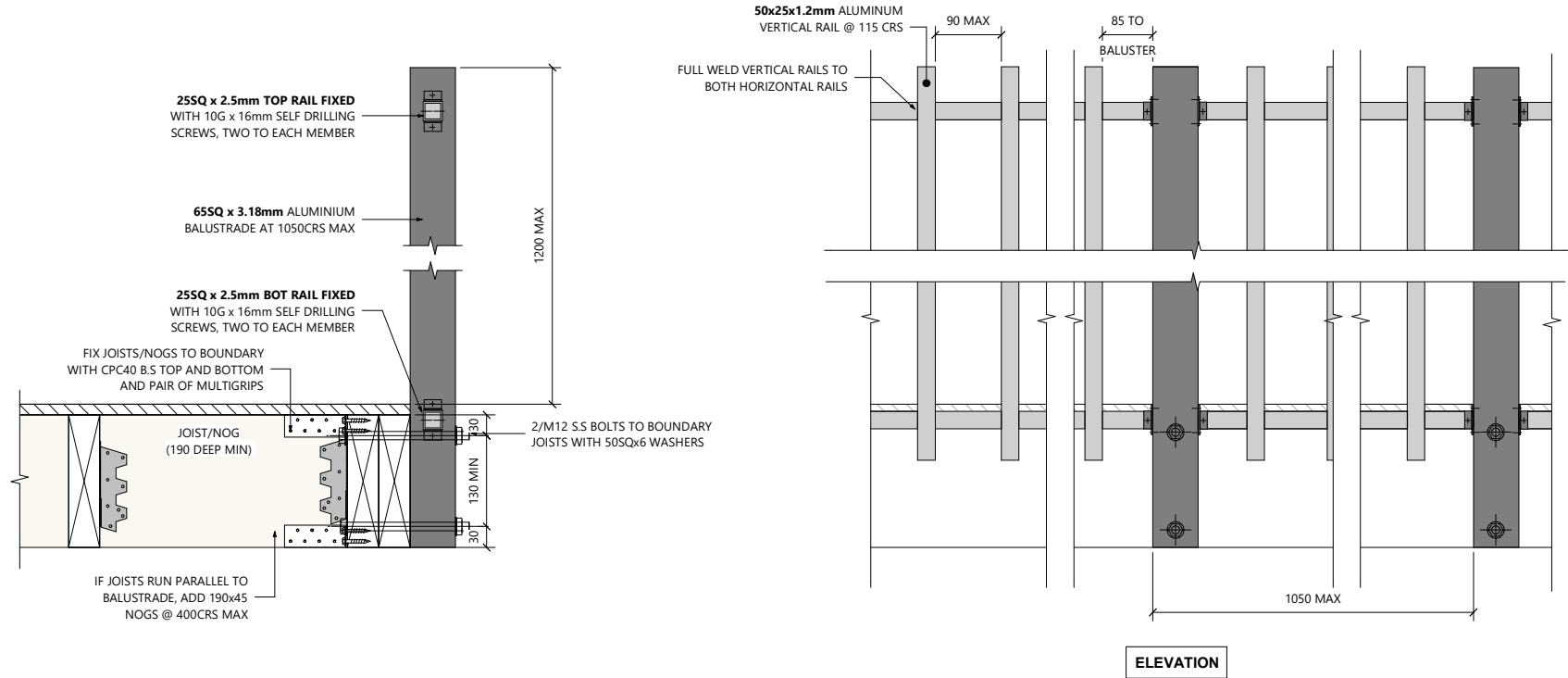
Client: GEMSCOTT HALL LTD	Designed: ADM	Drwg No.: DDE-004
Project: MAGNUMSTONE RETAINING WALL 57a HALL ROAD, KERIKERI	Drawn: JAV	Size: A3
	Checked: SHS	Rev: 1
Proj No: 14889	Date: 05/05/2026	Scale: NTS



Mako Blade Balustrade

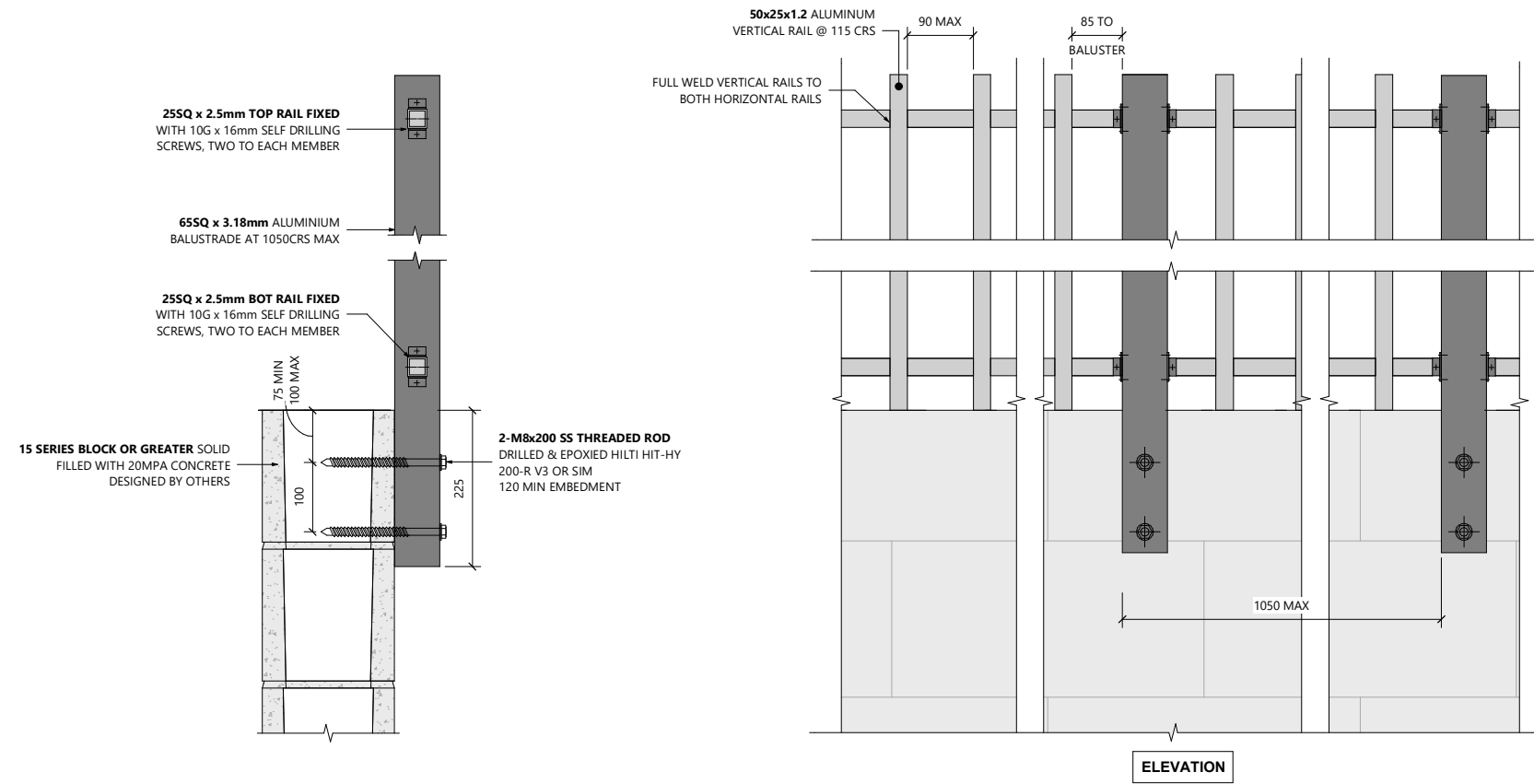
MAKO SOLUTIONS LTD

PROJECT - 11849



BLADE ALUMINIUM BALUSTRADE - TIMBER SIDE FIXED

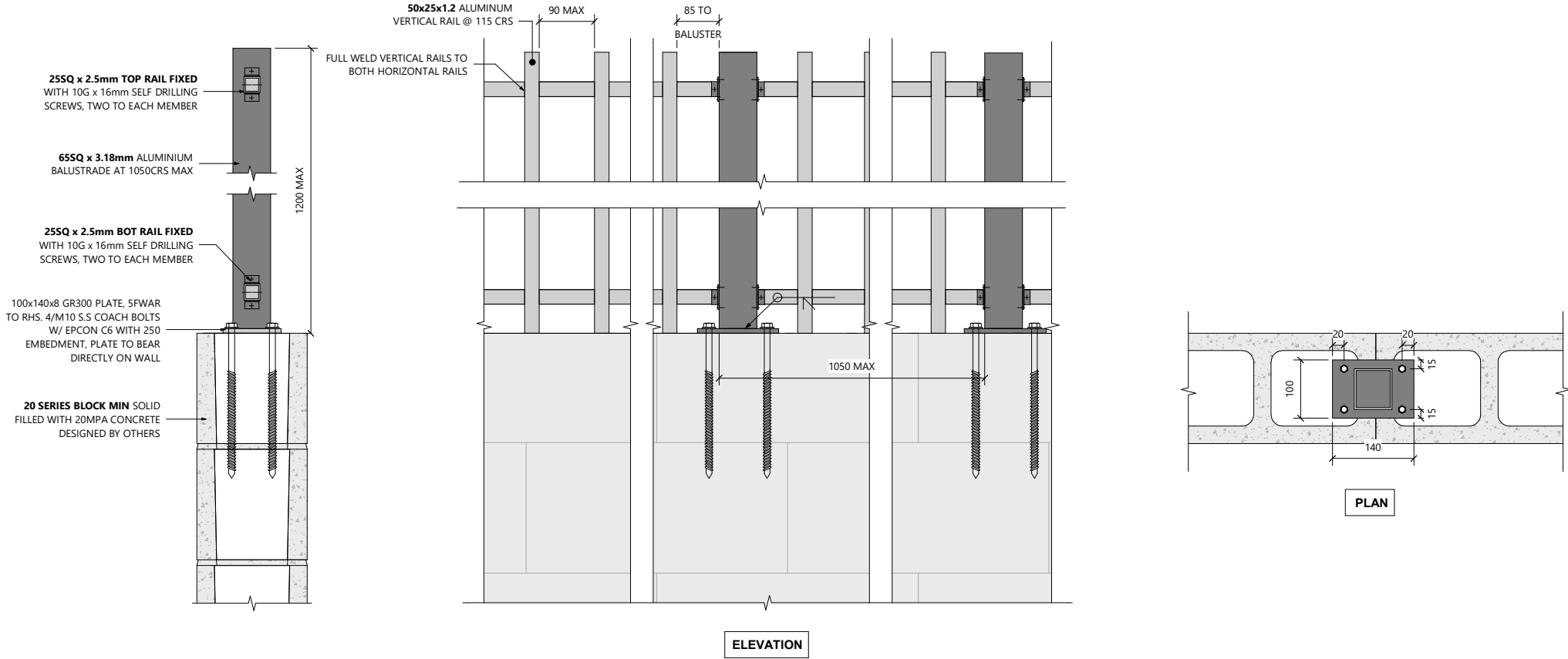
SCALE: 1 : 5



BLADE ALUMINIUM BALUSTRADE - BLOCK FACE FIXED

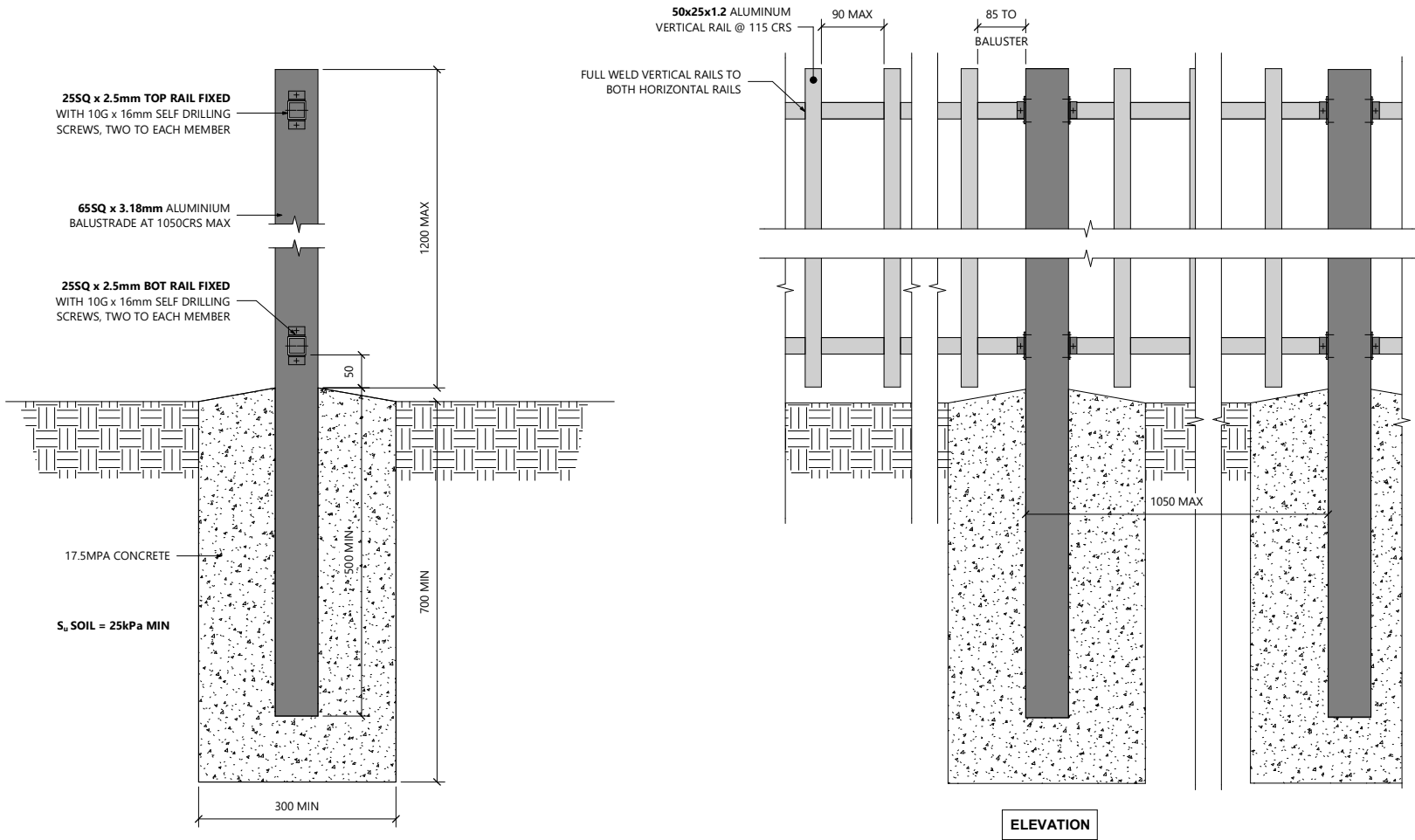
SCALE: 1 : 5

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REFER ARCHITECTURAL DRAWINGS FOR ALL DIMENSION, LEVELS, SETDOWNS, NIBS, REBATED, DUCTS THRU FLOORS / WALLS ETC, AND ALL OTHER SETTING OUT UNLESS SHOWN THE STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS ASSOCIATED WITH THE PROJECT.		
NOTES:		
1. ALUMINIUM TO BE GRADE 6063-T5		
2. ALL WELDING TO BE TYPE S.		
3. ALL STEEL WORK WITHIN 500 METERS OF BREAKING SURF OR WITHIN 50 METERS OF CALM SALT WATER TO BE TREATED TO HDG9000 TO ACHIEVE A TIME TO FIRST MAINTENANCE OF 25 YEARS FOR EXPOSURE CATEGORY C4 . OTHERWISE TREAT TO HDG390 TO ACHIEVE A TIME TO FIRST MAINTENANCE OF 25 YEARS FOR EXPOSURE CATEGORY C3 . PLEASE CONTACT ENGINEER IF WITHIN 100m OF BREAKING SURF OR EXPOSURE CATEGORY C5-M.		
4. ADDITIONALLY BOTTOM 100mm OF EXTERNAL CAST IN STEEL POSTS FROM TOP OF PILE/FOOTING TO BE COATED WITH A SELF PRIMING NON-CONDUCTIVE BARRIER COATING (EPOXY MASTIC OR SIM.) TO AT LEAST 350 MICRONS THICK.		
5. ALL STRUCTURAL STEEL TO BE CONSTRUCTION CATEGORY 2 IN ACCORDANCE WITH AS/NZS 5131:2016		
6. ALL TIMBER FIXINGS TO BE STAINLESS STEEL (S.S)		
7. NYLON PLASTIC RUBBER WASHERS BETWEEN STEEL AND ALUMINIUM.		
C	14/11/20204	FOR BUILDING CONSENT
B	27/08/2024	FOR BUILDING CONSENT
A	05/07/2024	FOR COORDINATION
REV	DATE	AMENDMENT
DHC STRUCTURAL CIVIL DHC CONSULTING GROUP LTD 30 Ponsonby Road, Grey Lynn, Auckland 1011 Ph: 09 520 0355 E: info@dhc.nz		
CLIENT		
MAKO BUILDING SOLUTIONS		
FOR BUILDING CONSENT		
Mako Blade Balustrade MAKO SOLUTIONS LTD		
STRUCTURAL DETAILS		
DESIGNED	JJ	DATE 14/11/20204
DRAWN	JJ	CHECKED AH
A1 SCALE 1 : 5		A3 SCALE
JOB No.	DWG No.	REVISION
11849	S401	C



BLADE ALUMINIUM BALUSTRADE - BLOCK TOP FIXED

SCALE: 1 : 5



BLADE ALUMINIUM BALUSTRADE - CAST IN POST

SCALE: 1 : 5

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SETDOWNS, NIBS, REBATED, DUCTS THRU FLOORS / WALLS ETC,
AND ALL OTHER SETTING OUT UNLESS SHOWN
THE STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION
WITH THE ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS
ASSOCIATED WITH THE PROJECT.

NOTES:

1. ALUMINIUM TO BE GRADE 6063-T5
2. ALL WELDING TO BE TYPE S.
3. ALL STEEL WORK WITHIN 500 METERS OF
BREAKING SURF OR WITHIN 50 METERS OF CALM
SALT WATER TO BE TREATED TO **HDG900** TO
ACHIEVE A TIME TO FIRST MAINTENANCE OF **25
YEARS** FOR EXPOSURE **CATEGORY C4**.
OTHERWISE TREAT TO **HDG390** TO ACHIEVE A
TIME TO FIRST MAINTENANCE OF **25 YEARS** FOR
EXPOSURE **CATEGORY C3**. PLEASE CONTACT
ENGINEER IF WITHIN 100m OF BREAKING SURF OR
EXPOSURE CATEGORY C5-M.
4. ADDITIONALLY BOTTOM 100mm OF EXTERNAL
CAST IN STEEL POSTS FROM TOP OF
PILE/FOOTING TO BE COATED WITH A SELF
PRIMING NON-CONDUCTIVE BARRIER COATING
(EPOXY MASTIC OR SIM.) TO AT LEAST 350
MICRONS THICK.
5. ALL STRUCTURAL STEEL TO BE CONSTRUCTION
CATEGORY 2 IN ACCORDANCE WITH AS/NZS
5131:2016
6. ALL TIMBER FIXINGS TO BE STAINLESS STEEL
(S.S)
7. NYLON PLASTIC RUBBER WASHERS BETWEEN
STEEL AND ALUMINIUM.

C	14/11/20204	FOR BUILDING CONSENT
B	27/08/2024	FOR BUILDING CONSENT
A	05/07/2024	FOR COORDINATION
REV	DATE	AMENDMENT

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STRUCTURAL | CIVIL

DHC CONSULTING GROUP LTD
30 Ponsonby Road, Grey Lynn, Auckland 1011
Ph: 09 520 0355 E: info@dhc.nz

CLIENT

MAKO
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FOR BUILDING CONSENT

Mako Blade Balustrade
MAKO SOLUTIONS LTD

STRUCTURAL DETAILS

DESIGNED	JJ	DATE	14/11/20204
DRAWN	JJ	CHECKED	AH
A1 SCALE 1 : 5		A3 SCALE	
JOB No.	DWG No.	REVISION	
11849	S402	C	

2 hDE ridge Design Drawings



STRUCTURAL DRAWINGS

57A HALL ROAD, KERIKERI - JOAL 5 AND 6
BRIDGE AND ABUTMENT DESIGN

DRAWING CONTENTS				
SHEET	DESCRIPTION	ISSUE DATE	STATUS	REVISION
S000	COVER SHEET	09.04.24	BUILDING CONSENT ISSUE	A
S050	SITE PLAN	09.04.24	BUILDING CONSENT ISSUE	A
S100	JOEL 5 BRIDGE PLAN & CROSS SECTIONS	09.04.24	BUILDING CONSENT ISSUE	A
S200	JOEL 6 BRIDGE PLAN & CROSS SECTIONS	09.04.24	BUILDING CONSENT ISSUE	A
S700	TYPICAL DETAILS - SHEET 1	09.04.24	BUILDING CONSENT ISSUE	A

GENERAL NOTES & LIMITATIONS OF USE

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION TO THE PROJECT WHICH MAY INCLUDE (BUT NOT LIMITED TO); ARCHITECTURAL DRAWINGS, ARCHITECTURAL & STRUCTURAL SPECIFICATIONS, INSPECTION SCHEDULES, GEOTECHNICAL REPORTS, SPECIALIST SYSTEM DESIGN (ie: HVAC, FIRE) AND ANY OTHER 3rd PARTY DOCUMENTATION FOR SPECIALIST DESIGNERS ENGAGED ON THE PROJECT.
2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION OR FABRICATION.
3. ANY DISCREPANCIES ENCOUNTERED ON SITE WITH THE DESIGN SHALL BE REFERRED TO THE DESIGN ENGINEER IMMEDIATELY FOR RESOLUTION BEFORE PROCEEDING WITH CONSTRUCTION OR FABRICATION OF COMPONENTS.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL TEMPORARY WORK TO ENSURE ADEQUATE STRENGTH AND STABILITY OF THE STRUCTURE AND GROUND DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL ENSURE SAFE WORK PRACTICES ON SITE IN ACCORDANCE WITH ALL APPLICABLE HEALTH & SAFETY CODES, RELEVANT STANDARDS AND LEGISLATION.
6. WHERE PROPRIETARY PRODUCTS ARE SPECIFIED IN THE STRUCTURAL DRAWINGS SUBSTITUTIONS MAY ONLY BE MADE IF APPROVED BY THE ENGINEER.
7. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE NZ BUILDING CODE, CURRENT CODES OF PRACTICE AND ANY LOCAL TERRITORIAL AUTHORITY REQUIREMENTS.
8. STANDARD ENGINEERING ABBREVIATIONS MAY HAVE BEEN USED IN THE DRAWINGS, COMMON ABBREVIATIONS ARE AS SHOWN BELOW:

ALT	ALTERNATE	MIN	MINIMUM
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
B	BOTTOM	NF	NEAR FACE
BOS	BOTTOM OF STEEL	NTS	NOT TO SCALE
CHS	CIRCULAR HOLLOW SECTION	OD	OUTSIDE DIAMETER
CONC.	CONCRETE	PCD	PITCH CIRCLE DIAMETER
COS	CHECK ON SITE	PCP	PRECAST PANEL
CRS	CENTERS	PFC	PARALLEL FLANGE CHANNEL
CJ	CONSTRUCTION JOINT	R	PLAIN ROUND BAR (300E)
CL	CENTER LINE	RB	REIDBAR (500E)
D	DEFORMED BAR (300E)	REF	REFER
DPC	DAMP PROOF COURSE	REBAR	REINFORCING BAR
DFM	DAMP PROOF MEMBRANE	RHS	RECTANGULAR HOLLOW SECTION
DIA	DIAMETER	RL	REDUCED LEVEL
DIM	DIMENSION	SFL	STRUCTURAL FLOOR LEVEL
DP	DOWNPIPE	SHS	SQUARE HOLLOW SECTION
DRG/DWG	DRAWING	SIM	SIMILAR
EA	EQUAL ANGLE	SJ or SC	SAWN CONTROL JOINT
EF	EACH FACE	SOP	SET OUT POINT
EJ	EXPANSION JOINT	S/S	STAINLESS STEEL
ELEV	ELEVATION	SSL	STRUCTURAL SLAB LEVEL
EW	EACH WAY	STIFF	STIFFENER
EX	EXISTING	STGD	STAGGERED
FF	FAR FACE	STRPS	STIRRUPS
FFL	FINISHED FLOOR LEVEL	STRS	STARTERS
FGL	FINISHED GROUND LEVEL	T	TOP
FW	FILLET WELD	TS	TOPSIDE
FWAR	FILLET WELD ALL AROUND	THK	THICK
GALV	GALVANISED	TOC	TOP OF CONCRETE
GL	GROUND LEVEL	TOF	TOP OF FOOTING
Gr	GRADE	TOS	TOP OF STEEL
HD	DEFORMED BAR (500E)	TOW	TOP OF WALL
H.D.	GALV HOT DIP GALVANISED	TYP	TYPICAL
HR	PLAIN ROUND BAR (500E)	UIS	UNDERSIDE
ID	INSIDE DIAMETER	UA	UNEQUAL ANGLE
IL	INVERT LEVEL	UB	UNIVERSAL BEAM
Lg	LONG	UC	UNIVERSAL COLUMN
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE

TIMBER FRAMING

1. ALL TIMBER FRAMING TO BE SG8 IN ACCORDANCE WITH NZS3622:2004 UNLESS NOTED OTHERWISE. DO NOT ACCEPT DAMAGED, FAULTY OR DEFECTIVE MATERIALS.
2. LIGHT TIMBER FRAMING CONSTRUCTION TO COMPLY WITH NZS3604:2011 AND OR ANY SPECIFIC ENGINEERED DESIGN OR APPROVED PROPRIETARY DESIGN TABLES. WHERE IN DOUBT FOR WHICH A STANDARD DETAIL FROM NZS3604:2011 CAN NOT BE APPLIED CONTACT THE ENGINEER FOR RESOLUTION IMMEDIATELY.
3. DURABILITY OF FIXINGS AND FASTENERS IN ACCORDANCE WITH SECTION 4 of NZS3604:2011 AND TO THE ARCHITECTS SPECIFICATIONS.
4. DURABILITY OF FRAMING AND HAZARD CLASS TREATMENT OF TIMBER IN ACCORDANCE WITH NZS3602:2003 AND TO THE ARCHITECTS SPECIFICATIONS.
GENERALLY MINIMUM REQUIREMENTS:
4.1 ALL TIMBER MEMBERS IN GROUND CONTACT SHALL HAVE H5 LEVEL OF TREATMENT TO AS/NZS1604.
4.2 ALL TIMBER MEMBERS EXPOSED TO EXTERIOR WEATHER CONDITIONS AND DAMPNESS BUT NOT IN GROUND CONTACT SHALL HAVE H3.2 LEVEL OF TREATMENT TO AS/NZS1604.
4.3 ALL TIMBER MEMBERS PROTECTED FROM THE WEATHER (ie: ENCLOSED TIMBER) BUT EXPOSED TO GROUND ATMOSPHERE SHALL HAVE H1.2 LEVEL OF TREATMENT TO AS/NZS1604
FOR FURTHER INFORMATION AND THE TREATMENT REQUIREMENTS OF ALL OTHER CASES REFER TO TABLE 1, NZS3602:2003. WHERE H5 TIMBER PILES HAVE BEEN CUT AFTER TREATMENT REFER TO CLAUSE 6.4.3.3 NZS3604:2011 FOR REQUIRED BRUSH TREATMENT TO CUT SURFACES. THE SURFACE SHALL NOT BE CUT FOR FIXINGS AND OTHER PURPOSES CLOSER THAN 150mm TO THE FINISHED GROUND LEVEL.
5. **BOLTING**
ALL BOLTS TO TIMBER FRAMING TO BE GRADE 4.6, UNLESS OTHER NOTED, WITH 50x50x3mm OVERSIZED WASHERS TO TIMBER FACES. MINIMUM EDGE DISTANCES AS PER FIGURE 1.
6. **NOTCHES AND HOLES IN TOP PLATES**
GENERALLY REFER TO SECTION 8.7.5 NZS3604:2011.
7. **NOTCHES AND HOLES IN FLOOR JOISTS**
GENERALLY REFER TO SECTION 7.1.7 NZS3604:2011. SPECIFIC ENGINEERING DESIGN MAY NEED TO BE UNDERTAKEN WHEN OUTSIDE OF THESE STANDARD LIMITATIONS. AVOID RUNNING PLUMBING THROUGH FLOOR JOISTS UNLESS SPECIFICALLY DESIGNED FOR.
8. **NOTCHES AND HOLES IN STUDS**
GENERALLY REFER TO CLAUSE 8.5.1.6 NZS3604:2011.

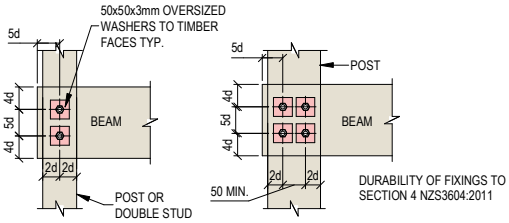


FIGURE 1: MINIMUM DISTANCES FOR BOLTS IN TIMBER (U.N.O)
"d" DENOTES Ø OF BOLT IN mm

FOUNDATIONS, EXCAVATIONS & BACKFILL

1. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE GEOTECHNICAL REPORT OR SOIL TESTS FOR ASSUMED GROUND BEARING CAPACITIES.
2. FOUNDATION SYSTEMS:
2a) NZS3604:2011 COMPLIANT FOUNDATIONS
UNLESS SPECIFIED OR DETAILED OTHERWISE ALL FOUNDATIONS SHALL BEAR UPON SOLID BOTTOM IN UNDISTURBED GOOD GROUND MATERIAL OR UPON FIRM FILL FOR WHICH A CERTIFICATE OF SUITABILITY HAS BEEN ISSUED UNDER NZS 4431. REFER TO NOTE 4 BELOW AND TO CLAUSE 3.1.3 NZS3604:2011 FOR DETERMINATION OF GOOD GROUND.
2b) SPECIFICALLY ENGINEERED DESIGN (S.E.D.) FOUNDATION SYSTEMS
WHERE FOUNDATION SYSTEMS ARE SPECIFICALLY DESIGNED BASED ON SITE SPECIFIC SOIL PARAMETERS THEN GEOTECHNICAL REQUIREMENTS WILL BE AS NOTED ON THE DRAWINGS, ANY SUCH GEOTECHNICAL NOTES DIRECTLY SHOWN ON THE DRAWINGS SHALL ALWAYS TAKE PRECEDENCE OVER ANY OTHER GENERAL NOTES IN THIS SECTION.
3. ALL EXCAVATIONS AND PLACING OF HARDFILL TO BE CARRIED OUT IN DRY CONDITIONS. IF DEWATERING IS REQUIRED THE SITE SHALL BE MAINTAINED IN A DEWATERED CONDITION FOR THE DURATION OF THE FOUNDATION WORK. MANAGE ON SITE STORAGE OF FILL TO MINIMIZE SURFACE PONDING IN THE EVENT OF RAIN.
4. GRANULAR FILL SHALL BE PLACED IN ACCORDANCE WITH NZS 4431:1989 AND TO THE GENERAL REQUIREMENTS AS OUTLINED BELOW.
4.1 WHERE COMPACTED HARDFILL IS TO BE PLACED BELOW A BUILDING USE A SUITABLE AP40 OR AP65 GRAVEL WITH A MAXIMUM DRY DENSITY OF AT LEAST 2150kg/m³. ALLOW FOR A 10-25mm MAX. SAND BLINDING FOR WHERE DPM SHEETS ARE TO BE INSTALLED OVER THE HARDFILL BASE.
4.2 PLACE AND COMPACT THE FILL MATERIAL IN LAYERS OF 150mm MAXIMUM THICKNESS USING A LARGE SELF-DRIVEN 4.3 THE FILL MATERIAL IS TO BE DENSITY TESTED USING A NUCLEAR DENSOMETER (ND) TO ENSURE FILL IS COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY (MDD). A READING F 6 ND TESTS ARE TO BE CARRIED OUT FOR EVERY 400mm LIFT AND 95% OF SUCH READINGS TO EXCEED THE GREATER OF THE MDD or 2150kg/m³.
4.4 THE CONTRACTOR IS TO OBTAIN THE MAXIMUM DRY DENSITY CERTIFICATE FOR THE FILL MATERIAL AND SUPPLY IT TO THE ENGINEER WITH THE ND TEST RESULTS.
4.5 FAILURE TO UNDERTAKE THESE STEPS MAY RESULT IN FILL MATERIAL BEING LIFTED AND PLACED AGAIN AT THE CONTRACTORS EXPENSE.

CONCRETE

1. ALL CONCRETE CONSTRUCTION IS TO BE IN ACCORDANCE WITH NZS 3109. THE CONTRACTOR IS REQUIRED TO MAINTAIN A COPY OF NZS3109 ON SITE. REFER TO THE STRUCTURAL SPECIFICATION FOR FURTHER REQUIREMENTS (AS APPLICABLE). ALL STRUCTURAL CONCRETE SHALL BE NORMAL GRADE TO NZS 3104 UNLESS NOTED OTHERWISE.
2. REFER TO NOTES ON DRAWINGS FOR CONCRETE STRENGTHS.
3. CONCRETE SUPPLIER BATCHING AND QA INFORMATION IS TO BE KEPT AND SUPPLIED TO THE ENGINEER UPON REQUEST. ALL CONCRETE SHALL BE FULLY COMPACTED BY APPROVED VIBRATION EQUIPMENT, WITH THE EXCEPTION OF SELF-COMPACTING CONCRETE WHERE THE USE OF THIS HAS BEEN PRE-APPROVED BY THE ENGINEER. VIBRATION SHALL BE APPLIED IN A UNIFORM PATTERN WITH CARE TAKEN NOT TO OVER-VIBRATE.
NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER.
4. ALLOW FOR ALL CAST-IN GLEATS, HOLDING DOWN BOLTS AND THE LIKE BEFORE LAYING CONCRETE. WHERE APPROVED BY THE ENGINEER, ALL CONSTRUCTION JOINTS SHALL BE FULLY ROUGHENED IN LINE WITH NZS3109 TYPE B JOINT UNLESS NOTED OTHERWISE.
6. WHERE SPECIFIED, ALL CONTROL JOINTS SHALL BE PROPERLY FORMED AS DETAILED AND WHERE SHOWN ON THE DRAWINGS, OR AS SPECIFICALLY APPROVED BY THE ENGINEER.
8. SLABS ON GROUND SHALL BE SAWCUT 1/4 SLAB THICKNESS (BUT NO GREATER THAN THE COVER TO THE FIRST LAYER OF REINFORCING) TO THE LAYOUT ON THE DRAWINGS OR 5,000 x 5,000 MAXIMUM GRID WITHIN 24 HOURS AFTER POURING. NO REINFORCING LAPS SHALL OCCUR AT SAWCUTS.
9. ALL SEALANTS AND WATERSTOPS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.
11. WHERE REQUIRED BY THE DRAWINGS, GROUT SHALL BE SIKAGROUT 212.
12. GROUTS, MORTARS AND EPOXIES SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.
13. **SLABS**
SLABS SHALL BE PLACED CONTINUOUSLY WITHOUT CONSTRUCTION JOINTS AND WITH STRICT ATTENTION TO AVOID COLD JOINTS AND PLASTIC SHRINKAGE.
14. SHOULD DELAYS OCCUR WITH CONCRETE SUPPLY, THE UNFORMED EDGES OF FRESHLY PLACED CONCRETE SHALL BE COATED WITH AN EVAPORATION RETARDANT (SIKAFILM OR SIMILAR APPROVED) AND JOINS SHALL BE SUITABLY VIBRATED ON CONTINUATION OF PLACING.
15. EVAPORATION RETARDANT SHALL BE APPLIED GENEROUSLY IN ACCORDANCE WITH NZS3109 TO SLAB SURFACES TO PREVENT PLASTIC SHRINKAGE UNDER ADVERSE AMBIENT CONDITIONS.
16. PRECAMBER BEAMS AND SLABS AS SHOWN ON THE DRAWINGS. METHOD OF PRECAMBERING TO BE AGREED WITH THE ENGINEER. WHERE PRECAMBERING IS NOT SHOWN ON THE DRAWINGS PROVIDE A POSITIVE UPWARD PRECAMBER OF 2mm PER 1000mm OF SPAN or AS SHOWN IN TABLE BELOW. MAINTAIN THE SLAB AND BEAM DEPTHS SHOWN ON PLANS.

UPWARD PRECAMBERS U.N.O			
BAND/BEAM SPANS ≥ 8m	SLAB SPANS ≥ 6m	BAND/BEAM SPANS ≥ 4m	SLAB CANTILEVERS ≥ 3m
1.5mm/m AT MIDSPAN		3mm/m SPAN AT CANTILEVER END	

CURING

17. FRESHLY CAST CONCRETE SURFACES SHALL BE PROTECTED FROM MOISTURE EVAPORATION IN ACCORDANCE WITH NZS 3109 AS SOON AS THE EXPOSED SURFACE HAS HARDENED SUFFICIENTLY BUT NOT LATER THAN TWO HOURS AFTER FINISHING.
18. CURING SHALL BE CONTINUOUS FOR AT LEAST SEVEN (7) DAYS USING ONE OF THE METHODS CONTAINED IN NZS3109. PHOTOGRAPHIC PROOF OF CURING SHALL BE PROVIDED TO THE ENGINEER.
19. ATTENTION SHALL BE GIVEN TO CURING METHODOLOGY DURING FROSTS IN ACCORDANCE WITH NZS3109 IF APPROPRIATE.

SURFACE FINISHINGS

20. CONCRETE SURFACES SHALL BE FINISHED TO THE STANDARD DESCRIBED IN NZS3114 FOR THE FOLLOWING ELEMENT CLASSIFICATIONS U.N.O.
- | ELEMENT | FINISH |
|--|--------|
| FORMED FOUNDATION SURFACES CONCEALED | F1 |
| FORMED SURFACES OF BEAMS, COLUMNS, WALLS, PANELS, SLAB EDGES ETC WHICH WILL BE CONCEALED | F3 |
| FORMED SURFACES OF BEAMS, COLUMNS, WALLS, PANELS, SLAB EDGES ETC WHICH WILL BE EXPOSED | F4 |
| UNFORMED INTERIOR SLAB FINISHES | U3 |
| UNFORMED EXTERIOR SLAB FINISHES/SLOPED CARPARK AREAS | U5 |
| CARPARK SLAB FLAT AREAS | U2 |
21. IF THE ARCHITECT'S SPECIFICATION DIFFERS FROM THESE NOTES, THE CONTRACTOR SHALL CONSULT THE ENGINEER.
22. CONDUITS, PIPES, ETC. SHALL ONLY BE LOCATED IN THE MIDDLE THIRD OF THE SLAB DEPTH. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
23. MAXIMUM DIAMETER OF CONDUITS, PIPES ETC CAST INTO SLAB IS NOT TO EXCEED 1/3 SLAB DEPTH. WHERE CONDUITS/PIPES ARE PLACED IN MULTIPLE LAYERS, THE CUMULATIVE DEPTH OF CONDUIT LAYERS SHALL NOT EXCEED 1/3 OF THE SLAB DEPTH.
24. WHERE MULTIPLE CONDUITS, PIPES ARE PLACED PARALLEL THROUGH SLAB, MINIMUM CLEAR DISTANCE BETWEEN ANY TWO CONDUITS OR GROUP OF CONDUITS SHALL BE EQUAL TO THE DIAMETER OF THE LARGER CONDUIT/PIPE OR WIDTH OF A GROUP OF CONDUITS.
25. A GROUP OF CONDUITS IS NOT TO BE GREATER THAN 100mm WIDE OR 1/3 OF SLAB DEPTH IN HEIGHT.

CONDUITS IN CONCRETE

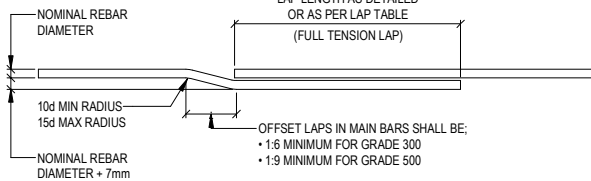
REINFORCING

1. ALL REINFORCING SHALL BE DUCTILE CLASS E, MICRO-ALLOY STEEL IN ACCORDANCE WITH AS/NZS 4671. NO QUENCHED AND TEMPERED STEEL IS TO BE USED.
2. SUPPORT FOR REINFORCING SHALL BE PLACED IN ACCORDANCE WITH NZS3109.
3. REINFORCING SHOWN ON THE DRAWINGS IS PRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN THE TRUE LOCATION.
4. THE FIRST STIRRUP SHALL NOT TO BE PLACED FURTHER THAN THE LESSER OF 1/2 STIRRUP SPACING OR 50MM FROM SUPPORT FACE.

REINFORCING LAPS AND DEVELOPMENT

5. ALL REINFORCEMENT SHALL BE BENT COLD IN A SINGLE FLUID MOTION. IF RE-BENDING OF ALREADY BENT REINFORCING IS REQUIRED CONSULT THE ENGINEER BEFORE PROCEEDING.
6. ALL REINFORCEMENT SHALL BE STRAIGHT BETWEEN BENDS. WHERE BARS ARE BENT OR KINKED IN SUCH A MANNER THAT, IN THE OPINION OF THE ENGINEER, THEY WILL IMPAIR THE EFFICIENCY OF THE STRUCTURE, THEN THESE BARS SHALL BE REPLACED AT THE CONTRACTORS COST.
7. SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITION SHOWN ON THE DRAWINGS, OR AS OTHERWISE APPROVED BY THE ENGINEER.
8. LAPS AND DEVELOPMENT OF REINFORCING SHALL BE IN ACCORDANCE WITH THE DRAWINGS OR NZS 3109 WHERE THE DRAWINGS DO NOT SPECIFY LAPS. WHERE MAIN REINFORCING BARS ARE SHOWN WITH OFFSET SPLICES, THE SLOPE OF THE INCLINED PORTION OF THE BAR SHALL NOT EXCEED 1 IN 12.
9. STRAIGHT BAR LAPS SHALL BE STAGGERED IF POSSIBLE.
10. STARTER BARS SHALL BE FIXED IN PLACE SUCH THAT THEY DO NOT MOVE DURING LAYING OF THE FIRST CONCRETE POUR. REMEDIAL WORKS WHERE STARTERS SHIFT DURING CONCRETING WILL BE AT THE CONTRACTORS EXPENSE.
11. SPLICING OF REINFORCEMENT WHETHER BY LAPPING OR MECHANICAL SPLICE, SHALL BE AS SHOWN ON THE DRAWINGS OR AS SPECIFICALLY APPROVED BY THE ENGINEER, EXCEPT AS NOTED BELOW. REINFORCEMENT IN SLABS ON GRADE AND IN TOPPINGS SHALL BE SPLICED AS REQUIRED, BUT NOT THROUGH SLAB JOINTS. WELDED SPLICES ARE NOT ALLOWED EXCEPT IF SPECIFIED OR APPROVED BY THE ENGINEER.
12. ALL BEAM AND COLUMN MAIN REINFORCEMENT LAP SPLICES SHALL HAVE CRANKED LAPS UNO.
13. CRANKED LAPS SHALL BE THUS:

FOR LAP LENGTHS



14. DEFORMED BAR LAPS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLES:

25MPa CONCRETE 500MPa STEEL REINFORCING	BAR DIAMETER					
	HD10	HD12	HD16	HD20	HD25	HD32
TOPSTEEL: HORIZ STEEL WITH > 300mm FRESH CONCRETE BELOW	650	800	1050	1300	1650	2100
ALL OTHER STEEL	500	600	800	1000	1250	1600

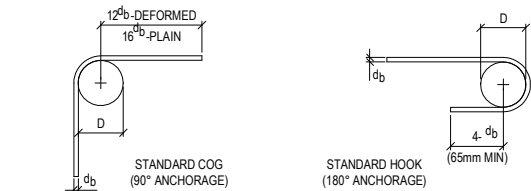
30MPa CONCRETE 500MPa STEEL REINFORCING	BAR DIAMETER					
	HD10	HD12	HD16	HD20	HD25	HD32
TOPSTEEL: HORIZ STEEL WITH > 300mm FRESH CONCRETE BELOW	600	750	950	1200	1500	1900
ALL OTHER STEEL	500	550	750	950	1150	1500

40MPa CONCRETE 500MPa STEEL REINFORCING	BAR DIAMETER					
	HD10	HD12	HD16	HD20	HD25	HD32
TOPSTEEL: HORIZ STEEL WITH > 300mm FRESH CONCRETE BELOW	550	650	850	1050	1300	1650
ALL OTHER STEEL	400	500	650	800	1000	1300

WHERE LAPPED BARS ARE NOT IN DIRECT CONTACT AND SEPARATED BY MORE THAN 3 BARS DIA. THE LAP LENGTHS SHALL BE INCREASED BY 1.5 TIMES THE SEPARATION DISTANCE.

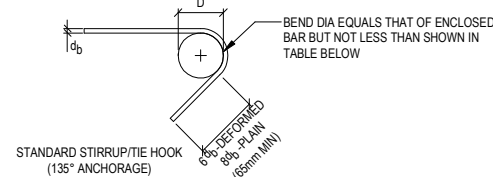
BENDING OF REINFORCEMENT

(A) BENDS FOR ALL BARS EXCEPT STIRRUPS AND TIES:



STEEL GRADE	BAR DIA (mm)	MINIMUM DIA OF BEND
GRADE 300 / 500	6 - 20	5 BAR DIA
GRADE 300 / 500	25 - 40	6 BAR DIA

(B) BENDS FOR STIRRUPS AND TIES:



STEEL GRADE	BAR DIA (mm)	MINIMUM DIA OF BEND	
		PLAIN BARS	DEFORMED BARS
GRADE 300E / 500E	6 - 20	2 BAR DIA.	4 BAR DIA.

(C) BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE SITE BENT UNLESS SHOWN ON DRAWINGS OR SPECIFICALLY APPROVED BY THE ENGINEER. RE-BENDING IS NOT ALLOWED WITHOUT ENGINEERS APPROVAL.

REINFORCING NOTATION



COVER SHALL BE AS NOTED BELOW UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

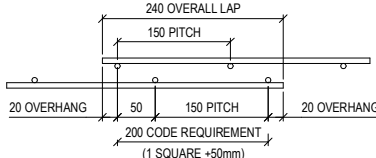
ENVIRONMENT	f _c (MPa)		
	25	30	40
SURFACES CAST AGAINST AND EXPOSED TO EARTH	75	75	75
SURFACES CAST AGAINST DPM ON EARTH	50	50	50
EXTERIOR ENVIRONMENT WITHIN 500m OF HIGH TIDE MARK	50	45	40
OTHER EXTERIOR ENVIRONMENT	40	35	30
SURFACES EXPOSED TO EARTH (NON-AGGRESSIVE OR PROTECTED BY DPM)	40	35	30
INTERIOR ENVIRONMENT NOT SUBJECTED TO REPEATED WETTING OR DRYING	25	20	20

NOTE:
CONCRETE COVERS ARE THE MINIMUM DISTANCE TO ANY REINFORCING STEEL, INCLUDING STIRRUPS AND TIES.

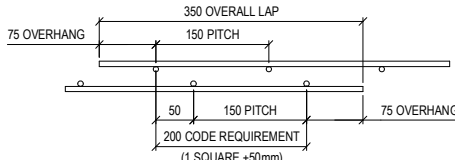
MESH REINFORCEMENT

THE FOLLOWING ARE EXAMPLES OF THE REINFORCING NOTATIONS CONTAINED ON THE DRAWINGS.

- 10-D12-300 DENOTES 10-12MM DEFORMED BARS AT 300MM CENTRES
- 10-R12-300 DENOTES 10-12MM PLAIN ROUND BARS AT 300MM CENTRES
- 10-HD12-300 DENOTES 10-12MM HIGH YIELD DEFORMED BARS AT 300MM CENTRES
- 10-HR12-300 DENOTES 10-12MM HIGH YIELD ROUND BARS AT 300MM CENTRES



SIDE LAP



END LAP

REINFORCING MESH LAPPING DETAILS

MESH SHALL BE DEFORMED GRADE 500E DUCTILE MESH COMPLYING WITH AS/NZS 4671 UNLESS APPROVED OTHERWISE BY THE ENGINEER. IN SLABS ON GRADE, WELDED WIRE MESH REINFORCEMENT TO BE LAPPED AS SHOWN BUT NOT LOCATED WITHIN THE ESTIMATED AREAS OF SAWCUTS.

BEAM & COLUMN REINFORCEMENT SPACING

FOR BAR SPACING REFER TO DRAWINGS. ALL REINFORCEMENT MINIMUM SPACING TO COMPLY TO NZS3101, 8.3:

SPACING TYPE	Minimum spacing (Ø=bar diameter)
Parallel bars	Largest bar Ø or 25mm, whichever greater
Longitudinal bars in spirally reinforced and bed compression members	1.5 Ø or 40mm, whichever greater.
Parallel bars in layers within beams	Largest bar Ø or 25mm, whichever greater
Splice spacing	Minimum bar spacing listed above between splices & adjacent bars

FOR ALL OTHER SITUATIONS NOT COVERED IN THE TABLE ABOVE (BUNDLED BARS, WALLS, SLABS, PRE-TENSIONED OR POST-TENSIONED MEMBERS), REFER TO NZS 3101 SECTION 8.3.

PROPRIETARY FIXINGS

(EPOXY FIXED ANCHORS, MECHANICAL ANCHORS, TIMBER CONNECTORS & FIXINGS)

1. ALL PROPRIETARY ANCHORS OR FIXINGS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS USING THE PRODUCTS SPECIFIED IN THE DRAWINGS.
2. NO SUBSTITUTION OF OTHER PRODUCTS FROM THE DRAWINGS OR SPECIFICATIONS IS PERMITTED UNLESS WRITTEN APPROVAL IS MADE BY THE DESIGN ENGINEER.
3. A PS3 MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER FOR ANCHORS OR CONNECTORS HIGHLY CRITICAL TO THE STRUCTURAL PERFORMANCE OF THE BUILDING.
4. WHERE INCORRECT OR SUB STANDARD PRODUCTS ARE USED THE ENGINEER MAY REQUEST DESTRUCTIVE TESTING / LOAD TESTING OR FURTHER DESIGN AND CONSTRUCTION MONITORING, ALL OF WHICH ARE AT THE CONTRACTOR EXPENSE TO ENSURE THE ORIGINAL DESIGN OBJECTIVES ARE MET.

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No.	REVISION	BY	DATE	SCALE A3:	PRINT AT 50% SCALE

PROJECT DESCRIPTION
57A HALL ROAD, KERIKERI - JOAL 5 AND 6
BRIDGE AND ABUTMENT DESIGN

DRAWING TITLE
GENERAL NOTES - SHEET 1

SERVICE: GENERAL NOTES

TEAM / DISCIPLINE: STRUCTURAL

STATUS:
BUILDING CONSENT ISSUE

PROJECT No: 25528
PHASE:

DRAWING No: S001
REV:

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PROJECT DESCRIPTION

57A HALL ROAD, KERIKERI - JOAL 5 AND 6
BRIDGE AND ABUTMENT DESIGN

DRAWING TITLE
SITE PLAN

SERVICE: PLAN

TEAM / DISCIPLINE: STRUCTURAL

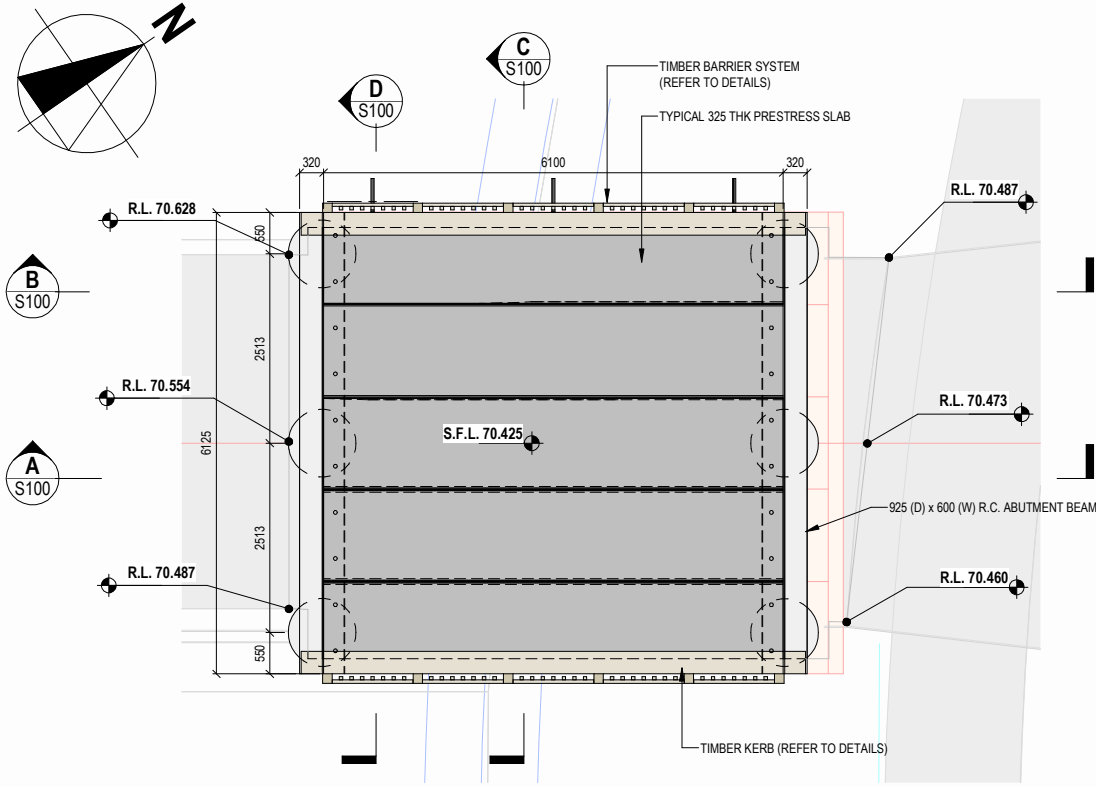
BUILDING CONSENT ISSUE

PROJECT No: 25528

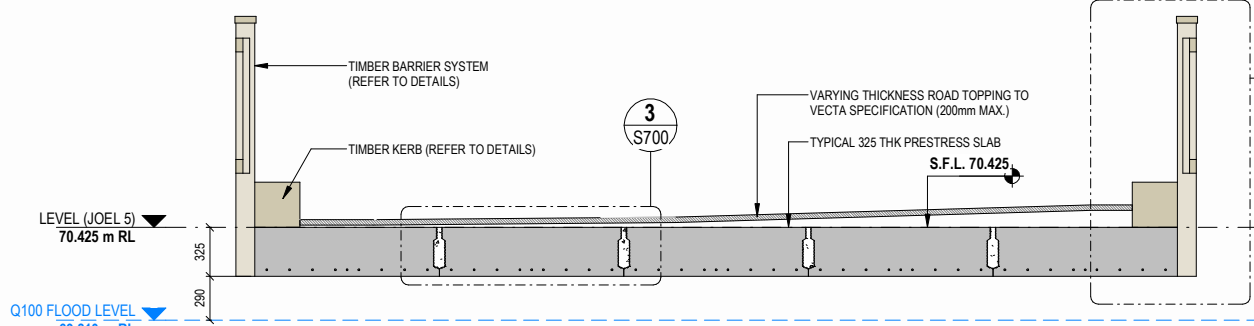
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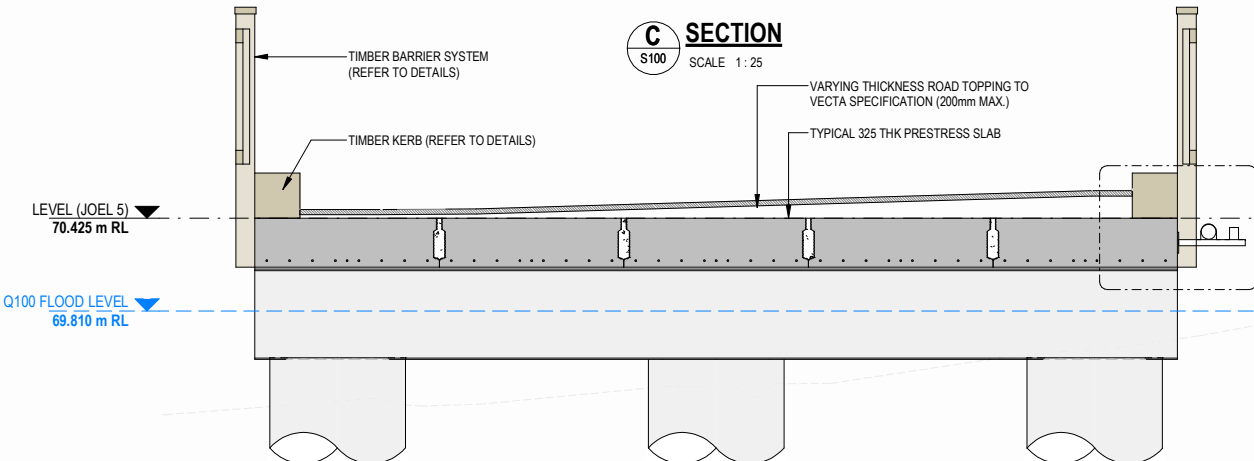
FNDC - Approved Building Consent Document - EBC-2024-894/0 - Pg 10 of 12 - 14/3/2025 - vc



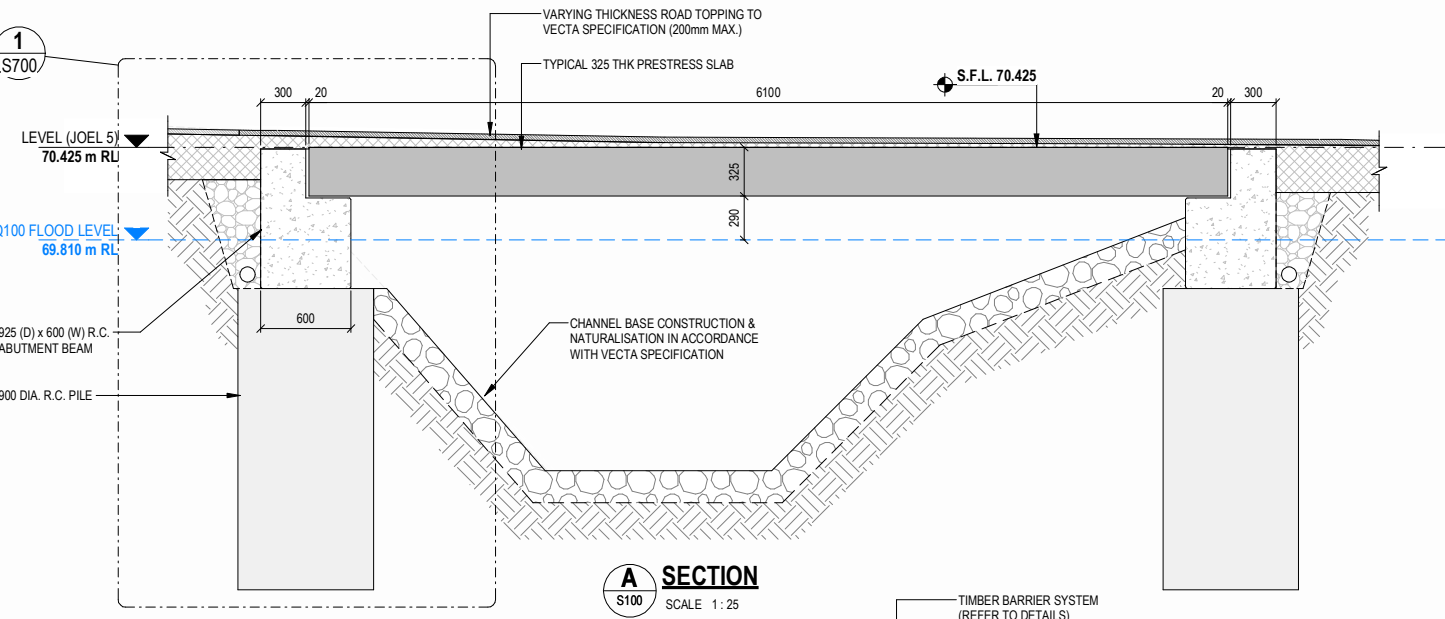
JOEL 5 PLAN
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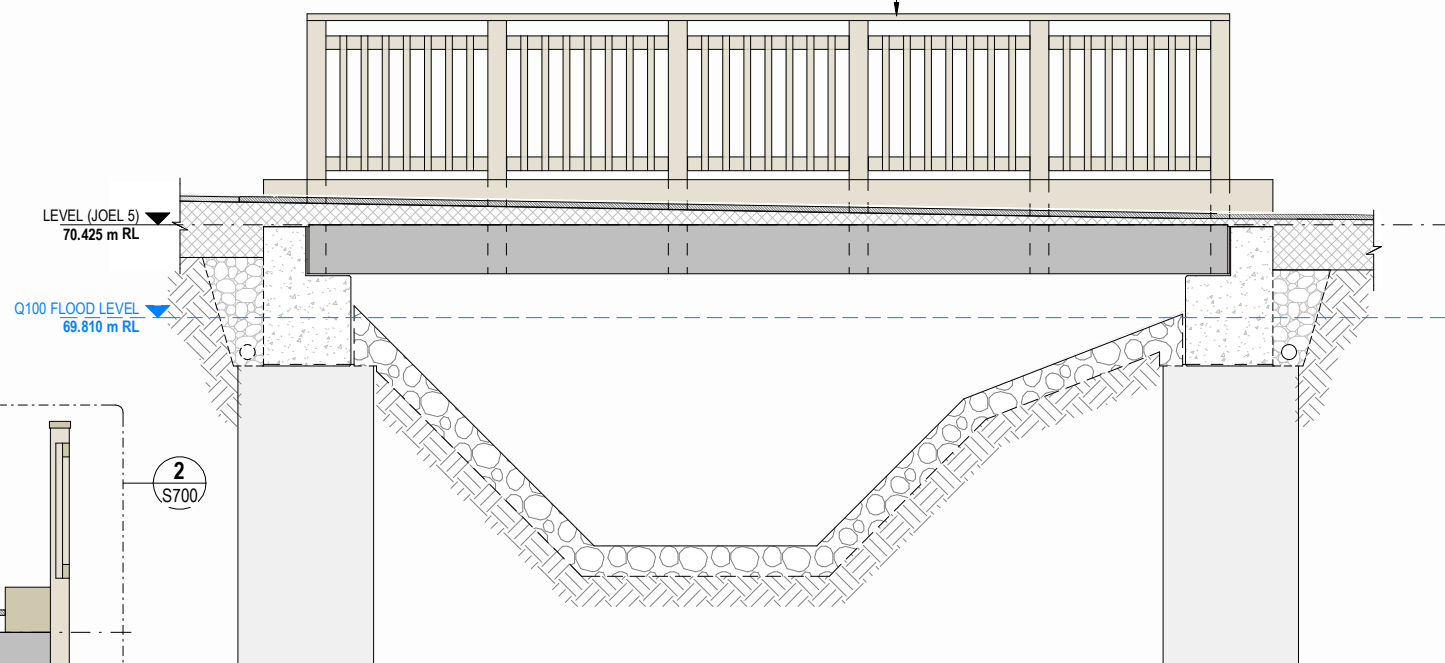
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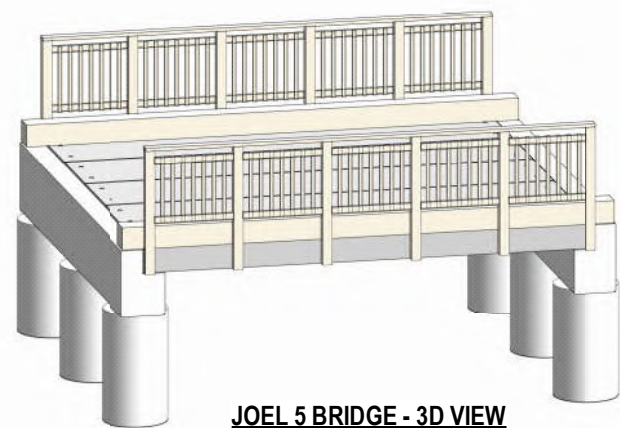
SECTION 4
SCALE 1:25



SECTION A
SCALE 1:25



SECTION B
SCALE 1:25



JOEL 5 BRIDGE - 3D VIEW

GENERAL NOTES

- FOR GENERAL STRUCTURAL NOTES REFER TO SHEETS S001
- CONFIRM ALL SETOUT DIMENSIONS FROM VECTA PLANS. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO ANY CONSTRUCTION OR FABRICATION. USE FIGURED DIMENSIONS ONLY AND AVOID SCALING FROM PLANS.
- THESE PLANS ARE TO BE READ IN CONJUNCTION WITH THE VECTA CIVIL PLANS, ALL RELATED CIVIL OR STRUCTURAL SPECIFICATIONS AND ANY SPECIFIC MANUFACTURER'S TECHNICAL INFORMATION.
- ALL WORK TO BE COMPLETED BY SUITABLY QUALIFIED TRADES PEOPLE IN ACCORDANCE WITH THE NZ BUILDING CODE AND TYPICAL CODES OF BEST PRACTICE.

