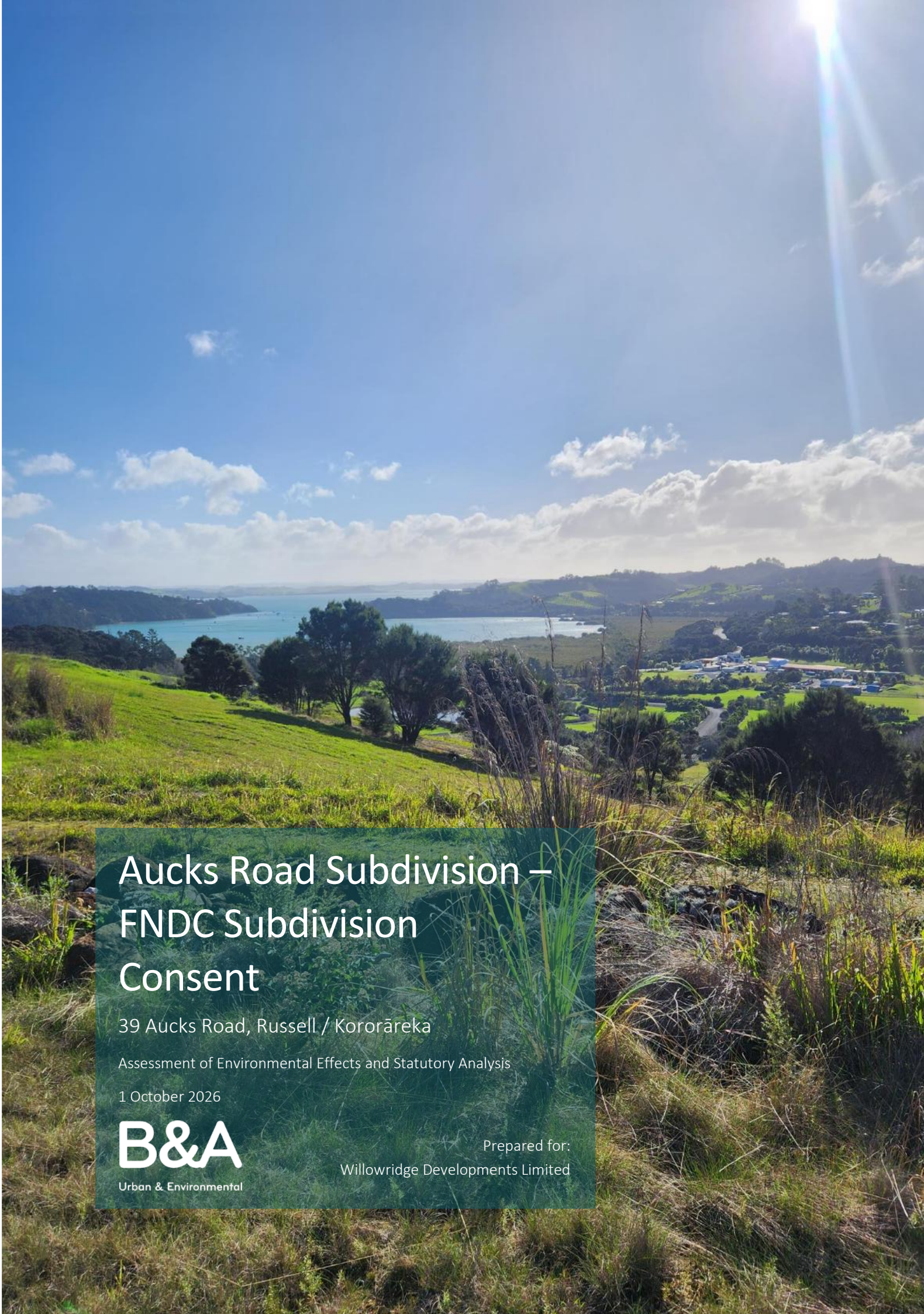


Aucks Road Subdivision – FNDC Subdivision Consent

39 Aucks Road, Russell / Kororāreka

Assessment of Environmental Effects and Statutory Analysis

1 October 2026

B&A
Urban & Environmental

Prepared for:
Willowridge Developments Limited

B&A Reference:

25041

Status:

Final for Lodgement

Date:

1 October 2026

Prepared by:



Moana Schoffa

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Reviewed by:



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1.0 Applicant and Property Details

To:	Far North District Council ("**FNDC**")
Site Address:	39 Aucks Road, Russell / Kororāreka, Far North District
Applicant Name:	Willowridge Developments Limited
Address for Service:	Barker & Associates Ltd PO Box 1986, Shortland Street, Auckland 1140 Attention: Moana Schoffa Email: MoanaS@barker.co.nz
Legal Description:	Lot 1 and 2 DP 542129, and Lot 1 DP 182616 (refer to Records of Title as **Appendix 1**)
Site Area:	38.2940ha
Site Owner:	Willowridge Developments Limited
District Plan:	Operative Far North District Plan (**ODP**) Proposed Far North District Plan (**PDP**)
Zoning:	**ODP:** Coastal Living & General Coastal Zone **PDP**: Rural Lifestyle & Rural Production Zone
Overlays & Controls:	**ODP:** Nil **PDP:** Coastal Environment
Designations:	None
Locality Diagram:	Refer to **Figure 1**
Brief Description of Proposal:	The proposal involves the subdivision of Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments.
Summary of Reasons for Consent:	**ODP**: Resource consent is required for a **non-complying activity** as the proposed subdivision does not comply with the Management Plan Standards under Section 13.9.2 (the average size of the lots in the General Coastal Zone will be less than 6ha). **PDP:** Resource consent is required for a **non-complying activity** as the proposed subdivision does

not comply with the Management Plan Standards under Rule SUB-R7.

2.0 Introduction

Barker and Associates (**B&A**) have been engaged by Willowridge Developments Limited (**the Applicant**) to prepare a subdivision application to the Far North District Council (**FNDC**) on their behalf.

The applicant seeks to subdivide Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments. This proposed subdivision will tie into the wider site's Management Plan Subdivision authorised under Resource Consent 2250266-RMACOM. However, this subdivision has not yet been formalised through the completion of the section 223 certification or the section 224(c) approval under the Resource Management Act 1991 (**RMA**).

This Assessment of Environmental Effects (**AEE**) has been prepared in accordance with the requirements of section 88 and schedule 4 of the RMA and is intended to provide the information necessary for a full understanding of the activities for which consent(s) are being sought and any actual or potential effects the proposal may have on the environment.

2.1 Background

Various resource consents have been approved on the subject site.

- **RC2010379** approved the subdivision of Lot 2 DP 187577 into 19 allotments and one allotment to vest in road. RC2010379 was subsequently varied to create 12 allotments. Section 223 was completed in 2001 for this subdivision and while Section 224(c) was never applied for, subdivision works were completed, including the establishment of the access through the site, electricity to boundaries and the formation of building platforms. This resource consent has now lapsed.
- **RC2170042-RMASUB** approved the subdivision of Lot 2 DP 187577 in 2016 into two allotments to create part of the subject site (Lot 2 DP 542129 [1.47ha]) and Lot 1 DP 542129 [38.17ha].
- **RC2250266-RMACOM** approved a management plan subdivision of 66 allotments on a 43.28ha site. This included 65 residential lots, one jointly owned access lot containing the accessways, parking areas, common area, and reserve area. Land use consent for various activities was also approved (no residential units). The resource consent also approved a cancellation of consent note 8300644.4 and 11735593.2, as well as the cancellation of the amalgamation condition on Lot 1 DP 187577 and Lot 3-4 DP 420232 held within Record of Title 476989. A copy of this approved Resource Consent decision is provided at **Appendix 2**.
- **2250266-RMAOBJ** approved changes to specified conditions conditions 4(j), 7(j), 10(j), 13(j) and 16(j) of the subdivision consent (2250266) under section 357A of the Resource Management Act 1991 (RMA) in relation to the banning of dogs within the proposed subdivision and development. A copy of this approved Resource Consent decision is provided at **Appendix 3**.

2.2 Pre-lodgement consultation

A separate combined new resource consent and Section 127 change of conditions [2270033-RMASUB] was applied for on 6 August 2026. A request for further information was received on 25 August 2026 – see **Appendix 4**.

A meeting was held with the processing planner of that application Nick Williamson to discuss the request for further information. One of the key concerns raised was relating to the amalgamation of Lot 2 DP 542129 with Lot 1 DP 182616 and how this could be addressed in the application given the scope of the existing resource consent. Mr Williamson expressed a preference for these to be lodged as separate applications as follows:

- This application – to apply separately for the subdivision of Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments being Lot 1000, Lot 62, Lot 63 and Lot 64. The intention is that this subdivision resource consent is obtained solely for these allotments, and that this subdivision is completed first prior to the further stages in RC2250266-RMACOM as amended by 2270033-RMASUB.
- The s127 application [2270033-RMASUB] – The section 127 will continue to be processed based on a separate response to the other matters in the RFI request, but approval will be delayed to coincide with this application being first granted. The completion of that stage will be a requirement specified on the amended conditions of 2270033-RMASUB.

The above was discussed and agreed in the meeting. Given the background associated with this, it is therefore respectfully requested that this be reallocated to Mr Williamson to process in accordance with the above arrangement.

3.0 Site Context

3.1 Site Description

The site comprises three parcels of land (Lot 1 and 2 DP 542129, and Lot 1 DP 182616), held within three records of title (RT 912226, 912227 & NA/113D/111) and encompasses a total area of 38.2940 hectares

The site is located on the southern side of Aucks Road and also has frontage to Russell Whakapara Road to the east, and Lane Road to the south-east. The lower lying land can be described as having rolling topography which rises into steep terrain. The site contains an artificial pond system and scattered indigenous and exotic vegetation. Various wetlands have been identified on the site which are fed by a myriad of overland flow paths and intermittent streams and flow into the man-made water bodies.

A number of improvements have been made to the site, including the establishment of an existing dwelling, outbuildings and a shed. Additionally, roading infrastructure, vehicle crossings, levelled building platforms and electricity connections were developed under the previously granted subdivision consent (RC2010379). The formed and sealed internal access road aligns with the layout approved in subdivision consent RC2010379.



Figure 1: Locality Plan

The site is zoned Coastal Living and General Coastal under the Operative Far North District Plan ("ODP"), as shown in Figure 2 below



Figure 2: ODP Mapping. Source: FNDC GIS Maps.

Under the Proposed Far North District Plan (PDP), the site sits within the Rural Lifestyle Zone and Rural Production Zone. The site is additionally subject to the Coastal Environment overlay, as illustrated in Figure 3 below.



Figure 3: PDP Mapping. Source: FNDC GIS Maps.

Vegetation across the site is a scattered mix, shaped by past land clearance, management practices, the development of a golf course in the lower sections, and partial subdivision development. In recent years, much of the site has been maintained intensively, with areas regularly mown, while steeper slopes host the majority of the remaining indigenous vegetation cover.

3.2 Surrounding Locality

The immediate environment of Orongo Bay is distinctly coastal, characterised by lifestyle properties, scattered residential activities, and some commercial and recreational uses to the east. The broader locality to the north-west and east is also zoned as Coastal Living in the ODP and features several relatively small allotments with existing dwellings or approved residential building platforms. The site adjoins various zones, including the Orongo Bay Special Purpose Zone, Recreational Activities Zone, CMA, and General Coastal Zone, as illustrated in **Figure 4** below. Lot sizes within the immediate Coastal Living Zone range from 7,124m^2 to 5.07 hectares.



Figure 4: Image of the subject site and surrounding zoning with the site shown in blue outline. The different zones are colour coded as follows: yellow represents the Coastal Living Zone, blue indicates the General Coastal Zone, purple designates the Recreational Activities Zone, and red highlights the Orongo Bay Special Purpose Zone.

Overall, the site has been significantly influenced through the varying characteristics within the surrounding / receiving environment.

4.0 Proposal

The Applicant seeks to subdivide Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments being Lot 1000, Lot 62, Lot 63 and Lot 64.

Please refer to Figure 5 below for the proposed scheme plan. This has also been replicated in full within Appendix 5.

The justification for this proposed separate application is provided in Section 2.2 above. Lots 62 – 64 are essentially existing allotments within the approved wider Management Plan Subdivision[1]. This subdivision extends their boundaries to encapsulate the land within Lot 1 DP 182616.

[1] Resource Consent 2250266-RMACOM.

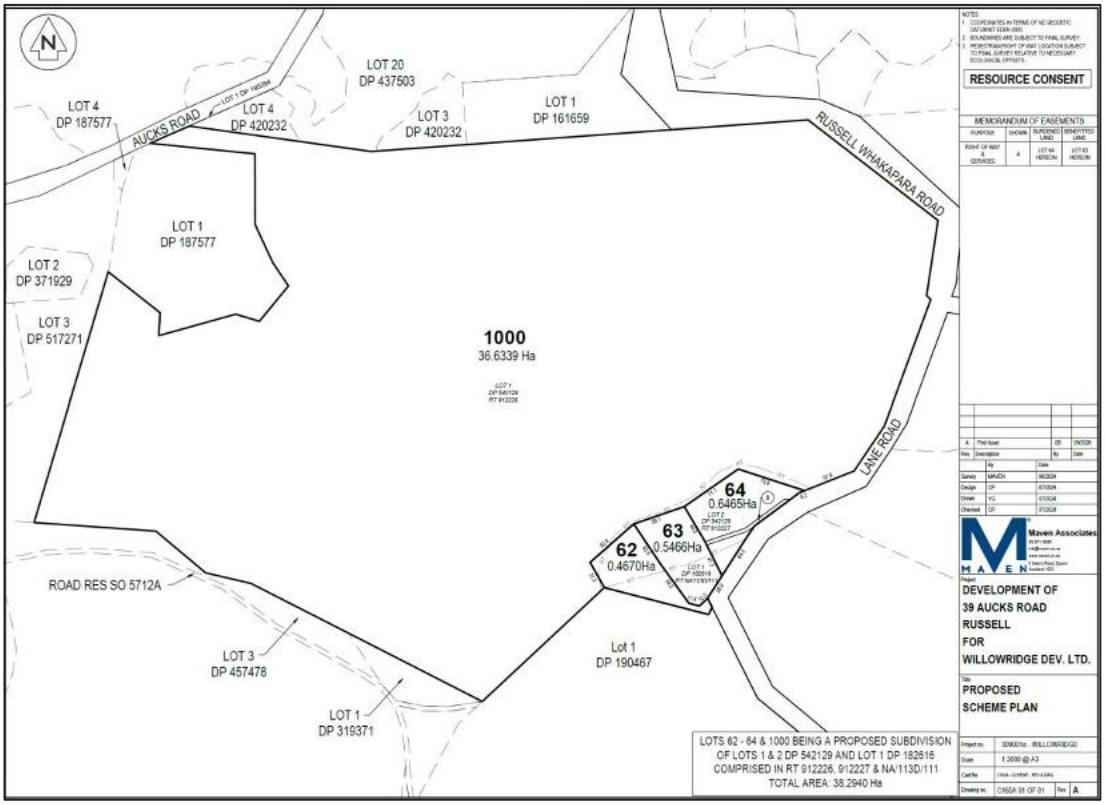


Figure 5: Proposed Scheme Plan

5.0 Reasons for Consent

A rules assessment against the provisions of the ODP and PDP is attached as **Appendix 6.** The proposal requires consent for the matters outlined below.

5.1 Operative Far North District Plan

The site is located within the Coastal Living Zone and the General Coastal Zone.

5.1.1 Subdivision

The Subdivision chapter of the ODP is a district-wide chapter which provides for management plan subdivision in the General Coastal Zone.

- **Standard 13.9.2.2** provides for management plan subdivision as a discretionary activity. Standard 13.9.2.2(a) provides that the average allotment size must be 6ha within the General Coastal Zone (the average size of all lots in the management plan subdivision, excluding lots used solely for access, utilities, roads and reserves). The proposed subdivision will tie into the approved wider management plan subdivision and will not meet this average lot size requirement. Standard 13.9.2.2(e) also states that any further subdivision of a lot contained within a management plan subdivision shall be a non-complying activity. The proposed subdivision results in the further subdivision of Lot 2 DP 542129 which is part of the approved

management plan subdivision.[2] As such, resource consent will be required for a **non-complying activity** pursuant to Rule 13.11(a).

5.2 Proposed Far North District Plan - Appeals Version

FNDC's decisions on submissions on the Proposed District Plan were formally notified on Tuesday 30 June 2026. This notification means all the provision in the Proposed District Plan – Decision Version have legal effect (under s86B(1) of the Resource Management Act 1991). Since then, the Environment Court Appeal period has closed, with 32 appeals to decisions on the PDP made with the section 274 period extended to 29 September 2026.

The site has been mapped as Rural Lifestyle Zone and Rural Production Zone within the PDP, and is partially within the Coastal Environment overlay.

5.2.1 Subdivision

The Subdivision chapter of the PDP is a district-wide chapter which provides for management plan subdivision in the Rural Lifestyle Zone and Rural Production Zone.

- **Rule SUB-R7** provides for management plan subdivision as a discretionary activity. DIS-1.1 provides that the average size of all lots in the management plan subdivision, excluding lots used solely for access, utilities, roads and reserves, are no less than 2ha in the Rural Production zone and 1ha in the Rural Lifestyle Zone. While no additional development rights are created by this subdivision compared to what has already been approved in 2250266-RMACOM, the proposed subdivision will not meet this average lot size requirement. As such, resource consent will be required for a **non-complying activity.**

5.3 National Environmental Standards for Contaminated Soils (NES-CS)

These regulations came into force on 1 January 2012 and apply when a person wants to undertake an activity described in regulation 5(2) and 5(6) on a piece of land described in regulation 5(7) or 5(8).

On the subject land, no Hazardous Activities and Industries List (**HAIL**) activities are being, have been, or are more likely than not to have been, undertaken on that land. No HAIL uses were identified in the subdivision that created the site (RC2170042). The owner of the site confirms that the use of the site has not changed since the underlying subdivision. There are no identified land uses or contamination information for the subject site or any neighbouring sites on the NRC's "Selected Land uses Register". Therefore, consistent with the conclusion reached on the original resource consent, the site is not a HAIL site, and should be considered as a Permitted Activity under the NES-CS.

5.4 Activity Status

Overall, this application is for a **non-complying activity**.

[2] Resource Consent 2250266-RMACOM.

6.0 Public Notification Assessment (Sections 95A, 95C and 95D)

6.1 Assessment of Steps 1 to 4 (Sections 95A)

Section 95A specifies the steps the council is to follow to determine whether an application is to be publicly notified. These are addressed in statutory order below.

6.1.1 Step 1: Mandatory public notification is required in certain circumstances

Step 1 requires public notification where this is requested by the applicant; or the application is made jointly with an application to exchange of recreation reserved land under section 15AA of the Reserves Act 1977.

The above does not apply to the proposal.

6.1.2 Step 2: If not required by step 1, public notification precluded in certain circumstances

Step 2 describes that public notification is precluded where all applicable rules and national environmental standards preclude public notification; or where the application is for a controlled activity; or a restricted discretionary, discretionary or non-complying boundary activity.

In this case, the applicable rules do not preclude public notification, and the proposal is not a controlled activity or boundary activity. Therefore, public notification is not precluded.

6.1.3 Step 3: If not required by step 2, public notification required in certain circumstances

Step 3 describes that where public notification is not precluded by step 2, it is required if the applicable rules or national environmental standards require public notification, or if the activity is likely to have adverse effects on the environment that are more than minor.

As noted under step 2 above, public notification is not precluded, and an assessment in accordance with section 95A is required, which is set out in the sections below. As described below, it is considered that any adverse effects will be less than minor.

6.1.4 Step 4: Public notification in special circumstances

If an application is not required to be publicly notified as a result of any of the previous steps, then the council is required to determine whether special circumstances exist that warrant it being publicly notified.

Special circumstances are those that are:

- Exceptional or unusual, but something less than extraordinary; or
- Outside of the common run of applications of this nature; or
- Circumstances which make notification desirable, notwithstanding the conclusion that the adverse effects will be no more than minor.

It is considered that there is nothing noteworthy about the proposal. It is for a proposed subdivision which will tie into the approved wider management plan subdivision which will not create any additional development rights, and will actually result in a reduction of development rights compared to the already granted resource consent 2250266-RMACOM. It is therefore considered that the application cannot be described as being out of the ordinary or giving rise to special circumstances.

6.2 Section 95D Statutory Matters

In determining whether to publicly notify an application, section 95D specifies a council must decide whether an activity will have, or is likely to have, adverse effects on the environment that are more than minor.

In determining whether adverse effects are more than minor:

- Adverse effects on persons who own or occupy the land within which the activity will occur, or any land adjacent to that land, must be disregarded.

  The land to be excluded from the assessment is listed in section 6.3 below.

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded.

  In this case, any subdivision in the ODP and PDP requires resource consent. In this instance the existing granted resource consent 2250266-RMACOM forms the permitted baseline for development across the relevant titles. Beyond that, it is considered that the permitted baseline in terms of the applicable ODP and PDP provisions is of limited relevance to the consideration and determination of this resource consent application, which is for a non-complying activity.

- Trade competition must be disregarded.

  This is not considered to be a relevant matter in this case.

- The adverse effects on those persons who have provided their written approval must be disregarded.

  No persons have provided their written approval for this proposal.

The sections below set out an assessment in accordance with section 95D, including identification of adjacent properties, and an assessment of adverse effects.

6.3 Land Excluded from the Assessment

In terms of the tests for public notification (but not for the purposes of limited notification or service of notice), the adjacent properties to be excluded from the assessment are shown in **Figure 6** below, and include:

- Lot 1 DP 542129;

- Lot 1 DP 187577 and Lot 3-4 DP 420232 (owned by applicant);
- Lot 3 DP 187577;
- Lot 3 DP 517271;
- Lot 3 and 7 DP 457478;
- Lot 20 DP 437503;
- Lot 30 DP 426505;
- Lot 31 and Lot 34 DP 426505;
- 5855 Old Russell Road, Russell;
- 5798 Old Russell Road, Russell;
- 17 Lane Road, Russell;
- 19 Lane Road, Russell;
- 54 Lane Road, Russell; and
- 75 Lane Road, Russell.

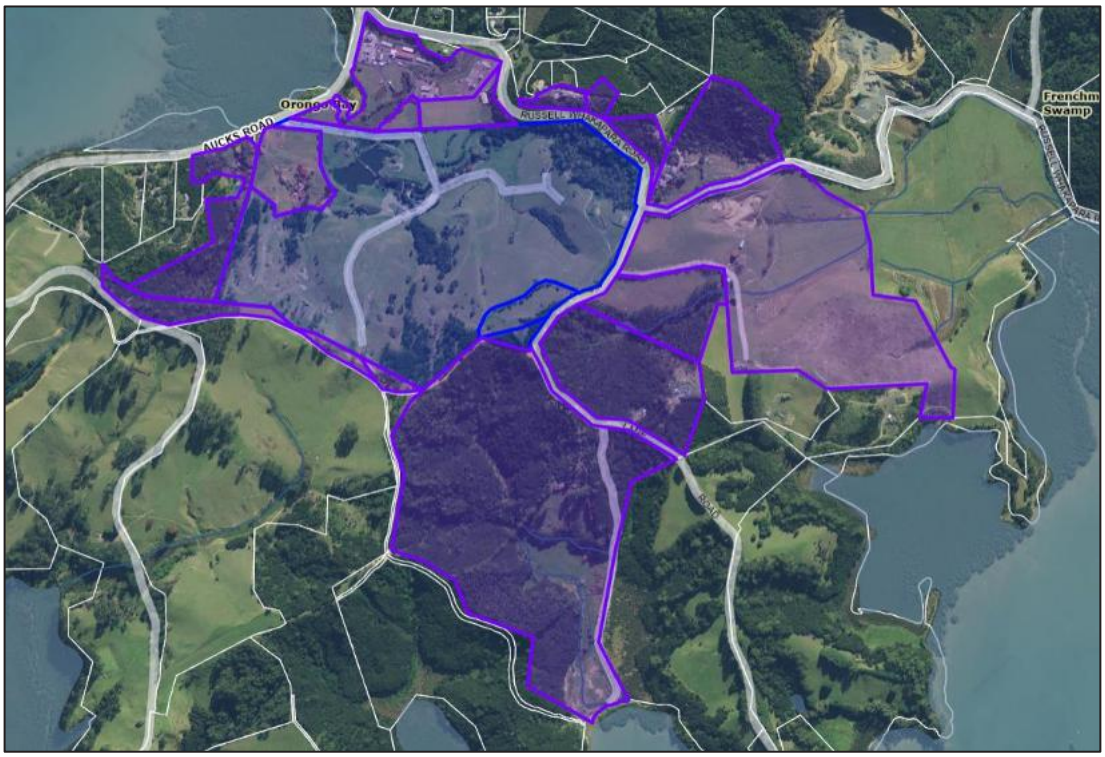


Figure 6: Adjacent properties in relation to subject site. Source: Emap.

6.4 Assessment of Effects on the Wider Environment

The following sections set out an assessment of wider effects of the proposal, and it is considered that adverse effects in relation to the following matters are relevant:

- Landscape and Amenity Effects;
- Ecological Effects;

- Traffic Safety and Efficiency Effects;
- Servicing Effects;
- Geotechnical Effects
- Reverse Sensitivity Effects;
- Archaeological Effects;
- Cultural Effects; and
- Construction Effects.

These matters are set out and discussed below.

6.4.1 Landscape and Amenity Effects

The proposal includes the subdivision of Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments. Proposed Lots 62, 63 and 64 will then become part of the wider approved Management Plan Subdivision.

While the resulting allotment sizes do not align with the average allotment size requirements for a management plan subdivision in General Coastal Zone of the ODP or the Rural Production Zone of the PDP, the proposal does not create any additional allotments beyond those already authorised by the resource consent for the wider Management Plan Subdivision and rather will actually result in a loss of a development right which currently exists on Lot 1 DP 182616.

The purpose of the minimum average allotment size requirement within the General Coastal and Rural Production Zone is to maintain the open character of the coastal and rural environments and avoid fragmentation of rural and coastal land. Similarly, the restriction on further subdivision within a management plan subdivision seeks to prevent incremental intensification beyond that contemplated through the comprehensive management plan process. In this instance, the proposed subdivision will not create any additional allotments or increase the overall residential yield of the wider subdivision. Rather, the existing development entitlement associated with Lot 1 DP 182616 will be extinguished through this subdivision. The proposal therefore results in a net reduction of one potential development right across the combined landholding. As no additional residential allotments are created, the subdivision will not generate any increase in anticipated building development, residential occupation, traffic movements or demand for infrastructure and servicing when compared with the existing scenario. As such, there are no adverse landscape and amenity effects associated with the proposed subdivision.

6.4.2 Ecological Effects

The proposed subdivision does not seek amendments to the purpose or overarching direction of the site-specific Ecological Management Plan (EMP) required under Resource Consent 2250266-RMACOM.

The proposed subdivision will not involve the clearance, disturbance or modification of indigenous vegetation, ecological habitats or other sensitive ecological features.

The updated Ecological Memorandum prepared by Wild Ecology, dated July 2026 (refer **Appendix 7**), provides an assessment of the increased sizes of Lots 62-64, noting that these increases occur within pasture and do not encroach on covenant areas. Overall, Wild Ecology concludes that no wetlands, watercourses or other sensitive ecological features are affected by the proposal, and no

adverse ecological effects beyond those already assessed in the 2024 Ecological Assessment are anticipated.

Following subdivision, the resulting allotments will form part of the authorised wider Management Plan Subdivision and remain subject to the relevant ecological protection and management requirements. The ecological outcomes anticipated under Resource Consent 2250266-RMACOM will therefore continue to be achieved, including the ongoing protection and management of the site's ecological values in perpetuity.

On this basis, the proposed subdivision is considered to have negligible ecological effects on the environment.

6.4.3 Traffic Safety and Efficiency Effects

The proposed vehicle accessways serving Lots 62–64 will be designed and maintained in accordance with the Far North District Council Engineering Standards and Guidelines and NZS 4404:2004. Please refer to the Engineering Memorandum and Engineering Drawings within Appendix 8 and Appendix 9, respectively for further detail on the design of the proposed vehicle accessways for these lots.

Proposed Lots 62–64 were included within the approved wider Management Plan Subdivision. Accordingly, the proposal will not increase the overall number of lots or generate additional traffic beyond that previously assessed and approved. It will therefore not affect the operation of the surrounding road network to any greater extent than anticipated under the wider subdivision.

On this basis, any transportation effects arising from the proposal are considered negligible.

6.4.4 Servicing Effects

The proposed subdivision will tie into the approved Management Plan Subdivision's servicing strategy and does not involve any changes to this. Accordingly, the proposed allotments can be adequately serviced in accordance with the approved arrangements, and any adverse effects relating to servicing will be less than minor.

6.4.5 Geotechnical Effects

The proposed building platform locations for proposed Lots 62-64 have not changed from what was approved under the wider Management Plan Subdivision. Haigh Workman had concluded within their original Geotechnical Investigation Report (refer to Appendix 10) that these building platform locations were suitable from a geotechnical perspective, subject to the recommendations within their report being followed.

Detailed engineering design and construction will be undertaken in accordance with the recommendations of the original Geotechnical Investigation Report.

Accordingly, any adverse geotechnical effects arising from the proposal are considered to be less than minor.

6.4.6 Reverse Sensitivity Effects

The surrounding area of the site is characterised by small to medium rural-residential and lifestyle lots, and includes respective residential, recreation and commercial activities. The proposed lots will be consistent with the lifestyle character observed in the area. Given the Kiwi High area in

which the site is located, agricultural activities are not common in the Rural General land adjacent to the south of the site.

Given the established coastal living and residential character of the wider area and the general absence of rural production activities, no reverse sensitivity effects are anticipated as a result of the proposed subdivision.

6.4.7 Archaeological Effects

Terrace features (Q05/1269) are the only known archaeological site within the application area. The proposed subdivision will avoid this site, and therefore there are no adverse archaeological or heritage effects anticipated as a result of this subdivision.

6.4.8 Cultural Effects

The authorised Management Plan Subdivision included detailed consultation with members of Kororāreka Marae and Te Kapotai hapū. It is not considered that this application changes the outcomes from that consultation or the determination of cultural effects from that resource consent. As such, no additional cultural effects are anticipated as a result of the current proposal.

6.4.9 Construction Effects

The construction activities associated with this subdivision will be limited to the construction of roading, drainage, driveways, and the formation of private driveways and building platforms. Please refer to the Engineering Memorandum and Engineering Drawings within Appendix 8 and Appendix 9, respectively for further detail on the earthworks associated with this subdivision. These works will be temporary in nature.

Extensive erosion and sediment control measures will be implemented at the site during earthworks activities as shown in the Engineering Plans. The erosion and sediment controls are in accordance with the Far North District Council code of practice (Erosion, Sediment and Dust Control 2.4.2.2) which also references Auckland Council Guideline Document GD2016/005 – Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016. All sediment control measures will be checked regularly to ensure that they are performing as intended.

The proposal will result in some construction noise which will adhere to standard noise restrictions in the New Zealand Standard 6803:1999 for Acoustics – Construction Noise. Therefore, it is considered that the proposal will have less than minor adverse noise effects as a result of construction activities.

Temporary traffic effects during construction will be managed with a Construction Management Plan as required by the conditions of consent of the approved wider Management Plan Subdivision.

On the basis of the above, it is considered that any adverse construction-related effects can be managed to a less than minor extent.

6.5 Summary of Effects

Overall, it is considered that any adverse effects on the environment relating to this proposal will be less than minor.

6.6 Public Notification Conclusion

Having undertaken the section 95A public notification tests, the following conclusions are reached:

- Under step 1, public notification is not mandatory;
- Under step 2, public notification is not precluded;
- Under step 3, public notification is not required as it is considered that the activity will result in less than minor adverse effects; and
- Under step 4, there are no special circumstances.

Therefore, based on the conclusions reached under steps 3 and 4, it is recommended that this application be processed without public notification.

7.0 Limited Notification Assessment (Sections 95B, 95E to 95G)

7.1 Assessment of Steps 1 to 4 (Sections 95B)

If the application is not publicly notified under section 95A, the council must follow the steps set out in section 95B to determine whether to limited notify the application. These steps are addressed in the statutory order below.

7.1.1 Step 1: Certain affected protected customary rights groups must be notified

Step 1 requires limited notification where there are any affected protected customary rights groups or customary marine title groups; or affected persons under a statutory acknowledgement affecting the land (being on land, or adjacent to land, that is subject to a statutory acknowledgement area).

The above does not apply to this proposal.

7.1.2 Step 2: If not required by step 1, limited notification precluded in certain circumstances

Step 2 describes that limited notification is precluded where all applicable rules and national environmental standards preclude limited notification; or the application is for a controlled activity (other than the subdivision of land).

In this case, the applicable rules do not preclude limited notification and the proposal is not a controlled activity. Therefore, limited notification is not precluded.

7.1.3 Step 3: If not precluded by step 2, certain other affected persons must be notified

Step 3 requires that, where limited notification is not precluded under step 2 above, a determination must be made as to whether any of the following persons are affected persons:

- In the case of a boundary activity, an owner of an allotment with an infringed boundary;
- In the case of any other activity, a person affected in accordance with s95E.

The application is not for a boundary activity, and therefore an assessment in accordance with section 95E is required and is set out below.

Overall, it is considered that any adverse effects on persons will be less than minor, and accordingly, that no persons are adversely affected.

7.1.4 Step 4: Further notification in special circumstances

In addition to the findings of the previous steps, the council is also required to determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined as eligible for limited notification.

In this instance, having regard to the assessment in section 6.1.4 above, it is considered that special circumstances do not apply.

7.2 Section 95E Statutory Matters

If the application is not publicly notified, a council must decide if there are any affected persons and give limited notification to those persons. A person is affected if the effects of the activity on that person are minor or more than minor (but not less than minor).

In deciding who is an affected person under section 95E:

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded;
- Only those effects that relate to a matter of control or discretion can be considered (in the case of controlled or restricted discretionary activities); and
- The adverse effects on those persons who have provided their written approval must be disregarded.

These matters were addressed in section 6.2 above, and no written approvals have been obtained.

Having regard to the above provisions, an assessment is provided below.

7.3 Assessment of Effects on Persons

Adverse effects in relation to landscape and amenity effects, traffic safety and efficiency effects, reverse sensitivity, infrastructure and servicing effects on persons are considered below.

Wider effects were considered in section 6.4 above, and considered to be less than minor.

As mentioned above, the proposed Lots 62-64 will be incorporated into the authorised wider Management Plan Subdivision. Importantly, the proposed subdivision will not create any additional development potential or result in an increase in the number of anticipated buildings, residential occupation, vehicle movements or demand for infrastructure when compared with the existing and consented environment. Rather, it will result in a in a net reduction of one potential development right across the combined landholding.

Erosion and sediment control devices will also be installed prior to earthworks activities to ensure that any potential sediment runoff is contained within the site.

Accordingly, the proposal does not give rise to increased landscape and amenity, traffic safety and efficiency, reverse sensitivity and infrastructure and servicing effects on neighbouring properties.

Having regard to the nature and limited scale of the proposed subdivision, it is considered that any adverse effects on surrounding properties will be less than minor.

7.3.1 Summary of Effects

Taking the above into account, it is considered that any adverse effects on persons at the aforementioned properties will be less than minor. Wider effects were assessed in section 6.4 above and are considered to be less than minor.

It is considered, therefore, that there are no adversely affected persons in relation to this proposal.

7.4 Limited Notification Conclusion

Having undertaken the section 95B limited notification tests, the following conclusions are reached:

- Under step 1, limited notification is not mandatory;
- Under step 2, limited notification is not precluded;
- Under step 3, limited notification is not required as it is considered that the activity will not result in any adversely affected persons; and
- Under step 4, there are no special circumstances.

Therefore, it is recommended that this application be processed without limited notification.

8.0 Consideration of Applications (Section 104)

8.1 Statutory Matters

Subject to Part 2 of the Act, when considering an application for resource consent and any submissions received, a council must, in accordance with section 104(1) of the Act have regard to:

- Any actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of a national environmental standard, other regulations, national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposed regional policy statement; a plan or proposed plan; and
- Any other matter a council considers relevant and reasonably necessary to determine the application.

As a non-complying activity, section 104D of the Act states that a council may only grant the application if:

(a) adverse effects will be no more than minor; or

(b) the activity is not contrary to the objectives and policies of the relevant plans.

9.0 Effects on the Environment (Section 104(1)(A))

Having regard to the actual and potential effects on the environment of the activity resulting from the proposal, it was concluded in the assessment above that any wider adverse effects relating to the proposal will be less than minor and that no persons would be adversely affected by the proposal.

Further, it is considered that the proposal will also result in positive effects including:

- Improved subdivision design through more efficient lot configuration for proposed Lots 62-64 and their access arrangements; and
- Greater flexibility in the siting and design of future dwellings on proposed Lots 62-64, while maintaining the landscape, visual amenity and natural character outcomes anticipated by the approved Wider Management Plan Subdivision consent.

Overall, it is considered that the proposal will have positive effects, and any actual and potential adverse effects on the environment of allowing the activity are appropriate.

10.0 District Plan and Statutory Documents (Section 104(1)(B))

10.1 Objectives and Policies of the National Policy Statement – Natural Hazards

The National Policy Statement for Natural Hazards (NPS-NH) provides direction to decision-makers to ensure that subdivision, use and development do not increase natural hazard risk and that new exposure to hazard risk is avoided where practicable. The objectives and policies seek to ensure that natural hazard risk to people, property and infrastructure is appropriately managed and not increased through subdivision, use or development. The NPS-NH risk framework provides that risk is assessed by considering the likelihood of a natural hazard event and the consequences associated with exposure to that hazard.

The proposal continues to retain all of the recommendations from the original 2024 geotechnical report (see Appendix 10), it is not considered that the proposal will increase exposure to natural hazards or introduce new hazard risks. Therefore, the likelihood of consequence to the risk profile remains unchanged from what was originally approved under 2250266-RMACOM.

On this basis, the proposal would fall within a low-risk category of the NPS-NH risk framework. For the outlined reasons, the proposed subdivision is considered be consistent with the intent and direction of the NPS-NH.

10.2 Objectives and Policies of the New Zealand Coastal Policy Statement

The New Zealand Coastal Policy Statement ("NZCPS") is a national policy statement with the purpose of ensuring that the requirements of the Resource Management Act in so far as it relates to the coastal environment of New Zealand are achieved. More specifically the NZCPS sets policies to protect the characteristics and qualities of the coastal environment from the issues it faces.

While the subject site is located partially within the coastal environment, the proposed subdivision will not increase the authorised subdivision yield or development potential, or affect the ecological protection and restoration measures approved under the wider Management Plan Subdivision.

Following subdivision, the resulting allotments will form part of the authorised Management Plan Subdivision and be subject to the relevant landscape, ecological and architectural controls under that resource consent.

Accordingly, the proposal will preserve the natural character, landscape and ecological values of the coastal environment while enabling the appropriate use and development of the site.

The proposed subdivision is therefore considered consistent with the relevant objectives and policies of the NZCPS.

10.3 Objectives and Policies of the National Policy Statement – Indigenous Biodiversity

The National Policy Statement for Indigenous Biodiversity ("NPS-IB") was published by the Minister of the Environment on 7 July 2023 and came into force on 4 August 2023.

The proposed subdivision does not involve any vegetation clearance or modification of ecological habitats. It will not alter the extent or location of the approved ecological restoration areas, the protection of indigenous vegetation, or the long-term ecological management regime established under the authorised Management Plan Subdivision.

Following subdivision, the resulting allotments will form part of the authorised Management Plan Subdivision and be subject to the relevant ecological protection and management requirements. The proposed subdivision will therefore not diminish or otherwise compromise the biodiversity benefits anticipated under Resource Consent 2250266-RMACOM. The approved restoration planting, covenant protection and ongoing management measures will apply, ensuring that the intended ecological outcomes are maintained in perpetuity.

Accordingly, the proposed subdivision does not alter the conclusions reached through the assessment of the authorised Management Plan Subdivision. The proposal will provide for the protection and enhancement of indigenous biodiversity values and is considered consistent with the relevant objectives and policies of the NPS-IB.

10.4 Objectives and Policies of the Regional Policy Statement for Northland

The Regional Policy Statement ("RPS") for Northland contains high level policy guidance for development. The subject site does not contain any significant features as defined by the RPS.

The proposed subdivision does not result in additional allotments from what has been approved by the wider Management Plan Subdivision. It will therefore not increase the authorised subdivision yield or development potential within the site.

Following subdivision, the resulting allotments will form part of the authorised Management Plan Subdivision and be subject to the relevant consent conditions and approved management measures. The existing provisions for the long-term protection and enhancement of indigenous biodiversity, management of landscape and natural character values, erosion and sediment control, and infrastructure servicing will apply.

Accordingly, the proposal is consistent with the relevant objectives and policies of the RPS.

10.5 Weighting of Operative and Proposed District Plan Provisions

The Far North District Council notified the Proposed Far North District Plan (PDP) on 27 July 2022. On 30 June 2026, the Council publicly notified its decisions on submissions to the PDP,

commencing the Environment Court appeal period. From that date, the Proposed District Plan – Decisions Version has legal effect under section 86B(1) of the Resource Management Act 1991.

Since then the Environment Court Appeal period has closed, with 32 appeals to decisions on the PDP made with the section 274 period extended to 29 September 2026. The full extent of Section 274 notices received is not currently known at the time of lodgement. The appeals are wide ranging, affecting many provisions within the PDP including those applicable to this site.

In undertaking this assessment, the provisions of both the ODP and the PDP (Appeals Version) have been considered. Given the wide range of appeals that have been received, the uncertainty associated with the 274 notices received, and the potential for further changes to the PDP provisions, greater weight has been afforded to the ODP. However, as demonstrated in the assessment below, the proposal is consistent with and finds support under both the ODP and the PDP provisions, so the weighting assessment is not particularly determinative in this instance.

10.6 Objectives and Policies of the Operative Far North District Plan

10.6.1 Chapter 10 – Coastal Environment

The objectives and policies of the Coastal Environment Chapter seek to manage, protect and enhance natural character, the open space and amenity values of the coastal environment, water quality and soil conservation and biodiversity values by limiting rural subdivision and development.

At a high level, this requires subdivision to result in the protection of significant vegetation, wetlands and wildlife habitats, or enhancement planting, which can offset some of the adverse effects of subdivision on the environment and landscape values.

The proposed subdivision will incorporate the resulting allotments into the wider Management Plan Subdivision authorised under Resource Consent 2250266-RMACOM. It will not increase the overall subdivision density, create any additional allotments or increase the development potential of the site beyond that already authorised.

While the resulting allotment sizes do not meet the average allotment size requirements for a Management Plan Subdivision in the General Coastal Zone, the subdivision will not materially alter the authorised subdivision layout, development pattern or anticipated built form. Accordingly, the proposal will not compromise the character or amenity values of the surrounding coastal environment.

The proposed subdivision will not alter the extent or location of the enhancement planting, ecological restoration areas or other environmental management measures approved as part of the authorised Management Plan Subdivision. These measures will continue to establish ecological connections and corridors with conservation areas on surrounding properties and provide for the ongoing protection, restoration and management of indigenous coastal vegetation and habitats.

Overall, the proposed subdivision will integrate with, and be subject to, the environmental management framework applying to the wider authorised Management Plan Subdivision. The proposal is therefore considered consistent with the relevant objectives and policies applying to the Coastal Environment.

10.6.2 Chapter 12 – Natural and Physical Resources

The objectives and policies of the Natural and Physical Resources Chapter seek to recognise and provide for the distinctiveness, natural diversity and complexity of landscapes as far as practicable with emphasis on enhancement rather than the deterioration of landscape values.

As detailed above in this report, the proposed subdivision and the resulting allotments will be subject to the protection, rehabilitation and enhancement measures applying to the authorised Management Plan Subdivision. These measures will continue to permanently protect, rehabilitate and enhance the natural character of the coastal environment. As such, the proposed subdivision will be consistent with its relevant objectives and policies.

10.6.3 Chapter 13 – Subdivision

The objectives and policies of the subdivision chapter seek to ensure subdivision occurs in a manner that avoids, remedies or mitigates adverse environmental effects and responds appropriately to the characteristics and constraints of the land. It provides for integrated subdivision design that maintains landscape, natural character and ecological values and provides for appropriate servicing and legal and physical access.

The proposed subdivision will incorporate the resulting allotments into the wider Management Plan Subdivision authorised under Resource Consent 2250266-RMACOM. It will not increase the overall subdivision density, create any additional allotments or increase the development potential of the site beyond that already authorised.

While the resulting allotment sizes do not align with the average allotment size requirements for a management plan subdivision in the General Coastal Zone, the proposal does not create any additional allotments beyond those already authorised by the Management Plan Subdivision. The purpose of the minimum average allotment size requirement within the General Coastal Zone is to maintain the open character of the coastal environment, avoid fragmentation of rural and coastal land, and ensure that subdivision occurs in a manner that is compatible with the character and environmental values of the zone. In this instance the land proposed to be incorporated into the Management Plan Subdivision is immediately adjoining the existing consented development and will not introduce an isolated pocket of smaller allotments within General Coastal Zone.

As such, it is considered that the proposed subdivision will be consistent with underlying intent of the Subdivision Chapter objectives and policies by promoting an integrated subdivision design that responds to the site's environmental constraints while maintaining the landscape, natural character and ecological outcomes established through the original consent.

10.7 Objectives and Policies of the Proposed Far North District Plan

10.7.1 Rural Lifestyle Zone

The objectives and policies of the Rural Lifestyle Zone is intended to provide for low-density residential living alongside small-scale farming activities in a manner that maintains the zone's rural character and amenity values and does not compromise the effective and efficient operation of adjoining Rural Production land.

The proposed subdivision will not increase subdivision density beyond what is already consented under the authorised Management Plan Subdivision or increase the potential development yield. As such, it is considered that proposal will not compromise the predominant character and amenity

values of the Rural Lifestyle zone beyond what is already approved and will maintain an appropriate interface with surrounding rural activities and does not introduce effects that would constrain primary production. As such, the proposed subdivision is consistent with the relevant objectives and policies of the Rural Lifestyle Zone.

10.7.2 Rural Production Zone

The objectives and policies of the Rural Production Zone seek to protect land for current and future primary production activities, particularly highly productive land, while maintaining the rural character and amenity of the zone. They provide for compatible rural activities provided that any subdivision and development do not fragment productive land or introduce reverse sensitivity effects.

While the proposal includes the subdivision of a section of Rural Production-zoned land, the land is located on the fringe of the Zone boundary, adjoins the existing Management Plan Subdivision site and does not comprise highly productive land. The proposal will not result in the fragmentation of a rural productive land and will not materially reduce the productive capacity of the wider rural landscape or constrain the ongoing operation of surrounding primary production activities through reverse sensitivity effects. Accordingly, the proposal is considered to be consistent with the overall intent of the Rural Production Zone objectives and policies.

10.7.3 Coastal Environment

The objectives and policies of the Coastal Environment seek to preserve and protect the natural character of the coastal environment while enabling appropriate use and development. They promote integrated and compatible land use and the protection of areas of high and outstanding natural character from inappropriate subdivision and development. Development should be designed and located to integrate with the surrounding landscape and avoid, remedy or mitigate adverse effects on coastal values.

The proposed subdivision will incorporate the resulting allotments into the wider Management Plan Subdivision authorised under Resource Consent 2250266-RMACOM. It will not increase the overall subdivision density, create any additional allotments or increase the development potential of the site beyond that already authorised.

The proposal does not involve significant adverse effects on natural character, coastal landscape values or indigenous biodiversity.

Overall, the proposed subdivision will integrate with, and remain subject to, the environmental management framework applying to the wider authorised Management Plan Subdivision. The proposal is therefore considered consistent with the relevant objectives and policies applying to the Coastal Environment.

10.7.4 Subdivision

The objectives and policies of the Subdivision chapter seek to ensure subdivision is undertaken in a coordinated and efficient manner that achieves the intended outcomes of the relevant zone while protecting environmental values and avoiding adverse effects. They require subdivision to provide appropriately sized and serviced allotments, maintain consistency with the character and purpose of the zone, avoid reverse sensitivity effects, protect highly productive land and significant environmental features.

The proposed subdivision will incorporate the resulting allotments into the wider Management Plan Subdivision authorised under Resource Consent 2250266-RMACOM. It will not increase the overall subdivision density, create any additional allotments or increase the development potential of the site beyond that already authorised.

While the resulting allotment sizes do not align with the average allotment size requirements for a management plan subdivision in the Rural Production Zone, the proposal does not create any additional allotments beyond those already authorised by the Management Plan Subdivision. The purpose of the minimum average allotment size requirement within the Rural Production Zone is to avoid fragmentation of rural land, and ensure that subdivision occurs in a manner that is compatible with the character and environmental values of the zone. In this instance the land proposed to be incorporated into the Management Plan Subdivision is not highly productive land, immediately adjoins the existing consented development, and represents an extension of the existing consented subdivision rather than introducing an isolated pocket of smaller allotments within Rural Production Zone.

Accordingly, the proposal is considered to be consistent with the overall intent of the Subdivision objectives and policies.

10.8 Summary

It is considered that the proposed development is generally in accordance with the objectives and policies of the relevant statutory planning document.

11.0 Part 2 Matters

While it is not necessary to take recourse to Part 2 given that it has already been incorporated into the ODP and PDP, we do so for completeness.

Section 5 of Part 2 identifies the purpose of the RMA as being the sustainable management of natural and physical resources. This means managing the use, development and protection of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being and health and safety while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Section 6 of the Act sets out a number of matters of national importance including (but not limited to) the protection of outstanding natural features and landscapes and historic heritage from inappropriate subdivision, use and development.

Section 7 identifies a number of “other matters” to be given particular regard by Council and includes (but is not limited to) Kaitiakitanga, the efficient use of natural and physical resources, the maintenance and enhancement of amenity values, and maintenance and enhancement of the quality of the environment.

Section 8 requires Council to take into account the principles of the Treaty of Waitangi.

Overall, as the effects of the proposal are considered to be less than minor, and the proposal accords with the relevant statutory documents’ objectives and policies, it is considered that the

proposal will not offend against the general resource management principles set out in Part 2 of the Act.

12.0 Other Matters (Section 104(1)(C))

12.1 Record of Title Interests

The Records of Title for the site are subject to a number of interests (refer **Appendix 1**). None of these are anticipated to affect the resource consent application.

13.0 Section 104(6A) Significant Non-compliances

Under Section 104(6A) of the RMA, a consent authority may decline an application for resource consent if the applicant has a record of significant non-compliance with a requirement of this Act.

The applicant, Willowridge Developments Limited, is not a natural person and has not been the subject of a significant non-compliance.

14.0 Section 104D Non-complying Activities

To be able to grant consent to a non-complying activity, a council must be satisfied that either the adverse effects of the activity on the environment will be minor (s104D(1)(a)), or the proposed activity will not be contrary to the objectives and policies of a proposed plan or plan (s104D(1)(b)). This consideration is commonly known as the 'threshold test' or the 'gateway test'. If either of the limbs of the test can be passed, then the application is eligible for approval, but the proposed activity must still be considered under section 104. There is no primacy given to either of the two limbs, so if one limb can be passed then the 'test' can be considered to be passed.

As identified in the assessment above, the adverse effects of the activity on the environment will be less than minor and the proposed activity will not be contrary to the objectives and policies of the plan. As such the application can be considered under section 104 and a determination made on the application as provided by section 104B.

15.0 Section 106 Subdivision

Under section 106 of the Act, a consent authority may refuse to grant a subdivision consent if it considers that there is significant risk from natural hazards, or sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.

As discussed in the assessment above, the proposed subdivision does not introduce any additional natural hazard risks given that the site is located outside of any natural hazard areas. Accordingly, the proposal will not result in a significant risk from natural hazards.

The proposed subdivision also does not adversely affect legal or physical access to the allotment. The proposed lots will be provided with appropriate legal and physical access.

It is concluded that there is no significant risk from natural hazards and that the proposed lots will be provided with legal and physical access arrangements. The proposal is therefore consistent with section 106 of the RMA.

16.0 Conclusion

The proposal involves the subdivision of Lot 1 and 2 DP 542129, and Lot 1 DP 182616 into four allotments at 39 Aucks Road, Russell.

Based on the above report it is considered that:

- Public notification is not required as adverse effects in relation to landscape and amenity, ecology, traffic safety and efficiency, servicing, geotechnical, reverse sensitivity, archaeological values, and construction are considered to be less than minor;
- Limited notification is not required as no persons are considered to be adversely affected by the proposal;
- The proposal accords with the relevant statutory documents objectives and policies. There are also positive effects; and
- The proposal is considered to be consistent with Part 2 of the Act.

It is therefore concluded that the proposal satisfies all matters the consent authority is required to assess, and that it can be granted on a non-notified basis. The applicant respectfully requests that draft conditions of consent be provided to them pursuant to section 107G of the Act.

Te Kaunihera o Te Hiku o te Ika
Far North District Council

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

Application for 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 discussion

Have you met with a council Resource Consent representative to discuss this application prior to lodgement?
☑ **Yes** ☐ **No** ☐ **N/A**

Have you consulted Council's Infrastructure Officer regarding infrastructure capacity to service the development?
☐ **Yes** ☑ **No** ☑ **N/A**

Have you consulted the Roading Officer regarding any road to vest or departure from District Plan / Engineering standards?
☐ **Yes** ☑ **No** ☑ **N/A**

**Contact details of who and how to engage in pre lodgement discussions can be found on the Resource Consent pages of the FNDC website.*

2. Type of consent being applied for

(more than one circle can be ticked):

☐ **Land Use**
☐ **Fast Track (Land Use - Controlled Activity)**
☐ **Change of Consent Notice (s.221(3))**
☐ **Certificate of Compliance (s.139)**
☐ **Extension of time (s.125)**
☐ **Discharge:** Total voume = _____ m³
Note; volumes >3m³ requires NRC Consent 3m³
☑ **Subdivision**
☐ **Existing Use Certificate (s.139A)**
☐ **Consent under National Environmental Standard**
(e.g. Assessing and Managing Contaminants in Soil)
☐ **Other (please specify)** _____

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: Willowridge Developments Limited C/O Brendan Fenn

Email: brendan@WILLOWRIDGE.CO.NZ

Phone number: Work 027 435 2133 Home

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

Unit 6B, 1 Sir Tim Wallis Drive, Three Parks, Wanaka, South Island, New Zealand

Postcode 0272

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: Moana Schoffa

Email: MoanaS@barker.co.nz

Phone number: Work 027 329 3900 Home

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

Level 1, 136 Bank Street, Whangarei

Postcode 0112

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

N/A

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: Willowridge Developments Limited

Property address/ location: Unit 6b, 1 Sir Tim Wallis Drive, Three Parks, Wanaka, South Island, New Zealand

Postcode

8. Application site details

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

Name/s: Willowridge Developments Limited

Site address/ location: 39 Aucks Road, Russell / Kororreka, Far North District

Lot 1 and Lot 2 DP 542129, Lot 1 DP 182616

Postcode 0272

Legal description:

Val Number: Refer to Appendix 1

Certificate of title: Refer to Appendix 1

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.

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.

The proposal involves the subdivision of Lot 1 and 2 DP 542129, and Lot 1 DP 182616 to create four allotments.

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** Enter BC ref # here (if known)
- ✔ **Regional Council Consent (ref # if known)** APP.046280.01.02
- ◯ **National Environmental Standard Consent** Consent here (if known)
- ◯ **Other (please specify)** Specify 'other' here

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**
- ◯ **Changing the use of a piece of land**
- ◯ **Disturbing, removing or sampling soil**
- ◯ **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**
- ✔ **Landslips**
- ◯ **Coastal Erosion**
- ◯ **Coastal Inundation**
- ◯ **Active Faults**
- ◯ **Liquefaction**
- ◯ **Tsunami**

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 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) Willowridge Developments Limited C/O Brendan Fenn

Email: brendan@WILLOWRIDGE.CO.NZ

Phone number: Work 027 435 2133 Home

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

Unit 6b, 1 Sir Tim Wallis Drive, Three Parks, Wanaka, South Island, New Zealand

Postcode 0272

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) Brendan Fenn

Signature:
(signature of bill payer)

pp. 

Date 01-Oct-2026

MANDATORY

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) Moana Schoffa

Signature 

Date 01-Oct-2026

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)
- [x] A current Certificate of Title (Search Copy not more than 6 months old)
- [ ] Details of your consultation with Iwi and hapū
- [x] Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- [x] Applicant / agent / property owner / bill payer details provided
- [x] Location of property and description of proposal
- [x] Assessment of Environmental Effects
- [ ] Written approvals / correspondence from consulted parties
- [x] Reports from technical experts (if required)
- [x] Copies of other relevant consents associated with this application
- [ ] Location and site plans (land use) AND/OR
- [x] 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

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **476989**

Land Registration District **North Auckland**

Date Issued 28 October 2009

Prior References

NA117C/424 NA123B/680

Estate Fee Simple

Area 3.6455 hectares more or less

Legal Description Lot 1 Deposited Plan 187577 and Lot 3-4 Deposited Plan 420232

Registered Owners

Willowridge Developments Limited

Interests

Appurtenant to Lot 1 DP 187577 herein is an electricity supply right specified in Easement Certificate B664045.3 - 14.5.1987 at 12.26 pm

The easements specified in Easement Certificate B664045.3 are subject to Section 309 (1) (a) Local Government Act 1974

Appurtenant to Lot 1 DP 187577 herein is a telephone supply right created by Transfer B790220.2 - 2.3.1988 at 2:18 pm

Subject to Section 241(2) and Sections 242(1) and (2) Resource Management Act 1991(affects DP 420232)

8300644.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 28.10.2009 at 3:13 pm (Affects Lots 3 & 4 DP 420232)

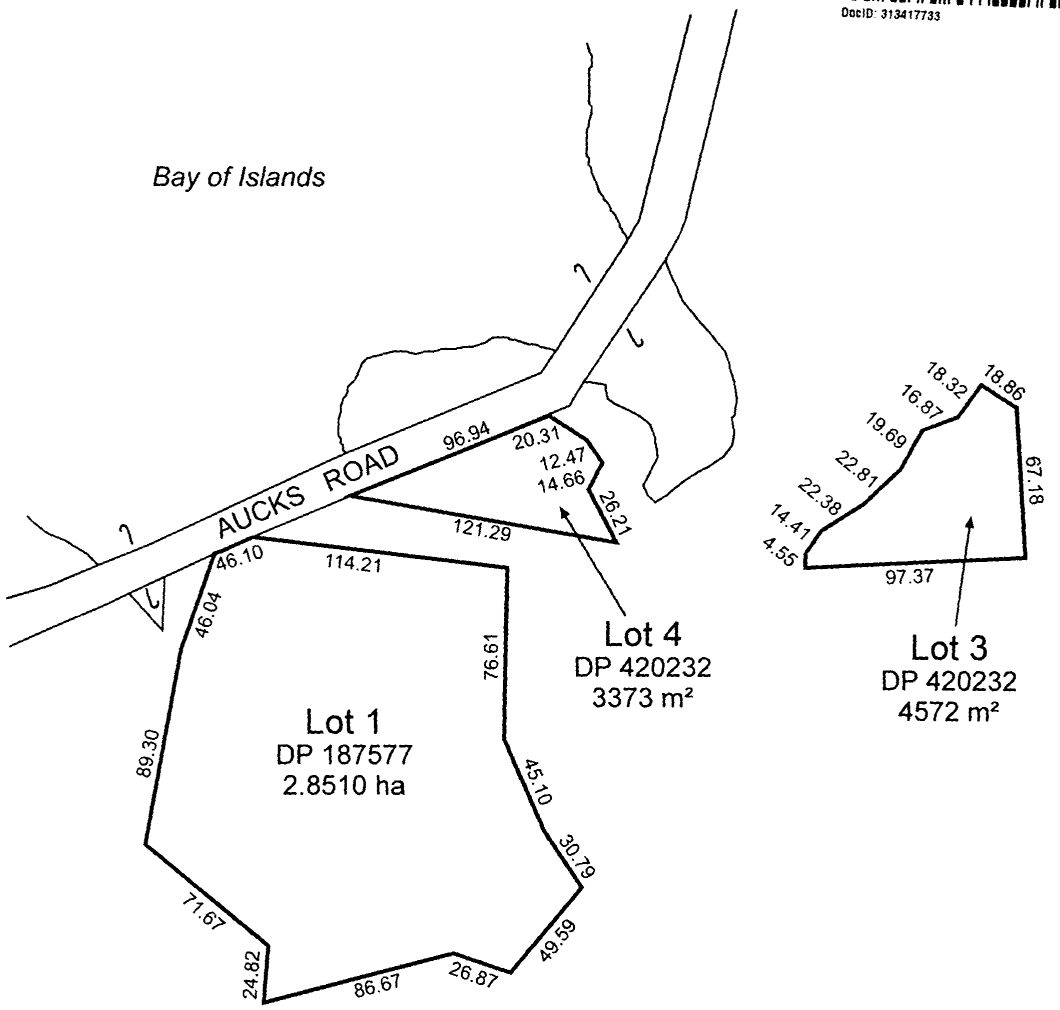
Appurtenant hereto is a right of way and a right to convey electricity, telecommunications and computer media created by Easement Instrument 8300644.5 - 28.10.2009 at 3:13 pm

12193860.1 Mortgage to Westpac New Zealand Limited - 16.8.2021 at 11:24 am

Land Covenant in Covenant Instrument 12682951.1 - 21.3.2023 at 3:57 pm

CT 476989
CH2009/198

Title Diagram CT 476989
Cpy – 01/01, Pgs – 001, 04/11/09, 12:48
DocID: 313417733



TOTAL CT AREA: 3.6455 ha

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **912226**
Land Registration District **North Auckland**
Date Issued 23 June 2020

Prior References
NA117C/425

Estate Fee Simple
Area 38.2940 hectares more or less
Legal Description Lot 1 Deposited Plan 542129
Registered Owners
Willowridge Developments Limited

Interests

Appurtenant hereto is an electricity supply right specified in Easement Certificate B664045.3 - 14.5.1987 at 12.26 pm

The easements specified in Easement Certificate B664045.3 are subject to Section 309 (1) (a) Local Government Act 1974

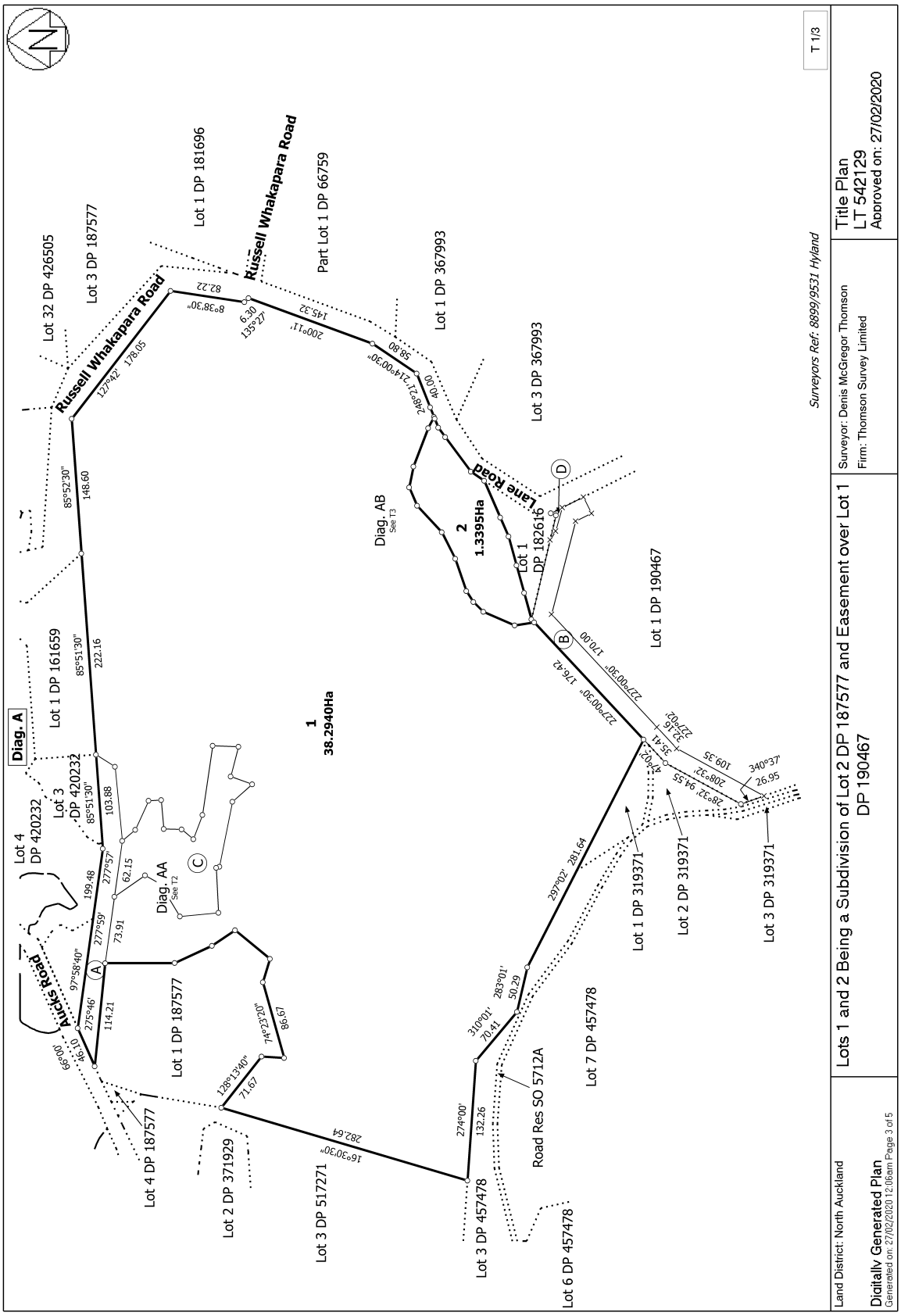
Appurtenant hereto is a telephone supply right created by Transfer B790220.2 - 2.3.1988 at 2:18 pm

D574444.3 Conservation Covenant pursuant to Section 77 Reserves Act 1977 - 25.1.2001 at 9.00 am

Subject to a right of way and a right to convey electricity, telecommunications and computer media over part marked A on DP 542129 created by Easement Instrument 8300644.5 - 28.10.2009 at 3:13 pm

12193860.1 Mortgage to Westpac New Zealand Limited - 16.8.2021 at 11:24 am

Land Covenant in Covenant Instrument 12682951.1 - 21.3.2023 at 3:57 pm


T 1/3
Surveyors Ref: 8899/9531 Hyland
Title Plan
LT 542129
Approved on: 27/02/2020
Surveyor: Denis McGregor Thomson
Firm: Thomson Survey Limited
Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467
Land District: North Auckland
Digitally Generated Plan
Generated on: 27/02/2020 12:06am Page 3 of 5
Russell Whakapara Road
Lane Road
Auckis Road
Diag. A
Diag. AA
See T2
Diag. AB
See T3
1
38.2940Ha
2
1.3395Ha
Lot 32 DP 426505
Lot 3 DP 187577
Lot 1 DP 181696
Part Lot 1 DP 66759
Lot 1 DP 367993
Lot 3 DP 367993
Lot 1 DP 182616
Lot 1 DP 190467
Lot 1 DP 161659
Lot 4 DP 420232
Lot 3 DP 420232
Lot 1 DP 187577
Lot 4 DP 187577
Lot 2 DP 371929
Lot 3 DP 517271
Lot 3 DP 457478
Lot 6 DP 457478
Road Res SO 5712A
Lot 7 DP 457478
Lot 1 DP 319371
Lot 2 DP 319371
Lot 3 DP 319371

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **912227**
Land Registration District **North Auckland**
Date Issued 23 June 2020

Prior References
NA117C/425

Estate Fee Simple
Area 1.3395 hectares more or less
Legal Description Lot 2 Deposited Plan 542129
Registered Owners
Willowridge Developments Limited

Interests

Appurtenant hereto is an electricity supply right specified in Easement Certificate B664045.3 - 14.5.1987 at 12.26 pm

The easements specified in Easement Certificate B664045.3 are subject to Section 309 (1) (a) Local Government Act 1974

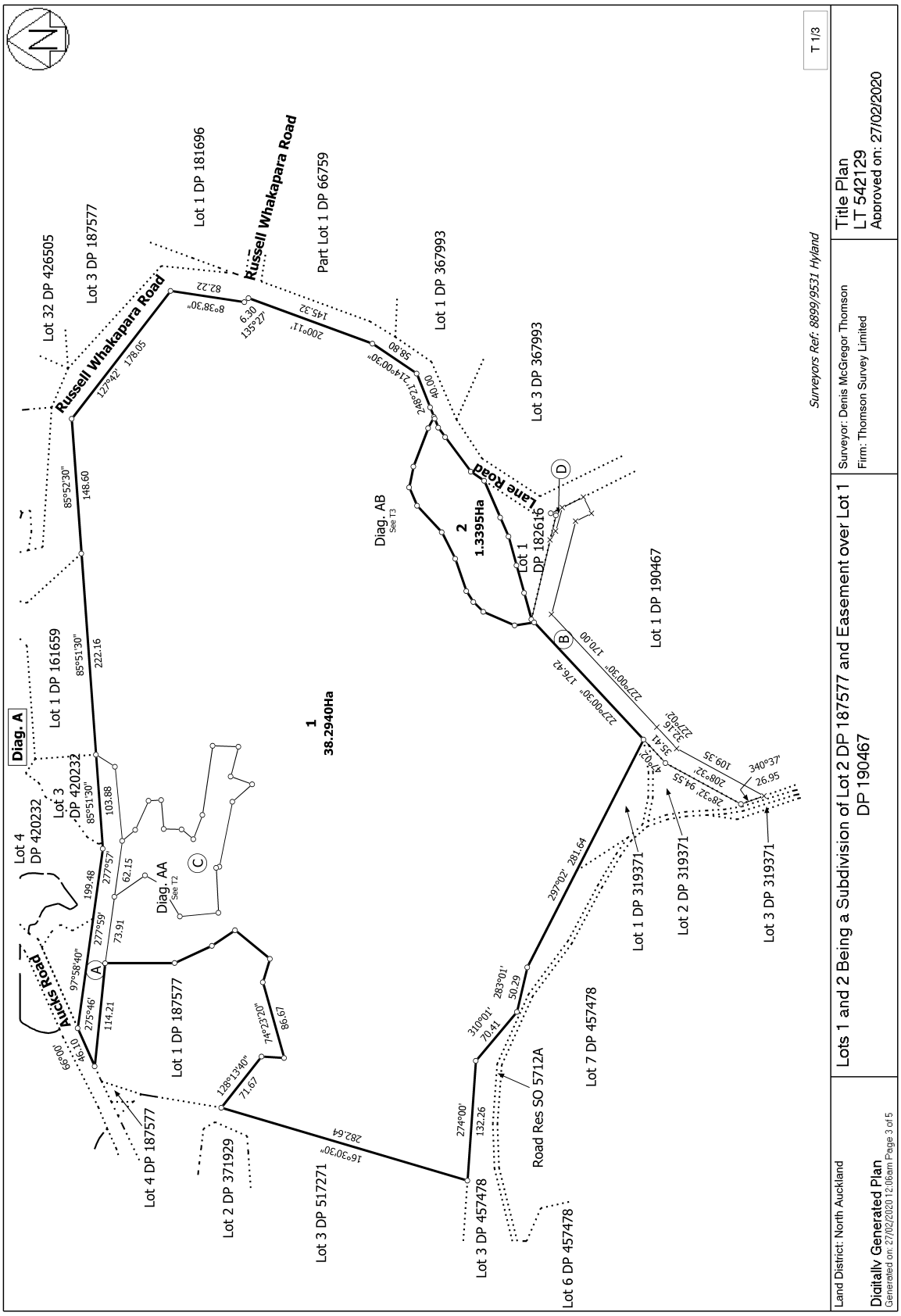
Appurtenant hereto is a telephone supply right created by Transfer B790220.2 - 2.3.1988 at 2:18 pm

D574444.3 Conservation Covenant pursuant to Section 77 Reserves Act 1977 - 25.1.2001 at 9.00 am

11735593.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 23.6.2020 at 11:30 am

12193860.1 Mortgage to Westpac New Zealand Limited - 16.8.2021 at 11:24 am

Land Covenant in Covenant Instrument 12682951.1 - 21.3.2023 at 3:57 pm


Russell Whakapara Road
Lane Road
Aucks Road
Diag. A
Diag. AB
See T3
Diag. AA
See T2
1
38.2940Ha
2
1.3395Ha
Lot 32 DP 426505
Lot 3 DP 187577
Lot 1 DP 181696
Part Lot 1 DP 66759
Lot 1 DP 367993
Lot 3 DP 367993
Lot 1 DP 182616
Lot 1 DP 190467
Lot 1 DP 161659
Lot 4 DP 420232
Lot 3 DP 420232
Lot 1 DP 187577
Lot 4 DP 187577
Lot 2 DP 371929
Lot 3 DP 517271
Lot 3 DP 457478
Lot 6 DP 457478
Road Res SO 5712A
Lot 7 DP 457478
Lot 1 DP 319371
Lot 2 DP 319371
Lot 3 DP 319371
T 1/3
Surveyors Ref: 8899/9531 Hyland
Surveyor: Denis McGregor Thomson
Firm: Thomson Survey Limited
Title Plan
LT 542129
Approved on: 27/02/2020
Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467
Land District: North Auckland
Digitally Generated Plan
Generated on: 27/02/2020 12:06am Page 3 of 5

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA113D/111**

Land Registration District **North Auckland**

Date Issued 03 June 1998

Prior References
NA24A/915

Estate Fee Simple

Area 4286 square metres more or less

Legal Description Lot 1 Deposited Plan 182616

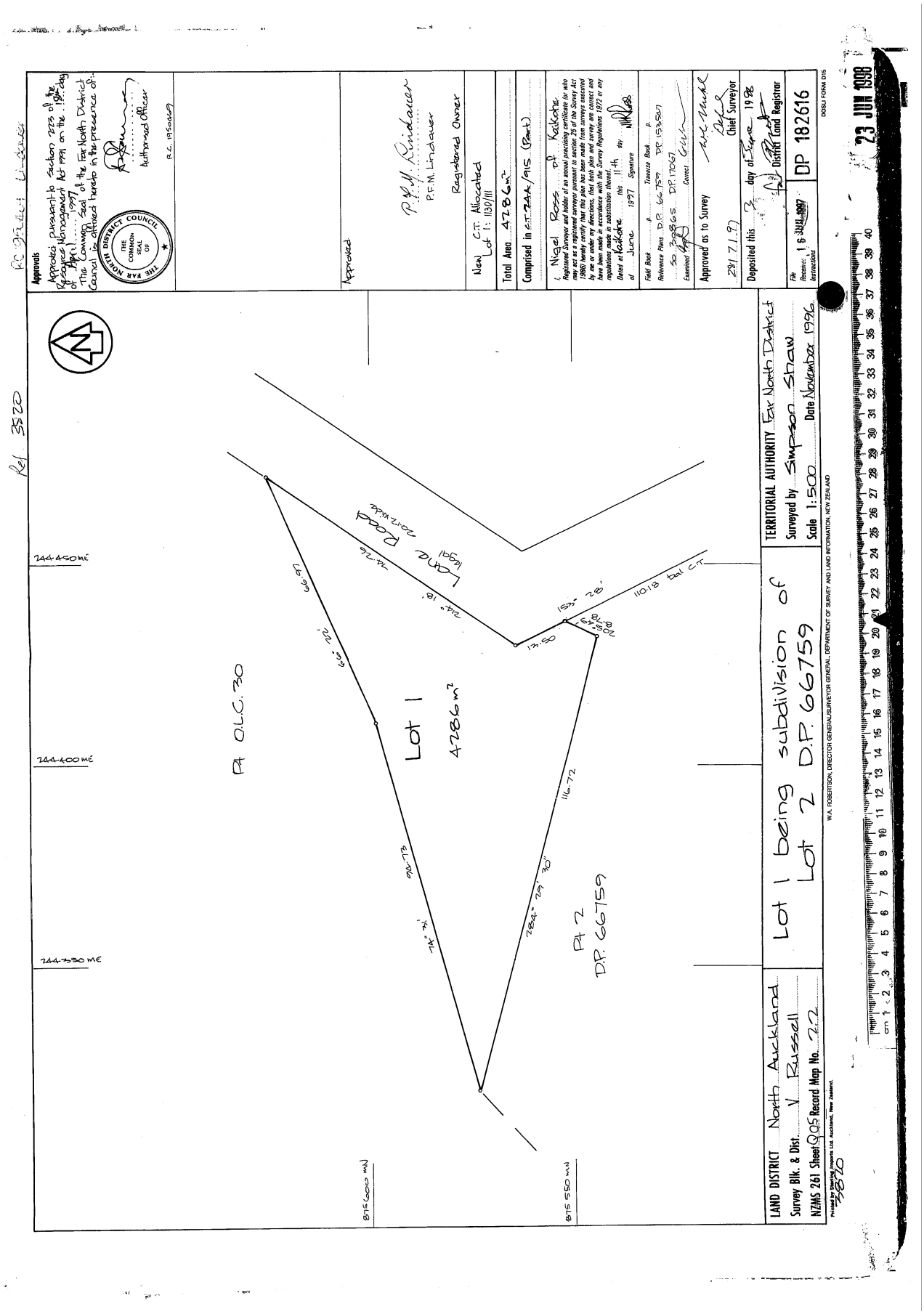
Registered Owners
Willowridge Developments Limited

Interests

Appurtenant hereto is a right of way and a right to convey electricity, telecommunications and water created by Easement Instrument 11735593.3 - 23.6.2020 at 11:30 am

12193860.1 Mortgage to Westpac New Zealand Limited - 16.8.2021 at 11:24 am

Land Covenant in Covenant Instrument 12682951.1 - 21.3.2023 at 3:57 pm


Approvals
Approved pursuant to section 226 of the Resource Management Act 1991 on the 15th day of April 1997 & the Common Seal of the Far North District Council was affixed hereto in the presence of
Authorised Officer
R.C. 195449
THE FAR NORTH DISTRICT COUNCIL THE COMMON SEAL OF
Approved
P.F.M. Lindauer
Registered Owner
New C.T. Allocated Lot 1: 1130/111
Total Area 4786m²
Comprised in CT 7A4A/915 (Part)
I, Nigel Ross of Kaikohe
Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 25 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been executed in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof.
Dated at Kaikohe this 11th day of June 1997 Signature
Field Book ... p ... Traverse Book ... p
Reference Plans D.P. 66759 DP. 153527
SO 23865 DP. 170671
Examined Correct
Approved as to Survey 23/7/97 Chief Surveyor
Deposited this 23rd day of June 1998 District Land Registrar
File Reference 1 & 3331/997 Instructions
DP 182616
DOSU FORM D15
23 JUN 1998
TERRITORIAL AUTHORITY Far North District
Surveyed by Simpson Shaw
Scale 1:500 Date November 1996
W.A. ROBERTSON, DIRECTOR GENERAL/SURVEYOR GENERAL, DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND
LAND DISTRICT North Auckland
Survey Blk. & Dist. V Russell
NZMS 261 Sheet 905 Record Map No. 22
Lot 1 being subdivision of Lot 2 D.P. 66759
Pt 2 D.P. 66759
Pt OLC 30
Lot 1 4786m²
Road
Lot 1 DP 153527
Lot 2 DP 66759
Printed by Sterling Imprints Ltd, Auckland, New Zealand.

View Instrument Details

Instrument No	8300644.5
Status	Registered
Date & Time Lodged	28 October 2009 15:13
Lodged By	Davis, Gregory Leslie
Instrument Type	Easement Instrument

Affected Computer Registers	Land District
476989	North Auckland
476990	North Auckland
NA117C/424	North Auckland
NA117C/425	North Auckland

Annexure Schedule: Contains 2 Pages.

Grantor Certifications

I certify that I have the authority to act for the Grantor and that the party has the legal capacity to authorise me to lodge this instrument ☑

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☑

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☑

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☑

I certify that the Mortgagee under Mortgage 6617509.1 has consented to this transaction and I hold that consent ☑

Signature

Signed by Gregory Leslie Davis as Grantor Representative on 26/11/2009 11:37 AM

Grantee Certifications

I certify that I have the authority to act for the Grantee and that the party has the legal capacity to authorise me to lodge this instrument ☑

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☑

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☑

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☑

Signature

Signed by Gregory Leslie Davis as Grantee Representative on 26/11/2009 11:37 AM

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

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Approved by Registrar-General of Land under No. 2007/6225

Easement instrument to grant easement or *profit à prendre*, or create land covenant

Sections 90A and 90F, Land Transfer Act 1952

Land registration district

NORTH AUCKLAND

BARCODE

Grantor *Surname(s) must be underlined or in CAPITALS.*

L R HYLAND LIMITED

Grantee *Surname(s) must be underlined or in CAPITALS.*

L R HYLAND LIMITED

Grant* of easement or *profit à prendre* or creation or covenant

The Grantor, being the registered proprietor of the servient tenement(s) set out in Schedule A, **grants to the Grantee** (and, if so stated, in gross) the easement(s) or *profit(s) à prendre* set out in Schedule A, **or creates** the covenant(s) **set out** in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

Dated this day of

Attestation

	Signed in my presence by the Grantor *Signature of witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** **Occupation** **Address**
Signature [common seal] of Grantor	
	Signed in my presence by the Grantee *Signature of witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** **Occupation** **Address**
Signature [common seal] of Grantee	

Certified correct for the purposes of the Land Transfer Act 1952.

[Solicitor for] the Grantee

*If the consent of any person is required for the grant, the specified consent form must be used.

REF: 7003 – AUCKLAND DISTRICT LAW SOCIETY

Approved by Registrar-General of Land under No. 2007/6225

Annexure Schedule 1

Easement instrument Dated [ ] Page 1 of 1 pages

Schedule A *(Continue in additional Annexure Schedule if required.)*

Purpose (nature and extent) of easement, *profit*, or covenant	Shown (plan reference)	Servient tenement (Identifier/CT)	Dominant tenement (Identifier/CT *or* in gross)
Right of Way	A on DP 420232	Lot 2 DP 187577	Lots 1 DP 187577 and Lots 3 & 4 DP 420232
Right to convey Electricity	A on DP 420232	Lot 2 DP 187577	Lots 1 DP 187577 and Lots 3 & 4 DP 420232
Right to convey Telecommunications and computer media	A on DP 420232	Lot 2 DP 187577	Lots 1 DP 187577 and Lots 3 & 4 DP 420232

Easements or *profits à prendre* rights and powers (including terms, covenants, and conditions)

Delete phrases in [ ] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

Unless otherwise provided below, the rights and powers implied in specific classes of easement are those prescribed by the Land Transfer Regulations 2002 and/or the Fifth Schedule of the Property Law Act 2007.

The implied rights and powers are ~~**[varied]**~~ ~~**[negatived]**~~ ~~**[added to]**~~ or ~~**[substituted]**~~ by:

~~[Memorandum number , registered under section 155A of the Land Transfer Act 1952].~~

~~[the provisions set out in Annexure Schedule 2].~~

Covenant provisions

Delete phrases in [ ] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

The provisions applying to the specified covenants are those set out in:

[Memorandum number , registered under section 155A of the Land Transfer Act 1952]

[Annexure Schedule 2].

All signing parties and either their witnesses or solicitors must sign or initial in this box

View Instrument Details

Instrument No	11735593.2
Status	Registered
Date & Time Lodged	23 June 2020 11:30
Lodged By	Jonson, Jan Dorothy
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Records of Title	Land District
912227	North Auckland

Annexure Schedule Contains 2 Pages.

Signature

Signed by Lucia Lisa Aprea as Territorial Authority Representative on 22/06/2020 12:44 PM

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

Far North District Council

Private Bag 752, Memorial Ave
Kaikohe 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

REGARDING **RC 2170042**
Being the Subdivision of LOT 2 DP 187577-SUBJ TO & INT IN EASES
North Auckland Registry

PURSUANT to Section 221 and for the purpose of Section 224 (c) (ii) of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and these are to be registered on the titles of the allotments specified below.

SCHEDULE

Lot 2 DP 542129

(i) In conjunction with the construction of any building which includes a wastewater treatment & effluent disposal system the applicant shall submit for Council approval a TP58 Report prepared by a Chartered Professional Engineer or an approved TP58 Report Writer. The report shall be prepared generally in accordance with the Site and Soil Evaluation prepared by BOI Plumbing and Drainage Ltd and submitted with RC 2170042. The report shall confirm that all of the treatment & disposal system can be fully contained within the lot boundary and comply with the Regional Water & Soil Plan Permitted Activity Standards.

(ii) In conjunction with the construction of any dwelling, and in addition to a potable water supply, a water collection system with sufficient supply for fire fighting purposes is to be provided by way of tank or other approved means and to be positioned so that it is safely accessible for this purpose. These provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509.

(iii) No more than two dogs and two cats shall be introduced or kept on the lot at any time. Any dog must be micro-chipped and have a current kiwi aversion trained certification. Any dog must be within a dog-proof fenced area on the lot and be under effective control at all times when outside of the fenced area, e.g. on a lead. At night any dog must kept inside or be tied up. Any cat is to be neutered, microchipped and kept inside at night.

Far North District Council

Private Bag 752, Memorial Ave
Kaitaia 0410, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

SIGNED: P J Killalea Mr Patrick John Killalea - Authorised Officer
By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
PRINCIPAL PLANNER – RESOURCE MANAGEMENT

DATED at **KERIKERI** this 19th day of December 2019

View Instrument Details

Instrument No	11735593.3
Status	Registered
Date & Time Lodged	23 June 2020 11:30
Lodged By	Jonson, Jan Dorothy
Instrument Type	Easement Instrument

Affected Records of Title	Land District
76318	North Auckland
NA113D/111	North Auckland
NA118B/623	North Auckland

Annexure Schedule Contains 1 Pages.

Grantor Certifications

I certify that I have the authority to act for the Grantor and that the party has the legal capacity to authorise me to lodge this instrument	☑
I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument	☑
I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply	☑
I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period	☑
I certify that the Mortgagee under Mortgage 9926056.6 has consented to this transaction and I hold that consent	☑
I certify that the Mortgagee under Mortgage 10986737.3 has consented to this transaction and I hold that consent	☑

Signature

Signed by Lucia Lisa Aprea as Grantor Representative on 20/07/2020 10:06 AM

Grantee Certifications

I certify that I have the authority to act for the Grantee and that the party has the legal capacity to authorise me to lodge this instrument	☑
I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument	☑
I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply	☑
I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period	☑

Signature

Signed by Lucia Lisa Aprea as Grantee Representative on 20/07/2020 10:06 AM

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

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Approved for ADLS by Registrar-General of Land under No. 2018/6266

EASEMENT INSTRUMENT TO GRANT EASEMENT OR *PROFIT À PRENDRE*

Sections 109 Land Transfer Act 2017

Registrar-General of Land Approval 2018/6266 ADLS

Grantor

Lindsay Robert HYLAND, Murray Craig GENTIL and LR Hyland Trustee Limited

Grantee

Lindsay Robert HYLAND, Murray Craig GENTIL and LR Hyland Trustee Limited

Grant of Easement or *Profit à prendre*

The Grantor being the registered owner of the burdened land set out in Schedule A **grants to the Grantee** (and, if so stated, in gross) the easement(s) or *profit(s) à prendre* set out in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

Schedule A *Continue in additional Annexure Schedule, if required*

Purpose (Nature and extent) of easement, or *profit*	Shown (plan reference)	Burdened Land (Record of Title)	Benefited Land (Record of Title) or in gross
Right of Way **Right to Convey Electricity,** **Right to Convey Telecommunications** **Right to Convey Water**	**B & D on DP 542129**	**Lot 1 DP 190467** **Record of Title NA118B/623**	**Section 24 BLK V Russell SD, Lot 1, 2 and 3 DP 319371** **Record of Title 76318**
Right of Way **Right to Convey Electricity** **Right to Convey Telecommunications** **Right to Convey Water**	**D on DP 542129**	**Lot 1 DP 190467** **Record of Title NA118B/623**	**Lot 1 DP 182616** **Record of Title NA113D/111**

Easements or *profits à prendre* rights and powers (including terms, covenants and conditions)

Delete phrases in [ ] and insert memorandum number as required; continue in additional Annexure Schedule, if required

Unless otherwise provided below, the rights and powers implied in specified classes of easement are those prescribed by the Land Transfer Regulations 2018 and/or Schedule 5 of the Property Law Act 2007

The implied rights and powers are hereby ~~**[varied]**~~ ~~**[negatived]**~~ ~~**[added to]**~~ or ~~**[substituted]**~~ by:

~~[Memorandum number , registered under section 209 of the Land Transfer Act 2017]~~

~~[the provisions set out in Annexure Schedule]~~

REF: 7203 – © AUCKLAND DISTRICT LAW SOCIETY INC. 2018

View Instrument Details

Instrument No	12682951.1
Status	Registered
Date & Time Lodged	21 March 2023 15:57
Lodged By	Rowlands, Brittany Joan
Instrument Type	Land Covenant under s116(1)(a) or (b) Land Transfer Act 2017

Affected Records of Title	Land District
476989	North Auckland
76318	North Auckland
912226	North Auckland
912227	North Auckland
NA113D/111	North Auckland
NA118B/623	North Auckland

Annexure Schedule Contains 2 Pages.

Covenantor Certifications

I certify that I have the authority to act for the Covenantor and that the party has the legal capacity to authorise me to lodge this instrument ☑

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☑

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☑

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☑

Signature

Signed by Rebecca Mary Karamaena as Covenantor Representative on 21/03/2023 11:27 AM

Covenantee Certifications

I certify that I have the authority to act for the Covenantee and that the party has the legal capacity to authorise me to lodge this instrument ☑

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☑

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☑

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☑

Signature

Signed by Rebecca Mary Karamaena as Covenantee Representative on 21/03/2023 11:28 AM

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

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This approved format may be used for lodgement as an electronic instrument under the Land Transfer Act 2017

Form 26

Covenant Instrument to note land covenant

(Section 116(1)(a) & (b) Land Transfer Act 2017)

Covenantor

WILLOWRIDGE DEVELOPMENTS LIMITED

Covenantee

WILLOWRIDGE DEVELOPMENTS LIMITED

Grant of Covenant

The Covenantor, being the registered owner of the burdened land(s) set out in Schedule A, **grants to the Covenantee** (and, if so stated, in gross) the covenant(s) set out in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

Schedule A *Continue in additional Annexure Schedule, if required*

Purpose of covenant	Shown (plan reference)	Burdened Land (Record of Title)	Benefited Land (Record of Title) or in gross
Covenant - No Objection	All of the land contained within the burdened land	RT NA118B/623 RT 76318	RT 912226 RT 912227 RT 476989 RT NA113D/111

This approved format may be used for lodgement as an electronic instrument under the Land Transfer Act 2017

Covenant rights and powers (including terms, covenants and conditions)

Delete phrases in [ ] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

The provisions applying to the specified covenants are those set out in:

~~[Memorandum number , registered under section 209 of the Land Transfer Act 2017].~~

[Annexure Schedule One].

Annexure Schedule One

1. The Covenantor acknowledges and agrees that this instrument shall be registered against the titles to the Benefited Land and the Burdened Land and agrees:

    a. To observe and perform the Covenants in this Instrument at all times (and to ensure that all occupiers, employees, contractors, invitees observes and performs the Covenants at all times); and

    b. Unless otherwise specified in this Instrument, the Covenants will forever run with and bind the Burdened Land for the benefit of the Benefited Land.

2. The Covenantor covenants with the Covenantee that:

    a. **No Objection:** The Covenantor shall not make or lodge, be a party to, procure, assist or support, finance or contribute to the cost of any submissions or proceedings (under the Resource Management Act 1991 or otherwise) designed or intended to or having the effect of limiting, preventing or restricting:
        i. any rezoning or amendments to the provisions of the District Plan or any proposed plan for residential and related activity on the Benefitted Land;
        ii. or any residential or related activity being undertaken or proposed to be undertaken on the Benefitted Land.

    b. **Road Vesting:** The covenants set out in this instrument shall cease to apply to any part of the Burdened Land which is intended to vest in the Crown or any territorial authority or any utility company as road, reserve or utility site, upon survey relating to such vesting or transfer being approved as to survey and being accepted for deposit by Land Information New Zealand.

B664045.3 EC

Approved by the District Land Registrars: North Auckland 422175, South Auckland H.008116/1974, Canterbury 957768, Marlborough 75776, Gisborne 112239.9, Hawkes Bay 303051, Taranaki 217464.1, Wellington A038045, Westland 45629.

EASEMENT CERTIFICATE

(**IMPORTANT**: Registration of this certificate does not of itself create any of the easements specified herein).

I, JAN HARM MULLER of Aucklnad, Company Director and OTTOLINA JOHANNA SMEELE of Auckland, Married Woman as tenants in common in equal shares

being the registered proprietor of the land described in the Schedule hereto hereby certify that the easements specified in that Schedule, the servient tenements in relation to which are shown on a plan of survey deposited in the Land Registry Office at Auckland on the day of 19 under No. 109590 are the easements which it is intended shall be created by the operation of section 90A of the Land Transfer Act 1952.

SCHEDULE

DEPOSITED PLAN NO.

Nature of Easement (e.g., Right of Way, etc.)	Servient Tenement: Lot No.(s) or other Legal Description	Servient Tenement: Colour, or Other Means of Identification, of Part Subject to Easement	Dominant Tenement Lot No.(s) or other Legal Description	Title Reference
Electricity	Lot 1	A	part Section 30 Block V Russell Survey District	Balance 750/160 ~~formerly 750/160 now 61C/902~~

N.B. On no account should this margin be used

N.B. On no account should this margin be used

LT31

State whether any rights or powers set out here are in addition to or in substitution for those set out in the Seventh Schedule to the Land Transfer Act 1952.

1. Rights and powers: (in substitution for those set out in the Seventh Schedule to the Land Transfer Act 1952)

1. THE full free and uninterrupted and unrestricted right liberty and privilege for the grantee and his tenants (in common with the grantor and his tenants) and any other person lawfully entitled so to do from time to time and at all times to take convey and lead wires and cables below the ground for the purpose of conveying electricity from the source of supply or point of entry as the case may be across the land over which the easement is granted or created together with the additional rights set out in clause 3 of this schedule.

~~2. THE full free and uninterrupted and unrestricted right liberty and privilege for the grantee and his tenants (in common with the grantor and his tenants) and any other person lawfully entitled so to do from time to time and at all times to underground convey telephone wires cables or other conduits together with the additional right incidental thereto set out in clause 3 hereof.~~

3. THE full free and uninterrupted and unrestricted right liberty and privilege for the grantee and his tenants (in common with the grantor and his tenants) and any other person lawfully entitled so to do for the purpose of the easement concerned

(a) To use any cables wires pipes or other means of conveyance already laid on the stipulated course or any cables wires or other means of conveyance in replacement or in substitution therefor;

(b) Where no such line of cables wires or other means exists to have laid placed and maintained a line of cable wire or other means of conveyance of sufficient size and of suitable material for the purpose under the surface of the land over which the easement is granted or created;

(c) In order to construct and maintain the efficiency of any wires cables pipes or any other means of conveyance the full free and uninterrupted and unrestricted right liberty and privilege for the grantee his tenants servants agents and workmen with any tools implements machinery vehicles or equipment of whatsoever nature necessary for the purpose to enter upon the land over which easement is created or granted and to remain there for any reasonable time for the purpose of laying inspecting cleansing repairing maintaining and renewing the cabling wiring or any part thereof and of opening up the soil of that land to such extent as may be necessary and reasonable in that regard subject to the condition that as little disturbance as possible is caused to the surface of the land of the grantor and that the surface is restored as nearly as possible to its original condition and any other damage done by reason of the aforesaid operations is properly and completely repaired to the reasonable satisfaction of the registered proprietors for the time being of the servient tenement.

N.B. On no account should this margin be used

N.B. On no account should this margin be used

IN THE MATTER of the Land Transfer Act 1952

A N D

IN THE MATTER of Caveat No. B.475465.1 (North Auckland Registry)

CONSENT OF CAVEATOR TO REGISTRATION OF DEALING

RAINER BEAT MARTI of Switzerland, Businessman, the Caveator under the abovementioned Caveat DOTH HEREBY CONSENT to the registration of the instruments referred to in the Schedule hereto BUT WITHOUT PREJUDICE to the rights of the Caveator protected by the said Caveat.

SCHEDULE

1. Partial withdrawal of Caveat B.475465.1 in respect of Lot 2 on Land Transfer Plan 109590.

2. Certificate pursuant to Section 306(1)(f)(i) of the Local Government Act 1974 in respect Land Transfer Plan 109590.

3. Easement Certificate specifying the easement which it is intended be created by the operation of Section 90A of the Land Transfer Act 1952 being an electricity easement over the part marked "A" on Lot 1 on Land Transfer Plan 109590.

DATED this 11th day of February 1987

SIGNED by the said)
RAINER BEAT MARTI)
as Caveator in the)
presence of:-)

R. Marti

Solicitor
Auckland

Correct for the Purposes of the Land Transfer Act 1952

Solicitor for the Caveator

2. Terms, conditions, covenants, or restrictions in respect of any of the above easements:

N.B. On no account should this margin be used

Dated this 5th day of August 1986

Signed by the above-named
JAN HARM MULLER and
OTTOLINA JOHANNA SMEELE

in the presence of

Witness .....

Occupation Solicitor

Address Auckland

N.B. On no account should this margin be used

EASEMENT CERTIFICATE

IMPORTANT: Registration of this certificate does not of itself create any of the easements specified herein.

Correct for purposes of the Land Transfer Act

(Solicitor for) the registered proprietor

The within easements when created will be subject to Section 309 (1) (a) Local Government Act 1974.

AWR

N.B. On no account should this margin be used

Particulars entered in the Register as shown in the schedule of land herein on the date and at the time stamped below

.....

District Land Registra
Assistant
of the District of .....

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY AUCKLAND
ASST LAND REGISTRAR

12.26 14.MAY87 B 664045

Bruce Tunnicliffe
Solicitor
AUCKLAND.

B790220.2

Approved by the Registrar-General of Land, Wellington, No. 367635.80
Approved by the District Land Registrar, North Auckland, No. 4363/80

TE B790220.2 Transfer a
Cpy-01/01, Pgs-009, 16/04/07, 08:37
DocID: 201454589

Under the Land Transfer Act 1952

Memorandum of Transfer

WHEREAS

JAN HARM MULLER of Auckland, Company Director and OTTOLINA JOHANNA SMEELE of Auckland, Married Woman as tenants in common in equal shares (hereinafter called "the Transferor")

being registered as proprietor

of an estate in fee simple

subject however to such encumbrances, liens and interests as are notified by memoranda underwritten or endorsed hereon in that piece of land situated in the Land District of North Auckland containing 42.1702 hectares more or less situated in Blocks I, II, V, and VI of the Russell Survey District being Old Land Claim Number 30 and being balance of Certificate of Title 750/160 (North Auckland Registry) LIMITED AS TO PARCELS

~~XXXXXXXXXXXXXX~~

SUBJECT TO

1. Proclamation No. 10400
2. ~~Certificate K.26933~~
2. Proclamation No. 10970
3. Proclamation No. 14255
   Proclamation 213228

~~TRANSFER, MORTGAGE, LEASE, ASSIGNMENT~~ and AGREEMENT stamped with duty of
$3250 on 20/3/96
$..... on ...../...../.....
or
for Dist. Commissioner of Inland Revenue

("the first land")

AND WHEREAS the Transferor is also the registered proprietor of an estate in fee simple in all that parcel of land containing 12.4950 hectares more or less being Lot 1, on Deposited Plan 109590 being Part Sections 30 and 51, Block V, Russell Survey District comprised in Certificate of Title 61C/901 (North Auckland Land Registry)

SUBJECT TO : Easements in Easement Certificate B.664045.3 (subject to Section 309 of the Local Government Act, 1974)

("the second land")

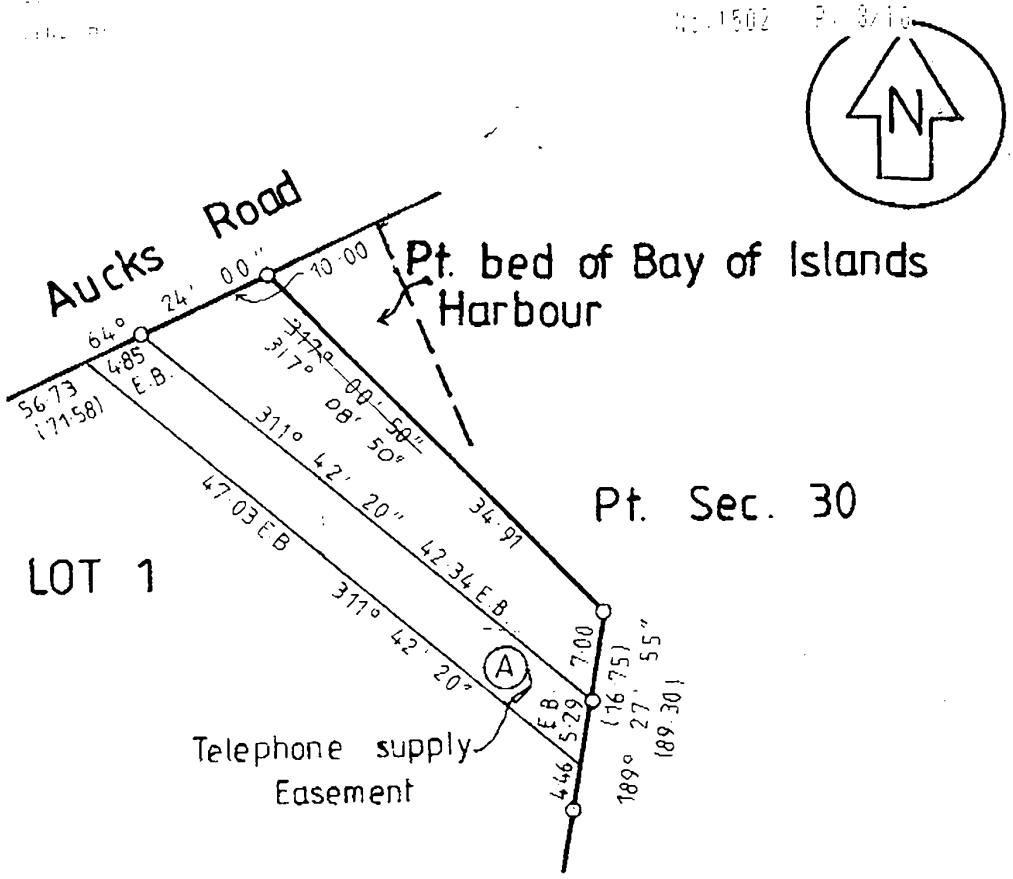
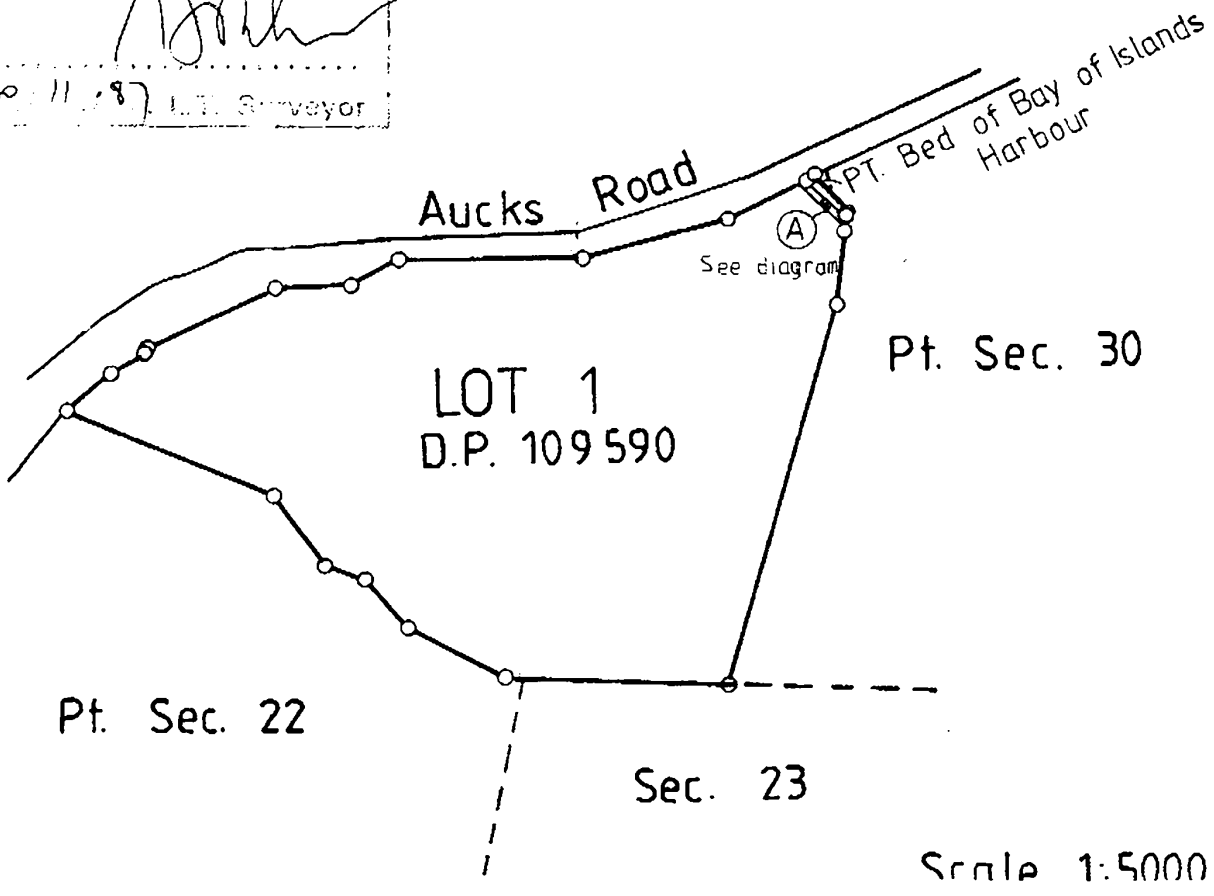


Diagram
Scale 1:500

Correct
30/11/87 L.T. Surveyor



Scale 1:5000

LVC 2

No. 1502 F. 4/10
18/12/85 m 2

STATUTORY DECLARATION WHERE PURCHASER OR LESSEE IS A COMPANY OR OTHER BODY CORPORATE

IN THE MATTER of the Land Settlement Promotion and Land Acquisition Act 1952 (hereinafter referred to as the Act), and

IN THE MATTER of an Agreement for Sale and Purchase

dated the 18th day of November 19 85

from JAN HARM MULLER and OTTOLINA JOHANNA SMEELE as Vendor (or Lessor)

to SUSAN MARY SPENCER as trustee for a company to be formed as Purchaser (or Lessee)

affecting all that parcel of land containing 43 hectares more or less being the balance of the land in Certificate of Title Volume 750 Folio 160 after subdivision of Lots 1 and 2 on the annexed plan of subdivision together with electricity and telephone easements

being ~~xx~~ part of the land comprised and described in certificate of title, Volume 750

folio 160 (North Auckland Land Registry).

I, SUSAN MARY SPENCER of Russell, Business Woman

solemnly and sincerely declare:

1. I am a Director of SPENCER ENTERPRISES LIMITED the purchaser ~~or lessee~~) of the land above-described.

2. The purchaser (~~or lessee~~) has entered into the transaction solely on its own behalf as the person beneficially entitled thereunder.

3. The purchaser (~~or lessee~~) does not own, lease, hold, or occupy in fee simple or under any tenure of more than 1 year's duration, either severally, jointly, or in common with any other person, any farm land, as defined in the Act, outside a city or borough or town district, and has no estate or interest, whether legal or equitable and whether vested or contingent, under any trust or will in any such farm land.

4. ~~There are more than nine members of the company~~

Or (a) No member of the company and no wife or husband of any member of the company owns, leases, holds, or occupies in fee simple or under any tenure of more than 1 year's duration, whether severally, jointly, or in common with any other person, any farm land, as so defined, outside a city or borough or town district, or has any estate or interest, whether legal or equitable and whether vested or contingent, under any trust, will, or intestacy, in any such farm land:

(b) No parent of any member of the company under 17 years of age, owns, leases, holds, or occupies in fee simple or under any tenure of more than 1 year's duration, either severally, jointly, or in common with any other person, any farm land, as so defined, outside a city or borough or town district, or has any estate or interest, whether legal or equitable and whether vested or contingent, under any trust, will, or intestacy, in any such farm land:

(c) All the shares in the company are held by members ~~on~~ their own behalf and as the persons beneficially entitled thereto.

5. No company of which the purchaser (~~or lessee~~) is a member, the members of which are less than 10 in number, owns, leases, holds, or occupies in fee simple or under any tenure of more than 1 year's duration, either severally, jointly, or in common with any other person, any farm land, as so defined, outside a city or borough or town district, or has any estate or interest, whether legal or equitable and whether vested or contingent, under any trust or will, in any such farm land.

6. The purchaser (~~or lessee~~) has not since the passing of the Act (namely, the 16th day of October 1952) transferred, granted, leased, or otherwise disposed of any estate or interest in farm land, as so defined, to any person as a trustee for any person or created any trust in respect of any estate or interest in any such farm land.

SPENCER ENTERPRISES LTD

7. The transaction is not subject to Part IIA of the Act because–

The purchaser ~~(or lessee)~~ is not an overseas corporation as defined in section 35A of the Act.

or

~~The transaction does not relate to any land of any of the classes described in paragraph (f) of subsection (1) of section 35B of the said Act (as substituted by section 2 of the Land Settlement Promotion and Land Acquisition Amendment Act 1969).~~

The Purchaser (or lessee) is the trustee under the ~~following~~ trust

and every beneficiary ~~under the trust~~ is a New Zealand citizen (or every beneficiary under the trust who is an individual is a New Zealand citizen and ~~no beneficiary under the trust that is a body corporate is an overseas corporation as defined in section 35A of the Act~~).

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths and Declarations Act 1957.

DECLARED at PAIHIA

this 13th day of December 1985

before me–

.....

~~Justice of the Peace~~

Solicitor of the Supreme Court

other person authorised to take and receive statutory declarations

NOTE–1. Where only Part II of the Act applies to the transaction, the declarant is required to declare as to the matters prescribed in paragraphs 1 to 7 of this form.

2. Where the declaration is made for the purposes of section 35D of the Act, the declarant is required to declare as to the matters prescribed in paragraphs 1 and 7 of this form.

3. Where Part II only or both Parts II and IIA apply to the transaction, and the purchaser or lessee is a trustee, then, under section 24 (1) (a) of the Act the consent of the Court is required and this form is not applicable.

4. Section 2 (1) of the Act contains the following definitions:

"Farm land" means land that, in the opinion of the Land Valuation Committee, or, as the case may be, of the Land Valuation Court, is or should be used exclusively or principally for agricultural purposes:

Provided that, where land that is being used exclusively or principally for agricultural purposes could, in the opinion of the Committee or, as the case may be, of the Court, be used with greater advantage to the community generally for non-agricultural purposes, it shall for the purposes of this Act be deemed not to be farm land.

"Agricultural purposes" has a meaning corresponding to the term "agriculture", which for the purposes of this definition means the cultivation of the soil for the production of food products and other useful products of the soil, and includes the use of land for horticultural or pastoral purposes, or for the keeping of pigs, bees, or poultry.

5. The classes of land described in paragraph (f) of section 35B (1) of the Act are as follows:

(a) Any land of 1 acre or over in area which under any operative regional planning scheme or proposed or operative district scheme under the Town and Country Planning Act 1953, is designated or zoned as a reserve, or as a publ park, or for recreation purposes, or as private open space, or for preservation as a place of or containing an object of historical or scientific interest or natural beauty, or any proposed such purpose.

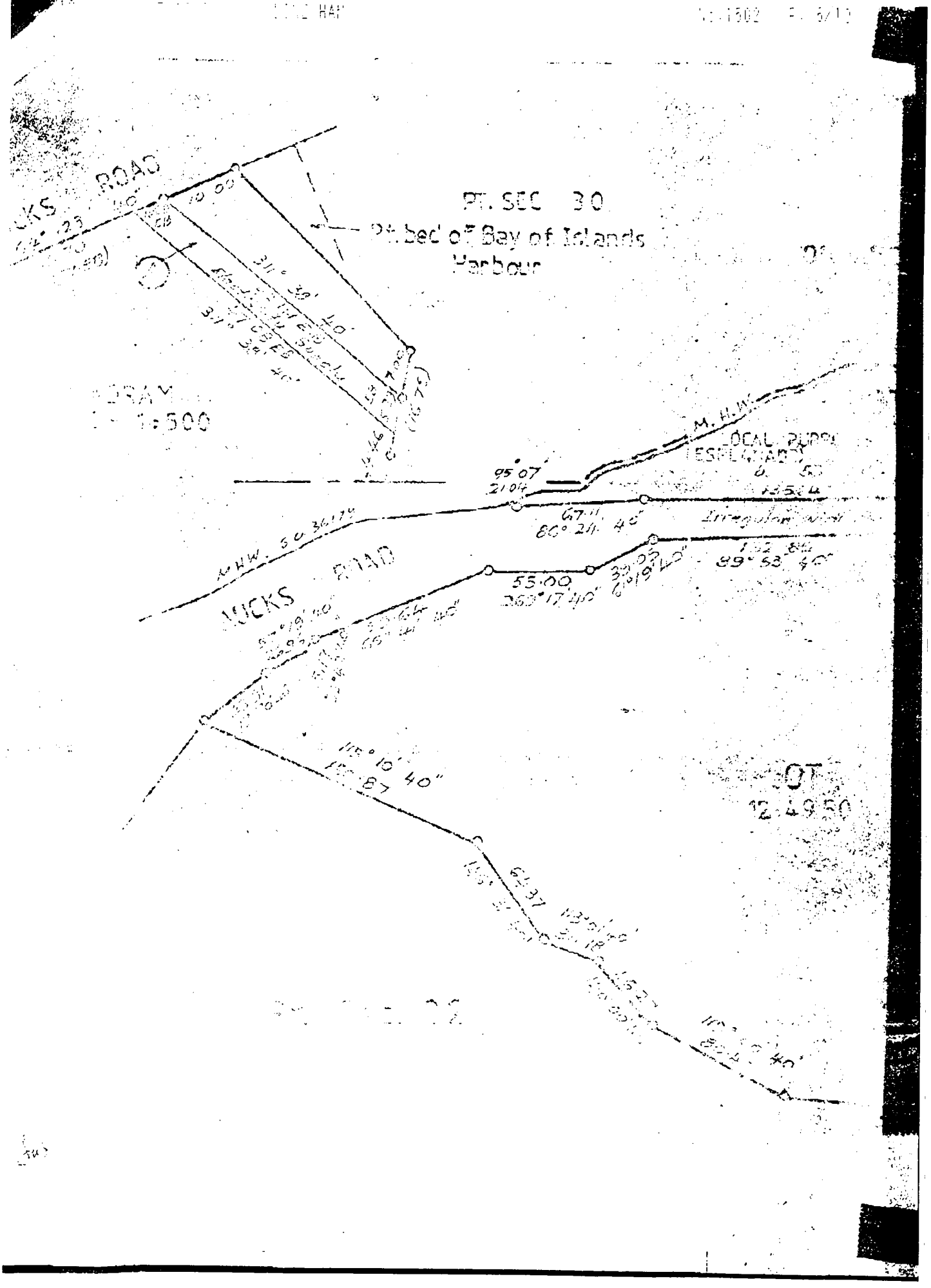
(b) Any land of 5 acres or over in area which under any such proposed or operative district scheme is zoned for rural purposes or is so zoned that farming of any kind is a predominant or conditional use in that zone.

(c) Any land of 1 acre or over in area which is not included in any proposed or operative district scheme provided and maintained by any Council or other local authority under that Act.

(d) Any land being or forming part of any island (except the North Island and the South Island) which is less than 100 miles from the nearest part of the coast of the North Island or of the South Island.

(e) Any land being or forming part of any island of the Chatham Islands.

W.G. ALLEN & CO. Ltd., Law Stationers, 222 Hobson Street, Auckland.


PT. SEC 30
Pt. bed of Bay of Islands Harbour
M.H.W.
LOCAL PURPOSE RESERVE
55.00
89° 53' 40"
M.H.W. S.U.
LOCAL PURPOSE RESERVE
1:500
12.49.50

AND IN FURTHER CONSIDERATION OF the sum of ONE DOLLAR ($1-00) paid to the Transferor by the Transferee (the receipt of which sum is hereby acknowledged) the Transferor HEREBY TRANSFERS and grants to the Transferee over the second land the Rights-of-Way herein described, namely:

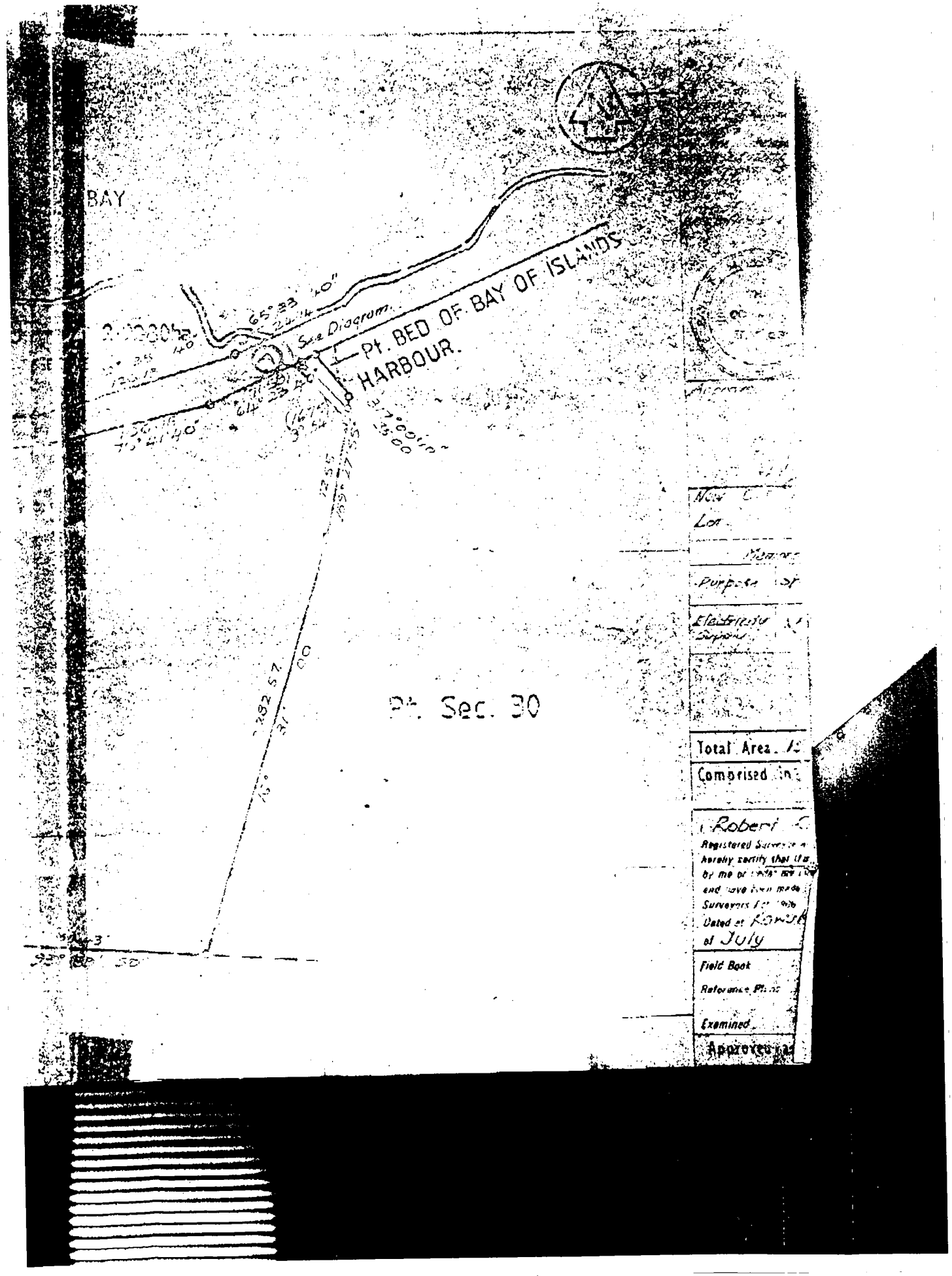
1. The full free and unrestricted right liberty and privilege for the Transferee and his tenants in common with the Transferor and its tenants, and any other person lawfully entitled so to do from time to time and at all times to convey telephone wires cables or other conduits through over under and across that portion of land marked "A" on the plan attached hereto.

2. The full free and uninterrupted and unrestricted liberty right and privilege for the Transferee and his tenants in common with the Transferor and its tenants, and any other person lawfully entitled so to do for the purposes of the easement concerned:-

(a) To use any cables wires pipes or other means of conveyance already laid on the stipulated course or any cables wires or other means of conveyance in replacement or in substitution therefor;

(b) Where no such line of cables wires or other means exists to have laid placed and maintained a line of cable wire or other means of conveyance of sufficient size and of suitable material for the purpose under the surface of the land over which the easement is granted or created;

(c) In order to construct and maintain the efficiency of any wires cables pipes or any other means of conveyance the full free and uninterrupted and unrestricted right liberty and privilege for the Transferee his tenants servants agents and workmen with any tools implements machinery vehicles or equipment of whatsoever nature necessary for the purpose to enter upon the land over which easement is created or granted and to remain there for any reasonable time for the purpose of laying inspecting cleansing repairing maintaining and renewing the cabling wiring or any part thereof and of opening up the soil of that land to such extent as may be necessary and reasonable in that regard subject to the condition that as little disturbance as possible is caused to the surface of the land of the Transferor and that the surface is restored as nearly as possible to its original condition and any other damage done by reason of the aforesaid operations is properly and completely repaired to the reasonable satisfaction of the registered proprietors for the time being of the servient tenement TO THE END AND INTENT that the Right-of-Way hereby created shall be forever appurtenant to the "first land" and every part thereof for all purposes connected with the use occupation and enjoyment thereof.


BAY
Pt. BED OF BAY OF ISLANDS
HARBOUR.
See Diagram
65° 33' 40"
Pt. Sec. 30
Total Area
Comprised
Registered Surveyor
Dated at
July
Field Book
Reference Plans
Examined
Approved

No.1502 P. 2 10

Consideration of the sum of FIVE HUNDRED AND FIFTY THOUSAND DOLLARS ($550,000.00) (which sum includes $100,000.00 for chattels) paid to the Transferor by SPENCER ENTERPRISES LIMITED a duly incorporated Company having its registered office at Nhia (hereinafter called "the Transferee")

(the receipt of which sum is hereby acknowledged)

Do hereby Transfer to the said Transferee

all their estate and interest in the

first
~~said~~ land above described see attached.

In witness whereof these presents have been executed this 2nd day

of September 1987

Signed by the above named JAN HARM)
MULLER and OTTOLINA JOHANNA)
SMEELE)
in the presence of:--)

The Common Seal of SPENCER)
ENTERPRISES LIMITED was)
hereunto affixed in the)
presence of:)

Director

Director

SPENCER ENTERPRISES LIMITED THE COMMON SEAL OF

No. 1502 P. 10

No.

TRANSFER OF

Correct for the purposes of the Land Transfer Act.

Solicitor for the Transferee.

I HEREBY CERTIFY THAT THIS TRANSACTION DOES NOT CONTRAVENE THE PROVISIONS OF PART IIA OF THE LAND SETTLEMENT PROMOTION AND LAND ACQUISITION ACT 1952.

SOLICITOR FOR THE TRANSFEREE

JH MULLER and OJ SMEELE ..... Transferor

SPENCER ENTERPRISES LIMITED ..... Transferee

Particulars entered in the Register as shown herein on the date and at the time endorsed below.

.....

Assistant / District Land Registrar

of the District of .....

C/T 117C/424
117C/425
117C/426
88C/452

02.18 02.MAR88 B 790220.2

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY
ASST L...

WALLACE SPENCER McBREARTY & DODDS
SOLICITORS
PAIHIA

Solicitors for the Transferee

©AUCKLAND DISTRICT LAW SOCIETY 1984

CONSERVATION COVENANT

(SECTION 77 RESERVES ACT 1977)

THIS DEED of COVENANT is made

BETWEEN SPENCER ENTERPRISES LIMITED (the "Landowner") of one part

AND THE MINISTER OF CONSERVATION ("the Minister") of the other part.

WHEREAS

A. The Landowner is the registered proprietor of the Land which comprises part of an estate in fee simple containing 39.6285 hectares more or less being Lot 2 Deposited Plan 187577 and being all the land comprised and described in Certificate of Title 117C/425 (North Auckland Registry).

SUBJECT TO:

(i) Electricity Supply Easement over part Lot 1 DP 109590 marked "A" DP 109590 CT 88C/452 and Lots 1-3 DP 143618 CTs 85B/332-334 as specified in Easement Certificate B664045.3, such electricity supply easements subject to section 309(1)(a) Local Government Act 1974.

(ii) Telephone supply easement over part Lot 1 DP 109590 CT88C/452 and Lots 1-3 DP143618 CTs 85B/332-334 created by Transfer B790220.1.

B. The Land contains a habitat for wildlife including but not limited to Brown Teal (Anas aucklandia chilortis).

C. The parties are agreed that the Land should be managed so as to preserve its natural environment, landscape, amenity, wildlife, and freshwater

NOW THEREFORE THIS COVENANT WITNESSES that in accordance with section 77 of the Reserves Act 1977 the Landowner and Minister mutually agree as follows.

1. INTERPRETATION

1.1 In this Covenant unless the context otherwise requires:

"**Act**" means the Reserves Act 1977.
"**Covenant**" means this Deed of Covenant.
"**Land**" means the land described in Schedule 1 of this Covenant .
"**Landowner**" means **Spencer Enterprises Limited** the registered proprietors of the Land.
"**Minister**" means the Minister of Conservation.
"**Pests**" includes any noxious or troublesome animals.
"**Weeds**" includes any noxious or troublesome plants, trees or other vegetation.

1.2 For avoidance of doubt:

1.2.1 The reference to any Act in this Covenant extends to and includes any amendment to or substitution of that Act.

1.2.2 Clause and other headings are for ease of reference only and shall not be treated as forming any part of the context or to affect the interpretation of this Covenant.

1.2.3 Words importing the singular number shall include the plural and vice versa.

1.2.4 References to parties are references to parties to this Covenant.

1.2.5 References to clauses are references to clauses in this Covenant.

1.2.6 References to persons shall be deemed to include references to individuals, companies, corporations, firms, partnerships, joint ventures, associations, organisations, trusts, states or agencies of states, government departments and local and municipal authorities in each case whether or not having separate legal personality.

1.2.7 Expressions defined in the main body of this Covenant bear the defined meaning in the whole of this Covenant including the Recitals. Where the parties disagree over the interpretation of anything contained in this Covenant and in determining the issue, the parties must have regard to the matters contained in the Recitals.

1.2.8 Any obligation not to do anything must be treated to include an obligation not to suffer, permit or cause the thing to be done.

1.2.9 Words importing one gender include the other gender.

1.2.10 The agreements contained in this Covenant bind in perpetuity the Land into whomsoever's hands the Land may come (but not as to render the Landowner personally liable in damages for any breach of covenant committed after it has parted with all interest in the Land)/and shall also bind any lessee of the Land for the term of any lease.

1.2.11 Where clauses in this Covenant require further agreement between the parties then such agreement must not be unreasonably withheld.

1.3 Subject to the rights, obligations and agreements conferred by this Covenant and until surrender by the Crown, the Landowner may exercise all rights and obligations consistent with ownership of the Land.

2. OBJECTIVES OF THE COVENANT

2.1 The Land must be managed so as:

2.1.1 To preserve, protect and enhance the natural environment, scenic landscape, amenities, and freshwater values of the Land.

2.1.2 To protect wildlife and their habitats, including but not limited to Brown Teal (Anas aucklandia chilortis)

3. IMPLEMENTATION OF OBJECTIVES

3.1 Unless agreed in writing by the parties (either under this Covenant or by other writing) the Landowner must not carry out or permit in relation to the Land:

3.1.1 Grazing of the Land by livestock or keeping livestock on the Land .

3.1.2 Felling, removal or damage of any native tree, shrub or other plant on the Land.

3.1.3 The planting of any species of tree, shrub or other plant or seed sowing of such species.

3.1.4 The erection of any fence, building, structure or other improvement for any purpose.

3.1.5 Any burning or top dressing.

3.1.6 Any cultivation, earth works or other soil disturbances.

3.1.7 Any archaeological or other scientific research involving disturbance of the soil.

3.2 Unless required to do so by statute the Landowner must not carry out or permit in relation to the land:

3.2.1 Any prospecting or mining for minerals, coal or other deposit on or under the Land.

3.2.2 Any erection of utility transmission lines across the Land.

3.2.3. The granting of any easement or concession over the Land.

3.3 The Landowner must:

3.3.1 Eradicate or control all weeds and pests on the Land to the extent required by any enactment and where necessary to maintain and enhance the natural process of regeneration of the native vegetation.

3.3.2 As far as practicable prevent any wildfire upon or threatening the Land and not permit the wildfire to escape.

3.3.3 Notify the Minister as soon as practicable in the event of wildfire threatening the Land.

3.3.4 Keep the Land free from exotic tree species.

3.3.5 Keep the Land free from rubbish or other unsightly or offensive material.

3.3.6 Keep the Land free from cats, rabbits, and domestic and feral animals.

3.3.7 Provide a suitable habitat for birdlife.

3.3.8 Encourage plants that are a food source for birdlife.

3.3.9 Manage the plant growth to encourage the regeneration of the native vegetation through its successive stages of natural regeneration.

3.4 The Landowner must comply with all requisite statutes, regulations and bylaws affecting the Land.

3.5 The Landowner acknowledges that this Covenant does not affect the Minister's exercise of any powers under any Act.

3.6 The Landowner will meet the cost of fencing the Land.

4. PUBLIC ACCESS

4.1 The general public shall be excluded from the Land.

5. THE MINISTER'S OBLIGATIONS

5.1 The Minister must have regard to the objectives of this Covenant when considering any requests for approval under this Covenant and will not unreasonably decline any approval.

6. JOINT OBLIGATIONS

6.1 Each party shall bear its own legal costs in the preparation and execution of this Covenant.

6.2 The Landowner shall bear the cost of the registration of this Covenant.

7. OBLIGATIONS UPON SALE OF THE LAND

7.1 If the Landowner sells, leases or otherwise parts with possession of the Land, the Landowner must ensure that it obtains the agreement of any purchaser, lessee or assignee to comply with the terms of this Covenant, including any agreement by the purchaser or assignee to ensure that upon any subsequent sale or assignment (whether by sale, lease or otherwise) any subsequent purchaser, lessee or assignee must also comply with the terms of this Covenant including this clause.

7.2 If, for any reason, this Covenant is unregistered and the Landowner fails to obtain the agreement of any purchaser, lessee or assignee to comply with the terms of this Covenant as set out in clause 7.1, the Landowner shall continue to be liable in damages for any breach of the Covenant committed after it has parted with all interest in the Land in respect to which such breaches occur.

8. DURATION OF COVENANT

8.1 This Covenant shall bind the parties in perpetuity to the rights and obligations contained in it.

9. MISCELLANEOUS MATTERS

9.1 **Rights**: the rights hereby granted are expressly declared to be in the nature of a covenant.

9.2 **Trespass Act**: except as provided in this Covenant, the Covenant does not diminish or affect the rights of the Landowner to exercise his or her landowner rights under the Trespass Act 1980 or any other statute or generally at law or otherwise. For avoidance of doubt these rights may be exercised by the Landowner if the Landowner reasonably considers that person has breached the rights and/or restrictions of access conferred by this Covenant.

9.3 While this Covenant remains in force and subject to the terms and conditions set out in this Covenant, sections 93 to 105 of the Reserves Act 1977 as far as they are applicable if necessary modifications apply to the Land as if the Land were a reserve.

9.4 This Covenant must be signed by both parties and registered against the Certificates of Title and the Landowner must undertake all reasonable endeavours to make available to the Minister the Certificates of Title to the Land. If the Landowner cannot produce any Certificate of Title the Landowner must, at the Landowners expense, obtain a duplicate of such Certificate of Title. The Minister then, at his/her expense, must register the Covenant against the Certificate of Title.

9.5 **Acceptance of Covenant**: until the Covenant is registered, the parties agree to be bound by the provisions of the Covenant.

10. NOTICES

10.1 Any notice required to be given under this Covenant shall be sufficiently given if made in writing and served as provided in section 152 of the Property Law Act 1952 and shall be sufficiently given if actually received by the party to whom it is addressed or that party's solicitor.

10.2 Any notice required to be given by the Minister shall be sufficiently given if it is signed by the Conservator, Northland Conservancy. Any notice required to be served upon the Minister shall be sufficiently served if delivered to the office for the time being of the Conservator, Northland Conservancy, at Whangarei.

10.3 Any notice required to be given by the Landowner shall be sufficiently given if it is signed by the registered proprietor or a director of the registered proprietor as the case may be from time to time.

10.4 Any notice required to be served on the Landowner shall be sufficiently served if delivered to the Landowner care of Cooper White & Associates, Chartered Accountants, 12 Seddon Street, Pukekohe, P.O. Box 303.

11. DEFAULT

11.1 Where there is any breach of any agreement contained in this Covenant by either party, then the other party shall be entitled to take such action as may be necessary to remedy the breach or prevent any further damage occurring as a result of the breach and shall also be entitled to recover from the party responsible for the breach as a debt due all costs incurred by the other party as a result of remedying such breach or prevent such damage.

11.2 Should either party to this Covenant become of the reasonable view that the other party (the defaulting party) has defaulted in performance of or observance of its obligations under this Covenant then that party (notifying party) may, by written notice:

11.2.1 Advise the defaulting party of the default.

11.2.2 State the action reasonably required of the defaulting party to perform in accordance with this Covenant; and

11.2.3 State a reasonable period within which the defaulting party must take action to remedy the breach.

12. DISPUTE RESOLUTION PROCESSES

12.1 **Resolve by managers**: if the defaulting party fails to take the requisite actions required within the time required in the notice under clause 10.2 or if the defaulting party disputes the notice or any aspect of it; or any other dispute in connection with this Covenant and the rights and obligations contained herein; then the parties agree to make efforts to resolve the disputes through negotiation between the representatives with managerial responsibility on behalf of each party.

12.2 **Resolve by the Minister and Landowner**: in the event that resolution is not agreed within one month of the date given in clause 11.2.3 then the matter will be referred directly to the Landowner and to the Minister for negotiation and/or resolution.

12.3 **Mediation**: if a resolution contemplated by the process provided in 11.2 is not agreed within three months of the date given in clause 11.2.3 then the matter will be referred to formal mediation by the parties with a mediator agreed between. Failing agreement between the parties as to an agreed mediator, then such will be appointed by the President of the New Zealand Law Society.

12.4 **Failure of mediation**: in the event that the matter is not resolved by mediation within nine months of the date referred to in clause 11.2.3 then the parties agree that the provisions in the Arbitration Act 1996 shall apply. The parties further agree that the results of arbitration shall be binding upon the parties.

SCHEDULE 1

Description of Land

That piece of land marked "C" on Deposited Plan 187577 (annexed hereto) being part of the land contained in CT 117C/425 (North Auckland Registry).

In witness whereof this Covenant has been executed this 8th day of December 2000.

SIGNED by **SPENCER ENTERPRISES LIMITED**
in the presence of :

S.G. Callender
Director

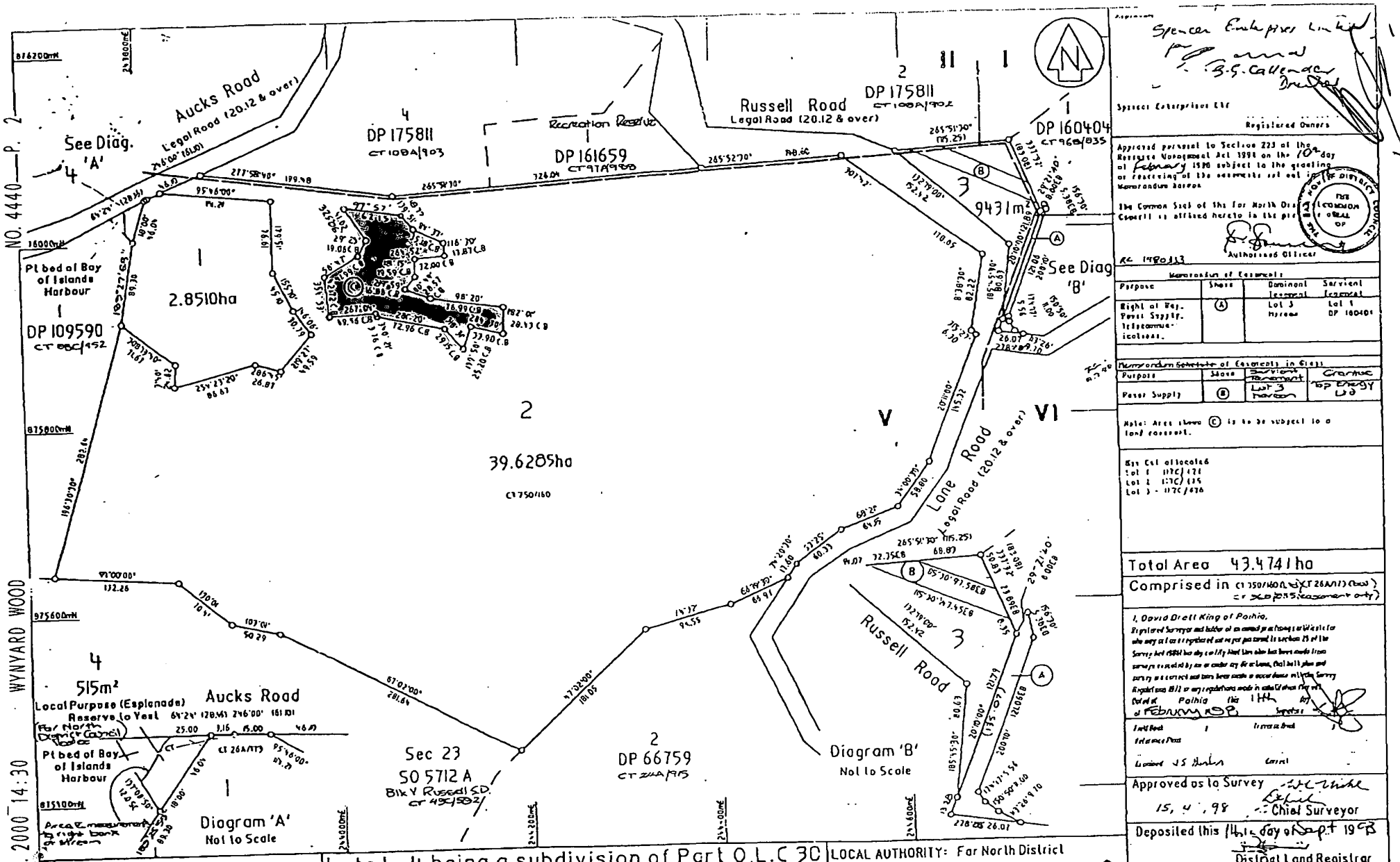
KB Hetherington
Solicitor
Wynyard Wood
Auckland

SIGNED by **GERALD EDWARD ROWAN**,)
Conservator for the Northland Conservancy,)
Department of Conservation, acting pursuant to an)
Instrument of Delegation from the Minister of)
Conservation dated the 29 October 1997.. and in the)
presence of)

Witness: (C.A.R. MACPHERSON)

Address : Wellington

Occupation: Solicitor



Spencer Enterprises Limited
per B.S. Callender

Spencer Enterprises Ltd
Registered Owners

Approved pursuant to Section 223 of the Resource Management Act 1991 on the 10th day of February 1998 subject to the granting or reserving of the easements set out in the Memorandum hereon

The Common Seal of the Far North District Council is affixed hereto in the presence of

Authorised Officer

RC 4980313

Memorandum of Easements

Purpose	Shown	Dominant Tenement	Servient Tenement
Right of Way, Power Supply, Telecommunications.	A	Lot 3 Hereon	Lot 1 DP 160404

Memorandum Schedule of Easements in Gross

Purpose	Shown	Servient Tenement	Grantee
Power Supply	B	Lot 3 Hereon	Top Energy Ltd

Note: Area shown C is to be subject to a land easement.

Key Ctf allocated
Lot 1 117C/471
Lot 2 117C/435
Lot 3 - 117C/436

Total Area 43.4741ha

Comprised in CT 150/160 (Part 26A/1) (Part CT 21A/915 Easement only)

I, David Drell King of Paihia, Registered Surveyor and holder of an earned premium certificate who carry on the practice of surveying, do hereby certify that I have made the survey represented by me or under my direction, that such survey and parcel boundaries have been correctly surveyed in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof and that it complies with the Survey Regulations 1972 or any regulations made in substitution thereof.

Dated at Paihia this 14th day of February 1998

Surveyor

Land Book Reference Plan

Licensed J.S. Hanlon Cancel

Approved as to Survey

15, 4, 98

Chief Surveyor

Deposited this 14th day of Sept 1998

District Land Registrar

LAND DISTRICT:	NORTH AUCKLAND
SURVEY BLK & DIST:	V Russell
NZMS.	Q05
SHEET No.	1.2 & 2.2

Lots 1 - 4 being a subdivision of Part O.L.C 30 & Sec 50 Block V Russell S.D and Proposed Right of Way over Lot 1 DP 160404

LOCAL AUTHORITY: Far North District

Surveyed by Thomson & King, Paihia

Scale: 1:2500 Date: Jan 1998

Land Transfer Regulations 13 FEB 1998

DP 187577

CONSERVATION COVENANT

Pursuant to section 77 of
the Reserves Act 1977

Correct for the
purpose of the Land Transfer Act

(A.R.MACPHERSON)

SPENCER ENTERPRISES LIMITED

Solicitor for the Minister

Covenantor

to

THE MINISTER OF CONSERVATION

Particulars entered in Register

Vol Folio

Date: .....

Time: .....

Assistant District Land Registrar
Of the North Auckland Land District

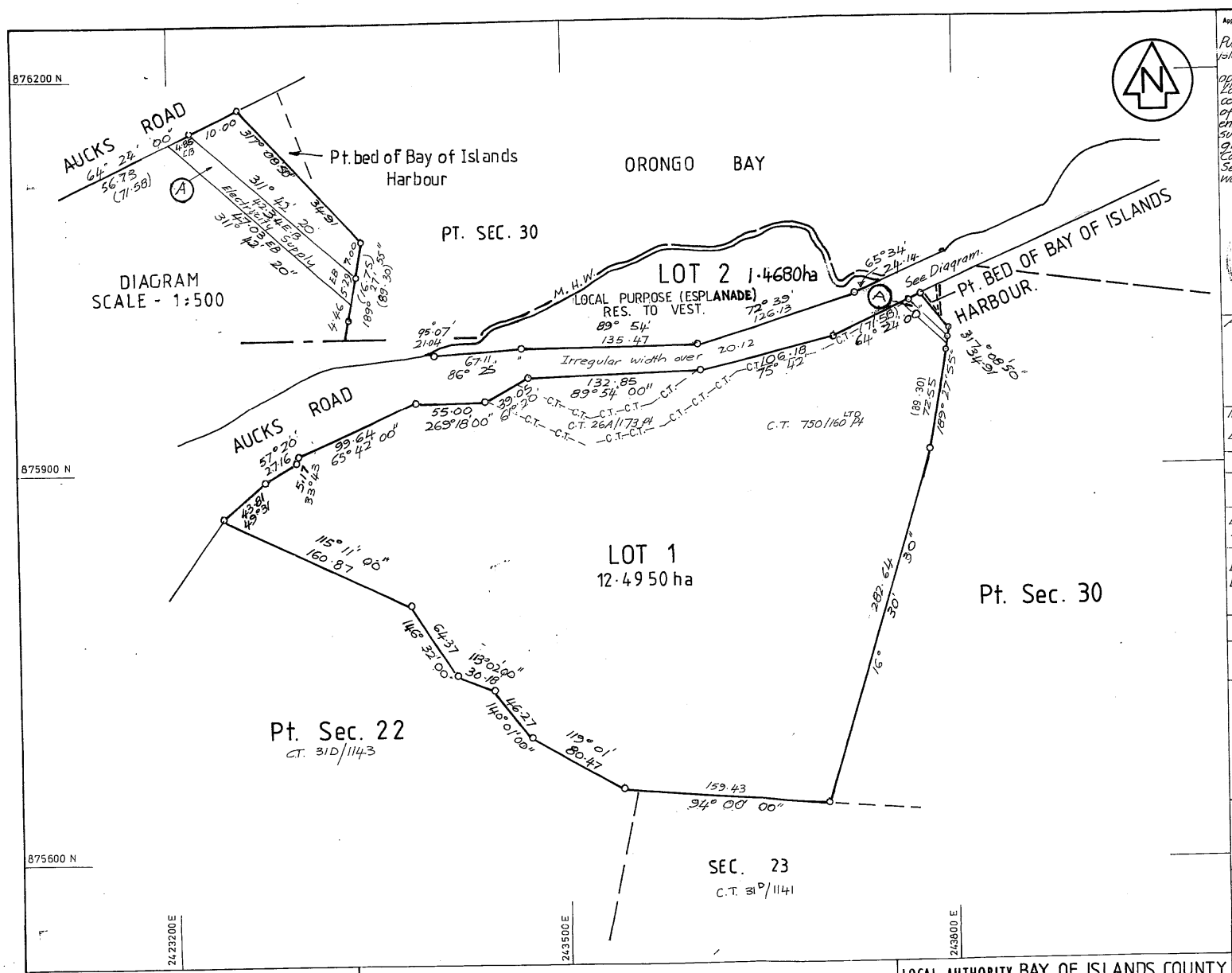
Northland Conservancy
Department of Conservation
NORTHLAND

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY NORTH
for REGISTRAR-GENERAL

9.00 25.JAN01 D 574444 13

REGISTRAR-GENERAL OF LAND NEW ZEALAND

LINZ COPY



Approvals Road shown is legal.

Pursuant to a resolution of the Bay of Islands County Council passed on the 21st day of August 1985 approving pursuant to Section 305 of the Local Government Act 1974 this survey plan conditional upon the granting or reserving of the easements shown in the memorandum endorsed hereon and certifying that the survey plan is in accordance with a consent granted under Part IV of the Town and Country Planning Act 1977 the Common Seal of the Bay of Islands County Council was affixed hereto in the presence of:

Chairman

General Manager

Approved

Owner

New C.T. issued

Lot 1 61C/902

Memorandum of Easements

Purpose	Shown	Servient Tenement	Dominant Tenement
Electricity Supply	A	Pt Lot 1	Pt Sec 30 BLK V Russell S.D.

New CT Allocated

Lot 1 - 61C/902

Total Area 13·9630 ha.

Comprised in C.T. 750/160 Pt Ltd.
C.T. 26A/173 Pt

I, Robert GilKison of Opua

Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1966

Dated at Kawakawa this 19th day of July 1985 Signature

Field Book p. Traverse Book p.

Reference Plans

Examined S. Wallace Correct P. Burrows

Approved as to Survey

10, 7, 86

Deputy Chief Surveyor

Deposited this 14 day 1987

District Land Registrar

File Received 25 OCT 1985 Instructions

D.P. 109590

LAND DISTRICT NORTH AUCKLAND
SURVEY BLK.& DIST. BLK V RUSSELL
NZMS SHEET No. Q05/1·2, 2·2

LOTS 1&2 BEING SUBDIVISION OF Sec. 51 & PT. Sec. 30 BLOCK V RUSSELL S.D.