VEHICLE BRIDGE NOTES

DESIGN CRITERIA

• SUPER IMPOSED DEADLOAD	3.25 kPa
• TOPPING WEIGHT	4.8 kPa
• MAXIMUM DEPTH OF TOPPING	200mm
• LIVE LOAD	3.5 kPa
• NUMBER OF AXLES	2
• MAXIMUM WEIGHT PER AXLE	10.4 TON
• GRAVITY SLS LOAD FACTOR	1
• LIVE SLS LOAD FACTOR	1.35
• GRAVITY ULS LOAD FACTOR	1.35
• LIVE ULS LOAD FACTOR	2.25

CONCRETE STRENGTH

- 60 MPa CONCRETE
- 28 MPa AT TRANSFER
- DENSITY OF CONCRETE 2400 kg/m³

CONCRETE COVER

- 25mm CONCRETE COVER TO REINFORCING
- 37mm CONCRETE COVER TO STRANDS

PRESTRESSING STRANDS

- 9 STRANDS OF 12.7mm DIAMETER
- INITIAL PRESTRESS FORCE 50%
- TENDON ULTIMATE STRESS 1850 MPa

PRECAST UNIT DESIGN PARAMETERS

- DEPTH OF PRECAST UNIT 325mm
- WIDTH OF PRECAST UNIT 1225mm
- AREA 38000 mm²
- SECOND MOMENT OF INERTIA 34.32 mm⁴
- CENTROID 162.5mm

SEATING REQUIREMENTS

- 300mm FROM EDGE OF ABUTMENT
- PRECAST UNITS TO BE SEATED ON 200x150x20mm RUBBER PADS

LIFTING AND TRANSPORTATION

- PRECAST UNITS ARE TO BE STACKED ON EDGE WITH SUITABLE SPACING BETWEEN UNITS TO ALLOW FOR PRECAMBER
- UNITS ARE TO BE LIFTED USING INSTALLED LIFTING EYES ONLY AND IN ACCORDANCE WITH APPROVED CODE OF PRACTICE FOR LOAD-LIFTING RIGGING

TOLERANCES

• LENGTH	± 25mm
• MAXIMUM HOG	20 mm
• PRESTRESSING STRANDS (HORIZONTAL, VERTICAL)	
• INSERT PO (HORIZONTAL, VERTICAL)	± 5 mm
• SURFACE FINISH	± 3 mm
	± 10 mm

FINISHES

• TOP SURFACE	BROOM FINISH
• SIDES AND BOTTOM	F5
• CONNECTION RECESS	5mm

GEOTECHNICAL

- SOIL FRICTION ANGLE = 30 DEG
- UNDRAINED SHEAR STRENGTH = 100 KPa
- SOIL CONDITIONS TO BE CONFIRMED BY LDE GEOTECHNICAL ENGINEERS DURING CONSTRUCTION

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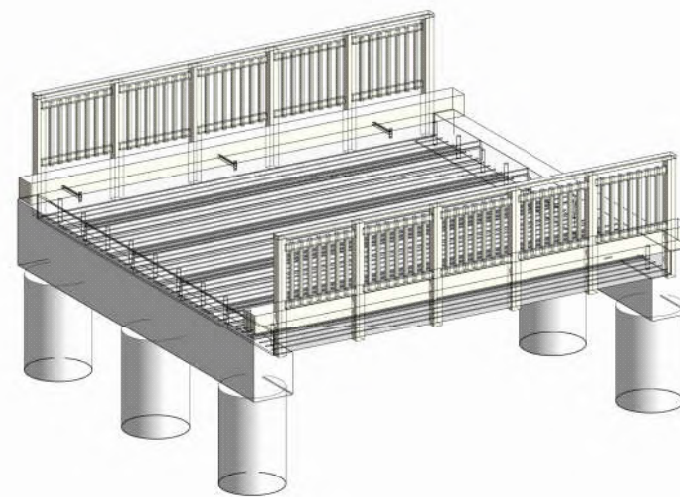
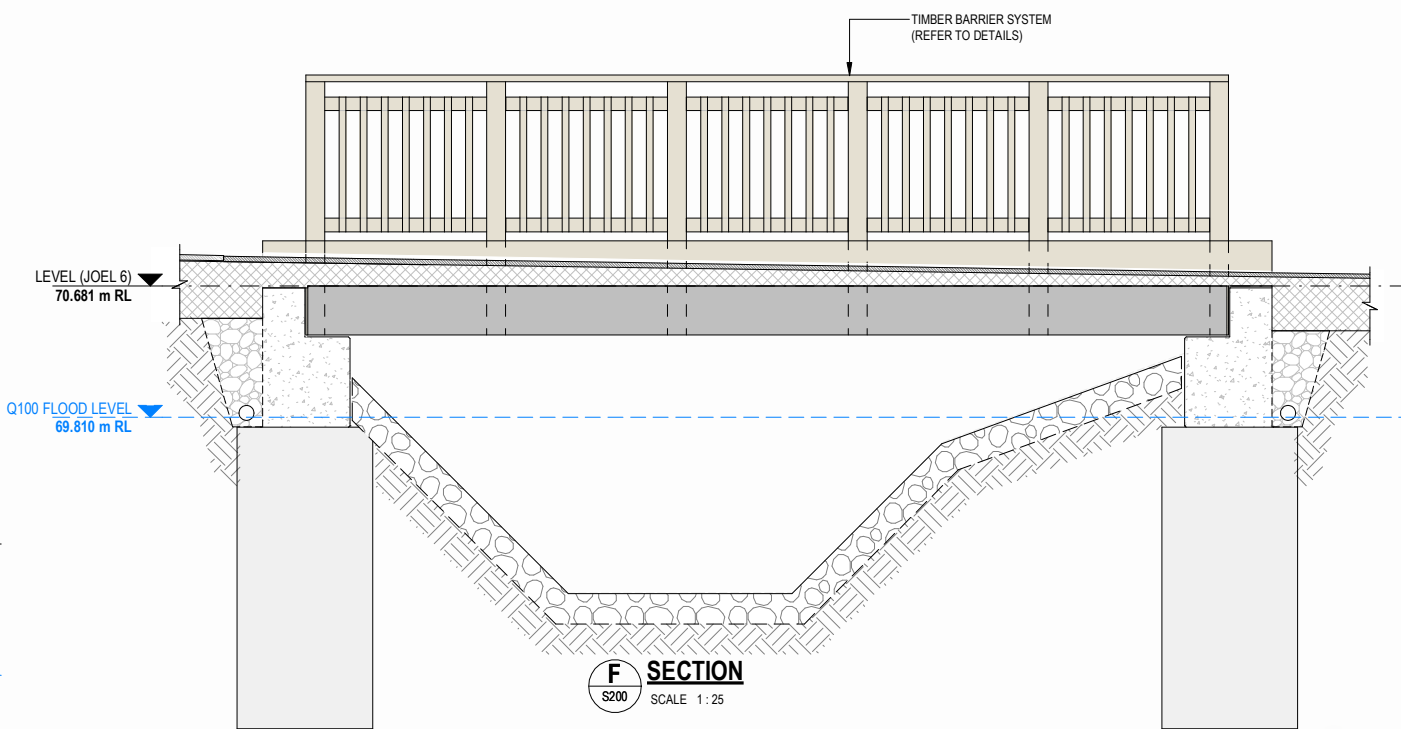
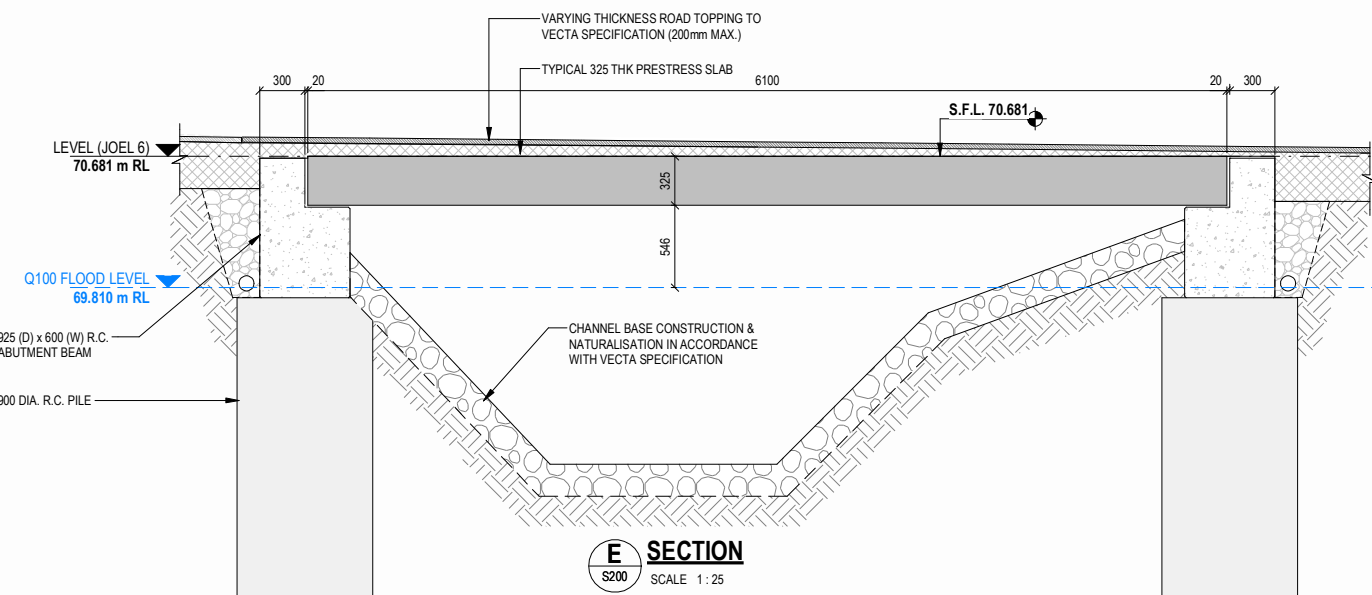
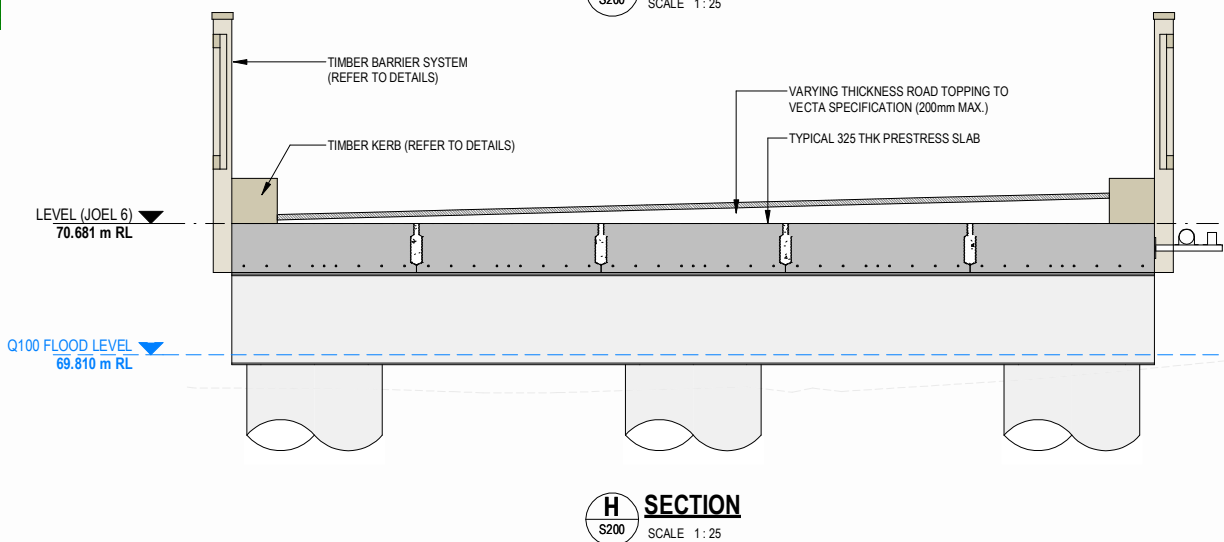
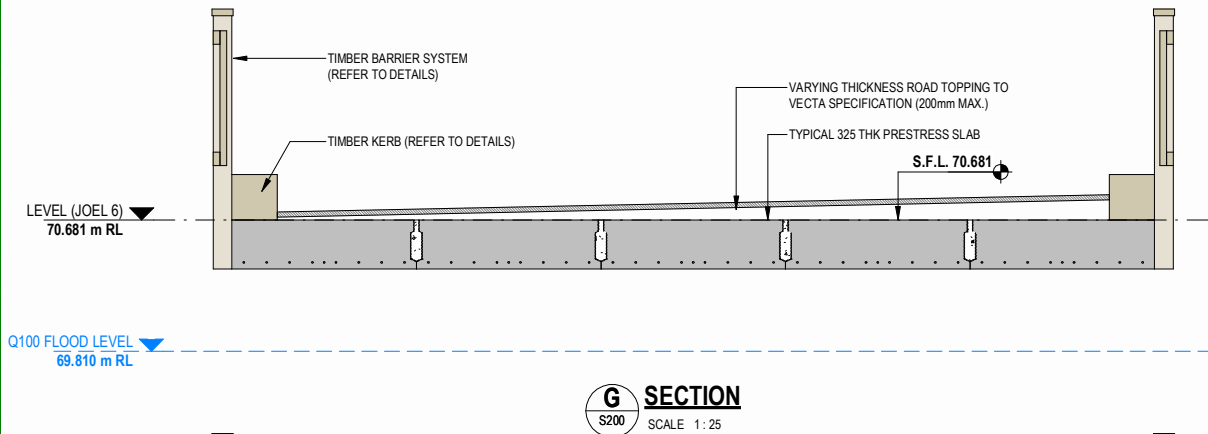
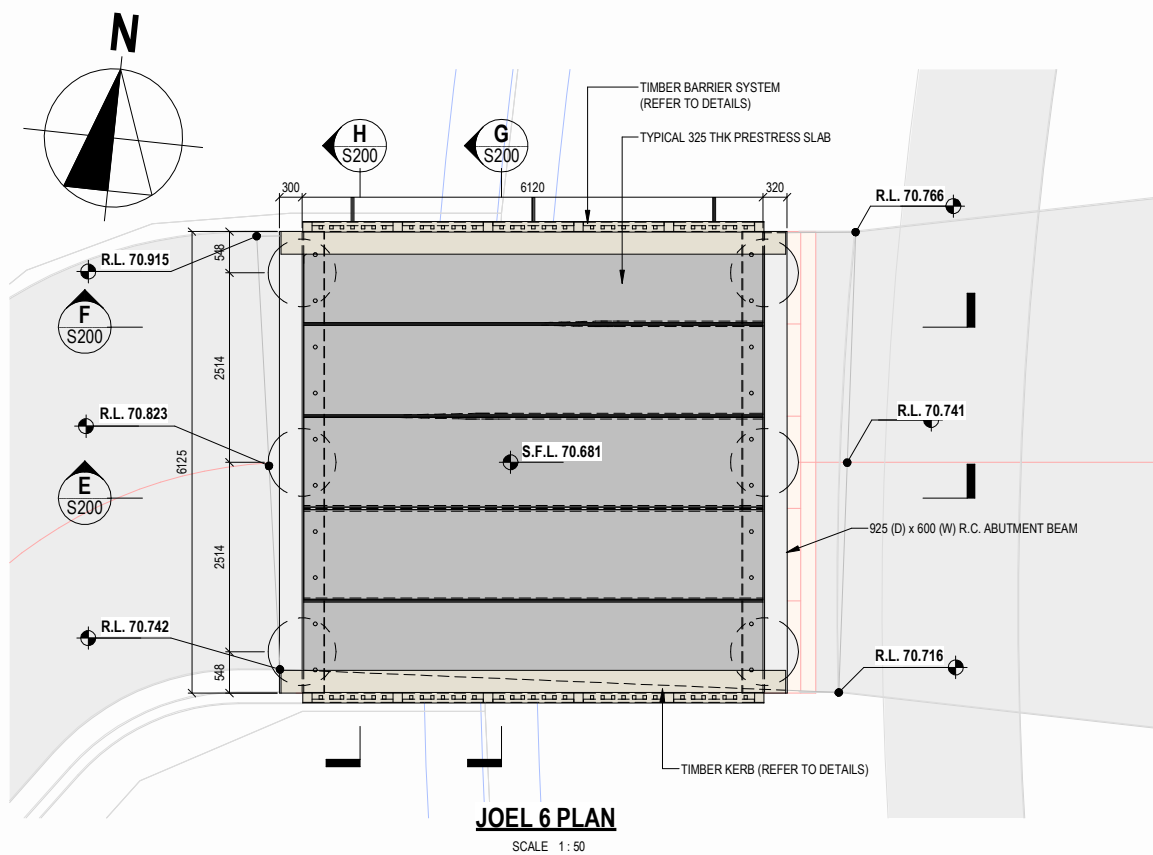
PROJECT DESCRIPTION
57A HALL ROAD, KERIKERI - JOAL 5 AND 6
BRIDGE AND ABUTMENT DESIGN

DRAWING TITLE
JOEL 5 BRIDGE PLAN & CROSS SECTIONS

SERVICE:	PLAN
TEAM / DISCIPLINE:	STRUCTURAL

STATUS:		BUILDING CONSENT ISSUE	
PROJECT No:		25528	
PHASE:			
DRAWING No:		S100	
REV:		A	

FNDC - Approved Building Consent Document - EBC-2024-894/0 - Pg 11 of 12 - 14/3/2025 - vc



GENERAL NOTES

- FOR GENERAL STRUCTURAL NOTES REFER TO SHEETS S001
- CONFIRM ALL SETOUT DIMENSIONS FROM VECTA PLANS. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO ANY CONSTRUCTION OR FABRICATION. USE FIGURED DIMENSIONS ONLY AND AVOID SCALING FROM PLANS.
- THESE PLANS ARE TO BE READ IN CONJUNCTION WITH THE VETCA CIVIL PLANS, ALL RELATED CIVIL OR STRUCTURAL SPECIFICATIONS AND ANY SPECIFIC MANUFACTURER'S TECHNICAL INFORMATION.
- ALL WORK TO BE COMPLETED BY SUITABLY QUALIFIED TRADES PEOPLE IN ACCORDANCE WITH THE NZ BUILDING CODE AND TYPICAL CODES OF BEST PRACTICE.

VEHICLE BRIDGE NOTES

DESIGN CRITERIA

- SUPER IMPOSED DEADLOAD 3.25 kPa
- TOPPING WEIGHT 4.8 kPa
- MAXIMUM DEPTH OF TOPPING 200mm
- LIVE LOAD 3.5 kPa
- NUMBER OF AXLES 2
- MAXIMUM WEIGHT PER AXLE 10.4 TON
- GRAVITY SLS LOAD FACTOR 1
- LIVE SLS LOAD FACTOR 1.35
- GRAVITY ULS LOAD FACTOR 1.35
- LIVE ULS LOAD FACTOR 2.25

CONCRETE STRENGTH

- 60 MPa CONCRETE
- 28 MPa AT TRANSFER
- DENSITY OF CONCRETE 2400 kg/m³

CONCRETE COVER

- 25mm CONCRETE COVER TO REINFORCING
- 37mm CONCRETE COVER TO STRANDS

PRESTRESSING STRANDS

- 9 STRANDS OF 12.7mm DIAMETER
- INITIAL PRESTRESS FORCE 50%
- TENDON ULTIMATE STRESS 1850 MPa

PRECAST UNIT DESIGN PARAMETERS

- DEPTH OF PRECAST UNIT 325mm
- WIDTH OF PRECAST UNIT 1225mm
- AREA 39000 mm²
- SECOND MOMENT OF INERTIA 34.32 mm⁴
- CENTROID 162.5mm

SEATING REQUIREMENTS

- 300mm FROM EDGE OF ABUTMENT
- PRECAST UNITS TO BE SEATED ON 200x150x20mm RUBBER PADS

LIFTING AND TRANSPORTATION

- PRECAST UNITS ARE TO BE STACKED ON EDGE WITH SUITABLE SPACING BETWEEN UNITS TO ALLOW FOR PRECAMBER
- UNITS ARE TO BE LIFTED USING INSTALLED LIFTING EYES ONLY AND IN ACCORDANCE WITH APPROVED CODE OF PRACTICE FOR LOAD-LIFTING RIGGING

TOLERANCES

- LENGTH ± 25mm
- MAXIMUM HOG 20 mm
- PRESTRESSING STRANDS (HORIZONTAL, VERTICAL) ± 5 mm
- INSERT PO (HORIZONTAL, VERTICAL) ± 3 mm
- SURFACE FINISH ± 10 mm

FINISHES

- TOP SURFACE BROOM FINISH
- SIDES AND BOTTOM F5
- CONNECTION RECESS 5mm

GEOTECHNICAL

- SOIL FRICTION ANGLE = 30 DEG
- UNDRAINED SHEAR STRENGTH = 100 KPa
- SOIL CONDITIONS TO BE CONFIRMED BY LDE GEOTECHNICAL ENGINEERS DURING CONSTRUCTION

CLIENT
GEMSCOTT HALL LTD



				DESIGN:	R.M.
				DRAWN:	B.H.
				DATE:	04.03.24
				CHECKED:	R.M.
A	BUILDING CONSENT ISSUE	B.H.	09.04.24	SCALE A1:	As indicated
No	REVISION	.BY	_DATE	SCALE A3:	PRINT AT 50%SCALE

PROJECT DESCRIPTION
57A HALL ROAD, KERIKERI - JOAL 5 AND 6
BRIDGE AND ABUTMENT DESIGN

DRAWING TITLE
JOEL 6 BRIDGE PLAN & CROSS SECTIONS

SERVICE: PLAN

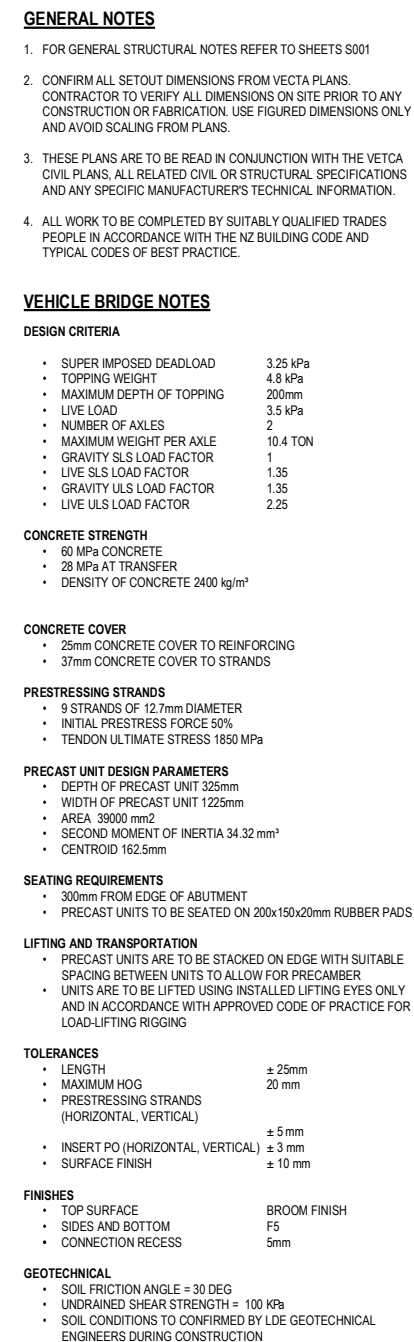
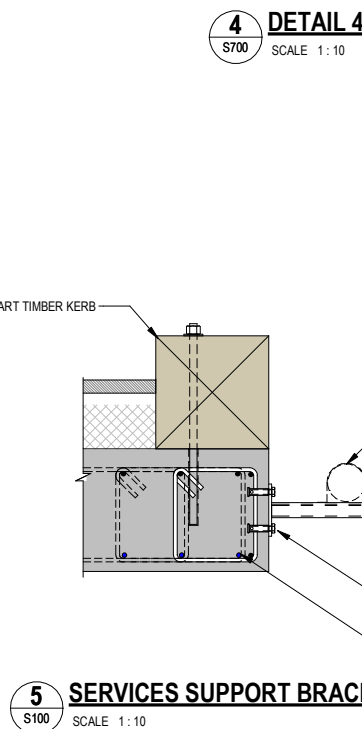
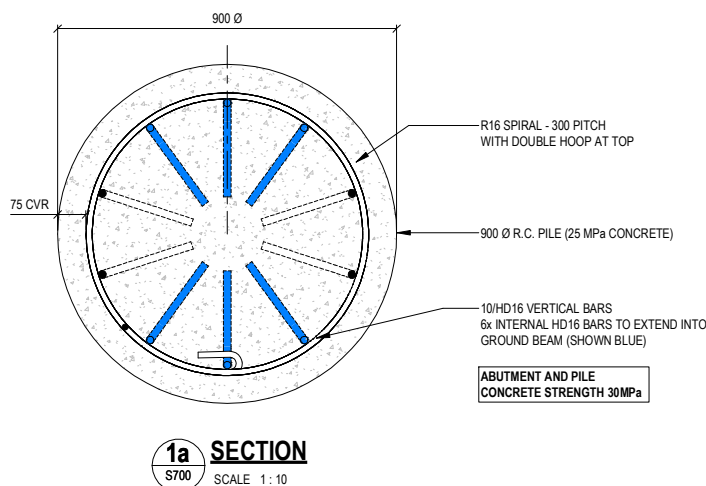
TEAM / DISCIPLINE: STRUCTURAL

STATUS: **BUILDING CONSENT ISSUE**

PROJECT No: 25528

DRAWING No: S200

REV: A



PROJECT DESCRIPTION

57A HALL ROAD, KERIKERI - JOAL 5 AND 6

BRIDGE AND ABUTMENT DESIGN

SERVICE:	DETAILS
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TEAM / DISCIPLINE: STRUCTURAL

DRAWING No: S700

Memo

Date: 31 July 2026

Our Ref: 16159

To: FNDC – Planning Support and Development Engineers

From: Chester Consultants Ltd

Prepared By: Jack Chen Civil Engineer

Reviewed By: Nat Jull Civil Engineer

Hall 57A – Proposed Stormwater Design Amendment

1 Introduction

Chester Consultants Ltd has been engaged by Gemscott to provide construction-phase engineering services for the Hall 57A development. As part of this role, we have reviewed elements of the approved stormwater design with the objective of identifying refinements that reduce unnecessary environmental, constructability, and long-term asset risk while continuing to appropriately manage stormwater effects.

A number of discussions have been had with FNDC in an effort to reach a mutual agreement for the scope of the stormwater design amendment.

At the time of writing this memo, with regards to stormwater design amendment, Chester has provided:

- 16159 - SW value engineering review memo, date: 28/04/2026
- 16159 – Proposed Mill Lane Box Culvert Assessment, date: 11/06/2026

Following discussions on multiple occasions, we received FNDC's agreement in principle to remove the underground attenuation tanks and in channel earth weir on 22/07/2026, FNDC has also recommended amendment details to be submitted via s127 variation and EPA amendment process to be assessed further. The above-mentioned documents and correspondence are attached to this memo.

This memo outlines the proposed stormwater design amendment, and assesses the post amendment downstream effects to support the proposal.

2 Summary of Proposed Stormwater Amendment

2.1 Underground Attenuation Tanks Removal

The original stormwater design relies on large underground attenuation tanks located within the public road reserve to achieve attenuation across the full spectrum of design events. While effective in reducing peak flows generated from the development site, this approach does not consider the wider Wairoa Stream catchment hydrology and the development site's location within the wider catchment. And in fact, increases the downstream flooding by delaying the site peak flow to coincide with the upstream wider catchment peak flow. This is further discussed in the downstream effects assessment section below.



We propose to remove the two public underground attenuation tanks to reduce the downstream peak flow, alleviate downstream flooding hazards, minimise long-term maintenance obligations, and reduce capital cost and construction complexity.

2.1.1 Cascade Separator

We note that in the underlying reporting by Vecta the following is set out:

2.5. Stormwater Quality Mitigation

TR 2013/035 sets the threshold before treatment is required with parking areas servicing more than 50 vehicles per day and high use roads that carry more than 10,000 vehicles per day. Neither threshold is exceeded.

Stormwater quality treatment is proposed by Cascade Separators (see Appendix 2) prior to discharge to each of the below ground tanks. This treatment is undertaken to reduce the maintenance requirement of the below ground catch all row.

Figure 1: Stormwater Quality Mitigation Discussion in Vecta Report

From this we conclude that the primary reason for the cascade separator and low flow by-pass was to add a layer of pre-treatment for the stormwater tank inflow to reduce potential maintenance requirements within the tanks rather than being required specifically because treatment thresholds within the catchment were exceeded. We also note that now all the private parking areas in the catchment are proposed as permeable, this will provide an element of passive treatment for what would have been one of the higher potential contaminant yielding surfaces in the catchment. All the public roads and JOAL have gross pollutant traps i.e. catchpits. On this basis we are of the opinion that that cascade separator and associated low flow by-pass can be removed from the design alongside the tanks.

2.2 In Channel Earth Weir Removal

The original stormwater design proposes an in-channel earth weir within the realigned stream corridor and incorporates a 1050mmØ culvert constructed below the existing stream bed, intended to facilitate fish passage. The stated purpose of the structure is to compensate for the loss of flood storage associated with site filling within the mapped floodplain.

This approach introduces environmental and asset risk by constructing a culvert fully below stream bed level, which presents a high risk of sediment accumulation, blockage, and impaired fish passage performance, increase long-term maintenance obligations.

Furthermore, the approach to incorporate flood storage within stream channel is inefficient, increases on-site flood risk by increasing flood level upstream of the earth weir, and in fact, increases the downstream flooding as well by delaying the Hall Road Catchment peak flow and coincide with the upstream wider catchment peak flow. This is further discussed in the downstream effects assessment section below.

We propose to remove the in-channel earth weir and the associated 1050mmØ culvert. In order to reduce environmental risk, minimise long term maintenance obligations, and reduce on-site and downstream flood risks.



2.3 Proposed Permeable Private Driveway

As part of the stormwater design amendment, we propose private driveway / carpark to be constructed with permeable paving / concrete in accordance with manufacturer's specifications to reduce the overall impervious coverage of the development, providing runoff volume reduction and opportunity for ground water retention supporting low impact design principles and stream channel erosion control. This, along with the roof tanks is intended to replace the extended detention components of the end of pipe stormwater tanks being removed.

2.4 Proposed On-Lot Roof Tanks

As part of the stormwater design amendment, we propose on-lot smaller tanks to collect roof runoff for retention and detention as the best-practical-option for providing stream channel erosion control. This, along with the permeable paving is intended to replace the extended detention components of the end of pipe stormwater tanks being removed.

The proposed dwelling roof area generally varies between 100-160m², to provide stream channel erosion control for the 90th percentile of a 24-hour storm event (approx. 25mm rainfall depth). For each dwelling we proposed a 1000L above ground thin tank or similar, with 10mmØ orifice at 0.75m above tank base, and a garden tap at base of tank for garden water reuse only. This provides approx. 400L water reuse volume, and 600L extended detention volume for the roof runoff.

2.4.1 Attenuation Calculation

Given the sizes of the roof areas are relatively small, and the minimum extended detention orifice size is limited to 10mmØ to avoid blockage, a 1000L tank with 10mmØ orifice has abundant storage volume to provide detention in a dynamic / real world 90th percentile 24-hour rainfall event.

Therefore, we have simplified the hydraulic model to use the following parameters:

Roof Area: 160 m²

Impervious Curve Number: 98

Tank Storage Volume: 1000 L

Detention Orifice: 10mmØ @ 0.75m above tank base

Retention Volume: approx. 400L, conservatively assumed full at beginning of the rainfall event.

An Autodesk SSA 1D dynamic hydraulic model is completed to confirm the tank size and compare the flow between unmitigated and mitigated scenario.

The model result shows post mitigation the peak flow is reduced from 0.23L/s to 0.13L/s, a 44% reduction without considering the retention volume at base of the tank.

Based on the above, it is our opinion that the combination of on-lot roof tank detention, garden water reuse, and permeable driveway is the best-practical-option for stream channel erosion control, and provides a better environmental and social benefit than the centralised underground attenuation tanks option.



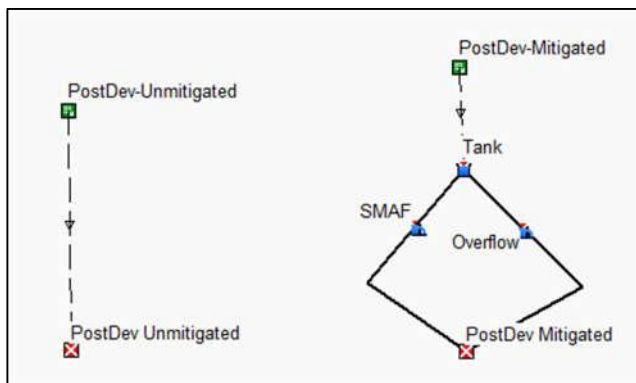


Figure 2: Autodesk SSA Model Setup

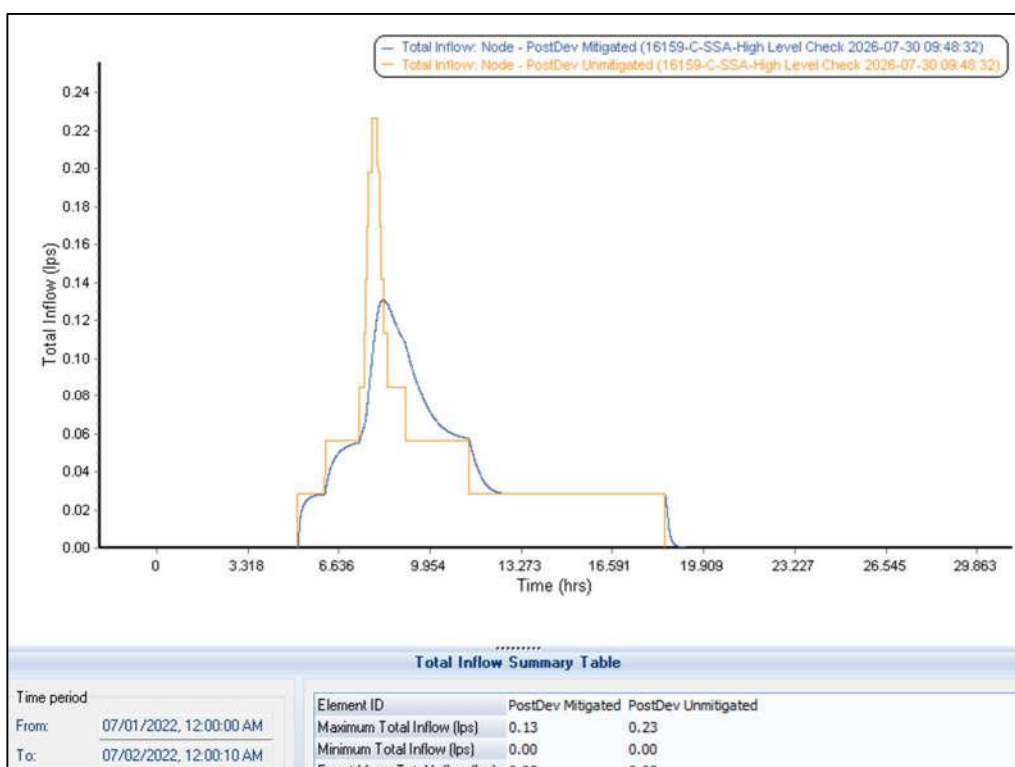


Figure 3: SSA Model Flow Results Comparison

3 Downstream Flood Effects Assessment

3.1 Catchment Summary

The 57A Hall Road development site is located at the end of the Hall Road Tributary catchment, the site discharges into a confluence zone where the Hall Road Tributary joins the Te Tahawai Tributary near the end of the Te Tahawai Tributary catchment. And approximately 200m further downstream, the Te Tahawai Tributary discharges into a second confluence zone where it joins the Wairoa Stream at the lower half of the wider Wairoa Stream Catchment.

The layout of the four catchments and their time of concentration (TOC) are shown in Figure 4 below.



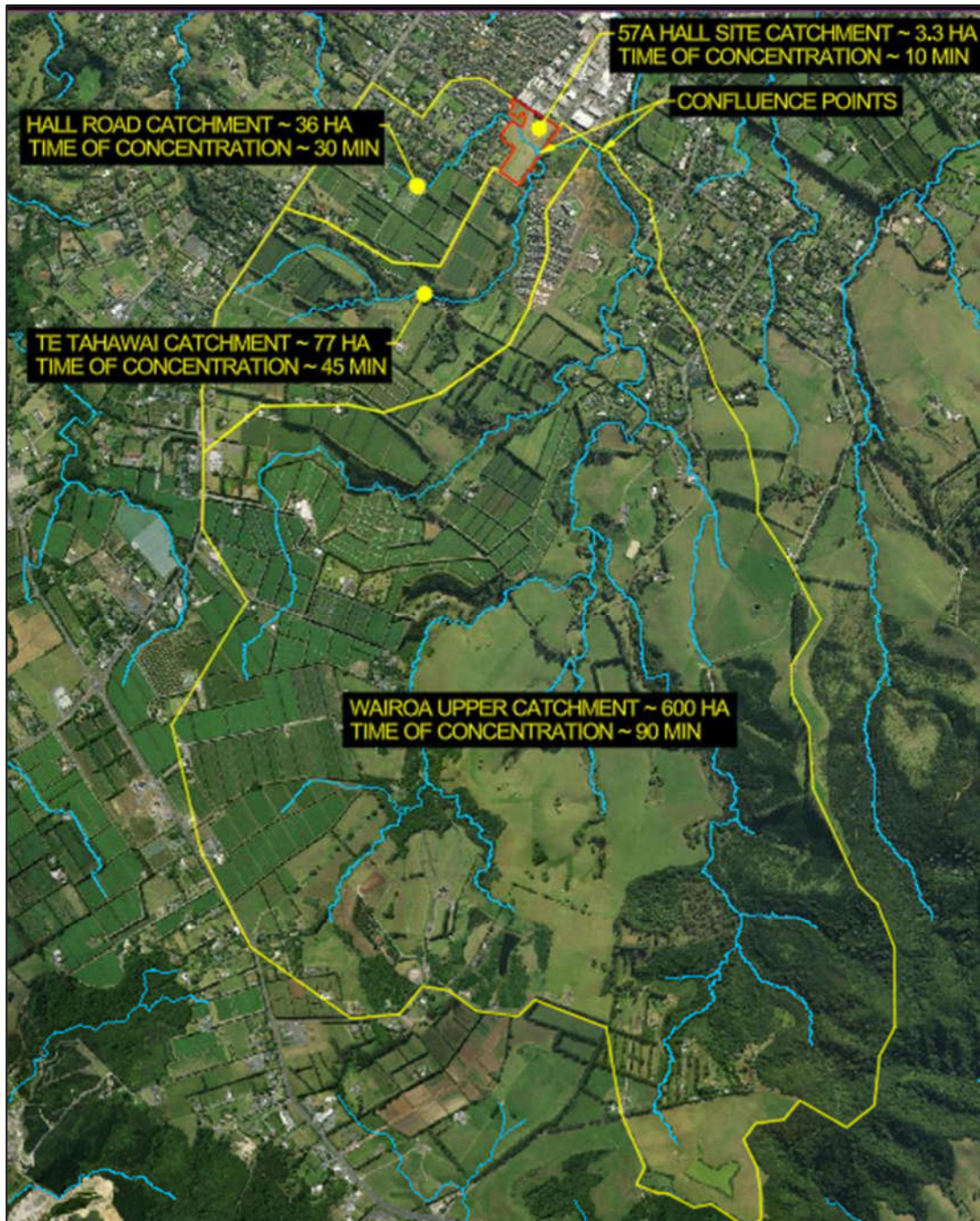


Figure 4: Catchment Layout and TOCs

3.2 Autodesk SSA Hydraulic Model

An Autodesk SSA 1D dynamic hydraulic model has been completed to facilitate the downstream effects assessment. The modelling approach and parameters are as follows:

Catchment Parameters:

57A Hall Rd:

Area - 3.3 Ha

TOC - 10 min

Weighted Curve Number: 85.05 (Conservatively Assumed 65% Impermeable)



Hall Rd Tributary:

Area - 36 Ha

TOC - 30 min

Weighted Curve Number: 75.8 (Assumed 40% Impermeable)

Te Tahawai Tributary:

Area - 77 Ha

TOC - 45 min

Weighted Curve Number: 70.25 (Assumed 25% Impermeable)

Wairoa Upper Catchment:

Area - 600 Ha

TOC - 90 min

Weighted Curve Number: 61 (Assumed greenfield)

Note: The Time of Concentration is referenced from Section 6.3.7 of the Haigh Workman's Design Report for Te Puna Waiora Retirement Village Stage 2, 57C Hall Road, Kerikeri, reference 18282, dated Jan 2021.

Design Rainfall:

1%AEP 24 Hour Rainfall + 20%Climate change adjustment

Modelling Approach:

For the **original design scenario**, a storage node with orifice and weirs are modelled to achieve full 1% AEP event attenuation for the entire 57A Hall Rd site, another storage node with 1050mmØ culvert and a bund top spillway are modelled to represent the in-channel earth weir. The 57A Hall Rd site and Hall Road Tributary both discharge to a junction with Te Tahawai Tributary, then all three sub-catchments join together and discharge to a junction with the Wairoa Stream Upper Catchment. See below Figure 5.

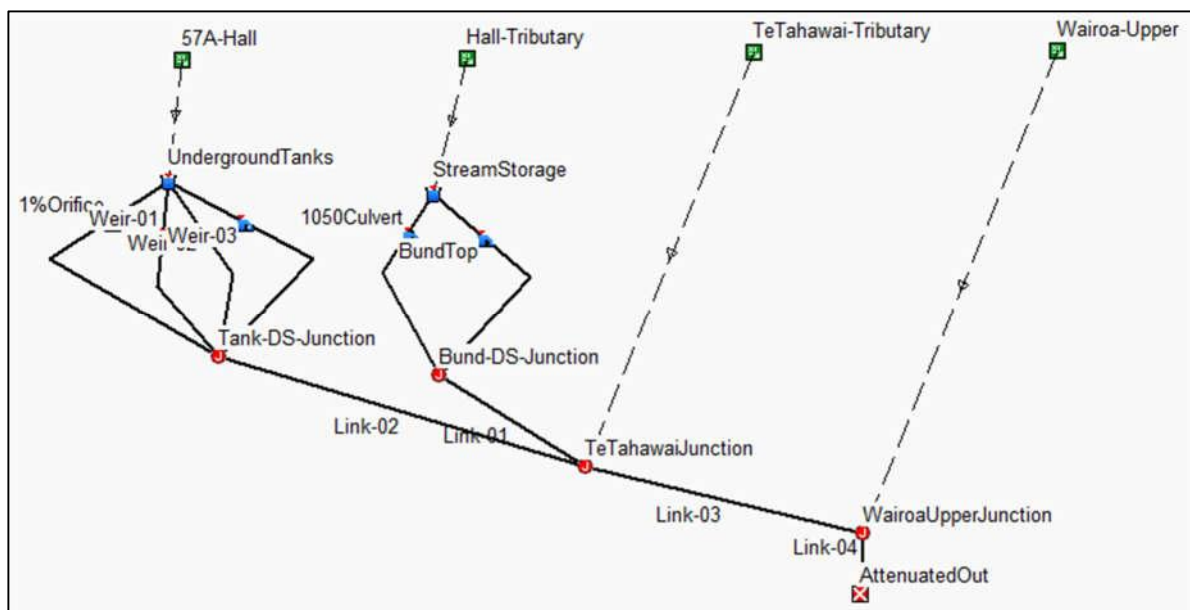


Figure 5: Original Design Scenario SSA Model Layout

For the **proposed design amendment scenario**, attenuation tank and in-channel earth weir is removed, the 57A Hall Rd site and Hall Road Tributary catchment runoffs discharge downstream



without being delayed by the storage devices. All catchment parameters remain the same as original design. See below Figure 6.

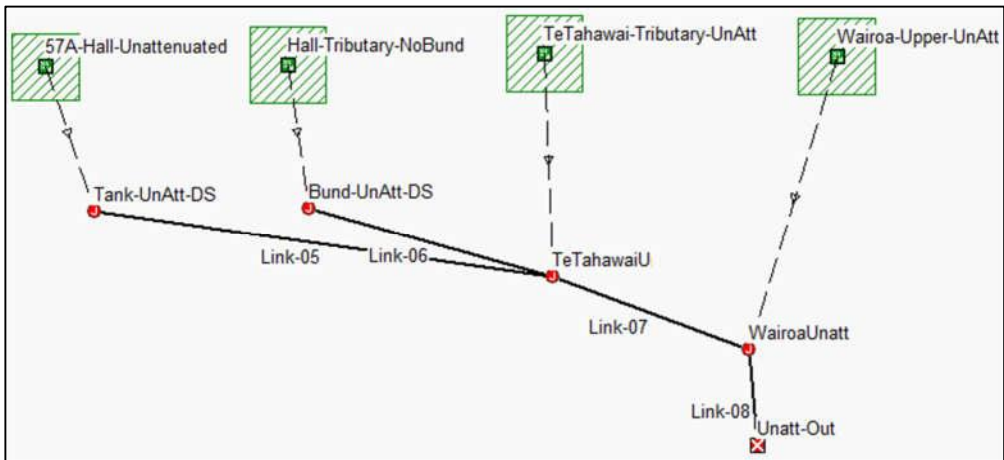


Figure 6: Proposed Design Amendment Scenario SSA Model Layout

3.3 Model Outputs

3.3.1 Overview

First let's have a quick overview to understand the scale difference between the four catchments. The unattenuated post development 57A Hall Rd site peak flow is 635l/s, and it makes up 1.2% of the peak flow at Te Tahawai Tributary and Wairoa Stream Upper Catchment confluence point, approximately 200m downstream of the 57A Hall Rd site discharging point. See below Figure 7 for more details.

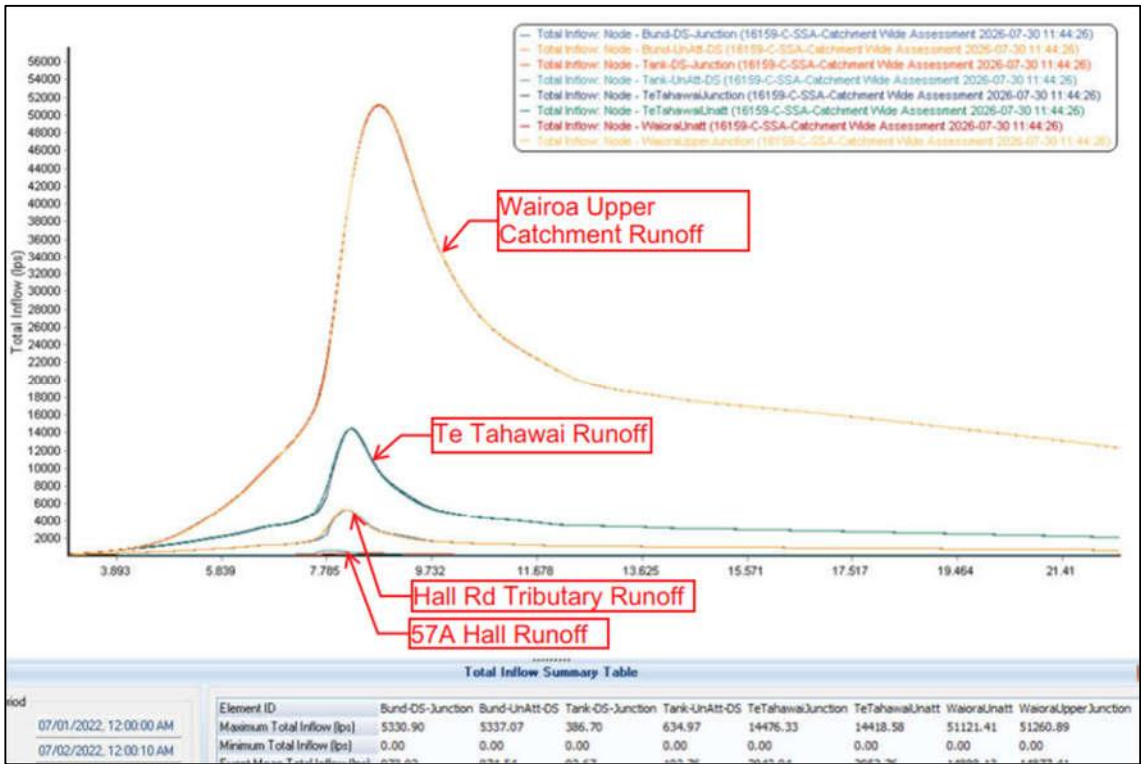


Figure 7: Runoff Output from SSA Model



3.3.2 Underground Attenuation Tanks Flow Effects

As we can see from the model output, in line with the original design stormwater management expectation, the modelled underground tank provides peak flow reduction for the development site of approx. 250 l/s. However, as shown in the flow hydrograph below in Figure 8, the post-peak flow of the attenuated scenario exceeds the unattenuated scenario by as much as 100l/s, which is how flow attenuation / ‘flatten the curve’ works.

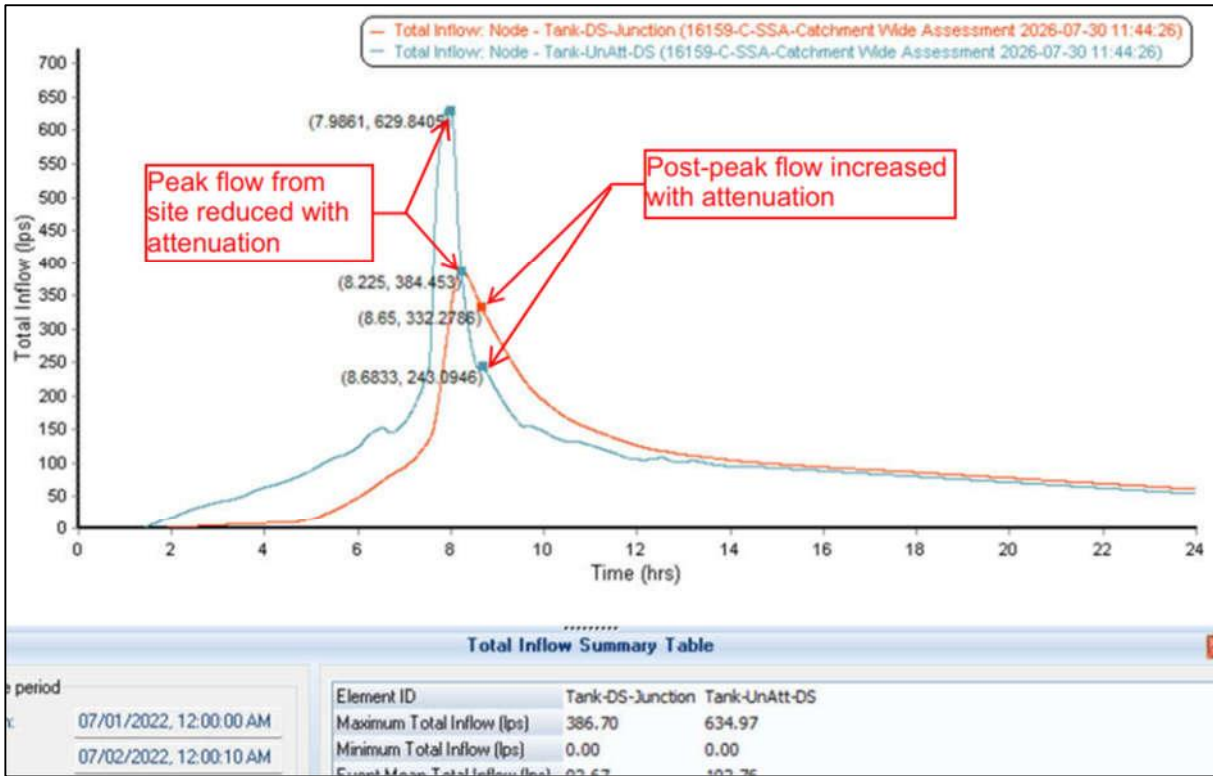


Figure 8: Flow Hydrograph of 57A Hall Rd Site Catchment

3.3.3 In-Channel Earth Weir Flow Effects

The in-channel earth weir from the original design is essentially a dam for the entire Hall Road Tributary Catchment to restore some of the flood storage volume back into the flood plain, however, because it is a dam located in a stream channel with reasonable sized catchment, and the top of the weir / spillway is designed to be triggered for at least the 10-yr flood event, the flood mitigation effect of the weir is very limited.

As shown in the flow hydrograph below in Figure 9, the peak flow reduction from the in-channel earth weir is only 6 l/s, and post peak, due to the culvert is pressurised to release the stored flood water from upstream, the flow is higher than the scenario where earth weir is removed.



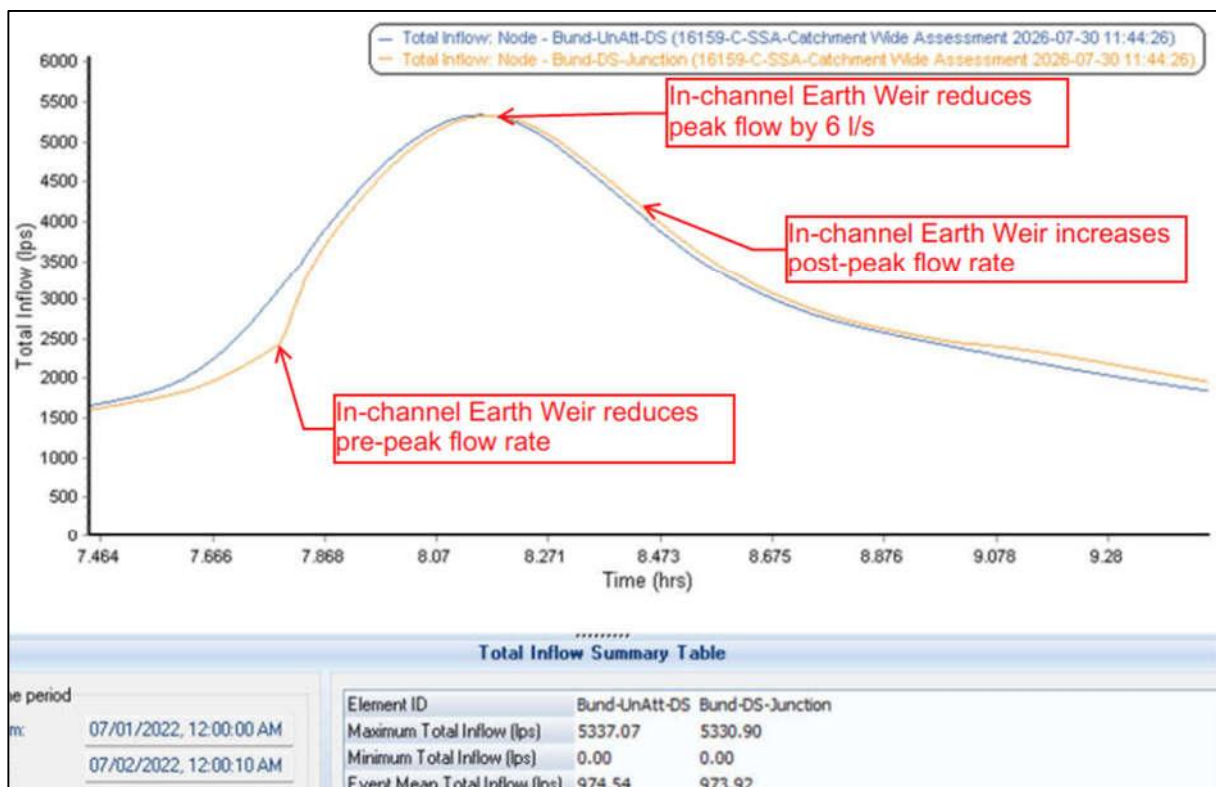


Figure 9: Flow Hydrograph at Downstream of In-Channel Earth Weir

3.3.4 Downstream Flow Effects

Based on the model output, the underground tanks delay the peak flow from 57A Hall Rd site by approximately 15min, from that point onwards, the attenuated flow exceeds unattenuated flow.

The 57A Hall Rd site catchment modelled time of concentration (TOC) is 10 minute due to minimum hydraulic modelling requirement, in reality the TOC could potentially be less than 10 min for a site this size. The Hall Rd Tributary catchment has a TOC of 30 min, and the Te Tahawai Tributary catchment has a TOC of 45 min, they are both over 15min longer than 57A Hall Rd site catchment TOC.

Therefore, the increased post peak attenuated flow from 57A Hall Rd Site will coincide with the peak flow from Hall Rd Tributary and Te Tahawai Tributary, resulting in what is shown in the model output 'Te Tahawai Confluence' flow hydrograph below in Figure 10, attenuated scenario peak flow being 58l/s higher than unattenuated peak flow.



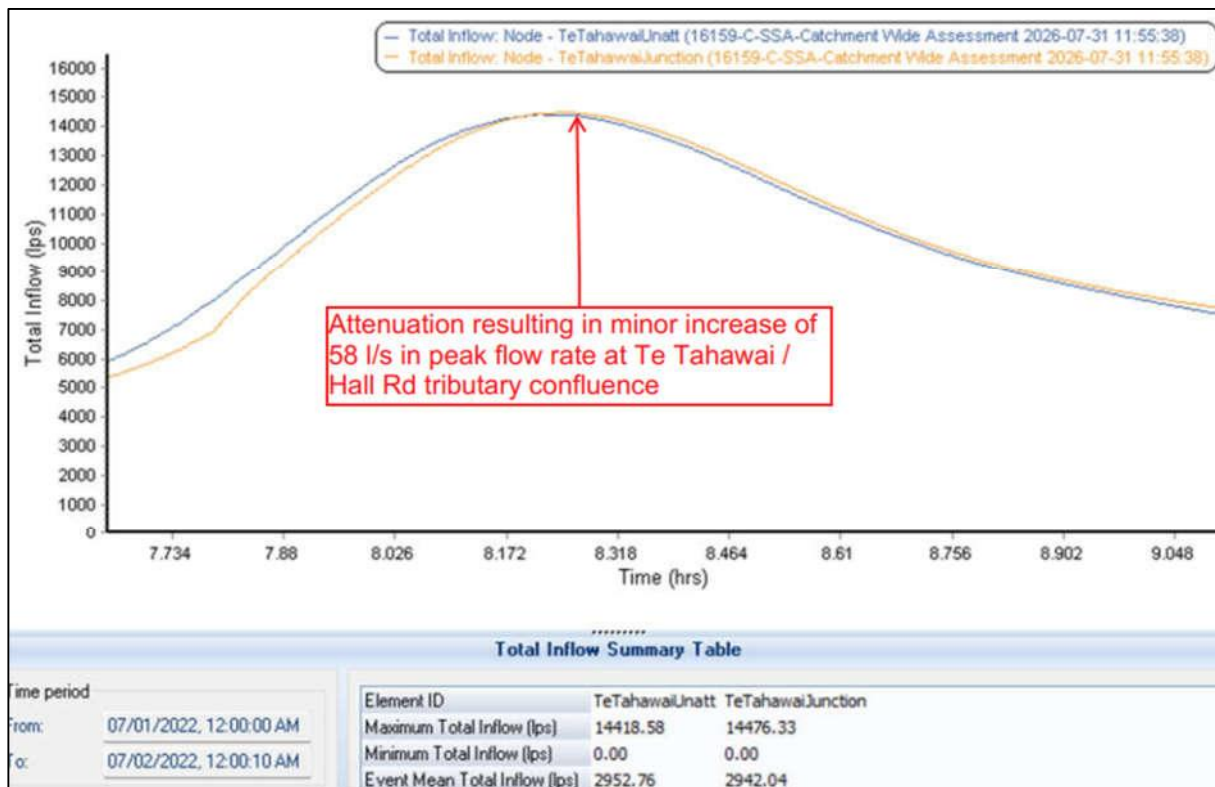


Figure 10: Flow Hydrograph at 'Te Tahawai Confluence'

The Wairoa Stream Upper catchment has a TOC of approximately 90min to the confluence point with Te Tahawai Tributary, under the same logic, and proven by the dynamic hydraulic model output below in Figure 11, the tank attenuated flow, and the in-channel earth weir attenuated flow coincide with the Wairoa Stream peak flow, resulting in a peak flow increase of 140 l/s compared with unattenuated scenario. While it is arguably less than minor compared with the total 51260 l/s peak flow rate, it is clear that the removal of underground tanks and in-channel earth weir from the proposed design is beneficial for the downstream properties.