LOCAL AUTHORITY BAY OF ISLANDS COUNTY
Surveyed by D.B. VON STURMER
Scale 1:2000 Date JULY-AUG 1985

Printed by Sterling Imperts Ltd, Auckland, New Zealand.
W. N. Hawkey, Surveyor-General, Department of Lands and Survey, Wellington
L65 (dist) 11 83

CENTIMETRES 1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

JUNE 87

Title Plan - DP 542129

Survey Number	DP 542129
Surveyor Reference	8899/9531 Hyland
Surveyor	Denis McGregor Thomson
Survey Firm	Thomson Survey Limited
Surveyor Declaration	I Denis McGregor Thomson, being a licensed cadastral surveyor, certify that: (a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and (b)the survey was undertaken by me or under my personal direction. Declared on 17 Feb 2020 02:47 PM

Survey Details

Dataset Description	Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467		
Status	Deposited		
Land District	North Auckland	**Survey Class**	Class B
Submitted Date	17/02/2020	**Survey Approval Date**	27/02/2020
		Deposit Date	23/06/2020

Territorial Authorities

Far North District

Comprised In

RT NA117C/425

RT NA118B/623

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area D Deposited Plan 542129	Easement		
Area B Deposited Plan 542129	Easement		
Lot 2 Deposited Plan 542129	Fee Simple Title	1.3395 Ha	912227
Lot 1 Deposited Plan 542129	Fee Simple Title	38.2940 Ha	912226
Area A Deposited Plan 542129	Easement		
Area C Deposited Plan 542129	Covenant - Land		
Total Area		39.6335 Ha	

THOMSON SURVEY LIMITED
SURVEYORS AND RESOURCE PLANNERS

Plan Number

DP 542129

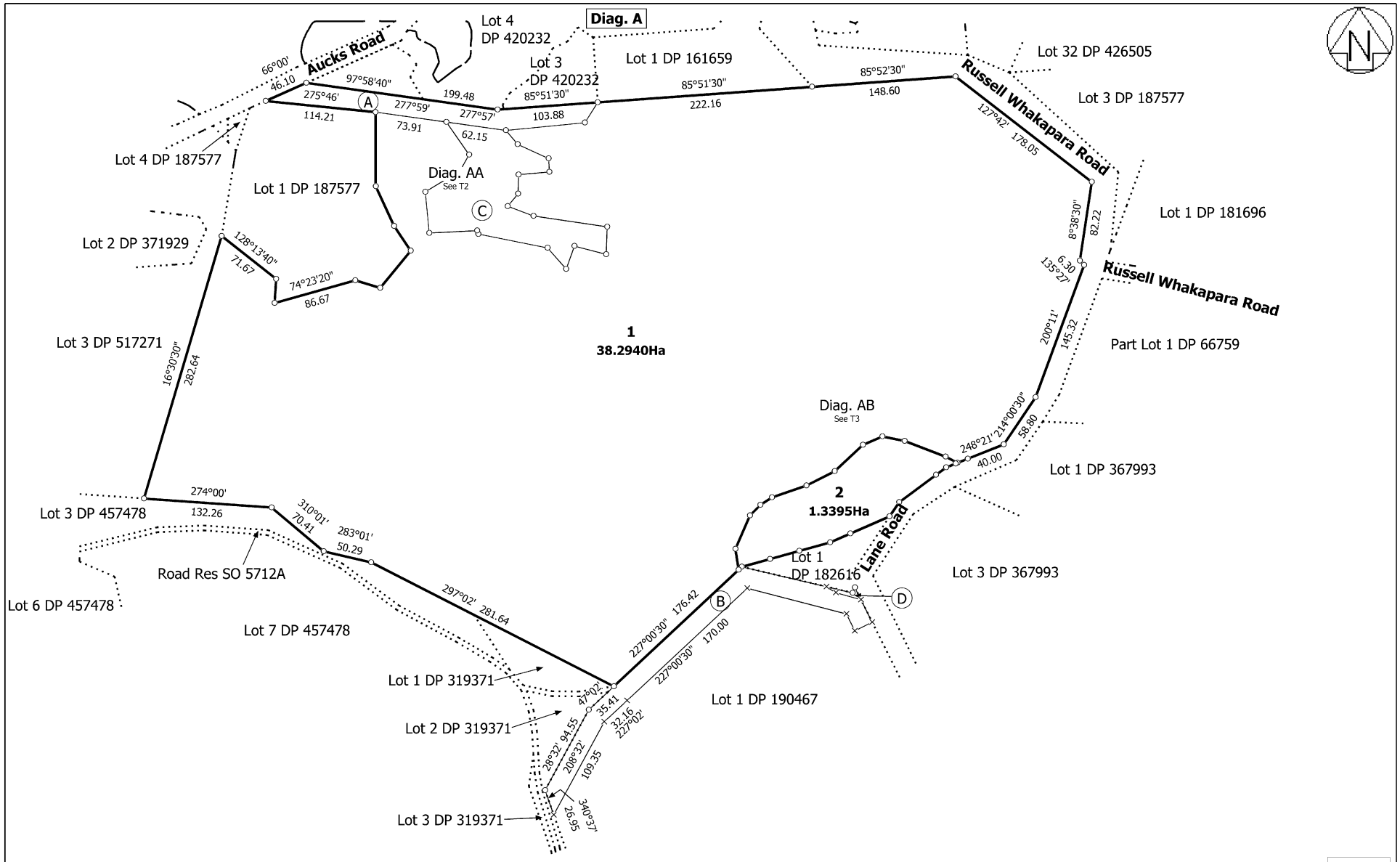
Schedule of Proposed Easements			
Purpose	**Shown**	**Servient Tenement** (Burdened Land)	**Dominant Tenement** (Benefited Land)
Right of way Right to convey electricity, Right to convey telecommunications. Right to convey water.	B & D	Lot 1 DP 190467	Section 24 BLK V Russell SD, Lots 1, 2 and 3 DP 319371
Right of way Right to convey electricity, Right to convey telecommunications. Right to convey water.	D	Lot 1 DP 190467	Lot 1 DP 182616

Schedule of Existing Easements			
Purpose	**Shown**	**Servient Tenement** (Burdened Land)	**Created By**
Right of way Right to convey electricity, telecommunications and computer media.	A	Lot 1	8300644.5

Area Marked C is subject to an existing Conservation Covenant D574444.3

Thomson Survey Ltd
315 Kerikeri Road, Kerikeri
P.O. Box 372, Kerikeri 0245, New Zealand.
Email: Kerikeri@tsurvey.co.nz

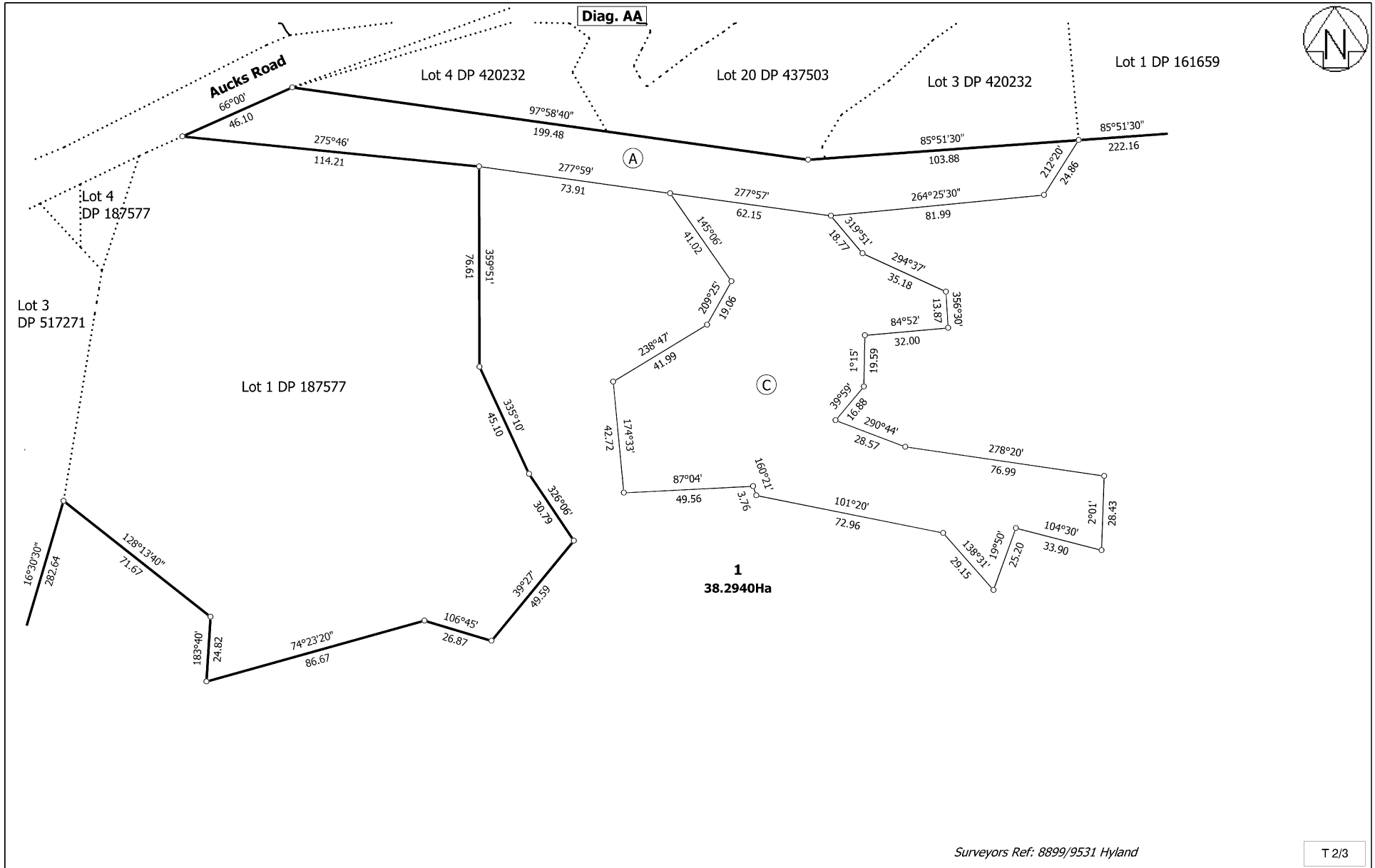
Telephone: **09 4077360**



Surveyors Ref: 8899/9531 Hyland

T 1/3

Land District: North Auckland Digitally Generated Plan Generated on: 24/07/2020 2:17pm Page 3 of 5	Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467	Surveyor: Denis McGregor Thomson Firm: Thomson Survey Limited	Title Plan DP 542129 Deposited on: 23/06/2020

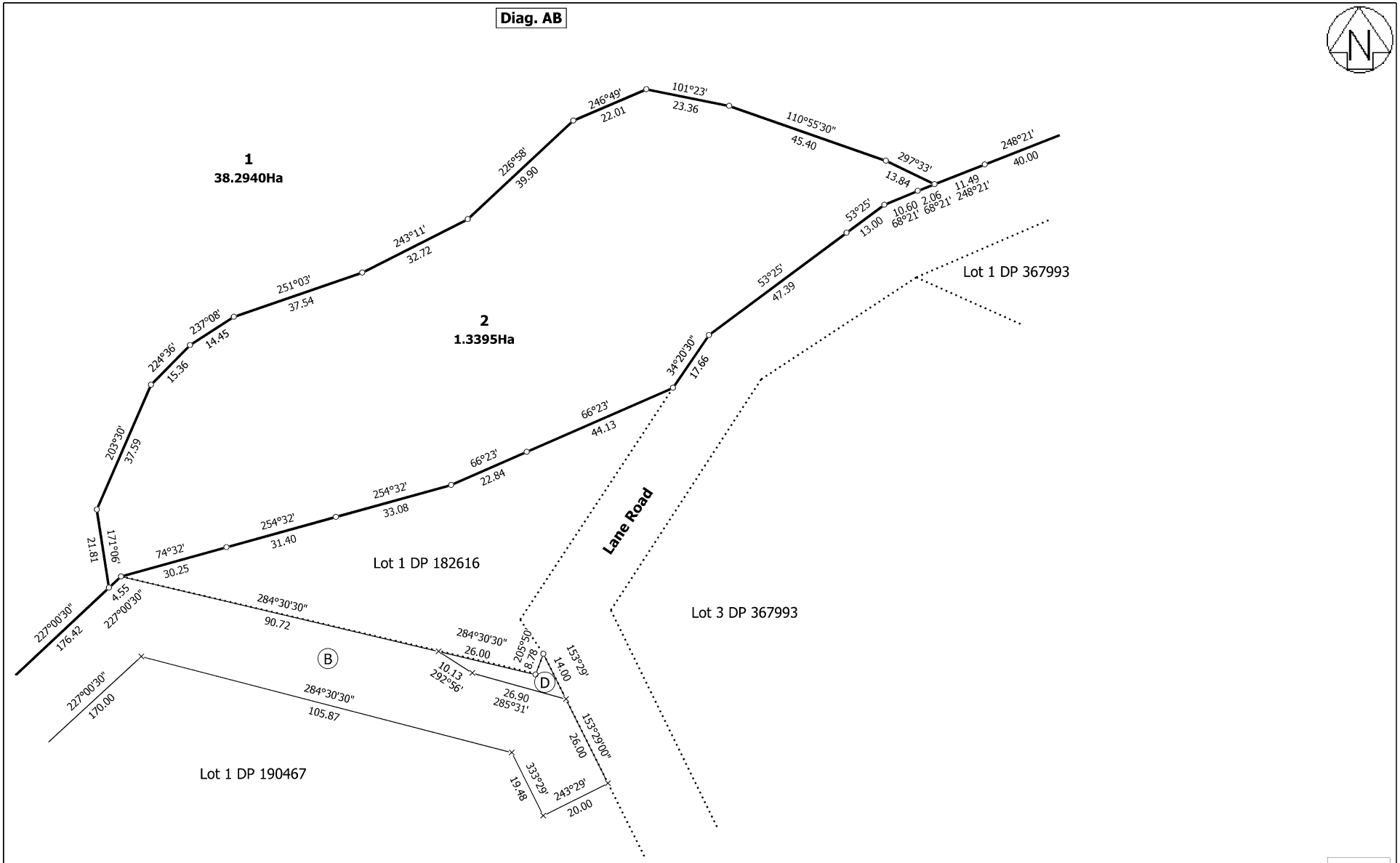


Surveyors Ref: 8899/9531 Hyland

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Land District: North Auckland Digitally Generated Plan Generated on: 24/07/2020 2:17pm Page 4 of 5	Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467	Surveyor: Denis McGregor Thomson Firm: Thomson Survey Limited	Title Plan DP 542129 Deposited on: 23/06/2020

Diag. AB



Surveyors Ref: 8899/9531 Hyland

T 3/3

Land District: North Auckland Digitally Generated Plan Generated on: 24/07/2020 2:17pm Page 5 of 5	Lots 1 and 2 Being a Subdivision of Lot 2 DP 187577 and Easement over Lot 1 DP 190467	Surveyor: Denis McGregor Thomson Firm: Thomson Survey Limited	Title Plan DP 542129 Deposited on: 23/06/2020

DECISION ON COMBINED RESOURCE CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

Pursuant to section 34A(1) and sections 104, 104B, 106 and Part 2 of the Resource Management Act 1991 (the Act), the Far North District Council **grants** land use and subdivision resource consent for a Discretionary activity, subject to the Conditions listed below to:

Applicant:	Willowridge Developments Limited
Council Reference:	2250266-RMACOM
Property Address:	39 Aucks Road, Russell
Legal Description:	Lot 1 DP 187577 Lots 3-4 DP 420232

The activities to which this decision relates are listed below:

Activity A: Subdivision

The proposal involves a subdivision to create 66 allotments on a 43.28 hectares site; 65 residential lot and one allotment for Jointly Owned Access Lot (Lot 200) which contains the accessways, parking areas, common area, and reserve area.

The subdivision is proposed as a management plan breaching minimum area for vacant new lots (iv), Allotment Dimensions and Management Plan Standard in the Coastal Living zone as a Discretionary activity.

Activity B: Landuse

Land use consent breaching Excavation and/or filling on any site within the Coastal Living Zone, Fire Risk to Residential Units, Land use activities which produce human sewage effluent, Coastal Hazard 2 Area, Private Accessway in all Zones, Vehicle Crossing Standards in Coastal Zone, Frontage to Existing Road, Stormwater Management and Visual Amenity in the Coastal Living zone as a Discretionary activity.

Note: No new buildings proposed by way of this application, it is proposed to enable the establishment of a residential dwelling on each allotment as a result of this development in accordance with the design controls.

Activity C: Cancellation of Consent Notice – Section 221

Pursuant to Section 221 of the RMA, it is proposed to cancel Consent Notice 8300644.4 and 11735593.2 as they relate to servicing requirements, cat and dog restrictions, and the approval from Council to establish a residential dwelling Lot 3-4 Deposited Plan 420232.

Activity D: Cancellation of Amalgamation Condition – Section 241

Pursuant to Section 241 of the RMA, the amalgamation Condition on Lot 1 Deposited Plan 187577 and Lot 3-4 Deposited Plan 420232 held within Record of Title 476989 pursuant to Section 241 of the RMA will be required to be cancelled pursuant to 241(3) of the RMA.

Subdivision Conditions

Pursuant to sections 108 and 220 of the Act, this subdivision resource consent is granted subject to the following Conditions:

1. **The activity shall be carried out in general accordance with the approved plans and reports attached to this consent with the Council's "Approved Stamp" affixed to it:**

Plan title and reference	***Author***	***Rev***	***Dated***
Proposed Scheme Plan Overall Staging	*Maven Associates*	*E*	*March 2025*
Landscape Integration Concept. Ref: 1348_LIC_20241202	*Lttoralis Landscape Architecture*	*N/A*	*02/12/2024*
Proposed Earthworks Overall Plan	*Maven Associates*	*B*	*February 2025*
Proposed Earthworks Plan	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan	*Maven Associates*	*B*	*February 2025*
Proposed Erosion and Sediment Control Overall Plan	*Maven Associates*	*B*	*February 2025*
Erosion and Sediment Control Standard Details	*Maven Associates*	*A*	*July 2024*
Proposed Cut and Fill Plan Part 1	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 2	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 3	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 4	*Maven Associates*	*B*	*February 2025*
Proposed Roading Plan	*Maven Associates*	*B*	*February 2025*
Proposed Stormwater Plan	*Maven Associates*	*B*	*February 2025*
Proposed Wastewater Plan	*Maven Associates*	*A*	*September 2024*
Report title and reference	***Author***	***Rev***	***Dated***

Civil Engineering Report	*Maven Associates*	*N/A*	*29/11/2024*
Geotechnical Assessment Report Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd	*Haigh Workman*	*N/A*	*December 2024*
Traffic Report – 39 Aucks Road, Russell	*Commute Transportation Consultants*	*N/A*	*22/11/2024*
Assessment of Landscape, Natural Character and Visual Effects	*Littotalis Landscape Architecture*	*N/A*	*December 2024*
Ecological Report	*Wild Ecology*	*N/A*	*December 2024*

Stage 1: Lot 1 – 4 and Lot 62 - 65

2. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AA within Lot 4;

iii. Any encroachment of the road onto private property to be surveyed off and vested in Council, such that the legal road boundary along the road frontage is at least 6m from the centreline of the carriageway or 2m from the edge of the carriageway whichever is the greater.

iv. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

vi. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference 1944181;

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 1-4 and 62-65 hereon shall become members of the

Residents Association incorporated.

vii. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during

construction or earthworks:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.

- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.

- The Restoration Planting plan/s must be supported by a schedule detailing the following:
  - Any pre-planting land preparation including removal/management of weeds.
  - Proposed plant species and intended locations for planting.
  - Details regarding plant sourcing.
  - Plant sizes at time of planting.
  - Density of planting and timing of planting.
  - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
  - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;

- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

d) The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed and constructed with culvert details, Streetscaping, road markings, signage, road pavement design and investigation report and marking to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;

- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation.

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.
- Description of Pond (wet or dry) design and internal details dimensions, cross-sectional details of the pond, including all input and output connections for all stormwater events. Details of the outlet structure at the discharge point. Minimum pipe gradients, alignments, and material specifications.

  Advise Note:

  - *The design and construction of the wetland pond should have consideration to Auckland Council GD01 Standard in relation to safety. The following may be required to be considered in accordance with the standard:*
  - *Dense, low planting along path edges above slopes to deeper sections;*
  - *If required high permanent 'pool style' fencing is around the wetland main body including all pools, inlets, outlets and pre-treatment areas;*
  - *Detailed design Safety components of the wetland pond including a barrier or system to prevent children accessing the pond and the limiting depth for children height and Safety Signage for everyone;*
  - *The wetland outlet to the river is to be specifically designed to limit stream erosion*.

- The drawings are to include details of all new connection and discharge points to the existing stormwater network.
- Mitigation measures for 20%, 50 % as per the requirement and 1% AEP + CC events for stormwater control for flow rate to 80% of the pre-development flows.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

e) The consent holder must provide the final certified **CMP, CTMP, APP, APMP, EMP, EPA and Management Plan** to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.

3. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 2(d)(iv) and 2(d)(v) above.

c) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 2(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 2(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

d) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 2(e) and with FNDC Engineering Standards.

e) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 2(e), from the Contractor.

f) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;
- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and
- Details of asphaltic concrete (where used).

g) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the **CTMP** to the satisfaction and approval of Council.

h) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

i) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 2(d)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;

ii. Require all lot owners within the subdivision to be a member and/or shareholder;

iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 2(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

j) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 2(d)(v) above.

4. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists, and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered 'pre-development' in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council's Resource Consent's Engineer or delegated representative.

Advise note: If the proposed area of impermeable surfaces exceeds 700m2, a resource consent may be required. All lots.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council's Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 1-4 and 62-65, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

k) For Lot 4, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AA shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

l) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

m) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the **APMP** and **EMP** approved under Condition 2(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

    i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

    ii. All buildings must be single storey;

    iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

    iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

    v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

n) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

o) For all lots, the owner of each allotment within the subdivision shall be required to be a member of the resident's association the owner of each shall adhere to the Conditions of the approved management plan and subdivision of all lots within the management plan is prohibited.

Stage 2: Lot 5 - 12, Lot 50 - 61

5. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AB, AC, BC, CC, AD, BD, CD, AE, BE,CE, AF, BF, CF, AG, BG, AH, AI, AM, AJ, AK, AL For Lots 5, 7, 8, 10, 12, 55, 58, 59, 60, 61 and 200;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181:

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 5 - 12, Lot 50 - 61 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide confirmation that a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in respect of Lots 10, 12, 53, 57, 59 and 60 in favour of the adjoining recreation reserve (Lot 1 DP 161659), has been prepared and will be registered on the title of each lot. The covenant shall protect the Far North District Council from any liability to contribute toward any work on a fence between the reserve and the said adjoining Lot. The covenant is to be prepared and registered by Council's solicitor at the applicant's expense.

d) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

e) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;

- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
    - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.

- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;

- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ‘‘Mitigation Amenity Planting’ and the ‘Low Riparian Mitigation/Amenity Planting’ illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:
  - Any pre-planting land preparation including removal/management of weeds.
  - Proposed plant species and intended locations for planting.
  - Details regarding plant sourcing.
  - Plant sizes at time of planting.
  - Density of planting and timing of planting.
  - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
  - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

f) The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled ‘Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd’ prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.

- Shall reference the recommendations made within “the Wastewater Feasibility Report ‘prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.

- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council “Quality Assurance/Quality Control Manual – Vested Assets”. This will include nomination of a site Engineer and an “Inspection and Test Plan” for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;

- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation.

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;

- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

g) The consent holder must provide the final certified **CMP, CTMP, APP, APMP, EMP, EPA and Management Plan** to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.

6. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 4(e)(iv) and 4(e)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 4(f) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 4(f) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 4(f) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 4(f), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;
- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and

h) Details of asphaltic concrete (where used). Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 4(e)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;

ii. Require all lot owners within the subdivision to be a member and/or shareholder;

iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 5(j) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 4(e)(v) above.

7. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered 'pre-development' in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m^2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council's Resource Consent's Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council's Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 5-6 and Lot 8-9, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

k) For Lots 5, 7, 8, 10, 12, 55, 58, 59, 60, 61 and 200, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AB, AC, BC, CC, AD, BD, CD, AE, BE,CE, AF, BF, CF, AG, BG, AH, AI, AM, AJ, AK, AL shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

l) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

m) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 4(e) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment

prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

n) On Lots 5-6 and Lot 8-9, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 4(e)(iv) of RC2250266 which includes, without limitation the following:

   i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

   ii. All buildings must be single storey;

   iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

   iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

   v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

   vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

   vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

   Advise note: All buildings must be single storey. Note: this does not preclude split level buildings.

o) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

   If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

   - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
   - The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
   - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
   - If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist

(representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.

- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Stage 3: Lot 39-49

8. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AR, AQ, AS, AP, AT, AO, AU, BO, NB and AV within Lot 45, 46, 47, 48 and 49;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v.

vi. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181):

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 39-49 hereon shall become members of the Residents Association incorporated.

vii. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

   i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

      - Details of the site manager including full contact details;
      - Details of the supervising engineer;
      - Details of the successful contractor;
      - The timing of construction works, including hours of work, key project and site management personnel;
      - A traffic management plans, specifically in relation to any Council roads affected by works;
      - A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
      - Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
      - Proposed procedures for controlling sediment runoff and dust generation;
      - Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
      - All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
      - Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
      - Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
      - Programme of works;
      - Proposed hours of work on the site;
      - The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological

site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;

- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental

benefit covenant areas shown on the approved subdivision scheme plan.

- The Restoration Planting plan/s must be supported by a schedule detailing the following:
  - Any pre-planting land preparation including removal/management of weeds.
  - Proposed plant species and intended locations for planting.
  - Details regarding plant sourcing.
  - Plant sizes at time of planting.
  - Density of planting and timing of planting.
  - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
  - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (OEMP) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;

- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

ix. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays,

dimensions, formation, material, culvert;

- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

9. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 6(d)(iv) and 6(d)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 6(e) to the approval of the Resource Consent Engineer. Compliance

with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 6(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 6(e) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 6(e), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;
- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and
- Details of asphaltic concrete (where used).

h) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 6(d)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;
ii. Require all lot owners within the subdivision to be a member and/or shareholder;
iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;
iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;
v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 7(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;
vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 6(d)(v) above.

10. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a

wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered ‘pre-development’ in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council’s Resource Consent’s Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council’s Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 44-49, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

k) For Lot 45, 46, 47, 48 and 49, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AR, AQ, AS, AP, AT, AO, AU, BO, NB and AV within shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which

the owner is responsible.

l) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

m) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 6(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

n) On Lots 44-49, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 6(d)(iv) of RC2250266 which includes, without limitation the following:

    i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

    ii. All buildings must be single storey;

    iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

    iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

    v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

    vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

    vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

    Advise note: All buildings must be single storey. Note: this does not preclude split level buildings.

o) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

    If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Stage 4: Lot 13-20 and 22-24

11. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall* prepared by Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AY, BY, NI, CW. AX, NH, GA, GB, GC, NG, AW, BW and NA within Lot 13,19, 22, 23 and 45;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181):

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lot 13-20 and 22-24 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;

- Proposed hours of work on the site;
- The CMP shall include a section relating to an “Accidental Discovery Protocol” to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
    - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
    - If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
    - Works in the area shall not commence until all cultural and statutory requirements have been met.
    - If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
    - All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and
- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council’s Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in

support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:
  - Any pre-planting land preparation including removal/management of weeds.
  - Proposed plant species and intended locations for planting.
  - Details regarding plant sourcing.
  - Plant sizes at time of planting.
  - Density of planting and timing of planting.
  - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
  - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (OEMP) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document

shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

ix. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required

by Council “Quality Assurance/Quality Control Manual – Vested Assets”. This will include nomination of a site Engineer and an “Inspection and Test Plan” for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

12. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor’s undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve 5855 Russell Whakapara Road, Russell.

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 8(d)(iv) and 8(d)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 8(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 8(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 8(e) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 8(e), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;
- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and

- Details of asphaltic concrete (where used).

h) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 8(d)(vi). As a minimum, the entity managing these communal areas shall:'

   i. Be registered under the Incorporated Societies Act 1908;

   ii. Require all lot owners within the subdivision to be a member and/or shareholder;

   iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

   iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

   v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 8(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

   vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 8(d)(v) above.

13. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered ‘pre-development’ in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m^2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council’s Resource Consent’s Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council’s Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 13–19, Lots 22–23, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum

of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

k) For Lots Lot 13,19, 22, 23 and 45, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AY, BY, NI, CW. AX, NH, GA, GB, GC, NG, AW, BW and NA within shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

l) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

m) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 8(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

n) On Lots 13–19, Lots 22–23, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 8(d)(iv) of RC2250266 which includes, without limitation the following:

   i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

   ii. All buildings must be single storey;

   iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

   iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

   v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

   vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

   vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

Advise note: If the proposed area of impermeable surfaces exceeds 700m2, a resource consent may be required. All lots.

o) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Stage 5: Lot 21, and 25-38

14. The Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area GH, GG, NG, GI, GJ, NK, GK, GL, NN, GM, GN, GO, NC, NF within Lot 25,32,33,38 and 39;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's

Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181:

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 21 and 25-38 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

ix. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on

surrounding roads from vehicles and remedial actions should it occur.

- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
    - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
    - If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
    - Works in the area shall not commence until all cultural and statutory requirements have been met.
    - If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
    - All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring

that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

x. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

xi. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

xii. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the

‘‘Mitigation Amenity Planting’ and the ‘Low Riparian Mitigation/Amenity Planting’ illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

xiii. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:
    - Any pre-planting land preparation including removal/management of weeds.
    - Proposed plant species and intended locations for planting.
    - Details regarding plant sourcing.
    - Plant sizes at time of planting.
    - Density of planting and timing of planting.
    - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
    - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

xiv. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

xv. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not

limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.

- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

xvi. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

x. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the

Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.

- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided

with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

15. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 10(d)(iv) and 10(d)(v) above.

b) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

c) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 10(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

iii. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 10(e) of this consent.

iv. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

d) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 10(e) and with FNDC Engineering Standards.

e) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 10(e), from the Contractor.

f) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;

- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and
- Details of asphaltic concrete (where used).

g) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

h) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

i) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 10(d)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;
ii. Require all lot owners within the subdivision to be a member and/or shareholder;
iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;
iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

i. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 11(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

ii. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

j) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 10(d)(v) above.

16. **Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:**

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered ‘pre-development’ in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council’s Resource Consent’s Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council’s Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 25-34, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply

to the future dwelling.

j) The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

k) For Lot 25,32,33,38 and 39, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area GH, GG, NG, GI, GJ, NK, GK, GL, NN, GM, GN, GO, NC, NF shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

l) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

m) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 10(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

n) On Lots 25-34, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 10(d)(iv) of RC2250266 which includes, without limitation the following:

    i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

    ii. All buildings must be single storey;

    iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

    iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

    v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

    vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

    vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

o) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or

destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Subdivision Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *A survey plan is submitted to Council for approval under section 223 of the RMA before the lapse date, and that plan is deposited within three years of the date of approval of the survey plan in accordance with section 224(h) of the RMA; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

Section 224 Certification

2. *A Section 224 Certificate will not be issued until all Council invoices, including engineering fees and any other costs associated with the Resource Consent have been paid in full.*

General

3. *This consent has been granted on the basis of all the documents and information provided by the consent holder, demonstrating that the new lot(s) can be appropriately serviced (infrastructure and access).*

4. *The Consent Holder shall pay all charges set by Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring, inspection and supervision charges relating to the Conditions of this resource consent. The applicant will be advised of the charges as they fall.*

5. *The consent holder is advised to engage with a suitably qualified experienced person to ensure pedestrian walkways through the proposed ecological covenant areas comply with the National Environmental Standards for Freshwater (2020).*

6. *The consent holder is advised that earthworks is assessed under NRC Consent AUT.046280.01.01, AUT.046280.02.01, AUT.046280.03.01 and FNDC has not assessed or imposed earthworks Conditions.*

Land Use Conditions

Pursuant to sections 108 of the Act, this land use consent is granted subject to the following Conditions:

1. **The activity shall be carried out in accordance with the application formally received by Far North District Council ("Council") on X December 2025, and the plan(s) and documents as follows:**

Plan title and reference	***Author***	***Rev***	***Dated***
Landscape Integration Concept. Ref: 1348_LIC_20241202	*Lttoralis Landscape Architecture*	*N/A*	*02/12/2024*
Proposed Roading Plan	*Maven Associates*	*B*	*February 2025*
Proposed Stormwater Plan	*Maven Associates*	*B*	*February 2025*
Proposed Wastewater Plan	*Maven Associates*	*A*	*September 2024*
Report title and reference	***Author***	***Rev***	***Dated***
Civil Engineering Report	*Maven Associates*	*N/A*	*29/11/2024*
Geotechnical Assessment Report Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd	*Haigh Workman*	*N/A*	*December 2024*
Traffic Report – 39 Aucks Road, Russell	*Commute Transportation Consultants*	*N/A*	*22/11/2024*
Assessment of Landscape, Natural Character and Visual Effects	*Littotalis Landscape Architecture*	*N/A*	*December 2024*

Ecological Report	*Wild Ecology*	*N/A*	*December 2024*

Land Use Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *The consent is given effect to; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

General Advice Notes

Right of Objection

2. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

General Advice Notes

3. *During the assessment of your application it was noted that a private Land Covenant exists on your property. Council does not enforce private land covenants, and this does not affect Council approving your plans. However, you may wish to get independent legal advice, as despite having a resource consent from Council, the private land covenant can be enforced by those parties specified in the covenant.*

4. *The site is in close proximity to an unsealed road (Lane Road). Unsealed roads have been shown to create a dust nuisance from vehicle usage. It is advised that the dwelling is either located as far as possible or at least 80m from the road, and/or boundary planting within the site is utilised to assist with this nuisance. Alternatively the applicant may consider sealing their road frontage to remove the issue.*

5. *The Consent Holder shall pay all charges set by Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring, inspection and supervision charges relating to the Conditions of this resource consent. The applicant will be advised of the charges as they fall.*

6. *Any work activity, excavation and non- excavation carried out in the road reserve, must lodge formal notice if intention to carry out Works, in the form of a Corridor Access Request, submitted to the Corridor Manager for Approval.*

   A Corridor Access Request (CAR) is an application for a permit to carry out works within the road reserve, this is defined in the National Code of Practice for Utilities access to the transport Corridors and has been adopted by Council.

   A Traffic Management Plan (TMP) must be uploaded with the CAR submission, describing the proposed works, design, setup, and removal of any activity being carried out within the road Reserve. A Work Access Permit (WAP) and reasonable Conditions will be issued once TMP is Approved. Enquiries as to its use may be directed to Council's Road Corridor Manager, corridor.access@fndc.govt.nz.

7. *Permits are required for drilling any bores in Northland. Therefore, resource consent will need to be gained from the Northland Regional Council if water is obtained in this way. If a bore is to be constructed, all areas used for sewage effluent disposal and reserve effluent disposal areas must be at least 20 metres away from any groundwater bore.*

8. *All earthworks are required to comply with the Northland Regional Council Regional Water and Soil Plan for Northland noting Erosion & sediment control and dust suppression requirements.*

9. *Erosion and Sedimentation Control shall be designed and carried out in accordance with GD05 "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region"/*

10. *Land use Conditions are covered by the subdivision Conditions and as a part of 223 Condition the consent holder must provide the final certified CMP, CTMP, APP, APMP, EMP, EPA and Management Plan to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.*

11. *Earthworks on site must be in accordance with and must adhere to all consent Conditions approved under AUT.046280.01.01, AUT.046280.02.01 and AUT.046280.03.01.*

Activity C: Cancellation of Consent Notice – Section 221

1. **Pursuant to Section 221(3), Consent Notice 8300644.4 shall be cancelled;**

   That no dwelling or habitable building shall be erected or brought onto Lots 3&4 without the prior consent of the Council. Lots 3, 4, & 1 DP 187577 are held together in a single Certificate of Title and shall be regarded as a single site for the purpose of the District Plan residential intensity provisions.

Activity D: Cancellation of Amalgamation Condition – Section 241

1. **Pursuant to s234e of the Resource Management Act 1991, the Far North District Council hereby cancels the following existing amalgamation Condition:**

   Lot 1 Deposited Plan 187577 and Lot 3-4 Deposited Plan 420232 are all held within Record of Title 476989 and are subject to an amalgamation Condition pursuant to Section 241 of the Act.

Reasons for the Decision

1. By way of an earlier report that is contained within the electronic file of this consent, it was determined that pursuant to sections 95A and 95B of the Act the proposed activity will not have, and is not likely to have, adverse effects on the environment that are more than minor, there are no affected persons and no special circumstances exist. Therefore, under delegated authority, it was determined that the application be processed without notification.

2. The application is for a Discretionary activity resource consent as such under section 104 the Council can consider all relevant matters. In particular the matters listed in 10.7.5.1.1 Visual Amenity, 10.7.5.3.8 Stormwater Management, 12.3.6.1.2 Excavation and/or filling on any site within the Coastal Living Zone, 12.4.6.1.2 Fire Risk to Residential Units, 12.7.6.1.4 Land use activities which produce human sewage effluent, 12.4.6.1.1 Coastal Hazard 2 Area, 15.1.6C.1.1 Private Accessway in all zones, 15.1.6C.1.5 Vehicle Crossing Standards in Coastal Zone, 13.7.2.1 Minimum area for vacant new lots (iv), 13.7.2.2 Allotment Dimensions, 13.9.2.2 (a) Management Plan Standard are of particular relevance.

2. In regard to section 104(1)(a) of the Act the actual and potential effects of the proposal will be acceptable as:

   a. The proposal will ensure the significant ecological environmental benefit that will be generated by the restoration and enhancement of approximately 16.93ha of land comprising freshwater and terrestrial environmental features. Further, No indigenous vegetation removal is proposed.

   b. The proposal will also have significant economic and social benefits through the provision of different allotment sizes to a constrained market in the wider Russell / Kororāreka catchment.

   c. Provision of adequate on-site parking and manoeuvring which contributes to the amenity of the development is considered.

   d. The proposed lots do not contain any areas of cultural significance to Māori or other heritage resources, outstanding landscapes, outstanding natural features or landscape features.

   e. There will be no reverse sensitivity effects as the activity is consistent with the current use of the existing activities in the wider environment.

   f. The proposal will also result in positive effects, including enabling the lots to be independently disposed for residential use,

3. In regard to section 104(1)(ab) of the Act the proposal includes offsetting or environmental compensation measures proposed and agreed to by the applicant for the activity.

   The proposal is a Management Plan subdivision and the purpose of management plan subdivision or development is to facilitate the sustainable management of natural and physical resources in an integrated way. Management plans allow subdivision and development where the location, form and scale of the proposal complements sustainable environmental management consistent with the protection of natural character, landscape, amenity, heritage, and cultural values.

   The Ecological Assessment prepared by Wild Ecology notes the following offsetting or environmental compensation measures:

   - *The development is anticipated to yield positive biodiversity outcomes that serves multiple functions, including ecological enhancement, open space, and recreational opportunities.*
   - *The total area proposed for ecological management is approximately 16.90 ha.*
   - *This includes extensive revegetation planting throughout the site connecting and expanding upon existing features to create a protected corridor network throughout the site while also retiring steeper, erodible areas, thereby facilitating potential fauna movement throughout the site and its wider surroundings.*

- *Extensive buffer areas will be established to enhance habitat connectivity, protect sensitive ecological features, and support biodiversity by providing refuge and movement pathways for various fauna species.*
- *For any revegetation planting within the 20-meter setback from the proposed building platforms, only indigenous species with low flammability have been selected. This choice is intended to reduce fire risk while maintaining ecological integrity. Integral components of this will include pest animal and plant control, biosecurity and disease management, and maintenance.*

- Appropriate Conditions of consent will be imposed to ensure the ongoing management of the existing indigenous terrestrial and wetland vegetation on-site, along with the proposed revegetation planting areas.

4. In regard to section 104(1)(b) of the Act the following statutory documents are considered to be relevant to the application:
   a. New Zealand Coastal Policy Statement 2011,
   b. National Policy Statement – Indigenous Biodiversity
   c. Northland Regional Policy Statement 2016,
   d. Operative Far North District Plan 2009,
   e. Proposed Far North District Plan 2022

New Zealand Coastal Policy Statement 2011

The New Zealand Coastal Policy Statement ("NZCPS") is a national policy statement with the purpose of ensuring that the requirements of the Resource Management Act in so far as it relates to the coastal environment of New Zealand are achieved. More specifically the NZCPS sets policies to protect the characteristics and qualities of the coastal environment from the issues it faces.

The proposal is consistent with the relevant objectives and policies under CPS because:

- The proposal to preserve the natural character of the coastal environment and protect landscape values by recognising the contributing factors and protecting them from inappropriate development.

- It enables use and development of the costal environment where appropriate whilst recognising the need to protect the values identified in the ecological assessment.

- The proposal provides further direction in regard to what activities (including development) are appropriate in the coastal environment recognising that appropriate siting and design is vital to avoid compromising the values if the environment.

- The proposal seeks to preserve natural character by avoiding significant adverse effects of development and directs the use of assessment of natural character as a means to do this.

It is noted that the proposed development is generally sympathetic to the natural character of the coastal environment. The location of the proposed building platforms are on higher elevations to ensure that future built form is appropriately contained. Design controls proposed in relation to the bulk and form of future structures are expected to minimise visual effects, with any resulting impacts on the natural and coastal character largely confined within the boundaries of the site.

Notably, the subdivision will not require the removal of any existing mature native vegetation. Furthermore, the proposal includes additional native planting and the establishment of an ecological management area of approximately 16.93 hectares. As a result, the natural character of the site is anticipated to be maintained and enhanced over time.

Overall, it is considered that the proposal accords with the relevant provisions of the Coastal Policy Statement.

National Policy Statement – Indigenous Biodiversity

The National Policy Statement for Indigenous Biodiversity ("NPS-IB") was published by the Minister of the Environment on 7 July 2023 and came into force on 4 August 2023, 28 days after notification in the New Zealand Gazette.

It is noted that the the application site does contain indigenous vegetation and an Ecological Assessment by Wild Ecology was provided with the application.

It is noted that identification, protection and restoration of identified ecological features on the subject site is a key feature of the proposal and the ecological assessment confirm the proposal provides for significant ecological benefit via the proposed 16.93ha environmental benefit area of historically degraded by traditional farming practices and land development. Within the 16.93ha areas, existing indigenous biodiversity is protected, and over time will be restored and enhanced.
The ecological assessment concludes any adverse ecological effects will be less than minor and acceptable, and the proposal gives effect to the objective and policies of the NPS-IB.

Overall, it is considered that the proposal accords with the relevant provisions of the NPS-IB.

Northland Regional Policy Statement 2016
The RPS provides an overview of resource management issues and gives objectives, policies, and methods to achieve integrated management of natural and physical resources of the region.
The proposal is not contrary to the relevant objectives and policies under Northland Regional Policy Statement 2016 because:

- The design of the subdivision has been developed around maintaining the ecological and landscape vales of the site where possible and limiting clearance. The proposed development aims to legally protect 16.93-hectare of the high ecological values of the site. This approach offers an opportunity to

safeguard and enhance the site's ecological features, resulting in a positive ecological impact.

- Silt and sediment controls are proposed to be implemented for the duration of earthworks on site.
- The site is not near any significant mineral resources.
- The proposal does not affect any landscape or natural character values, historic or cultural heritage values, or transport corridors.
- The site does not contain highly versatile soils. The development is not proposed on soils that are classified as LUC 1 – 3.
- The proposal has no implications on matters such as renewable energy, sustainable design technologies.
- The proposal can be adequately serviced in terms of transportation, water, wastewater, and stormwater by existing and proposed infrastructure as highlighted within the Infrastructure Report and Wastewater Feasibility Assessment.
- Adverse effects associated with natural hazards and downstream flooding are mitigates.
- The proposal will result in residential development being located within the Coastal Living Zone characterised by a range of residential uses in close proximity to an established settlement and associated services
- Subdivision, use and development of land will be managed to minimise risks of natural hazards by way of comprehensive design of onsite stormwater management and avoidance of areas high instability
- The Applicant has engaged with iwi and hapū and taken any feedback into account through the design phase of this development.
- Overall, the proposed development is consistent with the NRPS.

Operative Far North District Plan

Redistribution and increase of population in the District is causing a demand for the expansion of some settlements. This has the potential to cause significant effects on the environment. In particular, urban expansion requires the provision of infrastructure.

The Far North District has a long and varied coastline, containing eight major harbour systems. Because of its long coastline the District has a large amount of land in the coastal environment. The coastal environment of the Far North is one of the more valuable resources of the District. Tangata whenua have a close relationship with the coastal environment. Coastal landscapes encompass a range of values including ecological, natural, cultural, spiritual, amenity, heritage, recreational, social and economic values.

The activity is consistent with the relevant objectives, policies and assessment criteria of the Operative District Plan because it:

- The subdivision design has been developed to avoid, remedy or mitigate potential adverse effects arising from activities on the sensitive receiving environment.
- Cultural values of the site have been considered through the design phase of this development, with consultation with iwi and hapū. Concerns raised during the community hui in relation to wastewater and stormwater disposal, traffic movement, and landscape impacts, have been addressed within this report and through expert assessment.
- As per the extensive ecological mitigation measures proposed, there is no loss of wetland extent, no earthworks within proximity to wetlands and the effects on wetlands are appropriately managed. It is important to note that a comprehensive protection and enhancement approach is proposed that will ensure the restoration of these wetlands over time as a result of the proposed subdivision.
- The proposal includes extensive areas of enhancement planting which will ensure future development is integrated into the landscape while also providing ecological connections and corridors, to the existing conservation areas on surrounding sites. The proposed ecological benefit area will be enhanced and protected while the existing areas of amenity planting will provide effective mitigation for the effects of residential development on the resulting allotments.
- No clearance of native vegetation is required to facilitate works for the subdivision and the Management Plan will enable the active management of the proposed enhancement area.
- The Wastewater Feasibility Report and the Infrastructure Report notes the disposal of stormwater and wastewater can be adequately provided for, as can an adequate supply/storage of water. The proposal would therefore avoid adverse effects on sensitive receiving environments.

Overall, the proposed development is consistent with the Operative District Plan.

Proposed Far North District Plan

The Rural Lifestyle Zone recognises and provides for rural living maintains the character and amenity of the zone.

In assessing the proposal against the objectives and policies of the Proposed District Plan, particular regard has been given to those provisions that are directive on their face and do not rely on rules or methods still subject to submissions and appeals for their interpretation and application.

The activity is consistent with the relevant objectives, policies and assessment criteria because:

- The proposal is considered to be in-keeping with the density of the surrounding environment, while also providing for superior environmental outcomes.
- The proposal is well separated well from any other horticultural and agricultural activities. It is not considered, therefore, that any reverse sensitivity effects will result from the proposal.
- Disposal of stormwater and wastewater can be adequately provided for.

- While the site is subject to coastal flood hazards, there is no residential development proposed within these areas. The Infrastructure Report concludes that effects as a result of the coastal flooding are negligible as the resulting lots will not be accessible from the public road.

However, it is acknowledged the PDP hearings are still in progress. There is substantial scope for provisions to evolve through the submission and appeal process. Therefore, at this early stage of the PDP process, limited weighting has been placed on these PDP provisions relative to the Operative Plan. The Operative Plan remains the primary planning instrument for determining this application.

5. In regard to section 104(1)(c) of the Act there are no other matters relevant and reasonably necessary to determine the application.

6. In terms of s106 of the RMA the proposal is subject to coastal flood hazards. The flooding is an existing Condition, and there is no ability to remove the future flooding from Aucks Road as part of this development. However:
   - The Infrastructure Report notes all Individual building platform are located away from the coastal flood zone 3. Specific platform design has been provided as to ensure suitable building platforms are provided above the 100-yr levels. All dwellings will be elevated above adjacent JOAL corridors to ensure sufficient freeboard is provided from any future coastal flood hazard water level and watercourse during a storm event
   - The Infrastructure Report notes that effects as a result of the coastal flooding are negligible as the resulting lots will not be accessible from the public road.
   - The internal roads are for the most part elevated above the future 100-yr flood level, however a section of the existing JOAL would also be subject to future flooding and the below Conditions are proposed to ensure appropriate measures are in place.

     Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter.

     Flood control assessment model, detention requirement, details of earth bund formation.

7. Based on the assessment above the activity will be consistent with Part 2 of the Act. The activity will avoid, remedy or mitigate any potential adverse effects on the environment while providing for the sustainable management of natural and physical resources and is therefore in keeping with the Purpose and Principles of the Act. There are no matters under section 6 that are relevant to the application. The proposal is an efficient use and development of the site that will maintain existing amenity values without compromising the quality of the environment. The activity is not considered to raise any issues in regard to Te Tiriti o Waitangi.

8. Overall, for the reasons above it is appropriate for consent to be granted subject to the imposed Conditions.

Approval

This resource consent has been prepared by Swetha Maharaj, Senior Planner. I have reviewed this and the associated information (including the application and electronic file

material) and for the reasons and subject to the Conditions above, and under delegated authority, grant this resource consent.



Name: Pat Killalea Date: 17th June 2025

Title: Independent Commissioner

FAR NORTH DISTRICT COUNCIL

FAR NORTH OPERATIVE DISTRICT PLAN
DECISION ON RESOURCE CONSENT APPLICATION (Section 357A)

Resource Consent Number: 2250266-RMAOBJ/A

Pursuant to section 357D of the Resource Management Act 1991 (the Act), the Far North District Council hereby upholds the objection:

The activity to which this decision relates:

An objection in relation to conditions of consent contained in 2250266-RMAOBJ/A, a consent granted to Willowridge Developments Limited for Objection related to RC 2250266 RMACOM. The condition(s) objected to are Conditions 4(j), 7(j), 10(j), 13(j) and 16(j).

Subject Site Details

Address:	39 Aucks Road, Russell 0272
Legal Description:	Lot 1 DP 187577 Lots 3-4 DP 420232
Certificate of Title reference:	3355355

As a result of upholding the objection, the following changes are made to the consent conditions:

4(j), 7(j), 10(j), 13(j) and 16(j)

Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

The site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

For the purpose of clarity, the complete amended conditions of consent are as follows:

Stage 1: Lot 1 – 4 and Lot 62 - 65

Condition 4
Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

j. For lots 1-3, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lots is prohibited.

k. For lots 4 and 62-65, the site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l. A maximum of two (2) dogs may be kept per lot on Lots 1–3, subject to the following requirements:

i. Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [4(l)(ii)] below, supported by suitable photographic evidence.

ii. The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

iii. Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 4(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv. Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v. All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m. The following ongoing conditions shall apply to Lot 200:

i) No external dogs unless otherwise provided for under Condition 4(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

ii) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

iii) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 4(l) and conditions 4m(i) and 4m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

   a. A minimum height of 800mm.
   b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.

   c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

      i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
      ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
      iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
      iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
      v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Stage 2: Lot 5 - 12, Lot 50 - 61

Condition 7

Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

j. For lots 6, 7, 9, 11 and 50-61, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k. For lots 5, 8, 10, and 12 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l. A maximum of two (2) dogs may be kept per lot on Lots 6,7,9,11 and 50–61, subject to the following requirements:

   i) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

      - The dog's registration details, including its registration number; and
      - Confirmation of the containment measures implemented in accordance with Condition [7(l)(ii)] below, supported by suitable photographic evidence.

   ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

      - Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1**; or;
      - An electronic pet containment fence or an equivalent wireless system.

   iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 4(l)(ii) to the Residents' Association, or upon

request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m. The following ongoing conditions shall apply to Lot 200:

i) No external dogs unless otherwise provided for under Condition 7(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

ii) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

iii) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 7(l) and conditions 7m(i) and 7m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

a. A minimum height of 800mm.
b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.

iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Stage 3: Lot 39-49

Condition 10

Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

j. For lots 39-45, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k. For lots 46-49 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l. A maximum of two (2) dogs may be kept per lot on Lots 39-45, subject to the following requirements:

i) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [10(l)(ii)] below, supported by suitable photographic evidence.

ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 10(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m. The following ongoing conditions shall apply to Lot 200:

i) No external dogs unless otherwise provided for under Condition 10(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

ii) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

iii) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 10(l) and conditions 10m(i) and 10m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

   a. A minimum height of 800mm.
   b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
   c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

      i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
      ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
      iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
      iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
      v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Stage 4: Lot 13-20 and 22-24

Condition 13

Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

L. For lots 13-20, 22 and 24, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

M. For lot 23 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

N. A maximum of two (2) dogs may be kept per lot on Lots 13-20, 22 and 24, subject

to the following requirements:

i) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [13(l)(ii)] below, supported by suitable photographic evidence.

ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 13(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request..

O. The following ongoing conditions shall apply to Lot 200:

i) No external dogs unless otherwise provided for under Condition 13(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

ii) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

iii) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 13(l) and conditions 13m(i) and 13m(ii) above. An annual report must be provided to

the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

    a. A minimum height of 800mm.
    b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
    c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

        i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
        ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
        iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
        iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
        v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Stage 5: Lot 21, and 25-38

Condition 16

Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

j. For lots 21 and 26-38, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k. For lot 25 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l. A maximum of two (2) dogs may be kept per lot on Lots 21 and 26-38 subject to the following requirements:

vi) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:
- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [16(l)(ii)] below, supported by suitable photographic evidence.

vii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;

- An electronic pet containment fence or an equivalent wireless system.

viii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 16(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

ix) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

x) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m. The following ongoing conditions shall apply to Lot 200:

i) No external dogs unless otherwise provided for under Condition 16(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

ii) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:
- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area.

iii) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 16(l) and conditions 16m(i) and 16m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

a. A minimum height of 800mm.
b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or

ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Advice Notes

1. Archaeological sites are protected pursuant to the Historic Places Act 1993. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority obtained from the trust. Should any site be inadvertently uncovered, the procedure is that work should cease, with the trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains).

Statutory Information

1. Pursuant to section 102 of the Local Government Act 2002, the Far North District Council has prepared and adopted a development contributions policy. Under this policy, the activity to which this consent relates maybe subject to development contributions.

   You will be advised of the assessment of the development contributions payable under separate cover in the near future.

   It is important to note that the development contributions must be paid prior to commencement of the work or activity to which this consent relates or, in the case of subdivision, prior to the issue of a Section 224(c) Certificate.

   Further information regarding council's development contributions policy may be obtained from the long term council community plan (LTCCP) or council's web page at www.fndc.govt.nz

Reasons for the Decision to uphold the Objection (pursuant to Section 357D(2):

1. The site lies in a kiwi high-density zone, however, Wild Ecology's memo concludes that dog-related risk can be reduced to an acceptable level through enforceable management: *certified kiwi-aversion training, secure containment, leash-only rules outside containment, council registration/monitoring, and resident education.* This addresses a specific pathway of effects and is likely to achieve a positive ecological outcome as a total ban with higher compliance.

2. Following the pre-hearing meeting, the applicant strengthened its proposed conditions by *limiting dog numbers (max two per lot), requiring dog-proof fencing/enclosures to technical standards, mandating on-lead control on communal land, prohibiting visiting (external) dogs, assigning a Residents' Association compliance role with annual reporting to Council, and installing kiwi-protection signage*. These additions materially improve practicality, enforceability, and compliance oversight.

3. The development embeds long-term ecological enhancement via a ~16.9 ha protected/enhanced area with extensive revegetation, pest plant/animal control, stock

exclusion, and monitoring under an Ecological Management Plan (EMP). The Ecological Report and memo outline planting buffers, wetland enhancement, and corridor creation that reduce edge effects and support biodiversity, including kiwi movement. This further supports a managed-dogs approach rather than a blanket prohibition.

4. The consent includes a comprehensive management-plan framework and a Residents' Association with ongoing compliance duties, which is not typical of other subdivisions. These bespoke elements (plus the technical fencing standard, annual training, annual reporting and monitoring fees) distinguish this case and limits any precedent effect.

Approval
This decision has been prepared by Swetha Maharaj Senior Planner, and is granted under delegated authority (pursuant to section 34A of the Resource Management Act 1991) from the Far North District Council by RMA independent commission as set out below;

I have reviewed the above conditions of consent, amended as a result of an objection pursuant to ss357 and 357A of the Resource Management Act 1991 (RMA), and the associated documents, and pursuant to s357D of the RMA uphold the objection noting there is agreement between the objector, Willowridge Developments Limited, and the Far North District Council, that agreement being reflected in the above amended conditions to the consent as it relates to 39 Aucks Road, Russell.



AR Watson
RMA Independent Commissioner

19 November 2025

Right of Appeal
If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 358 of the Resource Management Act 1991) to appeal the decision. The notice of appeal must be in the prescribed form, stating reasons for the appeal and shall be lodged with the Environment Court within 15 working days of the receipt of this decision. Any person lodging an appeal shall ensure that a copy of the notice of appeal is served on Council at the same time as the notice is lodged with the Environment Court.

Lapsing Of Consent
Pursuant to section 125 of the Resource Management Act 1991, this resource consent, as amended as a result of this decision on an objection, will lapse 5 years after the date of commencement of consent unless, before the consent lapses;

The consent is given effect to; or

An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Resource Management Act 1991.

Schedule 1
Complete set of Consent Conditions for 2250266-RMACOM as Amended by 2250266-RMAOBJ/A

Subdivision Conditions

Pursuant to sections 108 and 220 of the Act, this subdivision resource consent is granted subject to the following Conditions:

1. **The activity shall be carried out in general accordance with the approved plans and reports attached to this consent with the Council's "Approved Stamp" affixed to it:**

Plan title and reference	***Author***	***Rev***	***Dated***
Proposed Scheme Plan Overall Staging	*Maven Associates*	*E*	*March 2025*
Landscape Integration Concept. Ref: 1348_LIC_20241202	*Lttoralis Landscape Architecture*	*N/A*	*02/12/2024*
Proposed Earthworks Overall Plan	*Maven Associates*	*B*	*February 2025*
Proposed Earthworks Plan	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan	*Maven Associates*	*B*	*February 2025*
Proposed Erosion and Sediment Control Overall Plan	*Maven Associates*	*B*	*February 2025*
Erosion and Sediment Control Standard Details	*Maven Associates*	*A*	*July 2024*
Proposed Cut and Fill Plan Part 1	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 2	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 3	*Maven Associates*	*B*	*February 2025*
Proposed Cut and Fill Plan Part 4	*Maven Associates*	*B*	*February 2025*
Proposed Roading Plan	*Maven Associates*	*B*	*February 2025*
Proposed Stormwater Plan	*Maven Associates*	*B*	*February 2025*
Proposed Wastewater Plan	*Maven Associates*	*A*	*September 2024*

Report title and reference	*Author*	*Rev*	*Dated*
Civil Engineering Report	*Maven Associates*	*N/A*	*29/11/2024*
Geotechnical Assessment Report Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd	*Haigh Workman*	*N/A*	*December 2024*
Traffic Report – 39 Aucks Road, Russell	*Commute Transportation Consultants*	*N/A*	*22/11/2024*
Assessment of Landscape, Natural Character and Visual Effects	*Littotalis Landscape Architecture*	*N/A*	*December 2024*
Ecological Report	*Wild Ecology*	*N/A*	*December 2024*

Stage 1: Lot 1 – 4 and Lot 62 - 65

2. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

i. The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

ii. The survey plan shall show:

   i. All easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

   ii. The Land Covenant Area AA within Lot 4;

   iii. Any encroachment of the road onto private property to be surveyed off and vested in Council, such that the legal road boundary along the road frontage is at least 6m from the centreline of the carriageway or 2m from the edge of the carriageway whichever is the greater.

   iv. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

   v. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

   vi. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference 1944181;

   Lot 200 hereon shall be owned in perpetuity by the Residents

Association incorporated established for the purpose of managing all the common areas.
All owners of lots 1-4 and 62-65 hereon shall become members of the Residents Association incorporated.

vii. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

iii. The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site

is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy

vehicles throughout the day

- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be

protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:
  - Any pre-planting land preparation including removal/management of weeds.
  - Proposed plant species and intended locations for planting.
  - Details regarding plant sourcing.
  - Plant sizes at time of planting.
  - Density of planting and timing of planting.
  - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
  - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of

this consent;

- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

iv. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as

required by Council “Quality Assurance/Quality Control Manual – Vested Assets”. This will include nomination of a site Engineer and an “Inspection and Test Plan” for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed and constructed with culvert details, Streetscaping, road markings, signage, road pavement design and investigation report and marking to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation.

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.
- Description of Pond (wet or dry) design and internal details dimensions, cross-sectional details of the pond, including all input and output connections for all stormwater events. Details of the outlet structure at the discharge point. Minimum pipe gradients, alignments, and material specifications.

Advise Note:

- *The design and construction of the wetland pond should have consideration to Auckland Council GD01 Standard in relation to safety. The following may be required to be considered in accordance with the standard:*
- *Dense, low planting along path edges above slopes to deeper sections;*
- *If required high permanent 'pool style' fencing is around the wetland main body including all pools, inlets, outlets and pre-treatment areas;*
- *Detailed design Safety components of the wetland pond including a barrier or system to prevent children accessing the pond and the limiting depth for children height and Safety Signage for everyone;*
- *The wetland outlet to the river is to be specifically designed to limit stream erosion*.

- The drawings are to include details of all new connection and discharge points to the existing stormwater network.
- Mitigation measures for 20%, 50 % as per the requirement and 1% AEP + CC events for stormwater control for flow rate to 80% of the pre-development flows.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

v. The consent holder must provide the final certified **CMP, CTMP, APP, APMP, EMP, EPA and Management Plan** to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.

3. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 2(d)(iv) and 2(d)(v) above.

c) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 2(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 2(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

d) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 2(e) and with FNDC Engineering Standards.

e) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 2(e), from the Contractor.

f) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

   i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

   ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

   iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

   iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

   v. Details of meters including Model ID, zero reading, and the meter locations.

   vi. Information for RAMM database:

      - Compaction tests on fill under the road formation;
      - Subgrade depth, aggregate Type and source;
      - Base course depth, aggregate type and source;
      - Lime or cement stabilisation details;
      - Seal coat details including binder type/grade and residual application rate; and
      - Details of asphaltic concrete (where used).

g) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the **CTMP** to the satisfaction and approval of Council.

h) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

i) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and

pest control in accordance with the requirements of the Management Plan in Condition 2(d)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;

ii. Require all lot owners within the subdivision to be a member and/or shareholder;

iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 2(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

j) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 2(d)(v) above.

4. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

b) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

c) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

d) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m2 gross floor area,

and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

e) For all lots, future owners are advised that no physical copper telecommunication connection exists, and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

f) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered 'pre-development' in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council's Resource Consent's Engineer or delegated representative.

Advise note: If the proposed area of impermeable surfaces exceeds 700m2, a resource consent may be required. All lots.

g) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council's Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

h) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

i) On Lots 1-4 and 62-65, any future residential dwellings are to be constructed within the identified building platforms.

j) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

k) For lots 1-3, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lots is prohibited.

l) For lots 4 and 62-65, the site is identified as being within a kiwi high density zone. On all lots no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

m) A maximum of two (2) dogs may be kept per lot on Lots 1–3, subject to the following requirements:

vi. Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [4(l)(ii)] below, supported by suitable photographic evidence.

vii. The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

viii. Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 4(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

ix. Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

x. All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

n) The following ongoing conditions shall apply to Lot 200:

iv) No external dogs unless otherwise provided for under Condition 4(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

v) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

vi) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 4(l) and conditions 4m(i) and 4m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

o) For Lot 4, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AA shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

p) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

q) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the **APMP** and **EMP** approved under Condition 2(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

ii. All buildings must be single storey;

iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

r) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o

Hau.

- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Schedule 1

3. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

4. The enclosure design may include but is not limited to:

   d. A minimum height of 800mm.
   e. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.

   f. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

      i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
      ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
      iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
      iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
      v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

Stage 2: Lot 5 - 12, Lot 50 - 61

5. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

i)The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

ii)The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AB, AC, BC, CC, AD, BD, CD, AE, BE,CE, AF, BF, CF, AG, BG, AH, AI, AM, AJ, AK, AL For Lots 5, 7, 8, 10, 12, 55, 58, 59, 60, 61 and 200;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181:

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 5 - 12, Lot 50 - 61 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

iii)Provide confirmation that a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in respect of Lots 10, 12, 53, 57, 59 and 60 in favour of the adjoining recreation reserve (Lot 1 DP 161659), has been prepared and will be registered on the title of each lot. The covenant shall protect the Far North District Council from any liability to contribute toward any work on a fence between the reserve and the said adjoining Lot. The covenant is to be prepared and registered by Council's solicitor at the applicant's expense.

iv)Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

v) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance

with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.

- The Restoration Planting plan/s must be supported by a schedule detailing the following:
    - Any pre-planting land preparation including removal/management of weeds.
    - Proposed plant species and intended locations for planting.
    - Details regarding plant sourcing.
    - Plant sizes at time of planting.
    - Density of planting and timing of planting.
    - Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
    - Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture,

dated December 2024;

- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

vi) The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;

- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;

- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation.

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

vii) The consent holder must provide the final certified **CMP, CTMP, APP, APMP, EMP, EPA and Management Plan** to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.

6. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 4(e)(iv) and 4(e)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

   Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 4(f) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

   i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 4(f) of this consent.

   ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 4(f) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 4(f), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

   i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

   ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

   iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

   iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

   v. Details of meters including Model ID, zero reading, and the meter locations.

   vi. Information for RAMM database:

      - Compaction tests on fill under the road formation;
      - Subgrade depth, aggregate Type and source;
      - Base course depth, aggregate type and source;
      - Lime or cement stabilisation details;
      - Seal coat details including binder type/grade and residual application rate; and

h) Details of asphaltic concrete (where used). Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 4(e)(vi). As a minimum, the entity managing these communal areas shall:

   i. Be registered under the Incorporated Societies Act 1908;

   ii. Require all lot owners within the subdivision to be a member and/or shareholder;

   iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

   iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

   v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 5(j) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

   vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 4(e)(v) above.

7. **Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:**

   a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

   b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

   c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

   d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

   e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered ‘pre-development’ in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m^2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council’s Resource Consent’s Engineer or delegated representative.

   f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council’s Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

   g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

   h) On Lots 5-6 and Lot 8-9, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) For lots 6, 7, 9, 11 and 50-61, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k) For lots 5, 8, 10, and 12 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l) A maximum of two (2) dogs may be kept per lot on Lots 6,7,9,11 and 50–61, subject to the following requirements:

ii) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [7(l)(ii)] below, supported by suitable photographic evidence.

ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1**; or;
- An electronic pet containment fence or an equivalent wireless system.

iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 4(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m) The following ongoing conditions shall apply to Lot 200:

iv) No external dogs unless otherwise provided for under Condition 7(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

v) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

vi) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 7(l) and conditions 7m(i) and 7m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

n) For Lots 5, 7, 8, 10, 12, 55, 58, 59, 60, 61 and 200, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AB, AC, BC, CC, AD, BD, CD, AE, BE,CE, AF, BF, CF, AG, BG, AH, AI, AM, AJ, AK, AL shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

o) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

p) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 4(e) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

q) On Lots 5-6 and Lot 8-9, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 4(e)(iv) of RC2250266 which includes, without limitation the following:

i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

ii. All buildings must be single storey;

iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building

is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

Advise note: All buildings must be single storey. Note: this does not preclude split level buildings.

r) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Schedule 1

3. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

4. The enclosure design may include but is not limited to:

    d. A minimum height of 800mm.
    e. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
    f. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

        vi. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
        vii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
        viii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
        ix. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
        x. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

xi.

Stage 3: Lot 39-49

8. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AR, AQ, AS, AP, AT, AO, AU, BO, NB and AV within Lot 45, 46, 47, 48 and 49;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181):

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 39-49 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to

Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall

notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).

- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:

- Any pre-planting land preparation including removal/management of weeds.
- Proposed plant species and intended locations for planting.
- Details regarding plant sourcing.
- Plant sizes at time of planting.
- Density of planting and timing of planting.
- Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
- Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (OEMP) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;

- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

ix. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards

- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

9. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve (Lot 1 DP 161659).

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 6(d)(iv) and 6(d)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or

construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 6(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 6(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 6(e) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 6(e), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

- Compaction tests on fill under the road formation;
- Subgrade depth, aggregate Type and source;
- Base course depth, aggregate type and source;
- Lime or cement stabilisation details;
- Seal coat details including binder type/grade and residual application rate; and
- Details of asphaltic concrete (where used).

h) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction

vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 6(d)(vi). As a minimum, the entity managing these communal areas shall:

   i. Be registered under the Incorporated Societies Act 1908;
   ii. Require all lot owners within the subdivision to be a member and/or shareholder;
   iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;
   iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;
   v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 7(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;
   vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 6(d)(v) above.

10. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for

foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered ‘pre-development’ in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council’s Resource Consent’s Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council’s Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 44-49, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) For lots 39-45, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k) For lots 46-49 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids)

which have the potential to be kiwi predators.

l) A maximum of two (2) dogs may be kept per lot on Lots 39-45, subject to the following requirements:

vi) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [10(l)(ii)] below, supported by suitable photographic evidence.

vii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

viii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 10(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

ix) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

x) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m) The following ongoing conditions shall apply to Lot 200:

iv) No external dogs unless otherwise provided for under Condition 10(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

v) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

vi) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 10(l) and conditions 10m(i) and 10m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated

monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

n) For Lot 45, 46, 47, 48 and 49, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AR, AQ, AS, AP, AT, AO, AU, BO, NB and AV within shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

o) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

p) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 6(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

q) On Lots 44-49, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 6(d)(iv) of RC2250266 which includes, without limitation the following:

    ii. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

    iii. All buildings must be single storey;

    iv. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

    v. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

    vi. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

    vii. Any planting within 20 meters of a building or accessway must consist of low flammability species;

    viii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

    Advise note: All buildings must be single storey. Note: this does not preclude split level buildings.

r) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Schedule 1

3. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

4. The enclosure design may include but is not limited to:

    d. A minimum height of 800mm.
    e. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
    f. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

    l. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
    li. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
    lii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
    liii. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
    liv. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

lv.

Stage 4: Lot 13-20 and 22-24

11. Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall* prepared by Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area AY, BY, NI, CW. AX, NH, GA, GB, GC, NG, AW, BW and NA within Lot 13,19, 22, 23 and 45;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181):

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lot 13-20 and 22-24 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

i. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;

- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).
    - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are

undisturbed, and the site is safe. Work may continue outside the buffer area.

- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

ii. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

iii. An Amenity Planting Plan (**APP**) prepared by a suitably qualified and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

iv. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ‘‘Mitigation Amenity Planting’ and the ‘Low Riparian Mitigation/Amenity Planting’ illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

v. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:
    - Any pre-planting land preparation including removal/management of weeds.
    - Proposed plant species and intended locations for planting.
    - Details regarding plant sourcing.
    - Plant sizes at time of planting.
    - Density of planting and timing of planting.

- Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
- Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

vi. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

vii. An Ongoing Environmental Management Programme (OEMP) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

viii. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;
- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

ix. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;
- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC

Engineering Standards;

- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

12. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for a fencing covenant pursuant to Section 5 of the Fencing Act 1978 in favour of the adjoining recreation reserve 5855 Russell Whakapara Road, Russell.

b) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 8(d)(iv) and 8(d)(v) above.

c) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

d) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 8(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

i. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 8(e) of this consent.

ii. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

e) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 8(e) and with FNDC Engineering Standards.

f) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 8(e), from the Contractor.

g) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

   i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

   ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

   iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

   iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

   v. Details of meters including Model ID, zero reading, and the meter locations.

   vi. Information for RAMM database:

s) Compaction tests on fill under the road formation;

t) Subgrade depth, aggregate Type and source;

u) Base course depth, aggregate type and source;

v) Lime or cement stabilisation details;

w) Seal coat details including binder type/grade and residual application rate; and

x) Details of asphaltic concrete (where used).

h) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

i) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

j) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 8(d)(vi).

As a minimum, the entity managing these communal areas shall:'

i. Be registered under the Incorporated Societies Act 1908;

ii. Require all lot owners within the subdivision to be a member and/or shareholder;

iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;

iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

v. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 8(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

vi. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

k) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 8(d)(v) above.

13. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross

floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered 'pre-development' in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m^2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council's Resource Consent's Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council's Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 13–19, Lots 22–23, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) For lots 13-20, 22 and 24, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k) For lot 23 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l) A maximum of two (2) dogs may be kept per lot on Lots 13-20, 22 and 24, subject to the following requirements:

   i) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:

      - The dog's registration details, including its registration number; and
      - Confirmation of the containment measures implemented in accordance with Condition [13(l)(ii)] below, supported by suitable photographic evidence.

   ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's

Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;
- An electronic pet containment fence or an equivalent wireless system.

iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 13(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request..

m) The following ongoing conditions shall apply to Lot 200:

iv) No external dogs unless otherwise provided for under Condition 13(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

v) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:

- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area

vi) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 13(l) and conditions 13m(i) and 13m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

n) For Lots Lot 13,19, 22, 23 and 45, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area AY, BY, NI, CW. AX, NH, GA, GB, GC, NG, AW, BW and NA within shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

o) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

p) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following the Council's approval of the works under the APMP and EMP approved under Condition 8(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

q) On Lots 13–19, Lots 22–23, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 8(d)(iv) of RC2250266 which includes, without limitation the following:

i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

ii. All buildings must be single storey;

iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

Advise note: If the proposed area of impermeable surfaces exceeds 700m2, a resource consent may be required. All lots.

r) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

- All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
- The Contractors/ Works Supervisor/Consent Holder shall notify

local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).

- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.
- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Schedule 1

3. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

4. The enclosure design may include but is not limited to:

    n. A minimum height of 800mm.
    o. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
    p. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

        vi. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
        vii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
        viii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
        ix. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
        x. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

xi.

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Stage 5: Lot 21, and 25-38

14. The Prior to the sealing of the Survey Plan pursuant to Section 223 the following Conditions shall be complied with:

a) The survey plan shall be generally in accordance with the plan of subdivision titled *Proposed Scheme Plan Overall prepared by* Maven Associates, Revision E and dated March 2025 as attached to this decision.

b) The survey plan shall show:

i. All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved;

ii. The Land Covenant Area GH, GG, NG, GI, GJ, NK, GK, GL, NN, GM, GN, GO, NC, NF within Lot 25,32,33,38 and 39;

iii. Easements over services and overland stormwater flow paths where such infrastructure is located on private property shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

iv. Easements over off-road formed tracks in general accordance with 'Proposed Scheme Plan Overall Staging' prepared by Maven Associates, referenced Rev E, dated 03/2025 shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved to the approval of Council's Resource Consent Engineer;

v. The following amalgamation Conditions shall be endorsed on the survey plan (LINZ request reference1944181:

Lot 200 hereon shall be owned in perpetuity by the Residents Association incorporated established for the purpose of managing all the common areas.

All owners of lots 21 and 25-38 hereon shall become members of the Residents Association incorporated.

vi. The survey plan shall show all necessary easements for the provision of access, drainage and utility services to all lots.

c) Provide evidence that a preferred road name and two alternatives for the private access have been supplied to the Far North District Council Administration Officer, Infrastructure & Asset Management Department for approval.

Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the Area. Information and advice on applying for road naming can be sought from the FNDC website, https://www.fndc.govt.nz/Services/Transport/roads/road-naming-and-renaming. The road naming application should use the form on the FNDC website and be submitted to roadingalliance@fndc.govt.nz.

d) The consent holder shall provide the following documents to the Council for review and certification by Council's Resource Consent Engineer or delegated representative before works commence on the site:

ix. A Construction Management Plan (**CMP**) shall be provided to Council's Development Engineer, or their delegated representative for certification, and shall include:

- Details of the site manager including full contact details;
- Details of the supervising engineer;
- Details of the successful contractor;
- The timing of construction works, including hours of work, key project and site management personnel;
- A traffic management plans, specifically in relation to any Council roads affected by works;
- A copy of the Corridor Access Request (CAR) and road opening notice issued for Council owned and maintained roads;
- Details of how construction materials will be moved to and from the site, including vehicle access through marked entry and exit points, and how materials will be loaded and unloaded;
- Proposed procedures for controlling sediment runoff and dust generation;
- Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
- All buried services within the road boundary shall be located, marked and adequately protected prior to any works commencing.
- Proposed restabilising process to ensure re-grass of any exposed areas that aren't covered by aggregate that are exposed as a result of earthworks within six weeks;
- Measures to ensure no land will deteriorate or will remain in such a Condition that it would, in the opinion of the Council, visually detract from the amenities of the property, or adjoining properties, or the neighbourhood;
- Programme of works;
- Proposed hours of work on the site;
- The CMP shall include a section relating to an "Accidental Discovery Protocol" to be applied during earthworks and construction works for the proposed subdivision. This shall acknowledge that all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced. If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction or earthworks:
    - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
    - The Contractors/ Works Supervisor/Consent Holder shall

notify the Area Archaeologist of Heritage NZ (HNZ) – Pouhere Taonga (Northland Office), relevant local iwi and hapū Far North District Council and any required statutory agencies (e.g., NZ Police for human skeletal remains).

- The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
- If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga to local iwi / hapū.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- If burials, human remains/koiwi tangata are uncovered, the bullet points above shall apply.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with; and

- The consent holder shall adhere to the terms of the certified Construction Management Plan at all times during the construction of the development.

x. The consent holder shall obtain and implement a Traffic Management Plan approved by Council prior to undertaking any works within or adjacent to Council's Road reserve The Traffic Management Plan shall be prepared by a certified Temporary Traffic Management Planner (**TTMP**) as validated on their Code of Practice for Temporary Traffic Management (**CoPTTM**) ID certification. A copy of the approved plan shall be submitted to the Manager of Engineering at Council or other duly delegated officer prior to works commencing.

The CTMP shall contain information about and site management procedures for:

- establishing a parking management plan for construction traffic
- measures to address the transportation and parking of oversize vehicles (if any)
- identifying the proposed number and timing of heavy vehicles throughout the day
- identifying the location of heavy vehicle and construction machinery access to the site;
- requiring and ensuring heavy traffic to avoid using Lanes Road access and depart the site.
- All physical works on site shall be undertaken in accordance with the approved CTMP.

xi. An Amenity Planting Plan (**APP**) prepared by a suitably qualified

and experienced landscape architect. The purpose of the APP is to provide detail of 'Mitigation Amenity Planting' and 'Low Riparian Mitigation/Amenity Planting' as illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 which is to be carried out by the consent holder prior to certification pursuant to s224 of the RMA. The APP shall as a minimum include the following:

- A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting, height and density upon maturity;
- Identification of the ecological covenant areas;
- A programme of establishment and post establishment protection and maintenance (e.g., planting method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme);
- Details of weed management; and
- Details of the final location of the off-road pedestrian walkways through the site.

xii. An Amenity Planting Maintenance Plan (**APMP**) prepared by a suitably qualified and experience landscape architect. The purpose of the APMP is to provide clear direction to the consent holder, Council and future lot owners as to how to maintain and manage the ''Mitigation Amenity Planting' and the 'Low Riparian Mitigation/Amenity Planting' illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024 on an ongoing basis so as to ensure the mitigation the planting is retained. The plan shall provide details of ongoing maintenance and monitoring requirements including (but not limited to):

- A plan of the planted areas detailing plant species and process for replacement of dead or poorly performing plants, noting that any replacements must be eco-sourced.

xiii. An Ecological Management Plan (**EMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology dated December 2024 in support of the application. The purpose of the EMP is to provide clear direction to the consent holder and Council of the restoration planting to be carried out prior to certification pursuant to s224 of the RMA within areas illustrated on the Landscape Integration Concept provided by Littoralis Landscape Architecture referenced as 1348_LIC_20241202 dated 02/12/2024. These areas are to be protected and managed by way of covenant and consent notice Condition. To ensure the long-term environmental benefit objectives are achieved, the EMP shall as a minimum include the following:

- A Restoration Planting plan or plans detailing the restoration planting to be undertaken in the ecological environmental benefit covenant areas shown on the approved subdivision scheme plan.
- The Restoration Planting plan/s must be supported by a schedule detailing the following:

- Any pre-planting land preparation including removal/management of weeds.
- Proposed plant species and intended locations for planting.
- Details regarding plant sourcing.
- Plant sizes at time of planting.
- Density of planting and timing of planting.
- Height and density upon maturity. Planting shall be provided within the areas identified as being subject to esplanade strips.
- Details regarding the removal or management of all invasive weed species and their replacement with native, eco-sourced species that will enhance ecological values of local habitat.

xiv. A fencing plan showing stock-proof fencing along the external boundaries of the development site where such fencing does not already exist.

xv. An Ongoing Environmental Management Programme (**OEMP**) prepared by a suitably qualified and experienced ecologist in accordance with the information provided by Wild Ecology in support of the application. The purpose of the OEMP is to provide clear direction to the consent holder, Council and future owners of allotments how to manage the covenanted ecological covenant areas, so as to ensure that the long-term environmental benefit is achieved. Where possible, the covenanted areas should be managed collectively as one ecological benefit area. As a minimum the OEMP shall include the following:

- Details of proposed measures to control pests including, but not limited to, rats, mustelids, opossums and freshwater pests. The purpose of the pest control is to ensure, as far as practicable, that the ecological gains of the ecological covenant area are not compromised.
- Safe control trapping measures are to be implemented such as the use of live capture cages to minimise risk to domestic pets.

xvi. A finalised Management Plan to Council's Resource Consent Principal Planner or other duly delegated officer for certification. This document must be in general accordance with the draft document, dated 12 December 2024, prepared by Barker & Associates Ltd and attached to this consent. In the event of a conflict between these Conditions and the approved draft management plan these Conditions shall prevail. The Document shall include:

- Reference to the documents in Condition 2(d)(i)- 2(d)(iv) of this consent;
- Details on the ongoing protection and management of archaeological site Q05/1269;
- Methods to facilitate pedestrian access within the subdivision;
- Building height and material controls in general accordance with the Assessment of Landscape, Natural Character and Visual Effects' prepared by Littotalis Landscape Architecture, dated December 2024;
- Requirements for the ongoing maintenance of roads, accessways, and other shared infrastructure;

- Details in relation to the management of the balance allotment;
- Regular maintenance and monitoring of the ecological management areas;
- Details of pest and weed control management measures and ongoing management; and
- Any other matters relevant for the management of the allotments.

x. The consent holder shall submit a detailed set of **engineering plans**, specifications and calculations, prepared in accordance with Council's Engineering Standards Engineering Standards & Guidelines, Version 0.6 May 2023 to the Council's Development Engineer, or their delegated representative for approval.

The engineering plans, calculations and specifications shall include, but may not be limited to the following:

- Plans must be prepared in general accordance recommendations of the Geotechnical Assessment Report, titled 'Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd' prepared by Haigh Workman and dated December 2024 unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Plans need to be prepared noting recommendations of insert Site Suitability report reference if required unless an alternative engineering report prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council.
- Shall reference the recommendations made within "the Wastewater Feasibility Report 'prepared by GWE Consulting Ltd (GWE), Ref: J5962, date: 29 November 2024, Civil engineering report, date 29/11/2024, rev A and Stormwater Modelling report, date 29/11/2024, rev A, Project 309001, Maven engineering

  Note: All plans shall clearly indicate assets that are to be vested in Council and assets that are to remain in private ownership including road footpath trail and all services.
- All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar.
- The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Resource Consent Engineer before any works commence.

Roading

- Detailed engineering designs (including structural designs), plans and drawings of all new road infrastructure;
- The new and/or amended vehicle crossings from Lane Road for all lots shall be designed to FNDC Engineering Standards
- Details of JOAL 1 to 6 and ROW (including passing bays, dimensions, formation, material, culvert;

- Turning head details, material specification, and a minimum thickness, culvert details, location of services within carriageway;
- Details of trail (offroad footpath inside the subdivision) material specification, width, slopes and formation

Stormwater

- A Chartered Professional Engineer certifying the PS1 on design and construction work are in accordance with FNDC Engineering Standards;
- Stormwater and Flood Risk Management infrastructure, attenuation designs, plans and drawings of all stormwater infrastructure as per chapter 4 of engineering standard 2023;
- The proposed private stormwater discharge and details of impermeable surface from the whole development, the proposed road, access lots and private property to the discharge point located;
- Provision for pre and post overland flow paths;
- Internal road drainage and discharge to CMA;
- Rainfall information (provide the snip of the niwa value used for calculation. Also use the current value as describe in the table 4.1);
- Pond capacity, swale capacity and culvert capacity;
- Flood control assessment model, detention requirement, details of earth bund formation; and
- A Streamworks Management Plan and a Fish Management Plan in accordance with the Ecological Assessment provided with the application by Wild Ecology and dated December 2024.

Earthworks

- The quantity and height of earthworks, including retaining structures; and
- Details on the temporary battering of excavations and fill.

15. Before a Certification is issued pursuant to section 224(c) of the Act, the following Conditions are to be complied with:

a) Provide confirmation from a suitably qualified experienced professional that all planting and landscaping works on site are completed in accordance with the APMP and EMP approved under Conditions 10(d)(iv) and 10(d)(v) above.

b) Provide evidence that the cost of purchasing and installing a road name sign for the Private Access has been paid to Council contractors:

Northern Area – Fulton Hogan (09) 408 6440 or Southern Area – Ventia (09) 407 7851.

c) The Chartered Professional Engineer certifying the PS4 on design and/or construction works shall ensure that the design and construction work are in undertaken in accordance with the above approved plans as outlined in Condition 10(e) to the approval of the Resource Consent Engineer. Compliance with this Condition shall be determined by:

iii. Site inspections undertaken as agreed in Council's engineering plan approval letter for the engineering plans as required by Condition 10(e) of this consent.

iv. A PS4 Certificate of Completion and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards.

d) The contractor providing the (PS3) certificate of completion of the work shall ensure and provide evidence that all construction works on the site are to be undertaken in accordance with the approved plans Condition in 223 Condition 10(e) and with FNDC Engineering Standards.

e) Certificate of Completion of Resource Consent Works" describing all the works mentioned in Condition in 223 Condition 10(e), from the Contractor.

f) As-built information, Road Assessment and Maintenance Management (RAMM) data and test results in accordance with the requirements of the latest FNDC Engineering Standards are to be submitted to Council on completion of the works. Provide as-built plans which are to include the following information:

i. Drawings showing the location of all underground services, including coordinates of hydrants, valves and manhole lids and levels of manhole inverts and lids to Department of Survey and Land Information (DOSDLI) datum. This information is also to be provided in a digital format to enable it to be added to Council's GIS data base.

ii. Stormwater overland flow paths including the extent and level of floodwater for a storm event with a 1% AER.

iii. As built drawings and asset data sheets for stormwater private assets are to be submitted in separate sets of documents.

iv. A schedule of assets, listing the quantity the unit rate and the value of each of the components (this information is required for valuation purposes).

v. Details of meters including Model ID, zero reading, and the meter locations.

vi. Information for RAMM database:

y) Compaction tests on fill under the road formation;

z) Subgrade depth, aggregate Type and source;

aa) Base course depth, aggregate type and source;

bb) Lime or cement stabilisation details;

cc) Seal coat details including binder type/grade and residual application rate; and

dd) Details of asphaltic concrete (where used).

g) Provide evidence from a SQEP that the construction work is completed without any dirt or debris tracked on to public roads, any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site. No parking of construction vehicles on Council roads shall be permitted. The consent holder shall be responsible for the dirt or debris tracked on to public roads shall be cleaned up or repairs to any damage to road carriageways, berms, footpath and kerb and channel caused during earthworks or construction activities on the site, within stipulated timeframes in the CTMP to the satisfaction and approval of Council.

h) Electricity connections shall be provided to the boundary of the net site area of all lots. All cabling shall be underground. The consent holder shall provide confirmation from the network utility supply authority/authorities of compliance with this Condition.

i) The consent holder shall provide suitable documentation to confirm that a suitable legal entity will be responsible for managing and maintaining the common areas, including the roading and, where relevant, the stormwater systems and

enhancement planting and bush protection areas and weed and pest control in accordance with the requirements of the Management Plan in Condition 10(d)(vi). As a minimum, the entity managing these communal areas shall:

i. Be registered under the Incorporated Societies Act 1908;
ii. Require all lot owners within the subdivision to be a member and/or shareholder;
iii. Set out that the purpose of the entity is to manage, complete ongoing maintenance and all repairs of the internal roading and access network, including all mitigation plantings and stormwater management measures, and communal facilities;
iv. Managing and monitoring the 5-years maintenance and monitoring of the ecological management areas in accordance with the Ecological Assessment prepared by Wild Ecology dated December 2024;

i. Ensuring that funding mechanisms are in place and operational for the purpose of achieving Condition 11(i) above, including ensuring it is mandatory for all owners within the development to join the Incorporated Society (or equivalent), and that a sinking fund is available to adequately fund these responsibilities;

ii. Provide a solicitor's undertaking to register the approved legal document against the appropriate titles for Roading, Stormwater Management Operator to apportion future maintenance and upgrading costs of the commonly owned stormwater system amongst the owners and communal area of the site. The document shall also include the details of periodically undertaken Operation and Maintenance Audits of the stormwater management devices.

j) The consent holder shall prepare and register a suitable covenant, which may be a Conservation covenant(s) in accordance with section 77 of the Reserves Act 1977, an open space covenant under the Queen Elizabeth the Second National Trust Act 1977, or a private bush protection covenant, against the titles of the land depicted on the Survey Plan as being subject to a covenant. The terms of any such covenant shall provide for on-going protection of the environment benefit provided within the development and shall specifically provide for ongoing weed and pest control, replacement and enhancement planting in accordance with documentation provided under Condition 10(d)(v) above.

16. Consent Notices pursuant to section 221 of the RMA shall be prepared for registration against the affected lots identified below. The consent notices shall draw attention to and require compliance with respect to the following matters:

a) For all lots, at the time of building consent for any structure, a site-specific geotechnical investigation shall be undertaken by a Chartered Professional engineer (CPEng Geotechnical) and a suitable report provided to the Far North District Council. That report shall have regard to any stability risk and provide site-specific geotechnical assessment for foundation design within each lot. The site-specific assessment shall take into account the Conclusions and Recommendations of the Geotechnical Assessment Report produced by Haigh Workman Limited, dated December 2024, project reference 23 020.

b) For all lots, at the time of lodging a building consent for a habitable building on the lot, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 or latest standard requirements.

c) For all lots, in addition to potable water supply a suitable dedicated fire fighting water supply is to be confirmed as part of any building consent for a habitable building on any lot. A minimum of 10,000 litres is to be dedicated for firefighting where any new dwelling is less than 200m^2 gross floor area, and minimum of 20,000 litres is to be dedicated for any dwelling exceeding 200m^2 gross floor area. For avoidance of doubt, the water supply is

required to meet the criteria of the Code of Practice for firefighting water supplies (SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice).

d) For all lots, future owners are advised that no physical copper telecommunication connection exists and only wireless telecommunications is available. Far North District Council will not be responsible for ensuring nor providing telecommunication connections to these lots.

e) For all lots, the subdivision provides attenuation for any impermeable areas from right of way carriageway within the lot. The right of way carriageway shall be considered 'pre-development' in stormwater attenuation calculations. The subdivision provides a resource consent for up to a maximum of 700m2 impermeable surfaces coverage on each Lot in addition to any right of way carriageway. This maximum can be exceeded, provided that suitable further attenuation is provided as confirmed by a design and statement from a Chartered Professional Engineer, to the certification of Council's Resource Consent's Engineer or delegated representative.

f) For all lots, overland/secondary flowpaths capable of accommodating the 1% AEP storm event (including existing downstream flowpaths of the proposed development) are to be submitted to Council's Resource Consents Engineer or delegated representative for certification. Diversion or filling in of existing overland flow paths shall not cause or worsen flooding effects on downstream properties.

g) For all lots, without the prior approval of the Council, no building shall be erected, nor any works which increase impermeable surfaces be undertaken, nor any planting or structure placed which may create a flow obstruction, on any area of the site which has been proposed as a secondary / overland (Q100) flow path.

h) On Lots 25-34, any future residential dwellings are to be constructed within the identified building platforms.

i) For all lots, at the time of lodging a building consent for a residential dwelling, the lot owner shall provide evidence to illustrate that a minimum of two 22,500 litre tanks will be available on site for potable and non-potable supply to the future dwelling.

j) For lots 21 and 26-38, the keeping of pet cats, mustelids, exotic fish, birds, rodents, and turtles on the lot is prohibited.

k) For lot 25 no occupier of, or visitor to the site, shall keep or introduce to the site carnivorous or omnivorous animals (such as cats, dogs or mustelids) which have the potential to be kiwi predators.

l) A maximum of two (2) dogs may be kept per lot on Lots 21 and 26-38 subject to the following requirements:

i) Prior to keeping any dog(s) on the lot, the lot owner must provide the following information to the Residents' Association:
- The dog's registration details, including its registration number; and
- Confirmation of the containment measures implemented in accordance with Condition [16(l)(ii)] below, supported by suitable photographic evidence.

ii) The lot owner must ensure any dog on the lot is securely contained at all times to prevent roaming. Containment measures must be demonstrated to the Council's Team Leader for Monitoring and Compliance satisfaction, and may include:

- Full dog proof fencing of the allotment or suitably sized area within the curtilage of the residential unit on the allotment in accordance with the requirements outlined in **Schedule 1;** or;

- An electronic pet containment fence or an equivalent wireless system.

iii) Lot owners must provide annual proof of compliance with secure containment measures outlined in Condition 16(l)(ii) to the Residents' Association, or upon request from either the Residents' Association or Council's Team Leader for Monitoring and Compliance.

iv) Any dog outside of its approved secure containment area must be kept on a lead and under the direct control of its owner at all times, including on footpaths, roadways, and communal areas administered by the Residents' Association.

v) All dogs kept on the lots must undergo certified kiwi aversion training. This training must be refreshed at regular intervals, at a minimum of once every 12 months, or as otherwise directed by the Council's Team Leader for Monitoring and Compliance. Proof of initial and ongoing refresher training must be provided to the Resident's Association, who will provide an annual report to the Council's Team Leader for Monitoring and Compliance, or upon request.

m) The following ongoing conditions shall apply to Lot 200:

iv) No external dogs unless otherwise provided for under Condition 16(l) are permitted to visit or be contained on the site. The Resident's Association and owner of each lot must ensure that any visitor(s) to the lot or communally owned land are advised of this restriction and that such visitors comply with this restriction.

v) The Residents' Association must install and maintain permanent signage at key entry points and communal areas within the development advising residents of:
- Lead Control Areas,
- The kiwi high-density area designation, and
- The requirement for dogs to be on a lead at all times when outside their secure containment area.

vi) The Residents' Association must undertake ongoing monitoring to ensure compliance with secure containment requirements under Condition 16(l) and conditions 16m(i) and 16m(ii) above. An annual report must be provided to the Council's Team Leader – Monitoring and Compliance, with any associated monitoring fees pursuant to Section 36 of the Resource Management Act 1991 payable by the lot owners.

n) For Lot 25,32,33,38 and 39, the owner shall preserve the indigenous trees and bush as indicated on the survey plan, as area GH, GG, NG, GI, GJ, NK, GK, GL, NN, GM, GN, GO, NC, NF shall not without the prior written consent of the Council and then only in strict compliance with any Conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

o) For all lots, lot owners shall comply with the Northland Plant Pest Management Strategy (NPPMS) and the National Pest Plant Accord (NPPA). All known pest plant species on-site must be excluded or controlled as necessary. No pest species shall be planted as part of landscaping. The dumping of green or garden waste into the ecological management areas is prohibited.

p) For all lots, all future lot owners must ensure regular maintenance and monitoring of the ecological management for a period of five years following

the Council's approval of the works under the APMP and EMP approved under Condition 10(d) of RC2250266. The maintenance and monitoring must be undertaken in accordance with Ecological Assessment prepared by Wild Ecology dated December 2024 by a suitably qualified experienced person.

q) On Lots 25-34, the owner of each lot shall be required at all times to comply with all aspects of the final management plan approved under Condition 10(d)(iv) of RC2250266 which includes, without limitation the following:

   i. All buildings and structures shall be limited to a maximum height of 5 meters above finished ground level or natural ground level (whichever is the lesser) based upon the centre-point of the building area, established by the common junction point achieved by projecting a symmetrical inward line from each of the corners of the defined building area;

   ii. All buildings must be single storey;

   iii. Applied finishes of buildings must have a maximum Light Reflectance Value ("LRV") of 30%, or utilise dark, recessive natural materials with a comparable ("LRV"). Mirrored glazing is prohibited. This provision does not apply to minor architectural elements such as flues and aerials;

   iv. Blinds, curtains and other window coverings must be moderately dark with an LRV of no more that 40%;

   v. Hedges, shelterbelts, and other linear or geometric planting patterns are not permitted.

   vi. Any planting within 20 meters of a building or accessway must consist of low flammability species;

   vii. Exterior lighting must be subdued, with fittings designed to prevent the light source from being visible beyond the allotment on which the building is located (e.g., using downlights in soffits instead of wall-mounted lighting and avoiding landscape lighting). Floodlighting and spotlights are prohibited.

r) For all lots, the future lot owners are advised all archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under the Act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effects cannot be practiced.

   If subsurface archaeological evidence or cultural materials (shell, midden, hangi, storage pits, etc.) should be unearthed during construction:

   - All work in the site will cease immediately. The Contractors/ Works Supervisor/Consent Holder shall shut down all equipment and activities.
   - The Contractors/ Works Supervisor/Consent Holder shall notify local iwi / hapū, Far North District Council, and the commissioned Archaeologist (representing HNZ) and any required statutory agencies (e.g., NZ Police for human skeletal remains).
   - The Contractors/ Works Supervisor/Consent Holder shall ensure a buffer zone of 10 metres is roped or marked around the archaeological remains and that the remains are undisturbed, and the site is safe. Work may continue outside the buffer area.
   - If the material or materials are confirmed to be Taonga tūturu of Māori origin, additional engagement between local iwi / hapū, Far North District Council, and the commissioned Archaeologist

(representing HNZ) to discuss Manatū Taonga - Ministry for Culture and Heritage Taonga Tūturu protocols and the expenditure process for the return of Taonga Tūturu to Te Uri o Hau.

- If burials, human remains/koiwi tangata are uncovered, the above bullet points shall apply.
- Works in the area shall not commence until all cultural and statutory requirements have been met.
- All parties will work together towards the recommencement of site works in the shortest possible timeframe while ensuring that archaeological and cultural requirements have been complied with.

Schedule 1

1. The secure dog containment enclosure ("the enclosure") must be of a height and design, including specification of vertical and horizontal gaps, to prevent escape by dogs through, under or over the enclosure.

2. The enclosure design may include but is not limited to:

    a. A minimum height of 800mm.
    b. A return back, lean-in or L-header at the upper section of the structure that is placed at an angle and protrudes inwards from the structure that deters climbing and prevents dogs from landing on or holding onto the return.
    c. An L-footer, vertical footer or obstruction below ground level, sufficient to prevent undermining of the structure. This might be comprised of:

        i. A concrete, metal rod system or suitably treated timber nib to penetrate vertically downwards a minimum 400mm below ground level directly beneath the bottom edge of the structure; and/or
        ii. A concrete buttress or suitably treated timber nib dug down into the ground and returning horizontally inwards from the bottom edge of the structure a minimum of 400mm; and/or
        iii. Burying chicken wire or equivalent in a flat shallow trench under the structure, with a minimum 500mm of mesh on the inside of the structure.
        iv. The enclosure must be lockable in a manner that prevents any dog or small child from activating or opening the gate or door.
        v. The enclosure must be constructed of durable materials and be easily accessible for maintenance.

vi.

Subdivision Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *A survey plan is submitted to Council for approval under section 223 of the RMA before the lapse date, and that plan is deposited within three years of the date of approval of the survey plan in accordance with section 224(h) of the RMA; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

Section 224 Certification

2. *A Section 224 Certificate will not be issued until all Council invoices, including engineering fees and any other costs associated with the Resource Consent have been paid in full.*

General Advise Notes

3. *This consent has been granted on the basis of all the documents and information provided by the consent holder, demonstrating that the new lot(s) can be appropriately serviced (infrastructure and access).*

4. *The Consent Holder shall pay all charges set by Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring, inspection and supervision charges relating to the Conditions of this resource consent. The applicant will be advised of the charges as they fall.*

5. *The consent holder is advised to engage with a suitably qualified experienced person to ensure pedestrian walkways through the proposed ecological covenant areas comply with the National Environmental Standards for Freshwater (2020).*

6. *The consent holder is advised that earthworks is assessed under NRC Consent AUT.046280.01.01, AUT.046280.02.01, AUT.046280.03.01 and FNDC has not assessed or imposed earthworks Conditions.*

Land Use Conditions

Pursuant to sections 108 of the Act, this land use consent is granted subject to the following Conditions:

1. **The activity shall be carried out in accordance with the application formally received by Far North District Council ("Council") on X December 2025, and the plan(s) and documents as follows:**

Plan title and reference	***Author***	***Rev***	***Dated***
Landscape Integration Concept. Ref: 1348_LIC_20241202	*Lttoralis Landscape Architecture*	*N/A*	*02/12/2024*
Proposed Roading Plan	*Maven Associates*	*B*	*February 2025*

Proposed Stormwater Plan	*Maven Associates*	*B*	*February 2025*
Proposed Wastewater Plan	*Maven Associates*	*A*	*September 2024*
Report title and reference	***Author***	***Rev***	***Dated***
Civil Engineering Report	*Maven Associates*	*N/A*	*29/11/2024*
Geotechnical Assessment Report Proposed Subdivision 39 Aucks Road, Russell for Williowridge Developments Ltd	*Haigh Workman*	*N/A*	*December 2024*
Traffic Report – 39 Aucks Road, Russell	*Commute Transportation Consultants*	*N/A*	*22/11/2024*
Assessment of Landscape, Natural Character and Visual Effects	*Littotalis Landscape Architecture*	*N/A*	*December 2024*
Ecological Report	*Wild Ecology*	*N/A*	*December 2024*

Land Use Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *The consent is given effect to; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

General Advice Notes

Right of Objection

2. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

3. *During the assessment of your application it was noted that a private Land Covenant exists on your property. Council does not enforce private land covenants, and this does not affect Council approving your plans. However, you may wish to get independent legal advice, as despite having a resource consent from Council, the private land covenant can be enforced by those parties specified in the covenant.*

4. *The site is in close proximity to an unsealed road (Lane Road). Unsealed roads have been shown to create a dust nuisance from vehicle usage. It is advised that the dwelling is either located as far as possible or at least 80m from the road, and/or boundary planting within the site is utilised to assist with this nuisance. Alternatively the applicant may consider sealing their road frontage to remove the issue.*

5. *The Consent Holder shall pay all charges set by Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring, inspection and supervision charges relating to the Conditions of this resource consent. The applicant will be advised of the charges as they fall.*

6. *Any work activity, excavation and non- excavation carried out in the road reserve, must lodge formal notice if intention to carry out Works, in the form of a Corridor Access Request, submitted to the Corridor Manager for Approval.*

   A Corridor Access Request (CAR) is an application for a permit to carry out works within the road reserve, this is defined in the National Code of Practice for Utilities access to the transport Corridors and has been adopted by Council.

   A Traffic Management Plan (TMP) must be uploaded with the CAR submission, describing the proposed works, design, setup, and removal of any activity being carried out within the road Reserve. A Work Access Permit (WAP) and reasonable Conditions will be issued once TMP is Approved. Enquiries as to its use may be directed to Council's Road Corridor Manager, corridor.access@fndc.govt.nz.

7. *Permits are required for drilling any bores in Northland. Therefore, resource consent will need to be gained from the Northland Regional Council if water is obtained in this way. If a bore is to be constructed, all areas used for sewage effluent disposal and reserve effluent disposal areas must be at least 20 metres away from any groundwater bore.*

8. *All earthworks are required to comply with the Northland Regional Council Regional Water and Soil Plan for Northland noting Erosion & sediment control and dust suppression requirements.*

9. *Erosion and Sedimentation Control shall be designed and carried out in accordance with GD05 "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region"/*

10. *Land use Conditions are covered by the subdivision Conditions and as a part of 223 Condition the consent holder must provide the final certified CMP, CTMP, APP, APMP, EMP, EPA and Management Plan to councils Resource Consents Monitoring Officer prior to commencement of any physical works on site.*

11. *Earthworks on site must be in accordance with and must adhere to all consent Conditions approved under AUT.046280.01.01, AUT.046280.02.01 and AUT.046280.03.01.*

Activity C: Cancellation of Consent Notice – Section 221

1. **Pursuant to Section 221(3), Consent Notice 8300644.4 shall be cancelled;**

   That no dwelling or habitable building shall be erected or brought onto Lots 3&4 without the prior consent of the Council. Lots 3, 4, & 1 DP 187577 are held together in a single Certificate of Title and shall be regarded as a single site for the purpose of the District Plan residential intensity provisions.

Activity D: Cancellation of Amalgamation Condition – Section 241

1. **Pursuant to s234e of the Resource Management Act 1991, the Far North District Council hereby cancels the following existing amalgamation Condition:**

   Lot 1 Deposited Plan 187577 and Lot 3-4 Deposited Plan 420232 are all held within Record of Title 476989 and are subject to an amalgamation Condition pursuant to Section 241 of the Act.

Approval

I have reviewed the above conditions of consent, amended as a result of an objection pursuant to ss357 and 357A of the Resource Management Act 1991 (RMA), and the associated documents, and pursuant to s357D of the RMA **uphold the objection** noting there is agreement between the objector, Willowridge Developments Limited, and the Far North District Council, that agreement being reflected in the above amended conditions to the consent as it relates to 39 Aucks Road, Russell.



AR Watson
RMA Independent Commissioner

19 November 2025

Te Kaunihera o Te Hiku o te Ika
Far North District Council

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

Request for Further Information

Section 92(1), Resource Management Act 1991

Resource Consent Application 2270033-RMASUB — 39 Aucks Road, Russell / Kororāreka

Date	25 August 2026
Our reference	2270033-RMASUB
To	Laura Bowman, Barker & Associates Limited
	Level 1, 136 Bank Street, Whangārei 0112
Applicant	Willowridge Developments Limited
Site	39 Aucks Road, Russell / Kororāreka 0272
Legal description	Lot 1 DP 542129; Lot 2 DP 542129; Lot 1 DP 187577; Lot 3 DP 420232; Lot 4 DP 420232; Lot 1 DP 182616
Reporting planner	Nick Williamson, Acting Senior Resource Consents Planner

Kia ora Laura

An assessment has been made of the application to subdivide land and to change conditions of resource consent 2250266-RMACOM under section 127 of the Resource Management Act 1991 (the Act), at 39 Aucks Road, Russell / Kororāreka.

Pursuant to section 92(1) of the Act, the Far North District Council requires further information in order to consider the proposal. The information required is set out below, with Council's reasons for each item as required by section 92(3).

Council's assessment is against the Operative Far North District Plan and the Proposed Far North District Plan. The appeal period on the Proposed Plan closed on 12 August 2026 and the plan is now in its Appeals Version. Council records that the subdivision provisions relevant to this application — including SUB-R7 and SUB-R8 to SUB-R23 — are referred to in notices of appeal lodged on the Proposed Plan. To the extent those provisions are under appeal, section 86F(1) of the Act means they remain proposed rather than operative, they continue to have legal effect under section 86B(1), and the corresponding Operative Plan provisions continue to apply in parallel. APP3 is not referred to in any notice of appeal. Council's assessment of activity status does not turn on the point: the proposal is a non-complying activity under each plan independently.

1. The structure of the application — LINZ has declined the amalgamation

On 25 August 2026 Land Information New Zealand responded to Council's amalgamation consultation (Request 1993296). The request was not approved. LINZ's response is attached. Their reason, in full:

> *"The proposed amalgamation is not approved because at Stage 1A there is no subdivision that is occurring. Land can only be held together under Section 220(1)(b)(ii) Resource Management Act 1991 where there is a Subdivision of Land. Rather it looks like a voluntary amalgamation is possible where the two parcels can be amalgamated into 1 Record of Title just not compulsory."*

That accords with Council's own reading. Section 220(1)(b) allows a condition that "any specified part or parts of the land being subdivided" be amalgamated. At Stage 1A no land is being subdivided — the scheme plan sheet is titled "Amalgamation Only" — so there is nothing for the condition to attach to. An amalgamation is not itself a subdivision of land within section 218, which requires the division of an allotment.

Council's related difficulty is with what follows. The new allotments arise at Stage 1B, which the scheme plan draws as a subdivision of all six parent parcels including Lot 1 DP 182616. That parcel was not within the 2250266-RMACOM site: that consent covered 43.28 hectares, this application covers 43.71 hectares, and the difference of 0.4366 hectares is Lot 1 DP 182616. A section 127 changes the conditions of a consent, and Council does not consider it can extend a consent to land that consent never applied to.

Council requests that you confirm how the application is intended to be delivered, and in particular which instrument authorises the creation of Lots 62, 63 and 64 over Lot 1 DP 182616.

> *Reason: Council cannot determine the application without knowing what is being applied for and under what instrument. The answer governs the rules that fall to be assessed, the scope of what may lawfully be done under section 127, and Council's response to the request at section 4.3 of the AEE that conditions be consolidated into 2250266-RMACOM.*

Repackaging the application

Council invites you to consider repackaging the application, and does not wish to prescribe an outcome. It may assist to set out how the options relate to one another.

The difficulty is confined to the two-step structure. It arises because Stage 1A has been drawn as an amalgamation standing on its own, doing no subdividing, so that the land can then be subdivided at Stage 1B under a consent that does not extend to it. Both halves of that structure are affected: LINZ has declined the first, and Council's section 127 concern goes to the second. A

structure in which the subdivision and the amalgamation occur under the same consent does not encounter either difficulty.

1. Voluntary amalgamation. LINZ observes that the two parcels can be amalgamated into one record of title voluntarily. That is available and would resolve the LINZ point. It does not, by itself, resolve Council's difficulty — a voluntary amalgamation produces a single title, but nothing would yet authorise the subdivision of that title into Lots 62–64 in so far as it comprises land outside the 2250266-RMACOM site. This route would need to be paired with route 2 or route 3.
2. A subdivision consent creating Lots 62, 63 and 64 from both parent parcels, carrying the amalgamation condition. That consent would be a subdivision of land, so section 220(1)(b)(ii) would be available and the amalgamation condition could properly attach to it. This resolves both the LINZ point and Council's section 127 concern.
3. The same subdivision consent, without an amalgamation condition. A subdivision consent may create three allotments from two parent parcels directly; on deposit of the survey plan both parent titles are consumed and titles issue for Lots 62, 63 and 64. No separate title for Lot 1 DP 182616 survives and the development right associated with it is extinguished, which Council understands to be the purpose described at section 4.2.1.1 of the AEE. On this route the amalgamation step appears unnecessary rather than merely unavailable — the intermediate merged title existed only to bring the land within the earlier consent.

Routes 2 and 3 are the same structure, differing only in whether an amalgamation condition rides with it. Council's provisional view is that route 3 is the simpler, but if there is a reason the applicant requires a merged title in its own right — the treatment of registered interests, for instance — Council would want to understand it, and route 2 remains open.

For your information, the approach Council is presently considering is a standalone subdivision consent for Lots 62, 63 and 64, tied to 2250266-RMACOM so that it cannot be given effect to independently, with the section 127 dealing with the balance. Comparing the approved and proposed scheme plans against the cadastral record, the additional land is absorbed entirely into Lots 62–64 and the northern boundaries of those lots do not move, so the two components appear to separate cleanly. No decision has been made. Council notes that if a separate consent is required because it reaches land outside the parent consent's site, its conditions could not then be folded into that consent by a section 127.

If a route is taken that removes Stage 1A, the staging described in Appendix 13 will need consequential rework, since Stages 1A and 1B are presently defined by reference to the amalgamation.

If you elect to repackage, Council accepts that some of the information sought below may need to be recast to match, and would rather receive it in the form that fits the revised application.

2. Average allotment size calculation

Please provide the calculation of the average size of all lots in the management plan subdivision, excluding lots used solely for access, utilities, roads and reserves, for both the Operative District Plan (Standard 13.9.2.2(a)) and the Proposed District Plan (SUB-R7, DIS-1(1)), identifying the figure applied to each zone and how averaging has been treated where the subdivision spans two zones.

> *Reason: no calculation is provided. Section 5.1 of the AEE cites only the 6ha General Coastal figure. Appendix 10 quotes both the 6ha General Coastal and 5,000m² Coastal Living figures and then concludes against a "2ha" figure, which is not an Operative District Plan standard for either zone. Council needs the calculation to state the reasons for consent correctly.*

3. APP3 — Subdivision management plan criteria

Please provide an assessment against APP3 of the Proposed District Plan, identifying where each item of the required information is located in the application.

> *Reason: DIS-1(4) of SUB-R7 requires the application to contain the information listed in APP3. Appendix 10 records compliance without identifying where that information sits.*

4. Highly productive land and outstanding natural character

Please confirm, with reference to the relevant mapping, whether any part of the site is identified as highly productive land, and whether any part is within an Outstanding Natural Character Area.

> *Reason: SUB-R22 (Discretionary) and SUB-R23 (Non-complying) are engaged by those mappings and are not addressed in Appendix 10. Section 10.7.2 of the AEE asserts the land is not highly productive but does not identify the source. Both rules are referred to in notices of appeal, but retain legal effect under section 86B(1) and must be assessed.*

5. Conservation Covenant D574444.3

Please provide a copy of the instrument creating Conservation Covenant D574444.3 (section 77, Reserves Act 1977), registered against Records of Title 912226 and 912227, together with an assessment of its effect on the proposal — in particular its spatial extent relative to the scheme plan, whether the consent of the Minister of Conservation is required for anything proposed, and its implications for the treatment of RT 912227.

Reason: section 12.1 of the AEE records that the title interests are "not anticipated to affect the resource consent application". RT 912227 is one of the two parcels the application deals with, and a covenant under section 77 of the Reserves Act binds successors in title. Council needs to understand the basis for that conclusion. The matter is relevant under sections 104(1)(c) and 106.

6. Pāteke / brown teal, and the ponds and wetlands

Please provide an ecological assessment addressing pāteke (brown teal) and the ponds and wetlands on the site, including the implications of the proposed changes to the management of the common areas.

Reason: the Ecological Memorandum at Appendix 8 is confined to the land covenant areas and does not include a fauna assessment. The 2024 Ecological Assessment records pāteke among the 'At Risk' species in the wider ecological context. Council has been advised by an interested party that high numbers of pāteke were recorded on the ponds within the site at the February 2025 census. Council needs this information to complete its assessment of effects.

7. Residents' Association and dog management — Lots 1–3

Please provide further explanation of the proposed amendments to the Residents' Association requirements as they affect Lots 1–3, addressing in particular the proposed deletion of the obligations in condition 4(m) — the external-dog prohibition, the signage requirement, and Association monitoring with annual reporting to Council — and how compliance is intended to be monitored for those lots.

Reason: section 6.4.2 of the AEE describes these amendments as changing the administrative mechanism through which compliance is demonstrated. Appendix 13 redirects three of the six obligations to Council and deletes the other three. Council notes that in the Pre-Hearing Meeting Planning Response of 5 September 2025 the Association's oversight role was advanced as the basis on which lot-specific restrictions were unnecessary. Council needs to understand the proposal as it now stands before assessing it. Nothing appears to turn on this for Lots 62–65, which remain subject to the prohibition in condition 4(k).

8. Engineering Plan Approval 2250266-RMAEPA/A

Please advise how the revised engineering drawings at Appendix 3 relate to the Engineering Plan Approval process on 2250266-RMAEPA/A, and whether the changes now sought arise from that process.

Reason: an Engineering Plan Approval is on foot on the underlying consent. Council needs to understand the relationship between the two, and the sequencing consequences, before assessing the changes.

Engineering review

Council's engineering review is not yet complete. Rinku Millie Mishra, Resource Consent Engineer, is preparing her report, and nothing in this request should be taken as settling any engineering matter — in particular earthworks volumes, the revised access and right-of-way arrangements, servicing, or natural hazards. Council will provide the engineering report when it is available.

Council has chosen to issue this request now rather than wait, so that you have the opportunity to consider the structure of the application before engineering comments arrive, rather than receive both at once.

Matters taken into account under section 92(2B)

Before making this request Council considered whether it needs the information for the purpose of section 104, and whether the information sought is proportionate to the scale and significance of the effects the activity may have on the environment. Items 1 to 4 go to the correct identification of the activity and the rules engaged. Items 5 to 7 go to matters of effect and to title interests relevant under sections 104(1)(c) and 106. Item 8 goes to the sequencing and integrity of the consent framework. Council has not sought information beyond those purposes.

Suspension of processing

Processing of the application is suspended from the date of this request. Under section 88C(2) the excluded period begins on the date of this request and ends on the earliest of: the date you provide the information; the date set under section 92A(2)(a) where you have agreed to provide it; the date you refuse to provide it; or, if you do not respond within 15 working days, the date that period ends. Council draws your attention to the fact that the excluded period can therefore end with the information still outstanding.

Your options under section 92A

Within 15 working days of the date of this request — that is, by 15 September 2026 — you must take one of the following steps:

a. provide the information requested; or

b. advise Council in writing that you agree to provide the information, and when it will be provided; or

c. advise Council in writing that you refuse to provide the information.

If the information is not provided

If you do not provide the information before the deadline, or refuse to provide it, section 95C of the Act requires Council to publicly notify the application. That obligation applies because Council has not yet decided whether to give public or limited notification. Alternatively, Council may determine the application to be incomplete under section 92AA and return it.

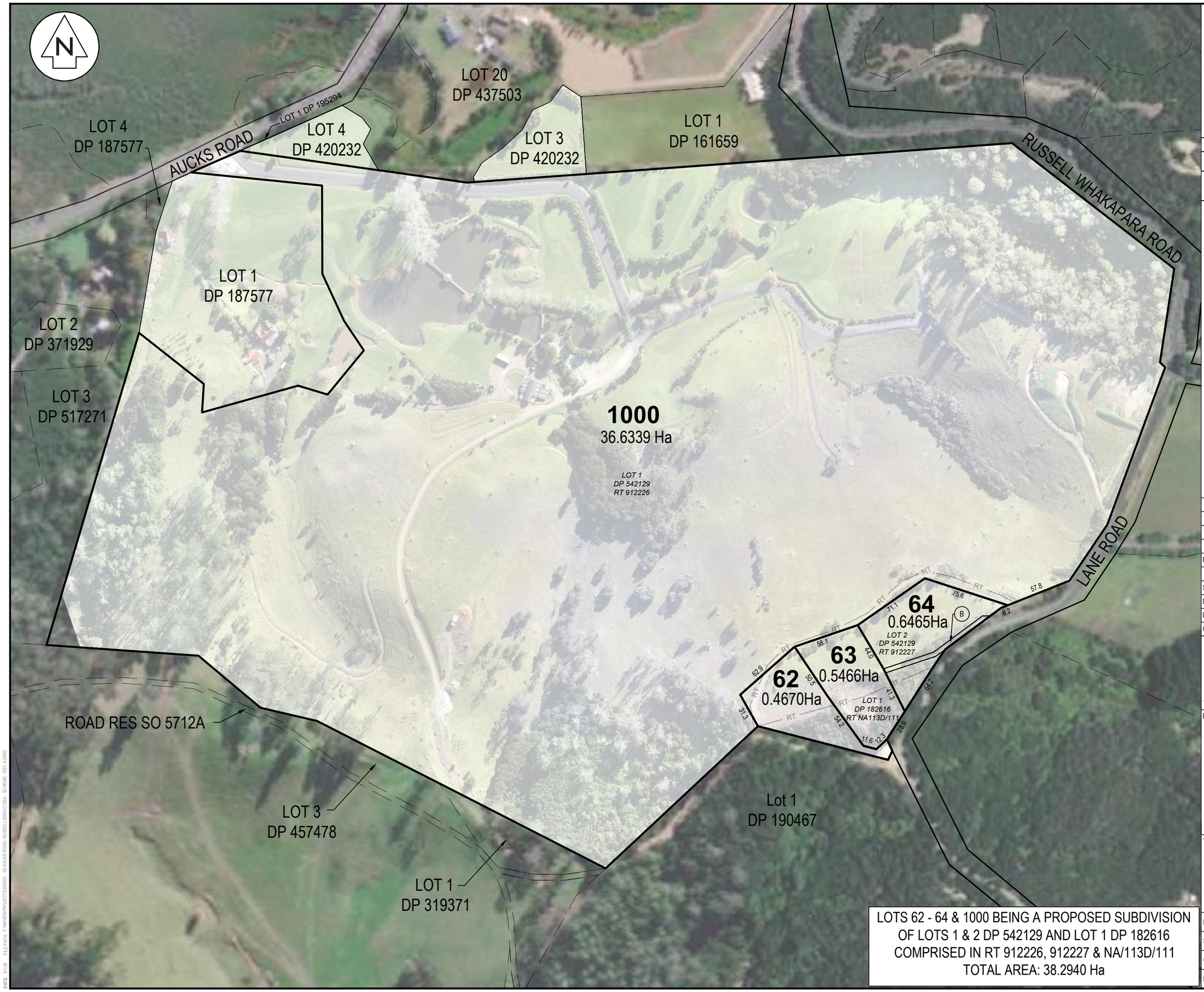
Contact

I would rather resolve the structural question at item 1 by discussion than by correspondence. If a call would help, I am happy to arrange one. I am working remotely at present and available up to 11am New Zealand time on weekdays. Council has also received an interested-party response from Russell Landcare Trust, which I can forward on request.

Ngā mihi

Nick Williamson
Acting Senior Resource Consents Planner
Far North District Council

Attachment: LINZ response — Request 1993296, Titles – Amalgamation Consultation, 25 August 2026



LOTS 62 - 64 & 1000 BEING A PROPOSED SUBDIVISION
OF LOTS 1 & 2 DP 542129 AND LOT 1 DP 182616
COMPRISED IN RT 912226, 912227 & NA/113D/111
TOTAL AREA: 38.2940 Ha

NOTES
1. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000.
2. BOUNDARIES ARE SUBJECT TO FINAL SURVEY.
3. PEDESTRIAN RIGHT OF WAY LOCATION SUBJECT TO FINAL SURVEY RELATIVE TO NECESSARY ECOLOGICAL OFFSETS .

RESOURCE CONSENT

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	BURDENED LAND	BENEFITTED LAND
RIGHT OF WAY & SERVICES	A	LOT 64 HEREON	LOT 63 HEREON

Rev	Description	By	Date
A	First Issue	SB	09/2026

	By	Date
Survey	MAVEN	06/2024
Design	CP	07/2024
Drawn	YG	07/2024
Checked	CP	07/2024

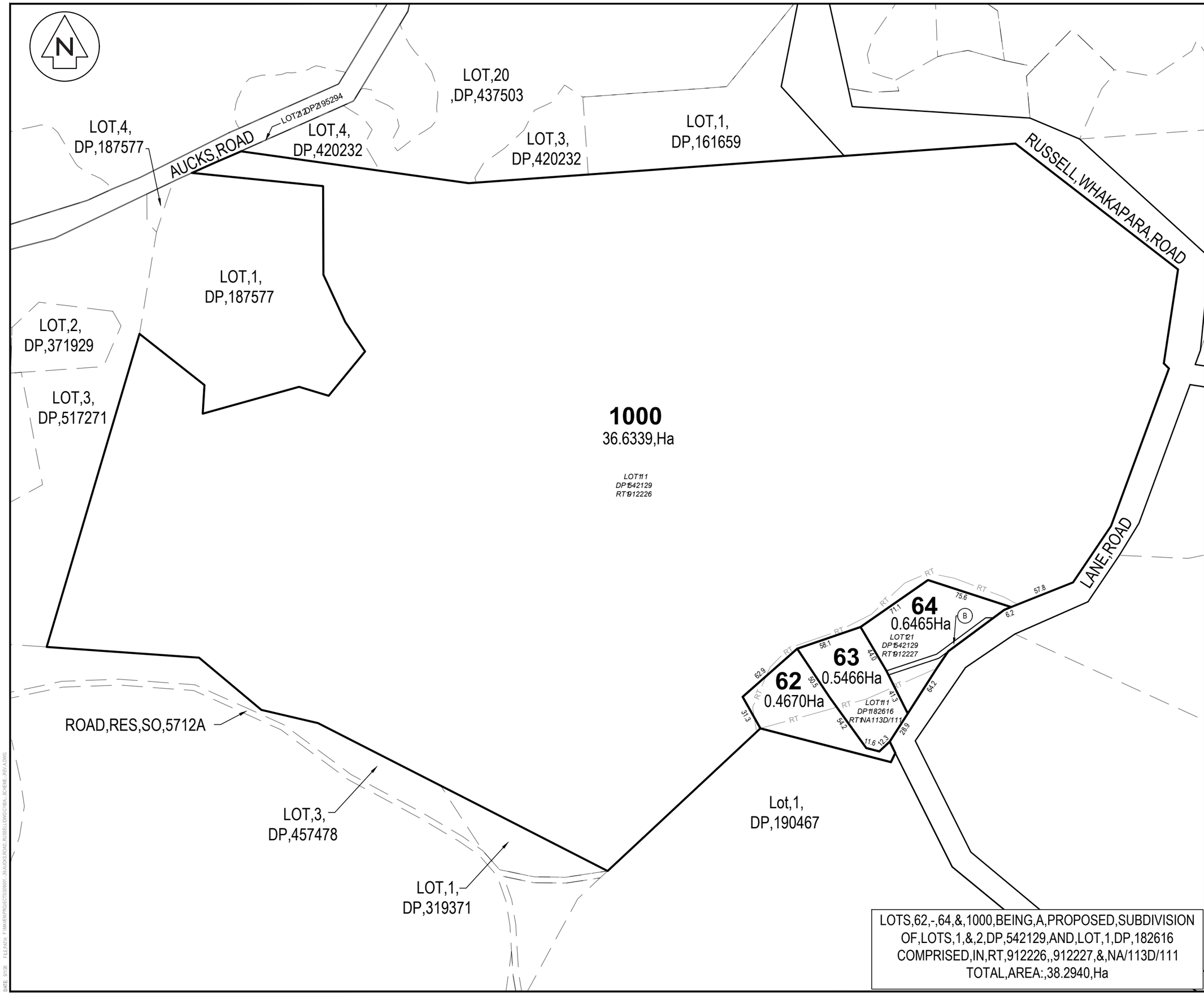
Maven Associates
09 571 0050
info@maven.co.nz
www.maven.co.nz
5 Owens Road, Epsom
Auckland 1023

Project
DEVELOPMENT OF
39 AUCKS ROAD
RUSSELL
FOR
WILLOWRIDGE DEV. LTD.

Title
PROPOSED
SCHEME PLAN

Project no.	309001a - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C160A - SCHEME - REV A.DWG		
Drawing no.	C160A 01 OF 01	Rev	A

DATE: 9/7/26 FILEPATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C160A - SCHEME - REV A.DWG



NOTES

1. COORDINATES,IN,TERMS,OF,NZ,GEODETIC DATUM,MT,EDEN,2000.
2. BOUNDARIES,ARE,SUBJECT,TO,FINAL,SURVEY.
3. PEDESTRIAN,RIGHT,OF,WAY,LOCATION,SUBJECT TO,FINAL,SURVEY,RELATIVE,TO,NECESSARY ECOLOGICAL,OFFSETS,.

RESOURCE CONSENT

MEMORANDUM,OF,EASEMENTS

PURPOSE	SHOWN	BURDENED LAND	BENEFITTED LAND
RIGHT,OF,WAY & SERVICES	A	LOT,64 HEREON	LOT,63 HEREON

LOTS,62,-,64,&,1000,BEING,A,PROPOSED,SUBDIVISION OF,LOTS,1,&,2,DP,542129,AND,LOT,1,DP,182616 COMPRISED,IN,RT,912226,,912227,&,NA/113D/111 TOTAL,AREA:,38.2940,Ha

Rev	Description	By	Date
,	,	,	,
,	,	,	,
,	,	,	,
A	First,Issue	SB	09/2026

	By	Date
Survey	MAVEN	06/2024
Design	CP	07/2024
Drawn	YG	07/2024
Checked	CP	07/2024

Maven Associates
09,571,0050
info@maven.co.nz
www.maven.co.nz
5,Owens,Road,,Epsom
Auckland,1023

Project

DEVELOPMENT OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED SCHEME PLAN

Project,no.	309001a,-,WILLOWRIDGE		
Scale	1:3000,@,A3		
Cad,file	C160A,-,SCHEME,-,REV,A.DWG		
Drawing,no.	C160A,01,OF,01	Rev	A

DATE: 9/1/26 FILEPATH: F:\MAVEN\PROJECTS\309001A - 39 AUCKS ROAD, RUSSELL\DWG\C160A,-,SCHEME,-,REV,A.DWG

Rules Assessment

Proposal: Subdivision of Lot 1 and 2 542129, and Lot 1 DP 182616 to create four allotments

Address: 39 Aucks Road, Russell

District Plan: Operative and Proposed Far North District Plan – Appeals Version

1.0 Operative Far North District Plan

Site Zoning	
Zone	Coastal Living and General Coastal
Overlays/Controls	Nil

Rule	Compliance	Non-Compliance
Subdivision		
Rule 13.6.5 LEGAL ROAD FRONTAGE	**Complies** Legal access will be provided to each lot by ROW's or direct access.	
Rule 13.7.2.1 (viii) General Coastal Zone	**N/A** Consent is sought as a non-complying activity for a management plan subdivision as per Rule 13.9.2.	
Rule 13.7.2.1 (ix) Coastal Living Zone	**N/A** Consent is sought as a non-complying activity for a management plan subdivision as per Rule 13.9.2.	
Rule 13.7.2.2 ALLOTMENT DIMENSIONS	The approved subdivision 2250266-RMACOM has approval under this rule for allotments in the management plan subdivision to not comply with the 30x30m platform.	
13.9.2 Management Plan Subdivision		
13.9.2.2 MANAGEMENT PLAN STANDARDS Management plan subdivision is a discretionary activity in the Rural Production and Coastal Living Zones where it complies with the set standards.	**Discretionary Activity** (c) N/A There is no part of the site is outside of the management plan subdivision area. (d) N/A (f) The application includes an updated draft management plan as	**Does not Comply** (a) Average lot size in the proposed management plan subdivision must meet 6ha in the General Coastal Zone and 5000m2 in the Coastal Living Zone. The proposal is not able to achieve the

Rule	Compliance	Non-Compliance
	described in Rule 13.9.2.1(d).	minimum allotment 2ha allotment size. (b) Part of the site (Lot 1 and 2 DP 542129) has been subject to a management plan subdivision. (e) Proposal seeks a further subdivision of lots contained within a subdivision management plan so requires a non-complying activity consent. Non-Complying Activity
Transportation		
15.1.6a.5.1 Traffic Intensity	N/A The approved subdivision 2250266-RMACOM has obtained consent for proposed traffic intensity. This proposal does not seek increase the subdivision yield so no change to consented traffic volumes.	
15.1.6B.1.1 On-Site Car Parking Spaces	Complies There is ample space onsite for onsite carparks.	
15.1.6B.1.5 CAR PARKING SPACE STANDARDS	Complies There is ample parking onsite, and within each resulting allotment to provide for sufficient parking in accordance with this rule.	
15.1.6C.1.1 PRIVATE ACCESSWAY IN ALL ZONES	Complies The approved subdivision 2250266-RMACOM has obtained consent for private access to exceed 8 household equivalents and not meeting legal width of the private accessways within the internal roading system. The proposed changes to access arrangements as part of this subdivision will not increase the existing approved non compliances. All proposed ROWs will serve no more than 2 Lots.	
15.1.6C.1.5 VEHICLE CROSSING STANDARDS IN RURAL AND COASTAL ZONES	Complies The approved subdivision 2250266-RMACOM includes the vehicle crossings on Lane Road. No changes to the approved	

Rule	Compliance	Non-Compliance
	vehicle crossing are being proposed.	
15.1.6C.1.7 GENERAL ACCESS STANDARDS	**Complies** The proposal seeks the reconfiguration of the access arrangements from what was approved under 2250266-RMACOM. The proposed new configurations as part of this application will continue to comply with these rules.	
Coastal Environment Chapter		
General Coastal Zone		
10.6.5.1.1 VISUAL AMENITY	**N/A** no new buildings or extensions to buildings are proposed under this application.	
10.6.5.1.2 RESIDENTIAL INTENSITY	**N/A** In this instance this application does not propose any residential activity. Noting that any future development on the resulting allotments would fall under the exception, as a subdivision approved pursuant to Rule 13.7.2.1 (Table 13.7.2.1)	
10.6.5.1.3 SCALE OF ACTIVITIES	**N/A** proposal is to create vacant allotments intended for residential use.	
10.6.5.1.4 BUILDING HEIGHT	**N/A** no buildings are proposed under this application.	
10.6.5.1.5 SUNLIGHT	**N/A** no buildings are proposed under this application but there is ample space for future development to be able to comply with this rule.	
10.6.5.1.6 STORMWATER MANAGEMENT	Engineering Memo (Appendix 8) provides the overall stormwater management remains unchanged as previously consented under 2250266-RMACOM.	
10.6.5.1.7 SETBACK FROM BOUNDARIES	**N/A** no buildings are proposed under this application but there is ample space for future development to be able to comply with this rule and proposed building platforms comply with setbacks.	

Rule	Compliance	Non-Compliance
10.6.5.1.8 TRANSPORTATION	See rules assessment above.	
10.6.5.1.9 KEEPING OF ANIMALS	**N/A** the proposal does not include the keeping of animals	
10.6.5.1.10 NOISE	Noise levels will comply	
10.6.5.1.11 HELICOPTER LANDING AREA	**N/A** the proposal does not include helicopter landing areas.	
10.6.5.2.1 PAPAKAINGA HOUSING	**N/A** the proposal does not include papakainga.	
Coastal Living Zone		
10.7.5.1.1 VISUAL AMENITY	**N/A** no new buildings or extensions to buildings are proposed under this application.	
10.7.5.1.2 RESIDENTIAL INTENSITY	**N/A** In this instance this application does not propose any residential activity. Noting that any future development on the resulting allotments would fall under the exception, as a subdivision approved pursuant to Rule 13.7.2.1 (Table 13.7.2.1)	
10.7.5.1.3 SCALE OF ACTIVITIES	**N/A** proposal is to create vacant allotments intended for residential use.	
10.7.5.1.4 BUILDING HEIGHT	**N/A** no buildings are proposed under this application.	
10.7.5.1.5 SUNLIGHT	**N/A** no buildings are proposed under this application but there is ample space for future development to be able to comply with this rule.	
10.7.5.1.6 STORMWATER MANAGEMENT	Engineering Memo (Appendix 8) provides the overall stormwater management remains unchanged as previously consented under 2250266-RMACOM	
10.7.5.1.7 SETBACK FROM BOUNDARIES	**N/A** no buildings are proposed under this application but there is ample space for future development to be able to comply with this rule.	
10.7.5.1.8 SCREENING FOR NEIGHBOURS NON-RESIDENTIAL ACTIVITIES	**N/A** no non-residential activities are proposed under the application.	
10.7.5.1.9 TRANSPORTATION	See rules assessment above.	

Rule	Compliance	Non-Compliance
10.7.5.1.10 HOURS OF OPERATION NON-RESIDENTIAL ACTIVITIES	**N/A** no non-residential activities are proposed under the application.	
10.7.5.1.11 KEEPING OF ANIMALS	**N/A** the proposal does not include the keeping of animals	
10.7.5.1.12 NOISE	**Complies** It is proposed that construction works will comply with this noise standard.	
10.7.5.1.13 HELICOPTER LANDING AREA	**N/A** the proposal does not include helicopter landing areas.	
10.7.5.2.1 PAPAKAINGA HOUSING	**N/A** the proposal does not include papakainga.	
Natural and Physical Resources		
12.1 LANDSCAPES AND NATURAL FEATURES – N/A		
12.2 INDIGENOUS FLORA AND FAUNA		
12.2.6.1.1 INDIGENOUS VEGETATION CLEARANCE PERMITTED THROUGHOUT THE DISTRICT	**N/A** No vegetation clearance is proposed under the proposal.	
12.2.6.1.3 INDIGENOUS VEGETATION CLEARANCE IN THE GENERAL COASTAL ZONE	**N/A** No vegetation clearance is proposed under the proposal.	
12.2.6.1.4 INDIGENOUS VEGETATION CLEARANCE IN OTHER ZONES	**N/A** No vegetation clearance is proposed under the proposal.	
12.3 SOILS AND MINERALS		
12.3.6.1.2 EXCAVATION AND/OR FILLING IN THE COASTAL LIVING, AND GENERAL COASTAL ZONES	The approved subdivision 2250266-RMACOM has already obtained consent for the earthworks required to facilitate the development under this rule. Engineering Memo (Appendix 8) provides that no significant changes to the overall earthworks volumes or methodology are anticipated because of these minor boundary adjustments. Any minor alterations will remain within the scope of the previously consented earthworks plan.	
12.3.6.1.4 NATURE OF FILLING MATERIAL IN ALL ZONES	The proposal does not seek to breach this rule, as fill will meet these standards.	

Rule	Compliance	Non-Compliance
12.4 NATURAL HAZARDS N/A		
12.5 HERITAGE N/A		
12.6 AIR N/A		
12.7 LAKES, RIVERS, WETLANDS AND THE COASTLINEN/A		
12.8 HAZARDOUS SUBSTANCES N/A		
12.9 RENEWABLE ENERGY AND ENERGY EFFICIENCY N/A		
12.6 HAZARDOUS SUBSTANCES N/A		
16. Signs and lighting N/A		
17. Designations and utility services N/A		
18. Special areas N/A		
19. Genetically modified organisms N/A		

2.0 Proposed Far North District Plan – Appeals Version

Proposed Far North District Plan	
Zone	Rural Lifestyle and Rural Production
Overlays/Controls	Coastal Environment

Rule	Compliance	Non-Compliance
Subdivision		
SUB-R3 Subdivision of land to create a new allotment	**N/A** no new allotments being proposed as all allotments already approved under 2250266-RMACOM. Proposal reconfigures the boundaries of approved Lots 62-64 to incorporate Lot 1 DP 182616, and will actually result in a loss of a development right which currently exists on Lot 1 DP 182616.	
SUB-R4 Subdivision that creates a private accessway	**N/A** private accessways were created under the approved management plan subdivision.	
SUB-R7 Management plan subdivision	**Discretionary** 3. N/A There is no part of the site outside of the management plan subdivision area. 4. Application contains the information listed in APP3-Subdivision management plan criteria.	**Does not Comply** 1. Average lot size in the proposed management plan subdivision must meet 2ha in the Rural Production Zone and 5000m2 in the Rural Lifestyle Zone. The proposal is not able to achieve the

Rule	Compliance	Non-Compliance
		minimum allotment 2ha allotment size. 2. Part of the site (Lot 1 and 2 DP 542129) has been subject to a management plan subdivision. **Non-Complying Activity**
Transport		
TRAN-R1 Parking	**Complies** There is ample parking onsite, and within each resulting allotment to provide for sufficient parking in accordance with this rule.	
TRAN-R2 New or altered vehicle crossings and access, including private accessways	**Complies** The proposal seeks new access arrangements access for Lots 62-64: PER-1: Proposed ROWs will serve a max of 2 allotments. PER-2: N/A PER-3: N/A Vehicle crossings are not off an Arterial Road PER-4: N/A no unutilised vehicle crossings to be reinstated PER-5: Proposed accessways will be designed and constructed in accordance with TRAN-Table 10 formation standards PER-6: Proposed accessways will be designed and constructed in accordance with TRAN-Table 11 Sealing standards PER-7: Proposed accessways utilise previously consented vehicle crossings. Note: The approved subdivision 2250266-RMACOM has approval for private access to exceed 8 household equivalents and not meeting legal width of the private accessways within the internal roading system. The proposed internal changes to accessways are to better align with topography and achieve better gradients.	

Rule	Compliance	Non-Compliance
TRAN-R3 - TRAN-R8	**N/A** these rules are not applicable to the proposal.	
TRAN-R9 Trip generation	**N/A** proposal does not seek increase the subdivision yield so no change to approved traffic volumes under existing consent 2250266-RMACOM.	
TRAN-R10 - TRAN-R14	**N/A** these rules are not applicable to the proposal.	
Rural Production Zone		
RPROZ-R1 New buildings or structures and relocated buildings or extensions or alterations to existing buildings or structures	**N/A** no new buildings or structures sought under the proposal. Future development will be required to comply with these standards or seek consent at the time of future development.	
RPROZ-R2 Impermeable surface coverage	**N/A** the proposal does not seek to increase the impermeable surface coverage created by the internal roading infrastructure approved under existing consent 2250266-RMACOM.	
RPROZ-R3 Residential activity	**Complies** While no residential activity is proposed under the proposal – future residential development will be permitted under the exclusion for single residential units of sites of less than 40ha.	
RPROZ-R4 - RPROZ-R41	**N/A** none of these activities are sought under the proposal.	
Rural Lifestyle Zone		
RLZ-R1 New buildings or structures and relocated buildings or extensions or alterations to existing buildings or structures	**N/A** no new buildings or structures sought under the proposal. Future development will be required to comply with these standards.	
RLZ-R2 Impermeable surface coverage	**N/A** the proposal does not seek to increase the impermeable surface coverage created by the internal roading infrastructure approved under existing consent 2250266-RMACOM.	
RLZ-R3 Residential activity	**Complies** While no residential activity is proposed under the proposal –	

Rule	Compliance	Non-Compliance
	future residential development will be permitted under the exclusion for single residential units of sites of less than 40ha.	
RLZ-R4 - RLZ-R29	**N/A** none of these activities are sought under the proposal.	
Natural Hazards		
NH-R1 - NH-R4 and NH-R7 - NH-R11 apply to River Flood Hazard Area	**N/A** application site not identified as subject to river flood hazard areas.	
NH-R5 Wild fire - Buildings used for a vulnerable activity (excluding accessory buildings)	**Complies** While no buildings are proposed under the application, the approved subdivision under 2250266-RMACOM includes consent notice conditions for future development to have water supply for firefighting purposes for each approved allotment. Future development will comply. Note: 2250266-RMACOM has existing approval for a number of building platforms that cannot achieve dripline setback given the existing and proposed vegetation on the site.	
NH-R6 Wild fire - extensions and alterations to buildings used for a vulnerable activity that increase the GFA	**N/A** the proposal does not include extensions and alterations to buildings used for a vulnerable activity that increase the GFA.	
Ecosystems and indigenous biodiversity		
IB-R1 Indigenous vegetation pruning, trimming and clearance and any associated land disturbance for specified activities.	**N/A** No vegetation clearance is proposed under the proposal.	
IB-R2 Indigenous vegetation clearance and any associated land disturbance for papakāinga	**N/A** No vegetation clearance is proposed under the proposal.	
IB-R3 Indigenous vegetation clearance and any associated land disturbance	**N/A** No vegetation clearance is proposed under the proposal.	
Natural character		
NATC-R1 - NATC-R2	**N/A** no development or works proposed under this application	

Rule	Compliance	Non-Compliance
	on wetland, lake and river margins.	
Coastal Environment		
CE-R1 New buildings or structures and relocated buildings and extensions or alterations to existing buildings or structures	The proposal does not include the development of new buildings. Noting that 2250266-RMACOM has conditioned design controls which will control future development and future development will need to comply with these rules.	
CE-R2 Earthworks or indigenous vegetation clearance	No vegetation clearance is proposed under the proposal. The approved subdivision 2250266-RMACOM has already consent for the earthworks required to facilitate the development. Engineering Memo (Appendix 8) states that no significant changes to the overall earthworks volumes or methodology are anticipated because of these minor boundary adjustments. Any minor alterations will remain within the scope of the previously consented earthworks plan. As such no additional earthworks beyond what is already approved is being sought under this application.	
CE-R3 - CE-R7	**N/A** none of these activities are sought under the proposal.	
CE-R8 Extensions and alterations to existing buildings and structures (excluding infrastructure)	**N/A** The proposal does not seek approval for extensions and alterations to existing buildings and structures.	
CE-R9 Maintenance, repair or upgrading of infrastructure, including structural mitigation assets	**N/A** The proposal does not seek approval for Maintenance, repair or upgrading of infrastructure, including structural mitigation assets.	
CE-R10 New buildings or structures and relocated buildings	**Complies** While no new buildings are sought under the proposal - the building platforms sought under this proposal are all located	

Rule	Compliance	Non-Compliance
	outside of the mapped coastal hazard areas on the site.	
CE-R11 - CE-R11	N/A none of these activities are sought under the proposal.	
Earthworks		
EW-R1 Earthworks	The approved subdivision 2250266-RMACOM has already consent for the earthworks required to facilitate the development. Engineering Memo (Appendix 8) states that no significant changes to the overall earthworks volumes or methodology are anticipated because of these minor boundary adjustments. Any minor alterations will remain within the scope of the previously consented earthworks plan. As such no additional earthworks beyond what is already approved is being sought under this application.	

MEMORANDUM

To	Willowridge Developments Ltd
From	Madara Vilde – Principal Ecologist, Wild Ecology Ltd
Date	23 July 2026
Subject	Ecological review – proposed land covenant areas, revised Scheme Plan (Maven C160, Rev I), 39 Aucks Road, Russell – to accompany the section 127 variation application to the Far North District Council (consent 2250266-RMAOBJA)

1. Purpose

Wild Ecology Ltd has previously prepared ecological mapping and reporting for the proposed subdivision at 39 Aucks Road, Russell ("the site") on behalf of Willowridge Developments Ltd, including the Ecological Assessment (Wild Ecology, 2024). This memorandum has been prepared to accompany the section 127 variation application to the Far North District Council and provides ecological comment on the proposed land covenant areas shown on the revised scheme plan.

The principal matter addressed is the minor reduction in the extent of the bush protection covenant on Lot 4, which arises from a change to the accessway serving that lot. The consequential re-apportionment of covenant areas associated with the revised lot layout in Stage 2 is also addressed. This memorandum should be read in conjunction with the 2024 Ecological Assessment, which contains the full site description, vegetation mapping and methodology.

2. Information relied on

- Proposed Scheme Plan – Overall Staging, Maven Associates drawing C160, Rev I (June 2026);
- the previously approved scheme plan, Maven Associates drawing C160, Rev D (November 2024);
- Wild Ecology (2024) Ecological Assessment and associated vegetation mapping and aerial imagery;

3. Lot 4 – reduction in bush covenant area

Under the approved scheme plan (Rev D), Lot 4 carried a single proposed land covenant of 0.2612 ha (shown as reference 'AA'). On the revised scheme plan (Rev I), the covenant on Lot 4 is shown as two areas – 0.0764 ha ('AB') and 0.1552 ha ('AC') – totalling 0.2316 ha. This represents a net reduction of approximately 0.0296 ha (296 m²), or some 11% of the previously proposed covenant area on that lot. The covenant continues to be proposed pursuant to either section 22 of the Queen Elizabeth the Second National Trust Act 1977 or

section 77 of the Reserves Act 1977, consistent with the approach across the wider subdivision.

I understand the reduction arises from the retention of the existing farm access track as the accessway serving Lot 4, rather than forming a new accessway elsewhere on the lot. Observations on site confirm that a formed farm track is already present in this location.

The area removed from the covenant lies along the margin of the covenant area and is coincident with this existing formed track. It is modified ground of correspondingly low ecological value, and its exclusion does not require the clearance of intact indigenous vegetation. Retaining the existing track in preference to forming a new accessway is, in my view, the better ecological outcome, as it confines vehicle access to an already disturbed corridor.

On this basis, the reduction in the Lot 4 covenant extent is very low and is not considered to result in any material change to the ecological values retained and protected within the covenant, nor to the ecological outcomes anticipated under the consent. The retained covenant area of 0.2316 ha continues to protect the higher value indigenous vegetation on the lot.

4. Covenant provision across the balance of the scheme

Stage 2 has been revised to comprise Lots 5–24 and Lots 50–61, with revised lot areas proposed for Lots 13–22 and Lot 24. Reflecting that revised layout, the proposed land covenants have been re-apportioned across the amended lot boundaries. Comparing the covenant schedules on Rev D and Rev I, proposed land covenants are now shown on Lots 14, 15, 16 and 24 in addition to the lots previously identified, and are no longer shown on Lot 19. Covenant provision in Stage 3 (Lots 45–49) and Stage 4 (Lots 25, 32, 33, 38 and 39) is unchanged.

This reflects the redistribution of covenant areas across redesigned lot boundaries rather than the withdrawal of protection from any mapped ecological feature. The indigenous vegetation identified in the 2024 Ecological Assessment within this part of the site continues to fall within land proposed to be covenanted, the change is to which lot each covenant area sits within, not to the extent of vegetation protected.

5. Other scheme plan changes

The following further changes are shown on Rev I and, in my assessment, have no implications for the covenanted bush areas or for indigenous vegetation, wetlands or watercourses identified in the 2024 Ecological Assessment:

- Lots 62–64 are increased in size (Lot 62 from 0.2939 ha to 0.4670 ha, Lot 63 from 0.3347 ha to 0.5466 ha and Lot 64 from 0.5945 ha to 0.6465 ha). These increases occur within pasture and do not encroach on covenant areas;
- balance Lot 200 is marginally increased from 6.5787 ha to 6.5790 ha;
- the staging is reduced from five stages to four, with Stage 4 now comprising Lots 25–39. This is a sequencing change only and does not alter the extent of any covenant or

planting area, although the staged delivery of ecological works under the Ecological Management Plan should be updated to align with the revised staging.

6. Conclusion

The reduction in the Lot 4 bush covenant of approximately 0.0296 ha is minor, occurs within a modified corridor along an existing farm track, and does not materially alter the ecological values protected by the covenant. Retaining the existing track is the preferable ecological outcome.

The changes to covenant provision elsewhere in Stage 2 represent a re-apportionment of covenant areas across revised lot boundaries rather than a reduction in the extent of vegetation protected.

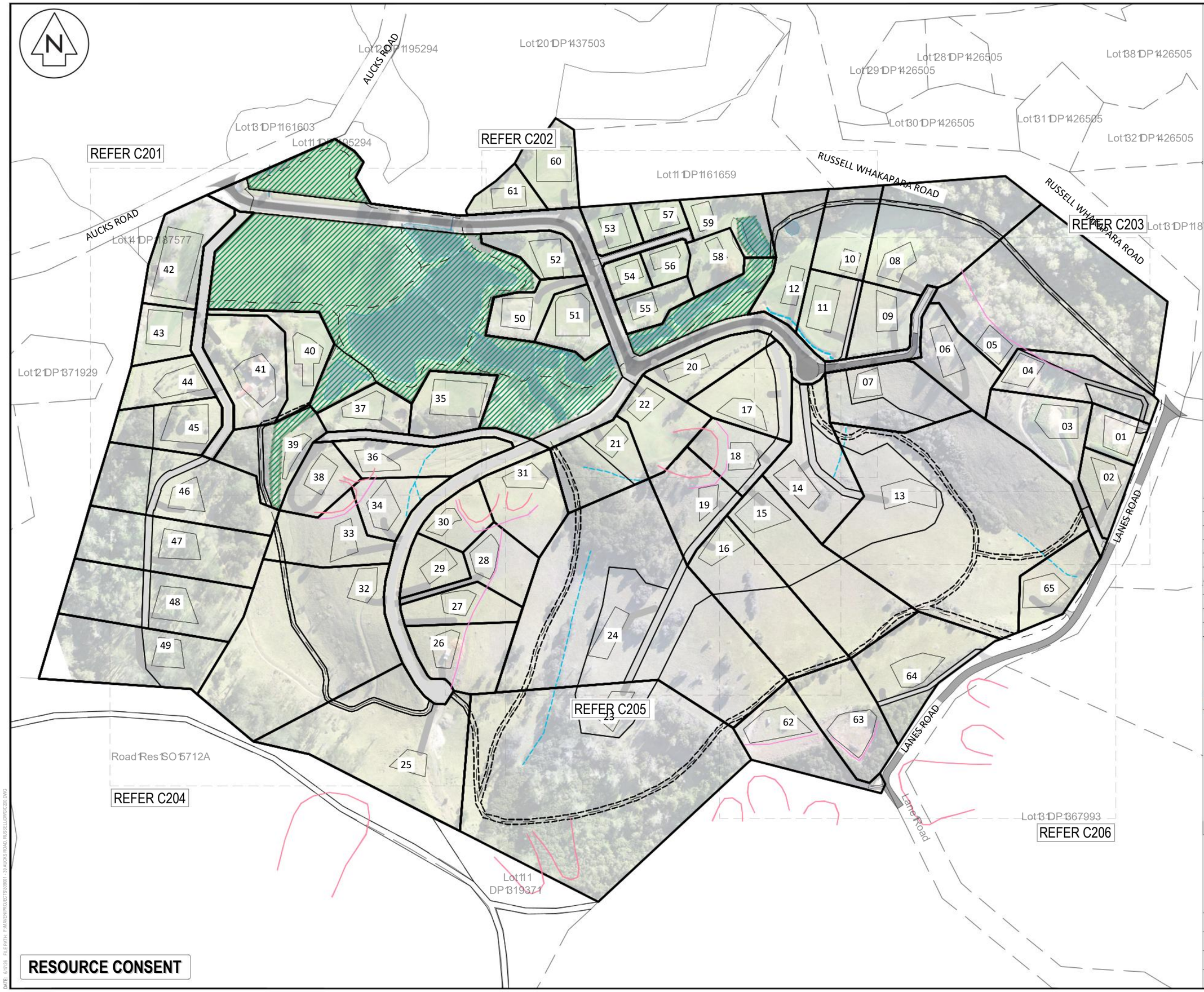
No wetlands, watercourses or other sensitive ecological features are affected by the proposed amendments, and no adverse ecological effects beyond those already assessed in the 2024 Ecological Assessment are anticipated.

Subject to the above, the proposed amendments are supported from an ecological perspective.

Madara Vilde
Principal Ecologist
Wild Ecology Ltd

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wildecology.co.nz

23.07.2026



NOTES

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LEGEND

- EX BDY
- PROP BDY
- INDICATIVE BUILDING PLATFORM

Rev	Description	By	Date
D	FOR RC S92	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED EARTHWORKS OVERALL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C200.DWG		
Drawing no.	C200	Rev	D

RESOURCE CONSENT

DATE: 01/7/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C200.DWG

ALL LEVELS TO BE EXISTING/PROPOSED GROUND LEVEL. BUILDING FINIAL FLOOR LEVEL SUBJECT TO FURTHER DESIGN COMPLYING WITH NZBC.