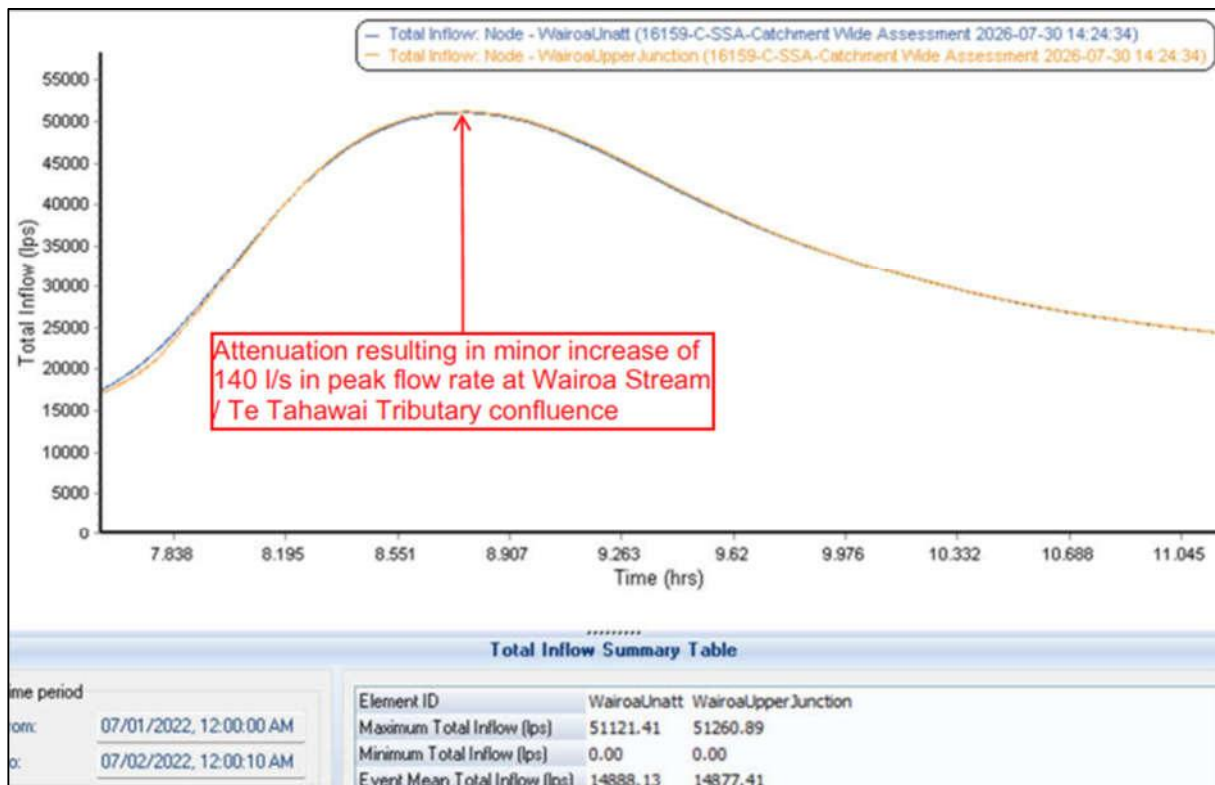


Figure 11: Flow Hydrograph at 'Wairoa - Te Tahawai Confluence'

4 Conclusion and Requests

Based the above discussion, Chester propose the following stormwater design amendment:

- **Removal of the underground attenuation tanks**, it has been demonstrated in the dynamic hydraulic model that removing attenuation tanks will reduce the downstream flood risk.
- **Removal of the in-channel earth weir**, it has been demonstrated that the weir provides minimal mitigation benefit at immediate downstream, and provides negative effect at the Wairoa Stream confluence point, and increases on-site, environmental, and asset risk.
- **Install on-lot roof tanks and permeable carparking** to provide best-practical-option stream channel erosion mitigation, and achieve an overall better environmental, social, financial outcome for all stakeholders.

Jack Chen

Civil Engineer

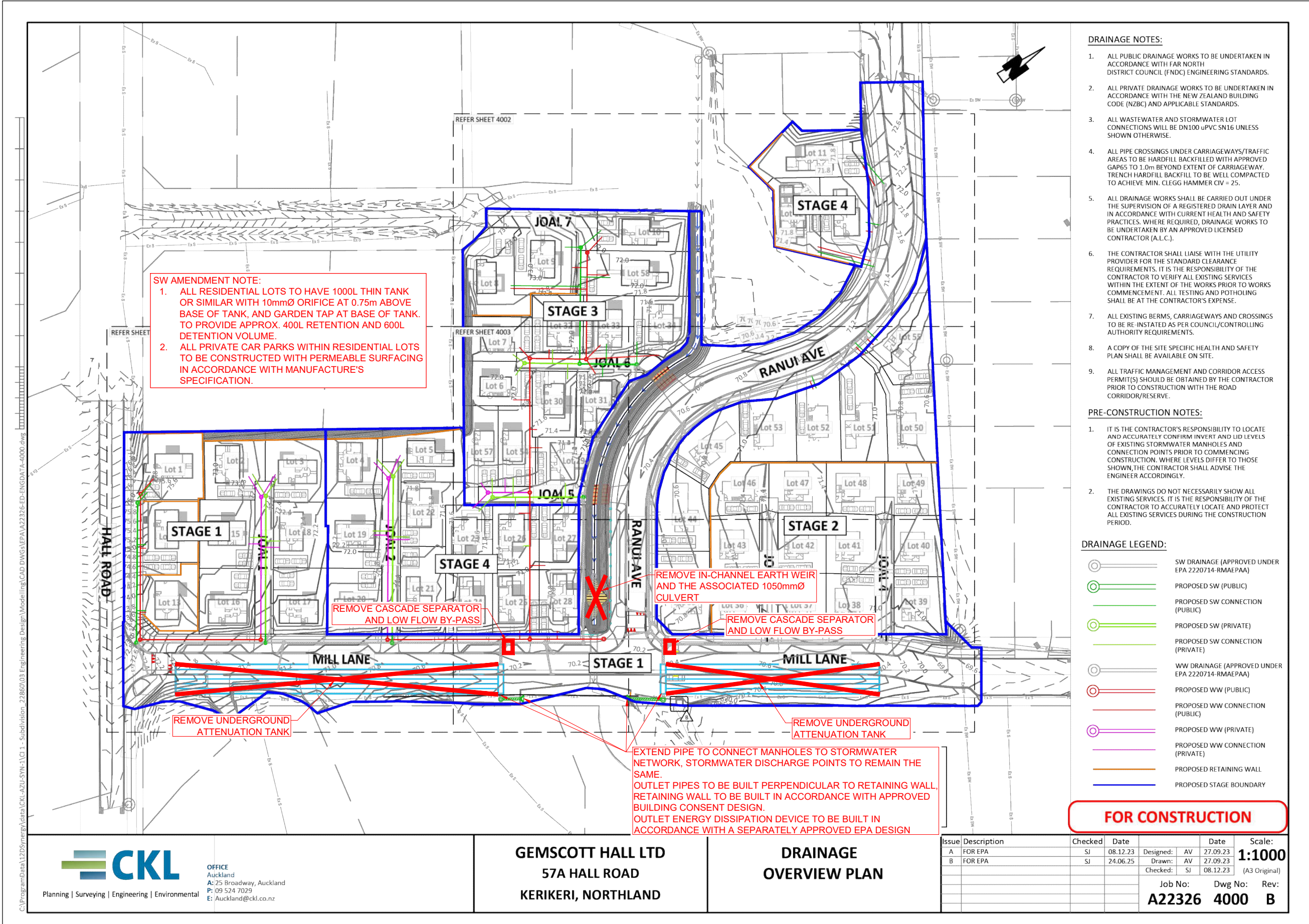
Appendices:

1. Chester Drawing 16159-C-SKT-SW Amendment, date 30/07/2026;
2. 16159 - SW value engineering review memo, date: 28/04/2026;
3. 16159 - Proposed Mill Lane Box Culvert Assessment, date: 11/06/2026;
4. FNDC's agreement in principle to remove the underground attenuation tanks and in channel earth weir, date: 22/07/2026.



Appendix 1: Chester Stormwater Amendment Drawing





CLIENT: GEMSCOTT HALL LTD

ADDRESS: 57A HALL ROAD, KERIKERI

DRAWING: STORMWATER AMENDMENT MARK UP

SCALE: NTS

PROJECT: 16159

DATE: 30/07/2026

Appendix 2: Stormwater Value Engineering Memo



Memo

Date: 28 April 2026

Our Ref: 16159

To: FNDC – Resource Consent Engineer, Roding, and Asset Team
From: Chester Consultants Ltd
Prepared By: Jack Chen Civil Engineer
Reviewed By: Nat Jull Civil Engineer

Hall 57A – Stormwater Value Engineering Review

1 Introduction

Chester Consultants Ltd has been engaged by Gemscott to provide construction-phase engineering services for the Hall 57A development. As part of this role, we have reviewed elements of the approved stormwater design with the objective of identifying refinements that reduce unnecessary environmental, constructability, and long-term asset risk while continuing to appropriately manage stormwater effects.

The primary purpose of this memorandum is to seek Far North District Council's (FNDC) approval to remove the in-channel earth weir currently approved within the realigned stream corridor.

As a secondary matter, and arising directly from this review, we also seek Council's view on whether there is an opportunity to relax the currently approved flood attenuation requirements, thereby avoiding the need for large public stormwater attenuation tanks, in favour of a proportionate, at-source stormwater management solution.

2 Summary of Approved Stormwater Strategy

The approved stormwater design, prepared by Vecta Ltd, is based on full hydraulic neutrality to a greenfield (100% permeable) condition. The key features of the approved design include:

- Attenuation of post-development peak flows for the 2-, 5-, 10- and 100-year storm events to equivalent greenfield peak flows;
- Extended detention of frequent storm events (SMAF 2);
- Two large underground attenuation tanks located within the public road reserve;
- An in-channel earth weir within the realigned stream to provide compensatory flood storage; and
- Gross pollutant stormwater treatment via proprietary devices.

Chester acknowledges that this approach has been consented and approved. However, our review has identified that some elements of the design could be adjusted to provide an overall preferable outcome for all stakeholders.



3 Assessment of In-Channel Earth Weir

3.1 Purpose of the Earth Weir

The in-channel earth weir is proposed within the realigned stream corridor and incorporates a culvert constructed below the existing stream bed, intended to facilitate fish passage. The stated purpose of the structure is to compensate for the loss of flood storage associated with site filling within the mapped floodplain. See below Figure 1 for a cross section of the proposed earth weir.

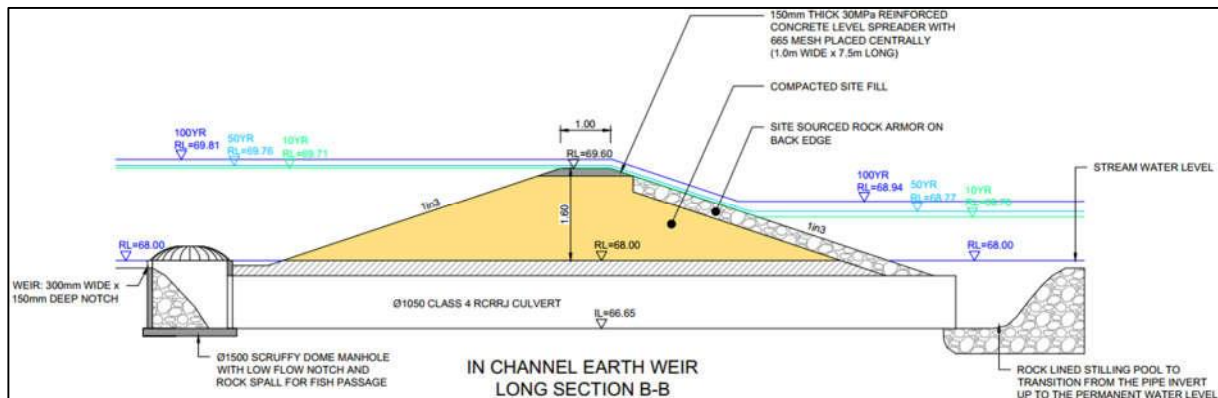


Figure 1: In Channel Earth Weir Cross Section

3.2 Assessment of Necessity and Effects

Based on our review, Chester considers that the earth weir provides minimal downstream stormwater mitigation benefit and, conversely, introduces increased risk within the site. Our reasoning is as follows:

- **Receiving environment is a river system, not a flood basin**
The downstream receiving environment is a river system whose flood behaviour is governed by catchment-scale hydraulics. Localised flood storage created by an in-stream weir is unlikely to measurably reduce downstream flood risk where flood levels and peak flows are controlled by upstream catchment response.
- **No demonstrable downstream flood mitigation benefit**
The earth weir is unlikely to reduce downstream flood peaks or flood levels in any material way. Given the relatively small volume compared to the upstream catchment size, flood storage provided within the channel is released back to the river system during the same event and therefore unlikely to mitigate downstream effects.
- **Increased upstream and on-site flood risk**
The presence of the earth weir increases afflux within the stream reach, elevating upstream water levels during large storm events. This increases flood risk within portions of the site relative to a free-flowing channel condition.
- **Environmental and asset risk**
The below-bed culvert configuration presents a high risk of sediment accumulation, blockage, and impaired fish passage performance. As a public asset, this introduces an



ongoing maintenance liability and risk of failure that is disproportionate to any benefit provided.

3.3 Conclusion on Earth Weir

The in-channel earth weir provides minimal mitigation for the downstream flood effects and instead transfers risk upstream and on-site. Its removal would:

- Restore a free-flowing stream channel;
- Reduce upstream flood levels;
- Remove a high-risk in-stream structure; and
- Improve long-term operational and environmental outcomes.

Chester therefore considers the earth weir to be unnecessary from a stormwater effects perspective, and understands its removal does not impair the outcome of the Resource Consent Decision 2240312-RMACOM. Therefore, we seek Council's confirmation that the removal of the In-Stream Earth Weir is within scope of the approved Resource Consent Decision referenced above. And recommends its removal to be approved via a minor amendment to the approved engineering plans.

4 Review of Stormwater Attenuation Requirements and Alternative BPO

4.1 Rationale for Reconsidering Attenuation Tanks

The approved stormwater strategy relies on large underground attenuation tanks located within the public road reserve to achieve attenuation across the full spectrum of design events. While effective in reducing peak flows generated from the development site, this approach:

- Does not consider the wider Wairoa Stream catchment hydrology and the development site's location within the wider catchment. And risks increasing the downstream flooding by delaying the site peak flow and coincide with the upstream wider catchment peak flow.
- Introduces high capital and construction complexity;
- Creates long-term maintenance obligations within the road corridor; and
- Exposes Council to whole-of-life asset risk;

See below Figure 2 and Figure 3 for a plan view of the large underground tanks, and Figure 4 and Figure 5 showing the Hall Road development site location and the Wairoa Stream and its tributary catchments.



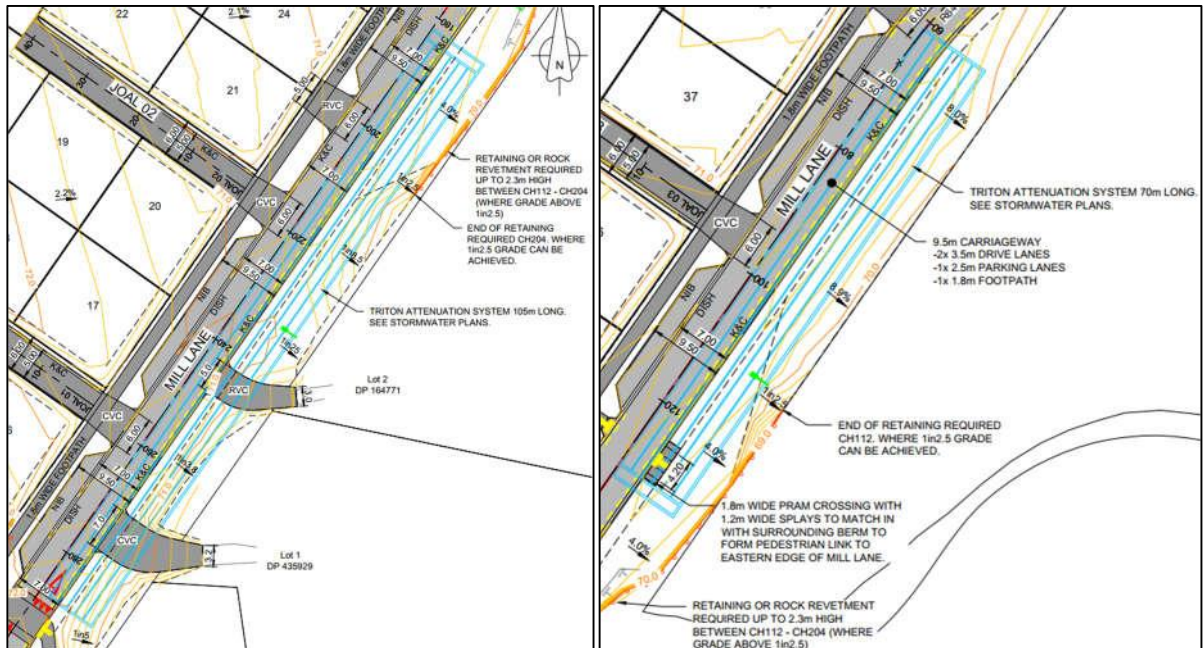


Figure 2 and Figure 3: Proposed Triton Attenuation Systems

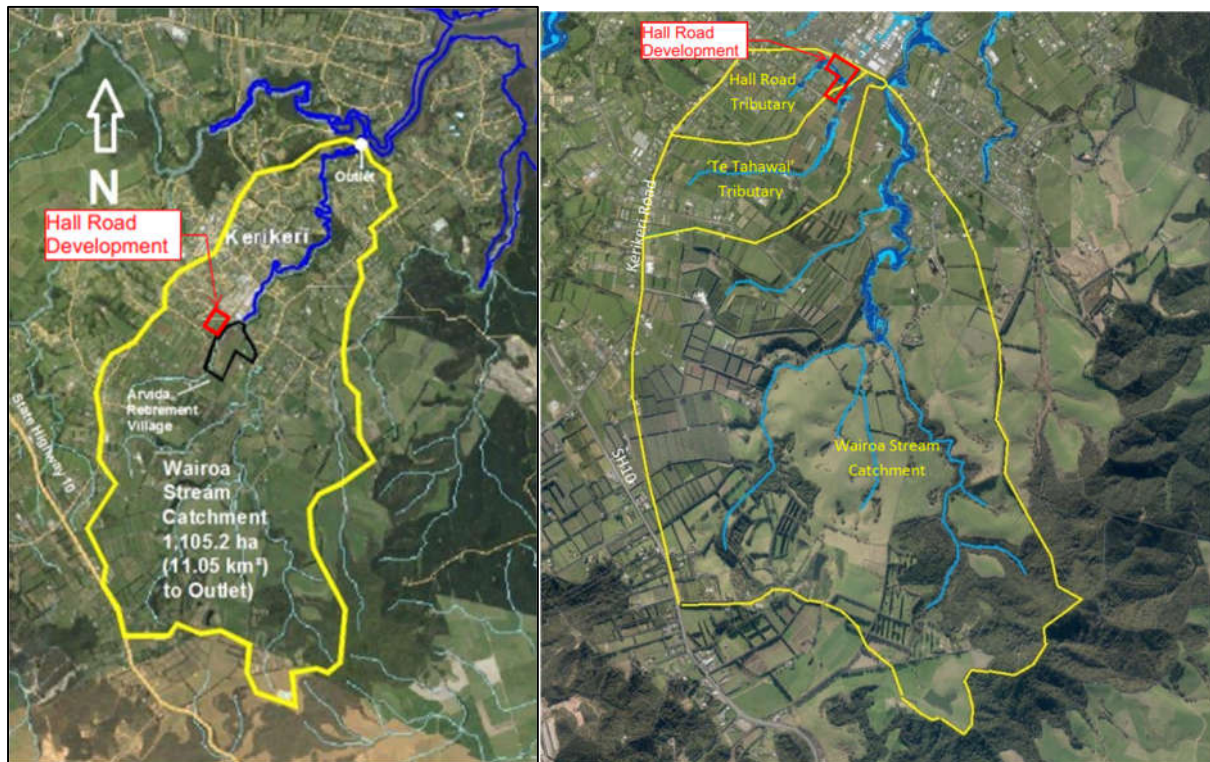


Figure 4 and Figure 5: Wairoa Stream and Tributary Catchments

4.2 High-Level Review of Wairoa Stream Catchment Hydrology

As part of the stormwater attenuation requirements assessment, we have reviewed several Haigh Workman's design reports for the adjacent Arvida Te Puna Waiora Retirement Village site (i.e.



the site next door), which have discussed how attenuation in the lower half of the catchment would potentially increase downstream flooding.

Based on the discussion in Section 6.3.7 of the Haigh Workman's Design Report for Te Puna Waioa Retirement Village Stage 2, 57C Hall Road, Kerikeri, reference 18 282, dated Jan 2021, we understand that the time to peak in the Wairoa Stream at the 57A Hall Road site is approximately 1.5 hours. The time to peak is 45 minutes in the Te Tahawai Tributary, and the Hall Road Tributary will have a similar time to peak as the Te Tahawai Tributary given its similar size.

On the other hand, the time to peak within the 57A Hall Road site catchment is approximately 10min and is located at the bottom of the Hall Road Tributary and Te Tahawai Tributary catchments, and the lower half of the Wairoa Stream catchment.

In addition, the Wairoa Stream catchment has a total area of approximately 1105 ha, and the proposed increased impervious area on 57A Hall Road site total area is approximately 1.5 ha.

Based on the above, we are of the same opinion that:

- Delaying the release of site runoff could increase the tributary peak flows by adding to the peak.
- Delaying the release of site runoff could increase flows in the Wairoa Stream during the build-up to the peak flow.
- The increases in peak runoff from the site as a result of the development are very small in comparison to the peak flood flows in the wider catchment (around 0.1%).
- Unattenuated site runoff is less likely to coincide with the wider catchment peak, therefore is more preferable compared with attenuated site runoff. And will have no adverse effects on flood levels in the Wairoa Stream or its tributaries.

4.3 Proposed Best Practicable Option (BPO)

Chester considers that a more proportionate and effects-based stormwater solution could be adopted, consistent with the Best Practicable Option (BPO) framework. Specifically, we propose that FNDC consider relaxing the current stormwater attenuation requirements as follows:

- **Mitigation Objective:**
 - Provide stream channel erosion mitigation targeted at extended detention for the runoff volume difference between pre and post development of the 1/3 of the 2-year 24-hour rainfall depth.
 - Reduce impervious area as much as practicable on individual lots.
- **Means of Mitigation:**
 - Provide attenuation at source on individual private lots, using 2000L-5000L tanks and small 10mm-20mm diameter orifices, subject to detail stream channel erosion mitigation design calculations.
 - Provide permeable paving / permeable concrete for private car parks.



- **Stormwater Functions Achieved:**
- Volume and rate control for frequent storm events associated with stream channel erosion;
- Reduction in cumulative effects associated with increased impervious roof areas;
- Removal of the need for public stormwater attenuation infrastructure;
- Retention of a simple and maintainable public stormwater network.

This approach aligns with key stormwater management objectives by:

- Focusing mitigation where imperviousness has increased;
- Managing frequent storm effects that drive erosion and stream degradation;
- Avoiding unnecessary flood attenuation and avoid the risk of increased downstream flooding when the site is located in the lower half of the catchment; and
- Providing BPO stormwater attenuation for 80% of the total site area. The proposed unattenuated public road and JOAL impervious areas equate to 20% of the total site area, which is significantly less than the residential zoning permitted 50% imperviousness baseline.

4.4 Project Risk Management

We acknowledge that adoption of this alternative approach would represent a change from the currently approved stormwater strategy and would require FNDC's agreement, supported by appropriate technical assessment. Given that construction is now underway, we do not seek immediate approval of this approach but wish to raise it as a credible alternative to the current strategy.

5 Conclusion and Requests

Chester respectfully seeks FNDC's consideration of the following:

- **Approval to remove the in-channel earth weir**, on the basis that it provides little downstream mitigation benefit and increases on-site, environmental, and asset risk.
- **Council's in-principle view** on whether relaxation of the currently approved flood attenuation requirements—through adoption of an at-source, frequent-storm attenuation approach—could be supported, thereby allowing removal of the public stormwater attenuation tanks.

Removal of the earth weir represents a low-risk, high-benefit amendment that improves environmental and asset outcomes. Reconsideration of the attenuation strategy presents an opportunity to better align stormwater mitigation with actual effects while reducing long-term public infrastructure burden.

We welcome the opportunity to discuss this further with Council officers.

Jack Chen

Civil Engineer



Attachments:

1. Vecta / Far North Holding - 57A Hall Road, Kerikeri Three Waters Resource Consent Design Report, ref: P0442, dated: 11/04/2022;
2. Haigh Workman - Stormwater and Services Report for Proposed Arvida Retirement Village Stage 1, Hall Road, Kerikeri, ref: 18 282, dated 12/2018;
3. Haigh Workman – Design Report, Te Puna Waiora Retirement Village Stage 2, 57C Hall Road, Kerikeri, ref: 18 282, dated 01/2021.



Appendix 3: Mill Lane Box Culvert Assessment Memo



Memo

Date: 11 June 2026

Our Ref: 16159

To: FNDC – Resource Consent Engineer, Roding, and Asset Team

From: Chester Consultants Ltd

Prepared By: Jack Chen Civil Engineer

Reviewed By: Nat Jull Civil Engineer

Hall 57A – Proposed Mill Lane Box Culvert Assessment

1 Introduction

Chester is engaged by Gemscott Hall Ltd to review the stormwater management design prepared by; Vecta Limited and CKL NZ Limited and approved under EPA (RC2240312 – EPA/B) by FNDC and has subsequently recommended changes to the design. This letter follows previous correspondence with FNDC on the matter and is intended to further assist FNDC's decision to adopt the recommended changes (i.e. removal of the in-stream earth weir and Attenuation Tanks).

Specifically, Chester has been verbally requested by Angus Simpson on behalf of FNDC to provide an assessment of the proposed box culvert under future Mill Lane public road, to assess compliance against the FNDC ES 2023. Presumably this is because the approved EPA design lacks detailed drawings and a capacity calculation for the proposed box culvert. We note that the culvert and the underground tanks are not linked because the tanks discharge downstream of the culvert.

2 Summary of Proposed Box Culvert and Design Criteria

Box Culvert geometry information was gathered from the site plan notes, stormwater long section drawings and the 3D FG and EG Surfaces.

The design flows were calculated for the entire Hall Road stream catchment of 37 Ha with climate change adjustment and 50% imperviousness MPD scenario assumption. And validated with the 100yr+cc ARI priority river flood model peak discharge information provided in the original Vecta report.

Tailwater levels conservatively adopted the 100yr+cc ARI priority river flood model downstream flood level for all design flows.

Culvert Dimension: 2m(W) x 1.5m(H) x 16m(L)

Culvert Inlet Invert: RL 67.085m

Culvert Outlet Invert: RL 66.977m

Upstream Stream Bed Level: RL 67.9m

Downstream Stream Bed Level: Estimated RL67.85m



Tailwater Level During 1%AEP CC Adjusted Event: RL 68.86m
 Road Crown Level: RL 70.18m
 50% AEP CC Adjusted Flow: 1.50 m³/s
 20% AEP CC Adjusted Flow: 2.32m³/s
 5% AEP CC Adjusted Flow: 3.57 m³/s
 1% AEP CC Adjusted Flow: 5.16 m³/s

3 Sedimentation within Box Culvert

The box culvert is proposed to be embedded approximately 870mm below the stream bed level rather than the typical 400mm, we suspect this is to provide depth for other services to be installed above the culvert. Embedment creates a low velocity zone within the box culvert, and overtime, allows fine particles transported by the stream baseflow to settle and accumulate inside the box culvert, forming a naturalised stream bed beneficial for fish passage. Embedment affects the box culverts hydraulic capacity so needs to be considered.

During larger events, when the culvert headwater increases above the soffit of the box culvert, and the culvert becomes pressurised, the water within the low velocity zone will be accelerated, a self-cleaning process will occur and removes part of the sedimentation.

While this is a highly complicated and dynamic natural process, we've simplified the concept down to a practical engineering approach, adopted a few empirical assumptions, and completed some iterative modelling to understand the process and its effect to the proposed box culvert.

3.1 Self-Cleaning Velocities

Based on FNDC ES stormwater pipe self-cleaning velocity requirement, and Table 4-7: Maximum Velocities in Channels, we've adopted the following self-cleaning velocities for the box culvert.

Fine particles such as silt and sand: 0.6m/s
 Gravel and Cobbles: 1.5m/s
 Culvert Base Manning's Considering Sediment: 0.035

4 Assessment of Box Culvert

4.1 HY-8 modelling

HY-8 culvert models have been completed to calculate headwater level, culvert capacity and flow velocity within the culvert, for different design flow and embedment / sedimentation depth scenarios.

4.1.1 870mm Embedment Scenario

Discharge Names	Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth(m)	Outlet Control Depth(m)	Flow Type	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)	Tailwater Depth (m)	Outlet Velocity (m/s)	Tailwater Velocity (m/s)
50%AEP	1.50	1.50	69.09	0.65	1.13	4-FFF	0.52	0.39	0.63	1.01	1.19	0.00
20%AEP	2.32	2.32	69.41	0.94	1.45	4-FFF	0.63	0.52	0.63	1.01	1.84	0.00
5%AEP	3.57	3.57	70.12	1.55	2.16	4-FFF	0.63	0.63	0.63	1.01	2.83	0.00
1%AEP	5.16	3.80	70.30	1.70	2.34	4-FFF	0.63	0.63	0.63	1.01	3.02	0.00

Figure 1: 870mm Embedment Culvert Summary Table



We note this is the extreme conservative scenario that assumes entire low velocity zone is filled with sediment, and the culvert is embedded flush with the downstream streambed level.

The results show that a 50%AEP event will have an average flow velocity of 1.19m/s, exceeding minimum self-cleaning velocity for silt, and a 20%AEP event will have an average flow velocity of 1.84m/s within the culvert, exceeding minimum self-cleaning velocity for gravel. Which means that the culvert embedment will be naturally reduced below 870mm whenever a 50%AEP or larger rainfall event occurs. Moreover, we believe that such rainfall event will almost certainly happen before the sediment within the box culvert reaches 870mm deep.

4.1.2 400mm Embedment Scenario

Discharge Names	Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth(m)	Outlet Control Depth(m)	Flow Type	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)	Tailwater Depth (m)	Outlet Velocity (m/s)	Tailwater Velocity (m/s)
50%AEP	1.50	1.50	68.92	0.65	1.43	4-FFF	0.52	0.39	1.10	1.01	0.68	0.00
20%AEP	2.32	2.32	69.00	0.87	1.51	4-FFF	0.68	0.52	1.10	1.01	1.05	0.00
5%AEP	3.57	3.57	69.17	1.17	1.68	4-FFF	0.90	0.69	1.10	1.01	1.62	0.00
1%AEP	5.16	5.16	69.50	1.58	2.02	4-FFF	1.10	0.88	1.10	1.01	2.35	0.00

Figure 2: 400mm Embedment Culvert Summary Table

The results show that a 50%AEP event flow velocity is close to the minimum self-cleaning velocity for silt, and 5%AEP event flow velocity is close to the minimum self-cleaning velocity for gravel.

From this we assess that the naturalised stream bed within the culvert will be relatively stable at 400mm embedment depth for rainfall events up to 50%AEP. And for event size between 50%AEP and 5%AEP, silt will be mobilised and removed, however gravel and cobbles will remain in place, keeping the structure for fish passage.

And when 1%AEP event occurs, the box culvert will likely to be cleaned to almost the original concrete base level, and the naturalisation of the fish passage will restart.



4.2 Conclusion on Box Culvert

Based on the above discussion, we are of the opinion that the 400mm embedment scenario is suitable to be used to assess the culvert hydraulic capacity. Our HY-8 model result of this scenario indicates that the culvert is able to convey 1%AEP climate change adjusted flow without overtopping the road.

The maximum headwater elevation is RL 69.50m and is lower than the proposed top of stream bank level, therefore water is contained within the stream channel and will not cause flooding issue to the adjacent properties.

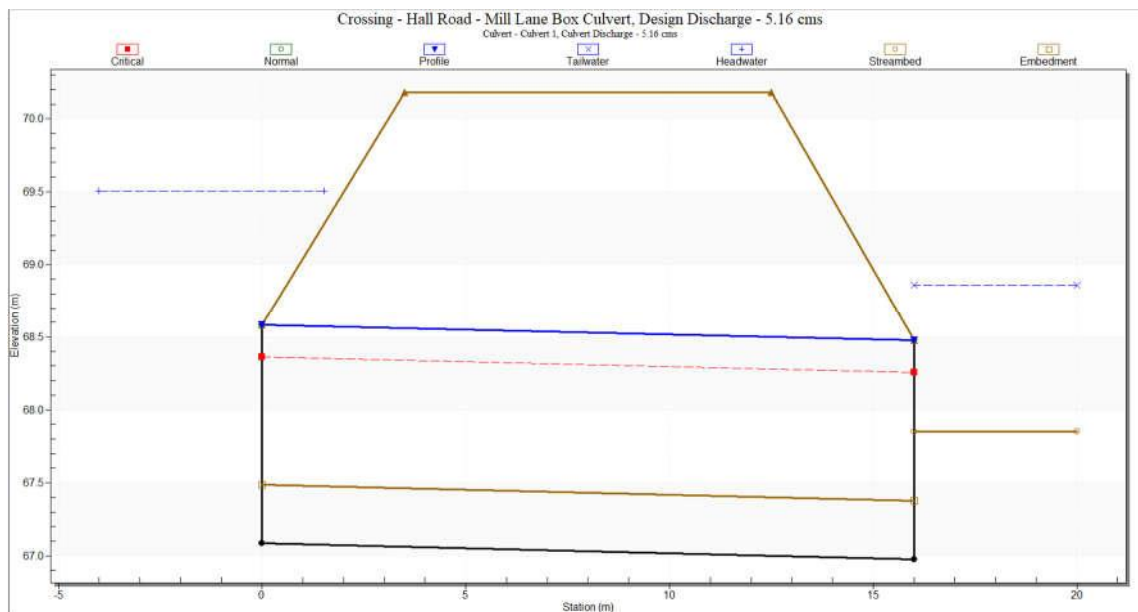


Figure 3: HY-8 Culvert Model Result – 400mm Embedment + 1%AEP CC Flow

Jack Chen

Civil Engineer



Appendix 4: FNDC Agreement in Principle



Jack Chen

From: Jack Chen
Sent: Tuesday, 28 July 2026 2:43 pm
To: Jack Chen
Subject: FW: 2240312 : 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Follow Up Flag: Follow up
Flag Status: Flagged

Ferret Queue Id: d69374e9-6fba-4521-aba6-6bc6c31c5c9b
SavetoFerret: Email_3570481_639208465916478301

From: Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>
Sent: Wednesday, 22 July 2026 11:23 am
To: Nat Jull <nat@chester.co.nz>
Cc: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>
Subject: FW: 2240312 : 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Nat,

Please see confirmation below from Infrastructure, let me know if you need any further information to prepare the S127 application.

Ngā mihi,



Nadia de la Guerre

Team Leader - Resource Consents Engineering

M 273598954 | P 6494015286 | Nadia.DeLaGuerre@fndc.govt.nz

Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029

fndc.govt.nz



From: Losaline Finekifolau <Losaline.Finekifolau@fndc.govt.nz>
Sent: Wednesday, 22 July 2026 10:17 am
To: Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>
Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Shelley Wharton <Shelley.Wharton@fndc.govt.nz>
Subject: RE: 2240312 : 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Nadia,

We agree in principle with the removal of the attenuation tanks and the earth weir.

The details can be further assessed as part of the RC variation/EPA process.

Ngā mihi



Losaline Finekifolau

Development Engineer - Waters - Infrastructure Engineering

M 274218114 | P 6494015236 | Losaline.Finekifolau@fndc.govt.nz

Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029

From: Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>
Sent: Wednesday, 22 July 2026 10:00 am
To: Losaline Finekifolau <Losaline.Finekifolau@fndc.govt.nz>
Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Shelley Wharton <Shelley.Wharton@fndc.govt.nz>
Subject: RE: 2240312 : 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Kia ora Losaline,

Can you please let me know if the DE agrees in principle to remove the attenuation tanks under the road and the weir?

An energy dissipation device can be added to the design to address any concerns re the velocity and scouring.

The applicant will need to apply for a Change in Consent conditions S127 once we have agreement from you.

The details of the design and any further changes, minor, can be made via the EPA process.

We just need to first question answered please.

Let me know if you need anything further to provide a timely response.

Ngā mihi,



Nadia de la Guerre

Team Leader - Resource Consents Engineering

M 273598954 | P 6494015286 | Nadia.DeLaGuerre@fndc.govt.nz

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From: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>
Sent: Friday, 17 July 2026 3:58 pm
To: Nat Jull <nat@chester.co.nz>
Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>; Andrew Hill <andrew.h@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Chris Moller <chris@gemscott.co.nz>; Jack Chen <jack.c@chester.co.nz>; Losaline Finekifolau <Losaline.Finekifolau@fndc.govt.nz>; Shelley Wharton <Shelley.Wharton@fndc.govt.nz>
Subject: 2240312 : 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Nat,

Please have a look at my comments in the trailing email, highlighted in **yellow** and **red**.

I think that, rather than continuing the email correspondence, the Resource Consent (RC) engineering concerns can now be addressed as part of the variation consent assessment, supported by the additional technical information and assessments as requested.

In relation to the Development Engineering (DE) comments, I suggest you contact and wait for DE to response and provide their feedback.

Note : I will be on leave for next full week and respond to any email ASAP I will be back.

Thanks, and best regards,
Millie

Rinku Millie Mishra



From: Nat Jull <nat@chester.co.nz>

Sent: Thursday, 9 July 2026 10:21 am

To: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>; Losaline Finekifolau <Losaline.Finekifolau@fndc.govt.nz>; Shelley Wharton <Shelley.Wharton@fndc.govt.nz>

Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>; Andrew Hill <andrew.h@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Chris Moller <chris@gemscott.co.nz>; Jack Chen <jack.c@chester.co.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

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Good Morning Shelly,

Thank you for the call yesterday afternoon. As discussed, I feel we are going around in circles a tad on the Hall Road decision to remove the In-Channel Earth Weir and Attenuation Tanks under the road and substitute for small at source roof tanks and private permeable parking.

There has been back-and-forth and information exchanged between Chester, Angus (for FNDC and Infrastructure Engineering) and Millie (for FNDC RC Engineering) for over three months now. I also understand Metis are currently developing a catchment flood model in the background for FNDC, so this has helped provide more confidence in the decision.

Given the above, we had the impression that FNDC Engineering (**as a whole**) were in a position to provide a clear and supportive statement for removing the tanks and weir – essentially something substantive so that we can then just get the planners to do the formalities with a subsequent s127 application. No more engineering assessment and review.

However, Millies's email below is indicating that both RC & Infrastructure Engineering are not in agreement and more engineering work is requested.

Please can you take a look and see if this is something you can help with?

Note: we have provided some responses in **green** below to Millies latest comments.

Ngā mihi mahana,

Nat Jull

Civil Team Leader | Regional Manager (Northland NZ)

BEngTech(Civil) MEngNZ

M +64 (0) 21 826 375

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From: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Sent: Thursday, 2 July 2026 11:04 am

To: Losaline Finekifolau <Losaline.Finekifolau@fndc.govt.nz>; Jack Chen <jack.c@chester.co.nz>

Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>; Andrew Hill <andrew.h@chester.co.nz>; Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Chris Moller <chris@gemscott.co.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Losaline,

Following up on our discussion yesterday, could you please reply to the email regarding the Development Engineering (DE) comments?

Please let them know that you are OK with the applicant's proposed approach so they can officially proceed with applying for the variation consent.

Hi Jack

Thank you for your email. I can confirm the proposed approach for the applicant to move forward with a variation consent application.

However, to ensure a review points with all other 8 points that you have mentioned in the excel below is for point 9 reword, please note that I have updated our tracking spreadsheet to include specific technical points

The assessment for the variation consent must comprehensively demonstrate the following **point 9** :

- **Downstream Impacts:** An analysis of whether removing attenuation will adversely affect downstream properties, tributaries, or existing overland flow paths during critical storm events. *We understand that from the information we have already provided (around coinciding peaks etc...) as well as the Metis modelling being completed for FNDC already provides a level of confidence that this is not an issue in this case.*
Development Engineering (DE) to review and confirm whether any further assessment or additional information is required to satisfied that the proposal can be supported.
- **System Assessments & Blockage:** A full assessment of both primary and secondary stormwater systems, including an evaluation of potential blockage scenarios. *This is outside the scope of the tank and weir removal. Furthermore, we have already provided the Box Culvert Assessment which looked a crucial blocking scenarios. – Development Engineering (DE) to review and confirm whether any further assessment or additional information is required to satisfied that the proposal can be supported.*
- **Discharge and Outlet Design:** Detailed parameters for the discharge point and outlet design. This must address erosion and scouring control for the pond area located between the proposed development and the neighboring property, alongside velocity and water depth changes for pre- and post-development scenarios. *We appreciate why this question is asked i.e. the approved EPA design (by Vector & CKL) omitted Energy Dissipation specifications for the culvert and SW outlets. We will complete a specific energy dissipation design for the outlets as they are proposed but request that this is separated out from the decision to remove tanks and earth weir. This is because the energy dissipation design is dictated by the peak outflow velocity of the culvert and pipes regardless of any upstream attenuation i.e. this is outside the scope of the tank and weir removal.*
– Development Engineering (DE) to review and confirm whether any further assessment or additional information is required to satisfied that the proposal can be supported.
RC engineer reply : The requested assessment is directly related to the proposed variation to remove the attenuation pond and weir. The attenuation system was originally incorporated to temporarily store stormwater and reduce downstream flow rates. Removing this infrastructure has the potential to alter peak flows, increase runoff velocities, and increase flood risk to neighbouring properties (refer Picture 1). Therefore, a hydraulic assessment is required to demonstrate that removal of the attenuation system will not result in any adverse flooding effects or increased risk to adjacent properties. This assessment is necessary to support the variation application.
- **Flow Pattern Changes:** Evaluation of how reducing the flood plain area through earthworks and building placement impacts flow dynamics. The assessment must address the risks of creating concentrated flows that increase runoff velocity and alter established flow patterns. *This is outside the scope of the tank and weir removal. The removal of the tanks and the weir is not changing anything to do with the approved earthworks, building placement or the points of discharge from that already consented.*

RC engineer reply : This request specifically relates to the proposed removal of the attenuation pond and weir. Under the approved design, stormwater was detained within the attenuation system, reducing flow velocity and

dissipating energy before discharge. Following the proposed removal, stormwater will pass through this area without the same level of attenuation, potentially changing existing flow paths and increasing flow velocities (refer Picture 1). Accordingly, an assessment is required to demonstrate that these altered flow conditions will not create erosion, concentrated flow paths, or increase flooding risks on neighbouring properties.

Site-Specific Intersection Dynamics: Specific attention given to the flat area circled in the provided site map. This zone serves as a critical water intersection for 57A Hall Road and the neighboring stream, while also crossing the physical accessway for the neighbouring property as shown in pic 2. This question seems to be targeted at concerns around the proposed earthworks / culvert embankment and its potential effect on flow dynamics. Again, this is outside the scope of the tank and weir removal as their removal does not change this. Furthermore, we understand the Metis modelling provides a level of confidence that this is not a critical issue.

RC engineer reply : this issue is nor relate to the earthworks, Council's concern is that removal of the attenuation pond and weir may change the hydraulic behaviour within the low-lying area identified in Picture 2. This area functions as an important flow path and hydraulic connection between the upstream catchment and downstream stream corridor. Removal of the attenuation system may increase flow velocities or alter flood extents through this area and with the reduction of the flood area the flow is increased and behaving like concentrated flow . Therefore, the assessment should demonstrate that the proposed variation will not adversely affect flood behaviour or increase risks to surrounding area.

- **Reverse Flow Risks:** Modeling / assessments to confirm that the changes will not cause reverse water flow into the neighboring property on the right-hand side, which could potentially block access or cause flooding to the access way to dwelling as shown in the below picture 1 . This question seems to be targeted at concerns around the proposed earthworks / culvert embankment and its potential effect on flow dynamics. Again, this is outside the scope of the tank and weir removal as their removal does not change this.

RC engineer reply : This concern arises from the proposed removal of the attenuation infrastructure. The existing attenuation pond and weir provide storage and reduce the rate of discharge during storm events. Their removal may alter local water levels, flow direction, and hydraulic grade during significant rainfall events. Council therefore requires an assessment demonstrating that the revised hydraulic conditions will not cause reverse flows, increased ponding, or flooding of neighbouring properties or accessways (refer Pictures 1 and 2)..

Picture 1 :



Picture 2





Please let me know if you or the applicant require any further clarification on these points before submission.

Thanks and regards
Millie



Rinku Millie Mishra

Senior Resource Consents Engineer - Resource Consents - Engineering

M 64273649266 | P 94015408 | Rinku.MillieMishra@fndc.govt.nz

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Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029

fndc.govt.nz



From: Jack Chen <jack.c@chester.co.nz>

Sent: Thursday, 2 July 2026 8:54 am

To: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>; Andrew Hill <andrew.h@chester.co.nz>; Nat Jull

<nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Chris Moller <chris@gemscott.co.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

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Hi Millie,

As discussed on Tuesday, can you please confirm FNDC's approval in principle to remove the In-Stream Earth Weir and Triton Underground Tanks? We can then proceed with applying for s127 Variation to formalise the changes.

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

jack.c@chester.co.nz

CHESTER

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From: Jack Chen

Sent: Wednesday, 24 June 2026 12:11 pm

To: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Cc: Development Engineers <Development.Engineers@fndc.govt.nz>; Nadia de la Guerre

<Nadia.DeLaGuerre@fndc.govt.nz>; Andrew Hill <andrew.h@chester.co.nz>; Nat Jull <nat@chester.co.nz>; Jasem

Saleh <jasem@gemscott.co.nz>; Chris Moller <chris@gemscott.co.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Millie,

Thanks for your clarification over the phone yesterday, please see attached our response to Council's comments.

We understand the next steps for removing the in-stream earth weir and Triton Underground tanks are:

1. FNDC / RC Engineering and Development Engineering team to confirm Approval in Principle to remove the In-Stream Earth Weir and Triton Underground Tanks.
2. Applicant / Gemscott c/o Chester to apply for s127 Variation to the existing Resource Consent Decisions, and supply design details for Council's review and approval to formalise the removal of the Earth Weir and Tanks.
3. Application with NRC to formalise the change to the proposed stream works e.g. removal of Earth Weir.

Any issue please do not hesitate to let me know, thank you.

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

From: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Sent: Wednesday, 17 June 2026 9:29 am

To: Jack Chen <jack.c@chester.co.nz>

Subject: FW: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Jack

I am on sick leave; I will talk to you soon . In the mean while I received below email from DE , I have not added my comments but you know as I have mentioned and show in my previous email more worries about the neighbour properties .

Thanks and regards

Millie



Rinku Millie Mishra

Senior Resource Consents Engineer - Resource Consents - Engineering

M 64273649266 | P 94015408 | Rinku.MillieMishra@fndc.govt.nz

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From: Development Engineers <Development.Enginers@fndc.govt.nz>

Sent: Monday, 15 June 2026 1:17 pm

To: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Subject: Re: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Morning Millie,

As previously discussed, Shelley has made the call that we are happy for the development to remove the attenuation device and instream weir. Provided the following is achieved - please see attached spreadsheet.

Can you please confirm you are happy with the queries before we send.



Angus Simpson

RC Contractor - Metis Consultants Limited - Infrastructure Engineering

Angus.Simpson@fndc.govt.nz

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From: Angus Simpson <Angus.Simpson@fndc.govt.nz>
Sent: Monday, May 18, 2026 2:20 PM
To: Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>
Subject: Re: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Millie,

I believe Chesters response on the whole sounds reasonable, please see if you are happy with my response in Red before responding 😊



Angus Simpson

RC Contractor - Metis Consultants Limited - Infrastructure Engineering

Angus.Simpson@fndc.govt.nz

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From: Jack Chen <jack.c@chester.co.nz>
Sent: Friday, May 15, 2026 12:40 PM
To: Angus Simpson <Angus.Simpson@fndc.govt.nz>; Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>
Cc: Chris Moller <chris@gemscott.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>; Nat Jull <nat@chester.co.nz>
Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

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Hi Angus and Millie,

Thanks for your emails, I'd like to consolidate the requirements from Council and the proposal from applicant's side into the below points:

1. For In-stream earth weir removal (bund):

- A site specific 2D hydraulic model comparing with bund and without bund scenarios.
- Provided the model results showing removal of the bund does not worsen the flood depth, extent, duration, and velocity for both localised and wider catchments, FNDC will accept the change to remove the bund.

[AMS] Removal of the earth weir modelling could have catchment wide effects, not just site specific. Catchment wide modelling is required.

[AMS] I believe the reviewal and approval of this aspect would partially come under NRC remit; it may be worth discussing joint reviewing. @Rinku Millie Mishra to confirm?

2. For Triton Underground Tanks (peak flow attenuation component):

- A catchment wide 1D/2D hydraulic model for pre-dev, post-dev with tanks, and post-dev without tanks scenarios. Assessing both localised and wider catchments, for 50%, 20%, and 1%AEP all climate adjusted events.
- Provided the model results showing removal of the attenuation does not worsen the flood depth, extent, duration, and velocity for both localised and wider catchments, FNDC will accept the change to remove the attenuation component.

[AMS] To clarify, the assessment of localised and wider catchment effects will involve two separate assessment approaches. The wider catchment assessment will consider the full catchment(Wairoa Stream), while the localised assessment will focus on the subcatchment associated with the two overland flow paths converging at the site boundary. The purpose of assessing these separately is that the wider catchment is likely to generate greater overall flood depths during larger storm events, whereas the localised catchment may experience proportionally greater impacts during localised, more frequent rainfall events.

3. For Triton Underground tanks (retention / volume control component):

- To replace the approved centralised retention component under public road. We proposed at-source individual tanks to provide volume control for 90th percentile 24-hour event rainfall depth (25mm) for all roof areas, likely tank sizes 2000-3000L (with 500L reuse and 2000L detention volume). And we propose permeable surfaces for private driveways / carparks to further promote at-source infiltration and reduce total impermeable surface area.
- @Angus Simpson @Rinku Millie Mishra please review this proposal and confirm if the volume control component can be changed as proposed.

[AMS] I understand the existing device contained 25% retention of 1600m3. That is 400m3 of retention. 58 Lot development with 0.5m3 retention each is not comparable. However, the assessment will be assessed on its merits of mitigating effect.

4. For Water Quality management:

- The approved baseline is Gross Pollutant Traps in the form of Stormwater360 Cascade Separators, our proposal does not change this approved baseline, therefore it should not affect the bund/tank removal reviewing process.

- On top of that, by introducing at-source tanks and permeable surfaces we are providing further water quality volume management.
- Therefore, I believe the Water Quality Management component remain as approved.

Please also see attached our response to the RC team further requirements. A quick additional note, the proposed changes provide the most cost-effective whole-of-life outcome for FNDC as required by FNDC ES :)

From Angus' email I understand provided the above points are addressed, FNDC can swiftly approve the proposed changes i.e. removal of bund, removal of underground tanks, install at-source tanks, and install permeable surfaces.

[AMS] "Swiftly" as in variation to RC and EPA applications process times.

@Rinku Millie Mishra can you please confirm the same?

@Angus Simpson from our conversations I understand FNDC/NRC have commissioned an up-to-date detailed hydraulic model for our catchment of interest, I believe we should share information provided they are not of conflicted interest, and work together for the best development outcome for all stakeholders.

[AMS] I will need to follow up on this further - the current response I have received is Council would like to carry out the model runs in house.

Any question please do not hesitate to let me know, thank you.

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

jack.c@chester.co.nz

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From: Angus Simpson <Angus.Simpson@fndc.govt.nz>

Sent: Wednesday, 13 May 2026 12:08 pm

To: Jack Chen <jack.c@chester.co.nz>

Cc: Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>; Chris Moller <chris@gemscott.co.nz>; Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Subject: Re: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi Jack,

The timeframe for Council's review and decision will largely depend on how clearly and comprehensively the assessment demonstrates that any adverse effects have been appropriately avoided or mitigated.

I would recommend meeting prior to commencing the assessment to discuss the proposed methodology and approach. This would help ensure expectations are aligned early and should assist in streamlining the subsequent review and decision-making process.

Provided the assessment adequately addresses Council's concerns, I would not anticipate the review and decision process taking an extended period of time.



Angus Simpson

RC Contractor - Metis
Consultants
Limited - Infrastructure
Engineering

Angus.Simpson@fndc.govt.nz

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From: Jack Chen <jack.c@chester.co.nz>

Sent: Wednesday, May 13, 2026 8:20 AM

To: Angus Simpson <Angus.Simpson@fndc.govt.nz>

Cc: Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>;

Chris Moller <chris@gemscott.co.nz>; Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

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Thank you for your email Angus, appreciated.

Our client would like to know once we have supplied all the assessments required (likely in two weeks), how long would it take Council to confirm the change is acceptable?

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

jack.c@chester.co.nz

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From: Angus Simpson <Angus.Simpson@fndc.govt.nz>

Sent: Tuesday, 12 May 2026 2:33 pm

To: Jack Chen <jack.c@chester.co.nz>

Cc: Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>;
Chris Moller <chris@gemscott.co.nz>; Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Subject: Re: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Afternoon Jack,

The Council considers the high-level assessment supporting the proposed consent variation to be plausible and is potentially willing to consider the change, subject to the provision of the following detailed investigation:

- Catchment-wide 1D/2D hydraulic modelling for pre- and post-development scenarios.

- Assessment of effects for the 50% AEP + climate change, 20% AEP + climate change, and 1% AEP + climate change storm events.
- Comparison of flood depth, extent, duration, and velocity between scenarios.
- The assessment shall consider effects for the whole catchment and localised drain catchment

Please also see attached for further requirements from the resource consent team.

We would be happy to discuss the approach to fit in with your requirements.

Angus Simpson

RC Contractor - Metis
Consultants
Limited - Infrastructure
Engineering

Angus.Simpson@fndc.govt.nz

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From: Jack Chen <jack.c@chester.co.nz>

Sent: Monday, May 11, 2026 10:32 AM

To: Angus Simpson <Angus.Simpson@fndc.govt.nz>

Cc: Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>;
Chris Moller <chris@gemscott.co.nz>; Rinku Millie Mishra <Rinku.MillieMishra@fndc.govt.nz>

Subject: RE: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

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Hi Angus,

Hope you had a great weekend.

Just wondering if you got to discuss about the bund and underground tanks for 57A Hall Road last week? And what are the outcomes? Thanks.

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

jack.c@chester.co.nz

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From: Jack Chen

Sent: Monday, 4 May 2026 4:14 pm

To: Rinku Millie Mishra <rinku.milliemishra@fndc.govt.nz>; angus.simpson@fndc.govt.nz; Chris Moller <chris@gemscott.co.nz>

Cc: Shelley Wharton <shelley.wharton@fndc.govt.nz>; Nadia de la Guerre <Nadia.DeLaGuerre@fndc.govt.nz>; Nat Jull <nat@chester.co.nz>; Jasem Saleh <jasem@gemscott.co.nz>; Andrew Hill <andrew.h@chester.co.nz>; Mike Fox <michael.fox@fndc.govt.nz>

Subject: 57A Hall Road, Kerikeri - Stormwater Engineering Review and Amendment Discussion

Hi all,

Thank you so much for the time to meet and discuss about 57A Hall Road, please see a quick summary of the discussion and actions for next step.

Removal of In-Channel Earth Weir (Bund):

- FNDC Asset team agrees in-principle with the removal of the bund, @angus.simpson@fndc.govt.nz will review the previous approved design calculations and confirm if further information is required for asset team to approve the bund removal.
- [@Rinku Millie Mishra](#) will discuss with Angus regarding formal approval process of this design change, and confirm with Chester about the documentation required.

Underground Tanks and BPO Stormwater management:

- FNDC Asset team agrees in-principle with the conclusion of unattenuated from site will have no adverse effects on flood levels and extents in the Wairoa Stream or its tributaries, and attenuation of peak SW flows for large events would pose a risk of slightly increased downstream flooding by adding to the peak.
- [@Rinku Millie Mishra](#) will confirm via email whether the RC engineering team can support the removal of large event peak flow attenuation requirements, and if any additional information is required to make this decision.
- Angus mentioned water reuse in addition to the proposed stream channel erosion control, which Gemscott and Chester agree can be discussed and included in the revised design if going ahead.

[@Rinku Millie Mishra](#) @angus.simpson@fndc.govt.nz We look forward to hearing back from you as soon as practical given the window to make these adjustments and achieve the best project outcome is relatively short, thank you.

Any question please do not hesitate to let me know.

Ngā mihi / Kind regards,

Jack Chen

Civil Engineer, BEng, MEngNZ

M +64 (0) 21 826 852

Level 2/66 Gillies Street, Kawakawa 0211

jack.c@chester.co.nz

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Project Name:

Te Tui Ora

Project Address:

57A Hall Road, Kerikeri, 0230

Client Name:

for Gemscott Hall Limited

Project Number: 2303

Project Date: August 2026

SKHY Level 4,
38 Khyber Pass Road,
Grafton, Auckland
09 302 3689
PO Box 44376
Point Chevalier
Auckland 1022
www.astudioarchitects.com

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RESOURCE CONSENT

Revision & Date

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2026-08-21

Resource Consent Drawing List	
RC-000	Overall Cover Sheet
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RC-005	Location Plan
RC-006	Proposed Context Plan
RC-007	Overall Site & Landscape Plan
RC-008	Overall Typology Plan
RC-009	Overall Typolgy Schedule
RC-010	Hard & Soft Landscaping Legend
RC-011	Material Schemes
RC-012	Material Schemes
RC-013	Material Schemes
RC-120	Proposed Site and Landscape Plan - Zone A
RC-121	Town Planning Compliance - Zone A
RC-122	Lot Area Schedules - Zone A
RC-140	Proposed Ground Floor Plan - Zone A
RC-150	Proposed Roof Plan - Zone A
RC-160	Sections 1 and 2 - Zone A
RC-161	Section 3 - Zone A
RC-163	Sections A and B - Zone A
RC-164	Section C - Zone A
RC-180	Elevations - Mill Lane and Hall Road - Zone A
RC-181	Elevations - JOAL 101 - Zone A
RC-183	Elevations - Zone A
RC-220	Proposed Site and Landscape Plan - Zone B
RC-221	Town Planning Compliance -Zone B
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RC-230	Proposed Ground Floor Plan - Zone B
RC-232	Proposed Roof Plan - Zone B
RC-235	Sector 1 - Proposed Site and Landscape Plan - Zone B
RC-236	Sector 2 - Proposed Site and Landscape Plan - Zone B
RC-237	Sector 3 - Proposed Site and Landscape Plan - Zone B
RC-240	Sector 1 - Proposed Ground Floor Plan - Zone B
RC-242	Sector 1 - Proposed Roof Plan - Zone B
RC-245	Sector 2 - Proposed Ground Floor Plan - Zone B
RC-247	Sector 2 - Proposed Roof Plan - Zone B
RC-250	Sector 3 - Proposed Ground Floor Plan - Zone B
RC-252	Sector 3 - Proposed Roof Plan - Zone B
RC-260	Sections 1 and 2 - Zone B
RC-261	Sections 3 and 4 - Zone B
RC-262	Sections 5 and 6 - Zone B
RC-263	Sections 7 and 8 - Zone B
RC-264	Section 9 - Zone B
RC-266	Sections A and B - Zone B
RC-267	Sections C and D - Zone B
RC-268	Sections E - Zone B
RC-280	Elevation - Mill Lane - Zone B
RC-281	Elevation - Ranui Road - Zone B
RC-282	Elevations - JOAL 103 - Zone B
RC-283	Elevations - JOAL 104 - Zone B
RC-284	Elevation - North Boundary - Zone B
RC-320	Proposed Site and Landscape Plan - Zone C
RC-321	Town Planning Compliance - Zone C

Resource Consent Drawing List	
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RC-330	Proposed Ground Floor Plan - Zone C
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RC-335	Sector 1 - Proposed Site and Landscape Plan - Zone C
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RC-360	Sections 1 and 2 - Zone C
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RC-365	Sections A and B - Zone C
RC-366	Sections C and D - Zone C
RC-367	Section E - Zone C
RC-370	HIRB Sections - Zone C
RC-371	HIRB Sections - Zone C
RC-380	Elevations - Ranui Avenue and JOAL 105 - Zone C
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RC-382	Elevations - JOAL 106 & 107 - Zone C
RC-383	Elevations - South Boundary - Zone C
RC-384	Elevation - West and Public Reserve Boundary - Zone C
RC-420	Proposed Site and Landscape Plan - Zone D
RC-421	Town Planning Compliance - Zone D
RC-422	Lot Area Schedules - Zone D
RC-430	Proposed Ground Floor Plan - Zone D
RC-432	Proposed Roof Plan - Zone D
RC-435	Sector 1 - Proposed Site and Landscape Plan - Zone D
RC-436	Sector 2 - Proposed Site and Landscape Plan - Zone D
RC-437	Sector 3 - Proposed Site and Landscape Plan - Zone D
RC-440	Sector 1 - Proposed Ground Floor Plan - Zone D
RC-442	Sector 1 - Proposed Roof Plan - Zone D
RC-445	Sector 2 - Proposed Ground Floor Plan - Zone D
RC-447	Sector 2 - Proposed Roof Plan - Zone D
RC-450	Sector 3 - Proposed Ground Floor Plan - Zone D
RC-452	Sector 3 - Proposed Roof Plan - Zone D
RC-460	Sections 1 and 2 - Zone D
RC-461	Sections 3 and 4 - Zone D
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RC-463	Section 7 - Zone D
RC-465	Sections A and B - Zone D
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RC-470	HIRB Sections - Zone D
RC-480	Elevations 1 and 2 - Ranui Avenue - Zone D
RC-481	Elevations 3 and 4 - Sector 1 - Zone D
RC-482	Elevations 5 and 6 - Ranui Avenue and Mill Lane - Zone D
RC-484	Elevations 7 and 8 - JOAL 102 - Zone D
RC-485	Elevation 9 and 10 - JOAL 105 - Zone D
RC-486	Elevation 11 - West Boundary - Zone D
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House Typology Drawing List	
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RC-3136	House Type OM3C - Elevations
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RC-3146	House Type OM3D - Elevations
RC-3150	House Type OM3E - Floor Plan
RC-3156	House Type OM3E - Elevations
RC-3157	House Type OM3E-2 - Floor Plan
RC-3158	House Type OM3E-2 - Elevations
RC-3160	House Type OM3F - Floor Plan
RC-3166	House Type OM3F - Elevations
RC-3170	House Type OM3G - Floor Plan
RC-3176	House Type OM3G - Elevations
RC-3200	House Type OM3J - Floor Plan
RC-3206	House Type OM3J - Elevations
RC-3210	House Type OM3K - Floor Plan
RC-3216	House Type OM3K - Elevations
RC-3220	House Type OM3L - Floor Plan
RC-3221	House Type OM3L - Elevations
RC-3225	House Type OM3L-2 - Floor Plan
RC-3226	House Type OM3L-2 - Elevations
RC-3230	House Type OM3M - Floor Plan
RC-3231	House Type OM3M - Elevations
RC-3240	House Type OM3N - Floor Plan
RC-3241	House Type OM3N - Elevations
RC-3250	House Type OM3O - Floor Plan
RC-3251	House Type OM3O - Elevations
RC-3260	House Type OM3P - Floor Plan
RC-3261	House Type OM3P - Elevations
RC-3270	House Type OM3Q - Floor Plan
RC-3271	House Type OM3Q - Elevations
RC-3310	House Type 3C - Floor Plan
RC-3314	House Type 3C - Elevations
RC-3315	House Type 3D - Floor Plan
RC-3318	House Type 3D - Elevations
RC-3320	House Type 3E - Floor Plan
RC-3323	House Type 3E - Elevations
RC-3330	House Type 3D Duplex - Floor Plan
RC-3338	House Type 3D Duplex - Elevations
RC-3340	House Type 3L - Floor Plan
RC-3343	House Type 3L - Elevations
RC-3350	House Type 3M - Floor Plan
RC-3353	House Type 3M - Elevations
RC-3360	House Type 3N - Floor Plan
RC-3363	House Type 3N - Elevations
RC-3370	House Type 3O - Floor Plan
RC-3375	House Type 3O - Elevations
RC-3380	House Type 3P - Floor Plan
RC-3385	House Type 3P - Elevations
RC-3400	House Type SL4A - Floor Plan
RC-3405	House Type SL4A - Elevations

House Typology Drawing List	
RC-3420	House Type SH3B - Floor Plan
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RC-3430	House Type SH3C - Floor Plan
RC-3435	House Type SH3C - Elevations
RC-3437	House Type SH3C-3 - Floor Plan
RC-3438	House Type SH3C-3 - Elevations
RC-3450	House Type SH3E - Floor Plan
RC-3455	House Type SH3E - Elevations
RC-3510A	House Type SH3BA - Floor Plan
RC-3515A	House Type SH3BA - Elevations
RC-3610A	House Type SH3CA - Floor Plan
RC-3615A	House Type SH3CA - Elevations
RC-3850	House Type SH3F - Floor Plan
RC-3855	House Type SH3F - Elevations
RC-3885	House Type SH3L - Floor Plan
RC-3886	House Type SH3L - Elevations
RC-4025-2	House Type SL4A-2 - Floor Plans
RC-4028-2	House Type SL4A-2 - Floor Plans
RC-4035	House Type SL4B - Floor Plans
RC-4036	House Type SL4B - Elevations
RC-4040	House Type SL4C - Floor Plans
RC-4043	House Type SL4C - Elevations
RC-4045	House Type SL4D - Floor Plans
RC-4048	House Type SL4D - Elevations
RC-4050	House Type SL4E - Floor Plans
RC-4053	House Type SL4E - Elevations
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	Te Tui Ora	57A Hall Road, Kerikeri, 0230	1 : 100	~A Resource Consent			RC-001	A
	for Gemscott Hall Limited		Half scale for reduced A3 drawings				Project No: 2303	
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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Location Plan

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
1 : 5000
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Revision & Date
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	for Gemscott Hall Limited Drawing Title Proposed Context Plan			Half scale for reduced A3 drawings   Scale 1:1400 @ A3				Project No: 2303 A STUDIO ARCHITECTS

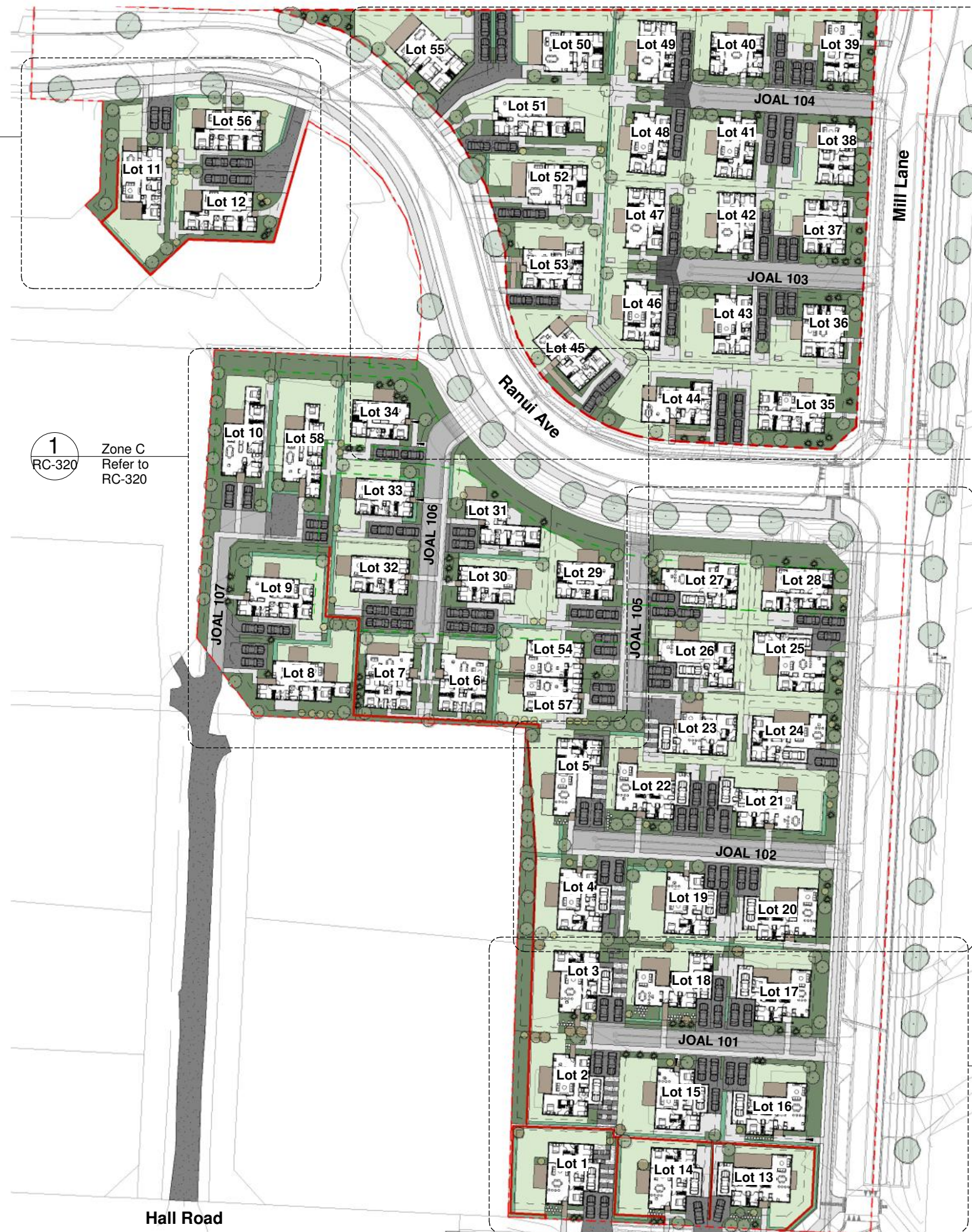
1
RC-420
Zone D
Refer to
RC-420

1
RC-220
Zone B
Refer to
RC-220

1
RC-320
Zone C
Refer to
RC-320

2
RC-420
Zone D
Refer to
RC-420

2
RC-120
Zone A
Refer to
RC-120



Hall Road

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Overall Site & Landscape Plan

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
1 : 500
Half scale for reduced A3 drawings
0 10 20 30m
Scale: 1:1000 @ A3

Revision & Date
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2026-08-21

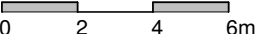
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Drawing No:
RC-007
Project No: 2303
Revision
A
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Typology Reference Summary								
Type		Sheet Reference	Material scheme	Number within each project stage				Total
3 Bedroom Stand Alone Houses				Stage 1	Stage 2	Stage 3	Stage 4	
	Type 3C	RC-3310	3			2		2
	Type 3D	RC-3315	1			3		3
	Type 3E	RC-3320	4			1		1
	Type 3L	RC-3340	3				1	1
	Type 3M	RC-3350	4				1	1
	Type 3N	RC-3360	3				1	1
	Type 3O	RC-3370	3		2			2
	Type 3P	RC-3380	3		1			1
	Type OM3C	RC-3130	7	1				1
	Type OM3D	RC-3140	8 (7 on lot 1&4)	3			2	5
	Type OM3E	RC-3150	9	1				1
	Type OM3E-2	RC-3157	9				1	1
	Type OM3F	RC-3160	9	1				1
	Type OM3G	RC-3170	7	1			1	2
	Type OM3J	RC-3200	7	1				1
	Type OM3K	RC-3210	9	1				1
	Type OM3L	RC-3220	7				2	2
	Type OM3L-2	RC-3225	7				1	1
	Type OM3M	RC-3230	7				1	1
	Type OM3N	RC-3240	8				1	1
	Type OM3O	RC-3250	7				1	1
	Type OM3P	RC-3260	8				1	1
	Type OM3Q	RC-3270	7				1	1
	Type SH3B	RC-3420	10		2			2
	Type SH3C	RC-3430	1		2			2
	Type SH3C-3	RC-3437	1		1			1
	Type SH3E	RC-3450	3		3			3
	Type SH3F	RC-3850	1		1			1
	Type SH3L	RC-3885	1		3			3
3 Bedroom Accessible								
	Type SH3BA	RC-3510A	10		2			2
	Type SH3CA	RC-3610A	10		1			1
3 Bedroom Attached Duplex								
	Type 3D Duplex	RC-3330	1			2		2
Sub Totals 3 bedrooms				9	18	8	15	50

Typology Reference Summary								
Type		Sheet Reference	Material scheme	Number within each project stage				Total
4 Bedroom Houses				Stage 1	Stage 2	Stage 3	Stage 4	
	Type SL4A	RC-3400	4		1			1
	Type SL4A-2	RC-4025-2	1			1		1
	Type SL4B	RC-4035	2			2		2
	Type SL4C	RC-4040	5			1		1
	Type SL4D	RC-4045	6			2		2
	Type SL4E	RC-4050	5		1			1
Sub Totals 4 Bedrooms					2	6		8
Total number of houses				9	20	14	15	58

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	for Gemscott Hall Limited					
	Drawing Title Overall Typolgy Schedule					A STUDIO ARCHITECTS

Hard Landscape Legend	
	Concrete Surface 1
	Concrete Surface 2
	Permeable paving or concrete
	Gravel
	Paving 1
	Decking
	Letter Box
	Thin Tank - 1000L (2400mm L x 260mm W x 1850mm H)
Washing Line	
	min. 28m line space - Refer Landscape drawings for specifications
Bin	
	
Garden Master Shed, Colorsteel finish. Fixed to ground to avoid uplift.	
	Min. - 1.52m X 1.020m Refer Landscape drawings for specifications

Soft Landscape Reference Legend	
Specimen tree symbols	
Plan	Elevation
	
	
	
	
Hedge	
	
Low-level planting	
	
Grass	
	

**Note: All hard and soft landscape elements are shown
indicatively on plans. Please refer to landscape
documentation and drawings for further information.**

Fencing and Retaining Walls	
	1.8m High Fence: Timber paling fence
	1.5m High Fence:
	1.2m High Fence: Open rail picket style fence
	Retaining Wall
Note: retaining walls are shown indicative. Refer to Civil Engineers documents for earth works, site services and final surface levels. Refer landscape drawings for fencing specifications for each fence type.	

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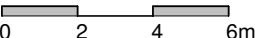
Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Hard & Soft Landscaping Legend

Project Address
57A Hall Road, Kerikeri, 0230

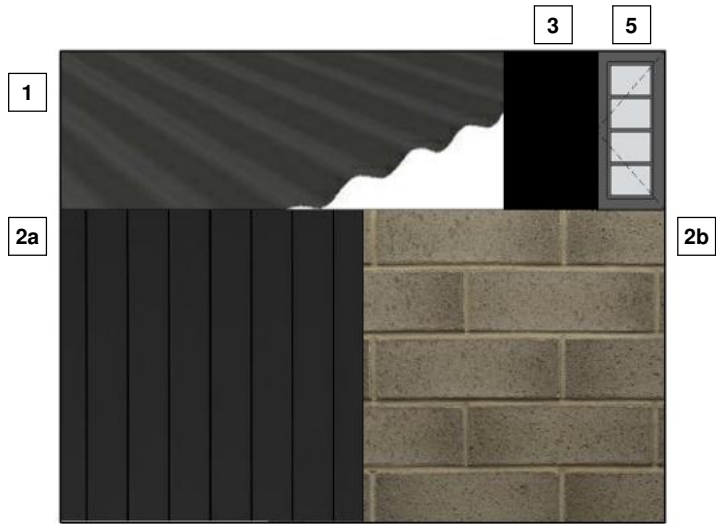
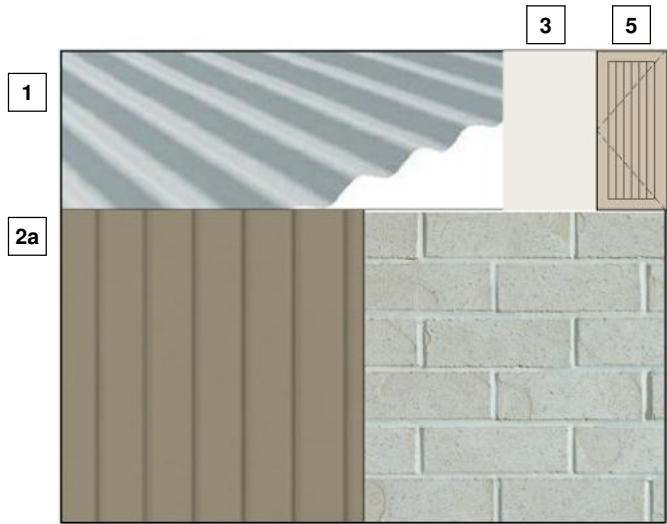
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Exterior Materials & Colours - Scheme 1

Roof

- 1** Metal roofing, ribbed or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Sandscape or Similar**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Timber**
Light natural colour or similar
- 2b** Type: Brick
- Colour: **Light Shade**
Origin range or similar
Shoreline colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **Light to match roof**

Door

- 5** Timber or aluminium powder coated
- Colour: **Timber**

Exterior Materials & Colours - Scheme 2

Roof

- 1** Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Flaxpod or Similar**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Dark**
Resene 'Element' or equivalent
- 2b** Type: Brick
- Colour: **Mid Shade**
Origins range or similar
Chiffon colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **Flax pod or similar**

Door

- 5** Timber paint finish or aluminium powder coated 860mm width door with glass panel.
- Colour: **Dark**

Exterior Materials & Colours - Scheme 3

Roof

- 1** Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Dark shade**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Dark**
Resene 'Element' or equivalent
- 2b** Type: Brick
- Colour: **Light Shade**
La Ploma range or similar
Madrid colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **Dark to match roof**

Door

- 5** Timber paint finish or aluminium powder coated 860mm width door with glass panel.
- Colour: **Dark**

Exterior Materials & Colours - Scheme 4

Roof

- 1** Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Slate or similar**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Dark**
Abodo 'Graphic' or similar
- 2b** Type: Brick
- Colour: **Dark Shade**
La Ploma range or similar
Azul colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **To match roof**

Door

- 5** Timber paint finish or aluminium powder coated 860mm width door with glass panel.
- Colour: **Dark**

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Material Schemes

Project Address
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Drawing Scale @ A1 =
1 : 50

Half scale for reduced A3 drawings

0 1 2 3m

Scale: 1:100 @ A3

Revision & Date
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Drawing No: **RC-011** Revision **A**

Project No: 2303

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Exterior Materials & Colours - Scheme 5

Roof

1

Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.

Finish: Colorsteel or equivalent

Colour: **Dark shade**

Integrated continuous metal fascia and spouting system including downpipes in the same colour and finish to match roofing.

Cladding

2a

Type: James Hardie 'Stria' or similar

Colour: **Dark**
Resene 'Element' or equivalent

2b

Type: Vertical boards

Colour: **Timber**
Resene 'Malta' or equivalent

Joinery

3

Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)

Finish: Powder coated

Colour: **Dark to match roof**

Door

5

Timber paint finish or aluminium powder coated 860mm width door with glass panel.

Colour: **Dark**

Exterior Materials & Colours - Scheme 6

Roof

1

Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.

Finish: Colorsteel or equivalent

Colour: **Light grey shade**

Integrated continuous metal fascia and spouting system including downpipes in the same colour and finish to match roofing.

Cladding

2a

Type: James Hardie 'Stria' or similar

Colour: **Light**
Resene 'Whitewater' or equivalent

2b

Type: Vertical boards

Colour: **Timber**
Resene 'Malta' or equivalent

Joinery

3

Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)

Finish: **Powder coated**

Colour: **Dark to match roof**

Door

5

Timber paint finish or aluminium powder coated 860mm width door with glass panel.

Colour: **Timber**

Exterior Materials & Colours - Scheme 7

Roof

1

Metal roofing, ribbed or trapezoidal profile selected to suit the roof pitch.

Finish: Colorsteel or equivalent

Colour: **Sandscape or Similar**

Integrated continuous metal fascia and spouting system including downpipes in the same colour and finish to match roofing.

Cladding

2a

Type: Vertical boards

Colour: **Timber**
Light natural colour or similar

2b

Type: Brick

Colour: **Light Shade**
Origin range or similar
Shoreline colour or similar

Joinery

3

Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)

Finish: Powder coated

Colour: **Light to match roof**

Door

5

Timber or aluminium powder coated 860mm width door

Colour: **Timber**

Exterior Materials & Colours - Scheme 8

Roof

1

Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.

Finish: Colorsteel or equivalent

Colour: **Flaxpod or similar**

Integrated continuous metal fascia and spouting system including downpipes in the same colour and finish to match roofing.

Cladding

2a

Type: Vertical boards

Colour: **Dark**
Resene 'Element' or equivalent

2b

Type: Brick

Colour: **Mid Shade**
Origins range or similar
Chiffon colour or similar

Joinery

3

Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)

Finish: Powder coated

Colour: **Flax pod or similar**

Door

5

Timber paint finish or aluminium powder coated 860mm width door with glass panel.

Colour: **Dark**

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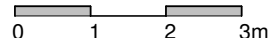
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Drawing Title
Material Schemes

Project Address
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Drawing Scale @ A1 =
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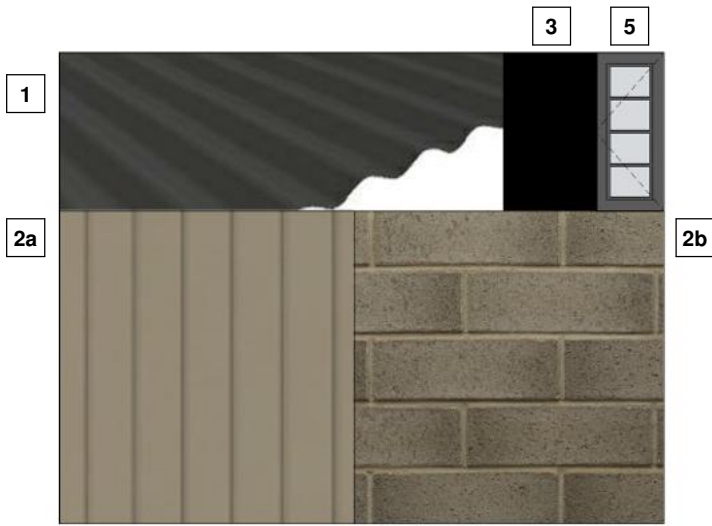
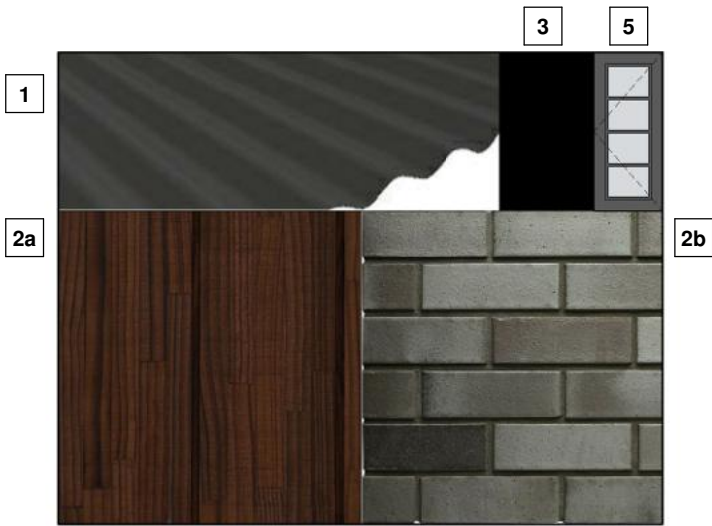
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Exterior Materials & Colours - Scheme 9

Roof

- 1** Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Slate or similar**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Dark**
Abodo 'Graphic' or similar
- 2b** Type: Brick
- Colour: **Dark Shade**
La Ploma range or similar
Azul colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **To match roof**

Door

- 5** Timber paint finish or aluminium powder coated 860mm width door with glass panel.
- Colour: **Dark**

Exterior Materials & Colours - Scheme 10

Roof

- 1** Metal roofing, corrugated or trapezoidal profile selected to suit the roof pitch.
- Finish: Colorsteel or equivalent
- Colour: **Flaxpod or Similar**
- Integrated continuous metal fascia and spouting** system including downpipes in the same colour and finish to match roofing.

Cladding

- 2a** Type: Vertical boards
- Colour: **Timber**
Light natural colour or similar
- 2b** Type: Brick
- Colour: **Mid Shade**
Origins range or similar
Chiffon colour or similar

Joinery

- 3** Nominal 40mm aluminum joinery suite with clear double glazing to living spaces and bedrooms and obscure glazing to Bathrooms & Ensuites. (Opalucet or Etchlite or similar)
- Finish: Powder coated
- Colour: **Flax pod or similar**

Door

- 5** Timber paint finish or aluminium powder coated 860mm width door with glass panel.
- Colour: **Dark**

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Material Schemes

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
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Half scale for reduced A3 drawings

0 1 2 3m

Scale: 1:100 @ A3

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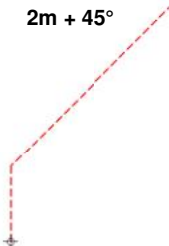
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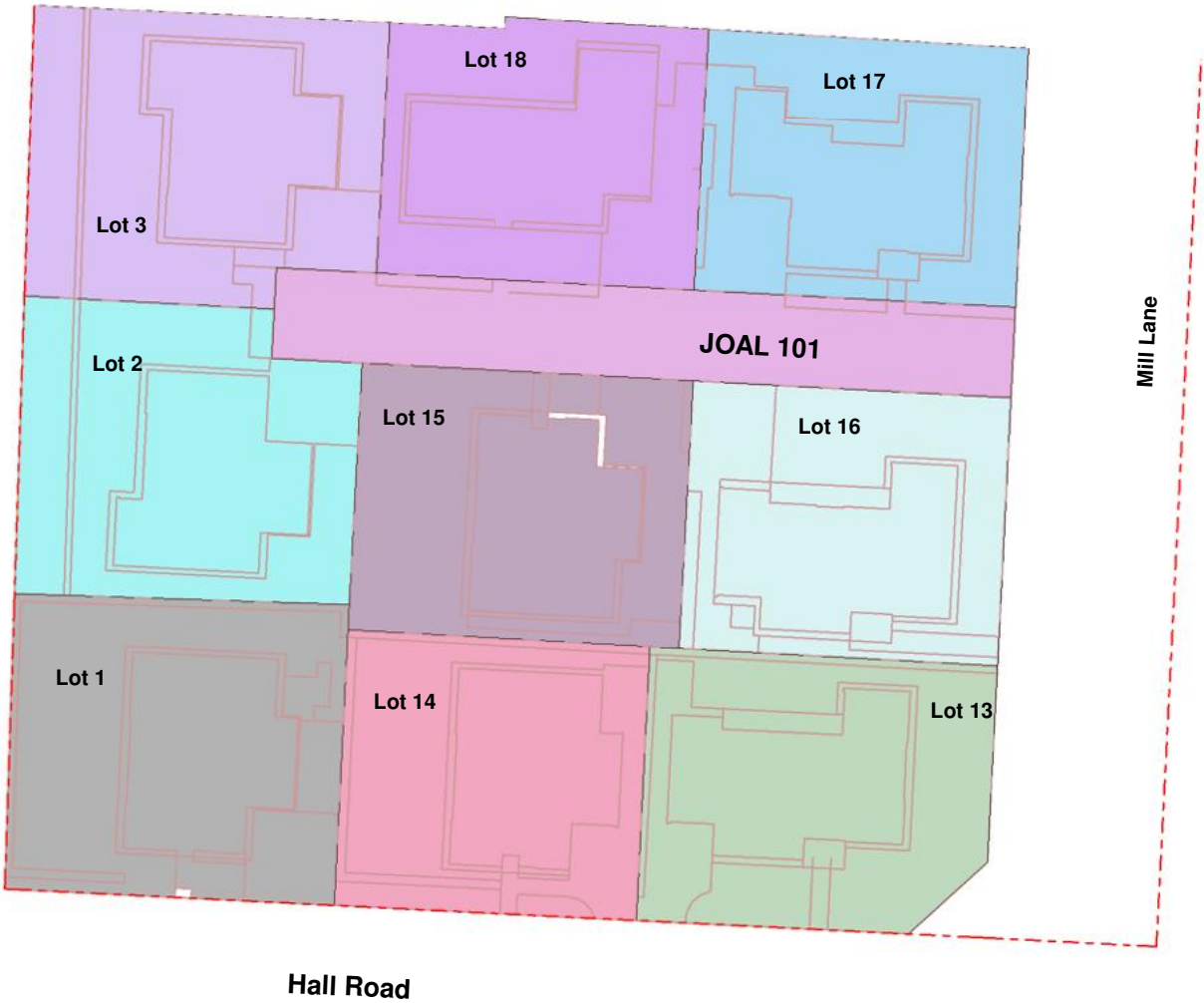
Drawing No: **RC-013** Revision **A**

Project No: 2303

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Town Planning Summary		
Far North District Plan Section 6 - Residential Zone		
7.6.5.1.4 Building Height		
8m		Complies
7.6.5.1.5 Sunlight		
External boundaries	 2m + 45°	Complies
Internal boundaries	 3m + 45°	Complies
7.6.5.1.6 Stormwater Management		
The maximum proportion of the gross site area covered by buildings and other impermeable surfaces		
Lots 1 -11	50%.	Complies except for lot 2 @ 51%
Lots 12 - 56	65%	Complies
Refer to 'note'		
7.6.5.1.7 Set Back from Boundaries		
Road boundaries	3m	Complies
Minimum 50% landscaping required in the front 2m from road boundary		
Other boundaries.	1.2m	Complies
7.6.5.1.17 Building Coverage		
45%		Complies

Note:	
Stormwater Management	
3.	The maximum proportion of the gross site area covered by buildings and other impermeable surfaces for any individual site created for a dwelling must not exceed:
i.	Lots 12-56 (65%); and
ii.	Lots 1-11 (50%)



- Lot Areas -	
Name	Area
JOAL 101	295 m²
Lot 1	435 m²
Lot 2	416 m²
Lot 3	435 m²
Lot 13	406 m²
Lot 14	367 m²
Lot 15	387 m²
Lot 16	375 m²
Lot 17	369 m²
Lot 18	364 m²
	3847 m²

Note:
Lot Areas excluding shared JOAL 101

1 1 : 250 Plan
- Site Coverage Plan

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 5 10 15m Scale: 1:500 @ A3			Project No: 2303	A STUDIO ARCHITECTS

- JOAL 101 -		
Coverage Type	Area	Percentage
Impervious	277.1 m²	94.1%
Landscape	17.4 m²	5.9%
	294.5 m²	100.0%

JOAL 101 is shared between 6 lots (Lots 2, 3, 15, 16, 17, & 18).

- Site Coverage - Lot 1		
Coverage Type	Area	Percentage
Building	154.5 m²	35.5%
Impervious	62.1 m²	14.3%
Landscape	218.1 m²	50.2%
	434.8 m²	100.0%

- Site Coverage - Lot 2		
Coverage Type	Area	Percentage
Building	138.4 m²	33.2%
Impervious	54.9 m²	13.2%
Landscape	222.9 m²	53.6%
	416.2 m²	100.0%

- Site Coverage - Lot 3		
Coverage Type	Area	Percentage
Building	138.4 m²	31.8%
Impervious	55.9 m²	12.8%
Landscape	240.8 m²	55.4%
	435.1 m²	100.0%

- Site Coverage - Lot 13		
Coverage Type	Area	Percentage
Building	166.4 m²	41.0%
Impervious	63.3 m²	15.6%
Landscape	175.9 m²	43.4%
	405.7 m²	100.0%

- Total Impervious - Lot 1		
Coverage Type	Area	Percentage
Impervious	216.7 m²	49.8%
Landscape	218.1 m²	50.2%
	434.8 m²	100.0%

- Total Impervious - Lot 2		
Coverage Type	Area	Percentage
Impervious	193.2 m²	46.4%
Landscape	222.9 m²	53.6%
	416.2 m²	100.0%

Total Impervious Area including a share of JOAL 101 (1/6) = 51%

- Total Impervious - Lot 3		
Coverage Type	Area	Percentage
Impervious	194.3 m²	44.6%
Landscape	240.8 m²	55.4%
	435.1 m²	100.0%

Total Impervious Area including a share of JOAL 101 (1/6) = 49.5%

- Total Impervious - Lot 13		
Coverage Type	Area	Percentage
Impervious	229.8 m²	56.6%
Landscape	175.9 m²	43.4%
	405.7 m²	100.0%

- Site Coverage - Lot 14		
Coverage Type	Area	Percentage
Building	156.0 m²	42.5%
Impervious	69.5 m²	18.9%
Landscape	141.8 m²	38.6%
	367.3 m²	100.0%

- Site Coverage - Lot 15		
Coverage Type	Area	Percentage
Building	129.8 m²	33.6%
Impervious	91.2 m²	23.6%
Landscape	165.7 m²	42.8%
	386.7 m²	100.0%

- Site Coverage - Lot 16		
Coverage Type	Area	Percentage
Building	148.2 m²	39.6%
Impervious	83.8 m²	22.4%
Landscape	142.7 m²	38.1%
	374.7 m²	100.0%

- Site Coverage - Lot 17		
Coverage Type	Area	Percentage
Building	138.0 m²	37.4%
Impervious	74.9 m²	20.3%
Landscape	155.9 m²	42.3%
	368.8 m²	100.0%

- Site Coverage - Lot 18		
Coverage Type	Area	Percentage
Building	140.2 m²	38.6%
Impervious	80.9 m²	22.2%
Landscape	142.6 m²	39.2%
	363.7 m²	100.0%

- Total Impervious - Lot 14		
Coverage Type	Area	Percentage
Impervious	225.5 m²	61.4%
Landscape	141.8 m²	38.6%
	367.3 m²	100.0%

- Total Impervious - Lot 15		
Coverage Type	Area	Percentage
Impervious	221.0 m²	57.2%
Landscape	165.7 m²	42.8%
	386.7 m²	100.0%

Total Impervious Area including a share of JOAL 101 (1/6) = 61.4%

- Total Impervious - Lot 16		
Coverage Type	Area	Percentage
Impervious	232.0 m²	61.9%
Landscape	142.7 m²	38.1%
	374.7 m²	100.0%

Total Impervious Area including a share of JOAL 101 (1/6) = 65%

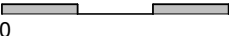
- Total Impervious - Lot 17		
Coverage Type	Area	Percentage
Impervious	212.9 m²	57.7%
Landscape	155.9 m²	42.3%
	368.8 m²	100.0%

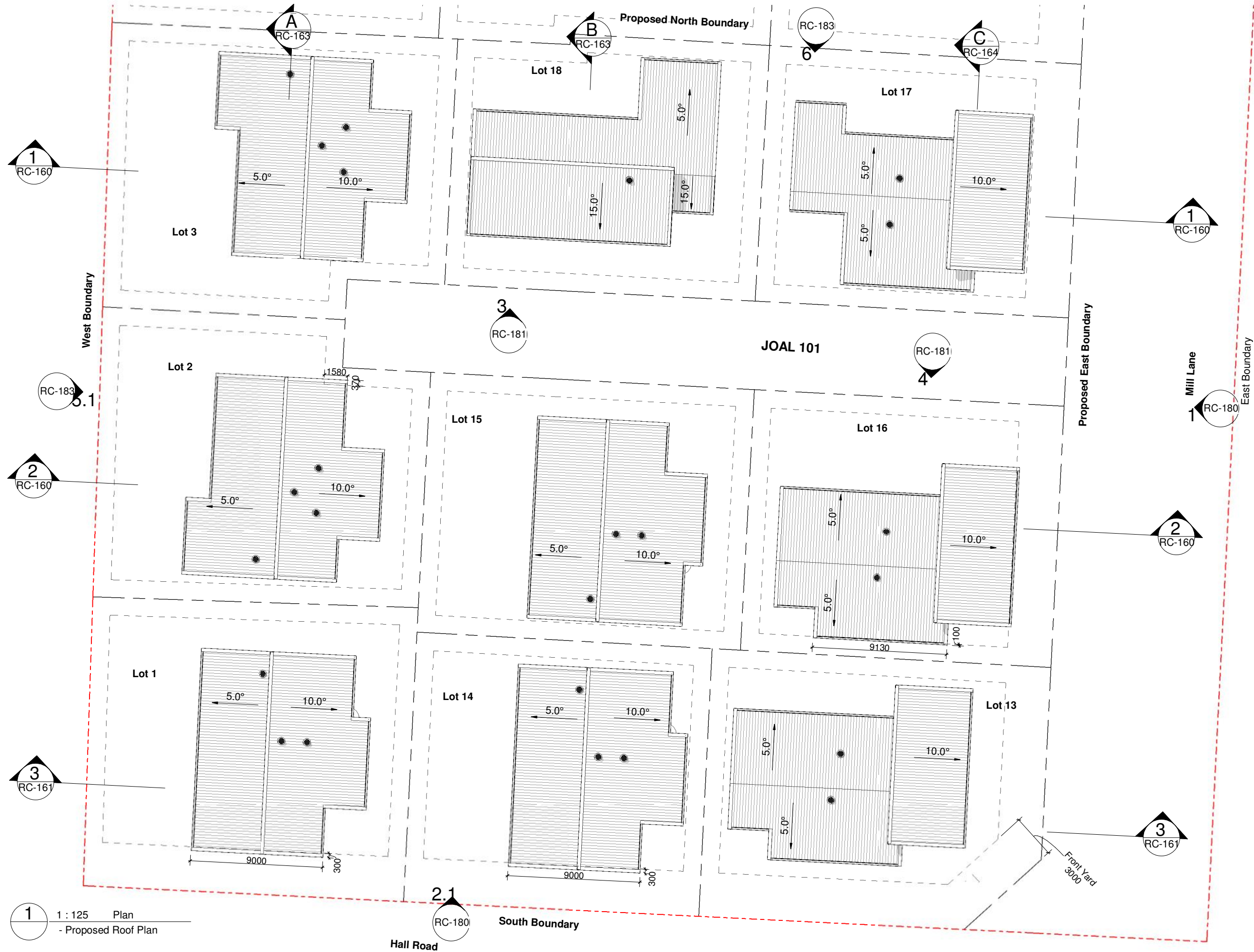
Total Impervious Area including a share of JOAL 101 (1/6) = 62%

- Total Impervious - Lot 18		
Coverage Type	Area	Percentage
Impervious	221.2 m²	60.8%
Landscape	142.6 m²	39.2%
	363.7 m²	100.0%

Total Impervious Area including a share of JOAL 101 (1/6) = 64.5%

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	for Gemscott Hall Limited						
	Drawing Title Lot Area Schedules - Zone A					A STUDIO ARCHITECTS	



Key

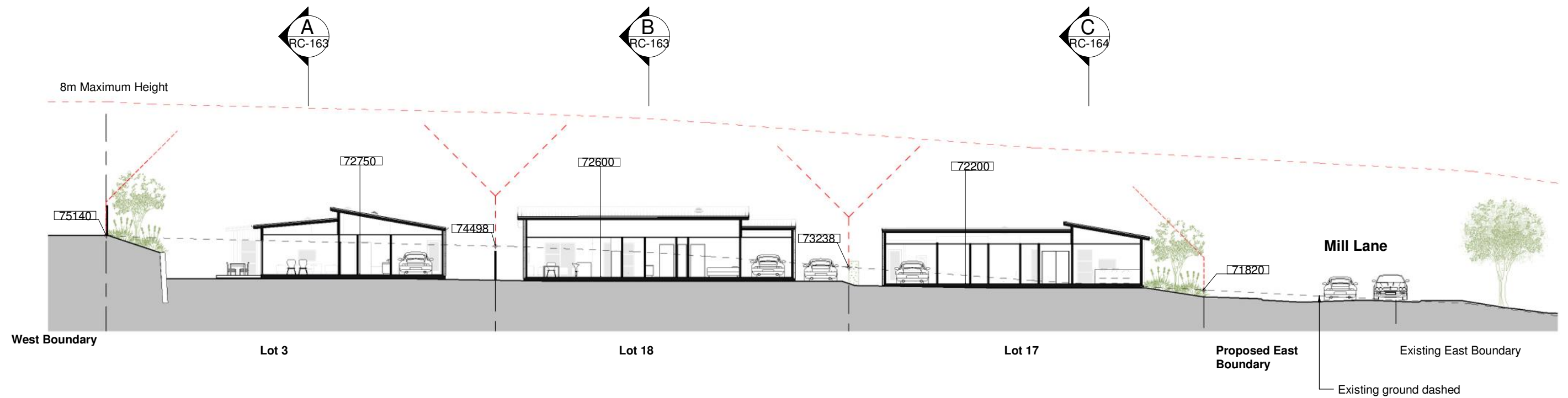
- Yard Setbacks
- Setback Infringement

Note: eaves of any building and any roof, gutter or downpipe may project over any setback by not more than 600 mm

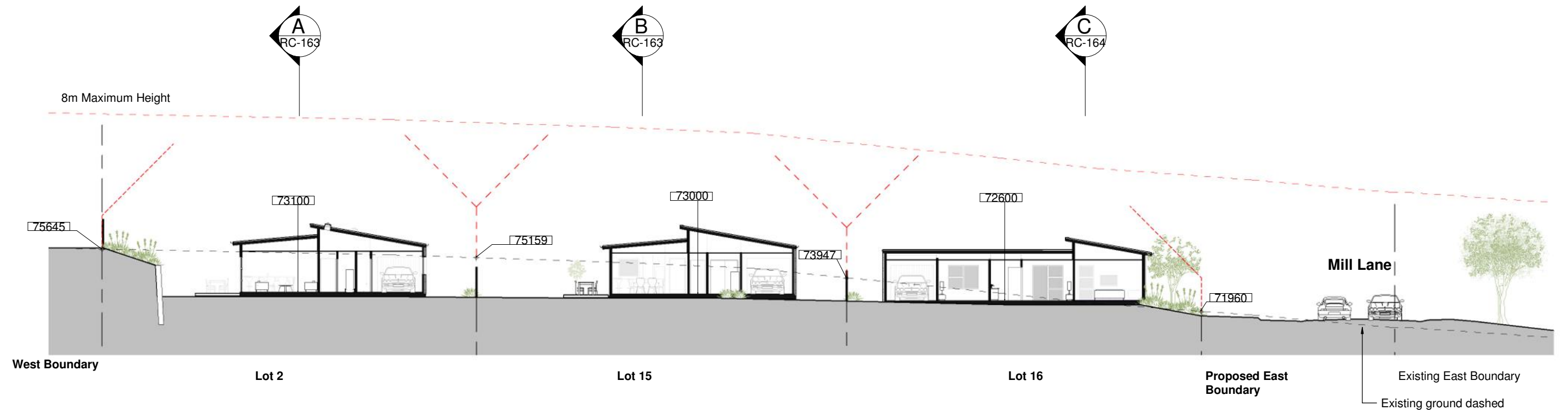
Note:

For Town Planning Summary refer to RC-115

RESOURCE CONSENT



1 1 : 125 Section
RC-120 - Section 1

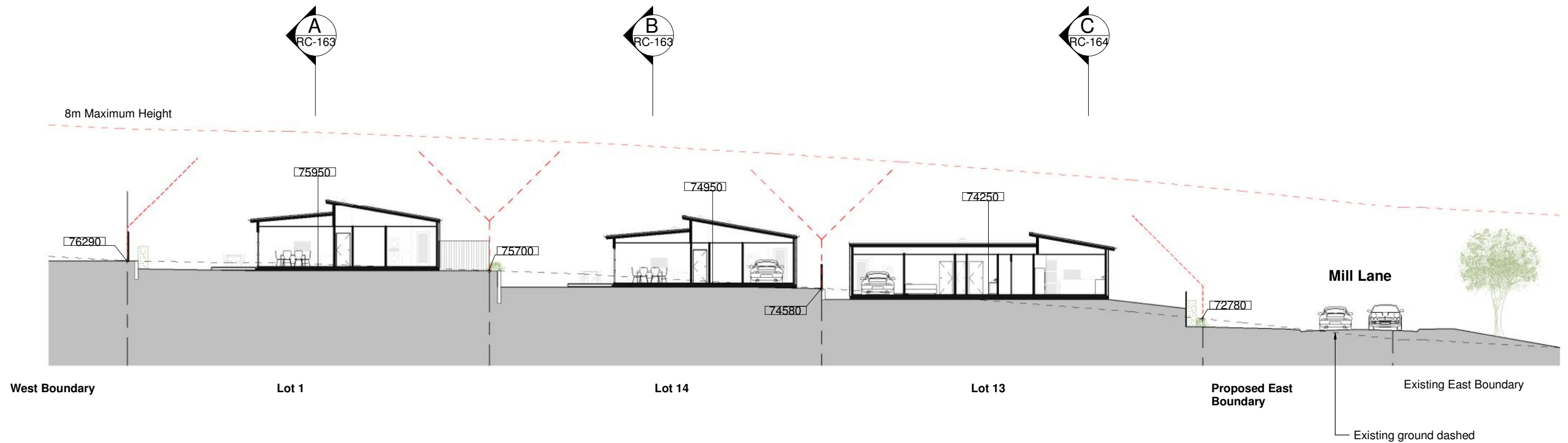


2 1 : 125 Section
RC-120 - Section 2

Note:
For Town Planning Summary refer to
RC-115

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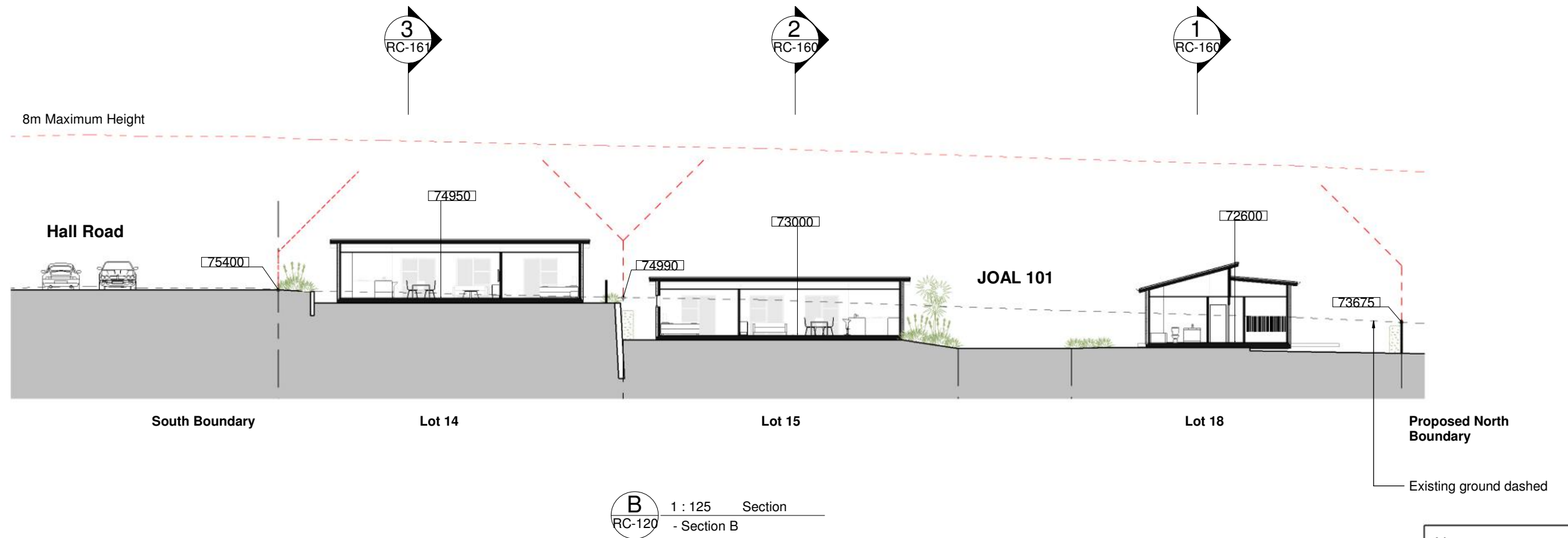
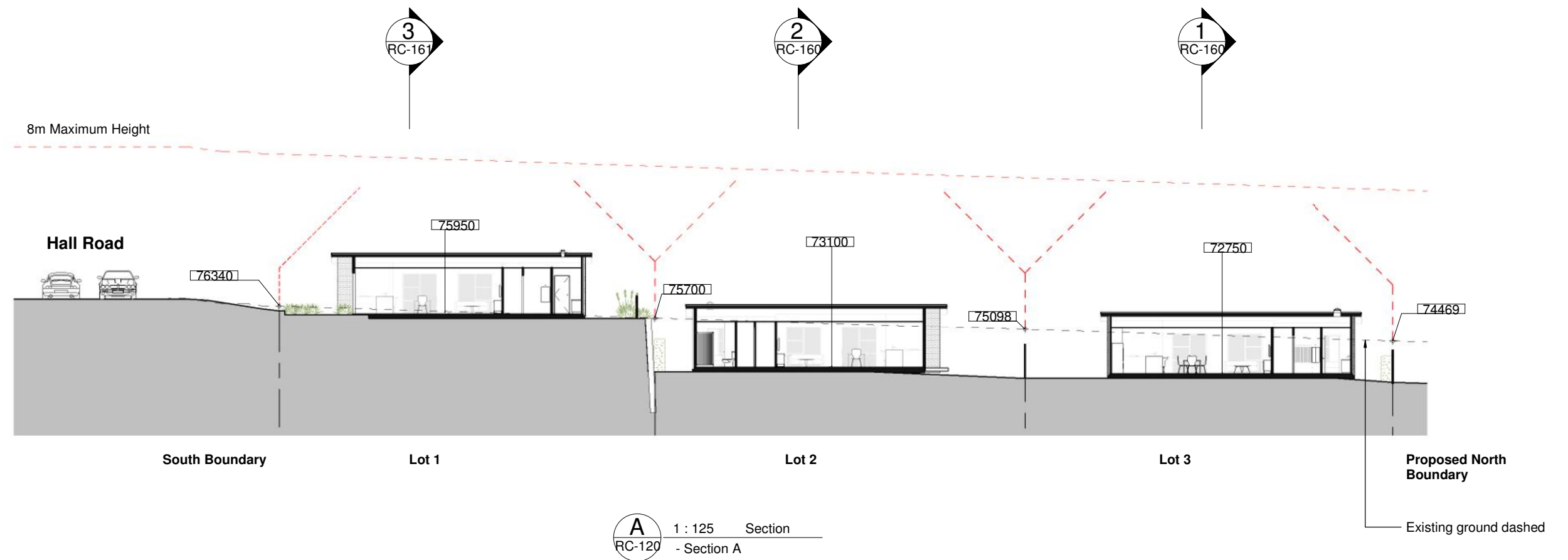


3 1 : 125 Plan
RC-120 - Section 3

Note:
For Town Planning Summary refer to
RC-115

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Note:

For Town Planning Summary refer to
RC-115

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sections A and B - Zone A

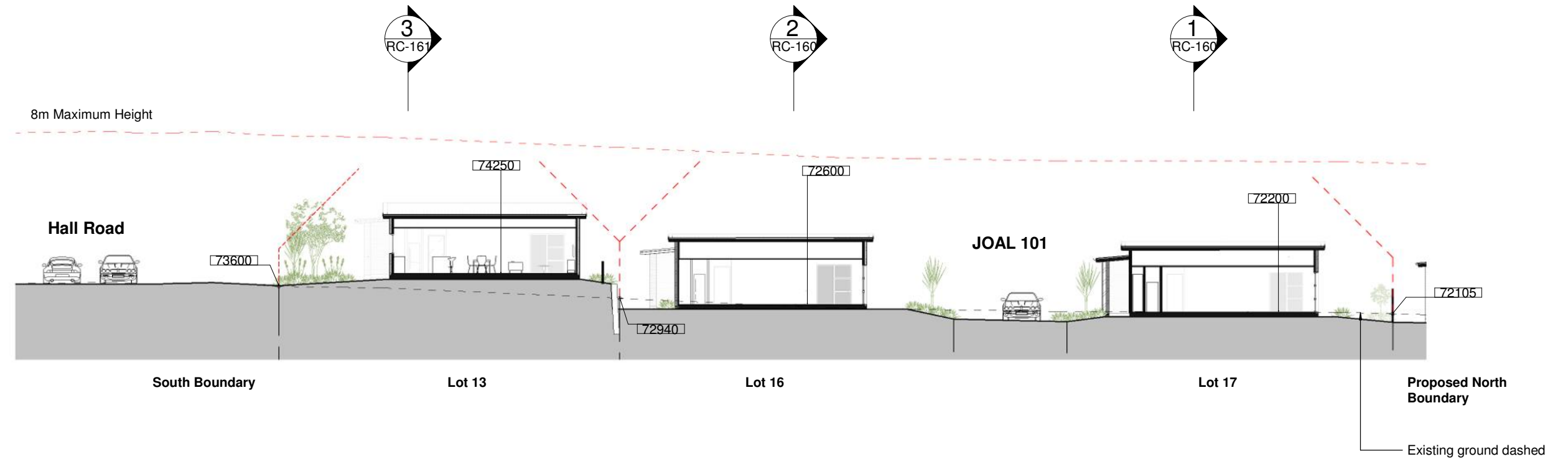
Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
° A Resource Consent 2026-08-21

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Drawing No: **RC-163** Revision **A**
Project No: 2303
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C
RC-120 1 : 125 Section
- Section C

Note:

For Town Planning Summary refer to
RC-115

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	for Gemscott Hall Limited Drawing Title Section C - Zone A					A STUDIO ARCHITECTS	



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West Boundary

Lot 3
House Type OM3J
Material Scheme 7

Lot 18
House Type OM3C
Material Scheme 7

Lot 17
House Type OM3F
Material Scheme 9

Proposed East
Boundary

Existing East Boundary

3 1 : 125 Elevation
RC-120 - Elevation 3 - JOAL 101



Existing East Boundary

Proposed East
Boundary

Lot 16
House Type OM3G
Material Scheme 7

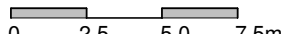
Lot 15
House Type OM3D
Material Scheme 8

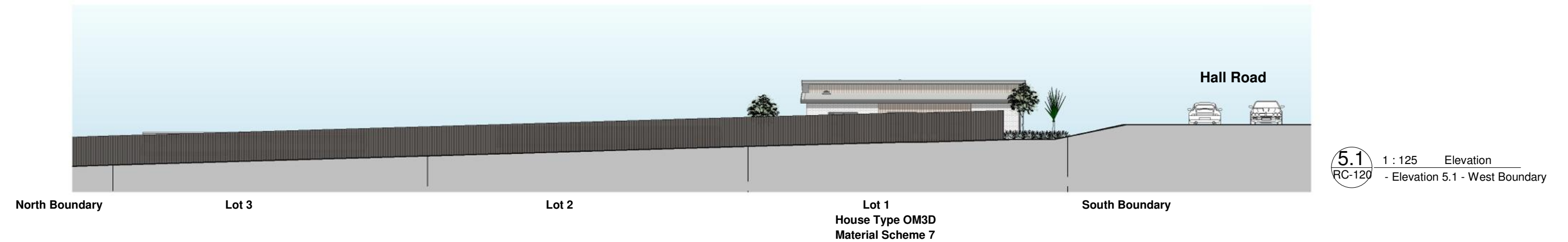
Lot 2
House Type OM3K
Material Scheme 9

West Boundary

4 1 : 125 Plan
RC-120 - Elevation 4 - JOAL 101

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Key	
	Yard Setbacks
	Easement
	Proposed finished floor level

Note

This plan shows the landscaping indicatively. Please refer to Landscape engineer's documentation and drawings for further information.