AUCKS ROAD

Lot 44 DP 417577

RL13.94

RL4.71

43

RL16.24

44

45 RL22.84

46 RL27.34

RL10.79

41

40 RL4.20

RL3.49

RL2.65

RL2.37

37 RL4.20

RL2.39

35 RL4.20

RL3.98

39 RL7.00

36 RL14.11

38 RL10.80

RESOURCE CONSENT

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Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C200.DWG		
Drawing no.	C201	Rev	D

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Lot 1 DP 161659

RUSSELL WAITANGI ROAD

TAPEKA ROAD

RESOURCE CONSENT

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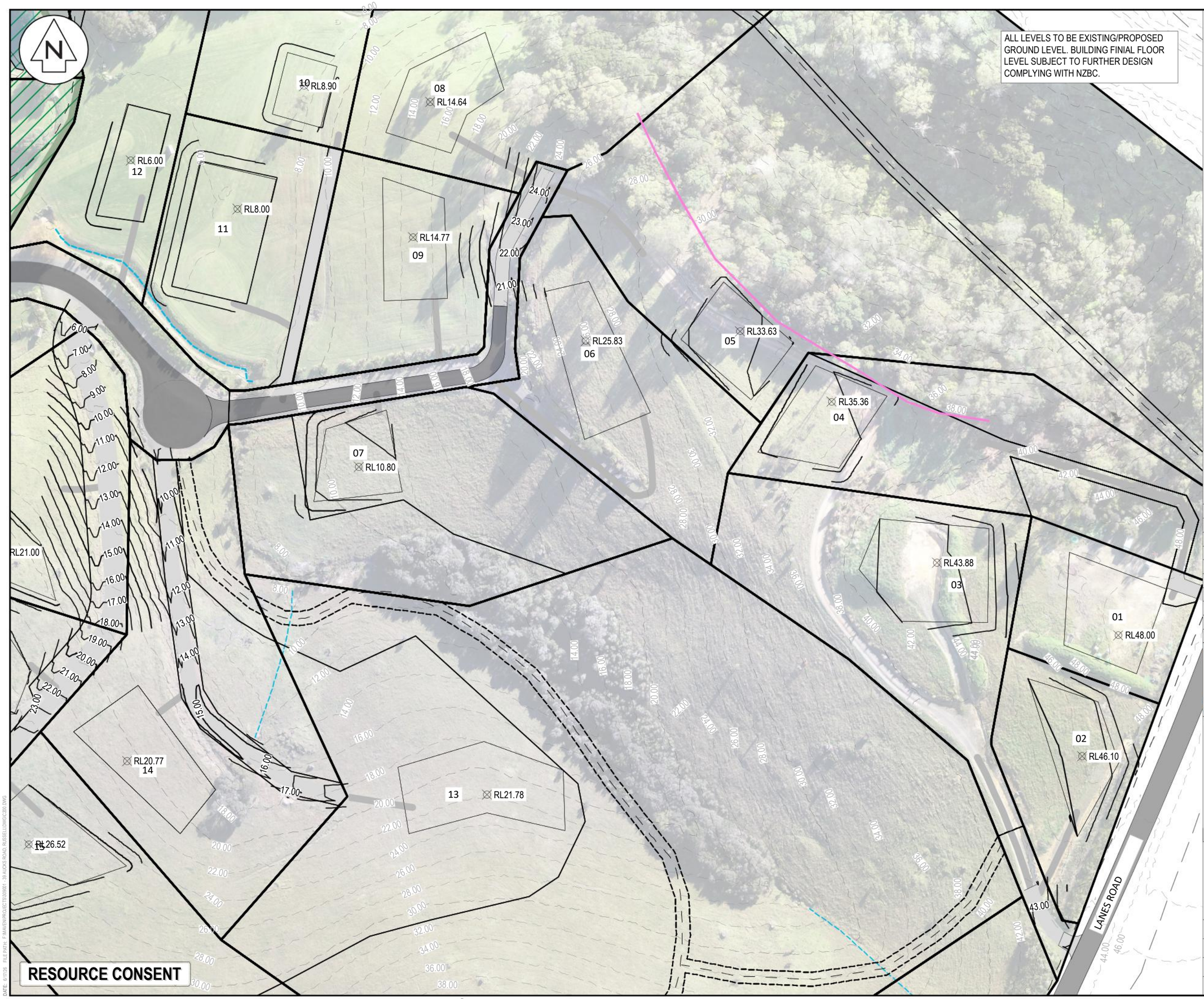
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PROPOSED EARTHWORKS PLAN

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Drawing no.	C202 Rev D

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Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C200.DWG
Drawing no.	C203 Rev D

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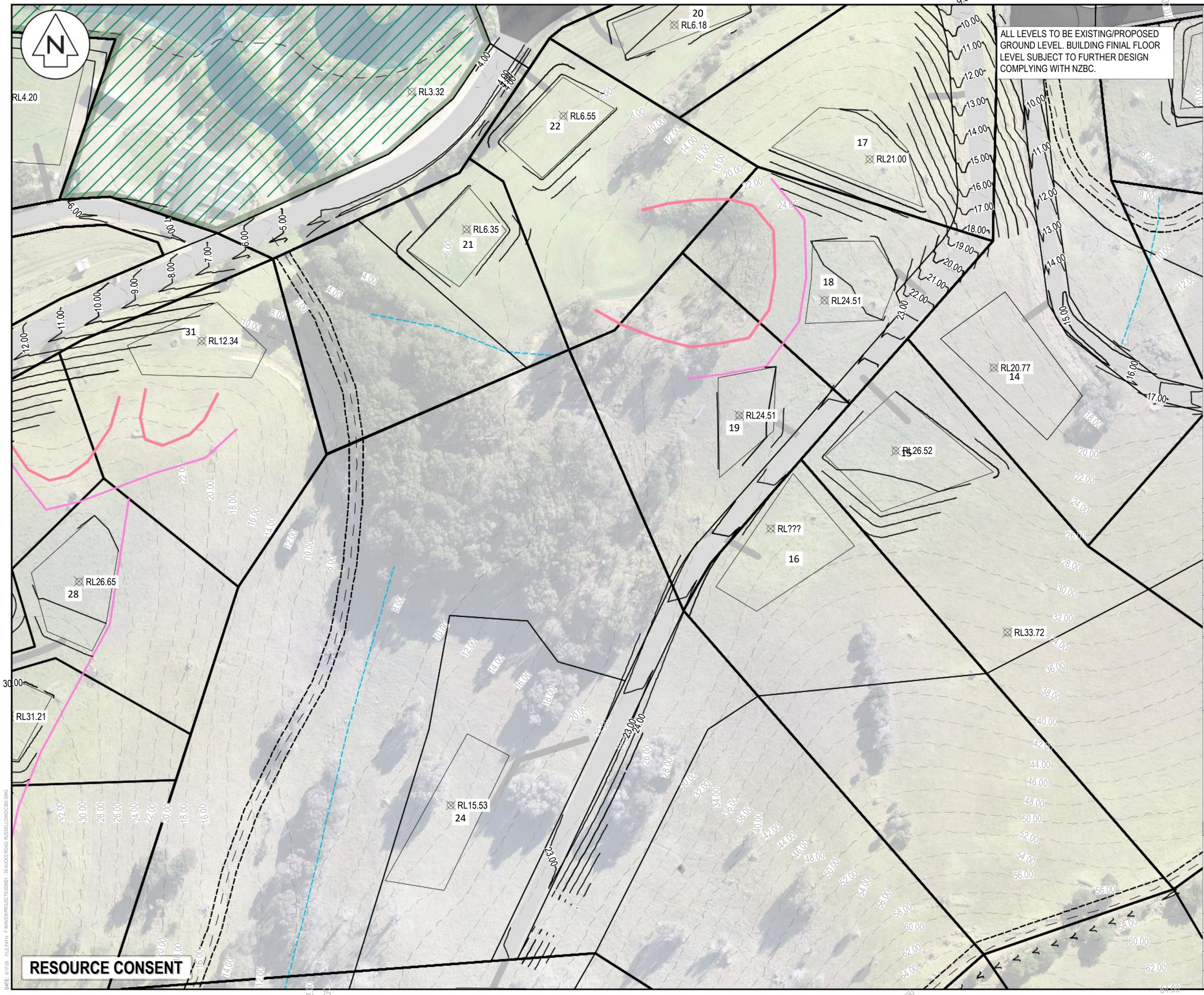
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RESOURCE CONSENT

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Drawing no.	C205 Rev D

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6. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START ONSITE IN ACCORDANCE WITH COUNCIL STANDARDS.
7. CONTRACTOR SHALL PROVIDE AS-BUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECENT VOLUMES TO

LEGEND

- EX BDY
- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- GEO FEATURE
- GEO SETBACK LINE
- RL 6.61 EX/PORP GROUND LEVEL

Rev	Description	By	Date
D	FOR RC S92	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

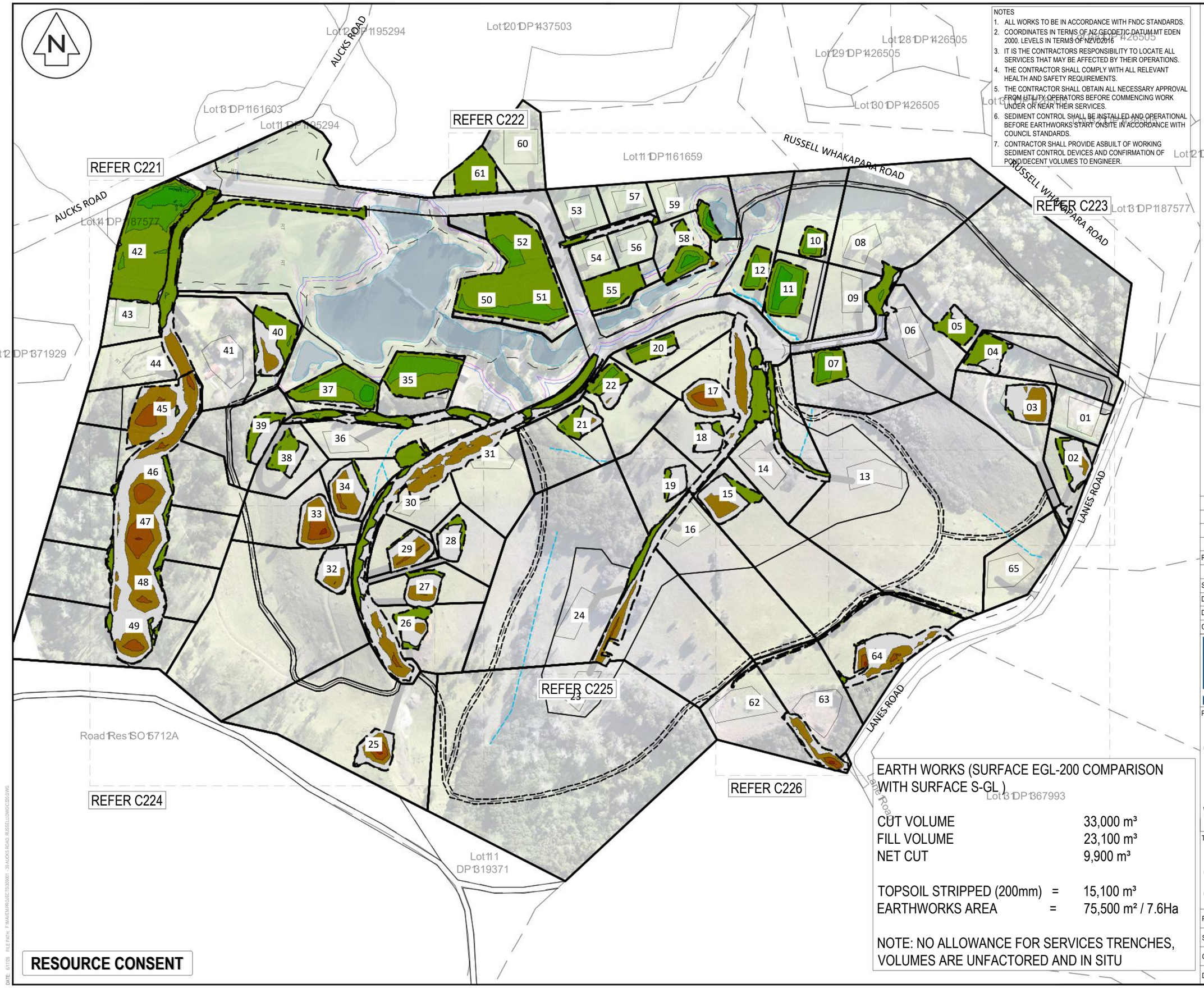
Title

PROPOSED EARTHWORKS PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C200.DWG		
Drawing no.	C206	Rev	D

ALL LEVELS TO BE EXISTING/PROPOSED GROUND LEVEL. BUILDING FINIAL FLOOR LEVEL SUBJECT TO FURTHER DESIGN COMPLYING WITH NZBC.

DATE: 6/01/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C200.DWG



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
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7. CONTRACTOR SHALL PROVIDE ASBUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECENT VOLUMES TO ENGINEER.

LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
3	-2.000	-1.000	
4	-1.000	0.000	
5	0.000	1.000	
6	1.000	2.000	
7	2.000	3.000	
8	3.000	4.000	

EARTH WORKS (SURFACE EGL-200 COMPARISON WITH SURFACE S-GL)

CUT VOLUME		33,000 m³
FILL VOLUME		23,100 m³
NET CUT		9,900 m³
TOPSOIL STRIPPED (200mm)	=	15,100 m³
EARTHWORKS AREA	=	75,500 m² / 7.6Ha

NOTE: NO ALLOWANCE FOR SERVICES TRENCHES, VOLUMES ARE UNFACTORED AND IN SITU

RESOURCE CONSENT

Rev	Description	By	Date
D	FOR RC S92	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

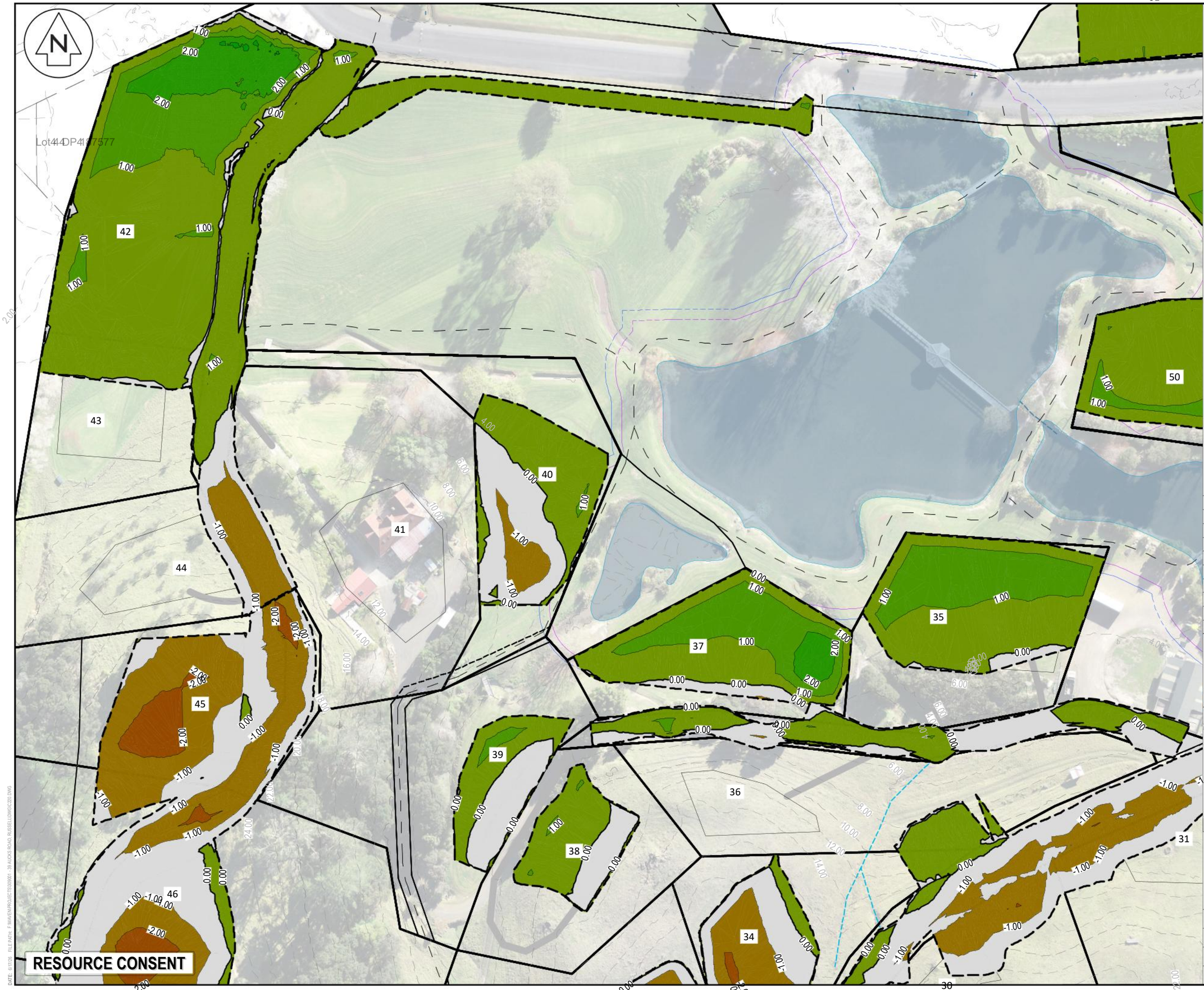
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title
PROPOSED CUT AND FILL OVERALL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:13000 @ A3		
Cad file	C220.DWG		
Drawing no.	C220	Rev	D

DATE: 6/1726 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- 15m OFFSET FROM POND
- 12m OFFSET FROM POND

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
3	-2.000	-1.000	
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Rev	Description	By	Date
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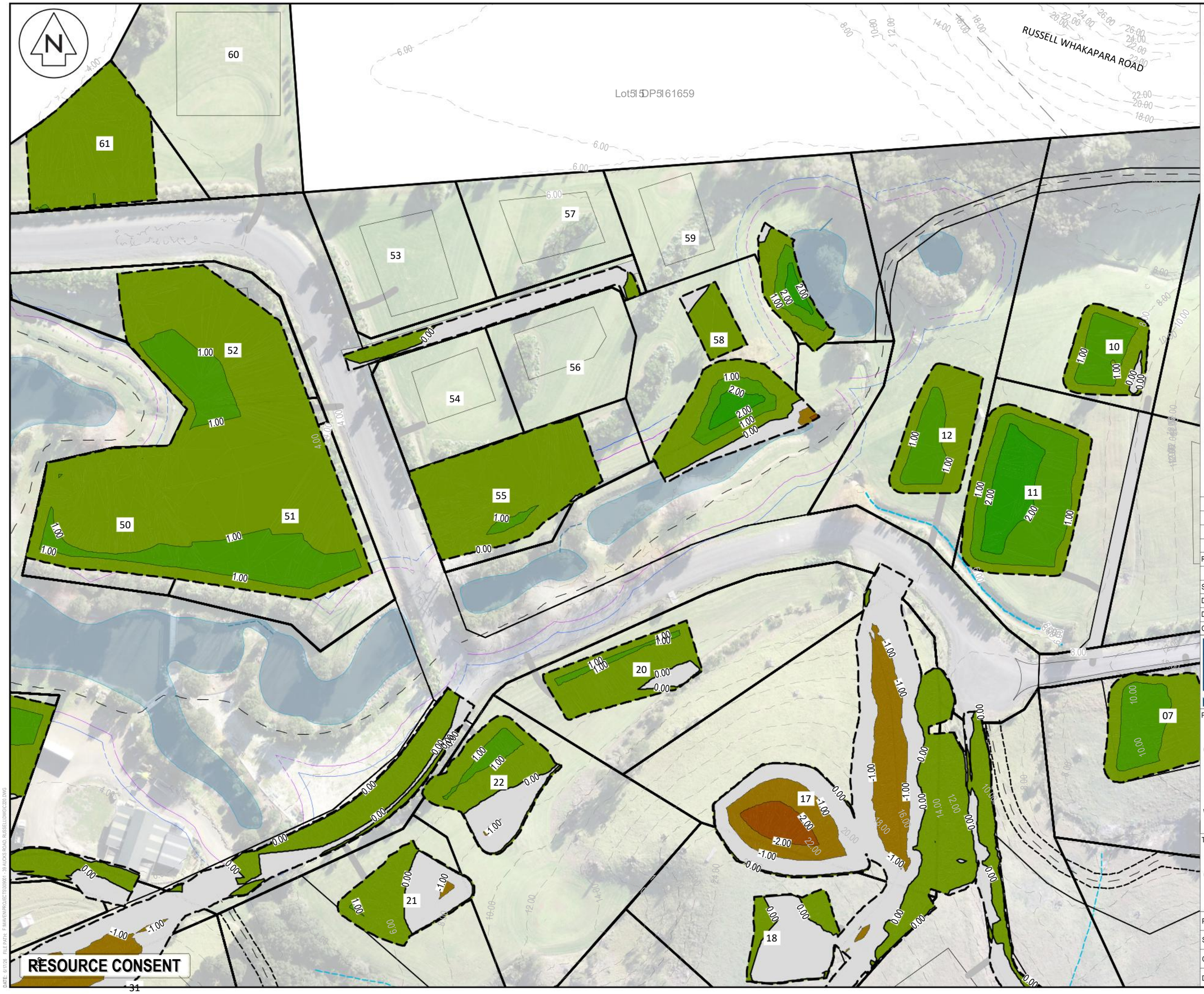
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C220.DWG		
Drawing no.	C221	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- 15m OFFSET FROM POND
- 12m OFFSET FROM POND

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
3	-2.000	-1.000	
4	-1.000	0.000	
5	0.000	1.000	
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	By	Date
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Design	JAW	07/2024
Drawn	JAW	07/2024
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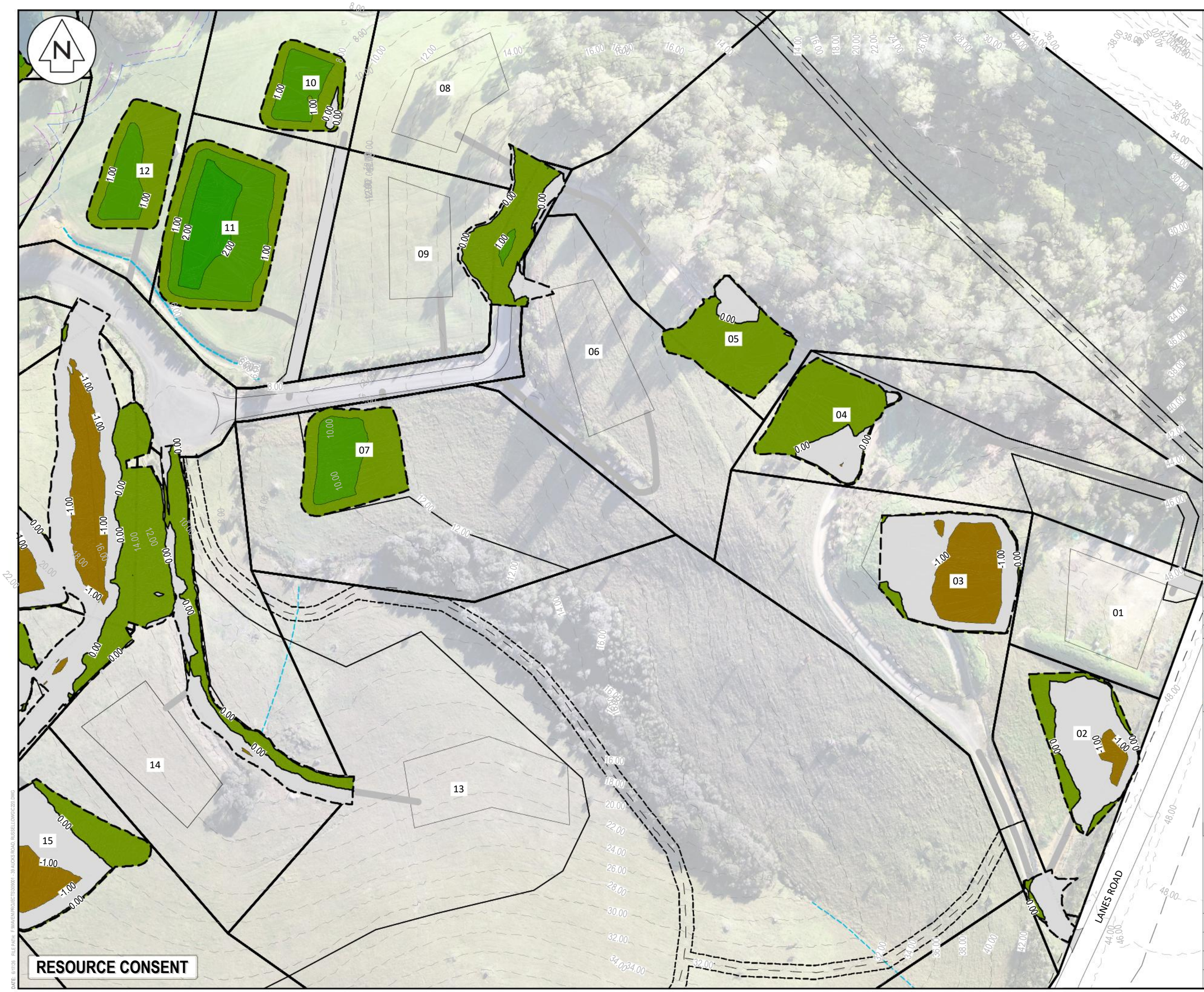
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C220.DWG		
Drawing no.	C222	Rev	D

DATE: 6/17/25 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- 15m OFFSET FROM POND
- 12m OFFSET FROM POND

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
3	-2.000	-1.000	
4	-1.000	0.000	
5	0.000	1.000	
6	1.000	2.000	
7	2.000	3.000	
8	3.000	4.000	

Rev	Description	By	Date
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A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Title

PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C220.DWG		
Drawing no.	C223	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
3	-2.000	-1.000	
4	-1.000	0.000	
5	0.000	1.000	
6	1.000	2.000	
7	2.000	3.000	
8	3.000	4.000	

Rev	Description	By	Date
D	FOR RC S92	JAW	06/2026
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B	FOR RC S92	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title
PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C220.DWG		
Drawing no.	C224	Rev	D

DATE: 6/17/25 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- 15m OFFSET FROM POND
- 12m OFFSET FROM POND

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
2	-3.000	-2.000	
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Rev	Description	By	Date
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Title

PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C220.DWG
Drawing no.	C225
Rev	D

DATE: 6/7/25 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



LEGEND

- EX BDY
- PROP BDY
- PROP EXTENT WORK
- INDICATIVE BUILDING PLATFORM
- 15m OFFSET FROM POND
- 12m OFFSET FROM POND

Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-3.000	
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3	-2.000	-1.000	
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A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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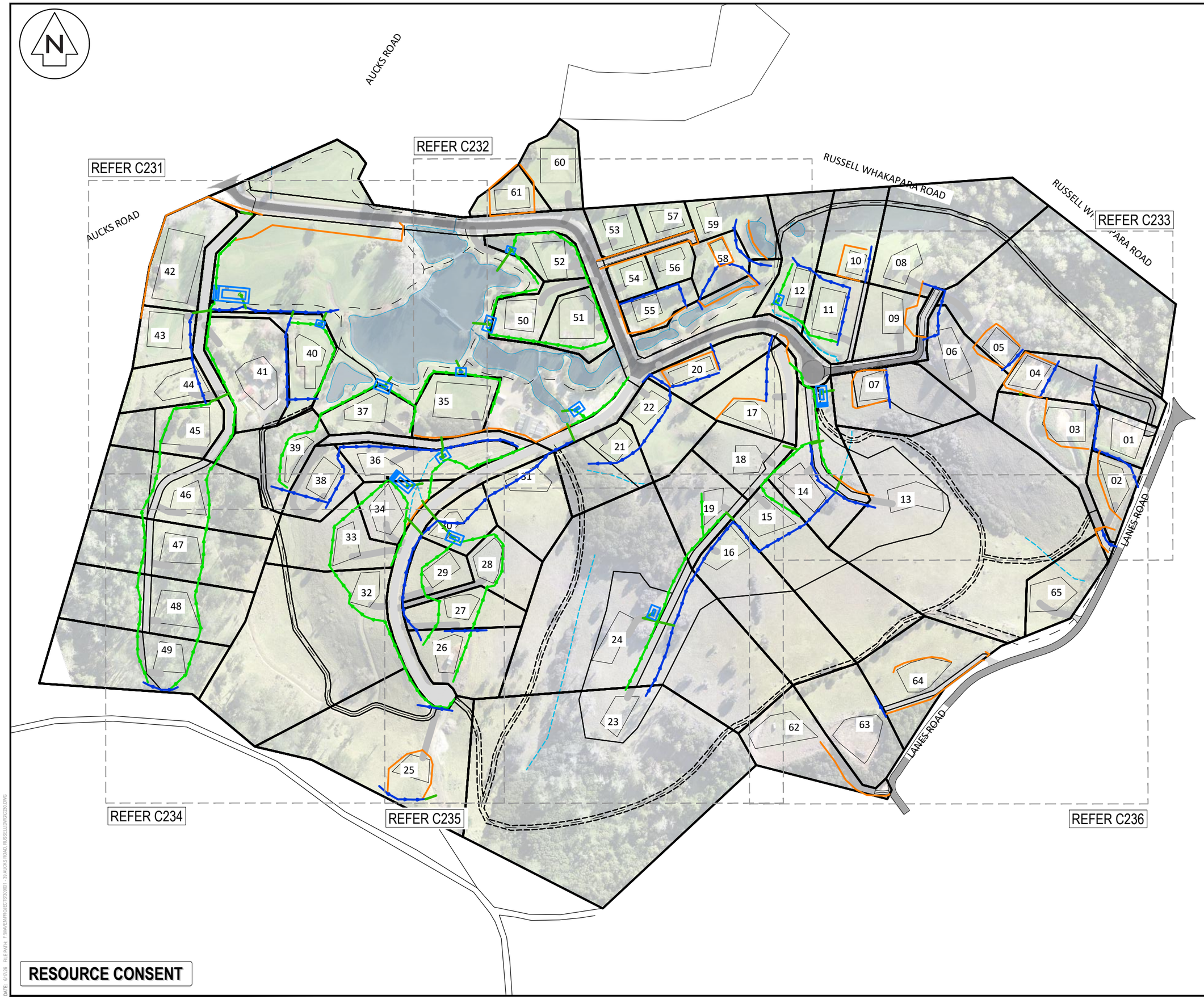
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED CUT AND FILL PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C220.DWG
Drawing no.	C226 Rev D

DATE: 6/7/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C220.DWG



RESOURCE CONSENT

NOTES

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LEGEND

- EX BDY
- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PROP EXTENT WORK
- PROP CLEANWATER
- PROP DIRTYWATER
- PROP SW PIPE
- PROP SILT FENCE
- PROP STOCKPILE
- PROP DECANT
- PROP DECANT BAR

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC	JAW	02/2025
A	FOR RC	JAW	11/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED EROSION AND SEDIMENT CONTROL OVERALL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C230.DWG		
Drawing no.	C230	Rev	D

DATE: 01/7/26 FILEPATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWGS\C230.DWG

WHEN EARTHWORKS AREA LESS THAN 1000m2, CONTRACTOR TO CONSIDER REPLACING SILT FENCE WITH EARTHBOUND UNDER THE SUPERVISION OF ENGINEERING

EX VEHICLE CROSSING TO BE USED AS STABILIZED ENTRANCE

EMERGENCY SPILLWAY WITH GEOTEXTILE EROSION PROTECTION 2.0m WIDTH TO GD05 STANDARDS @RL 2.2m

CHEMICAL TREATMENT

PROP SRP 1
UPSTREAM CATCHMENT = 1.23 Ha.
BASE SIZE 6.76m W x 20.3 m L @ RL 0.5m
USE 150mm RISER AS PRIMARY SPILLWAY
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 370 m³ (3% CATCHMENT AREA)

PROP DEB1
CATCHMENT = 2230m2
BASE SIZE 0.51m W x 1.52m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 47 m³ (2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB2
CATCHMENT = 5800m2
BASE SIZE 2.65m W x 8.0 m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 116 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB3
CATCHMENT = 2,200m2
BASE SIZE 0.5m W x 1.5m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 44 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB4
CATCHMENT = 4,600m2
BASE SIZE 2.02m W x 6.06m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 92 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB5
CATCHMENT = 2,720m2
BASE SIZE 0.9m W x 2.7m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 54 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB7
CATCHMENT = 3,190m2
BASE SIZE 1.22m W x 3.66m L @ RL 4.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 64 m³ (2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP SRP2
CATCHMENT = 8,150m2
BASE SIZE 3.65 m W x11.0m L @ RL 16.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 163 m³ (2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB6
BASE SIZE 1.36m W x 4.07m L @ RL 1.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

RESOURCE CONSENT

NOTES
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LEGEND
- EX BDY
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- PROP DIRTYWATER
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- PROP SILT FENCE
- PROP STOCKPILE
- PROP DECANT
- PROP DECANT BAR

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC	JAW	02/2025
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Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
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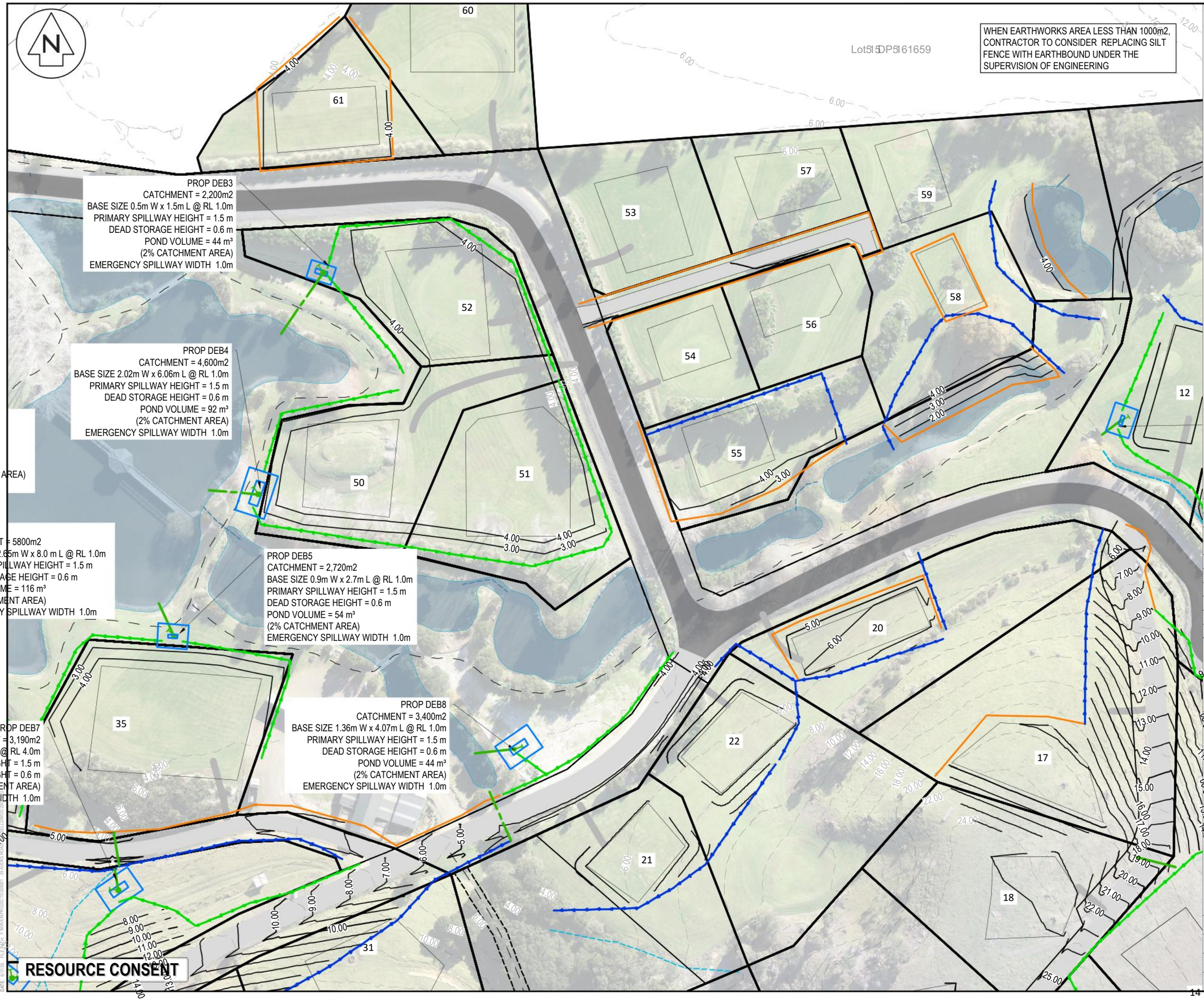
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C230.DWG		
Drawing no.	C231	Rev	D

DATE: 9/7/26 FILE PATH: P:\MAVEN PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C230.DWG



NOTES

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PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C230.DWG
Drawing no.	C232 Rev D

PROP DEB10
CATCHMENT = 2,520m2
BASE SIZE 0.74 m W x 2.22m L @ RL 3.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 46 m³ (2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP SRP3
CATCHMENT = 6,330m2
BASE SIZE 2.9 m W x 8.7m L @ RL 7.5m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 127 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

CHEMICAL TREATMENT

WHEN EARTHWORKS AREA LESS THAN 1000m2, CONTRACTOR TO CONSIDER REPLACING SILT FENCE WITH EARTHBOUND UNDER THE SUPERVISION OF ENGINEERING

RL35.36

LANES ROAD

RESOURCE CONSENT

NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF NZVD2016
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT HEALTH AND SAFETY REQUIREMENTS.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVAL FROM UTILITY OPERATORS BEFORE COMMENCING WORK UNDER OR NEAR THEIR SERVICES.
6. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START ONSITE IN ACCORDANCE WITH COUNCIL STANDARDS.
7. CONTRACTOR SHALL PROVIDE AS-BUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECENT VOLUMES TO

LEGEND
- EX BDY
- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PROP EXTENT WORK
- PROP CLEANWATER
- PROP DIRTYWATER
- PROP SW PIPE
- PROP SILT FENCE
- PROP STOCKPILE
- PROP DECANT
- PROP DECANT BAR

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

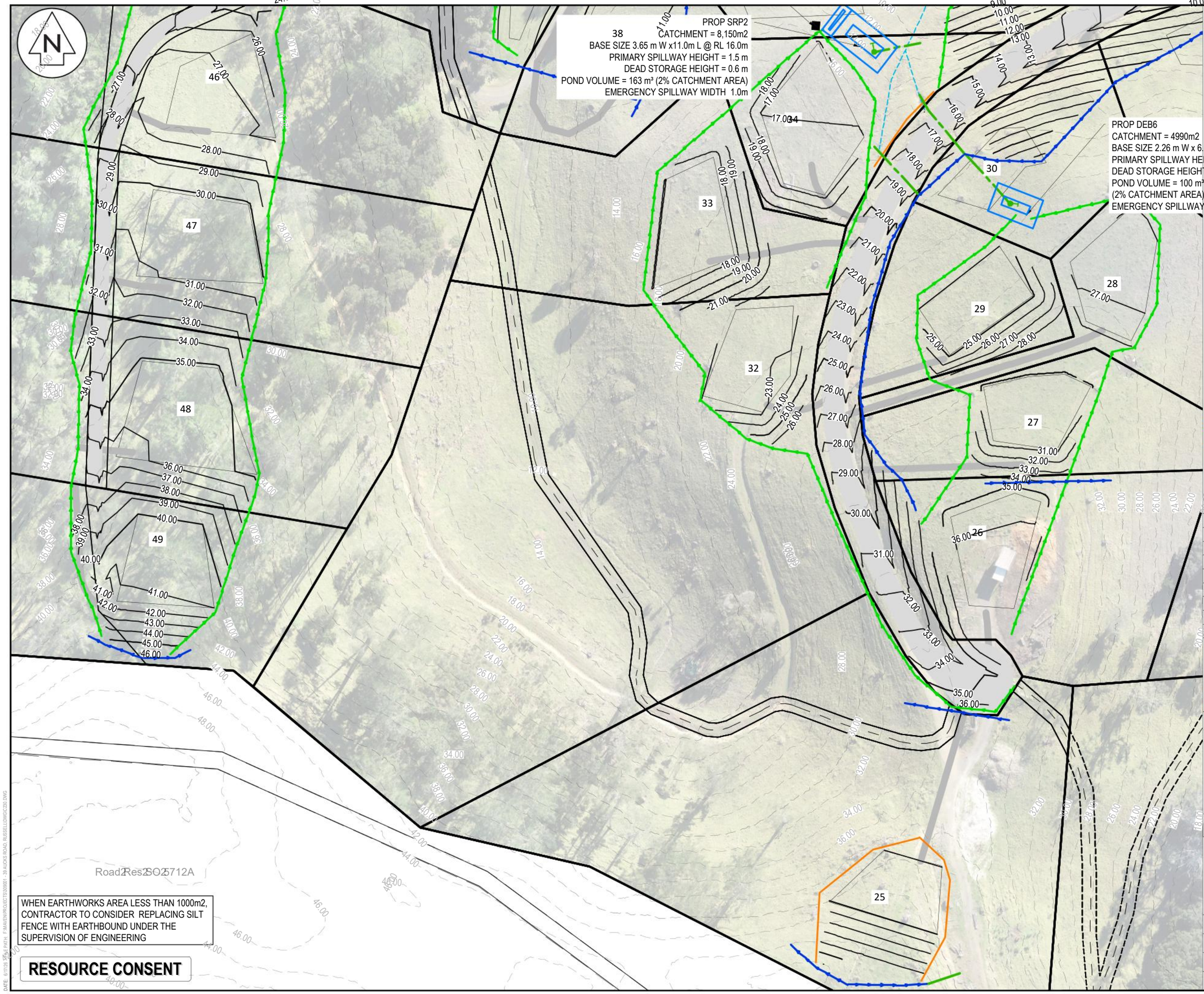
Maven Associates
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Auckland 1023

Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C230.DWG
Drawing no.	C233 Rev D

DATE: 6/07/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C230.DWG



NOTES

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6. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START
7. WORKS IN ACCORDANCE WITH COUNCIL STANDARDS.
8. CONTRACTOR SHALL PROVIDE AS-BUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECENT VOLUMES TO

LEGEND

- EX BDY
- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PROP EXTENT WORK
- PROP CLEANWATER
- PROP DIRTYWATER
- PROP SW PIPE
- PROP SILT FENCE
- PROP STOCKPILE
- PROP DECANT
- PROP DECANT BAR

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
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A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C230.DWG		
Drawing no.	C234	Rev	D

DATE: 9/17/25 25 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C230.DWG

PROP DEB6
CATCHMENT = 4990m2
BASE SIZE 2.26 m W x 6.77m L @ RL 3.0m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 100 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

PROP DEB9
CATCHMENT = 3,070m2
BASE SIZE 1.14m W x 3.42m L @ RL 19.5m
PRIMARY SPILLWAY HEIGHT = 1.5 m
DEAD STORAGE HEIGHT = 0.6 m
POND VOLUME = 20 m³
(2% CATCHMENT AREA)
EMERGENCY SPILLWAY WIDTH 1.0m

RL19.77

RESOURCE CONSENT

WHEN EARTHWORKS AREA LESS THAN 1000m2, CONTRACTOR TO CONSIDER REPLACING SILT FENCE WITH EARTHBOUND UNDER THE SUPERVISION OF ENGINEERING

NOTES
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7. CONTRACTOR SHALL PROVIDE AS-BUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECENT VOLUMES TO

LEGEND
- EX BDY
- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PROP EXTENT WORK
- PROP CLEANWATER
- PROP DIRTYWATER
- PROP SW PIPE
- PROP SILT FENCE
- PROP STOCKPILE
- PROP DECANT
- PROP DECANT BAR

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
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B	FOR RC	JAW	02/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C230.DWG
Drawing no.	C235 Rev D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C230.DWG



NOTES

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LEGEND

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- PROP BDY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
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Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
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A	FOR RC	JAW	11/2024

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Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

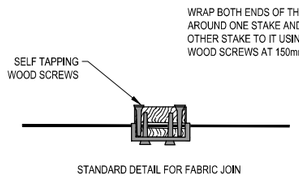
PROPOSED EROSION AND SEDIMENT CONTROL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C230.DWG		
Drawing no.	C236	Rev	D

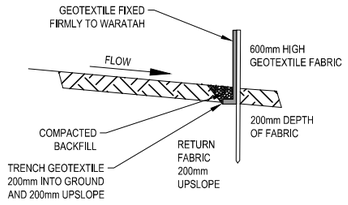
WHEN EARTHWORKS AREA LESS THAN 1000m2, CONTRACTOR TO CONSIDER REPLACING SILT FENCE WITH EARTHBOUND UNDER THE SUPERVISION OF ENGINEERING

RESOURCE CONSENT

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C230.DWG

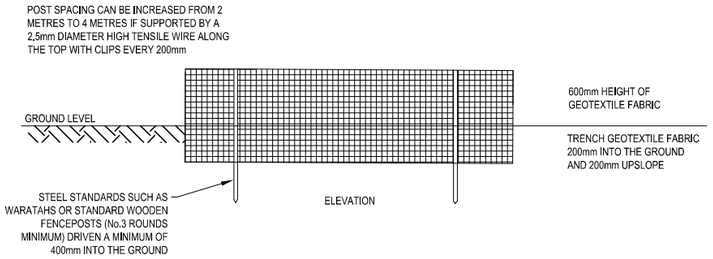


STANDARD DETAIL FOR FABRIC JOIN



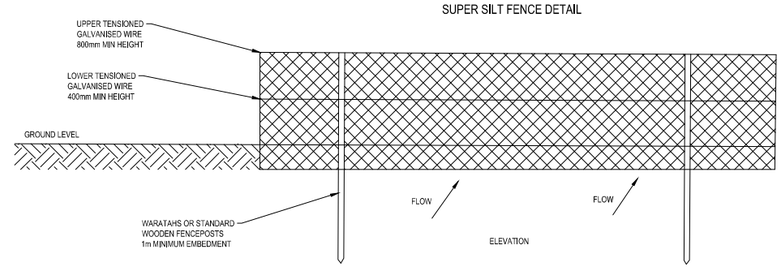
CROSS SECTION

STANDARD DETAIL FOR SILT FENCE

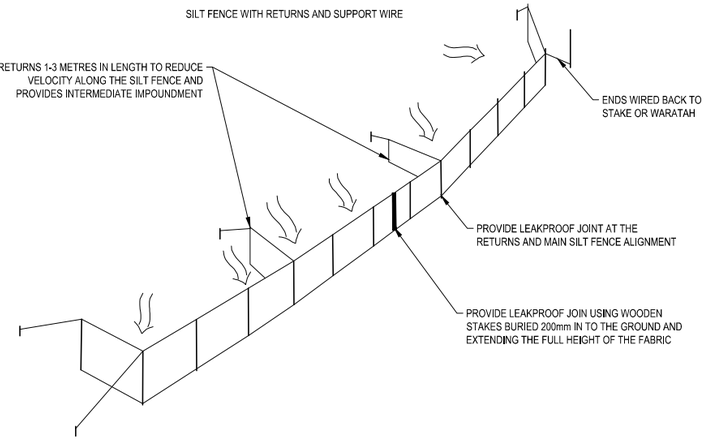


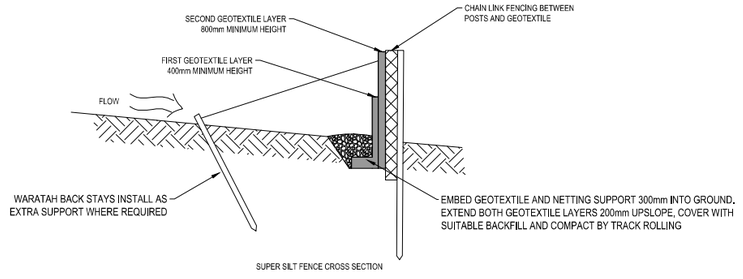
ELEVATION

SUPER SILT FENCE DETAIL



ELEVATION





SUPER SILT FENCE CROSS SECTION

Rev	Description	By	Date
-	FOR RC	JAW	10/2024

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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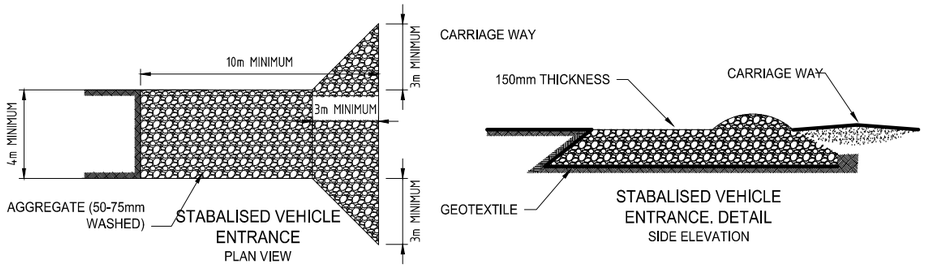
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

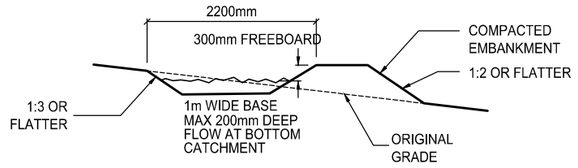
Title

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C241	Rev	A

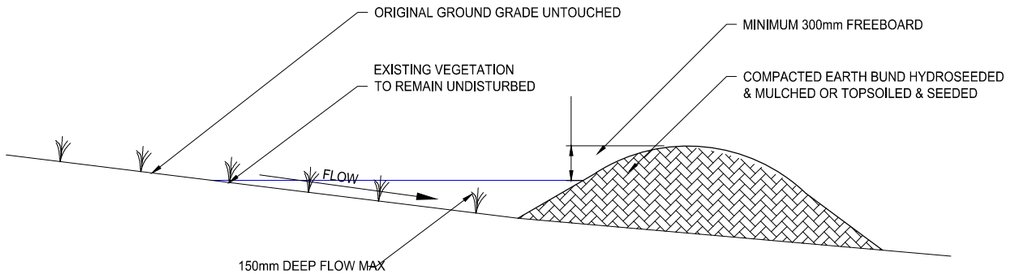
DATE: 6/17/26





TYPICAL CROSS SECTION OF A RUNOFF DIVERSION

TYPICAL DIMENSIONS UNLESS OTHERWISE NOTED



CLEAN WATER DIVERSION BUND DETAIL

Rev	Description	By	Date

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

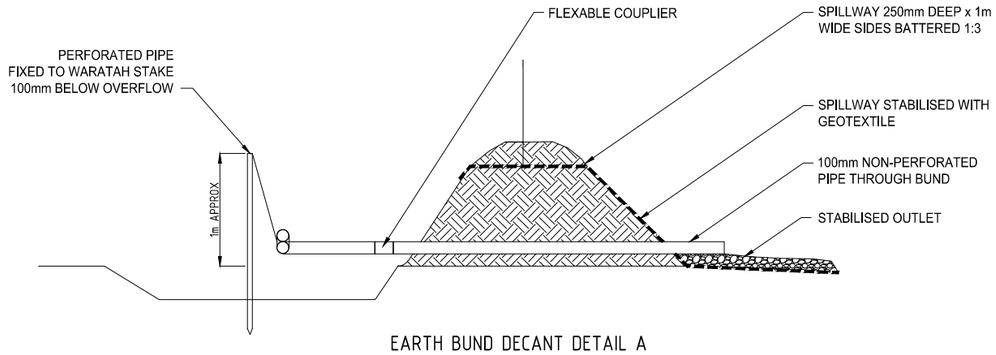
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

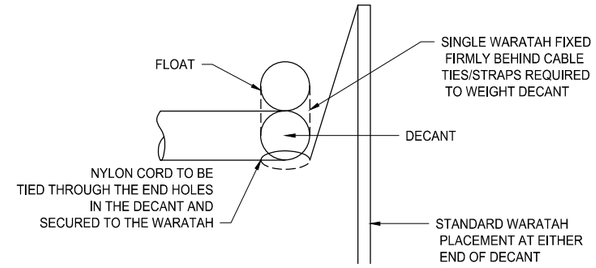
EROSION AND SEDIMENT CONTROL STANDARD DETAILS

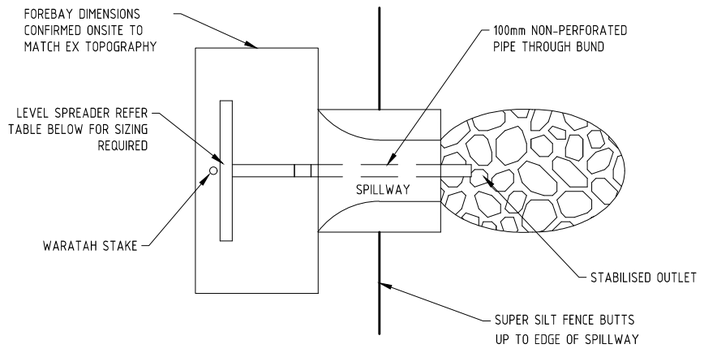
Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C242	Rev	A

DATE: 6/17/25



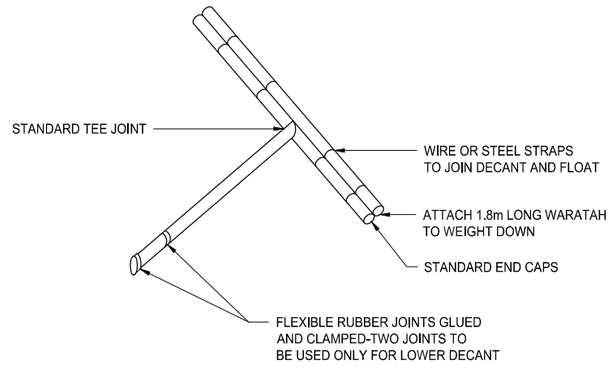
EARTH BUND DECANT DETAIL A
N.T.S





DECANT PLAN VIEW
N.T.S

LEVEL SPREADER DESIGN CRITERIA (20 YEAR STORM EVENT)				
DESIGN FLOW (m^3/sec)	INLET WIDTH (m)	DEPTH (m)	END WIDTH (m)	LENGTH (mm)
0-0.3	3	150	1	3
0.3-0.6	5	180	1	7
0.6-0.9	7	220	1	10



Rev	Description	By	Date

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

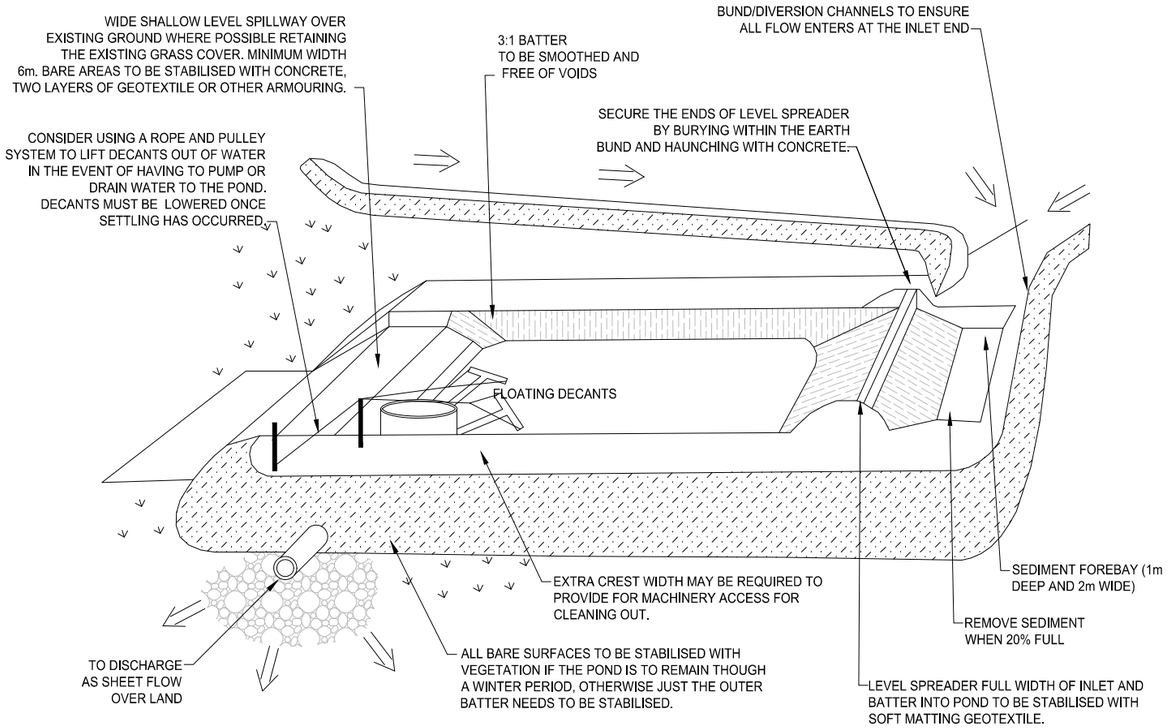
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

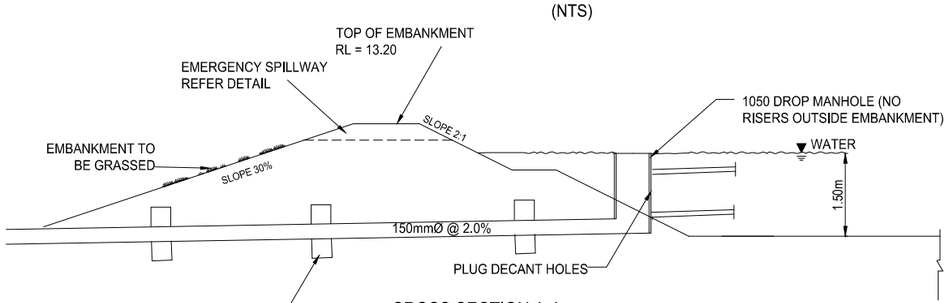
Title
EROSION AND SEDIMENT CONTROL STANDARD DETAILS

Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C243	Rev	A

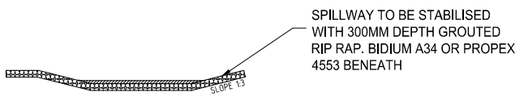
DATE: 6/17/26



SEDIMENT POND DETAILS
(NTS)



CROSS SECTION A-A
OF SEDIMENT TREATMENT POND NTS



DETAIL I
EMERGENCY SPILLWAY

Rev	Description	By	Date

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

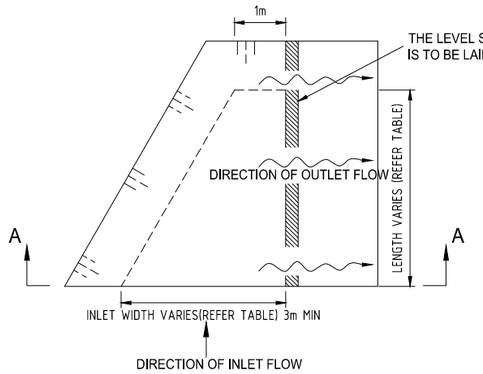
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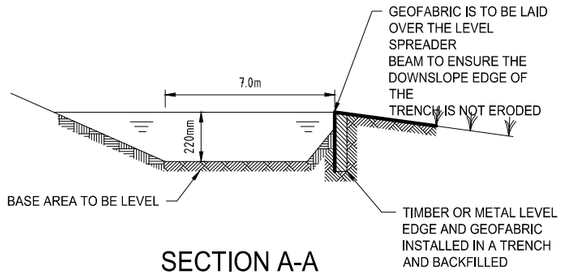
Title
EROSION AND SEDIMENT CONTROL STANDARD DETAILS

Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C244	Rev	A

DATE: 6/7/26

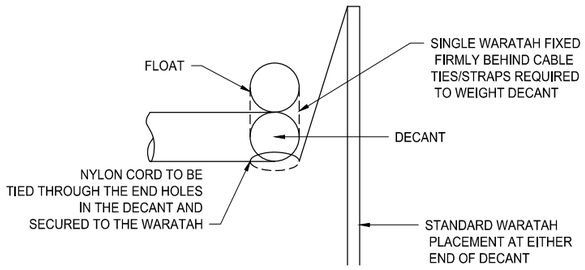


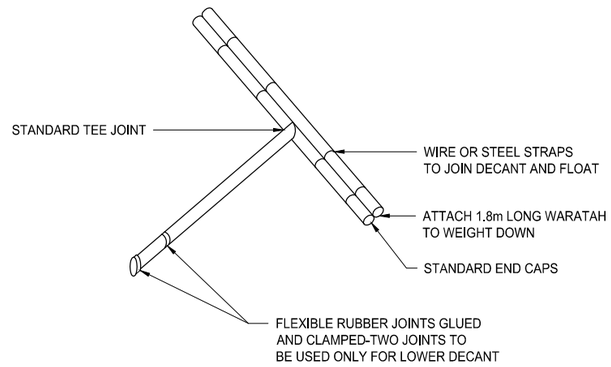
PLAN VIEW



SECTION A-A

LEVEL SPREADER DESIGN CRITERIA (20 YEAR STORM EVENT)				
DESIGN FLOW (m^3/sec)	INLET WIDTH (m)	DEPTH (m)	END WIDTH (m)	LENGTH (mm)
0-0.3	3	150	1	3
0.3-0.6	5	180	1	7
0.6-0.9	7	220	1	10





Rev	Description	By	Date

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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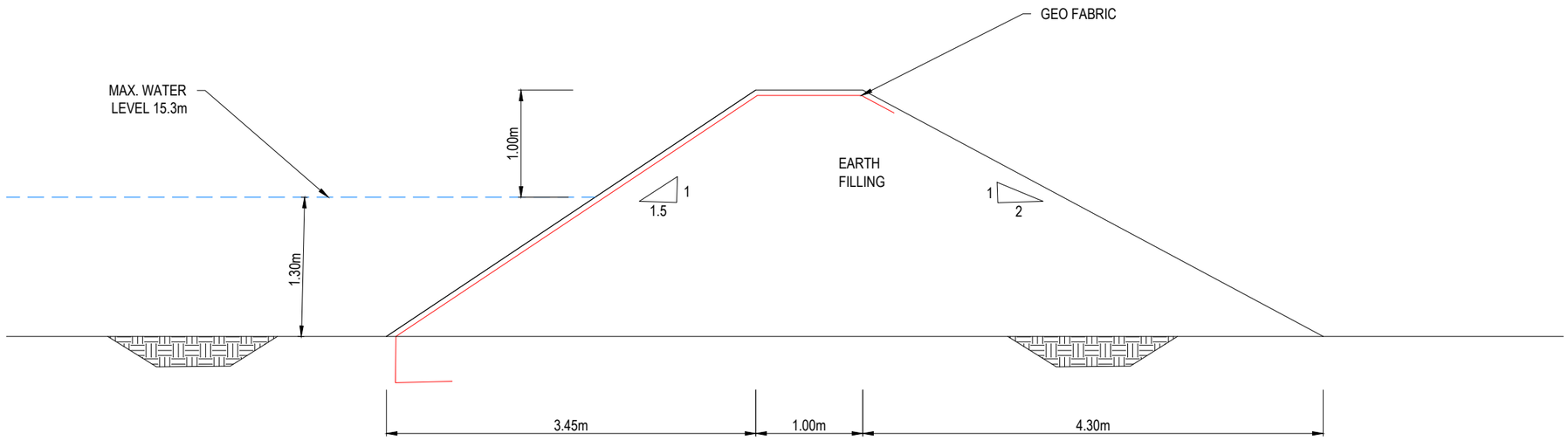
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

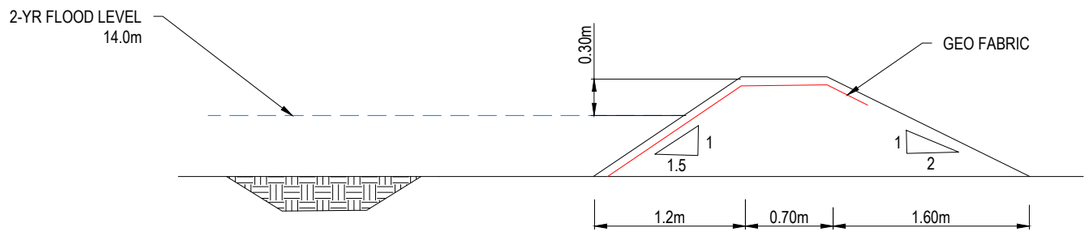
Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C245	Rev	A

DATE: 6/11/26



UPSTREAM COFFERDAM CORSS SECTION

NTS



DOWNSTREAM COFFERDAM CORSS SECTION

NTS

Rev	Description	By	Date

	By	Date
Survey	MAVEN	06/2024
Design	-	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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5 Owens Road, Epsom
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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

Project no.	309001 - WILLOWRIDGE		
Scale	NTS		
Cad file	C240 DETAILS.DWG		
Drawing no.	C246	Rev	A

DATE: 6/17/26



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. CONTRACTOR IS TO AVOID USING GPS FOR SET OUT OF THE KERB LEVELS WHERE GRADIENTS ARE LESS THAN 1%.
3. FINAL PAVEMENT DESIGN SUBJECT TO CBR/BEAM TESTS ON SUBGRADE MATERIAL.
4. SETOUT SCHEDULE WITH COORDINATES OF CHAINAGE POINTS ALONG ROAD CENTRELINE TO BE SUPPLIED TO THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. REFER TO LONG SECTION FOR FINISHED CENTRELINE LEVELS. REFER TO TYPICAL CROSS SECTIONS TO OBTAIN LEVELS FOR OTHER LOCATIONS.
6. STREET LIGHTING SHALL BE DESIGNED IN ACCORDANCE WITH ALL APPLICABLE NEW ZEALAND STANDARDS INCLUDING BUT NOT RESTRICTED TO THE CURRENT VERSION OF AS/NZS 1158 LIGHTING FOR ROADS AND PUBLIC SPACES SERIES OF STANDARDS.

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING OVERALL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C300.DWG		
Drawing no.	C300	Rev	D

RESOURCE CONSENT

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG

N

EX POWER POST TO BE USED AS LIGHTING POST

EX VEHICLE CROSSING 1 TO REMAIN

EX VEHICLE CROSSING 2 TO BE REMOVED

32.62m

10.69m

CH 0

6.01m

EX JOAL 5 TO REMAIN

6.00m

EX JOAL 5 TO REMAIN

ROAD1

CH 20

JOAL 1

CH 40

6.00m

PR 225mm RCRRJ CULVRT

A-A C321

CH 60

CH 80

CH 100

CH 120

CH 140

CH 160

CH 180

CH 200

CH 220

CH 240

4.00m

-20.5%

-23.0%

-37.9%

-38.4%

-33.7%

-49.9%

-31.8%

-35.1%

-38.0%

-10.9%

C-C C321

E-E C322

B-B C321

3.99m

-50.0%

-50.3%

4.00m

JOAL 2

JOAL 2

CH 187

CH 180

CH 160

CH 140

CH 120

CH 100

CH 80

CH 60

CH 40

CH 20

CH 0

-28.8%

-24.1%

-34.8%

JOAL 6

CH 160

CH 140

CH 120

42

43

44

45

40

41

37

35

39

36

38

61

50

31

RESOURCE CONSENT

DATE: 6/07/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWGS\C300.DWG

LEGEND

- EX BDY
- PROP BDY
- PR WALKWAY
- 15m OFFSET FROM POND
- 12M OFFSET FROM POND
- INDICATIVE BUILDING PLATFORM
- EX PAVE
- PROPOSED PAVE

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C300.DWG
Drawing no.	C301 Rev D

LEGEND

- EX BDY
- PROP BDY
- PR WALKWAY
- 15m OFFSET FROM POND
- 12M OFFSET FROM POND
- INDICATIVE BUILDING PLATFORM
- EX PAVE
- PROPOSED PAVE

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C300.DWG
Drawing no.	C302 Rev D

RESOURCE CONSENT

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C3D\.DWG



Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C300.DWG
Drawing no.	C303 Rev D

DATE: 01/7/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



RESOURCE CONSENT

LEGEND

- EX BDY
- PROP BDY
- PR WALKWAY
- 15m OFFSET FROM POND
- 12M OFFSET FROM POND
- INDICATIVE BUILDING PLATFORM
- EX PAVE
- PROPOSED PAVE

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
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	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C304	Rev	D

DATE: 01/7/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



LEGEND

- EX BDY
- PROP BDY
- PR WALKWAY
- 15m OFFSET FROM POND
- 12M OFFSET FROM POND
- INDICATIVE BUILDING PLATFORM
- EX PAVE
- PROPOSED PAVE

NOTES

1. DRIVEWAY 2 FROM CH 240 TO END , THE CUT GRADE TO BE 1:2

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
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B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

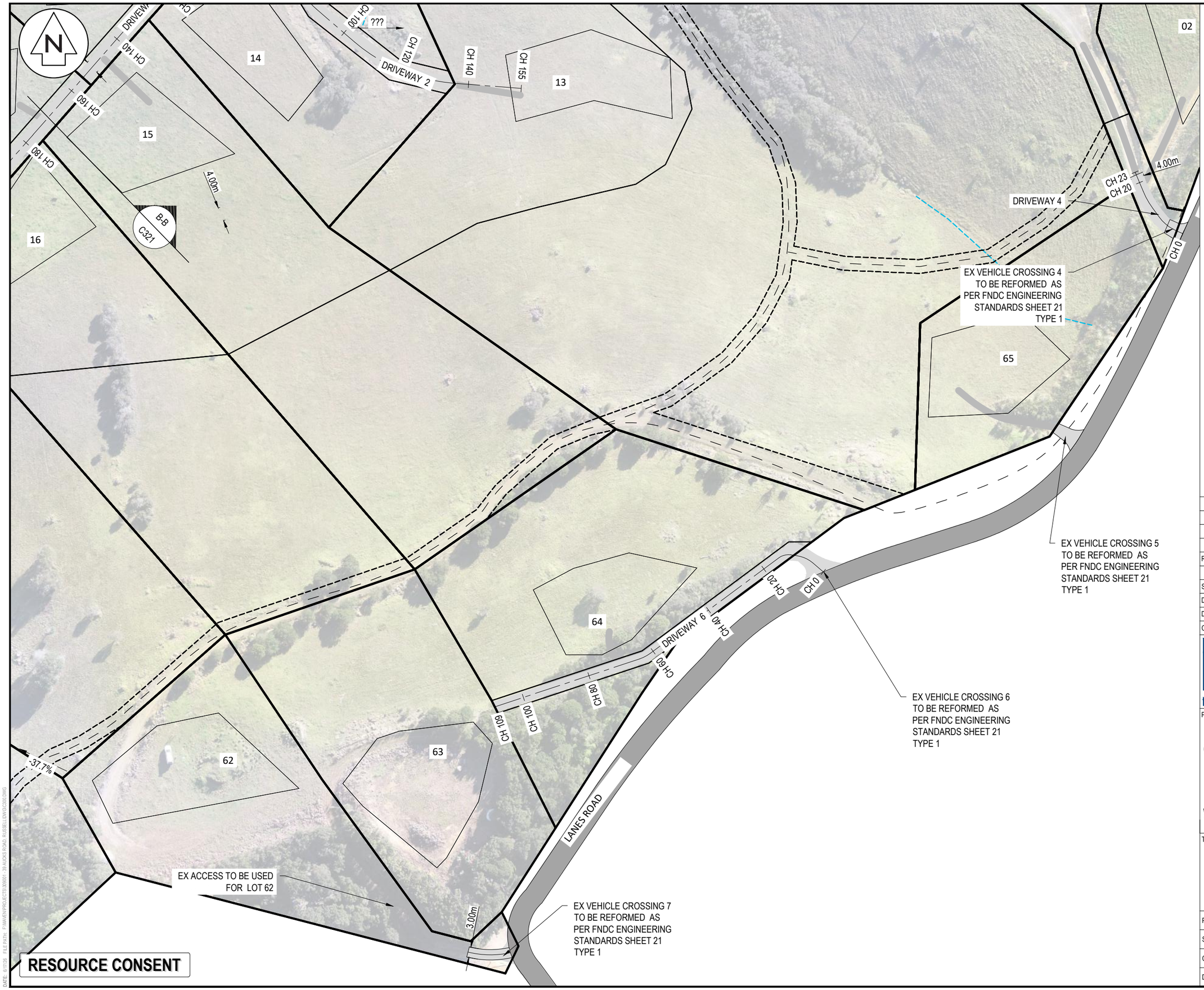
Title

PROPOSED ROADING PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C305	Rev	D

RESOURCE CONSENT

DATE: @17:26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



LEGEND

- EX BDY
- PROP BDY
- PR WALKWAY
- 15m OFFSET FROM POND
- 12M OFFSET FROM POND
- INDICATIVE BUILDING PLATFORM
- EX PAVE
- PROPOSED PAVE

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
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B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

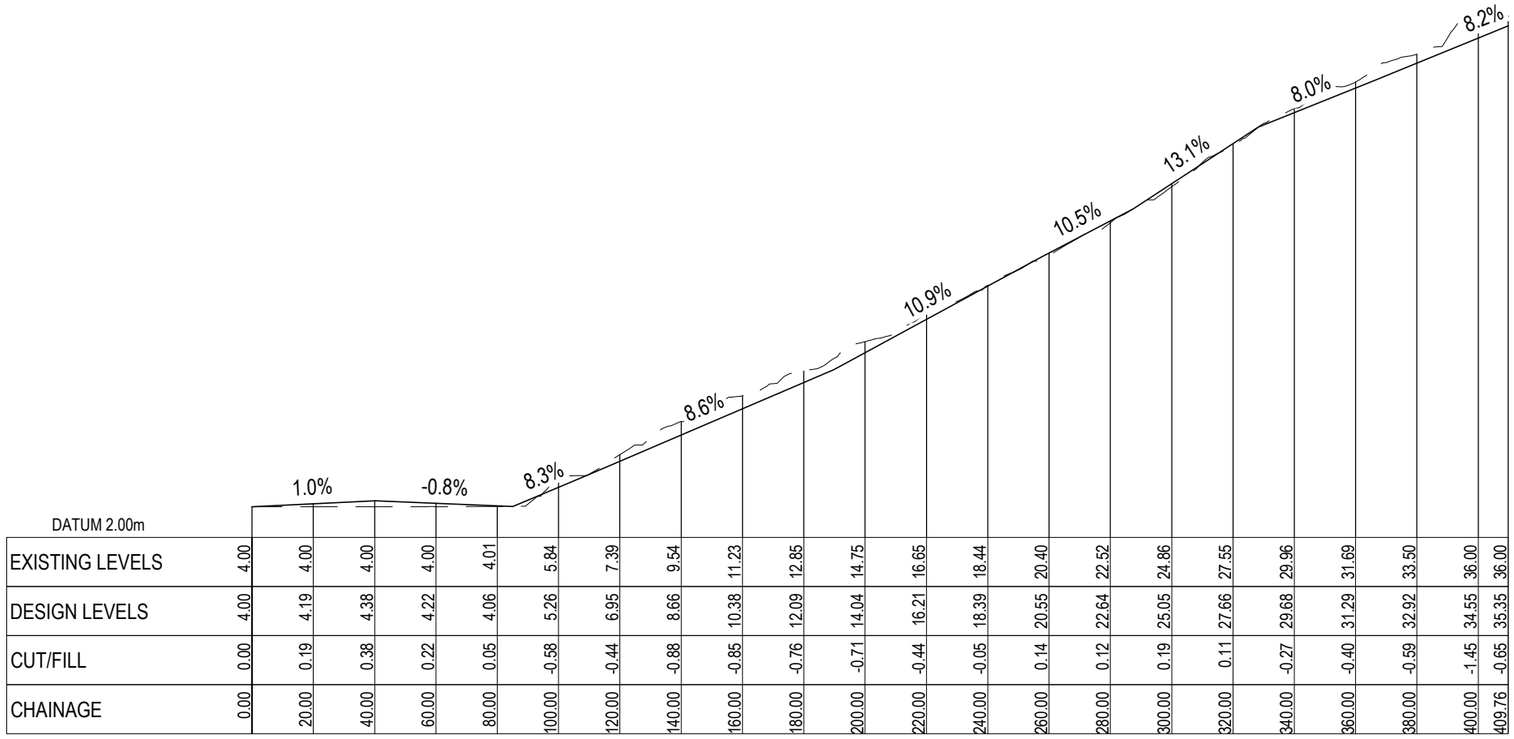
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PLAN

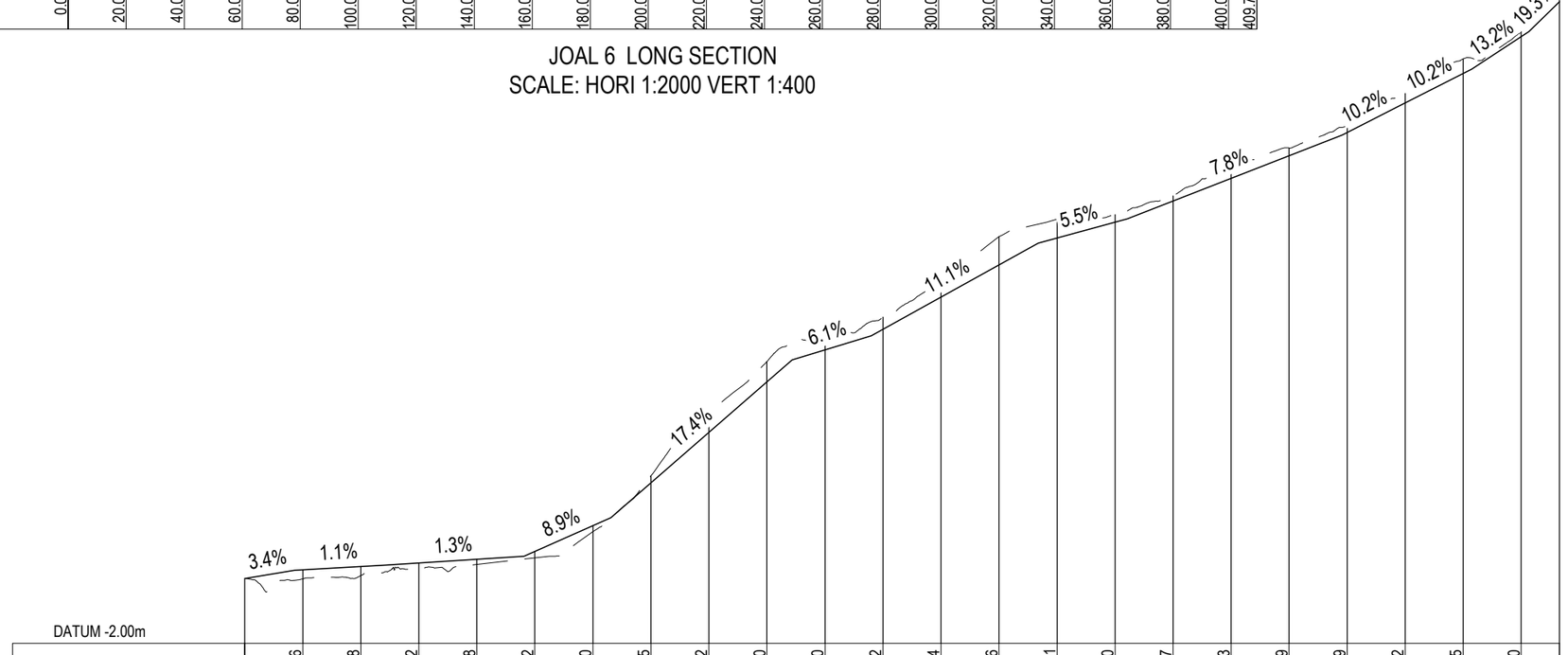
Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C306	Rev	D

DATE: @17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



DATUM 2.00m																					
EXISTING LEVELS	4.00	4.00	4.00	4.00	4.01	5.84	7.39	9.54	11.23	12.85	14.75	16.65	18.44	20.40	22.52	24.86	27.55	29.96	31.69	33.50	36.00	36.00
DESIGN LEVELS	4.00	4.19	4.38	4.22	4.06	5.26	6.95	8.66	10.38	12.09	14.04	16.21	18.39	20.55	22.64	25.05	27.66	29.68	31.29	32.92	34.55	35.35
CUT/FILL	0.00	0.19	0.38	0.22	0.05	-0.58	-0.44	-0.88	-0.85	-0.76	-0.71	-0.44	-0.05	0.14	0.12	0.19	0.11	-0.27	-0.40	-0.59	-1.45	-0.65
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	320.00	340.00	360.00	380.00	400.00	409.76

JOAL 6 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



DATUM -2.00m																						
EXISTING LEVELS		3.06	3.28	3.52	3.78	4.32	6.10	9.05	12.52	16.00	18.20	19.62	21.84	24.06	25.91	27.00	28.47	30.03	31.59	33.19	35.22	37.25	39.80	
DESIGN LEVELS		3.06	3.28	3.52	3.78	4.32	6.10	9.05	12.52	16.00	18.20	19.62	21.84	24.06	25.91	27.00	28.47	30.03	31.59	33.19	35.22	37.25	39.80	
CUT/FILL		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	320.00	340.00	360.00	380.00	400.00	420.00	440.00	455.63

JOAL 1 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400

RESOURCE CONSENT

LEGEND

EX GROUND LEVEL
PR GROUND LEVEL

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

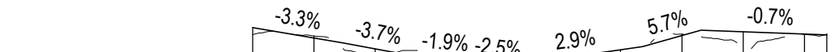
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title
PROPOSED ROADING LONG SECTIONS

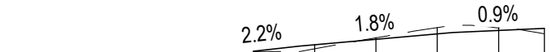
Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C310	Rev	D

DATE: 6/7/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



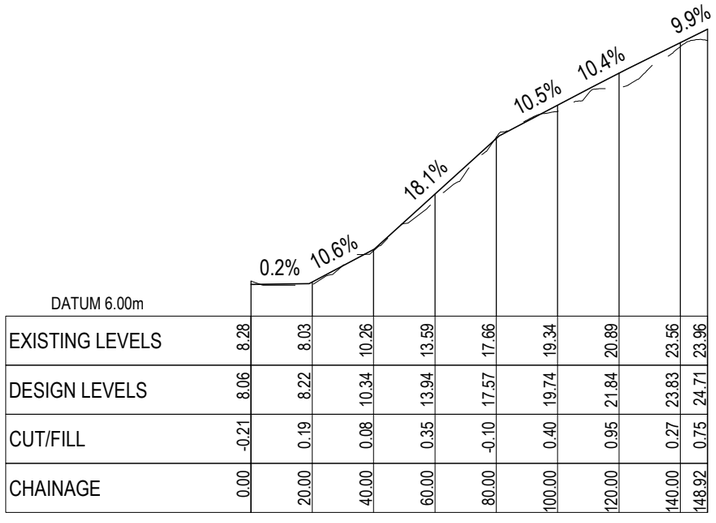
DATUM 2.00m											
EXISTING LEVELS	7.04	6.95	5.71	6.00	4.64	5.40	5.47	7.06	6.07	7.05	7.07
DESIGN LEVELS	7.49	6.82	6.11	5.54	5.13	5.46	6.04	6.97	7.22	7.07	7.01
CUT/FILL	0.45	-0.13	0.40	-0.46	0.49	0.06	0.56	-0.09	1.14	0.02	-0.05
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	187.25

JOAL 2 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



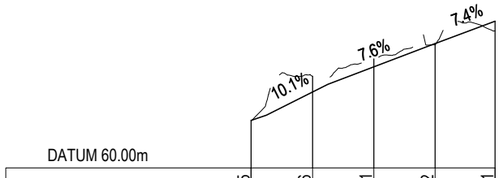
DATUM 0.00m						
EXISTING LEVELS	4.00	4.17	4.89	5.55	5.53	5.14
DESIGN LEVELS	4.01	4.43	4.78	5.14	5.36	5.49
CUT/FILL	0.01	0.26	-0.10	-0.41	-0.17	0.35
CHAINAGE	0.00	20.00	40.00	60.00	80.00	94.97

JOAL 3 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



DATUM 6.00m										
EXISTING LEVELS	8.28	8.03	10.26	13.59	17.66	19.34	20.89	23.56	23.96	
DESIGN LEVELS	8.06	8.22	10.34	13.94	17.57	19.74	21.84	23.83	24.71	
CUT/FILL	-0.21	0.19	0.08	0.35	-0.10	0.40	0.95	0.27	0.75	
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	148.92	

JOAL4 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



DATUM 60.00m					
EXISTING LEVELS	63.05	65.96	67.11	68.02	68.91
DESIGN LEVELS	63.09	64.94	66.58	68.11	69.56
CUT/FILL	0.04	-1.03	-0.53	0.09	0.64
CHAINAGE	0.00	20.00	40.00	60.00	79.57

DRIVEWAY 7 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400

RESOURCE CONSENT

LEGEND
EX GROUND LEVEL
PR GROUND LEVEL

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

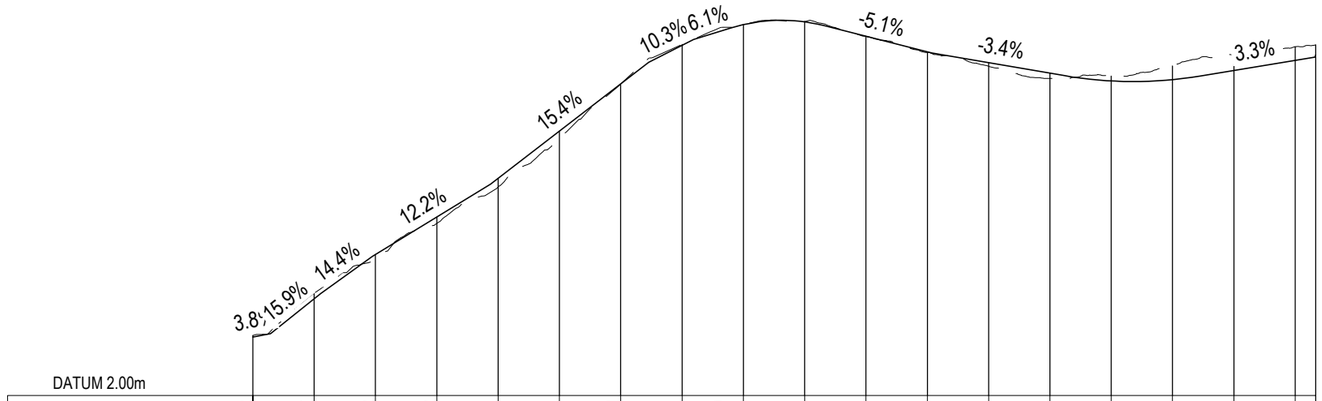
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title
PROPOSED ROADING LONG SECTIONS

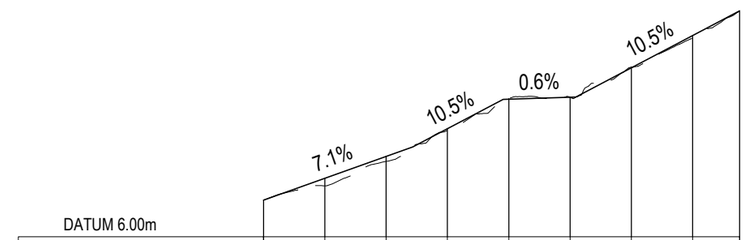
Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C311	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



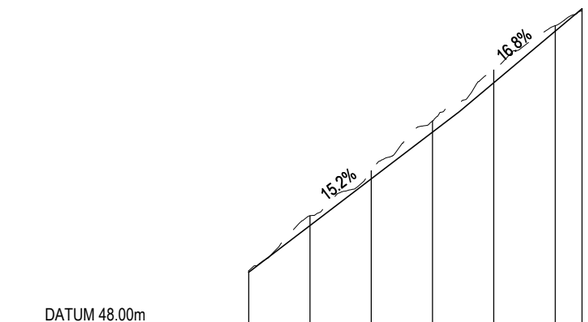
DATUM 2.00m																			
EXISTING LEVELS	5.92	8.67	10.92	13.22	15.59	18.75	22.31	24.88	26.00										
DESIGN LEVELS	5.81	8.30	11.19	13.63	16.15	19.23	22.31	24.83	25.85										
CUT/FILL	-0.11	-0.37	0.28	0.42	0.55	0.48	0.00	-0.05	-0.15										
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	154.23										

DRIVEWAY 1 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



DATUM 6.00m										
EXISTING LEVELS	8.39	9.82	11.24	13.05	14.97	15.09	17.01	19.11	20.72	
DESIGN LEVELS	8.39	9.82	11.24	13.05	14.97	15.09	17.01	19.11	20.72	
CUT/FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
CHAINAGE										

DRIVEWAY 2 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400



DATUM 48.00m							
EXISTING LEVELS	51.67	55.26	58.20	61.44	64.76	67.65	68.62
DESIGN LEVELS	51.67	55.26	58.20	61.44	64.76	67.65	68.62
CUT/FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	108.72

DRIVEWAY 6 LONG SECTION
SCALE: HORI 1:2000 VERT 1:400

RESOURCE CONSENT

LEGEND
EX GROUND LEVEL
PR GROUND LEVEL

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
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	By	Date
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Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

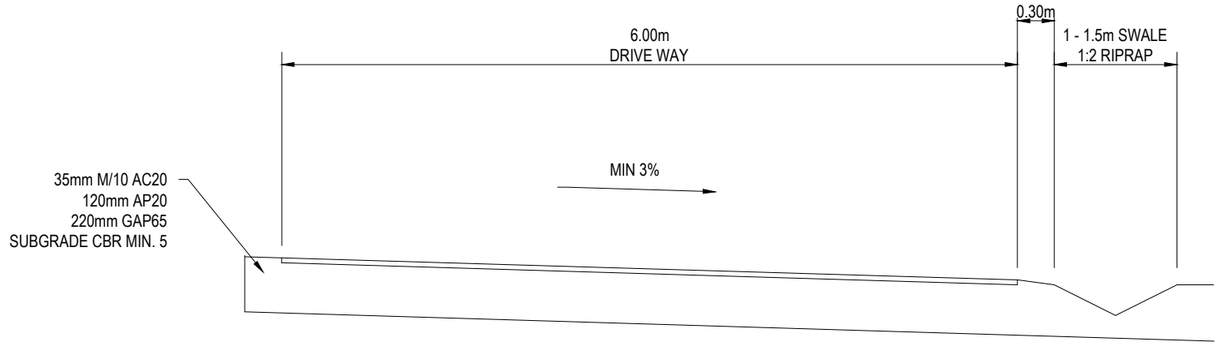
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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title
PROPOSED ROADING LONG SECTIONS

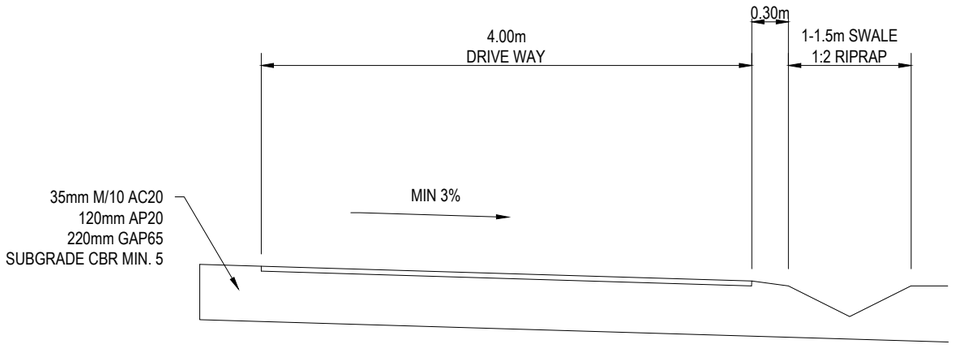
Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C312	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



TYPICAL 2-WAY DRIVE WAY CROSS SECTION A-A (FOR >= 6 LOTS)

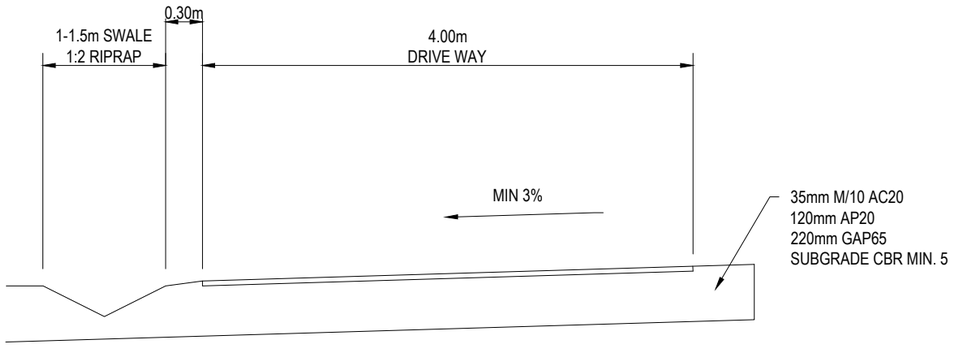
NTS



TYPICAL 1-WAY DRIVE WAY CROSS ECTION B-B (FOR 3 TO 5 LOTS)

NTS

2m WIDTH PASSING BAYS TO BE LOCATED AT
APPROPRIATE LOCATIONS FOR ONE-WAY DRIVE WAYS



TYPICAL 1-WAY DRIVE WAY CROSS ECTION C-C (FOR 3 TO 5 LOTS)

NTS

2m WIDTH PASSING BAYS TO BE LOCATED AT
APPROPRIATE LOCATIONS FOR ONE-WAY DRIVE WAYS

RESOURCE CONSENT

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

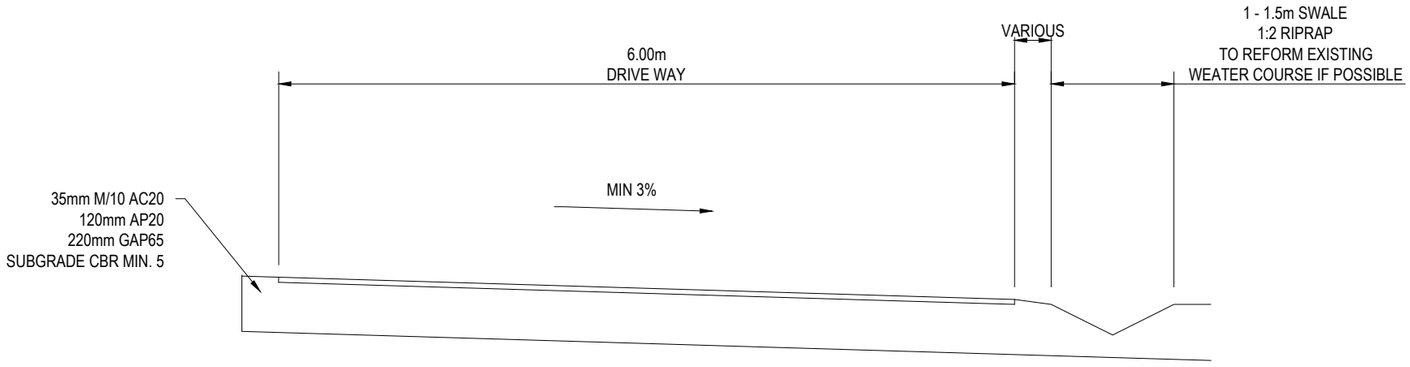
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING CROSS SECTIONS

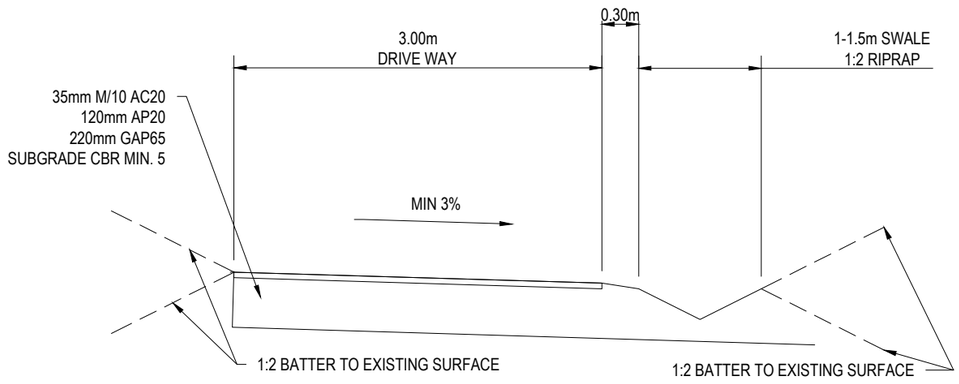
Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C321	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



TYPICAL 2-WAY DRIVE WAY CROSS SECTION D-D (FOR >= 6 LOTS)

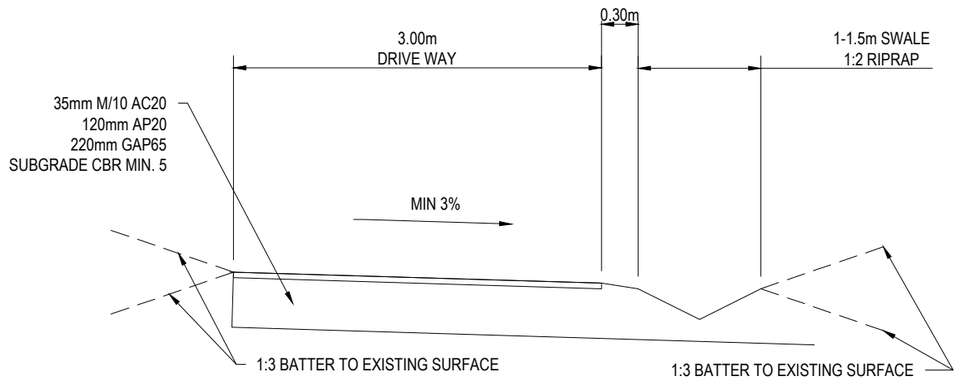
NTS



TYPICAL 1-WAY DRIVE WAY E-E (FOR 1 TO 2 LOTS)

NTS

2m WIDTH PASSING BAYS TO BE LOCATED AT
APPROPRIATE LOCATIONS FOR ONE-WAY DRIVE WAYS



TYPICAL 1-WAY DRIVE WAY F-F (FOR 1 TO 2 LOTS)

NTS

2m WIDTH PASSING BAYS TO BE LOCATED AT
APPROPRIATE LOCATIONS FOR ONE-WAY DRIVE WAYS

RESOURCE CONSENT

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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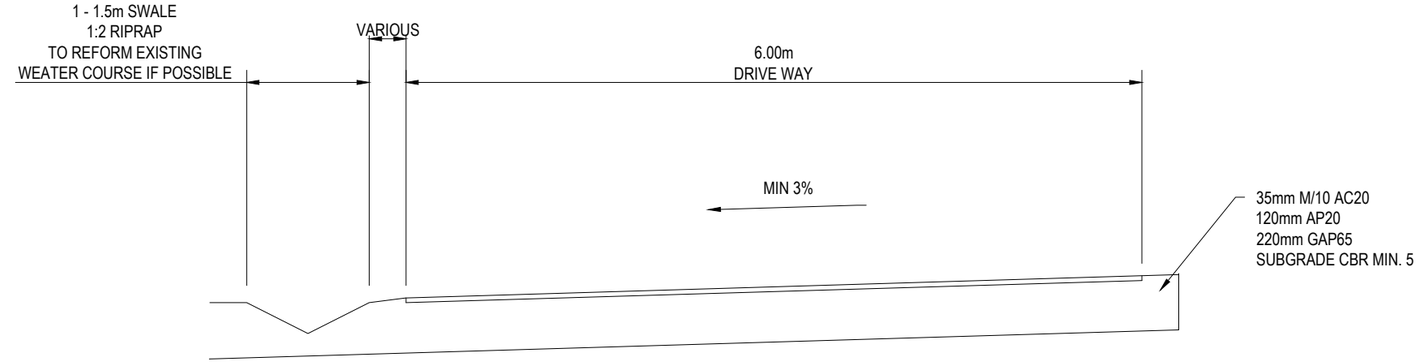
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING CROSS SECTIONS

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C322	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C300.DWG



TYPICAL 2-WAY DRIVE WAY CROSS SECTION G-G (FOR >= 6 LOTS)

NTS

RESOURCE CONSENT

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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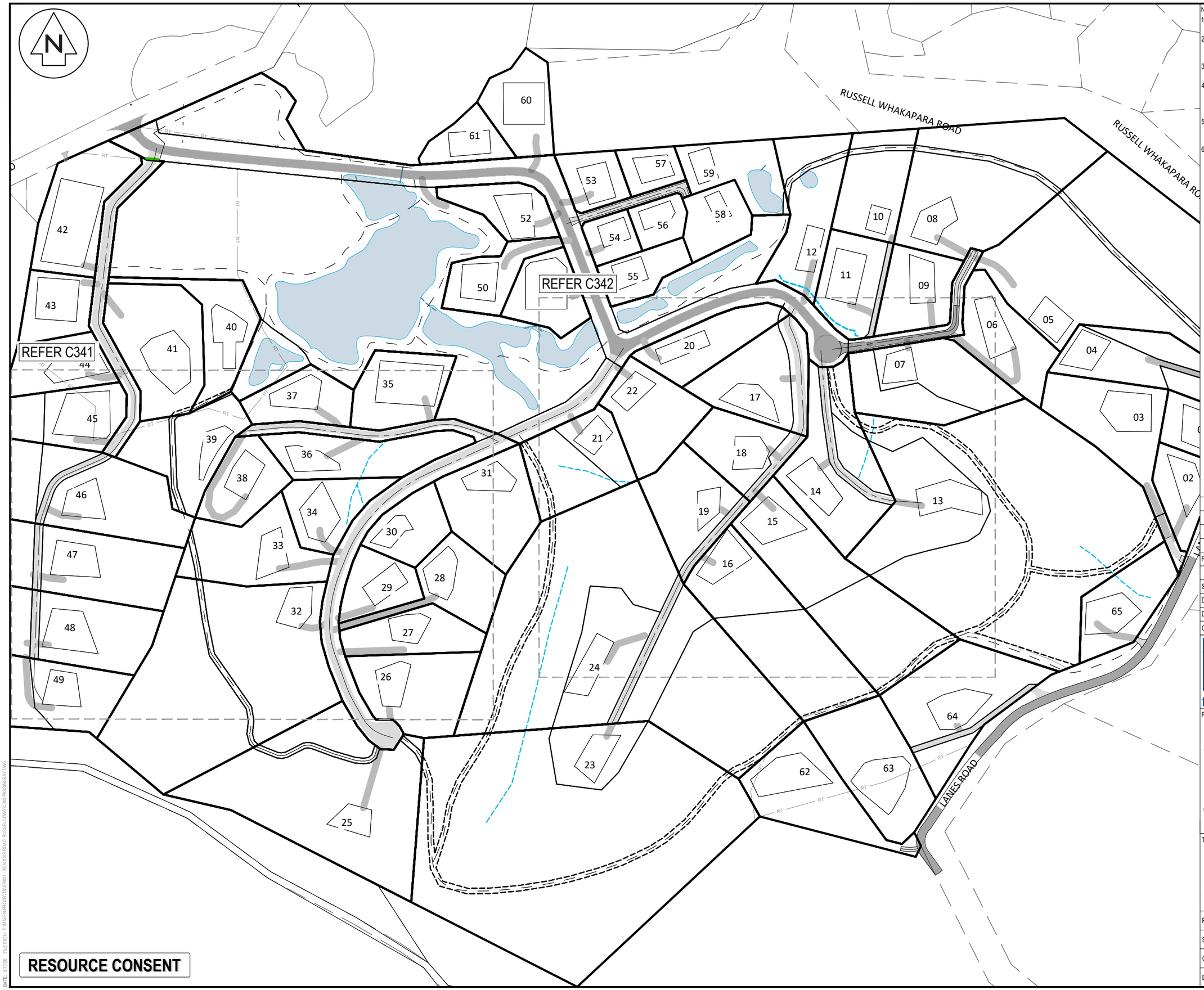
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING CROSS SECTIONS

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C300.DWG		
Drawing no.	C323	Rev	D

DATE: 8/7/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD RUSSELL\DWG\C300.DWG



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. CONTRACTOR IS TO AVOID USING GPS FOR SET OUT OF THE KERB LEVELS WHERE GRADIENTS ARE LESS THAN 1%.
3. FINAL PAVEMENT DESIGN SUBJECT TO CBR/BEAM TESTS ON SUBGRADE MATERIAL.
4. SETOUT SCHEDULE WITH COORDINATES OF CHAINAGE POINTS ALONG ROAD CENTRELINE TO BE SUPPLIED TO THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. REFER TO LONG SECTION FOR FINISHED CENTRELINE LEVELS. REFER TO TYPICAL CROSS SECTIONS TO OBTAIN LEVELS FOR OTHER LOCATIONS.
6. STREET LIGHTING SHALL BE DESIGNED IN ACCORDANCE WITH ALL APPLICABLE NEW ZEALAND STANDARDS INCLUDING BUT NOT RESTRICTED TO THE CURRENT VERSION OF AS/NZS 1158 LIGHTING FOR ROADS AND PUBLIC SPACES SERIES OF STANDARDS.

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PASSINGBAY OVERALL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:2500 @ A3		
Cad file	C340 PASSINGBAY.DWG		
Drawing no.	C340	Rev	D

RESOURCE CONSENT

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C340 PASSINGBAY.DWG



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. CONTRACTOR IS TO AVOID USING GPS FOR SET OUT OF THE KERB LEVELS WHERE GRADIENTS ARE LESS THAN 1%.
3. FINAL PAVEMENT DESIGN SUBJECT TO CBR/BEAM TESTS ON SUBGRADE MATERIAL.
4. SETOUT SCHEDULE WITH COORDINATES OF CHAINAGE POINTS ALONG ROAD CENTRELINE TO BE SUPPLIED TO THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. REFER TO LONG SECTION FOR FINISHED CENTRELINE LEVELS. REFER TO TYPICAL CROSS SECTIONS TO OBTAIN LEVELS FOR OTHER LOCATIONS.
6. STREET LIGHTING SHALL BE DESIGNED IN ACCORDANCE WITH ALL APPLICABLE NEW ZEALAND STANDARDS INCLUDING BUT NOT RESTRICTED TO THE CURRENT VERSION OF AS/NZS 1158 LIGHTING FOR ROADS AND PUBLIC SPACES SERIES OF STANDARDS.

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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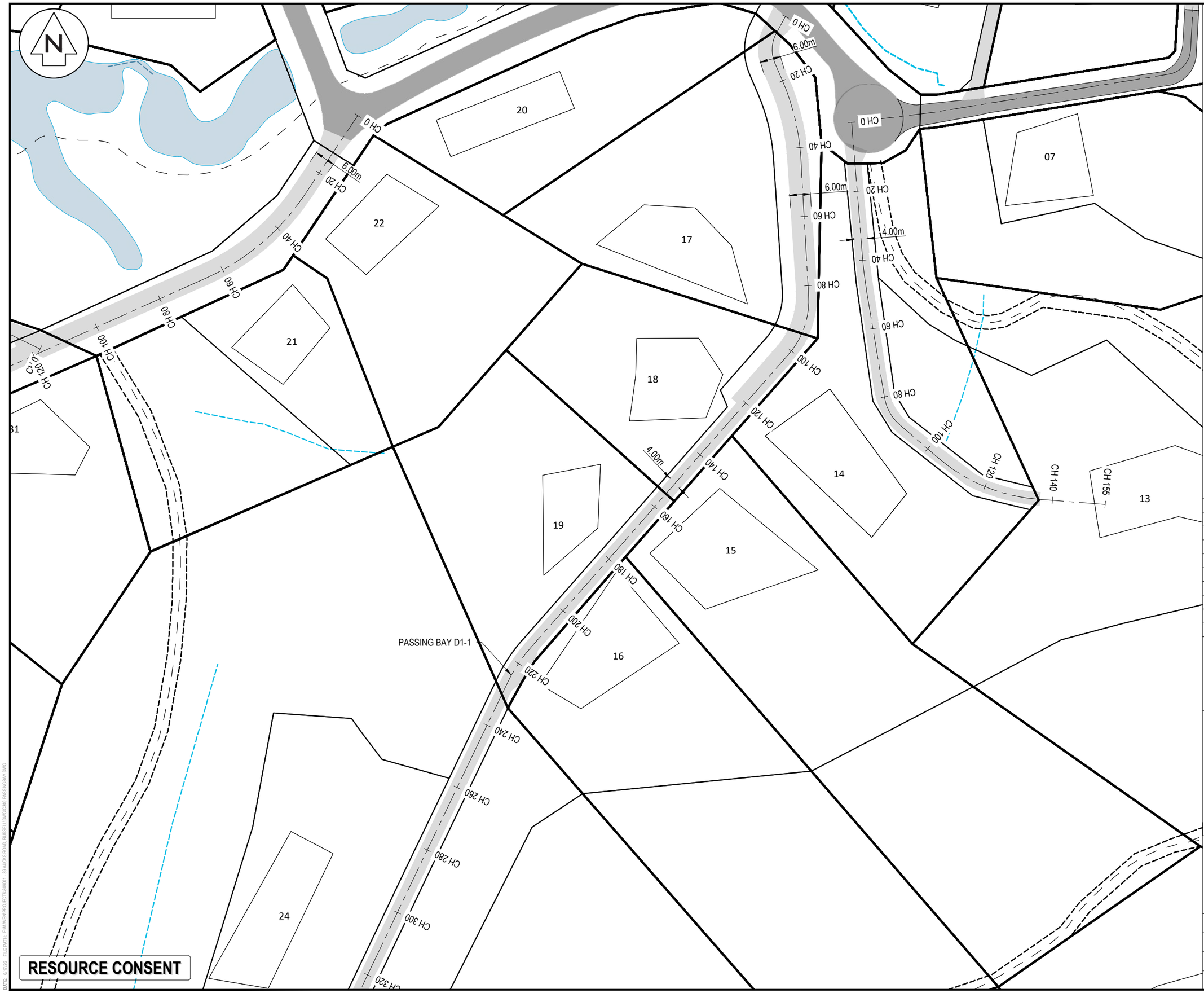
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PASSING BAY PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000@ A3		
Cad file	C340 PASSINGBAY.DWG		
Drawing no.	C341	Rev	D

DATE: 6/17/26 FILEPATH: P:\MAVEN\PROJECT\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C340 PASSINGBAY.DWG



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. CONTRACTOR IS TO AVOID USING GPS FOR SET OUT OF THE KERB LEVELS WHERE GRADIENTS ARE LESS THAN 1%.
3. FINAL PAVEMENT DESIGN SUBJECT TO CBR/BEAM TESTS ON SUBGRADE MATERIAL.
4. SETOUT SCHEDULE WITH COORDINATES OF CHAINAGE POINTS ALONG ROAD CENTRELINE TO BE SUPPLIED TO THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. REFER TO LONG SECTION FOR FINISHED CENTRELINE LEVELS. REFER TO TYPICAL CROSS SECTIONS TO OBTAIN LEVELS FOR OTHER LOCATIONS.
6. STREET LIGHTING SHALL BE DESIGNED IN ACCORDANCE WITH ALL APPLICABLE NEW ZEALAND STANDARDS INCLUDING BUT NOT RESTRICTED TO THE CURRENT VERSION OF AS/NZS 1158 LIGHTING FOR ROADS AND PUBLIC SPACES SERIES OF STANDARDS.

Rev	Description	By	Date
D	FOR RC AMENDMENT	JAW	06/2026
C	FOR RC S92	JAW	06/2025
B	FOR RC S92	JAW	03/2025
A	FOR RC	JAW	11/2024

	By	Date
Survey	MAVEN	06/2024
Design	JAW	07/2024
Drawn	JAW	07/2024
Checked	TM	07/2024

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Project

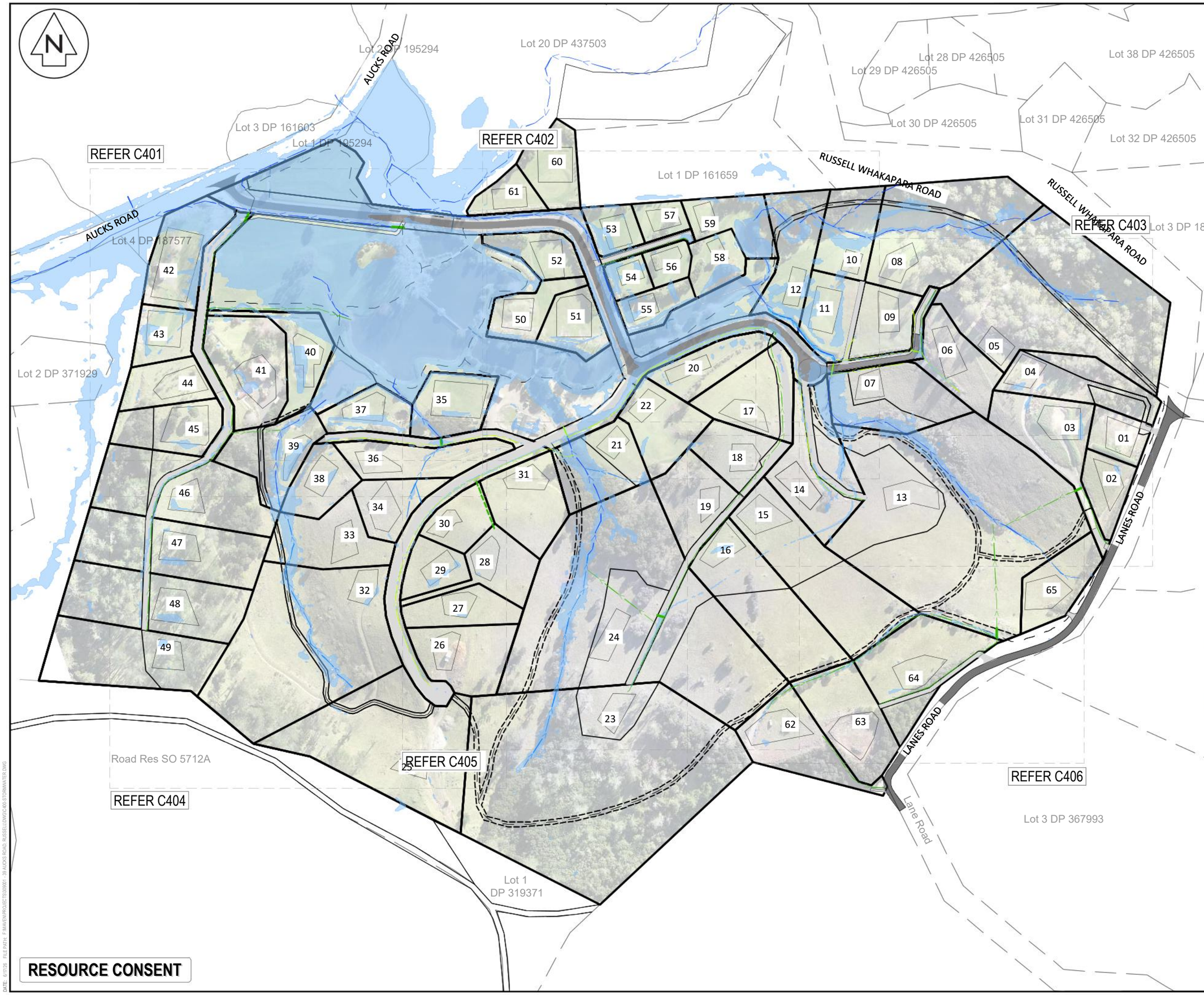
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWRIDGE DEV. LTD.

Title

PROPOSED ROADING PASSING BAY PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000@ A3		
Cad file	C340 PASSINGBAY.DWG		
Drawing no.	C342	Rev	D

DATE 01/26 FILEPATH P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD RUSSELL\DWG\C340 PASSINGBAY.DWG



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. PIPE BEDDING: 0 - 10% GRANULAR BEDDING,10 - 20% WEAK CONCRETE BEDDING.GREATER THAN 20% WEAK CONCRETE BEDDING (7MPA PLUS ANTI SCOUR BLOCKS AT 6M CRS).
5. EACH CONNECTION SHALL BE MARKED BY A 50MMX50MM TREATED PINE STAKE EXTENDING 600MM ABOVE GROUND LEVEL WITH THE TOP PAINTED. THIS MARKER POST SHALL BE PLACED ALONGSIDE A TIMBER MARKER INSTALLED AT THE TIME OF PIPELAYING AND EXTENDING FROM THE CONNECTION TO 150MM BELOW FINISHED GROUND LEVEL. CONNECTIONS SHALL BE ACCURATELY INDICATED ON "AS BUILT" PLANS.
6. APPROVED HARDFILL IS TO BE USED IN BACKFILLING OF ALL ROAD CROSSINGS AND VEHICLE CROSSINGS TO COUNCIL STANDARDS.
7. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
8. ALL MANHOLES ARE TO BE 1050MMØ PRECAST CONCRETE UNLESS SHOWN OTHERWISE.
9. ALL CATCHPIT LEADS SHALL HAVE MIN COVER 1.0M.
10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C400	Rev	D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWGS\C400-STORMWATER.DWG

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

300mm RCRRJ @1%

375mm RCRRJ @1%

PR EARTH BUND FOR 100-YR FLOODING DETENTION TOP WIDTH 1m, 1:3 BATTER TO EXISTING GROUND. TOP LEVEL 3.0m

LOT 44-49 STORMWATER DISCHARGE TO THE PROPOSED ROADSIDE DISH DRAIN

Lot 4 DP 187577

42 43 44 45 46 40 41 37 39 38 36 35

7-2 - 7-1 - 9 - 5 - 10 -

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
SW13-1	4.000	0.500
SW13-2	4.000	0.500
SW14	0.800	0.200
SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
2. SWALE 2 WILL USE 0.6m HEIGHT CHECK DAM EVERY 6m, SUBJECT EPA DETAIL DESIGN.
3. SWALE1-1, 10, 11, 12 AND 14 WILL BE GRASS OR APPROVED EQUIVALENT, SUBJECT TO DETAIL DESIGN.

RESOURCE CONSENT

NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. PIPE BEDDING: 0 - 10% GRANULAR BEDDING,10 - 20% WEAK CONCRETE BEDDING.GREATER THAN 20% WEAK CONCRETE BEDDING (7MPA PLUS ANTI SCOUR BLOCKS AT 6M CRS).
5. EACH CONNECTION SHALL BE MARKED BY A 50MMX50MM TREATED PINE STAKE EXTENDING 600MM ABOVE GROUND LEVEL WITH THE TOP PAINTED. THIS MARKER POST SHALL BE PLACED ALONGSIDE A TIMBER MARKER INSTALLED AT THE TIME OF PIPELAYING AND EXTENDING FROM THE CONNECTION TO 150MM BELOW FINISHED GROUND LEVEL. CONNECTIONS SHALL BE ACCURATELY INDICATED ON "AS BUILT" PLANS.
6. APPROVED HARDFILL IS TO BE USED IN BACKFILLING OF ALL ROAD CROSSINGS AND VEHICLE CROSSINGS TO COUNCIL STANDARDS.
7. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
8. ALL MANHOLES ARE TO BE 1050MMØ PRECAST CONCRETE UNLESS SHOWN OTHERWISE.
9. ALL CATCHPIT LEADS SHALL HAVE MIN COVER 1.0M.
10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C401	Rev	D

DATE: 6/17/26 FILEPATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C400\STORMWATER.DWG

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
SW13-1	4.000	0.500
SW13-2	4.000	0.500
SW14	0.800	0.200
SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
2. SWALE 2 WILL USE 0.6m HEIGHT CHECK DAM EVERY 6m, SUBJECT EPA DETAIL DESIGN.
3. SWALE1-1, 10, 11, 12 AND 14 WILL BE GRASS OR APPROVED EQUIVALENT, SUBJECT TO DETAIL DESIGN.

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

60 61 53 52 56 58 54 10 55 12 11 50 51 20 07 22 17 21 18

14 - 4 - 12 - 11 - 3 -

EXISTING CULVERT

PROPOSED RIPRAP SWALE TO EXISTING WATER COURSE

RESOURCE CONSENT

NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
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11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND
- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C402	Rev	D

DATE: 6/17/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD RUSSELL\DWG\CAD\C400-STORMWATER.DWG

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
SW13-1	4.000	0.500
SW13-2	4.000	0.500
SW14	0.800	0.200
SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
2. SWALE 2 WILL USE 0.6m HEIGHT CHECK DAM EVERY 6m, SUBJECT EPA DETAIL DESIGN.
3. SWALE1-1, 10, 11, 12 AND 14 WILL BE GRASS OR APPROVED EQUIVALENT, SUBJECT TO DETAIL DESIGN.

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

LOT 4 & 5 STORMWATER DISCHARGE TO THE EXISTING STREAM VIA STROMWATER DISPERSAL SYSTEM

LANES ROAD

RESOURCE CONSENT

NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. PIPE BEDDING: 0 - 10% GRANULAR BEDDING,10 - 20% WEAK CONCRETE BEDDING.GREATER THAN 20% WEAK CONCRETE BEDDING (7MPA PLUS ANTI SCOUR BLOCKS AT 6M CRS).
5. EACH CONNECTION SHALL BE MARKED BY A 50MMX50MM TREATED PINE STAKE EXTENDING 600MM ABOVE GROUND LEVEL WITH THE TOP PAINTED. THIS MARKER POST SHALL BE PLACED ALONGSIDE A TIMBER MARKER INSTALLED AT THE TIME OF PIPELAYING AND EXTENDING FROM THE CONNECTION TO 150MM BELOW FINISHED GROUND LEVEL. CONNECTIONS SHALL BE ACCURATELY INDICATED ON "AS BUILT" PLANS.
6. APPROVED HARDFILL IS TO BE USED IN BACKFILLING OF ALL ROAD CROSSINGS AND VEHICLE CROSSINGS TO COUNCIL STANDARDS.
7. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
8. ALL MANHOLES ARE TO BE 1050MMØ PRECAST CONCRETE UNLESS SHOWN OTHERWISE.
9. ALL CATCHPIT LEADS SHALL HAVE MIN COVER 1.0M.
10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND
- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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5 Owens Road, Epsom
Auckland 1023

Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C403	Rev	D

DATE: 6/01/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWGS\400-STORMWATER.DWG

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

LOT 44-49 STORMWATER DISCHARGE TO THE PROPOSED ROADSIDE DISH DRAIN

PROPOSED PRIVATE DN100 STORMWATER LINE FOR LOT 28 TO ROAD SWALE

Road2Res2SO25712A

RESOURCE CONSENT

NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
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6. APPROVED HARDFILL IS TO BE USED IN BACKFILLING OF ALL ROAD CROSSINGS AND VEHICLE CROSSINGS TO COUNCIL STANDARDS.
7. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
8. ALL MANHOLES ARE TO BE 1050MMØ PRECAST CONCRETE UNLESS SHOWN OTHERWISE.
9. ALL CATCHPIT LEADS SHALL HAVE MIN COVER 1.0M.
10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
SW13-1	4.000	0.500
SW13-2	4.000	0.500
SW14	0.800	0.200
SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
2. SWALE 2 WILL USE 0.6m HEIGHT CHECK DAM EVERY 6m, SUBJECT EPA DETAIL DESIGN.
3. SWALE1-1, 10, 11, 12 AND 14 WILL BE GRASS OR APPROVED EQUIVALENT, SUBJECT TO DETAIL DESIGN.

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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5 Owens Road, Epsom
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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C400-STORMWATER.DWG
Drawing no.	C404 Rev D

DATE: 6/17/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C400-STORMWATER.DWG

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

LOT 18 & 19 STORMWATER DISCHARGE TO THE PROPOSED ROADSIDE DISH DRAIN

LOT 28 STORMWATER DISCHARGE TO THE PROPOSED ROADSIDE DISH DRAIN VIA PROPOSED NEW STROMWATER LINE

ROADSIDE SWALE DRAIN DISCHARGE TO EXISTING WATER COURSE

LOT 26 & 27 STORMWATER DISCHARGE TO THE PROPOSED ROADSIDE DISH DRAIN

375mm RCRRJ @ 2%

21 18 31 19 15 30 16 28 29 27 24 26 23

1-3 1-2 1-1

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
SW13-1	4.000	0.500
SW13-2	4.000	0.500
SW14	0.800	0.200
SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
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3. SWALE1-1, 10, 11, 12 AND 14 WILL BE GRASS OR APPROVED EQUIVALENT, SUBJECT TO DETAIL DESIGN.

RESOURCE CONSENT

NOTES
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2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
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11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND
- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

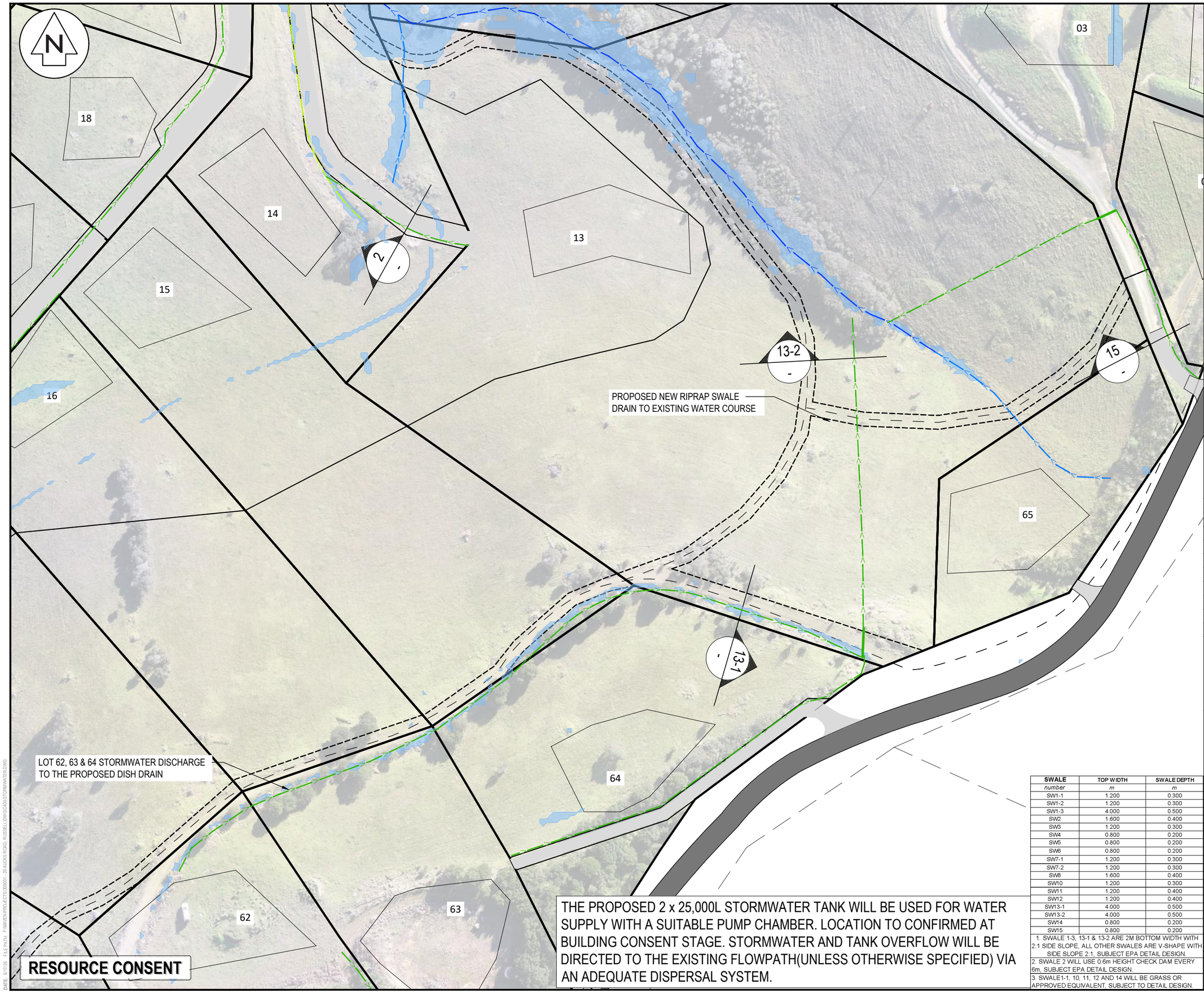
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Auckland 1023

Project
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title
PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C405	Rev	D

DATE: 6/17/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD RUSSELL\DWG\CAD\C400-STORMWATER.DWG



RESOURCE CONSENT

THE PROPOSED 2 x 25,000L STORMWATER TANK WILL BE USED FOR WATER SUPPLY WITH A SUITABLE PUMP CHAMBER. LOCATION TO CONFIRMED AT BUILDING CONSENT STAGE. STORMWATER AND TANK OVERFLOW WILL BE DIRECTED TO THE EXISTING FLOWPATH(UNLESS OTHERWISE SPECIFIED) VIA AN ADEQUATE DISPERSAL SYSTEM.

SWALE	TOP WIDTH	SWALE DEPTH
number	*m*	*m*
SW1-1	1.200	0.300
SW1-2	1.200	0.300
SW1-3	4.000	0.500
SW2	1.600	0.400
SW3	1.200	0.300
SW4	0.800	0.200
SW5	0.800	0.200
SW6	0.800	0.200
SW7-1	1.200	0.300
SW7-2	1.200	0.300
SW8	1.600	0.400
SW10	1.200	0.300
SW11	1.200	0.400
SW12	1.200	0.400
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SW13-2	4.000	0.500
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SW15	0.800	0.200

1. SWALE 1-3, 13-1 & 13-2 ARE 2M BOTTOM WIDTH WITH 2:1 SIDE SLOPE, ALL OTHER SWALES ARE V-SHAPE WITH SIDE SLOPE 2:1, SUBJECT EPA DETAIL DESIGN.
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NOTES

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2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. PIPE BEDDING: 0 - 10% GRANULAR BEDDING,10 - 20% WEAK CONCRETE BEDDING.GREATER THAN 20% WEAK CONCRETE BEDDING (7MPA PLUS ANTI SCOUR BLOCKS AT 6M CRS).
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10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- 100-YR FLOOD PLAIN

Rev	Description	By	Date
D	RESOURCE CONSENT	JAW	06/2026
C	RESOURCE CONSENT	WY	06/2025
B	RESOURCE CONSENT	WY	02/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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Project

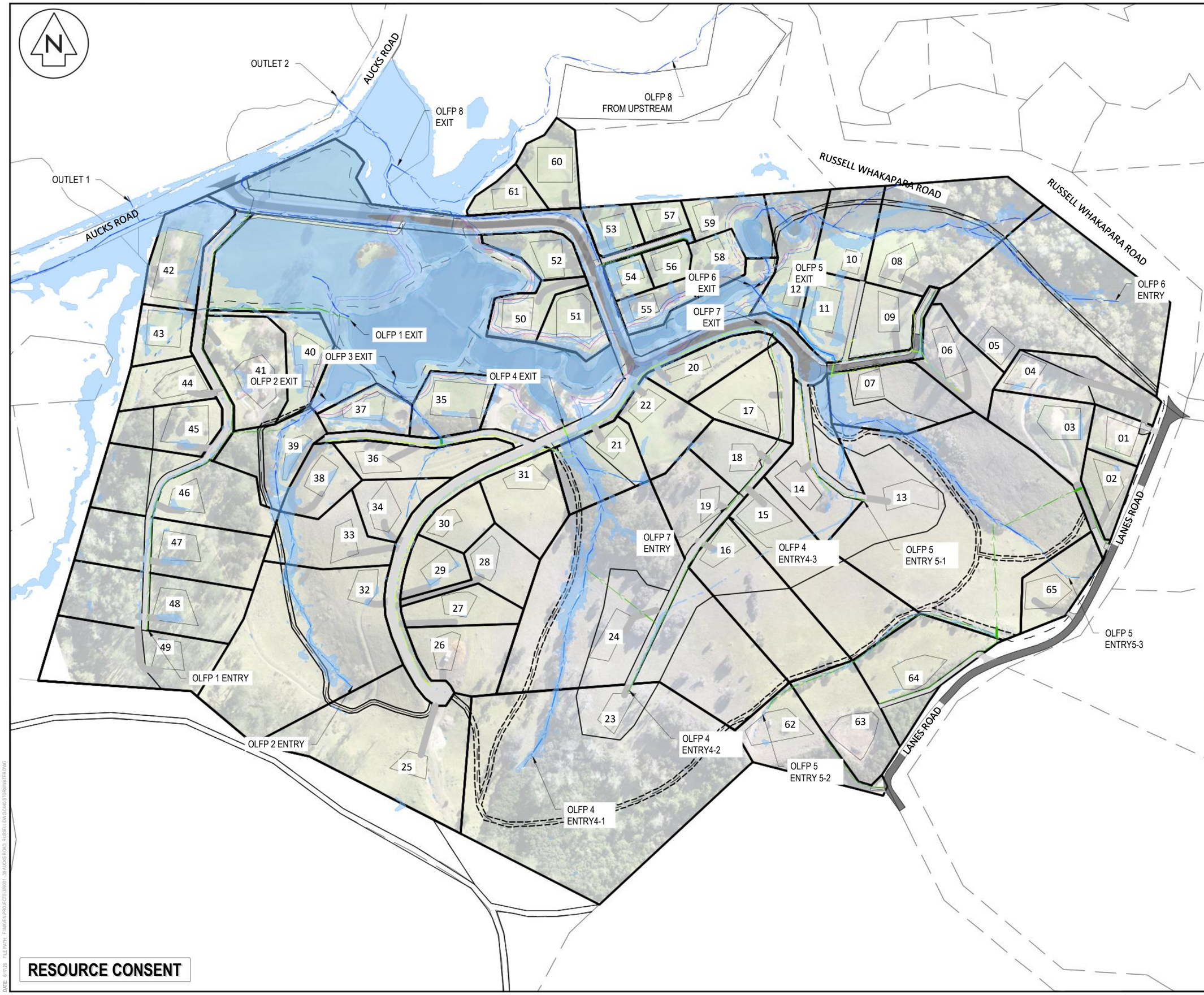
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

PROPOSED STORMWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C400-STORMWATER.DWG		
Drawing no.	C406	Rev	D

DATE: @17/26 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C400-STORMWATER.DWG



RESOURCE CONSENT

DATE: 6/17/25 FILE PATH: P:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C440-STORMWATER.DWG

NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
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10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- POST- DEV WSE

Rev	Description	By	Date
C	RESOURCE CONSENT S92	JAW	06/2025
B	RESOURCE CONSENT S92	JAW	02/2025

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
Checked	TM	07/2024

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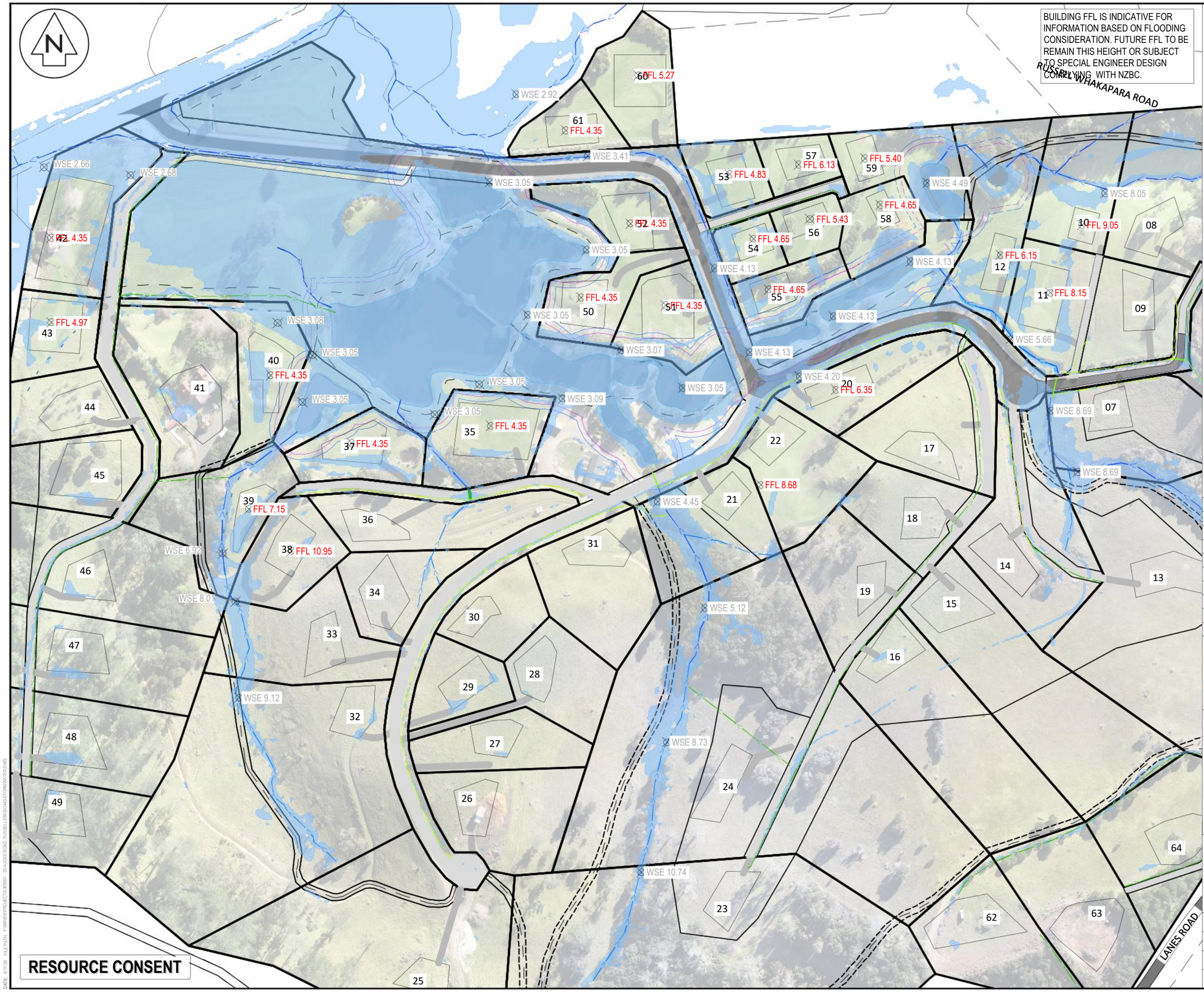
Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

OLFP AND EX STREAM PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:3000 @ A3		
Cad file	C440-STORMWATER.DWG		
Drawing no.	C440	Rev	C



NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH FNDC STANDARDS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
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LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- POST- DEV WSE
- WSE 5.66 — POST- DEV WSE LEVEL
- FFL 6.61 — INDICATIVE BUILDING FFL

Rev	Description	By	Date
C	RESOURCE CONSENT S92	JAW	06/2025
B	RESOURCE CONSENT S92	JAW	02/2025

	By	Date
Survey	MAVEN	06/2024
Design	AO	07/2024
Drawn	TY	09/2024
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Project

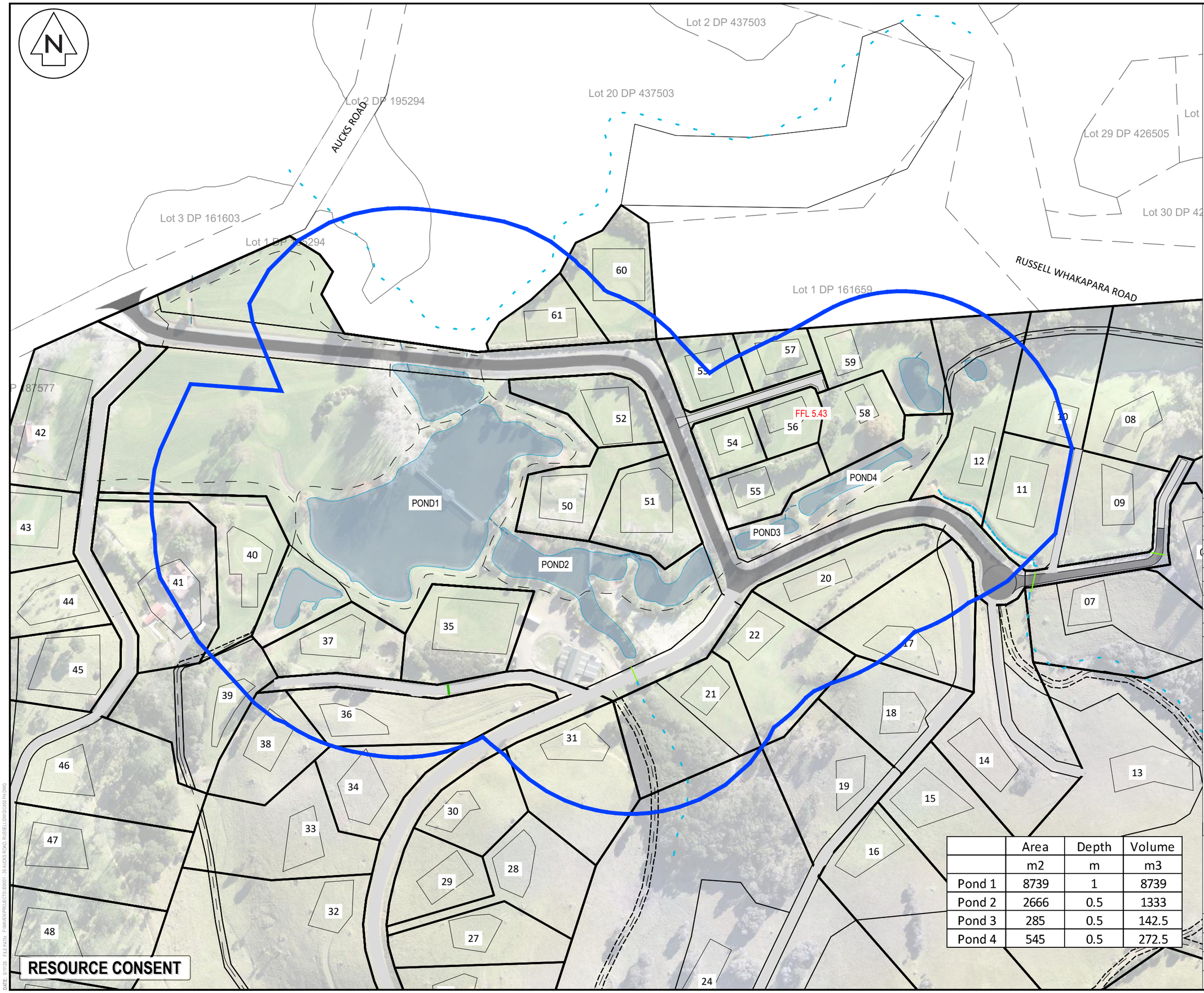
PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

POST-DEV WSE LEVEL AND BUILDING FFL PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:2000 @ A3		
Cad file	C440-STORMWATER.DWG		
Drawing no.	C441	Rev	C

DATE: 6/7/25 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD RUSSELL\DWG\C440-STORMWATER.DWG



NOTES

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7. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
8. ALL MANHOLES ARE TO BE 1050MMØ PRECAST CONCRETE UNLESS SHOWN OTHERWISE.
9. ALL CATCHPIT LEADS SHALL HAVE MIN COVER 1.0M.
10. ALL LINES TO BE ABANDONED SHALL BE SEALED AT EACH END. TIMING OF ALL SEALING TO BE COORDINATED WITH COUNCIL STAFF.
11. ALL LOT CONNECTION TO BE MIN 100mm uPVC SN16 UNLESS SHOWN OTHERWISE.

LEGEND

- EX BDY
- PROP BDY
- INDICATIVE BUILDING PLATFORM
- 90m OFFSET FROM EXISTING POND

	Area	Depth	Volume
	m2	m	m3
Pond 1	8739	1	8739
Pond 2	2666	0.5	1333
Pond 3	285	0.5	142.5
Pond 4	545	0.5	272.5

RESOURCE CONSENT

Rev	Description	By	Date
C	RESOURCE CONSENT S92	JAW	06/2025
B	RESOURCE CONSENT S92	JAW	02/2025

	By	Date
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Drawn	TY	09/2024
Checked	TM	07/2024

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Project

PROPOSED SUBDIVISION OF 39 AUCKS ROAD RUSSELL FOR WILLOWERIDGE DEV. LTD.

Title

90M OFFSET FROM PONDS PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:3000 @ A3
Cad file	C450 FH.DWG
Drawing no.	C450 Rev C

DATE: 8/7/26 FILE PATH: F:\MAVEN\PROJECTS\309001 - 39 AUCKS ROAD, RUSSELL\DWG\C450 FH.DWG

THE WASTEWATER ONSITE TREATMENT AREA IS INDICATIVE.SUBJECT TO BUILDING CONSENT. MIN. AREA 720 m² FOR 4 BEDROOM HOUSE
PUMP TO BE INSTALLED FOR DISPOSAL LEVEL ABOVE OUTLET

NOTES
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2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000. LEVELS IN TERMS OF THE AUCKLAND VERTICAL DATUM 1946.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. PUMP TO BE INSTALLED WHEN WW DISPOSAL LEVEL IS HIGHER WW DISCHARGE LEVEL

REFER C501
REFER C502
REFER C503
REFER C504
REFER C505
REFER C506

AUCKS ROAD
RUSSELL WHAKAPARA ROAD
LANES ROAD

LEGEND
- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- PR WW DISPOSAL FIELD

Rev	Description	By	Date
D	RC AMENDMENT	JAW	06/2026
C	RC S92	JAW	06/2025
A	RESOURCE CONSENT	AO	09/2024

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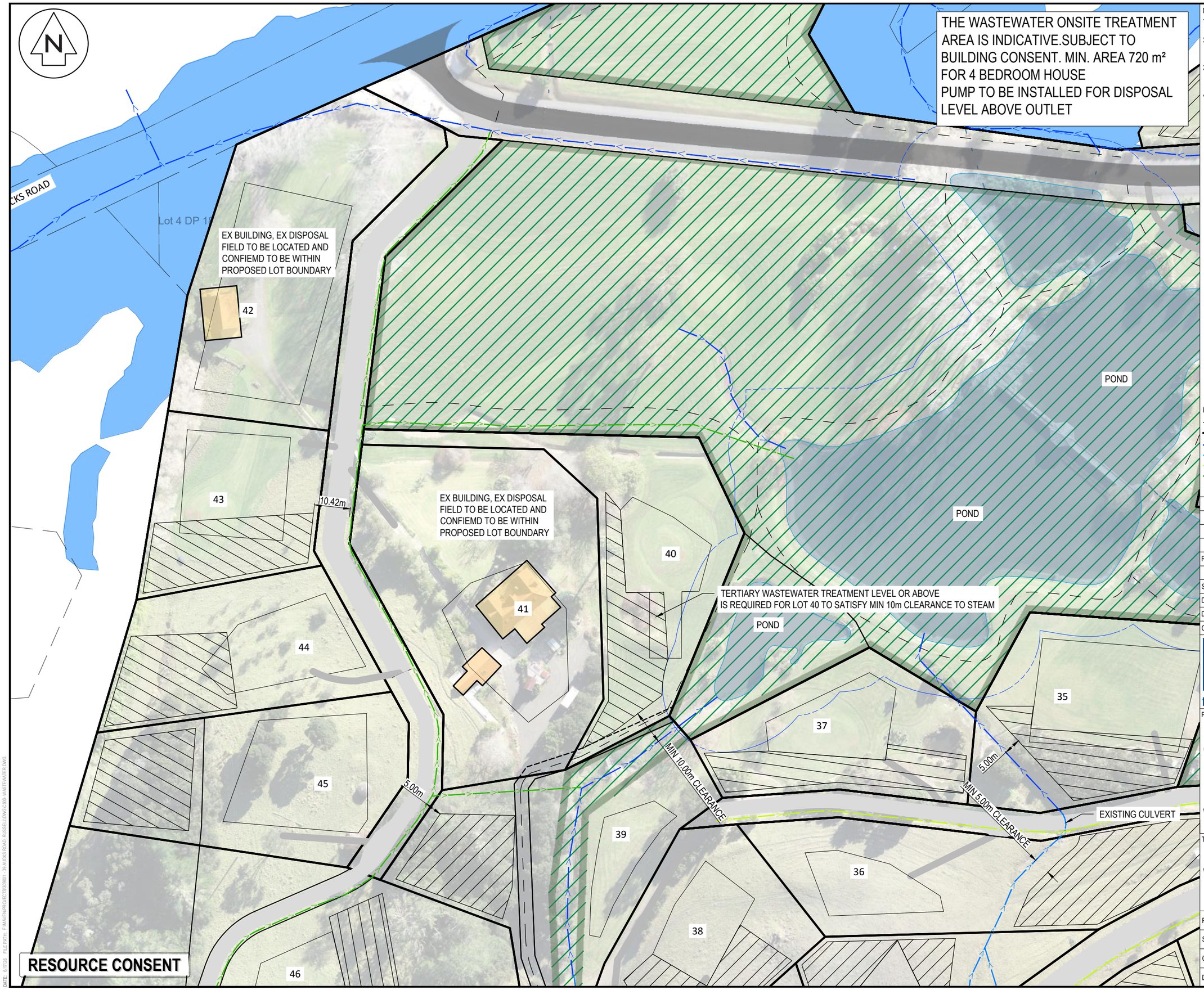
Project
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Title
PROPOSED WASTEWATER PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:3000 @ A3
Cad file	C500- WASTEWATER.DWG
Drawing no.	C500 Rev D

RESOURCE CONSENT

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LEGEND

- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- PR WW DISPOSAL FIELD

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C	RC S92	JAW	06/2025
A	RESOURCE CONSENT	AO	09/2024

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Title

PROPOSED WASTEWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C500- WASTEWATER.DWG		
Drawing no.	C501	Rev	D

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PUMP TO BE INSTALLED FOR DISPOSAL LEVEL ABOVE OUTLET

Lot 1 DP 161659

TERTIARY WASTEWATER TREATMENT LEVEL OR ABOVE IS REQUIRED FOR LOT 60 & 61 TO SATISFY MIN 10m CLEARANCE TO STEAM

MIN 15.00m CLEARACNE
MIN 15.00m CLEARANCE
MIN 5.00m CLEARANCE
MIN 5.00m CLEARANCE
MIN 5.00m CLEARANCE
MIN 15.00m CLEARANCE
MIN 5.00m CLEARANCE
MIN 15.00m CLEARANCE
MIN 5.0m CLEARANCE
MIN 5.00m CLEARANCE
MIN 5.66m CLEARANCE
15.00m
10.18m

POND
POND
POND
POND
POND

EXISTING CULVERT

60
61
57
59
53
58
52
56
54
10
12
55
11
51
50
20
07
22
17
21
18

RESOURCE CONSENT

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- PROP BDY
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- PR WW DISPOSAL FIELD

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	By	Date
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Design	AO	07/2024
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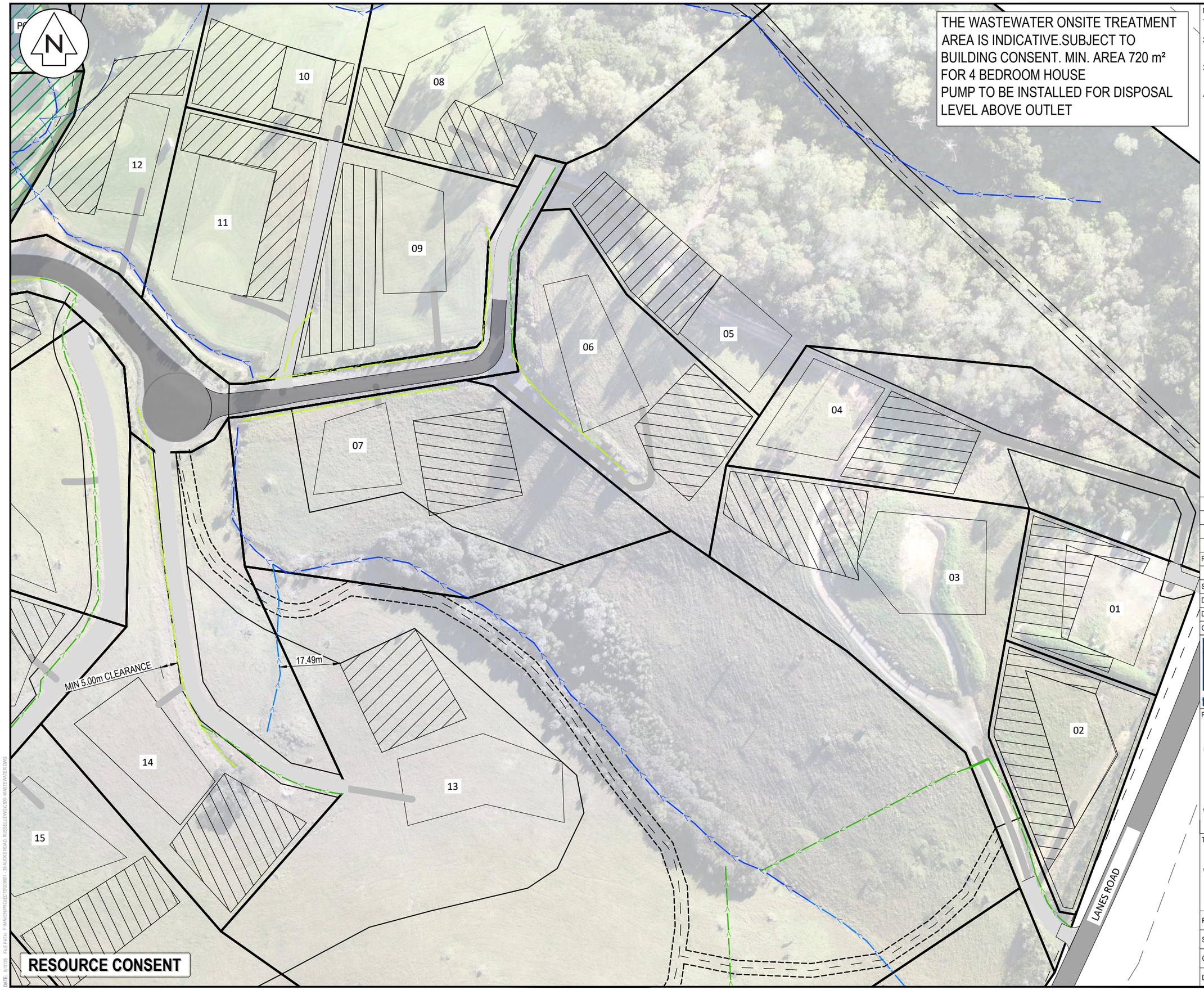
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Title
PROPOSED WASTEWATER PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C500- WASTEWATER.DWG
Drawing no.	C502 Rev D

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PUMP TO BE INSTALLED FOR DISPOSAL LEVEL ABOVE OUTLET

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LEGEND
- EX BDY
- PROP BDY
- EX INTERMITTENT STEAM
- EX OLFP
- EX WATERCOURSE
- PR WATERCOURSE
- PR WW DISPOSAL FIELD

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C	RC S92	JAW	06/2025
A	RESOURCE CONSENT	AO	09/2024

	By	Date
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Design	AO	07/2024
Drawn	TY	09/2024
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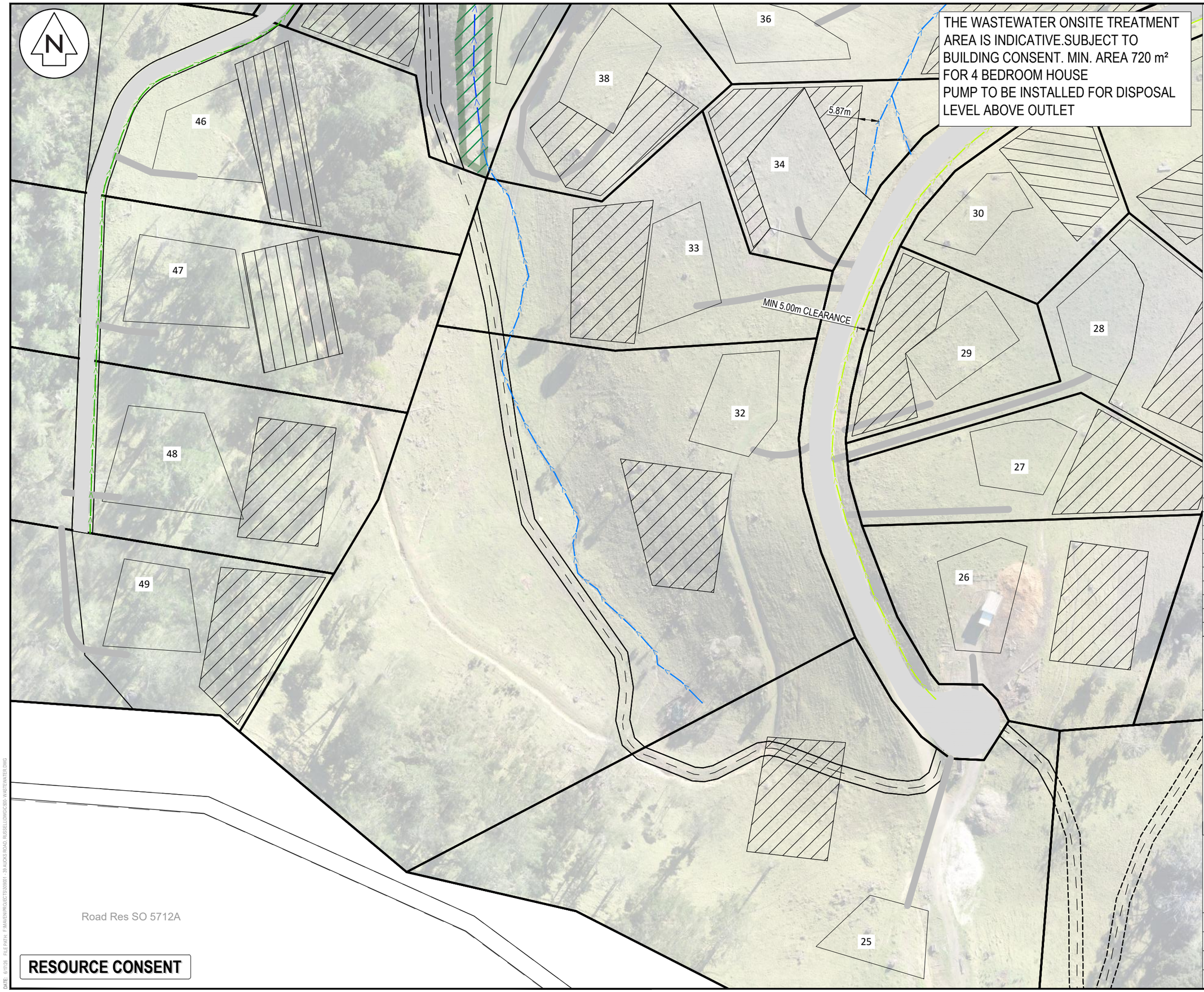
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Title
PROPOSED WASTEWATER PLAN

Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C500- WASTEWATER.DWG		
Drawing no.	C503	Rev	D

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LEGEND

- EX BDY
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- PR WATERCOURSE
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Project

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Title

PROPOSED WASTEWATER PLAN

Project no.	309001 - WILLOWRIDGE
Scale	1:1000 @ A3
Cad file	C500- WASTEWATER.DWG
Drawing no.	C504 Rev D

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PUMP TO BE INSTALLED FOR DISPOSAL LEVEL ABOVE OUTLET

MIN 5.00m CLEARANCE

MIN 5.00m CLEARANCE

15.08m CLEARANCE

RESOURCE CONSENT

NOTES

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LEGEND

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Cad file	C500- WASTEWATER.DWG		
Drawing no.	C505	Rev	D

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PUMP TO BE INSTALLED FOR DISPOSAL LEVEL ABOVE OUTLET

18
19
14
13
15
16
65
64
62
63
5.56m
MIN 5.0m CLEARANCE
MIN 5.0m CLEARANCE
LANES ROAD

RESOURCE CONSENT

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Project no.	309001 - WILLOWRIDGE		
Scale	1:1000 @ A3		
Cad file	C500- WASTEWATER.DWG		
Drawing no.	C506	Rev	D

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127 CIVIL ENGINEERING MEMO

CLIENT: WILLOWRIDGE DEVELOPMENTS LTD

SITE: 39 AUCKS ROAD, RUSSELL

1.1 INTRODUCTION

This memo accompanies the S127 application for 39 Aucks Road, Russell (2250266-RMACOM) and provides a concise overview of the proposed changes to the previously consented scheme, highlighting where changes have occurred and where previous assessments remain valid.

1.2 GENERAL SCHEME OVERVIEW & LOT YIELD

The total number of lots for this 66-lot (65 res lots and 1 jointly owned access lot) residential subdivision remains unchanged from the previously consented scheme.

There has been a redistribution of lot numbers across stages:

- Stage 1A: Amalgamation of Lot 2 DP 542129 and Lot 1 DP 182616 (Lot 1 DP 182616 not part of the original application).
- Stage 1B: Residential lot numbers remain unchanged. Additional area from Stage 1A amalgamation added to Lots 62, 63, and 64. (8 lots).
- Stage 2: Residential lot numbers are increased (20 lots approved vs. 32 lots proposed for S127).
- Stage 3: Remains unchanged. (10 lots).
- Stage 4: Residential lots are increased (11 lots approved vs. 15 lots proposed for S127).
- Stage 5: Removed, lots added to previous stages.
- The overall lot yield across all stages remains consistent with the approved consent.

Minor boundary adjustments have been made to the residential lot area because of staging redistribution. These changes are detailed in the accompanying scheme plans and do not impact the overall consented developable area:

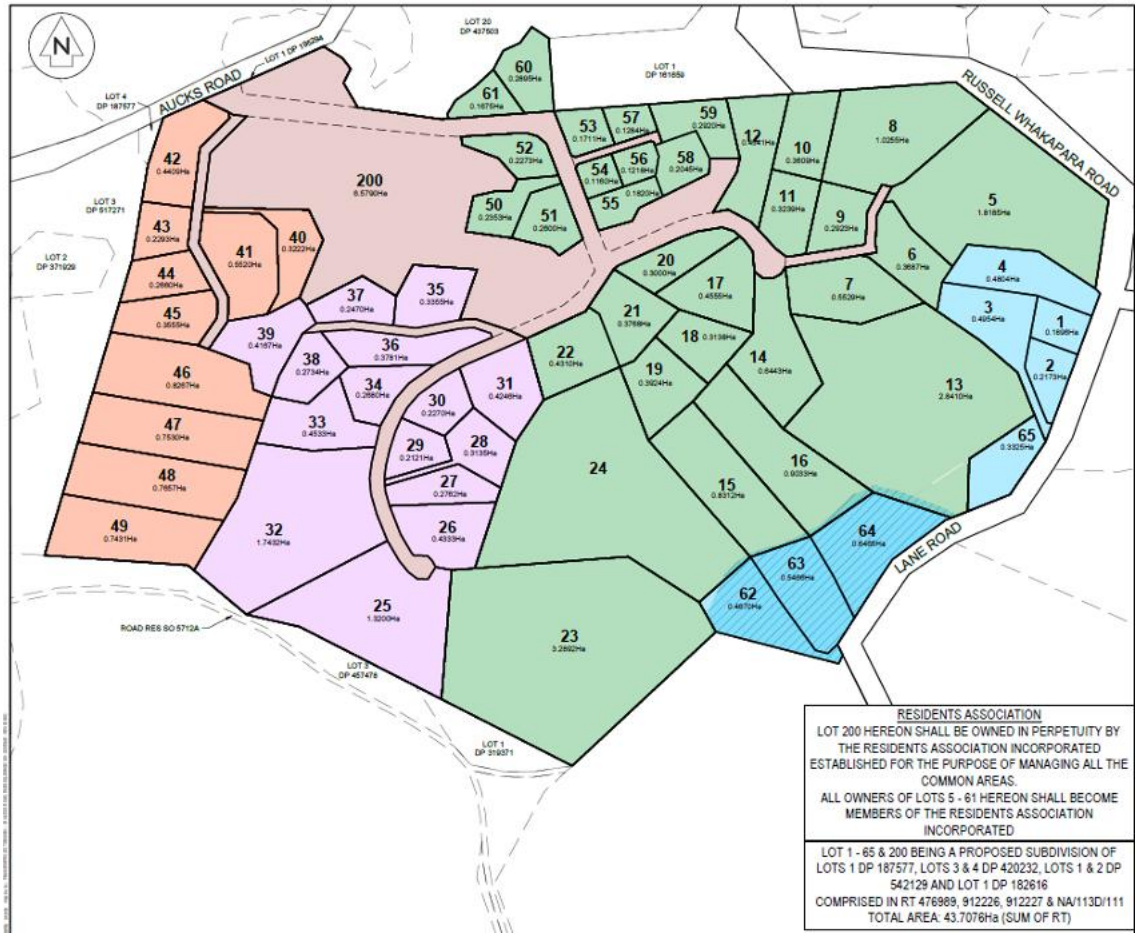


Figure 1: Proposed Scheme Plan Overview

1.3 ROADING

Stage 1B: Lot 63 is proposed to gain access over Lot 64. A right of way easement is proposed over Lot 64 in favour of Lot 63. The previously consented right of way over Lot 62 is removed.

Lot 4 has an existing track that will be utilised to gain site access. This is proposed to be accessed over the northeast corner of Lot 1. A right of way over Lot 1 in favour of Lot 4 is proposed.

Stage 2: Internal alignments have been changed to better suit the site topography. Specifically, previous access Driveway 2 has been reduced from CH 392 to CH 155. Driveway 1 is extended from CH 154 to CH 347. The site topography allows for a more gradually gradient and reduced cut/fill batters of Driveway 1, which are the main driving factors for this change.

1.4 EARTHWORKS

No significant changes to the overall earthworks volumes or methodology are anticipated because of these minor boundary and staging adjustments. Any minor alterations will remain within the scope of the previously consented earthworks plan.

The indicative buildings platforms, of which Lots 15, 16, 21, and 22 have been updated, as in the previous design exercise accommodate the expected disposal fields, yard and road setbacks and have considered geotechnical constraints to ensure that the lots remain suitable for any future residential development.

A geotechnical memo has been provided by Haigh Workman Ltd, addressing the revised changes. As noted in their reporting, the recommendations and suitability of the proposed platform changes are in general accordance with the previous platform locations. The site remains valid because the overall consented developable area is

not changing. Given this, the proposed scheme updates do not necessitate any new geotechnical investigations or alter the previously identified geotechnical constraints or recommendations.

1.5 THREE WATERS

The following provides a summary of the three water engineering considerations.

1.5.1 WASTEWATER

An updated wastewater disposal area plan (Drawing No. C500) is provided as an appendix for the designated wastewater disposal areas of the lots subject to variation. Adequate area is set aside to accommodate the previously recommended disposal area of 720m².

1.5.2 STORMWATER

The overall stormwater management remains unchanged as previously consented.

The previous assessment of stormwater catchment remains valid and have been reviewed against the revised lot configurations. No significant changes to this assessment are anticipated to impact the overall stormwater management design.

The sizing and design of any previously consented ponds or stormwater attenuation features remain consistent with the original consent and have been re-verified against the updated lot layouts to ensure their continued efficacy.

1.5.3 WATER

The overall water supply and firefighting supply management remains similar to previously consented, onsite tanks (25,000l) for private supply being required.

Previously lots were identified as lots requiring underground tanks which shall meet alternative supply requirements of NZS 4910:2008.

1.6 SERVICES

The general approach to the provision of power, and telecommunications services remains consistent with the original consent. Minor adjustments to reticulation layouts within the updated lot boundaries will be undertaken as part of detailed design, while the overall servicing strategy remains unchanged.

Geotechnical Assessment Report

Proposed Subdivision

39 Aucks Road, Russell

For

Willowridge Developments Ltd

Supporting report for Applications to Far North District Council and Northland Regional Council

Haigh Workman reference 23 020

December 2024



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PO Box 89 • 6 Fairway Drive • Kerikeri 0245 • New Zealand

1 Revision History

Revision Nº	Issued By	Description	Date
A	Josh Curreen	First Issue	September 2024
B	Josh Curreen	Revised Scheme Plan	December 2024

Prepared By	Reviewed By	Approved By
Josh Curreen	Wayne Thorburn	John Papesch
Senior Geotechnical Engineer MEngNZ	Senior Geotechnical Engineer CPEng, CMEngNZ	Director CPEng, CMEngNZ

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Executive Summary

Haigh Workman Ltd (Haigh Workman) has been engaged by Willowridge Developments Ltd to carry out a geotechnical investigation for a proposed subdivision comprising 65 residential lots at 39 Aucks Road, Russell. This report contains information required for subdivisional earthworks, as well as outlining geotechnical design issues that need to be considered for subsequent building design and construction on each residential Lot.

The underlying soils comprise a deeply weathered residual Waipapa Group soil mantle across the sloping parts of the site (i.e. ridges), with Pleistocene age Tauranga Group alluvial deposits across the low-lying northern parts of the site. Minor localised non-engineered fill was encountered in some parts of the site, inferred to have been placed for the previous golf course fairways and greens. Inferred colluvium was encountered up to 3.0 mbgl in TP01 and 2.0 mbgl in BH26, in the vicinity of platform 21.

There are several historic scarp features, as outlined in section 3.2, which are generally at or near the toe of the spur ridges. No weaker lenses were observed in the CPTs or hand augers carried out below the old scarp features and are considered relic features. Slope stability analyses indicates that stable building platforms can be provided on all lots subject to the recommendations herein. The proposed building platforms on Lot 04, 05, 18, 19, 26, 27, 28, 30, 33, 34, 62 and 63 will require setbacks from steep slopes and/or mapped scarp features. Building restriction lines have been set out on the attached site plans SP02 to SP05.

The preliminary settlement assessment indicates settlements up to 120 mm on Lot 50, Lot 51 and Lot 52, which will require mitigation / ground stabilisation for fill induced settlement (i.e. Pre-loading). Alternatively, deep driven pile foundations (driven to refusal) can be adopted. On all other lots (excluding Lots 50, 51 and 52), we do not consider consolidation settlement to cause any undue risk to the building platforms provided the fill thickness does not exceed 1.0 m beneath the building platform, and the fill is placed to an engineered standard. If fill exceeds 1.0 m thick, ground improvement (i.e. pre-loading) or deep piled foundations would likely be required. Differential settlements on these lots are predicted to be within tolerable limits given in B1/VM4 for the proposed filling outlined on Maven Associates cut and fill plans numbered C220 to C226, dated 11/2024.

Based on our liquefaction assessment and clayey nature of the overburden soils, we consider the potential for liquefaction induced ground damage (for ULS 0.13 g adopting mean hazard level) is minor and liquefaction damage is unlikely. We consider the effects from excess pore pressure and liquefaction to be between insignificant (L0) to mild (L1) in accordance with Table 5.1 (Module 3), with negligible differential settlements across the site due to limited excess pore water pressures. Step change behaviour was assessed for the lower bound ULS case (0.19 g, Mw 6.5 earthquake) which indicates minor liquefaction in some thin layers at greater depths however, these are not continuous through the CPTs and unlikely to manifest at the surface given the clayey nature of the overburden soils.

Overall soils types are considered highly expansive (Class H), based upon shrink-swell and Atterberg limit testing carried out on the site. Due to this classification, soils lie outside the definition of good ground within NZS3604:2011. Shallow foundations are considered to be generally appropriate for the majority of the lots, provided they are within the building restriction lines. Deeper foundations will be required if located on or near sloping ground. Ground stabilisation would be required if building beyond the restriction lines. Foundation recommendations are outlined in Section 7.

All earthworks should be carried out to the requirements of NZS 4404:2010 'Land Development and Subdivision Infrastructure' and NZS 4431:2022 'Engineered Fill Construction for Lightweight Structures' and in accordance with the recommendations outlined in Section 8.

Filling should be kept to a minimum and limited to 1.0 m beneath all building platform areas. If fill exceeds 1.0 m thick beneath any future building platforms, then a site-specific settlement analysis is required to estimate the differential settlement and associated angular distortion across the proposed buildings. Filling should be avoided on or around the steeper slopes on the ridgelines and beyond any building restriction lines, unless specific engineered design is undertaken to demonstrate it is safe to do so. No additional filling is recommended on any of the proposed building platforms, other than that indicated on Maven Associates cut and fill plans numbered C220 to C226, dated 11/2024, Rev. A.

Subject to constraints and recommendations outlined in Sections 6, 7 and 8, each residential Lot is considered to have a building platform area suitable for domestic residential development subject to specific geotechnical assessment and foundation design at building stage.

Future geotechnical investigation is recommended for each individual lot at building consent stage to confirm the subsoil conditions, confirm the soil expansivity, and provide site specific geotechnical assessment for foundation design within each lot. This report is not intended to be used for foundation design, other than provide general framework for building platform suitability. A summary of the Lot specific geotechnical recommendations is given in Table 13.

1 Introduction

1.1 Project Brief and Scope

Haigh Workman Ltd (Haigh Workman) has been commissioned by Willowridge Developments Ltd to prepare a geotechnical assessment report for use in support of Resource Consent applications to Far North District Council and Northland Regional Council for the proposed 65 lot residential subdivision.

The scope of this report encompasses the geotechnical suitability in the context of the proposed development as defined in our Short Form Agreement dated 23rd of July 2024. This appraisal has been designed to assess the subsoil conditions for earthworks and identify geotechnical constraints for the proposed development. As part of this assessment, the following work has been undertaken:

- A walkover inspection of the site with surface mapping of the geomorphological features;
- Reference to geological maps to assess the likely underlying geology and subsoil conditions;
- A review of historic aerial photographs;
- Intrusive site investigation for evaluation of subsurface conditions;
- Laboratory testing to confirm soil properties;
- Settlement and liquefaction analyses; and
- Slope stability analyses to identify stable building platforms.

This report summarises our findings and recommendations in relation to the proposed development plans prepared by Maven Associates to support Consent applications to Far North District Council and Northland Regional Council.

The principal objective of the investigation is to develop geotechnical models of the site so that geotechnical constraints to the proposed development can be identified and to provide assurance to Council that stable / suitable building platforms are available or can be made available for the proposed development.

2 Site Description and Proposed Development

2.1 General

Site Address: 39 Aucks Road, Russell

Legal Descriptions: Lot 1 DP187577, Lot 1 DP542129, Lot 2 DP542129, Lot 1 DP 182616, Lot 3 DP420232 and Lot 4 DP420232.

Site Area (combined): 43.716 ha

The site is predominantly situated across 4 spur ridges that slope down to the north from a main ridgeline that traverses around the southernmost boundary. The flanks of the spur ridges are moderately sloping with gradients up to 20 - 25°. There are 4 main flow paths between the spur ridges that traverse towards the north and into a series of man-made ponds on the flatter northern part of the site.

There is a gravel driveway off Aucks Road which provides access to the existing dwellings in the north-western part of the site. There is also a sealed double lane accessway from Aucks Road in the north-western corner of the lot which runs along the northern boundary, crosses over the ponds and associated waterways, then splits into 2 roads that run up the outer ridgelines. There is an existing shed situated adjacent to the pond on the northern part of the site. Access to the site can also be gained from Lanes Road which runs around the easternmost boundary.

At the time of investigation, the majority of undeveloped area around the property was grassed with patches of native bush/scrub dotted around the site, mainly on the flanks of the western ridgeline, easternmost gully, and across the steeper southern part of the property. There are also some exotic trees and fruit trees planted around the existing dwelling and within the stockpiled fill material around edges of the pond and lower building platforms.

The approximate location of these site features are shown on site SP01 to SP05 attached in Appendix A. An overview of the subject area is illustrated in Figure 1 below.

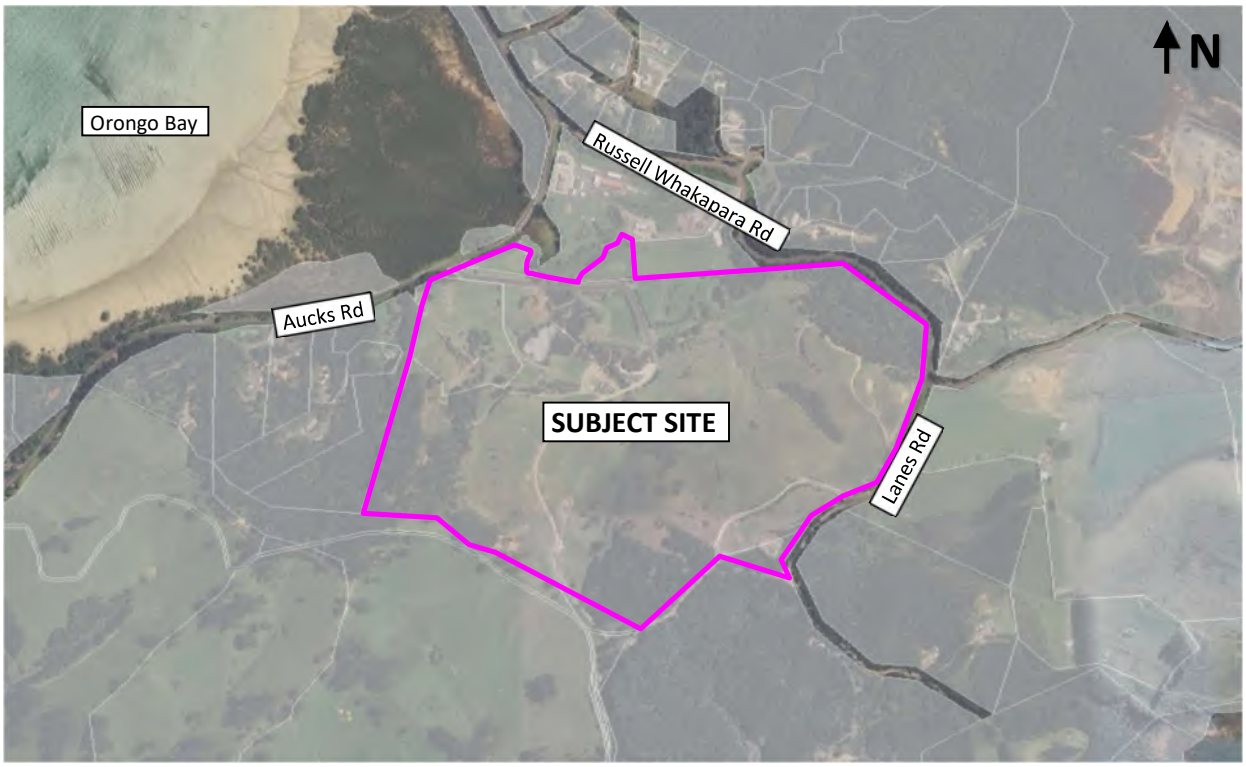


Figure 1: Site Location

2.2 Proposed Development

Based on discussions with our client and civil drawings prepared by Maven Associates, Ref. 309001 – WILLOWRIDGE, Rev. A, dated 11/2024, numbered C200 – C506 and Scheme plans numbered STAGE 1 to 5, SH1 to SH3, Rev. D, it is understood that the proposed development works involve:

- The creation of 65 residential lots with areas ranging from 1,153 m² to 32,892 m².
- Four Jointly Owned Access Lots (J.O.A.Ls) off the existing private sealed road.
- Two driveways off the end of the existing sealed road, Driveway 1 is 154 m long, and Driveway 2 is 392 m long.
- Earthworks involving cutting the crest of ridgelines to create level platforms. Cutting into the sidling platforms is also proposed to form some of the building platforms, with cutting up to a maximum depth of 3.0 m depth shown. Other sidling building platforms where no earthworks are shown will likely require some cutting and/or filling supported by retaining wall, however earthworks on these platforms does not form part of the subdivision enabling works. Most of the platforms are shown to be near level with a gentle crossfall of 5%. The latest cut-fill plans indicate up to 21,900 m³ cut volume.
- Filling up to 1.0 m deep across some of the lower northern parts of the site to raise ground levels above the flood hazard. Minor filling is shown on the outer extent of some ridgeline platforms but is typically less than 0.5 m depth.

The Maven scheme plan suggests staging the subdivision in 5 separate stages as shown on drawing numbered 'STAGING', Rev. B, dated 11/2024.

3 Geology

3.1 Published Geology

Sources of Information:

- Institute of Geological & Nuclear Sciences, 1:250,000 Scale, 2009: "*Geology of the Whangarei area*" [*];
- NZMS Sheet 290 Q04/05, 1:100,000 scale map, Edition 1, 1980: "Whangaroa-Kaikohe" (Soils);
- NZMS Sheet 290 Q04/05, 1:100,000 scale map, Edition 1, 1981: "Whangaroa-Kaikohe" (Rocks).

The site is within the bounds of the GNS Geological Map 2 "Geology of the Whangarei area", 1:250,000 scale. The published geological map indicates the site is underlain by Waipapa Group greywacke (TJw). The soils of the Waipapa Group comprise massive to thin bedded, lithic volcaniclastic metasandstone and argillite of Permian to Jurassic age. The low-lying northern part of the site is mapped as Tauranga Group alluvium (eQa) of middle Pleistocene age.

The geological map is shown in Figure 2 below, with geological units presented in Table 1 below.

[*] *Edbrooke, S.W.; Brook, F.J. (compilers) 2009. Geology of the Whangarei Area. Institute of Geological and Nuclear Sciences 1:250 000 geological map 2. 1 sheet + 68 p. Lower Hutt, New Zealand. GNS Science.*

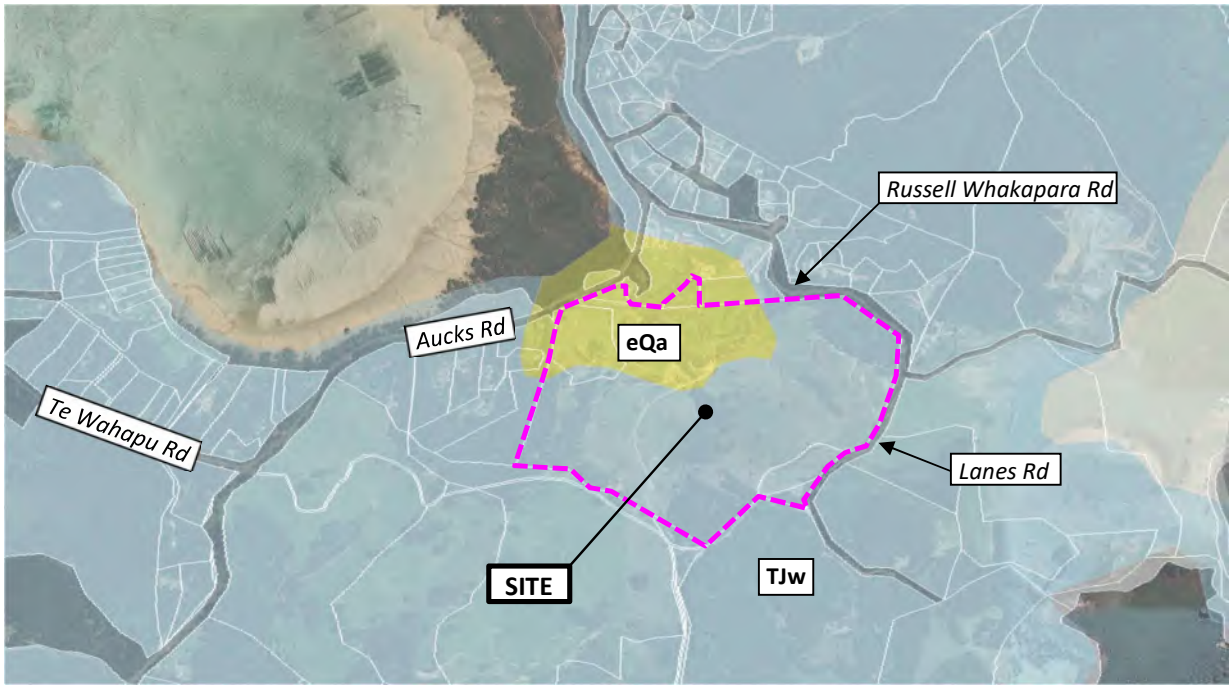


Figure 2: Geological Map Extract

Table 1: Geological Legend

Symbol	Unit Name	Description
eQa	Tauranga Group	Poorly to moderately consolidated mud, sand, gravel and peat or lignite of alluvial, swamp and estuarine origin. Middle Pleistocene age.
TJw	Waipapa Group	Massive to thin bedded, lithic volcaniclastic metasandstone and argillite (TJw) with minor conglomerate (TJg) and tectonically enclosed basalt (TJv), chert and red and green siliceous argillite (TJc). Permian to Jurassic age.

Further reference to the New Zealand land inventory map, Sheet 290 Q04/05 (Bay of Islands), indicates the site is predominantly underlain by 'soils of the rolling and hilly land; well to moderately well drained, Rangiora clay, clay loam and silty clay loam (RAH+RA)'. The lower northern part of the site is mapped as 'soils of the flood plains; well to moderately well drained, Whakapara silt loam and clay loam (WF)'. The underlying rock weathers to a yellow-brown soft sandy clay to depths of 30 m.

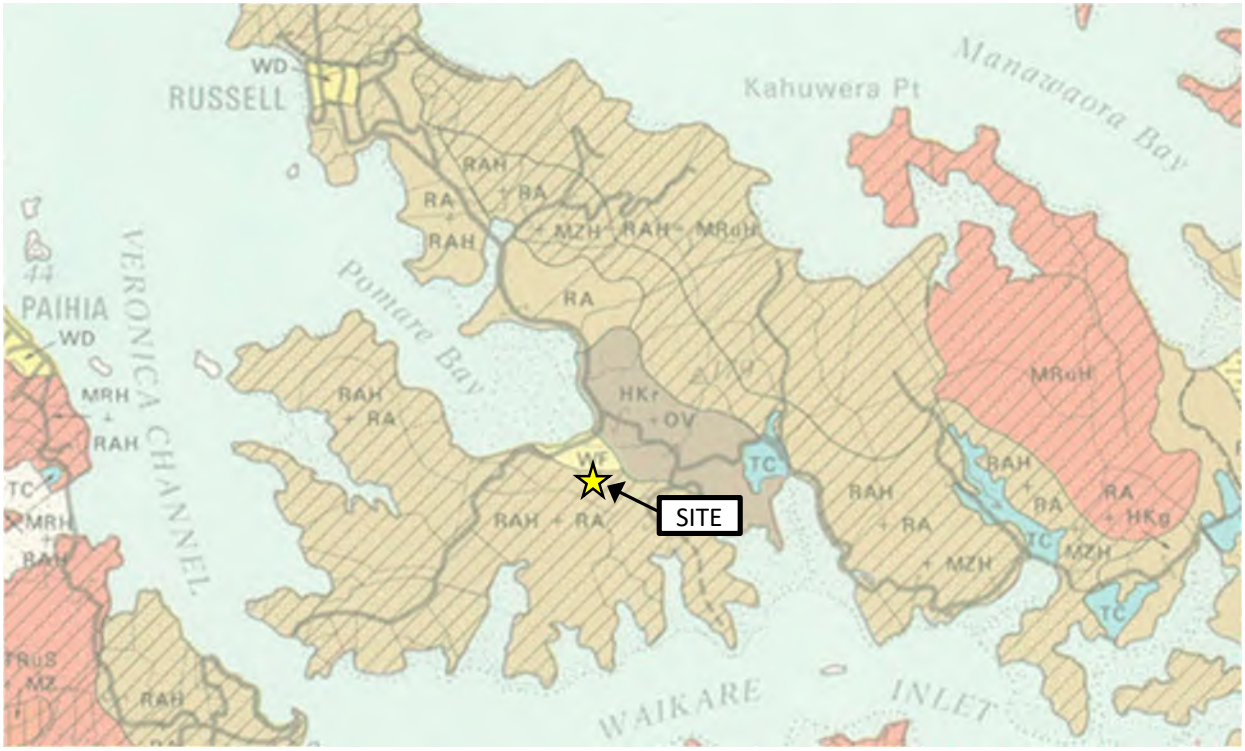


Figure 3: NZMS Soil Map - Sheet 290 Q04/05

3.2 Geomorphology

Based on the site walkover carried out, review of the geological maps and topography from LINZ LiDAR data, the geomorphology of the site and surrounding area is inferred as follows.

The subject site is primarily situated over spur ridges which slope moderately down towards the north from the main ridgeline that generally follows the southernmost boundary. The flanks of these spur ridges are moderately sloping with gradients up to 20 - 25°. The slopes can generally stand at moderately steep gradients due to the relatively high strength of the rock mass and residual soils, although shallow instabilities (e.g terracettes and shallow slumping) are often found indicative of shallow soil creep. Based on site observations and the LiDAR contours, the terracettes generally start to form where gradients exceed 18 - 20°.

There are several historic scarp features, as illustrated in Figure 4 below, which are generally at or near the toe of the spur ridges. Ground improvement or setbacks will be required from all historic scarp features for any affected building platforms.

The northern part of the site is underlain by alluvial deposits and there are a number of man-made ponds across this area that receive stormwater runoff from the flow paths that run between the spur ridgelines.

The inferred geological boundary between the Waipapa Group unit (TJw) and Tauranga Group alluvium (eQa) is relatively well defined by the LINZ LiDAR data with alluvial unit covering the northern part of the site, and diminishing as the gullies extend up between spur ridgelines. The inferred geological boundary is sketched below.

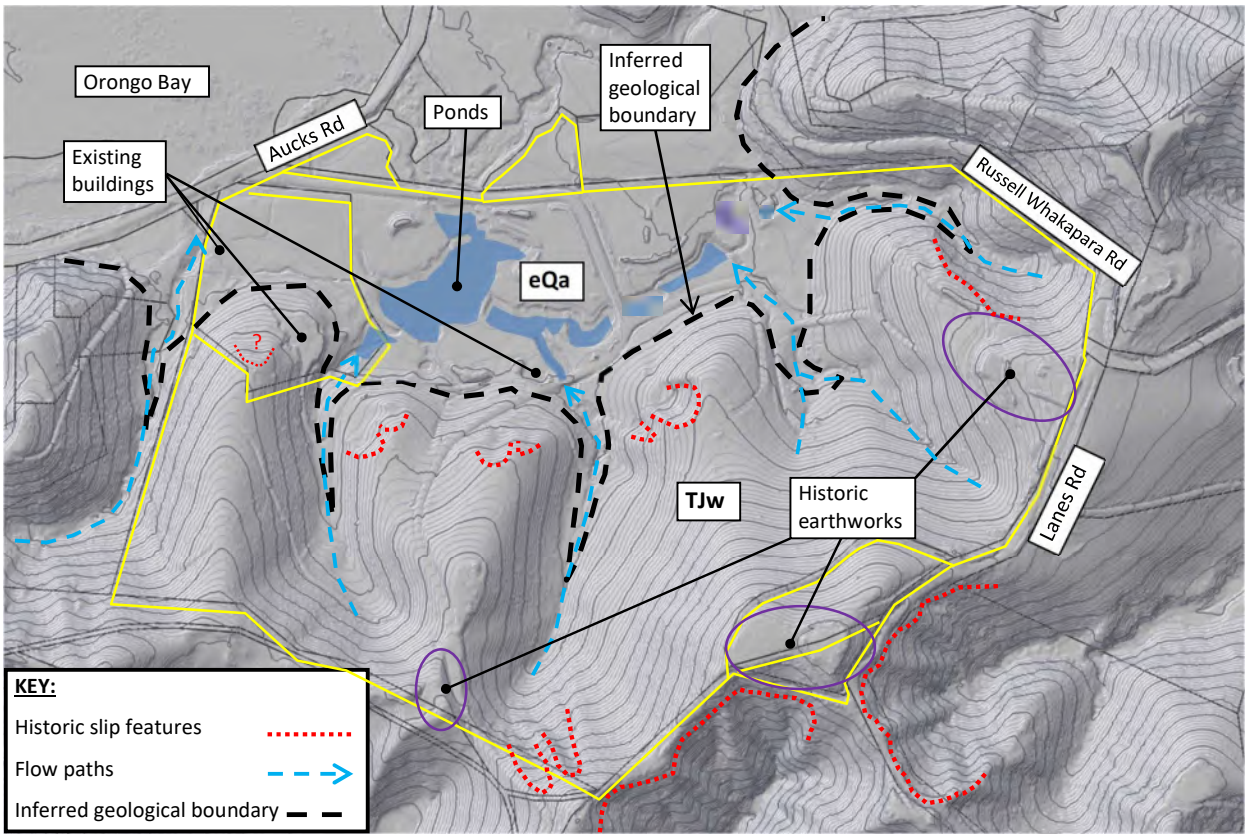
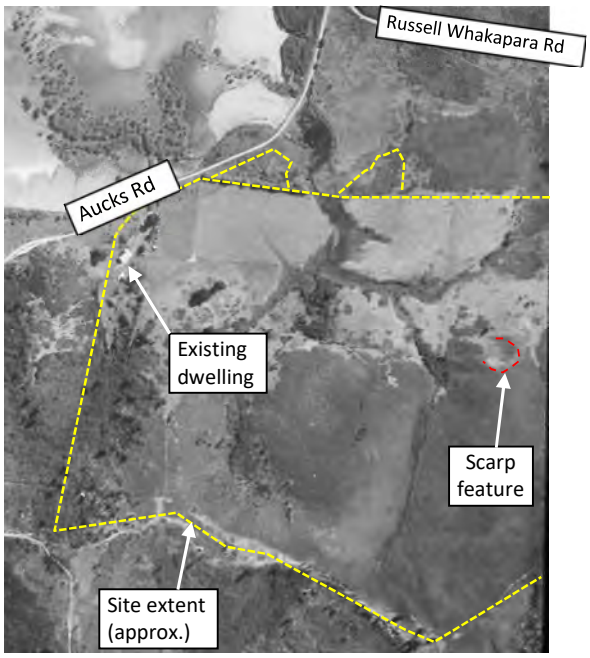


Figure 4: Geomorphological Features from DEM (2018 – 2020)

4 Historic Aerial Photography



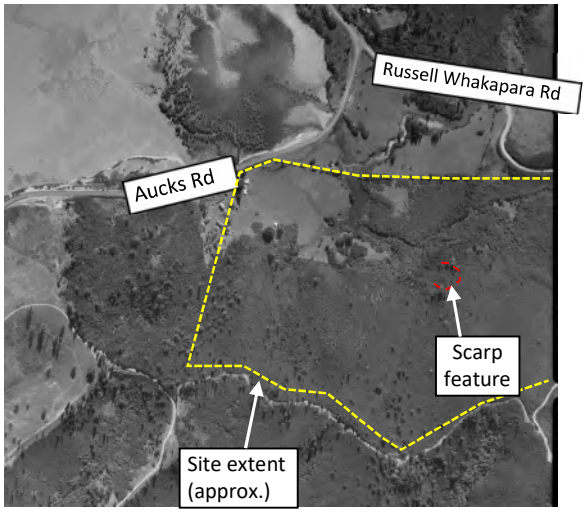
1951 Aerial (Retrolens)

Earliest historic aerial available that clearly shows the site.

The dwelling/cottage exists in the north-western corner.

The remainder of the site is largely undeveloped with the ridgelines in regenerating bush/scrub and the low-lying area in pasture.

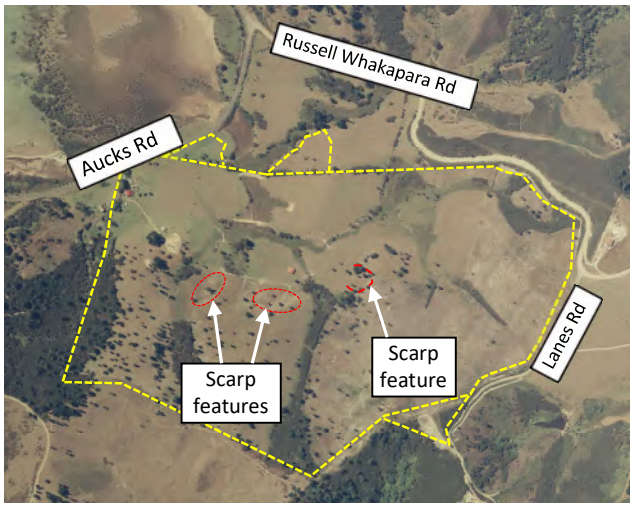
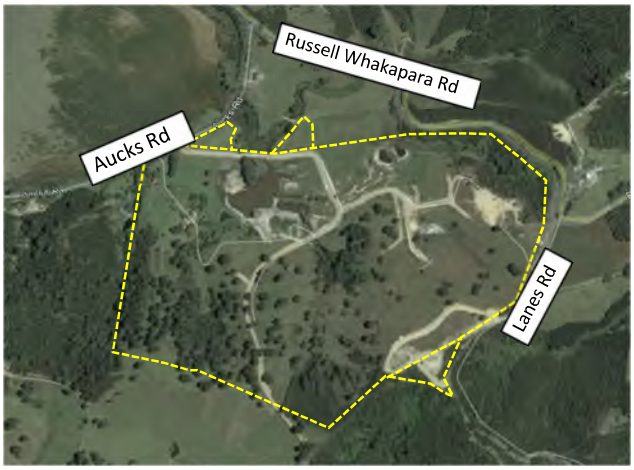
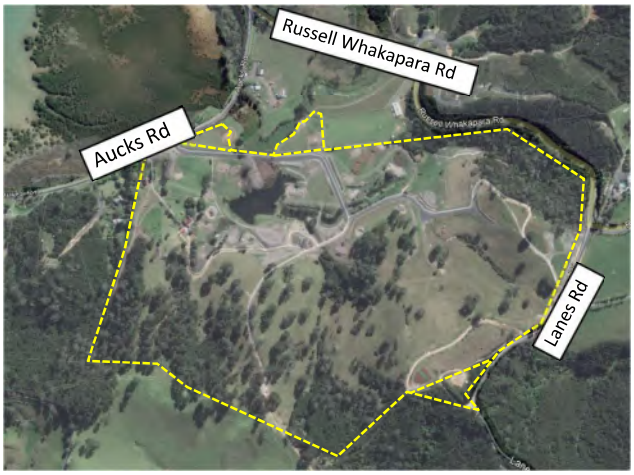
Old scarp feature above lot 21 is evident. Other features are more subtle and difficult to see due to vegetation.



1971 Aerial (Retrolens)

Regenerating bush covers more of the property (in the north-eastern part).

No other obvious change since 1951.

	**1978 Aerial (Retrolens)** The majority of the site in now in pasture with a few scattered trees in the southern part. Some crossings have been formed over the waterways to the north. Shed has been constructed near centre of lot. Building platform for the main dwelling has been formed. Old slip features at end of central ridge spur are now evident after clearing of vegetation.
	**2004 Aerial (Google Earth)** Internal roading through the subject site has been formed, but not yet sealed. Ponds have been constructed in the low-lying northern part. The main dwelling has been constructed. Earthworks have been carried out in the southern and eastern part of the property.
	**2011 Aerial (Google Earth)** Internal roads have been sealed. No other obvious changes between 2011 and present day.

5 Geotechnical Investigations

5.1 Subsoil Investigations

Haigh Workman undertook geotechnical investigations between 29th July and 6th August 2024. The investigations comprised the drilling of 40 hand auger boreholes (BH01 to BH40) and 30 Cone Penetration Tests (CPT01 to CPT30). Two test pits were also carried out in areas of suspected colluvial deposits.

5.1.1 Hand Auger Boreholes

The hand auger boreholes were drilled to depths of between 2.0 and 5.0 metres below ground level (mbgl). Investigations were logged in accordance with The New Zealand Geotechnical Society, "Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes" (2005). Investigation locations are shown on drawing SP02 to SP05 Appendix A. All shear strengths shown on the appended logs are Vane Shear Strengths in accordance with the NZGS; "Test Method for determining the Vane Shear Strength of a Cohesive Soil using a Hand-held Shear Vane", 2001.

5.1.2 Cone Penetrometer Tests

CPTs were undertaken by Underground Investigation Ltd. Testing was undertaken to refusal (anchors pulling out of the ground). A maximum depth of 29.8 m was achieved at CPT18 location. Underground Investigation Ltd provided a cone penetration rig attached to a remote controlled, rubber tracked machine to test and record ground information. CPT soundings are presented in Appendix C.

5.2 Ground Conditions

Based on the results of the geotechnical investigation conducted by Haigh Workman and review of published geological maps, it is considered that the underlying soils comprise a deeply weathered residual Waipapa Group soil mantle across the sloping parts of the site (i.e. ridges), with Pleistocene aged Tauranga Group alluvial deposits across the low-lying northern parts of the site. Non-engineered fill was encountered in some parts of the site, inferred to have been placed for the previous golf course fairways and greens. The fill is typically less than 0.6 m deep in these areas. Inferred colluvium was encountered up to 3.0 mbgl in TP01 and 2.0 mbgl in BH26, in the vicinity of platform 21. There is an historic scarp feature above platform 21 and the depth of colluvium aligns well with the inferred original ground line (based on adjacent slopes).

CPT soundings within the Tauranga Group alluvium indicate a crustal layer comprising stiff clays typically in the upper 2.5 to 4.0 mbgl, underlain by a thick deposit of soft to firm clays. Below the soft to firm layer, strength gradually increase with depth before encountering very dense sand and/or gravel layer at the refusal depth. CPTs within the Waipapa Group material generally indicate a deep weathering profile that gradually increases in strength with depth. CPTs on the eastern and western ridgelines encountered highly weathered greywacke rock near the termination depth however, testing on the 2 central ridgelines did not encounter rock.

The ground surface across the development area and nearby slopes were drawn from LINZ Data Service LiDAR contours. Geological cross sections are included within Appendix A. Subsoil conditions on the site have been interpolated between the boreholes, therefore some variation between test positions are likely. Detailed hand auger logs are presented within Appendix B. The tables below summarise the materials encountered in both the hand auger boreholes and CPTs.

Table 2: Hand Auger Borehole Summary

Test I.D.	Topsoil Depth	Non-Eng. fill	Alluvium [Tauranga Group]	Residual Soil [Waipapa Group]	Groundwater Level
BH01 (Lot 50)	0.2	NE	>3.0	NE	0.5
BH02 (Lot 60)	0.2	NE	>3.0	NE	2.8
BH03 (Lot 54)	0.2	NE	>3.0	NE	2.2
BH04 (Lot 55)	NE	0.4	>2.0	NE	NE
BH05 (Lot 58)	0.2	0.6	>3.0	NE	1.1
BH06 (Lot 12)	0.3	NE	>2.0	NE	1.0
BH07 (Lot 07)	0.2	0.4	NE	>4.0	2.1
BH08 (Lot 08)	0.2	NE	NE	>4.0	NE
BH09 (Lot 09)	0.2	NE	NE	>3.0	NE
BH10 (Lot 05)	NE	NE	NE	>3.0	NE
BH11 (Lot 04)	NE	NE	NE	>3.0	NE
BH12 (Lot 04)	0.3	NE	NE	>4.2	NE
BH13 (Lot 03)	NE	NE	NE	>4.0	NE
BH14 (Lot 01)	NE	0.2	NE	>1.2 (Scala refusal)	NE
BH15 (Lot 65)	0.2	NE	NE	>3.0	NE
BH16 (Lot 64)	0.2	NE	NE	>4.0	NE
BH17 (Lot 63)	NE	NE	NE	>3.0	NE
BH18 (Lot 62)	NE	0.1	NE	>3.0	NE
BH19 (Lot 13)	0.1	NE	NE	>3.0	NE
BH20 (Lot 14)	0.2	NE	NE	>3.0	NE
BH21 (Lot 16)	0.2	NE	NE	>3.0	NE
BH22 (Lot 22)	0.2	NE	NE	>4.0	NE
BH23 (Lot 24)	0.3	NE	NE	>3.0	NE
BH24 (Lot 17)	0.1	NE	NE	>4.0	NE
BH25 (Lot 20)	0.2	NE	NE	>3.0	0.5
BH26 (Lot 21)	0.3	NE	>3.0 (2m colluvium)	NE	1.4
BH27 (Lot 31)	0.2	NE	NE	>4.0	NE
BH28 (Lot 30)	0.2	NE	NE	>3.0	NE
BH29 (Lot 28)	0.2	NE	NE	>3.0	NE
BH30 (Lot 25)	0.2	NE	NE	>4.0	NE
BH31 (Lot 25)	0.2	NE	NE	>5.0	NE
BH32 (O.L.F.P)	NE	0.5	>3.0	NE	1.0
BH33 (Lot 37)	NE	0.4	>3.0	NE	2.8
BH34 (Lot 38)	0.3	NE	NE	5.0	NE
BH35 (Lot 39)	NE	0.5	5.0	NE	2.4
BH36 (Lot 40)	0.2	1.0	NE	>2.0 (Scala refusal)	1.7
BH37 (Lot 43)	NE	0.5	2.5	4.9	1.8
BH38 (Lot 44)	0.2	NE	NE	5.0	NE
BH39 (Lot 45)	0.2	NE	NE	4.9	NE
BH40 (Lot 48)	0.2	NE	NE	3.0	NE
TP01 (Lot 21)	NE	0.5	3.0m colluvium	>4.0	NE
TP02 (Lot 36)	0.2	NE	NE	>5.0	NE

NE = Not Encountered. NT = Not Tested. All depths measured in metres below current ground level (mbgl).

BH26 and TP01 encountered colluvium to respective depths of 2.0 and 3.0 mbgl.

Table 3: CPT Results Summary

Test I.D.	Inferred Colluvium	Alluvium [Tauranga Group]	Residual Soil [Waipapa Group]	Weathered Rock [Waipapa Group]	Groundwater Level
CPT01 (Lot 51)	NE	>14.2*	NE	NE	1.4
CPT02 (Lot 52)	NE	>11.7*	NE	NE	2.9
CPT03 (Lot 60)	NE	>14.1*	NE	NE	3.8
CPT04 (Lot 53)	NE	>17.3*	NE	NE	2.1
CPT05 (Lot 55)	NE	>22.1	NE	NE	2.7
CPT06 (Lot 58)	NE	>12.4*	NE	NE	0.5
CPT07 (Lot 21)	2.0	5.8	28.8	>29.6	0.6
CPT08 (Lot 21)	3.0	NE	18.1	>18.3	6.2
CPT09 (Lot 12)	NE	>22.3	NE	NE	3.9 collapsed
CPT10 (Lot 05)	NE	NE	24.5	>24.9	19.3
CPT11 (Lot 04)	NE	NE	9.8	>10.4	NE
CPT12 (Lot 05)	NE	NE	16.5	>16.7	NE
CPT13 (Lot 23)	NE	NE	26.1	>26.4	18.3
CPT14 (Lot 24)	NE	NE	>24.9	NE	NE
CPT15 (Lot 24)	NE	NE	>23.6	NE	3.0 collapsed
CPT16 (Lot 24)	NE	NE	>20.5	NE	10.6
CPT17 (Lot 28)	NE	NE	>28.6	NE	19.3 collapsed
CPT18 (Lot 26)	NE	NE	>29.8	NE	NE
CPT19 (Lot 36)	2.0**	NE	14.1	>15.0	10.2
CPT20 (Lot 38)	NE	NE	14.7	>15.0	5.1
CPT21 (Lot 37)	NE	2.0	12.2	>12.9	0.4
CPT22 (Lot 35)	NE	5.2	12.3	>12.6	5.0
CPT23 (Lot 47)	NE	NE	11.8	>12.3	5.5 collapsed
CPT24 (Lot 18)	NE	NE	>24.0	NE	22.9
CPT25 (Lot 43)	NE	2.5	>18.4	NE	3.6
CPT26 (Lot 47)	NE	NE	10.5	>12.3	4.2
CPT27 (Lot 49)	NE	NE	13.1	>17.6	NE
CPT28 (Lot 47)	NE	NE	18.8	>19.5	NE
CPT29 (Lot 44)	NE	NE	23.2	>23.6	6.5
CPT30 (Lot 61)	NE	>11.4	NE	NE	3.6 collapsed

Colour Key:	**Geological Unit**
	Tauranga Group (Alluvium)
	Waipapa Group
	Suspected Colluvium

NE = Not Encountered. NT = Not tested.
**Inferred refusal within very dense sand/gravel (Tauranga Group Alluvium).*
***Colluvium not obvious in adjacent test pit however, has been modelled as colluvium in SLIDE given the surrounding topography.*

5.2.1 Topsoil

Topsoil was encountered within most of the boreholes to between 100 and 300 mm depth, but typically around 200 mm depth. The natural topsoil was generally described as dark brown and dark greyish brown silt and clayey silt, moist to wet with low plasticity.

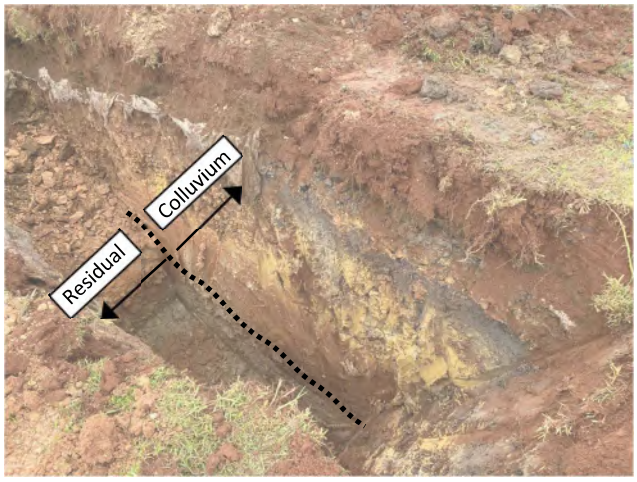
5.2.2 Non-engineered Fill

Localised areas of non-engineered fill were encountered across parts of the site, inferred to have been placed for the previous golf course fairways and greens. The fill is typically less than 0.6 m thick in these areas, but up to 1.0m deep on lot 40 (BH36).

No wide-spread filling appears to have been historically carried out across the proposed lots. The material excavated from the ponds (circa 2002) appears to have been placed in stock-piled mounds around the ponds and has been planted out. Some material may have also been taken off site.

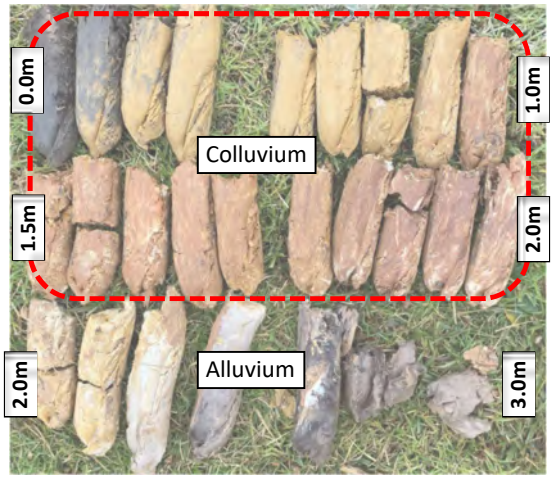
5.2.3 Inferred Colluvium

The geomorphology indicates historic scarp features at the base of the ridgelines around lot 19/21, 30, 31, 36, 38 and 44 (refer to SP02 to SP05). The site investigation targeted these areas in attempt to identify any colluvial and/or weaker layers downslope of the features. Test pits were undertaken on lot 21 and lot 36 adjacent to the CPTs. No obvious colluvium or weaker layers were observed on lot 36, 38 or 44, however the test pit carried out on lot 21 had a distinct change in material at approximately 3.0 mbgl. No weaker lenses were observed in the CPT around this interface and it is assumed that this is a relic slip feature. Furthermore, the depth of inferred colluvium (3.0 mbgl) aligns well with the adjacent slopes (inferred to be the original ground line).



Test pit TP01 photograph.

Showing inferred transition from colluvium to residual soil. Interface is inclined across the test pit and 3.0m at deeper end.



Hand auger borehole BH26 core photograph.

Showing inferred colluvium in upper 2.0 mbgl, with alluvium (Tauranga Group) beneath.

5.2.4 Alluvial Soils (Tauranga Group)

Alluvial deposits of the Tauranga Group were encountered across the low-lying northern part of the site. CPTs indicate a crustal layer comprising stiff clays typically in the upper 2.5 to 4.0 mbgl, underlain by a thick deposit of soft to firm clays. The depth of soft to firm soils varies between 5.0 and 10.0 mbgl. Below the soft to firm layer, strengths gradually increase with depth until the refusal depth. CPT01, CPT02, CPT03, CPT04 and CPT06 encountered a very dense layer at refusal depths between 11.7 and 17.3 mbgl, whereas CPT05 and CPT09 reached a depth 22.3 mbgl without encountering the very dense layer. The shallow refusal is therefore inferred to be a very dense sand and/or gravel layer within the Tauranga Group unit.

The CPTs carried out closer to the toe of the slopes revealed firm to stiff alluvium to between 2.0 and 5.8 mbgl, underlain by stiff to very stiff residual soils (interpolated from CPT trace and surrounding topography).

5.2.5 Residual Soils (Waipapa Group)

Fine-grained residual soils were encountered across the elevated/sloping parts of the development site. Vane shear strengths generally indicated of stiff to very stiff soils across the residual slopes. In general the boreholes encountered silty clay within the upper 1.0 m to 2.5 mbgl, underlain by silt and clayey silt. Firm to stiff residual soils were encountered on lot 38 and lot 07 however these slopes were relatively gentle. Boreholes BH14 and BH36 terminated at respective depths of 1.2 and 2.0 mbgl within hard soils. Scala penetrometer testing was carried out at the base of these holes to effective refusal. All other boreholes reached target depths.

The CPTs indicated a deeply weathered soil profile with stiff to hard residual soils to depths of between 10.4 m and 29.8 m, generally increasing in strength with depth. The tests on the eastern and western ridgelines encountered highly weathered greywacke rock near the termination depth however, testing around the central ridgelines (CPT14 to CPT18) did not encounter rock.

CPT17, carried out on the central ridgeline encountered a thin firm band (approx. 100mm thick) at 8.2 mbgl. No other CPTs encountered this weaker layer and it does not topographically align with any of the observed slip features. This is inferred to be an isolated weaker zone, however, has been included in the slope stability modelling for conservatism.

5.2.6 Groundwater Conditions

Groundwater was mostly encountered the hand auger boreholes and CPTs across the lower parts of the site. Groundwater standpipes were not installed in the hand auger boreholes or CPTs and no further groundwater monitoring has been undertaken. The investigation was carried out following a wet winter season therefore levels are considered to be representative of typical winter conditions. Groundwater levels can and do fluctuate and higher groundwater levels may be encountered following periods of prolonged or heavy rainfall.

5.3 Laboratory Testing

Soil samples were collected from the alluvial and residual soils within BH01, BH03, BH21, BH29 and BH40 at various depths. The samples were sent to an IANZ accredited laboratory to undertake testing to determine the materials Atterberg limits and linear shrinkage. Solid density testing was also undertaken within the residual Waipapa Group samples for earth filling purposes. Laboratory test results are presented in Appendix D.

6 Geotechnical Assessment

6.1 Geotechnical Design Parameters

Geotechnical design parameters recommended in this report are based on in-situ test results, empirical relationships, and back analysis. Back analyses were carried out along cross section C-C' which runs through the steep slope on the eastern side of the site (lot 05), and cross section I-I' which runs through the old scarp feature above lot 21. Sensitivity analyses was carried out for the residual soil layers to obtain a factor of safety of 1.0 for worst case groundwater conditions.

Refer to Table 4 below for soil parameters adopted within this report. Depths for the units are shown in Table 3 above and on the geological cross sections.

Table 4: Geotechnical Design Parameters

Soil Unit	Bulk Unit Weight, γ (kN/m³)	Peak Undrained Shear Strength S_u (kPa)	Effective Cohesion c' (kPa)	Effective Friction Angle, ϕ' (degrees)	Groundwater Conditions (Ru)*
Non-engineered Fill	17	25	1	26	0.15 (0.3)
Inferred Colluvium	17	25 - 50	5	24	0.3 (0.3)
Soft to Firm Alluvium [TAURANGA GROUP]	17	15 – 35	2	26	0.3 (0.3)
Firm Alluvium [TAURANGA GROUP]	17	25 - 50	3	28	0.3 (0.3)
Stiff Alluvium** [TAURANGA GROUP]	18	50	5	30	N/A
Med. Dense Sand** [TAURANGA GROUP]	18	N/A	0	35	N/A
Stiff Residual Soils [WAIPAPA GROUP]	18	50	5	30	0.15 (0.3)
Very Stiff Residual Soils [WAIPAPA GROUP]	18	100	7	32	0.15 (0.3)
Hard Residual Soils [WAIPAPA GROUP]	18	200	10	34	0.15 (0.3)
Highly Weathered Rock [WAIPAPA GROUP]	20	>500	15	34	0.15 (0.15)

**Parentheses indicate worst case/elevated groundwater conditions.*
***Stiff alluvium and medium dense sand were not used in any of the SLIDE models.*

Groundwater has predominantly been modelled using a pore pressure coefficient for each layer (Ru). This develops a porewater pressure profile specific to each slip surface and is appropriate for the short term / transient pore water pressures that are expected to develop following rainfall onsite and the groundwater flow conditions that will result due to the sloping topography. Where ground was encountered in the boreholes or CPTs (i.e. around the toe of the ridgelines), a water surface has been modelled, with Ru applied to the soils above the water surface.

6.2 Seismic Hazard

Anticipated peak ground acceleration has been taken from Module 1: Overview of the guidelines – Earthquake geotechnical engineering practice, adopting the mean hazard value of 0.13 g as the principal parameter for pseudo-static analysis (500-year return period). Step-change behaviour response has been assessed adopting the 'lower-bound' value of 0.19 g.

6.3 Slope Stability Assessment

6.3.1 General

There are several historic scarp features, as outlined in section 3.2 and on drawings SP01 to SP05, which are generally at or near the toe of the spur ridges. The residual greywacke slopes can generally stand at moderately steep gradients due to the relatively high strength of the rock mass and residual soils. However, shallow instabilities indicative of soil creep (e.g terracettes and shallow slumping) are often found where gradients begin to exceed 18 - 20°. The building platforms located on or near the moderately slopes of the ridgelines may be susceptible to soil creep which would require mitigation through specific pile foundation design.

Lots 04 and 05 are located adjacent to a very steep slope down into the northernmost gully. Lots 62 and 63 are on flat/cut platforms with steep slopes beyond the southern edge of the platforms. These lots will require building restriction lines from the top of slope. Lots 18 and 19 are situated above a large scarp feature and will require building restrictions. Similarly, lots 26 to 28 along the central ridgeline will require setbacks from the steeper eastern slope.

6.3.2 Instability Potential

Slope profile ranges have been used to categorise the potential for instability at the site within the Waipapa Group unit as very low, low, moderate and high, with corresponding slope angles. Gradients less than 18° are generally considered to have a low-risk of soil creep under natural conditions. Historic scarp features were observed around the head of the central gully and neighbouring southern slopes, generally where gradients exceed 25° therefore high-risk. Gradients between 18° and 25° are therefore considered medium risk. Table 5 summarises the slope profile ranges and potential for instability based on the geomorphology and qualitative assessment. Figure 5 shows the slope gradients and corresponding risk across the development area.

Table 5: Instability Risk Categorisation

Risk	Gradient	Slope Instability Potential
High	>25 °	Instability can be expected
Medium	18 – 25 °	Instability can be expected if the development does not have due regard for the site conditions
Low	10 – 18 °	Instability not expected unless major site changes occur
Very low	<10 °	Virtually nil

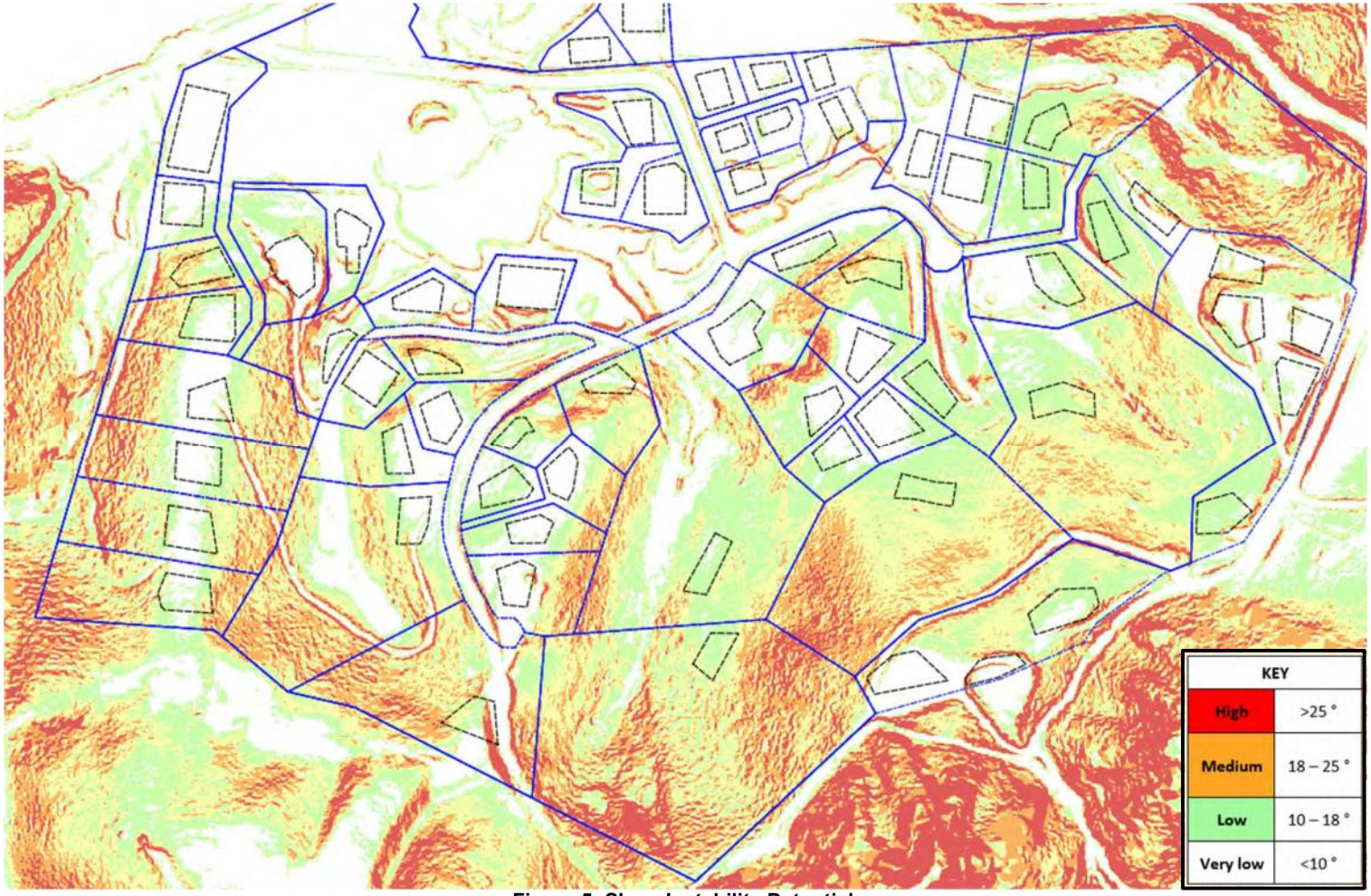


Figure 5: Slope Instability Potential

6.3.3 Stability Analyses

Due to the steepness of the slopes, historic slip features surround the site and visual assessment indicating soil creep, slope stability analyses have been carried out to assess the stability of the proposed building platforms and provide building restriction lines where necessary.

Seventeen geotechnical cross sections (C-C' to S-S') have been developed across the site to undertake slope stability analyses using computer software by Rocscience, Slide (Version 9.034). The soil parameters used are presented in Table 4. The purpose of the stability modelling was to assess the overall global stability for the proposed development area, including static groundwater conditions, elevated (worst case) groundwater, and during a ULS seismic event.

The post-development scenarios are based on the earthworks design by Maven Associates dated 11/2024, Rev. A. Iterations of the building platform locations and earthworks design have been made by Maven Associates following initial slope stability analyses and preliminary recommendations from Haigh Workman. The SLIDE models incorporate the earthworks design and building platform locations in the latest civil drawings available.

For modelling purposes, we have adopted a surcharge of 10 kN/m² for the assumed future building loads.

The criteria adopted for assessing the global stability is in general accordance with the Auckland Council Code of Practice for Land development and Subdivision* as outlined in Table 6 below. Stability analyses outputs for all scenarios are attached. In Appendix E.

Table 6: Design Factors of Safety (FOS)

Load Case	Design Factor of Safety
Static groundwater	≥ 1.5
Elevated groundwater	≥ 1.3
Seismic loading (ULS)	≥ 1.0

* *The Auckland Council Code of Practice for Land Development and Subdivision – Chapter 2: Earthworks and Geotechnical, May 2023, Version 2.0.*

6.3.4 Analyses Results

The stability analyses carried out for all scenarios are outlined in Table 7 below.

Table 7: Analyses Results

Section I.D.	Scenario	Result	Required	Outcome
C-C'	Back analyses	1.0	1.0	Minimum Factor of Safety provided with a **15.0 m building setback from top of steep eastern slope**
	Static conditions	1.6	1.5	
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
D-D'	Static conditions	1.6	1.5	Minimum Factor of Safety provided with an **8.0 m building setback from top of steep eastern slope**
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
F-F'	Static conditions	1.6	1.5	Minimum Factor of Safety provided with a **9.0 m building setback from top of steep southern slope**
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
G-G'	Static conditions	1.6	1.5	Minimum Factor of Safety provided with a **14.0 m building setback from top of steep southern slope**
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
H-H'	Static conditions	1.6	1.5	Globally stable. Steeper slopes above building platform are less than required for development but meet F.O.S for amenity area
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
I-I'	Back analyses	1.0	1.0	Lower platform (Lot 21) stable. Upper platforms (Lot 18 and Lot 19) require a **minimum 9.0 m setback from top of scarp** to meet required F.O.S for residential development
	Static conditions	1.5 [upper sites] 2.5 [lower site]	1.5	
	Elevated groundwater	1.5 [upper sites] 2.5 [lower site]	1.3	
	Seismic case (0.13g)	1.1 [upper sites] 1.6 [lower site]	1.0	
J-J'	Static conditions	1.7	1.5	Globally stable. Leading edge piles may be required if foundations are located close to edge of cut platform
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.2	1.0	
K-K'	Static conditions	1.7	1.5	Globally stable. Leading edge piles may be required if foundations are located close to edge of cut platform
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.2	1.0	
L-L'	Static conditions	1.6	1.5	Minimum Factor of Safety provided with an **8.0 m building setback from 'break in slope'**
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.2	1.0	
M-M'	Static conditions	1.6	1.5	Minimum Factor of Safety provided with an **8.0 m building setback from 'break in slope'**
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.2	1.0	

Table 6: Analyses Results (continued)

Section I.D.	Scenario	Result	Required	Outcome
N-N'	Static conditions	1.5	1.5	Globally stable provided building platform is formed in cut with retaining provided. No filling permitted. **Provide 3.0 m setback from top of relic features.**
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.2	1.0	
O-O'	Static conditions	1.6	1.5	Globally stable. **Provide 3.0 m setback from top of relic features**. Limit filling to 1.0 m maximum depth
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.2	1.0	
P-P'	Static conditions	1.8	1.5	Globally stable. Limit filling to 1.0 m maximum depth
	Elevated groundwater	1.6	1.3	
	Seismic case (0.13g)	1.3	1.0	
Q-Q' [east]	Static conditions	1.8	1.5	Globally stable. Leading edge piles may be required if foundations are located close to edge of cut platform
	Elevated groundwater	1.5	1.3	
	Seismic case (0.13g)	1.3	1.0	
Q-Q' [west]	Static conditions	1.7	1.5	Globally stable. Leading edge piles may be required if foundations are located close to edge of cut platform
	Elevated groundwater	1.4	1.3	
	Seismic case (0.13g)	1.3	1.0	
R-R'	Static conditions	1.5	1.5	Lower platform (Lot 31) stable. Upper platform (Lot 28) requires a **minimum 8.0 m setback from top of relic features**
	Elevated groundwater	1.3	1.3	
	Seismic case (0.13g)	1.0	1.0	
S-S'	Static conditions	2.4 [Lot 45] 1.5 [JOAL 1]	1.5	Globally stable. Leading edge piles may be required if foundations are located close to edge of Lot 45 cut platform
	Elevated groundwater	2.1 [Lot 45] 1.3 [JOAL 1]	1.3	
	Seismic case (0.13g)	1.7 [Lot 45] 1.2 [JOAL 1]	1.0	

The stability analyses summary sheets for all scenarios are included in Appendix E. Stable building sites have been identified on all lots subject to the recommendations contained in this report. Building restriction lines (BRL) are required for some of the lots as summarised in Table 8 below.

Table 8: Building Restriction Lines

I.D.	Minimum setback from slope	Comments
Lot 04	8.0 m	Setback from steep eastern slope
Lot 05	15.0 m	
Lot 18, 19	9.0 m	Setback from old scarp feature
Lot 26, 27, 28	8.0 m	Setback from break in slope (where slopes exceed 10°)
Lot 33, 34	3.0 m	Setback from old scarp features
Lot 62	14.0	Setback from steep southern slopes / edge of cut platform
Lot 63	9.0	

Building Restriction Lines (BRLs) have been set out on the attached site plans SP02 to SP05. If building beyond a BRL is desired, ground improvement will be required (e.g. soldier pile walls), preceded by site-specific analyses and design.

None of the building platforms are located within the 'high-risk' areas. The building platforms located on or near the 'medium risk' areas may be susceptible to soil creep which would require mitigation through specific pile foundation design.

Filling on sloping ground (i.e. sidling fills) or near any historic scarp features are to be avoided. Provided the recommendations are adhered to, it is considered that the proposed development is unlikely to adversely affect the existing stability of the site.

No weaker lenses were observed in the CPTs or boreholes carried out below the old scarp features. Given location of these features and absence of an obvious failure plain, it is assumed that these are relic slip features possibly resulting from toe erosion following the last interglacial period and subsequent higher sea levels.

Whilst the building platforms are considered stable for subdivision purposes, future building on these lots should be subject to further site-specific investigation and slope stability analysis once final development plans are known.

6.4 Liquefaction Potential

6.4.1 General

Liquefaction is the process where, during earthquake shaking, sand and silt grains in wet soil are rearranged and the water in the spaces between the grains is squeezed. Pressure builds up in the water until the silt and sand grains 'float' in the water and the soil behaves more like a liquid than a solid. Buildings, roads, pipes and tanks on or in liquefied soil are often damaged by tilting or sinking into the ground. The underlying alluvial soils comprise recent, unconsolidated to poorly consolidated, non-cohesive alluvial soils with a high groundwater table and are susceptible to liquefaction triggering during a significant seismic event.

The Northland region is considered to be one of the least seismically active regions of New Zealand, and we consider the liquefaction potential at this site is low.

6.4.2 Analysis Methodology

The liquefaction risk assessment for the identification, assessment and mitigation of liquefaction hazard has been conducted based on the recommendations of the New Zealand Geotechnical Society Inc. stated in Module 1 and Module 3 and the guidance document from MBIE (Planning and engineering guidance for potentially liquefaction-prone land, 2017).

The liquefaction susceptibility was analysed using CPT data imported into the GeoLogismiki software package CLiq (Version 2.2.1.7). The following assessment methodologies have been applied:

- Analysis Methods - Boulanger & Idriss (2014)
- Fines Correction Method – Robertson and Wride (1998)
- Settlement Estimates – Zhang at al (2002)

The following design cases have been considered for the liquefaction assessment:

Serviceability Limit State (SLS) – loads a building or structure is likely to be subjected to more frequently during its design life. A building should be readily repairable when subjected to SLS loads. SLS loads are based on a one in 25-year earthquake.

Ultimate Limit State (ULS) - loads a building or structure may be subjected to during a large (severe), relatively rare event. A building should be designed to lower the risk of collapse, and therefore minimise the risk or protect life safety to human life when subjected to ULS loads. ULS loads are based on a one in 500-year earthquake.

The seismic coefficients for design are based on the NZTA Bridge Manual (NZBM), calculated based on the following formula: $PGA = C0.1000 * \frac{Ru}{1.3} * f * g$

Table 9: Earthquake Design Scenarios

Design Case	Return Period	Magnitude (M)	Peak Groud Acceleration
SLS	25 year (Ru 0.25)	5.8	0.03 g
ULS	500 year (Ru 1.0)	5.8	0.13 g

A lower bound ULS case (0.19 g, Mw 6.5 earthquake) was also used to analyse any step-change behaviour (based on Module 1, NZGS & MBIE). Results are summarised in Table 10, with detailed results presented in Appendix F. The liquefaction severity number has been used to indicate the potential for surface manifestation, with all tests recording a LSN less than 10 (little to no expression of liquefaction, i.e., negligible risk).

Table 10: Liquefaction Results Summary

Test No.	SLS Design Case			ULS Design Case (0.13 g)		
	LPI	LSN	Free field Settlement (mm)	LPI	LSN	Free field Settlement (mm)
CPT01	Low risk	0	0	Low risk	0	1
CPT02	Low risk	0	0	Low risk	0	0
CPT03	Low risk	0	0	Low risk	0.3	5
CPT04	Low risk	0	0	Low risk	0.2	1
CPT05	Low risk	0	0	Low risk	0.3	4
CPT06	Low risk	0	0	Low risk	3.5	27
CPT09	Low risk	0	0	Low risk	0.2	1
CPT21	Low risk	0	0	Low risk	0.4	3
CPT22	Low risk	0	0	Low risk	0	0
CPT25	Low risk	0	0	Low risk	0.5	3
CPT30	Low risk	0	0	Low risk	0.4	3

6.4.3 Liquefaction Induced Settlement

The results indicate that during a SLS earthquake event, negligible settlement is predicted. The Liquefaction Potential Index (LPI) for the SLS design case is classified as low risk with the Liquefaction Severity Number (LSN) showing little to no expression of the liquefaction (i.e. sand boils or ejecta) expected at the surface.

For the ULS earthquake event, free field settlement due to liquefaction generally less than 5 mm, however CPT06 predicts up to 27 mm. The liquefaction potential index for ULS is classified as low risk with little to no expression of liquefaction (i.e. sand boils or ejecta). Given the nature of the overburden soils (clayey soils), liquefaction induced settlement at the ground surface is expected to be minor and the risk of liquefaction damage to the site is low and unlikely.

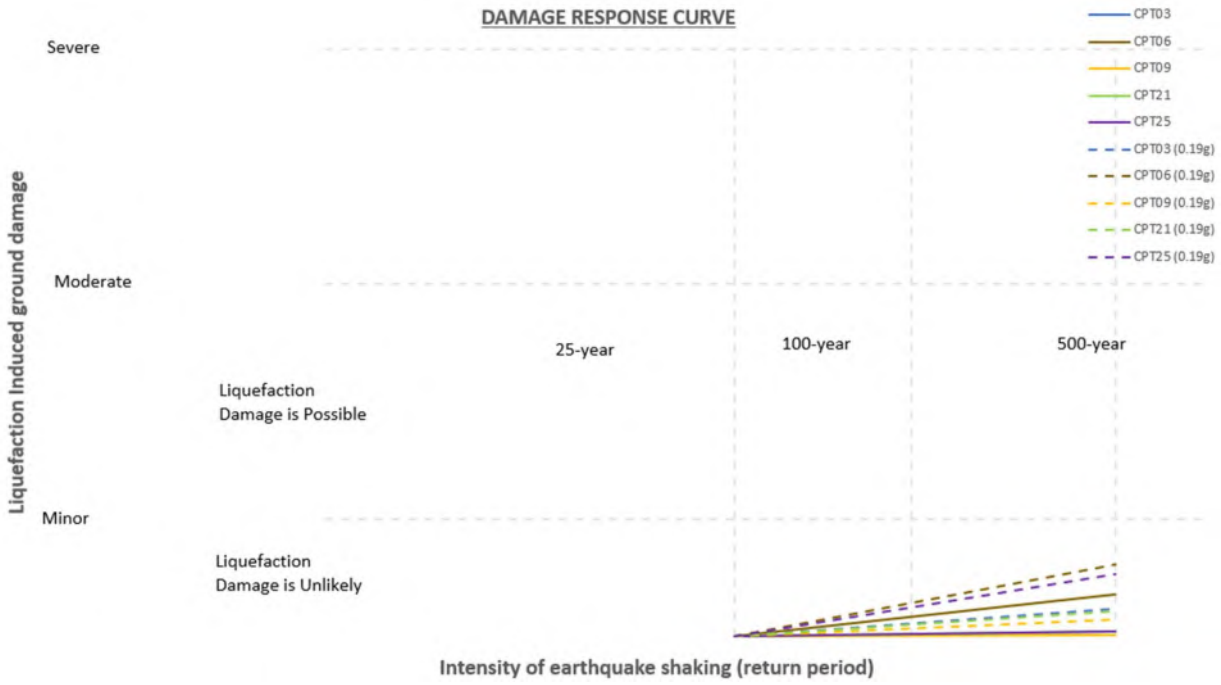


Figure 6: Damage Response Curve

Based on our assessment we consider liquefaction induced ground damage for (ULS 0.13 g) is minor and liquefaction damage is unlikely based on 'Planning and engineering guidance for potentially liquefaction-prone land, MBIE, September 2017). Based on the assessment, we consider the effects from excess pore pressure and liquefaction to be between insignificant (L0) to mild (L1) in accordance with Table 5.1 (Module 3), with negligible differential settlements across the site due to limited excess pore water pressures.

The liquefaction potential and free field settlement for the lower bound PGA = 0.19 g case also indicates minor expression of liquefaction. There are thin liquefiable layers at greater depths however, are not continuous through the CPTs. Liquefaction in these layers is unlikely to manifest at the surface given the clayey nature of the overburden soils.

The surrounding area is near flat and given the depth of the non-liquefiable clay soils, the risk of lateral spreading is negligible.

6.5 Consolidation Settlement

Consolidation settlement occurs when compressible soils are subject to a change in vertical effective stress, such as from new structures or fill loads. Weak clays and organic soils are most prone to consolidation settlement. The time required for settlement to occur is dependent on the drainage characteristics of the soil.

It is understood that site won material is to be used to fill across some of the lower northern building platforms to raise ground levels. Based on the Maven earthworks design, fill depths up to 1.0 m are proposed beneath the building sites. No filling is proposed for the building platforms on Lots 10, 11, 12, 42, 43, 53, 54, 56, 57, 58, 59 and 60.

A preliminary assessment has been carried out (using CPeT-IT software) to assess settlement potential for the lower/northern building platforms. A 10 kPa surcharge has been assumed for the future building loads, with a fill surcharge of 20 kPa per 1.0 m depth where applicable.

Table 11: Preliminary settlement estimates

Test I.D	Lot(s)	Maximum Fill depth (m)	Surcharge (kPa)	CPT settlement estimate (mm)
CPT01	50, 51	1.0	30	55
CPT02	52	1.0	30	120
CPT03	60	0	10	38
CPT04	53, 54, 56, 57	0	10	50
CPT05	55	1.0	30	50
CPT06	58, 59	0	10	15
CPT07	21	1.0	30	45
CPT09	10, 11, 12	0	10	23
CPT21	37	1.0	30	36
CPT22	35	1.0	30	23
CPT25	43	0	10	15
CPT30	61	0.5	20	15

Based on this preliminary assessment, CPT02 indicates excessive settlement from the proposed fill and future building load. Given the amount of settlement predicted in CPT01 and CPT02, it is recommended that Lot 50, Lot 51 and Lot 52 be subject to one of the following mitigation measures:

1. Providing a consolidation period (on hold time) after placing fill before construction of dwelling.
2. Pre-loading to accelerate the rate of settlement and partly replicate the building load.
3. Providing deep pile foundations. Piles would need to be founded in the hard/dense materials to avoid down-drag of the foundations.
4. Removing fill from the site and providing suspended timber floor on piles. This option is only recommended if the land beneath and intimately connected to the dwelling not susceptible to flooding.

Options 1 and 2 would be subject to detailed, site-specific settlement analysis and trial involving the installation of settlement plates and regular surveying of the plates to monitor the settlement.

The rate of settlement has been predicted based on in-situ dissipation testing, carried out in CPT06, CPT09, CPT22 and CPT30. Based on the results and assuming isotropic conditions, i.e. $k_h = k_v$, a vertical coefficient of consolidation, Cv of 1.37 m^2/year has been assumed, based on the worst-case CPT. Due to the depth, strength and hydraulic properties of soft material, the rate of settlement is slow and will take up to 5 years to achieve a tolerable level of settlement for residential development without any ground improvement.

A pre-load settlement design is outside the scope of this report however, based on settlement trials previously carried out on sites with similar ground conditions, we would be expected the time to complete the settlement trial to be between 1 to 2 years.

On all other lots (excluding Lots 50, 51 and 52), we do not consider consolidation settlement to cause any undue risk to the building platforms provided the fill thickness does not exceed 1.0 m beneath the building platform, and the fill is placed to an engineered standard (NZS4431:2022). If fill exceeds 1.0 m thick, ground improvement (i.e. pre-loading) or deep pile foundation would likely be required. Differential settlements on these lots are predicted to be within tolerable limits given in B1/VM4. Residential dwellings should be designed to tolerate angular distortion of up to 1:240 (approximately 25 mm over a 6.0 m length) as required by the New Zealand Building Code (B1/VM4). Filling should not exceed the depths outlined on Maven Associates cut and fill plans numbered C220 to C226, dated 11/2024 without further assessment.

All lots on the lower northern part of the site (underlain by alluvial soils) will however require detailed site-specific geotechnical investigation, settlement analysis and consideration of settlement monitoring at building consent stage.

6.6 Acid Sulphate Soils

Acid sulphate soils are soils that were historically deposited when the sea level was around 5.0 m higher than its present level, this occurred approximately 5,000 to 10,000 years ago during the Holocene age. Soils that were deposited during this time fall under one or more of the following descriptors:

- Soil or sediment of recent geological age (Holocene age).
- Marine or estuarine sediments.
- Low-lying coastal wetlands and back swamp areas, waterlogged or scalded areas, stranded beach ridges and adjacent swales, interdune swales or coastal sand dunes.
- Coastal alluvial valleys.
- Areas of peat, or coal deposits.

Water-soluble sulphates are capable of chemically reacting with the components of concrete, causing accelerated corrosion and resulting in a shortened design life. The elevated areas underlain by residual soils are unlikely to contain acid sulphates. Furthermore, the alluvial deposits across the northern part of the site comprise a thick crustal layer of stiff clays of Pleistocene age. The investigations did not encounter any Holocene age organic soils (i.e. peat) or sand deposits and was not discoloured.

On this basis, site specific testing was not found necessary and acid sulphate soils are considered as low risk on this site.

7 Building Design Considerations

7.1 Shrink/Swell Behaviour

The geotechnical investigations undertaken across the site indicated fine-grained clayey soils. The reactivity and the typical range of movement that could be expected from soils underlying any given building site depends on the amount of clay present, clay mineral type and proportion, depth and distribution of clay throughout the soil profile. Moisture changes tend to occur slowly in clays and produce swelling upon wetting and shrinkage upon drying. In addition, subsequent building damage can be limited by good building practice, including wetting of clay subgrade at least 48 hours ahead of base filling and slab preparation.

During our site investigation, a soil sample was collected from hand auger boreholes within the alluvial and residual soils. The samples were tested for Atterberg Limits and Linear Shrinkage in accordance with NZS4402:1986, to assess the soil expansivity and properties for foundation design. Solid density was also undertaken in residual soil samples to provide information for fill earthworks.

The laboratory test results are presented in Table 12 below.

Table 12: Laboratory Test Results

Sample I.D.	Geological Unit	Depth (m)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Linear Shrinkage (%)	Solid Density (t/m^3)
BH01	Alluvial Soils Tauranga Group	0.5 – 1.0	30.7	71	29	42	16	*NT*
BH03		0.5 – 1.0	34.2	85	31	54	19	*NT*
BH21	Residual Soils Waipapa Group	0.5 – 1.0	30.0	69	28	41	16	2.73
BH29		0.8 – 1.3	28.5	59	28	31	13	2.71
BH40		1.2 – 1.9	31.2	67	33	34	15	2.70

** NT = Not tested.*

The results indicate that the soils supporting the foundations are expansive and prone to seasonal volume change, predominantly shrinkage during summer, could result in surface settlements due to volume change. Based on the laboratory test results, it is our opinion that the site should be classified as Class H, highly expansive (in accordance with the New Zealand Building Code) and deeper foundations would be necessary to mitigate the effects of prolonged dry seasons.

Results are plotted on the Casagrande Chart in Figure 7 below, plotting above the A-Line, supporting the classification of Class H soils.

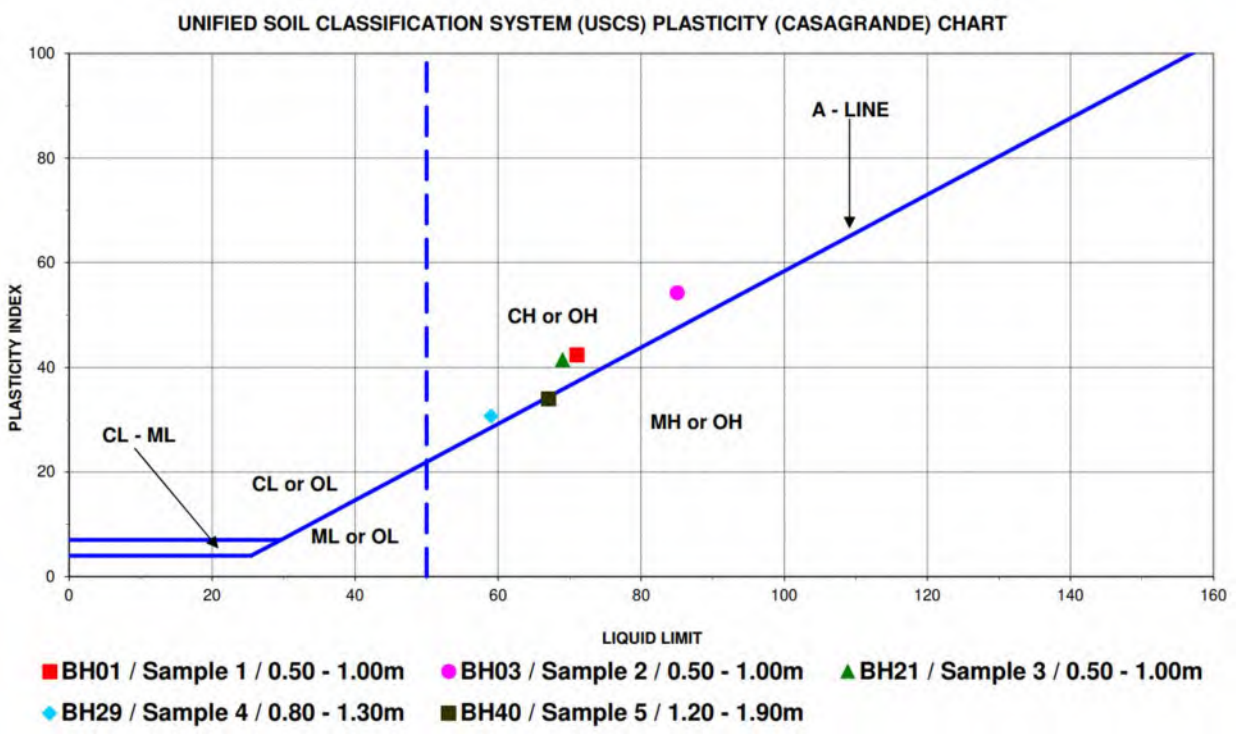


Figure 7: Casagrande Chart

7.2 Shallow Foundations

The soils tested across the site generally indicated stiff to very stiff clays and silts within the upper soil layers. Shallow foundations are considered to be generally appropriate for all lots, provided they are within the building restriction lines.

Weaker soils were encountered on some of the alluvial sites and at the toe of ridgelines therefore lower bearing capacities will be available on these sites. Ultimate bearing capacity to be adopted for shallow foundation design are outline in Table 13 for individual lots. A geotechnical strength reduction factor of 0.5 should be applied to these values for limit state design. These recommendations are subject to site specific testing at the building consent stage.

Foundation conditions fall outside the definition of 'good ground' as contained in NZS3604:2011 due to the presence of expansive soils. We recommend the foundations be designed in accordance with B1/AS1 with an allowance for class *'H', 'Highly expansive'* soil.

7.3 Pile Foundations

Leading edge pile foundations will be required if dwellings are located close to sloping ground due to the reduction in passive support. The earthwork drawings provided by Maven provide near flat building platforms for the majority of the lots (predominantly formed in cut). Consideration should be given to leading edge foundations if buildings are located near sloping ground at the edge of the formed platforms.

Site investigations carried out on Lots 35, 37, 58 and 59 revealed significantly lower bearing strengths than other lots (i.e. 100 kPa). Foundations on these lots may need to be supported on piles for any dwellings of heavy construction. If required, driven piles would be most suited to these sites due to elevated groundwater levels and potential for hole collapse. Site specific testing should be carried out at the building consent stage to inform design foundation depths.

As mentioned in section 6.5, Lot 50, Lot 51 and Lot 52 will require mitigation for fill induced settlement (i.e. Pre-loading) otherwise deep pile foundations would be required. If the piling option is chosen, piles should be driven to effective refusal to avoid any down-drag effects on the piles. Based on CPT01 and CPT02 refusal is expected to be between 12.0 and 14.0 mbgl across these lots.

8 Development Recommendations

8.1 Topsoil, Fill and Unsuitable Soils

All vegetation, topsoil and otherwise unsuitable material should be removed from earthworks areas and/or development area. The topsoil layer was found to be between 100 mm and 300 mm deep in our boreholes but may vary elsewhere across the site. Localised areas of non-engineered fill were encountered across parts of the site, typically less than 0.6 m thick, but up to 1.0m deep on lot 40. All existing fill and otherwise unsuitable material should be removed from the proposed building platforms and areas of intended engineered/certified fill placement. The excavated material should be stockpiled away from the steeper slopes, well clear of earthwork operations, or removed from the site.

8.2 Cut Excavations

Based on the civil design concept provided by Maven Associates cut and fill plans numbered C220 to C226, dated 11/2024, Rev. A, the building platforms on sloping ground / ridgelines are mostly formed in cut, with cut depths up to 3.0 m.

Cuts up to 1.2 m depth can be formed at gradients no steeper than 1V:2H. Cuts greater than 1.2 m depth should be formed at gradients no steeper than 1V:3H, or otherwise retained. Any cuts subject to surcharge loading should be supported by retaining walls OR battered to a suitable angle subject to specific design/assessment.

Design recommendations for retaining walls are outlined in section 8.11.

Cuts on most of the sidling platforms will need to be supported by retaining walls (subject to specific engineered design) as long term stable batters will not be achievable.

Cut platforms along the crest of ridgelines will be daylighted at the eastern and western edges, with battering between platform terraces.

Erosion protection is recommended on all exposed cut/fill batters (i.e. erosion control matting and/or planting).

8.3 Fills

Earthworks for the development will predominantly comprise cutting to form building platforms on the sloping ridgelines with filling across some of the lower lying northern area to raise ground levels above the flood hazard.

Filling should be kept to a minimum and limited to 1.0 m beneath all building platform areas. Filling should be avoided on or around the steeper slopes on the ridgelines. Filling beyond the building restriction lines should also be avoided, unless specific engineered design is undertaken to demonstrate it is safe to do so.

All earthworks should be carried out to the requirements of NZS 4404:2010 'Land Development and Subdivision Infrastructure' and NZS 4431:2022 'Engineered Fill Construction for Lightweight Structures'. It is recommended that any unsuitable material identified during excavation be removed and replaced with engineered fill. We recommend that all grass coverings, topsoil layers and unsuitable fill material be removed below any proposed areas of intended fill placement.

Any fill placed near or beneath any proposed dwelling platform, infrastructure or other structures, will need verification of compaction and confirmation by the engineer that settlement caused by filling will not adversely affect the proposed structures. Verification of compaction should be undertaken by a professional engineer at regular lifts, i.e. inspection at preplacement and every 500 mm thereafter (or as agreed between the Client and Engineer).

Laboratory testing undertaken indicated the moisture content of the residual Waipapa Group soils were slightly wet of the plastic limit which is the optimum condition of the soil. Some moisture conditioning may be required for clay fill earthworks (i.e. spreading and drying out before compaction). The fill should not be left to dry for extended periods or conditioning with water carts (wetting) would be required to reduce air voids to specification.

Compaction control of the cohesive fill consists of maximum allowable air voids and minimum allowable shear strengths and outlined in NZS4431:2022. The fill specification outlined below is recommended for earthworks. An outline of the specification details are as follows, to be read in collaboration with NZS4431:2022:

- Vane shear strength testing comprising an average of ten tests of 140 kPa with no single vane shear test of less than 120 kPa.
- Testing shall also include air void testing with a minimum of ten consecutive tests with an average of 10% air voids with no single test greater than 12%, in accordance with NZS4402:1986.

Fill batters (expected to be less than 1.0 m height) should be formed at gradients no steeper than 1V:3H. If greater batter slopes are intended, retaining walls will be required to support the fill. Fills of any height that are to be subject to surcharge loading of any sort should be supported using specifically designed retaining walls or battered to a suitable slope angle subject to specific geotechnical design recommendations.

The proposed excavations will generate a significant amount of excess fill material. Given the historic instability features identified on the surrounding slopes and steepness of the slopes, filling on sloping ground (i.e. sidling fills) should be avoided unless further investigations (machine testing) and slope stability analyses is undertaken to demonstrate that it is safe to do so. Furthermore, no fill should be placed within, or near any historic slip features identified on drawings SP01 to SP05.

Suitable fill disposal site(s) should be nominated well away from the development areas to avoid any detrimental effects on site stability. The preferred disposal area for excess fill would be the low-lying communal areas to the north-west of the ponds (if permitted).

No additional filling is recommended on any of the proposed building platforms, other than that indicated on Maven Associates cut and fill plans numbered C220 to C226, dated 11/2024, Rev. A.

8.4 Erosion and Sediment Control

Prior to commencing earthworks, a sediment control system needs to be constructed to ensure the Territorial and Regional Authority requirements are met. Typical details can be found in the Auckland Council publication GD05. Erosion and sediment control should be undertaken as early as possible before soil particles become dislodged and mobilised. The use of contour drains, mulching and earth bunds to control erosion during the construction phase is recommended, as is maintaining vegetation cover where possible to reduce erosion potential.

8.5 Unexpected Ground Conditions

Based on the site investigations carried out and excavations proposed in Maven Associates cut and fill plans, excavation to the finished cut levels should be achievable by direct excavation with no rock breaking/ripping expected.

Given the inherent variable nature of alluvial soils, weaker areas may be uncovered across the low-lying northern part of the site when excavating subgrades for building platforms or fill placement.

If unexpected ground conditions are encountered the engineer responsible for providing certification of the earthworks and Geotechnical Completion Report should be contacted immediately to provide advice.

8.6 Pavement Design

Vegetation, organic and deleterious material, topsoil and otherwise unsuitable material should be removed from the site under pavement areas prior to aggregate placement. Based on our observations during site investigations we consider the stiff natural ground at the site should provide an adequate subgrade for any proposed asphaltic or concrete paved access, parking and turning areas.

No specific testing was undertaken for pavement design. For preliminary design purposes, a design CBR of no greater than 4.0% may be assumed for the elevated roads / JOALs. For the low-lying JOALs (i.e. JOAL 3, the start of ROAD 2 and JOAL 1), softer zones could be encountered and may need to be undercut during construction. A design CBR of 2.0% should be adopted for these lots, and we also recommend a geotextile and geogrid is installed between subgrade and pavement to minimise the ingress of fines into the pavement from dynamic loading.

It is recommended that in-situ testing of all road subgrades is conducted by a suitably qualified and experienced engineer.

8.7 Stormwater Control

Controlling stormwater is imperative to the stability of the site. Concentrated stormwater flows from all impermeable areas must be collected, conveyed in sealed pipes, and discharged in a manner that will not affect the stability of the ground. Concentrated stormwater flows must not be allowed to discharge onto or into the ground close to the development area or on sloping ground as this would be detrimental to site stability. Stormwater soakage devices are not considered appropriate for this development given the steepness of slopes coupled with low permeability soils.

Stormwater reticulation is envisaged for some of the smaller lots with a combined outlet into the existing ponds or overland flow paths. For the lots on the ridgelines and sidlings, stormwater should collected and discharged in a dispersive manner (i.e. 'T-bar' spreader) in a location that will not adversely affect the subject building platform or any downslope properties. The discharge point should be at least 30 m downslope of the building platforms OR preferably at the base of the slope if possible. Consideration should also be given to having a combined outlet point for these lots site conditions suit.

The final outlet method(s) and locations should be subject geotechnical review.

8.8 Wastewater Disposal

A detailed wastewater disposal assessment is not within the scope of this report and should be carried out by a suitably qualified wastewater specialist.

Based on the soils encountered during our investigation, the soils are considered to be Category 5 in accordance with AS/NZS1547:2012.

No wastewater disposal is permitted within any of the historic slip features outlined on drawings SP01 to SP05. Once the wastewater disposal areas have been sized, Haigh Workman should be engaged to provide geotechnical comment on the field location and any impacts on the site stability.

8.9 Service Connections

All external service connections (power, water supply, stormwater, sewer, telecom and others) for the lower northern lots should be detailed for seasonal movement such as the use of rubber ring joints for stormwater or wastewater, or looped power and water connections.

Building foundations within a 45-degree zone of influence from the invert level of any service pipe shall adopt the standard engineering details within the Far North District Council plan and NZS4404:2010.

8.10 Subsoil Drainage

A geological boundary between Waipapa Group and Tauranga Group (alluvium) passes through some of the sites along the toe of the ridgelines and there is a potential for groundwater to exist between the geological units. Consequently, provision for subsoil drainage should be considered for any earthworks over these lithological boundaries. The approximate boundary, inferred from our site investigation, is shown on Figure 4, section 3.2.

8.11 Retaining Walls

The New Zealand Building Act (Schedule 1) states that a retaining wall is exempt from consent when the retained height is less than 1.5 m and it does not support any surcharge load or any load additional to the load of that ground (i.e. loading from vehicles, sloping ground above and below the wall, or boundary walls). Further guidance is provided on this exemption by MBIE which states the exemption does not apply to retaining walls supporting vehicle driveways, parking spaces, swimming pools, buildings, other retaining walls (e.g. tiered walls), or sloping ground above or below the wall.

Given the nature of the site, all future retaining walls will be subject to site specific testing and design by a Chartered Professional Engineer (CPEng Geotechnical). Earth pressure coefficients (K_p or k_a) needs to account for the sloping ground at the toe of the wall and can be estimated using the charts after NAVAC (DM7, 1971). Consideration should also be given to slope stability driving forces for walls cut into sidlings. Walls that are incorporated within the structures should be designed for at-rest earth pressures (k_0).

8.12 Safety in Design

The recommendations made in this report have been made with regards to Safety in Design, which should be taken into account during the design phase. The following points were raised during planning for safety in design:

- Construction monitoring needs to be considered;
- Trench construction for services should be benched to ensure the vertical height does not exceed 1.0 m without shoring / trench shields;
- Temporary battering of excavations and fills.

8.13 Construction Monitoring

A Chartered Professional Engineer familiar with the findings of this report should be engaged to carry out construction monitoring during subdivision development and earthworks to confirm soil conditions are consistent with those adopted within this report.

The recommendations given in this report are based on limited site data from discrete locations. Variations in ground conditions could exist across the site. It is in the interests of all parties that a Chartered Professional Engineer inspect excavations and foundation conditions exposed during construction, so that ground conditions can be compared with those assumed in formulating this report. In any event, we should be notified of any variations in ground conditions from those described or assumed to exist.

A geotechnical completion report should be prepared at the completion of subdivision works, with as-builts provided by the Contractor of all earthworks and drainage works undertaken.

9 Conclusion

Geotechnical investigations indicate that the proposed development area is stable subject to the recommendations herein and the subsoil properties are appropriate for residential development. The extent of the geotechnical investigations are outlined within this report.

The development will need to be undertaken in accordance with current best engineering practice and the following guidelines are applicable to the site:

- The natural ground within the specified building platform areas is considered generally suitable for residential development of residential buildings, subject to the following conditions:
    - All lots will be subject to site-specific geotechnical investigations and foundation design by a Chartered Professional Engineer.
    - Building Restriction Lines (BRL) have been set out as shown on the attached site plans SP02 to SP05. The proposed development on Lots 04, 05, 18, 19, 26, 27, 28, 30, 33, 34, 62, 63 will require a setback from the top of steep slope, scarp feature and/or edge of cut platforms. Setback distances are outlined in Table 13.
    - Foundation soils lie outside the definition of 'good ground' in NZS3604:2011 due to the presence of expansive clay soils. Based upon Atterberg limits and linear shrinkage testing the soils are considered highly expansive (Class H). Confirmation of the site reactivity class is to be conducted within the geotechnical completion report.
    - Foundation design for sites underlain by residual Waipapa Group soils should limit the geotechnical ultimate bearing capacity to 300 kPa for flat ground building sites. Specific design will need to be undertaken where foundations are on or near sloping ground. For sites underlain by Tauranga Group alluvial soils (excluding Lot 35, Lot 37, Lot 58 and Lot 59), an ultimate bearing capacity of 200 kPa should be adopted. A geotechnical strength reduction factor of 0.5 for limit state design. Specific design for expansive soils may be undertaken by first principles or by reference to AS2870:2011, with return periods from B1/AS1. A lower ultimate bearing capacity of 100 kPa is available on Lots 35, Lot 37, Lot 58 and Lot 59. Alternatively, pile foundations should be adopted on these lots.
    - Leading edge pile foundations will be required if dwellings are located on or close to sloping ground. The earthwork drawings show flat cut platforms for the majority of the sloping sites. Consideration should be given to leading edge foundations if buildings are located near sloping ground at the edge of the formed platforms.
    - Lot 50, Lot 51 and Lot 52 require mitigation for fill induced settlement (i.e. Pre-loading) otherwise deep pile foundations would be required. If the piling option is chosen, piles should be driven to effective refusal to avoid any down-drag effects on the piles. Refer to section 7.3.

- No earthworks involving fills in excess of 1.0 m should take place beneath any building platforms unless endorsed by a suitable design undertaken by a Chartered Professional Engineer with suitable geotechnical experience familiar with the contents of this report. If filling exceeds the depths indicated on Maven Associates cut-fill plans dated 11/2024, further settlement assessment OR slope stability analyses would be required.
- All earthworks should be carried out to the requirements of NZS 4404:2010 'Land Development and Subdivision Infrastructure' and NZS 4431:2022 'Engineered Fill Construction for Lightweight Structures', and in accordance with the recommendations outlined in Section 8. Any unsuitable material identified during excavation shall be removed and replaced with engineered fill.
- No fill should be placed within, or near any historic slip features identified on drawing SP01 to SP05. A suitable fill disposal site should be nominated well away from the development area to avoid any detrimental effects on site stability. Filling on sloping ground (i.e. sidling fills) should be avoided unless further investigations and slope stability analyses is undertaken to demonstrate that it is safe to do so.
- Cuts up to 1.2 m depth can be formed at gradients no steeper than 1V:2H. Cuts greater than 1.2 m depth should be formed at gradients no steeper than 1V:3H, or otherwise retained. Fill batters (expected to be up to 1.0 m in height) should be formed at gradients no steeper than 1V:3H.
- For pavement design, we recommend a design CBR of 3% for the elevated roads / JOALs. For the low-lying JOALs (i.e. JOAL 3, the start of ROAD 2 and JOAL 1), a design CBR of 2.0% should be adopted (subject to subgrade testing during construction).
- Concentrated stormwater flows from all impermeable areas must be collected, carried in sealed pipes and discharged in a manner that will not affect the stability of the ground. Design of devices to collect, transport and discharge concentrated flows should be engineered.
- Our assessment is based on interpolation between borehole positions and site observations. Local variations in ground conditions may occur. Unfavourable ground conditions may be encountered during earthworks. It is important that we are contacted in this eventuality or in the event that any variation in subsoil conditions from this described in this report are found. Design assistance is available as required to accommodate any unforeseen ground conditions present.

Provided the recommendations provided in this report are followed, the subject site is capable of being developed as proposed. All works should be carried under the guidance of a Chartered Professional Engineer familiar with the contents of this report. A geotechnical completion report is recommended at the completion of the earthworks to confirm the findings in this report and document the work undertaken, e.g. earthworks compaction certification.

This report is not intended to be used for foundation design, other than provide general framework for building platform suitability. Future specific geotechnical investigations are recommended to confirm the subsoil conditions, confirm the soil expansivity, and provide site specific geotechnical assessment for foundation design within each lot.

10 Lot Specific Geotechnical Recommendations

Table 13: Summary of Lot Specific Geotechnical Recommendations

Lot No.	Comments on nominated building platform	Lot Specific Geotechnical Recommendations
Lot 01 – Lot 03	Gently sloping building platforms. No building restriction lines.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Lot 03 may require deeper foundations if located on non-engineered fill or near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 04, Lot 05	Gently sloping building platforms. 8.0 m setback required for Lot 04 15.0 m setback required for Lot 05 Building Restriction Line shown on SP03	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 06	Cut building platform with retaining wall envisaged. Gentle to moderate slope below platform.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 07	Cut building platform with retaining wall envisaged. Gentle slope below platform.	Shallow foundations with 250 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 08, Lot 09	Cut building platforms with retaining walls envisaged. Gentle to moderate slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 10 – Lot 12	Near flat platforms. No filling proposed.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 13, Lot 14	Cut building platforms with retaining walls envisaged. Gentle to moderate slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 15, Lot 16	Cut building platforms envisaged. Gentle slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 17	Cut building platform with retaining wall envisaged. Moderate slope below platform.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.

Table 13 (cont.): Summary of Lot Specific Geotechnical Recommendations

Lot No.	Comments on nominated building platform	Lot Specific Geotechnical Recommendations
Lot 18, Lot 19	Gently sloping building platforms. 9.0 m setback required from old scarp feature. Building Restriction Line shown on SP02 and SP03.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Lot 19 may require deeper foundations if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 20	Gentle slopes. Filled building platform, up to 1.0 m depth.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Filling to be limited to 1.0m maximum depth. Site specific geotechnical report required at time of building.
Lot 21	Platform located below old slip feature. Underlain by old colluvium and alluvium. Gentle slopes. Filled building platform, up to 1.0 m depth.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Filling to be limited to 1.0m maximum depth. Site specific geotechnical report required at time of building.
Lot 22 – Lot 24	Cut building platforms with retaining walls envisaged. Moderate slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. May require deeper foundations if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 25	Building platform in cut (up to 3.0m) with 1V:3H batter on southern side. Moderate slopes with evidence of soil creep to north-west and east.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Leading edge piles required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 26 – Lot 28	Building platforms in cut on crest of ridgeline. Gentle slopes to west and moderate slopes to east of platform. Provide 8.0 m setback from 'break in slope' defined as point where slopes exceed 10°. Building Restriction Line shown on SP05.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 29	Cut building platform with cut batters. Gentle slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 30	Cut building platform with retaining walls envisaged. Provide setback from old scarp feature on the eastern side. Building Restriction Line.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 31	Cut building platform with retaining walls envisaged. Located below old slip feature but no colluvium encountered.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.

Table 13 (cont.): Summary of Lot Specific Geotechnical Recommendations

Lot No.	Comments on nominated building platform	Lot Specific Geotechnical Recommendations
Lot 32	Cut building platform with cut batters. Gentle slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 33, Lot 34	Cut building platform with cut batters envisaged. Gentle slope below platforms. Provide setback from old scarp features on the northern side. Building Restriction Line shown on SP02 and SP05.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 35 & Lot 37	Gentle slopes. Filled building platforms, up to 1.0 m depth. Unsuitable fill from old golf green to be removed.	Shallow foundations with 100 kPa ultimate bearing capacity, Class H soils. Alternatively, foundation to be supported on driven piles. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 36	Platform located below an old slip feature, but no colluvium encountered. Building platform must be cut down with cut batters retained (for slope stability)	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Building must be formed in cut. Deeper foundations required if located sloping ground. Site specific geotechnical report required at time of building.
Lot 38	Platform located below an old slip feature, but no colluvium encountered. Gentle slopes. Filled building platform, up to 1.0 m depth.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 39	Gentle slopes. Building platform mostly in cut with minor filling at northern edge. Unsuitable fill to be removed/ replaced with engineered fill.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 40	Gentle slopes. Cut to fill with filling up to 1.0m maximum depth. Unsuitable fill from old golf green to be removed.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 41	Contains existing dwelling. Site specific geotechnical report required if a new dwelling is proposed in the future. Recommendations would be similar to Lot 40.	
Lot 42	Contains existing cottage/dwelling. Site specific geotechnical report required if a new dwelling is proposed in the future. Recommendations would be similar to Lot 43	

Table 13 (cont.): Summary of Lot Specific Geotechnical Recommendations

Lot No.	Comments on nominated building platform	Lot Specific Geotechnical Recommendations
Lot 43	Gently sloping platform. No filling proposed. Unsuitable fill from old golf green to be removed.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.
Lot 44	Cut building platform in cut with retaining walls. Moderate slope below platform. No filling proposed.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 45 & Lot 49	Building platforms in cut on crest of ridgeline. Moderate slopes to west and east of platforms. Cut batter between platforms and along JOAL adjacent to platforms	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 50 – Lot 52	Gentle slopes. Filled building platforms, up to 1.0 m depth.	Ground improvement required to facilitate shallow foundation construction (refer section 6.5). Otherwise, provide deep driven pile foundations to effective refusal. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 53 – Lot 57	Gentle slopes. Filling up to 1.0 m depth on Lot 55. No filling proposed on other lots.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 58, Lot 59	Gentle slopes. No filling proposed. Unsuitable fill to be removed/ replaced with engineered fill.	Shallow foundations with 120 kPa ultimate bearing capacity, Class H soils. Alternatively, foundation to be supported on driven piles. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 60, Lot 61	Gentle slopes. Filling up to 0.5 m depth on Lot 61. No filling Lot 60.	Shallow foundations with 200 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report (including settlement analyses) required at time of building.
Lot 62, Lot 63	Gently sloping building platform on crest of ridge. 14.0 m setback required for Lot 62 9.0 m setback required for Lot 63 Building Restriction Lines shown on SP04	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Site specific geotechnical report required at time of building.

Table 13 (cont.): Summary of Lot Specific Geotechnical Recommendations

Lot No.	Comments on nominated building platform	Lot Specific Geotechnical Recommendations
Lot 64	Cut building platform on crest of ridgeline with cut batters. Gentle to moderate slope below platform.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. May require deeper foundations if located near edge of cut platform. Site specific geotechnical report required at time of building.
Lot 65	Cut building platforms with retaining walls envisaged. Gentle to moderate slope below platforms.	Shallow foundations with 300 kPa ultimate bearing capacity, Class H soils. Deeper foundations required if located near edge of cut platform. Site specific geotechnical report required at time of building.
All Lots	Suitable building platforms are available or can be made available provided the recommendation in this report are followed.	Site specific investigations, assessment and reporting required for all lots at building consent stage.
All Lots	Earthworks	All earthworks to be under supervision by a Chartered Professional Engineer (CPEng Geotechnical)

11 Limitations

This report has been prepared for the use of Willowridge Developments Ltd with respect to the particular brief outlined to us. This letter report is to be used by our Client and their Consultants only and may be relied upon when considering geotechnical advice. Furthermore, this report may be utilised in the preparation of resource consent applications with local authorities. The information and opinions contained within this report shall not be used in other context for any other purpose without prior review and agreement by Haigh Workman Ltd.

The recommendations given in this report are based on site data from discrete locations. If any changes are made, we must be allowed to review the new development proposal to ensure that the recommendations of this report remain valid Inferences about the subsoil conditions away from the test locations have been made but cannot be guaranteed. We have inferred an appropriate geotechnical model that can be applied for our analyses. However, variations in ground conditions from those described in this report could exist across the site. Should conditions encountered differ to those outlined in this report we ask that we be given the opportunity to review the continued applicability of our recommendations.

Appendix A – Drawings

Drawing No.	Title
SP01	Site Overview Plan
SP02 – SP05	Site Investigation Plans 1 to 4
CS01 – CS19	Geological Section A-A' to S-S'

NOTES:

1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
2. CONTOURS ARE FROM LINZ DATA SERVICE LIDAR INFORMATION WITH 5.0m MAJOR AND 1.0m MINOR CONTOURS SHOWN.
3. BUILDING PLATFORM LOCATIONS ARE TAKEN FROM MAVEN ASSOCIATES DRAWINGS DATED 07/2024.

KEY:

OVERLAND FLOW PATHS

HISTORIC SLIP FEATURES

SP02

SP03

SP04

SP05

RUSSELL WHAKAPARA ROAD

AUCKS ROAD

SEALED ACCESSWAY

SEALED ACCESSWAY

METALLED ACCESSWAY

EXISTING DWELLING/ COTTAGE

EXISTING DWELLING

PONDS

EXISTING SHED

LANES ROAD

Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	6/12/2024	REVISED SCHEME PLAN

DWG: SITE OVERVIEW PLAN

Scale 1:3000 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **SP01**

Sheet No. **1** of **24**

Plotted By Josh Curreen at 6/12/2024 4:26:04 pm

NOTES:

1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
2. CONTOURS ARE FROM LINZ DATA SERVICE LIDAR INFORMATION WITH 5.0m MAJOR AND 1.0m MINOR CONTOURS SHOWN.
3. BUILDING PLATFORM LOCATIONS ARE TAKEN FROM MAVEN ASSOCIATES DRAWINGS DATED 07/2024.

KEY:

- OVERLAND FLOW PATHS
- HISTORIC SLIP FEATURES
- TOP OF BANK OR BREAK IN SLOPE ADJACENT TO BUILDING PLATFORMS
- BUILDING RESTRICTION LINES

AUCKS ROAD
SEALED ACCESSWAY
EXISTING DWELLING/ COTTAGE
EXISTING DWELLING
PONDS
EXISTING SHED
METALLED ACCESSWAY
SEALED ACCESSWAY
CPT01 CPT02 CPT03 CPT04 CPT05 CPT06 CPT07 CPT08 CPT19 CPT20 CPT21 CPT22 CPT24 CPT25 CPT26 CPT28 CPT29 CPT30
BH01 BH02 BH03 BH04 BH05 BH21 BH24 BH25 BH26 BH27 BH28 BH32 BH33 BH34 BH35 BH36 BH37 BH38 BH39
TP01 TP02
42 43 44 45 46 41 40 39 38 37 36 35 34 33 30 31 50 51 52 53 54 55 56 57 58 59 60 61 20 21 19 18 17 16 15
5.00 10.00 15.00 20.00 25.00 30.00
8m 9m

Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	6/12/2024	REVISED SCHEME PLAN

DWG: SITE INVESTIGATION PLAN 1

Scale 1:1500 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **SP02**

Sheet No. **2** of **24**

Plotted By Josh Curreen at 6/12/2024 4:26:55 pm

NOTES:

1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
2. CONTOURS ARE FROM LINZ DATA SERVICE LIDAR INFORMATION WITH 5.0m MAJOR AND 1.0m MINOR CONTOURS SHOWN.
3. BUILDING PLATFORM LOCATIONS ARE TAKEN FROM MAVEN ASSOCIATES DRAWINGS DATED 07/2024.

KEY:

- OVERLAND FLOW PATHS
- HISTORIC SLIP FEATURES
- TOP OF BANK OR BREAK IN SLOPE ADJACENT TO BUILDING PLATFORMS
- BUILDING RESTRICTION LINES

RUSSELL WHAKAPARA ROAD

SEALED ACCESSWAY

LANES ROAD

BH01 BH02 BH03 BH04 BH05 BH06 BH07 BH08 BH09 BH10 BH11 BH12 BH13 BH14 BH19 BH20 BH21 BH24 BH25 BH26 BH32

CPT01 CPT02 CPT04 CPT05 CPT06 CPT07 CPT08 CPT09 CPT10 CPT11 CPT12 CPT24 TP01

B' CS02 C' CS03 D' CS04 C CS03 D CS04 E CS05 E CS05 I CS09 I CS09

9m 15m 8m 9m

Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	6/12/2024	REVISED SCHEME PLAN

DWG: SITE INVESTIGATION PLAN 2

Scale 1:1500 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

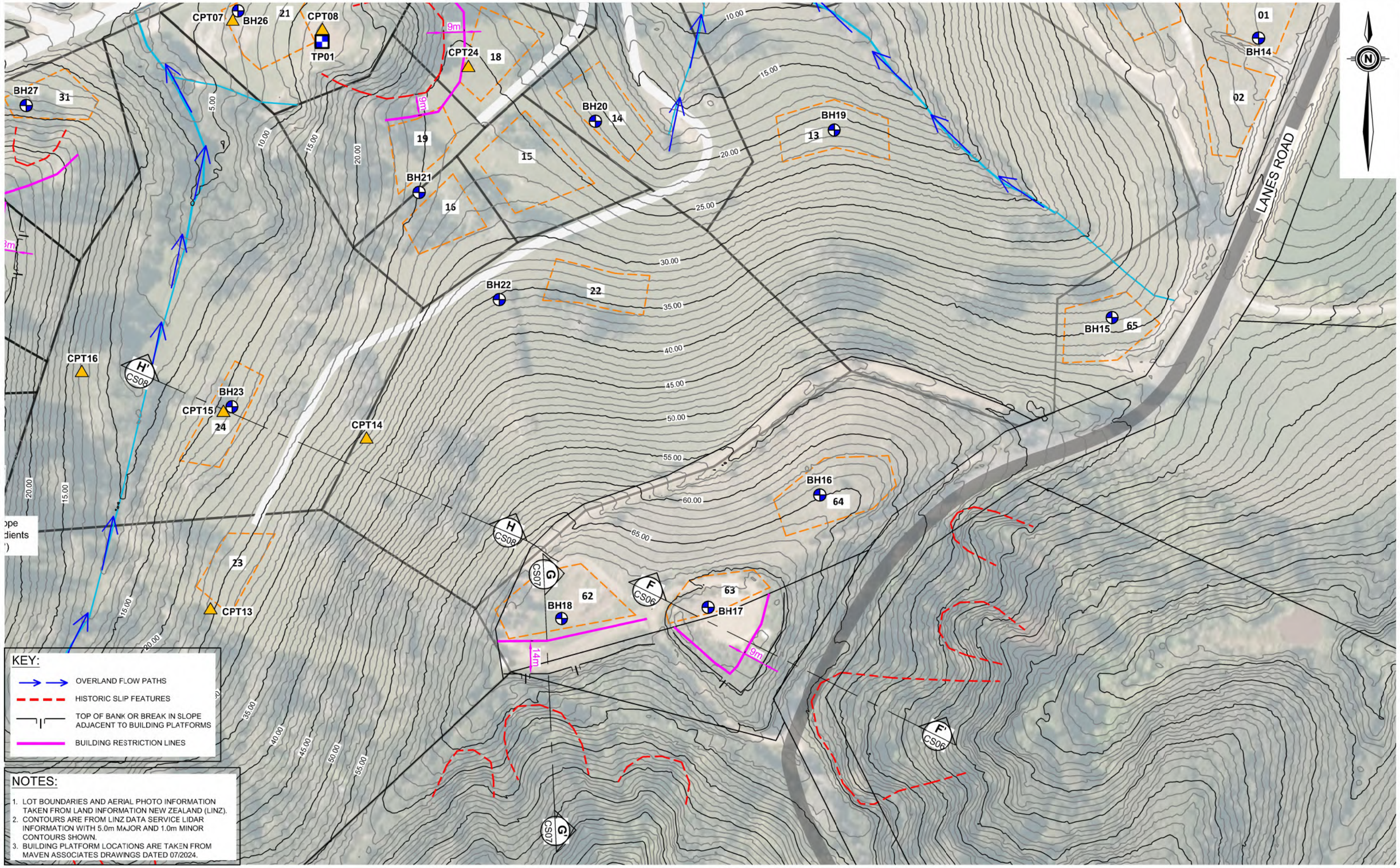
Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **SP03**

Sheet No. **3** of **24**

Plotted By Josh Curreen at 6/12/2024 4:27:18 pm



KEY:

- OVERLAND FLOW PATHS
- HISTORIC SLIP FEATURES
- TOP OF BANK OR BREAK IN SLOPE ADJACENT TO BUILDING PLATFORMS
- BUILDING RESTRICTION LINES

NOTES:

1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
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3. BUILDING PLATFORM LOCATIONS ARE TAKEN FROM MAVEN ASSOCIATES DRAWINGS DATED 07/2024.

Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	6/12/2024	REVISED SCHEME PLAN

DWG: SITE INVESTIGATION PLAN 3

Scale 1:1500 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

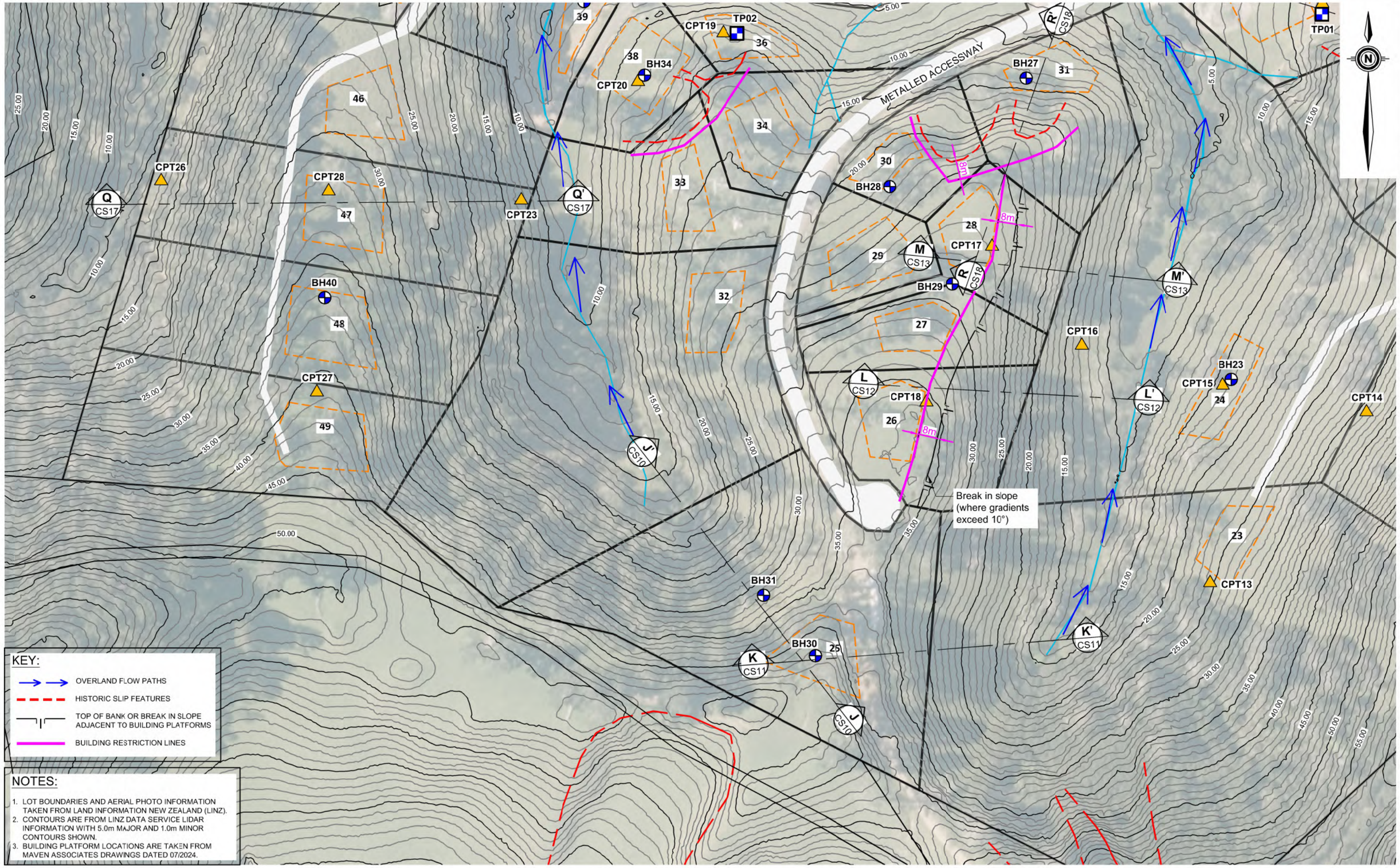
Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **SP04**

Sheet No. **4** of **24**

Plotted By Josh Curreen at 6/12/2024 4:27:41 pm



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	6/12/2024	REVISED SCHEME PLAN

DWG: SITE INVESTIGATION PLAN 4

Scale 1:1500 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

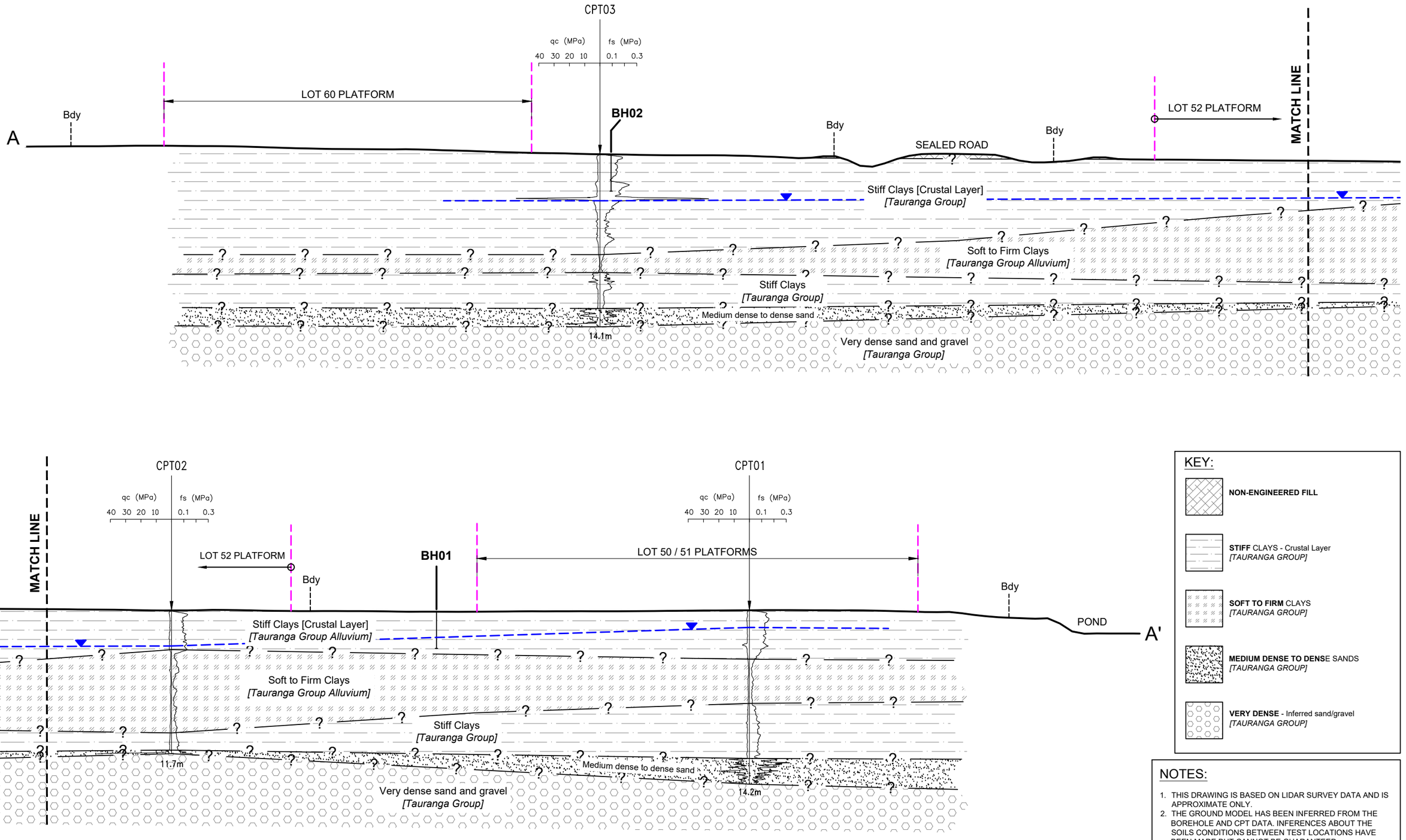
Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **SP05**

Sheet No. **5** of **24**

Plotted By Josh Curreen at 6/12/2024 4:28:08 pm



KEY:

- **NON-ENGINEERED FILL**
- **STIFF** CLAYS - Crustal Layer *[TAURANGA GROUP]*
- **SOFT TO FIRM** CLAYS *[TAURANGA GROUP]*
- **MEDIUM DENSE TO DENSE** SANDS *[TAURANGA GROUP]*
- **VERY DENSE** - Inferred sand/gravel *[TAURANGA GROUP]*

NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION A-A'

Scale 1:300 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS01**

Sheet No. **6** of **24**

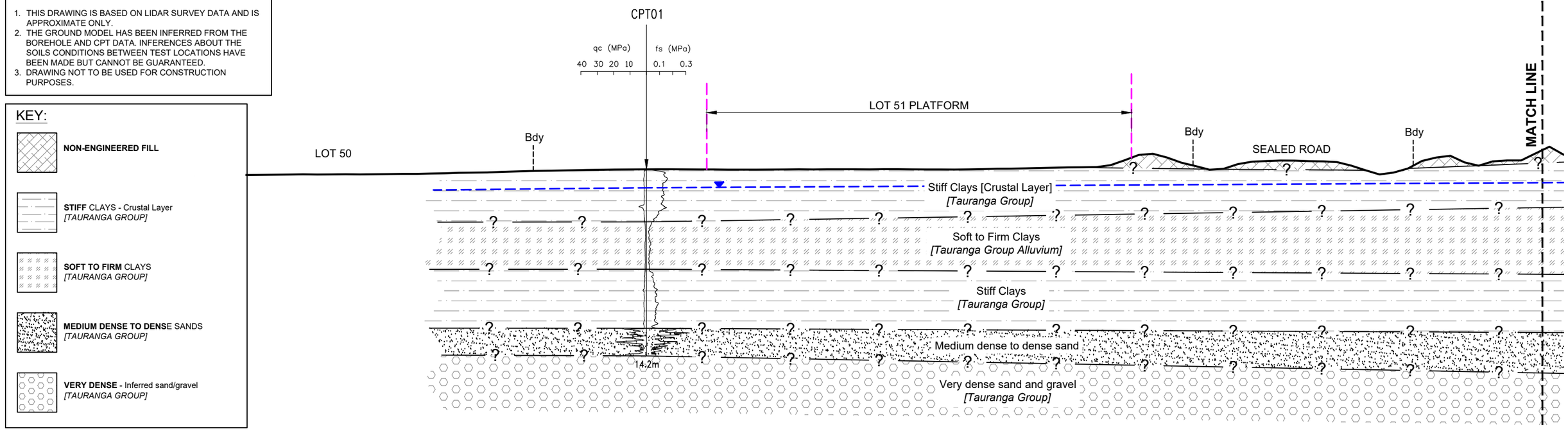
Plotted By Josh Curreen at 6/12/2024 4:24:17 pm

NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** CLAYS - Crustal Layer *[TAURANGA GROUP]*
- **SOFT TO FIRM** CLAYS *[TAURANGA GROUP]*
- **MEDIUM DENSE TO DENS**E SANDS *[TAURANGA GROUP]*
- **VERY DENSE** - Inferred sand/gravel *[TAURANGA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION B-B'

Scale 1:300 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS02**

Sheet No. **7** of **24**

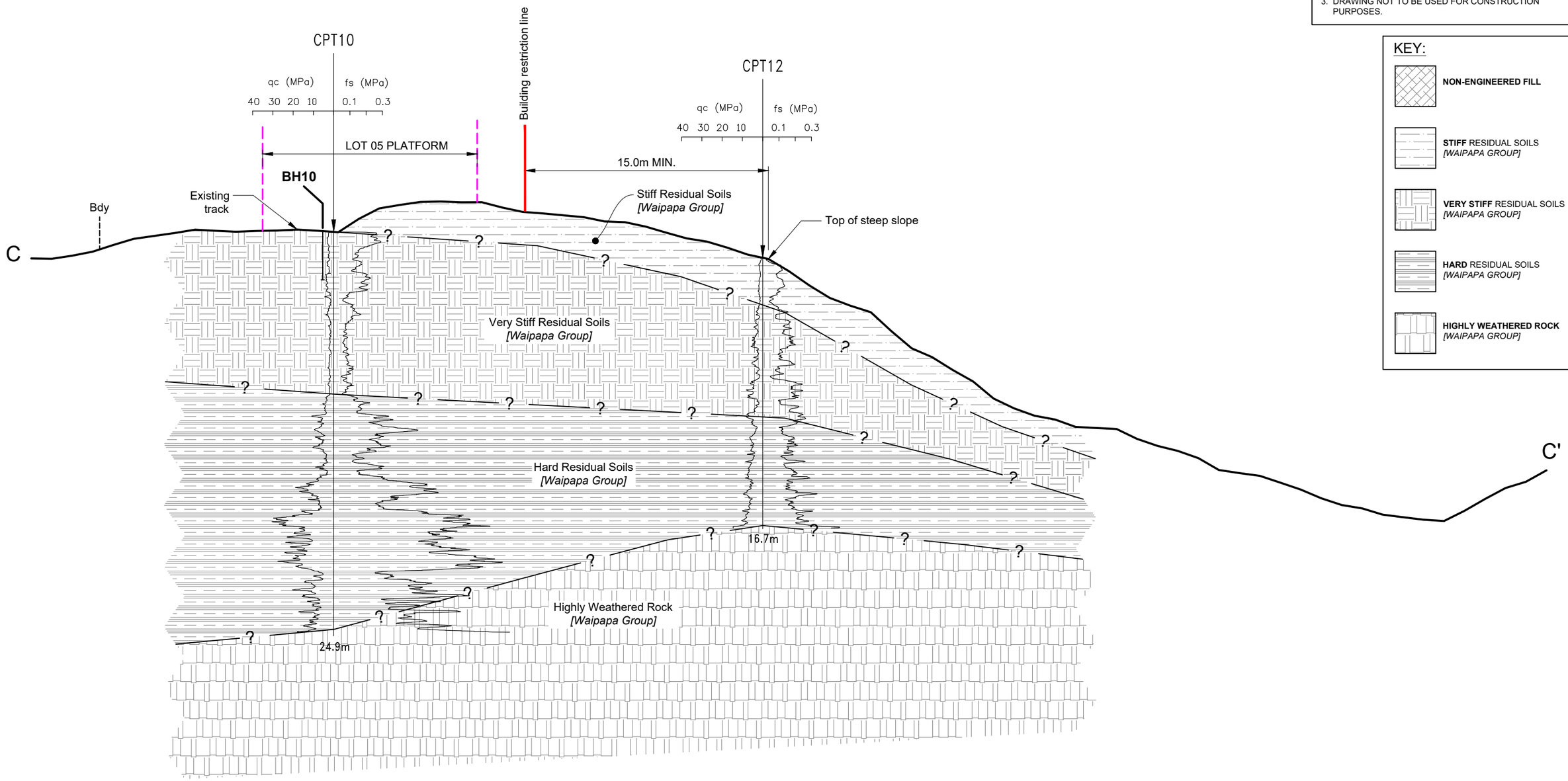
Plotted By Josh Curreen at 6/12/2024 4:24:17 pm

NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION C-C'

Scale 1:250 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS03**

Sheet No. **8** of **24**

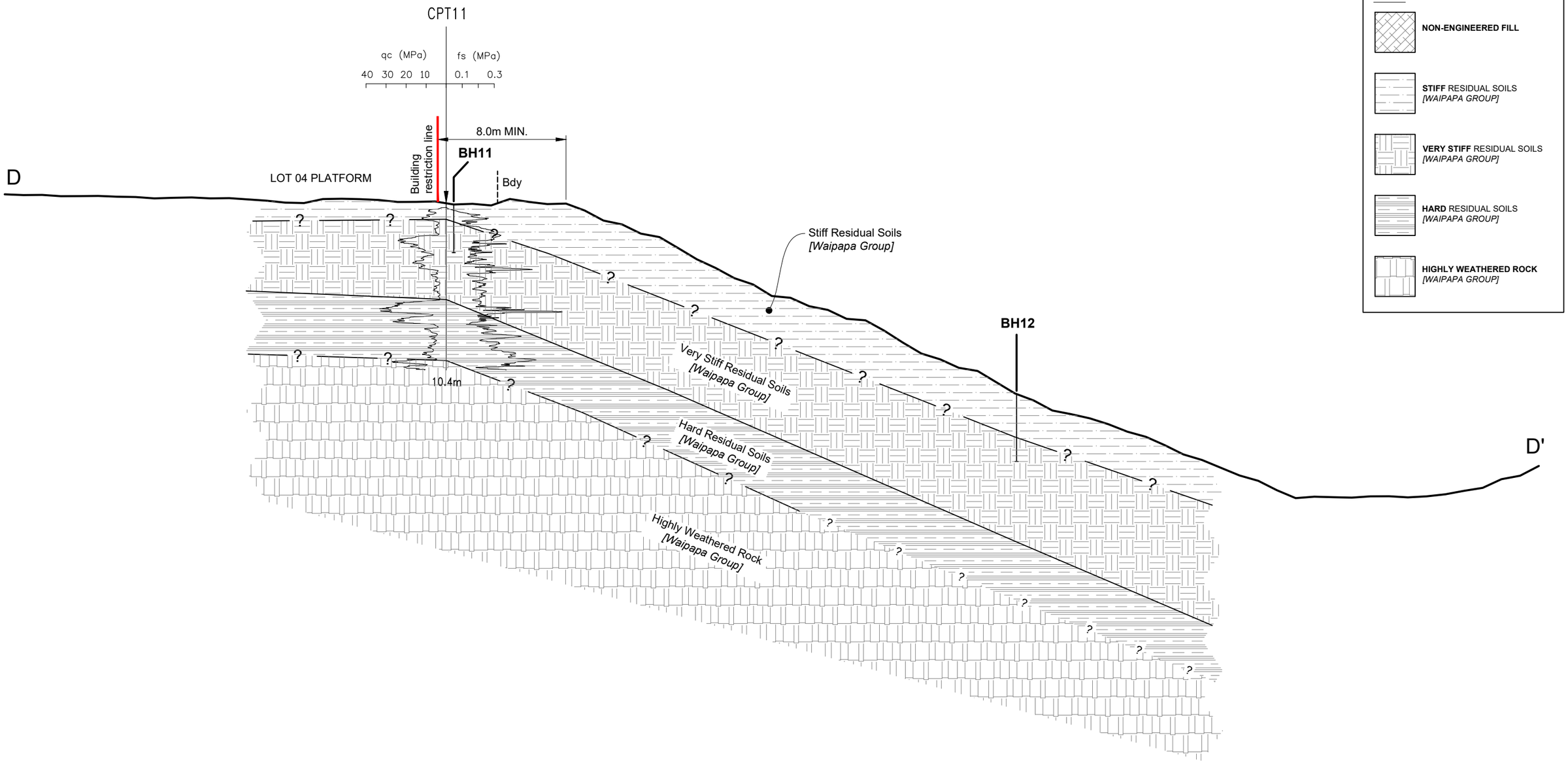
Plotted By Josh Curreen at 6/12/2024 4:24:50 pm

NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION D-D'

Scale 1:250 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS04**

Sheet No. **9** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:33 pm

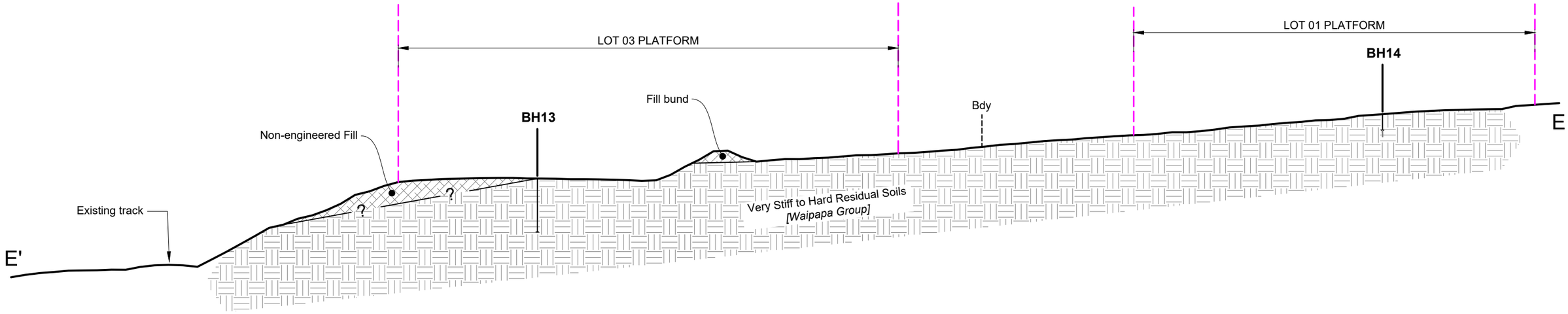
NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

NON-ENGINEERED FILL

VERY STIFF RESIDUAL SOILS
[WAIPAPA GROUP]



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION E-E'

Scale 1:300 @A3 | Date NOV 2024
Drawn JMC | Checked WT | Approved JP
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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS05**

Sheet No. **10** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:45 pm

NOTES:

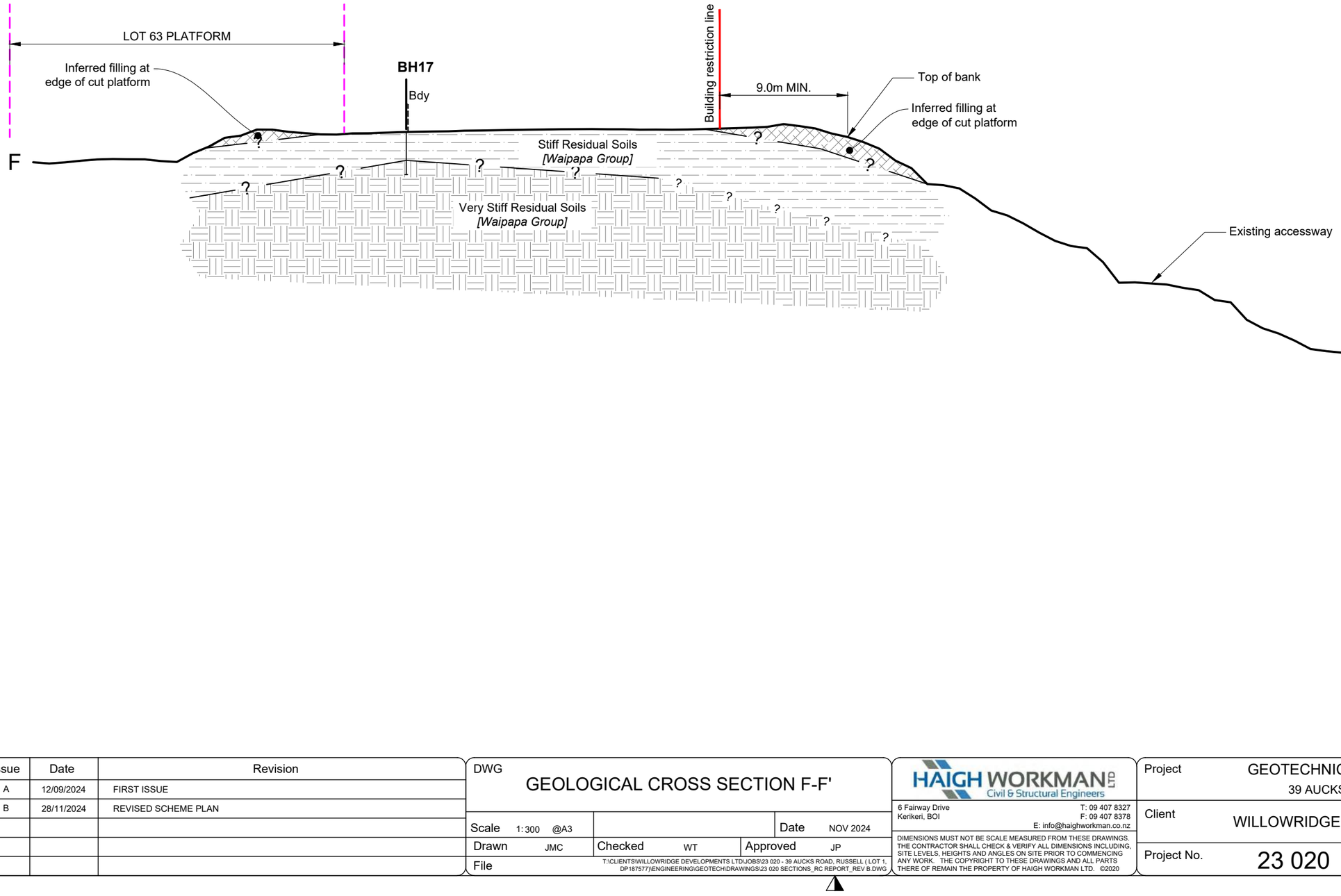
1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
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3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

NON-ENGINEERED FILL

STIFF RESIDUAL SOILS
[WAIPAPA GROUP]

VERY STIFF RESIDUAL SOILS
[WAIPAPA GROUP]



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION F-F'

Scale 1:300 @A3 | Date NOV 2024
Drawn JMC | Checked WT | Approved JP
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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS06**

Sheet No. **11** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:25 pm

NOTES:

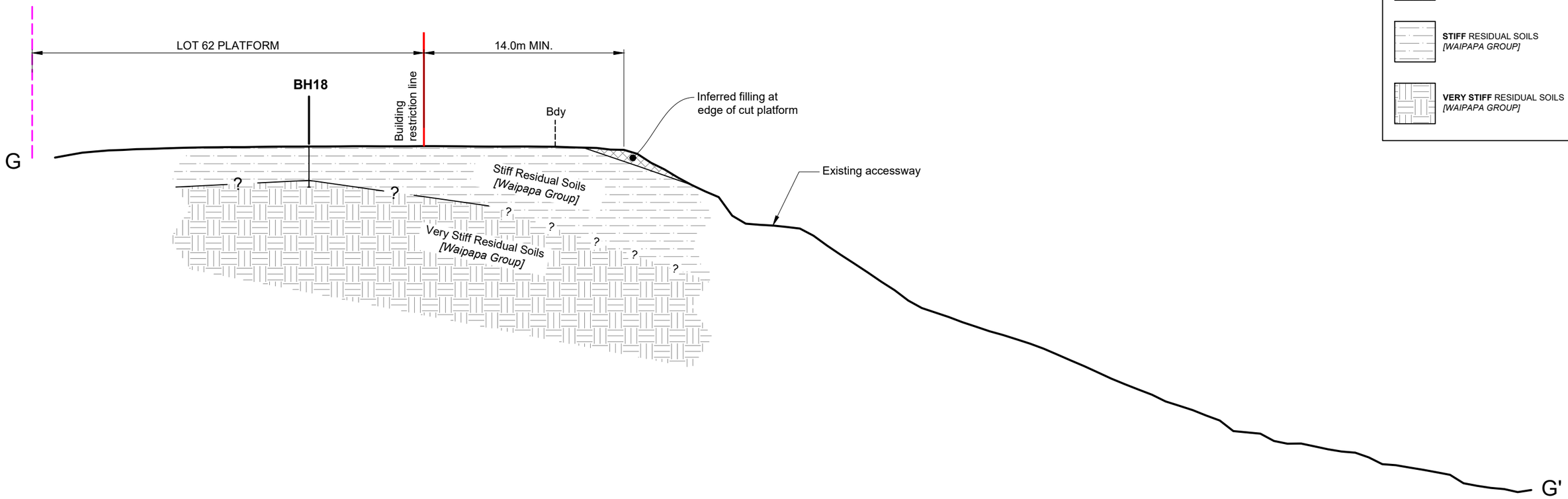
1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

NON-ENGINEERED FILL

STIFF RESIDUAL SOILS *[WAIPAPA GROUP]*

VERY STIFF RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION G-G'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS07**

Sheet No. **12** of **24**

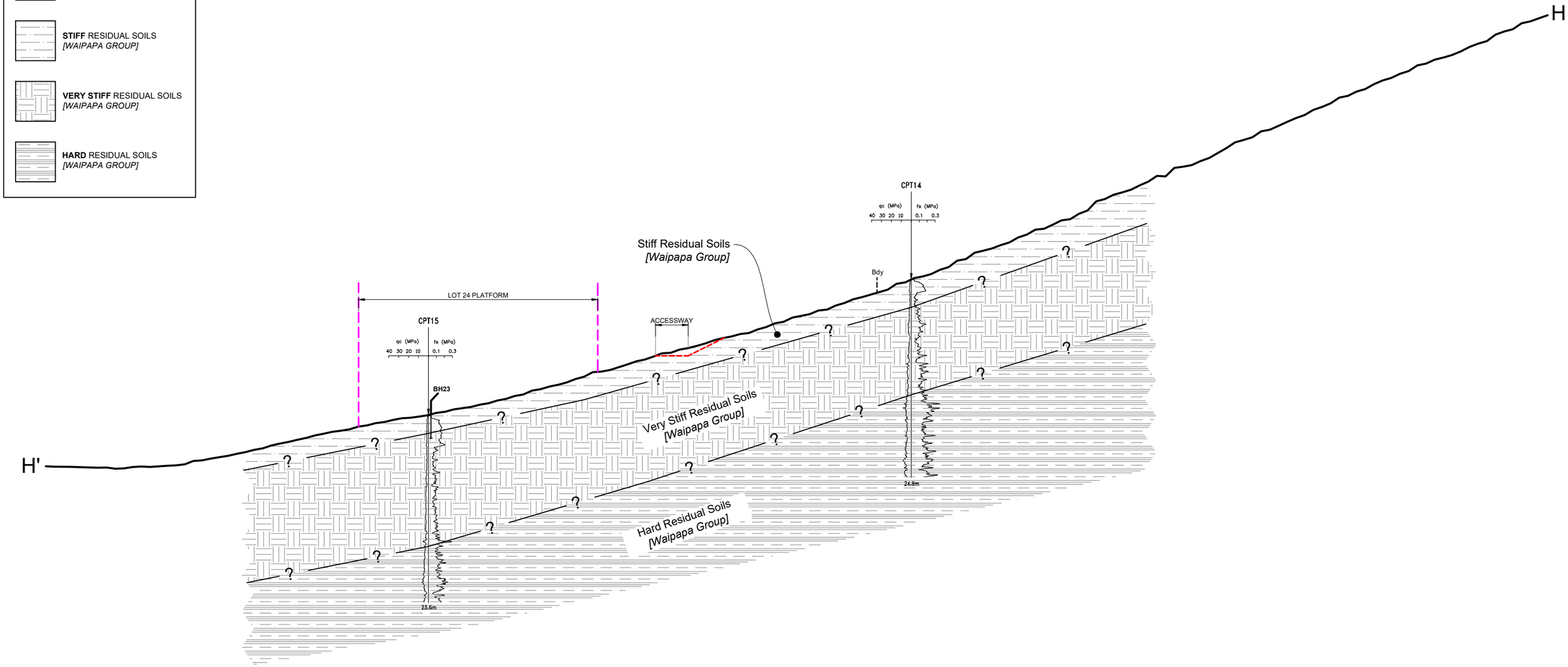
Plotted By Josh Curreen at 6/12/2024 4:24:25 pm

NOTES:

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2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION H-H'

Scale 1:500 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS08**

Sheet No. **13** of **24**

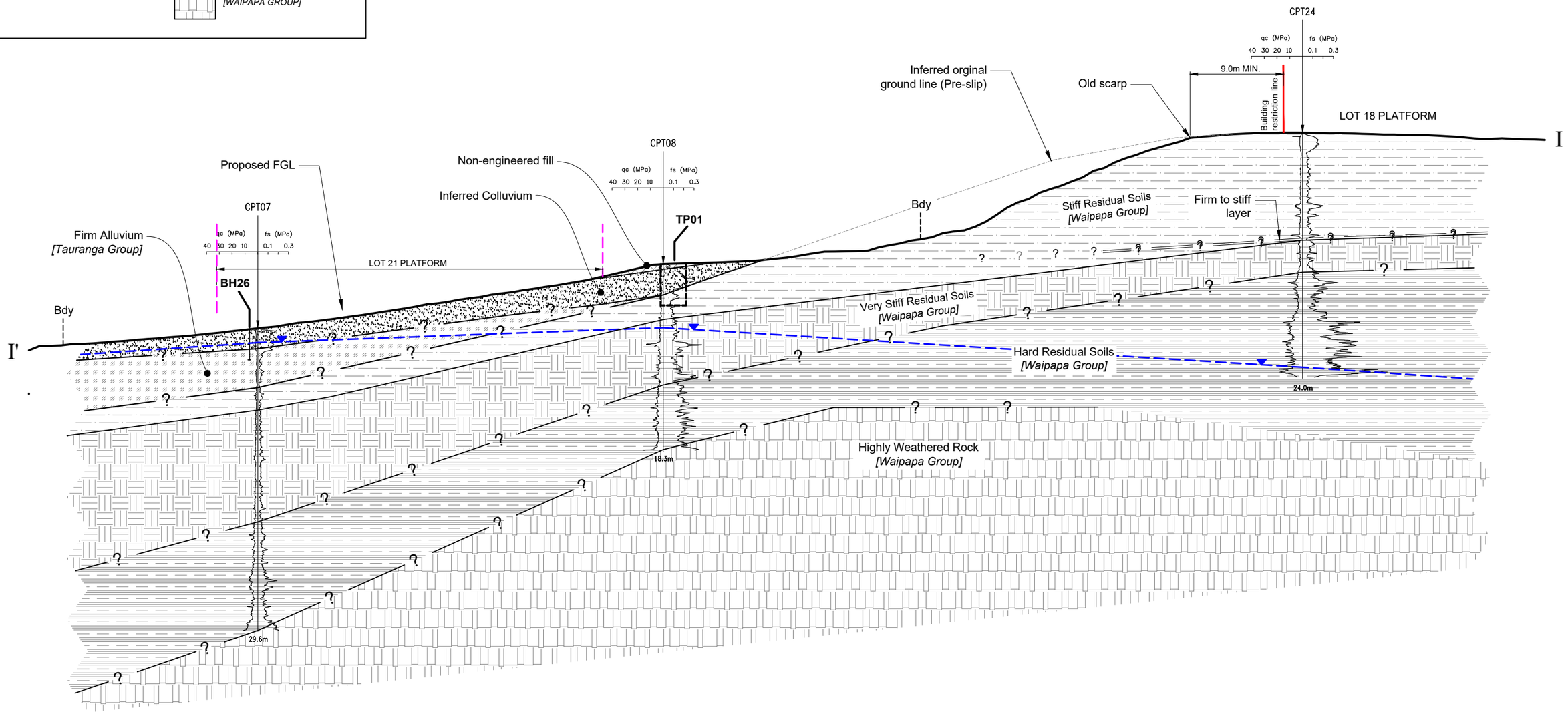
Plotted By Josh Curreen at 6/12/2024 4:24:30 pm

KEY:

- **NON-ENGINEERED FILL**
- **INFERRED COLLUVIUM**
- **FIRM** ALLUVIUM *[TAURANGA GROUP]*
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*

NOTES:

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3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION I-I'

Scale 1:400 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS09**

Sheet No. **14** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:45 pm

NOTES:

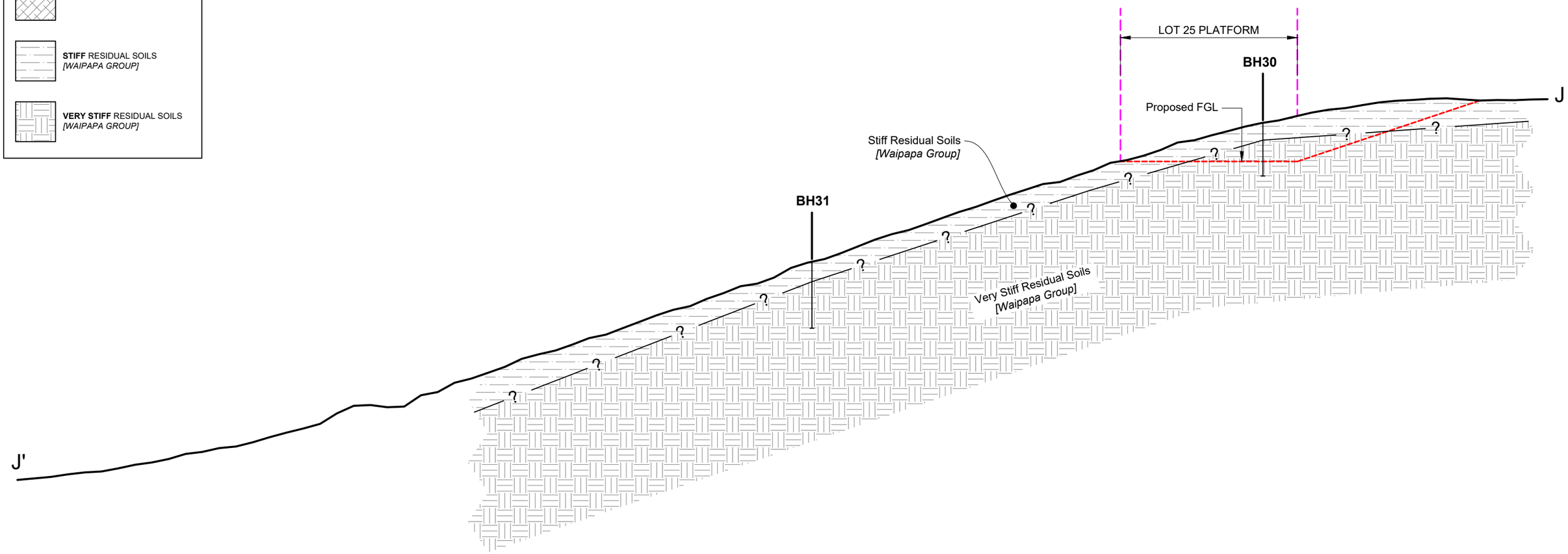
1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
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3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

NON-ENGINEERED FILL

STIFF RESIDUAL SOILS
[WAIPAPA GROUP]

VERY STIFF RESIDUAL SOILS
[WAIPAPA GROUP]



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION J-J'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS10**

Sheet No. **15** of **24**

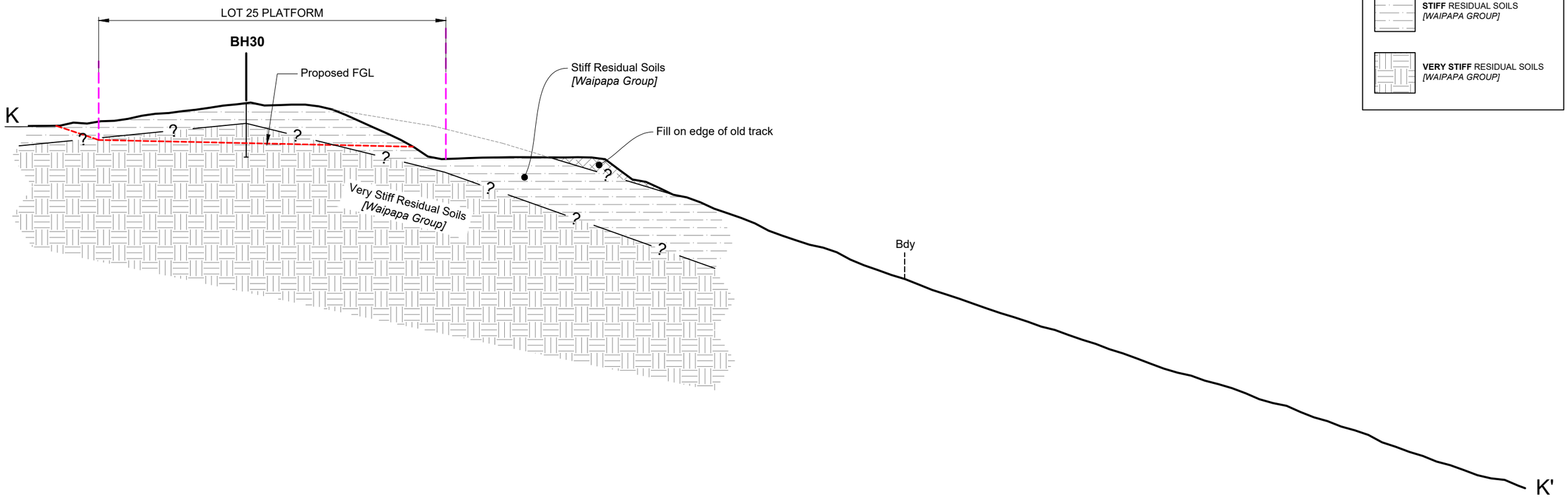
Plotted By Josh Curreen at 6/12/2024 4:24:30 pm

NOTES:

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KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION K-K'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS11**

Sheet No. **16** of **24**

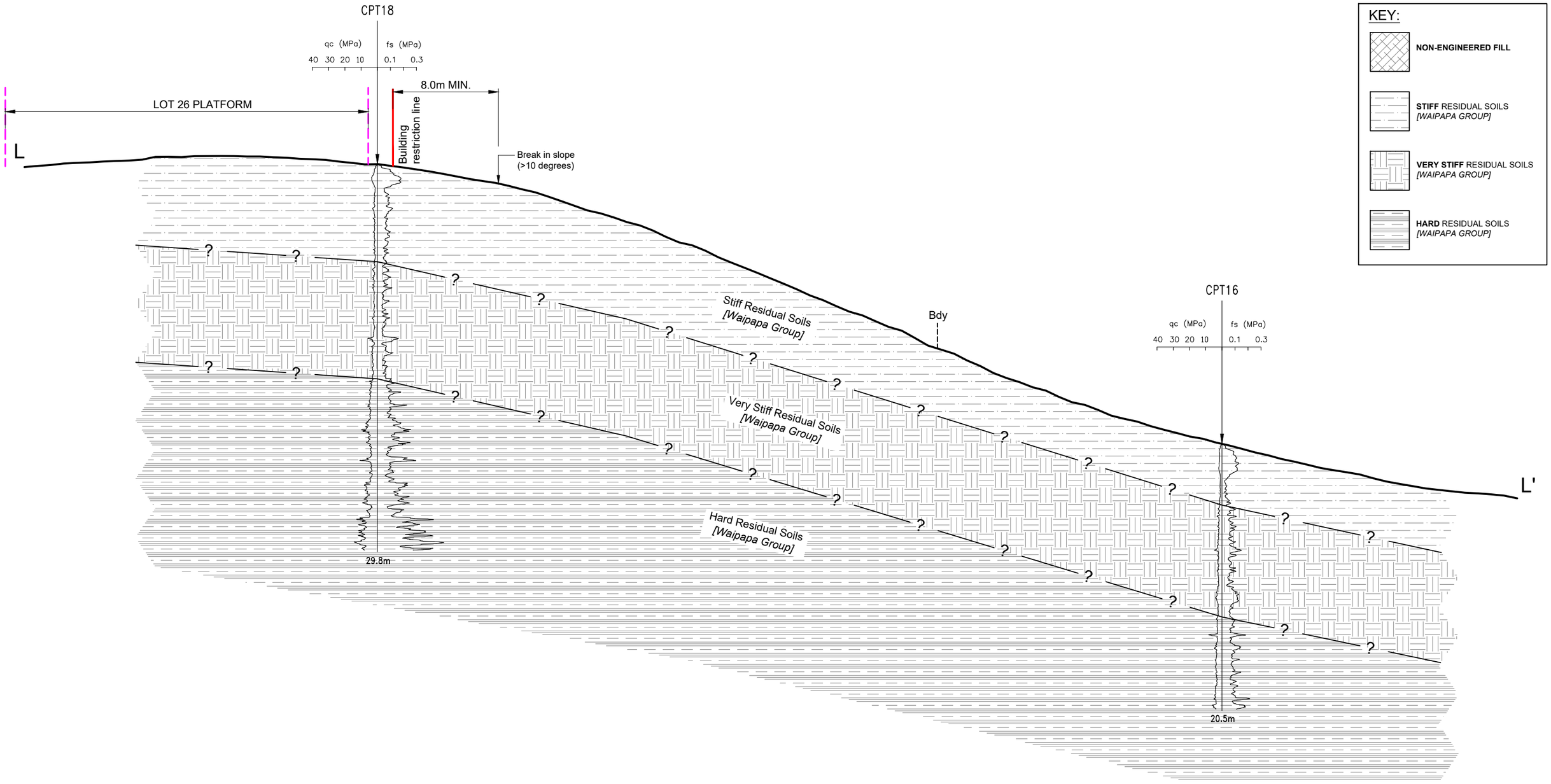
Plotted By Josh Curreen at 6/12/2024 4:24:48 pm

NOTES:

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KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION L-L'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS12**

Sheet No. **17** of **24**

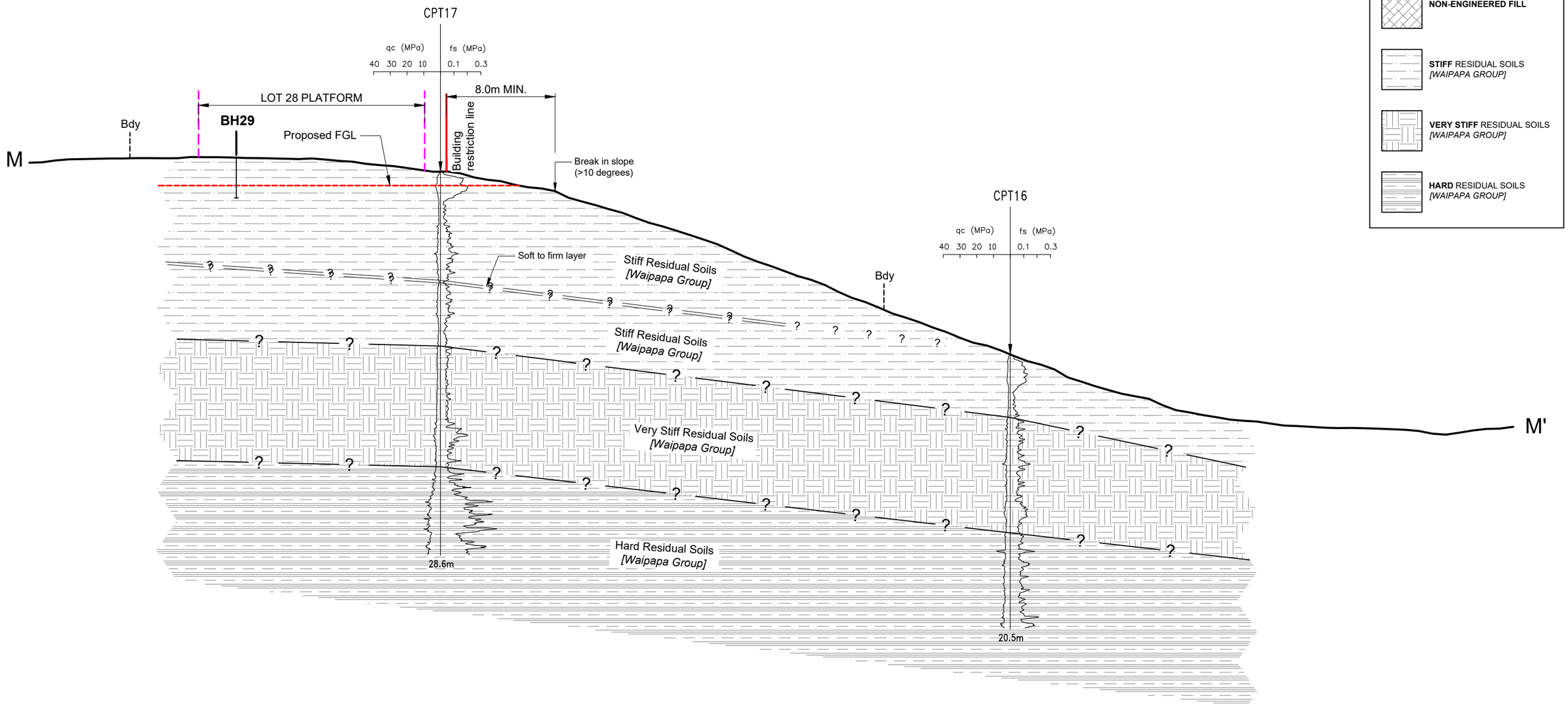
Plotted By Josh Curreen at 6/12/2024 4:24:48 pm

NOTES:

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3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION M-M'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS13**

Sheet No. **18** of **24**

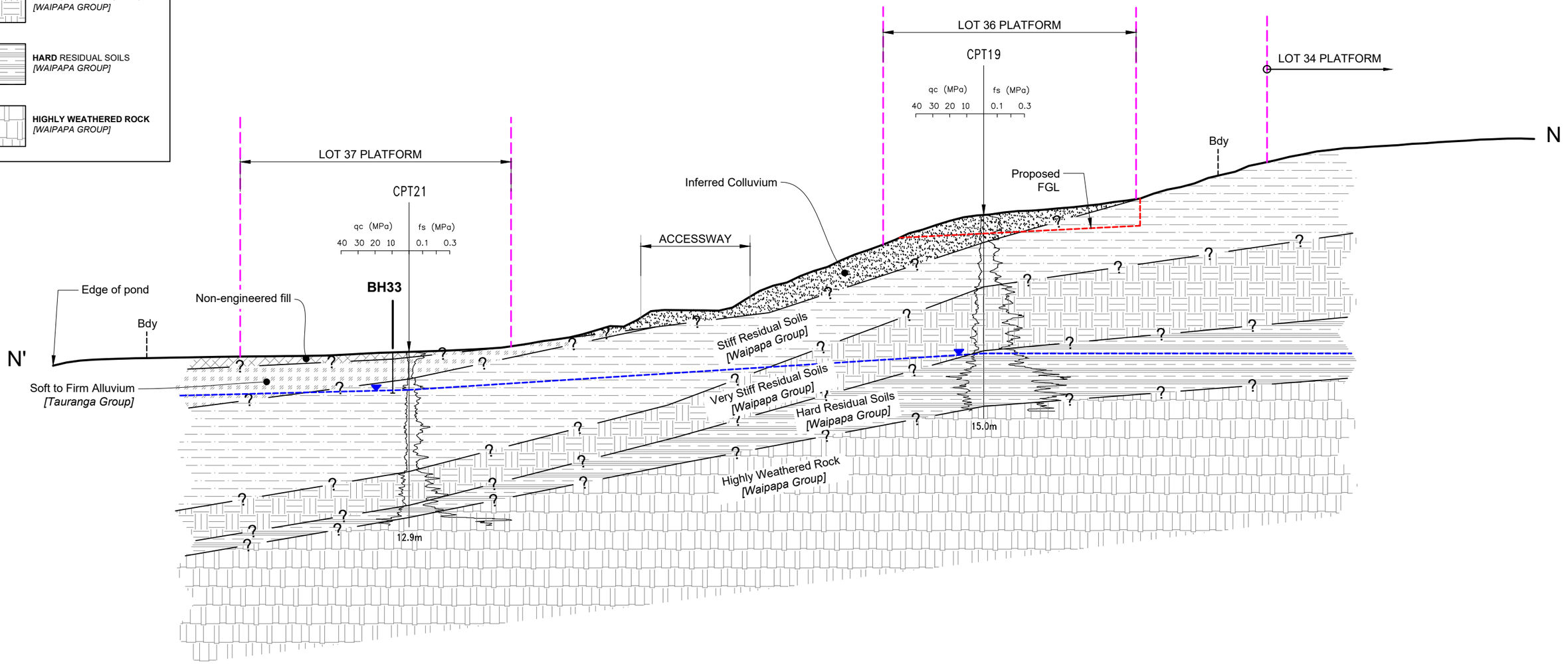
Plotted By Josh Curreen at 6/12/2024 4:24:27 pm

KEY:

- **NON-ENGINEERED FILL**
- **INFERRED COLLUVIUM**
- **SOFT TO FIRM** ALLUVIUM *[TAURANGA GROUP]*
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*

NOTES:

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Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION N-N'

Scale 1:300 @A3 | Date NOV 2024

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Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS14**

Sheet No. **19** of **24**

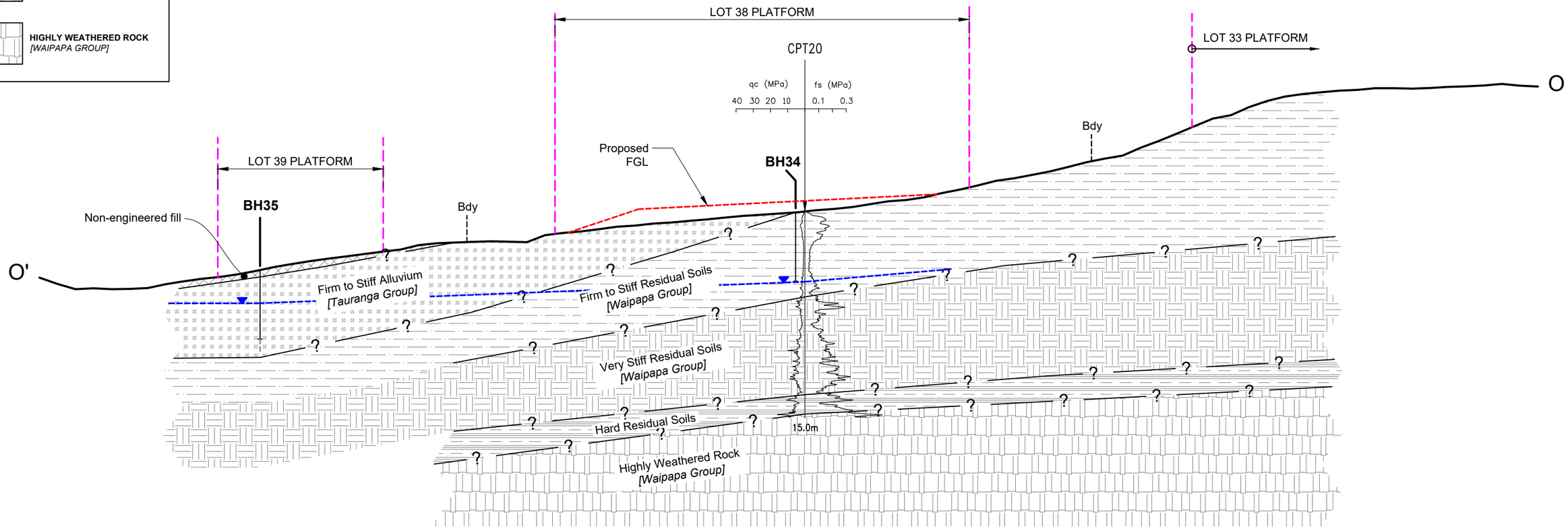
Plotted By Josh Curreen at 6/12/2024 4:24:36 pm

KEY:

- **NON-ENGINEERED FILL**
- **SOFT TO FIRM** ALLUVIUM *[TAURANGA GROUP]*
- **FIRM TO STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*

NOTES:

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Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION O-O'

Scale 1:300 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

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Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS15**

Sheet No. **20** of **24**

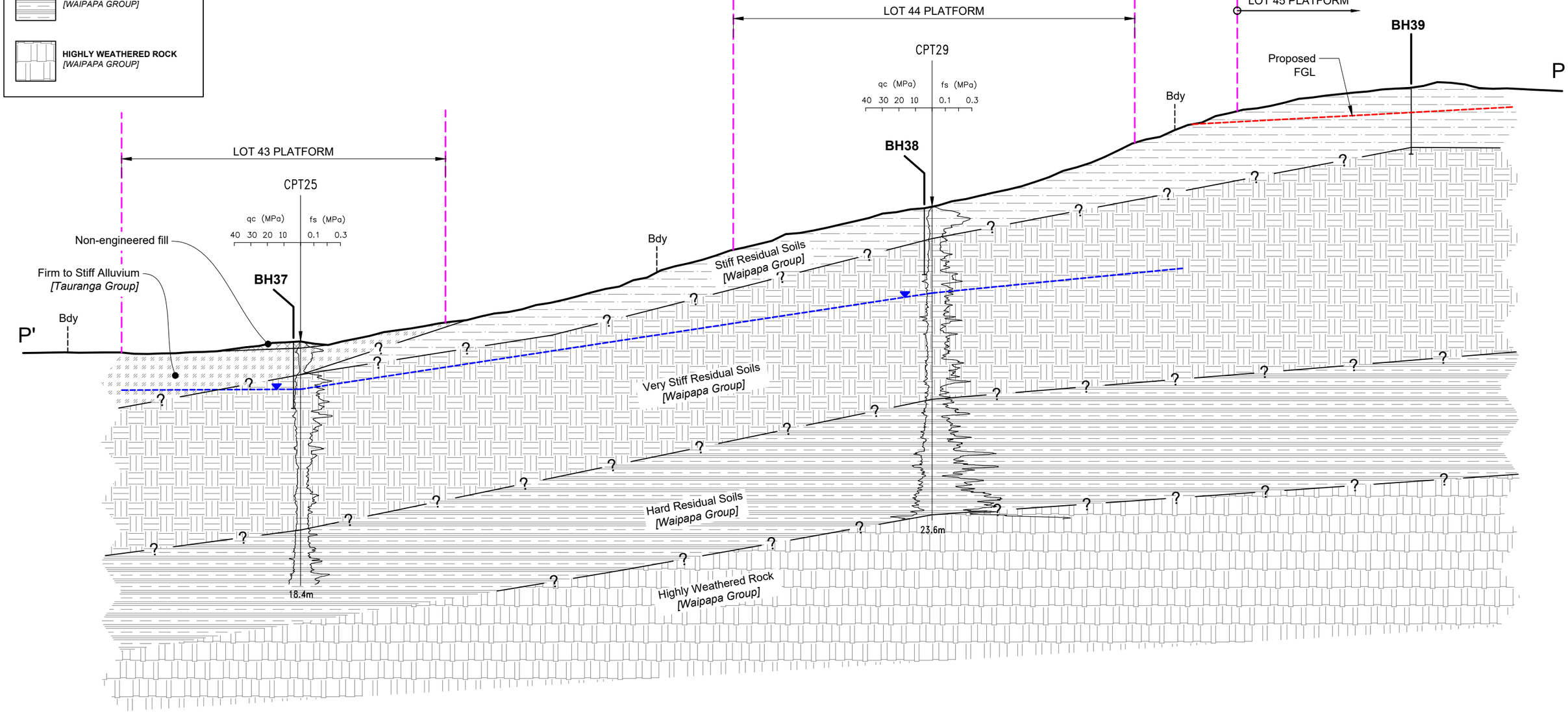
Plotted By Josh Curreen at 6/12/2024 4:24:36 pm

KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HIGHLY WEATHERED ROCK** *[WAIPAPA GROUP]*

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Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION P-P'

Scale 1:300 @A3 | Date NOV 2024

Drawn JMC | Checked WT | Approved JP

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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS16**

Sheet No. **21** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:39 pm

NOTES:

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KEY:

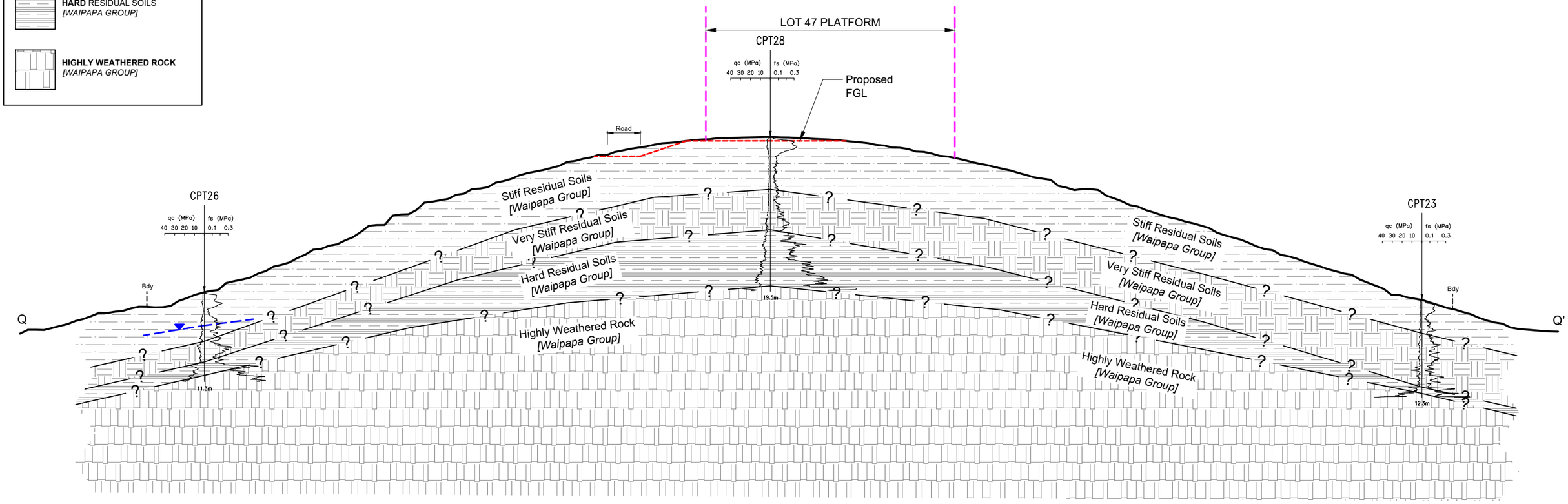
NON-ENGINEERED FILL

STIFF RESIDUAL SOILS
[WAIPAPA GROUP]

VERY STIFF RESIDUAL SOILS
[WAIPAPA GROUP]

HARD RESIDUAL SOILS
[WAIPAPA GROUP]

HIGHLY WEATHERED ROCK
[WAIPAPA GROUP]



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION Q-Q'

Scale 1:500 @A3 | Date NOV 2024
Drawn JMC | Checked WT | Approved JP
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39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS17**

Sheet No. **22** of **24**

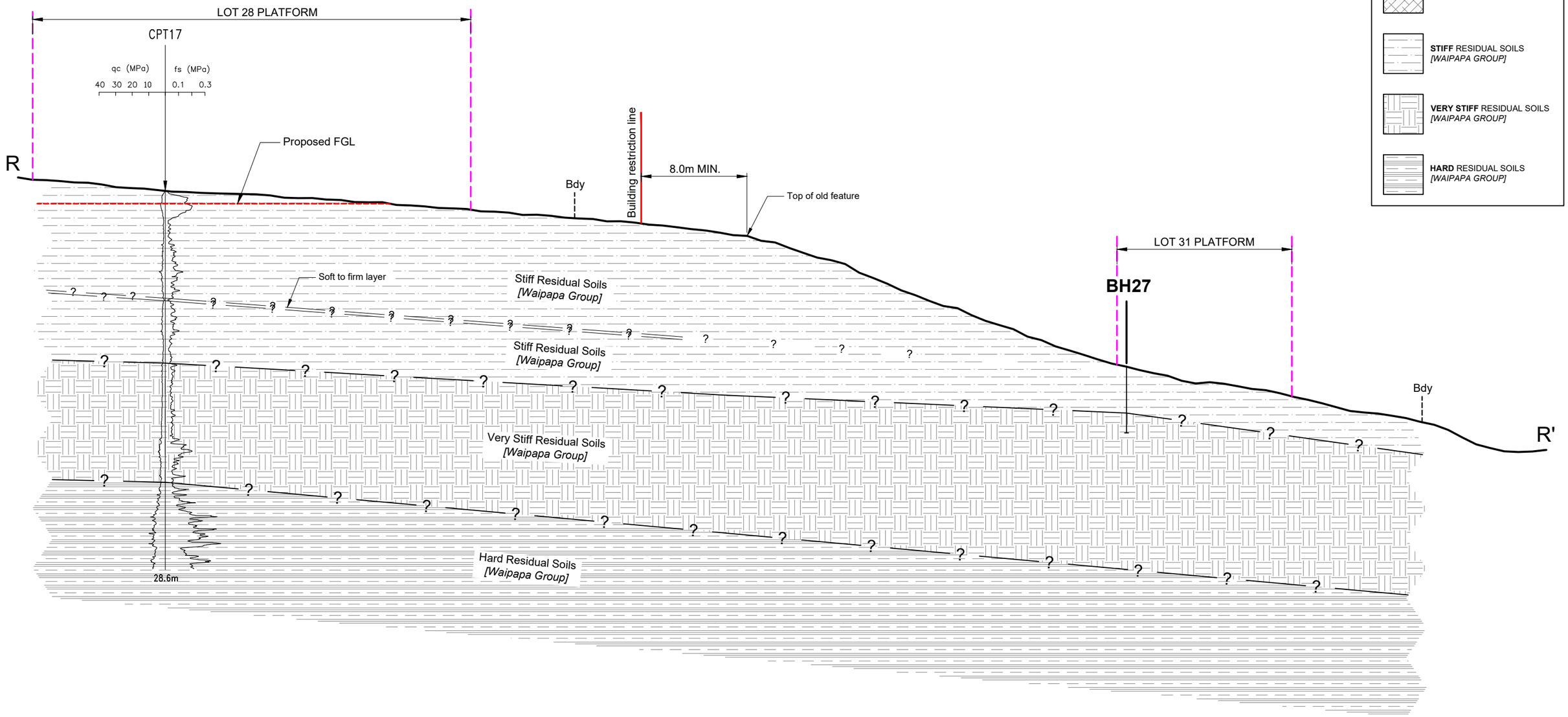
Plotted By Josh Curreen at 6/12/2024 4:24:27 pm

NOTES:

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KEY:

- **NON-ENGINEERED FILL**
- **STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **VERY STIFF** RESIDUAL SOILS *[WAIPAPA GROUP]*
- **HARD** RESIDUAL SOILS *[WAIPAPA GROUP]*



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION R-R'

Scale 1:300 @A3 | Date NOV 2024 | Drawn JMC | Checked WT | Approved JP

File: T:\CLIENTS\WILLOWRIDGE DEVELOPMENTS LTD\JOBS\23 020 - 39 AUCKS ROAD, RUSSELL (LOT 1, DP187577)\ENGINEERING\GEOTECH\DRAWINGS\23 020 SECTIONS_RC REPORT_REV B.DWG

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS18**

Sheet No. **23** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:33 pm

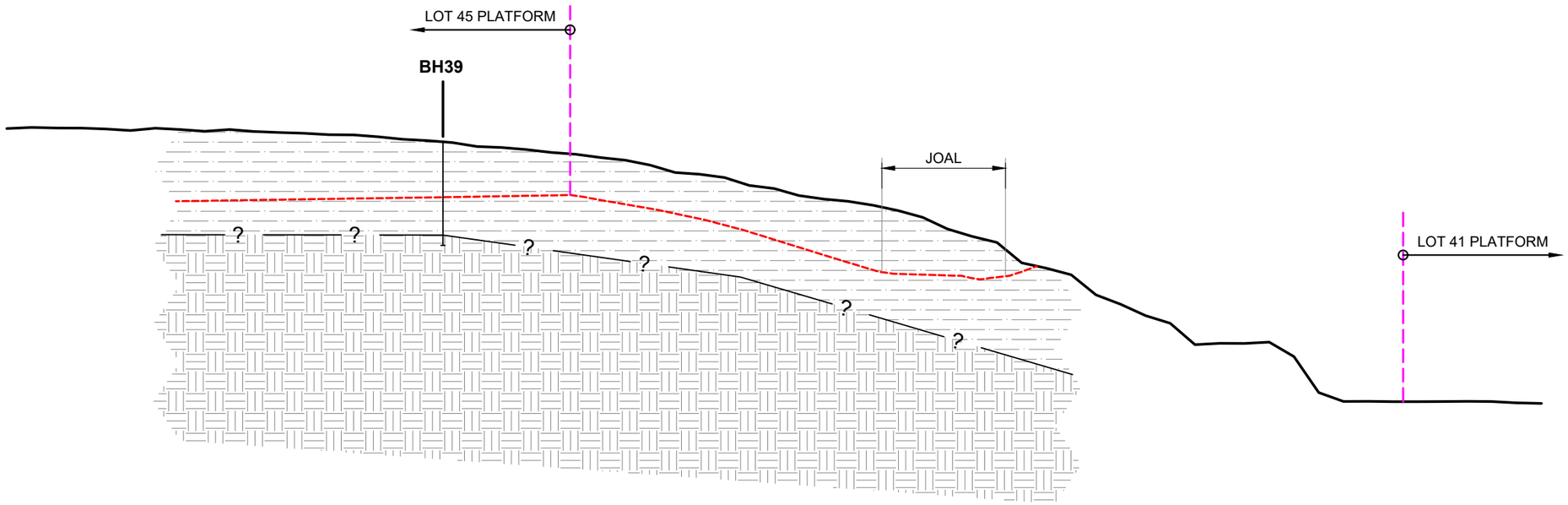
NOTES:

1. THIS DRAWING IS BASED ON LIDAR SURVEY DATA AND IS APPROXIMATE ONLY.
2. THE GROUND MODEL HAS BEEN INFERRED FROM THE BOREHOLE AND CPT DATA. INFERENCES ABOUT THE SOILS CONDITIONS BETWEEN TEST LOCATIONS HAVE BEEN MADE BUT CANNOT BE GUARANTEED.
3. DRAWING NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY:

STIFF RESIDUAL SOILS
[WAIPAPA GROUP]

VERY STIFF RESIDUAL SOILS
[WAIPAPA GROUP]



Issue	Date	Revision
A	12/09/2024	FIRST ISSUE
B	28/11/2024	REVISED SCHEME PLAN

DWG: GEOLOGICAL CROSS SECTION S-S'

Scale 1:250 @A3 | Date NOV 2024
Drawn JMC | Checked WT | Approved JP
File T:\CLIENTS\WILLOWRIDGE DEVELOPMENTS LTD\JOBS\23 020 - 39 AUCKS ROAD, RUSSELL (LOT 1, DP187577)\ENGINEERING\GEOTECH\DRAWINGS\23 020 SECTIONS_RC REPORT_REV B.DWG

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Project: GEOTECHNICAL INVESTIGATION
39 AUCKS ROAD, RUSSELL

Client: WILLOWRIDGE DEVELOPMENTS

Project No. 23 020 | RC no. N/A

DWG No. **CS19**

Sheet No. **24** of **24**

Plotted By Josh Curreen at 6/12/2024 4:24:39 pm

Appendix B – Hand Auger Logs

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Borehole Log - BH01

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark brown. Firm, moist, low plasticity, minor rootlets. [TOPSOIL]

Silty CLAY; light grey streaked minor grey brown and orange brown. Very stiff, moist, high plasticity.

[TAURANGA GROUP]

At 1.0m - 1.1m: minor fine gravel, saturated.

CLAY; light grey brown streaked minor orange brown. Very stiff, saturated, high plasticity.

At 1.3m: Becoming light grey with minor orange flecks.

End of hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: GW at 0.5m

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
	231+	
30	148	5
	231+	
3	181	63
2	132	74
3	105	41

Scala Penetrometer (blows/100mm): 0, 5, 10, 15, 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH02

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark brownish grey. Firm, moist, minor rootlets. [TOPSOIL]

Silty CLAY; light orange brown streaked orange brown and brown (desiccation streaks to 0.4m). Very stiff, moist, high plasticity.
[TAURANGA GROUP]

CLAY; light gey streaked orange brown. Very stiff, wet, high plasticity.

At 1.9m: Becoming dark orange brown streaked light grey.

At 2.5m: Becoming light grey streaked orange brown.

End of Hole at 3.0m (Target depth)



Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	TS					0 5 10 15 20
0.5	TAURANGA GROUP		Groundwater at 2.8m	3	211 / 72	
1.0				3	178 / 59	
1.5				3	135 / 49	
2.0				2	135 / 74	
2.5				2	214 / 112	
3.0				2	165 / 92	
3.5						
4.0						
4.5						

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH03

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description (Based on NZGS Logging Guidelines 2005)	Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
SILT, some clay; dark brown. Moist to wet, low plasticity. [TOPSOIL]	0.0	TS					
Silty CLAY; light orange brown and grey brown (desiccation streaks to 0.5m). Very stiff, moist, high plasticity. *[TAURANGA GROUP]*		TAURANGA GROUP		Groundwater at 2.2m			
At 0.5m: Becoming light orange brown streaked grey brown.	0.5				3	198 / 66	
At 1.0m: Becoming light grey streaked orange brown.	1.0				3	184 / 69	
At 1.5m - 1.6m: Minor fine weakly cemented clasts.	1.5				3	178 / 58	
At 2.0m - 2.2m: Minor fine weakly cemented clasts, Saturated.	2.0				3	158 / 58	
CLAY; orange brown and light grey. Very stiff, saturated, high plasticity.					2	158 / 79	
At 2.5m: Becoming light grey streaked orange brown.	2.5				2	109 / 53	
End of Hole at 3.0m (Target depth)	3.0						
	3.5						
	4.0						
	4.5						

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH04

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; minor clay, dark grey brown mixed light grey and orange brown. Stiff, moist, low plasticity. *[NON-ENGINEERED FILL]*

Silty CLAY; light grey streaked dark grey brown and orange brown (desiccation streaks to 0.9m). Very stiff, moist, high plasticity. *[TAURANGA GROUP]*

CLAY; light grey streaked minor light grey brown. Very stiff, moist to wet, high plasticity.

At 1.5m: Becoming light grey streaked orange brown.

End of Hole at 2.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; TAURANGA GROUP

Graphic Log

Water Level: Groundwater Not Encountered

Sensitivity: 3, 2, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): 231+; 181; 72; 152; 66; 132; 53

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH05

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

TOPSOIL/FILL; some intermixed clay, brown mixed orange brown and light grey. Moist, low plasticity.

At 0.5m: Minor charred wood.

CLAY; light grey streaked orange brown. Stiff, moist to wet, high plasticity. *[TAURANGA GROUP]*

At 1.1m: Becoming light brown and grey, firm.

At 2.0m - 2.1m: Some fine gravel.
At 2.1m: Very poor recovery.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; TAURANGA GROUP

Graphic Log

Water Level: Groundwater at 1.1m

Sensitivity: 4, 6, 14, 5, 7

Vane Shear and Remoulded Vane Shear Strengths (kPa):

Depth (m)	Vane Shear	Remoulded Vane Shear
0.5	107	25
1.0	63	10
1.5	46	3
2.0	Gravelly	
2.5	33	7
3.0	43	7

Scala Penetrometer (blows/100mm): 0, 5, 10, 15, 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH06

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	29/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	29/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown, speckled orangish brown. Moist to wet, low plasticity. [TOPSOIL]

CLAY; light grey, speckled minor orange brown. Stiff, wet, high plasticity. *[TAURANGA GROUP]*

At 1.0m: Becoming light greyish brown, speckled minor orange brown, saturated.

End of Hole at 2.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; TAURANGA GROUP

Graphic Log

Water Level: Groundwater at 1.0m

Sensitivity: 29, 7, 14, 17

Vane Shear and Remoulded Vane Shear Strengths (kPa): 96, 3, 135, 20, 140, 10, 138, 8

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH07

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, trace gravel; dark brownish grey. Firm, wet, low plasticity.
[NON-ENGINEERED FILL]

Clayey SILT; some intermixed topsoil, yellow brown and brown. Firm, wet, low plasticity.

Clayey SILT; trace fine gravel, orange brown. Very stiff, moist, low plasticity
[WAIPAPA GROUP]

Silty CLAY; orange brown. Stiff, moist, high plasticity.

At 0.8m: Becoming light orange brown mottled whitish grey, trace fine sand.

At 1.4m: Becoming moist to wet.

Clayey SILT; trace fine sand, whitish grey and orange brown. Stiff, moist to wet, low plasticity.

SILT; some clay, minor fine sand, whitish grey, light orange brown and dark orange. Stiff, wet, low plasticity.

At 2.1m: Becoming pinkish brown mottled whitish grey and dark orange, minor clay, trace fine sand.

At 2.3m: water seepage.

At 3.6m: Becoming very stiff.

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; WAIPAPA GROUP

Groundwater at 2.1m

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
	201	
3	161	60
5	87	17
10	72	7
8	130	17
8	83	10
4	126	29
13	95	7
5	195	42

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken.

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Borehole Log - BH08

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark grey brown. Wet, low plasticity. [TOPSOIL]

Silty CLAY; yellow brown streaked minor light grey brown. Very stiff, moist, high plasticity. *[WAIPAPA GROUP]*

At 1.2m: Becoming orange brown streaked light grey.

SILT; some clay, dark orange brown streaked orange brown. Very stiff, moist, low plasticity. Trace fine weakly cemented clasts.

Silty CLAY; light orange brown streaked light grey. Very stiff, wet, high plasticity

Clayey SILT; whitish grey streaked dark orange brown. Very stiff, moist to wet, high plasticity.

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
3	208	82
2	178	79
2	194	115
4	181	46
	231+	
4	148	36
4	155	41
	231+	

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH09

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark grey brown. Wet, low plasticity. [TOPSOIL]

Silty CLAY; yellow brown streaked minor light grey brown. Very stiff, moist, high plasticity. *[WAIPAPA GROUP]*

At 1.0m: Becoming yellow brown streaked reddish brown.

Clayey SILT; light orange brown streaked light grey and reddish brown. Very stiff, moist, low plasticity.

At 1.8m: Becoming wet, light orange brown and light reddish brown.

End of hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
	231+	0 5 10 15 20
2	214 / 102	
7	132 / 20	
6	168 / 30	
7	145 / 20	
6	191 / 30	

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Borehole Log - BH10

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Silty CLAY; light brownish orange, streaked orange. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

At 0.4m: Becoming light orange, streaked light pinkish red.

Clayey SILT; light orange, streaked pinkish red, mottled white. Very stiff, moist, low plasticity.

At 0.9m: Becoming light pink and light orange, streaked grey.

SILT; some clay, light orange and pink, streaked whitish grey. Very stiff, moist, low plasticity.

At 1.8m: Becoming light whitish grey, streaked orange.

At 2.2m: Becoming light orange, streaked orange and pink.

At 2.8m: Becoming light orange, mottled white and pink.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 5, 4, 4

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; UTP; 175 / 37; 146 / 37; 178 / 40; 201+

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken.

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Borehole Log - BH11

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; light pinkish red and light orange, speckled black and white. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

From 0.3m: Becomes light orange and light pink, mottled white.

SILT, some clay, trace fine gravel; orange, mottled light pink and white, streaked black. Very stiff, moist to wet, low to medium plasticity.

At 0.6m: Pocket of fine gravel and coarse sand; pinkish red (weakly cemented).

From 0.7m: Becomes light pink, mottled light orange and light greyish white.

From 1.0m: Minor fine gravel; orange and light pink, mottled white and black.

From 1.5m: Becomes white and orange, mottled black. Trace fine gravel.

From 1.8m: Becomes orange, mottled white, streaked black.

SILT, some clay, trace fine gravel; light greyish white and light orange, mottled light pink, streaked black. Very stiff, moist, low plasticity.

From 2.7m: Becomes light orange and light greyish white, streaked black, mottled light pink.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 4

Vane Shear and Remoulded Vane Shear Strengths (kPa): 132, 32, UTP, UTP, UTP, UTP, UTP

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH12

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, minor clay; light grey to grey, mottled brown. Firm, moist, low plasticity. Rootlets. [Topsoil]

Silty CLAY; light yellowish orange, streaked orange and grey. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

From 0.5m: Becomes light orange and light grey, streaked orange.

Silty CLAY, trace fine gravels; light orange and light grey, mottled dark orange. Very stiff, moist to wet, medium plasticity.

From 0.8m: Becomes light orange, streaked orange.

At 1.3m: Pocket of fine to medium gravel, some silty clay; orange to dark orange.

CLAY, some silt, trace fine gravel; orange, mottled dark orange. Very stiff, moist, medium to high plasticity.

SILT, some clay, trace fine gravel; light orange and light pink, mottled black. Very stiff, moist, low to medium plasticity.

Clayey SILT; light pink, streaked black and orange. Very stiff, moist, medium plasticity.

SILT, some clay; light pink, mottled black and light orange. Very stiff, moist to wet, medium plasticity.

Clayey SILT; light orange and pinkish white, streaked black, mottled dark orange. Very stiff, moist, medium plasticity.

From 2.9m: Becomes light greyish white, streaked orange and black.

From 3.4m: Becomes light orange and orange, streaked white and black.

SILT, some clay, trace fine gravel; white, streaked orange, speckled black. Very stiff, moist, low plasticity. Gravel: weakly cemented.

From 3.9m: Becomes light greyish white, mottled orange, streaked black. Dry to moist, low plasticity.

End of Hole at 4.2m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S., WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 6, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): 201, 172, 29, 141, 54, 201, 201, 201, 201, UTP, UTP

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH13

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; light orange to orange and light brown. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

From 0.3m: Becomes light orange to orange, streaked dark orange.

From 0.7m: Becomes light orange and light pink, mottled white.

From 1.1m: Becomes light orange, streaked light pink.

SILT, some clay, trace fine gravel; light pink and white, streaked orange. Very stiff, moist, medium plasticity.

From 1.8m: Becomes light orange and light pink, mottled white. Moist to wet.

From 2.0m: Becomes white and light pink, streaked orange. Moist, low plasticity.

From 2.3m: Becomes pinkish red and orange, streaked white.

From 2.7m: Becomes moist to wet.

From 3.3m: Becomes white and light pink, streaked orange and black, mottled dark orange.

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: WAIPAPA GROUP

Water Level: Groundwater not encountered

Sensitivity: 3, 4, 4

Vane Shear and Remoulded Vane Shear Strengths (kPa):

	Vane Shear	Remoulded Vane Shear
	195	69
	UTP	
	201	
	UTP	
	163	43
	UTP	
	192	54
	UTP	

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH14

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Gravelly SILT, minor clay; light orange and light grey, streaked orange. Very stiff, dry to moist, low plasticity. Gravel: fine, weakly cemented. [Fill]

SILT, some fine gravel, minor clay; light grey and bluish grey, streaked orange. Very stiff, moist, low plasticity. [WAIPAPA GROUP]

From 0.5m: Becomes bluish grey and light pink, streaked orange.
From 0.6m: Becomes mottled orange to dark orange.

SILT, some fine gravel, trace clay; light bluish grey, streaked orange and light pink. Very stiff, dry to moist, no plasticity. Gravel: weakly cemented.

From 0.9m: Becomes moist.

From 1.1m: Becomes light pink and pinkish orange, mottled grey.

End of Hole at 1.2m (Unable to Penetrate)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; UTP; UTP

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing undertaken from 0.9m to 1.5m during advancement of auger. Groundwater not encountered.

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Borehole Log - BH15

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown. Firm, wet, low plasticity. Trace rootlets. [TOPSOIL]

Silty CLAY; yellowish brown, streaked light greyish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.5m: Becomes yellowish brown.

At 1.5m: Becomes yellowish brown, streaked light grey.

At 1.9m: Becomes yellowish brown, streaked reddish brown and light grey.

Clayey SILT; light grey, streaked orange. Very stiff, moist, low plasticity.

Silty CLAY; yellowish brown, minor reddish brown streaks. Very stiff to hard, moist, high plasticity.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): 231, 231, 231, 231, UTP, UTP

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH16

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT, dark greyish brown, moist to wet, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

At 1.0m: Becomes yellowish brown, streaked orangish brown.

At 1.5m: Becomes light yellowish brown.

Clayey SILT; light orangish brown, streaked dark orangish brown. Very stiff, wet, low plasticity.

At 2.0m: Becomes light grey, streaked light orangish brown and dark orangish brown.

At 2.5m: Becomes light whitish grey, streaked dark orangish brown. Occasional fine gravel, weakly cemented.

End of Hole at 4.0m (Target depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	T.S.		Groundwater not encountered	3	201 / 63	0 5 10 15 20
0.5	WAIPAPA GROUP					
1.0				3	231	
1.5					194 / 76	
2.0				5	158 / 33	
2.5				6	214 / 36	
3.0				5	135 / 30	
3.5				4	155 / 36	
4.0				5	214 / 46	
4.5						



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH17

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Silty CLAY; light orange. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

From 0.3m: Becomes light orange to orange, streaked light pinkish red.

From 0.7m: Becomes light orange to orange, streaked orange and light grey,

SILT, some clay; orange and whitish grey. Very stiff, moist, low plasticity.

From 1.1m: Becomes moist to wet.

Clayey SILT; light orange to orange, mottled whitish grey, streaked dark orange. Very stiff, moist, low to medium plasticity.

SILT, some clay; light grey and light orange, streaked orange. Very stiff, moist to wet, low plasticity.

From 1.9m: Becomes light orange, streaked light grey.

SILT, some clay, minor fine gravel; light grey and orange, mottled dark orange. Very stiff, moist, low plasticity. Minor fine gravel weakly cemented clasts.

From 2.5m: Becomes light grey and light orange, mottled black. Trace fine gravel.

SILT, minor fine gravel and coarse sand, trace clay; brownish orange, speckled black. Very stiff, moist, no plasticity. Gravel: weakly cemented.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 3, 8

Vane Shear and Remoulded Vane Shear Strengths (kPa): 184, 63, 175, 23, 201, UTP, UTP, UTP

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH18

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; brown, wet, low plasticity. Trace fine gravel. [FILL]

Silty CLAY; light yellowish brown, mottled light grey. Very stiff, moist, low plasticity. [WAIPAPA GROUP]

SILT, some clay; light grey, mottled dark orangish brown. Very stiff to hard, moist to wet, low plasticity. Occasional fine weakly cemented clasts.

From 2.5m: Trace clay. Very hard to drill.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 5, 11

Vane Shear and Remoulded Vane Shear Strengths (kPa): 112, 23, 231, 145, 13, 231, UTP, UTP

Scala Penetrometer (blows/100mm): 0, 5, 10, 15, 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH19

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT, dark greyish brown. Firm, moist, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown and light grey, mottled dark brownish grey. Very stiff, moist, medium to high plasticity. Topsoil desiccation. [WAIPAPA GROUP]

From 0.8m: Becomes yellowish brown and dark brown, mottled light yellowish grey. No topsoil desiccation.

Clayey SILT; pinkish red, white, light yellowish brown and light orange. Very stiff, moist, low plasticity.

From 1.5m: Becomes pink, pinkish red, light yellowish brown and white. Moist to wet.

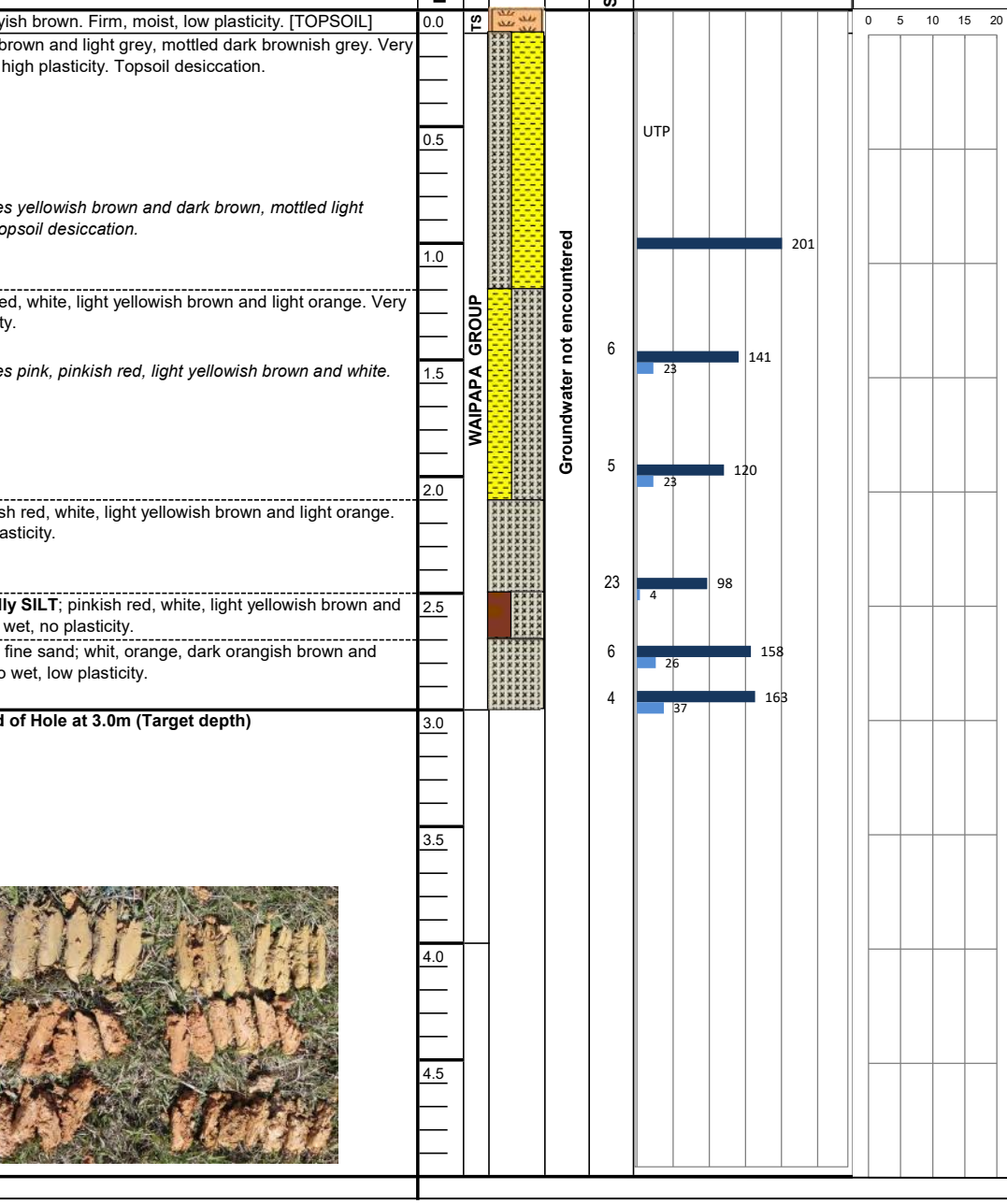
SILT, some clay; pinkish red, white, light yellowish brown and light orange. Very stiff, moist, low plasticity.

Fine to medium **gravelly SILT**; pinkish red, white, light yellowish brown and light orange. Very stiff, wet, no plasticity.

SILT, some clay, trace fine sand; whit, orange, dark orangish brown and pink. Very stiff, moist to wet, low plasticity.

End of Hole at 3.0m (Target depth)





LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH20

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, dark greyish brown. Firm, moist to wet, low plasticity. [TOPSOIL]

SILT, some clay and fine to medium gravel; light yellowish brown and dark grey. Stiff, moist to wet, low plasticity. [WAIPAPA GROUP]

Silty CLAY; yellowish brown to orangish brown. Very stiff, moist, high plasticity.

From 0.9m: Becomes mottled brownish red.

Silty CLAY; brownish red, streaked white and light brownish yellow. Very stiff, moist, no plasticity.

Clayey SILT; white, orange, brown orange. Very stiff, moist to wet, low to no plasticity.

From 1.7m: Becomes mottled pink.

At 2.3m: Some coarse sand to fine gravel.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
2	189	77
	201	
15	201	83
		6
10	119	11
8	135	17
80	115	1
6	195	32

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH21

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, minor clay; dark brown to dark greyish brown. Firm, wet, low plasticity. Rootlets. [Topsoil]

Clayey SILT; light orange and light brown, streaked orange. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

Silty CLAY; light orange to orange. Very stiff, moist, medium plasticity.

From 0.9m: Becomes grey, streaked light pinkish red.

Clayey SILT; light orange and orangish red, streaked red. Very stiff, moist, medium plasticity.

From 1.3m: Becomes light orange and light red, streaked red and white.

SILT, some clay; light pinkish red and red, mottled white. Very stiff, moist to wet, low plasticity.

From 2.0m: Becomes pinkish red.

SILT, some clay, trace fine gravel; pinkish red, streaked orange and white. Very stiff, moist, low plasticity.

From 2.6m: Becomes light pink and white, streaked orangish red.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Water Level: Groundwater not encountered

Sensitivity: 5, 5, 4, 5

Vane Shear and Remoulded Vane Shear Strengths (kPa): 201; UTP; 118 / 26; 103 / 23; 135 / 37; 178 / 34

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH22

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, some clay; dark greyish brown. Firm, saturated, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown, streaked greyish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

Clayey SILT; yellowish brown, mottled light grey. Very stiff. Moist, low plasticity.

At 1.0m: Becomes orangish brown, streaked light grey.

Clayey SILT; orangish brown, mottled light grey. Very stiff, wet, low plasticity.

Silty CLAY; reddish brown, streaked orangish brown. Very stiff, moist, high plasticity.

Clayey SILT; light reddish brown, mottled dark orangish brown and light grey. Very stiff, wet, low plasticity.

At 2.9m: Becomes dark orangish brown, mottled whitish grey and reddish brown. Trace fine grained, weakly cemented gravel.

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
4	201	46
	231	
6	194	33
3	132	46
5	152	30
8	161	20
7	171	23
4	115	30

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH23

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown. Firm, saturated, low plasticity. [TOPSOIL]

Clayey SILT; orangish brown, mottled dark greyish brown. Stiff, wet, high plasticity. [WAIPAPA GROUP]

Silty CLAY; yellowish brown. Very stiff, wet, high plasticity.

CLAY; yellowish brown. Very stiff, wet, high plasticity.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Depth (m)	Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
0.5	26	168	7
1.0	11	214	20
1.5	2	178	82
2.0	4	221	53
2.5		231	
3.0	2	214	99

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH24

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; brownish grey. Firm, moist to wet, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown to orangish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.6m: Becomes moist to wet.

From 1.0m: Becomes light yellowish brown, streaked brownish red, light greyish white and brownish orange.

From 1.5m: Becomes light brownish orange, mottled light grey.

From 1.9m: Becomes pink to brownish pink, mottled white.

Clayey SILT; light pinkish brown, mottled whit and brownish orange. Very stiff, moist, medium plasticity.

From 2.4m: Becomes pink, mottled white, light yellowish brown and brownish orange. Moist to wet.

SILT, some clay; orangish brown to brownish orange, streaked black and white. Very stiff, moist to wet, low plasticity.

Clayey SILT; pink, mottled white and brownish orange. Very stiff, moist to wet, medium plasticity.

Sandy SILT; brownish orange to dark orange, streaked pink and black. Very stiff, moist to wet, no plasticity. Sand: fine to medium grained.

Clayey SILT; pink, mottled white and brownish orange. Very stiff, moist to wet, medium plasticity.

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
4	155	43
3	148	54
2	179	75
5	152	29
4	110	26
4	151	43
4	110	32
6	201	34

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH25

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, some clay; dark greyish brown. Firm, saturated, low plasticity. [TOPSOIL]

Silty CLAY; orangish brown, streaked light grey and light greyish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

CLAY; light grey, streaked orangish brown. Very stiff, wet, high plasticity.

Silty CLAY; whitish grey, streaked orangish brown. Stiff, saturated, high plasticity.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater measured at 0.5mbgl.

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
3	198	59
3	168	63
3	112	43
4	102	23
3	86	30
2	102	43

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater measured at 0.5mbgl. Water seepage from 2.0m.

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Borehole Log - BH26

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown. Firm, moist to wet, low plasticity. Rootlets. [TOPSOIL]

Silty CLAY; yellowish brown, streaked greyish brown. Very stiff, moist, high plasticity. [INFERRED COLLUVIUM]

Silty CLAY; minor fine gravel; reddish brown, mottled orangish brown and light grey. Very stiff, moist, high plasticity. Gravel: weakly cemented.

From 1.2m: No gravel.

At 1.8m: Some fine gravel, some clay seams; light grey. Saturated.

CLAY; light grey, streaked orangish brown. Very stiff, saturated, high plasticity. [TAURANGA GROUP (Alluvium)]

At 2.4m: Some black organic streaks.

CLAY, some peat streaks; brown, streaked black. Firm to stiff, saturated, high plasticity. Organic odour.

End of Hole at 3.0m (Target depth)



Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	T.S.		Groundwater measured at 1.4mbgl.	3	181 / 66	0 5 10 15 20
0.5	INFERRED COLLUVIUM			3	188 / 66	
1.0				3	168 / 53	
1.5				2	168 / 76	
2.0	TAURANGA GROUP			22	72 / 3	
2.5				5	79 / 16	
3.0						
3.5						
4.0						
4.5						

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater measured at 1.4mbgl.

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Borehole Log - BH27

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, minor clay; dark brown. Firm, wet, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown, streaked brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.9m: Becomes yellowish brown, streaked reddish brown and light grey.

From 1.2m: Becomes reddish brown, streaked light grey and orangish brown.

From 1.7m: Becomes orangish brown.

Clayey SILT; light pinkish brown, streaked dark orangish brown. Very stiff, wet, low plasticity.

From 2.4m: Becomes whitish grey, streaked dark orangish brown.

From 3.0m to 3.1m: Becomes orangish brown with dark orangish brown staining (limonite).

End of Hole at 4.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
3	227	72
2	181	76
2	165	69
3	107	33
	231	
4	194	46
	231	
	231	

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH28

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, minor clay; dark greyish brown. Firm, wet, low plasticity. [TOPSOIL]

Clayey SILT, minor fine gravel; orangish brown, streaked dark orangish brown Stiff, wet, low plasticity. [WAIPAPA GROUP]

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity.

At 1.1m: Becomes yellowish brown, streaked reddish brown.

At 1.6m: Becomes yellowish brown and reddish brown, streaked dark orangish brown.

Clayey SILT; orangish brown and reddish brown, mottled light grey. Very stiff, wet, low plasticity.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S., WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	
3	214	63
	231	
	231	
3	178	63
5	128	26
6	145	26

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH29

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, minor clay; brown, mottled orange. Firm, wet, low plasticity. Rootlets. [Topsoil]

Clayey SILT; light orange, streaked light brownish grey and orange. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

SILT, some clay, trace fine gravel; light orange, mottled pinkish orange. Very stiff, moist, medium to low plasticity.

From 1.0m: Becomes pinkish red, streaked light orange and red.

Clayey SILT; light orange and light pinkish red. Very stiff, moist, medium plasticity.

SILT, some clay; light greyish white and orangish red. Very stiff, moist to wet, low plasticity.

From 2.0m: Becomes light pink and white, streaked orange.

From 2.3m: Becomes orangish red, mottled white, streaked dark orange.

From 2.6m: Becomes orange and white, mottled red. Wet.

From 2.8m: Becomes light pink and pinkish white, streaked orange.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. (Topsoil); WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 3, UTP, 2, 3, 4, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): 161 / 49; 141 / 57; 92 / 29; 132 / 34; 103 / 37

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH30

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; dark greyish brown. Firm, moist to wet, no plasticity. [TOPSOIL]

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.5m: Becomes mottled orangish brown.

From 0.9m: Becomes orangish brown to brownish orange.

***Clayey SILT**, trace fine gravel; brownish orange, mottled white and dark orange. Very stiff, wet, low plasticity.*

From 1.5m: No gravel. Medium plasticity.

SILT, minor clay; white. Very stiff, wet, no to low plasticity.

At 2.0m: No clay, minor fine sand; dark brownish orange.
At 2.1m: Becomes white, mottled black and light orange. Moist to wet.

At 2.4m: Becomes mottled orange.
From 2.5m: Becomes light brownish orange and white.

From 2.8m: Minor fine to medium sand.

From 3.3m to 3.4m: Becomes mottled dark orange.
From 3.4m: Trace orange mottles.

From 3.9m: Becomes dark orange and brownish orange mottled white.

End of Hole at 4.0m (Target depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	T.S.		Groundwater not encountered	14	201	0 5 10 15 20
0.5	WAIPAPA GROUP				201	
1.0					201	
1.5				8	155 / 11	
2.0				6	196 / 26	
2.5				7	201 / 32	
3.0				7	188 / 29	
3.5				6	135 / 19	
4.0					201 / 34	
4.5						



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH31

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; greyish brown. Stiff, moist, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown, streaked greyish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.5m: Trace fine gravel; white. Weakly cemented clasts.

From 1.0m: Minor reddish brown streaks.

Clayey SILT; light grey, streaked orangish brown. Very stiff, moist, low plasticity.

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity.

From 3.3m: Becomes yellowish brown, streaked reddish brown.

From 3.7m: Minor dark orangish brown silt bands with trace fine gravel, weakly cemented.

Clayey SILT; light orangish brown, mottled light grey and dark orangish brown. Stiff, saturated, low plasticity.

From 4.5m: Becomes orangish brown and whitish grey.

End of Hole at 5.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 3, 3, 2, 4, 4

Vane Shear and Remoulded Vane Shear Strengths (kPa): 155, 56; 181, 72; 231; 184, 112; 231; 231; 231; 231; 122, 33; 135, 33

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH32

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	05/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	05/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Crushed oyster shell and fine to medium gravel. [FILL]

Clayey SILT, minor fine to medium gravel; dark brown, light brown and grey intermixed. Stiff, wet, low plasticity. [FILL]

Clayey SILT; dark greyish brown. Very stiff, moist, high plasticity.

CLAY; light greyish brown, streaked dark brown. Very stiff, wet, high plasticity. [TAURANGA GROUP]

From 1.0m: Becomes light greyish brown and grey. Stiff.

From 1.2m: Becomes light grey, streaked minor orangish brown.

From 2.4m: Becomes light greyish brown.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; TAURANGA GROUP

Graphic Log

Water Level: Groundwater at 1.0 m

Sensitivity: 4, 16, 18, 9, 3, 2

Vane Shear and Remoulded Vane Shear Strengths (kPa)

Corrected	Remoulded
178	49
130	8
173	10
211	23
99	33
102	43

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH33

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; reddish brown and brown. Moist. Friable. [FILL]

SILT, trace clay; dark greyish brown. Stiff, moist, low plasticity.

Silty CLAY, trace fine gravel; grey, streaked orangish brown. Stiff, moist to wet, high plasticity. [TAURANGA GROUP]

CLAY; orangish brown, streaked light grey. Stiff, wet, high plasticity.

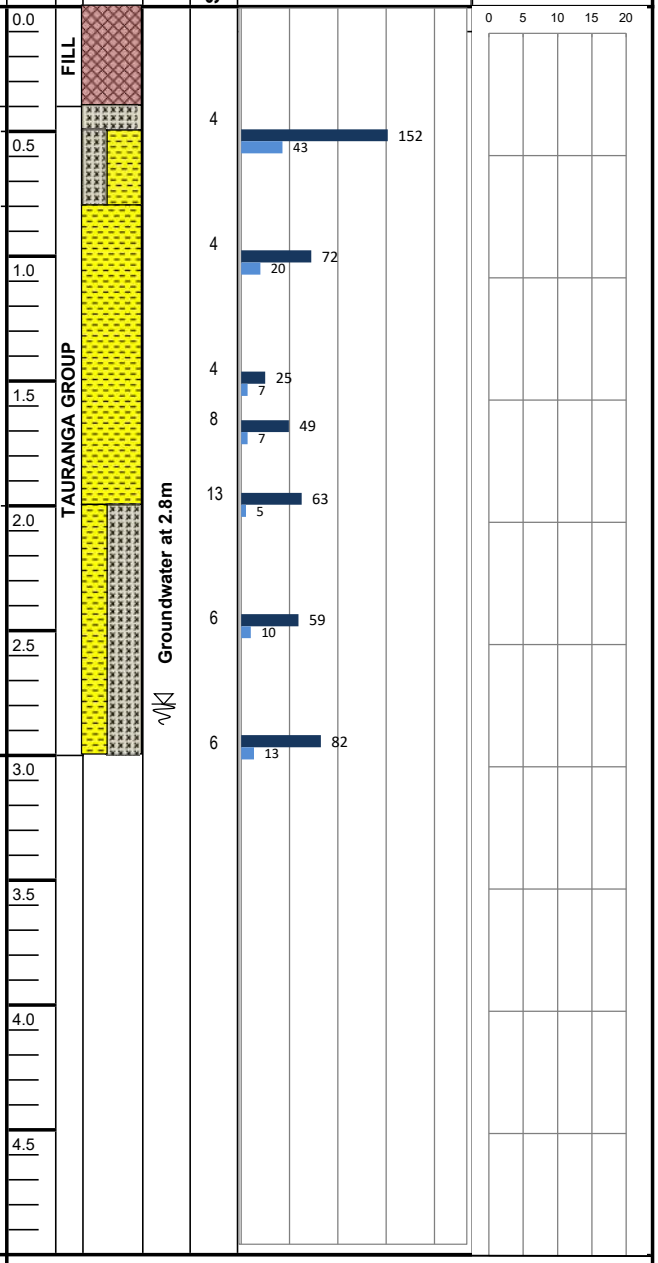
From 1.4m: Becomes whitish grey, streaked brown. Trace decaying organics. Gravel absent. Soft to firm.

Clayey SILT, minor fine gravel; orangish brown, streaked light grey. Firm, wet, low plasticity.

From 2.4m: Becomes whitish grey and dark orangish brown. Gravel absent.

End of Hole at 3.0m (Target depth)





LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH34

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	31/07/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown. Moist, low plasticity. [TOPSOIL]

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.9m: Becomes streaked orangish brown.

From 1.8m: Becomes orangish brown, streaked light orangish brown. Minor light grey weakly cemented clasts.

Clayey SILT; orangish brown, mottled reddish brown and light grey. Stiff, wet, low plasticity.

From 2.7m: Becomes trace fine weakly cemented clasts.

From 2.9m: Becomes no weakly cemented clasts.

From 3.5m: Becomes pinkish brown, streaked orangish brown and light grey.

End of Hole at 5.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
3	194	66
	231	
2	161	76
2	105	53
3	79	30
4	102	26
3	89	33
3	79	26
3	112	36
3	128	49

Scala Penetrometer (blows/100mm): 0 5 10 15 20



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH35

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	06/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	06/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

Clayey SILT, trace fine gravel; orangish brown, brown, white, light grey intermixed. Stiff, moist, low to medium plasticity. [FILL]

SILT; dark greyish brown. Stiff, moist, low plasticity. [BURIED TOPSOIL]

Silty CLAY; orangish brown to yellowish brown. Very stiff, moist, high plasticity. [TAURANGA GROUP]

From 1.2m: Becomes light yellowish brown to light orangish brown, mottled light green.

CLAY; light green, mottled light orange. Very stiff, moist, high plasticity. Trace fine rootlets.

From 2.0m: Becomes stiff, moist to wet.

From 3.2m: Becomes trace fine sand, some silt. Firm to stiff, wet.

Silty CLAY, trace coarse sand to fine gravel; light grey, mottled black, grey and brown. Stiff, wet, high plasticity. Trace amorphous organics.

From 3.9m: Trace orange mottles.

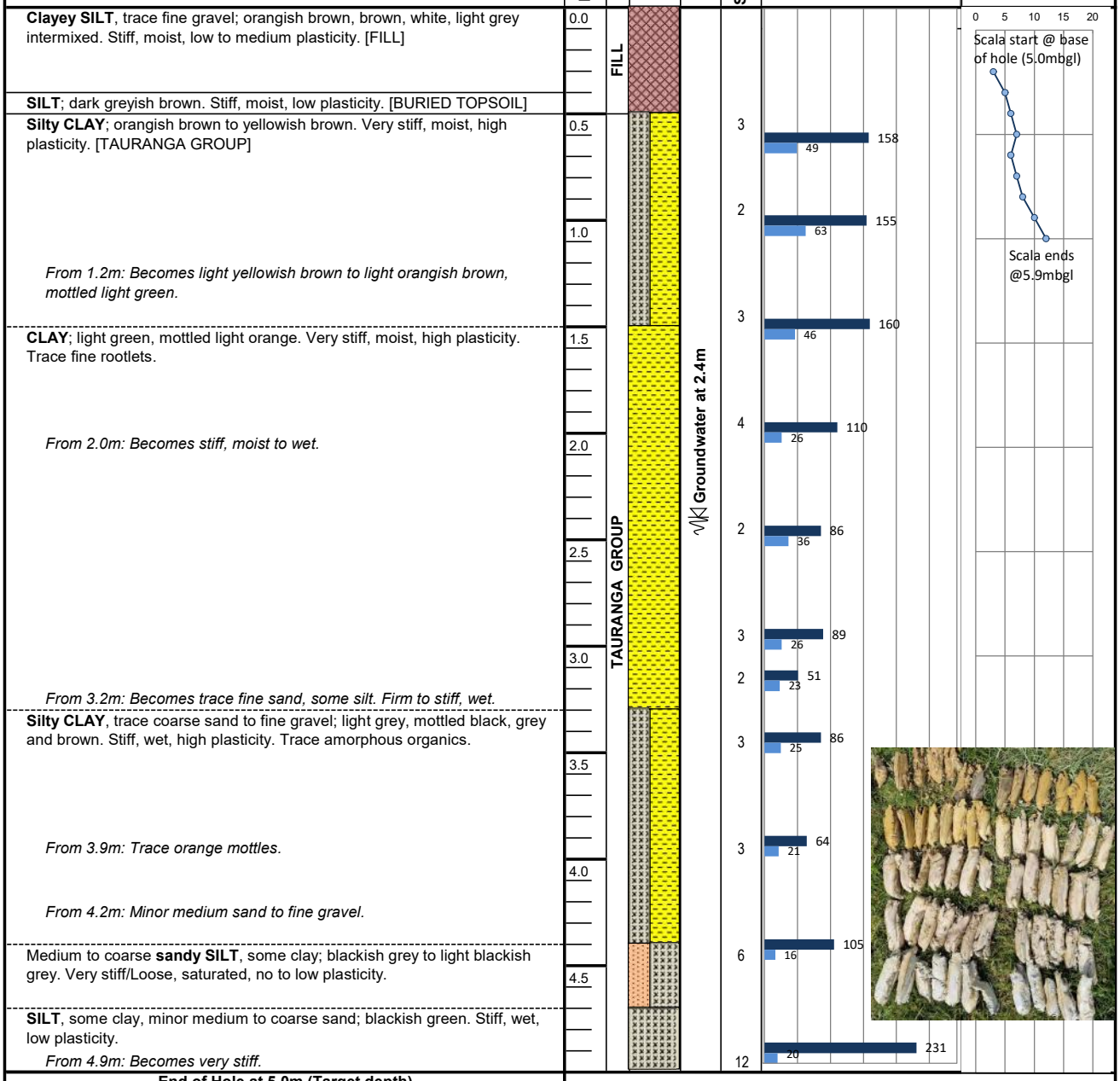
From 4.2m: Minor medium sand to fine gravel.

Medium to coarse **sandy SILT**, some clay; blackish grey to light blackish grey. Very stiff/Loose, saturated, no to low plasticity.

SILT, some clay, minor medium to coarse sand; blackish green. Stiff, wet, low plasticity.

From 4.9m: Becomes very stiff.

End of Hole at 5.0m (Target depth)



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH36

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	06/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	06/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, trace clay; reddish brown. Stiff, moist, no to low plasticity. [TOPSOIL]

SILT, some clay; greenish brown and black. Firm, moist, low plasticity. [FILL]

From 0.45m: Becomes intermixed with silty clay.

Clayey SILT; light greenish brown to light yellowish brown, mottled black. Soft, moist to wet, medium plasticity. [FILL]

Clayey SILT, minor coarse sand to fine gravel; light grey, mottled light orange. Very stiff, moist to wet, medium plasticity. [WAIPAPA GROUP]

From 1.2m: Fine to medium gravel silt, some clay band; light grey, mottled light orange. Low plasticity.

Clayey SILT, minor fine to coarse sand; light grey, mottled light orange. Very stiff, moist to wet, medium plasticity.

SILT, trace fine sand; light grey, trace mottled orange. Hard, moist, no to low plasticity.

End of Hole at 2.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater at 1.7m

Sensitivity: 5, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): 105, 23, 171, 56, 231

Scala Penetrometer (blows/100mm): 0, 10, 20, 30

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH37

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	06/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	06/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; reddish brown. Firm, moist, no plasticity.[FILL]

SILT, some clay; dark brownish green and dark green. Firm, moist to wet, low plasticity. [FILL]

From 0.4m: Becomes intermixed with silty clay.

Silty CLAY, brownish orange and light grey to brownish grey. Very stiff, moist, medium to high plasticity. [TAURANGA GROUP]

From 0.8m: Minor fine to medium sand.
From 0.9m: Becomes light grey, mottled orange.

CLAY; light grey, mottled light orange. Stiff, moist to wet, high plasticity.

From 1.8m: Becomes wet.
From 1.9m: Becomes firm, water seepage.

Silty CLAY; brownish orange and light green. Firm, wet, medium plasticity.

Silty CLAY; light orange, mottled light green and dark orange. Stiff, wet, medium to high plasticity. [WAIPAPA GROUP]

From 2.8m: Becomes dark orange.

From 3.0m: Becomes light grey, pink, orange and dark orange.

Clayey SILT; light orange, mottled light grey and dark orange. Stiff, wet, medium plasticity.

From 3.5m: Trace fine to medium sand.



From 4.1m: Trace fine gravel.

From 4.3m: No gravel.

From 4.5m: Becomes Very stiff.

End of Hole at 4.9m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: FILL; TAURANGA GROUP; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater at 1.8 m

Sensitivity	Vane Shear (kPa)	Remoulded Vane Shear (kPa)
3	158	49
3	128	40
9	91	10
9	56	7
3	132	49
3	125	44
5	138	26
40	132	3
4	168	41
8	166	20

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH38

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JMC
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; dark greyish brown. Friable. Rootlets. [TOPSOIL]

Silty CLAY; yellowish brown, streaked greyish brown. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

From 0.7m: Trace fine gravel; white, weakly cemented.
From 0.8m: Becomes orangish brown, streaked yellowish brown.

From 1.4m: Becomes light yellowish brown, streaked light grey.

Clayey SILT; light whitish grey, streaked dark orangish brown and pink. Very stiff, moist, low plasticity.

From 2.0m: becomes pinkish brown, streaked light grey and dark orangish brown.

From 2.5m: Becomes light whitish grey, streaked dark orangish brown.

From 3.5m: Becomes streaked pinkish brown.

From 4.0m: No pinkish brown streaks.



End of Hole at 5.0m (Target depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 3, UTP, 3, 4, 4, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): 224, 76, 161, 63, 138, 33, 161, 46, 194, 56, 231, 231, 231, 231

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH39

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	06/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	CN
Date Completed:	06/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; dark brownish grey, mottled orange. Firm, moist, no plasticity. [TOPSOIL]

Silty CLAY, trace fine to medium sand; yelloiwish brown to light orangish brown, mottled orange. Very stiff, moist, high plasticity. [WAIPAPA GROUP]

CLAY, some silt; whitish grey mottled orange brown and reddish brown. Very stiff, moist, high plasticity.

From 1.2m: Becomes whitish grey streaked light orange and yellowish brown.

Clayey SILT; whitish grey, mottled dark brownish orange and orange.

From 2.4m: Becomes mottled pink.

From 3.5m: Becomes moist to wet.



End of Hole at 4.9m (Target depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	TS		Groundwater not encountered	3	204 / 69	0 5 10 15 20
0.5	WAIPAPA GROUP				UTP	
1.0				4	155 / 40	
1.5				5	140 / 30	
2.0				3	142 / 43	
2.5				7	194 / 30	
3.0				7	143 / 20	
3.5				9	198 / 23	
4.0				6	231 / 36	
4.5				7	231 / 33	

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Borehole Log - BH40

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	01/08/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	01/08/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; brown, mottled orange. Stiff, moist, low plasticity. Rootlets. [TOPSOIL]

Silty CLAY; light brownish orange, streaked light brown. Very stiff, moist, medium plasticity. [WAIPAPA GROUP]

From 0.5m: Becomes orange, streaked dark orange.

From 0.9m: Becomes light orange to light brownish orange.

Clayey SILT; light brownish grey to light orange, streaked dark orange. Very stiff, moist, medium plasticity.

From 1.3m: Becomes light orange, mottled orange and white. Trace fine gravel.

SILT, some clay; light brownish orange, streaked orange and whitish grey. Very stiff, moist, low plasticity.

From 1.9m: Becomes greyish white, streaked dark orange.

SILT, minor clay, trace fine gravel; dark orange, mottled white. Very stiff, dry, no plasticity.

From 2.4m: Becomes light whitish grey, mottled orange.

From 2.6m: Becomes moist to wet. No gravel.

From 2.7m: Becomes light orange and whitish grey, streaked orange.

End of Hole at 3.0m (Target depth)



Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: TS; WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered

Sensitivity: 4; 6

Vane Shear and Remoulded Vane Shear Strengths (kPa): 201; UTP; 201; 132; 32; 161; 29; 201

Scala Penetrometer (blows/100mm): 0 5 10 15 20

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 2220
Scala penetrometer testing not undertaken. Groundwater not encountered.

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Test Pit Log - TP01

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	16 Tonne Excavator	**LOGGED BY:**	JMC
Date Completed:	31/07/2024	**TEST PIT SIZE (m)**	2.5m x 0.9m	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; reddish brown. Stiff, moist. Friable. [FILL]
At 0.2m: Geo fabric.

GRAVEL; light grey. Loose, moist. Gravel: medium to coarse grained, angular. [FILL]

Clayey SILT; dark grey. Stiff, moist, medium plasticity. [INFERRED COLLUVIUM]

Silty CLAY; yellowish brown. Very stiff, moist, high plasticity.

Silty CLAY; light grey, streaked orangish brown. Very stiff, moist to wet, high plasticity. Some fibrous organics (old tree roots).

Silty CLAY, minor fine to coarse gravel; reddish brown, speckled yellowish brown and light grey. Very stiff to hard, moist to wet, medium plasticity. Gravel: wite and orangish brown, highly weathered.

At 2.8m: Becomes wet.

Silty CLAY, trace fine gravel; light grey, streaked orangish brown and light orangish brown. Very stiff, moist to wet, high plasticity. [WAIPAPA GROUP]

End of Test Pit at 4.0m (Target depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	FILL		Groundwater not not encountered.	4	99 / 23	0 5 10 15 20
0.5	INFERRED COLLUVIUM			30	189 / 58	
1.0				6	184 / 30	
1.5					231	
2.0						
2.5				4	201 / 46	
3.0	WAIPAPA GROUP					
3.5						
4.0						
4.5						

UTP



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

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Test Pit Log - TP02

Hole Location: Refer to Site Plan

JOB No. 23 020

CLIENT:	Willowridge Developments	**SITE:**	39 Aucks Road, Russell		
Date Started:	31/07/2024	**DRILLING METHOD:**	3 Tonne Excavator	**LOGGED BY:**	JMC
Date Completed:	31/07/2024	**TEST HOLE SIZE**	350mm dia. Auger	**CHECKED BY:**	WT

Soil Description

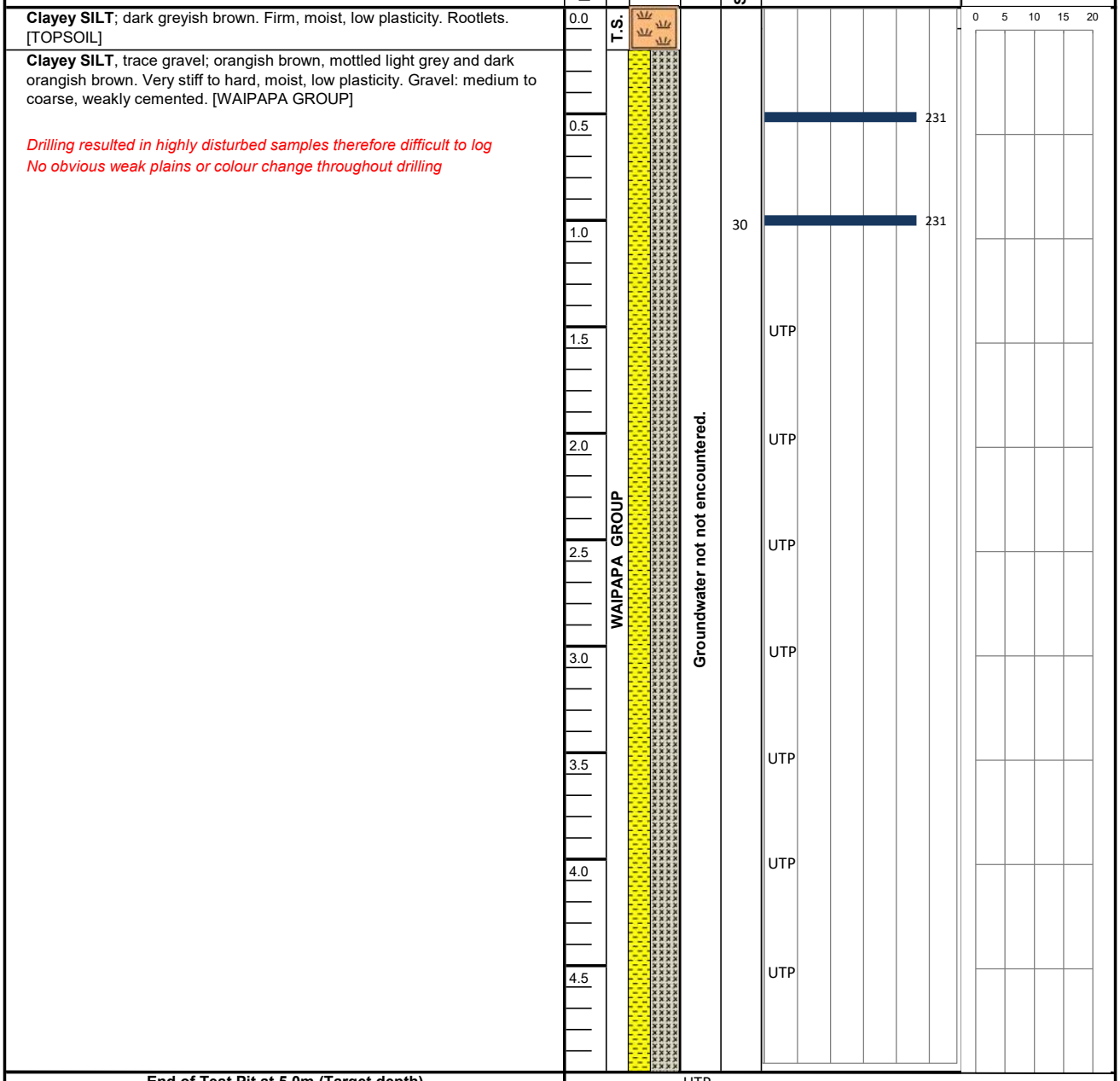
Based on NZGS Logging Guidelines 2005

Clayey SILT; dark greyish brown. Firm, moist, low plasticity. Rootlets. [TOPSOIL]

Clayey SILT, trace gravel; orangish brown, mottled light grey and dark orangish brown. Very stiff to hard, moist, low plasticity. Gravel: medium to coarse, weakly cemented. [WAIPAPA GROUP]

Drilling resulted in highly disturbed samples therefore difficult to log
No obvious weak plains or colour change throughout drilling

End of Test Pit at 5.0m (Target depth)



LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: 440
Scala penetrometer testing not undertaken.

Appendix C – Cone Penetration Test Records

CPT Test Information

Test Hole Number	CPT01	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	6.14
Cone Area Ratio	0.865	Start Recording	10:21:00 AM
Probe Radius	0.0177	Finish Recording	10:44:00 AM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	1.4
Metres To Next Calibration	260	Total Penetration Depth (m)	14.197
Depth of Predrill	0	Test ended due to:	☑ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.06%	0.08%	0.04%
End of test with tip loosened	0.08%	0.02%	0.32%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

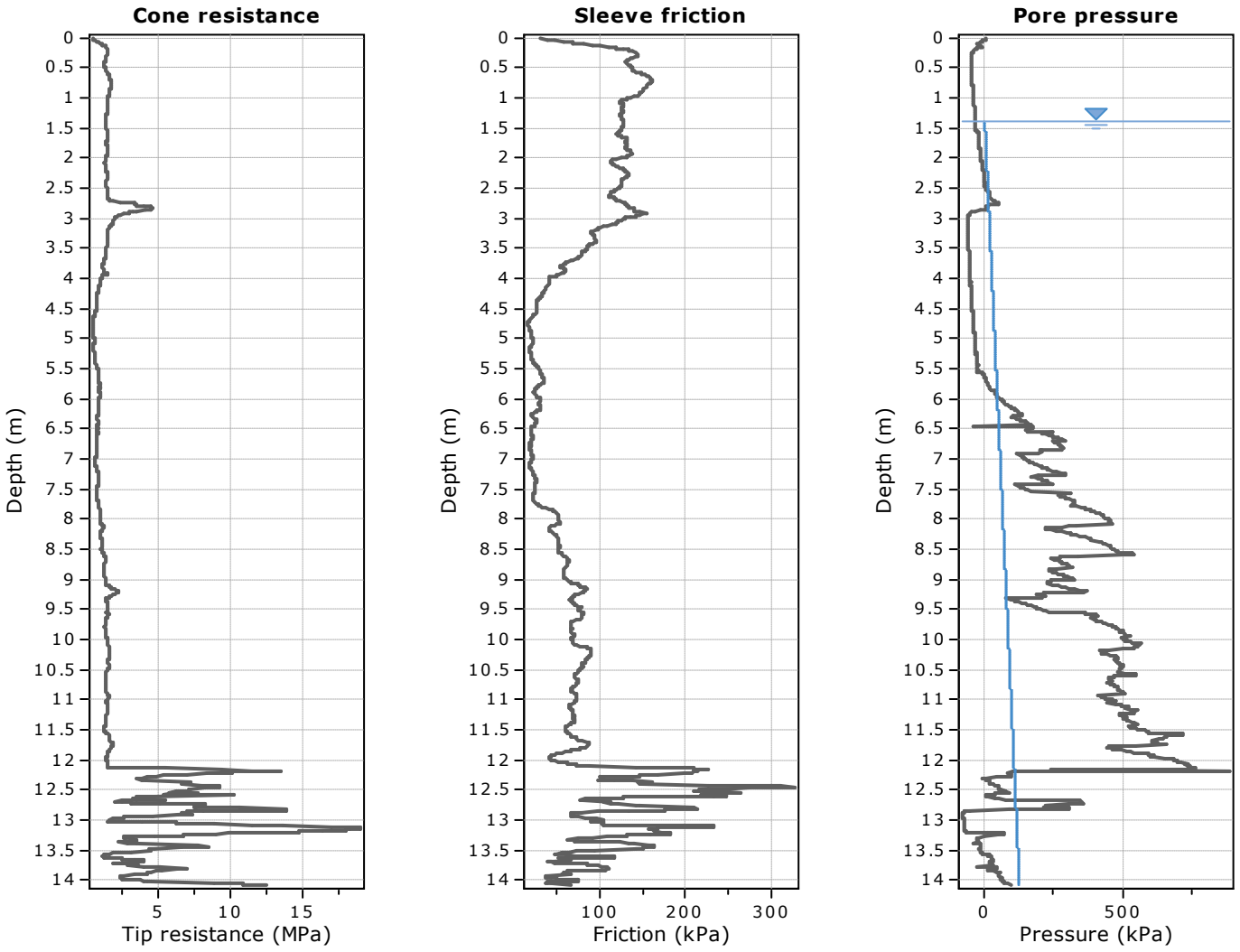
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

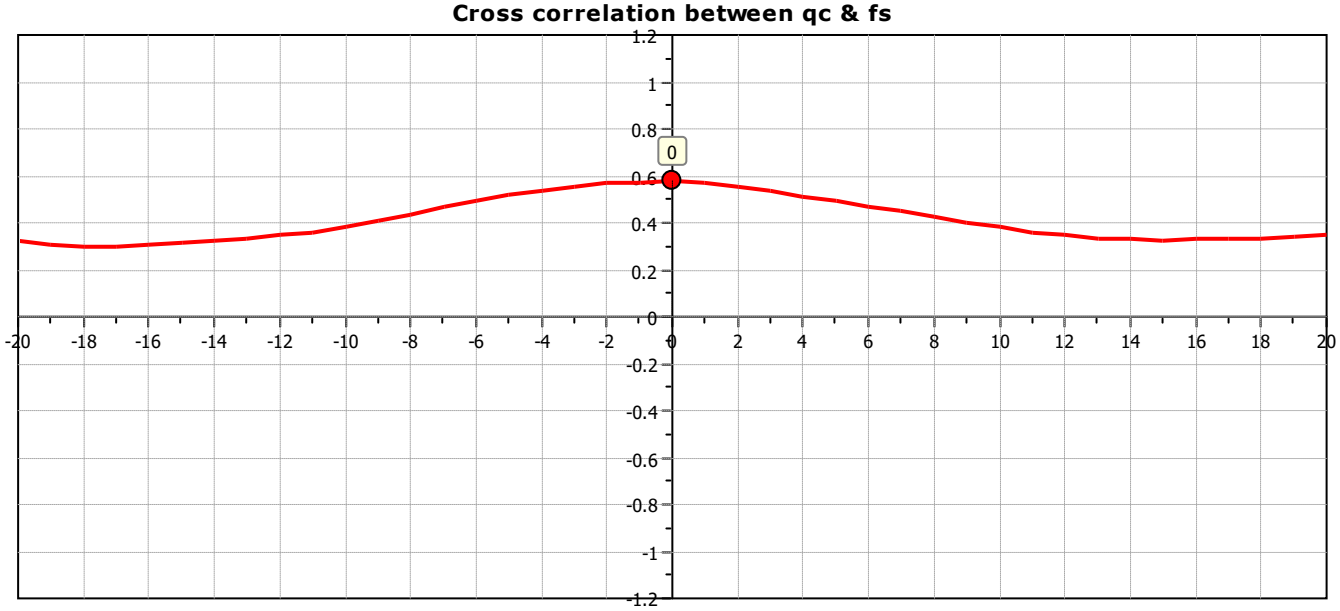
Underground Investigation Ltd
Cone Penetration Testing
craig@undergroundinvestigation.co.nz
+64211473249

Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT01
Total depth: 14.08 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT02	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	6.05
Cone Area Ratio	0.862	Start Recording	11:11:00 AM
Probe Radius	0.0178	Finish Recording	11:29:00 AM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	2.9
Metres To Next Calibration	596	Total Penetration Depth (m)	11.71
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☑ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.05%	0.02%	0.28%
End of test with tip loosened	0.07%	0.00%	0.48%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

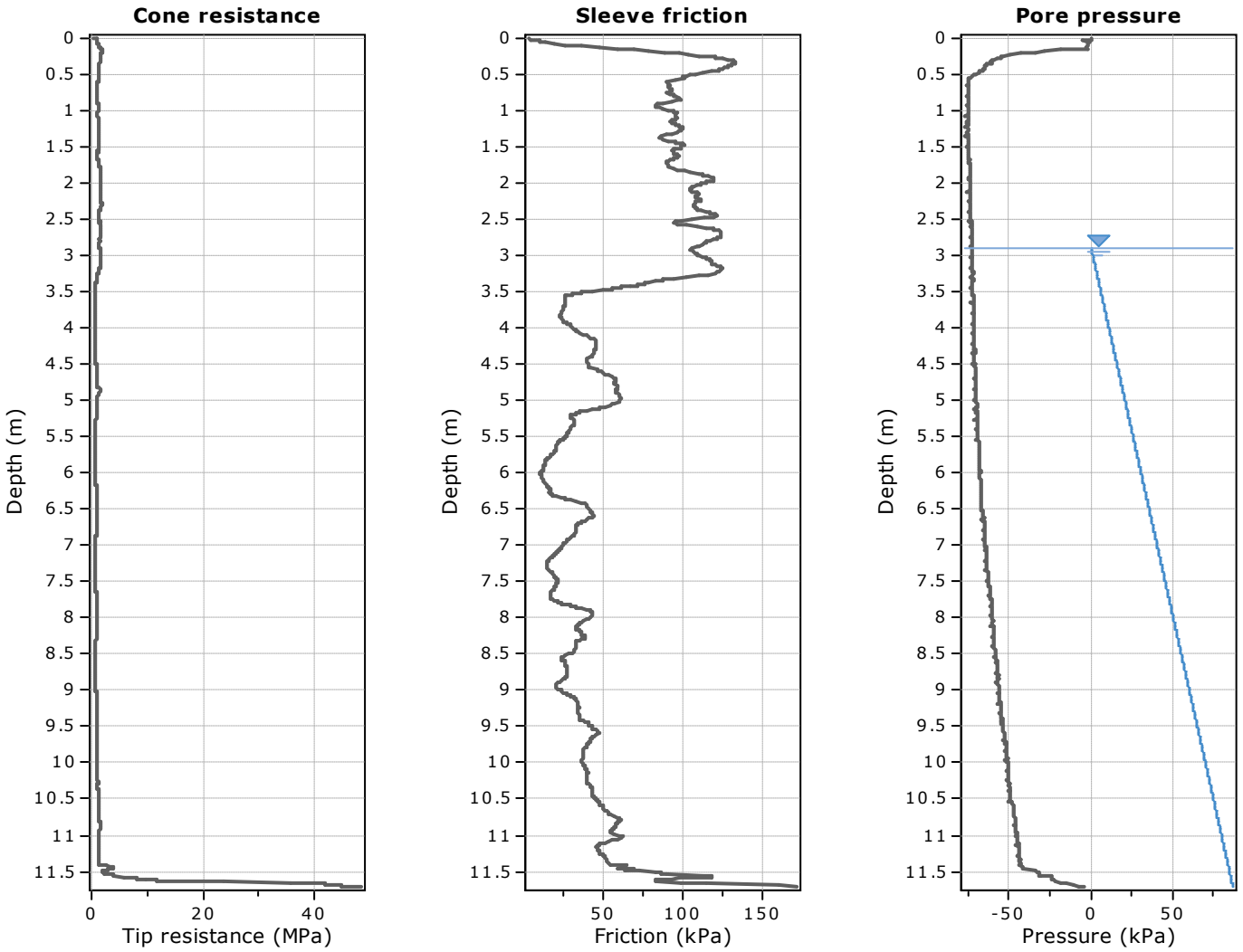
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

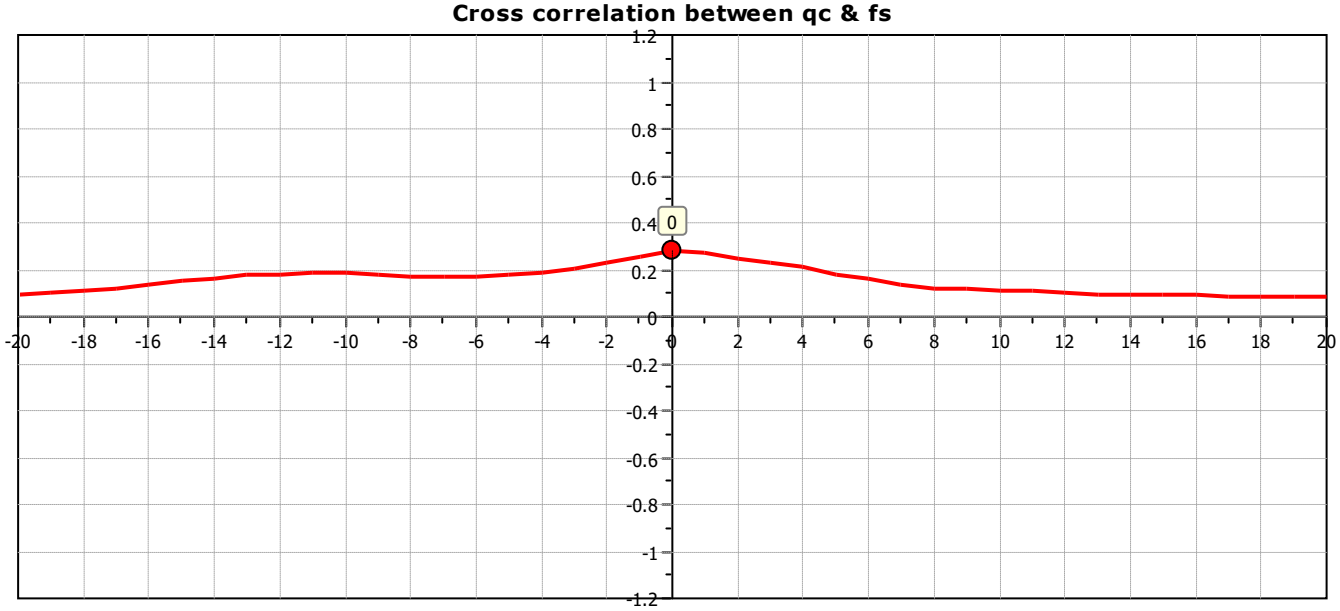
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT02
Total depth: 11.71 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT03	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5801	Battery Voltage Start	5.99
Cone Area Ratio	0.843	Start Recording	11:52:00 AM
Probe Radius	0.0178	Finish Recording	12:15:00 PM
Date of First Push Current Calibration	9/01/2024	Measured Ground Water Depth	3.8
Metres To Next Calibration	880	Total Penetration Depth (m)	14.097
Depth of Predrill	0	Test ended due to:	☑ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☐ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.01%	0.02%	1.00%
End of test with tip loosened	0.07%	0.01%	0.56%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

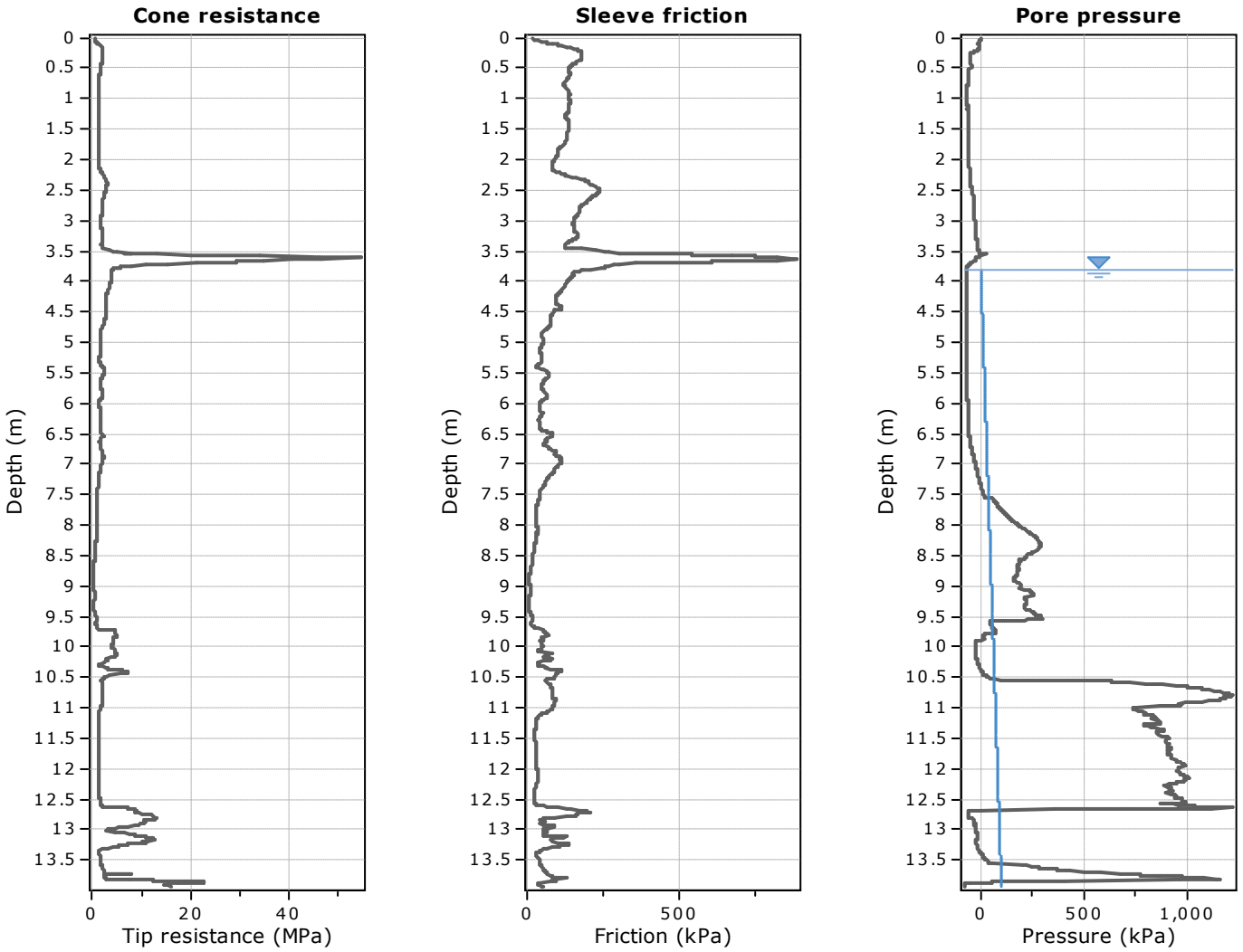
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

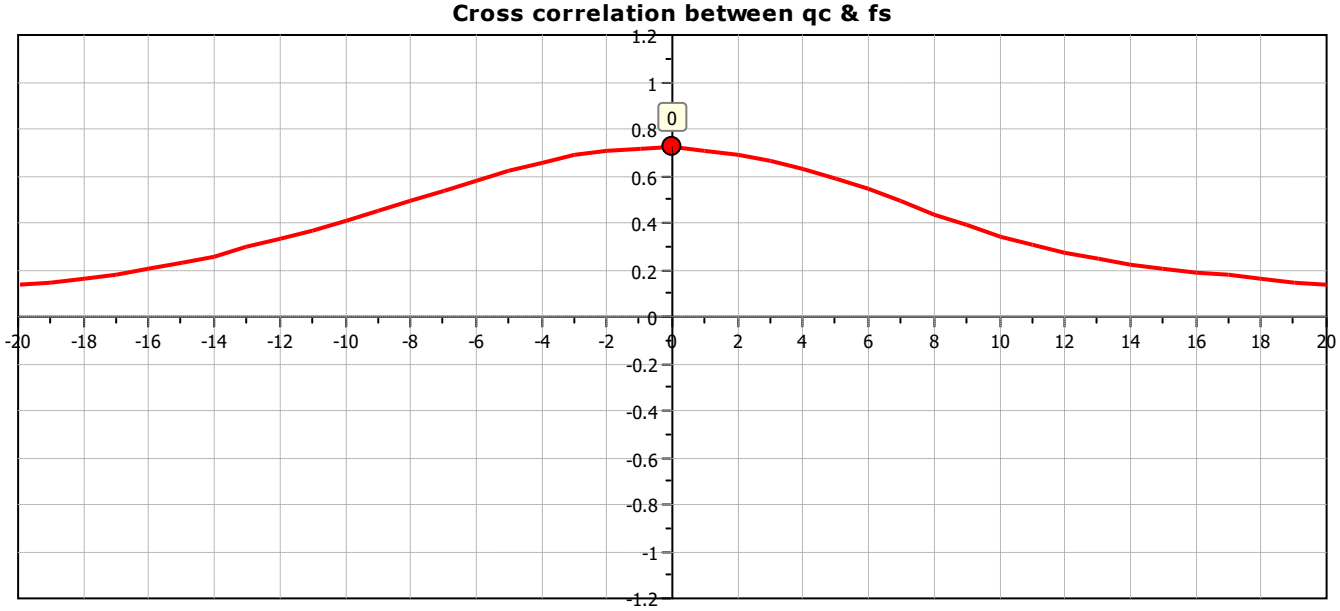
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT03
Total depth: 13.94 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT04	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5845	Battery Voltage Start	5.97
Cone Area Ratio	0.85	Start Recording	1:08:00 PM
Probe Radius	0.0179	Finish Recording	1:34:00 PM
Date of First Push Current Calibration	13/03/2024	Measured Ground Water Depth	2.1
Metres To Next Calibration	1165	Total Penetration Depth (m)	17.325
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.03%	0.08%	0.16%
End of test with tip loosened	0.06%	0.00%	0.70%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

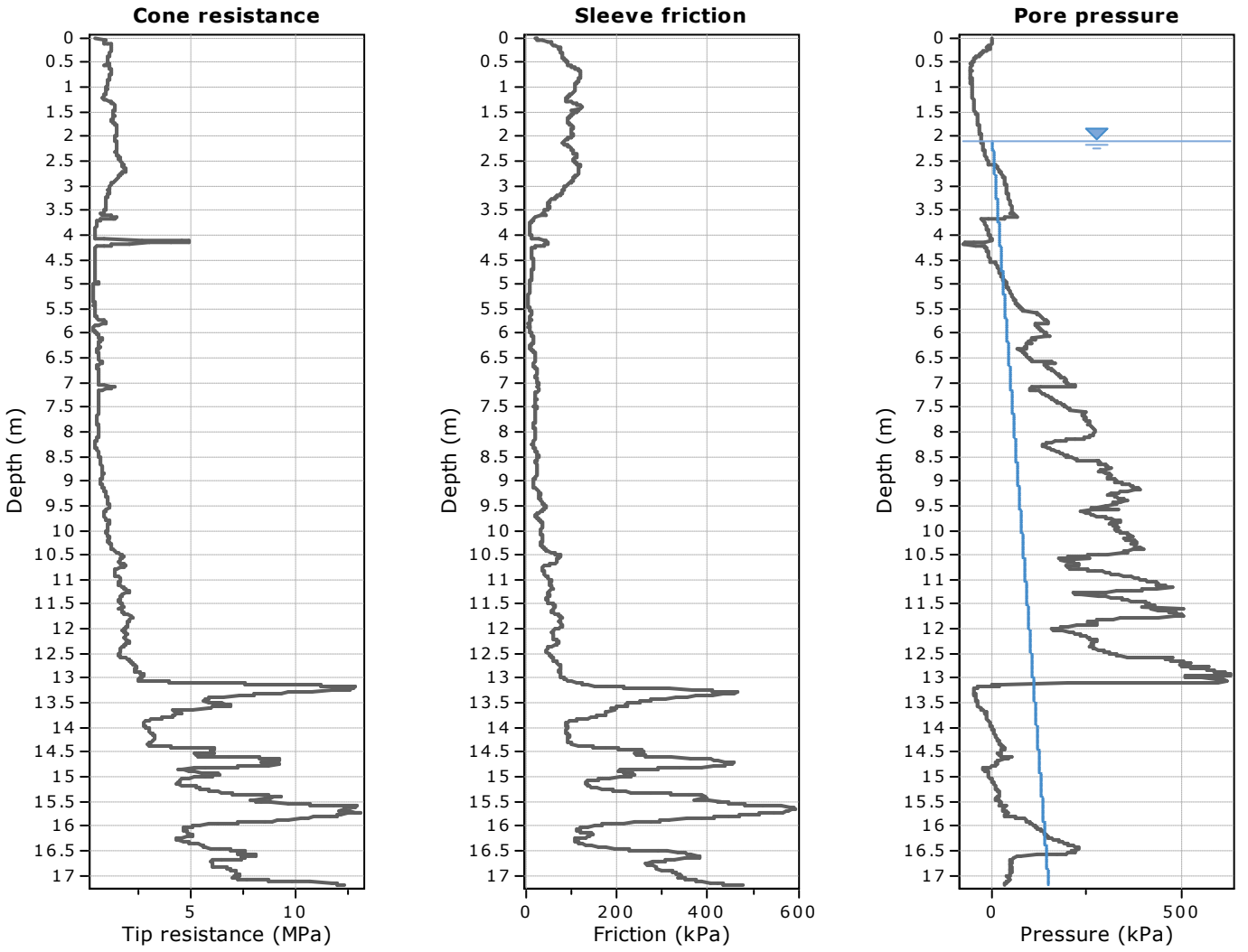
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

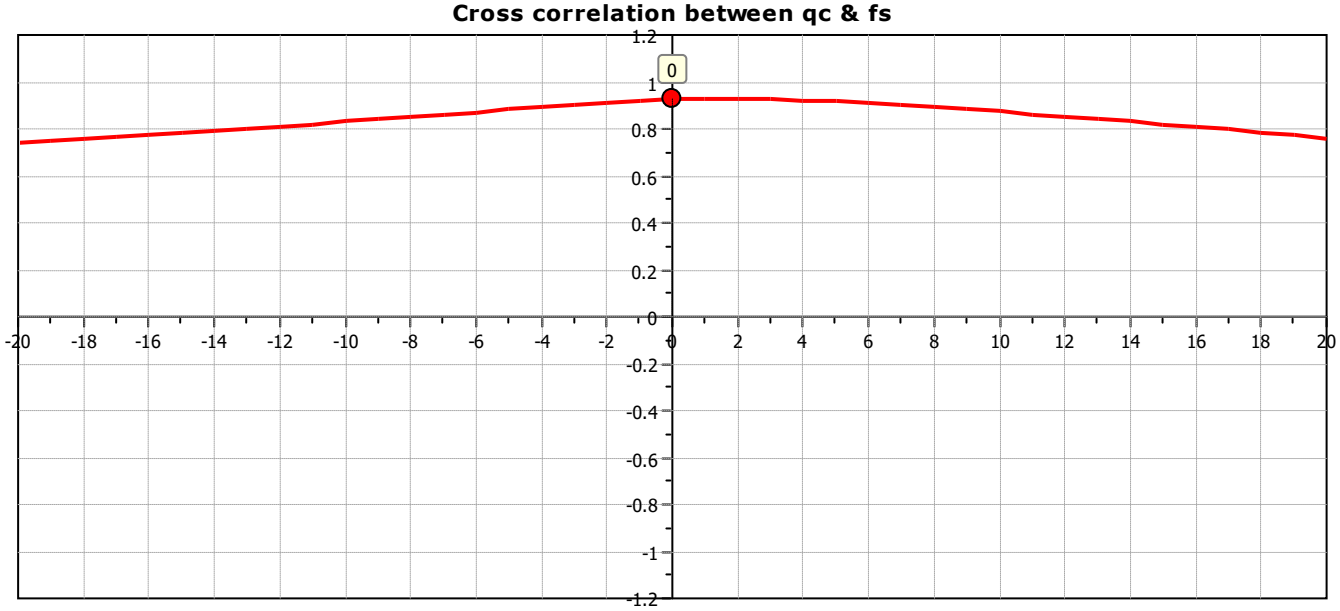
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT04
Total depth: 17.20 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT05	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5959	Battery Voltage Start	5.89
Cone Area Ratio	0.869	Start Recording	1:47:00 PM
Probe Radius	0.0179	Finish Recording	2:21:00 PM
Date of First Push Current Calibration	26/06/2024	Measured Ground Water Depth	2.7
Metres To Next Calibration	1397	Total Penetration Depth (m)	22.102
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.04%	0.01%	0.76%
End of test with tip loosened	0.10%	0.03%	1.26%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged

qc

fs

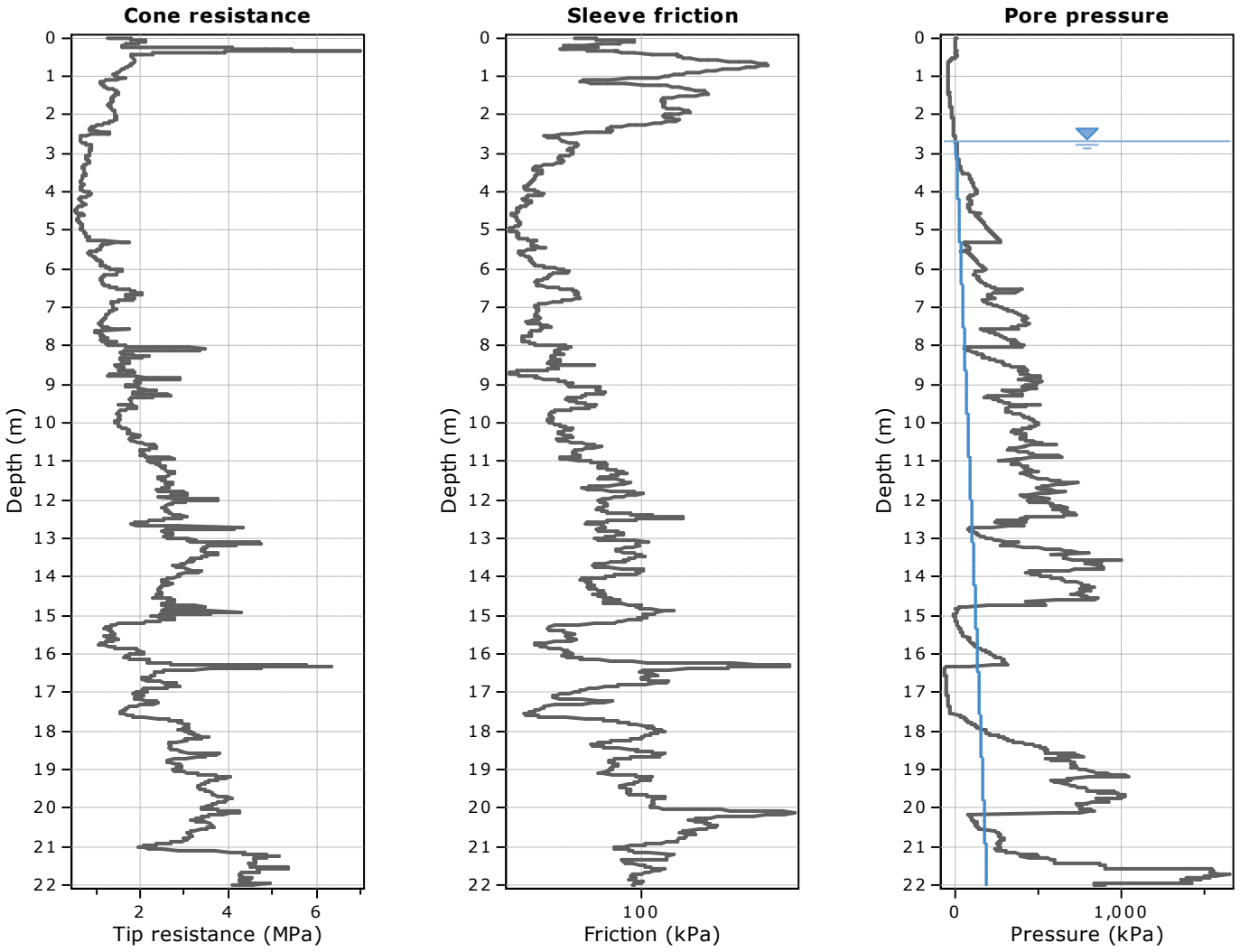
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8.6

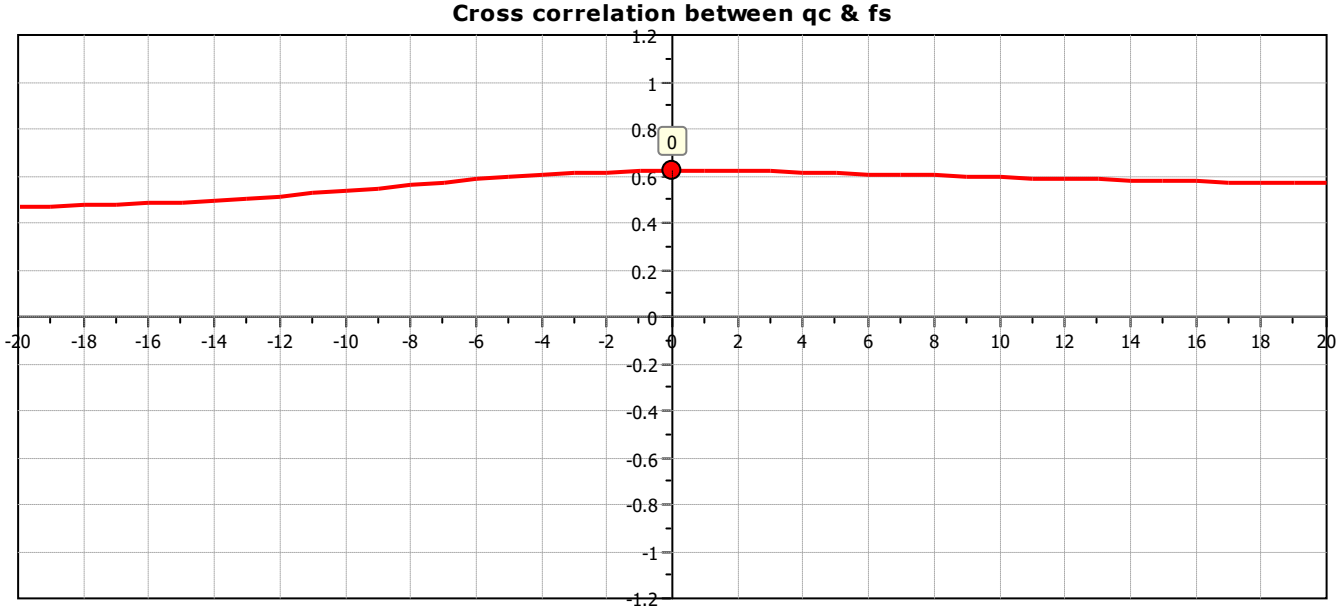
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT05
Total depth: 22.00 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT06	Job Identifier	HW Willowridge
Test Date	29/07/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	5.83
Cone Area Ratio	0.865	Start Recording	2:38:00 PM
Probe Radius	0.0177	Finish Recording	4:02:00 PM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	0.5
Metres To Next Calibration	246	Total Penetration Depth (m)	12.367
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☑ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.05%	0.09%	0.50%
End of test with tip loosened	0.06%	0.00%	0.94%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments
CPT06-D1	3.555	3648	0.14

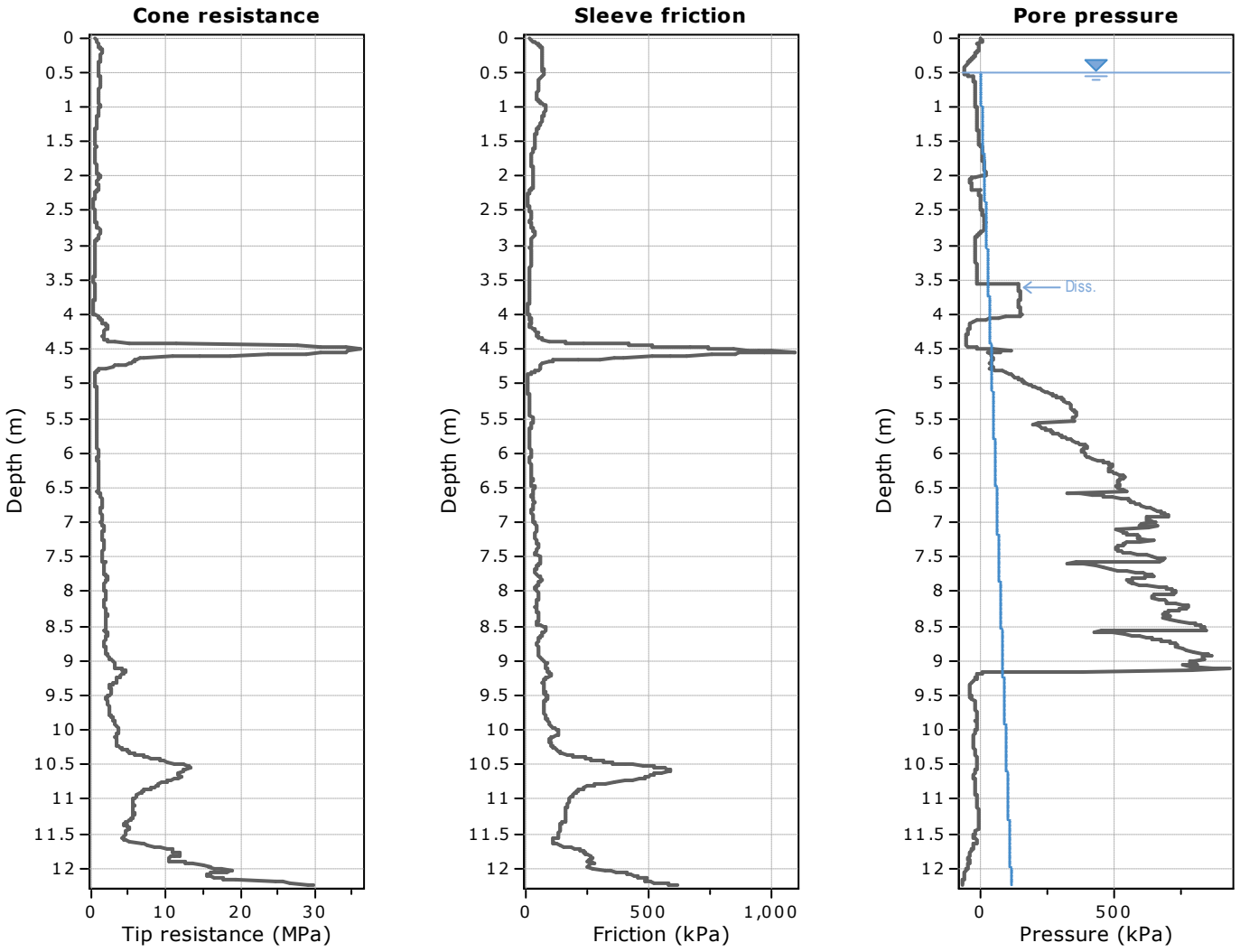
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

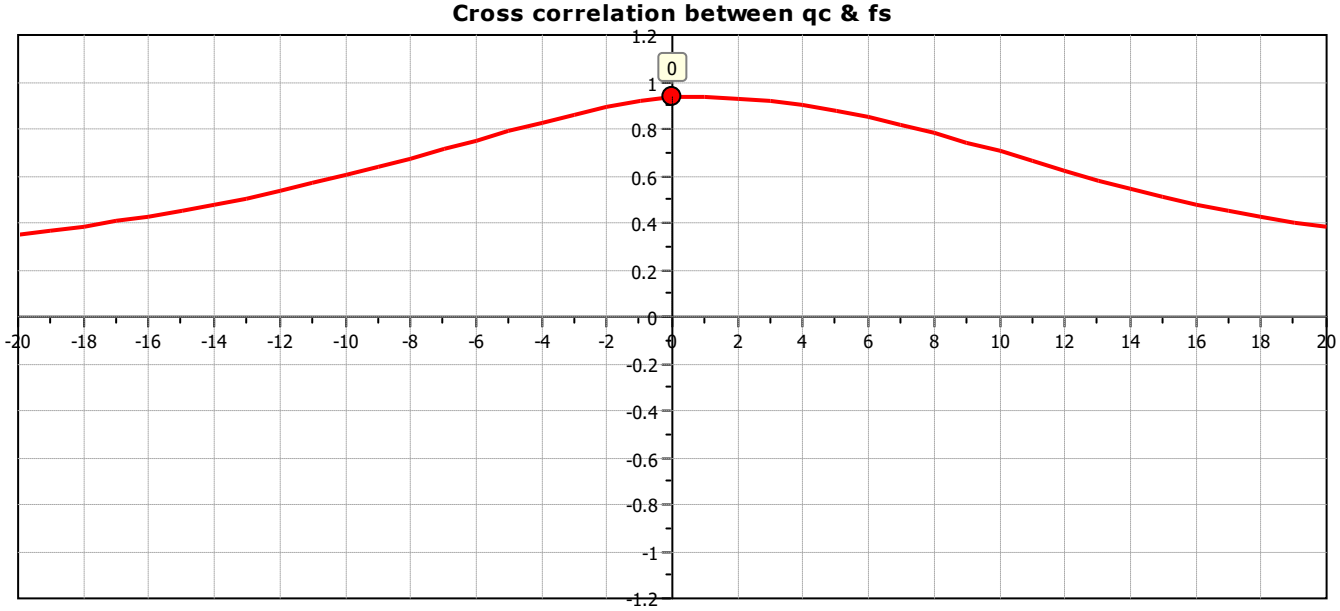
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT06
Total depth: 12.24 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT07	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	5.93
Cone Area Ratio	0.865	Start Recording	9:50:00 AM
Probe Radius	0.0177	Finish Recording	10:35:00 AM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	0.6
Metres To Next Calibration	234	Total Penetration Depth (m)	29.6
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.03%	0.06%	0.16%
End of test with tip loosened	0.07%	0.00%	0.70%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

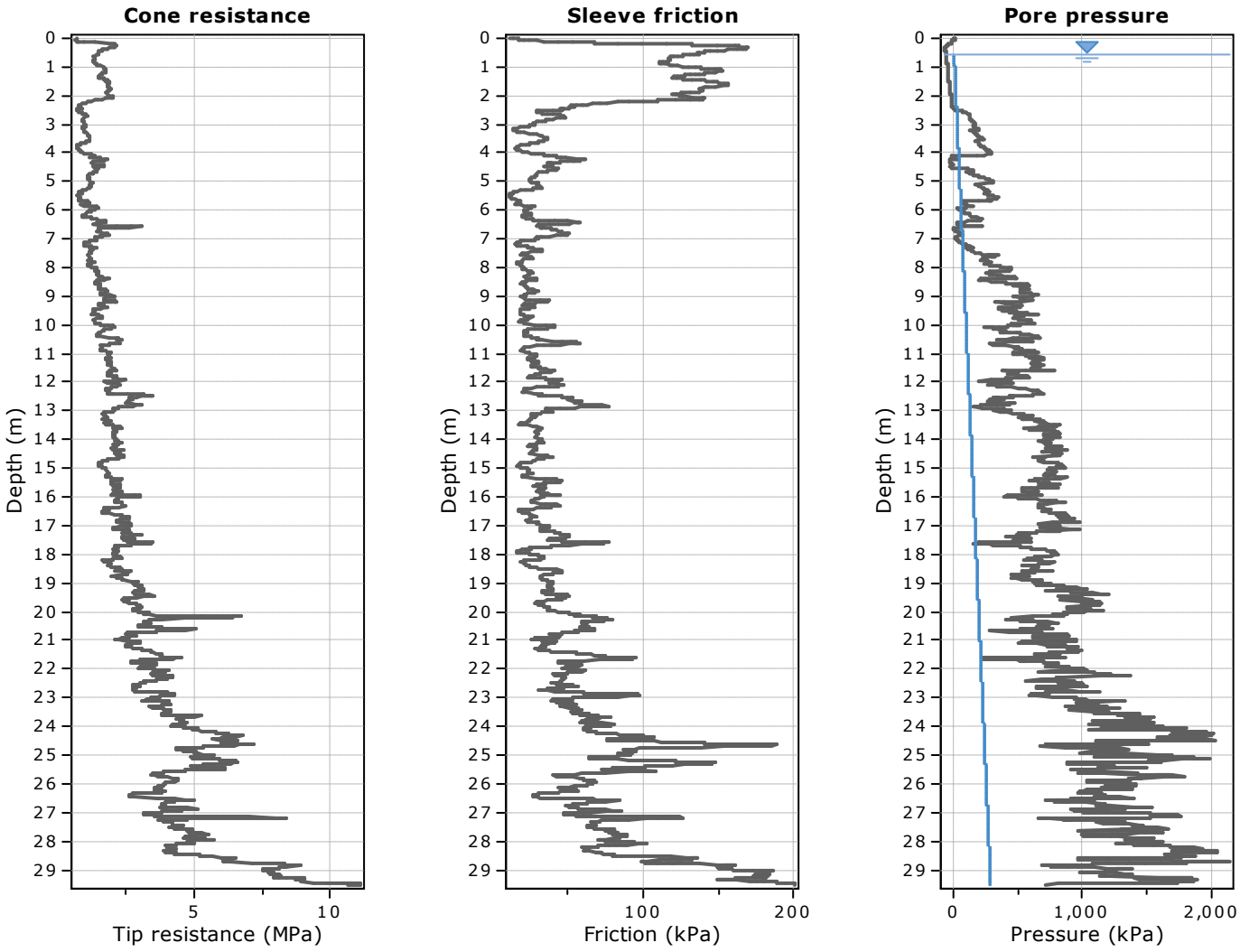
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc 22.3-22.34	fs	u 22.31 23.57

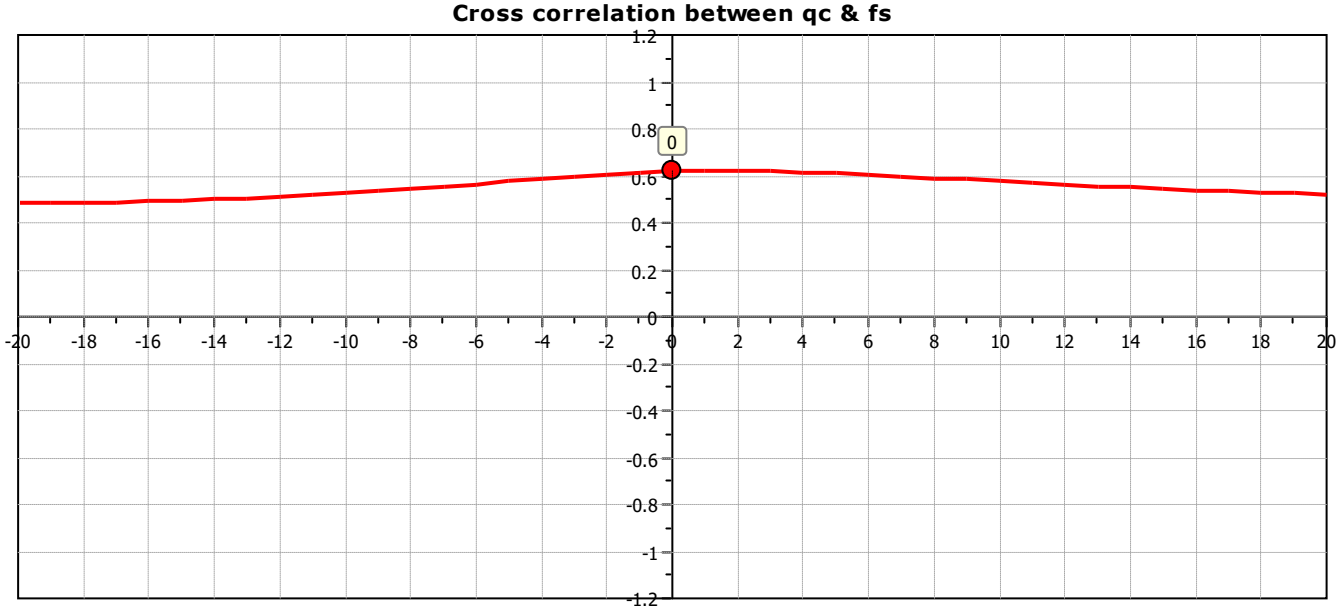
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT07
Total depth: 29.53 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT08	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	5.81
Cone Area Ratio	0.862	Start Recording	10:55:00 AM
Probe Radius	0.0178	Finish Recording	11:27:00 AM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	6.2
Metres To Next Calibration	584	Total Penetration Depth (m)	18.285
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☐ Target Depth
			☑ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.00%	0.01%	0.56%
End of test with tip loosened	0.02%	0.02%	0.12%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

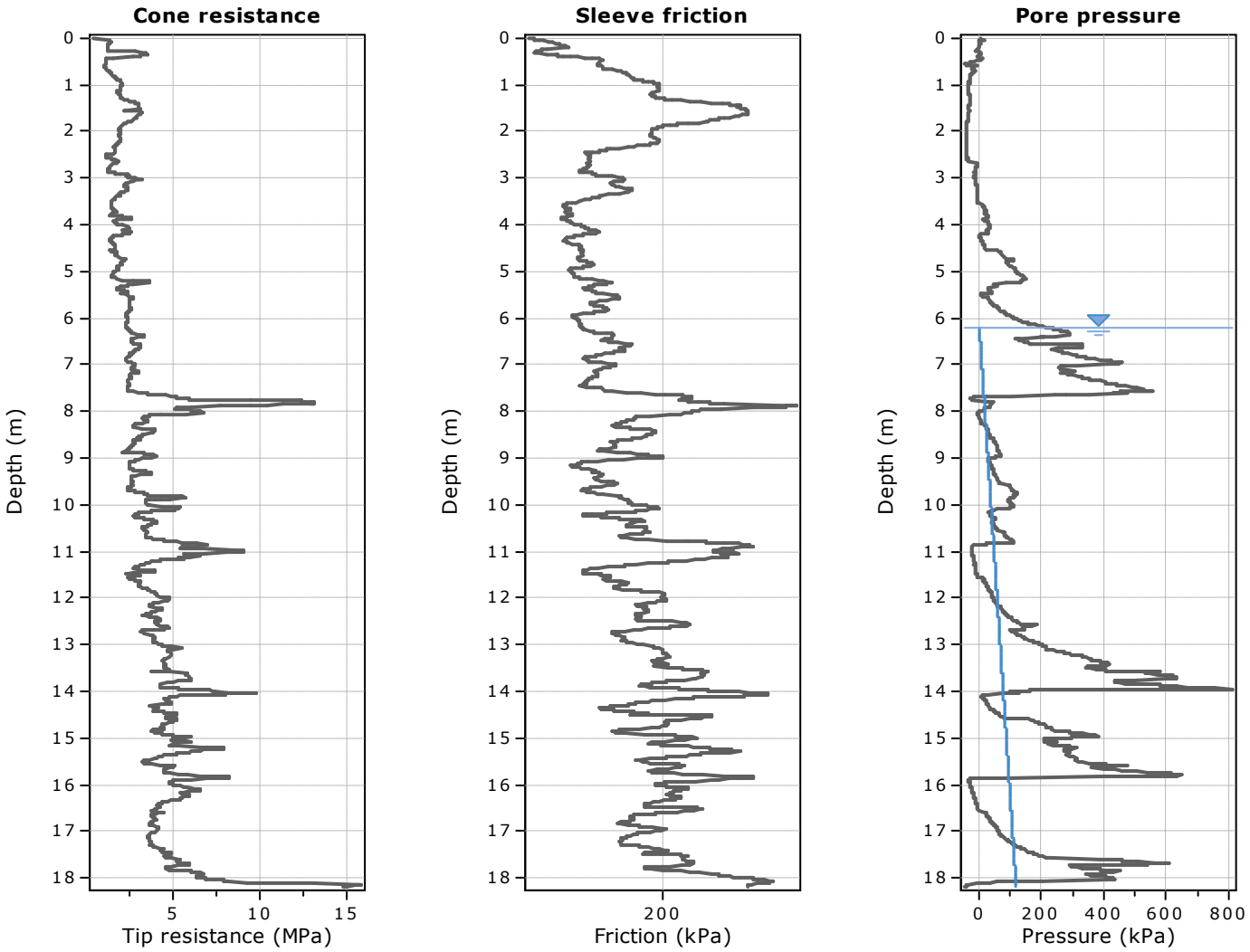
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