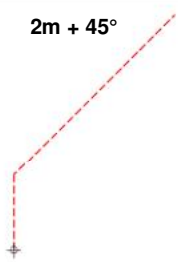
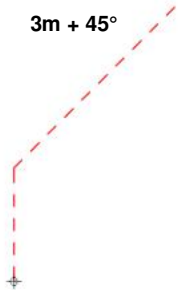
For Hard and Soft Landscaping Legend refer to **RC-010**

RESOURCE CONSENT

1 1 : 250 Plan
RC-007 -- Proposed Site and Landscape Plan

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings			
	Drawing Title Proposed Site and Landscape Plan - Zone B		 Scale: 1:500 @ A3			

A STUDIO ARCHITECTS

Town Planning Summary		
Far North District Plan Section 6 - Residential Zone		
7.6.5.1.4 Building Height		
8m		Complies
7.6.5.1.5 Sunlight		
External boundaries	 2m + 45°	Complies
Internal boundaries	 3m + 45°	Complies
7.6.5.1.6 Stormwater Management		
The maximum proportion of the gross site area covered by buildings and other impermeable surfaces		Complies except for Lot 40, Lot 50, Lot 46 Refer to Sheet - RC 216
Lots 1 -11	50%.	
Lots 12 - 56	65%	
Refer to 'note'		
7.6.5.1.7 Set Back from Boundaries		
Road boundaries	3m	Minor Infringements refer RC-242, 247, 250, 252
Minimum 50% landscaping required in the front 2m from road boundary		
Other boundaries.	1.2m	Complies
7.6.5.1.17 Building Coverage		
45%		Complies

Note:	
Stormwater Management	
3.	The maximum proportion of the gross site area covered by buildings and other impermeable surfaces for any individual site created for a dwelling must not exceed: i. Lots 12-56 (65%); and ii. Lots 1-11 (50%)



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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Town Planning Compliance -Zone B

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 5 10 15m
Scale: 1:500 @ A3

Revision & Date
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Drawing No: **RC-221** Revision **A**
Project No: 2303
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RESOURCE CONSENT

-- Site Coverage - Lot 35		
Coverage Type	Area	Percentage
Building	123.9 m ²	28.0%
Impervious	75.8 m ²	17.2%
Landscape	242.4 m ²	54.8%
	442.1 m ²	100.0%

-- Total Impervious - Lot 35		
Coverage Type	Area	Percentage
Impervious	199.7 m ²	45.2%
Landscape	242.4 m ²	54.8%
	442.1 m ²	100.0%

-- Site Coverage - Lot 36		
Coverage Type	Area	Percentage
Building	108.3 m ²	35.7%
Impervious	74.5 m ²	24.5%
Landscape	120.7 m ²	39.8%
	303.5 m ²	100.0%

-- Total Impervious - Lot 36		
Coverage Type	Area	Percentage
Impervious	182.8 m ²	60.2%
Landscape	120.7 m ²	39.8%
	303.5 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) = 64.5%

-- Site Coverage - Lot 37		
Coverage Type	Area	Percentage
Building	109.2 m ²	36.4%
Impervious	70.3 m ²	23.4%
Landscape	120.5 m ²	40.2%
	300.0 m ²	100.0%

-- Total Impervious - Lot 37		
Coverage Type	Area	Percentage
Impervious	179.5 m ²	59.8%
Landscape	120.5 m ²	40.2%
	300.0 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) = 64.2%

-- Site Coverage - Lot 38		
Coverage Type	Area	Percentage
Building	97.5 m ²	31.9%
Impervious	83.3 m ²	27.3%
Landscape	124.7 m ²	40.8%
	305.5 m ²	100.0%

-- Total Impervious - Lot 38		
Coverage Type	Area	Percentage
Impervious	180.8 m ²	59.2%
Landscape	124.7 m ²	40.8%
	305.5 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 64%

-- Site Coverage - Lot 39		
Coverage Type	Area	Percentage
Building	97.4 m ²	32.3%
Impervious	76.9 m ²	25.5%
Landscape	127.2 m ²	42.2%
	301.5 m ²	100.0%

-- Total Impervious - Lot 39		
Coverage Type	Area	Percentage
Impervious	174.3 m ²	57.8%
Landscape	127.2 m ²	42.2%
	301.5 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 62.6%

-- Site Coverage - Lot 40		
Coverage Type	Area	Percentage
Building	111.2 m ²	36.8%
Impervious	76.4 m ²	25.3%
Landscape	114.3 m ²	37.9%
	302.0 m ²	100.0%

-- Total Impervious - Lot 40		
Coverage Type	Area	Percentage
Impervious	187.6 m ²	62.1%
Landscape	114.3 m ²	37.9%
	302.0 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 66.4%

-- Site Coverage - Lot 41		
Coverage Type	Area	Percentage
Building	96.1 m ²	31.7%
Impervious	80.3 m ²	26.5%
Landscape	127.1 m ²	41.9%
	303.5 m ²	100.0%

-- Total Impervious - Lot 41		
Coverage Type	Area	Percentage
Impervious	176.4 m ²	58.1%
Landscape	127.1 m ²	41.9%
	303.5 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 63%

-- Site Coverage - Lot 42		
Coverage Type	Area	Percentage
Building	97.9 m ²	32.5%
Impervious	73.1 m ²	24.3%
Landscape	130.2 m ²	43.2%
	301.2 m ²	100.0%

-- Total Impervious - Lot 42		
Coverage Type	Area	Percentage
Impervious	171.0 m ²	56.8%
Landscape	130.2 m ²	43.2%
	301.2 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) = 61.45%

-- Site Coverage - Lot 43		
Coverage Type	Area	Percentage
Building	97.9 m ²	31.6%
Impervious	73.0 m ²	23.6%
Landscape	138.8 m ²	44.8%
	309.7 m ²	100.0%

-- Total Impervious - Lot 43		
Coverage Type	Area	Percentage
Impervious	170.8 m ²	55.2%
Landscape	138.8 m ²	44.8%
	309.7 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) = 59.8%

-- Site Coverage - Lot 44		
Coverage Type	Area	Percentage
Building	119.9 m ²	29.8%
Impervious	98.6 m ²	24.5%
Landscape	184.0 m ²	45.7%
	402.5 m ²	100.0%

-- Total Impervious - Lot 44		
Coverage Type	Area	Percentage
Impervious	218.4 m ²	54.3%
Landscape	184.0 m ²	45.7%
	402.5 m ²	100.0%

-- Site Coverage - Lot 45		
Coverage Type	Area	Percentage
Building	119.8 m ²	32.6%
Impervious	97.0 m ²	26.3%
Landscape	151.2 m ²	41.1%
	368.0 m ²	100.0%

-- Total Impervious - Lot 45		
Coverage Type	Area	Percentage
Impervious	216.7 m ²	58.9%
Landscape	151.2 m ²	41.1%
	368.0 m ²	100.0%

-- Site Coverage - Lot 46		
Coverage Type	Area	Percentage
Building	98.1 m ²	32.7%
Impervious	84.3 m ²	28.1%
Landscape	117.7 m ²	39.2%
	300.1 m ²	100.0%

-- Total Impervious - Lot 46		
Coverage Type	Area	Percentage
Impervious	182.4 m ²	60.8%
Landscape	117.7 m ²	39.2%
	300.1 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) =65.03%

-- Site Coverage - Lot 47		
Coverage Type	Area	Percentage
Building	97.9 m ²	32.3%
Impervious	80.2 m ²	26.4%
Landscape	125.0 m ²	41.3%
	303.0 m ²	100.0%

-- Total Impervious - Lot 47		
Coverage Type	Area	Percentage
Impervious	178.0 m ²	58.7%
Landscape	125.0 m ²	41.3%
	303.0 m ²	100.0%

Total Impervious Area including a share of
JOAL 103 (1/6) = 63.2%

-- Site Coverage - Lot 48		
Coverage Type	Area	Percentage
Building	97.9 m ²	30.9%
Impervious	77.4 m ²	24.5%
Landscape	141.3 m ²	44.6%
	316.6 m ²	100.0%

-- Total Impervious - Lot 48		
Coverage Type	Area	Percentage
Impervious	175.3 m ²	55.4%
Landscape	141.3 m ²	44.6%
	316.6 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 60.2%

-- Site Coverage - Lot 49		
Coverage Type	Area	Percentage
Building	98.1 m ²	32.7%
Impervious	73.0 m ²	24.4%
Landscape	128.5 m ²	42.9%
	299.6 m ²	100.0%

-- Total Impervious - Lot 49		
Coverage Type	Area	Percentage
Impervious	171.1 m ²	57.1%
Landscape	128.5 m ²	42.9%
	299.6 m ²	100.0%

Total Impervious Area including a share of
JOAL 104 (1/6) = 62%

-- Site Coverage - Lot 50		
Coverage Type	Area	Percentage
Building	144.2 m ²	31.9%
Impervious	161.1 m ²	35.6%
Landscape	147.2 m ²	32.5%
	452.5 m ²	100.0%

-- Total Impervious - Lot 50		
Coverage Type	Area	Percentage
Impervious	305.3 m ²	67.5%
Landscape	147.2 m ²	32.5%
	452.5 m ²	100.0%

-- Site Coverage - Lot 51		
Coverage Type	Area	Percentage
Building	127.5 m ²	28.2%
Impervious	85.3 m ²	18.9%
Landscape	238.7 m ²	52.9%
	451.5 m ²	100.0%

-- Total Impervious - Lot 51		
Coverage Type	Area	Percentage
Impervious	212.8 m ²	47.1%
Landscape	238.7 m ²	52.9%
	451.5 m ²	100.0%

-- Site Coverage - Lot 52		
Coverage Type	Area	Percentage
Building	137.9 m ²	38.1%
Impervious	77.5 m ²	21.4%
Landscape	146.6 m ²	40.5%
	362.0 m ²	100.0%

-- Total Impervious - Lot 52		
Coverage Type	Area	Percentage
Impervious	215.3 m ²	59.5%
Landscape	146.6 m ²	40.5%
	362.0 m ²	100.0%

-- Site Coverage - Lot 53		
Coverage Type	Area	Percentage
Building	110.1 m ²	29.7%
Impervious	81.1 m ²	21.9%
Landscape	179.2 m ²	48.4%
	370.4 m ²	100.0%

-- Total Impervious - Lot 53		
Coverage Type	Area	Percentage
Impervious	191.2 m ²	51.6%
Landscape	179.2 m ²	48.4%
	370.4 m ²	100.0%

-- Site Coverage - Lot 55		
Coverage Type	Area	Percentage
Building	129.6 m ²	28.8%
Impervious	92.5 m ²	20.6%
Landscape	227.8 m ²	50.6%
	449.9 m ²	100.0%

-- Total Impervious - Lot 55		
Coverage Type	Area	Percentage
Impervious	222.2 m ²	49.4%
Landscape	227.8 m ²	50.6%
	449.9 m ²	100.0%

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Lot Area Schedules - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =

Half scale for reduced A3 drawings


Revision & Date
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Drawing No: **RC-222** Revision **A**
Project No: 2303
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1 1 : 250 Plan
-- Proposed Ground Floor Plan

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Proposed Ground Floor Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
Scale: 1:500 @ A3

Revision & Date
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Grafton, Auckland
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Drawing No:
RC-230
Project No: 2303
Revision
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1 1 : 250 Plan
-- Proposed Roof Plan

RESOURCE CONSENT



Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-215	

1 1 : 125 Plan
RC-220 -- Proposed Landscape Plan - Sector 1

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Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-215	

2 1 : 125 Plan
RC-220 -- Proposed Landscape Plan - Sector 2

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	A STUDIO ARCHITECTS



3 1 : 125 Plan
RC-220 -- Proposed Landscape Plan - Sector 3

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title

Sector 3 - Proposed Site and Landscape Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

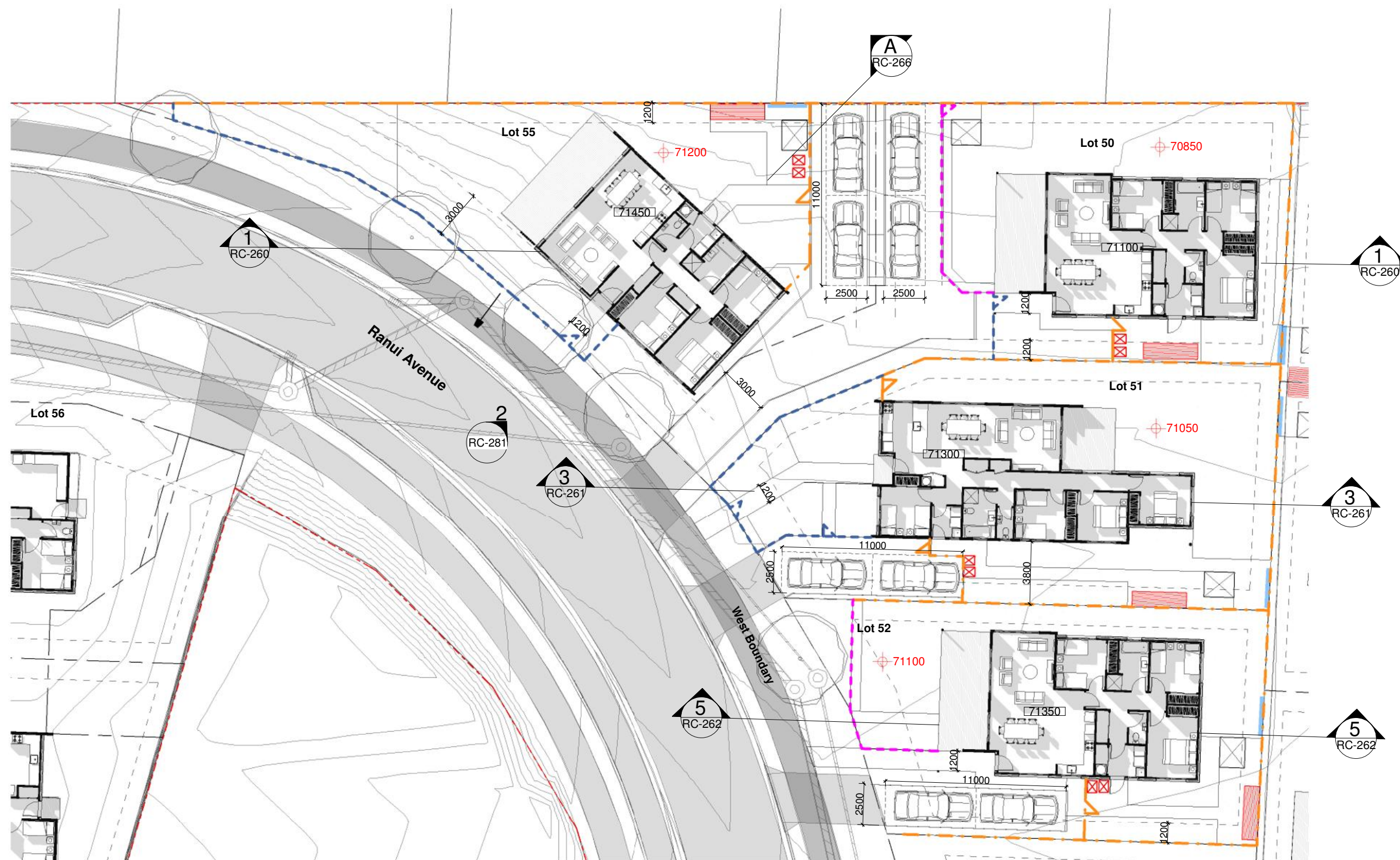
Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Project No: 2303
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Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-215	

1 1 : 125 Plan
RC-230 -- Proposed Ground Floor Plan - Sector 1

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 1 - Proposed Ground Floor Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

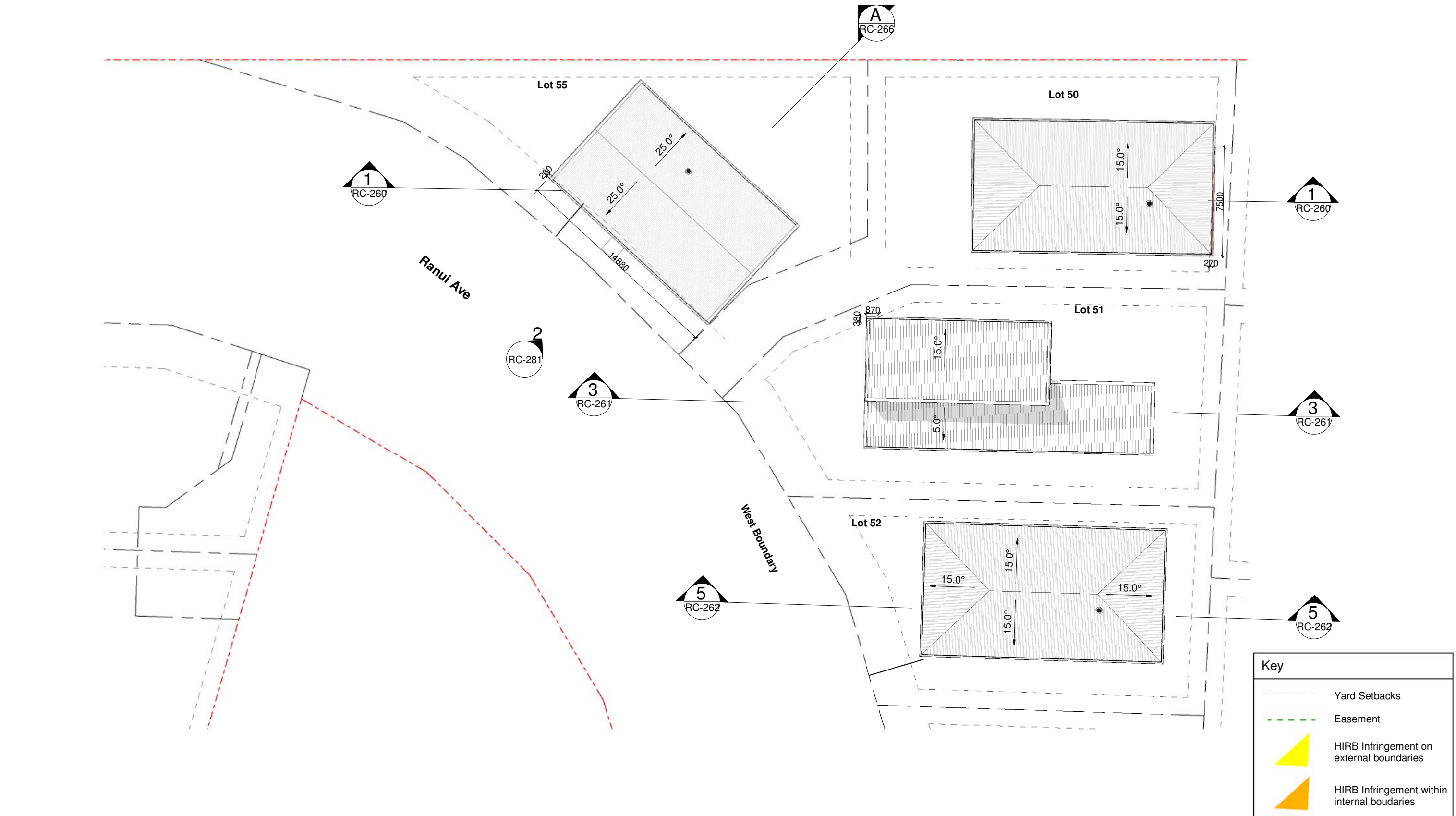
Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Drawing No:
RC-240
Project No: 2303
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1 1 : 125 Plan
RC-232 -- Proposed Roof Plan - Sector 1

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RESOURCE CONSENT



Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note
For Fencing/Retaining Walls and Utility Component legend refer to RC-010
For Town Planning Summary refer to RC-215

2 1 : 125 Plan
RC-230 -- Proposed Ground Floor Plan - Sector 2

RESOURCE CONSENT

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 2 - Proposed Ground Floor Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Drawing No:
RC-245
Project No: 2303
Revision
A
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2 1 : 125 Plan
RC-232 -- Proposed Roof Plan - Sector 2

RESOURCE CONSENT

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--	---	--	--	--	--



3 1 : 125 Plan
RC-230 -- Proposed Ground Floor Plan - Sector 3

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3 Verify all dimensions and levels on site prior to commencing any work
4 All discrepancies are to be referred to the design office for clarification

Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title

Sector 3 - Proposed Ground Floor Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated

Half scale for reduced A3 drawings

0 2.5 5.0 7.5m

Scale: 1:250 @ A3

Revision & Date
A Resource Consent

2026-08-21

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Drawing No:
RC-250

Project No: 2303

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Note

For Fencing/Retaining Walls and Utility Component legend refer to **RC-010**

For Town Planning Summary refer to **RC-215**



3 1 : 125 Plan
RC-232 -- Proposed Roof Plan - Sector 3

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1 Written dimensions are to be used
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3 Verify all dimensions and levels on site prior to commencing any work
4 All discrepancies are to be referred to the design office for clarification

Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 3 - Proposed Roof Plan - Zone B

Project Address
57A Hall Road, Kerikeri, 0230

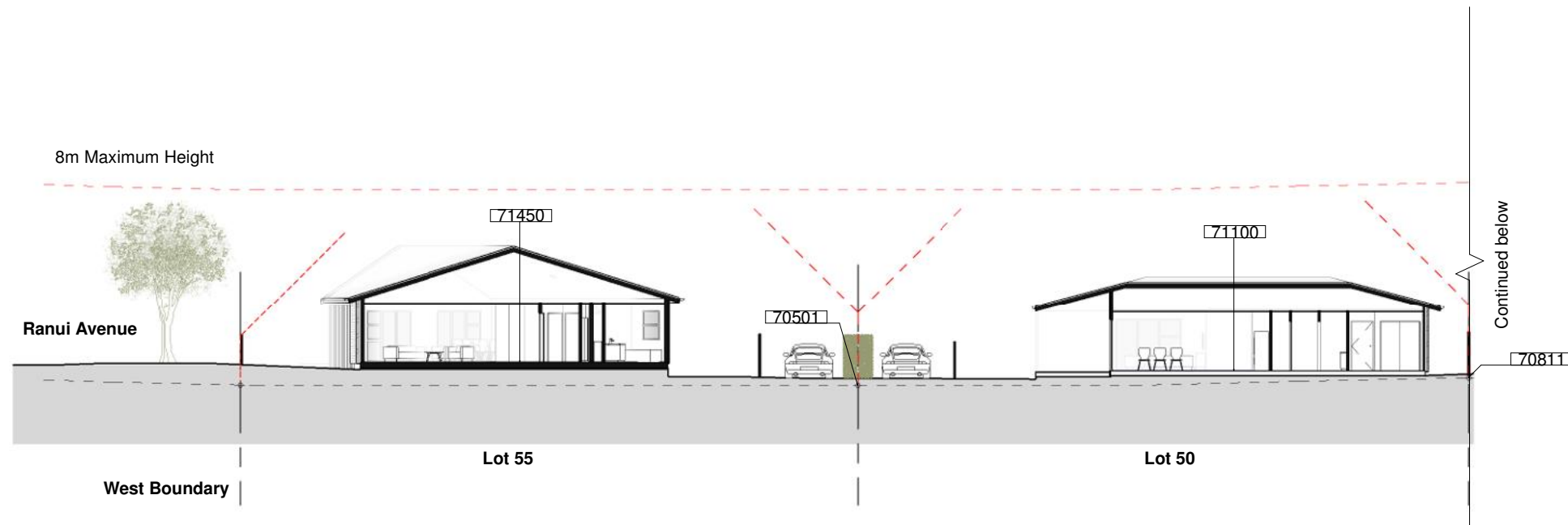
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Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

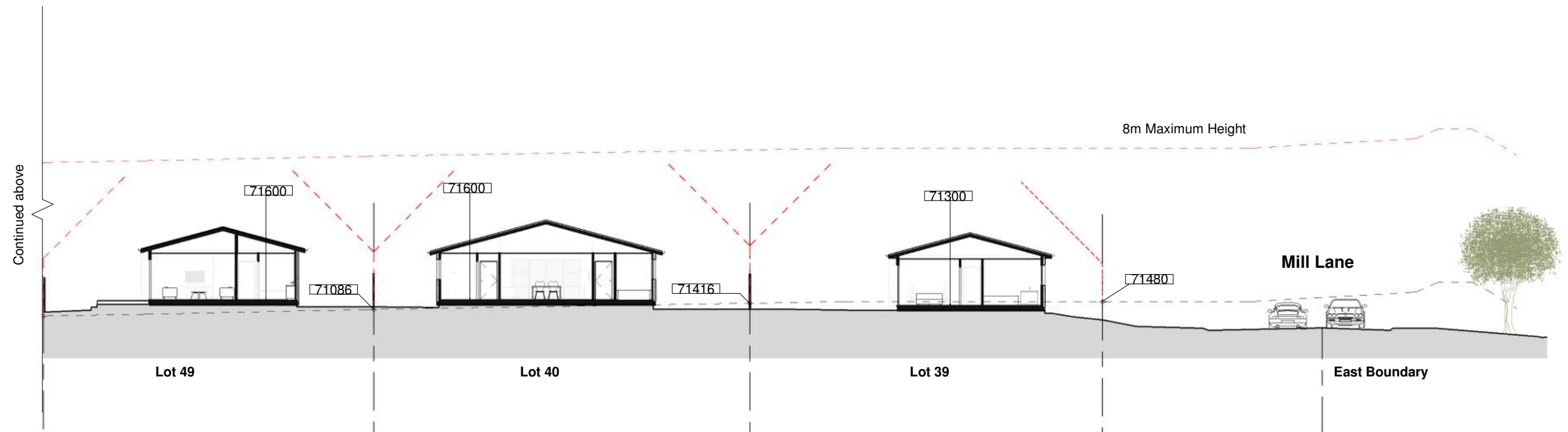
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Drawing No:
RC-252
Project No: 2303
Revision
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RESOURCE CONSENT



1 1 : 125 Plan
RC-220 -- Section 1

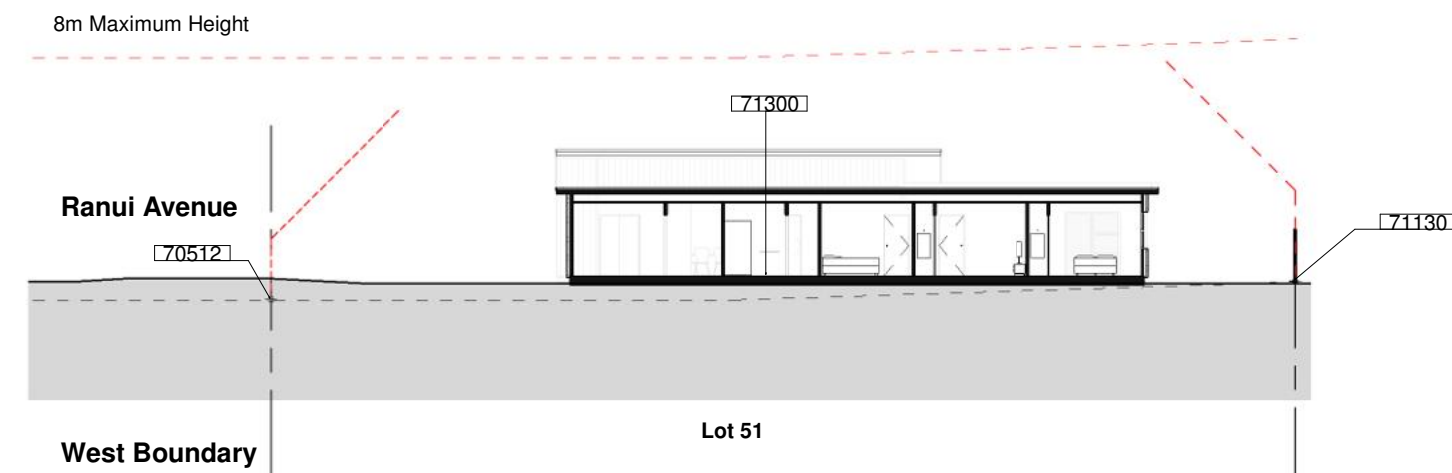


2 1 : 125 Section
RC-220 -- Section 2

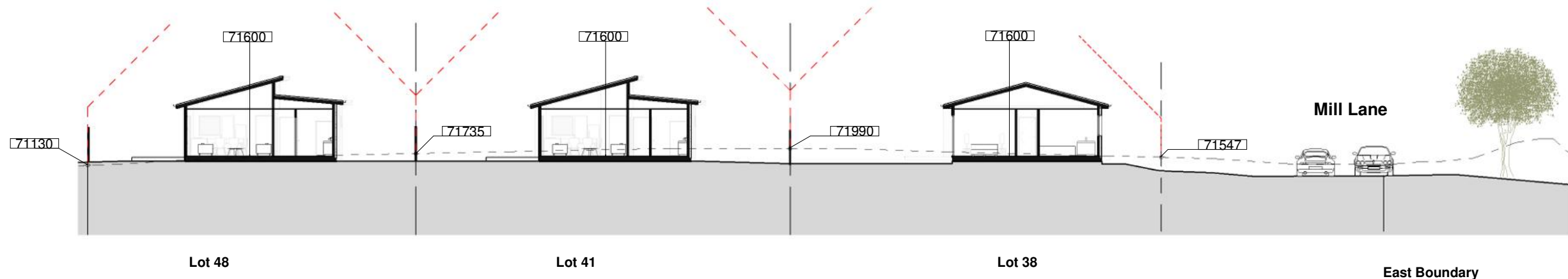
Note
For Town Planning Summary refer to
RC-215
--- Existing Ground

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3 1 : 125 Section
RC-220 -- Section 3

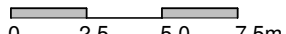


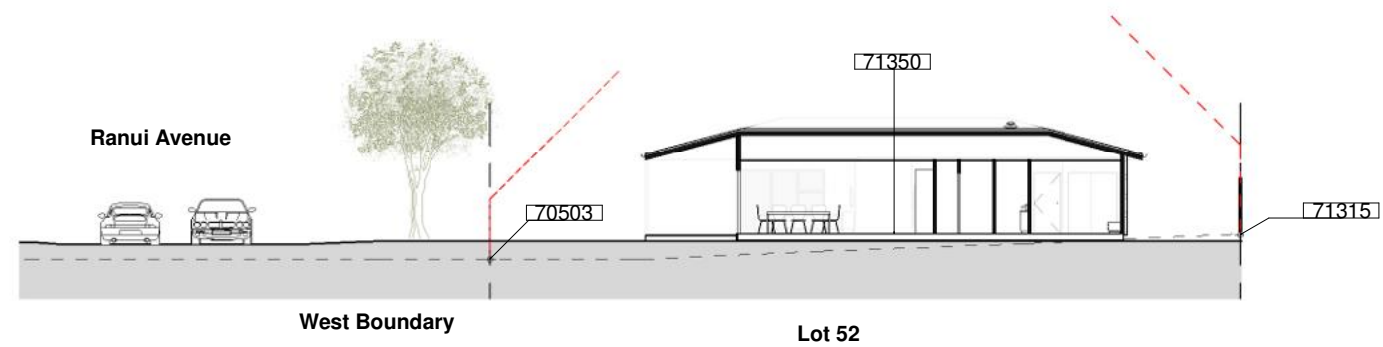
4 1 : 125 Section
RC-220 -- Section 4

Note

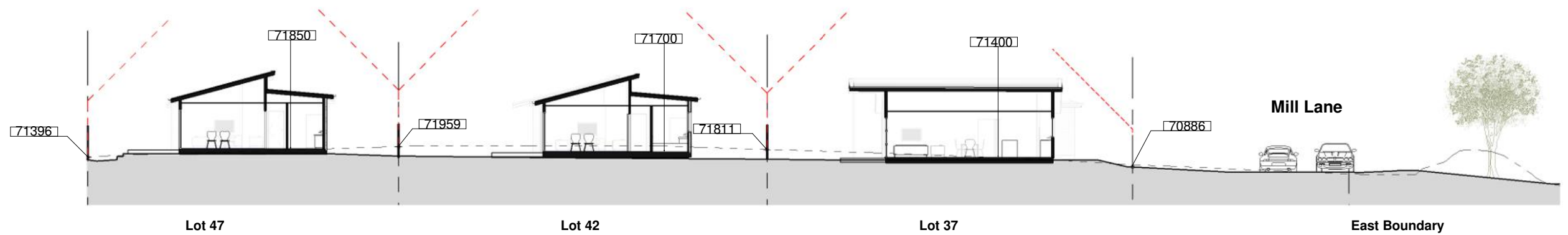
For Town Planning Summary refer to
RC-215
- - - - Existing Ground

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5 1 : 125 Section
RC-220 -- Section 5



6 1 : 125 Section
RC-220 -- Section 6

Note
For Town Planning Summary refer to RC-215
--- Existing Ground

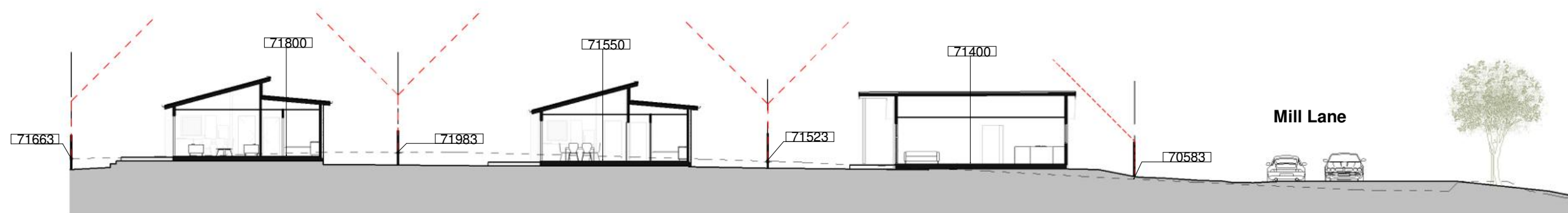
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	Te Tui Ora	57A Hall Road, Kerikeri, 0230	As indicated	° A Resource Consent 2026-08-21		RC-262	A
	for Gemscott Hall Limited		Half scale for reduced A3 drawings			Project No: 2303	
	Drawing Title		Scale: 1:250 @ A3			A STUDIO ARCHITECTS	



Lot 53

7
RC-220 1 : 125 Section
-- Section 7



Lot 46

Lot 43

Lot 36

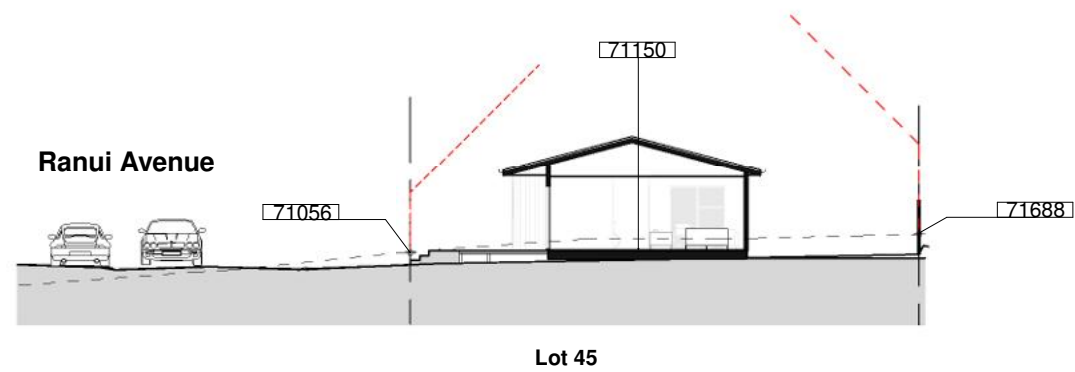
East Boundary

8
RC-220 1 : 125 Section
-- Section 8-

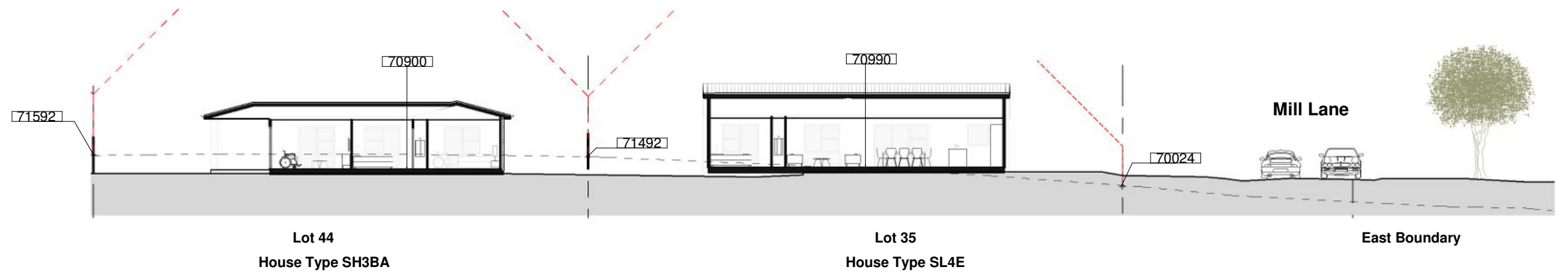
Note
For Town Planning Summary refer to
RC-215
--- Existing Ground

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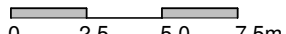
9 1 : 125 Section
RC-220 -- Section 9

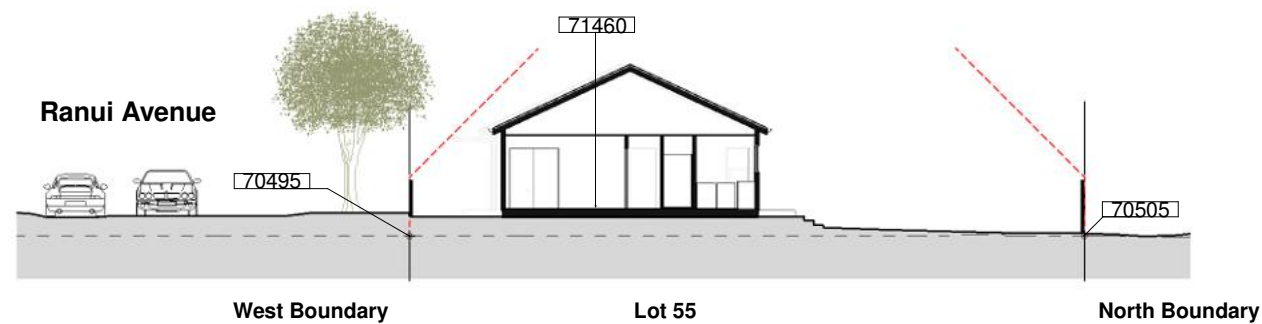


10 1 : 125 Section
RC-220 -- Section 10

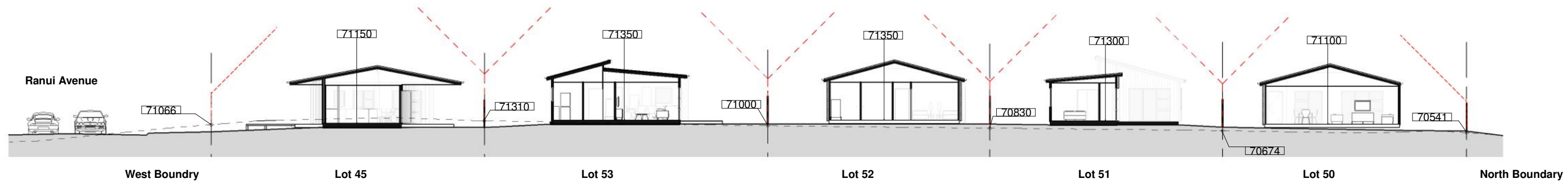
Note
For Town Planning Summary refer to
RC-215
- - - - Existing Ground

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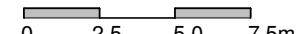
A 1 : 125 Section
RC-220 -- Section A

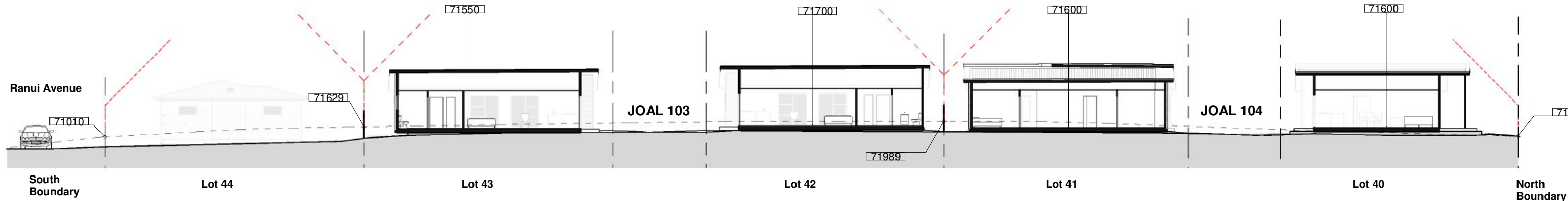
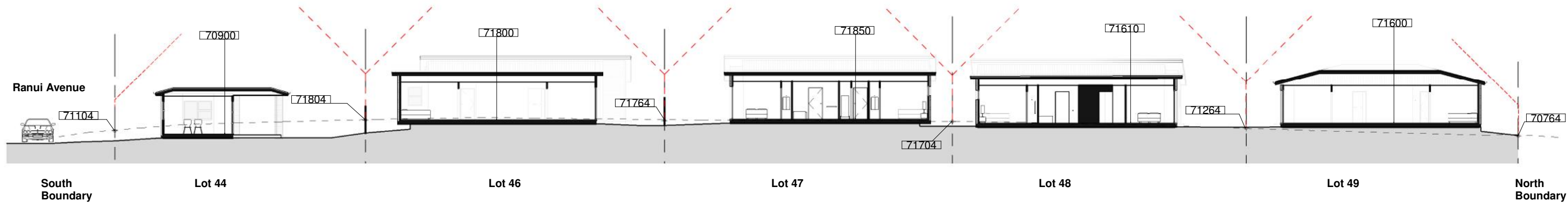


B 1 : 125 Section
RC-220 -- Section B

Note
For Town Planning Summary refer to
RC-215
--- Existing Ground

RESOURCE CONSENT

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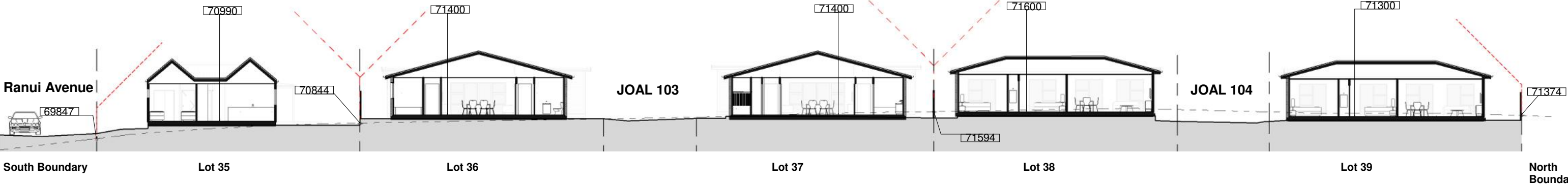
Note

For Town Planning Summary refer to **RC-215**

--- Existing Ground

RESOURCE CONSENT

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E 1 : 125 Section
RC-220 -- Section E

Note

For Town Planning Summary refer to
RC-215

--- Existing Ground

RESOURCE CONSENT

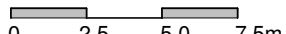
These drawings, and all parts thereof, are copyright. Final design and detail may vary. 1 Written dimensions are to be used 2 Do not scale dimensions from drawings 3 Verify all dimensions and levels on site prior to commencing any work 4 All discrepancies are to be referred to the design office for clarification	Project Name Te Tui Ora for Gemscott Hall Limited Drawing Title Sections E - Zone B	Project Address 57A Hall Road, Kerikeri, 0230	Drawing Scale @ A1 = As indicated Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3	Revision & Date ° A Resource Consent 2026-08-21	SKHY Level 4, 38 Khyber Pass Road, Grafton, Auckland 09 302 3689 PO Box 44376 Point Chevalier Auckland 1022 www.astudioarchitects.com	Drawing No: RC-268 Project No: 2303 A STUDIO ARCHITECTS	Revision A
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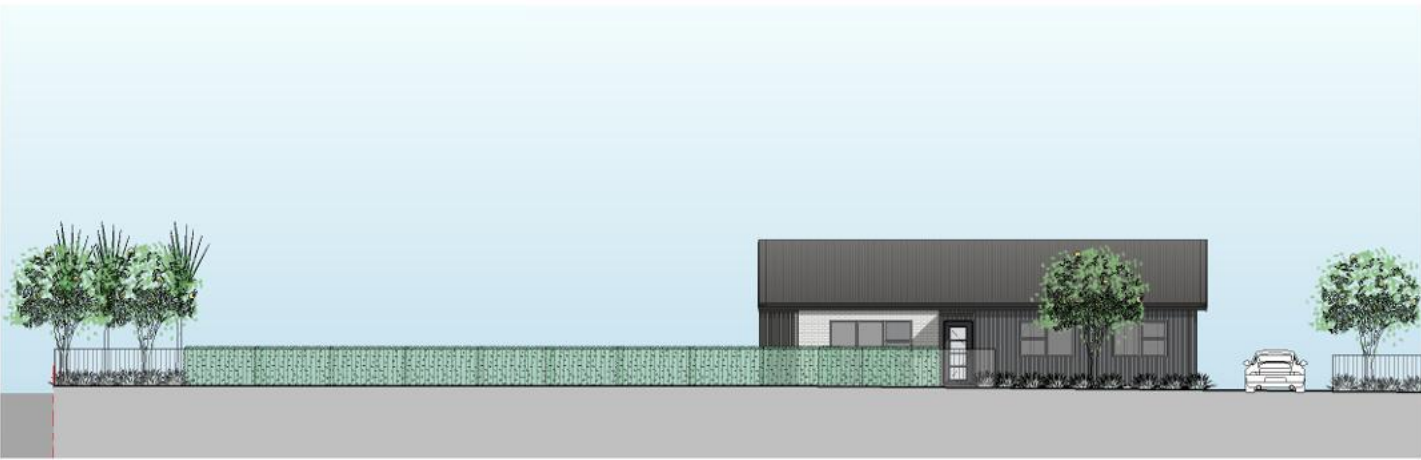


1
RC-220

1 : 125 Elevation
-- Elevation 1 - Mill Lane

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings			Project No: 2303	
	Drawing Title Elevation - Mill Lane - Zone B		 Scale: 1:250 @ A3			A STUDIO ARCHITECTS	



North Boundary

Lot 55
House Type 3P
Material Scheme 3

Vehicle access

Lot 51

2
RC-220

1 : 125 Elevation
-- Elevation 2 - Ranui Avenue



Lot 51
House Type SL4A
Material Scheme 4

Lot 52
House Type 30
Material Scheme 3

Lot 53
House Type SH3CA
Material Scheme 1

3
RC-220

1 : 125 Elevation
-- Elevation 3 - Ranui Avenue



Lot 45
House Type SH3BA
Material Scheme 10



Lot 44
House Type SH3BA
Material Scheme 10

Lot 35
House Type SL4E
Material Scheme 5

Mill Lane

East Boundary

4
RC-220

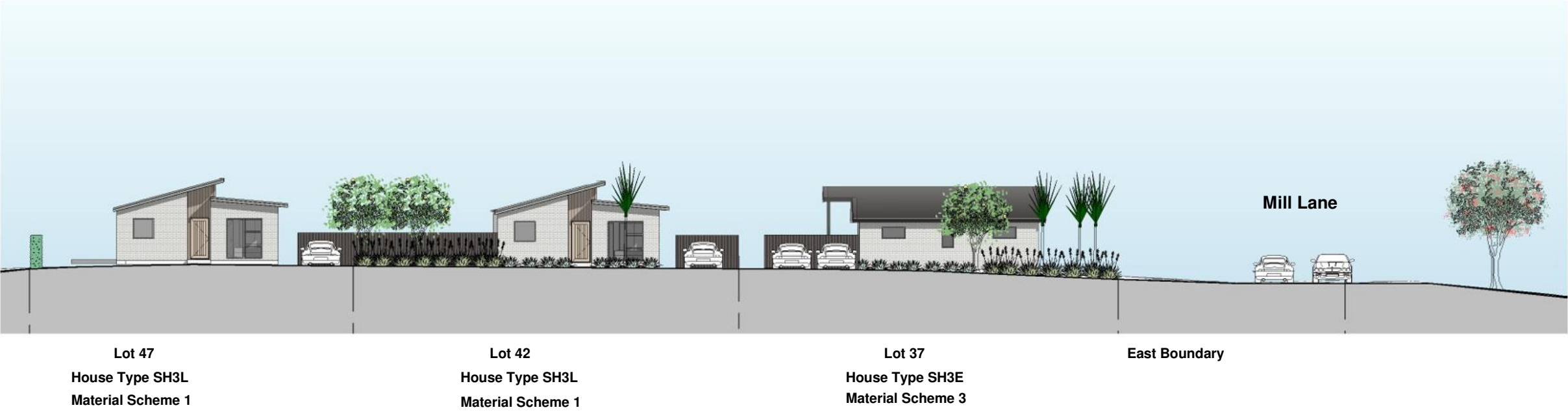
1 : 125 Elevation
-- Elevation 4 - Ranui Avenue

5
RC-220

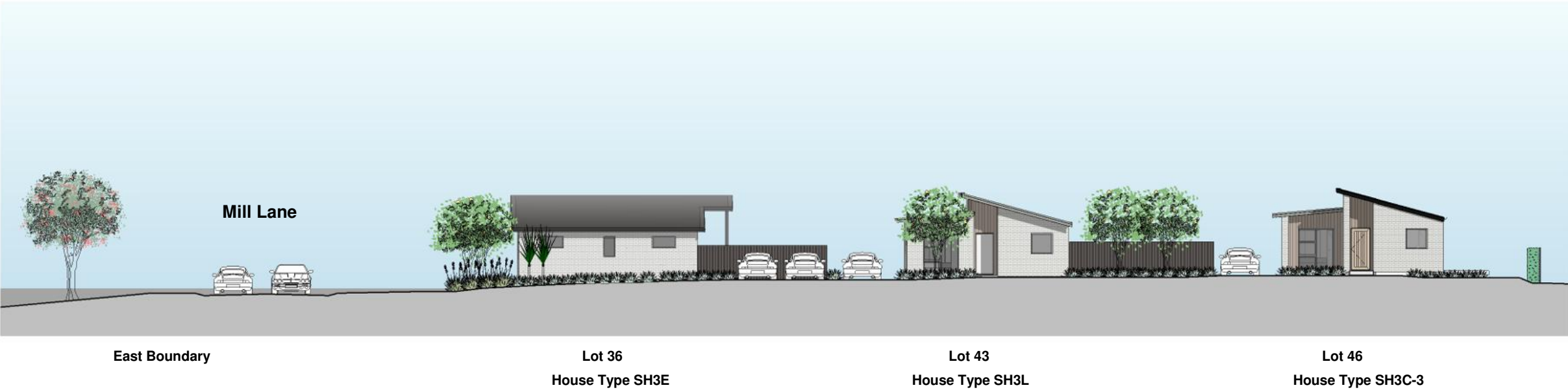
1 : 125 Elevation
-- Elevation 5 - Ranui Avenue

RESOURCE CONSENT

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6 1 : 125 Elevation
 RC-220 -- Elevation 6 - JOAL 103



7 1 : 125 Elevation
 RC-220 -- Elevation 7 - JOAL 103

RESOURCE CONSENT

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 3 Verify all dimensions and levels on site prior to commencing any work
 4 All discrepancies are to be referred to the design office for clarification

Project Name
Te Tui Ora
 for Gemscott Hall Limited
 Drawing Title
Elevations - JOAL 103 - Zone B

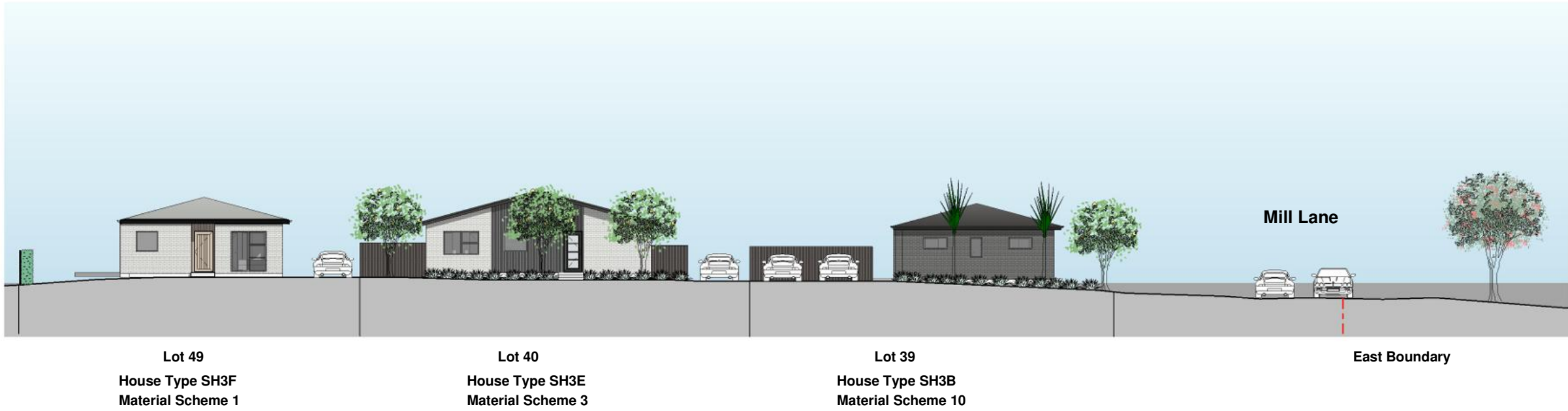
Project Address
 57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
 1 : 125
 Half scale for reduced A3 drawings
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 Scale: 1:250 @ A3

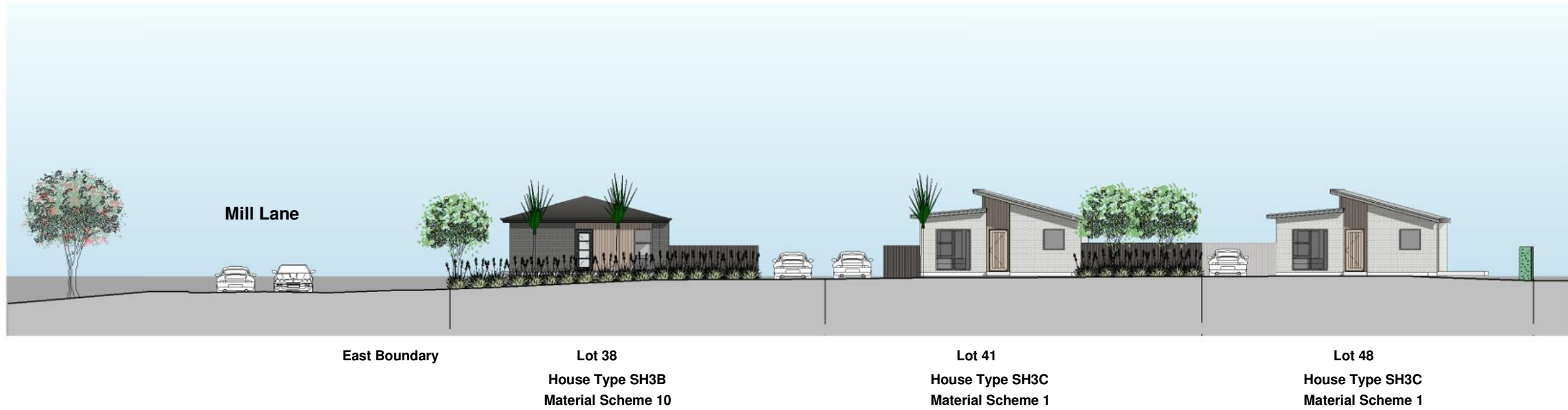
Revision & Date
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Drawing No: **RC-282** Revision **A**
 Project No: 2303
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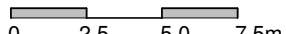


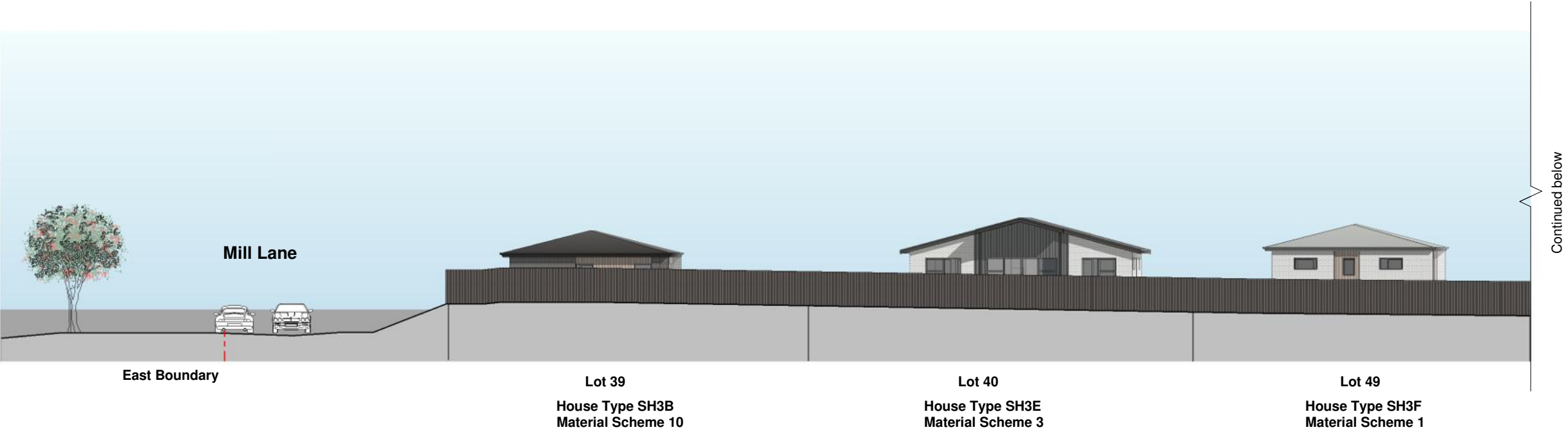
8 1 : 125 Elevation
RC-220 -- Elevation 8 - JOAL 104



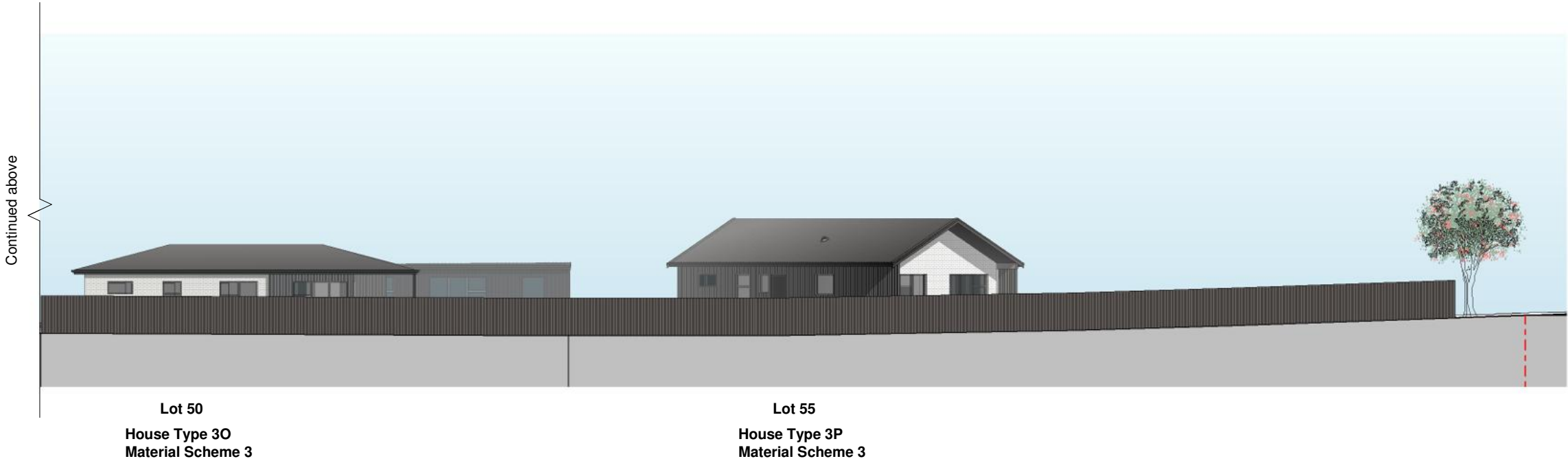
9 1 : 125 Elevation
RC-220 -- Elevation 9 - JOAL 104

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10 1 : 125 Elevation
RC-220 -- Elevation 10 - North Boundary



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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevation - North Boundary - Zone B					A STUDIO ARCHITECTS	



Key

- Yard Setbacks
- Easement
- XXXXX Proposed finished floor level

Note

This plan shows the landscaping indicatively. Please refer to Greenwoods documentation and drawings for further information.

For Hard and Soft Landscaping Legend refer to **RC-010**

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Proposed Site and Landscape Plan - Zone C

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated

Half scale for reduced A3 drawings

Scale: 1:500 @ A3

Revision & Date
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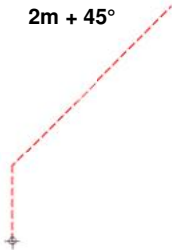
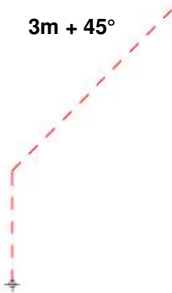
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Drawing No:
RC-320

Revision
A

Project No: 2303

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Town Planning Summary		
Far North District Plan Section 6 - Residential Zone		
7.6.5.1.4 Building Height		
8m		Complies
7.6.5.1.5 Sunlight		
External boundaries	2m + 45° 	Complies Except for lot 31
Internal boundaries	3m + 45° 	Complies except lots 10, 29, 31, and 58.
Stormwater Management		
The maximum proportion of the gross site area covered by buildings and other impermeable surfaces		Lots 6 & 7 infringe by 9% and lot 57 infringes by 7% Complies
Lots 1 - 11 & 57	50%.	
Lots 12 - 56	65%	
7.6.5.1.7 Set Back from Boundaries		
Road boundaries	3m	Complies
Minimum 50% landscaping required in the front 2m from road boundary		
Other boundaries.	1.2m	Complies
7.6.5.1.17 Building Coverage		
45%		Complies



--- Lot Areas ---	
Name	Area
JOAL 105	225 m²
JOAL 106	290 m²
JOAL 107	234 m²
Lot 6	300 m²
Lot 7	302 m²
Lot 8	482 m²
Lot 9	427 m²
Lot 10	435 m²
Lot 29	339 m²
Lot 30	304 m²
Lot 31	375 m²
Lot 32	303 m²
Lot 33	301 m²
Lot 34	426 m²
Lot 54	301 m²
Lot 57	313 m²
Lot 58	579 m²
	5936 m²

Note:
Lot Areas excluding shared JOAL

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Town Planning Compliance - Zone C

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
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Half scale for reduced A3 drawings
0 5 10 15m
Scale: 1:500 @ A3

Revision & Date
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--- JOAL 105		
Coverage Type	Area	Percentage
Impervious	210.2 m ²	93.2%
Landscape	15.2 m ²	6.8%
	225.5 m ²	100.0%

JOAL 105 is shared between 6 lots (Lots 29, 54, 57 and 3 other lots)

--- JOAL 106		
Coverage Type	Area	Percentage
Impervious	265.6 m ²	91.6%
Landscape	24.3 m ²	8.4%
	289.9 m ²	100.0%

JOAL 106 is shared between 7 lots (Lots 6, 7, 30, 31, 32, 33, 34).

--- JOAL 107		
Coverage Type	Area	Percentage
Impervious	155.6 m ²	66.6%
Landscape	77.9 m ²	33.4%
	233.5 m ²	100.0%

JOAL 107 is shared between 4 lots (Lots 8, 9, 10, 58).

--- Site Coverage - Lot 6		
Coverage Type	Area	Percentage
Building	127.4 m ²	42.4%
Impervious	36.7 m ²	12.2%
Landscape	136.1 m ²	45.3%
	300.2 m ²	100.0%

--- Site Coverage - Lot 7		
Coverage Type	Area	Percentage
Building	127.7 m ²	42.3%
Impervious	36.1 m ²	12.0%
Landscape	137.9 m ²	45.7%
	301.7 m ²	100.0%

--- Site Coverage - Lot 8		
Coverage Type	Area	Percentage
Building	149.4 m ²	31.0%
Impervious	83.1 m ²	17.2%
Landscape	249.9 m ²	51.8%
	482.4 m ²	100.0%

--- Site Coverage - Lot 9		
Coverage Type	Area	Percentage
Building	137.7 m ²	32.3%
Impervious	67.3 m ²	15.8%
Landscape	222.0 m ²	52.0%
	427.0 m ²	100.0%

--- Total Impervious - Lot 6		
Coverage Type	Area	Percentage
Impervious	164.1 m ²	54.7%
Landscape	136.1 m ²	45.3%
	300.2 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 59%

--- Total Impervious - Lot 7		
Coverage Type	Area	Percentage
Impervious	163.8 m ²	54.3%
Landscape	137.9 m ²	45.7%
	301.7 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 59%

--- Total Impervious - Lot 8		
Coverage Type	Area	Percentage
Impervious	232.6 m ²	48.2%
Landscape	249.9 m ²	51.8%
	482.4 m ²	100.0%

Total Impervious Area including a share of JOAL 107 (1/4) = 50%

--- Total Impervious - Lot 9		
Coverage Type	Area	Percentage
Impervious	205.0 m ²	48.0%
Landscape	222.0 m ²	52.0%
	427.0 m ²	100.0%

Total Impervious Area including a share of JOAL 107 (1/4) = 50%

--- Site Coverage - Lot 10		
Coverage Type	Area	Percentage
Building	135.5 m ²	31.1%
Impervious	65.6 m ²	15.1%
Landscape	234.1 m ²	53.8%
	435.2 m ²	100.0%

--- Site Coverage - Lot 29		
Coverage Type	Area	Percentage
Building	96.8 m ²	28.5%
Impervious	72.5 m ²	21.4%
Landscape	169.8 m ²	50.1%
	339.2 m ²	100.0%

--- Site Coverage - Lot 30		
Coverage Type	Area	Percentage
Building	99.2 m ²	32.7%
Impervious	64.6 m ²	21.3%
Landscape	139.9 m ²	46.1%
	303.6 m ²	100.0%

--- Site Coverage - Lot 31		
Coverage Type	Area	Percentage
Building	106.0 m ²	28.3%
Impervious	88.8 m ²	23.7%
Landscape	180.3 m ²	48.1%
	375.0 m ²	100.0%

--- Site Coverage - Lot 32		
Coverage Type	Area	Percentage
Building	101.3 m ²	33.5%
Impervious	63.6 m ²	21.0%
Landscape	137.9 m ²	45.5%
	302.8 m ²	100.0%

--- Total Impervious - Lot 10		
Coverage Type	Area	Percentage
Impervious	201.0 m ²	46.2%
Landscape	234.1 m ²	53.8%
	435.2 m ²	100.0%

Total Impervious Area including a share of JOAL 107 (1/4) = 49%

--- Total Impervious - Lot 29		
Coverage Type	Area	Percentage
Impervious	169.3 m ²	49.9%
Landscape	169.8 m ²	50.1%
	339.2 m ²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 55%

--- Total Impervious - Lot 30		
Coverage Type	Area	Percentage
Impervious	163.7 m ²	53.9%
Landscape	139.9 m ²	46.1%
	303.6 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 58%

--- Total Impervious - Lot 31		
Coverage Type	Area	Percentage
Impervious	194.7 m ²	51.9%
Landscape	180.3 m ²	48.1%
	375.0 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 54%

--- Total Impervious - Lot 32		
Coverage Type	Area	Percentage
Impervious	164.9 m ²	54.5%
Landscape	137.9 m ²	45.5%
	302.8 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 59%

--- Site Coverage - Lot 33		
Coverage Type	Area	Percentage
Building	101.0 m ²	33.6%
Impervious	71.7 m ²	23.8%
Landscape	128.1 m ²	42.6%
	300.8 m ²	100.0%

--- Site Coverage - Lot 34		
Coverage Type	Area	Percentage
Building	99.9 m ²	23.4%
Impervious	79.6 m ²	18.7%
Landscape	246.6 m ²	57.9%
	426.0 m ²	100.0%

--- Site Coverage - Lot 54		
Coverage Type	Area	Percentage
Building	104.1 m ²	34.6%
Impervious	62.0 m ²	20.6%
Landscape	134.3 m ²	44.7%
	300.5 m ²	100.0%

--- Site Coverage - Lot 57		
Coverage Type	Area	Percentage
Building	104.1 m ²	33.2%
Impervious	59.9 m ²	19.1%
Landscape	149.4 m ²	47.7%
	313.4 m ²	100.0%

--- Site Coverage - Lot 58		
Coverage Type	Area	Percentage
Building	135.1 m ²	23.3%
Impervious	132.7 m ²	22.9%
Landscape	311.2 m ²	53.8%
	579.0 m ²	100.0%

--- Total Impervious - Lot 33		
Coverage Type	Area	Percentage
Impervious	172.7 m ²	57.4%
Landscape	128.1 m ²	42.6%
	300.8 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 62%

--- Total Impervious - Lot 34		
Coverage Type	Area	Percentage
Impervious	179.5 m ²	42.1%
Landscape	246.6 m ²	57.9%
	426.0 m ²	100.0%

Total Impervious Area including a share of JOAL 106 (1/7) = 46%

--- Total Impervious - Lot 54		
Coverage Type	Area	Percentage
Impervious	166.2 m ²	55.3%
Landscape	134.3 m ²	44.7%
	300.5 m ²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 59%

--- Total Impervious - Lot 57		
Coverage Type	Area	Percentage
Impervious	164.0 m ²	52.3%
Landscape	149.4 m ²	47.7%
	313.4 m ²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 57%

--- Total Impervious - Lot 58		
Coverage Type	Area	Percentage
Impervious	267.7 m ²	46.2%
Landscape	311.2 m ²	53.8%
	579.0 m ²	100.0%

Total Impervious Area including a share of JOAL 107 (1/4) = 48%

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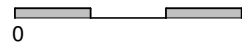
Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Lot Area Schedules - Zone C

Project Address
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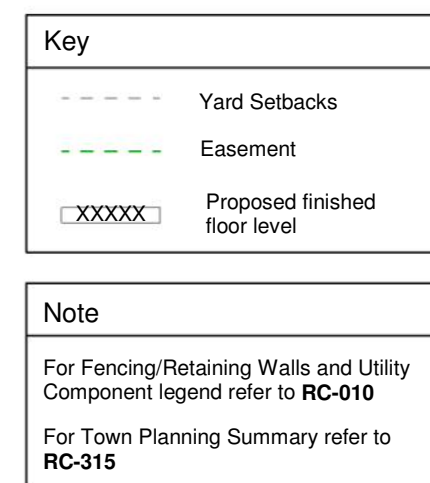
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	for Gemscott Hall Limited Drawing Title Proposed Ground Floor Plan - Zone C			Half scale for reduced A3 drawings  Scale: 1:500 @ A3	A STUDIO ARCHITECTS		



Key

- Yard Setbacks
- Easement
- HIRB Infringement within internal boundaries
- Maximum height infringement

Note

For Fencing/Retaining Walls and Utility Component legend refer to **RC-010**

For Town Planning Summary refer to **RC-315**

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Proposed Roof Plan - Zone C

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
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Half scale for reduced A3 drawings

Scale: 1:500 @ A3

Revision & Date
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Drawing No:
RC-332

Revision
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Project No: 2303

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Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note

This plan shows the landscaping indicatively. Please refer to Greenwoods documentation and drawings for further information.