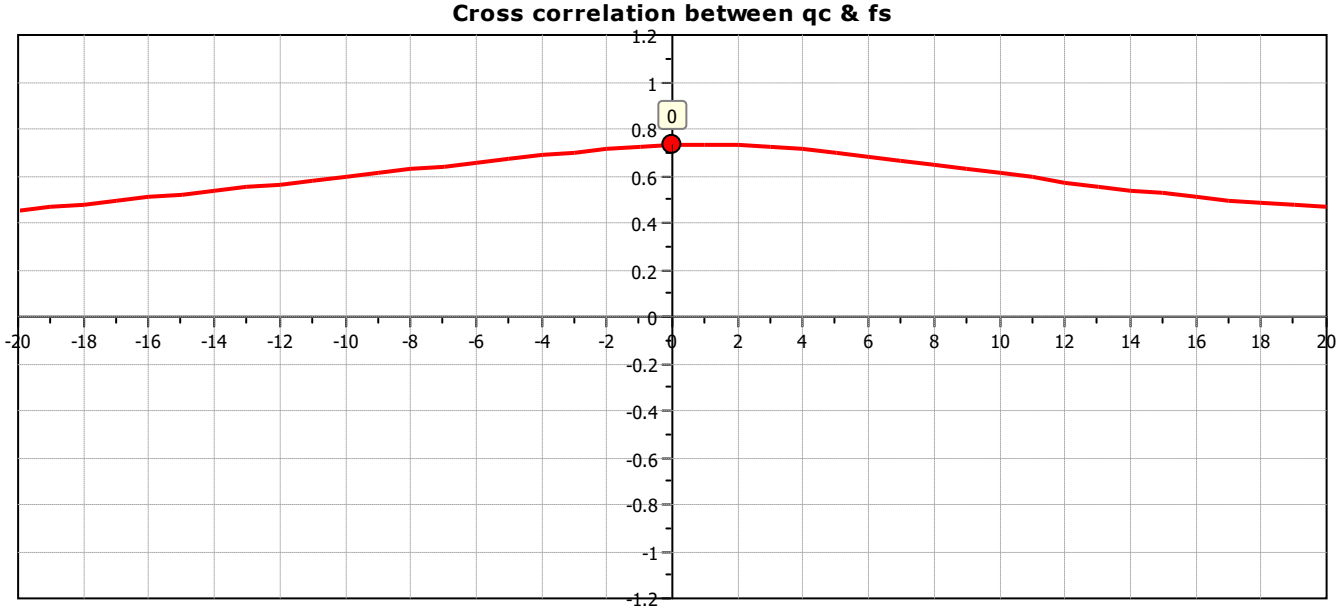
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT08
Total depth: 18.19 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT09	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5801	Battery Voltage Start	5.79
Cone Area Ratio	0.843	Start Recording	11:59:00 AM
Probe Radius	0.0178	Finish Recording	1:37:00 PM
Date of First Push Current Calibration	9/01/2024	Measured Ground Water Depth	collapsed at 3.9m
Metres To Next Calibration	866	Total Penetration Depth (m)	22.322
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.00%	0.04%	0.86%
End of test with tip loosened	0.09%	0.00%	0.46%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments
CPT09-D1	12.865	12860	0

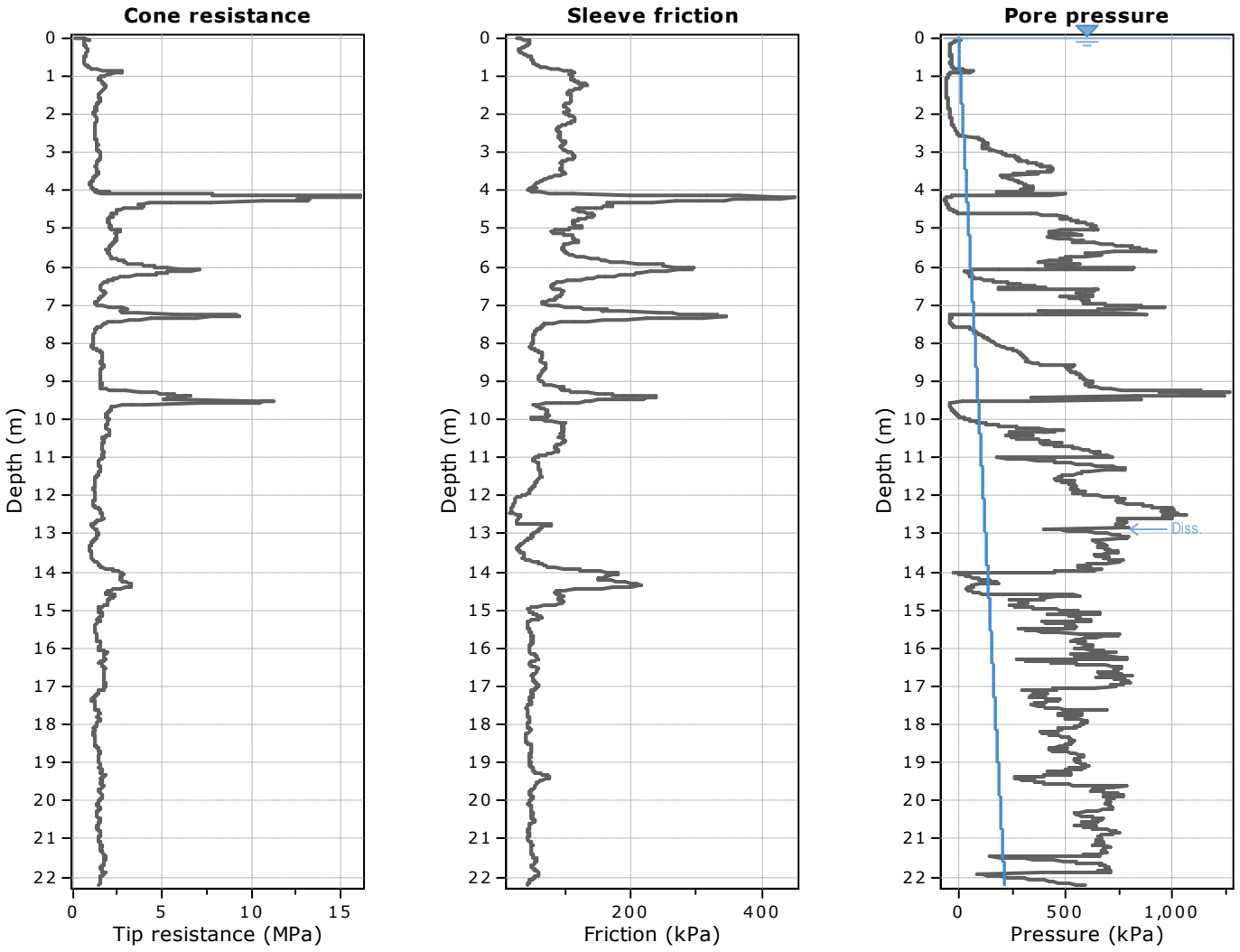
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

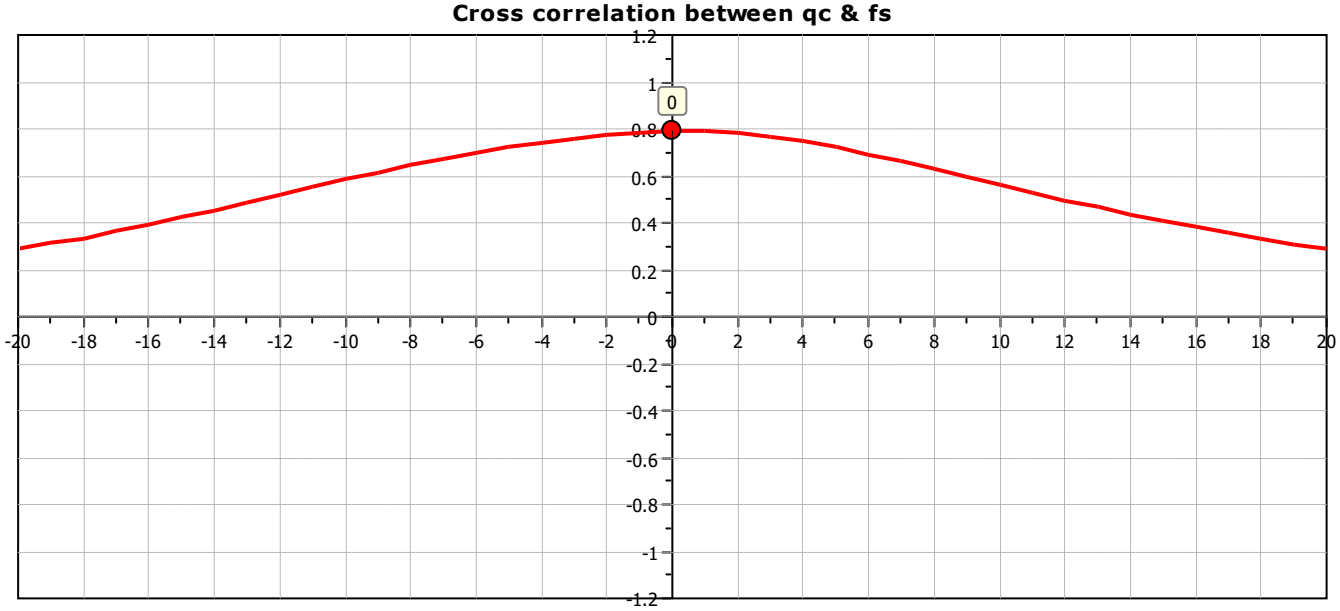
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT09
Total depth: 22.21 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT10	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5845	Battery Voltage Start	6.49
Cone Area Ratio	0.85	Start Recording	2:04:00 PM
Probe Radius	0.0179	Finish Recording	2:43:00 PM
Date of First Push Current Calibration	13/03/2024	Measured Ground Water Depth	19.3
Metres To Next Calibration	1148	Total Penetration Depth (m)	24.887
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☑ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☐ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.03%	0.04%	0.24%
End of test with tip loosened	0.05%	0.02%	0.60%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged

qc

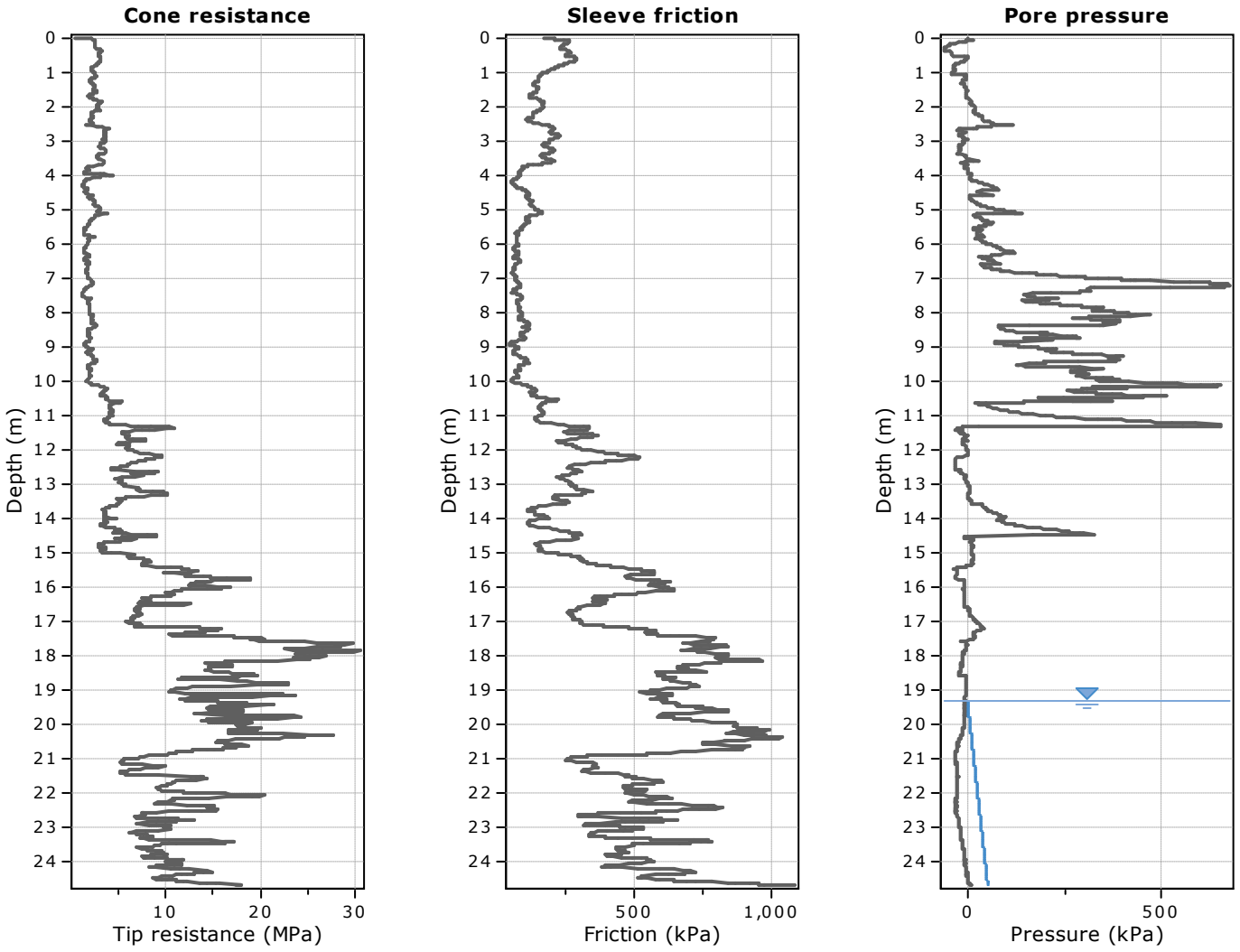
fs

u

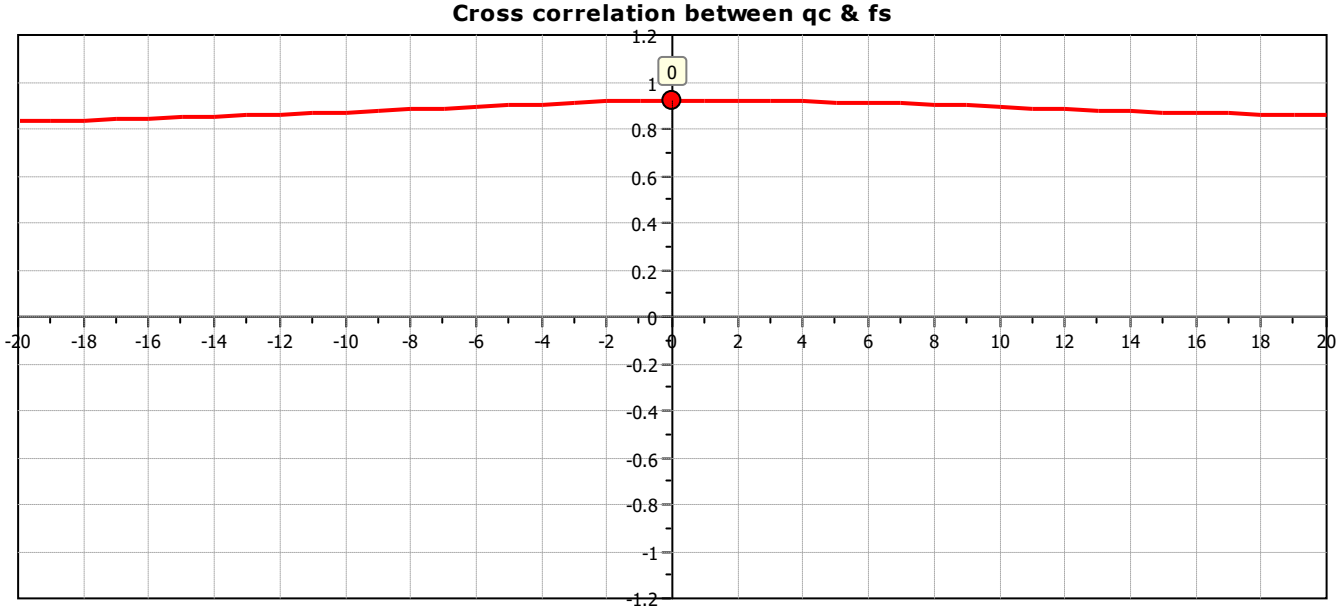
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT10
Total depth: 24.67 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT11	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5959	Battery Voltage Start	6.29
Cone Area Ratio	0.869	Start Recording	3:07:00 PM
Probe Radius	0.0179	Finish Recording	3:27:00 PM
Date of First Push Current Calibration	26/06/2024	Measured Ground Water Depth	collapsed at 10m dry
Metres To Next Calibration	1375	Total Penetration Depth (m)	10.405
Depth of Predrill	0	Test ended due to:	☑ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☐ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.01%	0.04%	0.00%
End of test with tip loosened	0.08%	0.00%	0.76%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

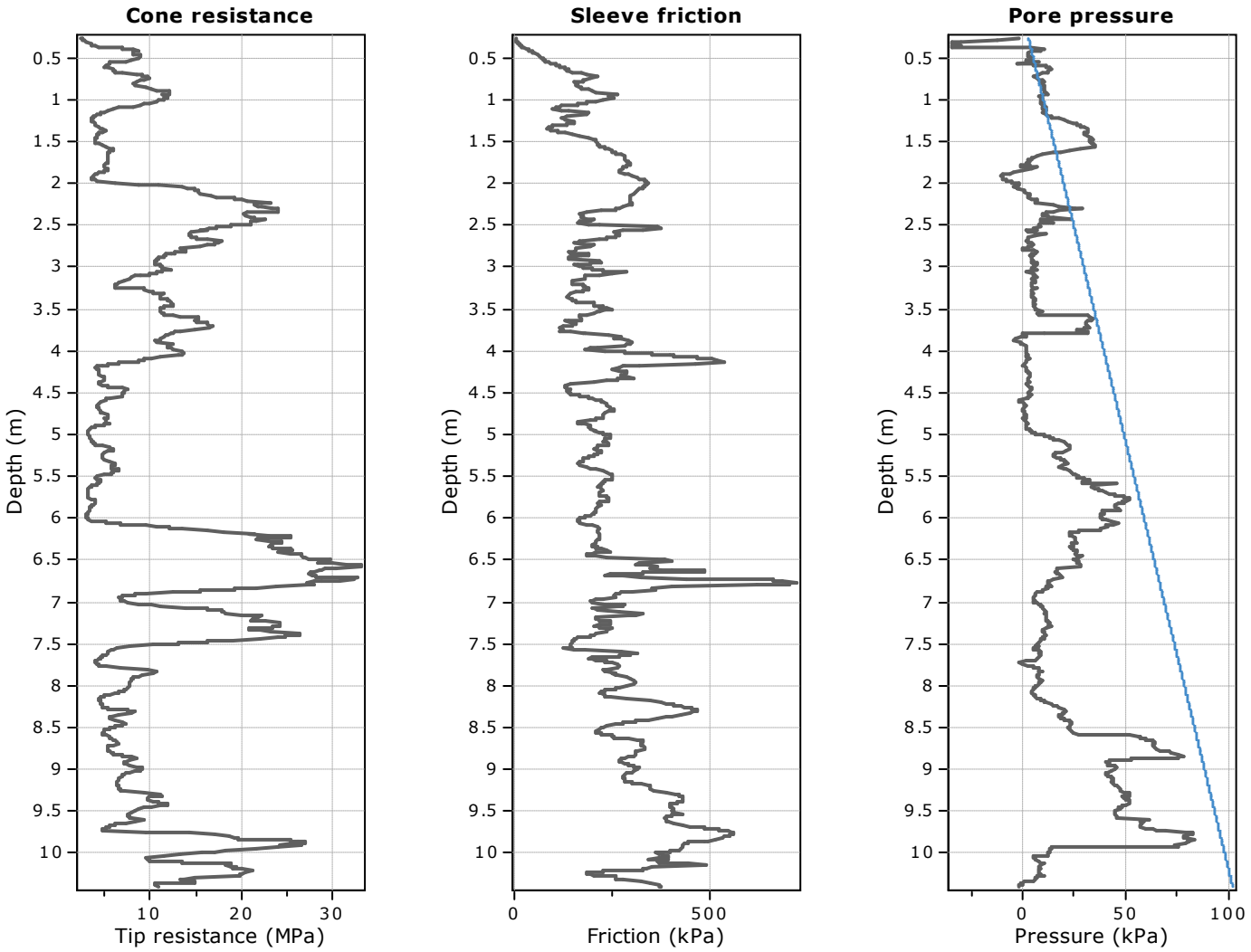
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

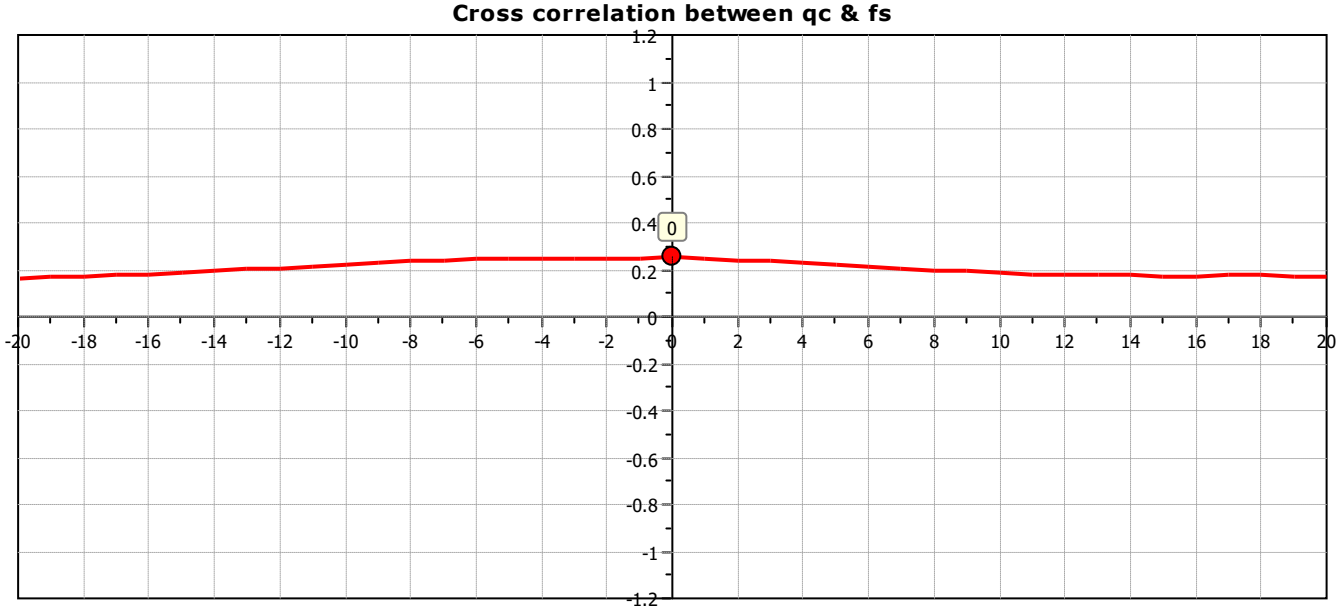
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT11
Total depth: 10.40 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT12	Job Identifier	HW Willowridge
Test Date	30/07/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	6.23
Cone Area Ratio	0.865	Start Recording	4:06:00 PM
Probe Radius	0.0177	Finish Recording	4:32:00 PM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	EOB 16.5m dry
Metres To Next Calibration	204	Total Penetration Depth (m)	16.735
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.04%	0.05%	0.06%
End of test with tip loosened	0.06%	0.01%	0.88%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

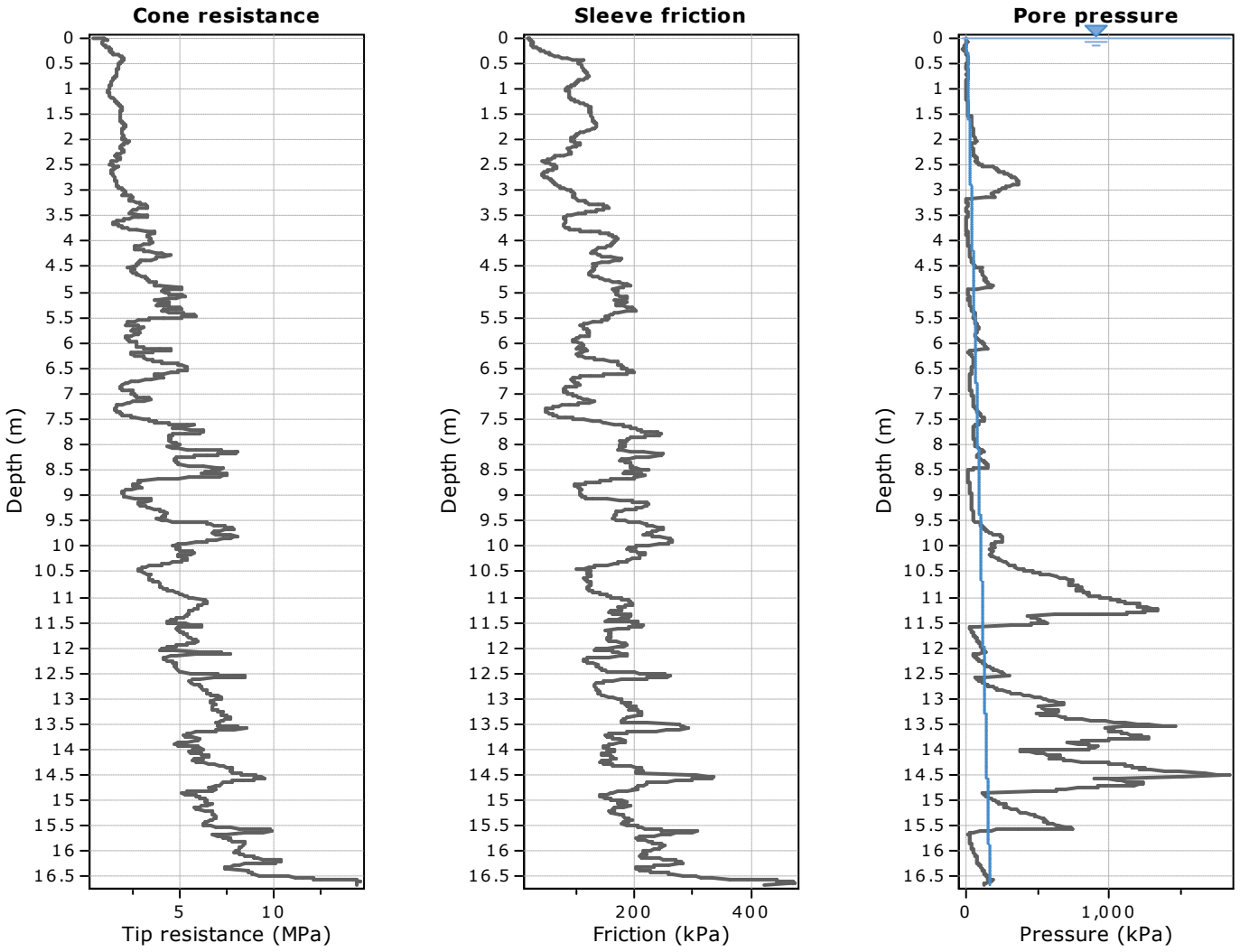
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

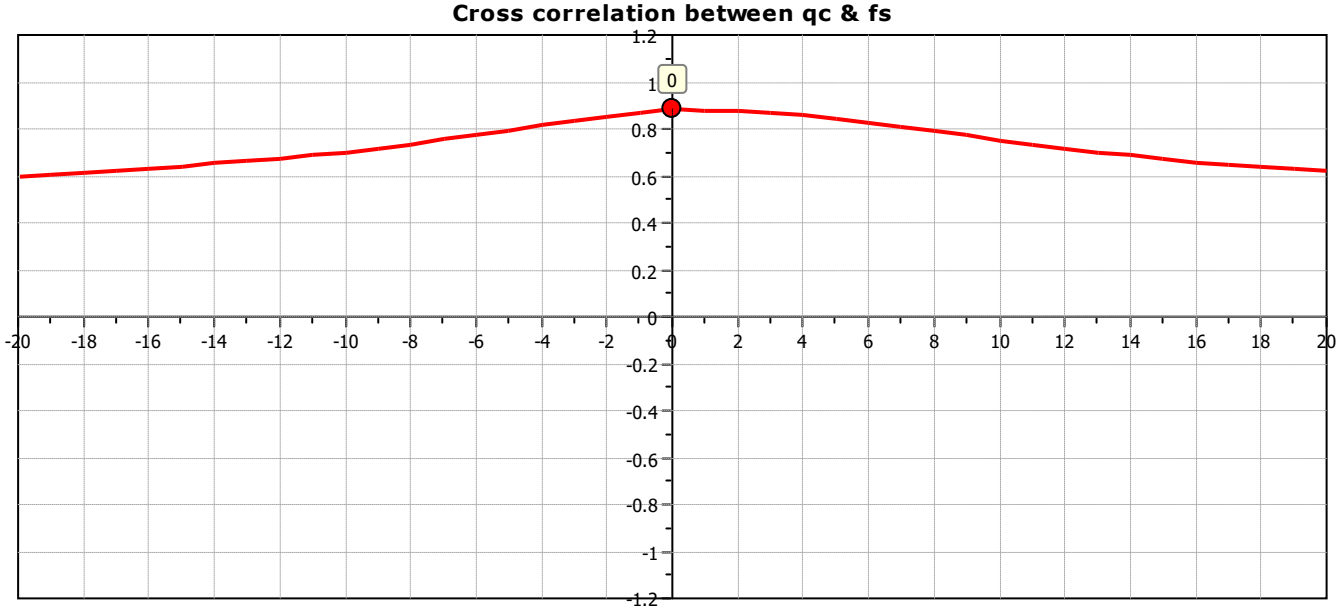
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT12
Total depth: 16.66 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT13	Job Identifier	HW Willowridge
Test Date	31/07/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	6.24
Cone Area Ratio	0.865	Start Recording	9:43:00 AM
Probe Radius	0.0177	Finish Recording	10:28:00 AM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	18.3
Metres To Next Calibration	187	Total Penetration Depth (m)	26.445
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.05%	0.08%	0.18%
End of test with tip loosened	0.05%	0.06%	0.74%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

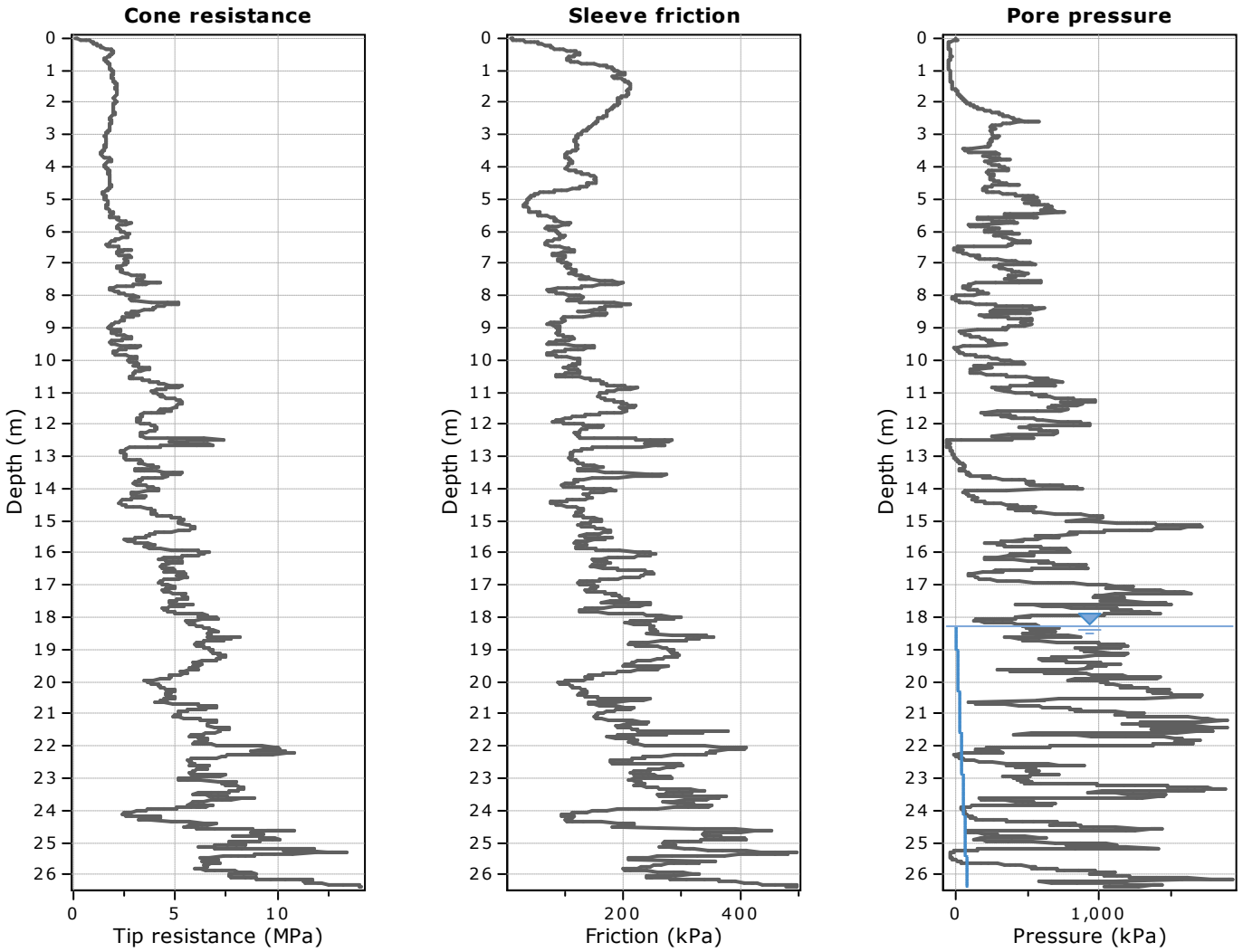
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc 23.8	fs	u

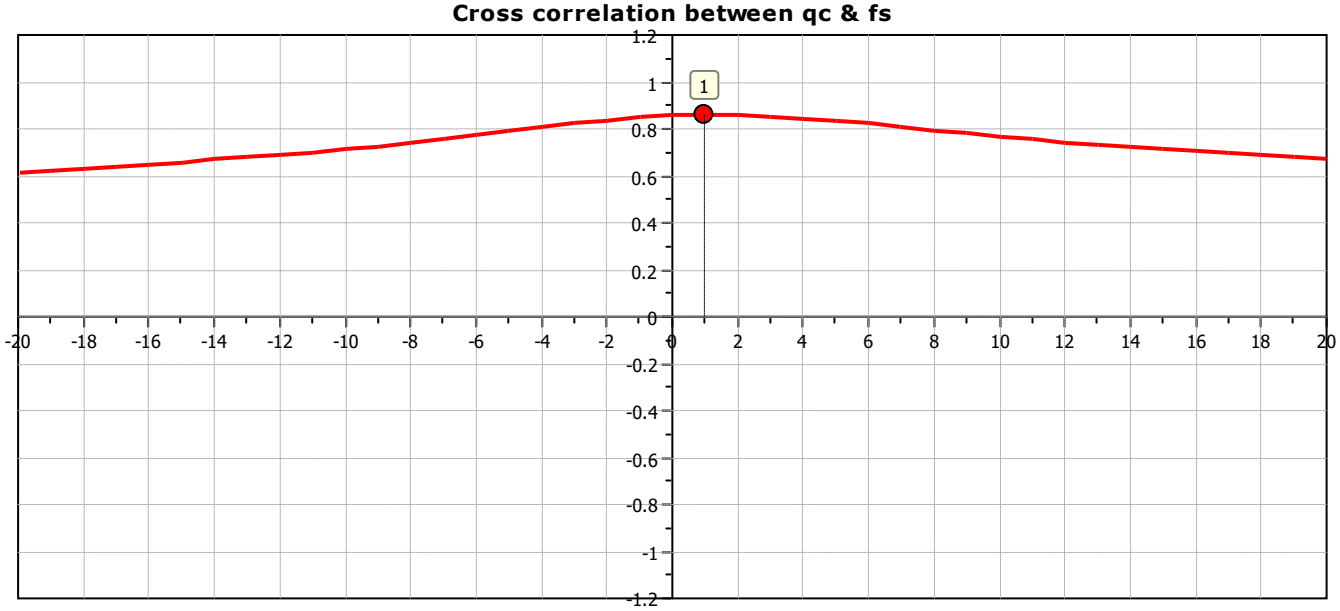
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT13
Total depth: 26.37 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT14	Job Identifier	HW Willowridge
Test Date	31/07/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	6.1
Cone Area Ratio	0.862	Start Recording	11:19:00 AM
Probe Radius	0.0178	Finish Recording	11:57:00 AM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	collapsed at 18.8m dry
Metres To Next Calibration	566	Total Penetration Depth (m)	24.917
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.07%	0.02%	0.26%
End of test with tip loosened	0.09%	0.00%	0.94%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

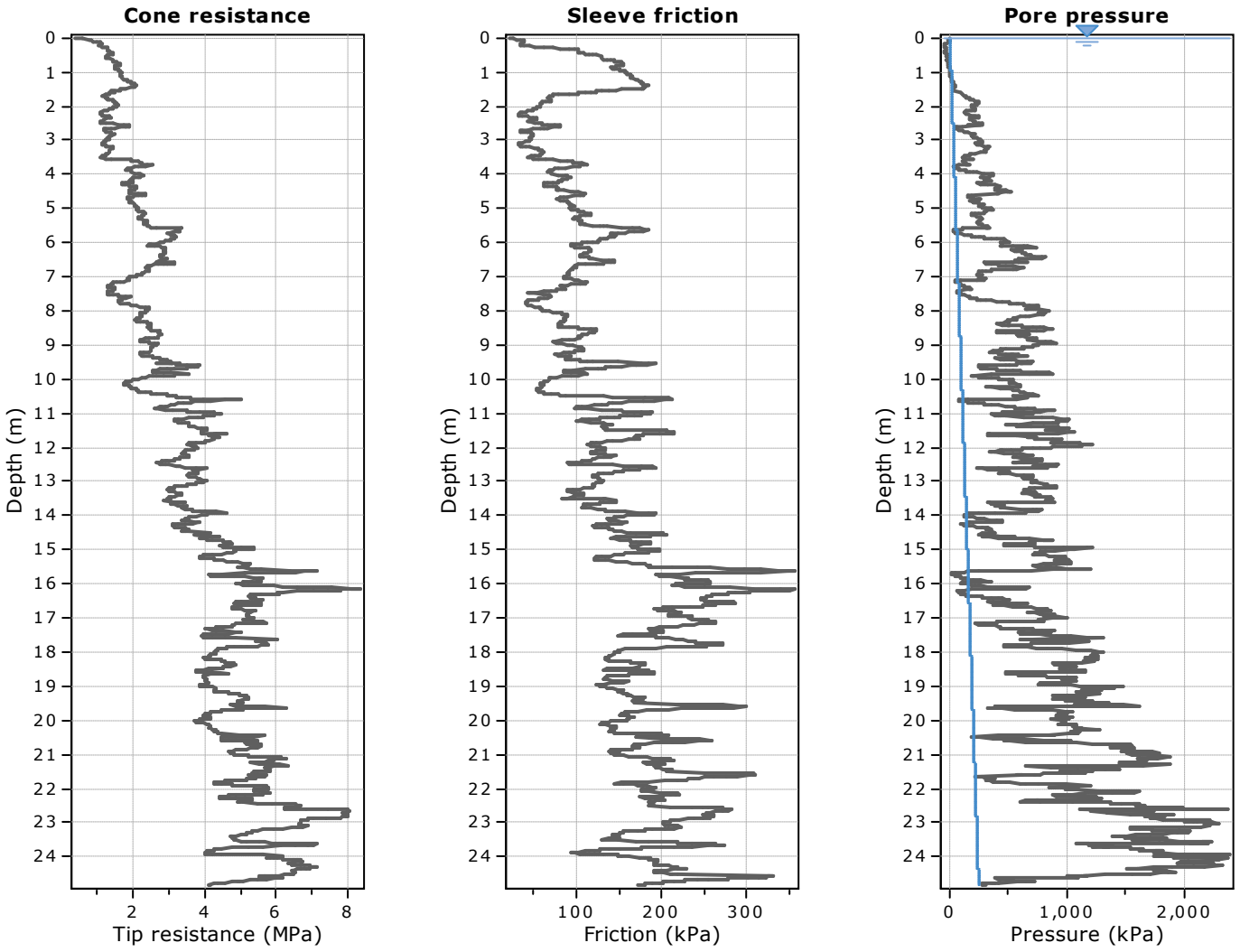
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

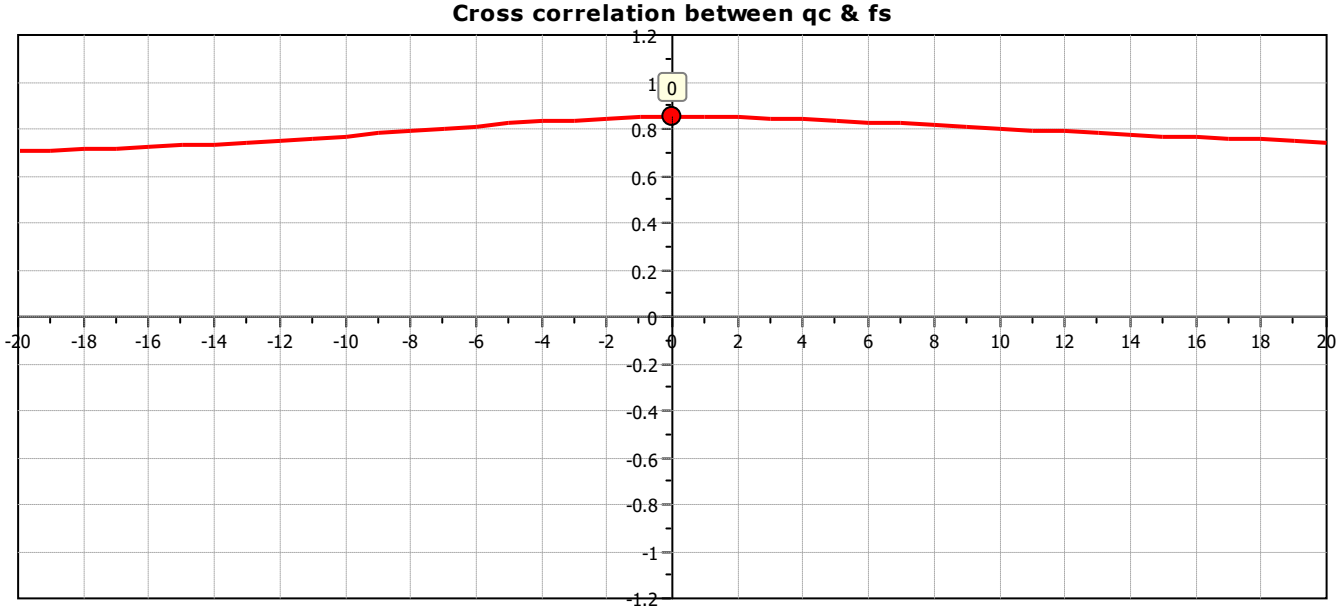
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT14
Total depth: 24.83 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT15	Job Identifier	HW Willowridge
Test Date	31/07/2024	Operator	Craig Greenfield
Cone Serial Number	5801	Battery Voltage Start	6
Cone Area Ratio	0.843	Start Recording	12:16:00 PM
Probe Radius	0.0178	Finish Recording	12:55:00 PM
Date of First Push Current Calibration	9/01/2024	Measured Ground Water Depth	collapsed at 3m
Metres To Next Calibration	844	Total Penetration Depth (m)	23.605
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☐ Target Depth
			☑ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.02%	0.00%	0.84%
End of test with tip loosened	0.01%	0.12%	0.06%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

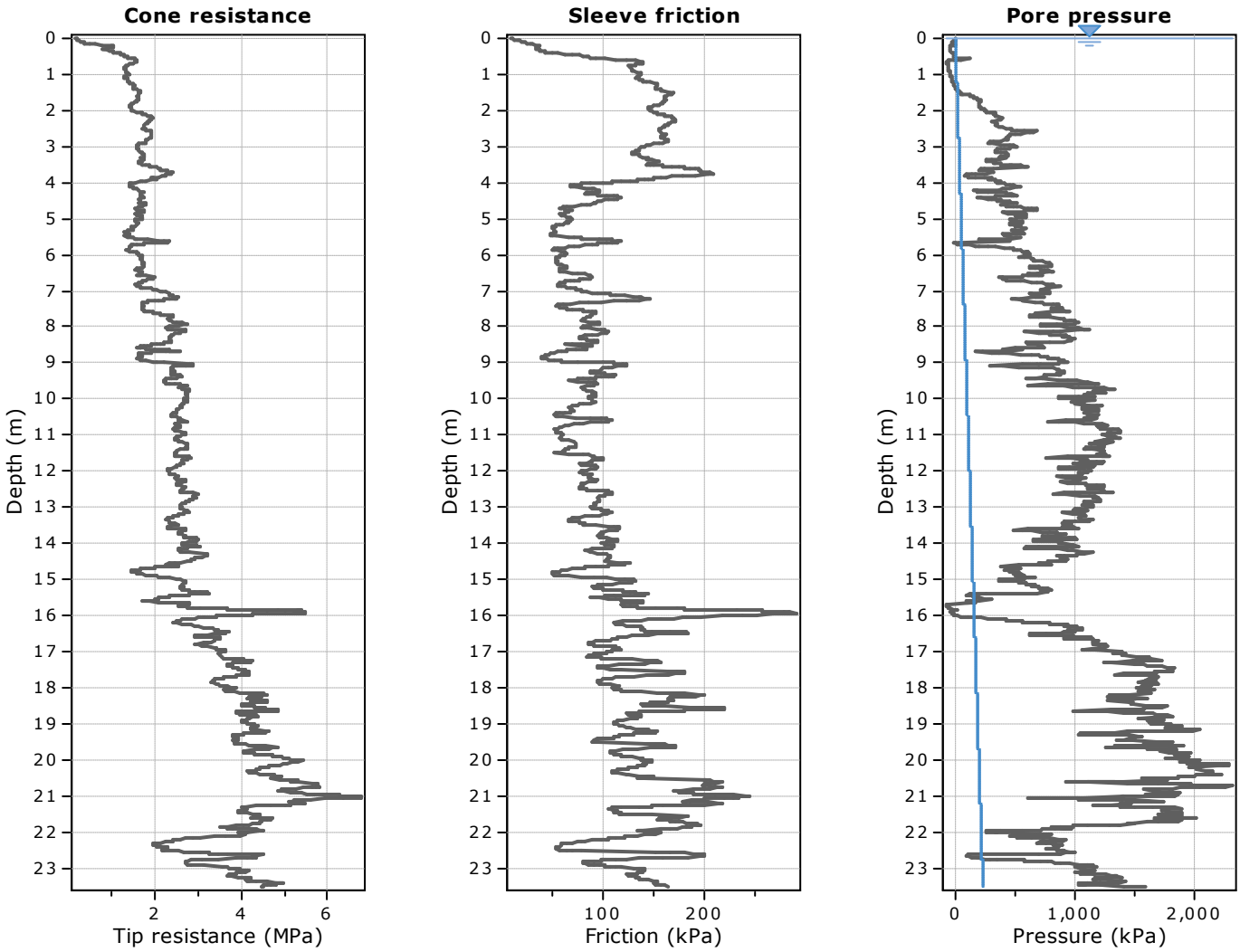
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

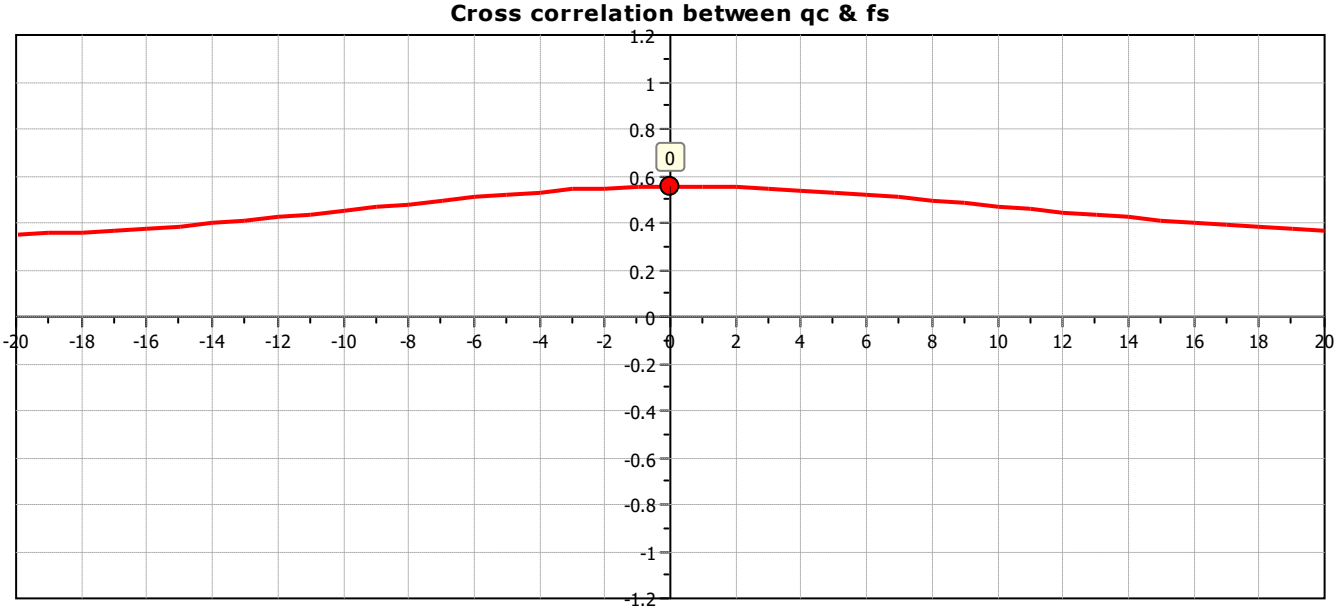
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT15
Total depth: 23.51 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT16	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	5.98
Cone Area Ratio	0.865	Start Recording	2:07:00 PM
Probe Radius	0.0177	Finish Recording	2:42:00 PM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	10.6
Metres To Next Calibration	161	Total Penetration Depth (m)	20.475
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.06%	0.07%	0.74%
End of test with tip loosened	0.09%	0.03%	1.08%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

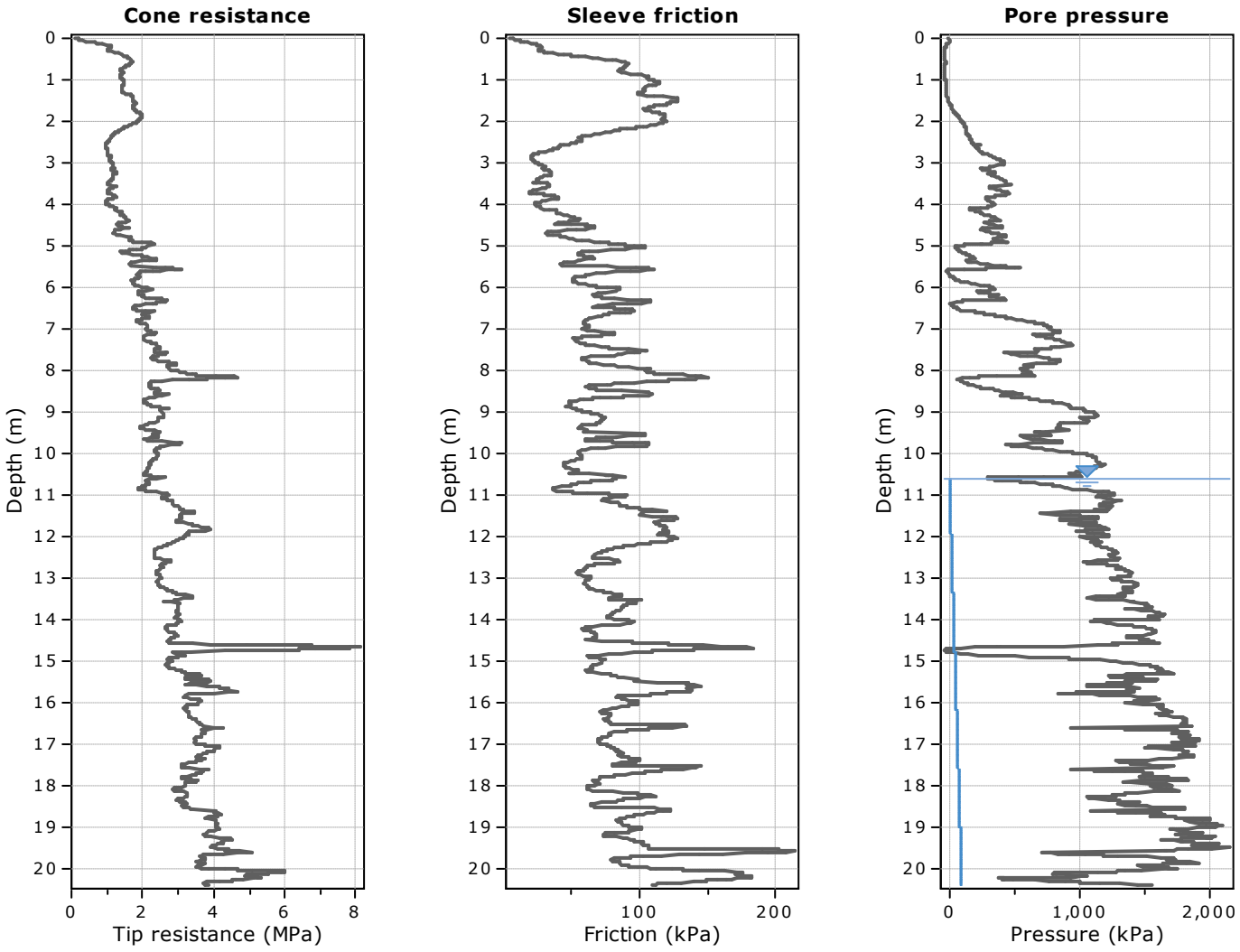
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc 8.87-8.92	fs	u 8.89

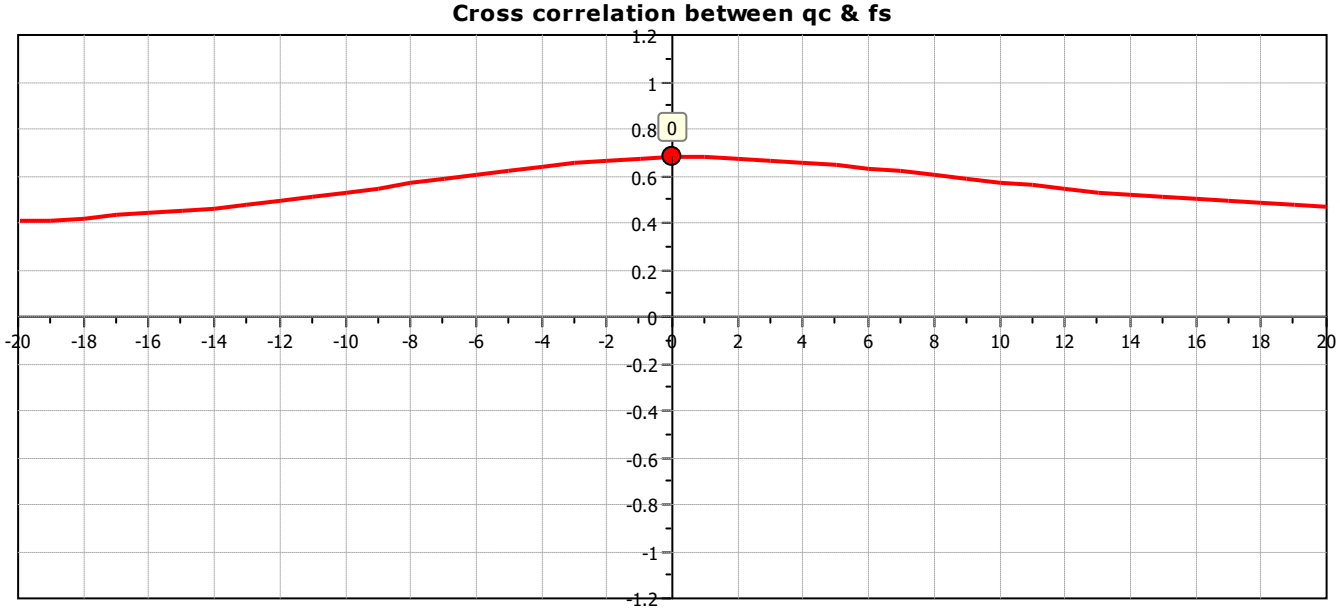
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT16
Total depth: 20.40 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT17	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	5.9
Cone Area Ratio	0.862	Start Recording	3:02:00 PM
Probe Radius	0.0178	Finish Recording	3:48:00 PM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	collapsed at 19.3m
Metres To Next Calibration	541	Total Penetration Depth (m)	28.62
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.04%	0.11%	0.08%
End of test with tip loosened	0.06%	0.06%	0.66%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

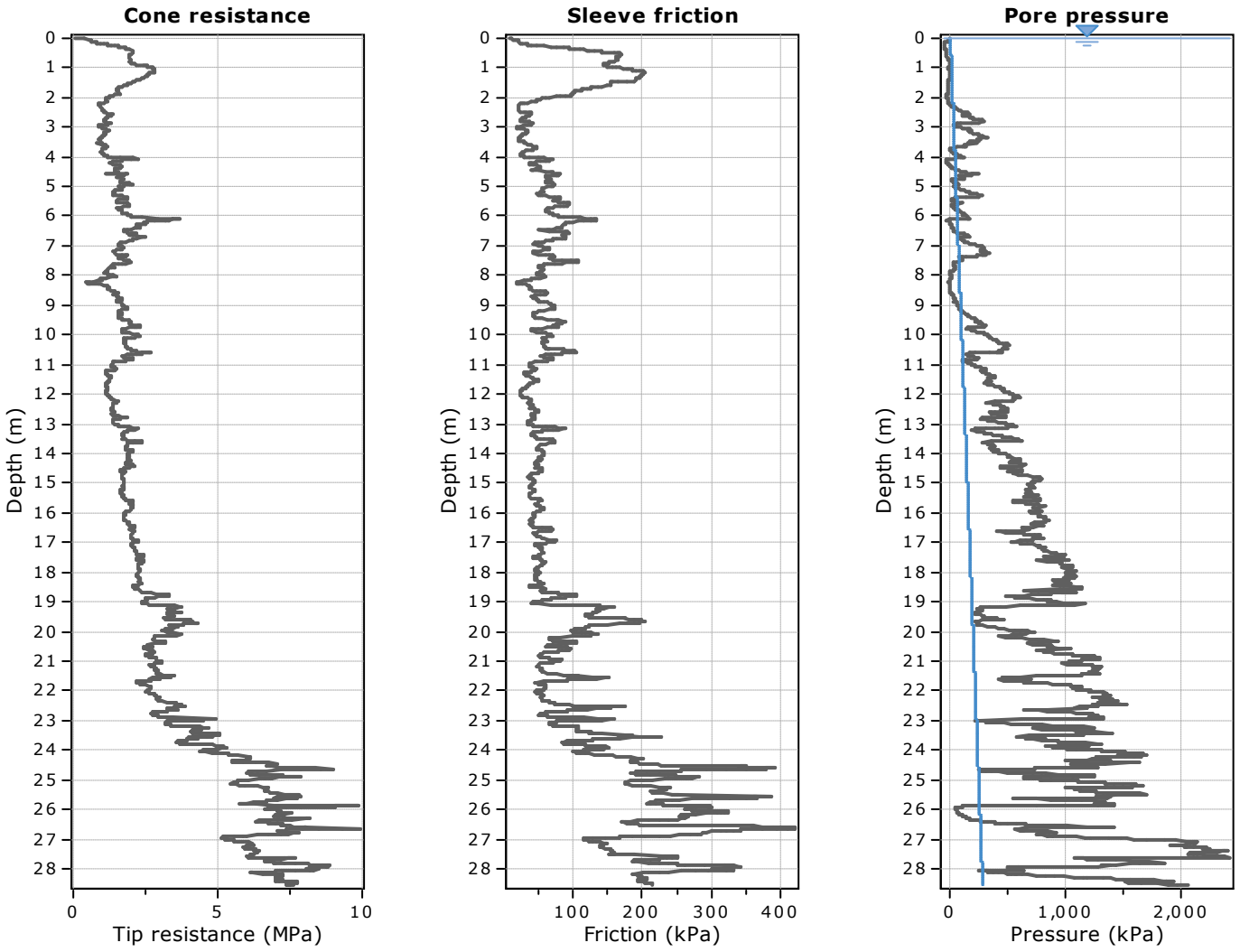
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

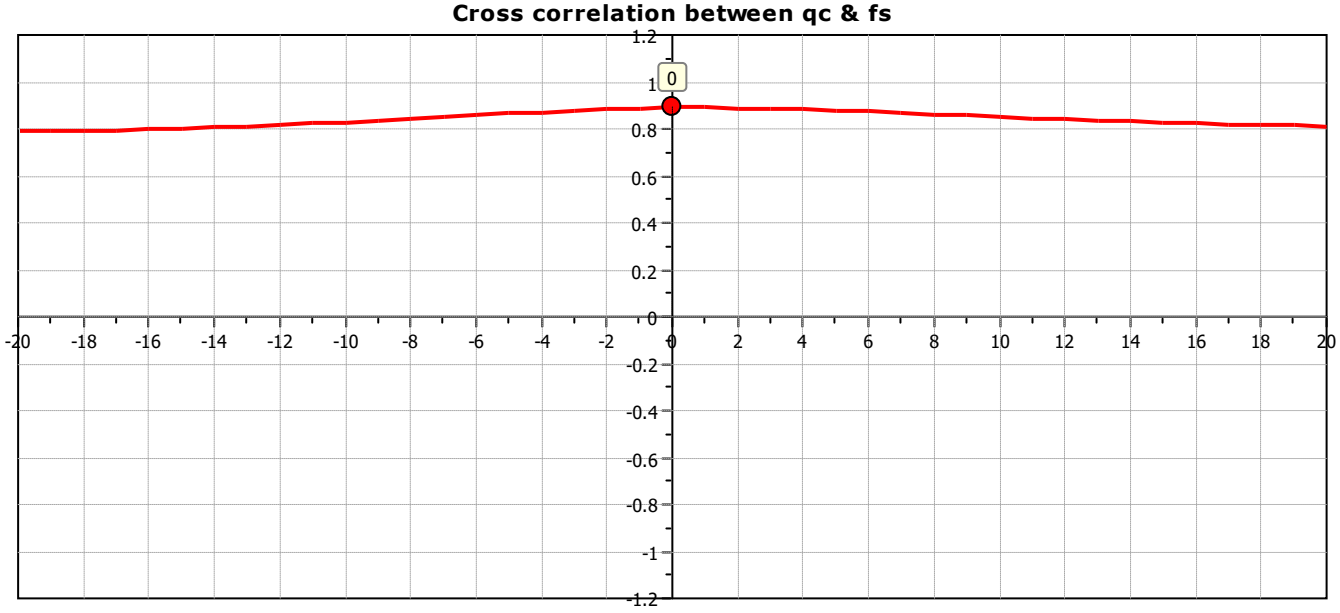
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT17
Total depth: 28.54 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT18	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	5.98
Cone Area Ratio	0.865	Start Recording	8:48:00 AM
Probe Radius	0.0177	Finish Recording	9:35:00 AM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	EOB 29.6m dry
Metres To Next Calibration	140	Total Penetration Depth (m)	29.762
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☐ Target Depth
			☑ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.02%	0.08%	0.12%
End of test with tip loosened	0.08%	0.18%	0.00%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

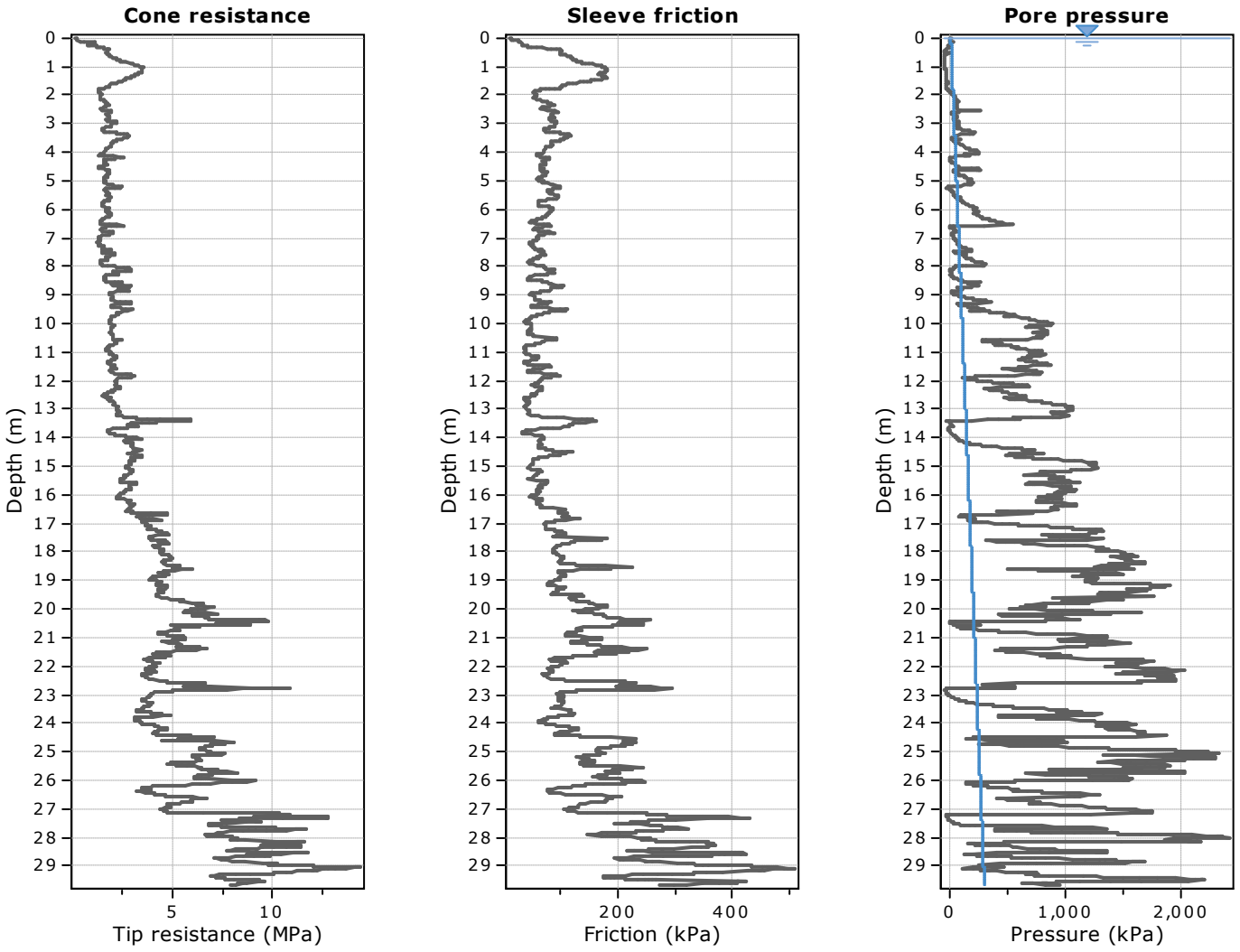
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

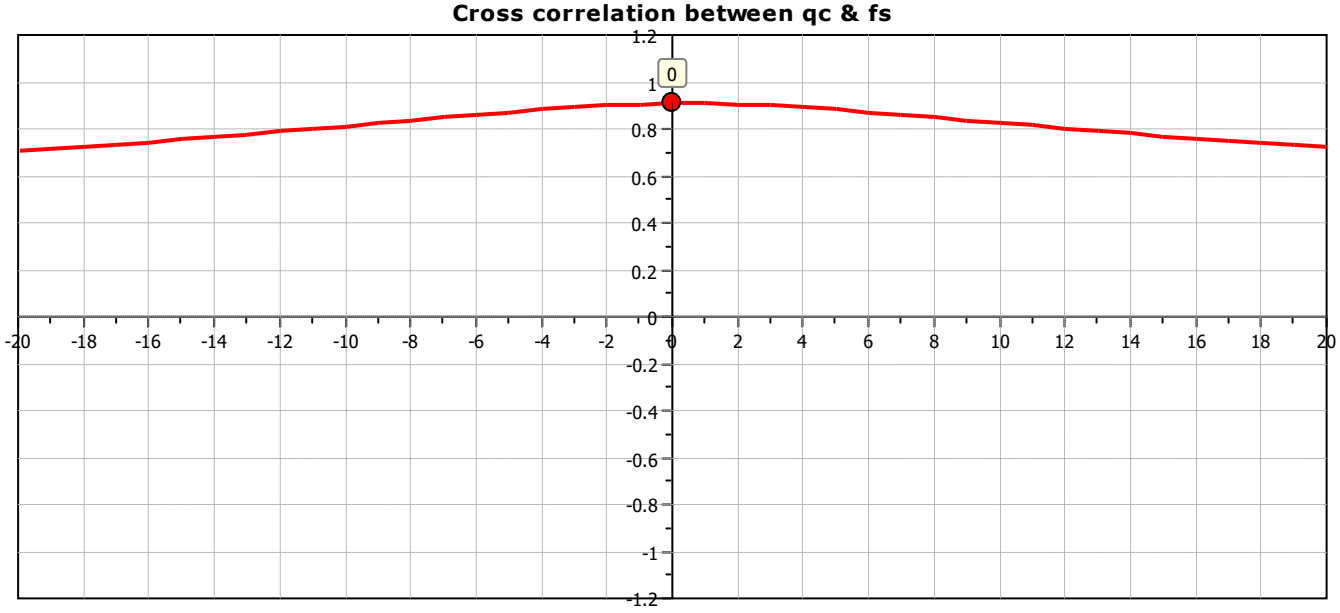
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT18
Total depth: 29.67 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT19	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	5.86
Cone Area Ratio	0.862	Start Recording	10:02:00 AM
Probe Radius	0.0178	Finish Recording	10:26:00 AM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	10.2
Metres To Next Calibration	513	Total Penetration Depth (m)	15.025
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☑ Target Depth
			☐ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.00%	0.01%	0.56%
End of test with tip loosened	0.02%	0.02%	0.14%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged

qc

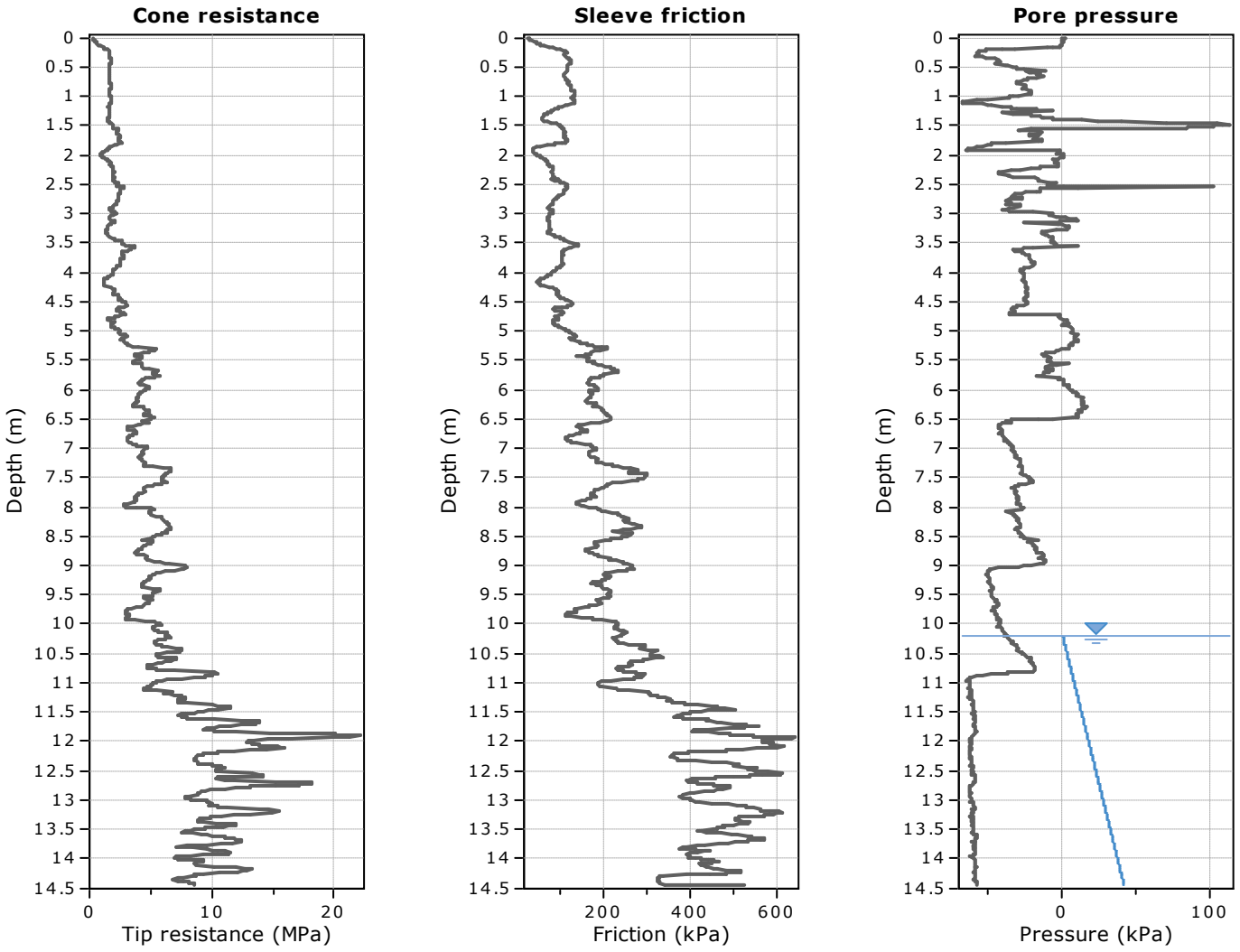
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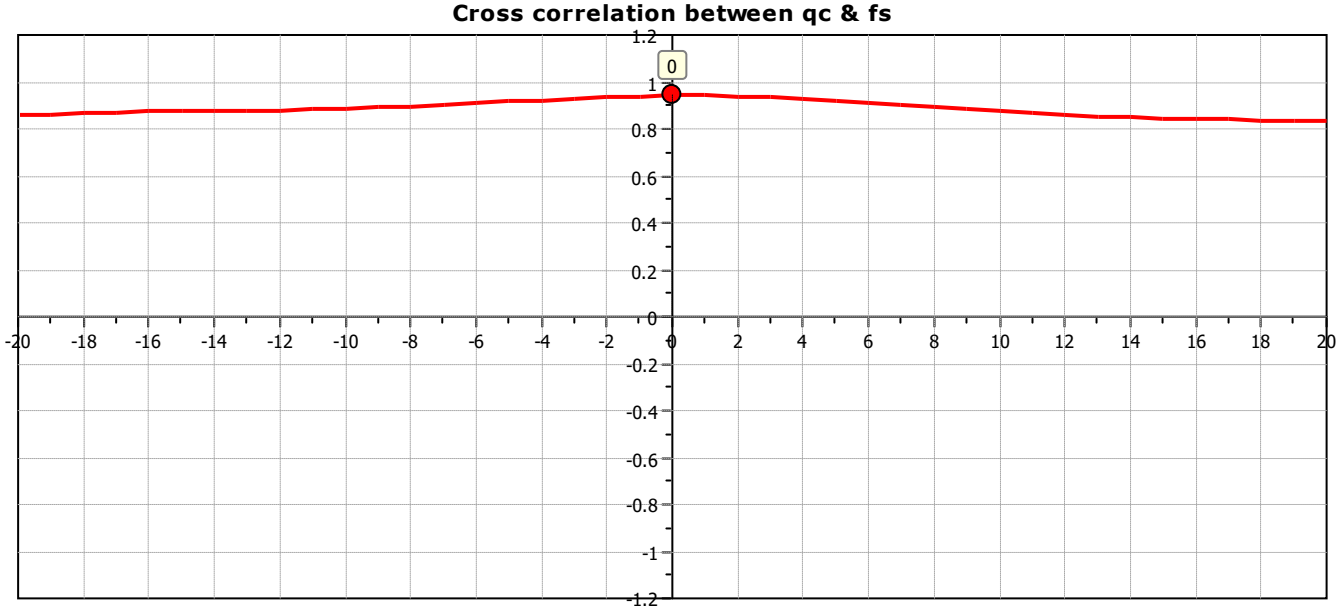
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT19
Total depth: 14.45 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT20	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5801	Battery Voltage Start	5.84
Cone Area Ratio	0.843	Start Recording	10:44:00 AM
Probe Radius	0.0178	Finish Recording	11:07:00 AM
Date of First Push Current Calibration	9/01/2024	Measured Ground Water Depth	5.1
Metres To Next Calibration	820	Total Penetration Depth (m)	15.022
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☑ Target Depth
			☐ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.01%	0.00%	0.80%
End of test with tip loosened	0.05%	0.02%	0.28%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged

qc

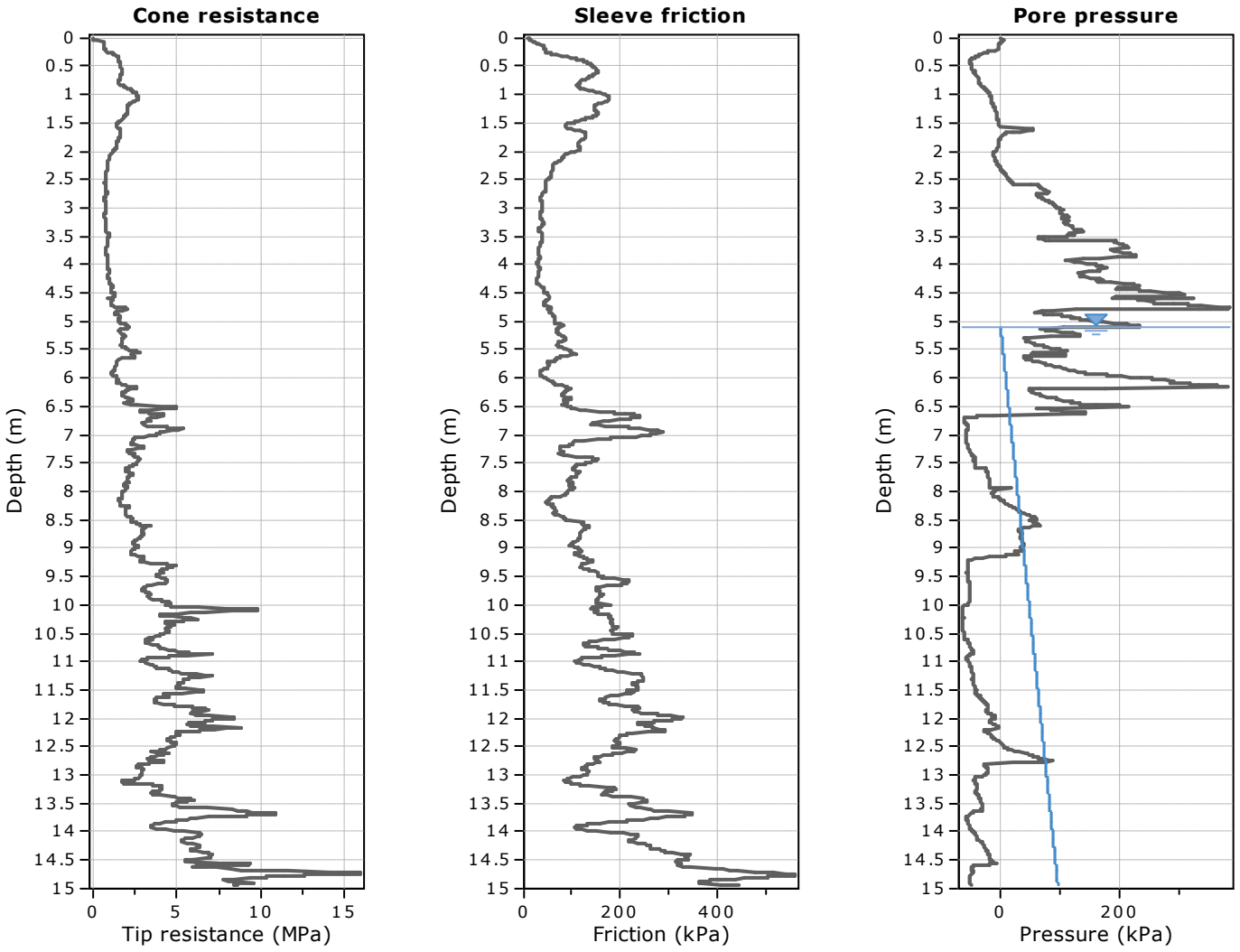
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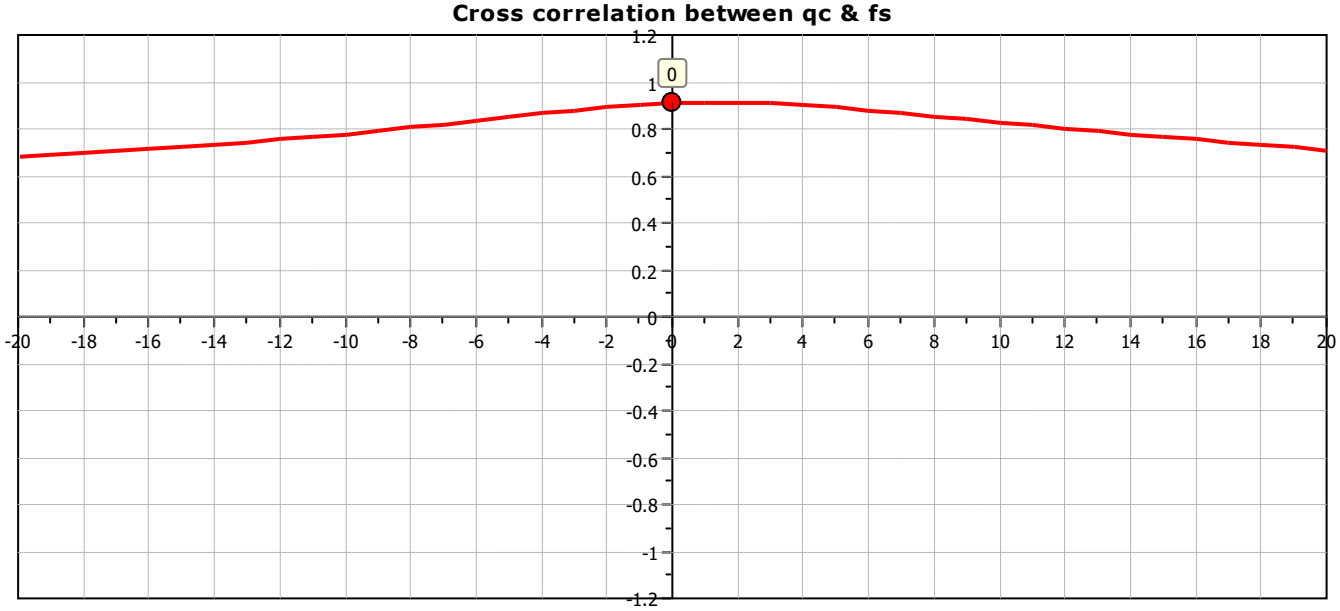
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT20
Total depth: 14.94 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT21	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5845	Battery Voltage Start	5.85
Cone Area Ratio	0.85	Start Recording	11:43:00 AM
Probe Radius	0.0179	Finish Recording	12:04:00 PM
Date of First Push Current Calibration	13/03/2024	Measured Ground Water Depth	0.4
Metres To Next Calibration	1123	Total Penetration Depth (m)	12.947
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.03%	0.08%	0.16%
End of test with tip loosened	0.07%	0.00%	0.88%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

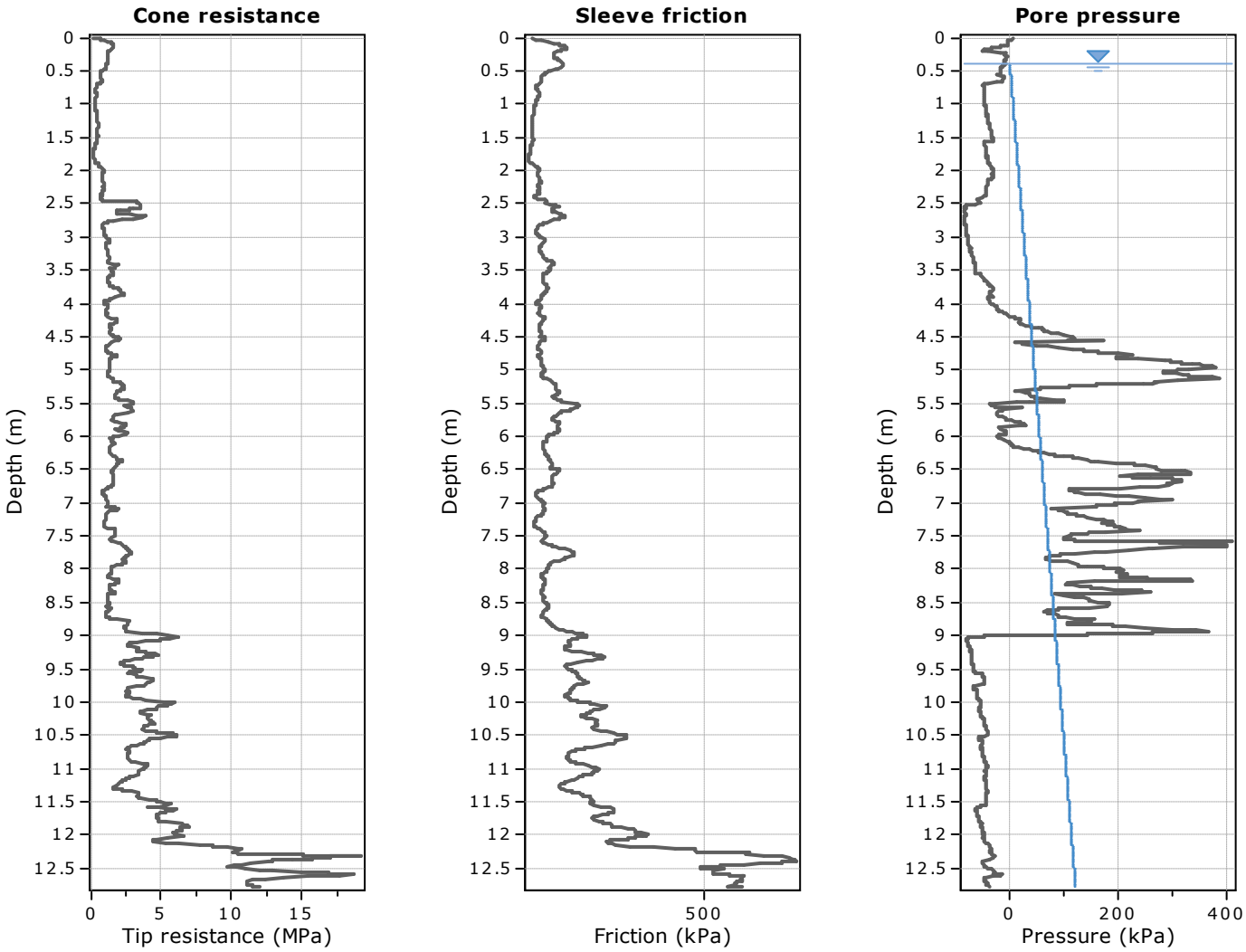
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

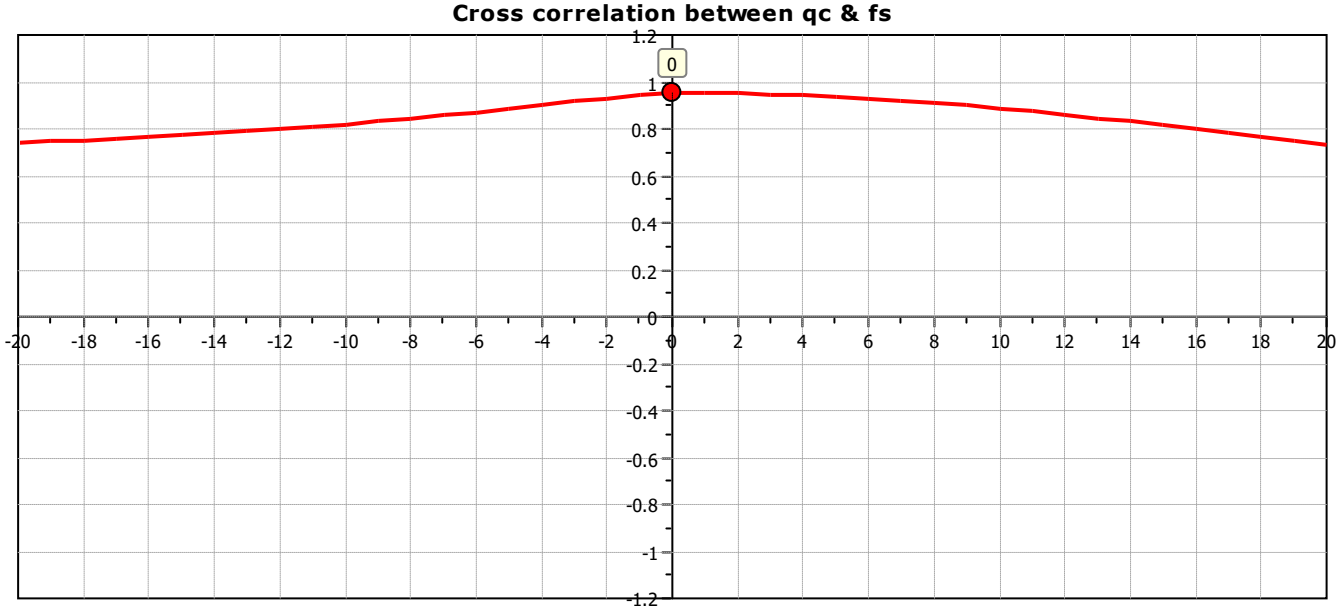
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT21
Total depth: 12.78 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT22	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5959	Battery Voltage Start	5.8
Cone Area Ratio	0.869	Start Recording	12:15:00 PM
Probe Radius	0.0179	Finish Recording	1:20:00 PM
Date of First Push Current Calibration	26/06/2024	Measured Ground Water Depth	5
Metres To Next Calibration	1365	Total Penetration Depth (m)	12.612
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.00%	0.00%	0.52%
End of test with tip loosened	0.07%	0.01%	0.92%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments
CPT22-D1	3.772	2461	0.04

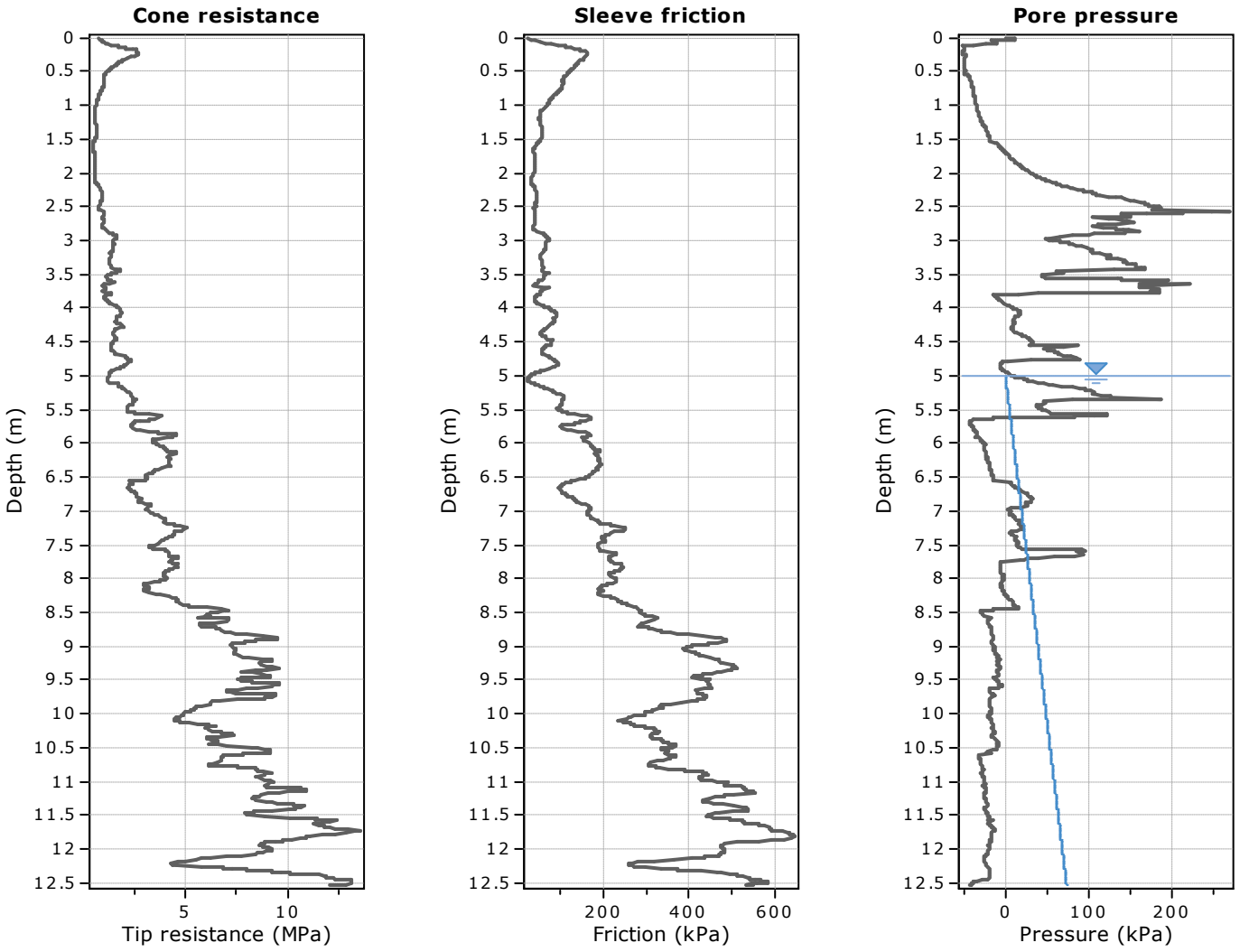
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

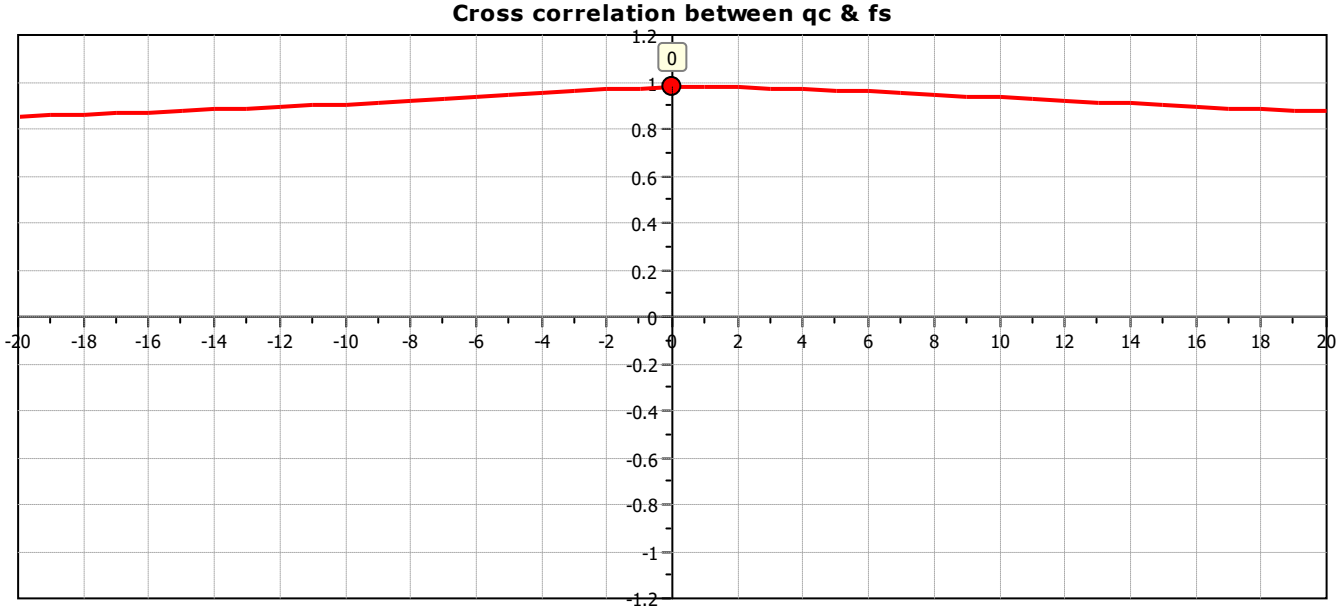
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT22
Total depth: 12.53 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT23	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5654	Battery Voltage Start	5.77
Cone Area Ratio		Start Recording	1:58:00 PM
Probe Radius	0.018	Finish Recording	2:19:00 PM
Date of First Push Current Calibration	1/08/2024	Measured Ground Water Depth	collapsed at 5.5
Metres To Next Calibration	1500	Total Penetration Depth (m)	12.307
Depth of Predrill	0	Test ended due to:	☑ High Tilt ☑ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☐ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.00%	0.00%	0.00%
End of test with tip loosened	0.03%	0.02%	0.04%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

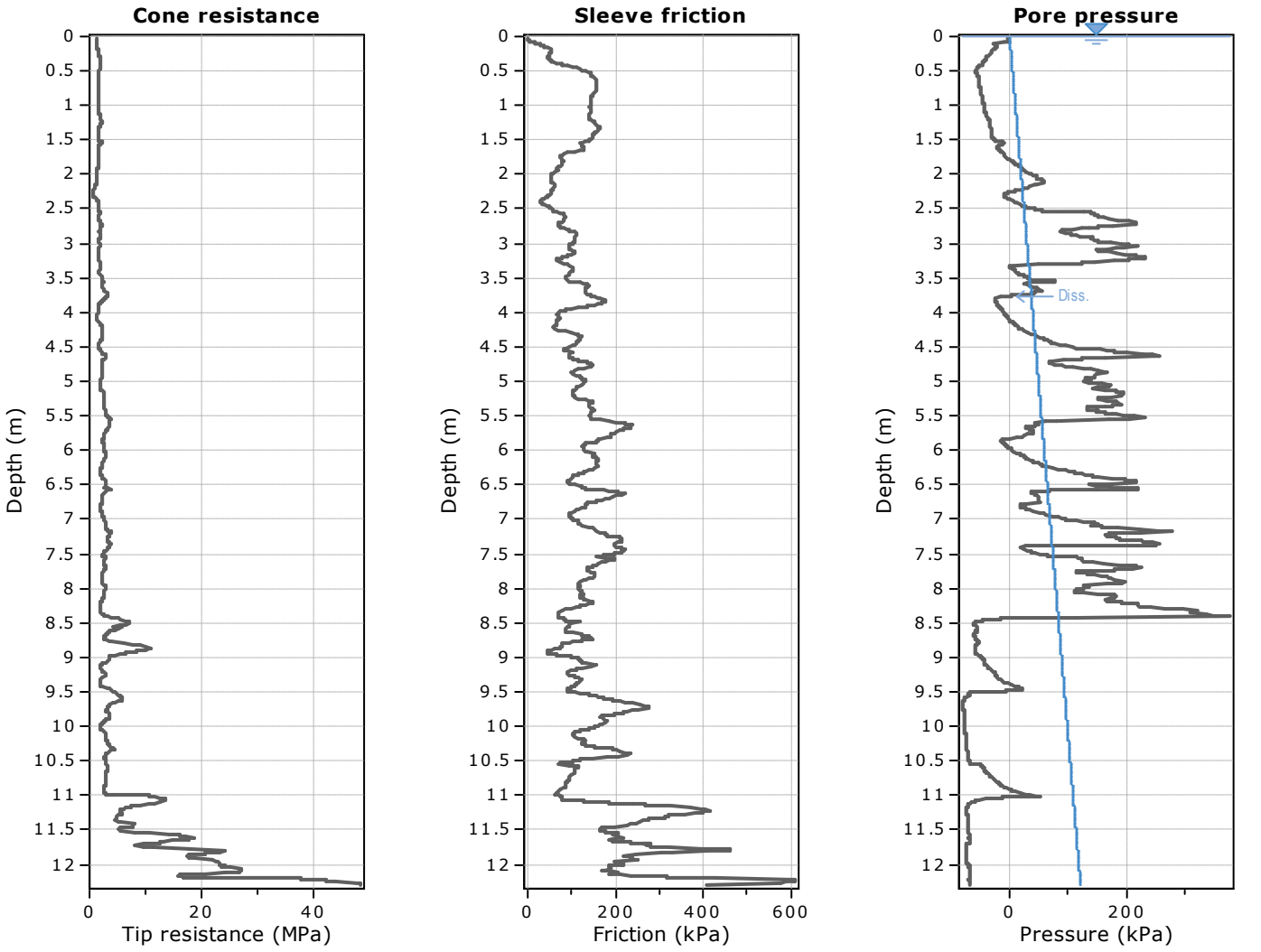
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

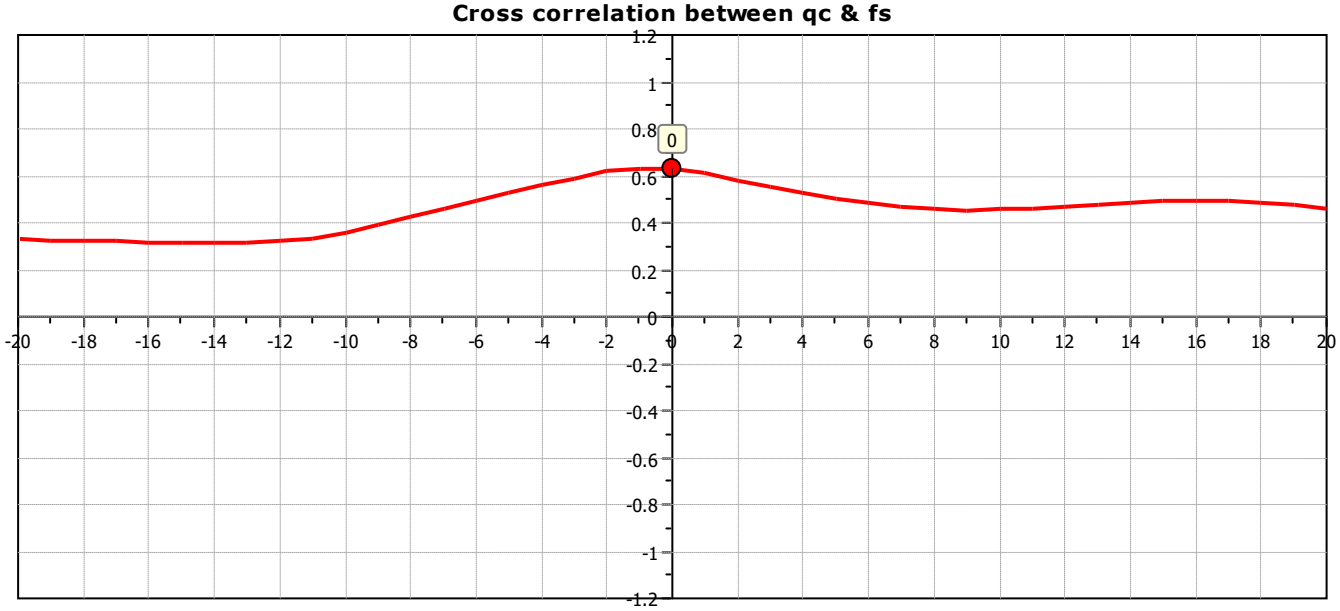
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT23
Total depth: 12.30 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT24	Job Identifier	HW Willowridge
Test Date	1/08/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	5.78
Cone Area Ratio	0.865	Start Recording	3:15:00 PM
Probe Radius	0.0177	Finish Recording	3:57:00 PM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	22.9
Metres To Next Calibration	111	Total Penetration Depth (m)	23.995
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.04%	0.08%	0.16%
End of test with tip loosened	0.04%	0.02%	0.18%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

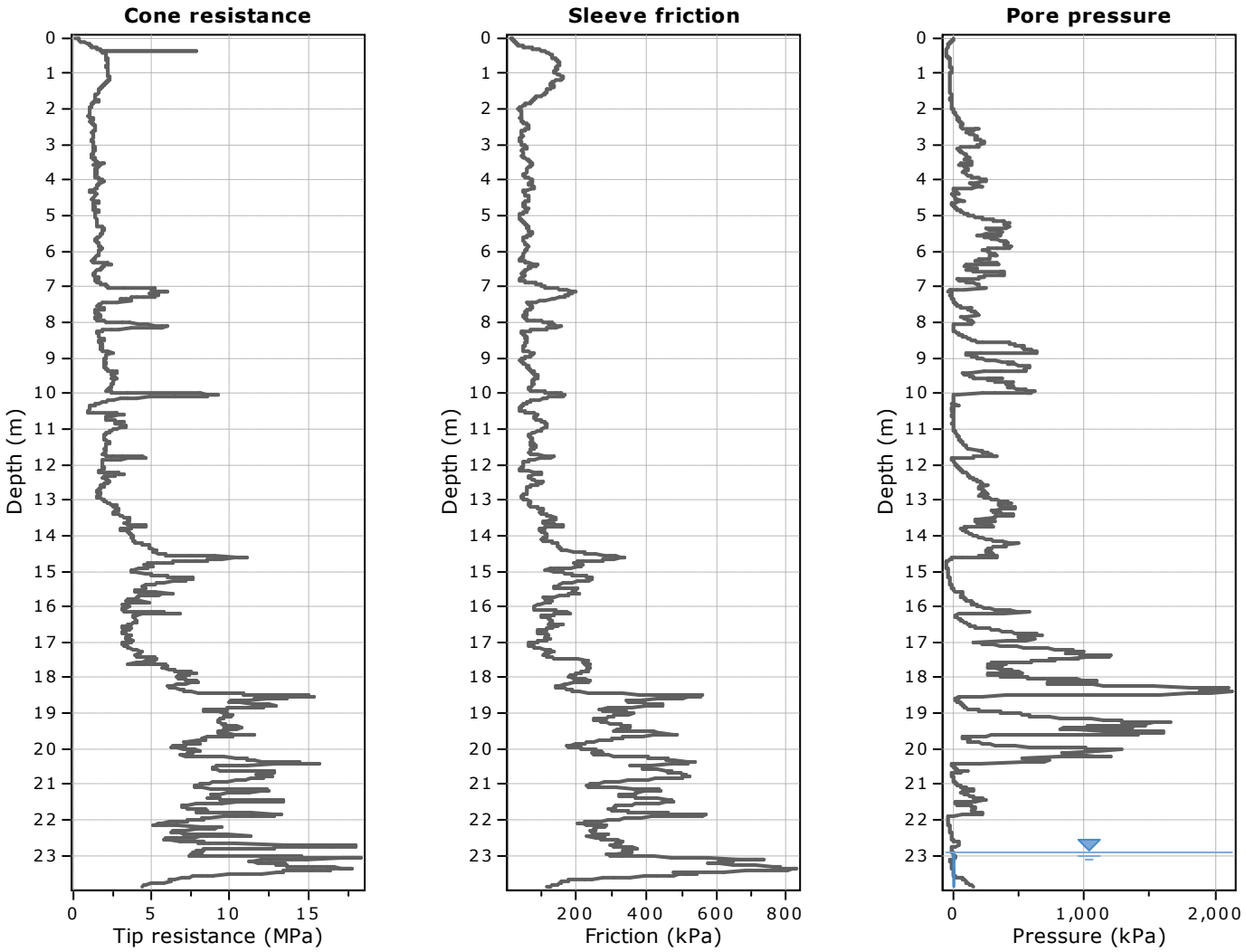
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

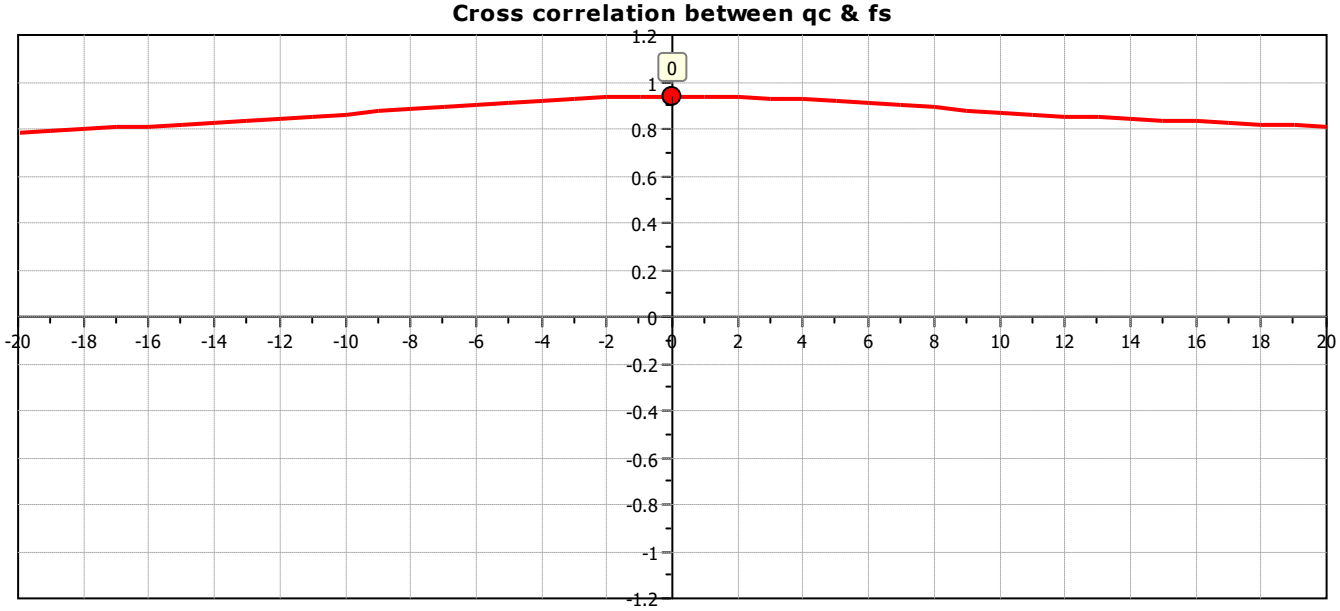
Underground Investigation Ltd
Cone Penetration Testing
craig@undergroundinvestigation.co.nz
+64211473249

Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT24
Total depth: 23.88 m, Date: 2/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT25	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5681	Battery Voltage Start	6.43
Cone Area Ratio	0.865	Start Recording	9:21:00 AM
Probe Radius	0.0177	Finish Recording	9:56:00 AM
Date of First Push Current Calibration	14/09/2023	Measured Ground Water Depth	3.6
Metres To Next Calibration	87	Total Penetration Depth (m)	18.387
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.06%	0.12%	0.24%
End of test with tip loosened	0.08%	0.05%	0.86%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

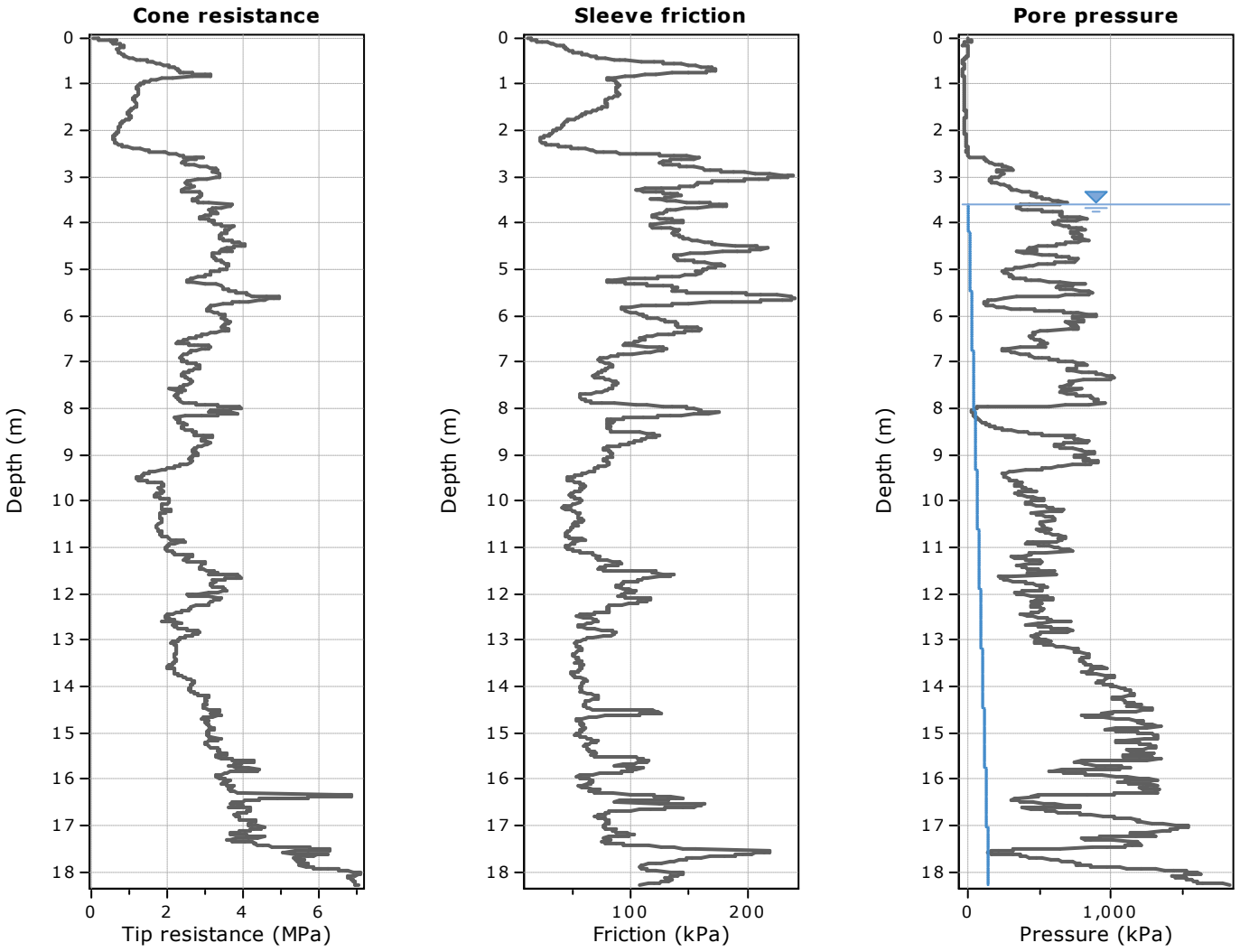
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

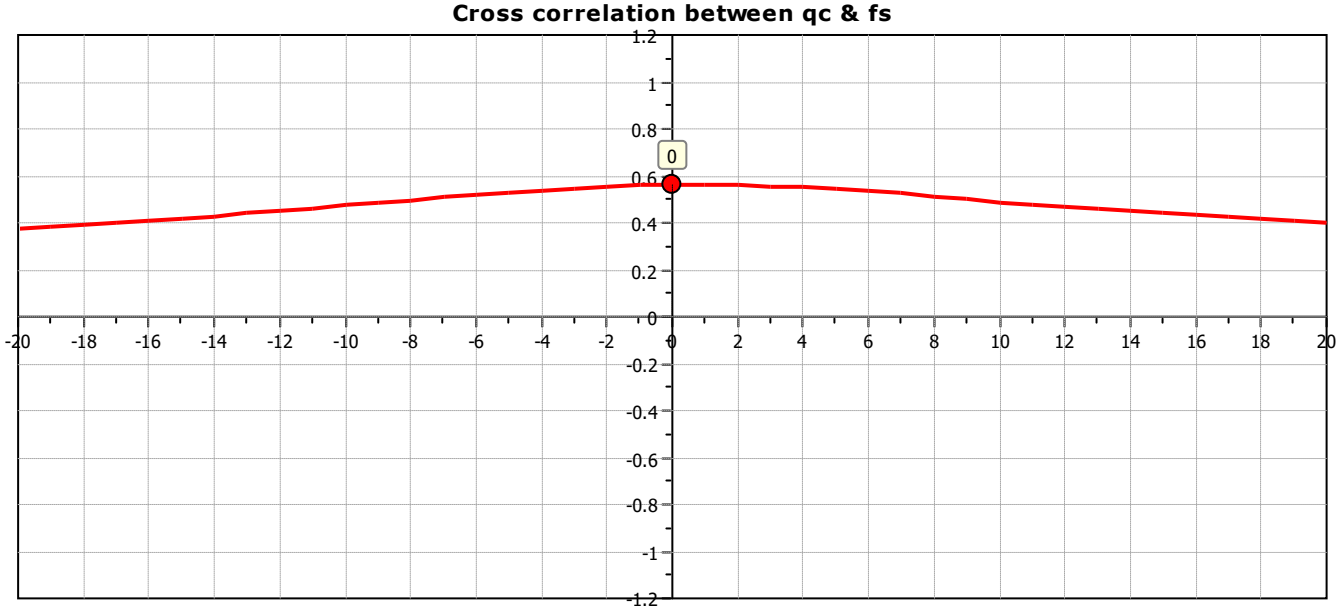
Underground Investigation Ltd
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT25
Total depth: 18.29 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT26	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5708	Battery Voltage Start	6.24
Cone Area Ratio	0.862	Start Recording	10:22:00 AM
Probe Radius	0.0178	Finish Recording	10:41:00 AM
Date of First Push Current Calibration	9/11/2023	Measured Ground Water Depth	4.2
Metres To Next Calibration	498	Total Penetration Depth (m)	11.295
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.07%	0.03%	0.14%
End of test with tip loosened	0.05%	0.01%	0.90%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

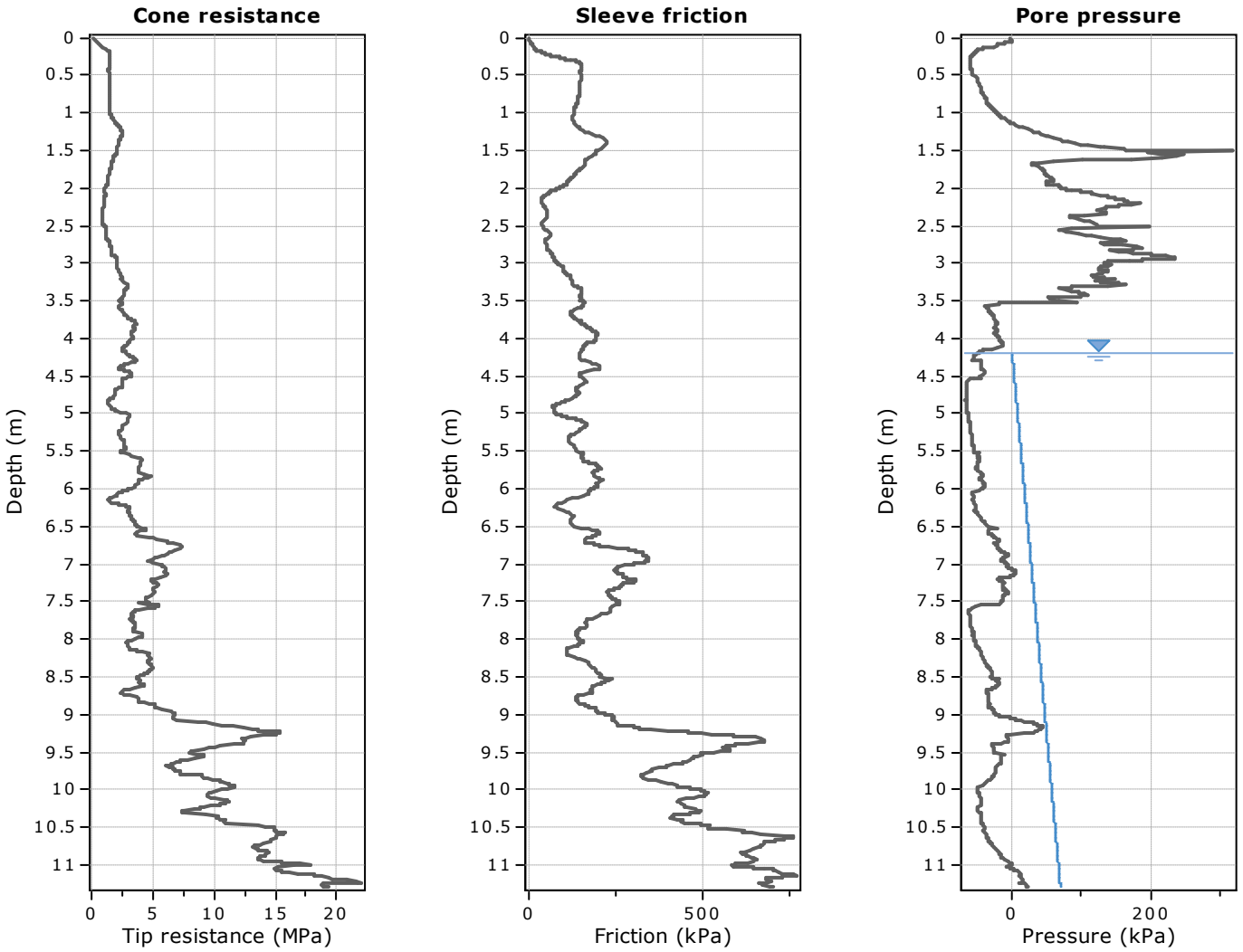
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

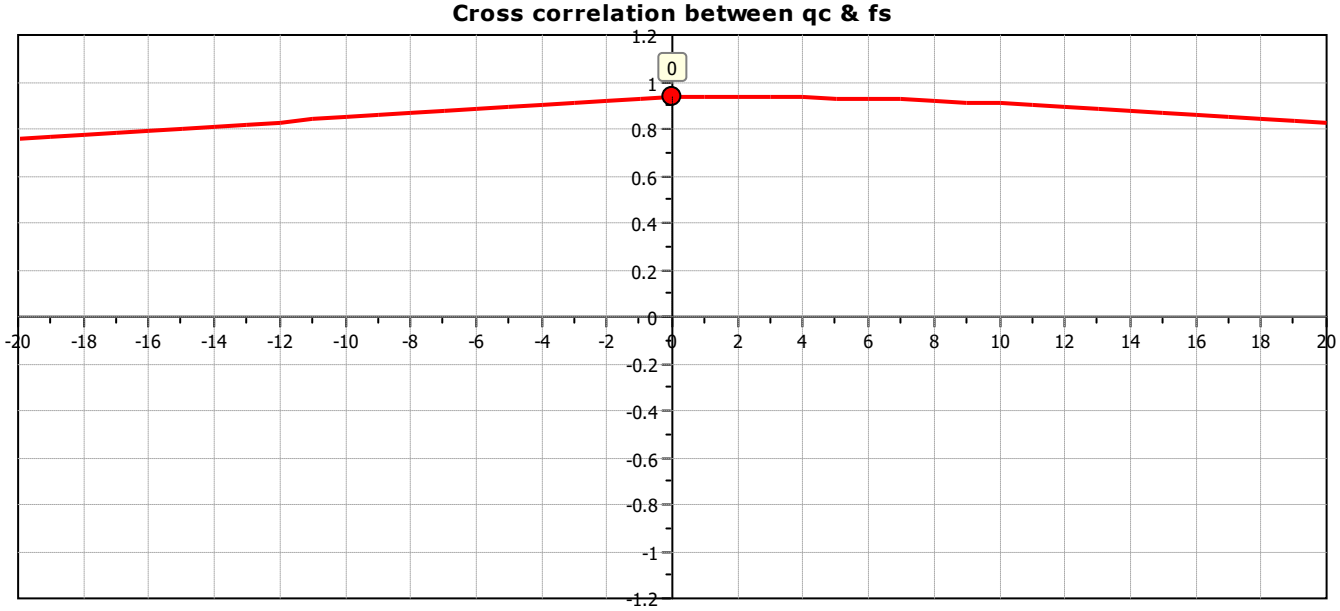
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT26
Total depth: 11.29 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT27	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5801	Battery Voltage Start	6.2
Cone Area Ratio	0.843	Start Recording	11:56:00 AM
Probe Radius	0.0178	Finish Recording	12:23:00 PM
Date of First Push Current Calibration	9/01/2024	Measured Ground Water Depth	EOB 17.5 dry
Metres To Next Calibration	805	Total Penetration Depth (m)	17.592
Depth of Predrill	0	Test ended due to:	☐ High Tilt
Depth at Start of Test	0		☐ High Tip Pressure
Anchor Depth (Left)	1.5		☐ High Friction
Anchor Depth (Right)	1.5		☐ High Pore Pressure
			☐ High Total load
			☐ Danger of Rods Buckling
			☐ Target Depth
			☑ Anchor Failure

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.02%	0.01%	1.10%
End of test with tip loosened	0.05%	0.09%	0.70%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

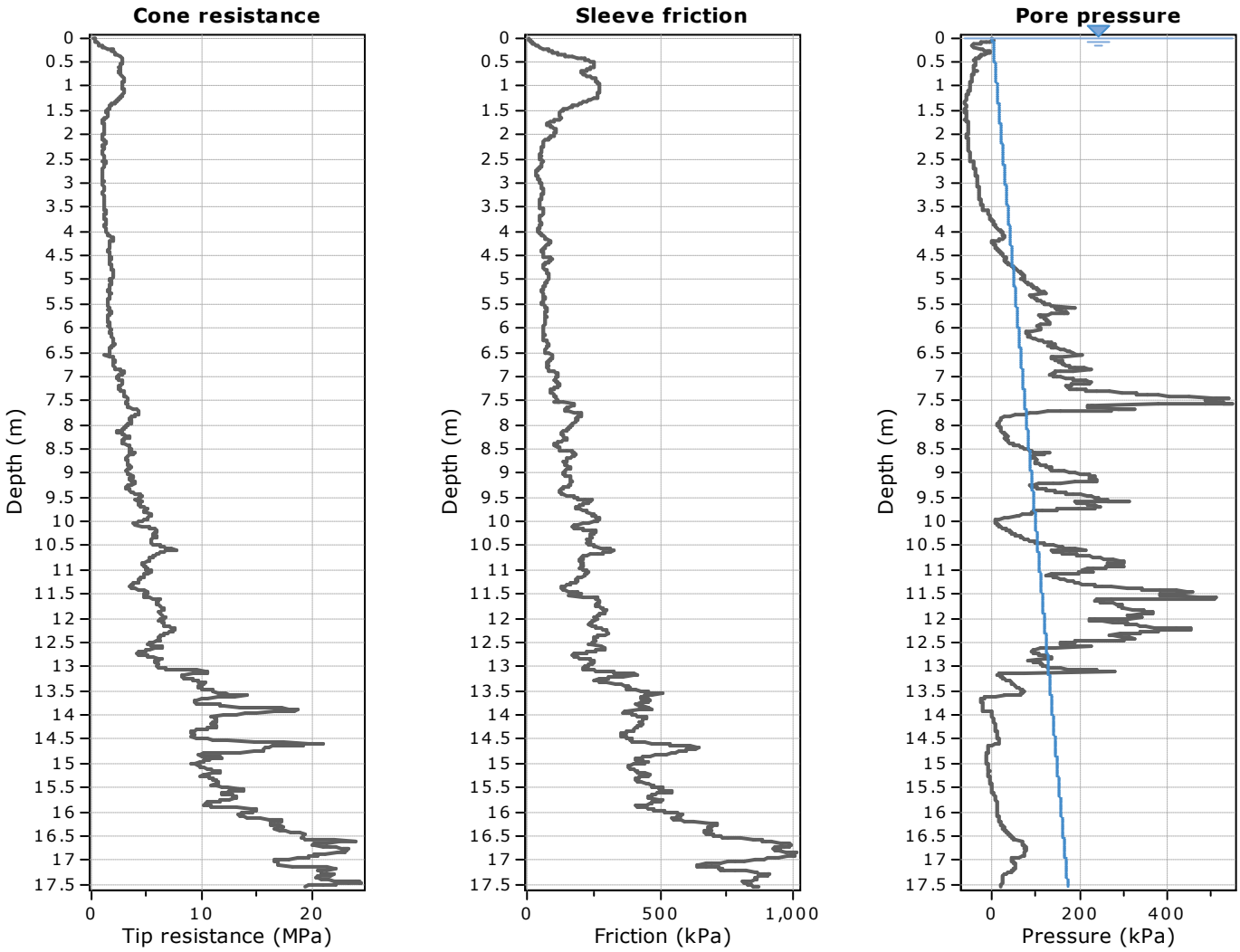
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

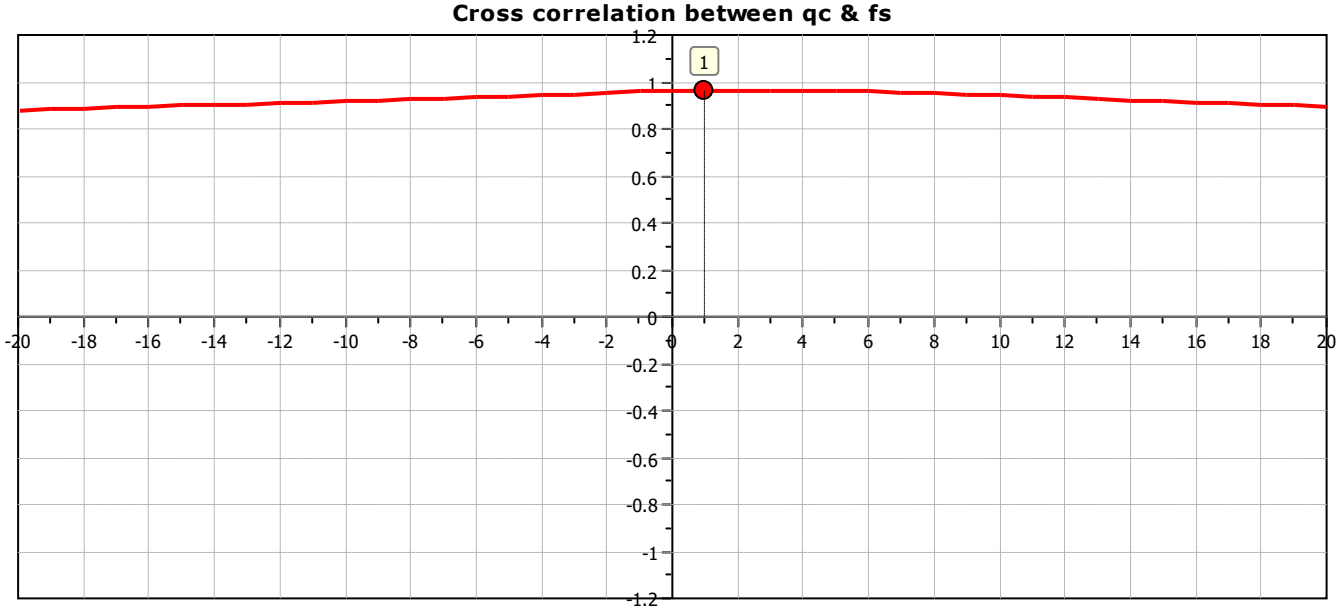
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Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT27
Total depth: 17.55 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT28	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5845	Battery Voltage Start	6.12
Cone Area Ratio	0.85	Start Recording	1:34:00 PM
Probe Radius	0.0179	Finish Recording	2:05:00 PM
Date of First Push Current Calibration	13/03/2024	Measured Ground Water Depth	collapsed at 19.4m dry
Metres To Next Calibration	1110	Total Penetration Depth (m)	19.48
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.03%	0.07%	0.26%
End of test with tip loosened	0.03%	0.02%	0.94%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

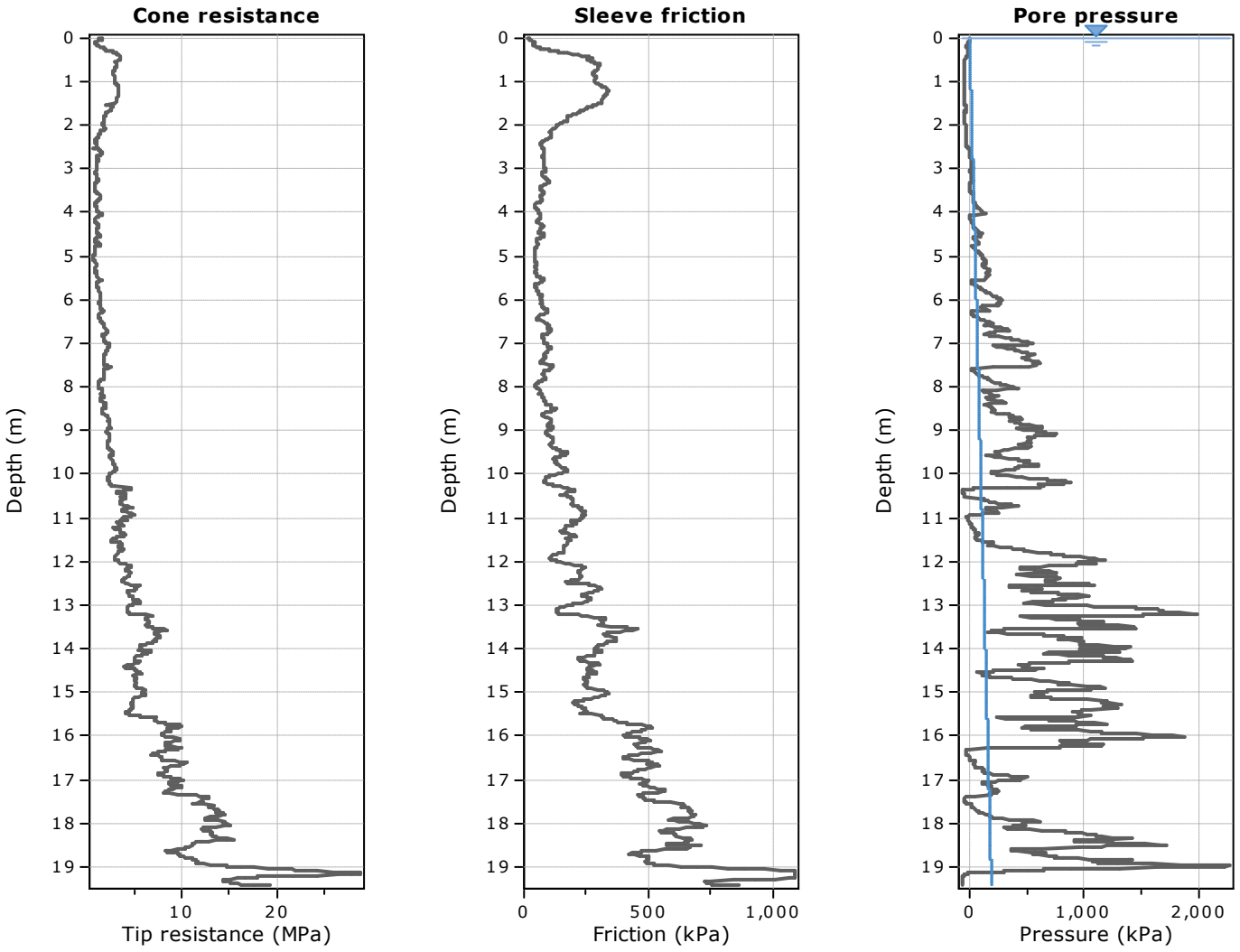
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

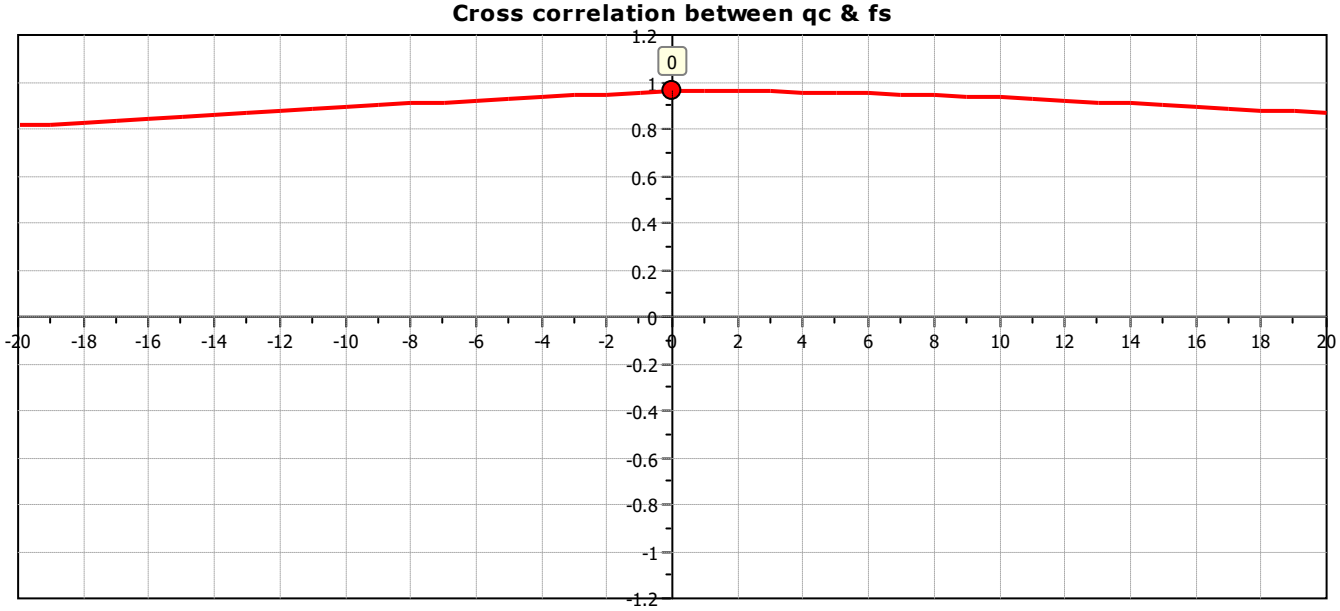
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+64211473249

Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT28
Total depth: 19.42 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT29	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5959	Battery Voltage Start	6.03
Cone Area Ratio	0.869	Start Recording	2:23:00 PM
Probe Radius	0.0179	Finish Recording	2:58:00 PM
Date of First Push Current Calibration	26/06/2024	Measured Ground Water Depth	6.5
Metres To Next Calibration	1352	Total Penetration Depth (m)	23.605
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☐ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☑ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.01%	0.01%	0.30%
End of test with tip loosened	0.07%	0.02%	1.12%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments

Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged

qc

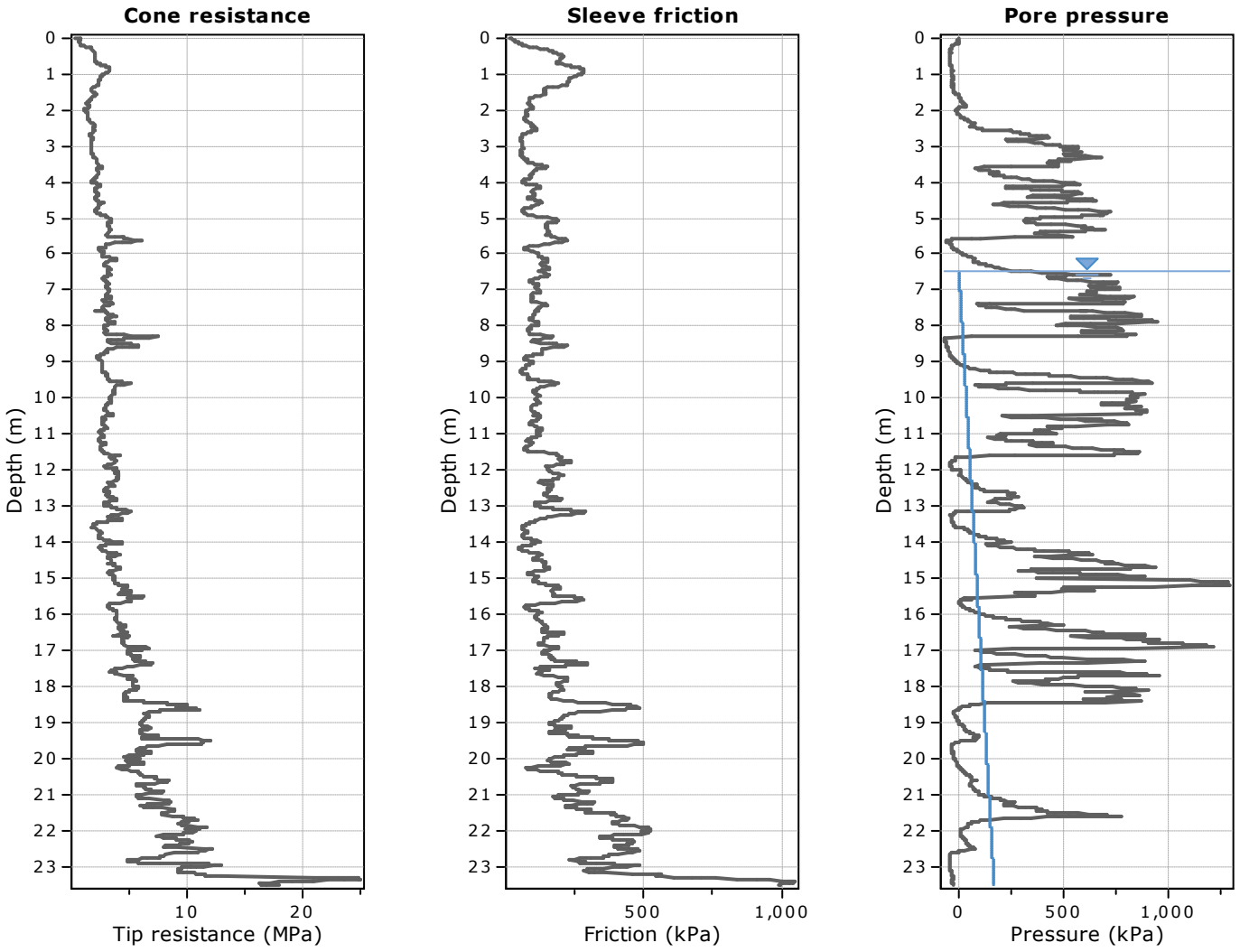
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u

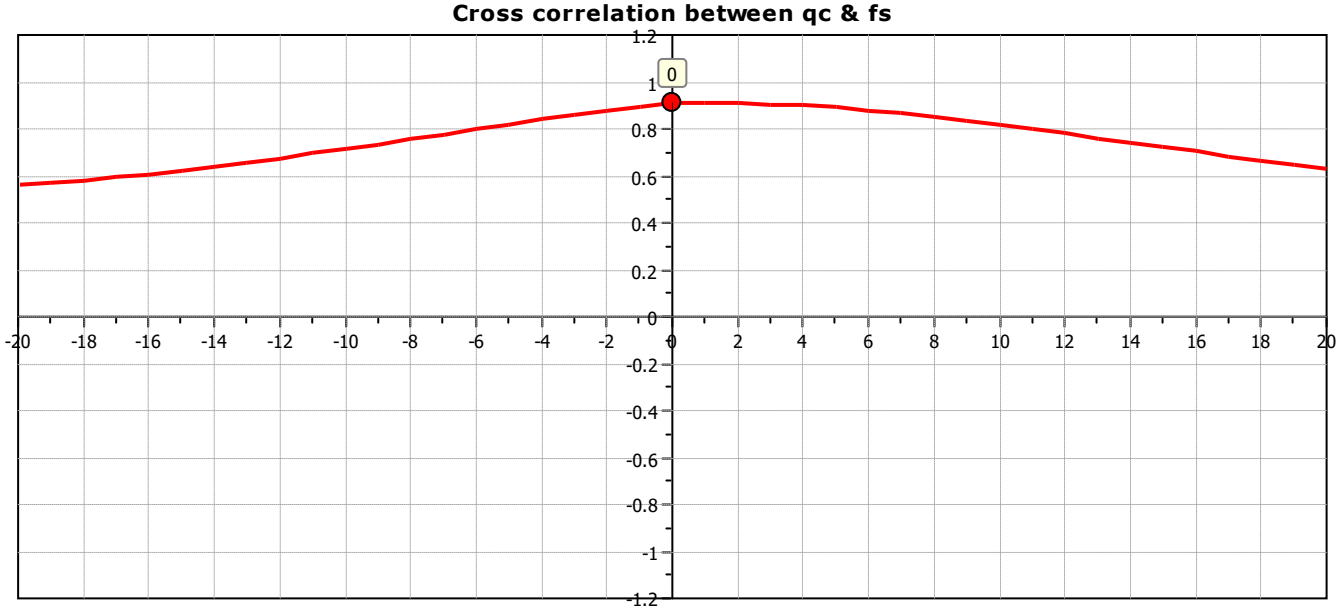
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+64211473249

Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT29
Total depth: 23.52 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT Test Information

Test Hole Number	CPT30	Job Identifier	HW Willowridge
Test Date	5/08/2024	Operator	Craig Greenfield
Cone Serial Number	5654	Battery Voltage Start	5.98
Cone Area Ratio	0.84	Start Recording	3:50:00 PM
Probe Radius	0.018	Finish Recording	4:42:00 PM
Date of First Push Current Calibration	1/08/2024	Measured Ground Water Depth	collapsed at 3.6m dry
Metres To Next Calibration	1487	Total Penetration Depth (m)	11.375
Depth of Predrill	0	Test ended due to:	☐ High Tilt ☑ High Tip Pressure ☐ High Friction ☐ High Pore Pressure ☐ High Total load ☐ Danger of Rods Buckling ☐ Target Depth ☐ Anchor Failure
Depth at Start of Test	0		
Anchor Depth (Left)	1.5		
Anchor Depth (Right)	1.5		

Zero Value Change % FSO

	Point Resistance	Pore Pressure	Sleeve Friction
Zero Shift Since First Push Current Calibration	0.02%	0.06%	0.02%
End of test with tip loosened	0.05%	0.03%	0.04%

Dissipation Testing

Test No	Depth (m)	Duration (secs)	Comments
CPT30-D1	10.507	1852	0.12

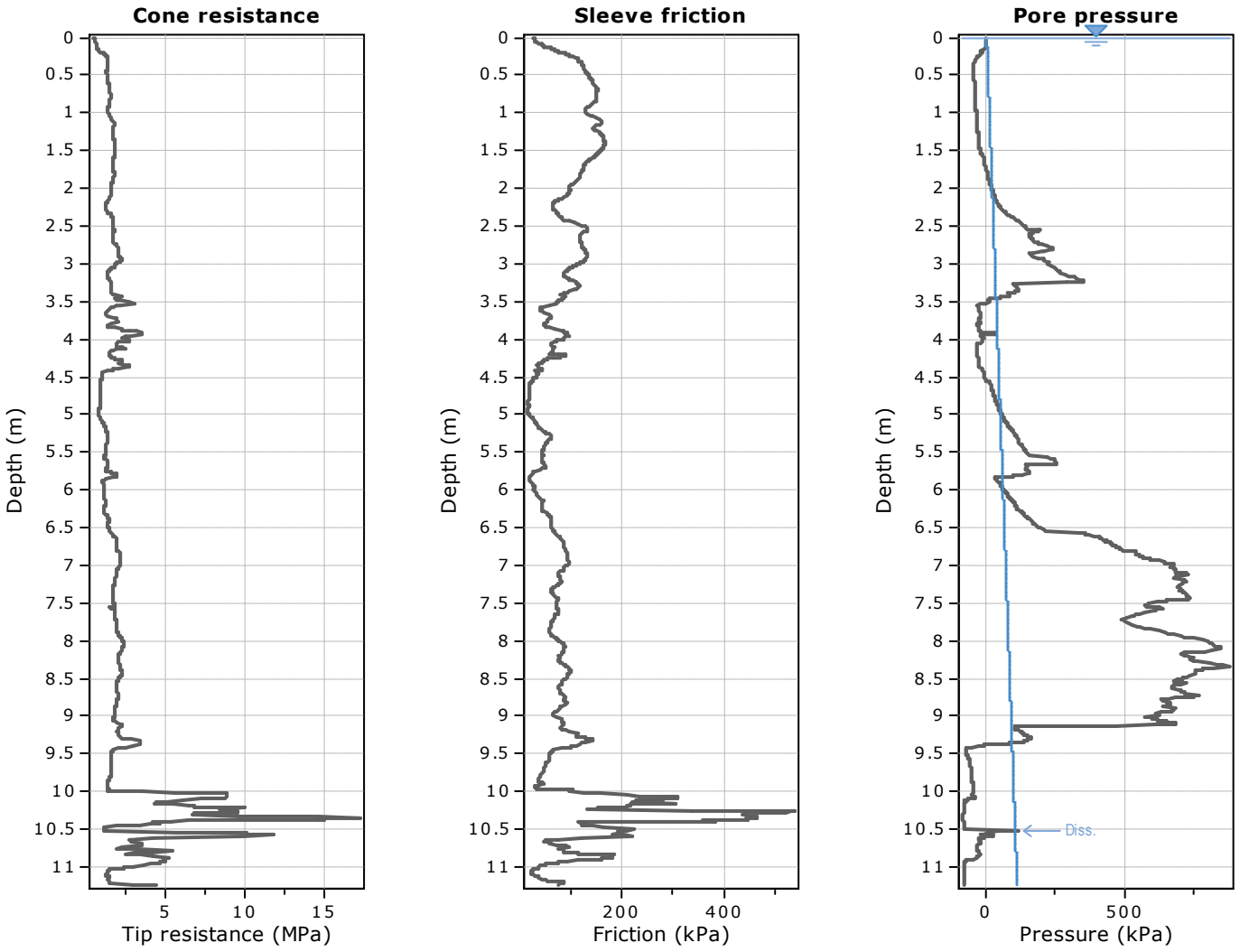
Notes and Comments

Data loss (typically at rod change points). Either deleted or averaged	qc	fs	u

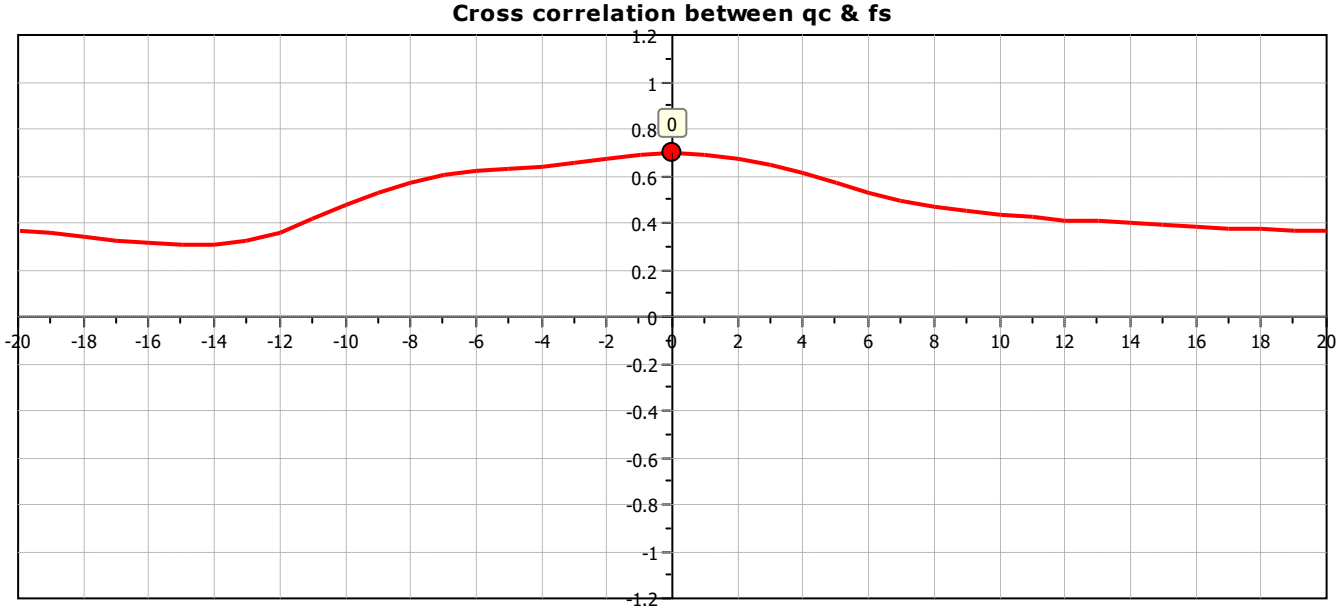
Underground Investigation Ltd
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craig@undergroundinvestigation.co.nz
+64211473249

Project: **Willowridge Developments**
Location: **Aucks Road Russell**

CPT: CPT30
Total depth: 11.24 m, Date: 9/08/2024



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Appendix D – Laboratory Test Results

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Please reply to: W.E. Campton

Haigh Workman Ltd.
PO Box 89
Kerikeri 0245

Job Number: 63632#L
BGL Registration Number: 2828
Checked by: JF

Attention: **JOSH CURREEN**

16th August 2024

ATTERBERG LIMITS & LINEAR SHRINKAGE TESTING

Dear Sir,

Re: 39 AUCKS ROAD, RUSSELL

Your Reference: 23 020
Report Number: 63632#L/AL 39 Aucks Road

The following report presents the results of Atterberg Limits & Linear Shrinkage testing at BGL of soil samples delivered to this laboratory on the 7th of August 2024. Test results are summarised below, with page 3 showing where the samples plot on the Unified Soil Classification System (Casagrande) Chart. Test standards used were:

Water Content:	NZS4402:1986:Test 2.1
Liquid Limit:	NZS4402:1986:Test 2.2
Plastic Limit:	NZS4402:1986:Test 2.3
Plasticity Index:	NZS4402:1986:Test 2.4
Linear Shrinkage:	NZS4402:1986:Test 2.6

Borehole Number	Sample Number	Depth (m)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Linear Shrinkage (%)*
BH01	Sample 1	0.50 – 1.00	30.7	71 ◆	29 ◆	42 ◆	16 ◆
BH03	Sample 2	0.50 – 1.00	34.2	85	31	54	19
BH21	Sample 3	0.50 – 1.00	30.0	69 ◆	28 ◆	41 ◆	16 ◆
BH29	Sample 4	0.80 – 1.30	28.5	59 ◆	28 ◆	31 ◆	13 ◆
BH40	Sample 5	1.20 – 1.90	31.2	67	33	34	15

**The amount of shrinkage of the sample as a percentage of the original sample length.*

◆ *= The soil fraction passing a 425µm sieve was used for the liquid limit, plastic limit & linear shrinkage tests.*

The whole soils were used for the water content tests (the soils were in a natural state), and for the liquid limit, plastic limit & linear shrinkage tests without a diamond beside them. The soil fractions passing a 0.425mm sieve were used for the liquid limit, plastic limit & linear shrinkage tests with a diamond (◆) beside them. The soils were wet up and dried where required for the liquid limit, plastic limit & linear shrinkage tests.

As per the reporting requirements of NZS4402: 1986: Test 2.1: water content is reported to two significant figures for values below 10%, and to three significant figures for values of 10% or greater. Test 2.2: liquid limit, test 2.3: plastic limit and test 2.6: linear shrinkage are reported to the nearest whole number.

Please note that the test results relate only to the samples as-received, and relate only to the samples under test.

Thank you for the opportunity to carry out this testing. If you have any queries regarding the content of this report please contact the person authorising this report below at your convenience.

Yours faithfully,

Justin Franklin
Key Technical Person
Assistant Laboratory Manager
Babbage Geotechnical Laboratory

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TESTING LABORATORY
№ 126

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation. This report may not be reproduced except in full & with written approval from BGL.

Babbage Geotechnical Laboratory

Project: 39 AUCKS ROAD, RUSSELL

DETERMINATION OF THE LIQUID LIMIT, PLASTIC LIMIT & THE PLASTICITY INDEX

Test Methods: NZS4402: 1986: Test 2.2, Test 2.3 and Test 2.4

Tested By:	SG / JL	August 2024
Compiled By:	JF	16/08/2024
Checked By:	JF	16/08/2024

SUMMARY OF TESTING

Borehole Number	Sample Number	Depth (m)	Liquid Limit	Plastic Limit	Plasticity Index	Soil Classification Based on USCS Chart Below
BH01	Sample 1	0.50 - 1.00	71	29	42	CH
BH03	Sample 2	0.50 - 1.00	85	31	54	CH
BH21	Sample 3	0.50 - 1.00	69	28	41	CH
BH29	Sample 4	0.80 - 1.30	59	28	31	CH
BH40	Sample 5	1.20 - 1.90	67	33	34	CH / MH

The chart below & soil classification terminology is taken from ASTM D2487-17^{e1} "Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)", April 2020, & is based on the classification scheme developed by A. Casagrande in the 1940's (Casagrande, A., 1948: Classification and identification of soil. Transactions of the American Society of Civil Engineers, v. 113, p. 901-930). The chart below & the soil classification given in the table above are included for your information only, and are not included in the IANZ endorsement for this report.

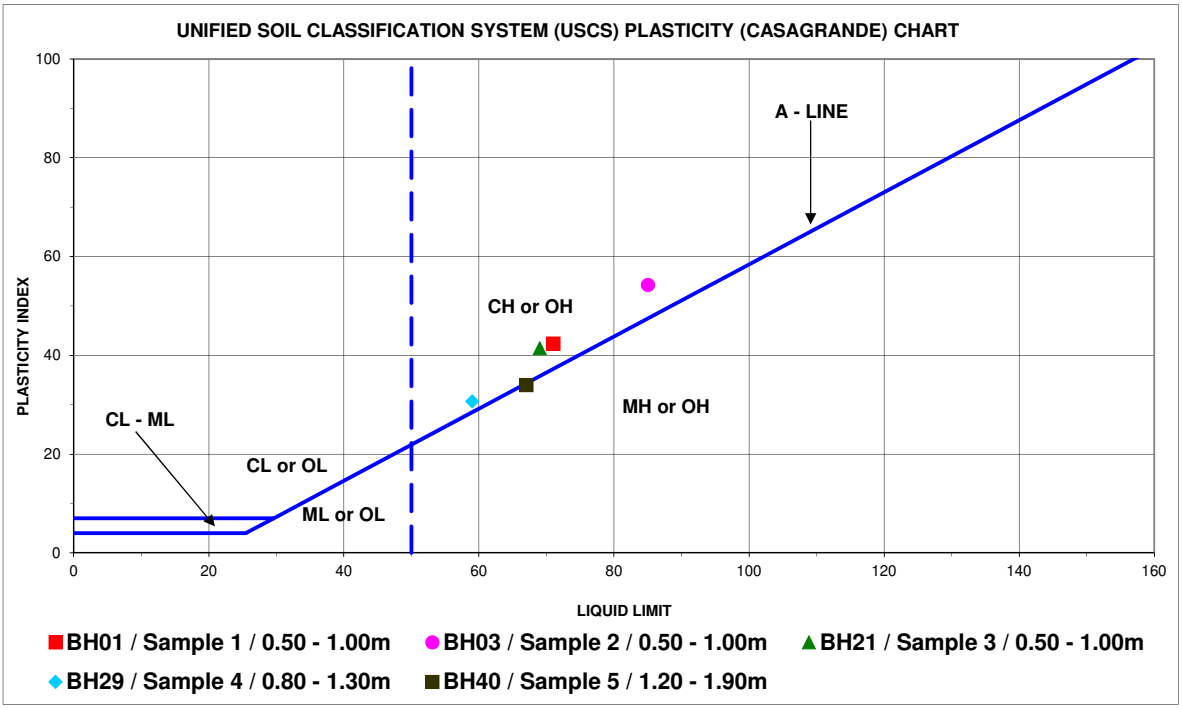


CHART LEGEND

CL = CLAY, low plasticity ('lean' clay)
CH = CLAY, high plasticity ('fat' clay)
OL = ORGANIC CLAY or ORGANIC SILT, low liquid limit
OH = ORGANIC CLAY or ORGANIC SILT, high liquid limit
ML = SILT, low liquid limit
MH = SILT, high liquid limit ('elastic silt')
CL - ML = SILTY CLAY

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Please reply to: W.E. Campton

Haigh Workman Ltd.
PO Box 89
Kerikeri 0245

Job Number: 63632#L
BGL Registration Number: 2828
Checked by: JF

Attention: **JOSH CURREEN**

15th August 2024

SOLID DENSITY TESTING

Dear Sir,

Re: 39 AUCKS ROAD, RUSSELL

Your Reference: 23 020
Report Number: 63632#L/SD 39 Aucks Road

The following report presents the results of solid density testing at BGL of soil samples delivered to this laboratory on the 7th of August 2024.

The test standard used was:

Solid Density (medium & fine soils): NZS4402:1986:Test 2.7.2

Borehole Number	Sample Number	Depth (m)	Solid Density (t/m^3)
BH21	Sample 3	0.50 – 1.00	2.73
BH29	Sample 4	0.80 – 1.30	2.71
BH40	Sample 5	1.20 – 1.90	2.70

The whole soil was used for these tests. When tested the samples were in the as-received state.

As per the reporting requirements of NZS4402: 1986: Test 2.7.2, solid density is the average value of two determinations (each within $0.02t/m^3$ of each other) reported to the nearest $0.01t/m^3$.

Sample Descriptions (*not part of BGL IANZ Accreditation*)

BH21 / Sample 3 / 0.50 – 1.00m:

CLAY, moderately to highly plastic, orange, slightly moist.

BH29 / Sample 4 / 0.80 – 1.30m:

CLAY, fine to medium sandy, moderately plastic, orange with red mottles, moist.

BH40 / Sample 5 / 1.20 – 1.90m:

CLAY, silty, trace fine sand, moderately plastic, yellow, moist.

Please note that the test results relate only to the samples as-received, and relate only to the samples under test.

Thank you for the opportunity to carry out this testing. If you have any queries regarding the content of this report please contact the person authorising this report below at your convenience.

Yours faithfully,

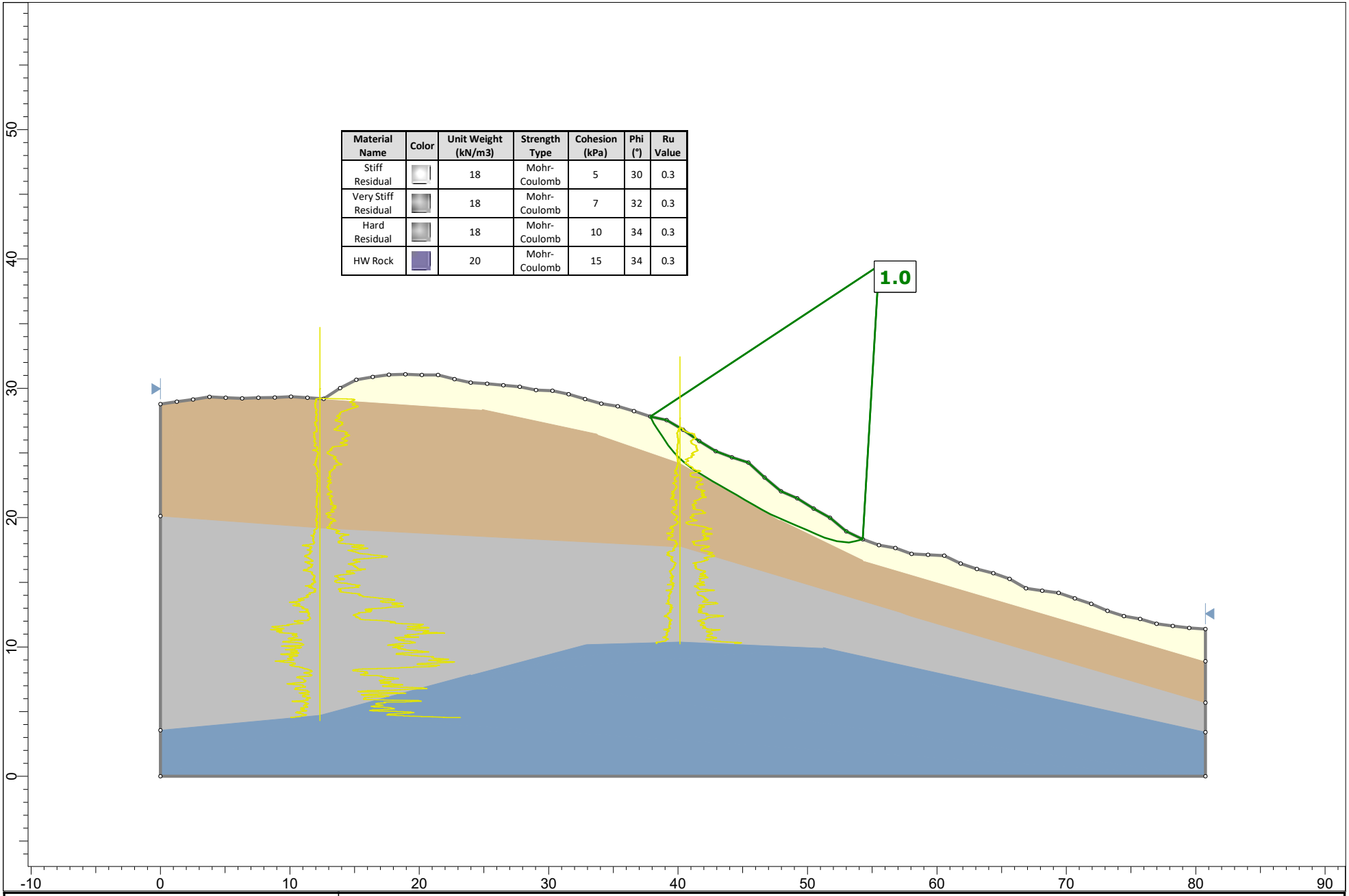
Justin Franklin
Key Technical Person
Assistant Laboratory Manager
Babbage Geotechnical Laboratory

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№ 126

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation. This report may not be reproduced except in full & with written approval from BGL.

Appendix E – Slope Stability Outputs

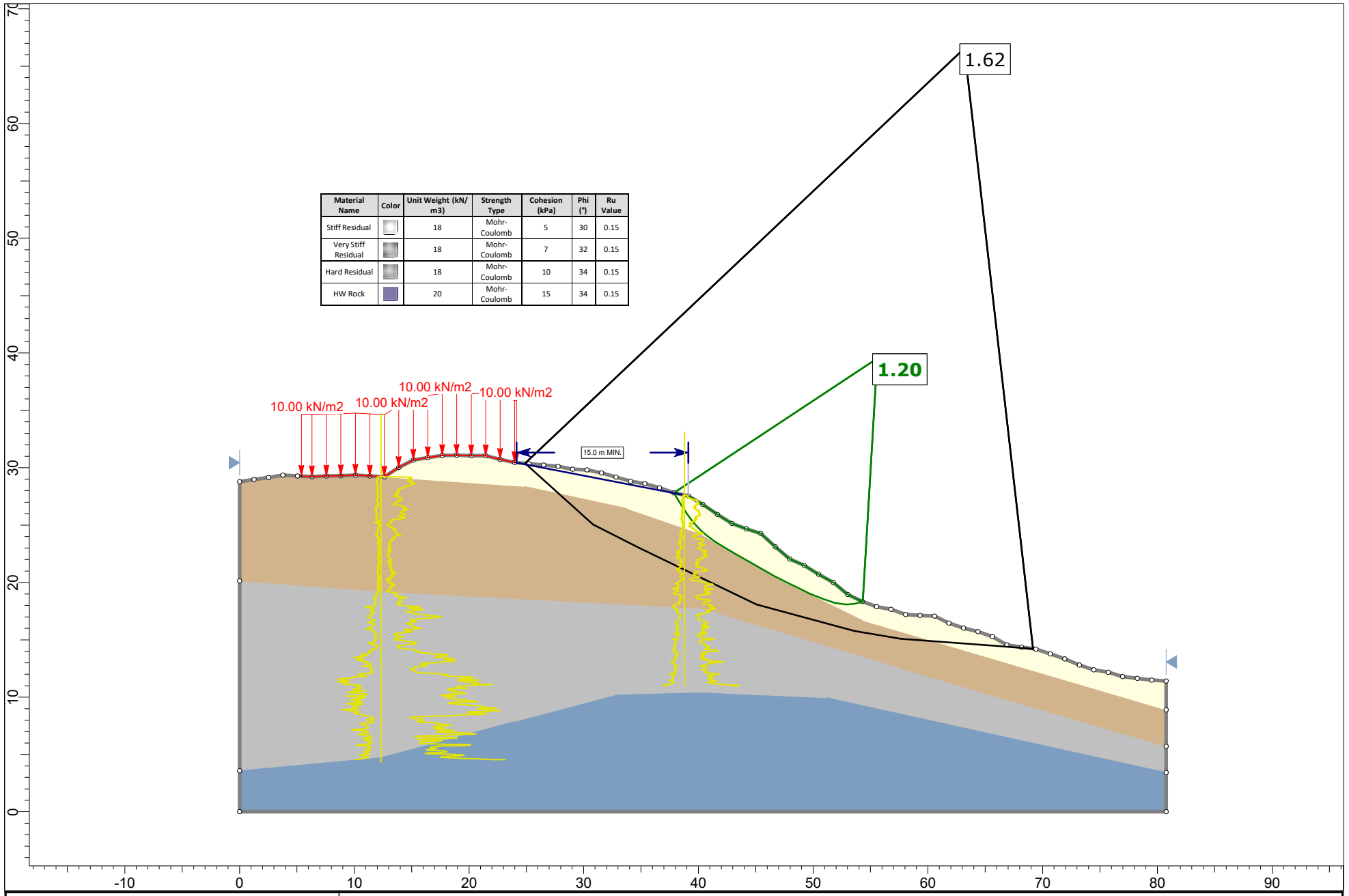
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
HW Rock		20	Mohr-Coulomb	15	34	0.3



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section C-C'	*Scenario*	Back analyses
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	CC_back analyses.slmd



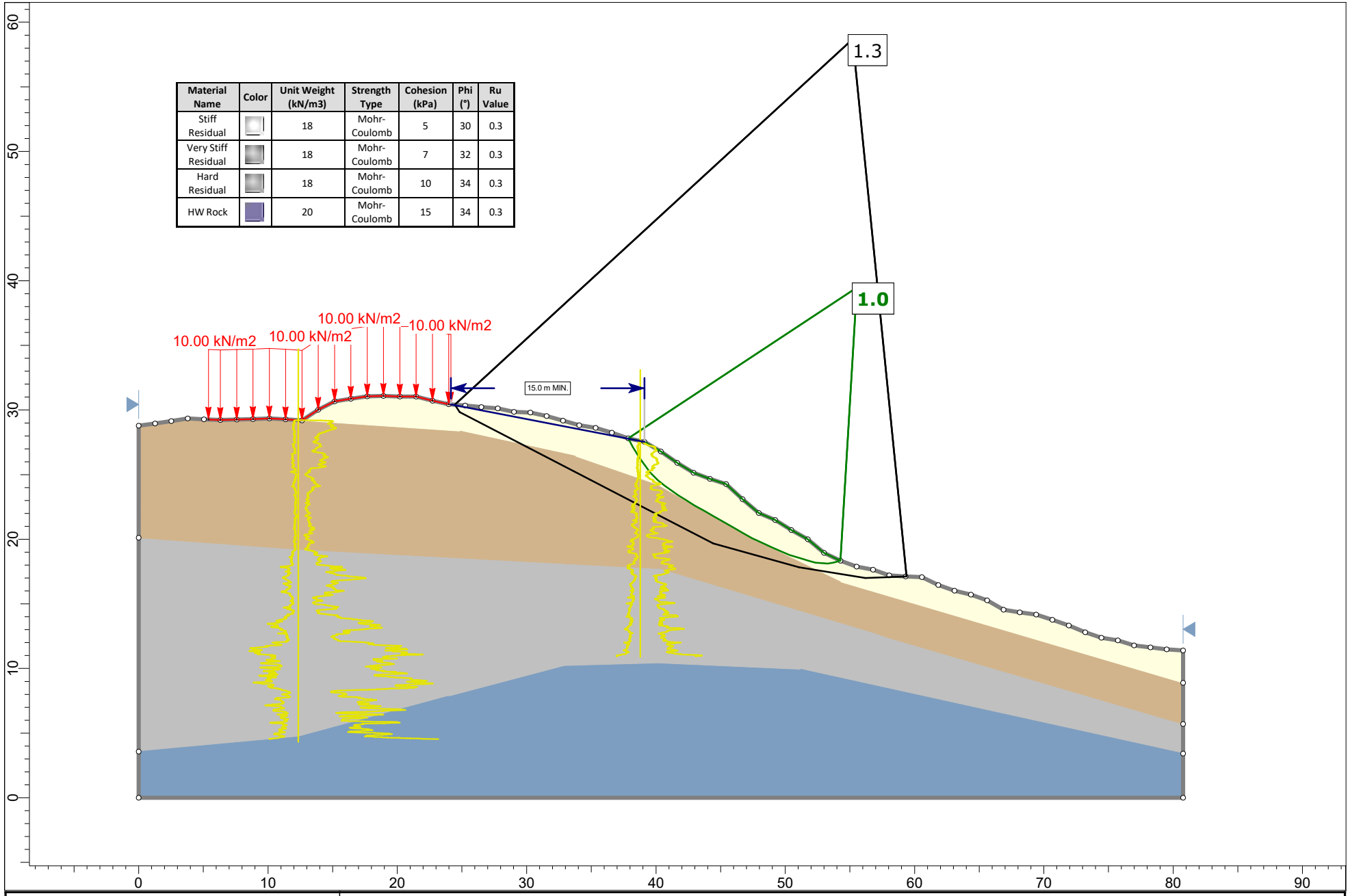
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section C-C'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	CC_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
HW Rock		20	Mohr-Coulomb	15	34	0.3

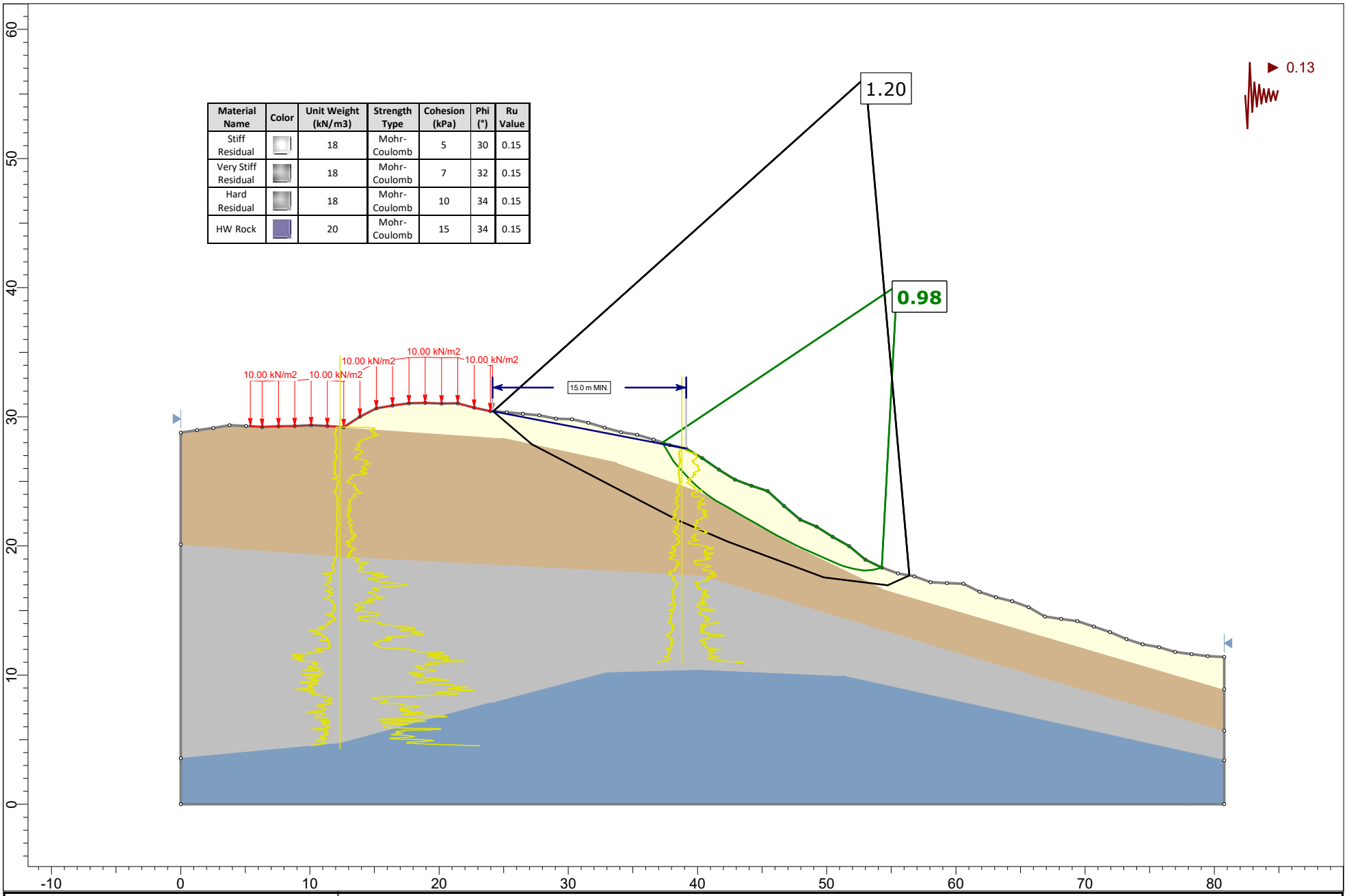


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section C-C'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	CC_elevatedGW.slmd

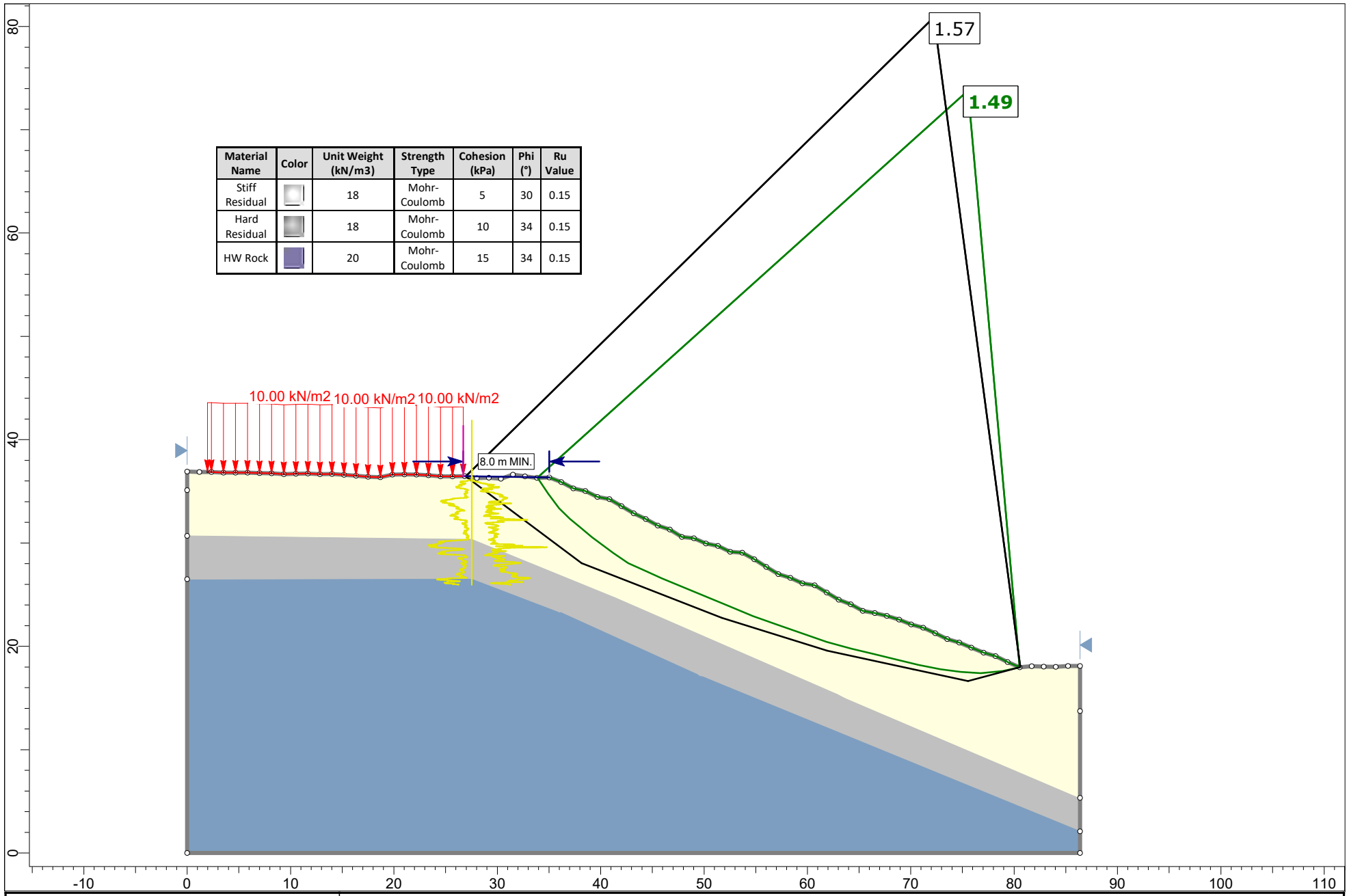
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section C-C'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	CC_seismic.slmd



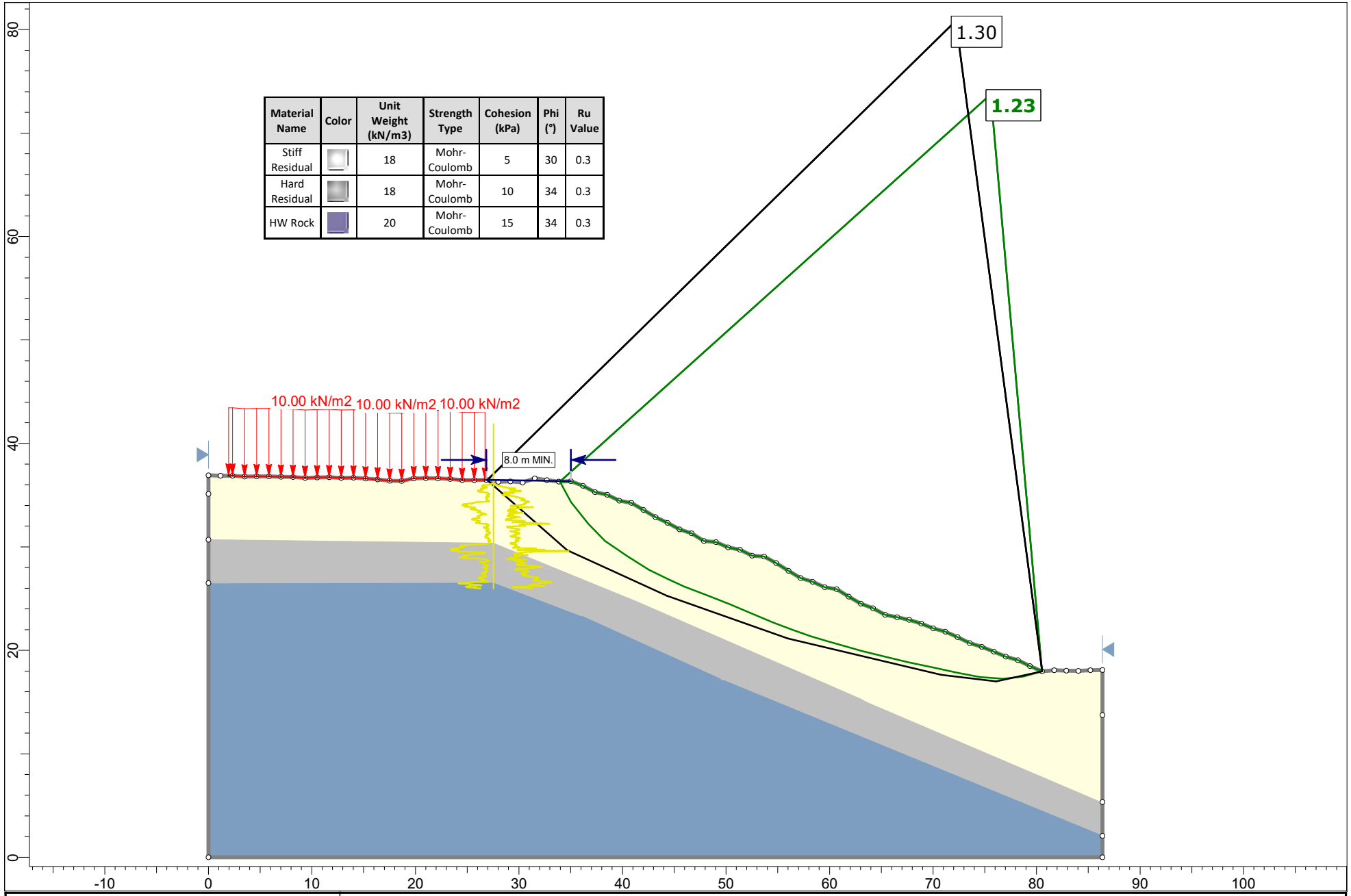
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section D-D'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	DD_static.slmd

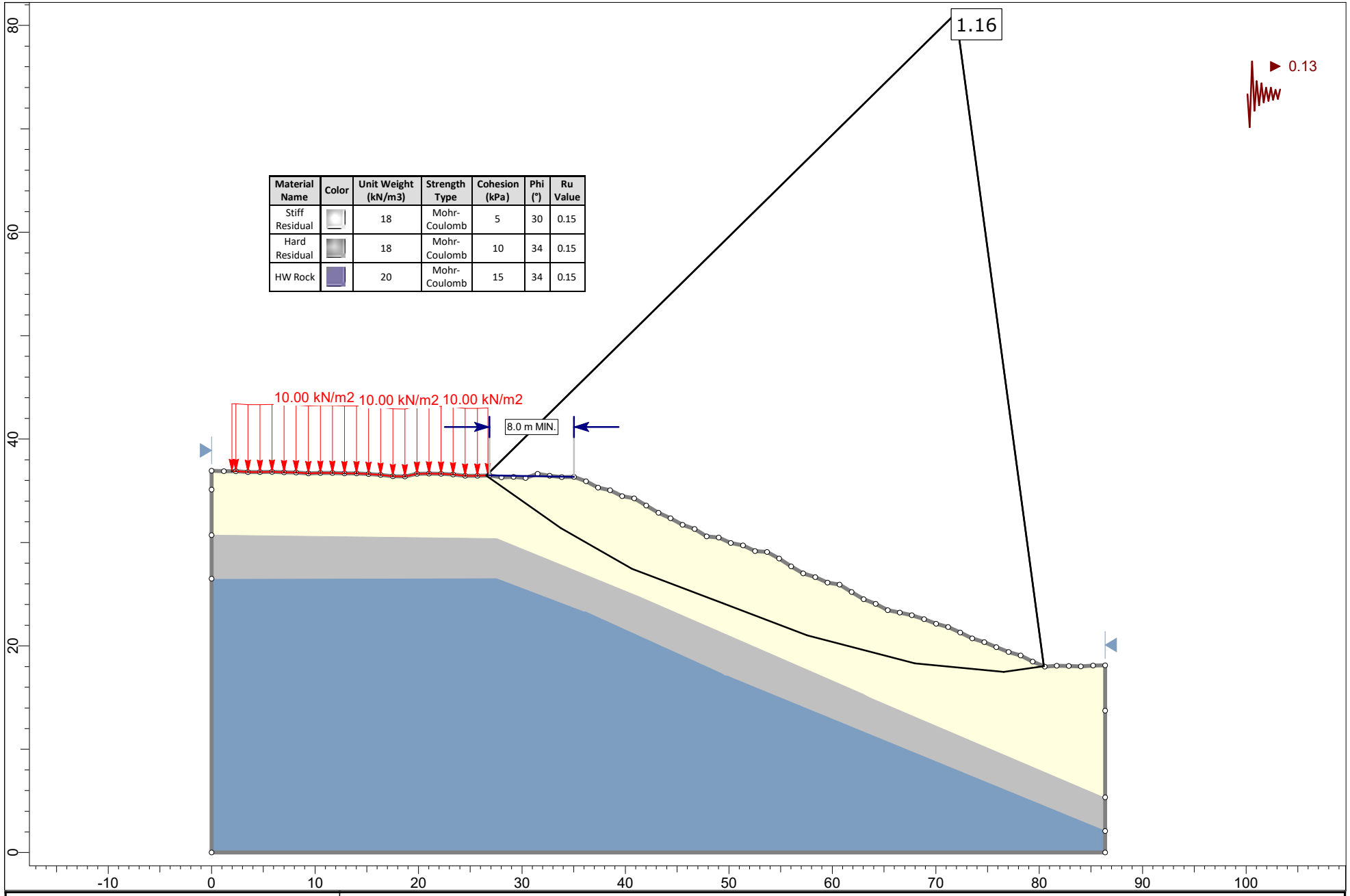
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
HW Rock		20	Mohr-Coulomb	15	34	0.3



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section D-D'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	DD_elevatedGW.slmd

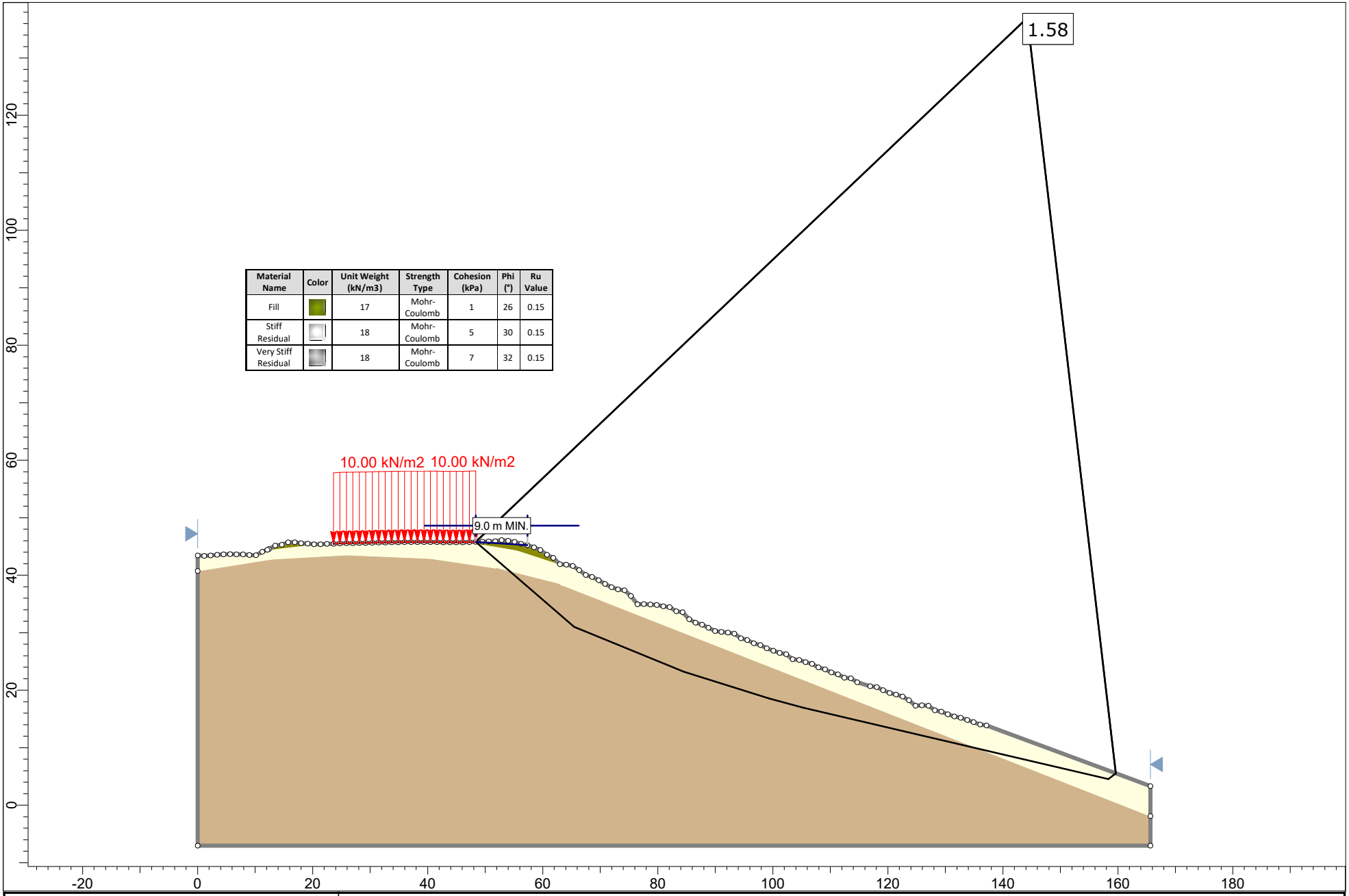


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section D-D'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	DD_seismic.slmd



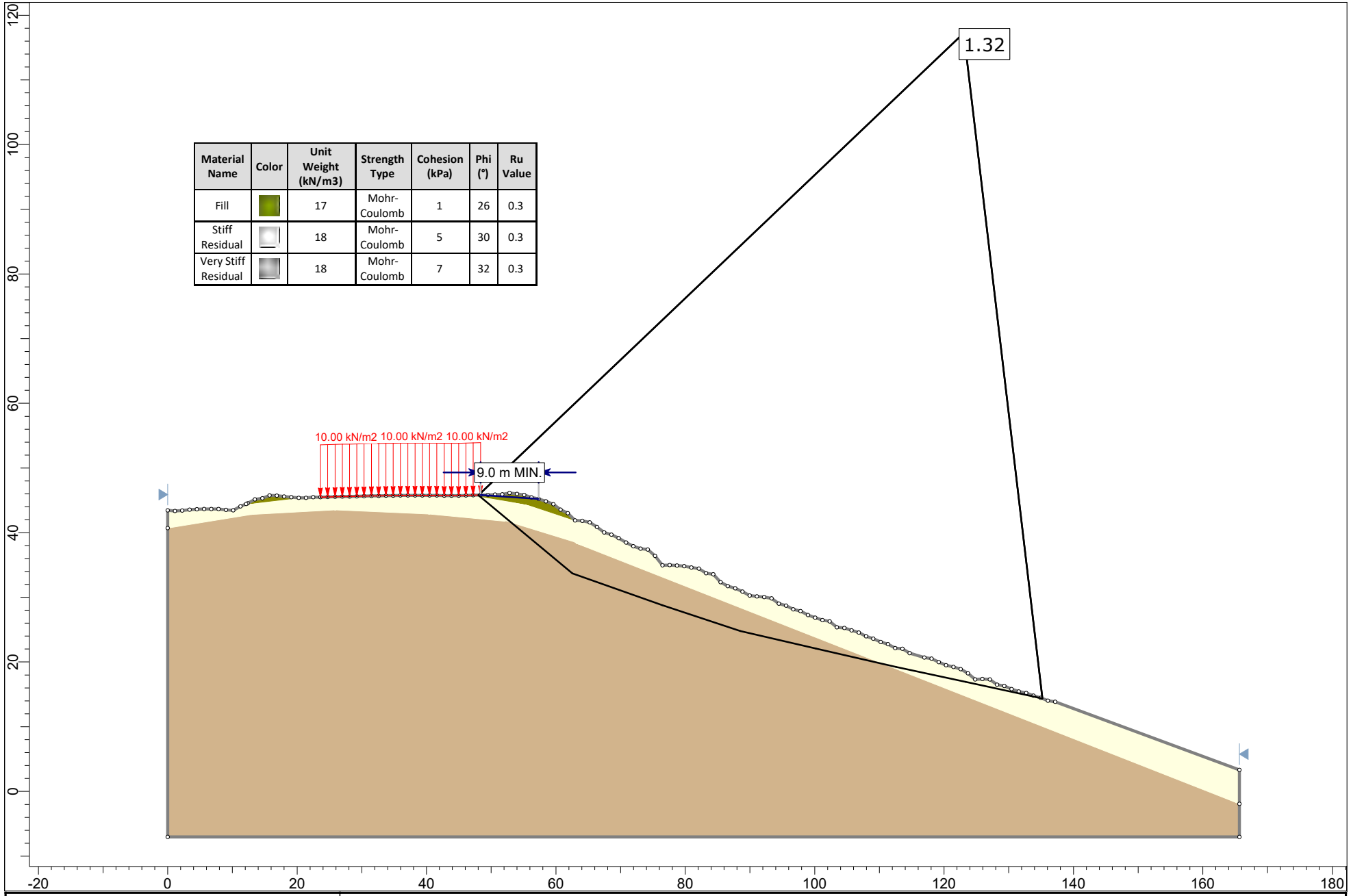
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section F-F'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	FF_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3

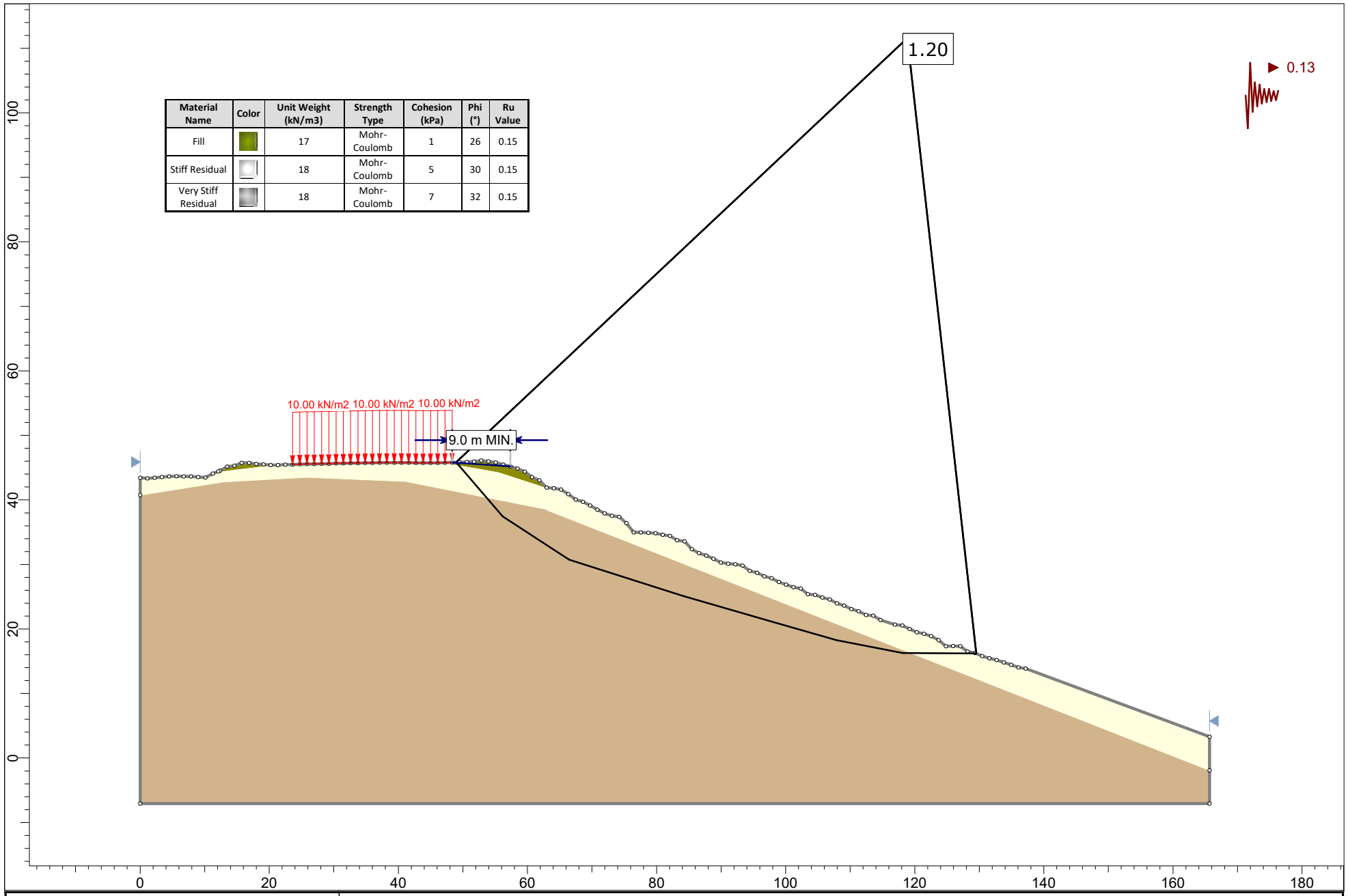


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section F-F'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	FF_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15

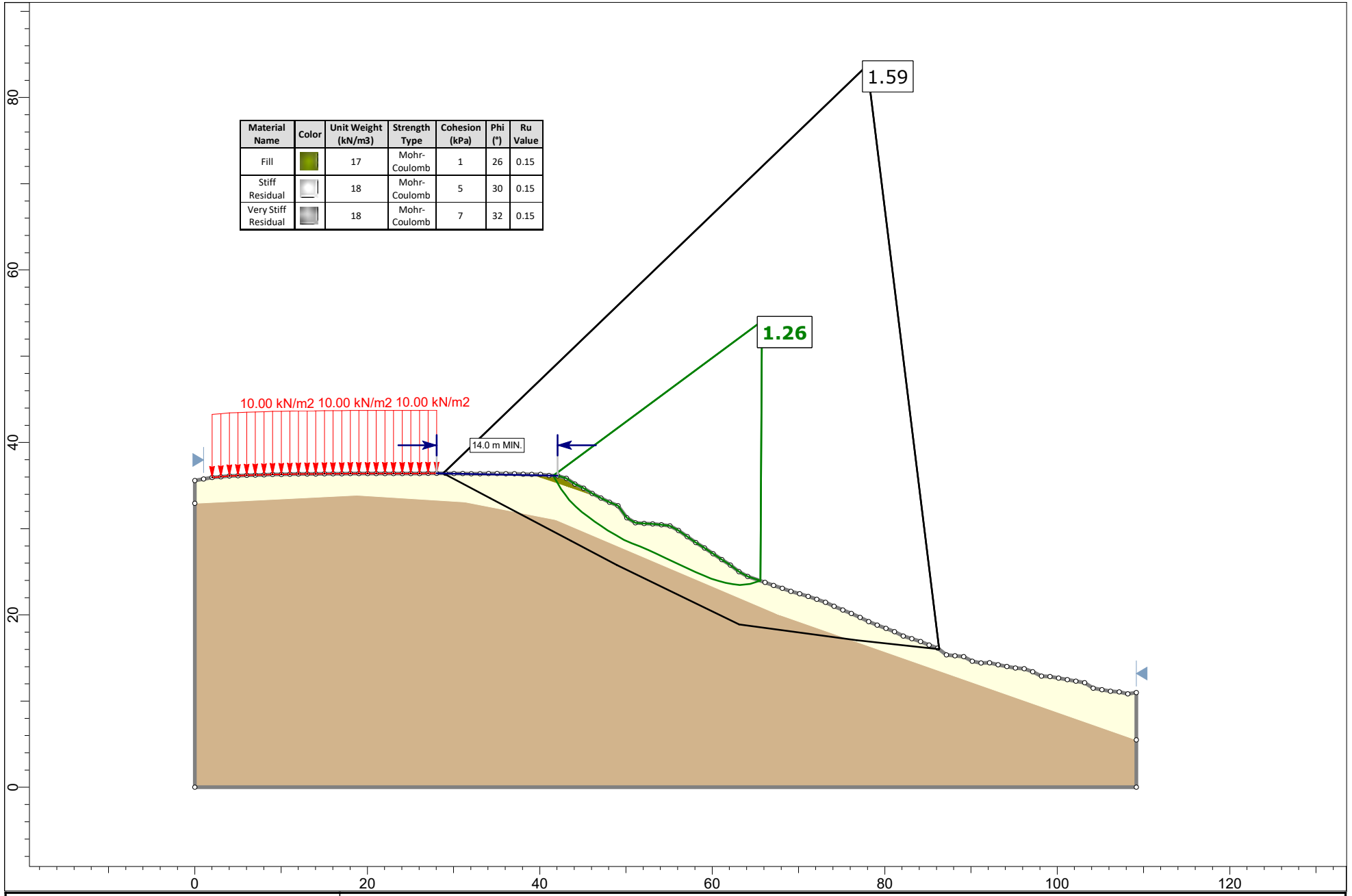


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section F-F'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	FF_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15

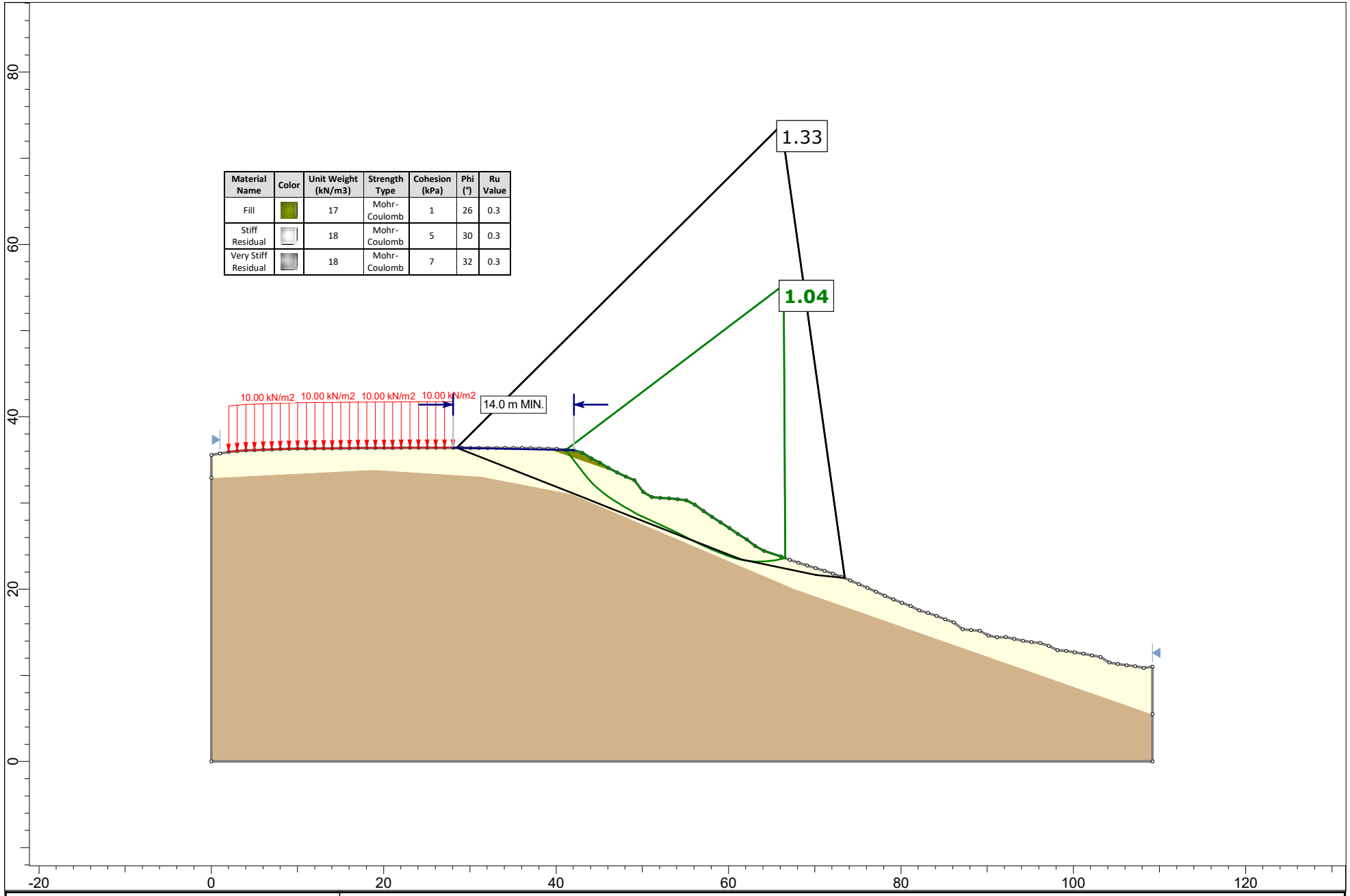


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section G-G'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	GG_static.slmd

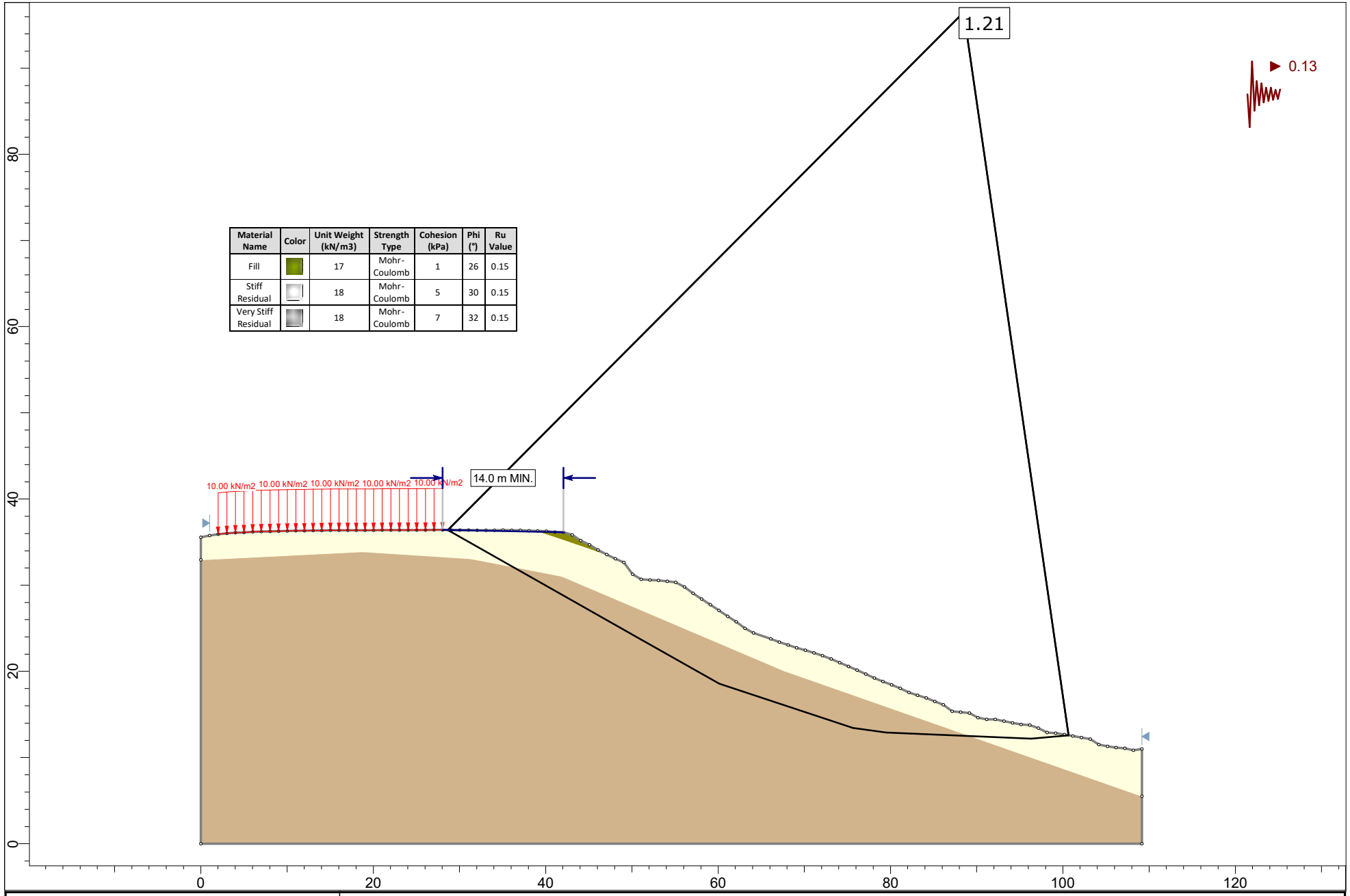
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section G-G'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	GG_elevatedGW.slmd

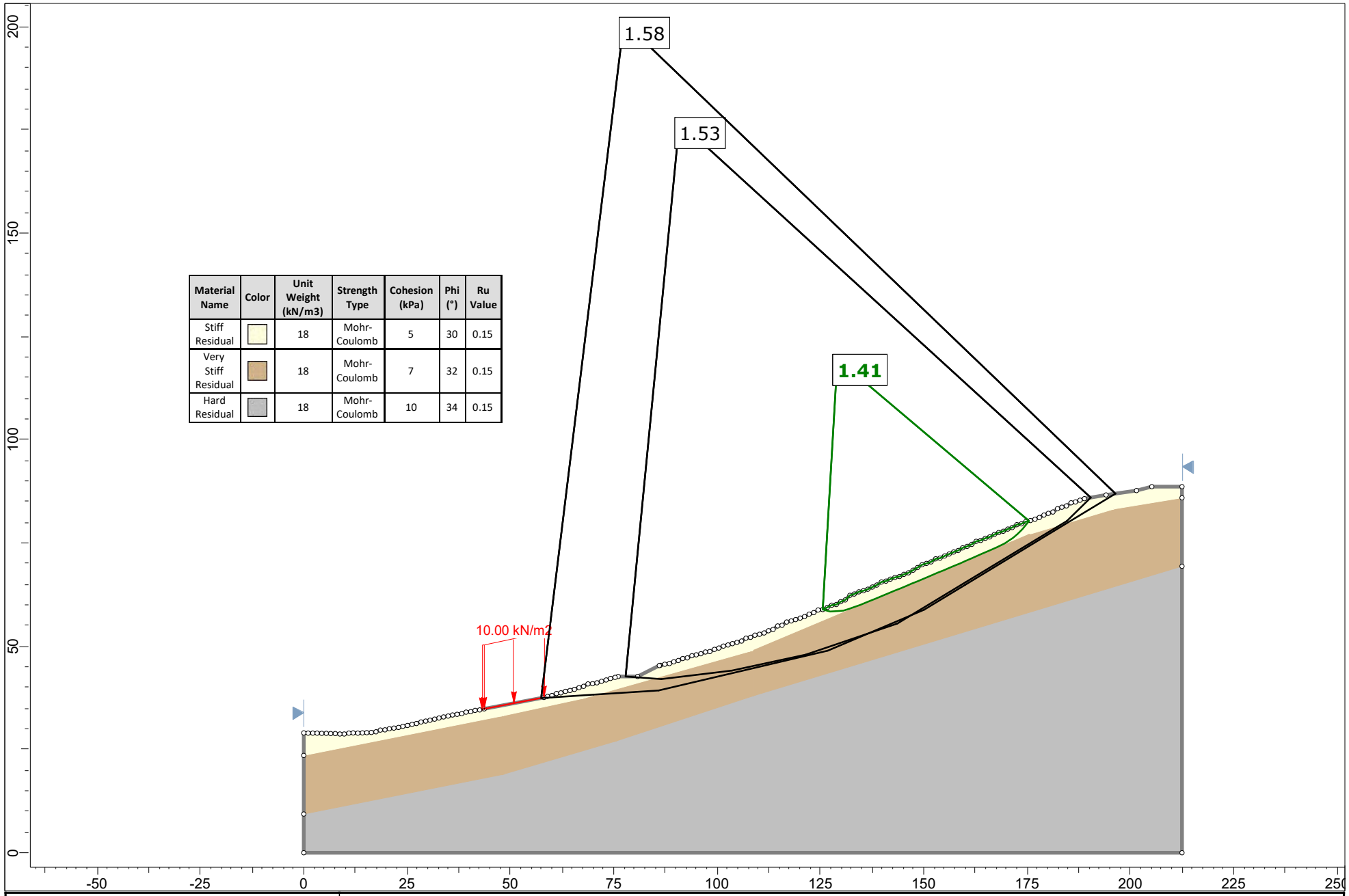


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section G-G'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	GG_seismic.slmd

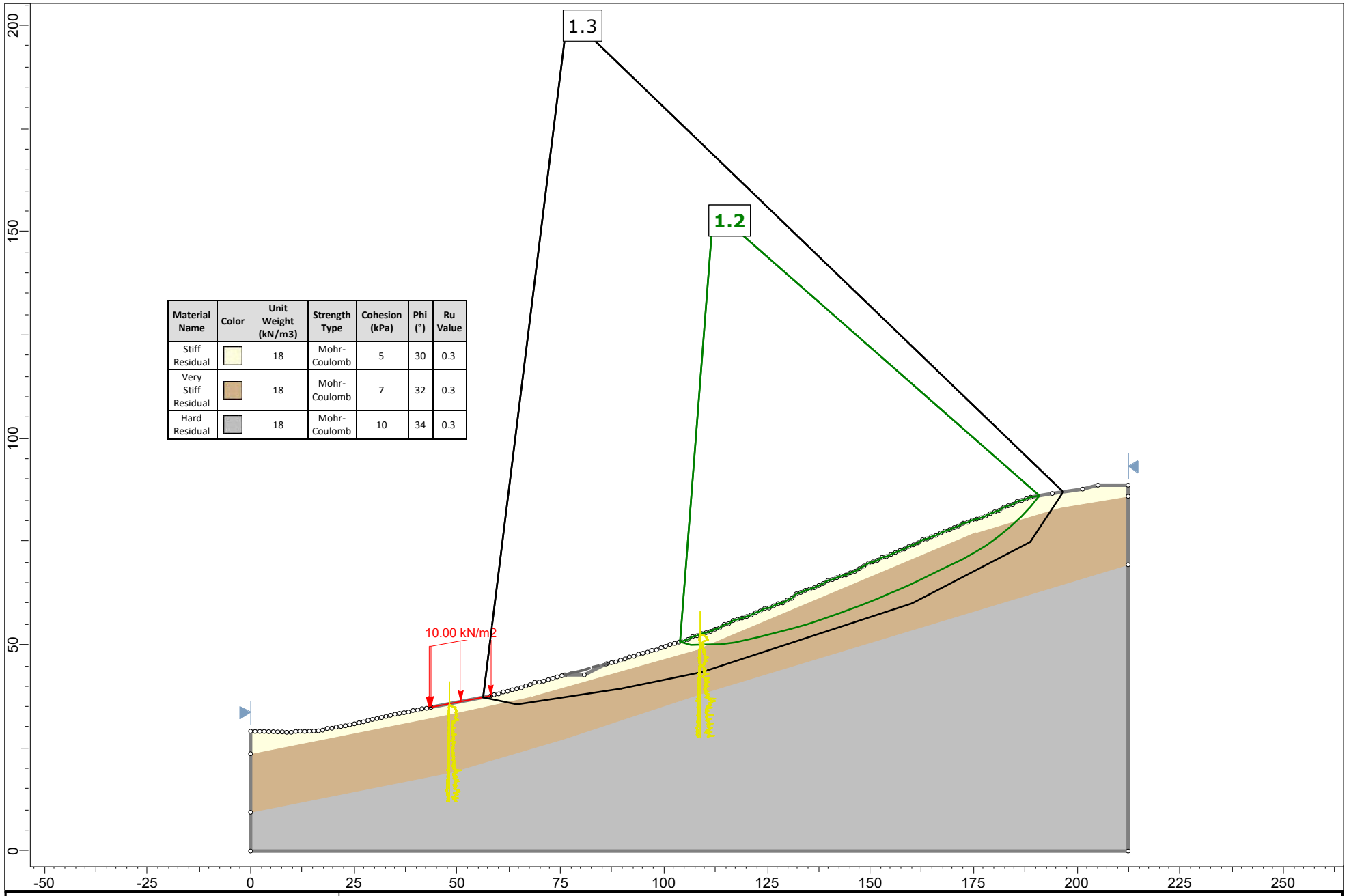


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section H-H'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	HH_static.slmd

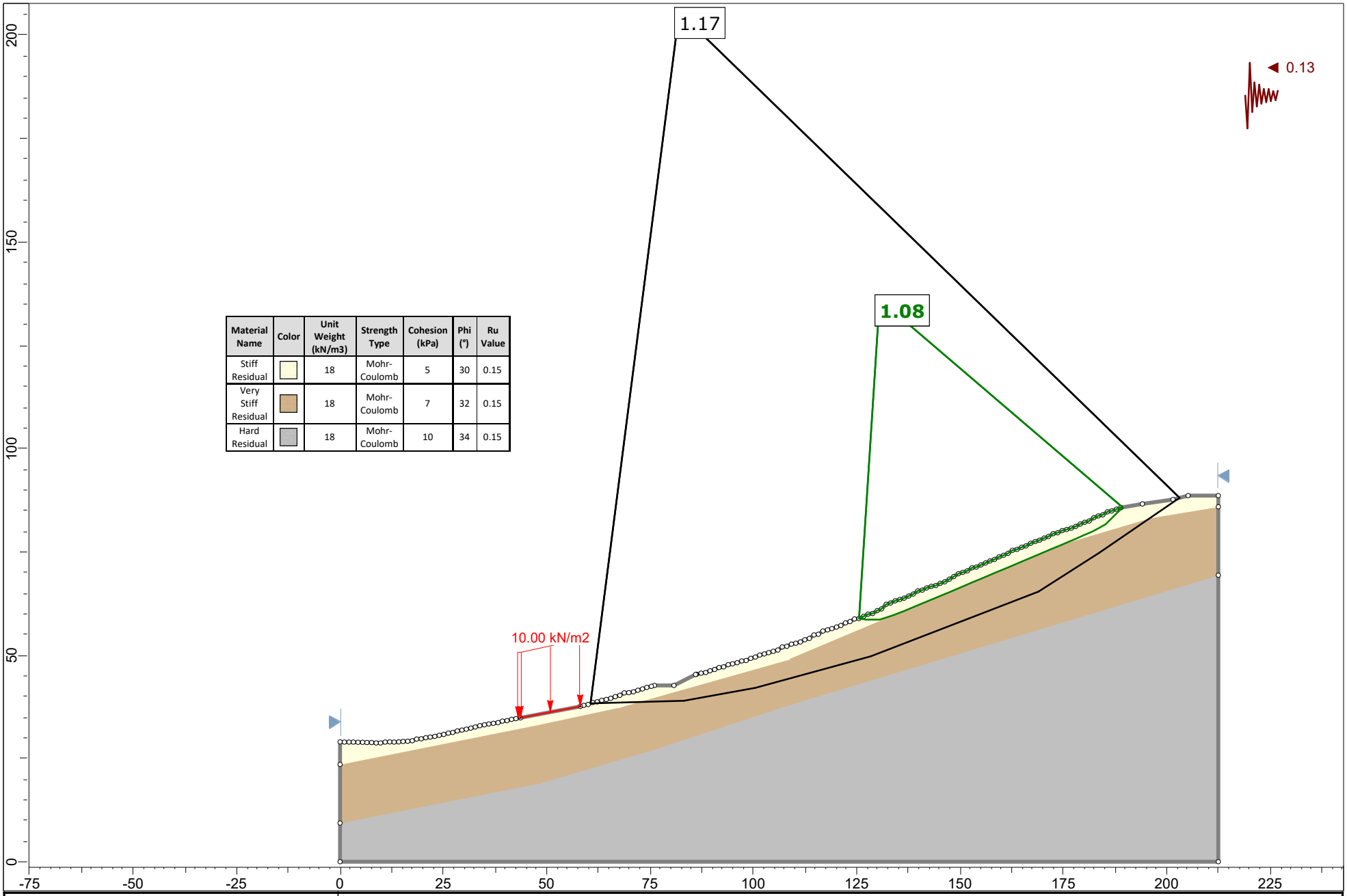


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section H-H'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	HH_elevatedGW.slmd



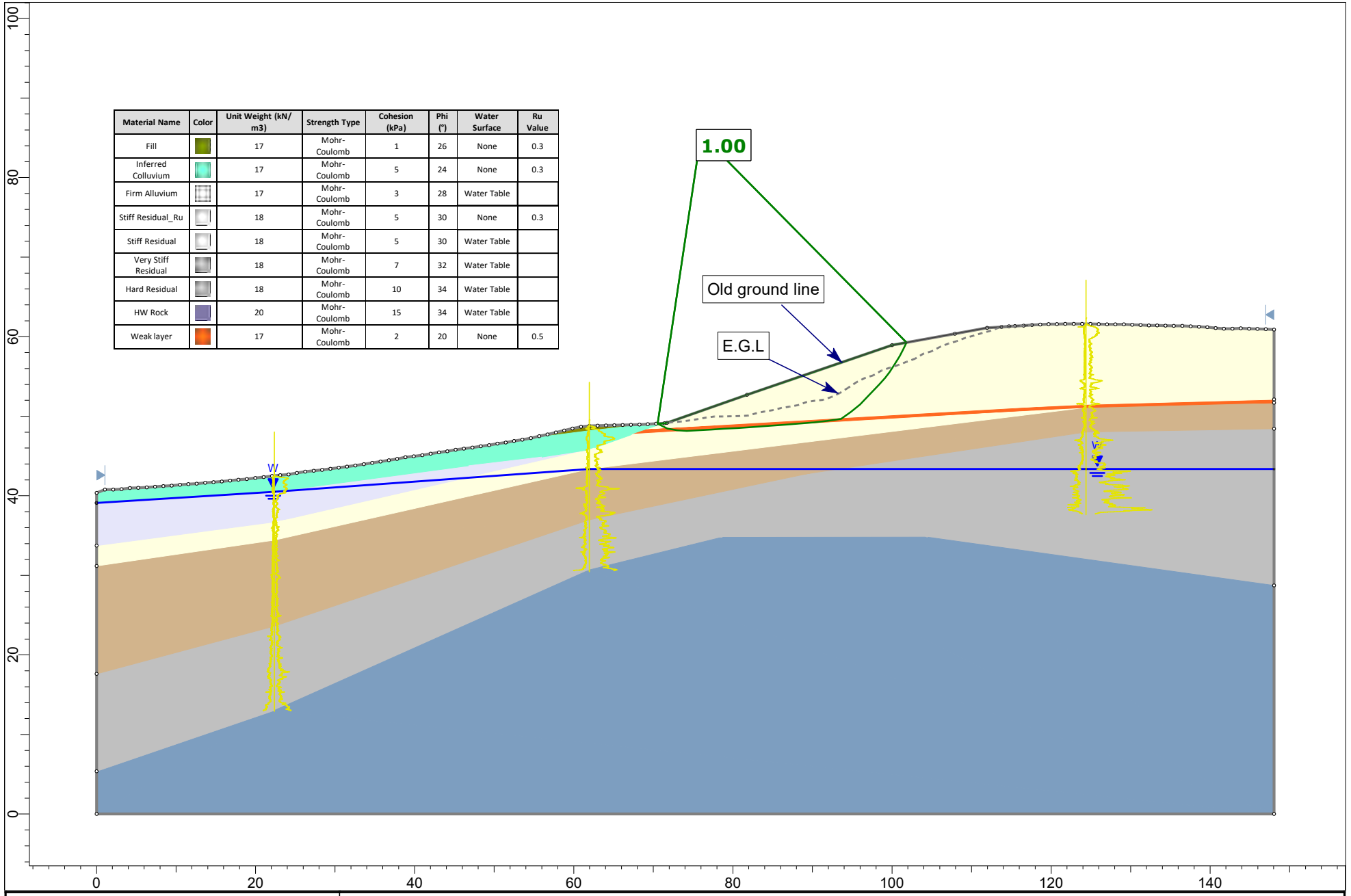
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section H-H'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	HH_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.3
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.3
Firm Alluvium		17	Mohr-Coulomb	3	28	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	
HW Rock		20	Mohr-Coulomb	15	34	Water Table	
Weak layer		17	Mohr-Coulomb	2	20	None	0.5

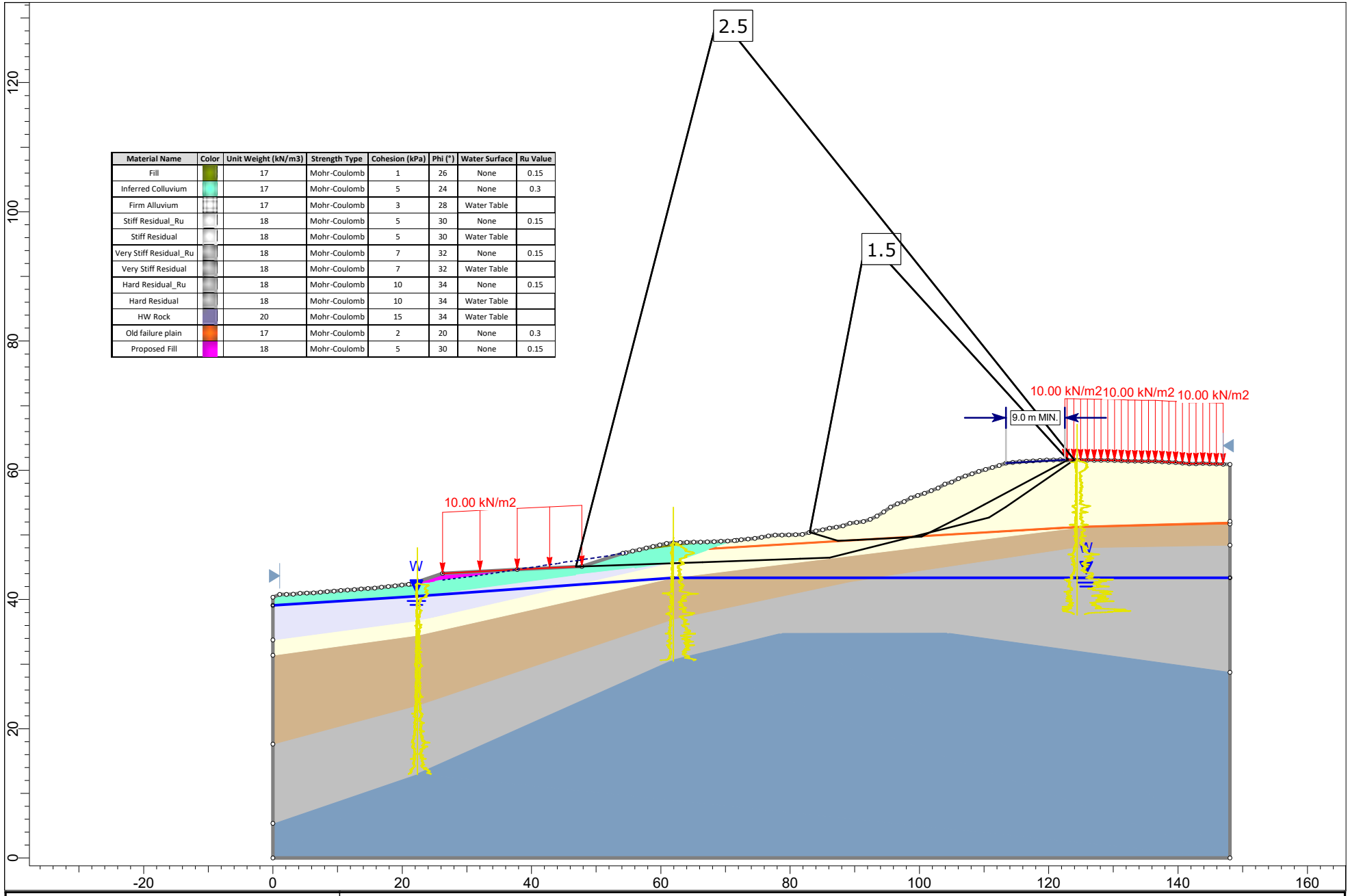


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section I-I'	*Scenario*	Back analyses
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	II_backanalyses.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.15
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.3
Firm Alluvium		17	Mohr-Coulomb	3	28	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual_Ru		18	Mohr-Coulomb	10	34	None	0.15
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	
HW Rock		20	Mohr-Coulomb	15	34	Water Table	
Old failure plain		17	Mohr-Coulomb	2	20	None	0.3
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.15

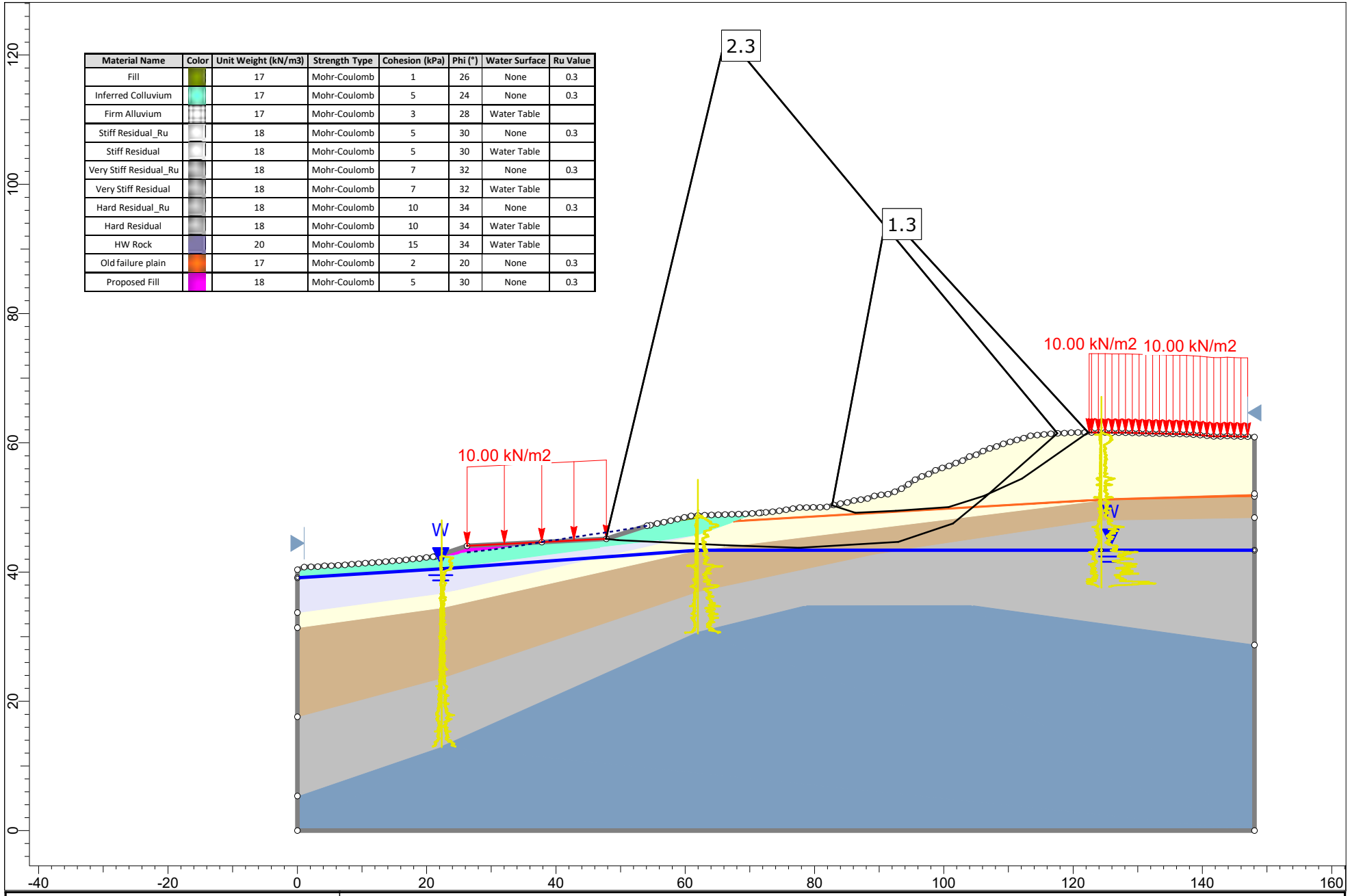


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section I-I'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	II_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.3
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.3
Firm Alluvium		17	Mohr-Coulomb	3	28	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual_Ru		18	Mohr-Coulomb	10	34	None	0.3
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	
HW Rock		20	Mohr-Coulomb	15	34	Water Table	
Old failure plain		17	Mohr-Coulomb	2	20	None	0.3
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.3

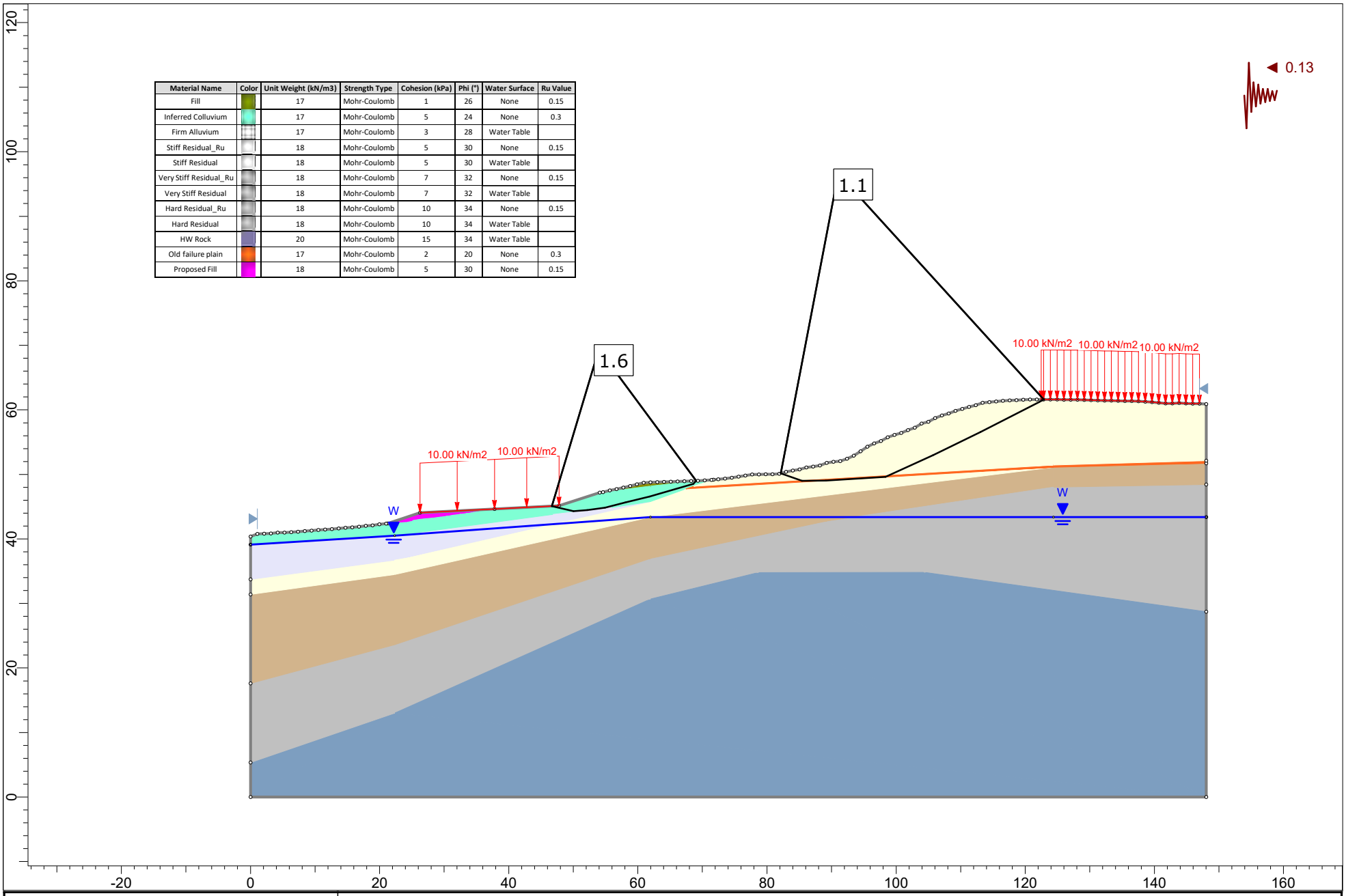


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section I-I'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	II_elevatedGW.slmd

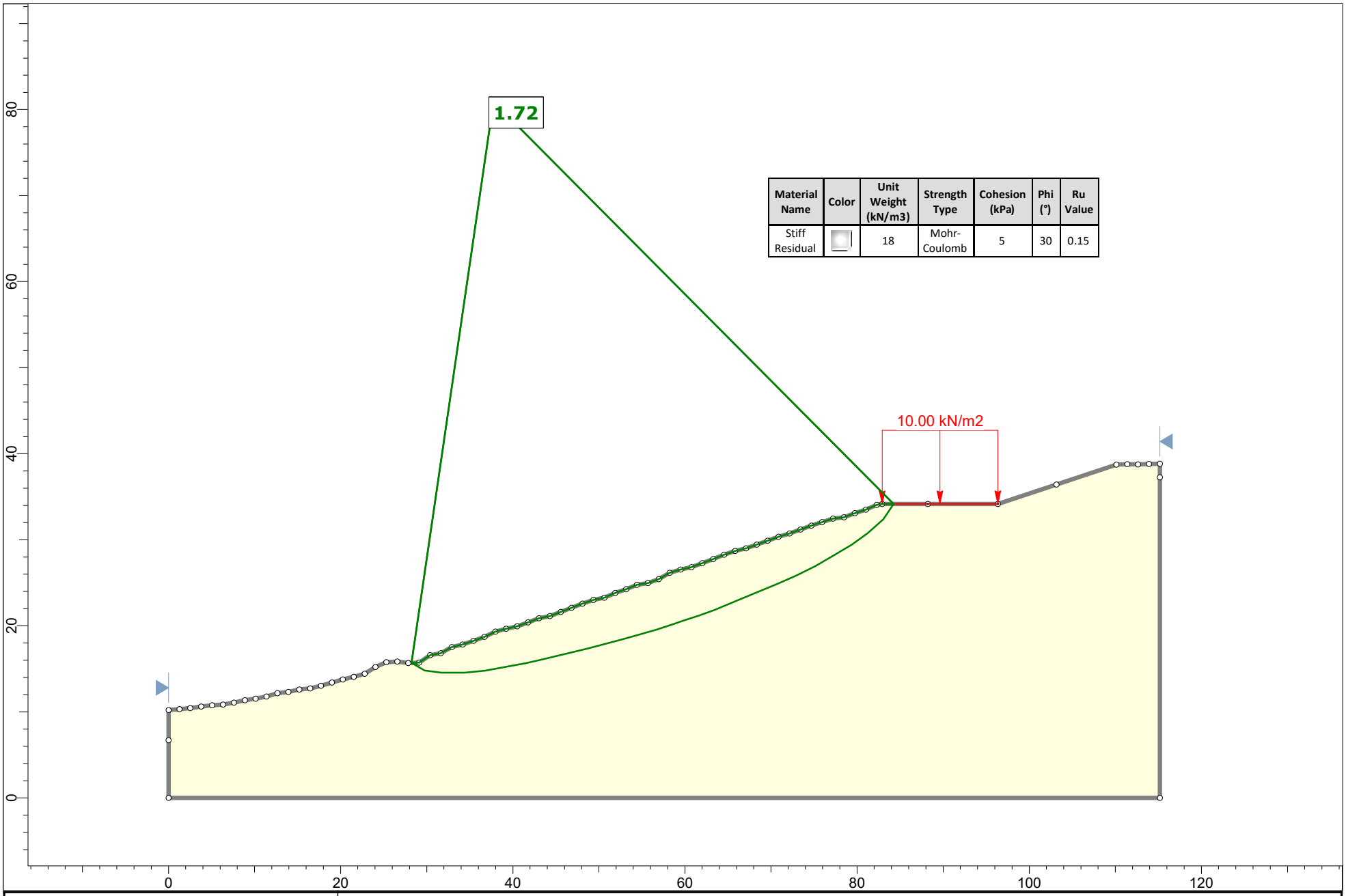
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.15
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.3
Firm Alluvium		17	Mohr-Coulomb	3	28	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual_Ru		18	Mohr-Coulomb	10	34	None	0.15
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	
HW Rock		20	Mohr-Coulomb	15	34	Water Table	
Old failure plain		17	Mohr-Coulomb	2	20	None	0.3
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.15



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section I-I'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	II_seismic.slmd

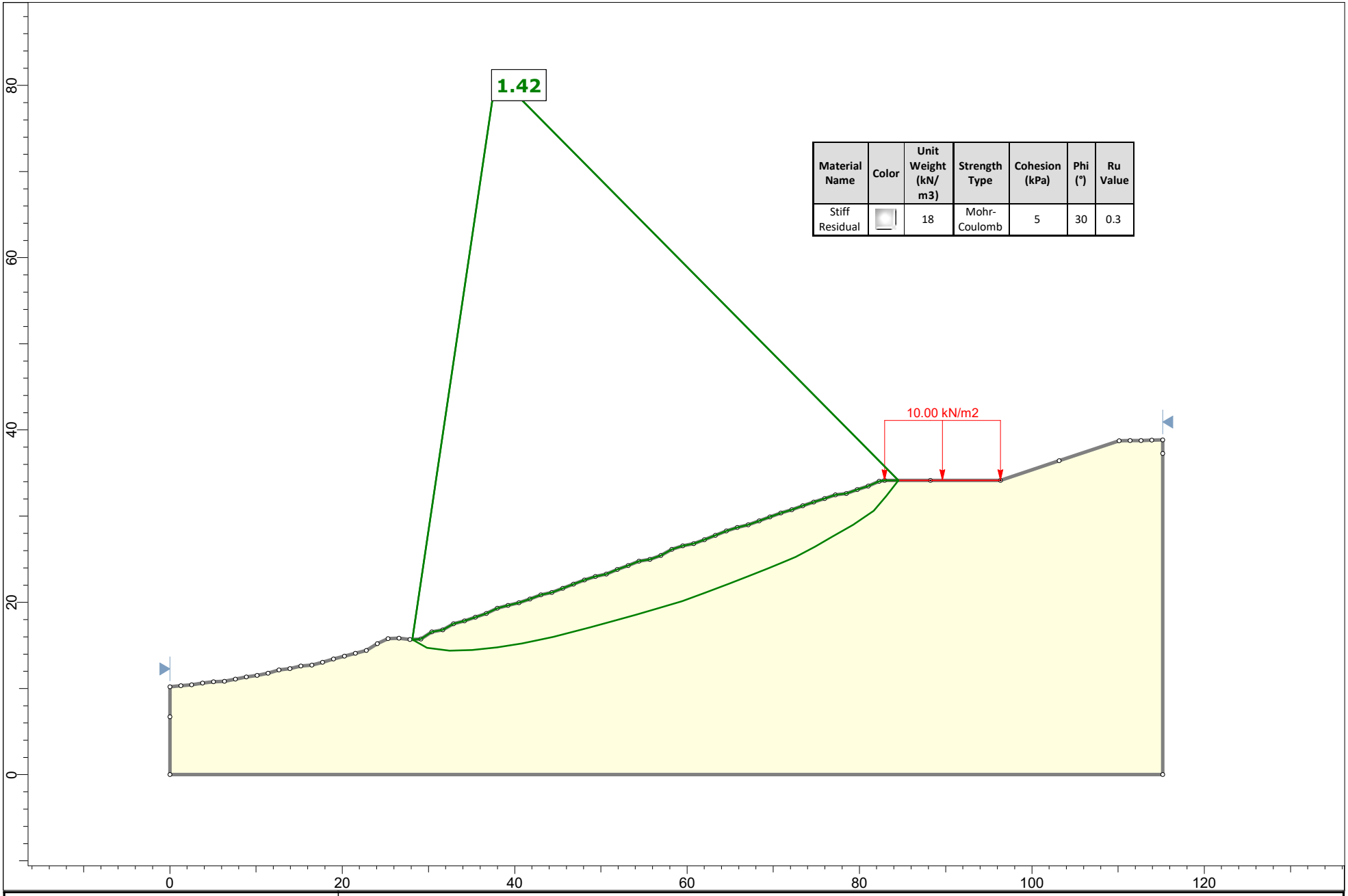


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section J-J'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	JJ_static.slmd

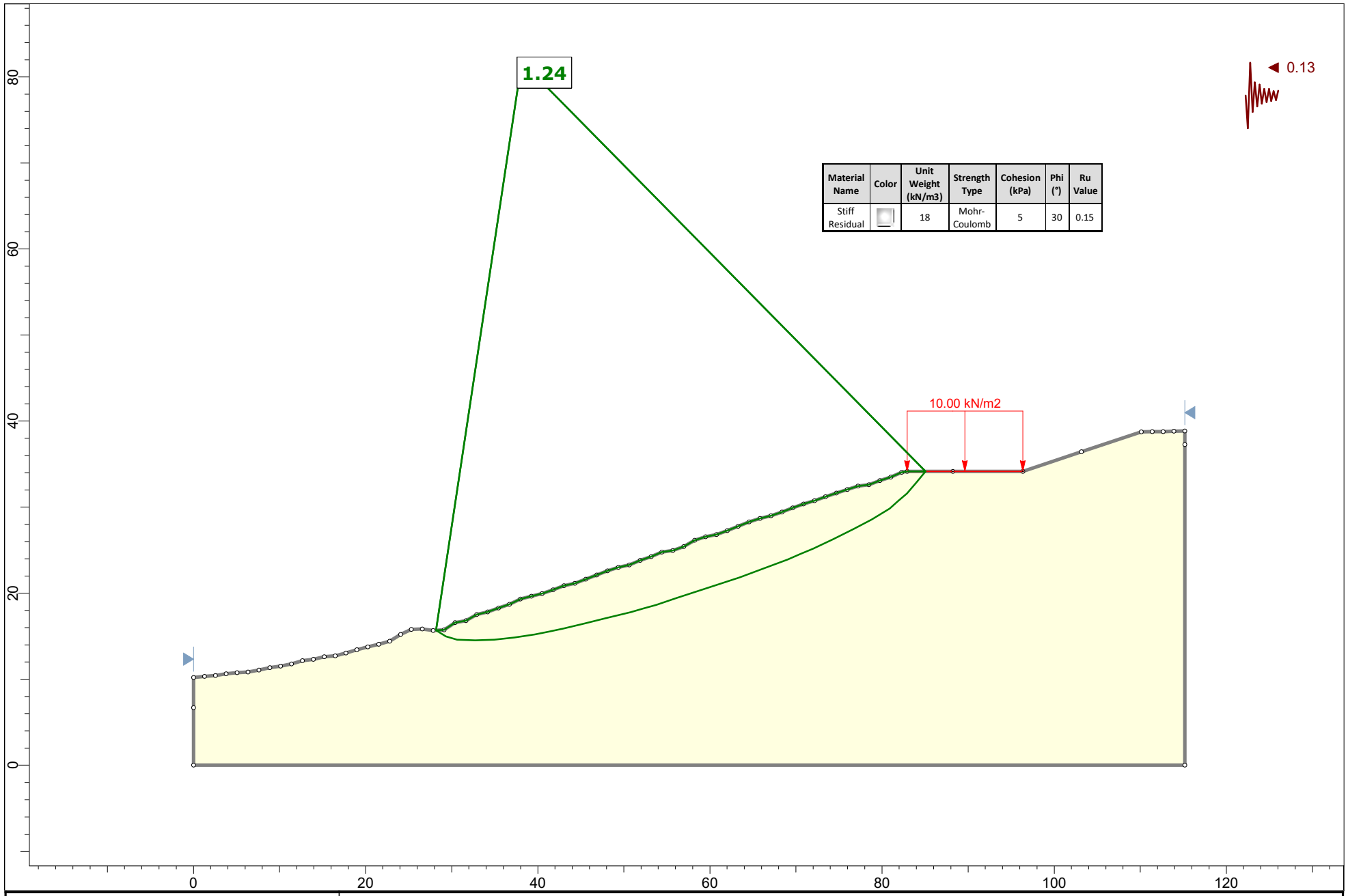


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3

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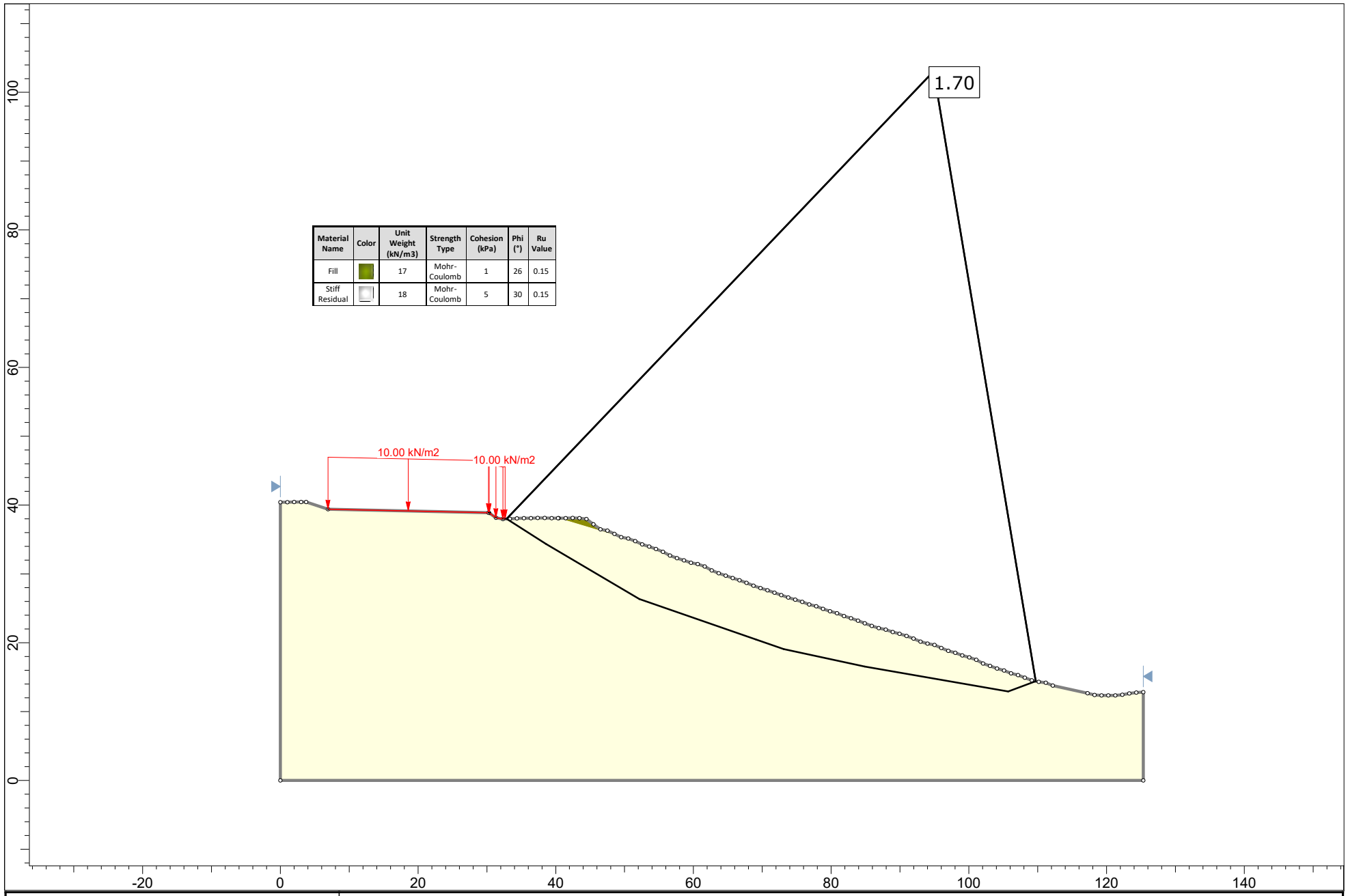
Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section J-J'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	JJ_elevated.slmd



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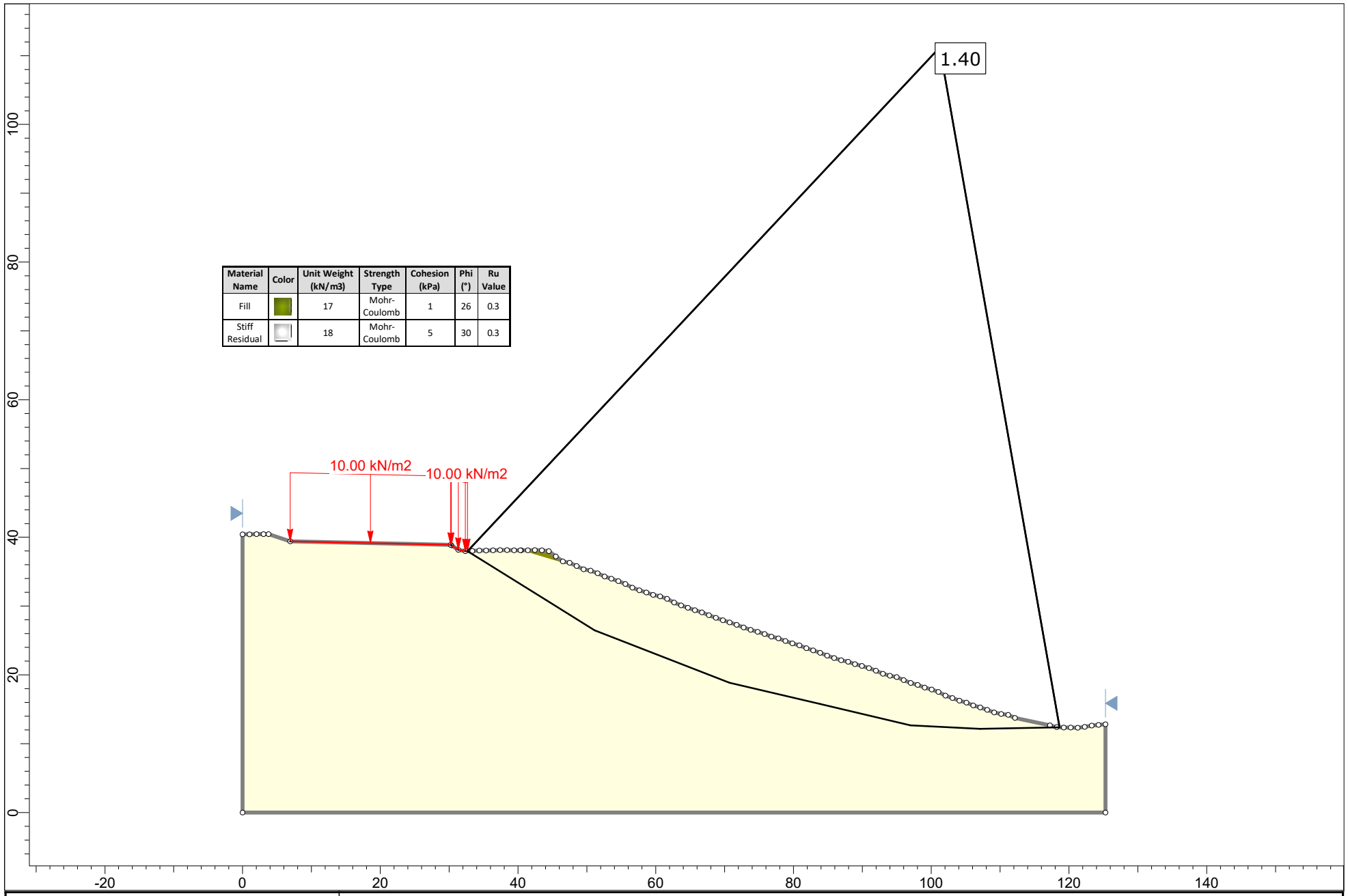
Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section J-J'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	JJ_seismic.slmd



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section K-K'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	KK_static.slmd

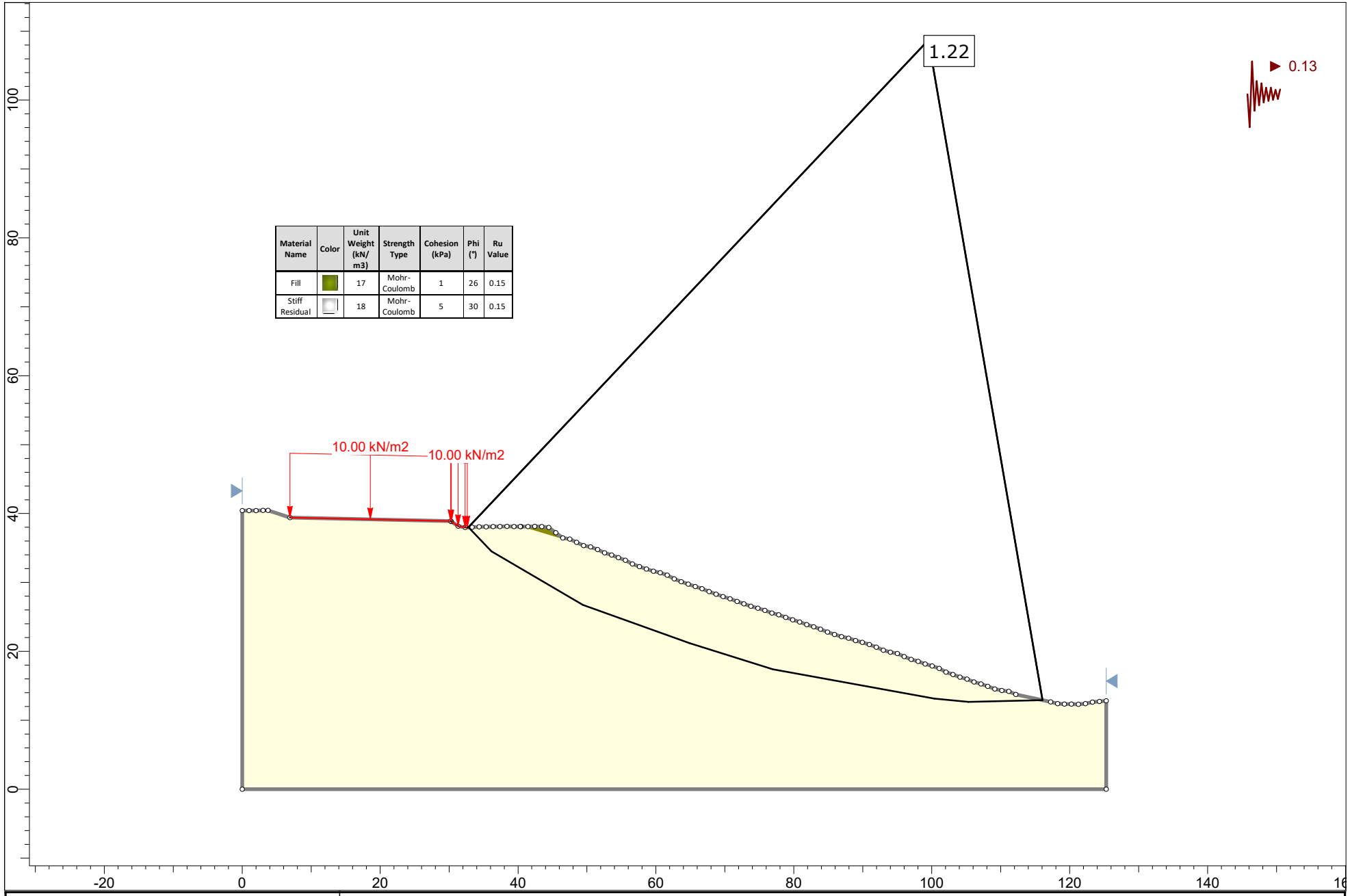


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	0.3

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section K-K'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	KK_elevated.slmd



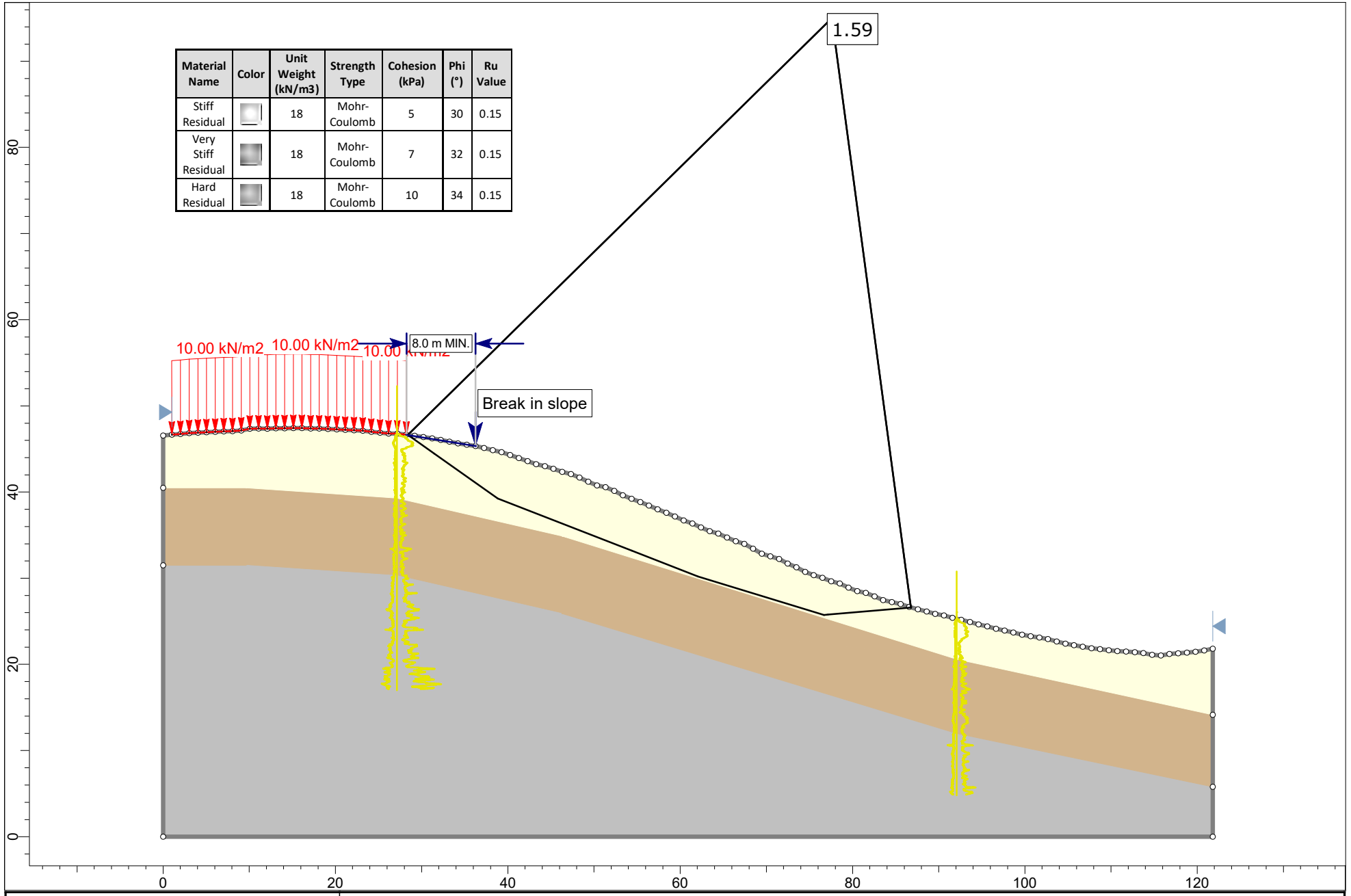
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Fill		17	Mohr-Coulomb	1	26	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section K-K'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	KK_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15

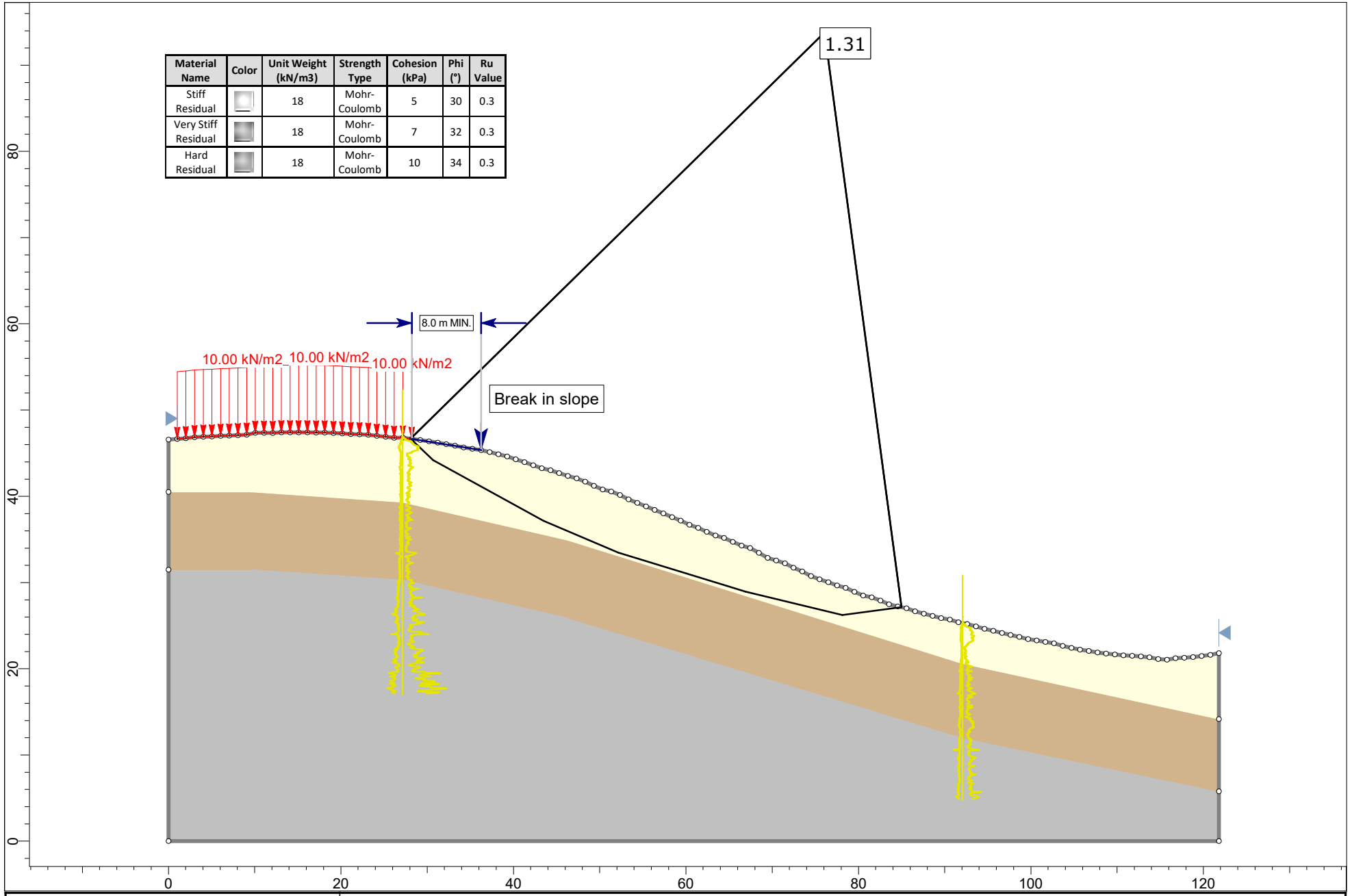


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section L-L'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	LL_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3

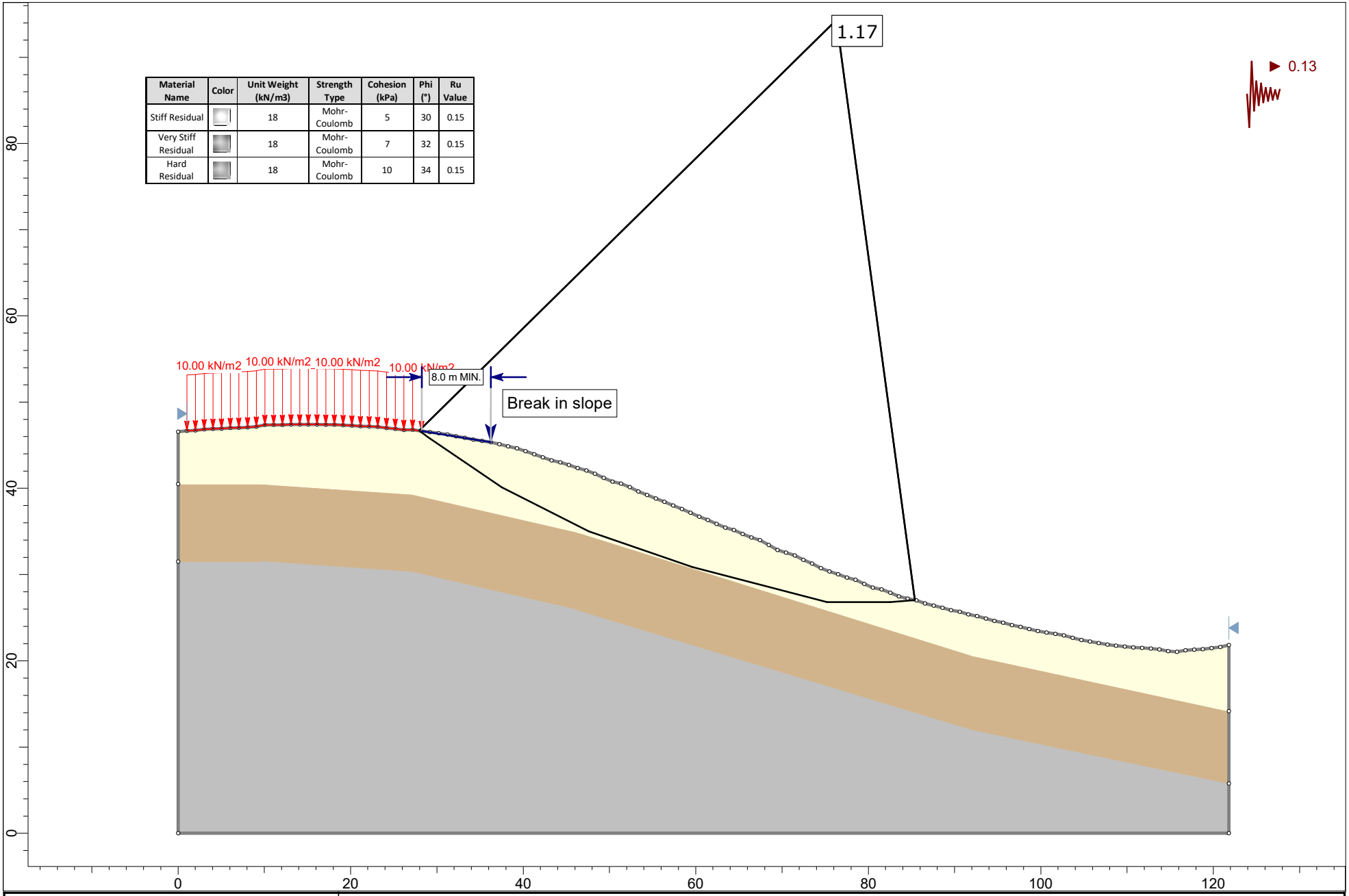


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section L-L'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	LL_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15

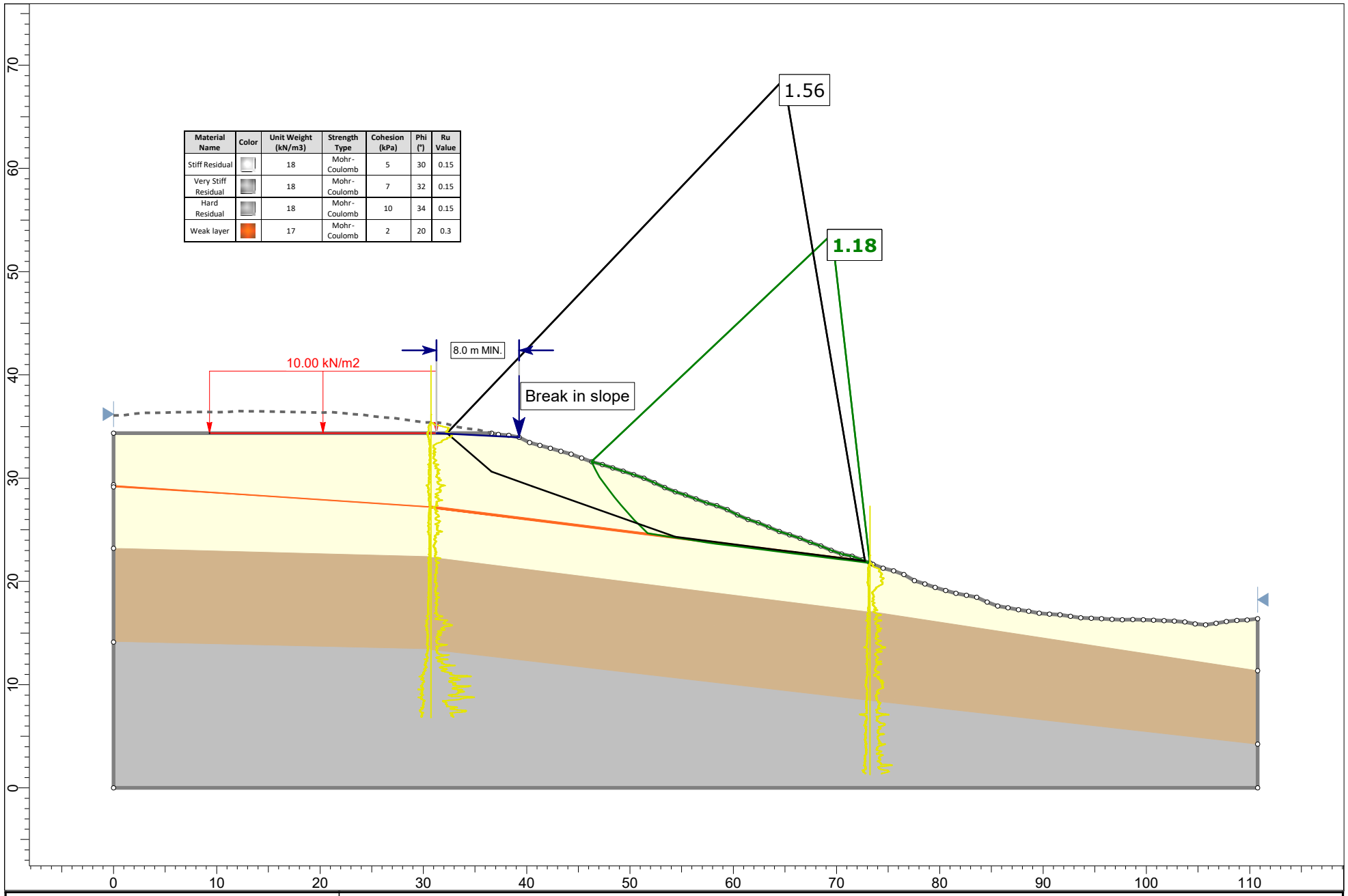


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section L-L'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	LL_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
Weak layer		17	Mohr-Coulomb	2	20	0.3

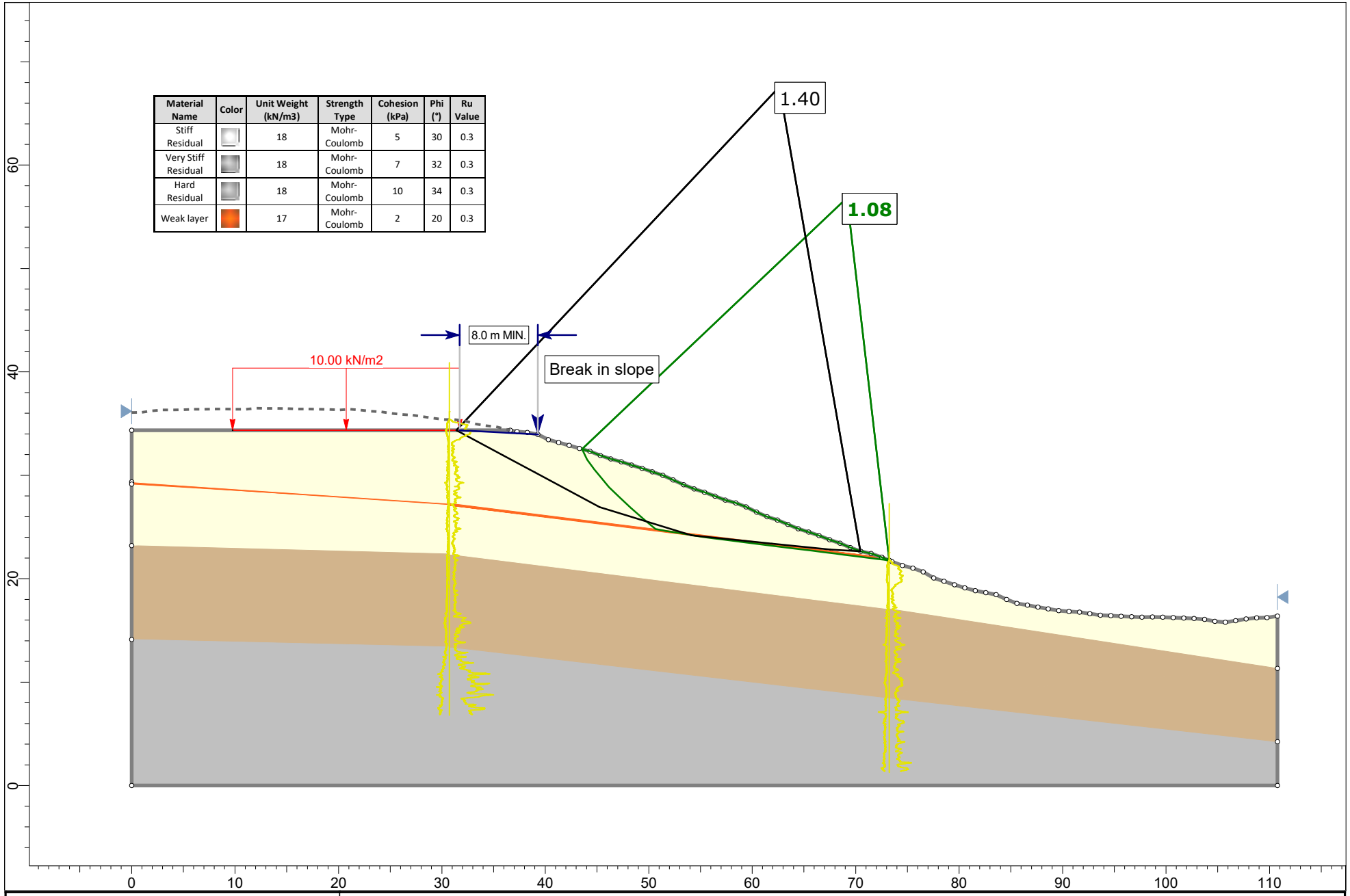


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section M-M'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	MM_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
Weak layer		17	Mohr-Coulomb	2	20	0.3

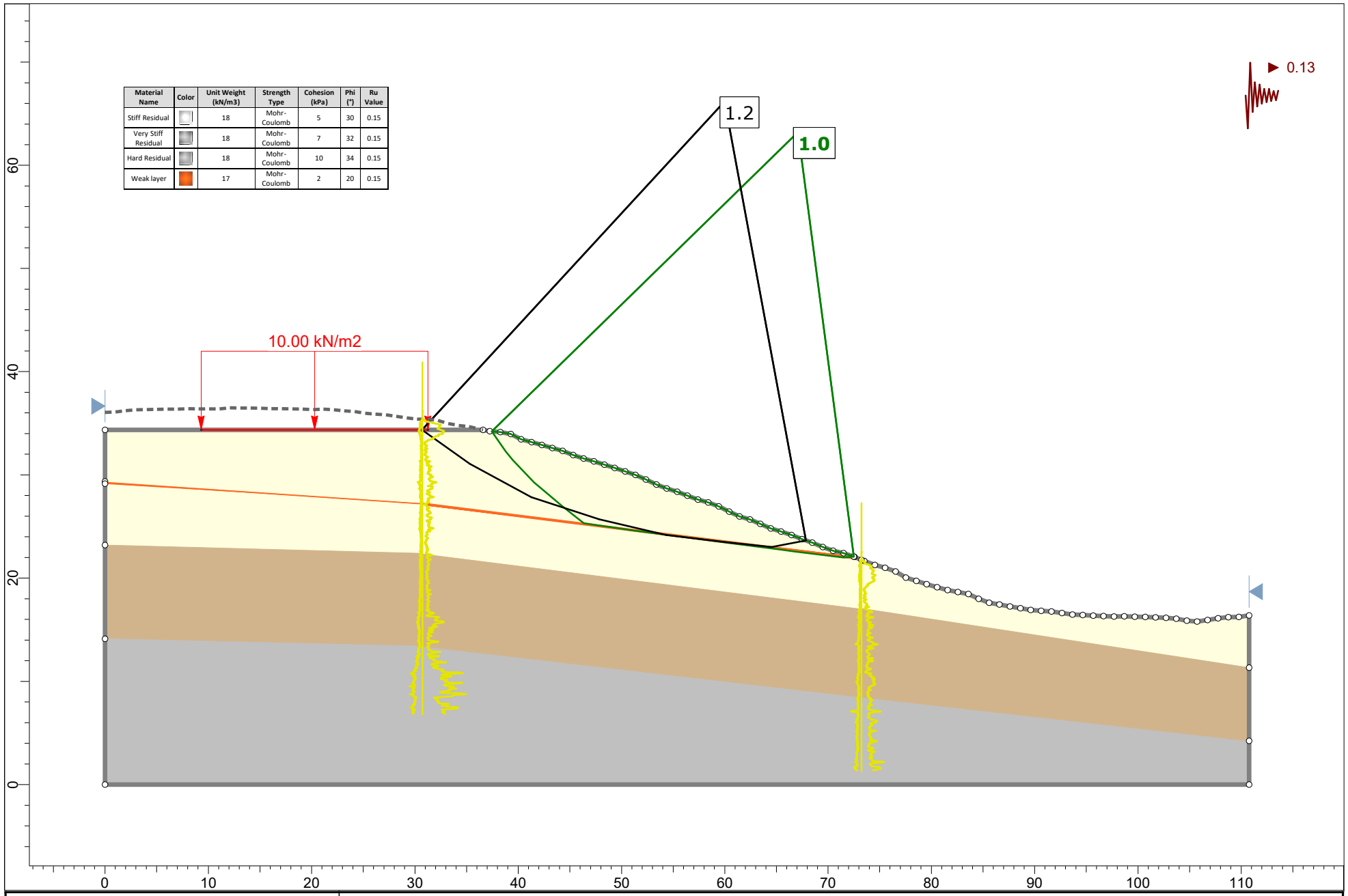


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section M-M'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	MM_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
Weak layer		17	Mohr-Coulomb	2	20	0.15

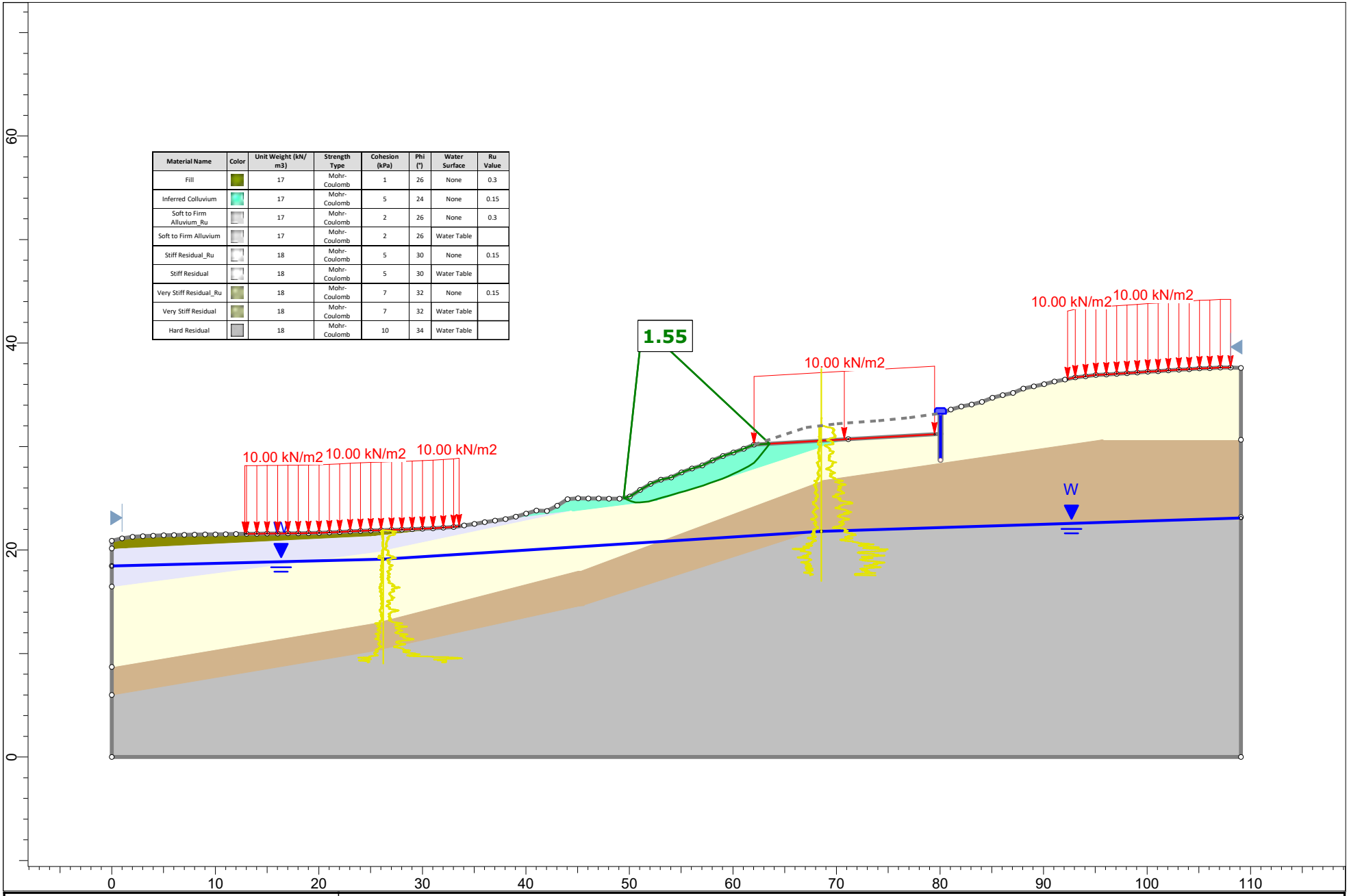


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section M-M'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	MM_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.3
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.15
Soft to Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Soft to Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

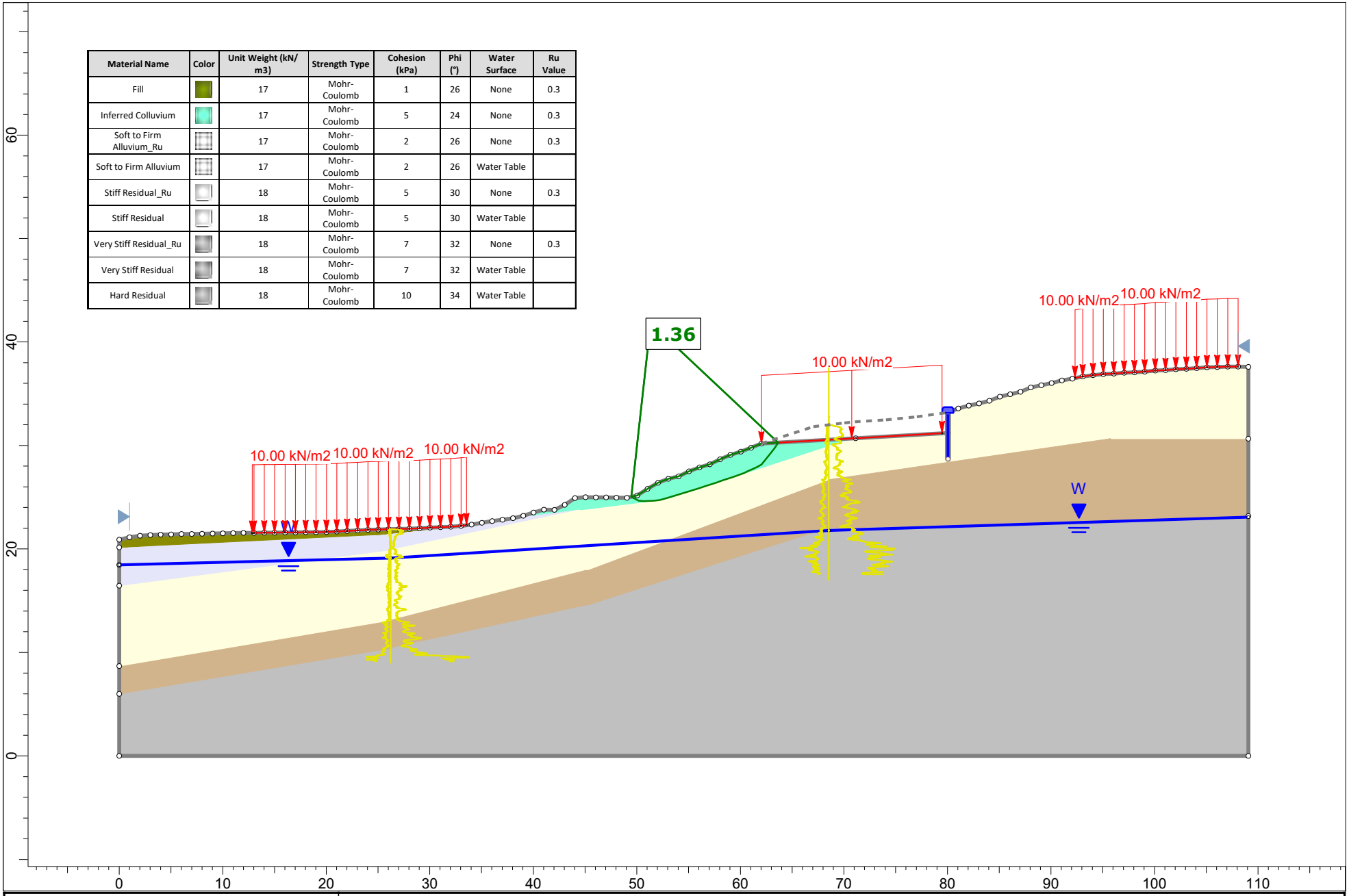


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section N-N'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	NN_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.3
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.3
Soft to Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Soft to Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.3
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

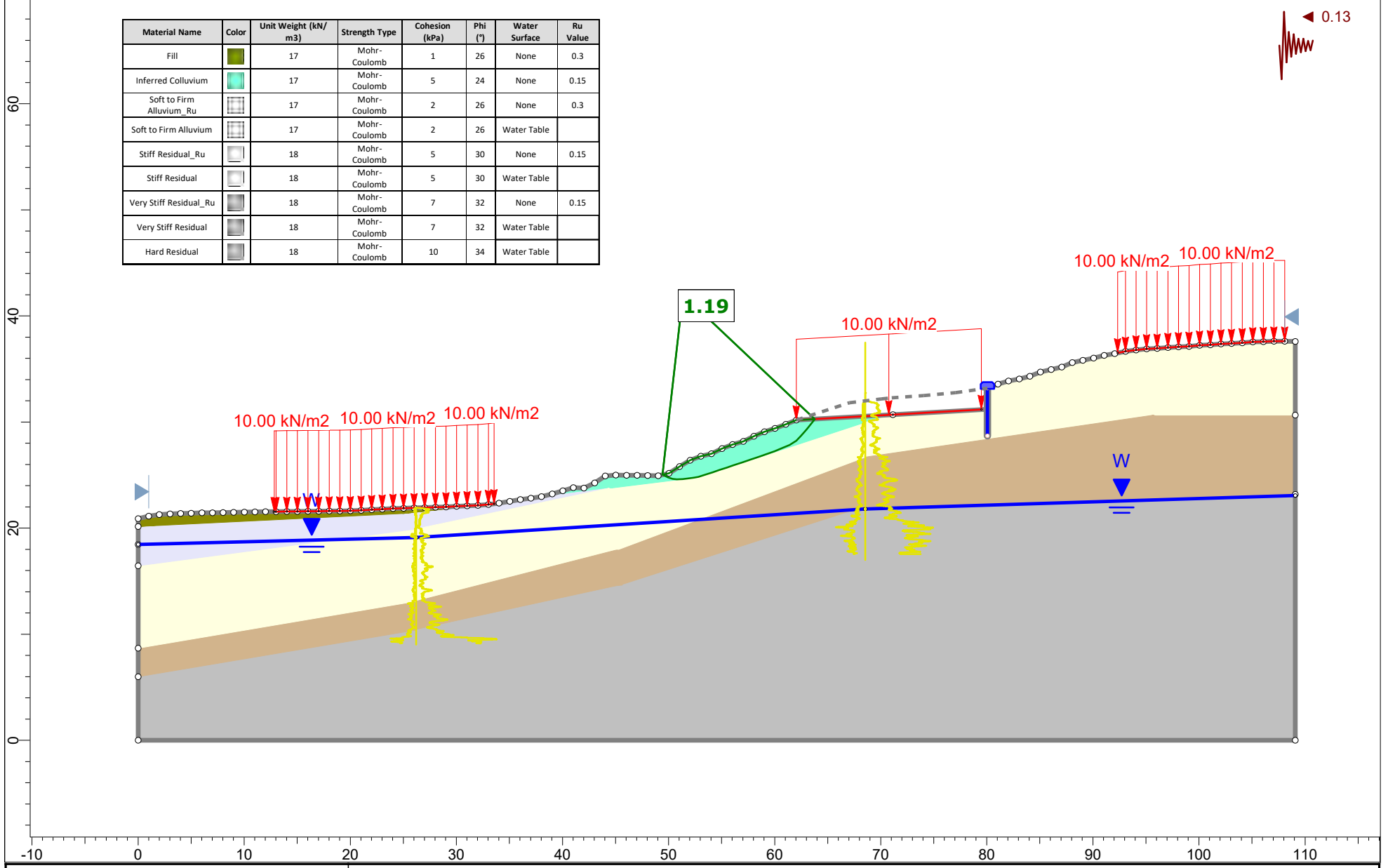


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section N-N'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	NN_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Fill		17	Mohr-Coulomb	1	26	None	0.3
Inferred Colluvium		17	Mohr-Coulomb	5	24	None	0.15
Soft to Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Soft to Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual		18	Mohr-Coulomb	5	30	Water Table	
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

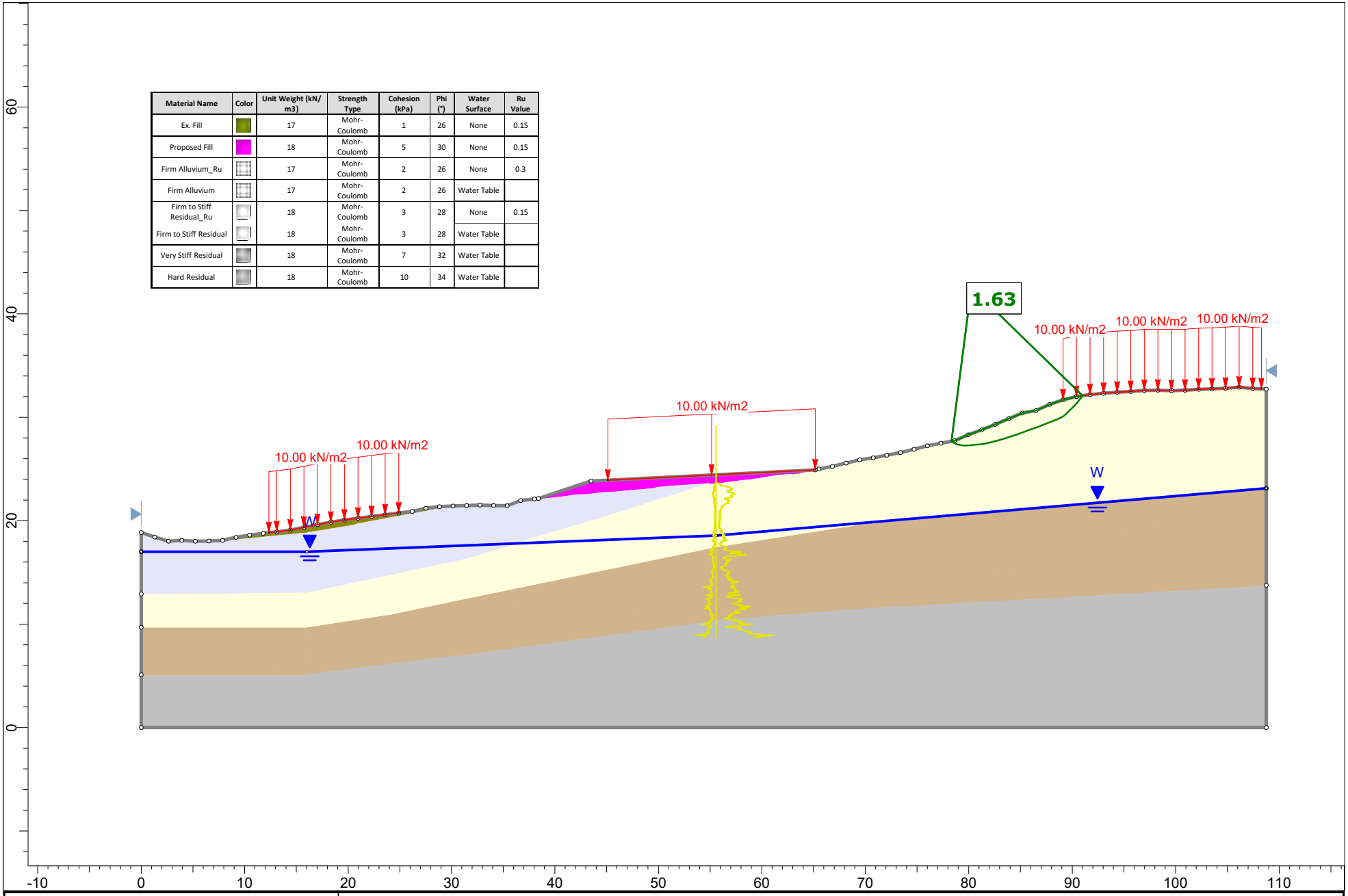


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section N-N'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	NN_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None	0.15
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.15
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Firm to Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None	0.15
Firm to Stiff Residual		18	Mohr-Coulomb	3	28	Water Table	
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