For Hard and Soft Landscaping Legend refer to **RC-010**

1 1 : 125 Plan
RC-320 --- Proposed Landscape Plan - Sector 1

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings			Project No: 2303	
	Drawing Title Sector 1 - Proposed Site and Landscape Plan - Zone C		 Scale: 1:250 @ A3			A STUDIO ARCHITECTS	

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2 1 : 125 Plan
--- Proposed Landscape Plan - Sector 2

Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note

This plan shows the landscaping indicatively. Please refer to Greenwoods documentation and drawings for further information.

For Hard and Soft Landscaping Legend refer to **RC-010**

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Sector 2 - Proposed Site and Landscape Plan - Zone C

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
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Half scale for reduced A3 drawings

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Scale: 1:250 @ A3

Revision & Date
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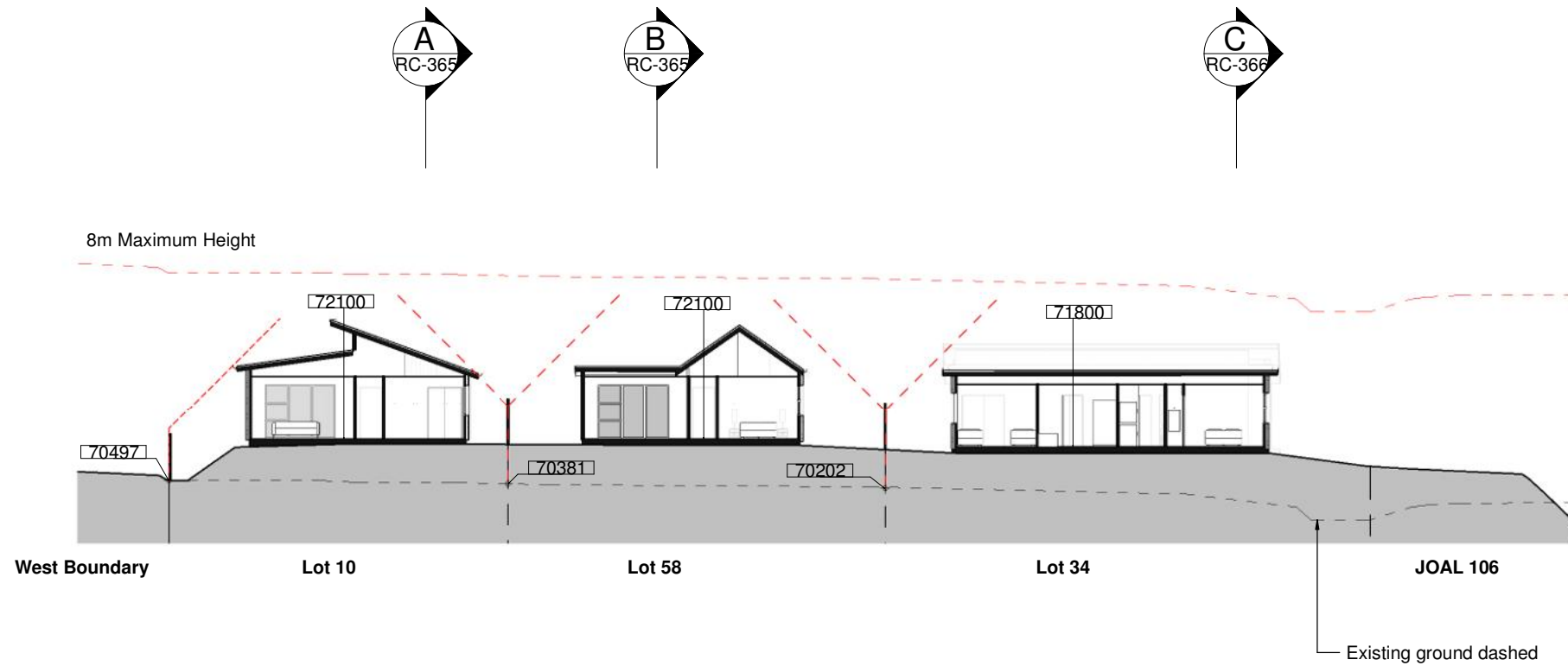
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Drawing No:
RC-336

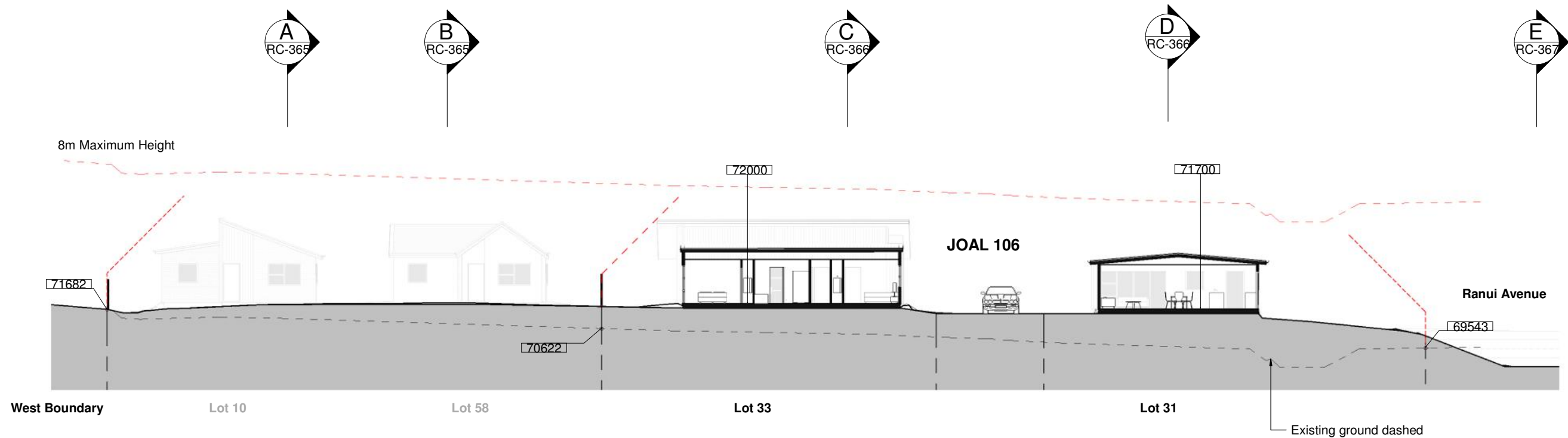
Project No: 2303

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Revision
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1 1 : 125 Section
RC-320 --- Section 1

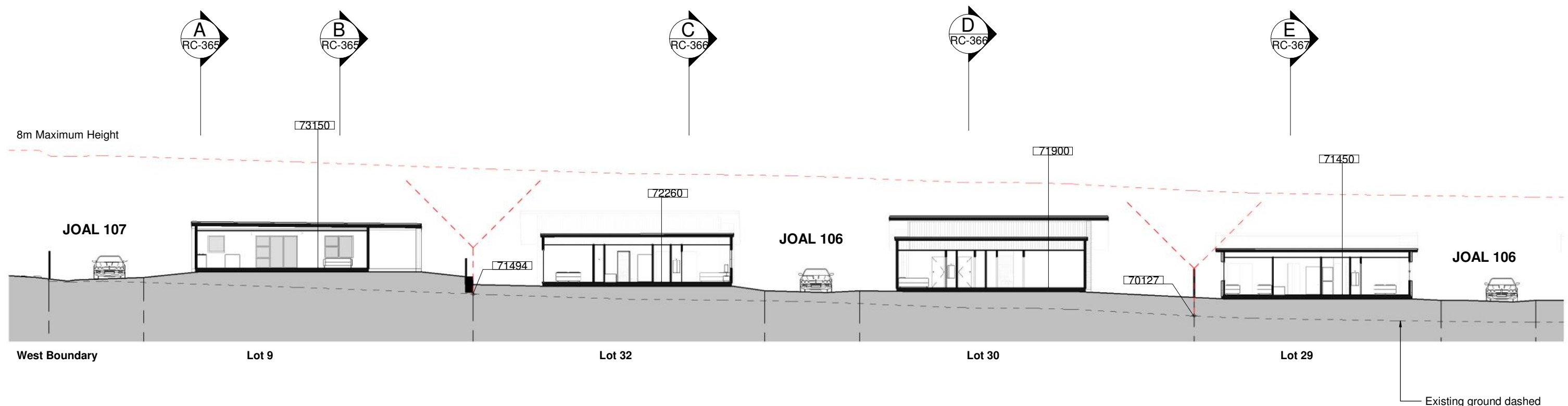


2 1 : 125 Section
RC-320 --- Section 2

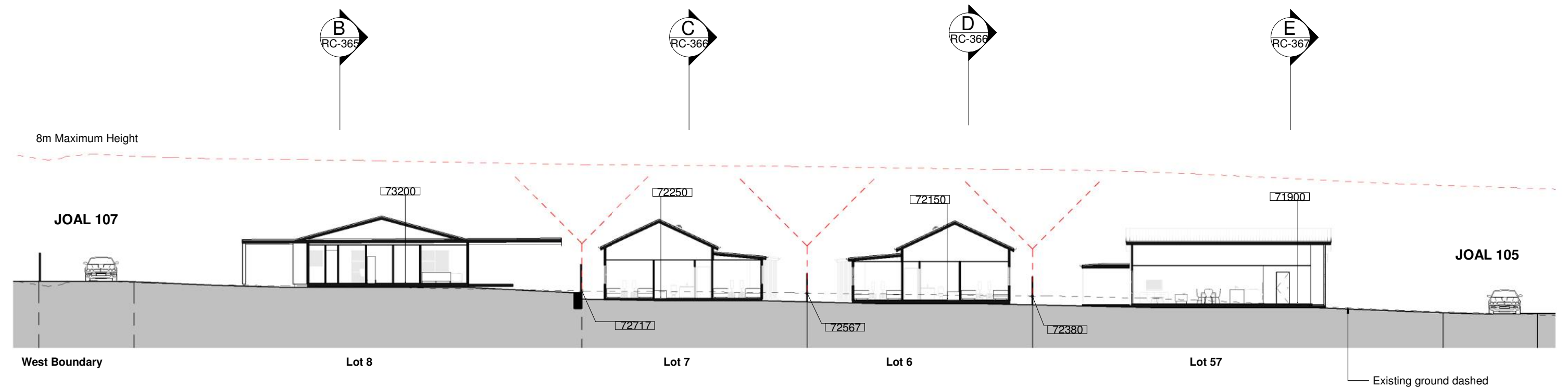
Note
For Town Planning Summary refer to
RC-315

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3 1 : 125 Section
RC-320 --- Section 3

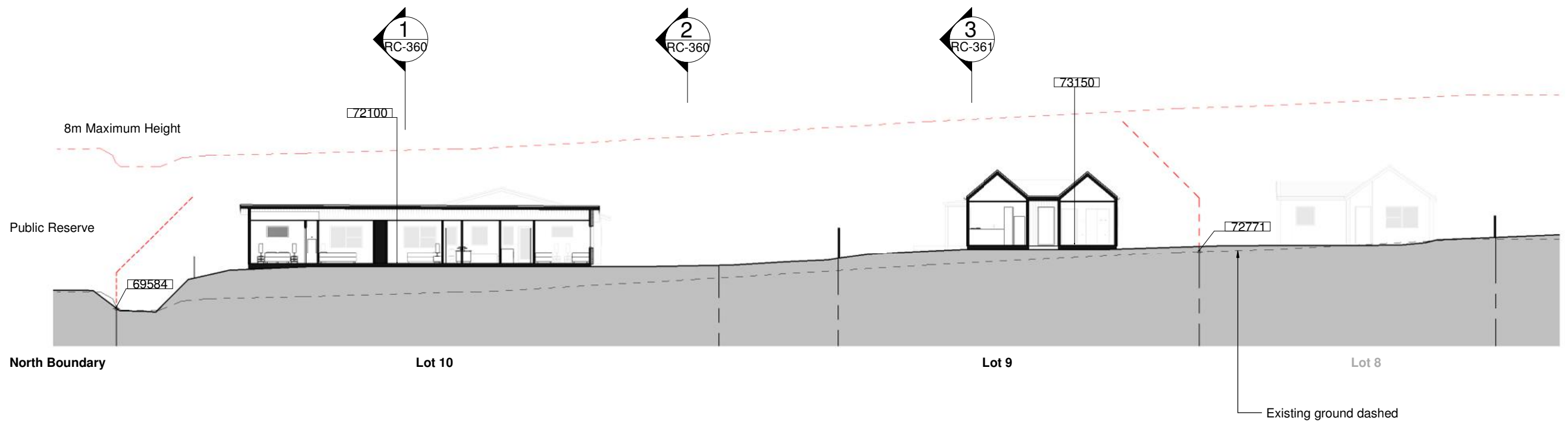


4 1 : 125 Section
RC-320 --- Section 4

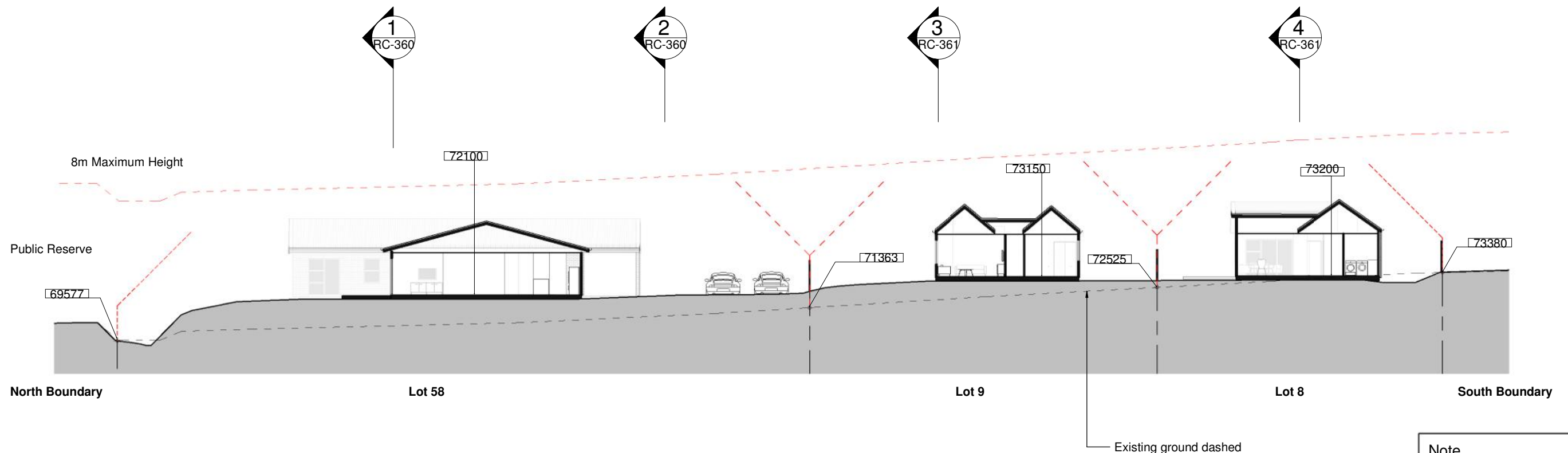
Note
For Town Planning Summary refer to
RC-315

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A 1 : 125 Section
RC-320 --- Section A

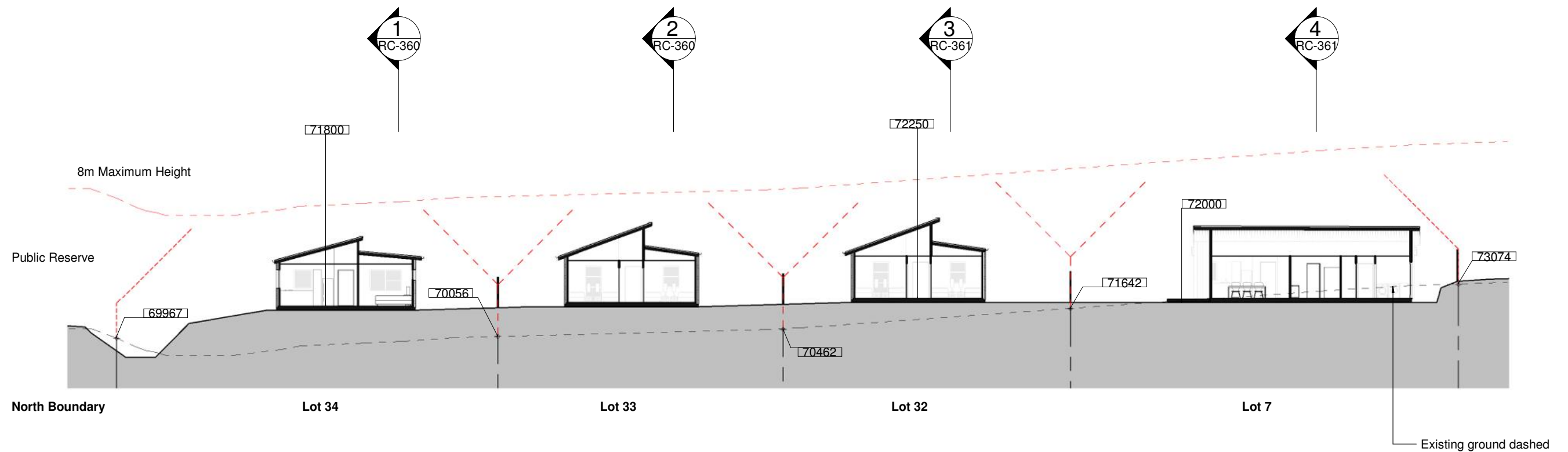


B 1 : 125 Section
RC-320 --- Section B

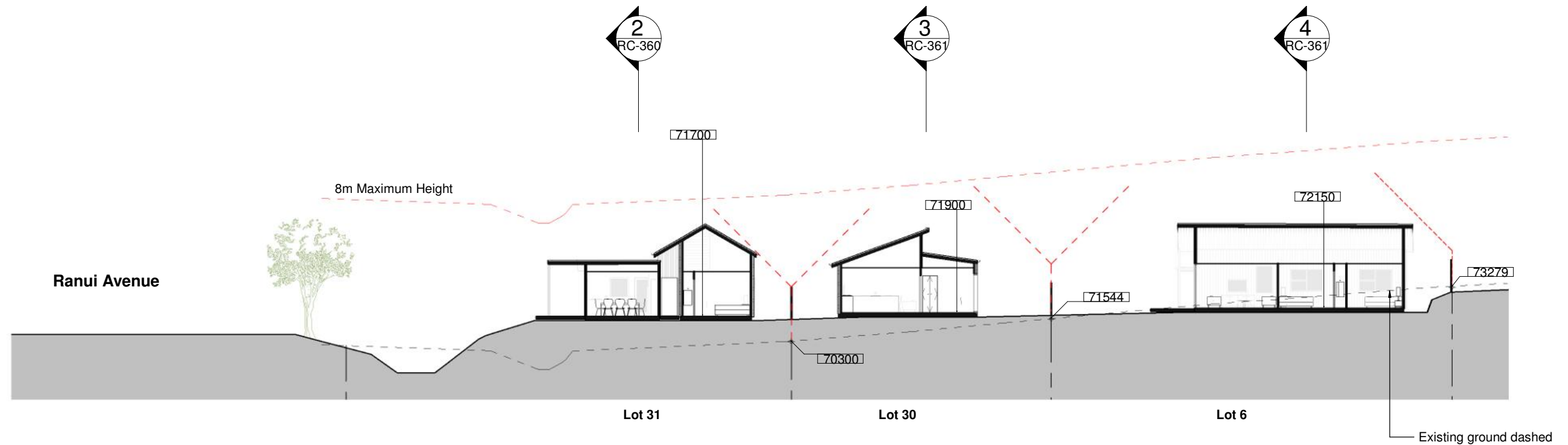
Note
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C 1 : 125 Section
RC-320 --- Section C

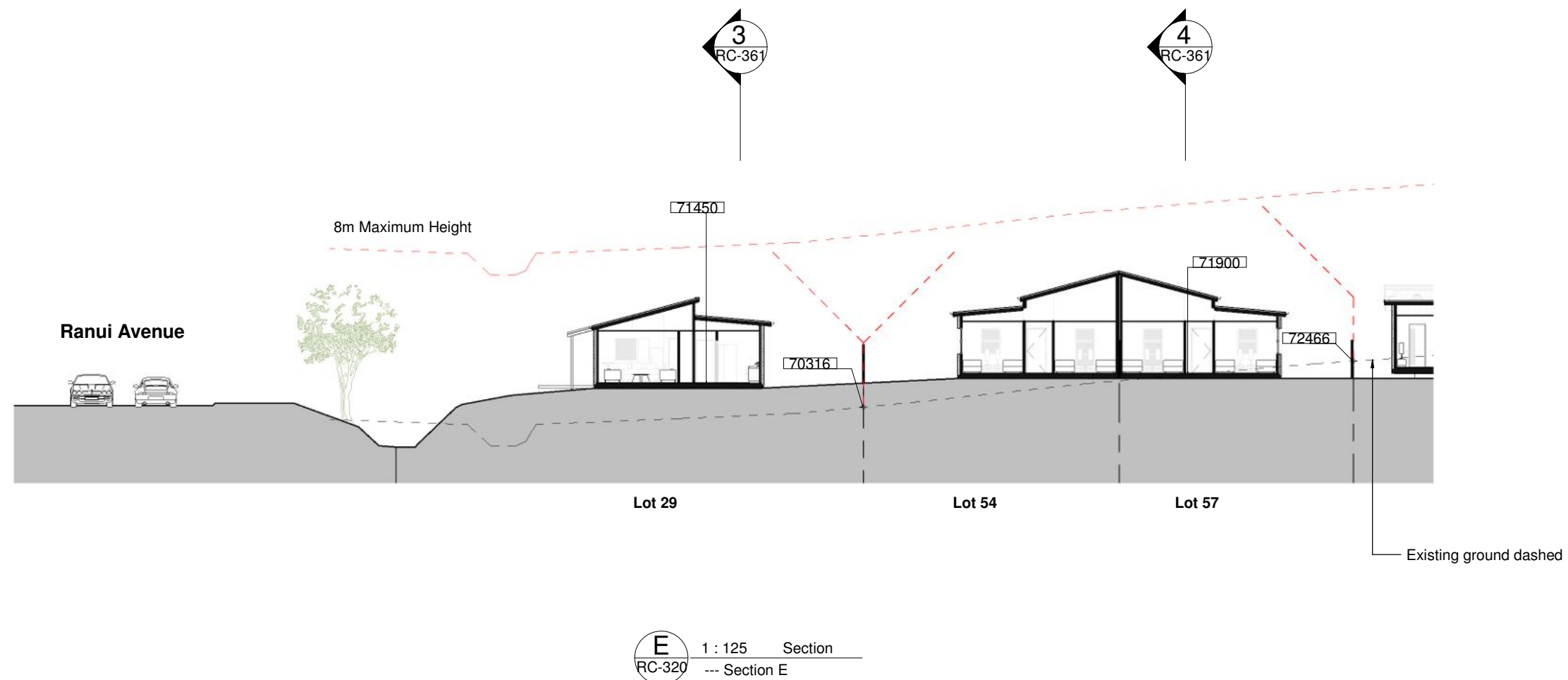


D 1 : 125 Section
RC-320 --- Section D

Note
For Town Planning Summary refer to
RC-315

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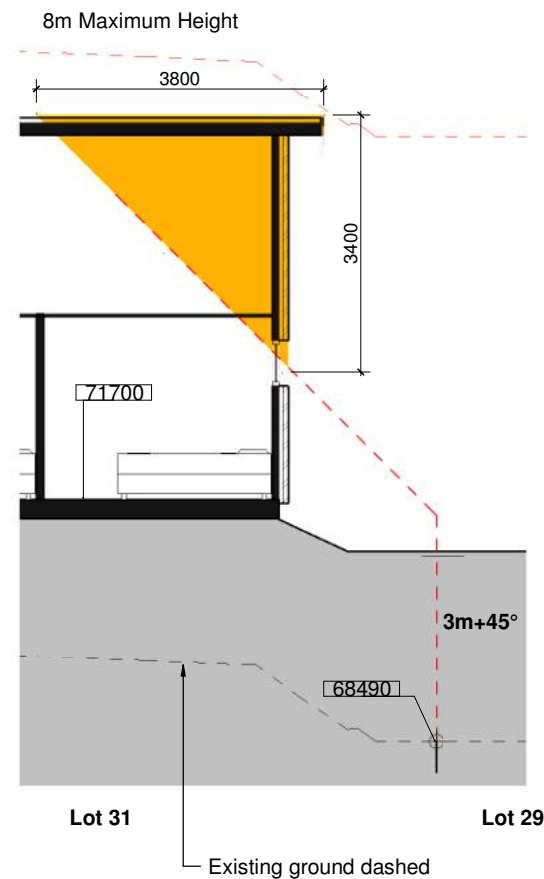


E 1 : 125 Section
RC-320 --- Section E

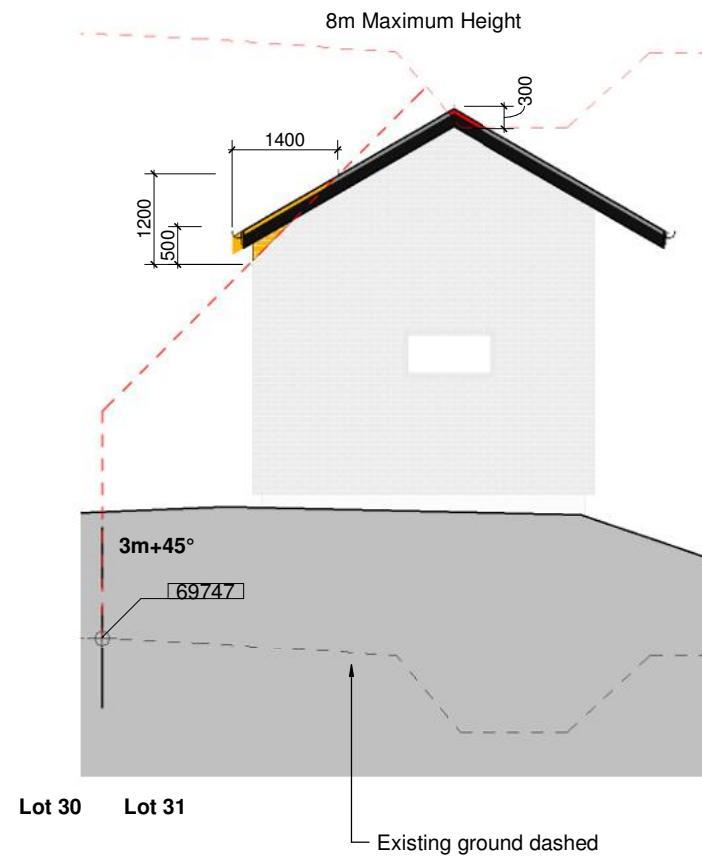
Note
For Town Planning Summary refer to
RC-315

RESOURCE CONSENT

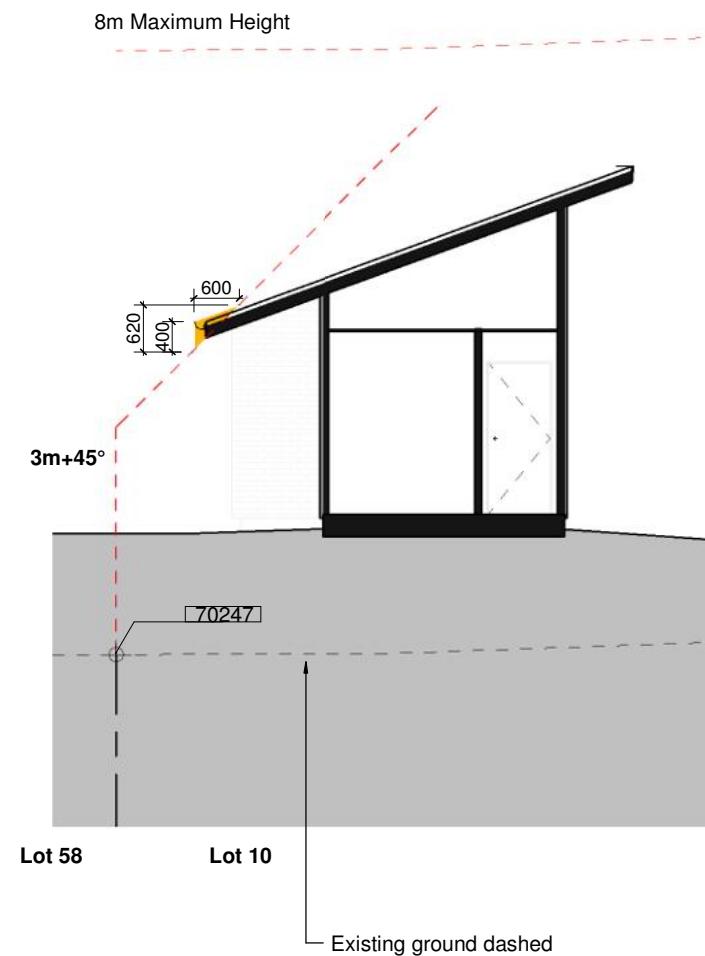
These drawings, and all parts thereof, are copyright. Final design and detail may vary. 1 Written dimensions are to be used 2 Do not scale dimensions from drawings 3 Verify all dimensions and levels on site prior to commencing any work 4 All discrepancies are to be referred to the design office for clarification	Project Name Te Tui Ora	Project Address 57A Hall Road, Kerikeri, 0230	Drawing Scale @ A1 = As indicated	Revision & Date ◦ A Resource Consent 2026-08-21	SKHY Level 4, 38 Khyber Pass Road, Grafton, Auckland 09 302 3689 PO Box 44376 Point Chevalier Auckland 1022 www.astudioarchitects.com	Drawing No: RC-367	Revision A
	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 1 2 3m Scale: 1:100 @ A3			Project No: 2303	
	Drawing Title Section E - Zone C					A STUDIO ARCHITECTS	



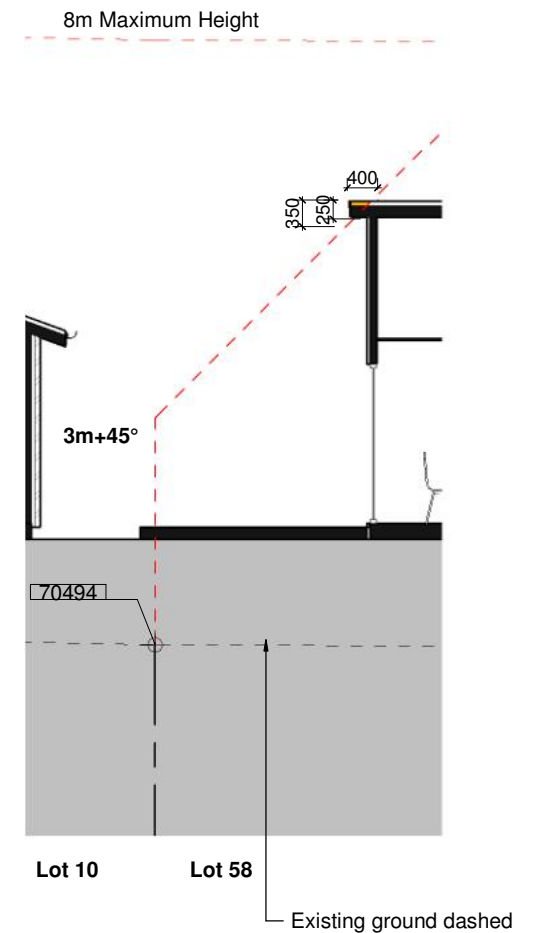
H1 1 : 50 Section
RC-342 --- HIRB Section 1 - Lot 31



H2 1 : 50 Section
RC-335 --- HIRB Section 2 - Lot 31



H3 1 : 50 Section
RC-335 --- HIRB Section 3 - Lot 10

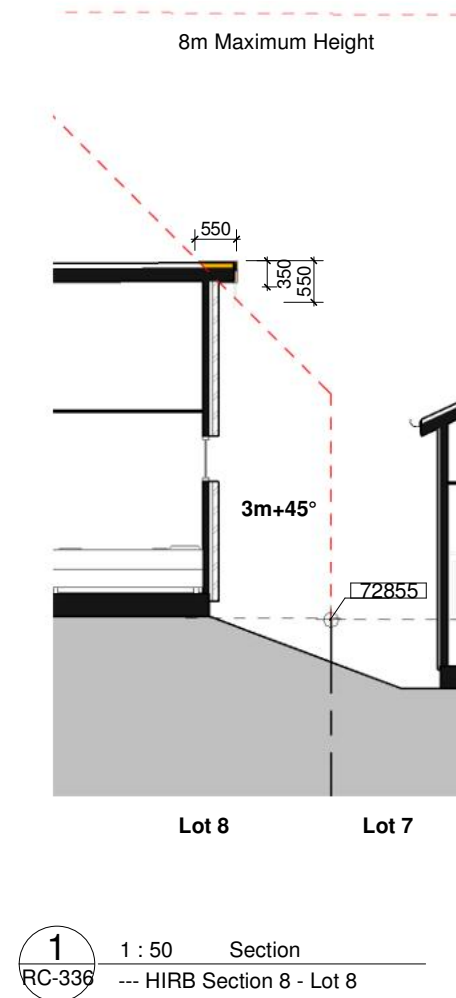
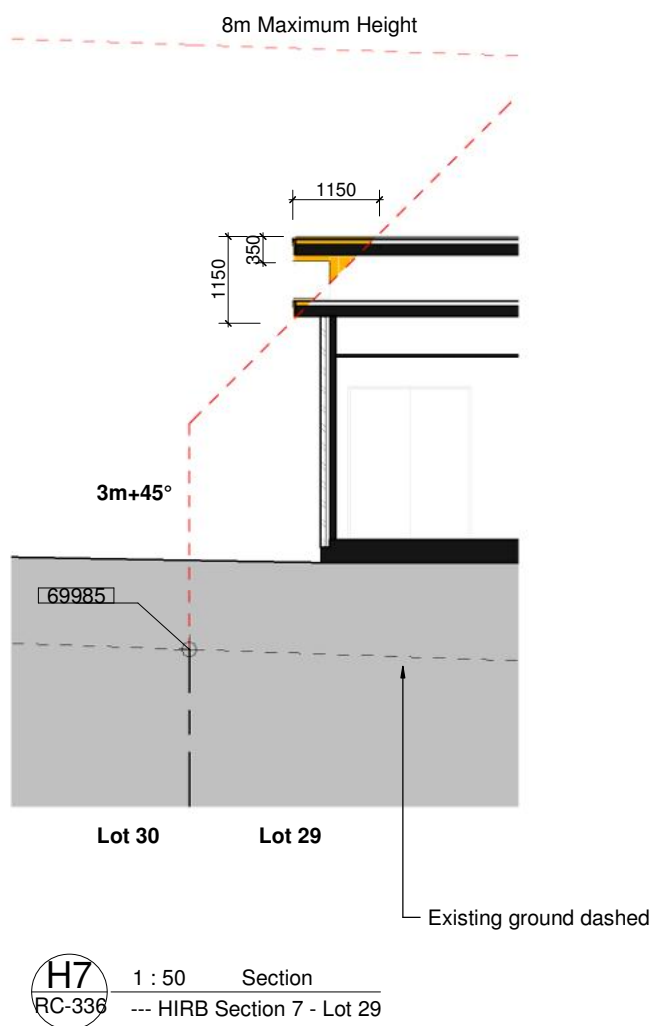
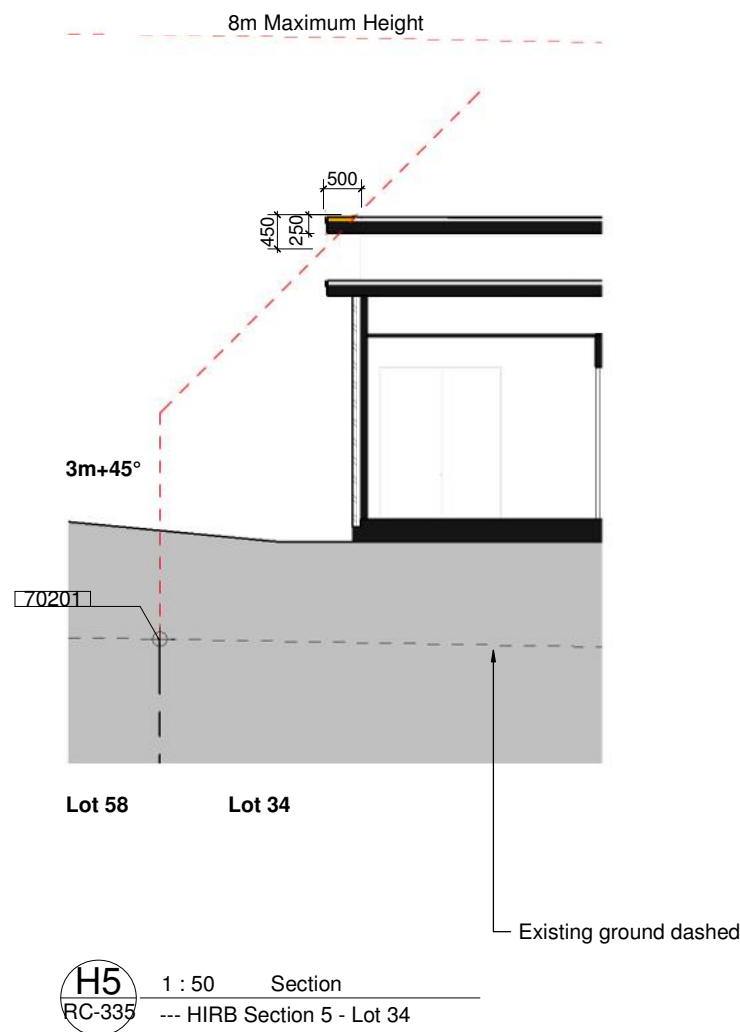


H4 1 : 50 Section
RC-335 --- HIRB Section 4 - Lot 58

Key	
	HIRB Infringement within internal boundaries
	Maximum height Infringement

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Key	
	HIRB Infringement within internal boundaries
	Maximum height infringement

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JOAL 105

Lot 29
House Type 3C
Material Scheme 3

Lot 31
House Type 3E
Material Scheme 4

JOAL 106

Lot 34
House Type 3C
Material Scheme 3

1
RC-320 1 : 125 Elevation
--- Elevation 1 - Ranui Avenue



South Boundary

Lot 57
House Type 3D Duplex
Material Scheme 1

Lot 54
House Type 3D Duplex
Material Scheme 1

Lot 29
House Type 3C
Material Scheme 3

2
RC-220 1 : 125 Elevation
--- Elevation 2 - JOAL 105

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-325**

For Exterior Materials and Colours refer to **RC- 011,012,013.**

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevations - Ranui Avenue and JOAL 105 - Zone C					A STUDIO ARCHITECTS	



Lot 31
House Type 3E
Material Scheme 4

Lot 30
House Type 3D
Material Scheme 1

Lot 6
House Type SL4D
Material Scheme 6

South Boundary

3
RC-220
1 : 125 Elevation
--- Elevation 3 - JOAL 106



South Boundary

Lot 7
House Type SL4D
Material Scheme 6

Lot 32
House Type 3D
Material Scheme 1

Lot 33
House Type 3D
Material Scheme 1

Lot 34
House Type 3C
Material Scheme 3

4
RC-220
1 : 125 Elevation
--- Elevation 4 - JOAL 106

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-325**

For Exterior Materials and Colours refer to **RC- 011,012,013.**

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Lot 6
House Type SL4D
Material Scheme 6

Lot 7
House Type SL4D
Material Scheme 6

5 1 : 125 Section
RC-320 --- Elevation 5 - JOAL 106



West Boundary

Lot 10
House Type SL4A-2
Material Scheme 1

Lot 58
House Type SL4B
Material Scheme 2

6 1 : 125 Elevation
RC-320 --- Elevation 7 - JOAL 107



North Boundary

Lot 10
House Type SL4A-2
Material Scheme 1

Lot 58

Lot 9
House Type SL4C
Material Scheme 5

Lot 8
House Type SL4B
Material Scheme 2

South Boundary

7 1 : 125 Elevation
RC-320 --- Elevation 6 - JOAL 107

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-325**

For Exterior Materials and Colours refer to **RC- 011,012,013.**

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West Boundary

JOAL 107

Lot 8

House Type SL4B

Material Scheme 2

Lot 7

House Type SL4D

Material Scheme 6

Lot 6

House Type SL4D

Material Scheme 6

Lot 57

House Type 3D Duplex

Material Scheme 1

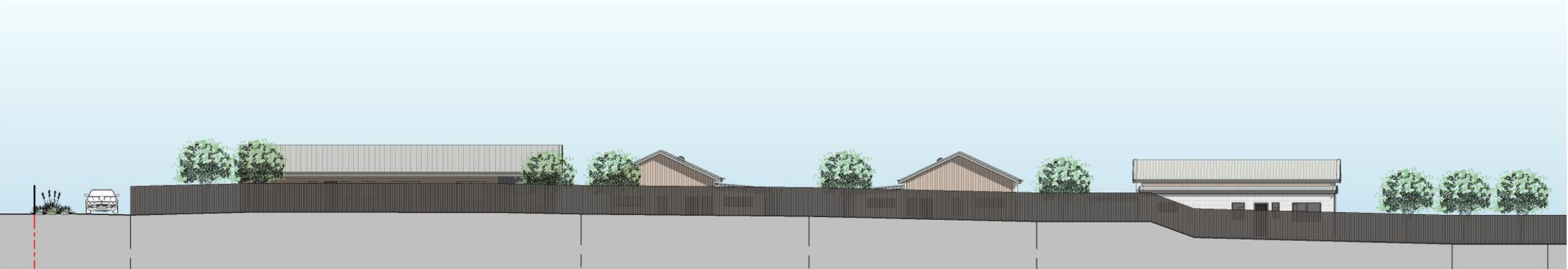
8

RC-320

1 : 125

Elevation

Elevation 8 - South Boundary



West Boundary

JOAL 107

Lot 8

Lot 7

Lot 6

Lot 57

JOAL 105

8.1

RC-320

1 : 125

Elevation

Elevation 8. - South Boundary from neighbouring lots

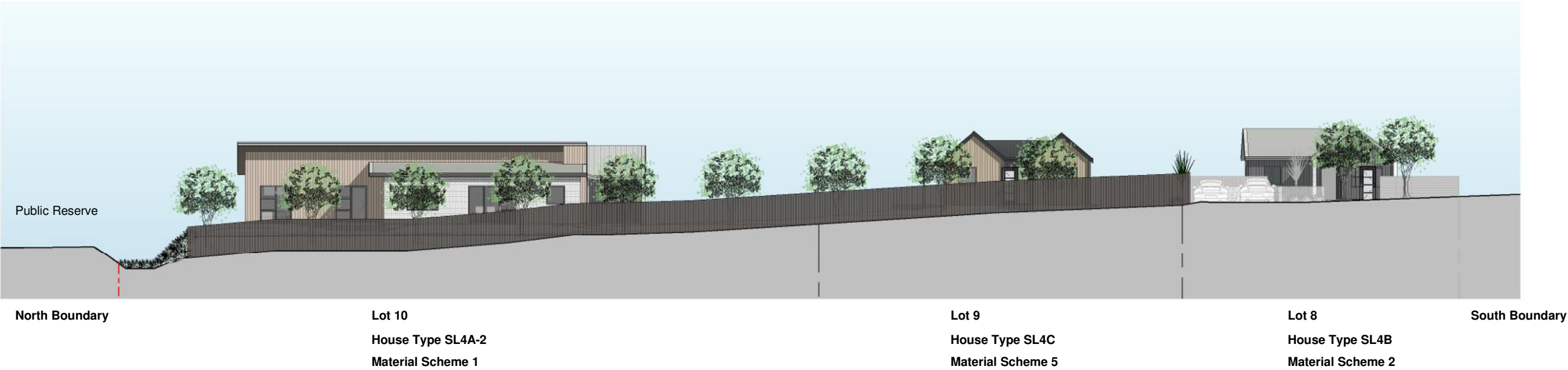
Note:

For Proposed Typology Plan and material scheme reference refer to **RC-325**

For Exterior Materials and Colours refer to **RC- 011,012,013.**

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	Te Tui Ora	57A Hall Road, Kerikeri, 0230	As indicated				RC-383	A
	for Gemscott Hall Limited		Half scale for reduced A3 drawings				Project No: 2303	
	Drawing Title		0 2.5 5.0 7.5m				A STUDIO ARCHITECTS	
	Elevations - South Boundary - Zone C		Scale: 1:250 @ A3					



9 1 : 125 Elevation
RC-320 --- Elevation 9 - West Boundary



10 1 : 125 Elevation
RC-237 --- Elevation 10 - Public Reserve

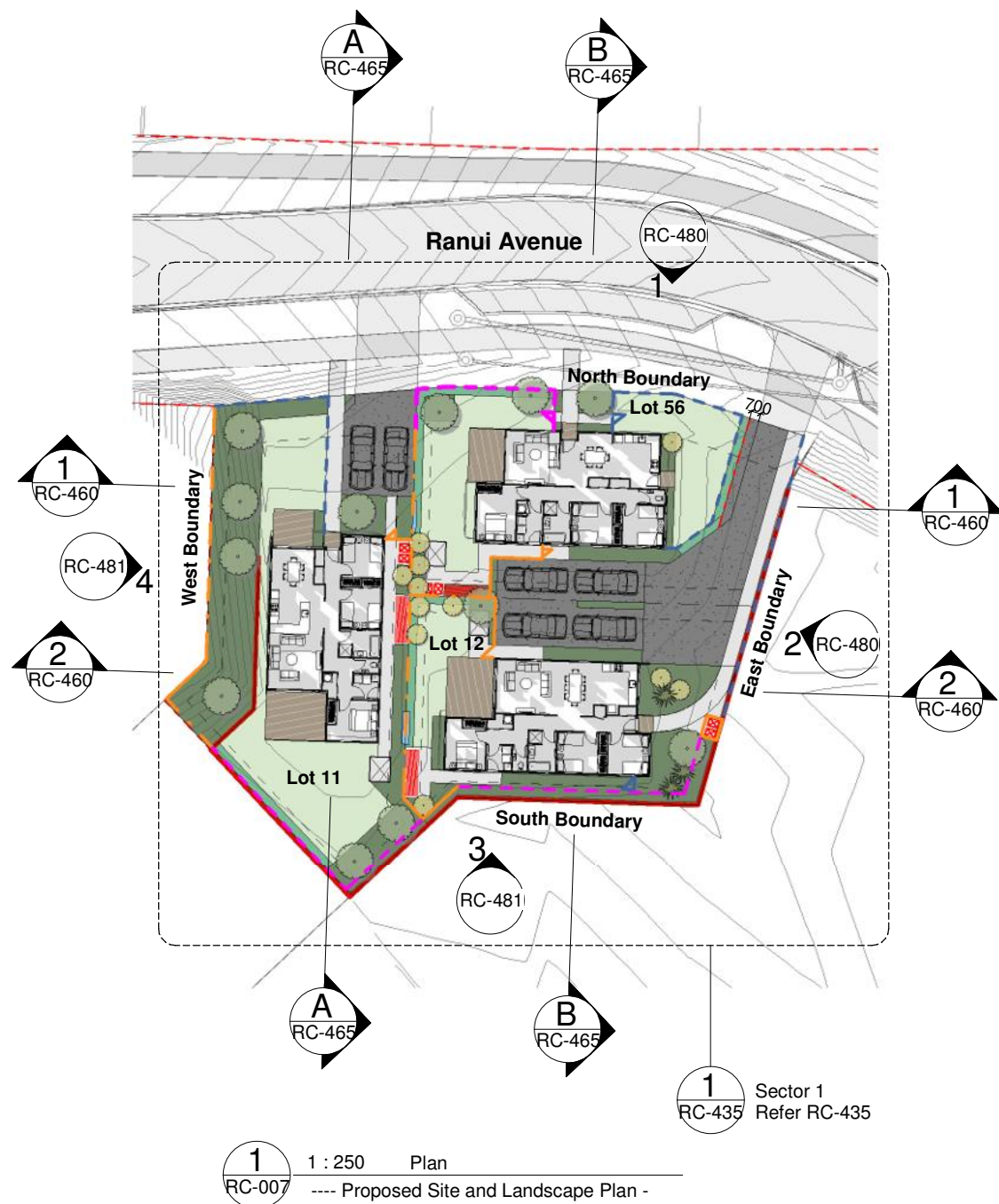
Note:

For Proposed Typology Plan and material scheme reference refer to **RC-325**

For Exterior Materials and Colours refer to **RC- 011,012,013.**

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevation - West and Public Reserve Boundary - Zone C					A STUDIO ARCHITECTS	



Note

This plan shows the landscaping indicatively. Please refer to Greenwoods documentation and drawings for further information.

For Hard and Soft Landscaping Legend refer to **RC-010**

Key

- Yard Setbacks
- Easement
- XXXXXX Proposed finished floor level

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title

Proposed Site and Landscape Plan - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated

Half scale for reduced A3 drawings

0 5 10 15m
Scale: 1:500 @ A3

Revision & Date
A Resource Consent

2026-08-21

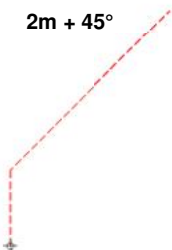
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Grafton, Auckland
09 302 3689
PO Box 44376
Point Chevalier
Auckland 1022
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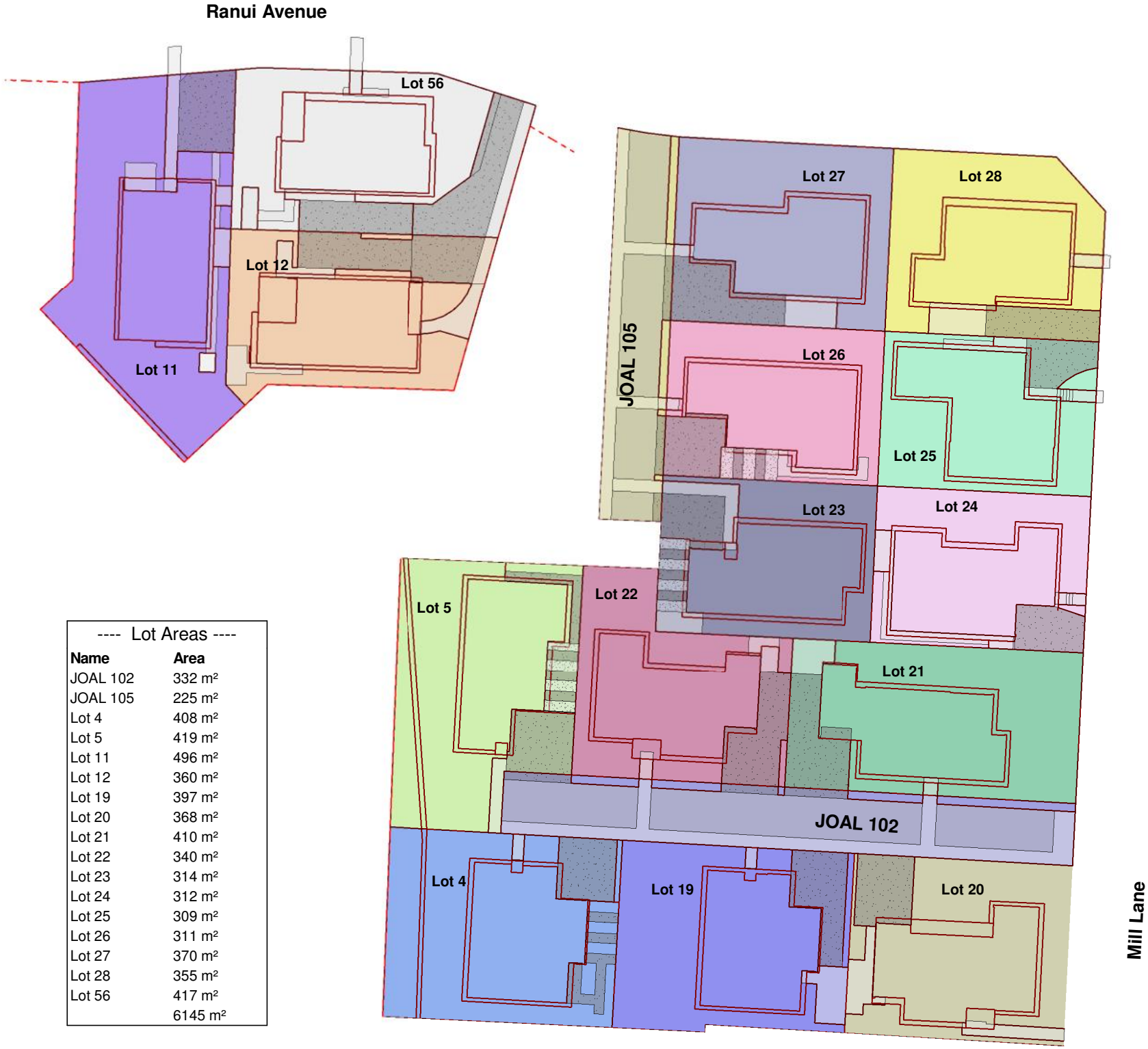
Drawing No:
RC-420
Project No: 2303

Revision
A

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Town Planning Summary		
Far North District Plan Section 6 - Residential Zone		
7.6.5.1.4 Building Height		
8m		Complies
7.6.5.1.5 Sunlight		
External boundaries	 2m + 45°	Complies except lot 28 & 24. Refer to RC-447
Internal boundaries	 3m + 45°	Complies except lot 25, 27, 28. Refer to RC-447
Stormwater Management		
The maximum proportion of the gross site area covered by buildings and other impermeable surfaces		Complies except lot 4, 5, 12, 20, 22, 23. Refer to RC-415 & 417
Lots 1 -11 & 57	50%.	
Lots 12 - 56	65%	
7.6.5.1.7 Set Back from Boundaries		Complies
Road boundaries	3m	Complies except lot 22,28,56. Refer to RC-442,447,452
Minimum 50% landscaping required in the front 2m from road boundary		
Other boundaries.	1.2m	Complies
7.6.5.1.17 Building Coverage		
45%		Complies



Note:
Lot Areas excluding shared JOAL

1 1 : 250 Plan
---- Site Coverage Plan

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings			Project No: 2303	
	Drawing Title Town Planning Compliance - Zone D		0 5 10 15m Scale: 1:500 @ A3				
						A STUDIO ARCHITECTS	

---- JOAL 102		
Coverage Type	Area	Percentage
Impervious	304.6 m²	91.7%
Landscape	27.6 m²	8.3%
	332.2 m²	100.0%

JOAL 102 is shared between 6 lots (Lots 4, 5, 19, 20, 21 and 22)

---- JOAL 105		
Coverage Type	Area	Percentage
Impervious	210.2 m²	93.2%
Landscape	15.2 m²	6.8%
	225.5 m²	100.0%

JOAL 105 is shared between 6 lots (Lots 23, 26, 27 and 3 other lots)

---- Site Coverage - Lot 4		
Coverage Type	Area	Percentage
Building	137.7 m²	33.8%
Impervious	52.2 m²	12.8%
Landscape	217.6 m²	53.4%
	407.5 m²	100.0%

---- Total Impervious - Lot 4		
Coverage Type	Area	Percentage
Impervious	189.9 m²	46.6%
Landscape	217.6 m²	53.4%
	407.5 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 52%

---- Site Coverage - Lot 5		
Coverage Type	Area	Percentage
Building	142.2 m²	33.9%
Impervious	65.6 m²	15.6%
Landscape	211.7 m²	50.5%
	419.5 m²	100.0%

---- Total Impervious - Lot 5		
Coverage Type	Area	Percentage
Impervious	207.8 m²	49.5%
Landscape	211.7 m²	50.5%
	419.5 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 54.4%

---- Site Coverage - Lot 11		
Coverage Type	Area	Percentage
Building	139.5 m²	28.1%
Impervious	78.2 m²	15.8%
Landscape	278.7 m²	56.1%
	496.4 m²	100.0%

---- Total Impervious - Lot 11		
Coverage Type	Area	Percentage
Impervious	217.7 m²	43.9%
Landscape	278.7 m²	56.1%
	496.4 m²	100.0%

---- Site Coverage - Lot 12		
Coverage Type	Area	Percentage
Building	132.2 m²	36.7%
Impervious	107.5 m²	29.8%
Landscape	120.5 m²	33.5%
	360.2 m²	100.0%

---- Total Impervious - Lot 12		
Coverage Type	Area	Percentage
Impervious	239.7 m²	66.5%
Landscape	120.5 m²	33.5%
	360.2 m²	100.0%

---- Site Coverage - Lot 19		
Coverage Type	Area	Percentage
Building	129.1 m²	32.6%
Impervious	79.4 m²	20.0%
Landscape	188.1 m²	47.4%
	396.6 m²	100.0%

---- Total Impervious - Lot 19		
Coverage Type	Area	Percentage
Impervious	208.6 m²	52.6%
Landscape	188.1 m²	47.4%
	396.6 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 57.4%

---- Site Coverage - Lot 20		
Coverage Type	Area	Percentage
Building	148.0 m²	40.2%
Impervious	77.4 m²	21.0%
Landscape	142.5 m²	38.7%
	367.8 m²	100.0%

---- Total Impervious - Lot 20		
Coverage Type	Area	Percentage
Impervious	225.3 m²	61.3%
Landscape	142.5 m²	38.7%
	367.8 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 66.3%

---- Site Coverage - Lot 21		
Coverage Type	Area	Percentage
Building	140.0 m²	34.1%
Impervious	83.2 m²	20.3%
Landscape	186.8 m²	45.6%
	410.0 m²	100.0%

---- Total Impervious - Lot 21		
Coverage Type	Area	Percentage
Impervious	223.2 m²	54.4%
Landscape	186.8 m²	45.6%
	410.0 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 58.9%

---- Site Coverage - Lot 22		
Coverage Type	Area	Percentage
Building	137.5 m²	40.4%
Impervious	71.1 m²	20.9%
Landscape	131.8 m²	38.7%
	340.3 m²	100.0%

---- Total Impervious - Lot 22		
Coverage Type	Area	Percentage
Impervious	208.5 m²	61.3%
Landscape	131.8 m²	38.7%
	340.3 m²	100.0%

Total Impervious Area including a share of JOAL 102 (1/6) = 65.5%

---- Site Coverage - Lot 23		
Coverage Type	Area	Percentage
Building	131.7 m²	41.9%
Impervious	64.4 m²	20.5%
Landscape	118.3 m²	37.6%
	314.4 m²	100.0%

---- Total Impervious - Lot 23		
Coverage Type	Area	Percentage
Impervious	196.1 m²	62.4%
Landscape	118.3 m²	37.6%
	314.4 m²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 65.7%

---- Site Coverage - Lot 24		
Coverage Type	Area	Percentage
Building	134.0 m²	43.0%
Impervious	60.7 m²	19.5%
Landscape	117.2 m²	37.6%
	311.8 m²	100.0%

---- Total Impervious - Lot 24		
Coverage Type	Area	Percentage
Impervious	194.6 m²	62.4%
Landscape	117.2 m²	37.6%
	311.8 m²	100.0%

---- Site Coverage - Lot 25		
Coverage Type	Area	Percentage
Building	135.7 m²	43.9%
Impervious	59.4 m²	19.2%
Landscape	114.0 m²	36.9%
	309.2 m²	100.0%

---- Total Impervious - Lot 25		
Coverage Type	Area	Percentage
Impervious	195.2 m²	63.1%
Landscape	114.0 m²	36.9%
	309.2 m²	100.0%

---- Site Coverage - Lot 26		
Coverage Type	Area	Percentage
Building	128.7 m²	41.4%
Impervious	56.4 m²	18.1%
Landscape	126.1 m²	40.5%
	311.2 m²	100.0%

---- Total Impervious - Lot 26		
Coverage Type	Area	Percentage
Impervious	185.1 m²	59.5%
Landscape	126.1 m²	40.5%
	311.2 m²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 63.1%

---- Site Coverage - Lot 27		
Coverage Type	Area	Percentage
Building	131.8 m²	35.6%
Impervious	84.3 m²	22.8%
Landscape	154.0 m²	41.6%
	370.1 m²	100.0%

---- Total Impervious - Lot 27		
Coverage Type	Area	Percentage
Impervious	216.1 m²	58.4%
Landscape	154.0 m²	41.6%
	370.1 m²	100.0%

Total Impervious Area including a share of JOAL 105 (1/6) = 61.6%

---- Site Coverage - Lot 28		
Coverage Type	Area	Percentage
Building	121.2 m²	34.2%
Impervious	75.8 m²	21.3%
Landscape	157.9 m²	44.5%
	354.9 m²	100.0%

---- Total Impervious - Lot 28		
Coverage Type	Area	Percentage
Impervious	197.0 m²	55.5%
Landscape	157.9 m²	44.5%
	354.9 m²	100.0%

---- Site Coverage - Lot 56		
Coverage Type	Area	Percentage
Building	122.6 m²	29.4%
Impervious	143.5 m²	34.4%
Landscape	150.9 m²	36.2%
	417.0 m²	100.0%

---- Total Impervious - Lot 56		
Coverage Type	Area	Percentage
Impervious	266.1 m²	63.8%
Landscape	150.9 m²	36.2%
	417.0 m²	100.0%

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Project Name
Te Tui Ora

for Gemscott Hall Limited

Drawing Title
Lot Area Schedules - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

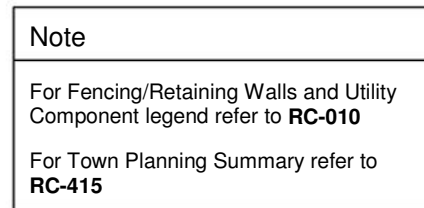
Drawing Scale @ A1 =

Half scale for reduced A3 drawings


Revision & Date
○ A Resource Consent 2026-08-21

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38 Khyber Pass Road,
Grafton, Auckland
09 302 3689
PO Box 44376
Point Chevalier
Auckland 1022
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Drawing No: **RC-422** Revision **A**
Project No: 2303
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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Proposed Ground Floor Plan - Zone D

Drawing Scale @ A1 =
As indicated

Half scale for reduced A3 drawings

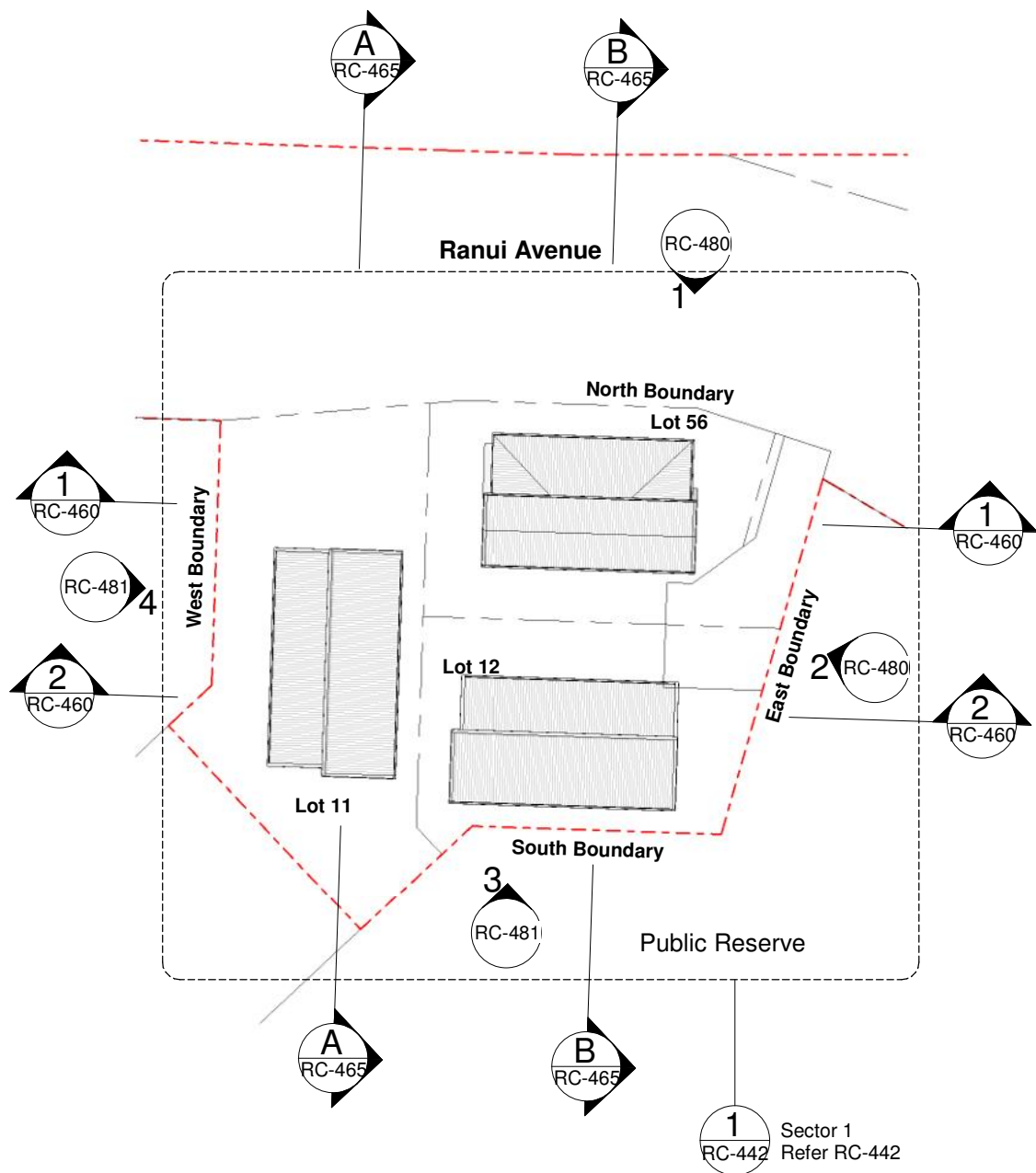


Scale: 1:500 @ A3

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Drawing No: RC-430	Revision A
Project No: 2303	
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RESOURCE CONSENT



Key	
	Yard Setbacks
	Easement
	HIRB Infringement on external boundaries
	HIRB Infringement within internal boundaries

Note
For Fencing/Retaining Walls and Utility Component legend refer to RC-010
For Town Planning Summary refer to RC-415

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Project Name
Te Tui Ora
 for Gemscott Hall Limited
 Drawing Title
Proposed Roof Plan - Zone D

Project Address
 57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
 As indicated
 Half scale for reduced A3 drawings

 Scale: 1:100 @ A3

Revision & Date
 A Resource Consent 2026-08-21

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Drawing No:
RC-432
 Project No: 2303
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RESOURCE CONSENT



Key	
	Yard Setbacks
	Easement
	Level of finished ground level
	Proposed finished floor level

Note

This plan shows the landscaping indicatively. Please refer to Greenwoods documentation and drawings for further information.

For Hard and Soft Landscaping Legend refer to **RC-010**

RESOURCE CONSENT

1 1 : 125 Plan
RC-420 ----- Proposed Site and Landscape Plan - Sector 1

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 1 - Proposed Site and Landscape Plan - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
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RC-435
Project No: 2303
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2 1 : 125 Plan
----- Proposed Site and Landscape Plan - Sector 2

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 2 - Proposed Site and Landscape Plan - Zone D
Project Address
57A Hall Road, Kerikeri, 0230

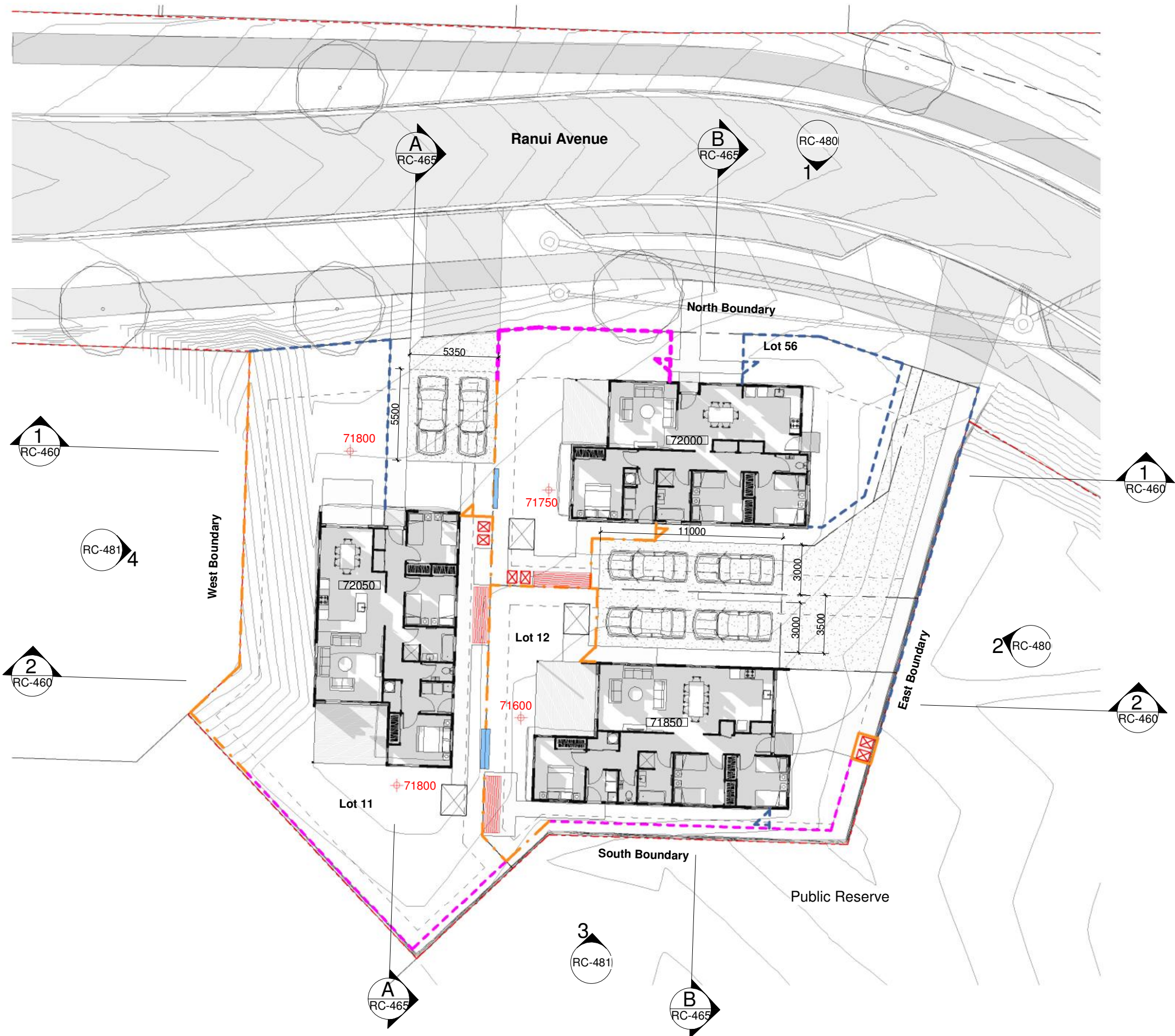
Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Drawing No:
RC-436
Revision
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Project No: 2303
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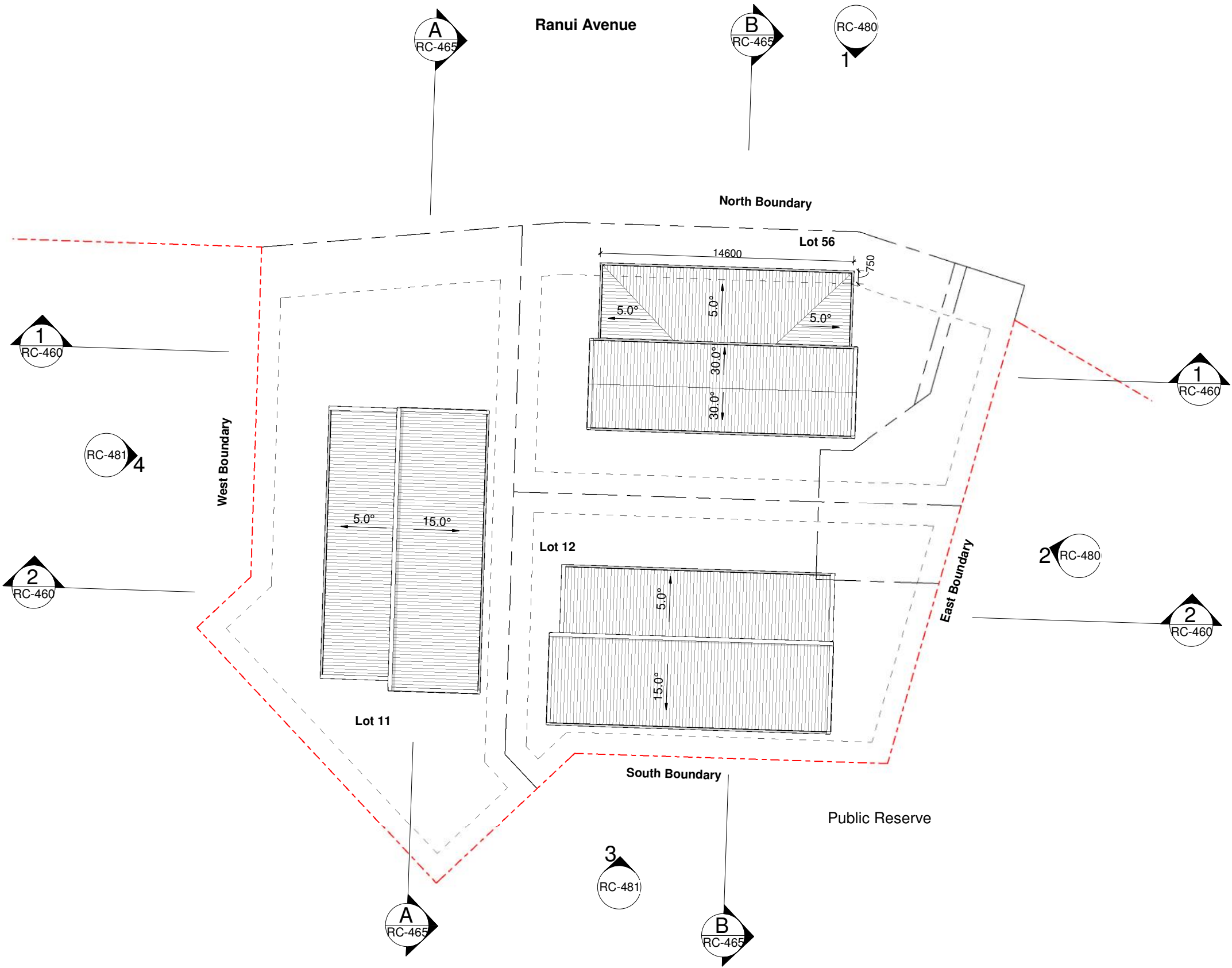
1 1 : 125 Plan
RC-430 ----- Proposed Ground Floor Plan - Sector 1

Key	
-----	Yard Setbacks
-----	Easement
XXXXXX	Proposed finished floor level

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-415	

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	A STUDIO ARCHITECTS



Key	
	Yard Setbacks
	Easement
	HIRB Infringement on external boundaries
	HIRB Infringement within internal boundaries

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-415	

RESOURCE CONSENT

1 1 : 125 Plan
RC-432 ----- Proposed Roof Plan - Sector 1

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 1 - Proposed Roof Plan - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent

2026-08-21

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Drawing No:
RC-442
Project No: 2303
Revision
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Key	
	Yard Setbacks
	Easement
	Proposed finished floor level

Note	
For Fencing/Retaining Walls and Utility Component legend refer to RC-010	
For Town Planning Summary refer to RC-415	

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sector 2 - Proposed Ground Floor Plan - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Drawing No:
RC-445
Revision
A
Project No: 2303
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Key

Yard Setbacks

Easement

HIRB Infringement on external boundaries

HIRB Infringement within internal boundaries

Note

For Fencing/Retaining Walls and Utility Component legend refer to **RC-010**

For Town Planning Summary refer to **RC-415**

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Project Name

Te Tui Ora

for Gemscott Hall Limited

Drawing Title

Sector 2 - Proposed Roof Plan - Zone D

Project Address

57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =

As indicated

Half scale for reduced A3 drawings

0

2.5

5.0

7.5m

Scale: 1:250 @ A3

Revision & Date

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Drawing No:

RC-447

Revision

A

Project No: 2303

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title

Sector 3 - Proposed Ground Floor Plan - Zone D

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent

2026-08-21

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Drawing No:
RC-450
Project No: 2303
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Revision
A



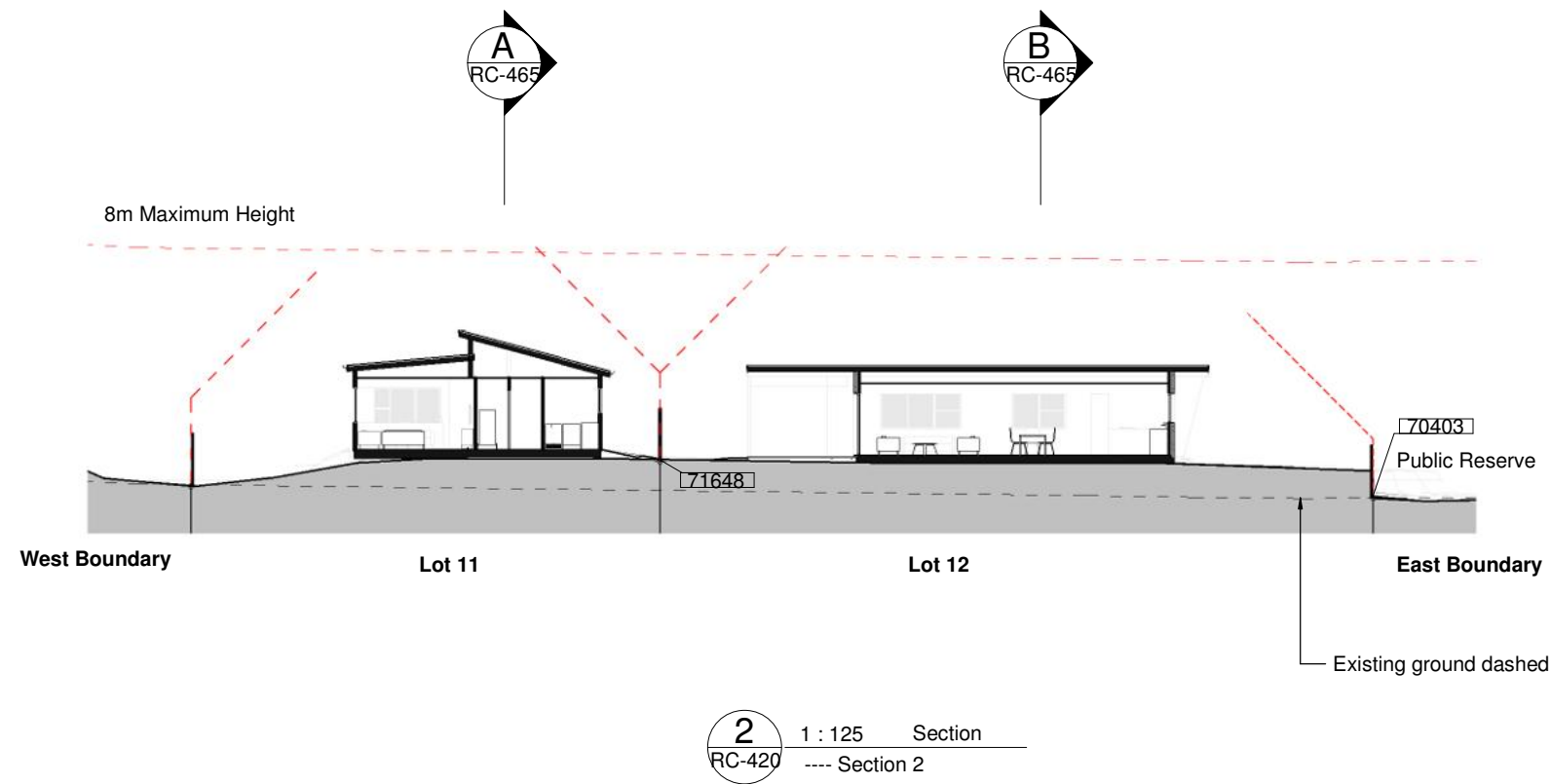
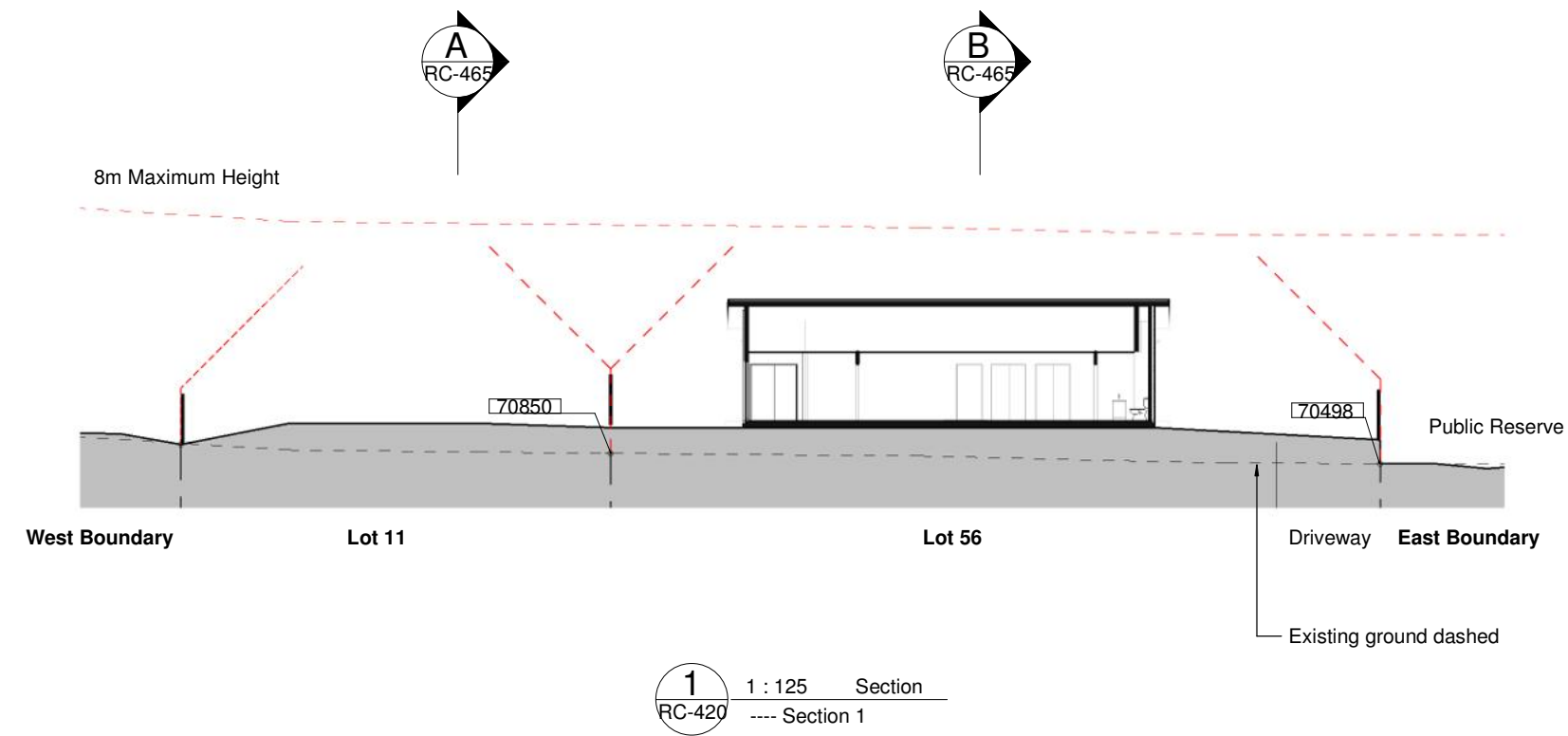
Note

For Fencing/Retaining Walls and Utility Component legend refer to **RC-010**

For Town Planning Summary refer to **RC-415**

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Note

For Town Planning Summary refer to
RC-415

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Project Name
Te Tui Ora
for Gemscott Hall Limited
Drawing Title
Sections 1 and 2 - Zone D

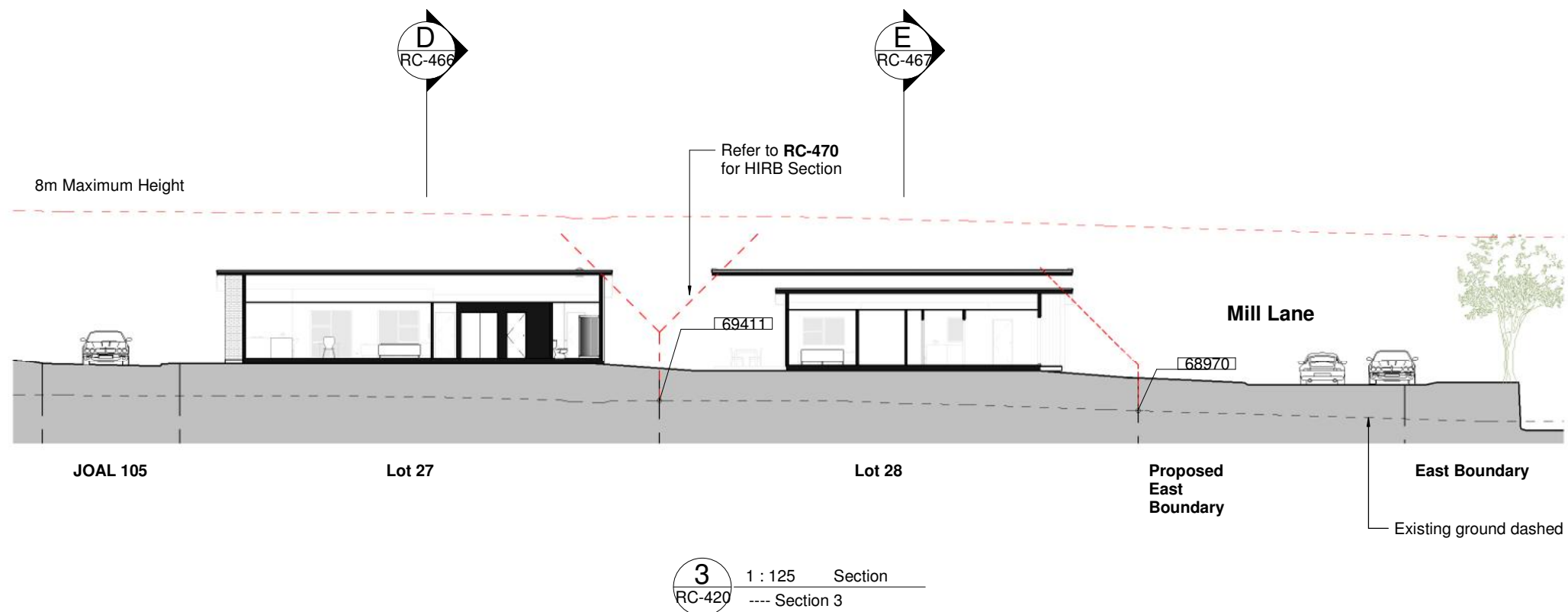
Project Address
57A Hall Road, Kerikeri, 0230

Drawing Scale @ A1 =
As indicated
Half scale for reduced A3 drawings
0 2.5 5.0 7.5m
Scale: 1:250 @ A3

Revision & Date
A Resource Consent 2026-08-21

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Drawing No: **RC-460** Revision **A**
Project No: 2303
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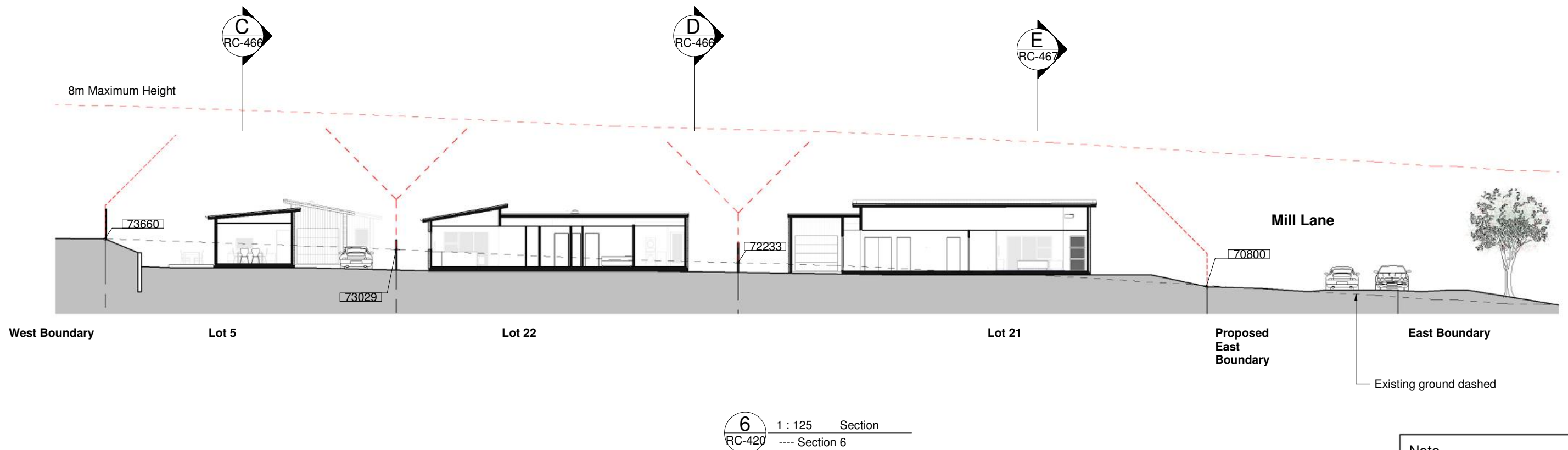
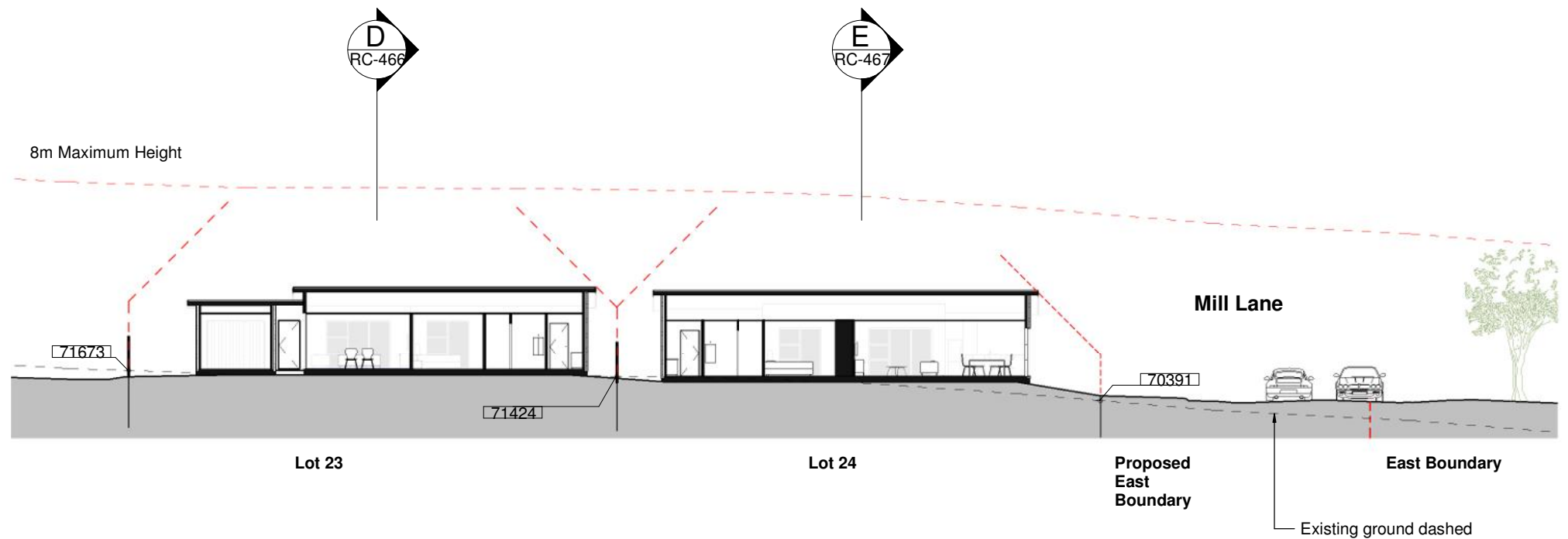


Note

For Town Planning Summary refer to
RC-415

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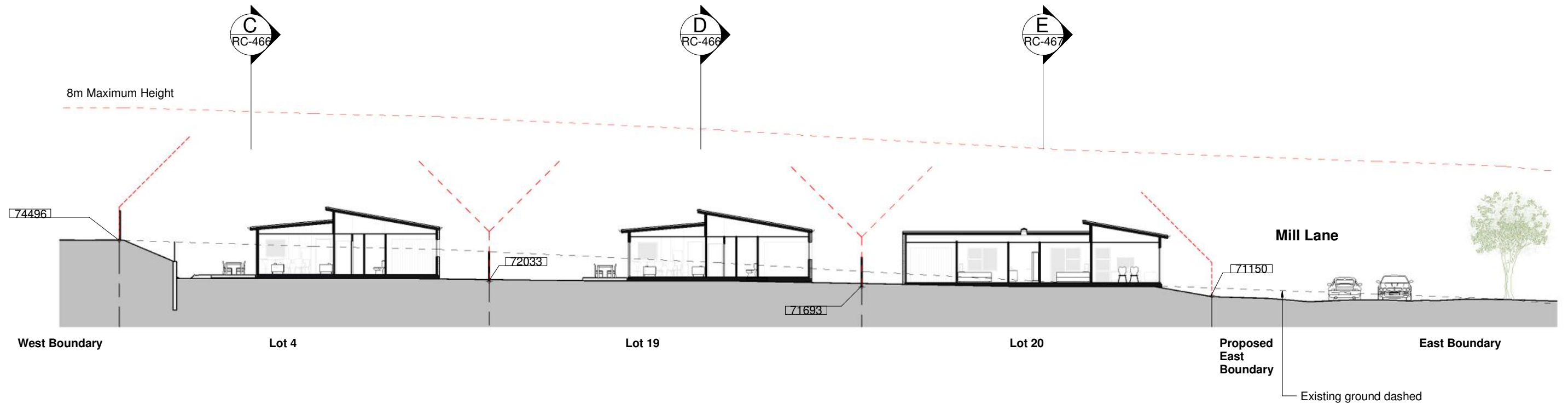


Note

For Town Planning Summary refer to
RC-415

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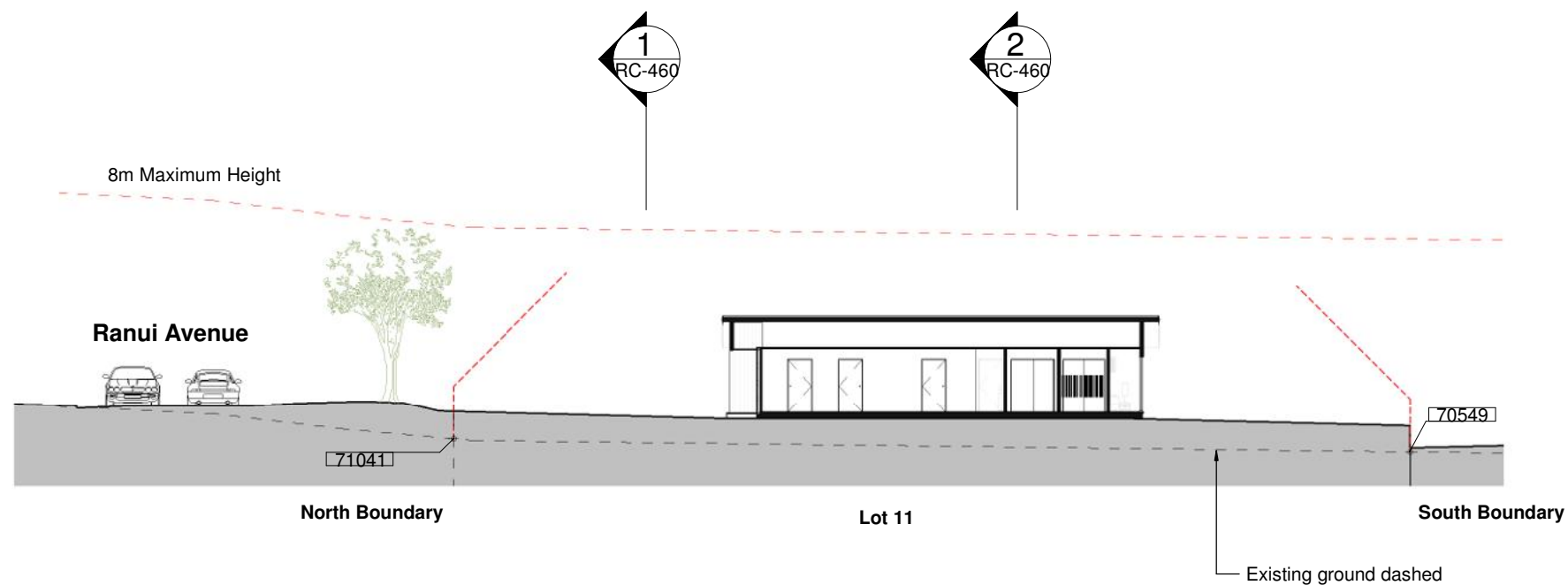


7 1 : 125 Section
RC-420 ---- Section 7

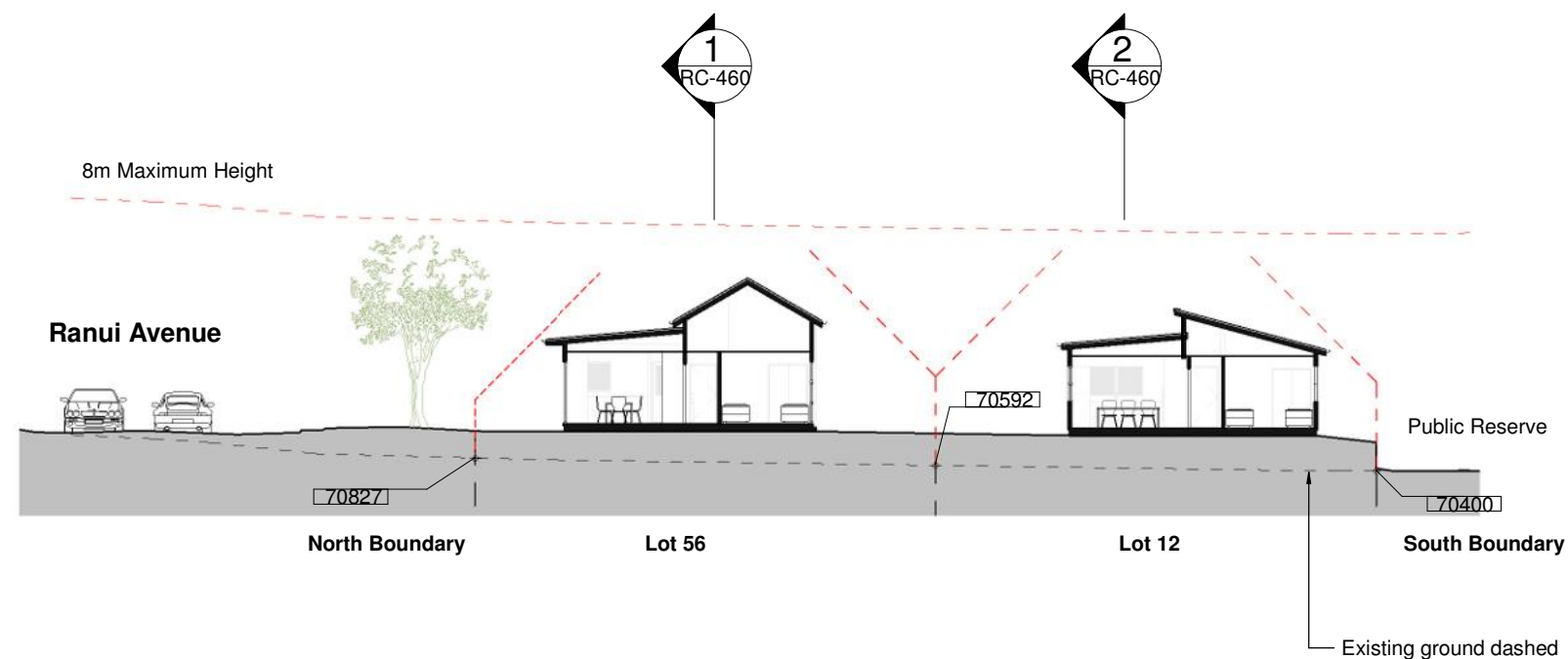
Note
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RC-415

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A 1 : 125 Section
RC-420 ---- Section A

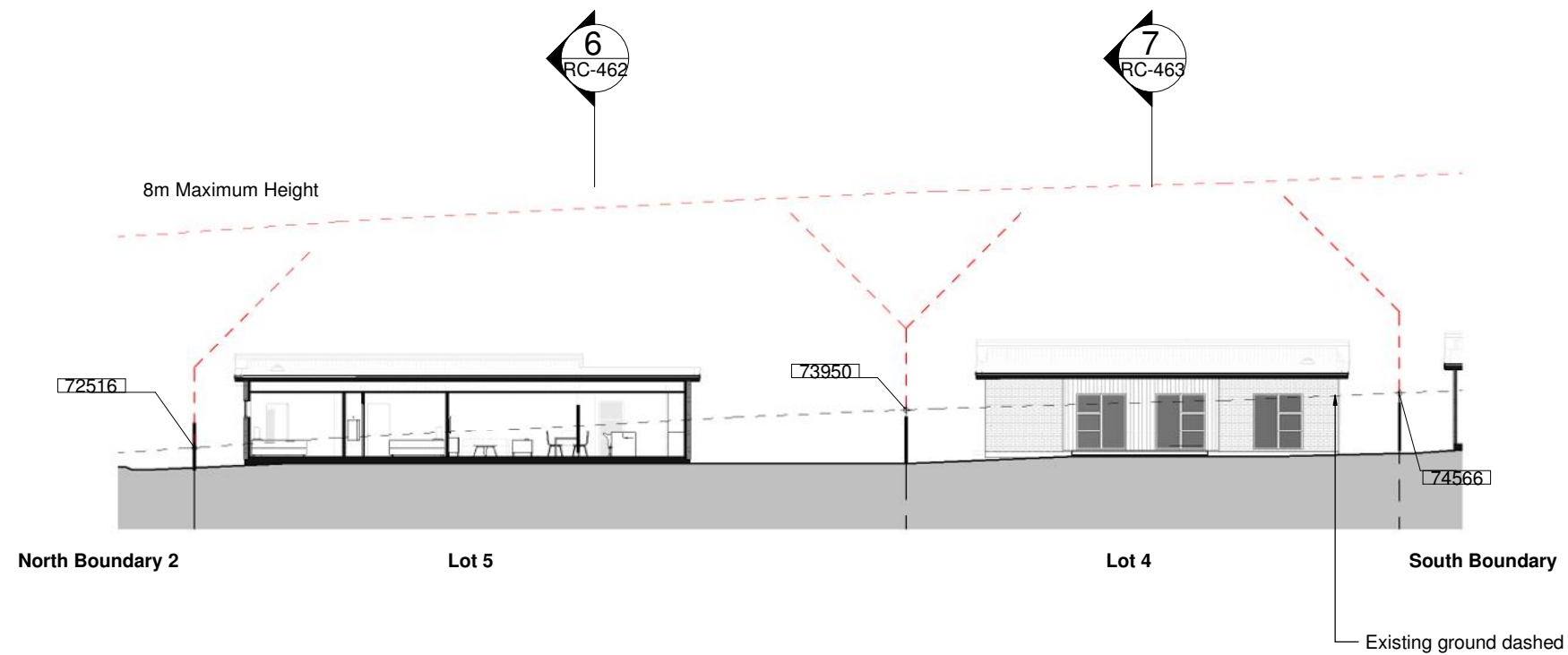


B 1 : 125 Section
RC-420 ---- Section B

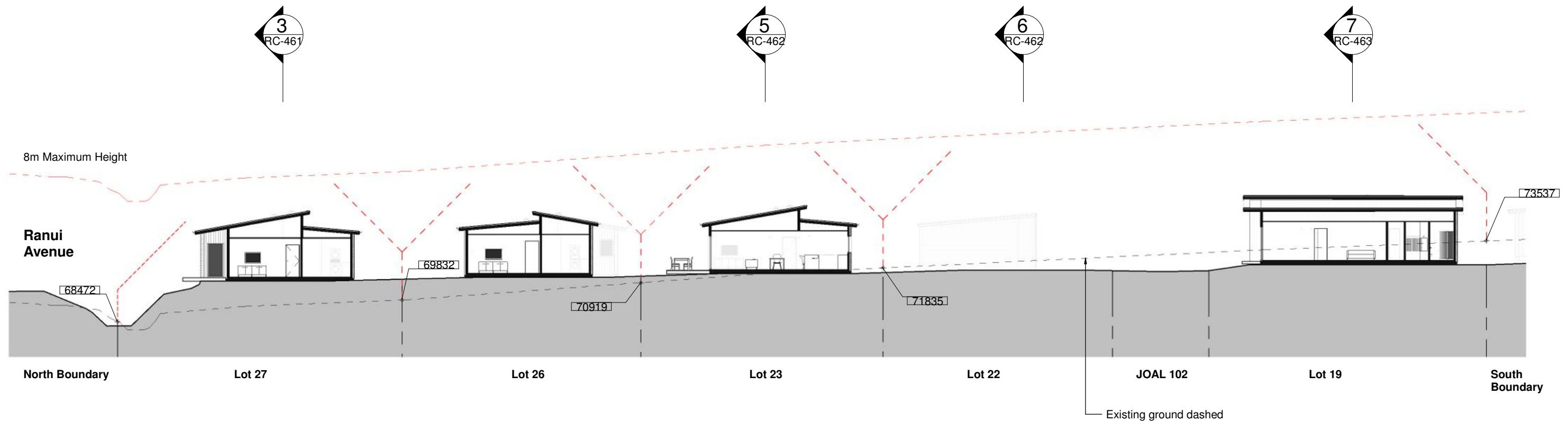
Note
For Town Planning Summary refer to RC-415

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 02.55.07.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Sections A and B - Zone D					A STUDIO ARCHITECTS	



C 1 : 125 Section
RC-120 ---- Section C

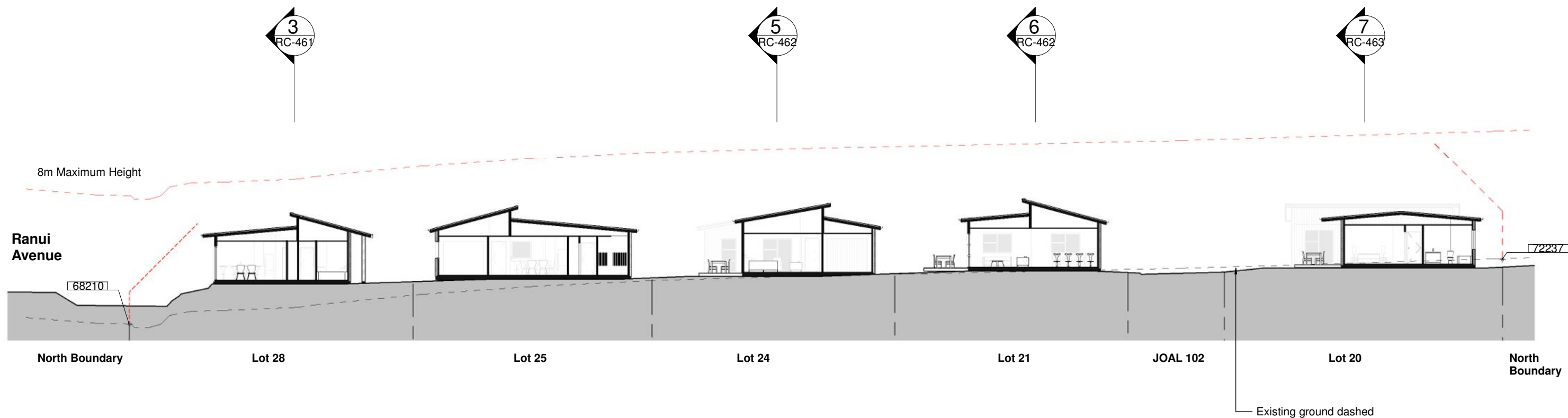


D 1 : 125 Section
RC-420 ---- Section D

Note
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RC-415

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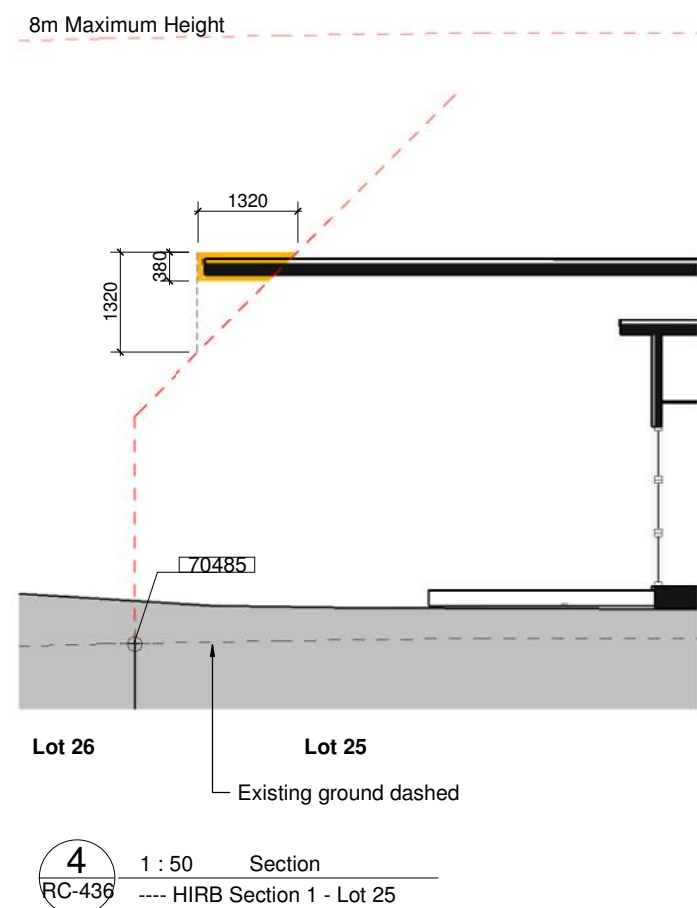
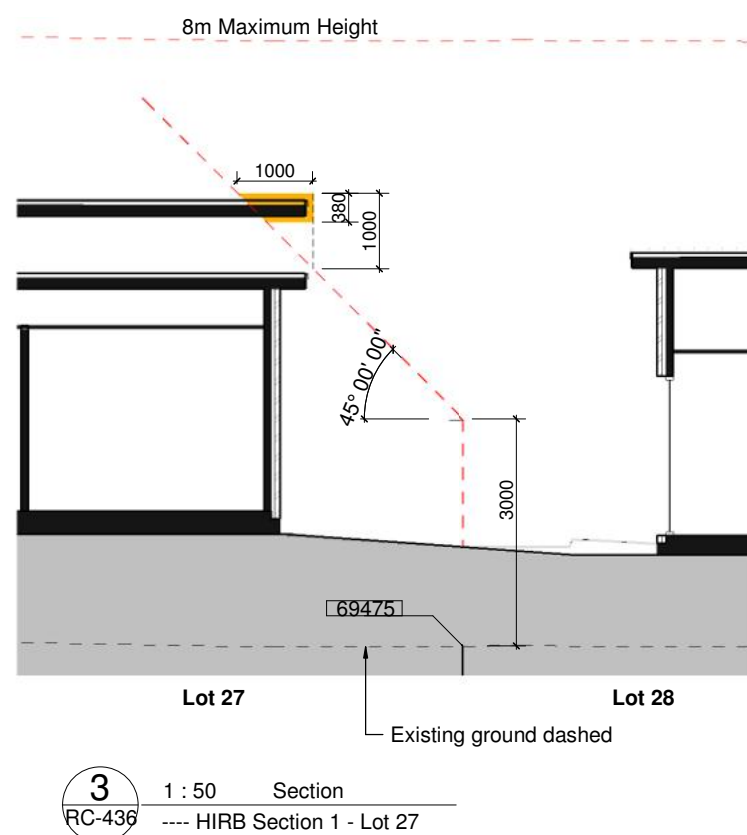
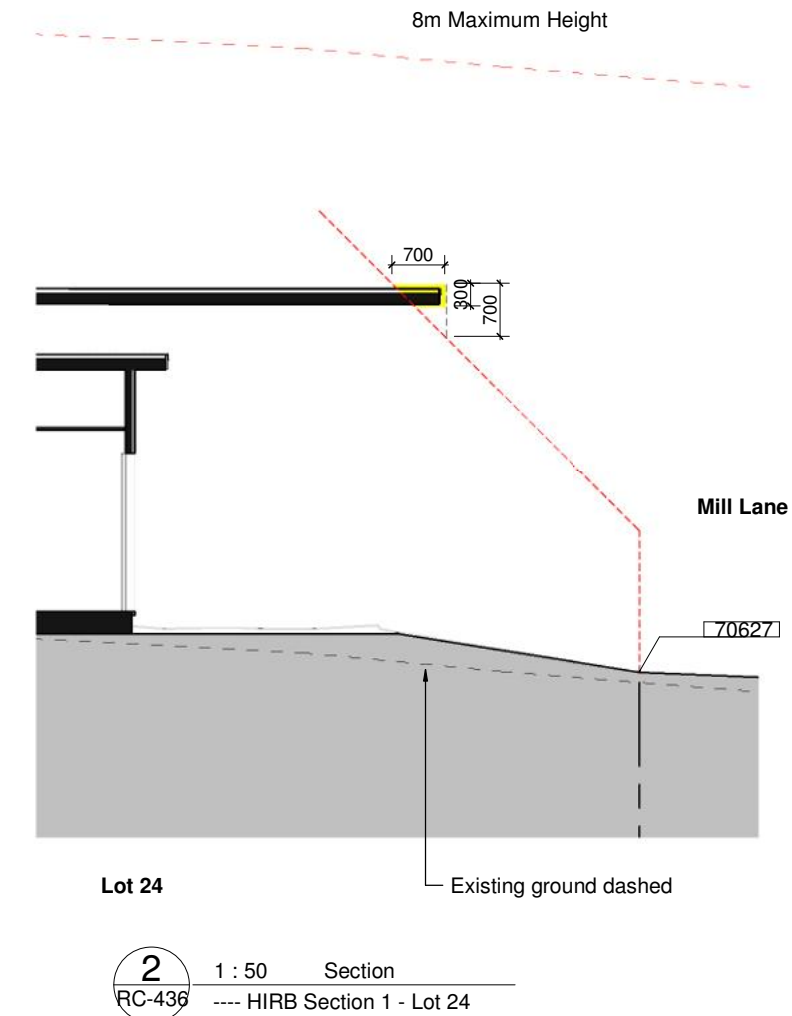
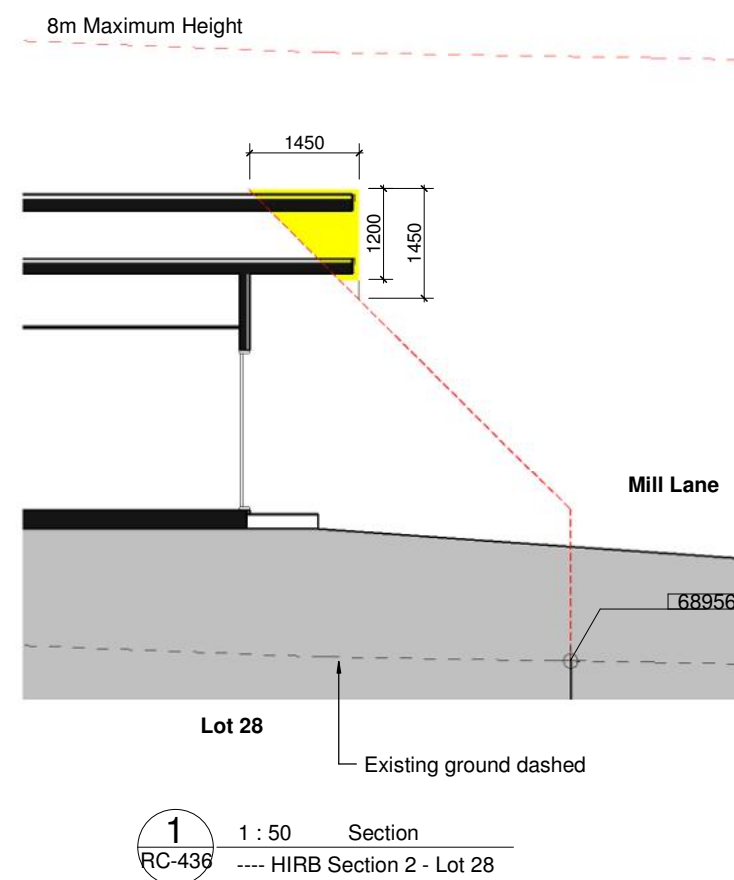
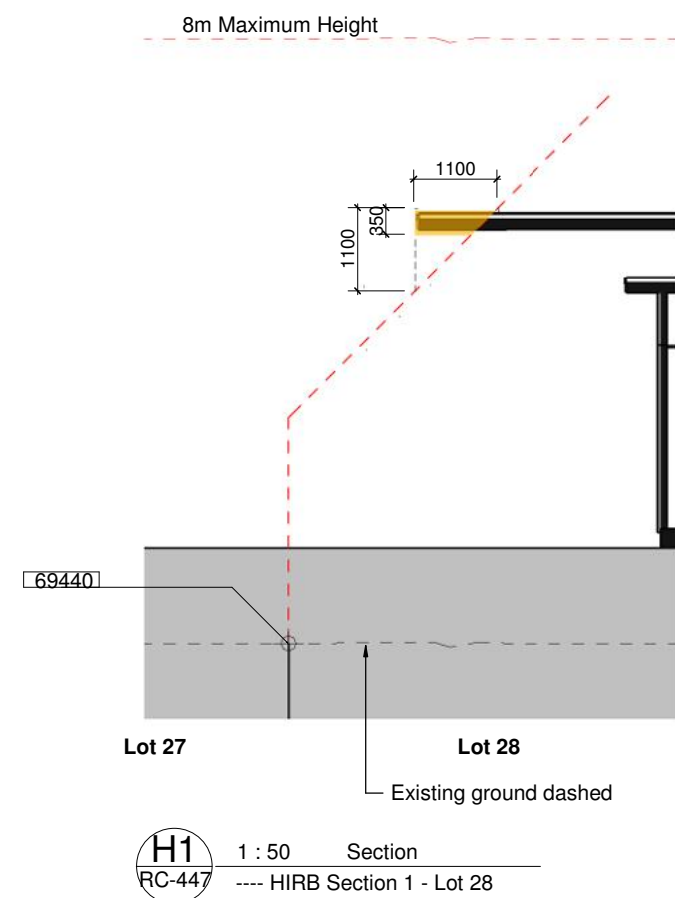
E 1 : 125 Section
RC-420 ---- Section E

Note

For Town Planning Summary refer to
RC-415

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Key	
	HIRB Infringement on external boundaries
	HIRB Infringement within internal boundaries

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Project Name
Te Tui Ora
 for Gemscott Hall Limited
 Drawing Title
HIRB Sections - Zone D

Project Address
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Drawing Scale @ A1 =
 1 : 50
 Half scale for reduced A3 drawings

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 Project No: 2303
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East Boundary

Lot 56
House Type 3M
Material Scheme 4

Lot 11
House Type 3N
Material Scheme 3

West Boundary

1
RC-420

1 : 125 Elevation

---- Elevation 1 - North Boundary - Ranui Avenue



Lot 56
House Type 3M
Material Scheme 4

Lot 11
House Type 3N
Material Scheme 3

1.
RC-220

1 : 125 Elevation

---- Elevation 1



South Boundary

Lot 12
House Type 3L
Material Scheme 3

Lot 56
House Type 3M
Material Scheme 4

North Boundary

2
RC-420

1 : 125 Elevation

---- Elevation 2 - East Boundary - Reserve



South Boundary

Lot 12
House Type 3L
Material Scheme 3

Lot 56
House Type 3M
Material Scheme 4

North Boundary

2.
SK-5200

1 : 125 Elevation

---- Elevation 2

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-425**

For Exterior Materials and Colours refer to **RC- 011, 012, 013**

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- 3 Verify all dimensions and levels on site prior to commencing any work
- 4 All discrepancies are to be referred to the design office for clarification

Project Name
Te Tui Ora

Project Address
57A Hall Road, Kerikeri, 0230

Drawing Title
Elevations 1 and 2 - Ranui Avenue - Zone D

Drawing Scale @ A1 =
As indicated

Half scale for reduced A3 drawings

0 2.5 5.0 7.5m

Scale: 1:250 @ A3

Revision & Date
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Drawing No:
RC-480

Revision
A

Project No: 2303

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3
RC-420

1 : 125 Elevation

---- Elevation 3 - South Boundary



4
RC-420

1 : 125 Elevation

---- Elevation 4 - West Boundary

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-425**

For Exterior Materials and Colours refer to **RC- 011, 012, 013**

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5
RC-320
1 : 125 Elevation
---- Elevation 5



6
RC-120
1 : 125 Elevation
---- Elevation 6

Note:

For Proposed Typology Plan and material scheme reference refer to **RC-425**

For Exterior Materials and Colours refer to **RC- 011, 012, 013**

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7
RC-420 1 : 125 Elevation
---- Elevation 7 - JOAL 102



8
RC-420 1 : 125 Elevation
---- Elevation 8 - JOAL 102

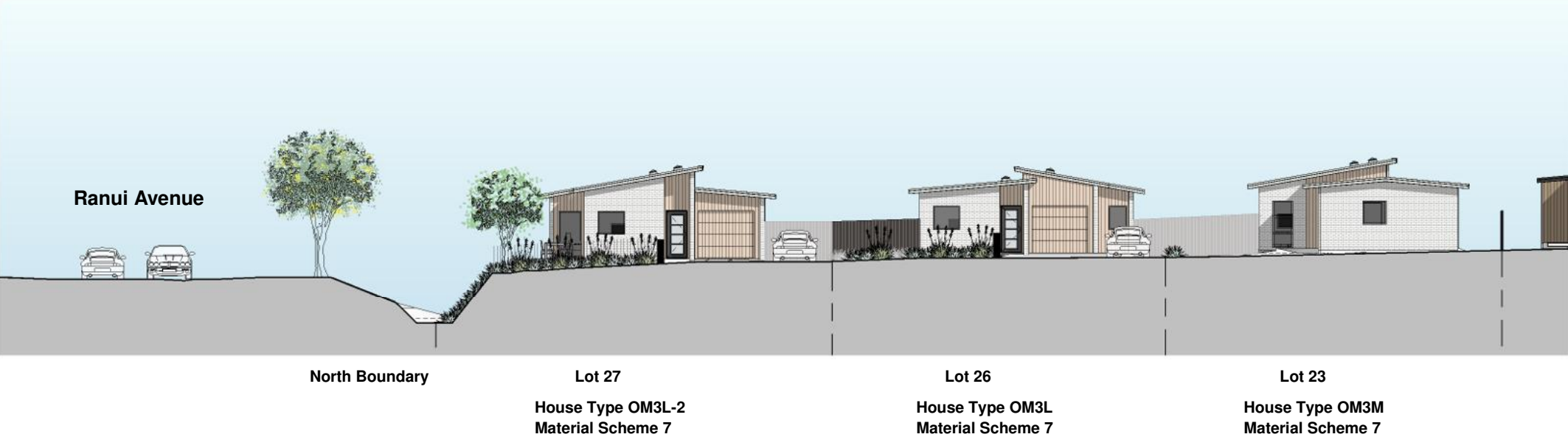
Note:

For Proposed Typology Plan and material scheme reference refer to **RC-425**

For Exterior Materials and Colours refer to **RC- 011, 012, 013**

RESOURCE CONSENT

These drawings, and all parts thereof, are copyright. Final design and detail may vary. 1 Written dimensions are to be used 2 Do not scale dimensions from drawings 3 Verify all dimensions and levels on site prior to commencing any work 4 All discrepancies are to be referred to the design office for clarification	Project Name Te Tui Ora for Gemscott Hall Limited Drawing Title Elevations 7 and 8 - JOAL 102 - Zone D	Project Address 57A Hall Road, Kerikeri, 0230	Drawing Scale @ A1 = As indicated Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3	Revision & Date o A Resource Consent 2026-08-21	SKHY Level 4, 38 Khyber Pass Road, Grafton, Auckland 09 302 3689 PO Box 44376 Point Chevalier Auckland 1022 www.astudioarchitects.com	Drawing No: RC-484 Revision A Project No: 2303 A STUDIO ARCHITECTS
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9 1 : 125 Elevation
RC-220 ---- Elevation 9 - JOAL 105



10 1 : 125 Elevation
RC-320 ---- Elevation 10 - North Boundary

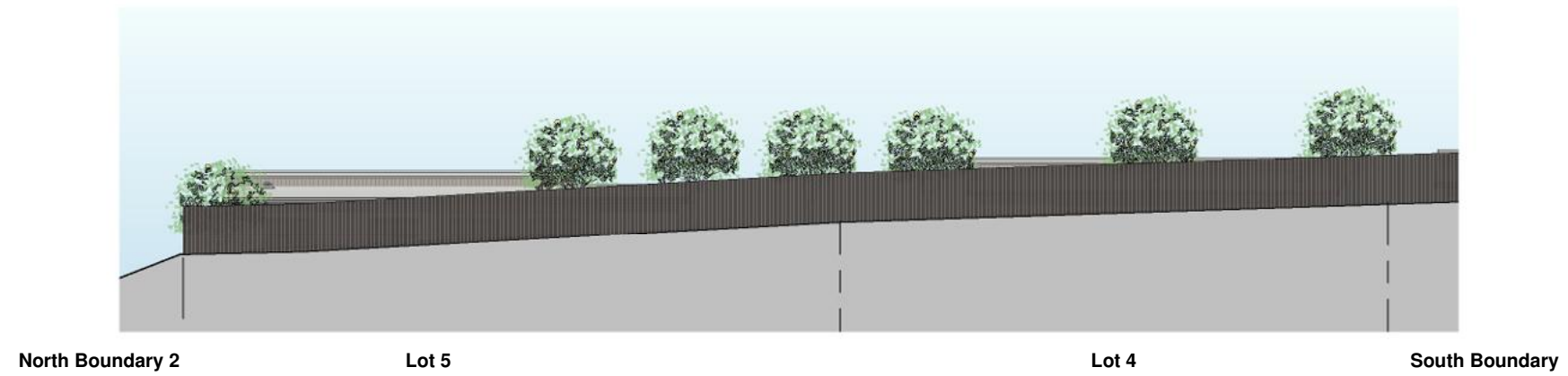
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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 02.55.07.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevation 9 and 10 - JOAL 105 - Zone D					A STUDIO ARCHITECTS	



11
1 : 125 Elevation
RC-120
---- Elevation 11 - West Boundary

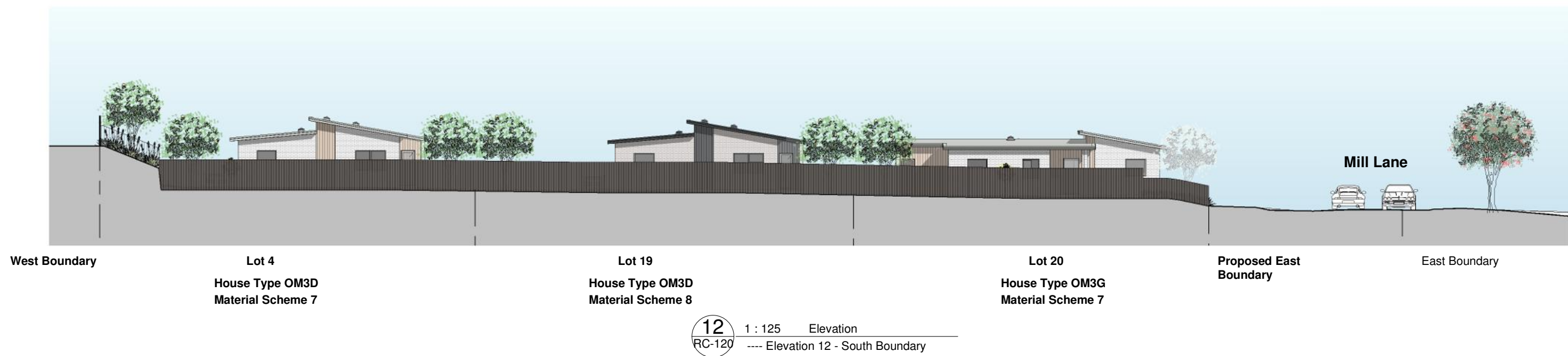
Note:

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	for Gemscott Hall Limited			Half scale for reduced A3 drawings 02.55.07.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevation 11 - West Boundary - Zone D						A STUDIO ARCHITECTS	



Note:

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For Exterior Materials and Colours refer to **RC- 011, 012, 013**

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	for Gemscott Hall Limited		Half scale for reduced A3 drawings 0 2.5 5.0 7.5m Scale: 1:250 @ A3			Project No: 2303	
	Drawing Title Elevation 12 - South Boundary - Zone D					A STUDIO ARCHITECTS	

57A Hall Road, Kerikeri

<i>General Arrangement Plan</i>	<i>P_02</i>
<i>Streetscape Planting Area 1</i>	<i>P_03</i>
<i>Streetscape Planting Area 2</i>	<i>P_04</i>
<i>Streetscape Planting Area 3</i>	<i>P_05</i>
<i>Streetscape Planting Area 4</i>	<i>P_06</i>
<i>Streetscape Planting Area 5</i>	<i>P_07</i>
<i>Swale Planting Area 1</i>	<i>P_08</i>
<i>Swale Planting Area 2</i>	<i>P_09</i>
<i>Typical Planting Details</i>	<i>P_10</i>

Detailed Streetscape Landscape Plan Set

Gemscott Hall Ltd

Project No: 2611



GENERAL NOTES:

- 1: UNLESS OTHERWISE STATED, ALL DIMENSIONS ARE IN MM
- 2: WHERE PROPRIETY ITEMS ARE USED, INSTALL TO ACCORDANCE WITH THE MANUFACTURERS CURRENT SPECIFICATIONS.
- 3: LANDSCAPE DRAWINGS SHALL BE READ IN CONJUNCTION WITH CIVIL DRAWINGS AND SPECIFICATIONS. CIVIL PLAN SERVICE LOCATIONS AND ALIGNMENTS TAKE PRECEDENCE OVER REFERENCED LOCATIONS IN THE LANDSCAPE PLANS.
- 4: ANY DISCREPANCIES SHALL BE IMMEDIATELY REFERRED TO THE LANDSCAPE ARCHITECT
- 5: CONTRACTOR TO ENSURE CURRENT ISSUED PLANS ARE USED AND DISTRIBUTED AMONGST STAFF MEMBERS AND SUB-CONTRACTORS.

SWALE RIPARIAN PLANTING NOTES:

PLANT LOCATIONS ARE TO BE MARKED ON SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT/ OR LOCAL COUNCIL AUTHORITY PRIOR TO INSTALLATION.

PLANT SELECTION IS TO BE AS PER THE PLANT SCHEDULE. ALTERNATIVE OR SUBSTITUTE PLANTING SPECIES TO BE APPROVED BY THE LANDSCAPE ARCHITECT.

ALL PLANTS ARE TO BE WELL WATERED IN FOLLOWING PLANTING, WITH SUBSEQUENT WATERING TO BE CARRIED OUT AS PER THE TECHNICAL SPECIFICATION.

FORMATIVE PRUNING OF TREES DURING MAINTENANCE PERIOD TO MAINTAIN REQUIRED CLEARANCES OF ROADS, FOOTPATHS AND DRIVEWAYS

BIOCOIR COCONUT MATTING (OR APPROVED PRODUCT BY CIVIL ENGINEERS) TO BE IMPLEMENTED ALONG ALL PLANTING AREAS OF THE SWALE.

ALL PHORMIUM TENAX PLANTING WITHIN THE UPPER EMBANKMENT AREAS NEED TO BE PLANTED 1000MM FROM FOOTPATHS AND PEDESTRIAN AREAS.

ALL APODASMIA SIMILLIS TO BE PLANTED 500MM AWAY FROM FOOTPATHS AND PEDESTRIAN AREAS.

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ALL TREE PITS ARE TO BE SCARIFIED, AND BACKFILLED AFTER PLANTING WITH A 80% MIX OF EXCAVATED TOPSOIL AND IMPORTED COMPOST, AND TAMPED DOWN BY FOOT TO PROVIDE A LIGHTLY COMPACTED FINAL SOIL LEVEL.

NEW PLANTING AREAS TO RECEIVE MINIMUM 300MM DEPTH OF WEEDFREE TOPSOIL.

ALL PLANTING SHALL RECEIVE A DOSE OF SLOW RELEASE FERTILISER UPON PLANTING.

ALL PLANTS ARE TO BE WELL WATERED IN FOLLOWING PLANTING, WITH SUBSEQUENT WATERING TO BE CARRIED OUT AS PER THE TECHNICAL SPECIFICATION.

STAKES TO BE UPRIGHT, ALIGNED PARALLEL TO PREDOMINANT WIND DIRECTION, AND DRIVEN MIN. 400MM INTO FIRM, UNMODIFIED GROUND.

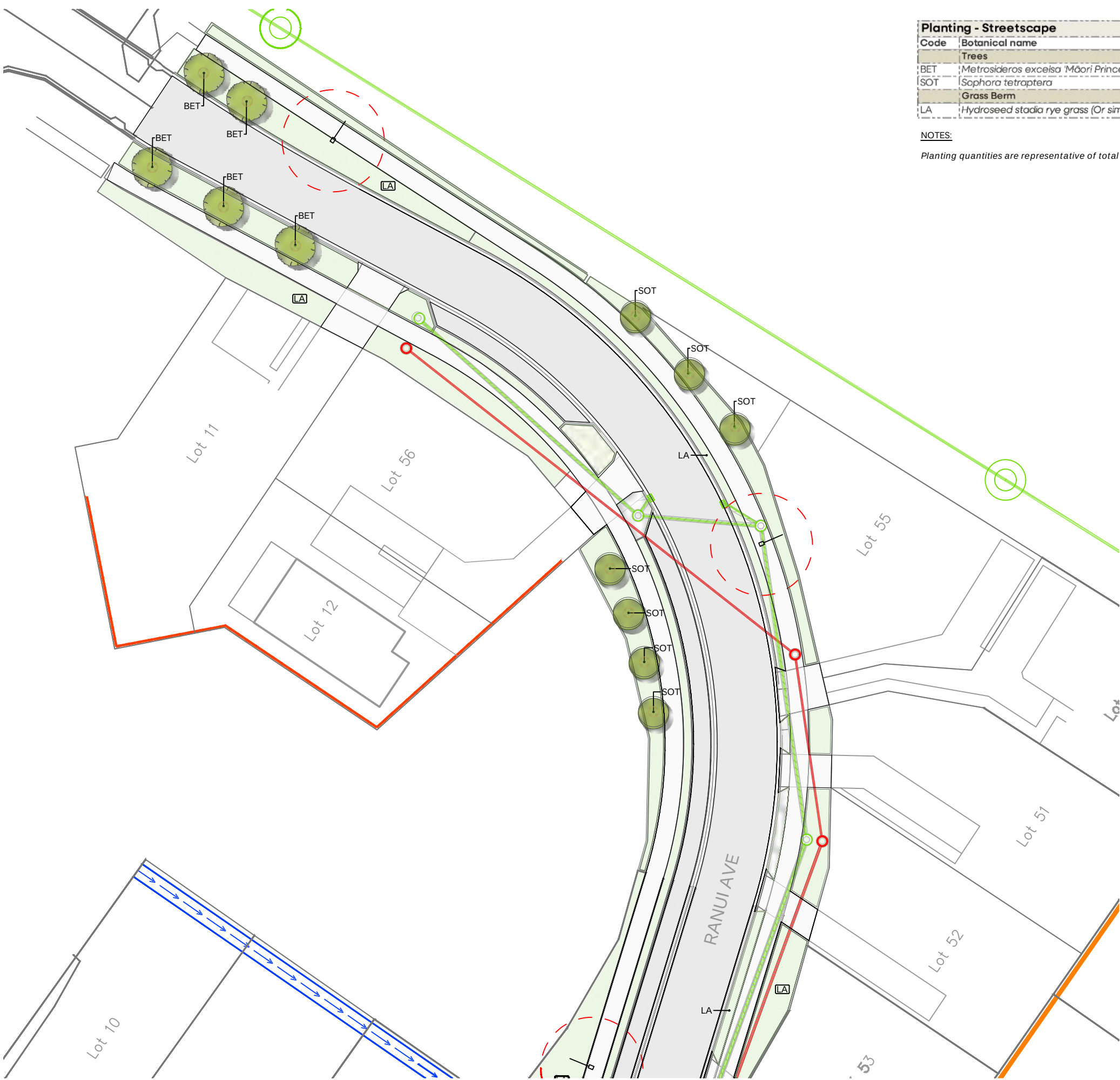
ALL PLANTED AREAS TO RECEIVE 100MM OF CAMBIUM BARK MULCH.

STREET TREES TO HAVE A 1000MM RADIUS OF CAMBIUM BARK MULCH TO A MINIMUM DEPTH OF 100MM WHEN SETTLED AS PER THE FNDCE ENGINEERING STANDARDS VERSION 0.6

PLANTING TO BE 300MM AWAY FROM EDGE OF FOOTPATH, DRIVEWAY, OR ROAD.

PHORMIUM COOKIANUM 'EMERALD GREEN' AND APODASMIA SIMILLIS TO BE PLANTED 500MM AWAY FROM EDGE OF FOOTPATH, DRIVEWAYS AND ROADS.





Planting - Streetscape								
Code	Botanical name	Common Name	Spacing	Grade	H @ Maturity	H @ Install	Detail	Quantity
Trees								
BET	Metrosideros excelsa 'Māori Princess'	pohutukawa maori princess	As Marked	45 L	8 x 6m	1.8m	PD 01	23
SOT	Sophora tetraptera	large leaved kowhai	As Marked	45 L	6 x 3m	1.8m	PD 01	20
Grass Berm								
LA	Hydroseed stadia rye grass (Or similar) over all grass berm areas							PD 04

NOTES:

Planting quantities are representative of total plant numbers across all Streetscape Areas.

- 5m radius street tree offset from light pole
- Referenced SW underground services
- Referenced WW underground services

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Planting - Streetscape								
Code	Botanical name	Common Name	Spacing	Grade	H @ Maturity	H @ Install	Detail	Quantity
Trees								
BET	Metrosideros excelsa 'Māori Princess'	pohutukawa maori princess	As Marked	45 L	8 x 6m	1.8m	PD 01	23
SOT	Sophora tetraptera	large leaved kowhai	As Marked	45 L	6 x 3m	1.8m	PD 01	20
Grass Berm								
LA	Hydroseed stadia rye grass (Or similar) over all grass berm areas						PD 04	

NOTES:

Planting quantities are representative of total plant numbers across all Streetscape Areas.

- 

5m radius street tree offset from light pole
- 

Referenced SW underground services
- 

Referenced WW underground services

STREETSCAPE PLANTING NOTES:

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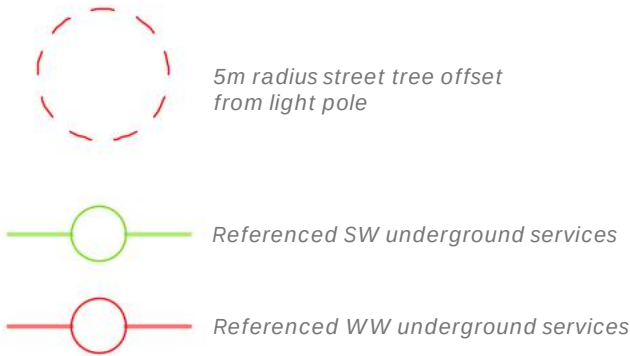
PHORMIUM COOKIANUM 'EMERALD GREEN' AND APODASMA SIMILIS TO BE PLANTED 500MM AWAY FROM EDGE OF FOOTPATH, DRIVEWAYS AND ROADS.



Planting - Streetscape								
Code	Botanical name	Common Name	Spacing	Grade	H @ Maturity	H @ Install	Detail	Quantity
Trees								
BET	Metrosideros excelsa 'Maori Princess'	pohutukawa maori princess	As Marked	45 L	8 x 6m	1.8m	PD 01	23
SOT	Sophora tetraptera	large leaved kowhai	As Marked	45 L	6 x 3m	1.8m	PD 01	20
Grass Berm								
LA	Hydroseed stadia rye grass (Or similar) over all grass berm areas						PD 04	

NOTES:

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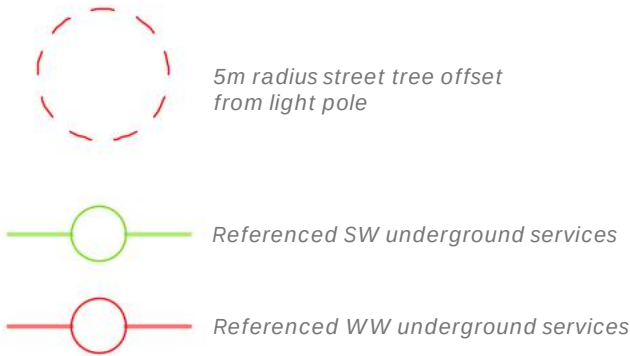
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Planting - Streetscape								
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SOT	Sophora tetraptera	large leaved kowhai	As Marked	45 L 6 x 3m	1.8m		PD 01	20
Grass Berm								
LA	Hydroseed stadia rye grass (Or similar) over all grass berm areas						PD 04	

NOTES:

Planting quantities are representative of total plant numbers across all Streetscape Areas.



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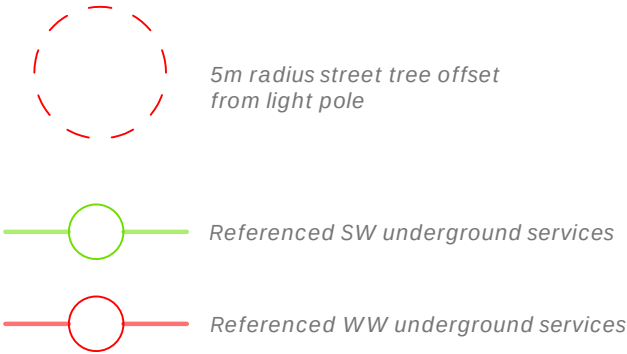
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Planting - Streetscape								
Code	Botanical name	Common Name	Spacing	Grade	H @ Maturity	H @ Install	Detail	Quantity
Trees								
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SOT	Sophora tetraptera	large leaved kowhai	As Marked	45 L	6 x 3m	1.8m	PD 01	20
Grass Berm								
LA	Hydroseed stadia rye grass (Or similar) over all grass berm areas						PD 04	

NOTES:

Planting quantities are representative of total plant numbers across all Streetscape Areas.



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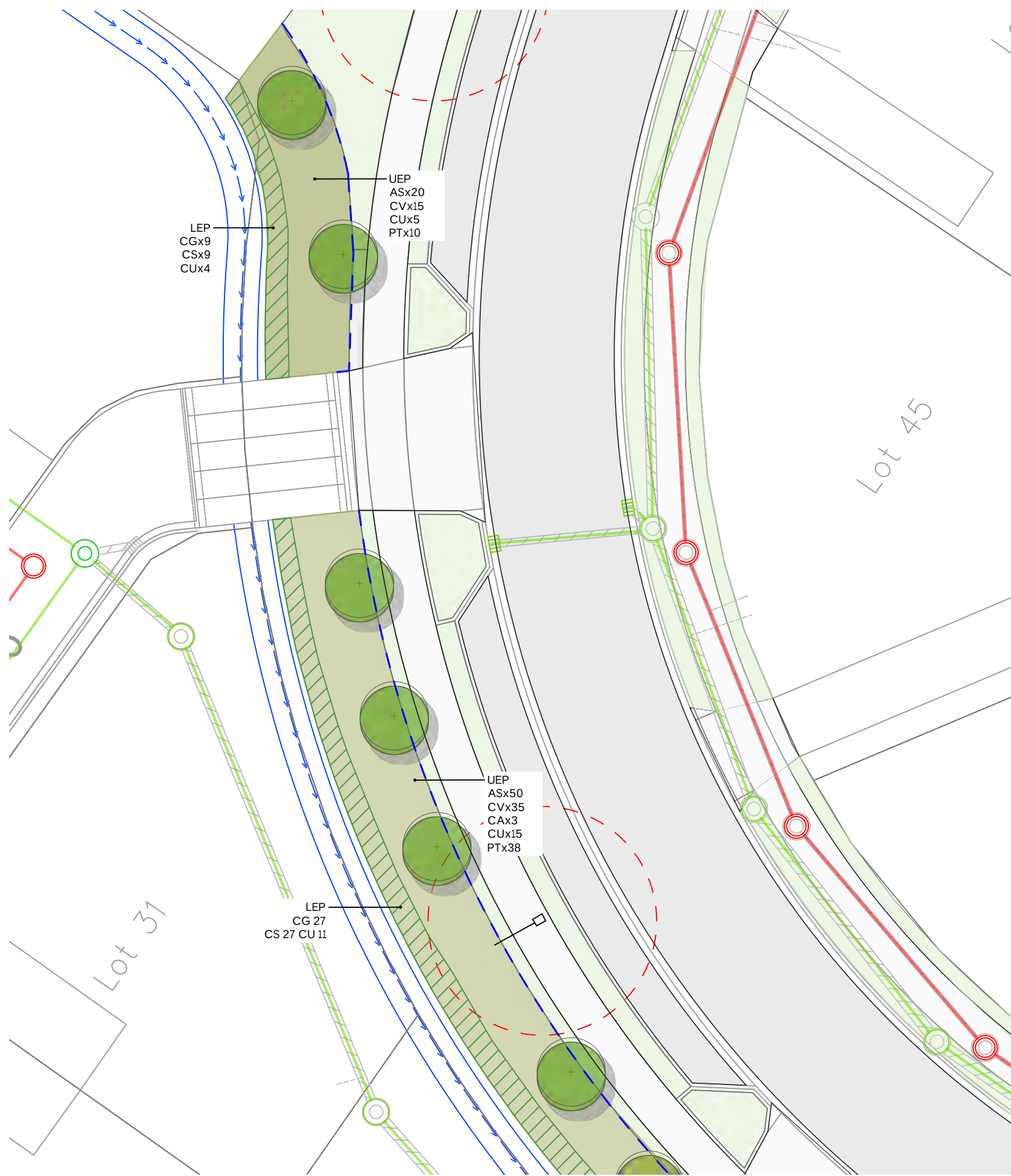
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Planting - Riparian edge

Code	Botanical name	Common Name	Spacing	Grade	H @ Maturity	H @ Install	Detail	Quantity
Planting Mixes								
UEP	Upper embankment planting (262 m ²)							
AS 20%	Apodasmia similis	oia	800mm	1L	1 x 1 m	0.2m	PD 02-03	120
CV 15%	Carex virgata	swamp sedge	800mm	1L	1 x 1 m	0.2m	PD 02-03	85
CA 5%	Cordyline australis	cabbage tree	3000mm	2L	2 x 8m	0.2m	PD 02-03	6
CU 10%	Cyperus ustulatus	giant umbrella sedge	1000mm	1L	1.25 x 1.25m	0.2m	PD 02-03	35
PT 50%	Phormium tenax	harakeke	1500mm	1L	2 x 2m	0.2m	PD 02-03	86
LEP	Lower embankment planting (68 m ²)							
CG 40%	Carex geminata	rautahi	800mm	1L	1 x 1m	0.2m	PD 02-03	50
CS 40%	Carex secta	purei	800mm	1L	1 x 1.5m	0.2m	PD 02-03	50
CU 20%	Cyperus ustulatus	giant umbrella sedge	1000mm	1L	1.25 x 1.25m	0.2m	PD 02-03	20

NOTES:

Planting quantities are representative of total plant numbers across all swale areas.

- 5m radius street tree offset from light pole
- Referenced SW underground services
- Referenced WW underground services
- 1.2m aluminum fence barrier 'Mako Solutions 'Mako Swim'

SWALE RIPARIAN PLANTING NOTES:

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CV 15%	<i>Carex virgata</i>	swamp sedge	800mm	1L	1 x 1 m	0.2m	PD 02-03	85
CA 5%	<i>Cordyline australis</i>	cabbage tree	3000mm	2L	2 x 8m	0.2m	PD 02-03	6
CU 10%	<i>Cyperus ustulatus</i>	giant umbrella sedge	1000mm	1L	1.25 x 1.25m	0.2m	PD 02-03	35
PT 50%	<i>Phormium tenax</i>	harakeke	1500mm	1L	2 x 2m	0.2m	PD 02-03	86
LEP	Lower embankment planting (68 m ²)							
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NOTES:

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PLANT SELECTION IS TO BE AS PER THE PLANT SCHEDULE. ALTERNATIVE OR SUBSTITUTE PLANTING SPECIES TO BE APPROVED BY THE LANDSCAPE ARCHITECT.

ALL PLANTS ARE TO BE WELL WATERED IN FOLLOWING PLANTING, WITH SUBSEQUENT WATERING TO BE CARRIED OUT AS PER THE TECHNICAL SPECIFICATION.

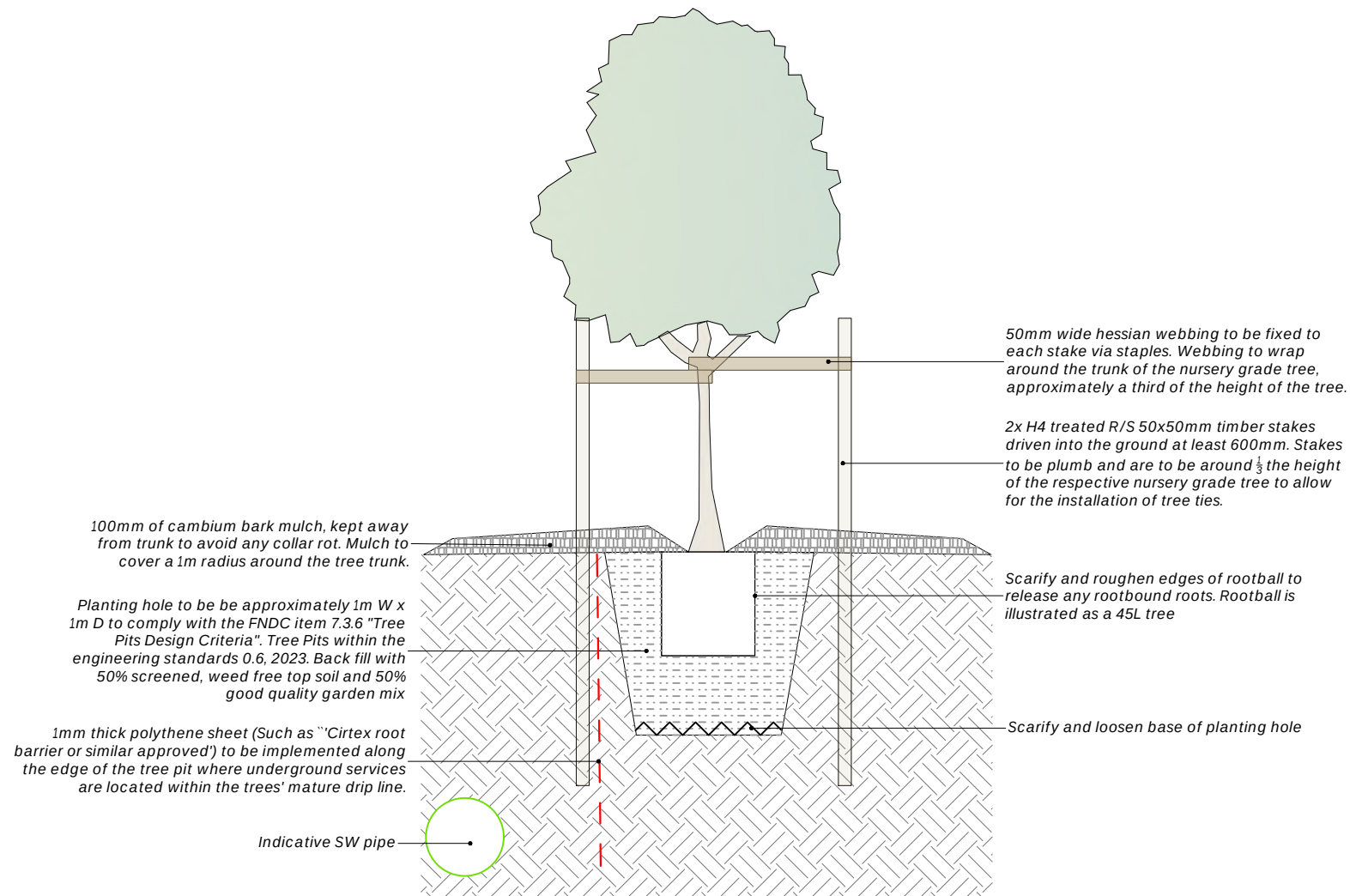
FORMATIVE PRUNING OF TREES DURING MAINTENANCE PERIOD TO MAINTAIN REQUIRED CLEARANCES OF ROADS, FOOTPATHS AND DRIVEWAYS

BIOCOIR COCONUT MATTING (OR APPROVED PRODUCT BY CIVIL ENGINEERS) TO BE IMPLEMENTED ALONG ALL PLANTING AREAS OF THE SWALE.

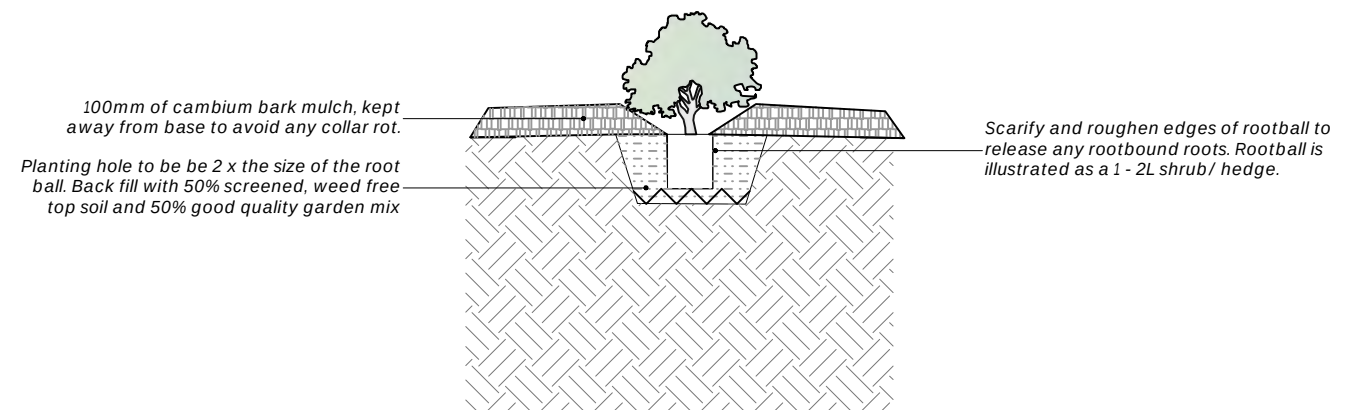
ALL PHORMIUM TENAX PLANTING WITHIN THE UPPER EMBANKMENT AREAS NEED TO BE PLANTED 1000MM FROM FOOTPATHS AND PEDESTRIAN AREAS.

ALL APODASMIA SIMILLIS TO BE PLANTED 500MM AWAY FROM FOOTPATHS AND PEDESTRIAN AREAS.

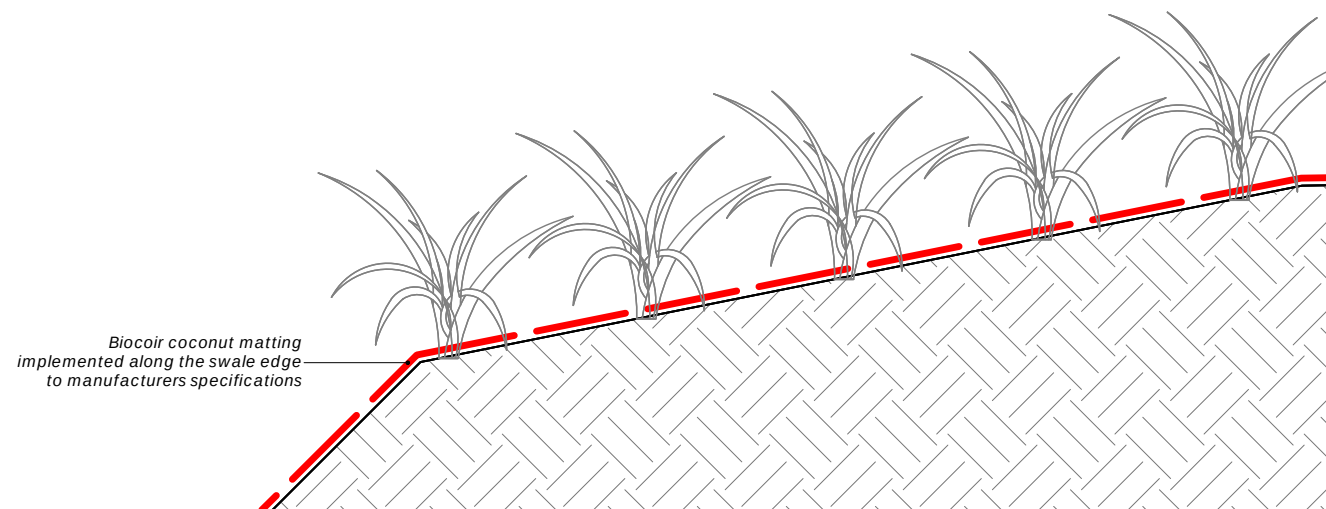




PD|01 Typical 45L street tree detail to FNDC standards
Scale: 1:25 @ A3

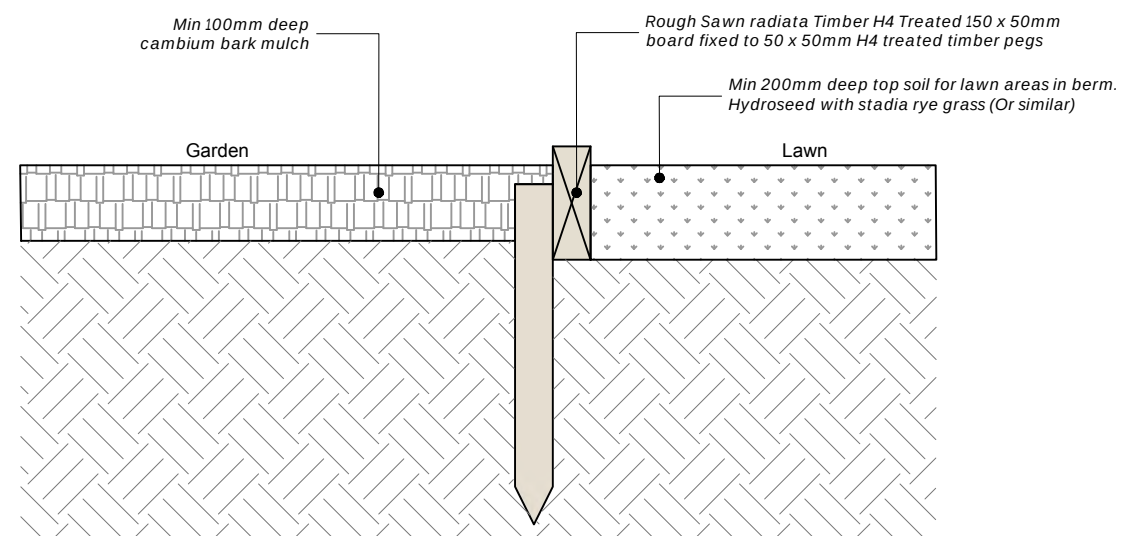


PD|02 Typical 2L planting detail
Scale: 1:25 @ A3



PD|03 Typical biocoir coconut matting along swale
Scale: 1:30 @ A3

NOTE:
Refer to the manufacturers specifications for additional implementation I details



PD|04 Typical timber edging detail between grass berm and garden areas (If required)
Scale: 1:10 @ A3

Planting Maintenance Schedule

57A Hall Road streetscape and riparian swales

9 June 2026

1. INSTALLATION OF PLANTING

1.1 - SITE PREPARATION:

The Contractor is required to prepare the site for plant installation unless otherwise agreed upon. The Contractor is to ensure all planting areas are weed free before planting and must undertake all necessary weed removal a minimum of 1 week prior to the commencement of planting.

The contractor is to supply appropriate growing medium and fertilizer to ensure the best chances of plant survival within all garden beds. The Contractor is to ensure garden areas designated for planting are free of any rubbish or foreign matter.

1.2 - PLANT SUPPLY:

All tree and plant species are to be supplied by the Contractor unless otherwise agreed upon and shall be nursery stock, true to name and type. Roots shall not be left exposed.

Crown

All trees and plants supplied shall:

- Be free of pests and diseases.
- Have good vigor and vitality and form.
- Have a sound structure.
- Show no mineral deficiencies or chemical or frost damage.
- Have a crown/root ratio of reasonable proportions.

Roots

Roots are important to a tree or plant's establishment and continued growth. To ensure the optimum opportunity for survival all trees and plants shall:

- Be weed free.
- Be free of decay.
- Have no damaged roots
- Have a two-month supply of nutrients.
- Have reasonable moisture content.
- Be conducive to a successful transplant.
- Have a root/crown ratio of reasonable proportions.
- Have a solid root ball with roots holding the mix together firmly
- Recently bagged plants which are prone to disintegrating will not be accepted.
- Have an even 360° spread.

Stem

All trees and plants supplied shall:

- Have no damage either mechanical, insect or disease.
- Be firm and upright in the pot.

All trees or plants must be true to the species and container size specified, be well rooted and appear in general good health. Trees or plants shall not be substituted without the Landscape Architect's approval.

ESCARP

1.3 - PLANTING OF SPECIMEN TREES WITHIN BERM:

The Contractor is responsible for the installation of all specimen trees where spacing is indicated as 'Marked' on the plant table of the planting plan.

Timing

Planting shall take place between May and August. Planting may occur outside these times with the approval of the Landscape Architect and a watering regime, which is to be strictly adhered to.

Maintenance of trees prior to planting

Containerized trees shall be thoroughly moistened at the time of planting. If the soil is dry, the plant shall be submerged in water for five minutes until air bubbles stop rising. Care shall be taken to ensure that the root ball is not disturbed during container removal or planting. If plants are slightly pot bound the roots shall be loosened, trimmed and spread out to ensure healthy growth. Roots shall not be exposed to the sun or wind. The consent holder shall undertake maintenance of all street trees for a period of **two years** commencing the date of the issued 224(c) certificate.

Tree pits

The bottom of the pit shall be forked over to an additional depth of 50 – 100mm to facilitate root penetration, air movement and free drainage. The Contractor shall adhere to the following practices whilst planting all specimen trees: The size of the tree pits are to adhere to the FNDC street tree standards outlined within the **Engineering Standards Version 0.6 2023 7.3.6 Tree Pits**.

Planting

Trees shall be set upright in the center of the pit at such a depth that the soil, when firmed down, is at the same height as the top of the root ball. Where roots are pot bound and/or girdling they shall be cleanly severed at the edge of the root ball and gently teased out in a radial fashion. Loose roots shall be spread out in a radial fashion and the pit progressively backfilled with weed free, screened top soil or first class growing medium. Soil shall be heeled in using natural body weight and not compacted by machinery or 'stamped' down. For bare root stock the soil shall be heeled firmly round the root collar. Each tree shall be watered thoroughly after planting, ensuring that the moisture has penetrated to the full depth of the root ball (initial watering is also important to settle the soil around the roots). Unless otherwise specified, all newly planted trees shall be staked and mulched.

Fertilizer

Fertilizer for individual plant types shall be thoroughly mixed with the soil in the base of the planting hole, prior to planting. It is also recommended that four 2 year slow release fertilizer tablets per plant are mixed into the soil at various levels of the tree pit. Apply quantities as recommended by the manufacturer.

Staking

Newly planted specimen trees shall be supported by timber stakes, 50x50mm dimension, uniform in appearance, straight and finished to a uniform height. Stakes shall be driven into the ground to a depth sufficient to support the tree, shall be upright and immovable. All tree ties shall be either jute (hessian) or similar approved to allow minor movement without chafing of the stems and to allow the development of a strong supporting root system. Tree ties shall be placed at one third the height of the tree from ground level.

To gain installation approval by the Landscape Architect specimen trees shall:

- be located as marked.
- be upright and firm in the ground.
- be securely staked.

- have the top of the root ball level with the surrounding surface.
- be healthy with no evidence of decline or damage

1.4 - PLANTING OF SHRUBS, AND GROWDCOVERS WITHIN BERM:

The Contractor is responsible for the installation of all shrub, hedge and groundcover plants indicated on the planting plan.

Timing

Planting shall take place between April and September (the planting season). Planting may occur outside these times with the approval of the Landscape Architect and a watering regime, which is to be strictly adhered to.

Setting out

Planting positions shall be in accordance with the planting plans. The Landscape Architect may require minor refinement to the design with adjustments to lines, levels and grouping of trees locally as the planting proceeds. In areas of block planting, plants shall be spaced so that when established they will completely and evenly fill the areas indicated, unless otherwise specified.

Maintenance of planting

Containerized trees shall be thoroughly moistened at the time of planting. If the soil is dry, the plant shall be submerged in water for five minutes until air bubbles stop rising. Allow time to drain before planting. Balled and container grown plants shall have the cloth cordage, container, wire containment and hessian removed immediately prior to planting. Care shall be taken to ensure that the root ball is not disturbed during container removal or planting. If plants are slightly pot bound the roots shall be loosened, trimmed and spread out to ensure healthy growth. Roots shall not be exposed to the sun or wind. The consent holder shall undertake maintenance of all berm planting for a period of **two years** commencing the date of the issued 224(c) certificate.

Planting hole

The planting hole shall be twice the root ball width and twice the root ball depth.

Fertilizer

Fertilizer for individual plant types shall be thoroughly mixed with the soil in the base of the planting hole, prior to planting. It is also recommended that two 2 year slow release fertilizer tablets or similar slow release granules per plant are mixed into soil at the base of the planting hole.

Planting

Plants shall be set upright in the center of the pit at such a depth that the soil, when firmed down is at the same height as the top of the root ball. Soil shall be heeled in using natural body weight and not compacted by machinery or 'stamped' down. Any major roots that accidentally break off or fray shall be cleanly cut off from the plant. Loose roots shall be spread out in a radial fashion, and the pit progressively backfilled with screened, weed free top soil. Each plant shall be watered thoroughly after planting, ensuring that the moisture has penetrated to the full depth of the root ball (initial watering is also important to settle the soil around the roots). The Contractor shall consult the Landscape Architect over any concerns with soil moisture levels.

To gain installation approval by the Landscape Architect specimen trees shall:

- be located as specified.
- be upright and firm in the ground.
- have the top of the root ball level with the surrounding surface.
- be healthy with no evidence of decline or damage

1.5 - PLANTING OF RIPARIAN PLANTING ALONG SWALE:

The Contractor is responsible for the installation of all shrubs, sedges, and grass plants indicated on the planting plan.

Timing

Planting shall take place between April and September (the planting season). Planting may occur outside these times with the approval of the Landscape Architect and a watering regime, which is to be strictly adhered to.

Setting out

Planting positions shall be in accordance with the planting plans. The Landscape Architect may require minor refinement to the design with adjustments to lines, levels and grouping of trees locally as the planting proceeds. In areas of block planting, plants shall be spaced so that when established they will completely and evenly fill the areas indicated, unless otherwise specified.

Maintenance of planting

Containerized trees shall be thoroughly moistened at the time of planting. If the soil is dry, the plant shall be submerged in water for five minutes until air bubbles stop rising. Allow time to drain before planting. Balled and container grown plants shall have the cloth cordage, container, wire containment and hessian removed immediately prior to planting. Care shall be taken to ensure that the root ball is not disturbed during container removal or planting. If plants are slightly pot bound the roots shall be loosened, trimmed and spread out to ensure healthy growth. Roots shall not be exposed to the sun or wind. The consent holder shall undertake maintenance of all berm planting for a period of **two years** commencing the date of the issued 224(c) certificate.

Planting hole

Where possible, the planting hole shall be twice the root ball width and twice the root ball depth.

Mulching

No mulch is to be implemented along the swale. Biocor coconut matting (or similar approved product) is to be installed along the embankment of the swale. Installation of the coconut matting is to adhere to the respective manufacturers' guidelines and specifications.

Planting

Plants shall be set upright in the center of the pit at such a depth that the soil, when firmed down is at the same height as the top of the root ball. Soil shall be heeled in using natural body weight and not compacted by machinery or 'stamped' down. Any major roots that accidentally break off or fray shall be cleanly cut off from the plant. Loose roots shall be spread out in a radial fashion, and the pit progressively backfilled with screened, weed free top soil. Each plant shall be watered thoroughly after planting, ensuring that the moisture has penetrated to the full depth of the root ball (initial watering is also important to settle the soil around the roots). The Contractor shall consult the Landscape Architect over any concerns with soil moisture levels.

To gain installation approval by the Landscape Architect specimen trees shall:

- be located as specified.
- be upright and firm in the ground.
- have the top of the root ball level with the surrounding surface.
- be healthy with no evidence of decline or damage

1.6 - MANNER OF EXECUTION:

The Contractor is responsible for completing the plant installation with care and consideration to the site and its surroundings. They are expected to cooperate with the others on site and leave site in the same or better condition it was prior to the contract being carried out. Any damage to private or public property at the site and surrounding area at the fault of the Contractor is the responsibility of the Contractor to rectify with the relevant or affected parties.

1.7 – DAMAGE/ VANDALISM:

If any damage/ theft to the planting occurs during the maintenance period, the consent holder shall replace damaged/ stolen plants with the same species and height and shall be maintained for a period of **two years** following the replacement planting, to the satisfaction of the Parks and Reserve Planner.

2. MULCHING WITHIN PLANTED BERMS

2.1 - GARDEN PREPARATION:

The Contractor is required to prepare new landscaped areas for mulching. Spray any weeds with non-residual herbicide, and remove any rubbish or foreign matter and make sure surface levels of growing media are as consistent as possible to allow easy and even application of mulch.

2.2 - MULCH SUPPLY:

All mulch is to be supplied to the site and applied to all new landscaped areas within the berm by the Contractor unless otherwise agreed upon. All new landscaped areas (all newly planted areas specified for planting on the planting plan) are to be covered with 100mm deep minimum cambium bark mulch. No mulch is to be implemented along the swale. Biocoir coconut matting (or similar approved product) is to be installed along the embankment of the swale. Installation of the coconut matting is to adhere to the respective manufacturers' guidelines and specifications.

2.3 - MULCH APPLICATION:

The surface of the mulch in all new landscaped areas shall be flush with or no more than 25mm below the surrounding ground surface, garden edging, kerb, path or other formed surface and shall be even and free of hollows.

Mulch to tree pits in other garden areas shall fill the entire area or radially to 600mm from the trunk of the tree.

Mulch shall not touch the stems of plants. A small circle shall be cleared (diameter of 50mm minimum) around the stem to avoid stem rot. Mulch shall be pulled back to 100mm off the trunk of any tree to prevent collar rot.

Unless specified otherwise, mulch shall be placed and maintained to a minimum consolidated depth of 100mm for planter beds and tree pits. Growing media shall not be mixed into the mulch during placement, planting or weeding. Mulch shall not spread onto paved surfaces or onto lawn areas.

2.4 - MANNER OF EXECUTION:

The Contractor is responsible for completing the mulching of new landscaped areas with care and consideration to the site and its surroundings.

3. MAINTENANCE SCHEDULE

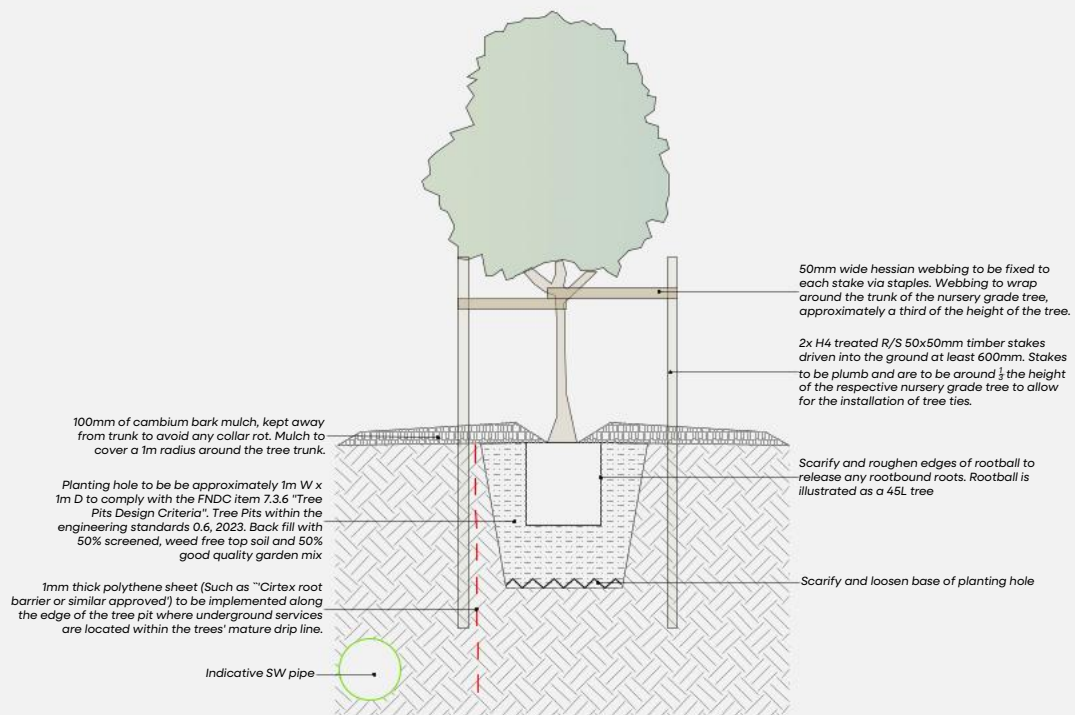
OUTLINE

Landscapes are to be maintained as per drawing plan set 2611 with any plant replacements required to be carried out during the planting season following the plant failure. Annual maintenance is to be undertaken at 3 month intervals, 4 times a year, (even intervals ideally at the change of each season), to identify and carry out maintenance required in the schedule below:

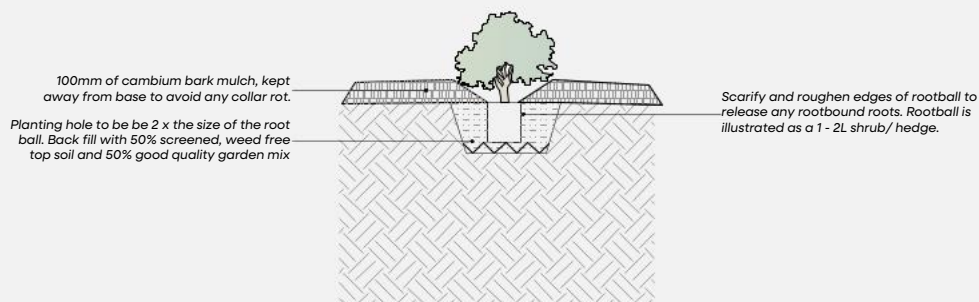
MAINTENANCE SCHEDULE

ITEM	MINIMUM FREQUENCY	ACTION
Watering	Minimum recommendation once per week over the first summer growing season. As required thereafter to maintain growth.	Water all plants to maintain moisture content as specified.
Pests and diseases	3-monthly intervals	Check for pests and diseases and apply appropriate treatment to ensure plants are pest and disease free.
Rubbish and Litter	3-monthly intervals	Ensure landscape areas within the berm and swale are free of litter or vandalism.
Pruning	3-monthly intervals	All dead and weak branches to be removed.
Plant maintenance vandalism, losses and replacement	3-monthly intervals	Replace any plant losses like for like as per approved landscape plans.
Stakes and ties	3-monthly intervals	Check all stakes and ties, repair and tension as required.
Fertilisation	6-monthly intervals or at the recommended rate depending on type and period of slow release.	Fertilise each plant to the recommended slow release period of manufacturers specification.
Weed control	3-monthly intervals through growing seasons and less over winter	Remove any large weeds which have developed post the previous maintenance visit. Careful use of spray is to be used for mass amounts of small weeds within garden beds or footpaths. Hand weeding is encouraged alongside the swale to avoid residual herbicide spray entering the waterway.

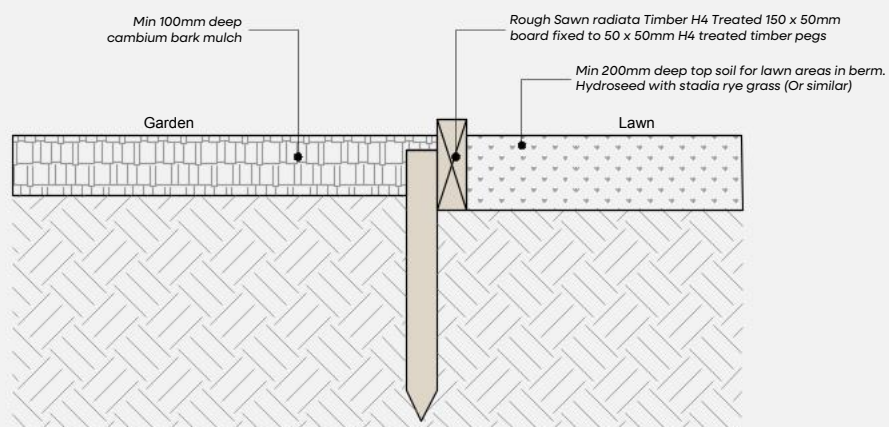
4. PLANTING DETAILS



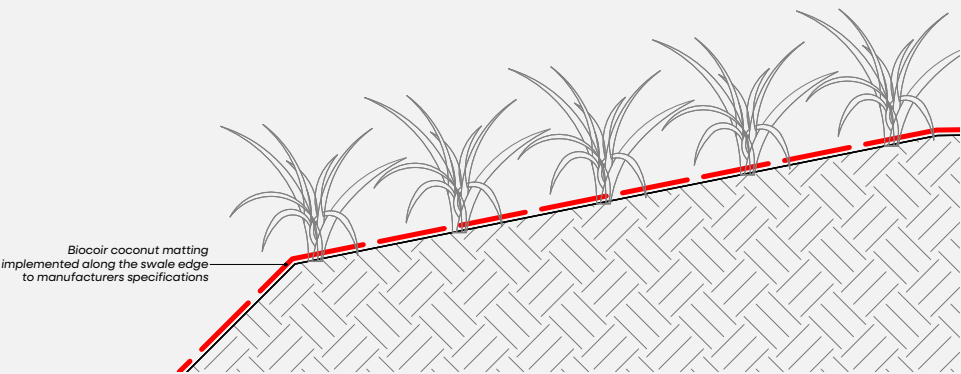
45L Tree in garden (NTS in report)



1 - 2 L Shrub/ plant in garden (NTS in report)



Lawn and garden bed interface within berm (NTS in report)



Coconut matting along swale edge (NTS in report)

Meeting Minutes

57A Hall Road Development Pre-Application Meeting

Date: 6 August 2026

Attendees: Andrew Hill, Jasem Saleh, Jack Chen, Nick Williamson, Rinku (Millie) Mishra

Purpose

Discuss proposed amendments to the 57A Hall Road development, including housing typology changes, stormwater design amendments, and the most efficient consenting pathway.

Key Discussion Points

The development will remain at 58 units. Previously consented two-storey dwellings will be replaced with predominantly single-storey typologies. Roading layout remains unchanged. The principal engineering change is the removal of two large underground stormwater detention tanks and replacement with lot-based stormwater tanks to be installed as development proceeds.

Consenting Strategy

Council officers supported a pragmatic approach focused on the difference between the currently consented environment and the final development outcome. Rather than varying multiple existing land use consents, the preferred approach is a single new land use consent covering the entire development. A separate Section 127 application will be lodged against the subdivision consent to remove or amend conditions that are no longer required.

Stormwater and Engineering Matters

The subdivision consent and EPA currently reference the underground detention tanks. Council engineering staff advised that the change must be formally documented so future compliance and Section 224 certification assessments clearly identify the revised stormwater approach. Updated drawings, calculations and PS1 documentation will be required. Council indicated that an EPA amendment process may run in parallel with the resource consent applications.

Subdivision Conditions

Conditions relating to private on-site matters such as stormwater attenuation, landscaping and other internal development requirements should be transferred from the subdivision consent to the new land use consent where appropriate. Conditions relating to public infrastructure and vested assets should remain within the subdivision consent framework.

District Plan Matters

Council confirmed that assessment should generally be undertaken against the Proposed District Plan decisions version. No significant new planning constraints were identified that would materially affect the proposal. The development was considered consistent with Council objectives relating to housing diversity and affordability.

Agreed Actions

1. Andrew Hill to prepare a single comprehensive land use consent application covering all remaining development stages and changes.
2. Prepare a Section 127 application to amend the subdivision consent and remove or transfer superseded conditions.
3. Jack Chen to finalise stormwater design documentation, updated plans, calculations and supporting memorandum.
4. Provide engineering information to Council staff early to obtain informal feedback and reduce processing delays.
5. Council staff to continue pre-application engagement and provide examples/documentation where useful.
6. Consent applications and engineering approval processes to proceed in parallel where possible.

Meeting Outcome

All parties reached agreement on the preferred consenting pathway. The approach is intended to simplify compliance, provide greater flexibility for staging and construction, and avoid the need to manage multiple overlapping land use consents.