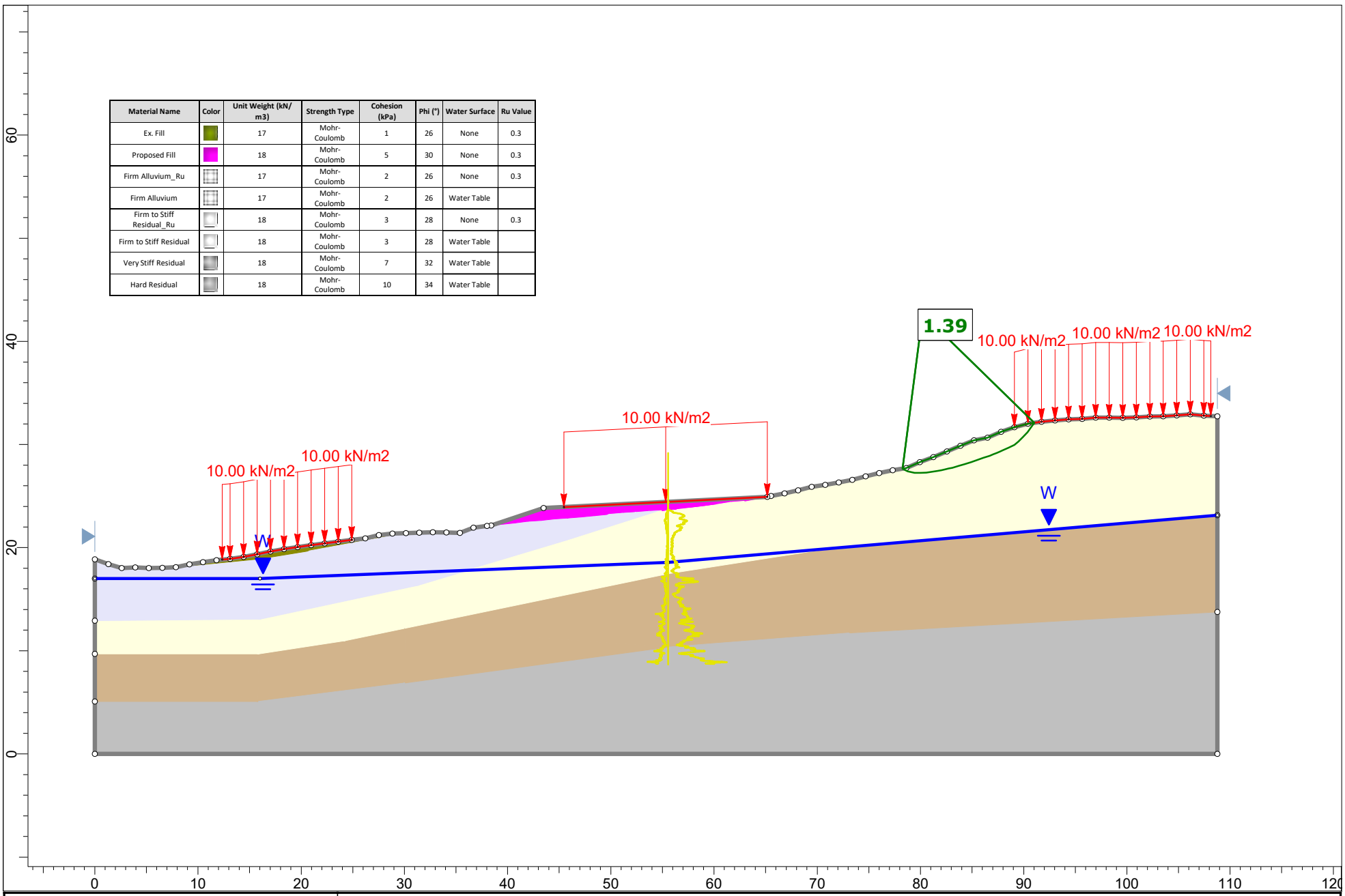


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section O-O'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	OO_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None	0.3
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.3
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Firm to Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None	0.3
Firm to Stiff Residual		18	Mohr-Coulomb	3	28	Water Table	
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

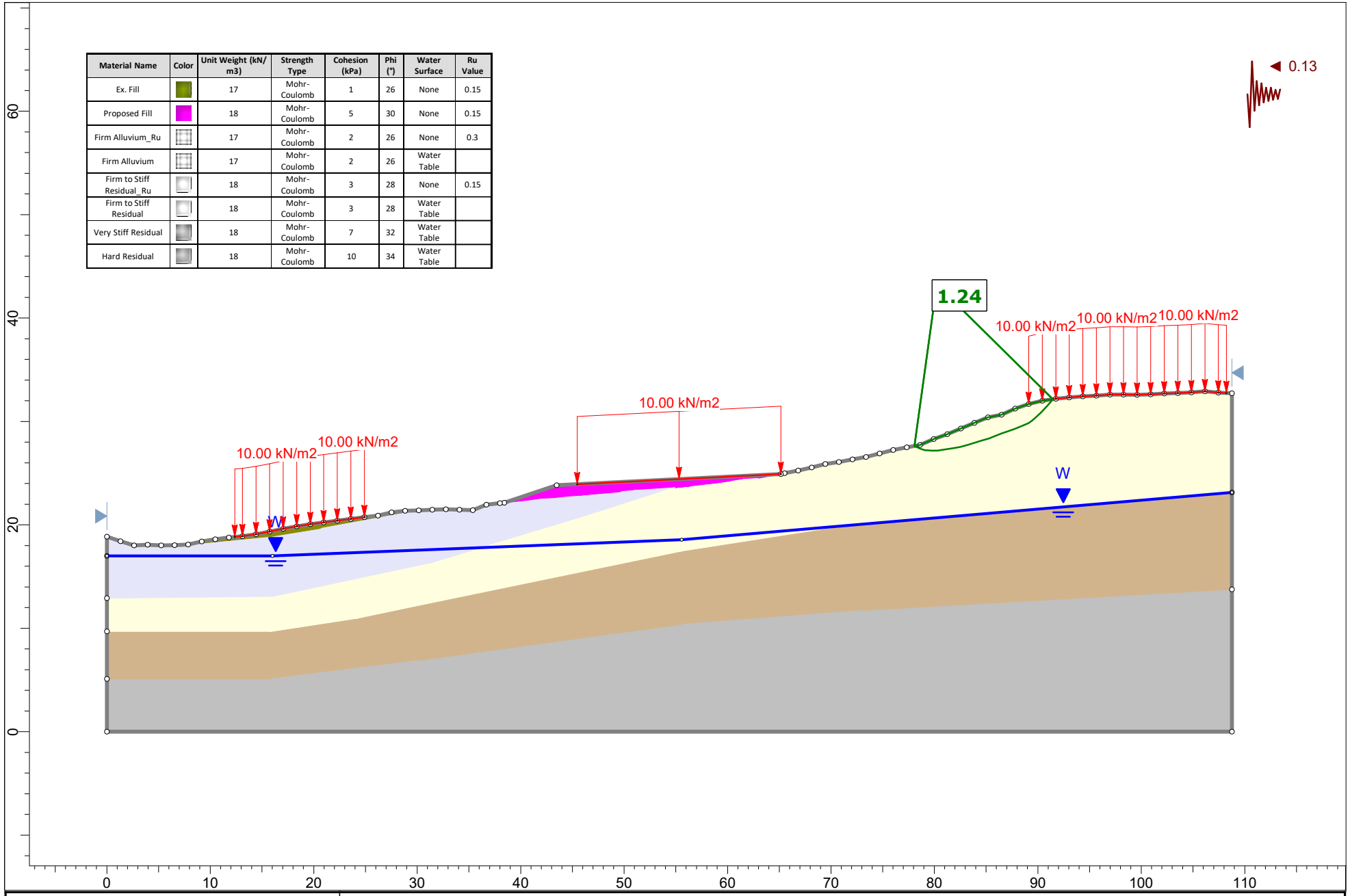


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section O-O'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	OO_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None	0.15
Proposed Fill		18	Mohr-Coulomb	5	30	None	0.15
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Firm to Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None	0.15
Firm to Stiff Residual		18	Mohr-Coulomb	3	28	Water Table	
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

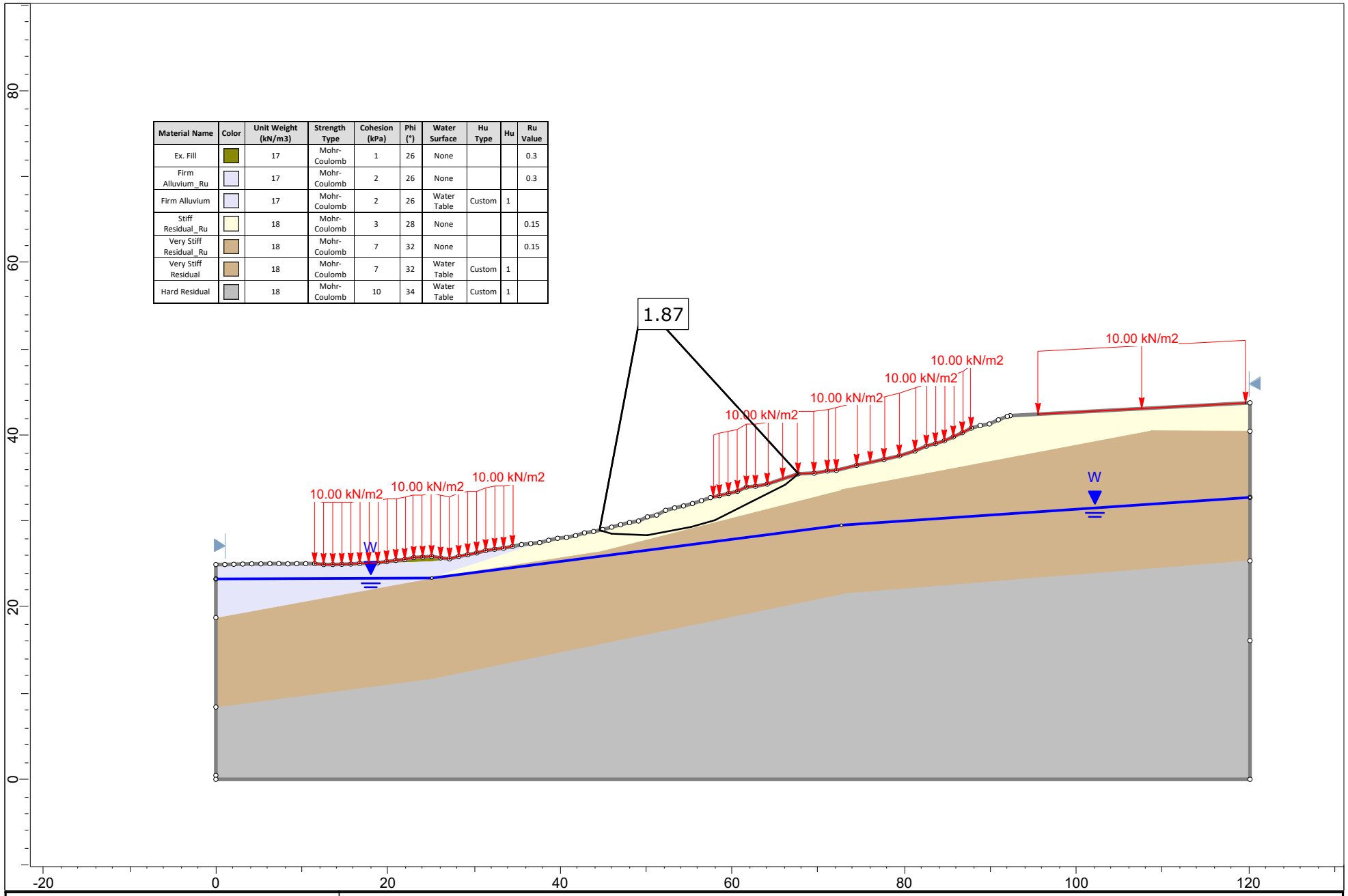


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section O-O'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	OO_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None			0.3
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None			0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	Custom	1	
Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None			0.15
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None			0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	Custom	1	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	Custom	1	

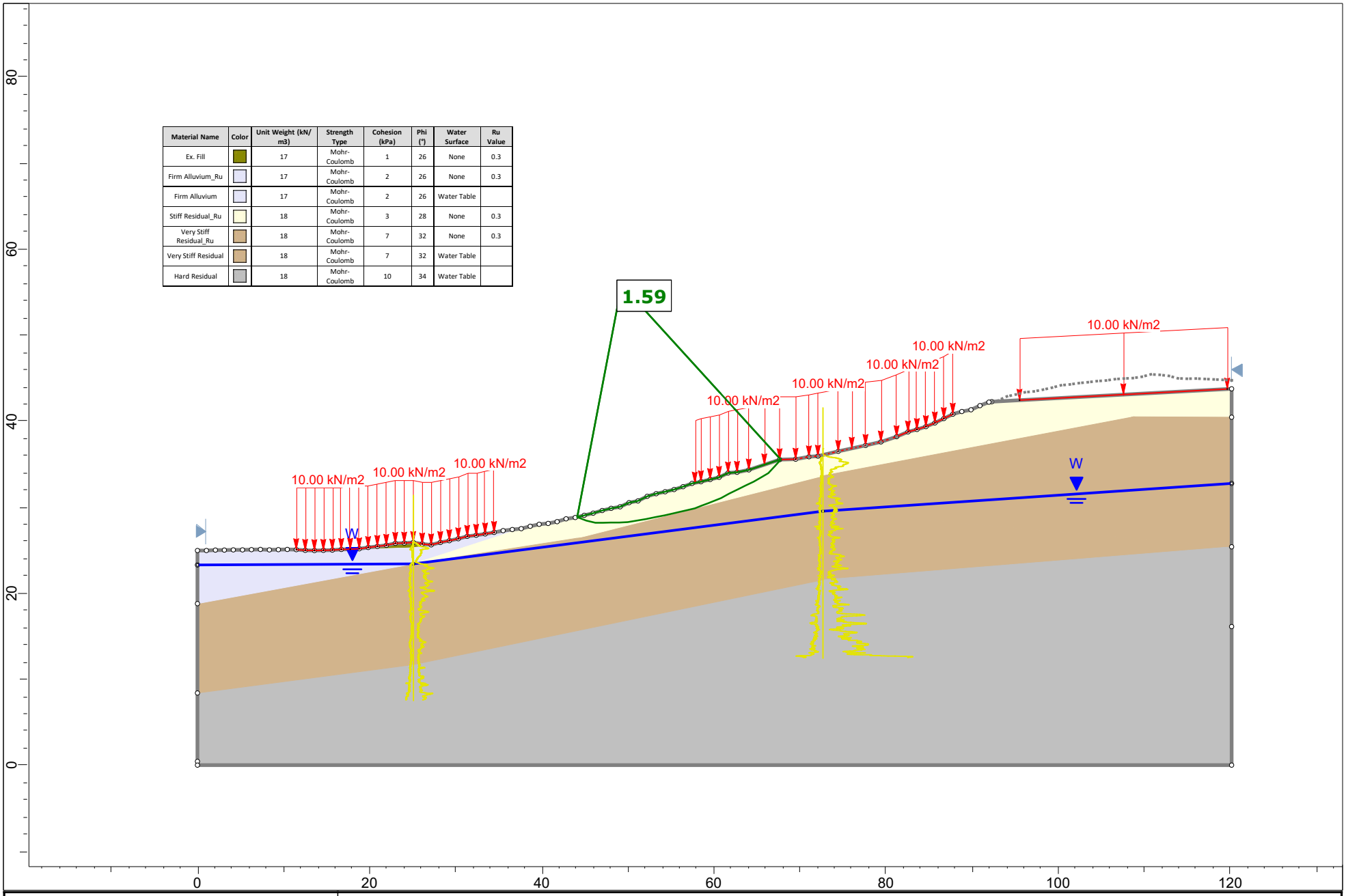


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section P-P'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	PP_static.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None	0.3
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None	0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	
Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None	0.3
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	

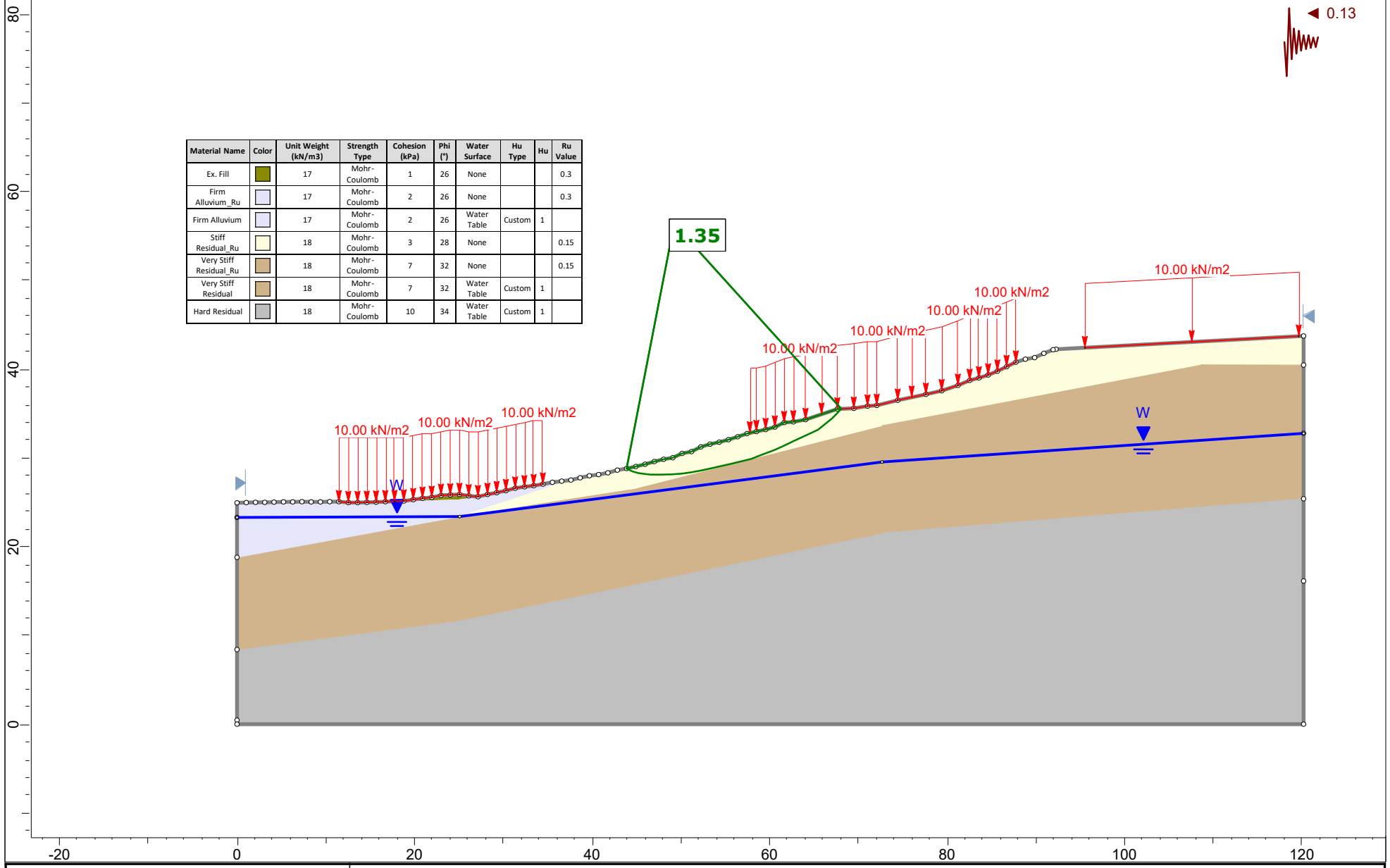


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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section P-P'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	PP_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Ex. Fill		17	Mohr-Coulomb	1	26	None			0.3
Firm Alluvium_Ru		17	Mohr-Coulomb	2	26	None			0.3
Firm Alluvium		17	Mohr-Coulomb	2	26	Water Table	Custom	1	
Stiff Residual_Ru		18	Mohr-Coulomb	3	28	None			0.15
Very Stiff Residual_Ru		18	Mohr-Coulomb	7	32	None			0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	Water Table	Custom	1	
Hard Residual		18	Mohr-Coulomb	10	34	Water Table	Custom	1	

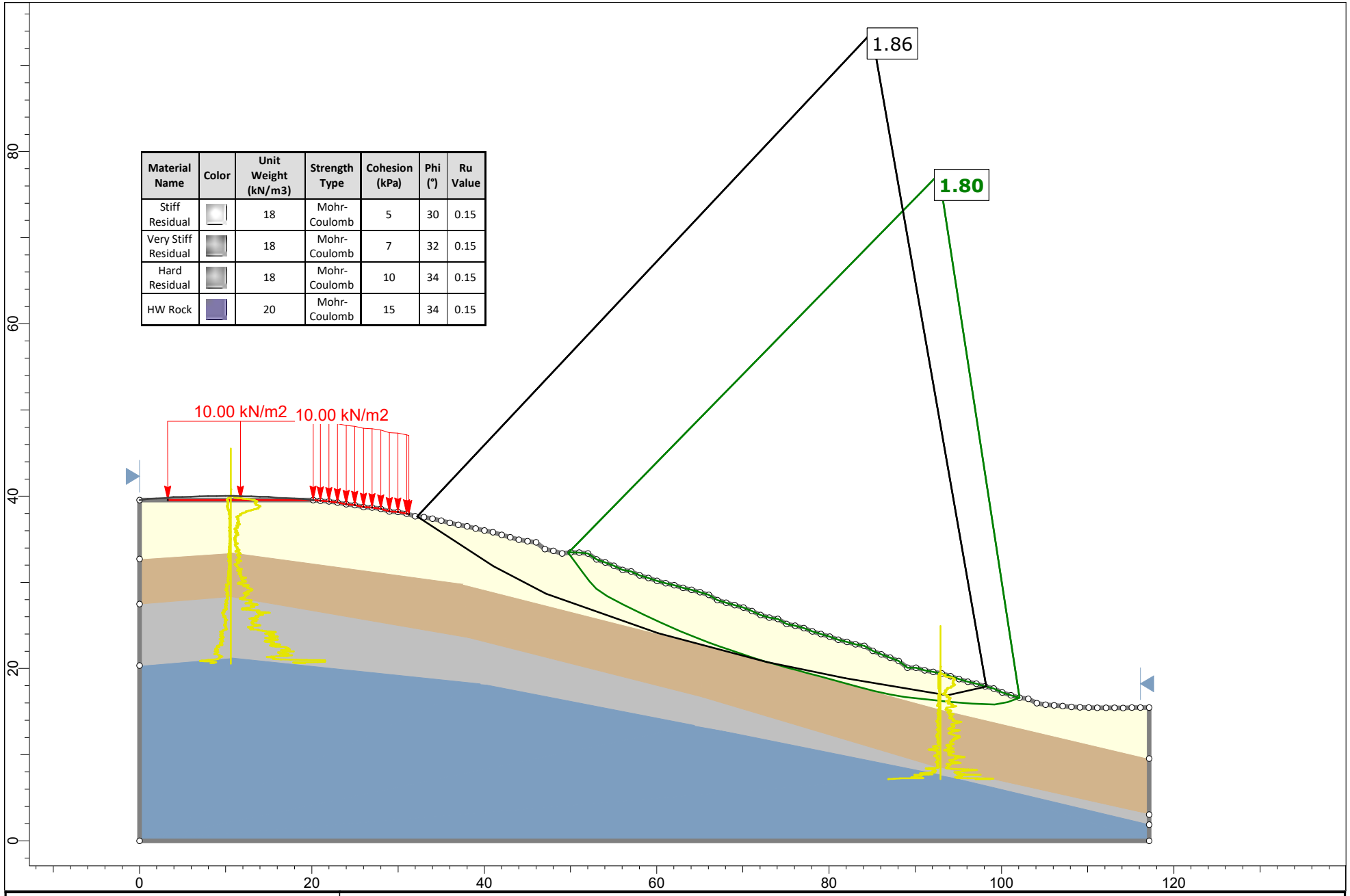


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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section P-P'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	PP_seismic.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

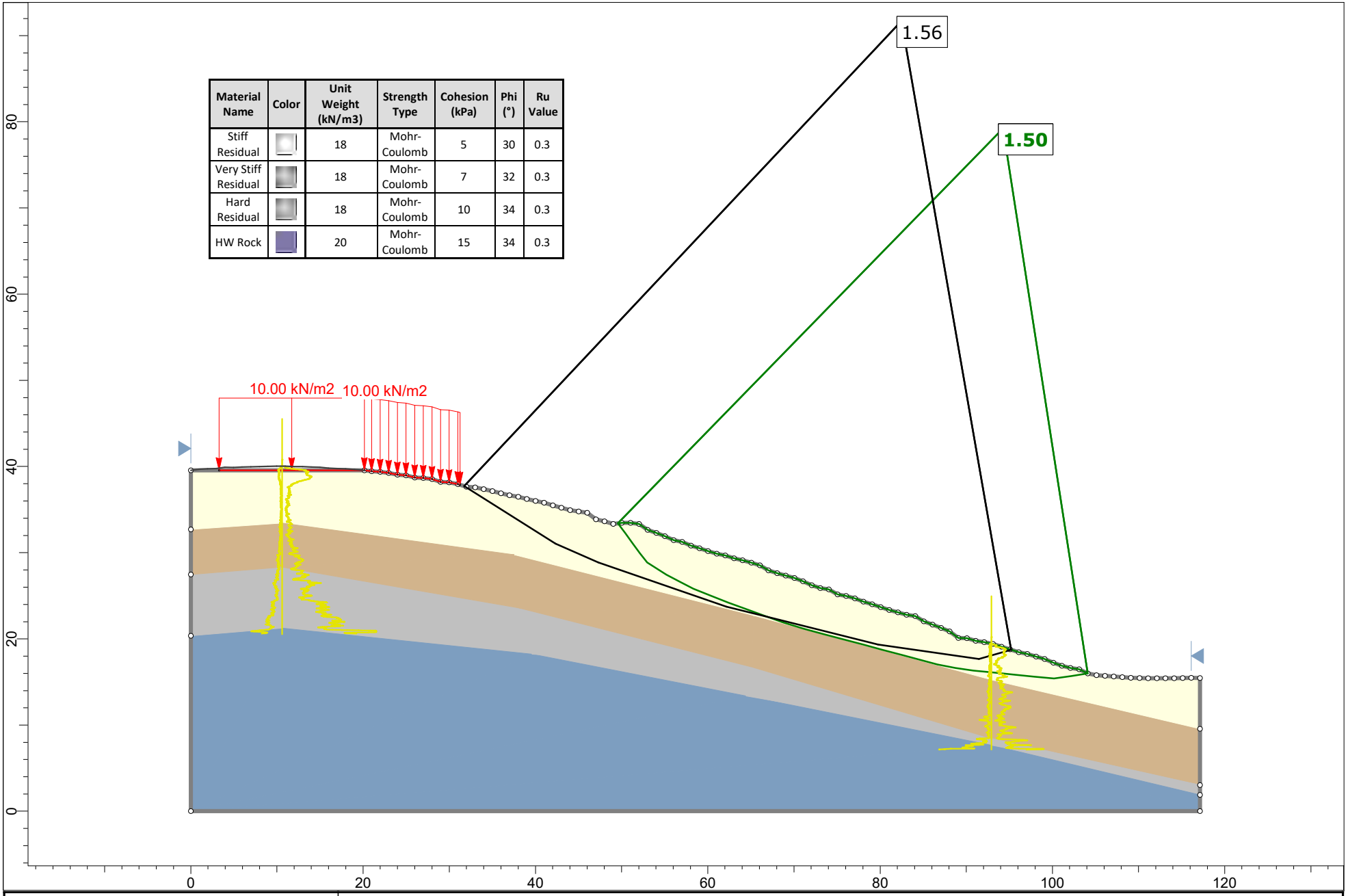


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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' - [EAST]	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-east_static.slmd

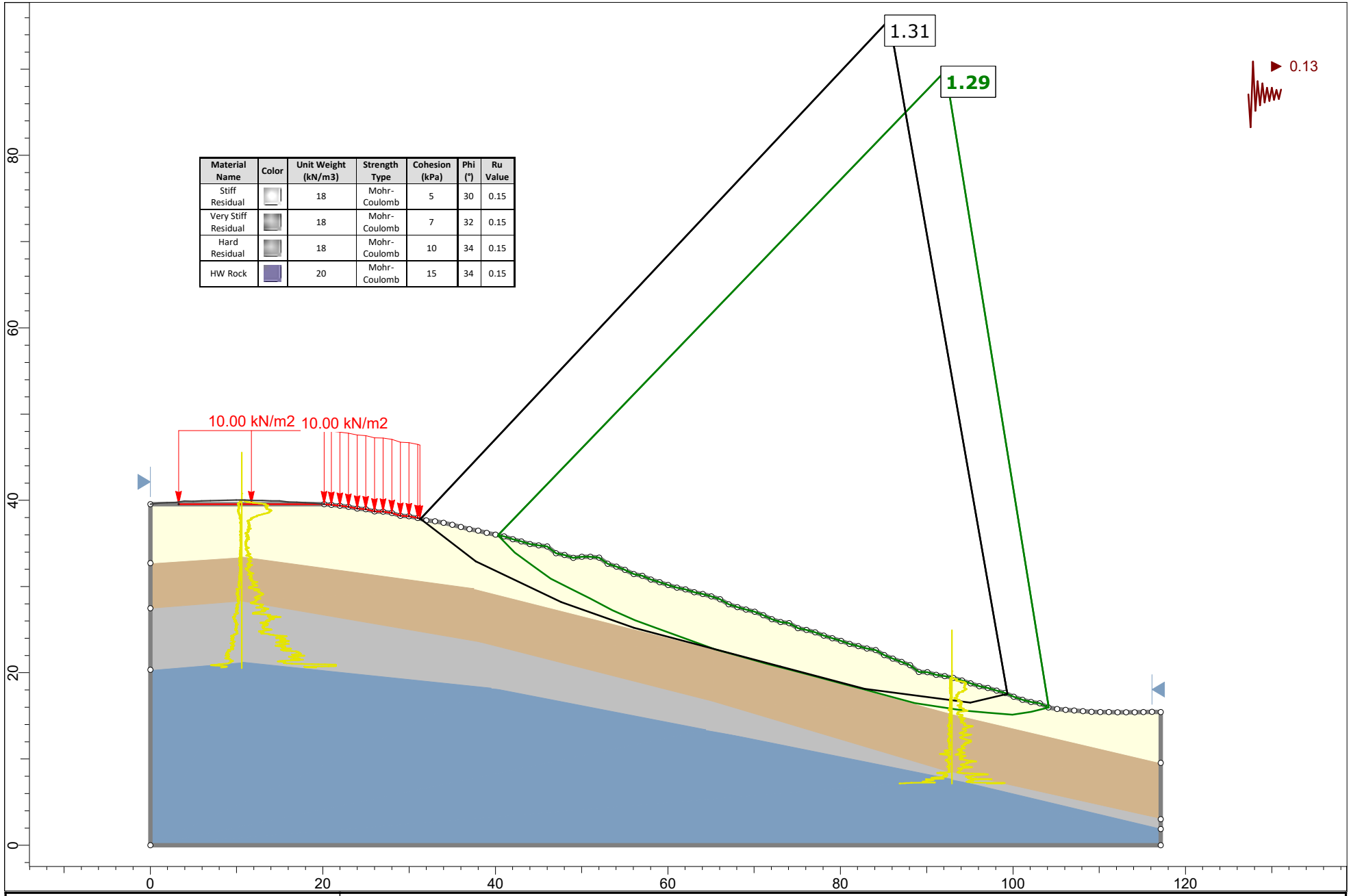
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
HW Rock		20	Mohr-Coulomb	15	34	0.3



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' [EAST]	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-east_elevatedGW.slmd

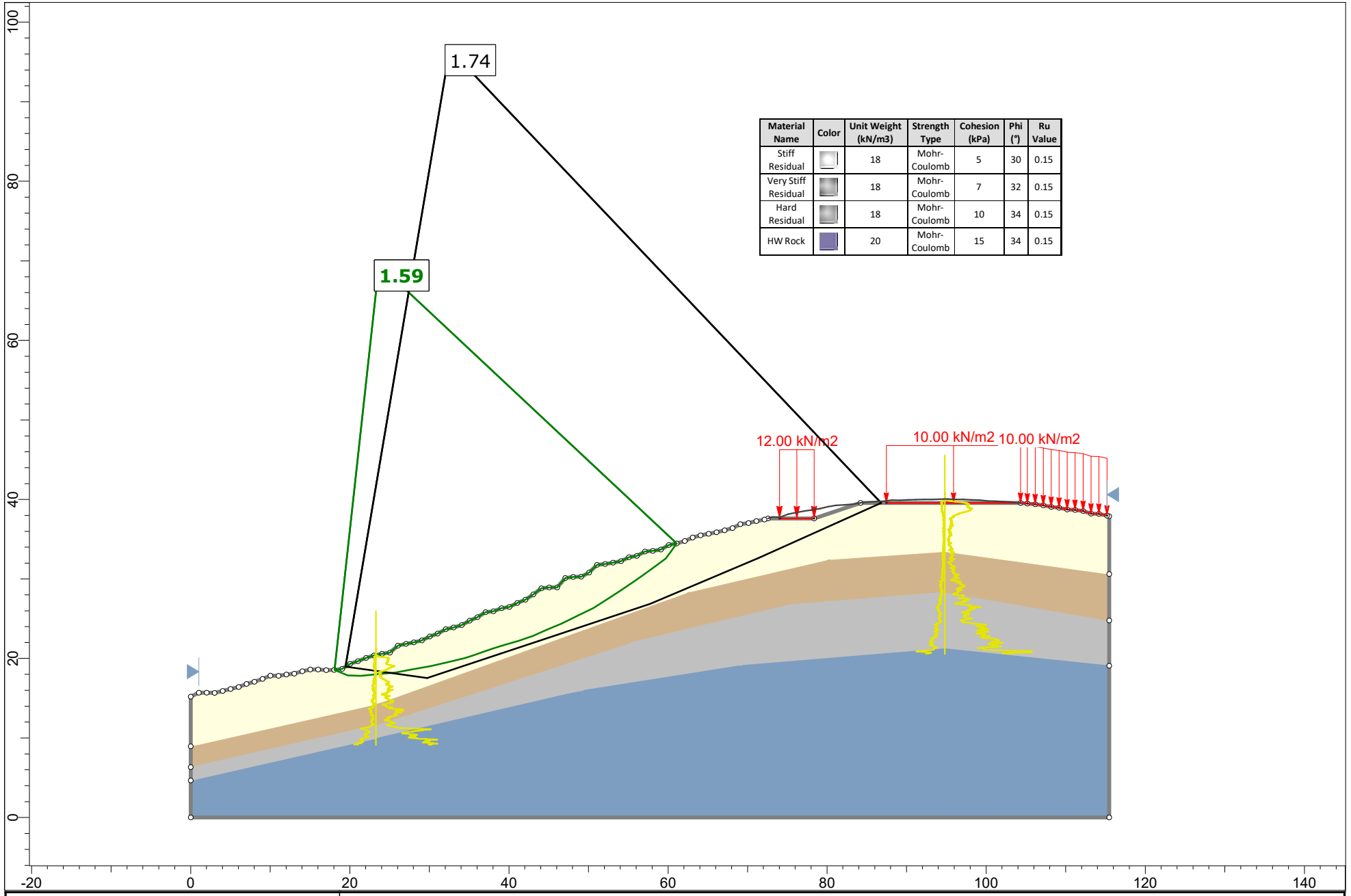


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' [EAST]	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-east_seismic.slmd

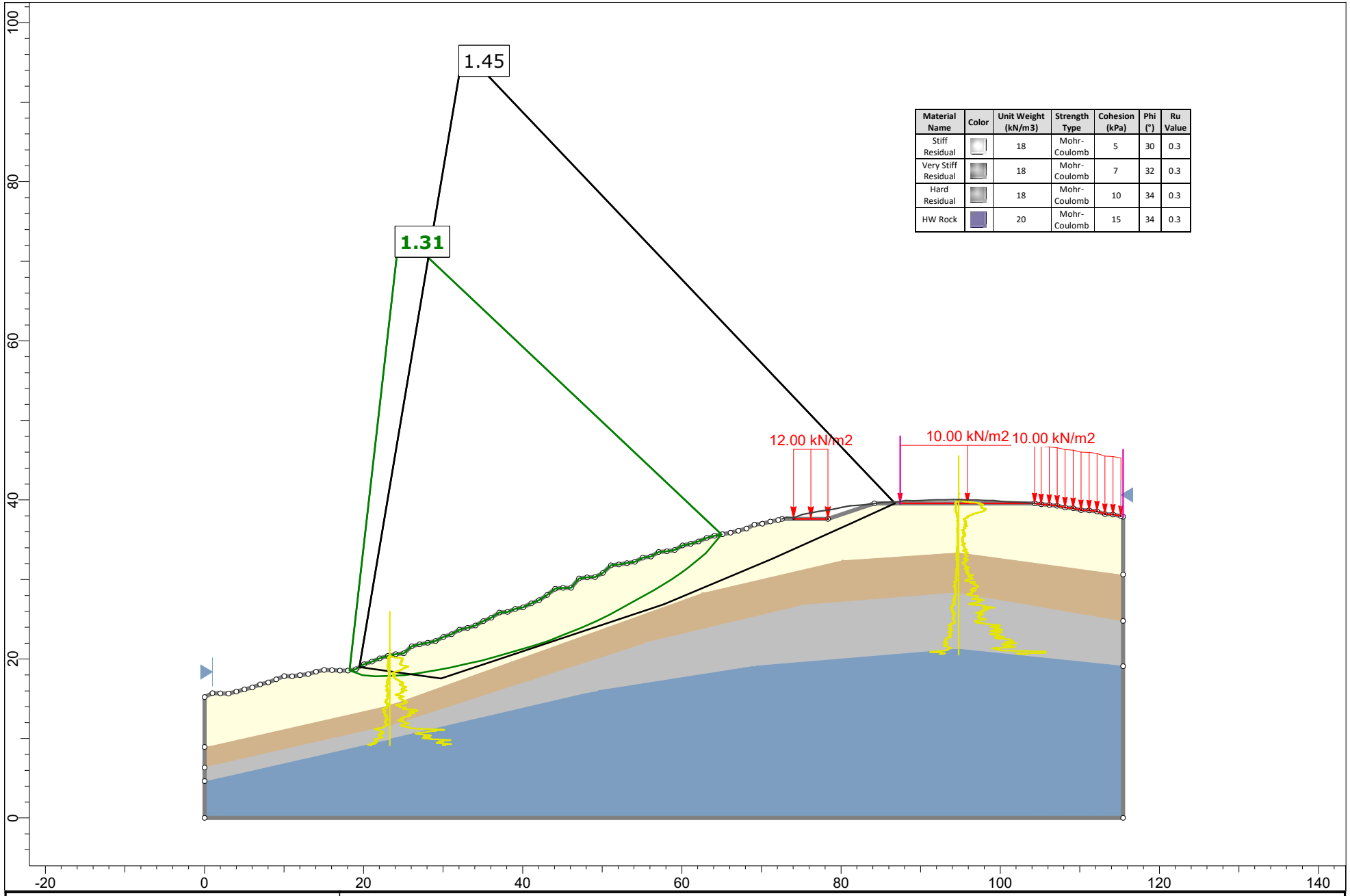


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' - [WEST]	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-west_static.slmd

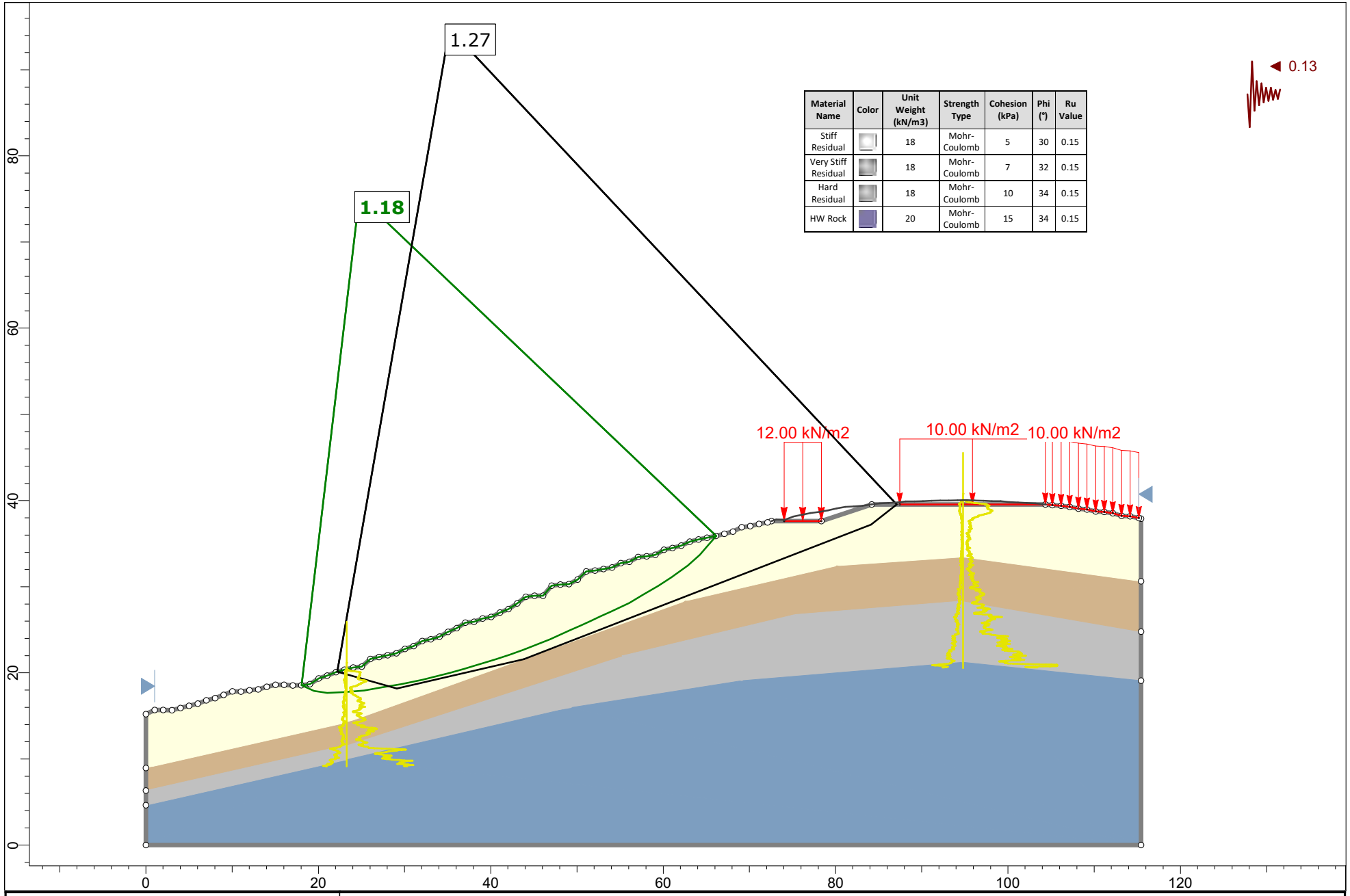


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
HW Rock		20	Mohr-Coulomb	15	34	0.3

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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' - [WEST]	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-west_elevatedGW.slmd



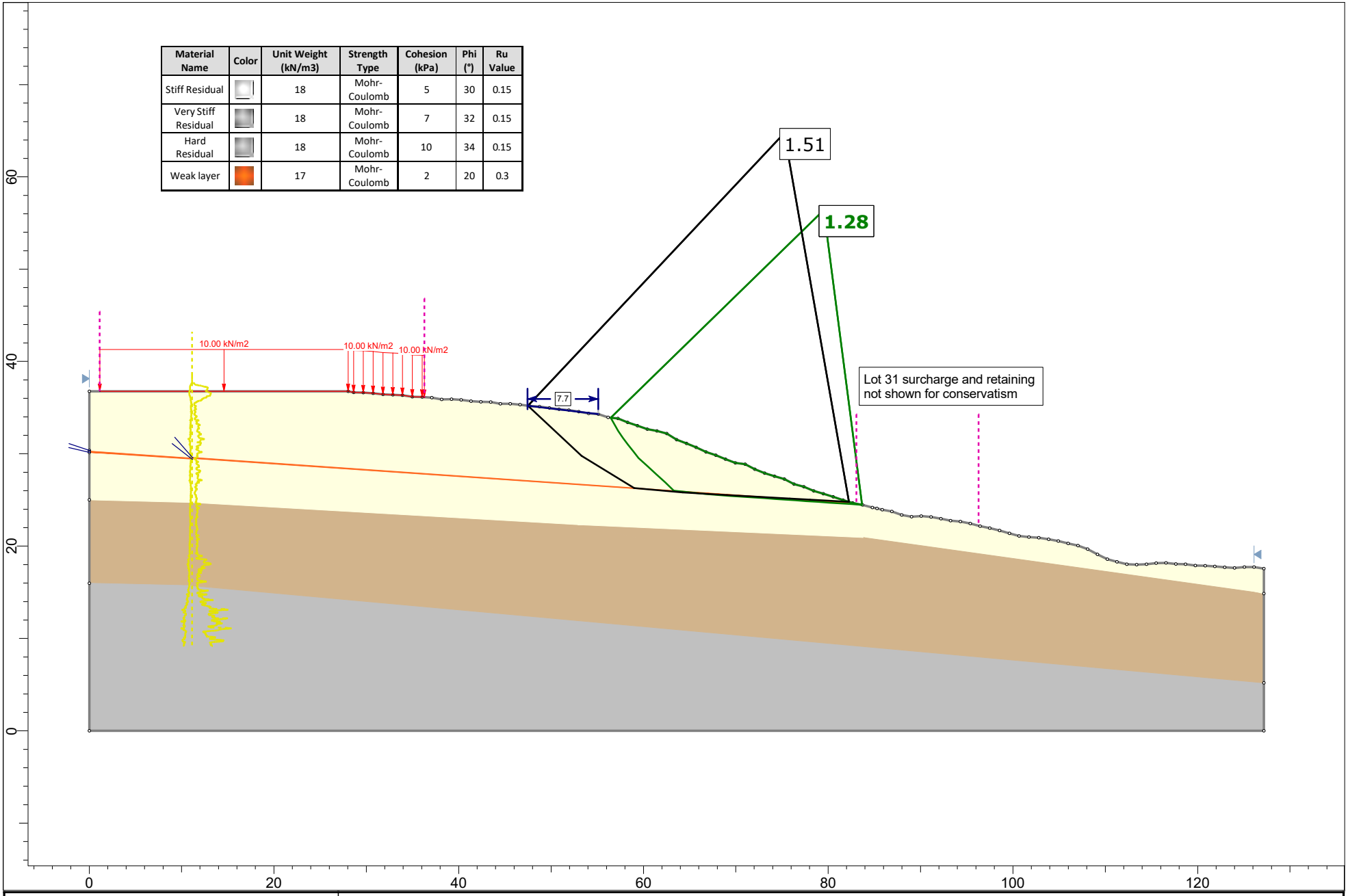
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
HW Rock		20	Mohr-Coulomb	15	34	0.15

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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section Q-Q' - [WEST]	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	QQ-west_seismic.slmd

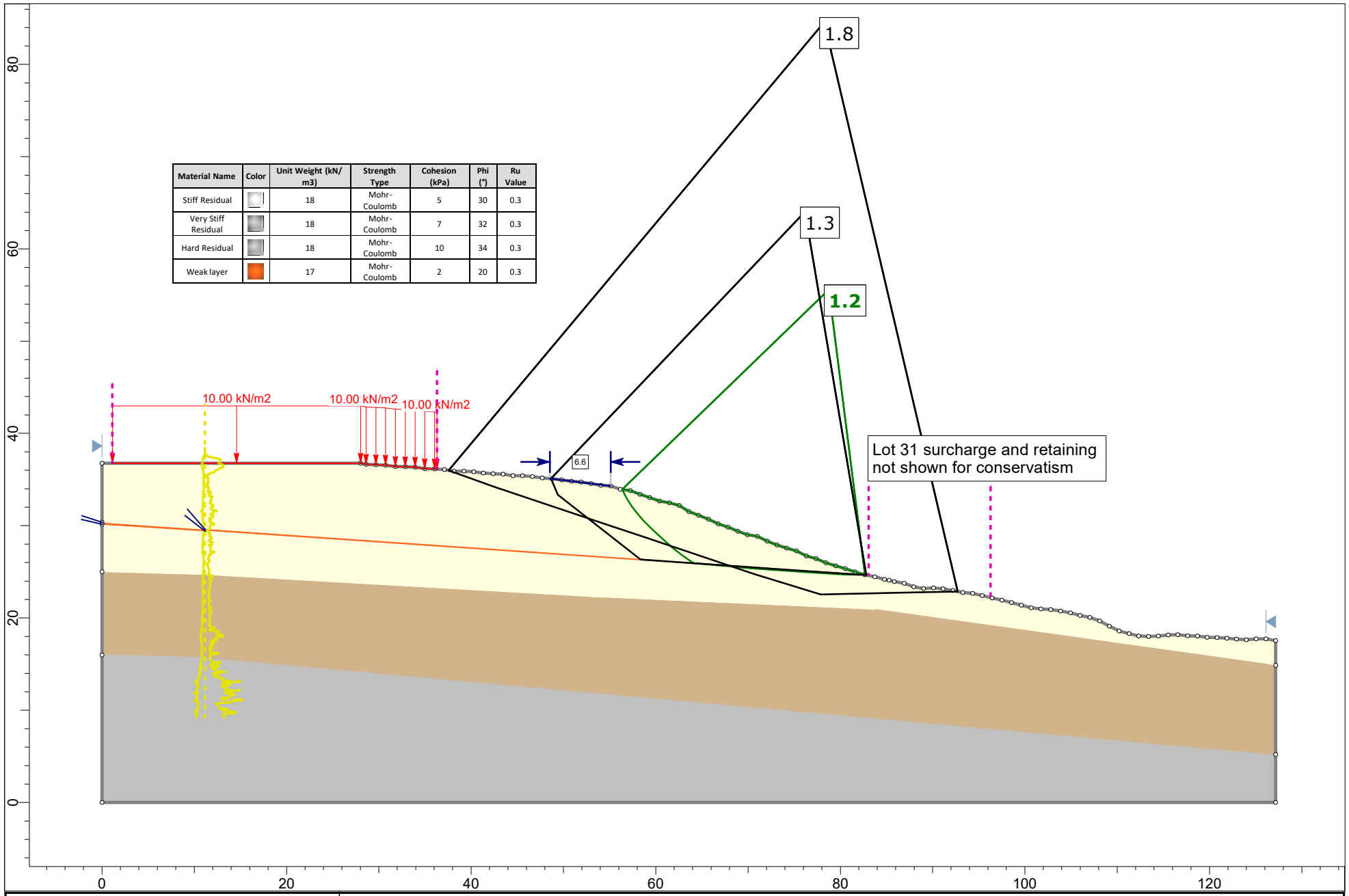
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
Weak layer		17	Mohr-Coulomb	2	20	0.3



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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section R-R'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	RR_static.slmd



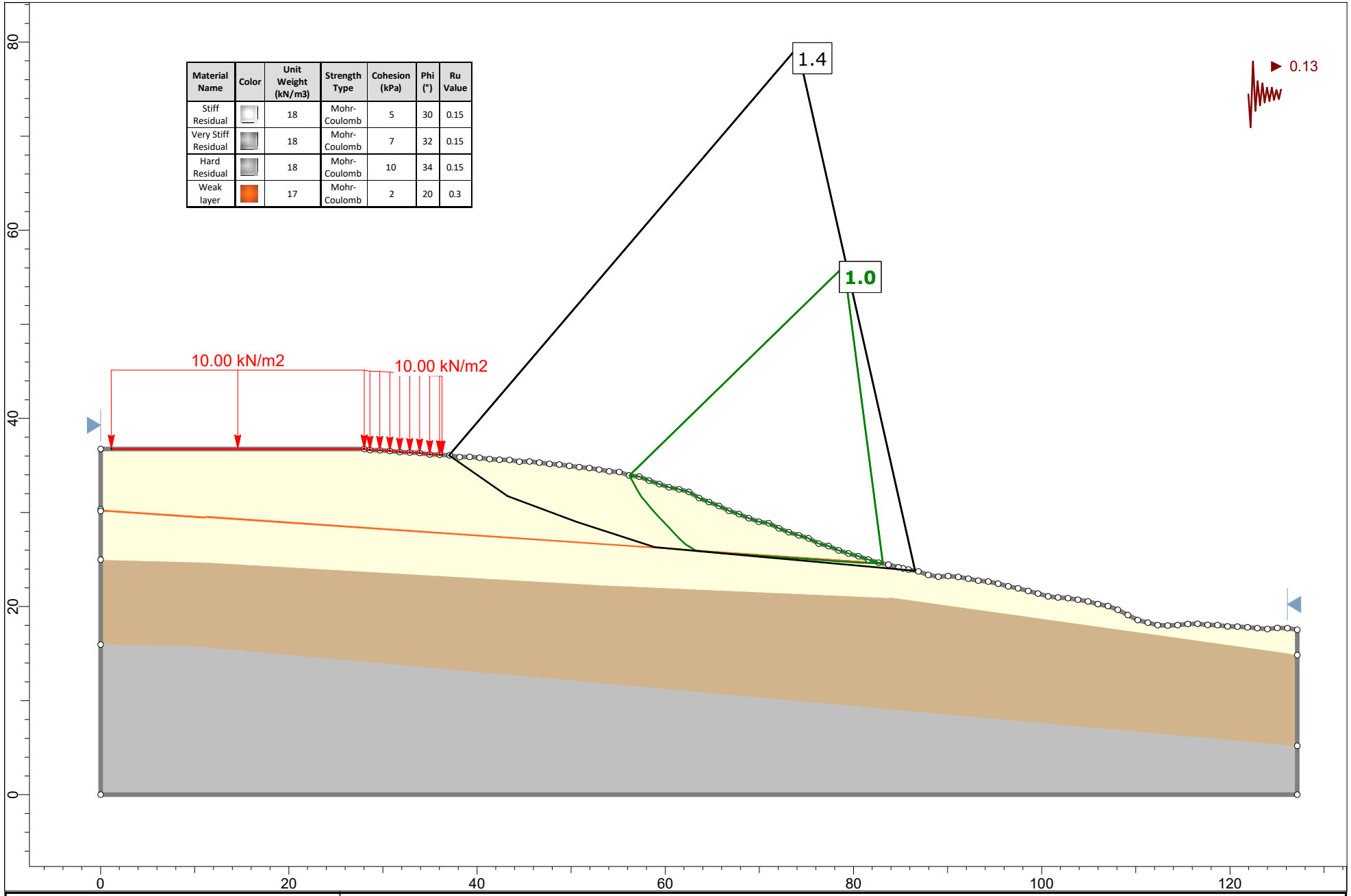
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.3
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.3
Hard Residual		18	Mohr-Coulomb	10	34	0.3
Weak layer		17	Mohr-Coulomb	2	20	0.3

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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section R-R'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	RR_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	0.15
Very Stiff Residual		18	Mohr-Coulomb	7	32	0.15
Hard Residual		18	Mohr-Coulomb	10	34	0.15
Weak layer		17	Mohr-Coulomb	2	20	0.3

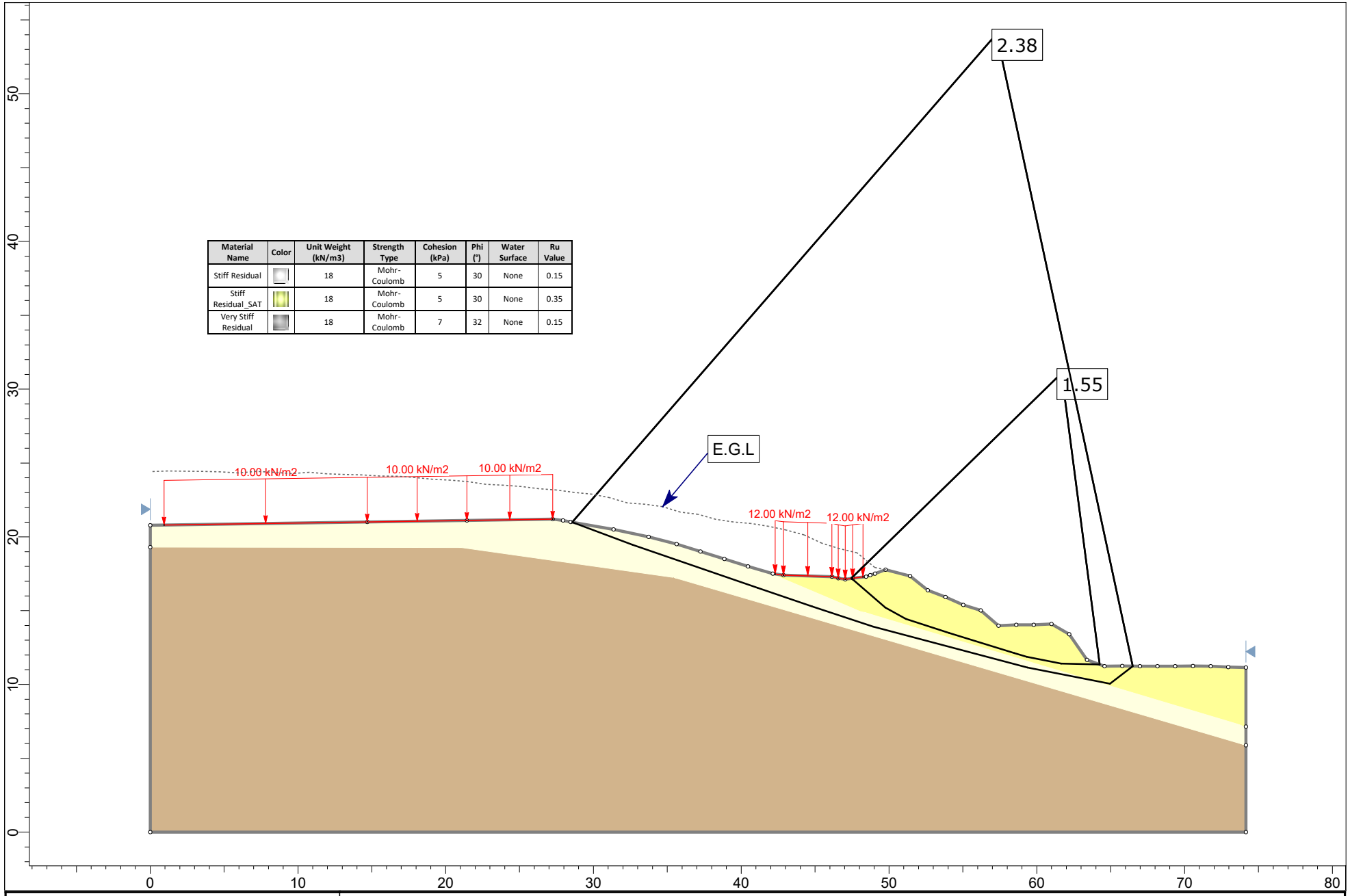


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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section R-R'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	RR_seismic.slmd

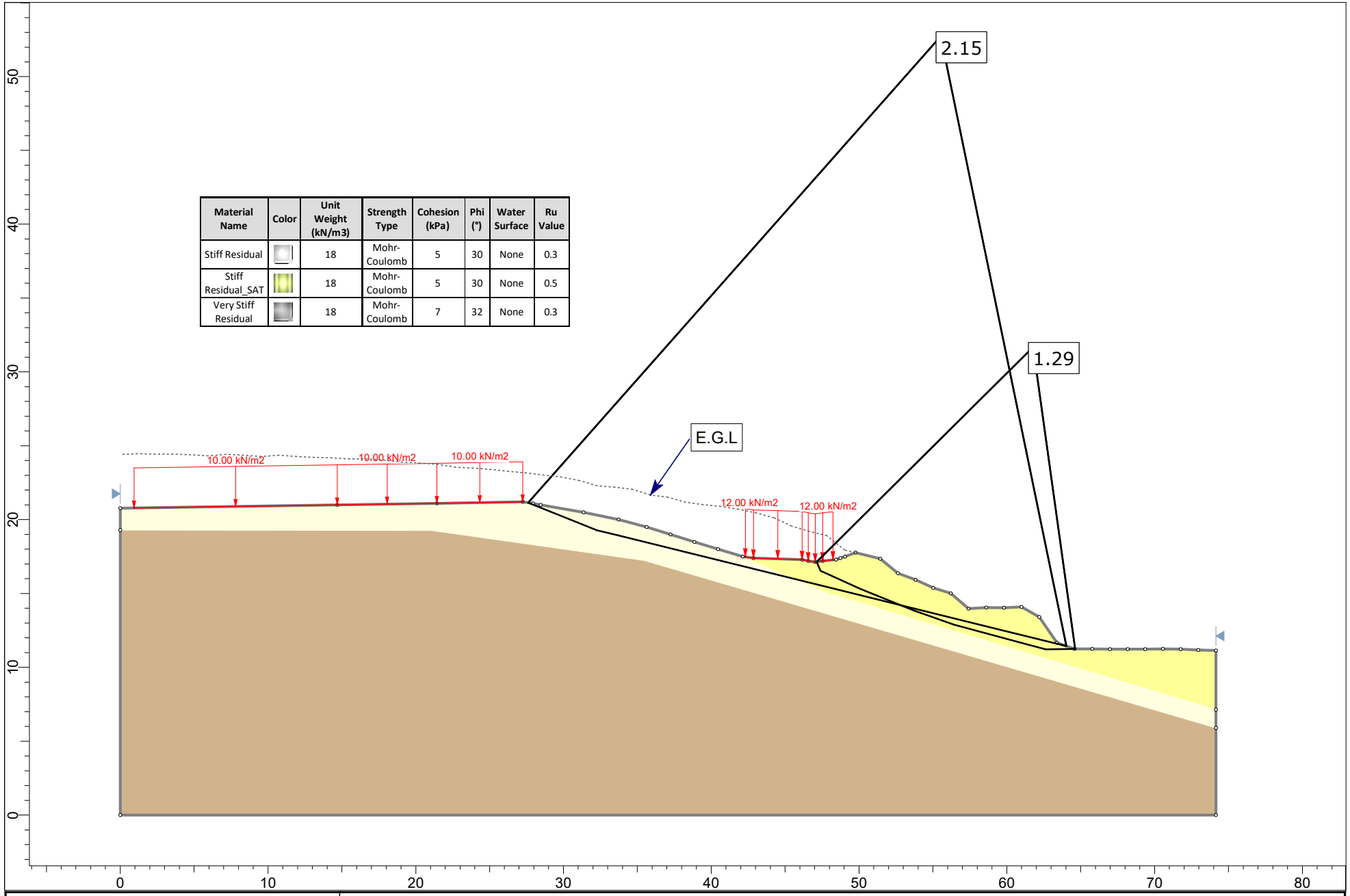
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual_SAT		18	Mohr-Coulomb	5	30	None	0.35
Very Stiff Residual		18	Mohr-Coulomb	7	32	None	0.15



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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section S-S'	*Scenario*	Static conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	SS_static.slmd



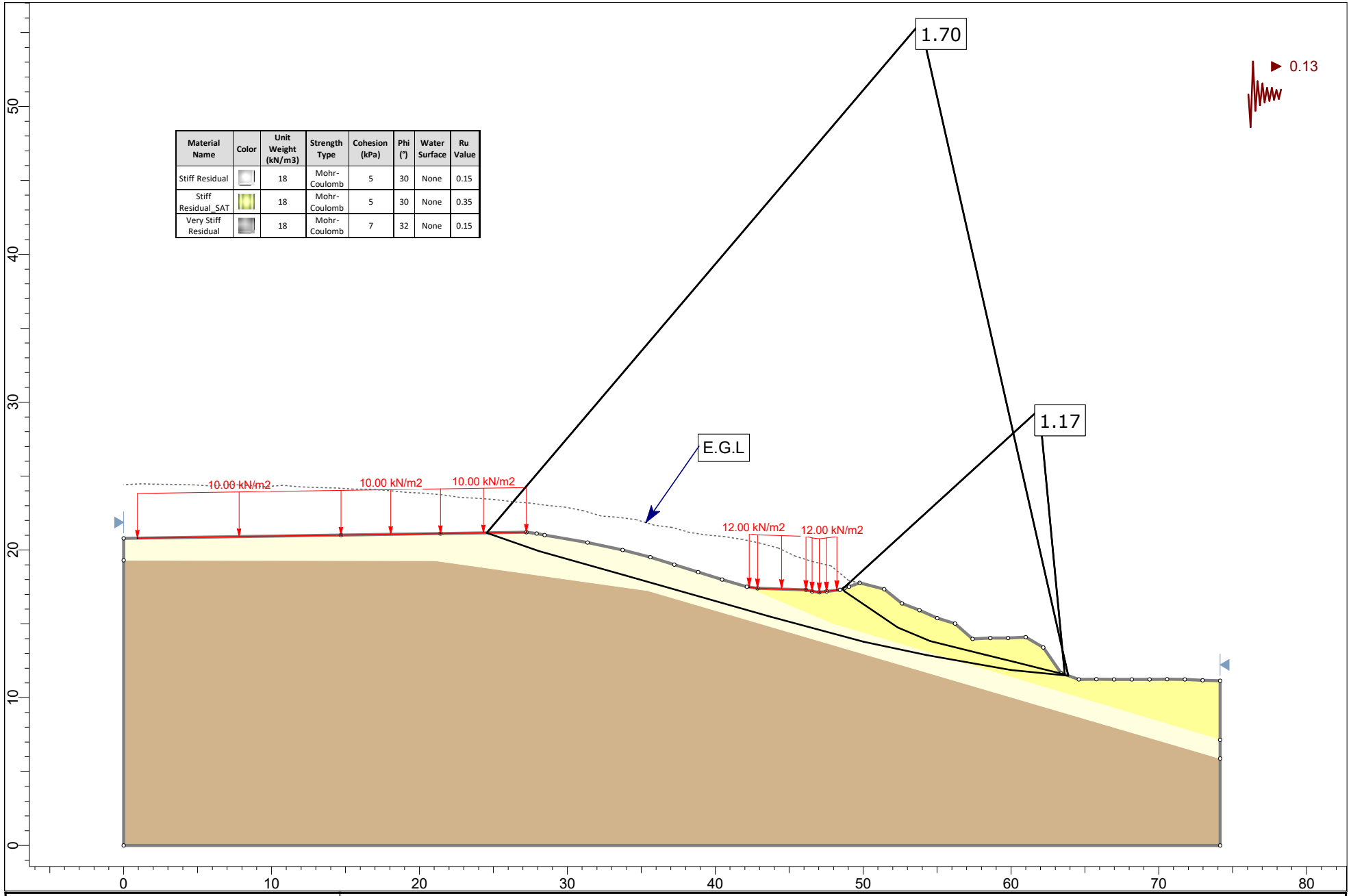
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	None	0.3
Stiff Residual_SAT		18	Mohr-Coulomb	5	30	None	0.5
Very Stiff Residual		18	Mohr-Coulomb	7	32	None	0.3

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SLIDEINTERPRET 9.034

Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section S-S'	*Scenario*	Elevated groundwater conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	SS_elevatedGW.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Stiff Residual		18	Mohr-Coulomb	5	30	None	0.15
Stiff Residual_SAT		18	Mohr-Coulomb	5	30	None	0.35
Very Stiff Residual		18	Mohr-Coulomb	7	32	None	0.15



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Project	23 020 - Aucks Rd, Russell - Willowridge Developments		
Group	Cross Section S-S'	*Scenario*	Seismic conditions
Drawn By	JMC	*Company*	
Date	16/08/2024, 9:07:26 am	*File Name*	SS_seismic.slmd

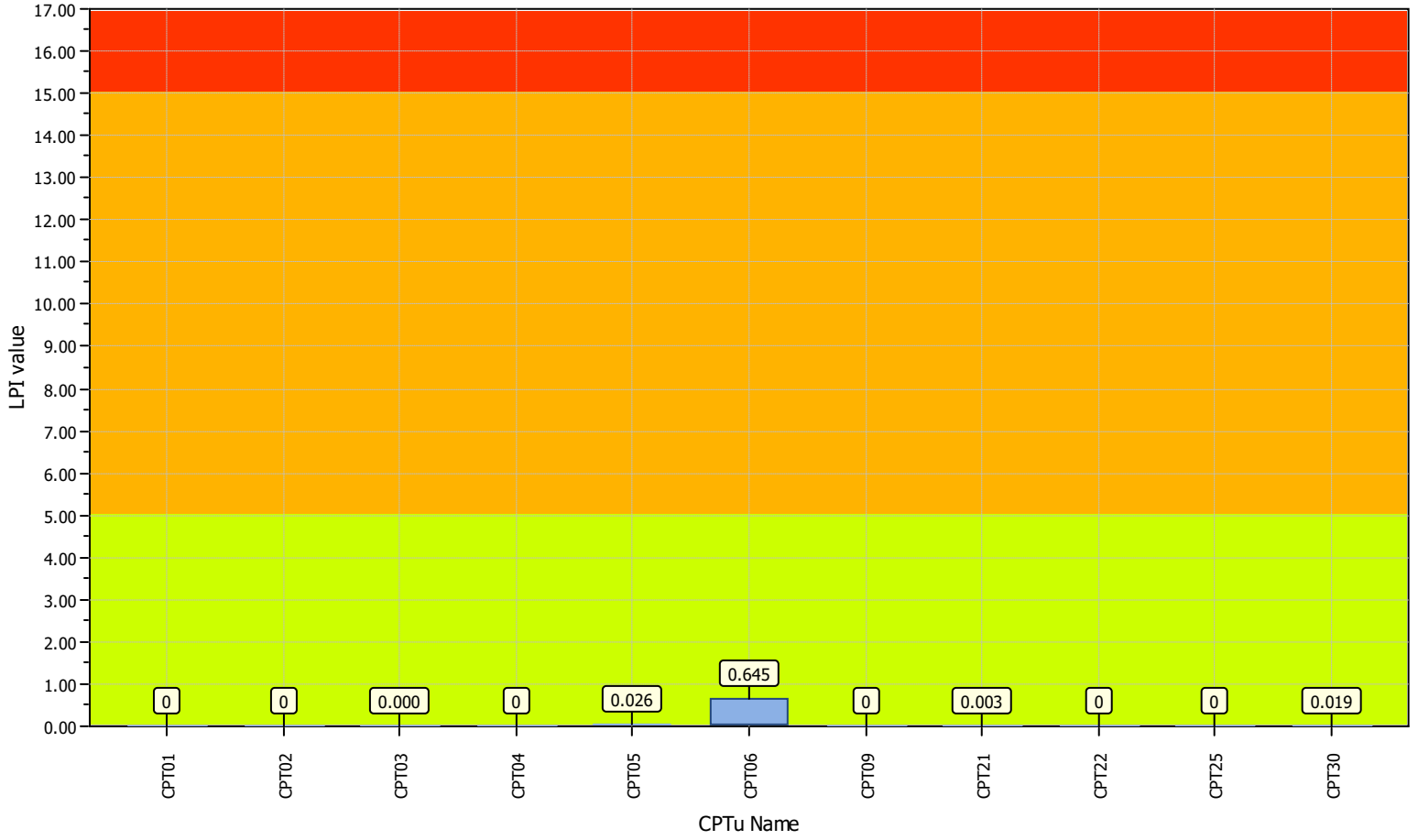
Appendix F – Liquefaction Assessment

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Project title : Willowridge Developments

Location : Aucks Road Russell

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

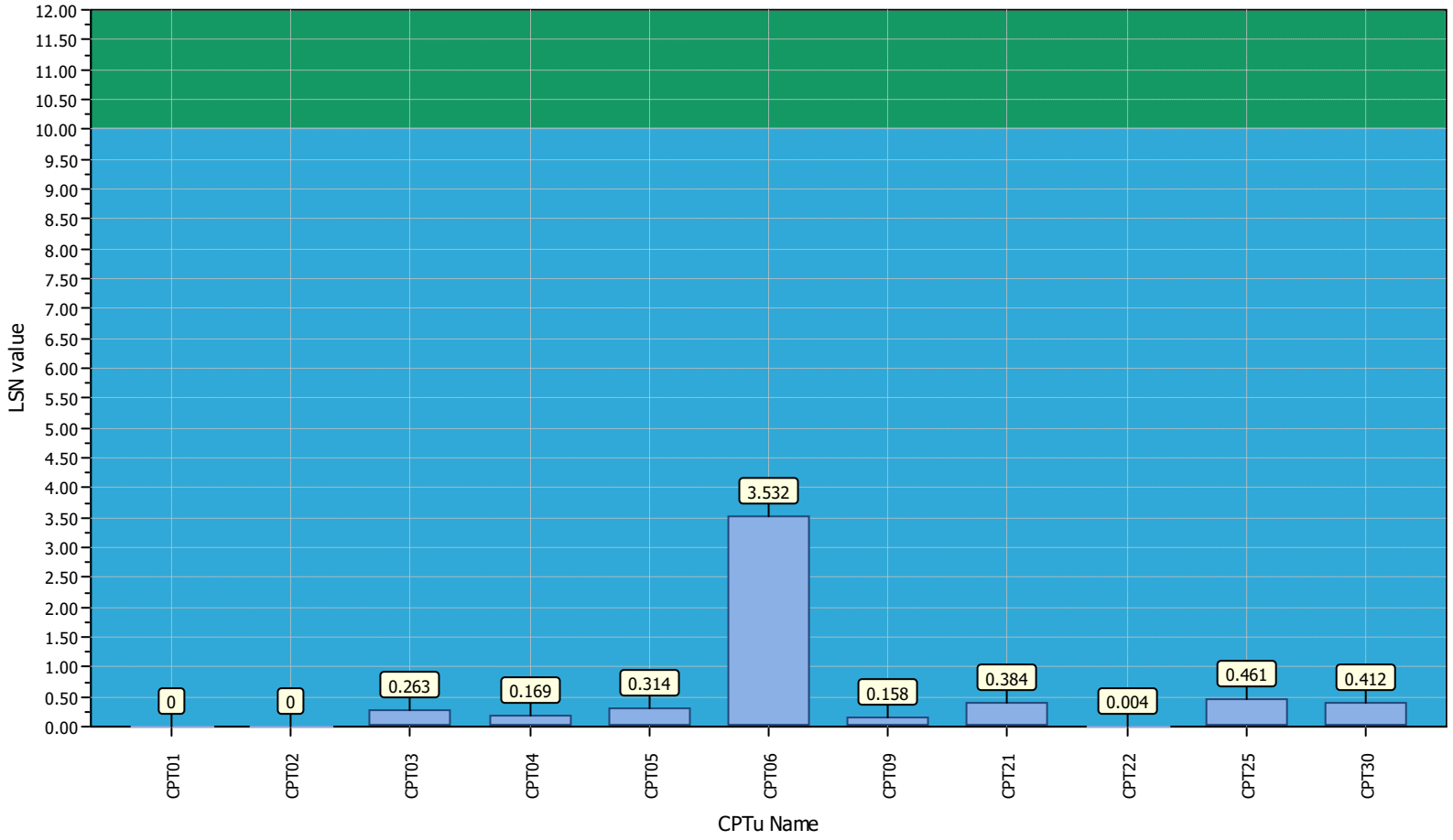
Total CPT number: 11
100.00% low risk
0.00% high risk
0.00% very high risk

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Project title : Willowridge Developments

Location : Aucks Road Russell

Overall Liquefaction Severity Number report



LSN color scheme

- Severe damage
- Major expression of liquefaction
- Moderate to severe exp. of liquefaction
- Moderate expression of liquefaction
- Minor expression of liquefaction
- Little to no expression of liquefaction

Basic statistics

Total CPT number: 11

100.00% little liquefaction

0.00% minnor liquefaction

0.00% moderate liquefaction

0.00% moderate to major liquefaction

0.00% major liquefaction

0.00% severe liquefaction

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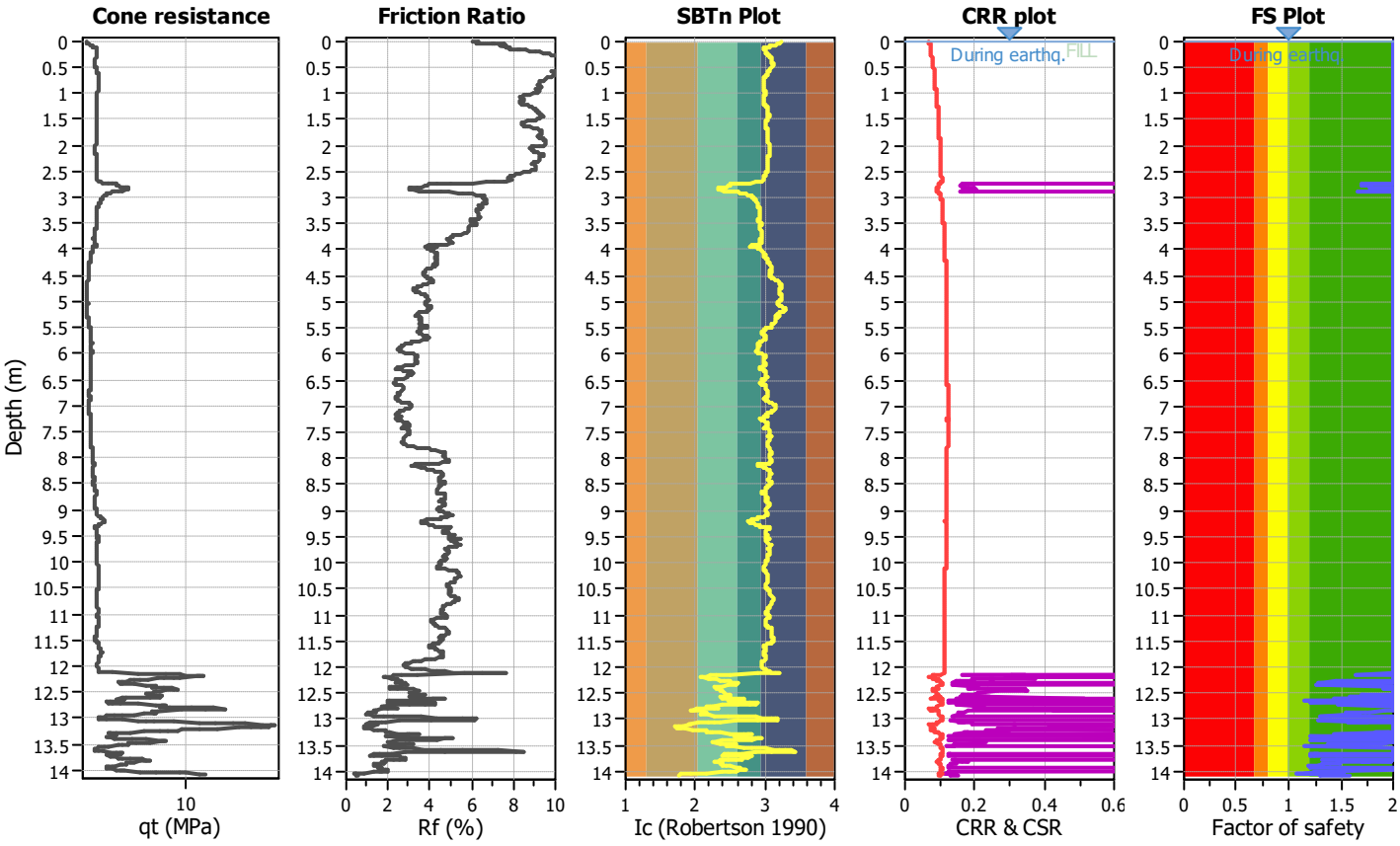
LIQUEFACTION ANALYSIS REPORT

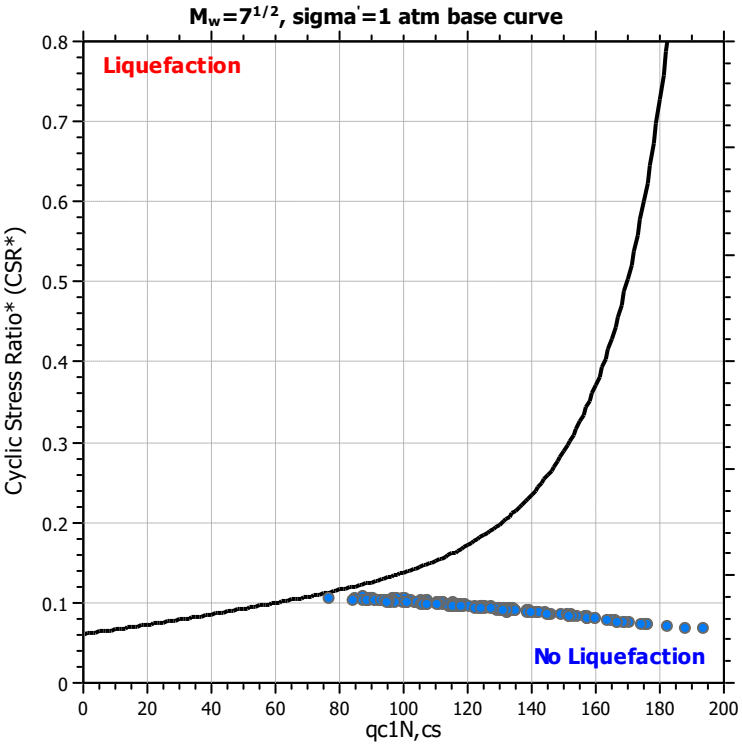
Project title : Willowridge Developments **Location : Aucks Road Russell**

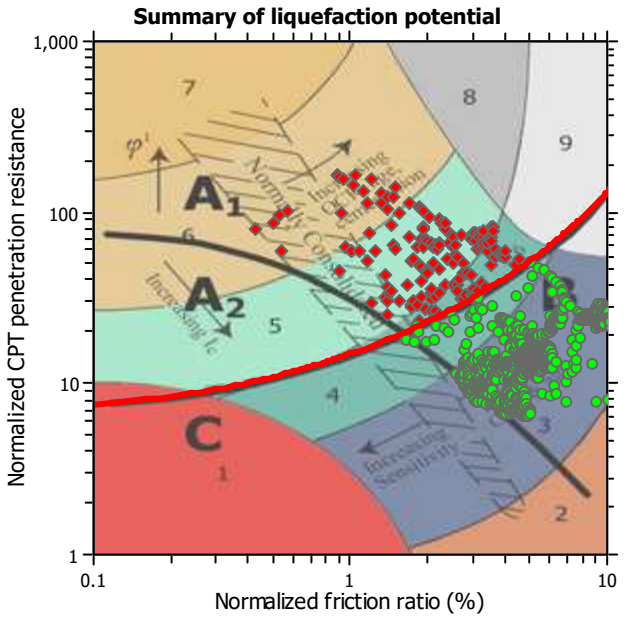
CPT file : CPT01

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.40 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	1.00 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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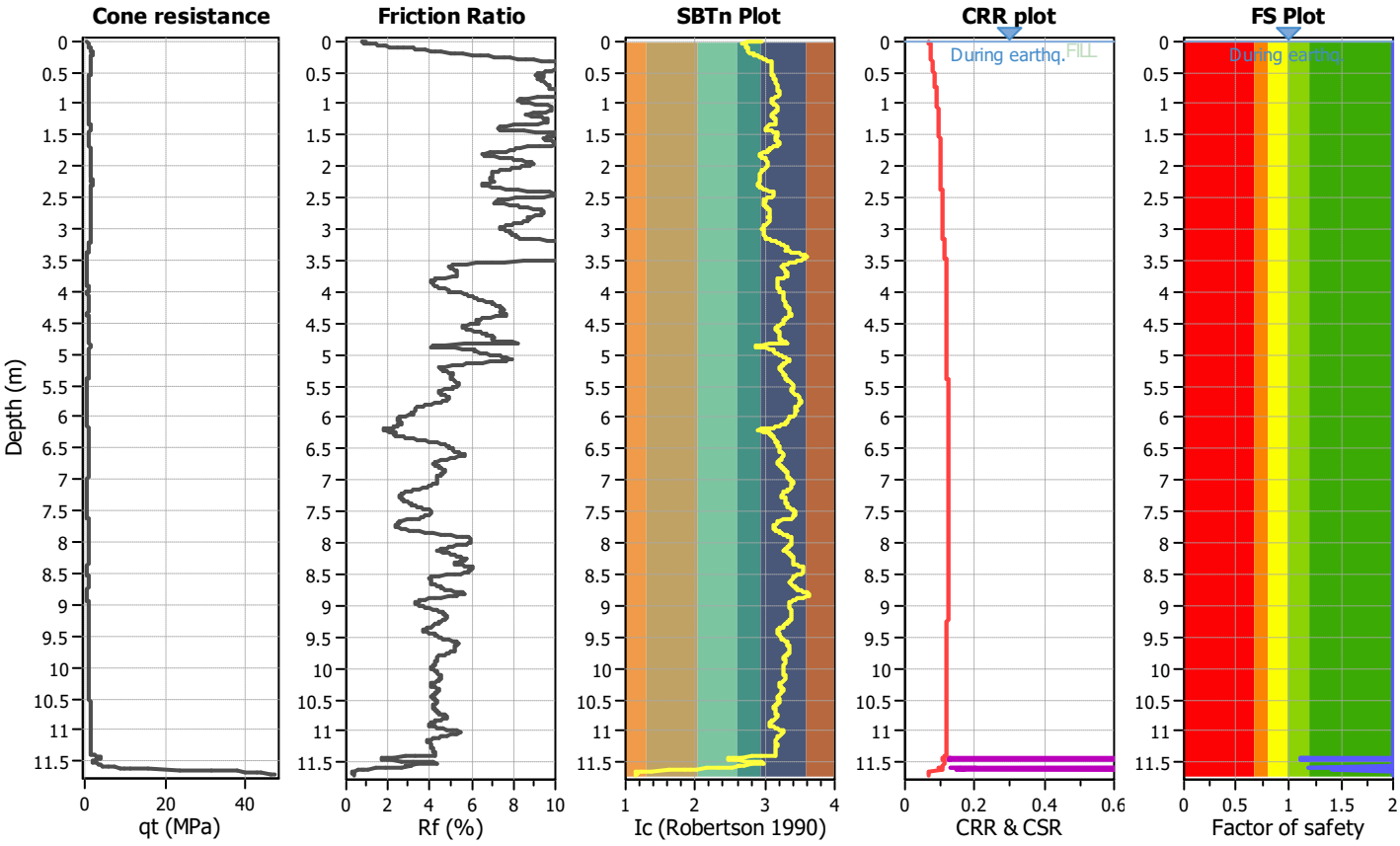
LIQUEFACTION ANALYSIS REPORT

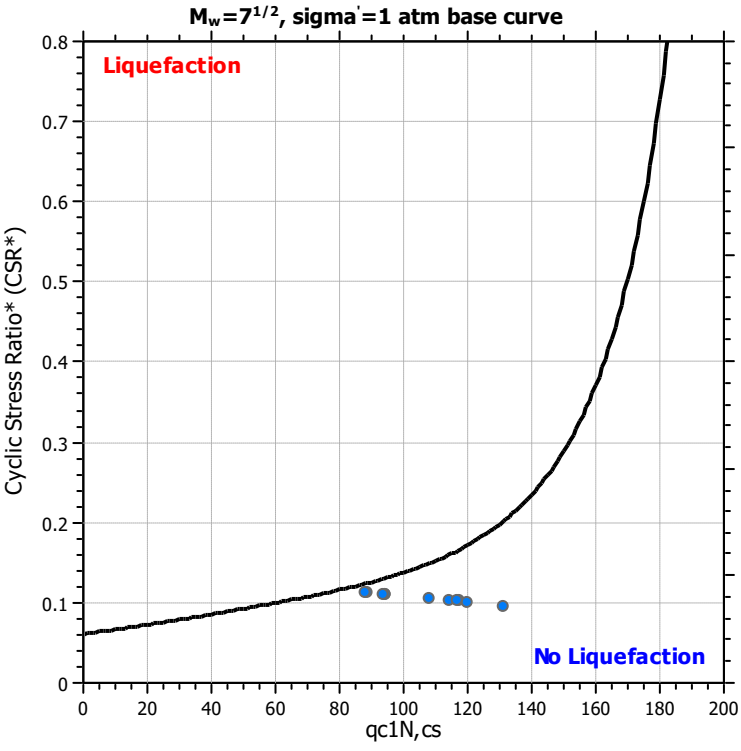
Project title : Willowridge Developments **Location : Aucks Road Russell**

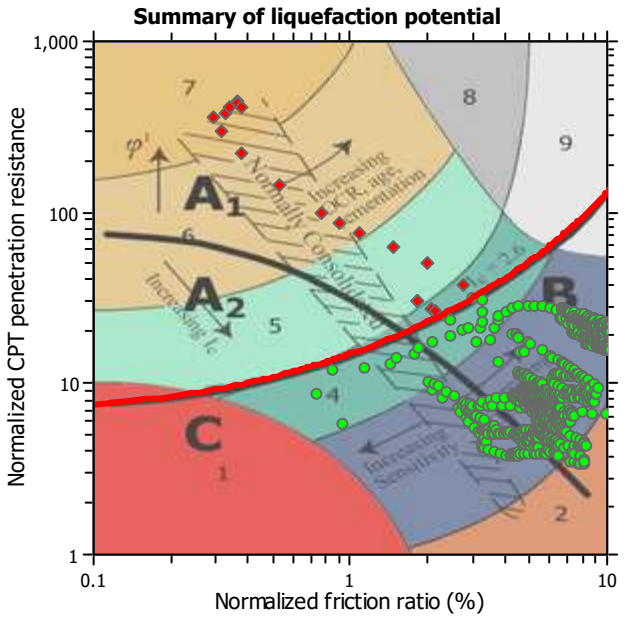
CPT file : CPT02

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.90 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	1.00 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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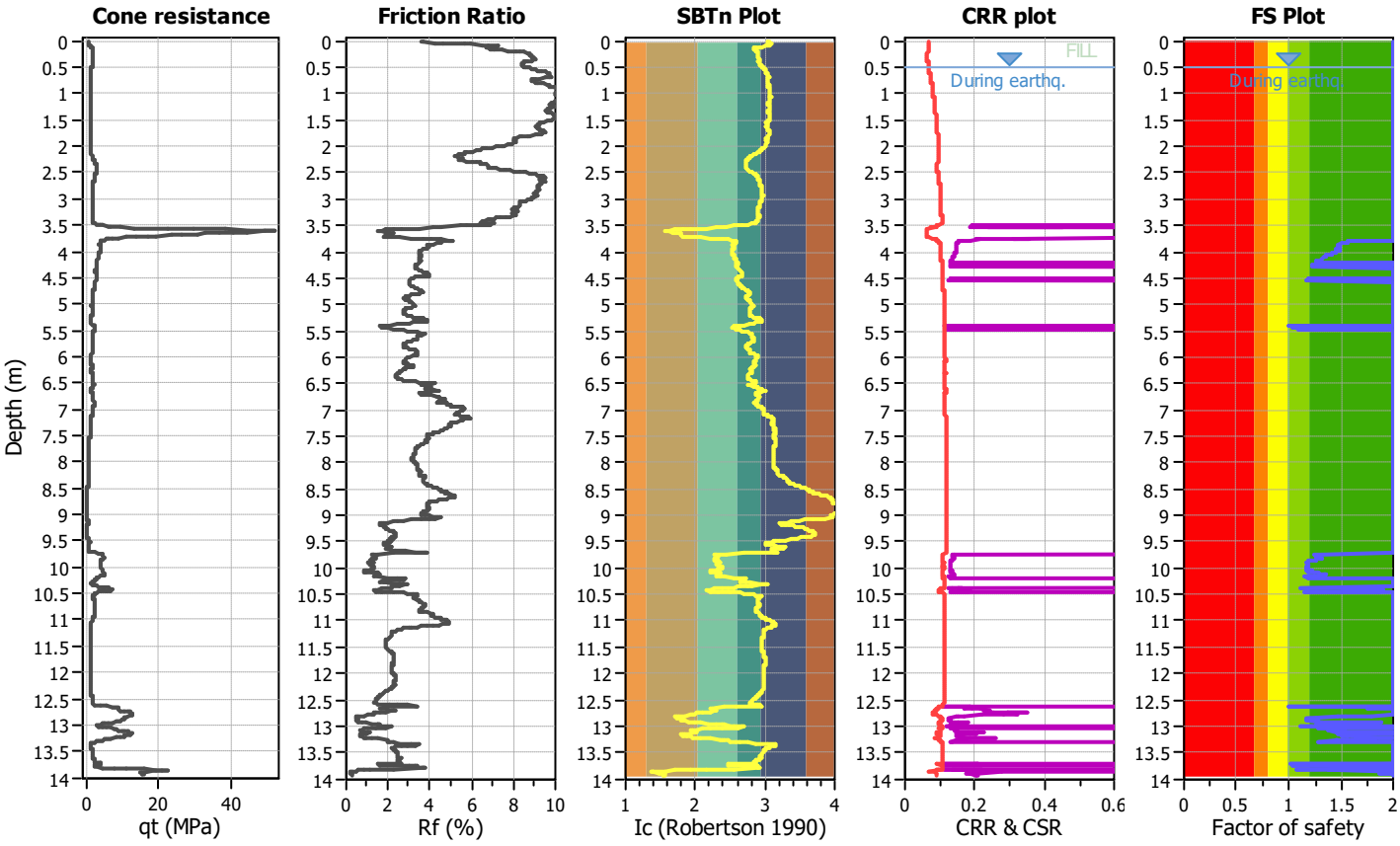
LIQUEFACTION ANALYSIS REPORT

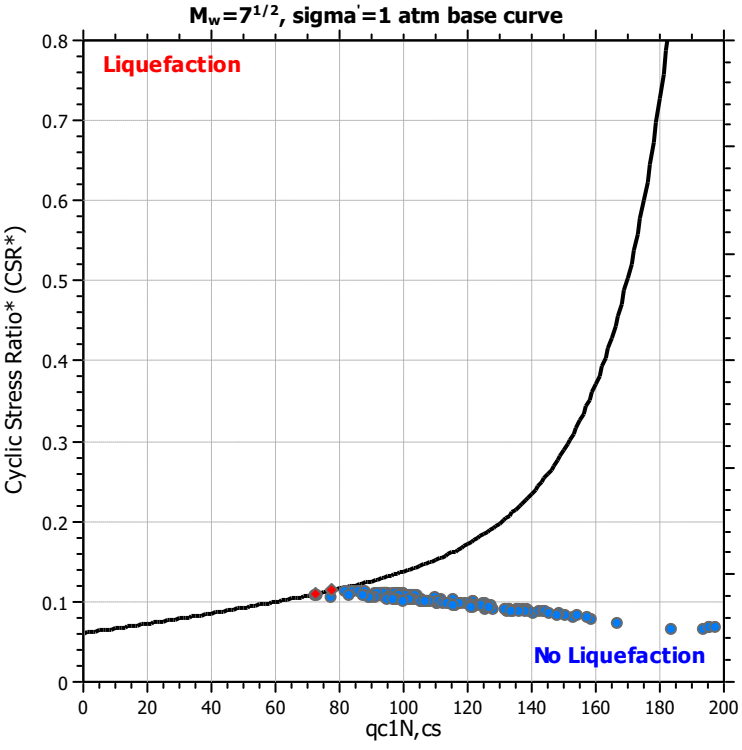
Project title : Willowridge Developments **Location : Aucks Road Russell**

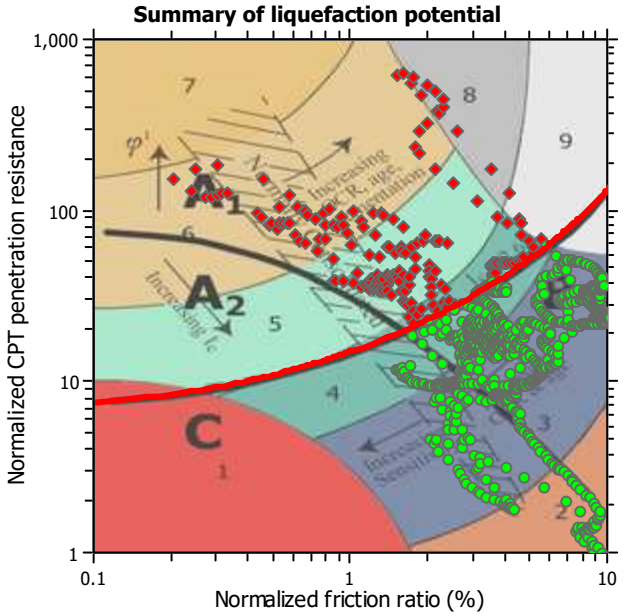
CPT file : CPT03

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	3.80 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	0.50 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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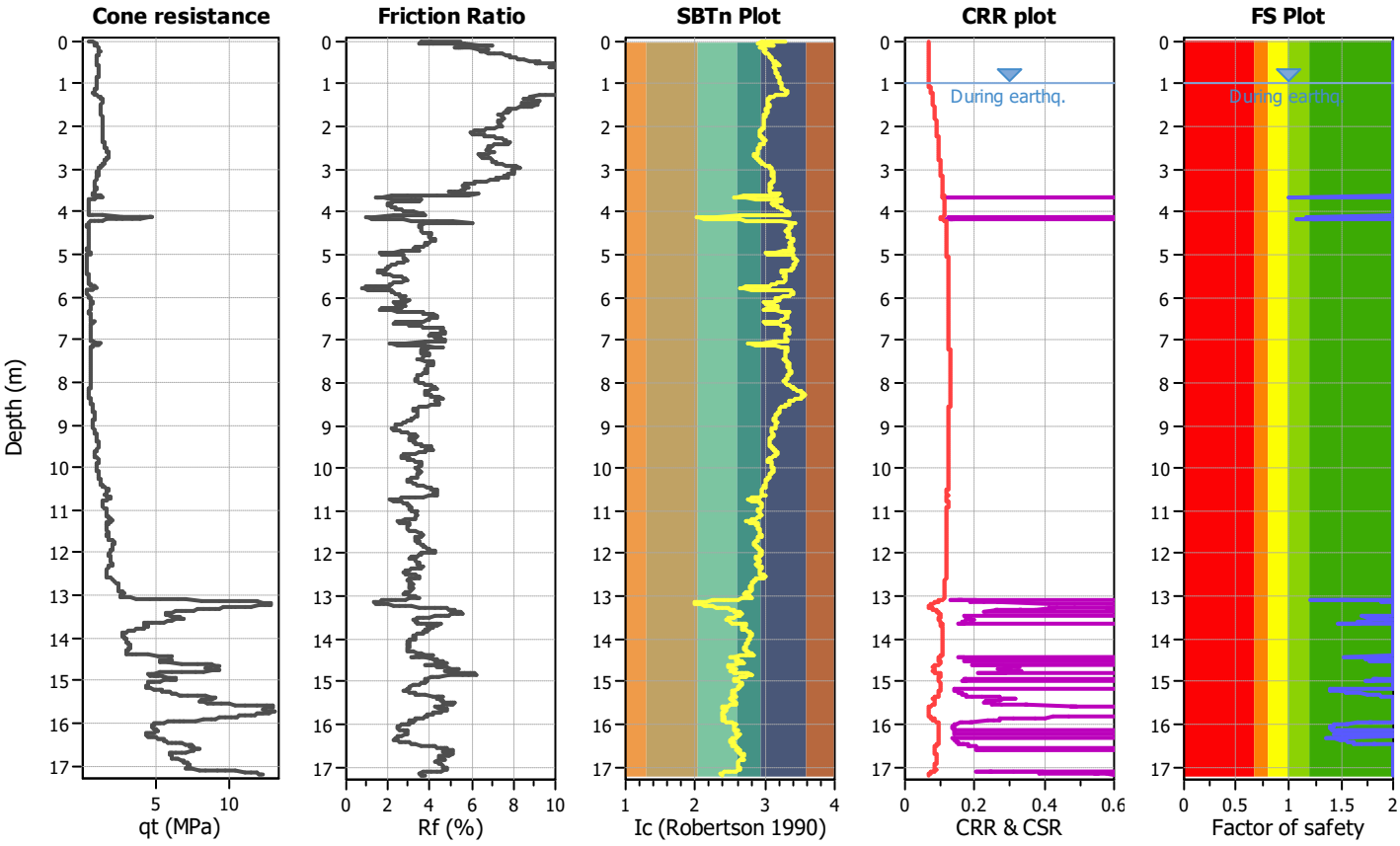
LIQUEFACTION ANALYSIS REPORT

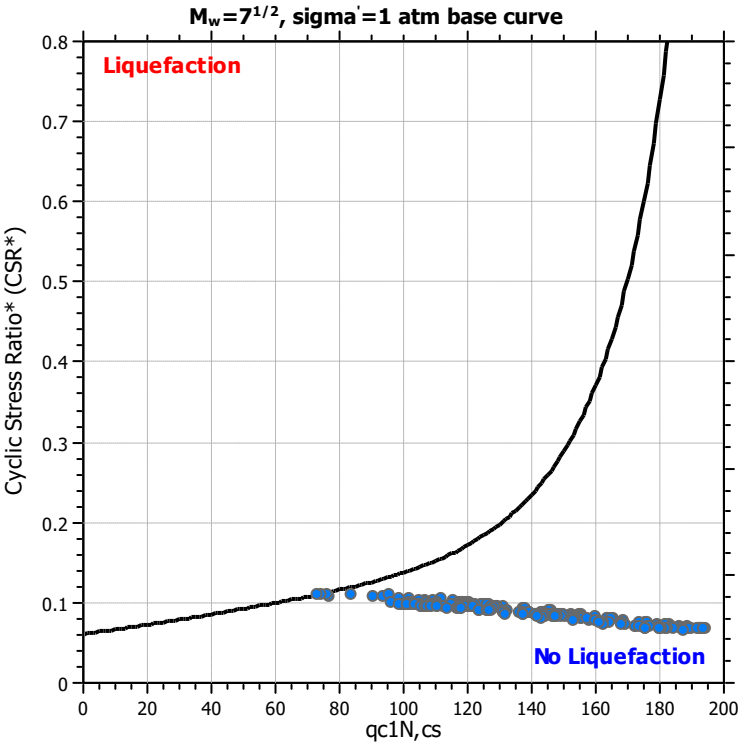
Project title : Willowridge Developments **Location : Aucks Road Russell**

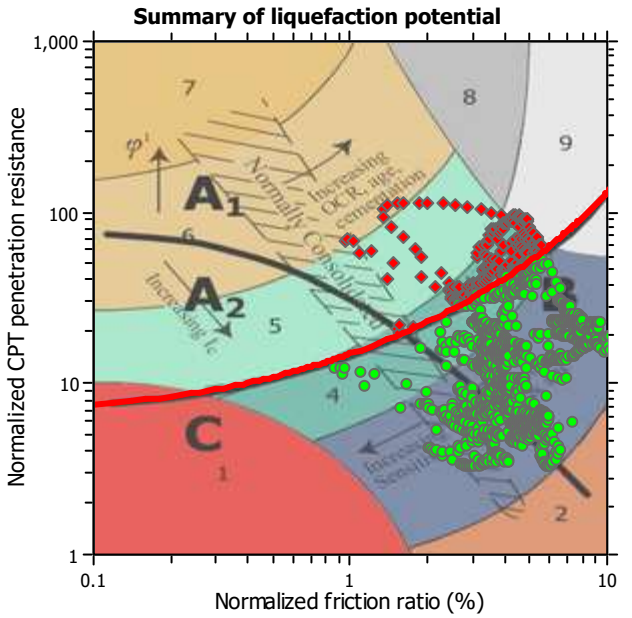
CPT file : CPT04

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.10 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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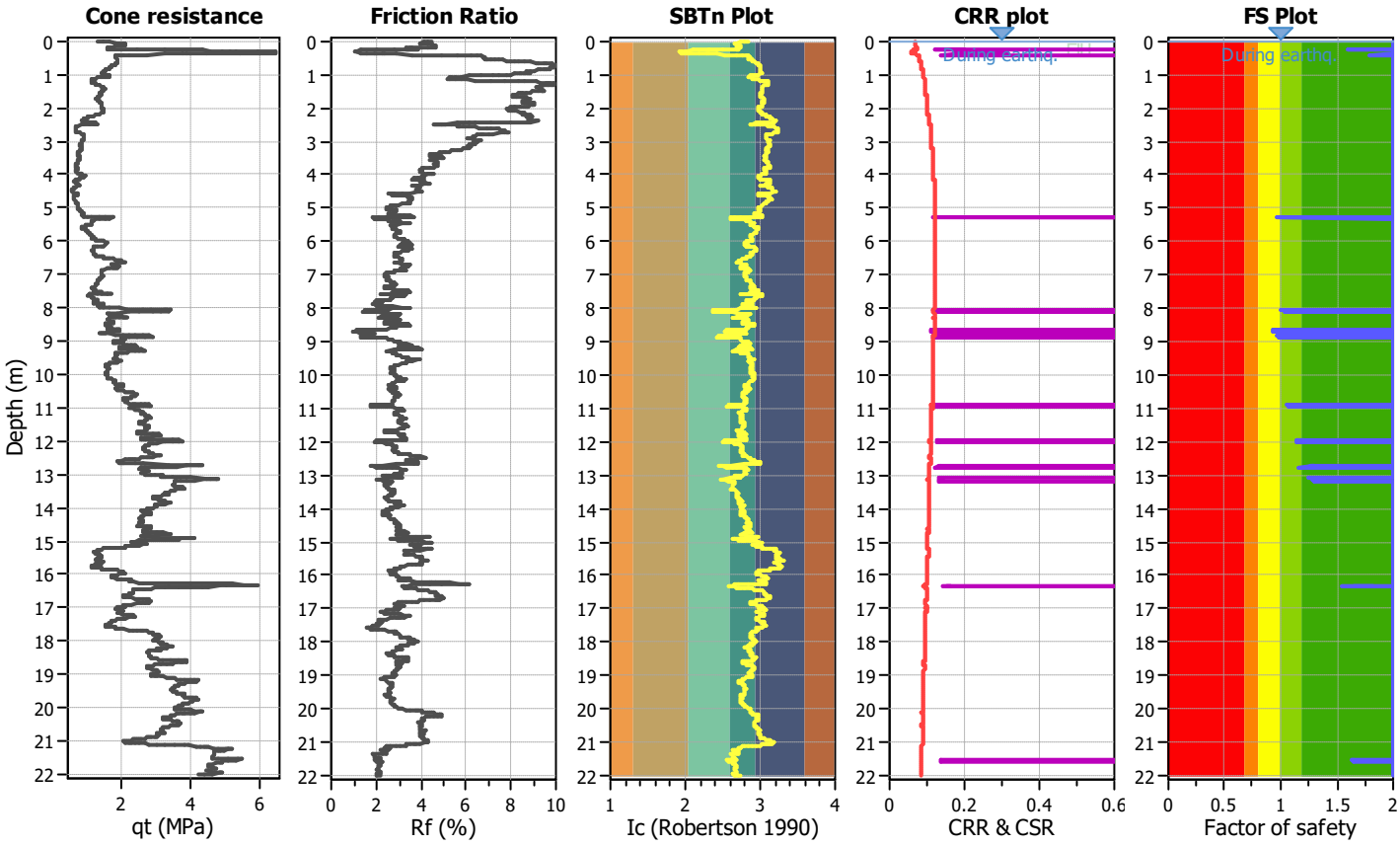
LIQUEFACTION ANALYSIS REPORT

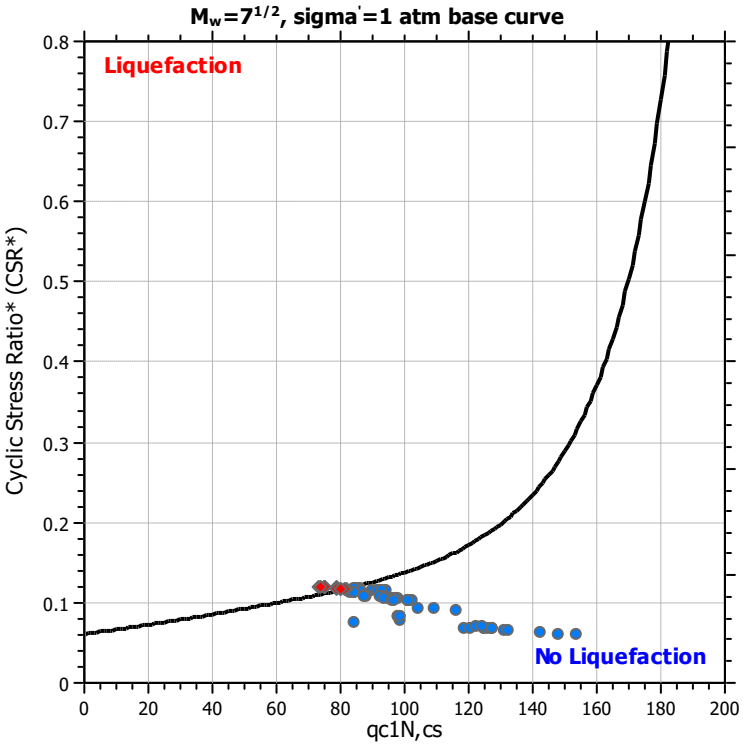
Project title : Willowridge Developments **Location : Aucks Road Russell**

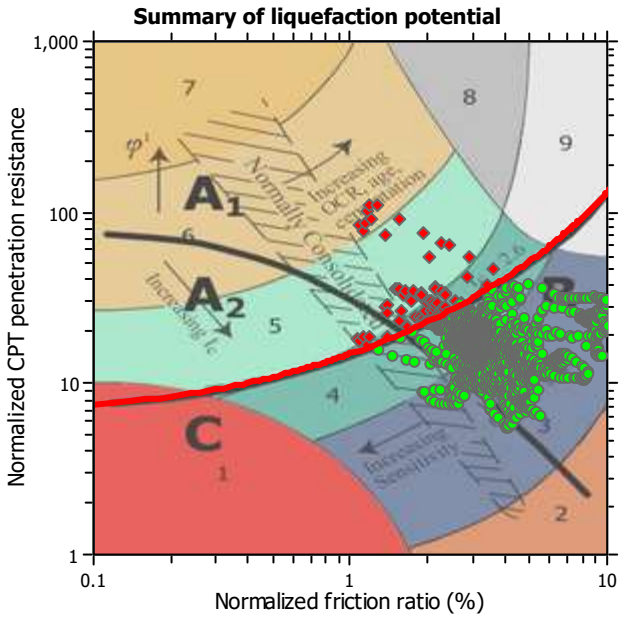
CPT file : CPT05

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.70 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	1.00 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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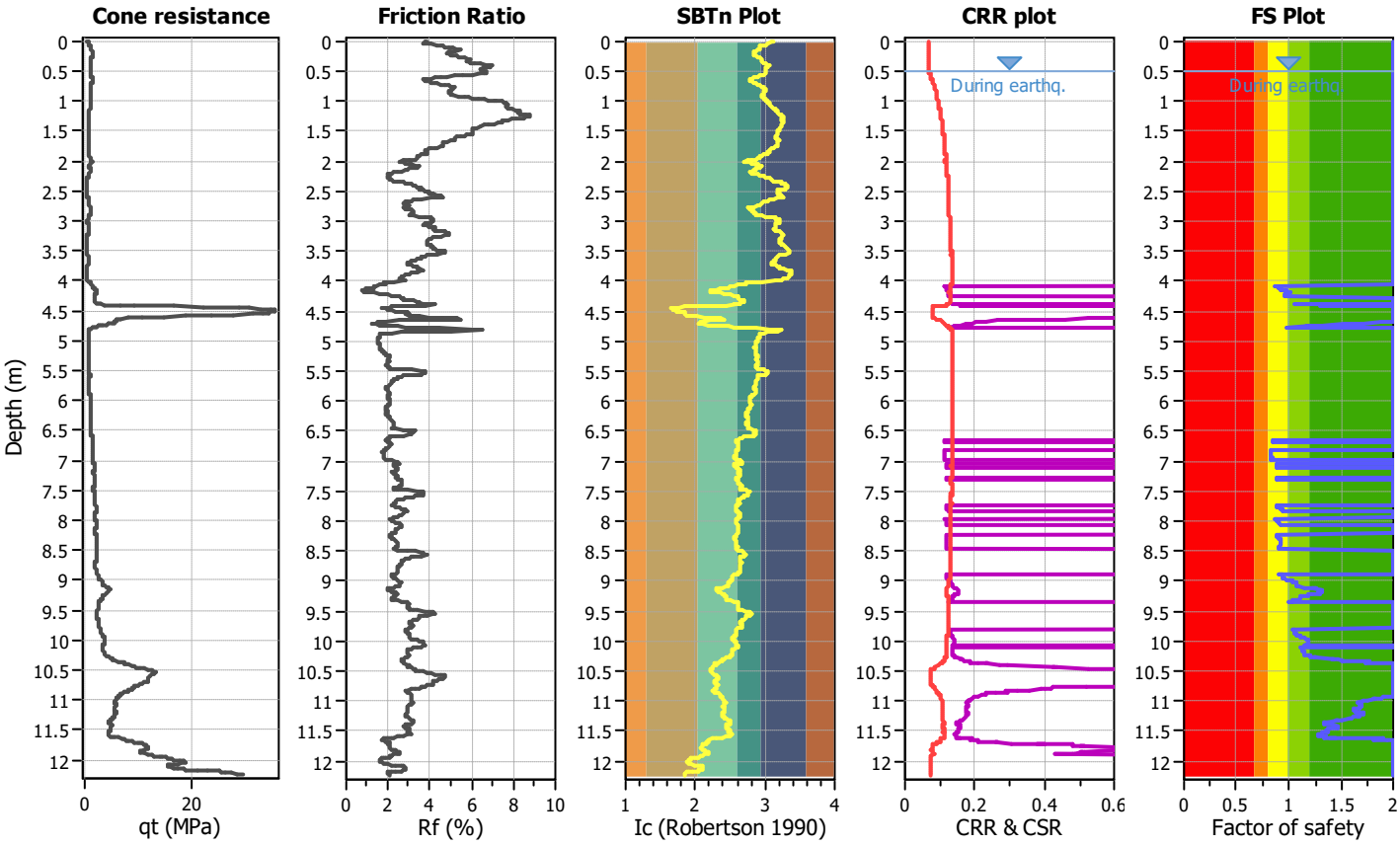
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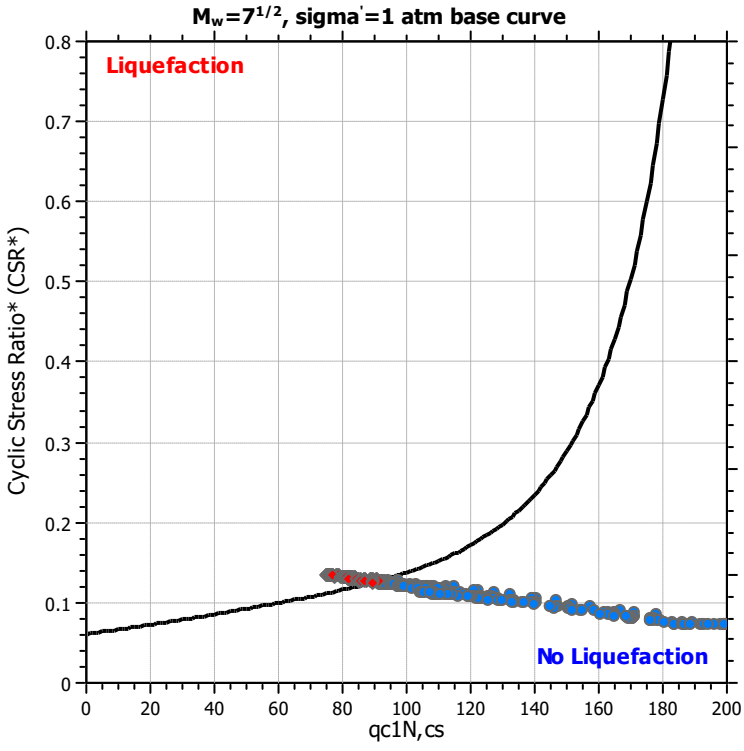
Project title : Willowridge Developments **Location : Aucks Road Russell**

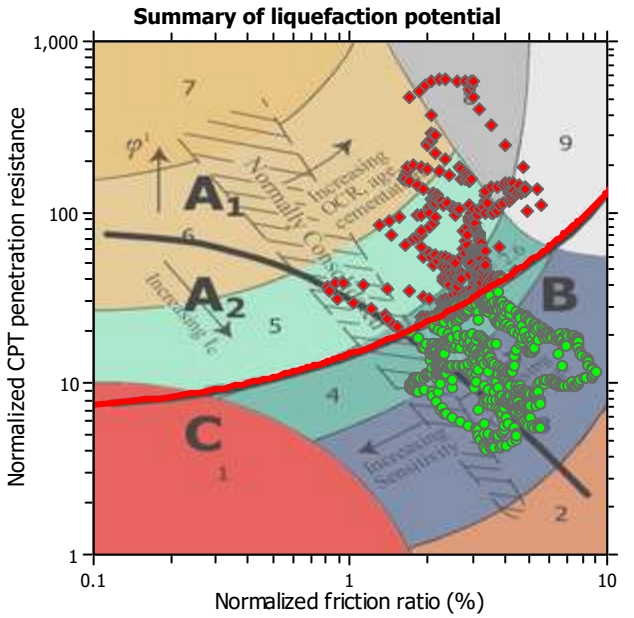
CPT file : CPT06

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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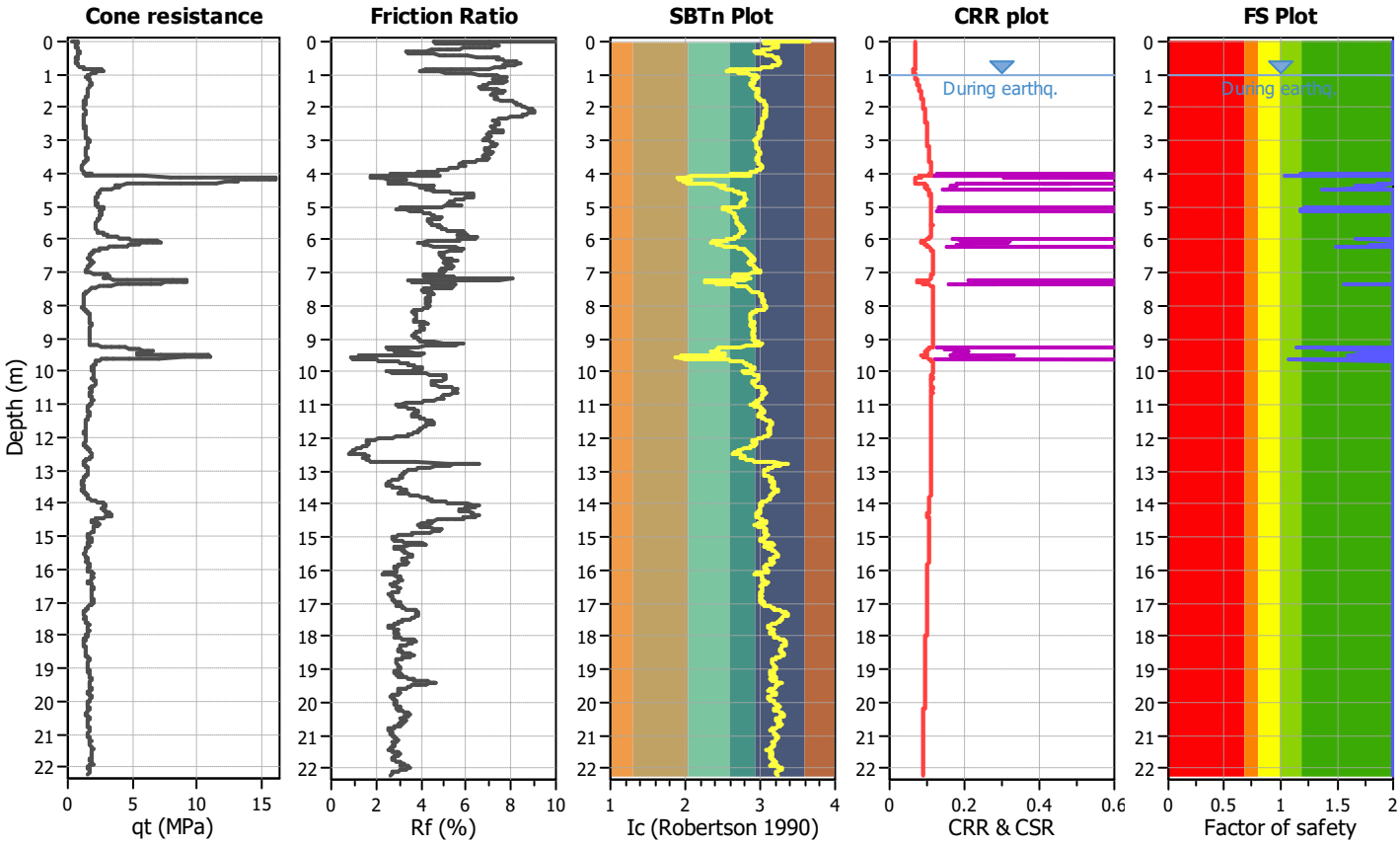
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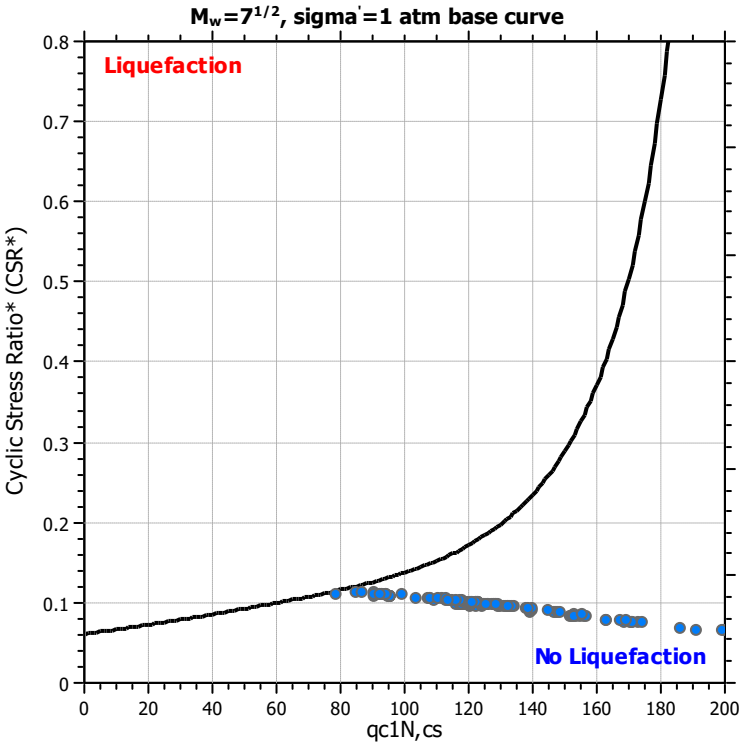
Project title : Willowridge Developments **Location : Aucks Road Russell**

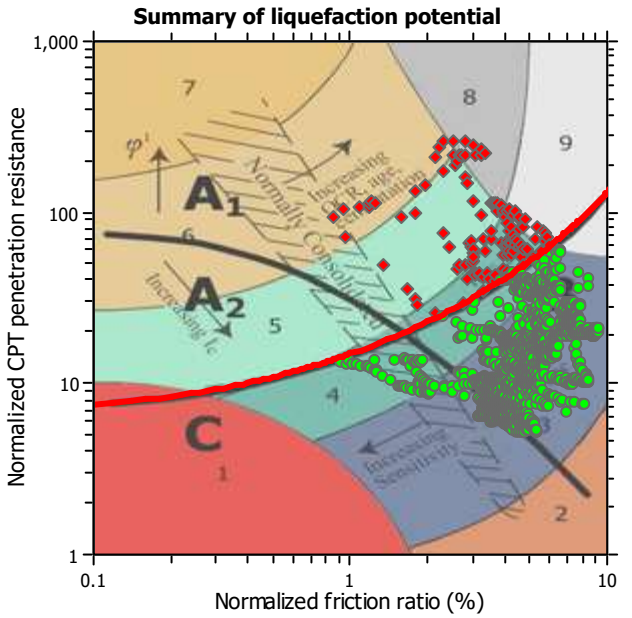
CPT file : CPT09

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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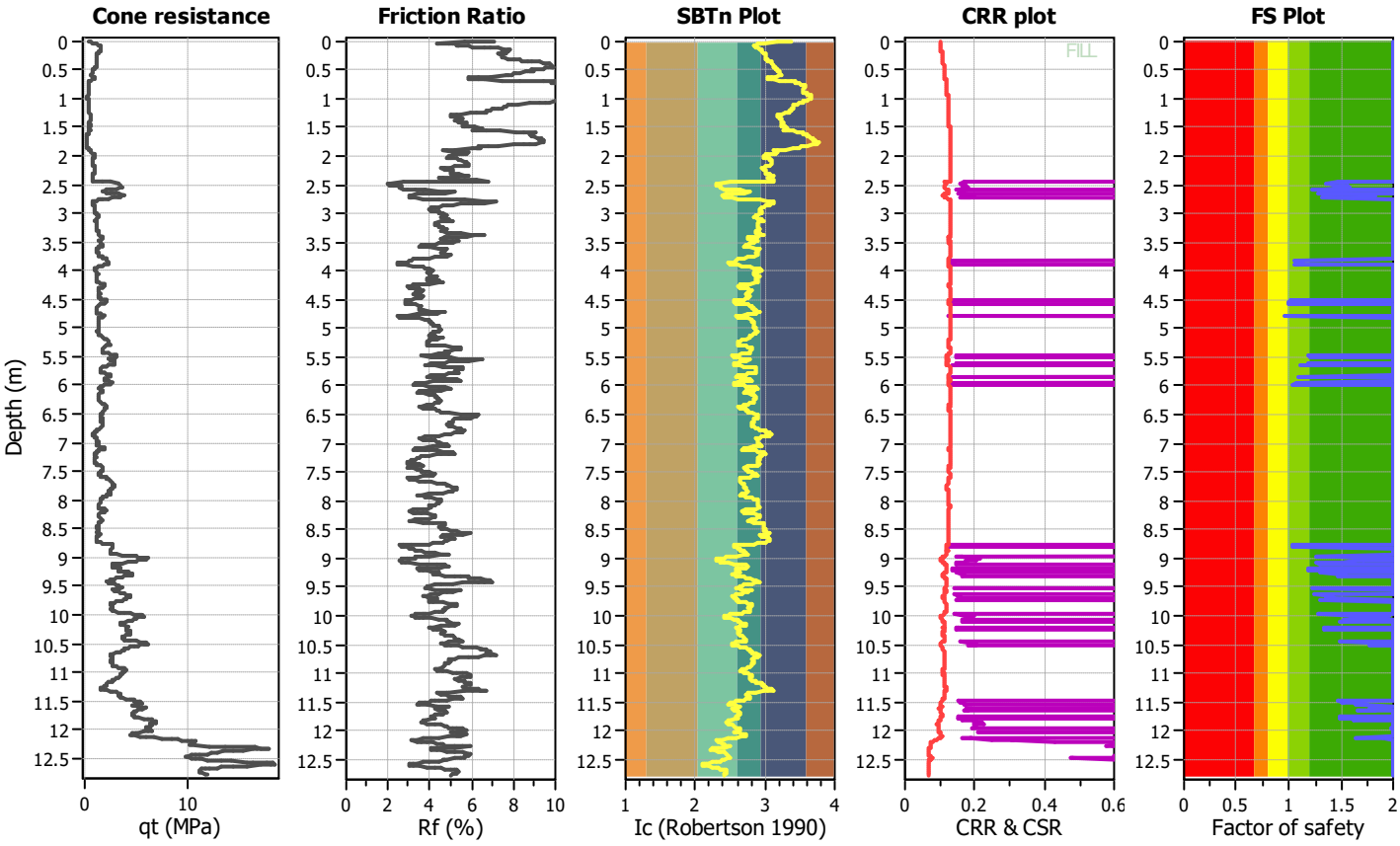
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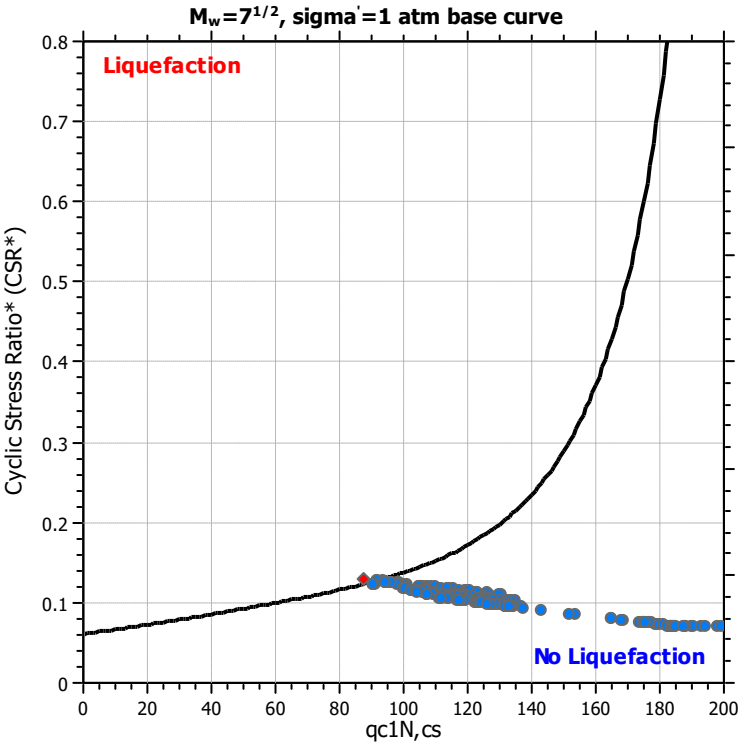
Project title : Willowridge Developments **Location : Aucks Road Russell**

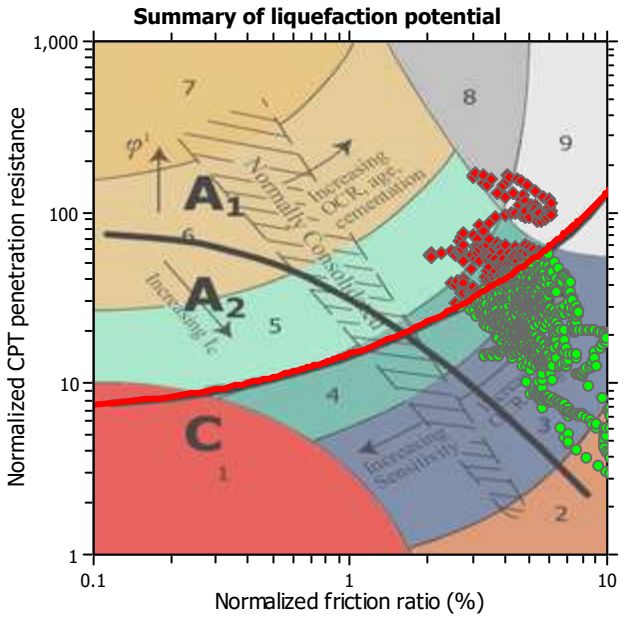
CPT file : CPT21

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.40 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	0.40 m	Fill height:	1.00 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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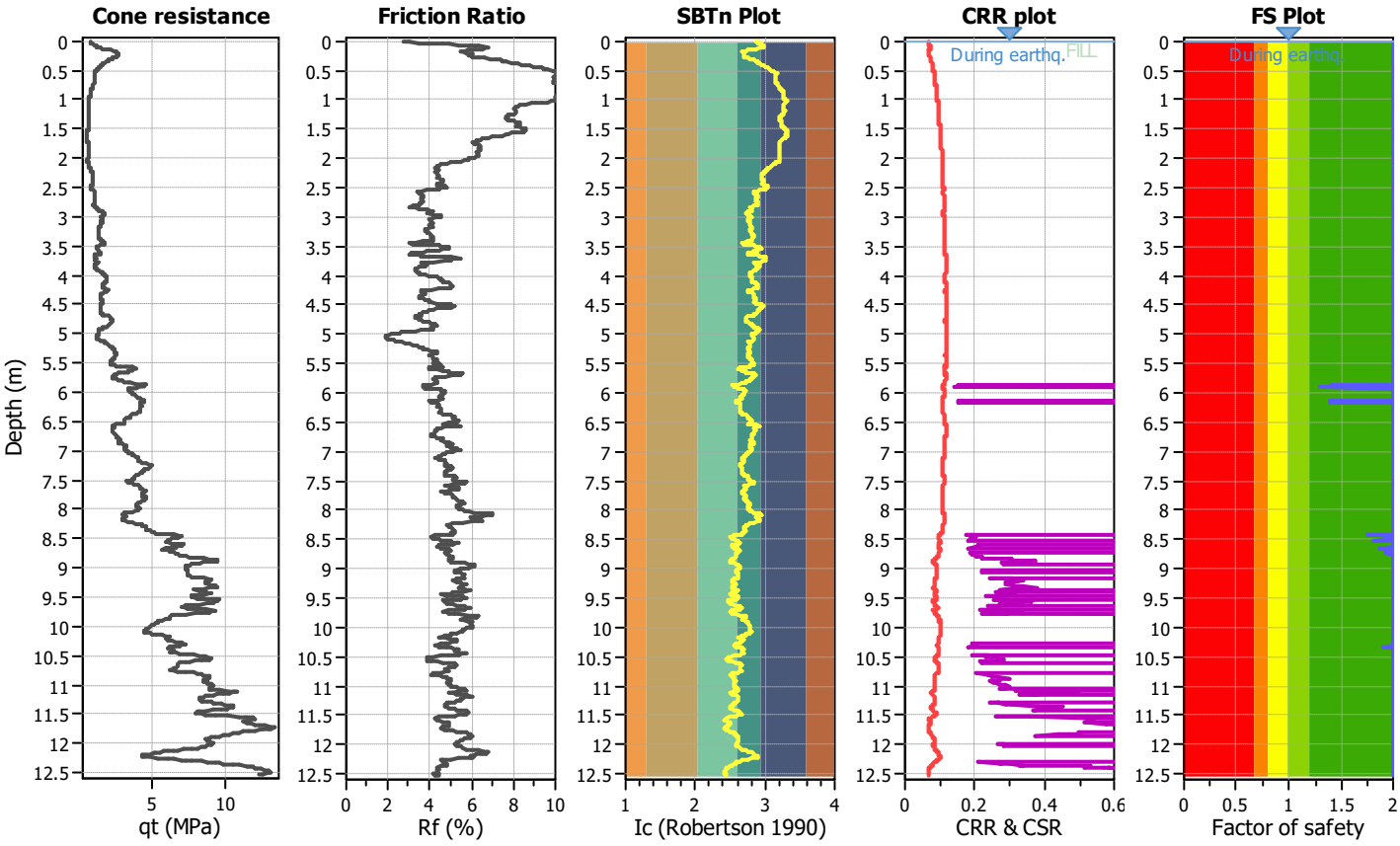
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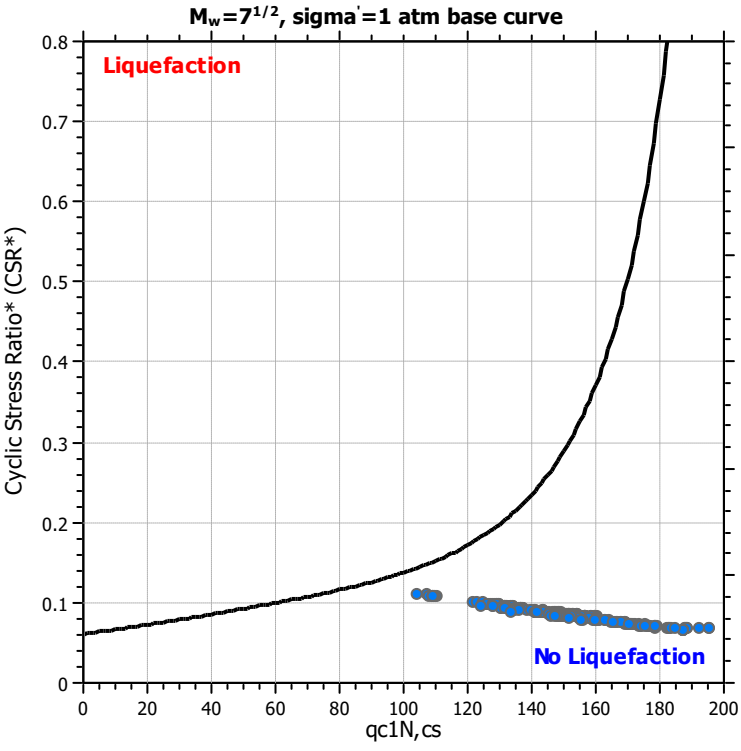
Project title : Willowridge Developments **Location : Aucks Road Russell**

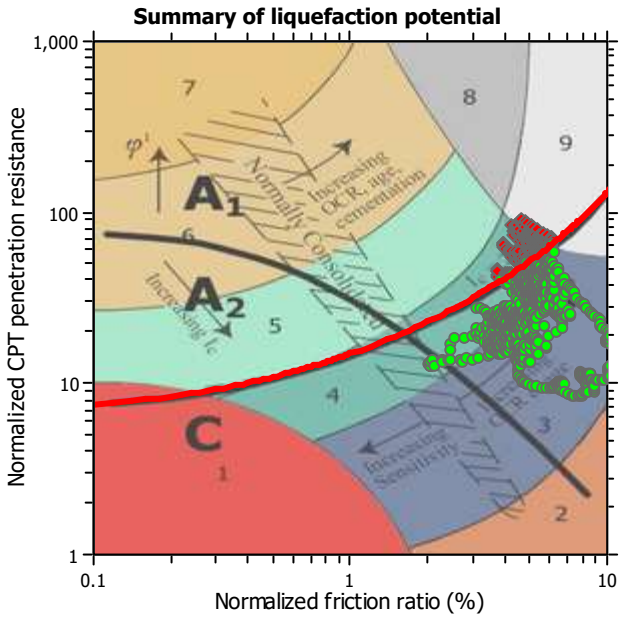
CPT file : CPT22

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	5.00 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	1.00 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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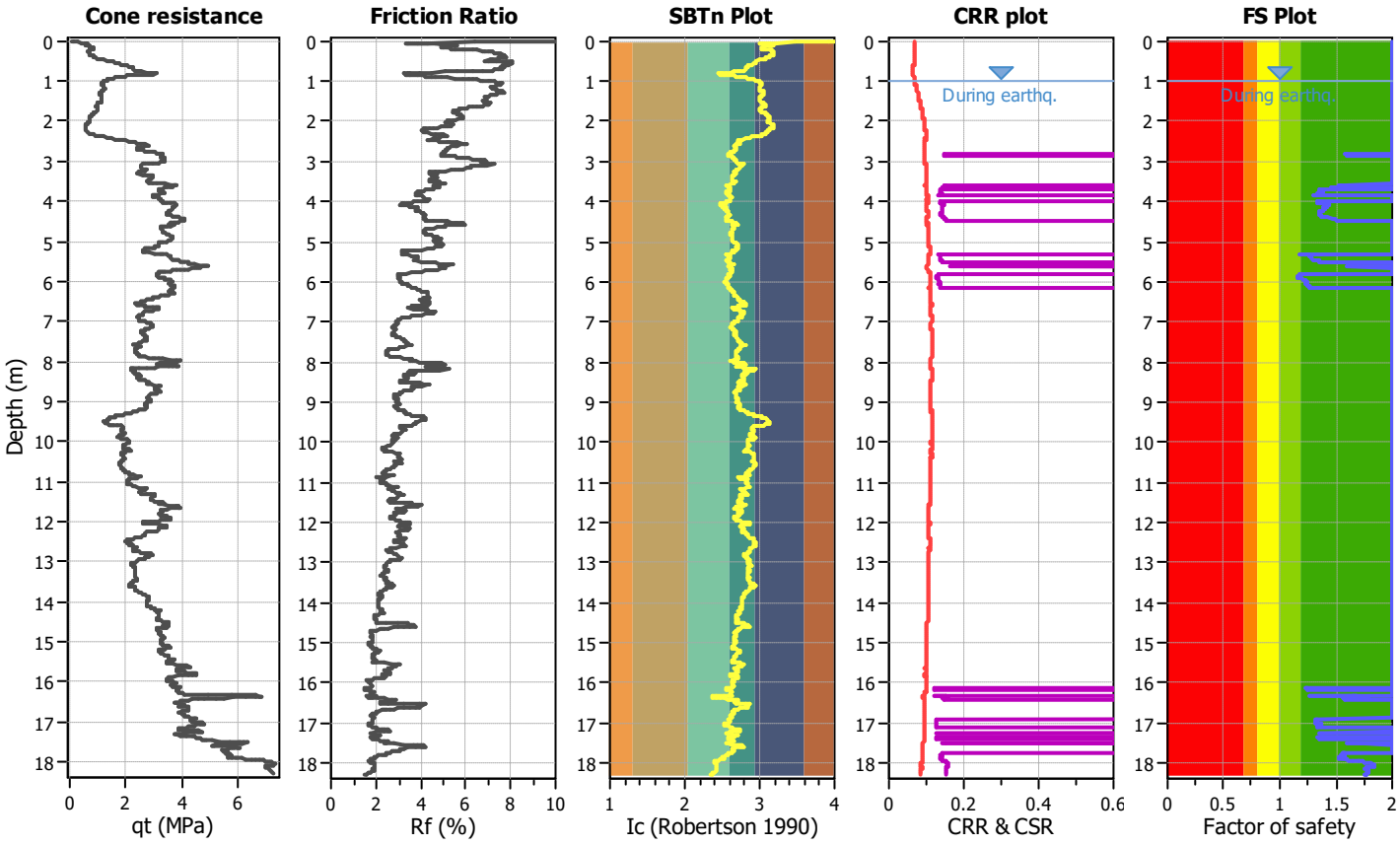
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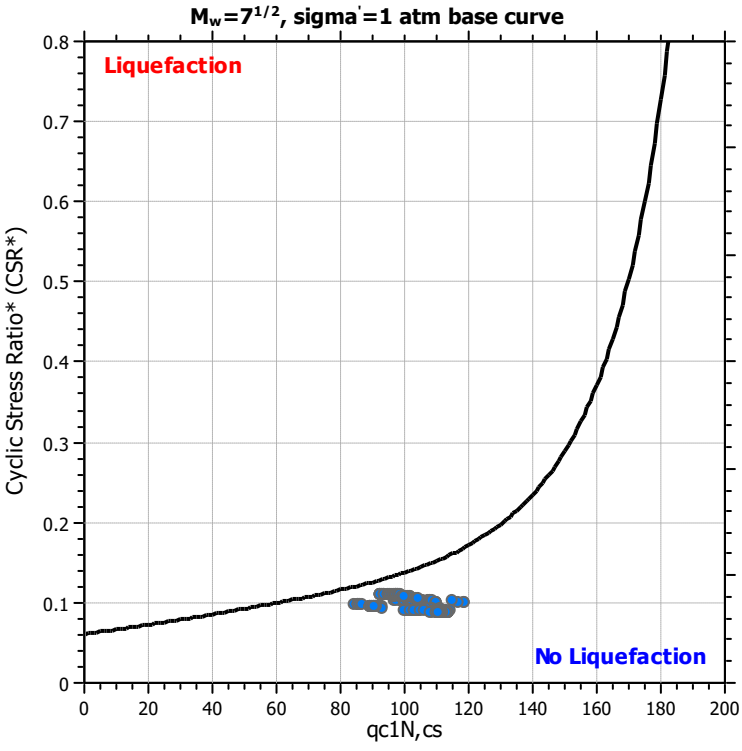
Project title : Willowridge Developments **Location : Aucks Road Russell**

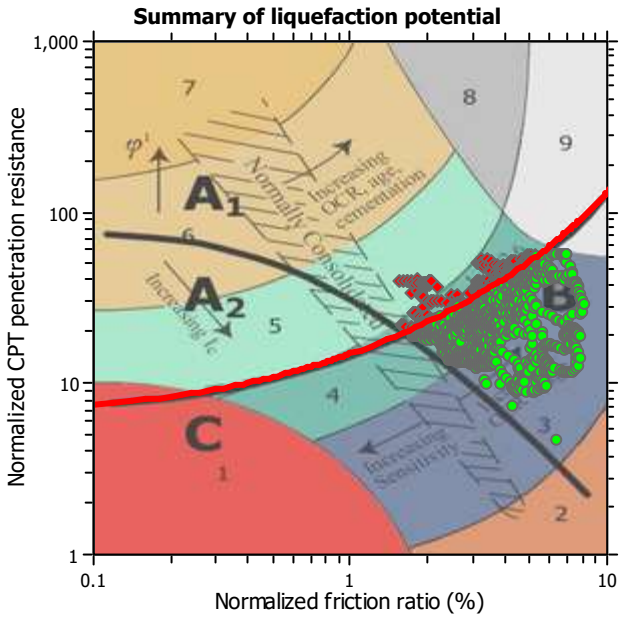
CPT file : CPT25

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	3.60 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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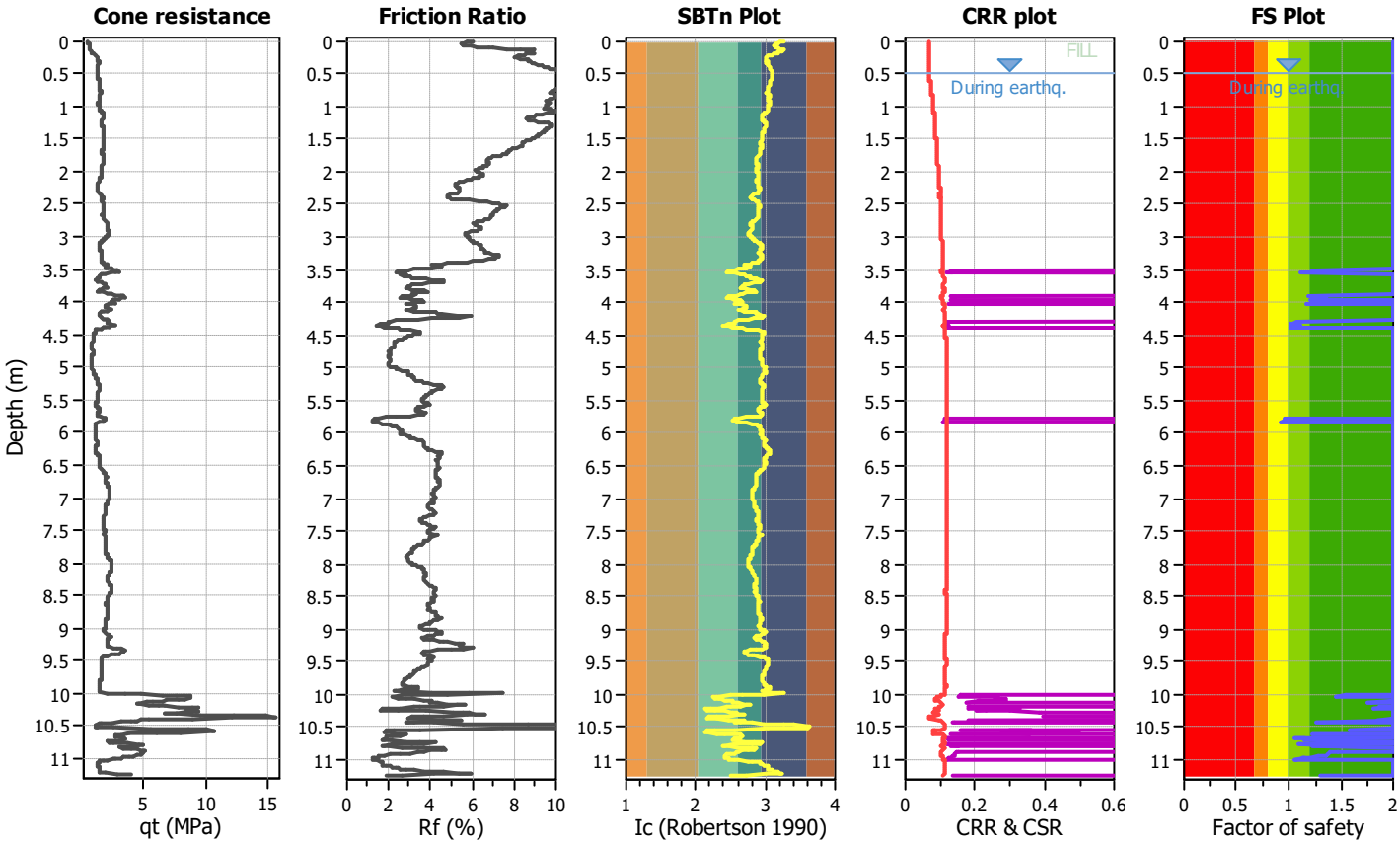
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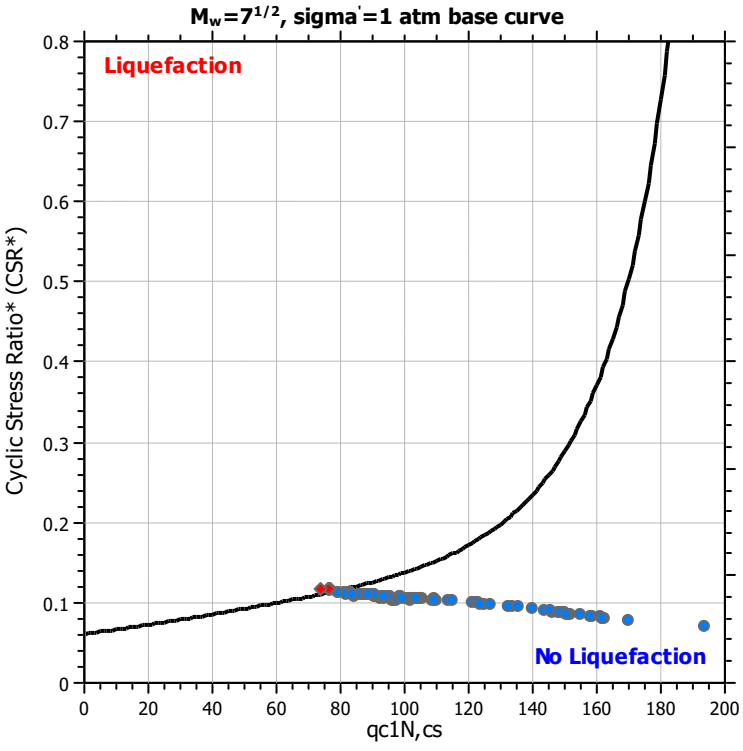
Project title : Willowridge Developments **Location : Aucks Road Russell**

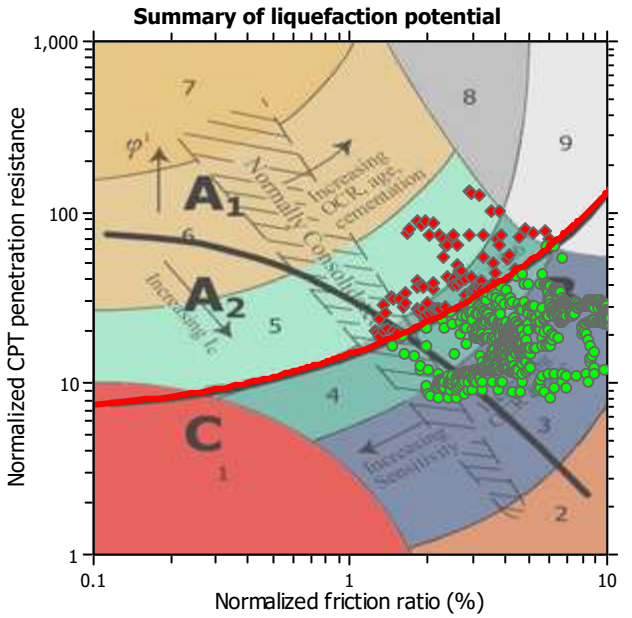
CPT file : CPT30

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	3.80 m	Use fill:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	0.50 m	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	18.00 kN/m^3	Limit depth:	N/A
Earthquake magnitude M_w:	5.80	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		







Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry