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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for

(more than one circle can be ticked):

- ☑ **Land Use**
- ☐ **Fast Track Land Use***
- ☑ **Subdivision**
- ☐ **Consent under National Environmental Standard** (e.g. Assessing and Managing Contaminants in Soil)
- ☐ **Other (please specify)** _____
- ☐ **Discharge**
- ☐ **Change of Consent Notice (s.221(3))**
- ☐ **Extension of time (s.125)**

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

3. Would you like to opt out of the Fast Track Process?

☑ **Yes** ☐ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ☐ **Yes** ☑ **No**

If yes, which groups have you consulted with?	
Who else have you consulted with?	Top Energy, Chorus

For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council tehonosupport@fndc.govt.nz

5. Applicant Details

Name/s: Max & Gary Beckham

Email: [redacted]

Phone number:

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

Postcode

6. Address for Correspondence

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

Name/s: Cable Bay Consulting Ltd

Email: [redacted]

Phone number: ome

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

Postcode 0420

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

7. Details of Property Owner/s and Occupier/s

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

Name/s: Max Beckham

Property Address/ Location: [redacted]

Postcode 0420

8. Application Site Details

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

Name/s: Max Beckham

Site Address/ Location: [redacted]

Legal Description:

Certificate of title:

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

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ◯ **Yes** ✔ **No**

Is there a dog on the property? ◯ **Yes** ✔ **No**

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

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.

A seven lot subdivision, plus road to vest, taking place in two stages in the residential zone. Please refer to the attached AEE.

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.

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)** Ref # here (if known)
- ◯ **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. 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**

13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ● **Yes** ◯ **No**

If yes, do you agree to extend the processing timeframe pursuant to Section 37 of the Resource Management Act by 5 working days? ✔ **Yes** ◯ **No**

14. 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) Max & Gary Beckham

Email: [redacted]

Phone number:

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

Postcode

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) Max Beckham

Signature:
(signature of bill payer [redacted]

MANDATORY

15. 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.

15. Important information continued...

Declaration

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

Name: (please write in full) Neil Mumby

Signature: [redacted]

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

Checklist (please tick if information is provided)

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

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

APPLICATION FOR DISCRETIONARY RESOURCE CONSENT TO THE FAR NORTH DISTRICT COUNCIL PURSUANT TO SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

A Seven Lot Residential Subdivision, plus Road to Vest, taking place in Two Stages in the Residential Zone.

26 Melody Lane, Mangonui

Assessment of Environmental Effects

September 2025

Cable Bay Consulting Ltd, 11 Bush Point Road, Cable Bay 0420

INTRODUCTION AND PROPOSAL

1.1 Max Beckham "(the Applicant") seeks resource consent under the Resource Management Act 1991, and the Far North District Council District ("FNDC") Operative District Plan ("ODP") for a staged seven lot subdivision in the Residential Zone.

1.2 In summary form, Stage One of this subdivision will see the creation of two lots, with one of these lots being a "Super lot". Stage Two of the subdivision will see the Super lot subsequently subdivided into six residential lots plus a proposed road to vest. It is envisaged that the balance of the land will be further developed for residential purposes (as provided for by the proposed road to vest and balance lot) - but that future development does not form part of this subdivision application.

DOCUMENTATION

1.3 This application is accompanied by the following documents;

i. Register of Title & Instruments (**Attachment 1**)
ii. Adjacent Land Analysis (**Attachment 2**)
iii. Scheme Plan (**Attachment 3**)
iv. FNDC Concept Development Meeting Transcript (**Attachment 4**)
v. Engineering Report (**Attachment 5**)
vi. Section 86B of the RMA 1991 Check (**Attachment 6**)
vii. Operative District Plan Development Control Check (**Attachment 7**)
viii. Relevant ODP Assessment Criteria (**Attachment 8**)
ix. Fourth Schedule Compliance Assessment (**Attachment 9**)
x. NRPS : Relevant Objectives & Policies (**Attachment 10**)
xi. ODP : Relevant Objectives & Policies (**Attachment 11**)
xii. PDP : Relevant Objectives & Policies (**Attachment 12**)
xiii. Service Provider Correspondence (**Attachment 13**)
xiv. Application Form & Checklist (**Attachment 14**).

DESCRIPTION OF SITE AND SURROUNDS

1.4 The land is as legally described in Table 1 with a total land area of approximately 2.82 hectares. The current Register of Title is appended in **Attachment 1** for ease of reference and summarised in Table 1 below;

Existing Title	Existing Area
Lot 3 Deposited Plan 199804, created in 2002, with Sewer Easement.	2.82 hectares

Table 1 : Register of Title Information

1.5 The site is vacant and currently in pasture. The site has two road frontages, facing onto Melody Lane to the north, and Karamea Road to the south. The topography of the site falls from north west to south east, with gentle to moderate slope, and is bisected by an overland flow path and piped gully area on the northern portion of the site.

1.6 An area of exotic vegetation as well as the northern edge of the ITM timber yard are located in the south western corner of the site. This area is unaffected by the proposed development.

1.7 The easement referenced on the Register of Title is located on the western portion of the site adjacent 42 and 42A Melody Lane, and is also unaffected by the proposed development. There are no other notable features present. The main site features can be seen in the aerial image in Figure 1 below.

Figure 1 : Aerial Imagery *Source FNDC GIS as at 21/03/25.*

1.8 In general terms, the site is centrally located in Mangonui, east of State Highway 10, and on elevated land with some views out over Mangonui Harbour. Adjacent land uses are mixed in nature. To the north and east of the site, land uses are residential. To the west, the principal activity is State Highway 10 and the residential land uses at 42 & 42A Melody Lane. To the south of the site is a business zoning, with a broad range of commercial uses, including offices, drycleaners, storage, and the already mentioned ITM timber yard. Adjacent land analysis for the purposes of later assessment under s95D of the Act is contained in **Attachment 2.**

1.9 The subject site is zoned Residential under the Operative District Plan ("ODP"), with no limitations listed in the Resource Maps, as illustrated in Figures 2 & 3 below.

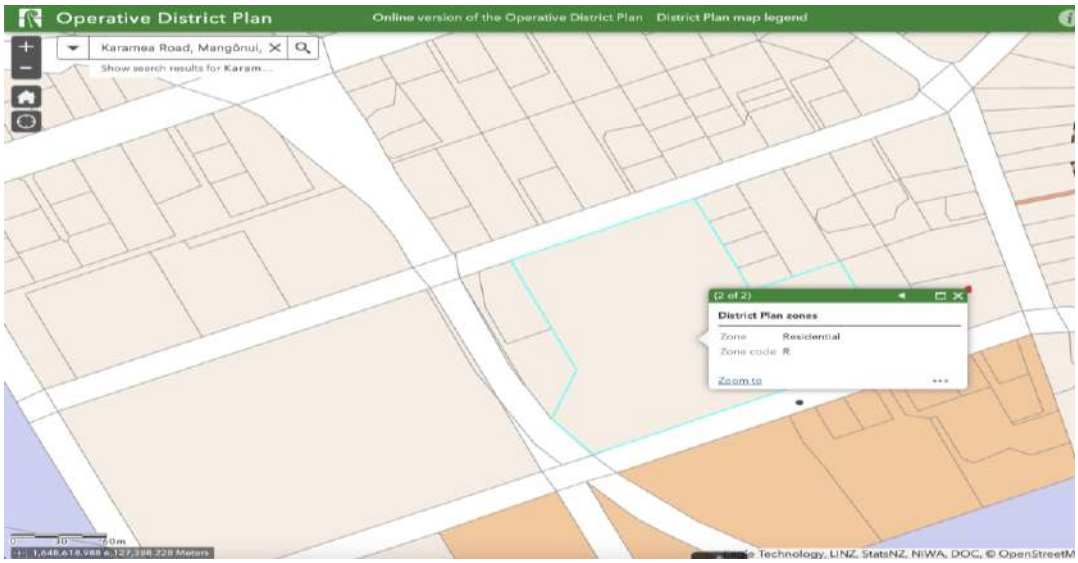


Figure 2 : FNDC ODP Zoning Map *Source FNDC GIS 21/03/25*

Figure 3 : FNDC Resource Maps *Source FNDC ODP Map 15*

1.10 The site is located within 500 metres of reserve land, but this appears to be land from an area of previously stopped road and is not administered by the Department of Conservation as shown in figure 4 below.

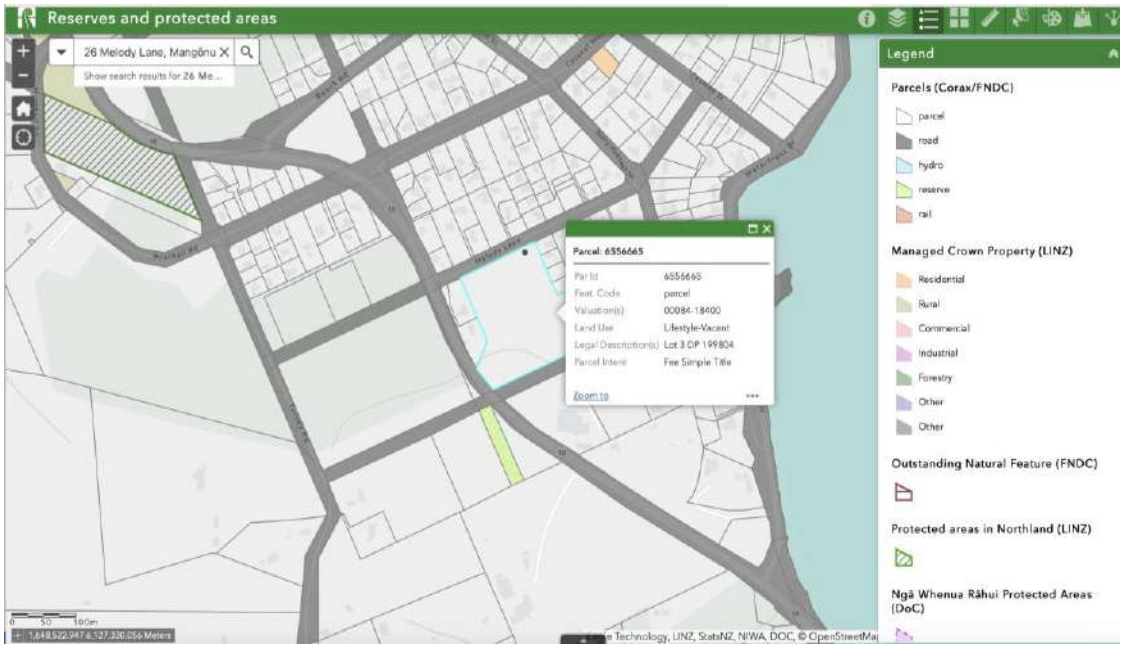


Figure 4 : Reserve Land within 500 metres *Source FNDC GIS as at 21/03/25.*

1.11 No HAIL sites are present as per the screenshot below;

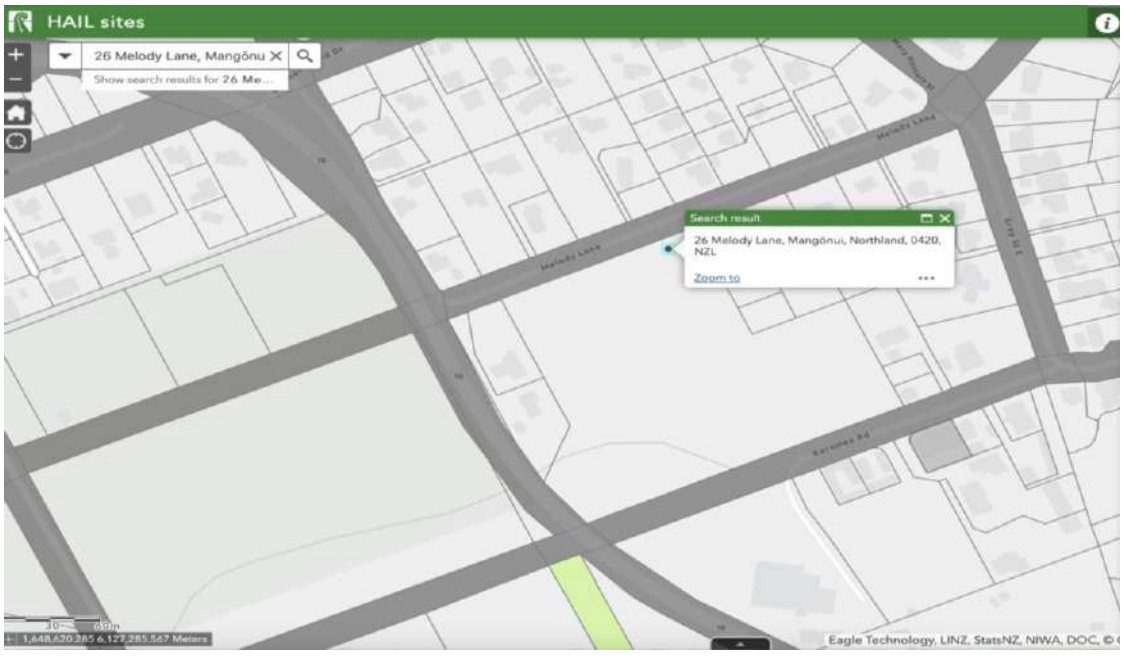


Figure 5 : HAIL Map *Source FNDC GIS 21/03/25*

1.12 No recorded NZAA Archaeological sites are shown on the site in Councils GIS. The site does not contain any District Plan Historic Sites, District Plan Archaeological Sites, or District Plan sites of Significance to Māori. There is an Historic Site some 65 metres to the east on a nearby property as shown in Figure 6 below.

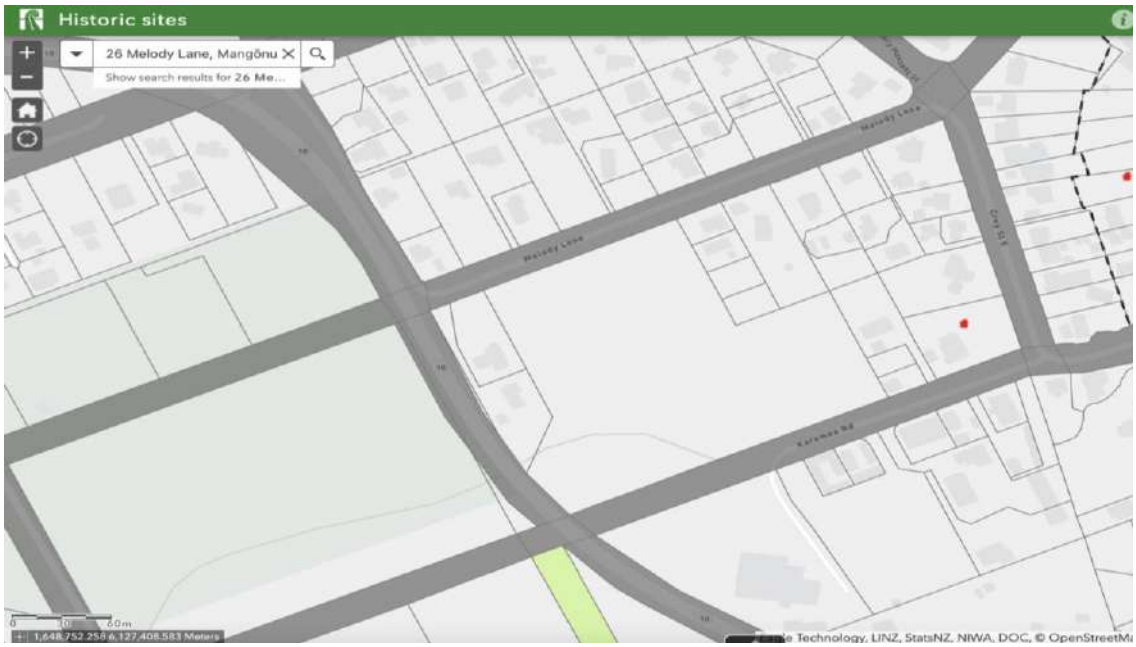


Figure 6: NZAA Archaeological Sites *Source FNDC GIS 19/02/25*

1.13 The site is not located within a Kiwi Present area as per the screenshot below.

Figure 7: Kiwi Present Area – Not Present *Source FNDC GIS 21/03/25*

1.14 The site as a whole is also zoned "General Residential" under the Proposed District Plan ("PDP"). The site is also notated as falling within the "Coastal Environment" and also as being affected by flooding on the southern boundary. This can be seen in Figure 8 below.

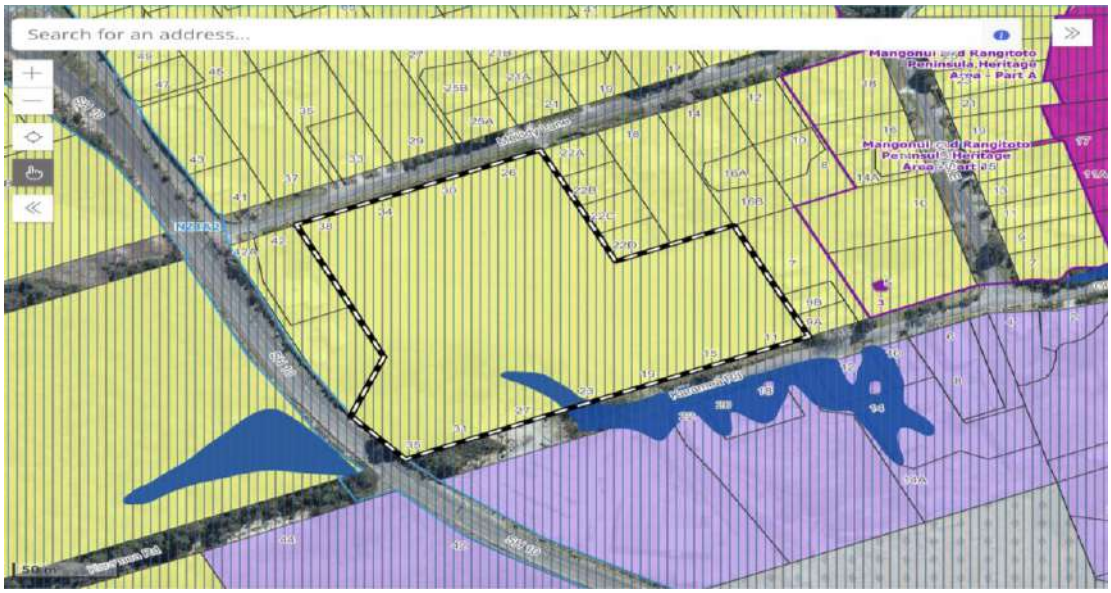


Figure 8 : FNDC PDP Zoning Maps *Source FNDC GIS 21/11/24*

1.15 No heritage matters, notable trees, Sites and Areas of Significance to Māori, Outstanding Natural Landscapes, Outstanding Natural Features, or Statutory Acknowledgment Areas are notated on the PDP maps. Heritage areas and Heritage sites are all located eastward of the subject property.

Site History

1.16 A review of the FNDC property files shows that Council has records for prior applications on the subject site. These encompass prior lapsed subdivisions of the site going back to 1984 (82709-TCPSUB), more recent subdivisions that have been granted approval by the FNDC in the 1990's (RC1990641 & RC1960840), as well as a land use consent for earthworks and piping of an overland flow path issued by the FNDC in 2004 (RC 2040678).

1.17 It is noted that the Applicant has advised that they are aware of other prior resource consents on the site for a retirement village and subdivision, but despite extensive enquiries made of Council staff, no further information on this matter has been located within the Council files.

Subdivision Concept Design

2.1 The proposed subdivision layout is shown below, with a further full detailed plan set in **Attachment 3** for ease of reference.

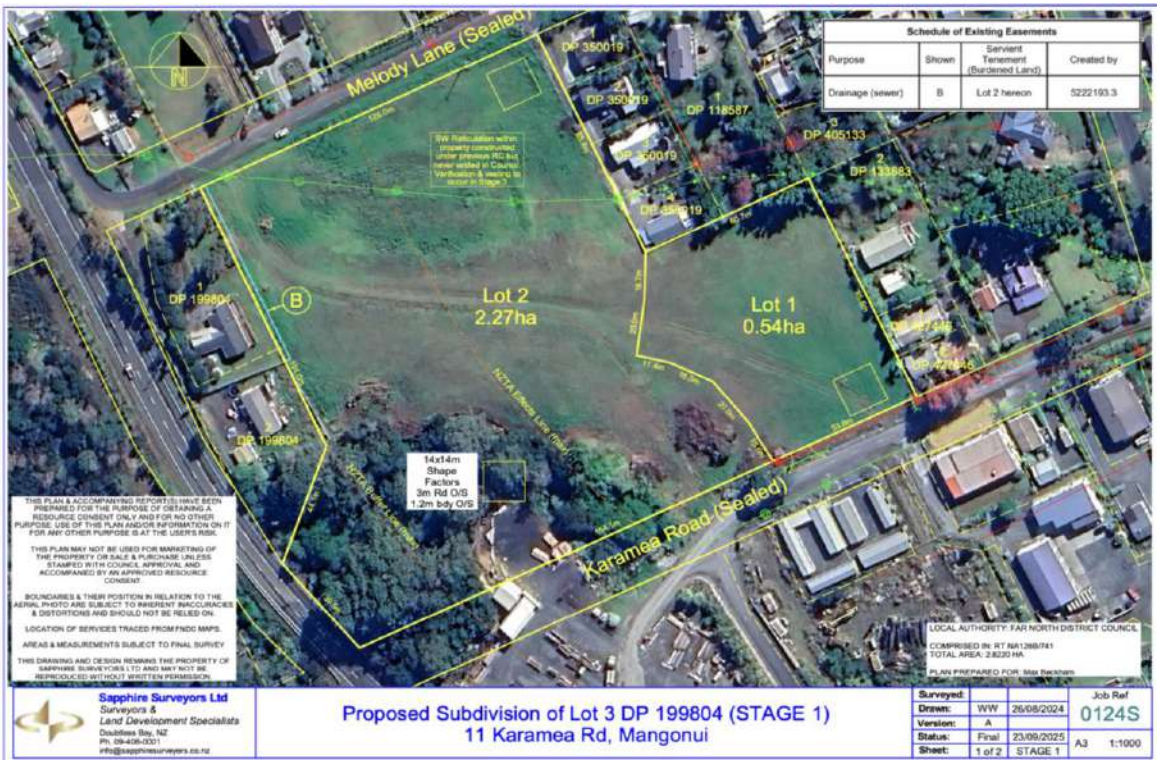


Figure 9 : Stage 1 Scheme Plan *Source Sapphire Surveyors September 2025*

Figure 10 Stage 2 Scheme Plan *Source Sapphire Surveyors September 2025*

2.2 The Applicants have taken a collaborative approach with engineering and surveying inputs informing the proposed design, as well as an initial concept development plan meeting with the FNDC in December 2024 – please refer to a meeting transcript in **Attachment 4**.

Planning Design Considerations

2.3 The subject proposal as a whole as a number of important attributes that will contribute towards desirable planning outcomes in this locale. Specifically;

- The development will be staged with an overall design concept in mind, which will allow the first two stages of development to proceed (being those subject to this application) without compromising potential lot yield on the balance of the land, and at the same time incorporating key infrastructure (like the Stub Road, wastewater and stormwater lines, etc) into these earlier stages, and so as to facilitate the future development of the balance of the site in a comprehensive matter.

- The subject site has two legal road frontages that provide for a future link road through the site. It is anticipated that this future link road will facilitate a helpful linkage in this local area for both vehicles and pedestrians, and serve to more directly link the surrounding residential area with employment opportunities in the business area.

- It is understood FNDC has various internal policies that address infrastructural matters. This includes hesitation around the vesting of roads when only six to seven lots are served (as proposed in the second stage of this subdivision), as well as hesitation around incurring ongoing maintenance obligations.

- To this end it is proposed that the Stub Road will contain two 3.5 metre general traffic lanes with no on-street parking lanes within a 20 metre wide legal corridor. From the Applicants perspective, this will reduce overall vehicle speeds by narrowing perceived road width and enhance safety. It is anticipated that from FNDC's perspective a road of this configuration, if vested, will also have minimal ongoing maintenance. The legal width of the road at 20 metres can nonetheless however incorporate footpaths, indented parking bays, landscaping in the future if ever required by Council.

- It is anticipated that the FNDC will make a final decision on the issue of vesting as part of this consent application given Rule 15.1.6C.1.1 of the ODP anticipates that roads to vest occur when nine or more lots are served. In the circumstance that the FNDC elects to accept the vesting of the Stub Road in Stage 2 of this application, the necessary resource consents have been applied for. Regardless of the decision that the FNDC makes on the vesting issue however, the Applicant will accept consent conditions requiring the provision of engineers certificates etc attesting that the formation works for the Stub Road have been undertaken to a roading standard,

so when the through road is ultimately formed in the future (and more lots are serviced), there are no issues with this Stub Road vesting in the FNDC at that time.

- In addition, a condition of consent is offered in this application for consideration by Council to allow the provision of plans at the EPA stage for the Stub Road to illustrate how footpaths, indented parking bays and any landscaping may be implemented if required by Council, and should they accept the Road to Vest in the future. The landscaping for these works could also effectively form an entry feature for the southern portion of the development.

- A reverse sensitivity consent notice is also offered with this proposal to ensure that complaints do not arise from future occupiers about the business activities on the industrial zoned land to the south.

Engineering Design Considerations

2.4 The proposed subdivision has been assessed by the Applicants engineers. This assessment has confirmed that adequate wastewater, stormwater, water supply and access can be provided. A copy of the engineering report is contained in **Attachment 5** for reference.

Landform & Stability

2.5 The proposed subdivision has been designed to avoid the steeper slopes present within the site. These areas are located in the south western corner of the site and the boundary of these areas are shown in figure 11 below. It is a requirement of the engineering report that future development within the wider property maintain a minimum 20 metre setback from the steeper slopes, unless subject to specific engineering design.

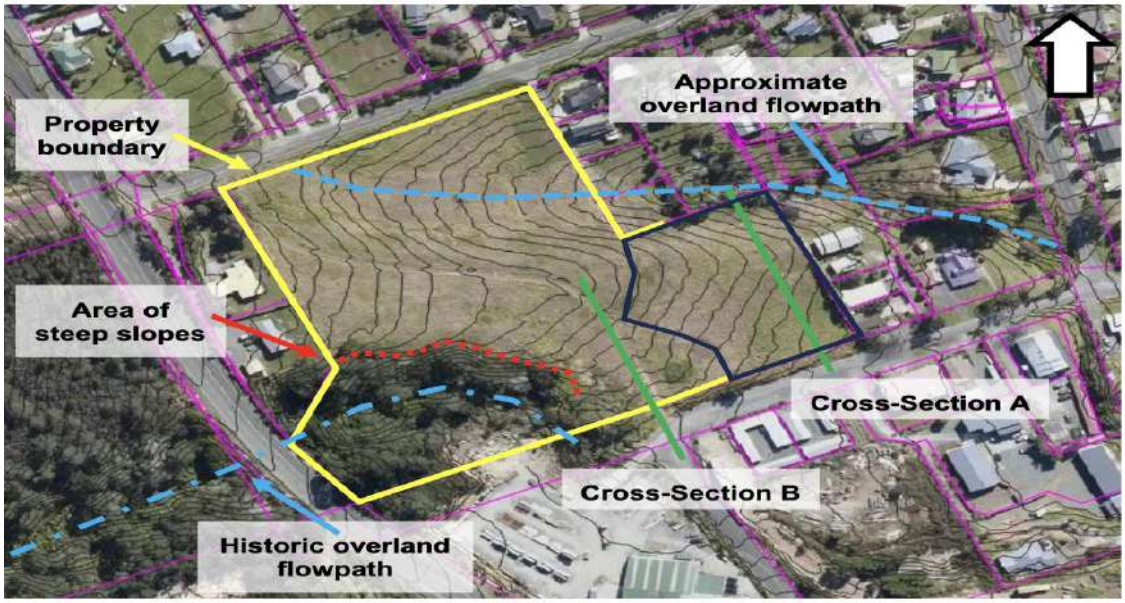


Figure 11 : Key Landform and Features *Source page 15 of Hawthorn Geddes Report*

Earthworks

2.6 The engineering report indicates that a total volume of 900m^3 of earthworks for the road to vest and the provision of drainage services will be required to facilitate the subdivision. The proposed earthworks will be designed and managed to comply with the requirements of GD05 for the control of sediment-laden runoff generated during site works.

Stormwater

2.7 The site contains clay soils and as a consequence the proposed stormwater management approach for the individual lots does not rely on soakage. The supplied engineering report contains an indicative stormwater management design for individual lots that meets the requirements of the FNDC Engineering Standards (2023) for stormwater attenuation and disposal of post-development peak flows. The engineering report also recommends that specific design and installation of lot attenuation be carried out at the building consent stage. Stormwater from the Stub Road will be dealt with by the road side drains along Karamea Road. It is anticipated that the additional runoff from the proposed road will remain within the available capacity of the roadside drain under storm scenarios (providing existing drains are cleared of obstructions) and as a consequence additional attenuation measures for the Stub Road are not required for this road design.

Waste Water

2.8 The supplied engineering report confirms that the proposed development can be connected to the FNDC vested sewer gravity main across Karamea Road via a proposed sewer manhole and in accordance with the FNDC Engineering Standards (2023). As the subdivision will be staged, the engineering report contains the details of the sewer infrastructure to be constructed as part of Stages 1 and 2 of the subdivision, including the proposed connections to the lots.

Water Supply and Firefighting

2.9 The potable water and firefighting requirements for Stage 1 of the subdivision will be met through the installation of rainwater harvesting tanks. A consent notice will be registered on the titles of Lots 1 and 2, requiring the installation of these tanks at the building consent stage. For Stage 2, potable water supply will be provided via connection to the Doubtless Bay water supply network, which has confirmed sufficient capacity to service the proposed lots. Firefighting storage can be provided by tanks in the road reserve and which are proposed to vest in Doubtless Bay Water Supply as the water supply authority in the local area.

Traffic

2.10 The proposed subdivision will create only two lots initially in Stage 1, then six residential lots in Stage 2. The engineering report has however conservatively assessed the potential for further subdivision of the balance area in the future with an estimated total of around 29 lots for the overall development in the long term.

2.11 The engineering report assumes traffic generation of eight vehicles per day (vpd) per lot, which will result in a traffic generation rate of some 232vpd. The engineering report estimates that this will equate to a 31% increase in existing traffic volumes (using estimated AADT of 750vpd), resulting in a total AADT of 982 vpd, and confirms that these volumes are within the capacity of an access road even once the overall subdivision is fully developed.

2.12 In terms of the future link road, the proposal is to provide two 3.5 metre wide traffic lanes, with a total carriageway width of seven metres and a legal width of 20 metres. Karamea Road currently lacks a footpath, but the proposed link road has a legal width sufficient to provide a footpath if ever required in the future.

Recommended Conditions

3.0 It is anticipated that the FNDC decision will include both general conditions and also specifically identify which conditions are to be complied with for the s.223 and s.224 process in each stage of the proposed subdivision. The Applicant anticipates receiving separate Title for the two lots as part of Stage 1. It is also important to note that whilst three water services have been incorporated into the subdivision design, the location of these services may be amended as a consequence of feedback from the FNDC during the processing of this consent / or as a consequence of the detailed design process. Accordingly, flexibility is sought on the matter of easement conditions, where specific reference is made within the conditions to allow changes to the easement boundaries with the approval of Council.

Stage 1

3.1 As Stage 1 will only result in the creation of two lots (one of 2.27 hectares and one of 0.54 hectares) minimal conditions are anticipated for this stage. The Stage 1 plan of subdivision indicates the location of crossing points as well as indicative building platforms.

3.2 Servicing of Lot 1 will see then the road crossing apron constructed onto Karamea Road to provide access to Lot 1 in this first stage. The placement of this road apron will coincide with the southern alignment of the Stub Road for Stage 2. Lot 1 will also obtain a sewer connection in the south eastern corner as shown on the Stage 1 plan of subdivision.

3.3 Servicing of Lot 2 will also require the wastewater line adjacent Karamea Road to be extended west to the boundary of Lot 2 on the southern boundary and a road apron will be constructed on the northern boundary adjacent Melody Lane. The placement of this road apron will coincide with the northern alignment of the link road in the future and will be confirmed at the Building Consent stage.

3.4 The potable water and firefighting requirements for Stage 1 of the subdivision will be met through the installation of rainwater harvesting tanks. A consent notice will be

registered on the titles of Lots 1 and 2 requiring the installation of these tanks at the building consent stage.

Stage 2

3.5 This stage will see the servicing of Lots 1-6 as well as construction works for the Stub Road and Right of Way. Wastewater lines will be located primarily along the eastern boundary and will ultimately connect to Lot 6. Stormwater lines will follow the same alignment along this eastern boundary as well, and connect with the Right of Way, which will also include granular storage for stormwater attenuation. An additional stormwater line will also be located within the Stub Road, and will also provide a SW connection for Lot 6 in the interim, and be available for connection when the balance lot is developed in the future. Lots 1 and 2 will have shared crossings to the stub road, and a total of three crossings will service Lots 4-6. The exact location of these crossings will be confirmed at the time of Building Consent.

3.6 For Stage 2, potable water supply will be piped along the Stub Road and provided via connection to the Doubtless Bay Water Supply network whom has confirmed sufficient capacity to service the proposed lots. Firefighting storage will be provided by tanks in the Stub Road and which are proposed to vest in Doubtless Bay Water Supply as the water supply authority in the local area.

3.7 As already stated, it is understood that the FNDC has internal policy around the circumstances of when roads are to vest, and as Stage 2 only includes six residential lots, the vesting of this road may not align with that policy - even though it is proposed to ultimately form the southern portion of a through road servicing some 29 lots. A condition of consent is offered in this application for consideration by Council to allow the provision of plans at the EPA stage for the Stub Road to illustrate how footpaths, indented parking bays and any landscaping may be implemented if required by Council, and should they ultimately accept the Road to Vest. The landscaping for these works could also effectively form an entry feature for the southern portion of the development.

3.8 In the circumstance elects to not accept the road to vest. Then the Stub Road can be formed and maintained initially by the Applicant and transferred across the FNDC when the balance of the site is developed. Appropriate records of engineering inspections etc will need to be retained, and conditions of consent to this effect can be imposed on the subdivision to ensure that there are no issues arising with future vesting when the stub road is completed.

3.9 It is also anticipated that this stage will also see the imposition of consent notices on reverse sensitivity matters, and the cancelling of any redundant consent notice imposed for Stage 1 on water supply and firefighting matters. Additional conditions pertaining to the land development works would be applied at this stage and this may include all earthworks works to be in accordance with GD05 / approved earthworks permit, limits on the days and hours of construction works, construction noise levels, traffic management, etc.

DISTRICT PLANNING FRAMEWORK

4.0 At the present time, the principal district planning instruments relevant to this subdivision are the ODP, PDP and Variation 1 to the PDP. There are no other plan changes relevant to this proposal.

Proposed District Plan

4.1 The FNDC publicly notified its PDP on 27th July 2022. Whilst hearings on the PDP have commenced, no decisions have yet been issued by the Hearings Commissioners. It is understood that decisions will be issued by Council in May 2026.

4.2 Under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply.

4.3 In terms of s.86B(3) of the Act, a review of the PDP shows that there are no provisions that relate to water, air or soil, significant indigenous vegetation, significant indigenous habitats of fauna, historic heritage or aquaculture activities that require resource consent in this intervening period.

4.4 Tabulated analysis of the PDP provisions are contained in **Attachment 6**. As there are no relevant rules within the PDP with immediate legal effect that affect the proposed activity status, the activity status of this application is prescribed by the current FNDC ODP. The objectives and policies of the PDP are however relevant for the s.104 assessment undertaken later in this report. This matter is discussed further in paragraph 7.12 to 8.6 of this report.

Operative District Plan

4.5 As already stated, the ODP is the dominant planning document in considering this proposal. Tabulated analysis of the ODP provisions is contained in **Attachment 7**. The analysis confirms that consent is required under the following rules of the ODP;

- Controlled Activity subdivision consent under Rule 13.7.2.1 (v) as the proposal meets the minimum lot size of 600m^2 for sewered sites.
- Discretionary Activity consent under Rule 15.1.6C.2 as the proposed road to vest will not meet the current engineering standards required by Rule 15.1.6C.1.9.

4.6 The proposal will require some 900m^3 of earthworks in Stage 2 for the Stub Road, service provision etc, but consent for this is sought under Rule 13.6.8 of the ODP so no additional land use consent is required. An earthworks permit under the FNDC Control of Earthworks Bylaw (2019) is also requested as part of this application.

4.7 Overall this subdivision application is considered a discretionary activity.

STATUTORY REQUIREMENTS

Section 104 & 106 – Consideration of Subdivision Consent Applications

5.0 Section 104 of the Resource Management Act 1991 sets out those matters that must be considered when assessing an application for resource consent. Subject to Part II of the Act, Section 104B requires a consent authority to have regard to the following matters:

> *"s. 104B Determination of applications for discretionary or non-complying activities*
>
> *After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—*
>
> *(a) may grant or refuse the application; and*
>
> *(b) if it grants the application, may impose conditions under section 108."*

5.1 As a discretionary activity subdivision, and in addition to s.106 matters, Council has the ability to approve of decline the application. The ODP provides a range of assessment criteria for discretionary subdivision in Rule 13.10 of the ODP that may be considered by the FNDC in making that determination. These are set out in **Attachment 8**.

5.2 With respect to these subdivision assessment criteria, the proposal results in lots that are of sufficient size to accommodate dwellings clear of natural hazards, and adequate water supply, stormwater and wastewater disposal is able to be provided as set out in the attached engineering report. Moreover service providers have been consulted, whom have confirmed that adequate power and telecommunications can be provided. Appropriate provision for easements can be made. There are no listed heritage matters or sensitive ecological areas present on the site that will be affected by the proposal. The form of development is specifically envisaged by the plan provisions in the zone. The proposal is in accordance with these assessment criteria.

5.3 The supporting engineering report elaborates on the matters relevant to these assessment criteria as well as s.106 of the Act, and recommends conditions for adoption by Council to mitigate effects.

5.4 The Fourth Schedule of the Act outlines the matters that must be included in an assessment of effects. A compliance schedule demonstrating how this AEE meets the requirements of the Fourth Schedule contained in **Attachment 9.**

5.5 The subsequent sections of this AEE address the requirements of s.5, s.104 and the Fourth Schedule of the Act as appropriate to the scale of the activity, and as necessary to provide an informed assessment of this proposal.

ASSESSMENT OF EFFECTS

6.0 The Council must decide whether the activity will have, or is likely to have, adverse effects on the environment that are more than minor.

Permitted Baseline

6.1 The permitted baseline may be taken into account and the Council has the discretion to disregard those effects. Whilst there is no permitted subdivision in the zone, it is noted that under the ODP, residential units on a sewered site can be constructed at the rate of one unit per 600m^2 of site area and up to 200m^3 of earthworks with cut / fill faces of 1.5 metres in height in a 12 month period can be undertaken on the site as a permitted activity (see Rule 7.6.5.1.2 and Rule 12.3.6.1.3). Setting aside an allowance for the undevelopable land in the south west of the site, plus the area required for the link road, etc, a reasonably foreseeable density of development for this site would be in the order of 29 residential units.

Receiving Environment

6.2 The receiving environment beyond the subject site includes permitted activities under the relevant plans, lawfully established activities (via existing use rights or resource consent), and any unimplemented resource consents that are likely to be implemented. The effects of any unimplemented consents on the subject site that are likely to be implemented (and which are not being replaced by the current proposal) also form part of this reasonably foreseeable receiving environment. This is the environment within which the adverse effects of this application must be assessed. There are no known consents in the area or that have been recently applied for on adjacent sites that may impact this proposal. However if the FNDC is aware of any relevant applications, this AEE can be updated as required to reflect any change in circumstances.

Section 106 Matters

6.3 The engineering report in **Attachment 5** contains an assessment on engineering matters, including stability. Moreover, the proposed subdivision appropriately provides for legal access to each of the proposed lots. Accordingly, there are no adverse effects of the nature identified in s.106 of the Act that preclude this subdivision from proceeding.

Subdivision and Consequential Land Use Effects

6.4 The effects arising from the proposal have been assessed using the objectives and policies and the relevant assessment criteria within the ODP as a guide. This has informed the suggested consent conditions.

PROVISIONS OF ANY RELEVANT PLAN, POLICY STATEMENT, OR OTHER REGULATION

National Environmental Standards for Assessing and Managing Contaminated in Soils to Protect Human Health (2011) (NES :CS)

7.0 With respect to the NES:CS specifically, the site has not been used for cropping purposes and the Applicants have advised that they are not aware of any HAIL activities present. In addition, the HAIL GIS Maps on Councils website have been reviewed and this also does not indicate any HAIL sites on the property.

National Policy Statement for Freshwater Management(2022) ("NPS:FW)

7.1 The NPS : FW sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. It is considered that the proposal is not inconsistent with the objectives of the NPS FW in that the density of development is specifically envisaged by the zone provisions.

NPS Indigenous Biodiversity

7.2 The site contains no significant natural area or other indigenous vegetation of note.

New Zealand Coastal Policy Statement

7.3 The site is visible from the coast, but as already stated, the proposed building platform will appear as part of the existing Mangonui settlement when viewed from the coast. As a consequence no adverse effects on the coasts natural character, intrinsic values or water quality that will arise.

The Northland Regional Policy Statement

7.4 The Northland Regional Policy Statement ("NRPS") was made operative in May 2016. The site is located outside of any outstanding natural landscape, outstanding natural features, natural character areas, but is within the coastal environment. This can be seen in Figure 16 below.

Figure 16: Regional Policy Statement Map *Source NRC GIS 21/03/25*

7.5 The NRPS contains objectives and policies related to infrastructure and the coastal environment. The objectives and policies considered relevant to this proposed subdivision are contained in **Attachment 10**.

7.6 As outlined earlier in this report, the building platform has been sited clear of the small modelled flood hazard area in the southern portion of the site. The hazard risk has been addressed in the supplied engineering report and found to be acceptable. This proposal does not detract from the qualities and characteristics that make up the natural character of the coastal environment. The proposal is considered consistent with the relevant NRPS objectives and policies.

FNDC ODP Objectives and Policies

7.7 As already stated, the proposal constitutes a discretionary activity overall under the ODP. The pertinent objectives and policies are contained in **Attachment 11.**

Commentary – Subdivision Objectives and Policies

7.8 The proposed subdivision is of a nature specifically envisaged by the zone provisions (13.3.1). The lot sizes, dimensions and location of the allotments have been designed to accord with the ODP standards. The proposed subdivision will result in dwellings being located in the less environmentally sensitive portions of the site, clear of flood hazard (13.4.3). There are no scheduled heritage resources present on the site (13.3.4) , and stormwater management will be in place for the proposed development (13.3.5) The proposal contains a set of suggested resource consent conditions to address environmental effects arising from the proposal (13.3.2). Particular consideration has been given to ensuring adverse effects are appropriately avoided, remedied or mitigated. The proposal is in accordance with these objectives and policies.

Commentary – Residential Zone Objectives and Policies

7.9 The proposed subdivision is appropriate for a residential zoned site in an urban area. The proposal will appropriately avoid, remedy or mitigate effects on amenity values (7.3.3) The proposal contains a set of suggested resource consent conditions to address environmental effects arising from the proposal, including water supply (7.3.6). The proposal will adequately maintain the amenity values of the local area (7.4.1) and the supporting infrastructure will be appropriately designed (7.4.8). The proposal is consistent with the density of development in the immediate surrounding area (7.6.3.1). The proposal is in accordance with these objectives.

Commentary – Transport Objectives and Policies

7.10 As already stated this proposal has been put forward with flexibility in mind for the Stub Road / Future Link Road. It is anticipated that the FNDC will advise its position on the

matter of road vesting, and the extent to which ancillary matters are appropriate (indented parking, footpaths, landscaping etc), in the design of any roading corridor and as a consequence the proposal will be in accordance with Objective 15.1.3.5 and Policies 15.1.4.1 and 15.1.4.7 of the ODP.

Summary

7.11 In summary, for the reasons detailed above, the proposal can be considered consistent with the relevant objectives and policies contained within the ODP.

PDP Objectives and Policies

7.12 The pertinent objectives and policies are contained in **Attachment 12.** As the objectives and policies of the General Residential zone are consistent with the ODP, this proposal sits comfortably with these as the proposed development will achieve the objectives of the zone as it will cater for development in an area identified to accommodate growth (GRZ-01 and GRZ-04) and with appropriate infrastructure being in place (GRZ-P8 (f)).

7.13 The proposal is also consistent with the objectives and policies of the coastal environment overlay as the proposal will result in a subdivision that is consistent with the intent of the zone and overlay with appropriate infrastructure being able to be provided (CE-01 & CE03 and CE-P5).

7.14 As with the General Residential zone objectives and policies, the associated subdivision objectives and policies sit comfortably alongside this proposal as the proposal will achieve the objectives of the zone SUB-01 (a), contribute to local character and sense of place (SUB01 (b)) and SUB-P3 (a) to (d) and does not increase risk from natural hazards (SUB 01 (e) and SUB-P11 (d). Moreover appropriate infrastructure is able to be provided (SUB-03(a) and SUB-P6 (a) and (b).

7.15 With respect to natural hazards, proposed building platforms are sited clear of the small modelled flood hazard area in the southern portion of the site. The hazard risk has been assessed in the supporting engineering report and the recommended conditions will ensure that the proposal is consistent with policies regarding flood hazard (NH-01 & NH-02, NH-P2, NH-P5, NH-P6, NH-P8).

7.16 In terms of the transport objectives and policies, and as already stated this proposal has been put forward with flexibility in mind for the Stub Road / Future Link Road. It is anticipated that the FNDC will advise its position on the matter of road vesting, and the extent to which ancillary matters are appropriate (indented parking, footpaths, landscaping etc), in the design of any roading corridor and as a consequence the proposal will be in accordance with Objectives TRAN 03, TRAN 05 and TRAN 06 and Policies TRAN P2, TRAN – P3, and TRAN P8.

Variation 1 to the PDP

7.17 The Far North District Council has notified Proposed Plan Variation 1 (Minor Corrections and Other Matters) to the Proposed District Plan. Proposed Plan Variation 1 makes minor amendments to correct minor errors, amend provisions that are having unintended consequences, remove ambiguity and improve clarity and workability of provisions. There are multiple zones and provisions of the PDP that are affected by this variation. Examples of this include changes to the wording of both rural, urban and special purpose zones. The variation does not seek changes to the subdivision provisions in the General Residential Zone. Submissions for this variation closed in December 2024 so the provision have no effect on activity classification and little if any weight in the decision making process for this application at the current time.

ANY OTHER RELEVANT AND REASONABLY NECESSARY MATTER

Weighting of District Planning Documents

8.0 In general terms the weight afforded to the objectives and policies of a PDP are determined by the extent to which the PDP provisions have been tested in the statutory process. Typically, a PDP notified by a consent authority will garner greater weighting in the process a few years after notification as decisions are issued and appeals are resolved in accordance with the time frames prescribed in the RMA 1991.

8.1 However this is not the case with FNDC PDP. Whilst the statutory process for the PDP substantively commenced on 27 July 2022 with the public notification of the PDP, according to the FNDC website, the PDP received "…*a high number of submissions with 580 original submissions (with over 8,500 original submission points), and 549 further submissions (with 26,174 further submission points) covering a broad range of issues…*"

8.2 As a consequence of that significant number of submissions, as well as staffing issues, Council wrote to the Minister for Environment on 15 July 2024 seeking an extension of time until 27 May 2026 for the issue of Council decisions on the PDP. This extension of time was granted by the Minister for the Environment on 17 September 2024.

8.3 All of this means that despite being in the public realm for a number of years, the PDP has not yet had any decisions issued on submissions by either the Hearings Panel or Council.

8.4 As a consequence, the PDP carries less weighting in the decision making process at the present time, than would otherwise be expected. This is setting aside the fact that the Council will still need to make a decision as to whether or not they will accept the recommendations of the Hearings Panel. The Council decisions will then be subject to potential challenge via appeal.

8.5 We also note that in parallel with this Council has recently notified a plan variation to correct errors, including corrections to zoning and other amendments to the PDP. Submissions for this variation closed in December 2024.

8.6 In our opinion all of this means that the Operative District Plan is the dominant document in the weighing up of the objectives and policies of the district planning documents.

PART 2 OF THE RMA

9.0 The purpose of the RMA under s5 is to promote the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way or at a rate that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

9.1 This application is considered to be consistent with this purpose. In particular, the proposal seeks to enable the wellbeing (social and economic) of the applicants by allowing efficient utilisation of their site and will ensure that adverse effects of the proposal on the environment will be avoided, remedied and/or mitigated.

9.2 Section 6 of the Act sets out a number of matters of national importance which need to be recognised and provided for and includes among other things and in no order of priority, the protection of outstanding natural features and landscapes, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna, and the protection of historic heritage. The site does not contain any identified "outstanding landscape" or features. It does not contain records of any significant indigenous vegetation and/or habitats of indigenous fauna, or any archaeologically significant or heritage items.

9.3 Section 7 identifies a number of "other matters" to be given particular regard by a council in the consideration of any assessment for resource consent, and includes the efficient use of natural and physical resources, and the maintenance and enhancement of amenity values. The proposal is considered to be consistent with the maintenance and enhancement of amenity values.

- The development has been designed to take into account the attributes of the subject site.
- The proposal will enable an efficient use of physical resources as it will utilise land zoned for residential purposes.

9.4 Section 8 requires all persons exercising functions and powers under the RMA to 'take into account' the Principles of the Treaty of Waitangi. No section 8 issues are considered to result.

9.5 Overall, the application is consistent with Part 2 of the RMA for the following reasons:

- The proposal provides for the wellbeing of people within the FNDC District by providing for the efficient utilisation of an existing site;
- The proposal avoids, remedies or mitigates adverse effects on the environment.

WRITTEN APPROVALS / CONSULTATION

10.0 No written approvals have been sought with this stage of the application as the density of development is specifically provided for in the zone, and no other parties are adversely affected.

10.1 Moreover, the proposed subdivision layout has been informed by the engineering assessment that have been undertaken on the site. This layout will ensure that the proposed subdivision will not result in adverse effects on adjacent / other parties.

10.2 The Applicant has however consulted with service providers (Top Energy, Chorus) and confirmation of servicing is contained in **Attachment 13.** Moreover, a concept development plan meeting was held with the FNDC in December 2025 and a transcript of the meeting is contained in Attachment 4. No fundamental concerns were expressed by Council staff on the proposal.

10.3 It is anticipated that consultation will occur with the NZTA in the future and pre-resource consent lodgement for the development of the balance lot in Stage 3. This is because an area of the balance lot falls partially within the NZTA effects line (being that area approximately 90 metres from the edge of the SH10 formation as shown on page 6 of the Hawthorne Geddes report). The NZTA effects line is primarily about addressing reverse sensitivity matters, and these issues can be addressed through consultation, the resource consent process, and standard conditions at that time.

SECTION 95 NOTIFICATION ASSESSMENT

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

Step 1: mandatory public notification in certain circumstances

No mandatory notification is required as:

- the applicant has not requested that the application is publicly notified (s95A(3)(a))
- there are no outstanding or refused requests for further information (s95C and s95A(3)(b)), and
- the application does not involve any exchange of recreation reserve land under s15AA of the Reserves Act 1977 (s95A(3)(c)).

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

The application is not precluded from public notification as:

- the activities are not subject to a rule or national environmental standard (NES) which precludes public notification (s95A(5)(a)); and
- the application does not involve one or more of the activities specified in s95A(5)(b).

Step 3: if not precluded by step 2, public notification required in certain circumstances

11.1 The application is not required to be publicly notified as the activities are not subject to any rule or a NES that requires public notification (s95A(8)(a)). For the reasons outlined earlier in this report public notification is not required as the activities will have or are likely to have adverse effects on the environment that are less than minor (s95A(8)(b)).

Step 4: public notification in special circumstances

11.2 If an application has not been 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 (s95A(9)).

Special circumstances are those that are:

- Exceptional, abnormal or unusual, but something less than extraordinary or unique;
- outside of the common run of applications of this nature; or
- circumstances which make notification desirable, notwithstanding the conclusion that the activities will not have adverse effects on the environment that are more than minor.

11.3 "Special circumstances" have been defined by the Court of Appeal as those that are unusual or exceptional, but they may be less than extraordinary or unique (Peninsula Watchdog Group (Inc) v Minister of Energy [1996] 2 NZLR 529). With regards to what may constitute an unusual or exceptional circumstance, Salmon J commented in Bayley v Manukau CC [1998] NZRMA 396 that if the district plan specifically envisages what is proposed, it cannot be described as being out of the ordinary and giving rise to special circumstances.

11.4 In Murray v Whakatane DC [1997] NZRMA 433, Elias J stated that circumstances which are "special" will be those which make notification desirable, notwithstanding the general provisions excluding the need for notification. In determining what may amount to "special circumstances" it is necessary to consider the matters relevant to the merits of the application as a whole, not merely those considerations stipulated in the tests for notification and service.

11.5 In this instance there are no special circumstances as the nature of the consent application is consistent with the rules, and objectives and policies for subdivision in the Rural Production zone.

Public notification conclusion
Having undertaken the s95A public notification tests, the following conclusions are reached:

- Under step 1, public notification is not mandatory.
- Under step 2, there is no rule or NES that specifically precludes public notification of the activities, and the application is for activities other than those specified in s95A(5)(b).
- Under step 3, public notification is not required as the application is for activities that is are not subject to a rule that specifically requires it, and it is considered that the activities will not have adverse effects on the environment that are more than minor.
- Under step 4, there are no special circumstances that warrant the application being publicly notified.

11.6 It is therefore recommended that this application be processed without public notification.

Limited notification assessment (sections 95B, 95E-95G)

11.7 If the application is not publicly notified under s95A, the council must follow the steps set out in s95B to determine whether to limited notify the application. These steps are addressed in the statutory order below.

Step 1: certain affected protected customary rights groups must be notified.

11.8 There are no protected customary rights groups or customary marine title groups affected by the proposed activities (s95B(2)).

11.9 In addition, the council must determine whether the proposed activities are on or adjacent to, or may affect, land that is subject of a statutory acknowledgement under schedule 11, and whether the person to whom the statutory acknowledgement is made is an affected person (s95B(3)). In this instance, the proposal is not on and will not affect land that is subject to a statutory acknowledgement, and will not result in adversely affected persons in this regard.

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

The application is not precluded from limited notification as:

- the application is not for one or more activities that are exclusively subject to a rule or NES which preclude limited notification (s95B(6)(a)); and
- the application is not exclusively for a controlled activity, other than a subdivision, that requires consent under a district plan (s95B(6)(b)).

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

As this application is not for a boundary activity, there are no affected persons related to that type of activity (s95B(7)).

The following assessment addresses whether there are any affected persons that the application is required to be limited notified to (s95B(8)).

In determining whether a person is an affected person:

- a person is affected if adverse effects on that person are minor or more than minor (but not less than minor);
- adverse effects permitted by a rule in a plan or NES (the permitted baseline) may be disregarded; and
- the adverse effects on those persons who have provided their written approval must be disregarded.

Adversely affected persons assessment (sections 95B(8) and 95E)

12.0 As already stated, and as Illustrated earlier in this AEE, there are less than minor effects on persons arising from this application.

Step 4: further notification in special circumstances

12.1 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 warrants it being notified to any other persons not already determined as eligible for limited notification (excluding persons assessed under section 95E as not being affected persons).

Special circumstances are those that are:

- Exceptional, abnormal or unusual, but something less than extraordinary or unique;
- outside of the common run of applications of this nature; or
- circumstances which make limited notification to any other person desirable, notwithstanding the conclusion that no other person has been considered eligible.

12.2 In this instance there is nothing exceptional or unusual about the application, and that the proposal has nothing out of the ordinary run of things to suggest that notification to any other persons should occur.

Limited notification conclusion

Having undertaken the s95B limited notification tests, the following conclusions are reached:

- Under step 1, limited notification is not mandatory.
- Under step 2, there is no rule or NES that specifically precludes limited notification of the activities, and the application is for activities other than that specified in s95B(6)(b).
- Under step 3, limited notification is not required as it is considered that the activities will not result in any adversely affected persons.
- Under step 4, there are no special circumstances that warrant the application being limited notified to any other persons.

12.3 It is therefore recommended that this application be processed without limited notification.

CONCLUSION

13.0 Under the FNDC ODP the application site is zoned Residential. The proposal seeks discretionary activity subdivision consent which is consistent with the intensity of development anticipated within the zone, the relevant assessment criteria, as well as the objectives and policies of the zone.

13.1 The application has been assessed in terms of the matters detailed in the relevant sections of the RMA (1991), and the FNDC ODP. The environmental effects arising from the proposal are less than minor.

13.2 In my opinion, and based on the supporting reports, the proposal accords with Section 104 & 106 of the RMA and can be granted resource consent on a non-notified basis.

Neil Mumby
Planning Consultant
B. Soc.Sci (REP) (Hons)
MNZPI(Full),
Member
ISOCARP
September 2025

Attachment 1

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA126B/741**
Land Registration District	**North Auckland**
Date Issued	15 May 2002

Prior References
NA125B/230

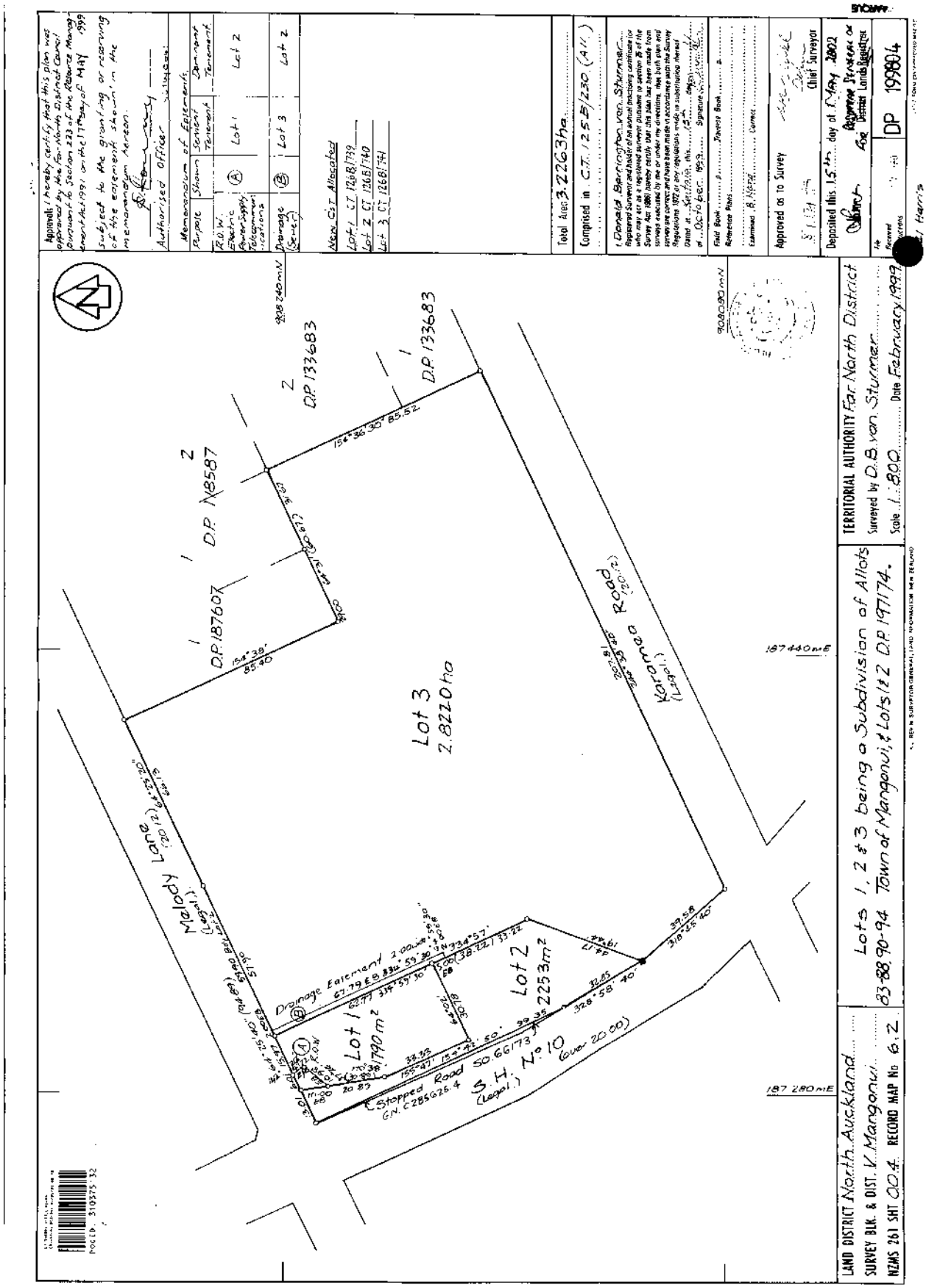
Estate	Fee Simple
Area	2.8220 hectares more or less
Legal Description	Lot 3 Deposited Plan 199804
Registered Owners	

Max John Beckham

Interests

Subject to a drainage (sewer) easement over part marked B specified in Easement Certificate 5222193.3 - 15.5.2002 at 3:49 pm

The easement specified in Easement Certificate 5222193.3 is subject to Section 243 (a) Resource Management Act 1991


Lot 1
1790 m²
Lot 2
2253 m²
Lot 3
2.8220 ha
Drainage Easement 2.00 wide
Stopped Road SO 66173
S.H. No 10
Melody Lane (Legal)
Karamea Road (Legal)
D.P. 187607
D.P. 133683
D.P. N8587
187440mE
187280mE
Lots 1, 2 & 3 being a Subdivision of Allots 83-88, 90-94 Town of Manganui, & Lots 1 & 2 D.P. 197174.
TERRITORIAL AUTHORITY Far North District
Surveyed by D.B. van Sturmer
Scale 1:800 Date February 1999
LAND DISTRICT North Auckland
SURVEY BLK. & DIST. V. Manganui
NZMS 261 SHT 004 RECORD MAP No 6, 2
Total Area 3.2263ha
Comprised in C.T. 1258/230 (A11)
New Cts Allocated
Lot 1 CT 126B/739
Lot 2 CT 126B/740
Lot 3 CT 126B/741
Approved as to Survey
Chief Surveyor
Deposited this 15th day of May 2002
DP 199804

EASEMENT CERTIFICATE

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

I/We MAUREEN DAWN HARRIS of Mangonui widow

being the registered proprietor(s) 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 99 under No. 199804 are the easements which it is intended shall be created by the operation of section 90A of the Land Transfer Act 1952.

SCHEDULE 199804

DEPOSITED PLAN NO.

Nature of Easement (e.g., Right of Way, etc.)	Servient Tenement		Dominant Tenement Lot No.(s) or other Legal Description	Title Reference
	Lot No.(s) or other Legal Description	Colour, or Other Means of Identification, of Part Subject to Easement		
Right of Way Electric Power Supply & Tele-communications	Lot 1 on Deposited Plan 199804 CT 126B/739	A	Lot 2 On DP 199804	126B/740
Drainage (Sewer)	Lot 3 on Deposited Plan 199804 CT 126B/741	B	Lot 2 on DP 199804	126B/740

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:

Right of Way - as provided by the Seventh Schedule to the Land Transfer Act 1952.

Electric power supply and telecommunications easement - as provided by Clauses 2 and 5 of the Seventh Schedule to the Land Transfer Act 1952 as if electric power and telecommunications were water and cables were pipes mutatis mutandis.

Drainage (sewer) as provided by Paragraph 4 of the Seventh Schedule to the Land Transfer Act 1952.

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

NIL

Dated this 15th day of December 19 99

Signed by the above-named

MAUREEN DAWN HARRIS

in the presence of

Witness .....

Occupation ..... D. R. FOUNTAIN SOLICITOR .....

Address ..... KAITAIA .....

M.D. Harris

Correct for the purposes of the Land Transfer Act 1952

(D. R. Fountain)

(Solicitor for) the registered proprietor:

Approved by Registrar-General
of Land under No. 1998/6031

EASEMENT CERTIFICATE

Land Transfer Act 1952

Law Firm Acting

Auckland District Law Society
REF: 4050

This page is for Land Registry Office use only.
(except for "Law Firm Acting")

Attachment 2

Adjacent Land Assessment

26 Melody Lane, Cable Bay

1.1 Adjacent land uses are residential and business in nature. A table identifying the legal descriptions of adjacent land (where available) and associated land uses are contained in Table 1 below;

Street Address	Legal Description	Property Description
41 Melody Lane	Lot 2 DP 96048	Single residential house on corner site opposite subject site.
37 Melody Lane	Allotment 109 TN OF Mangonui	Single residential house opposite subject site.
35 Melody Lane	Allotment 275 TN OF Mangonui	Single residential house opposite subject site.
33 Melody Lane	Allotment 276 TN OF Mangonui	Single residential house opposite subject site.
29 Melody Lane	Lot 8 DP 95486	Single residential house opposite subject site.
25A Melody Lane	Lot 1 DP 505953	Single residential house opposite subject site.
25B Melody Lane	Lot 2 DP 505953	Single residential house opposite subject site.
27 Melody Lane	Lot 2 DP 348882	Single residential house opposite subject site.
21 Melody Lane	Lot 1 DP 430585	Single residential house opposite subject site.
22A Melody Lane	Lot 1 DP 350019	Single residential house adjacent subject site.
22B Melody Lane	Lot 2 DP 350019	Single residential house adjacent subject site.
22C Melody Lane	Lot 3 DP 350019	Single residential house adjacent subject site.
18 Melody Lane	Lot 1 DP 118587	Single residential house adjacent subject site.
16B Melody Lane	Lot 3 DP 405133	Vacant residential section adjacent subject site.
7 Karamea Road	Lot 2 DP 133683	Single residential house adjacent subject site.
9B Karamea Road	Lot 1 DP 427446	Single residential house adjacent subject site.
9A Karamea Road	Lot 2 DP 427446	Single residential house adjacent subject site.
12 Karamea Road	Lot 4 DP 136251	Industrial site opposite subject site.
14 Karamea Road	Lot 1 DP 315176	Commercial site with driveway opposite subject site.
22 Karamea Road	Lot 1 DP 340489	Vacant industrial land opposite subject site.
18 Karamea Road	Lot 5 DP 136251	Industrial site opposite subject site.

20 Karamea Road	Lot 6 DP 136251	Industrial site opposite subject site.
22 Karamea Road	Lot 2 DP 340489	Commercial / Retail site opposite subject site.
State Highway 10	SO Plan(s)	State Highway
42A Melody Lane	Lot 2 DP 199804	Single residential house adjacent subject site.
42 Melody Lane	Lot 1 DP 199804	Single residential house adjacent subject site.

1.2 An image showing the location of the adjacent land is below in Figure 2 below;

Figure 2 : Adjacent Land Assessment

Key

★ = Adjacent Land

Attachment 3

Schedule of Existing Easements			
Purpose	Shown	Servient Tenement (Burdened Land)	Created by
Drainage (sewer)	B	Lot 2 hereon	5222193.3

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LOCATION OF SERVICES TRACED FROM FNDC MAPS.

AREAS & MEASUREMENTS SUBJECT TO FINAL SURVEY

LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL

COMPRISED IN: RT NA126B/741
TOTAL AREA: 2.8220 HA

PLAN PREPARED FOR: Max Beckham

Sapphire Surveyors Ltd
Surveyors &
Land Development Specialists
Doubtless Bay, NZ
Ph. 09-406-0001
info@sapphiresurveyors.co.nz

Proposed Subdivision of Lot 3 DP 199804 (STAGE 1)
11 Karamea Rd, Mangonui

Surveyed:			Job Ref 0124S
Drawn:	WW	26/08/2024	
Version:	A		
Status:	Final	23/09/2025	A3 1:1000
Sheet:	1 of 2	STAGE 1	

Schedule of Proposed Easements

To be subject to Sec 243 RMA 1991

Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefitted Land)
Right of way; Right to convey water, power & telecommunications	A	Lot 4 hereon	Lot 5 hereon
Right to drain sewage			Lots 5 & 6 hereon
Right to drain stormwater	E	Lot 4 hereon	Lot 5 hereon

Schedule of Proposed Easements in Gross

Purpose	Shown	Servient Tenement (Burdened Land)	Grantee
Right to drain stormwater & sewage	B	Lots 1-4 hereon	FNDC
Right to drain sewage	C	Lot 4 hereon	
Right to drain stormwater	D	Lot 2 DP ****** (Stg1)	

Note: All services easements subject to change depending on final engineering design and construction.

14x14m Shape Factors
3m Rd O/S
1.2m bdy O/S

LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL

COMPRISED IN: RT NA126B/741
TOTAL AREA: 2.8220 HA

PLAN PREPARED FOR: Max Beckham

Sapphire Surveyors Ltd
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Proposed Subdivision of Lot 1 DP ****** (Stage 1)
STAGE 2 of Proposed Subdivision of Lot 3 DP 199804
11 Karamea Rd, Mangonui

Surveyed:			Job Ref 0124S
Drawn:	WW	24/03/2025	
Version:	A		
Status:	Final	23/09/2025	A3 1:500
Sheet:	2 of 2	STAGE 2	

Attachment 4

Transcript

December 5, 2024, 1:03AM

Yuna Zhou started transcription

Amit Nandi 0:03
I'm joining the meeting just to observe.
It's from the planning team that you wanna be driving.

NM **Neil mumby** 0:12
Right. OK, alright.
And that leads James, I think.

JB **James Blackburn** 0:21
Just yes, James Blackburn. I'm civil engineering director at Hawthorn.
Gedders in Fenrir?
Although we'll cover geotech storm water rolling traffic, all of the normal things
Nadia's pretty familiar with our work, so.
So yeah, and just gearing up to get into it from a design perspective, but keen to hear.

NM **Neil mumby** 0:36
OK.

JB **James Blackburn** 0:43
Particularly Elizabeth, if you've got anything from a traffic point of view that I need to consider, that's extraordinary.

NM **Neil mumby** 0:49
OK.
Great. Alright. So and I'll be lucky. Last my name's Neil Mumby.
I'm a planning consultant with the cable Bay Consulting based in the far north.
Here our clients have approached us about this subdivision concept.
Hence the proposed meeting today.

So right now that that's out of the way, shall we start with infrastructure so engineers can do their thing?

James Blackburn 1:15
So I launch into it, then Neil, as far as we've got.

Neil mumby 1:19
Yep, look, that sounds great to me, James.

James Blackburn 1:21
OK.
So the initial proposal is the.

Neil mumby 1:22
If that's yeah.

James Blackburn 1:27
Sort of six residential lots with an access lot and then a balanced lot in the wider site.
The bulk of it proposed at this stage not to be touched.
Expectations for this arrangement, as it's shown, are an access obviously off the geez.
Now what's the name?
There's there's some funny Rd. names here. Neil, help me out.

Neil mumby 1:50
Tell me a road Kerramea Rd.

James Blackburn 1:51
Yeah.
Of the of the southern side.
Which as far as I can tell is effectively a cul-de-sac.
It sort of feeds down in between the industrial lots, but otherwise is A2 lane sealed Rd. going towards the center of maunui.
We were just expecting a standard residential cul-de-sac Rd. type entrance arrangement.
Visibility is serviceable.

Doesn't seem to be any conflict.
Vehicle speeds are low.
I think there's a minor water table drain that will have to cross there, otherwise nothing extraordinary.
The Storm water management we're expecting to comply with the requirements of the FNDC.
Engineering standards.
Possibly with a little bit of adaptation. Nadia to address some of the things that are in there that are a little bit conflicted.
But generally speaking, I don't think there's anything untoward there.
I I think the proposal at this point would be for the road lot to manage.
Effects from a stormwater runoff somehow within the roading reserve haven't resolved exactly how I'm going to do that at this point.
And the lots will be required to manage their own discharges.
Wastewater reticulated service. I'm not sure.
I'm not aware of any capacity constraints, but perhaps somebody from the Council can enlighten me.
It's a conventional gravity system in the road, I think.
And we would look to extend that with a vested gravity link into the development.
And water supply is likely to be from the.
Doubtless Bay Water company network.
Which again will feed either from the top of the bottom.
I haven't resolved that completely yet.
I need to talk to.
Dallas players, whether they've got any preferences and that's pretty well the infrastructure.
I can't comment about geotechnical constraints yet, 'cause we haven't been to site.

Neil mumby 4:08
Thank you. Alright.
Council.

Nadia de la Guerre 4:13
So for wastewater, there's no constraints in the vicinity. If there's some, there is some issues in the in the pump station further down the road. But we don't see that as

your problem.
So we would be OK for you to connect into the gravity sewer system.
So no issues, yeah.
So same with the storm water as well. The the connection points for you to connect into as well once you've attenuated.
So we're far north. Carol N council.
We're still use the 2000.
Non engineering standards.
But if you yeah, but if if you prefer, you can use the 2023 standards. So yeah.

James Blackburn 4:50
It's OK.
I think that the.
The responsible approach cause officially the 2009 standards, just requires the 10 year to be managed.
But given what's downstream, I think that that, that we should sort of earth towards the more recent standard in terms of trying to control run off because we've got, you know, if we end up with a significant overland flow, that's uncontrolled ending up in that road, it could.

Nadia de la Guerre 5:07
Nice.

James Blackburn 5:23
Cause issues.
So that's why I said about there being a bit of a hybrid.
I'm I'm sort of.
I think we'd go higher than the one in 10, but we're just gonna see how the numbers pan out.

Nadia de la Guerre 5:36
Yeah, we very much effects orientated when we we have a look at the down downstream effects.
So we try not to flood downstream properties.
Yeah. So that sounds good, James.

James Blackburn 5:51
OK.


Nadia de la Guerre 5:51
So that's storm water.
So it can be Vista to council the pipe network if it's in the public Rd. reserve.


Elizabeth Stacey 6:05
Which brings us to the next point this.


Nadia de la Guerre 6:07
Yeah. Yeah, that's probably for three waters, I suppose.
So yeah, no, no issues really with with the three waters connections.

James Blackburn 6:14
OK, cool. Thank you.


Nadia de la Guerre 6:15
OK.
So yeah, so onto routing.


Elizabeth Stacey 6:18
So I guess the question for me, James and Neil is normally council would not be vesting abroad for six lots, it would be a private asset.
It's over 8 lots. Generally when we consider vesting we have a large balance lot.
Do you have a phase three that we should anticipate coming forward and if so, do you have anything you can share on that now?

Neil mumby 6:42
Do you want me to talk to that point, gent?

James Blackburn 6:44
Yes, if you would mind. In case I commit to something that we're not supposed to know about.

Neil mumby 6:49

Sure. So so look.

Two things.

The two things there.

So firstly, yes, the the client does have development aspirations for the balance of this site, but they don't know the detail of that yet.

All we know at this point in time, it would be for standard residential development, but it's pretty well signalled by the provision of the stub Rd.

Yeah. Is it out in this concept plan of development?

So we can't give you any more detail on that at this stage because it hasn't been done. But clearly there is a long term view for the overall development of the site.

The second point is is in terms of whether the roads vested or not.

In terms of the overall concept, we're doing stage one first, which is effectively a super lot, which is just going to be that area of land you know surrounding the proposed lots and and probably the access Rd.

In its entirety as as a single lot first.

That's because the the client wishes to undertake some transactions between the parties and their organization, and in terms of the the road itself, I mean that could either be formed or vested in Council.

Just depending upon.

And or vested with council, just depending upon what the clients particular aspirations.

In the sense that that they seem to be pretty experienced developers, they do a lot of construction work, for example for Auckland Transport in Auckland. They seem to be across the detail of engineering standards and and works so.

If, for example, that the Council was of the view that they wouldn't accept vesting with these six lots if that road was formed to council standard initially, and even if it was held in private ownership.

But transferred it at a subsequent stage with the balance of the site is developed.

Will that create any problems for yourselves?

Elizabeth Stacey 9:06

To that, no. So I think that.

If it's not.

Inspected as a vested roadway and then we have the issue of vested assets from our 3 waters team in a private road.
I think we need to discuss it and that's what that pre app or this pre app meeting is for.
Our initial thought is we would not be accepting it as a vested roadway with only a six lot subdivision on the carts.

Neil mumby 9:40
Even though the balance of the site is is ultimately going to be developed as per as per the layout of the subdivision concept you've got.

Elizabeth Stacey 9:48
So if that's part of your application, then absolutely we can look at it. But right now I'm looking at an application with a six lot subdivision.

Neil mumby 9:59
James, have you got any experience with these sorts of matters?

James Blackburn 10:02
I mean, so we've not in far north explicitly, but we've certainly undertaken.
The the the previously the avenue of submitting the vested Rd. design and indeed the other infrastructure and normally the private infrastructure in a non vested Rd. you know reticulated structure is not normally an issue it can sit under any piece of land in the same way as you.
Know reticulation infrastructure can run through private property.
That's not really a problem normally.

Neil mumby 10:36
K.

James Blackburn 10:37
But we have also.
Undertaken we've understood where a Council is in terms of, you know, the threshold in terms of number of users and have designed and constructed to a vested standard.

And we've undertaken all of the inspections and then when a subsequent phase comes on, at least we've got all of the records and then we can offer it to be vested subsequently.

Elizabeth Stacey 11:06

That's absolutely right, James.

So as long as you hold those records and you're able to provide that to council as part of that process, we would consider it at that time certainly.

JB

James Blackburn 11:19

I do have a question and perhaps I'm not party to the overall plan, Neil.

This might be one for you, but I mean is there an ambition from Council, Elizabeth, from your perspective, to connect?

NM

Neil mumby 11:25

Yeah.

JB

James Blackburn 11:32

The the Southern Rd. ultimately to the road at the top, which is a loop.

Presently what you have is basically a cul-de-sac, although legally it goes through to meet the state highway.

It's just a one way in one way out. Rd. I mean, is that something that Council would look to do?

Or would they?

Because, again, that sort of feeds into the mix. If they wanted to open up another.

Another route, if you like, from that neck of the woods, particularly in terms of.

You know, trying to keep people off the waterfront. Rd. If that was a desire from a traffic perspective or, I don't know, sort of just chucking things out there.

Elizabeth Stacey 12:07

Yeah, absolutely.

So certainly, we're always interested in more through connections, but what I can tell you is that's not in our current 10 year plan.

We don't have it on our LTP at the moment.

James Blackburn 12:21
OK. Because obviously that would lead to maybe a shift in the in an appropriate design standard. It might also change the treatment of a vested Rd. if we were doing for example, the future stages as well as you know giant cul-de-sac subdivision, we would look to make sure.
That we've got suitable walking connections with less emphasis on on traffic conveyance, whereas if there was a push to maybe have that as a through route, then it would just.
You know, probably only subtly, but change the the way that we think about those. Roads being formed.

Neil mumby 12:57
Yeah. OK. OK.

Elizabeth Stacey 12:58
The other thing is, depending on how you decide to put your application and whether it's vested or or private, a little bit different standard as far as cul-de-sac in that end of it. If you want it to be a vested Rd. even if there is another.
Stage coming versus kind of that stubbed out as you're showing it private accessway.
So just something to keep in mind.

James Blackburn 13:18
And just further to that then, Elizabeth.
If there is.
A little bit more than just indicated further stages, but but how to what standard would you look to have that formed if the consent involved subsequent stages if they were known about? So again, we've got circumstances where they're not quite ready to go, but they know that that.
Coming so we've been allowed to form those.
Turning heads to A to a.
I'll say this.
I don't mean this like it sounds, but to an incomplete standard. Knowing that if we were to curb it and and do all of that, it's all abortive work.
But we make sure that the spaces there and the facility to turn is there and it's got a

sensible base. But we know that eventually when they carry on with the road, I mean is that something that would be considered or would you look?

Elizabeth Stacey 14:09

Absolutely, yeah.

No, absolutely.

And we can look at different configurations for that cul-de-sac that works best for you in a temporary state for sure.

JB **James Blackburn** 14:18

OK.

NM **Neil mumby** 14:20

K right.

Alright, OK.

Well, that that was very, very helpful.

I think that that part of the conversation. Alright, who's next?

Yuna Zhou 14:32

I think I will be the next.

From planning side, I do not really have too many concerns, but I do have maybe two questions.

One is.

Is there any river going through the site?

Especially the, so maybe southeastern of the the corner of the site there any river go goes through the site.

NM **Neil mumby** 14:49

River.

JB **James Blackburn** 14:58

Do I do to that, Neil?

NM **Neil mumby** 14:58

There's no river.
Yeah. Yeah. You go for a chance, yeah.

James Blackburn 15:01
So there's to the northwest of the site coming from the opposite side of the state highway, there is a reticulated stormwater network and that emerges within the the balance lot, if you like, of the proposal as an open drain that meanders across the top half of the site.
And then.
And stays as an open drain through the adjacent residential properties and then.
Is reticulated under?
The road to the right and so.
OK. That layer that you've got turned on there, I think Joanne is NR CS regional flood mapping, which is not a suitable tool for urban areas.
I know they've done it.
I've had such an argument with the NRC about it being used for urban areas because it's doesn't.
Doesn't reflect things appropriately, so it's not a river, it's an open drain. It's effectively part of council's reticulated network and then it becomes reticulated as you go towards the the estuary and then it's oscillates between some reticulation, under roading and then open drains and discharges to the.
To the estuary, to the east. I think the last probably 60 or so metres is reticulated as well, so it's a bit hit and miss.
And I my anticipation is.
In a subsequent stage, whatever that might form that may take that, that ultimately those reticulated connections from the northwestern corner would be extended through so that it would be reticulated waterway or storm water route through the development in the future stages, but no river.


Yuna Zhou 16:51
OK.

Neil mumby 16:51
Yeah, yeah.

Yuna Zhou 16:51

That's good.

Yeah, because the reason I ask for it is if there is any like reverse 3 meters or more through the side, we may ask for reserves.

So yeah, if there is not one, because when I look at the map I the only thing I can say is maybe there's thousands southeast corner of the site.

So if there is no river, I think it's fine.

Neil mumby 17:16

Yeah. And just to add to that, so these we can definitely confirm now that there's no river or stream of three meters with the wider prison on the site. And there's also and there's also to assist a previous Council consent that was issued for the site, which I. Think was to do with the piping of the of that overland flow path that we're talking about. So where it's showing is or basically that northwwastern sort of corner of the site where that line.

And Green is showing then that I'm pretty sure that's that's the area that this particular previous consent issued by Council.

Dealt with just to assist, yeah.

Yuna Zhou 17:58

OK, OK.

That's good.

And another question, I think it is based right on Sir is because the site connecting to the state highway. So just thinking whether traffic report will be required so yeah.

Neil mumby 18:12

So, so so to assist with that.

That was the.

Aerials and the GIS system suggest there's a direct connection through to the state highway. There's actually not.

And there I think quite unlikely to be formed given the topography.

So for example, you look on the southwestern corner of the site.

That area, which is heavily vegetated, there is a significant change of grade.

Through the significant. So I just can't see it ever being formed. And if you look at

obviously where we've got, lot 7 is obviously connecting onto a local road and even if that road is pushed right through to met to the north, to Melody Lane, which is the. Road that runs along the northern edge of the site that also does not connect with the state highway either.
So just, yeah, just just sitting there outside. So you're aware of it?

JB **James Blackburn** 19:11
And I think further to that, Neil, just to expand on your point.
The NZTA with the proximity of the of the primary junction to monetary to the South, they wouldn't want to even look to establish that connection.
So I don't think there's any risk of their needing to be an ITA associated with effects on the state highway because the the connectivity is is, you know, substantially remote from the site.

NM **Neil mumby** 19:41
OK, OK.
Alright, so does that answer your query?
Your queries you know.

 **Yuna Zhou** 19:46
Yeah, yeah, I think.
Yeah, I'm all good now.

NM **Neil mumby** 19:47
Yeah.

 **Yuna Zhou** 19:48
Unless Elizabeth has any like further concerns or questions because.
This proposal look like a controlled activity, so no, like special concerns from my side.

NM **Neil mumby** 20:03
OK. Just to throw some things on the table, just to get the conversation going, I guess.
My first question would be obviously it's a residential development just to the north

of an existing industrial area. If we put forward standard consent notices dealing with the issue of reverse sensitivity on the lots, would that be acceptable to Council?

Yuna Zhou 20:26

Yeah, I think you can volunteer.

Maybe a consent notice says maybe in the future the people leave on the site will not complain about the industrial activity.

Something like that. If you can accept that we can.

NM **Neil mumby** 20:38

Yeah. Yeah. OK.

Yuna Zhou 20:39

Yeah, we can insert a consent notice like that.

JB **James Blackburn** 20:43

Subject to those those activities presumably lying within the standard permitted thresholds.

NM **Neil mumby** 20:43

Sure. OK.

JB **James Blackburn** 20:49

It's not a.

NM **Neil mumby** 20:49

Yes, yes, yes.

JB **James Blackburn** 20:49

It's not a carp launch. Yeah, OK.

NM **Neil mumby** 20:51

No, no, no.

It's it's. It's certainly not not car plunge.

And then the other thing is is, you know, in terms of the number of supporting

reports that you'd want to see in the AEI mean, clearly we'll have a planning report.
And AEE and clearly we'll have an engineering report.
Is there any other reports that you anticipate being necessary?

Yuna Zhou 21:16
Not for now.
Unless if we when we, because we will contact with EV and maybe. Yeah, I think maybe we just if they have any special concern because it's connected to some historical overlay based on the PDP map.
So there is some heritage overlay, just maybe neighbouring to the site, but I yeah, yeah. But but the site is not really really within it I think.

Neil mumby 21:41
But not on the site itself though, right? So start.
Yep, Yep.

Yuna Zhou 21:47
I will not really have any special concern at this stage because I don't think the site has any historical or natural features, significant ones on site.
But yeah, we will contact you if they have any other special concern, we will let you know. But at this stage, I think I think it's fine.

Neil mumby 22:08
OK, OK.
Alright, OK.
So is there anything else that we should be covering off in the discussion people?
It's it's the meeting seems to have gone extraordinarily well and quickly.

Nadia de la Guerre 22:21
I'll just ask again of the with the road connection, where that's going to come off. So it's not coming off the state highway.
So because I'm sharing my screen at the moment it's my issue my screen.
So will you be coming off this road with a with Lot 7 joins on?
Is that correct?
So will there be a vehicle crossing formed in this location?

James Blackburn 22:49

Well, yeah, it'll be.

I think we're anticipating Nadia, that that's actually going to be a formalized T junction to a vested standard, although that obviously notwwestanding previous discussions today. But yes, the access point is from.

From that road at the southern side, Carramia Rd.

Nadia de la Guerre 23:07

Bye.

OK.

And there's joints on around the back.

James Blackburn 23:14

It leads all the way actually to the IT becomes Gray St. and then meets the waterfront Rd.

So just literally straight down to the woods that that Little peninsula that's in the estuary, it comes out opposite that.

Nadia de la Guerre 23:33

This one.

James Blackburn 23:34

Yeah.

Nadia de la Guerre 23:36

Bye.

OK, Tina.

That explains that I just. I wasn't aware of the drop and elevation from the state highway.

So that explains why you're coming around the back.

Neil mumby 23:50

Yeah, different.

Nadia de la Guerre 23:50
Yeah.

Neil mumby 23:51
And it's also, it's also a overtaking lane up at Hill as well. So it would be quite problematic to have a right turn of any form.

Nadia de la Guerre 23:52
And.

James Blackburn 23:56
Yeah.

Neil mumby 24:00
So I just think it's it's such, it's just extremely unlikely to ever happen, I think.
Yeah, at the moment.

Nadia de la Guerre 24:08
OK.
So in terms of engineering reports, it would just be your typical site suitability report to say that these slots are capable of being built on, and then we'll also be interested to see what you're going to do if you'll storm water.
So those two engineering reports would be good.

James Blackburn 24:26
Yeah, yeah.
So we we will, Nadia, as you're familiar with we there will be a a comprehensive engineering suitability report.
So it will cover all reticulated service connection, firefighting, geotechnical founding conditions at a high level in terms of lot suitability and stability if that's applicable.
Stormwater management, wastewater connections, traffic and access impacts and again, if suitable pedestrian connectivity towards the.
Towards the Town Center.

Nadia de la Guerre 25:00

OK, so with stormwater, are you anticipating a private attenuation system you're not not?

JB **James Blackburn** 25:07

I have haven't got that far.

I was certainly anticipating that the individual residential lots would be probably controlled via a consent notice with an example of how that might be managed at that size of lots that are proposed.

Nadia de la Guerre 25:10

OK.

JB **James Blackburn** 25:25

I was anticipating that connecting to a an element of reticulated network within the road to vest, quote, UN quote.

And the discharge for that was likely to be to the water table drain. Whether we can then make a connection on Karamea Road going to the east.

I'm just trying to remind myself what the retic was there, whether that was viable.

I haven't looked at that. You know, I mean, it might be that the reticulation that's at the corner of Karamea Rd. just gets extended to the road to vest corridor and then into the site.

Because the drainage.

Route that crosses the northern half of the site as an open drain.

Is likely to high an elevation to to be accessed from the for the lower lots. I haven't looked at the topography in detail yet so but yeah, certainly we're proposing to have on lot attenuation and then how I deal with the piece of Rd. in isolation I haven.

Got my head around yet, but that's the intention. Is that the?

If I can, I will offset it.

And my reasoning there is that I don't suppose there's a particular appetite to have a small piece of attenuation associated with a small piece of Rd. stand alone.

So we would look to see whether the numbers will work suitably to put a responsibility on each lot to a degree that we don't have to put any controls in place for the roading.

Nadia de la Guerre 27:04

It's yeah, because I think you you might struggle to vast any storm water attenuation devices to eroding.

JB **James Blackburn** 27:10

Yeah, yeah.

Nadia de la Guerre 27:12

Yeah. OK.

JB **James Blackburn** 27:12

Oh, definitely would struggle with writing, yes.

Nadia de la Guerre 27:16

Or even stormwater, for that matter, yeah.

JB **James Blackburn** 27:18

OK.

Nadia de la Guerre 27:19

OK, alright.

So let's let's search.

Yuna Zhou 27:23

I have one more point.

Where you prepare something like landscape plan or landscape assessment, especially along the road frontage of LOT 1 and the maybe the eastern and the northern boundary Lot 5421 and lot 6 and far well there be any like landscape plan.

NM **Neil mumby** 27:46

Probably not for this phase, but for an overall development of the site.

I think that's a that's a possibility.

I mean, I couldn't see any references in the matters of discretion for controlled subdivision to provision of landscaping plans, but I'm I'm happy to have it pointed

out.
But I think this particular element is I think quite small, probably OK without it, I think.
But if you've got thoughts.
To the contrary, on that I'm, I'm very happy to hear them.

Yuna Zhou 28:21
Yeah, it's just.
I'm just thinking whether there could be some like lens because it's because I think cross the street will be the industry area, so it will be good to have some landscaping around the road, maybe around the road frontage.

NM

Neil mumby 28:32
Mm hmm.
OK.

Yuna Zhou 28:39
If you think that could be possible, maybe you can consider about that.

NM

Neil mumby 28:39
I'll make a note and I'll and I'll talk to the client.
OK.

Yuna Zhou 28:44
Yeah, just just a recommendation, yeah.

NM

Neil mumby 28:44
We'll definitely have a look at it for you. Yeah, OK.
OK, wait for.

Yuna Zhou 28:52
Because it's a controlled activity, I agree there is not much.

NM

Neil mumby 28:56

Yeah.
Yeah, OK. But that that's OK.

Yuna Zhou 28:58
To concern, yeah.

Neil mumby 29:00
Yep, OK.
That's alright.
OK. Have we got any more things that have popped up in the course of the conversation today that we need to cover off?
You want seems happy.
OK.
So in terms of from here, I'll need to go back and report to the client, but obviously. We'll be looking at getting an application and to council at this stage early in the new Year, just just so you're you're aware of general timing.
And in terms of that, we'd like to submit with the application a copy of today's minutes.
So in terms of minutes from today's meeting, who's got the short score in terms of preparing those?
Providing the recording.

Yuna Zhou 29:52
Would you prefer meeting minutes or just a record of the meeting?

Neil mumby 29:59
A brief set of meeting minutes I I think would be helpful.
And that way it's all easily accessible by people to refer to in the subsequent stages of the application if needed.
Does that sound OK?

Yuna Zhou 30:13
Yeah, I will try to contact planning support to see whether they can help with it.
If they cannot, I will help with it.

Neil mumby 30:20
Yeah. And look, if there's any issue with it, don't hesitate to get in contact and or send through the recording and I can type something up pretty quickly if needed, alright.
What?

Yuna Zhou 30:34
Yep, Yep.
OK.
No problem.

Neil mumby 30:36
OK, brilliant.

Yuna Zhou 30:36
Maybe I will send you the record first, if you want I can send you the record first.

Neil mumby 30:39
OK.
Yeah, yeah.
OK. OK. Well.

Nadia de la Guerre 30:42
I think the recording will be available to everyone in this meeting. It usually.

Yuna Zhou 30:46
Oh yeah.

Nadia de la Guerre 30:47
Pops up and it's part of this meeting invite, so you should all be able to see it. And I think that transcript as well that puts it all in text.
It's just it's it's very.

Neil mumby 30:56
Alright.


Nadia de la Guerre 30:56
It's very funny to read through, go through AI, and it doesn't always pick up my accent.
So it just keeps that in mind.

Neil mumby 31:03
Ha ha ha.


Yuna Zhou 31:06
If you can find the record and maybe you can just go through it first, then I will prepare the meeting minutes. Maybe planning support will send to you or I will do it if say I'm not really available, yeah.

Neil mumby 31:06
OK, OK.
K.
OK, OK.
Lovely, alright.
Well, thank you everyone.
One last chance.
No other issues or we good.

James Blackburn 31:26
I'm all clear.

Neil mumby 31:29
OK, OK.
That's obviously fine, Elizabeth.
You're fine.
Nadia's fine. Euna's fine. Alright. OK.

Well, thanks again guys.
We'll we'll be in contact, alright.

James Blackburn 31:39
Right. Very good. Thanks very much.

Nadia de la Guerre 31:39
Alright, thank you. Bye bye.
Games. See you. Bye bye.

Neil mumby 31:41
OK.

James Blackburn 31:42
See ya.

Neil mumby 31:43
Yeah. Thank you very much.
Much appreciated. OK, bye bye.

Yuna Zhou 31:46
Bye.

Yuna Zhou stopped transcription

Attachment 5

Hawthorn Geddes
engineers & architects ltd

ENGINEERING REPORT FOR RESOURCE CONSENT – Rev 3

PREPARED FOR MAX BECKHAM

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ENGINEERING REPORT FOR PROPOSED SUBDIVISION

Table of Contents

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3	Client: Via email: CC Via email	Max Beckham Maxbeckham1947@gmail.com Gary Beckham Garybeckham10@gmail.com	EMAIL	04.08.2025

1. Purpose

The purpose of this report is to present the results of the engineering suitability assessment completed for 26 Melody Lane, Mangonui, Lot 3 DP 199804. This report provides advice on site stability, liquefaction, earthworks, firefighting capability, reticulated wastewater connections, traffic / access, stormwater management, and building site suitability.

This report supersedes our previous report dated 23.06.2025.

This report is suitable to support a resource consent application to the Far North District Council (FNDC).

2. Executive Summary

This report presents the results of an engineering investigation and assessment completed for the proposed development as described in Section 3 below.

This Executive Summary provides a brief overview of our engineering evaluation for the project and is not intended to replace more detailed information contained elsewhere in this report. A summary of important engineering considerations, our conclusions, and recommendations for the proposed development are as follows:

- **Report Purpose:** to assess the suitability of the subject property for an eight lot residential subdivision to be undertaken in two stages.

- **Geological Unit:** the underlying geology of the subject property mapped by GNS Science belong to Mangonui Formation and Undifferentiated Tangihua Complex basalt.

- **General Site Topography:** slopes over the property are typically gentle with localised areas increasing to steep slopes. The steep slopes in the southwest of the property are likely the result of historic surface water runoff erosion, over steepened slopes, and shallow slippage.

- **Subsoil Investigation:** sixteen hand augers were undertaken over the property. The hand augers encountered soils of Mangonui Formation typically overlying Undifferentiated Tangihua Complex basalt.

- **Groundwater:** groundwater transmissions were encountered solely within HA1 and are likely the result of a groundwater short circuit or neighbouring stormwater runoff transmitting to the lowest point. Elevated groundwater transmissions are expected to be no shallower than 3.0m bgl, with normal groundwater transmissions much deeper.

- **Liquefaction Vulnerability:** the property is unlikely to be subject to liquefaction damage during a Damage Control Limit State (DCLS) seismic event or smaller based on encountering cohesive, normally to over-consolidated silty clays and clays.

- **Static Load Settlement:** the proposed development is not considered subject to settlement under typical residential loading (NSZ 3604:2011) or fill loads up to 20kPa.

- **Site Subsoil Class:** Seismic Subsoil Class C, per AS/NZS 1170.5:2004, Amd 2016, Section 3.1.3.1.

- **Earthworks:** excavations and fill up to 1.5m will likely be required for the formation of level building sites within the proposed development area. Excavations and fill areas greater than 1.0m high shall be suitably battered at 24° (1V:2.25H) or retained.

- **Foundation Options:** typical shallow foundations are considered appropriate for the proposed development, subject to the consideration of expansive soils.

- **Stormwater Management:** Stormwater management for the additional impervious areas associated with the development (ROW and impervious areas associated with the lots) will be required and the design is in accordance with the requirements of FNDC ES 2023.

- **Traffic / Access:** the proposed development will not adversely affect the safety and efficiency of the adjacent traffic network.

3. Purpose

The subject property (Lot 3 DP 199804) is proposed to be subdivided in two stages. Stage 1 will consist of a two-lot subdivision. The smaller of the two lots from Stage 1 is to be further subdivided into six residential lots (Lots 1 to 6) and one road to vest (Lot 7). There is also potential for future subdivision within the balance lot (Lot 8); however, this has not been assessed in this report.

An aerial view of the proposed subdivision scheme plan as prepared by Sapphire Surveyors Ltd for stage 1 and 2 is shown in Figures below.

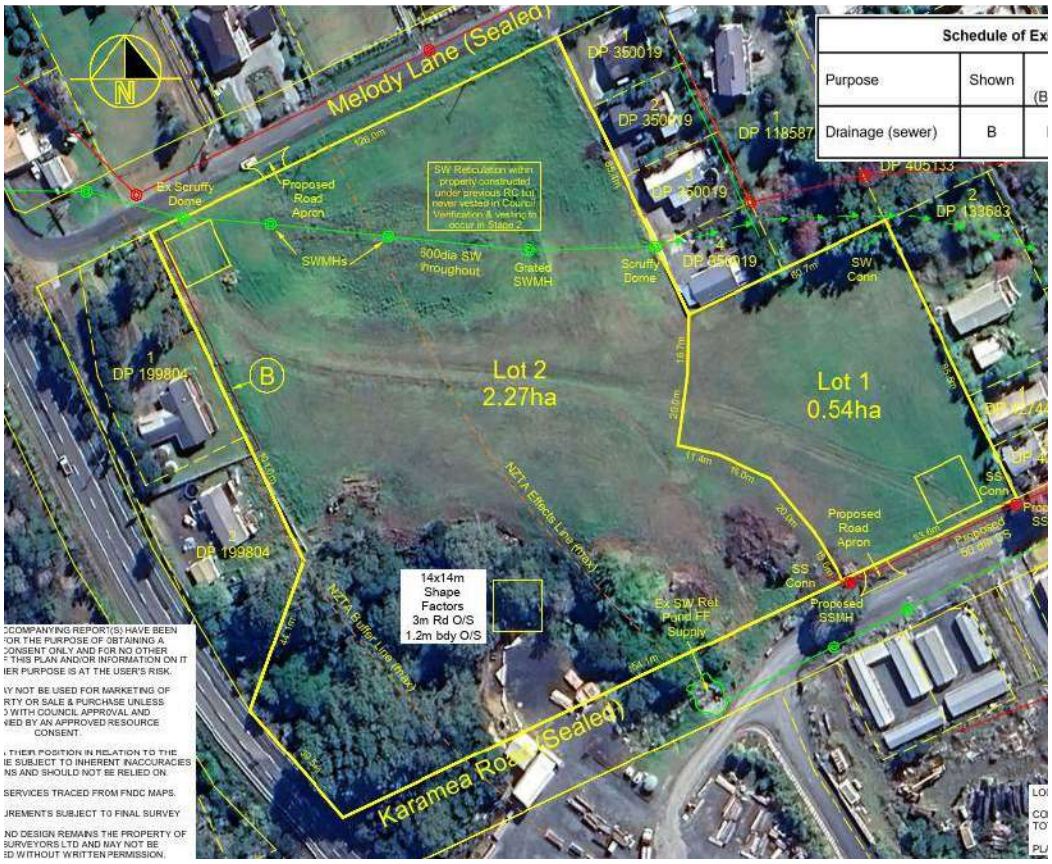

Figure A: Aerial view of the concept plan prepared by Sapphire Surveyors Ltd titled "Lots 1-2 being a Proposed Subdivision of Lot 3 DP 199804 - 11 Karamea Road, Mangonui".

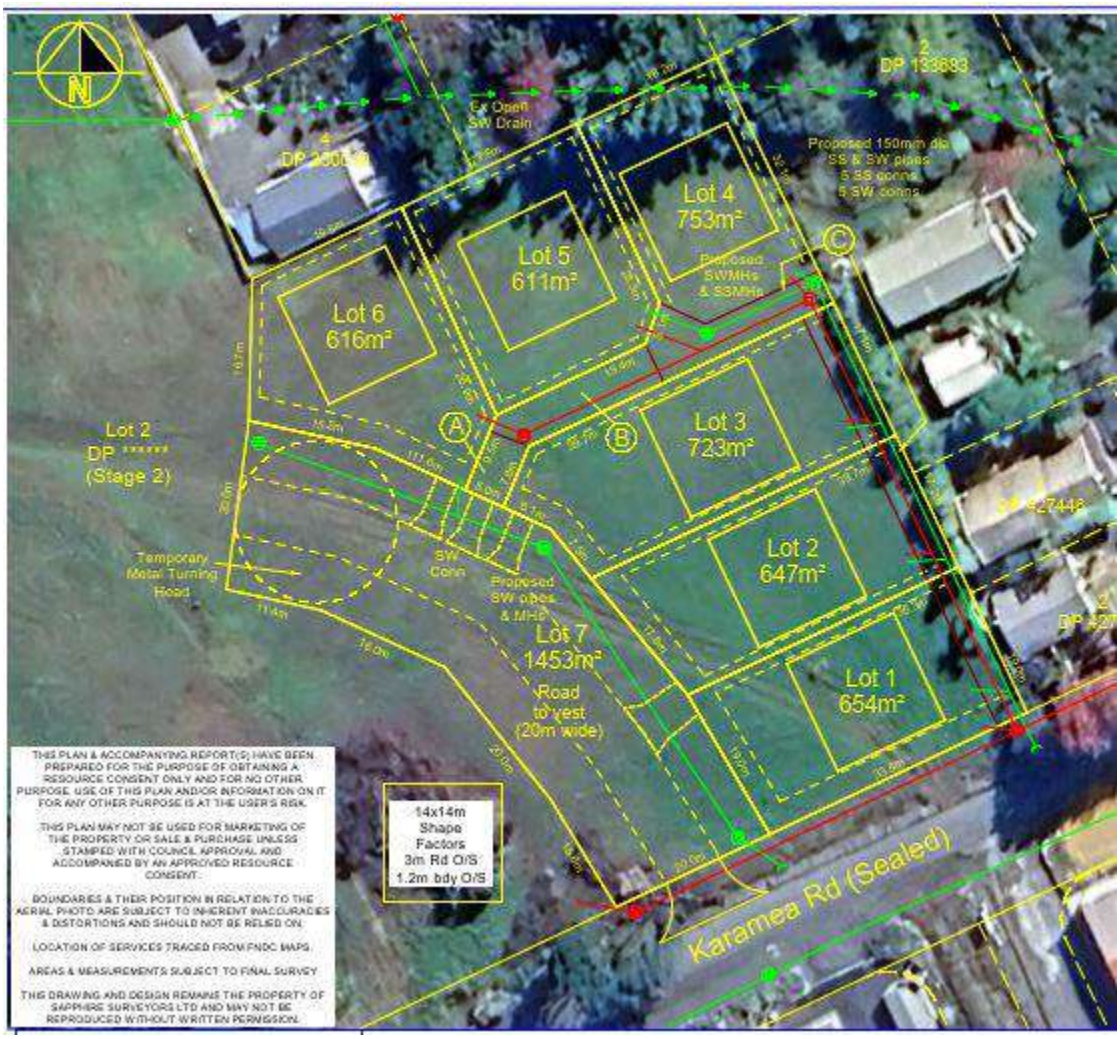

Figure B: Aerial view of the concept plan prepared by Sapphire Surveyors Ltd titled "Lots 1-8 being a Proposed Subdivision of Lot 3 DP 199804 - 11 Karamea Road, Mangonui".

Access to Lot 1 (Stage 1) is proposed from the northwest side of Karamea Road, while Lot 2 (Stage 1) will be accessed via Melody Lane. Access to the Stage 2 lots is also proposed from the northwest side of Karamea Road.

The new residential lots will be connected to the council's reticulated stormwater network and wastewater network. The lots will be supplied with potable water via connecting to Doubtless Bay Water Supply (DBWS) network. Stormwater management for the lots will be required and is assessed herein.

4. Site Description

The property is irregular in shape, approximately 2.8Ha in area located within the Residential Zone under the operative Far North Proposed District Plan. The property is located some 220m west of the Mangonui Harbour foreshore, some 40m east of State Highway 10 (SH10), and some 1250m southeast of Coopers Beach (Figure B).

The proposed lots are gently sloping comprising grassed pasture with a localised steep area that is densely vegetated in the southwest corner of the property. These steep slopes are likely the result of a combination of overland flowpath incision, oversteepening leading to slippage, and surface water runoff creating the steep slope face.

There is a naturally formed, overland flowpath that traverses through the north of the property from west to east, Figure B below.

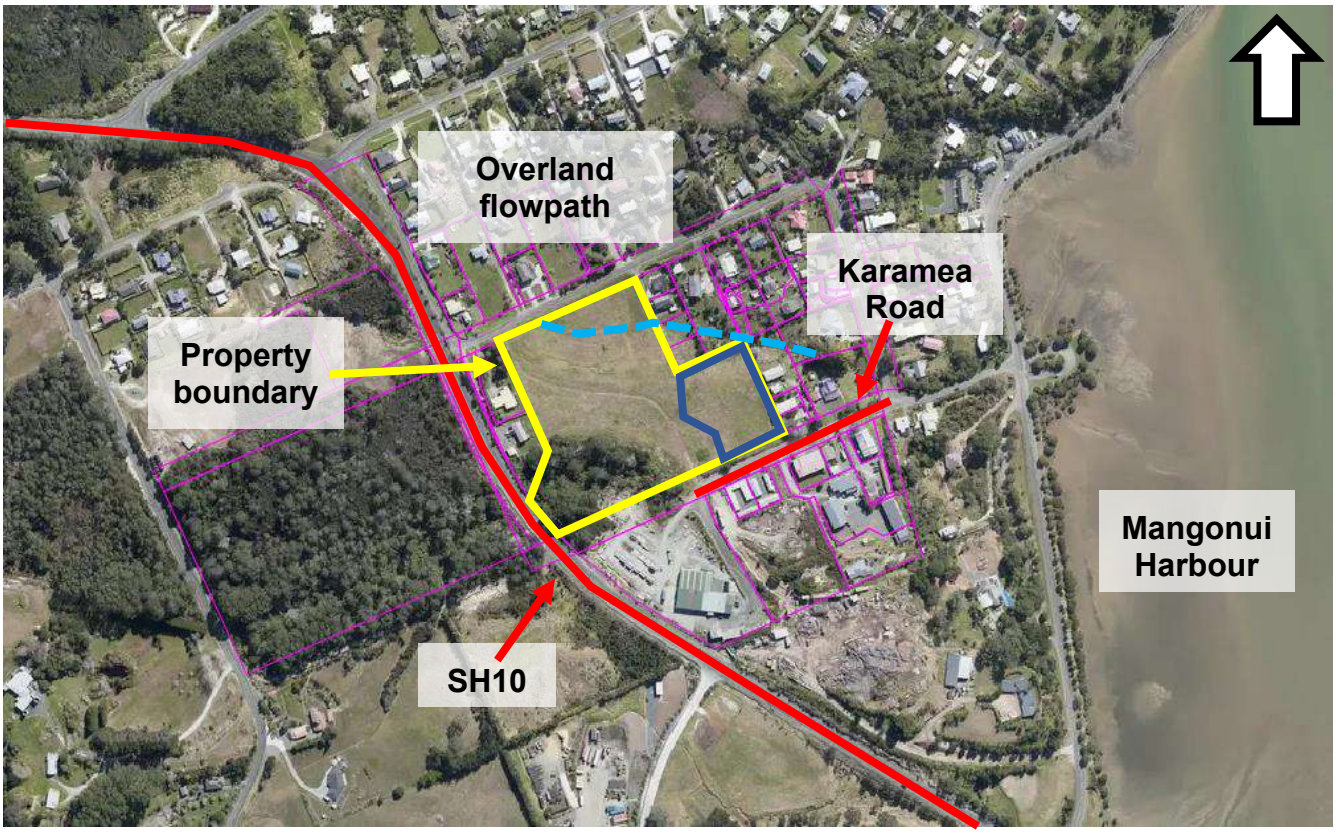

Figure C: Aerial image of the property and its immediate surrounds (source: LINZ Data). The dark blue area represents the location of the proposed development (Lot 1 to Lot 7).

5. Geological Setting

The published geology by GNS Science indicates that the proposed sites are underlain by Mangonui Formation and Undifferentiated Tangihua Complex (UTC) basalt, with the geological boundary in the southeastern area of the property.

The Mangonui Formation is described as comprising conglomerate rocks including pebbly sandstone, mudstone, and lignite. The Mangonui Formation is weakly indurated, with depth to groundwater typically greater than 10m below ground level (bgl). The Mangonui Formation is younger than the UTC basalt, forming between 11 million to 5.5 million years ago.

The Undifferentiated Tangihua Complex basalt in Northland Allochthon is described as basaltic pillow lava and pillow breccia, with sills and dikes of basalt and dolerite. The UTC basalt formed up to 105 million years ago and is typically very strong and highly durable to erosional processes.

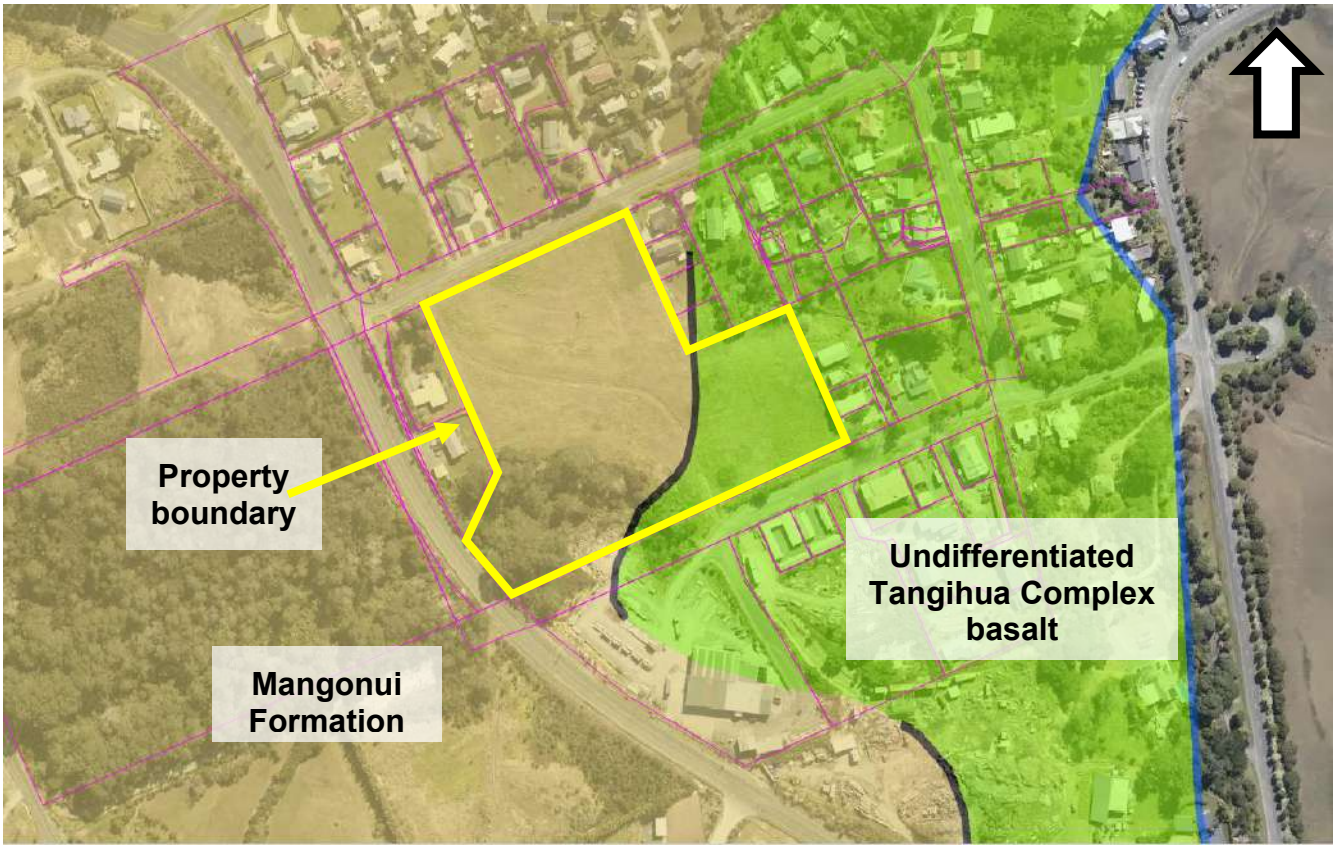

Figure D: Aerial view of the property and its surrounds with the published 250k geology overlain (source: LINZ Data and GNS Science).

6. Geotechnical Investigation

A site-specific subsoil investigation was undertaken over the 17th to 18th of December 2024 to determine the quality of the subsoil present beneath the proposed building sites and the wider property. The investigation comprised the following:

- Sixteen hand augers (HA1 – HA16) and nine dynamic cone penetrometers (DCPTs) performed by HGEA.

6.1. Subsoil Investigation

Hand augered boreholes were drilled to depths ranging between 1.4m and 3.0m bgl with refusal inferred over highly weathered rock that was unable to be penetrated with a hand auger. DCPTs were completed with a Scala Penetrometer from the base of HA1, HA4, HA7, HA9, and HA12 – HA16, the results were attained to refusal (≥20 blows/100mm) at a maximum depth of 4.9m bgl. Refusal of the DCPTs is inferred to be with moderately weathered, moderately strong rock. Undrained shear strengths were measured within the cohesive soils in accordance with NZGS Guideline for Handheld Shear Vane Test at nominal 0.3m intervals within all boreholes. The results ranged between 42kPa and unable to penetrate (UTP), typically greater than 150kPa.

Groundwater transmissions were encountered within HA1 at some 2.5m bgl and is considered an isolated phenomenon which has likely been contributed to from geomorphology or stormwater discharged to ground from neighbouring property(s). No other hand augers encountered groundwater transmissions, elevated groundwater transmissions are inferred from depths greater than 3.0m bgl and normal groundwater transmissions are inferred from depths greater than 5.0m bgl.

Soils encountered within the hand augered boreholes were consistent with the published geology by GNS Science of Mangonui Formation overlying UTC basalt.

Logs of the hand augered boreholes and a site plan indicating the hand augered borehole locations, are attached to this report.

Each hand augered borehole is summarised on Table 1 below:

Table 1: Summary of Subsoil Conditions

Hand Augered Borehole	Hand Auger Termination Depth	Scala Penetrometer Termination Depth	Topsoil Depth	Groundwater Depth	Shear Vane Soil Strengths	Scala Penetrometer Raw Data in Natural Ground	Generalised Description
All depths measured in (m) below current ground level					min - max		
					kPa	Blows/ 100mm	
HA1	2.7	3.7	0.2	2.5	164 – 195+	4 – 17	**Topsoil:** dark brown silts.

Hand Augered Borehole	Hand Auger Termination Depth	Scala Penetrometer Termination Depth	Topsoil Depth	Groundwater Depth	Shear Vane Soil Strengths	Scala Penetrometer Raw Data in Natural Ground	Generalised Description
All depths measured in (m) below current ground level					min - max		
					kPa	Blows/ 100mm	
HA2	2.6	NM	0.1	NE	118 – 195+	NM	**Residual Mangonui Formation Soil:** light grey and golden brown sometimes mottled orange, moist, very stiff to hard, highly plastic, silty clay and clay. **Residual UTC Basalt Soil:** dark red, very stiff, highly plastic, moist, silty clay and clay.
HA3	1.4	NM	0.2	NE	148 – UTP	NM	
HA4	2.0	3.2	0.2	NE	167 – 195+	4 – 20	
HA5	2.9	NM	0.2	NE	153 – 195+	NM	
HA6	2.3	NM	0.3	NE	221+	NM	
HA7	2.4	3.4	0.2	NE	139 – 221+	5 – 15	
HA8	3.0	NM	0.2	NE	151 – 195+	NM	
HA9	2.4	3.2	0.1	NE	167 – 195+	6 – 15	
HA10	1.6	NM	0.1	NE	167 – 195+	NM	
HA11	2.6	NM	0.2	NE	167 – 195+	NM	
HA12	2.1	3.6	0.1	NE	104 – 158	3 – 20	
HA13	2.7	3.5	0.2	NE	167 – 195+	6 – 23	
HA14	2.4	3.6	0.2	NE	153 – 195+	4 – 15	
HA15	2.5	4.9	0.2	NE	42 – 195+	1 – 15	

Hand Augered Borehole	Hand Auger Termination Depth	Scala Penetrometer Termination Depth	Topsoil Depth	Groundwater Depth	Shear Vane Soil Strengths	Scala Penetrometer Raw Data in Natural Ground	Generalised Description
All depths measured in (m) below current ground level					min - max		
					kPa	Blows/ 100mm	
HA16	2.4	3.5	0.3	NE	123 – 172	2 – 16	

Table 1 Notes:

NM = not measured NE = not encountered

6.2. Geological Model

A geological profile though the centre of the property from northwest to southeast is presented below in Figure D. The illustrated image shows the encountered subsoil depths from hand augered boreholes and inferred from DCPT data; it also identifies inferred/encountered elevated groundwater transmissions. The locality of this section is identified in the site plan in Appendix A of this report.

The property is underlain by Mangonui Formation and UTC basalt residual silty clay and clays grading to weathered UTC basalt with depth. The soil/rock lithology beyond the subsoil investigation termination depths has been inferred from site topography.

Geologic Cross Section Key			
	Residual Mangonui Formation Soil		Residual UTC Basalt Soil
	Completely Weathered UTC Basalt		Highly to Moderately Weathered UTC Basalt

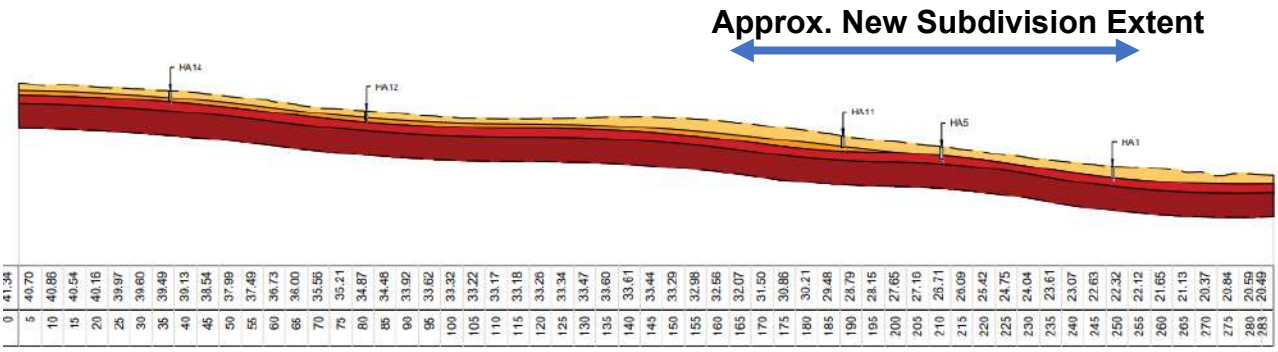

Figure E: Snip of geological cross-section inferred from the subsoil investigations completed by HGEA, sourced from Figure 2 attached to this report.

7. Seismic Subsoil Classification

The results of the investigation indicate the site is Seismic Subsoil Class C; in accordance with AS/NZS 1170.5:2004. This was assessed based on the geological properties measured during our investigation in correlation with AS/NZS 1170.5:2004; (method (d) of the hierarchy for site classification methods, AS/NZS 1170.5:2004, Amd 2014, Section 3.1.3.1).

8. Stability Assessment

8.1. Visual Stability Assessment

A visual stability assessment was undertaken by a geotechnical engineer and reviewed by a chartered geotechnical engineer from HGEA. This comprised a detailed site walkover, a review of historical aerial photographs and (source: Google Earth and Retro Lens), review of available LiDAR data, and a QGIS desktop assessment.

Rotational slope movement is characterised by the detachment and subsequent downslope movement of a mass of soil and/or rock along a curved or concave failure surface. The triggering mechanism often involves factors such as increased porewater pressure due to heavy rainfall, saturation of the soil matrix, and geological weaknesses such as the presence of a weak layer or discontinuity within the slope. On the surface, this type of failure manifests as a distinctive concave-shaped head scarp or scar at the uppermost part of the slope, marking the point of initial detachment. Below the head scarp, a displaced slump block forms, featuring an irregular surface morphology. This surface disruption is the result of the non-uniform deposition of material during its downward movement, leading to an observable hummocky or undulating terrain.

Translational slope movement is a type of slope failure where a relatively coherent mass of soil, rock, or debris moves downslope along a nearly planar surface. In simpler terms, it's when a block of the hillside breaks away and slides downhill in a fairly flat, sheet-like manner, without much rotation or tumbling. This type of movement is typical to occur over a shear plane, there is a notable difference in soil mass and strength within the shear plane.

On a smaller scale, terracettes are evidence of shallow translational / planar failure (soil creep / slippage) in the upper 1.0m of soils due to oversaturation, slope oversteepening, and/or soil expansivity processes. These slippages were not observed over the subject property however, slopes didn't typically exceed 12°.

The property is typically gently sloping at an average of 7° (Figure E) with a localised area of steep slopes in the southwest corner of the property. These steep slopes are likely the result of a historic surface water channel that caused slope erosion and over steepening which subsequently resulted in slippage of the slopes above creating the observed geomorphology.

There is no evidence of active shallow or deep-seated slope movement across the property or in the immediate surrounds.

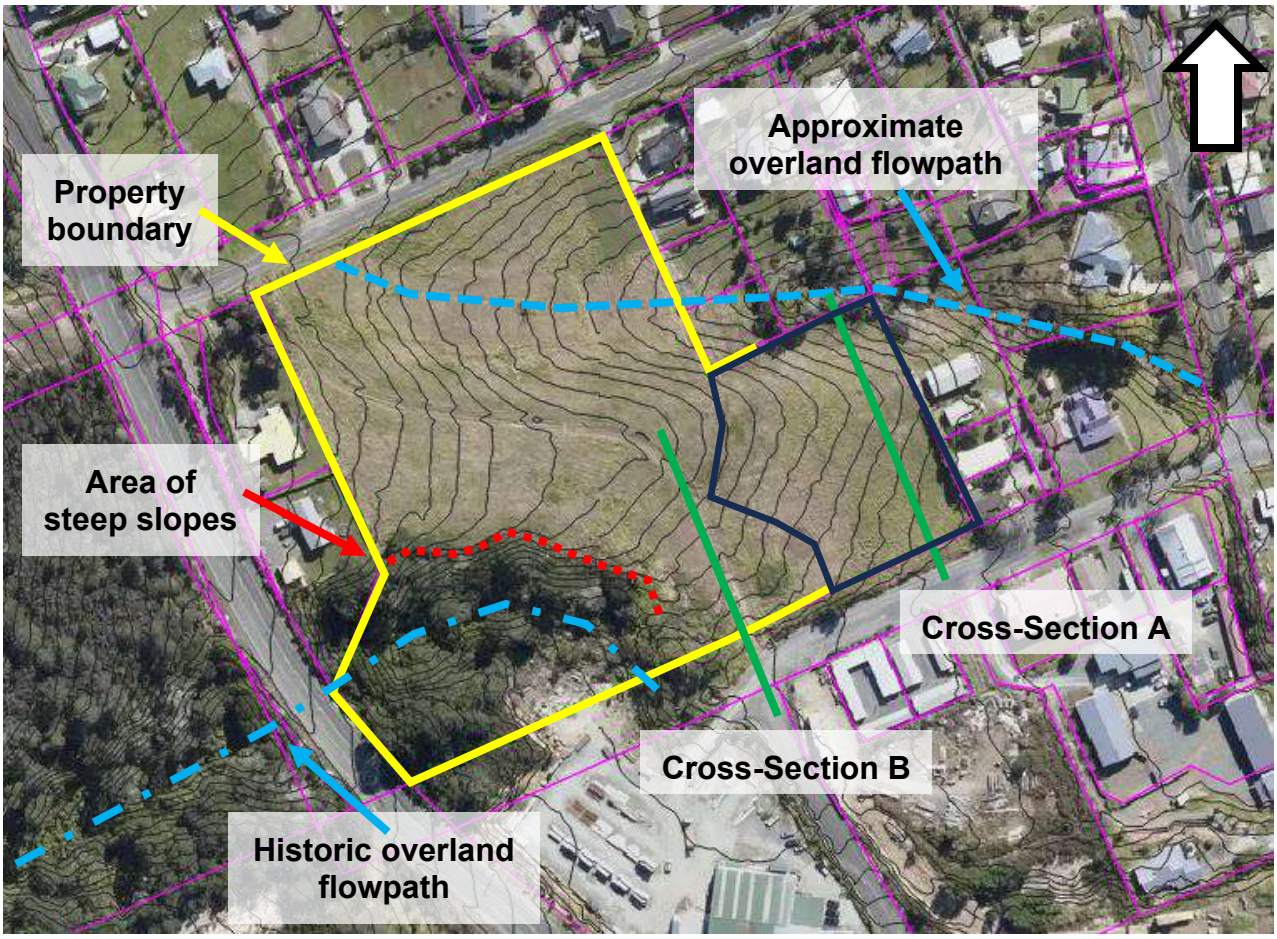

Figure F: Aerial image of the property and its surrounds with contours overlain at 1.0m intervals (source: LINZ Data). The dark blue represents the approximate development area (Lot 1 to Lot 7). The green line represents the location of the slope stability cross-sections undertaken in Section 8.2.

8.2. Numerical Stability Assessment

A numerical slope stability analysis to determine the Factor of Safety (FoS) against sliding for the proposed development has been completed using RocScience Slide2 and the Morgenstern-Price slope model to assess local and global stability. The cross section used for the analysis has been adopted from available LiDAR data., illustrated in Figure D above.

Global stability is defined as the large-scale instability of the site where the critical failure plane intercepts the proposed building sites. Local stability relates to smaller scale slippage of localised steep slopes and earthworks (cut/fill) batters.

The numerical analysis presented in this report was completed, to assess the global and local stability of the proposed development through the nominated building sites.

An analysis has been undertaken for the critical cross-section/s through the nominated building sites. To ensure the parameters and methods used are critical representations, a sensitivity analysis was conducted.

Three load cases / slope conditions have been assessed; these are:

1. Normal groundwater conditions (NGWT),

2. Elevated groundwater conditions (EGWT), and

3. Seismic with normal groundwater conditions (DCLS).

The Mohr-Coulomb (MC) engineering soil parameters of the subsoil conditions were derived from prior experience with Mangonui Formation and UTC basalt soils. No recent or relevant slope movements were evident in observed LiDAR data nor within the GNS published geology, therefore a back analysis was unable to be undertaken. Whilst there are steep slopes in the southwest of the property, these have been formed from many small slope regressions created from undercutting of the historic overland flowpath, and this is not considered appropriate for use as the back analysis.

For an IL2 structure, DCLS level seismic event may be adopted for slope stability assessments to model a minimum seismicity event in areas with a perceived low seismic potential as is recommended within the NZ Bridge Manual (SP/M/022) and has been adopted in standard engineering practice.

The analysis criteria adopted herein is based on engineering best practice. This requires a minimum FoS against sliding of 1.5 to be achieved for normal groundwater conditions, 1.3 for elevated groundwater conditions (undrained), and 1.0 for a DCLS level seismic event.

Soil lithology and depth for the forward analyses have been inferred based on site topography and profiles encountered in the hand auger and DCPTs. The forward analyses were completed for existing and proposed (post-earthworks) slope conditions. The calibrated MC soil parameters used for the analyses are summarised in Table 2 below:

Table 2: Calibrated Mohr-Coulomb Soil Parameters

Soil Description	Soil Unit Weight (γ)	Effective Cohesion (c')	Effective Friction Angle (ϕ')
	kN/m^3	kPa	Degrees
Residual Soil of Mangonui Formation	18	2	24
Completely Weathered Mangonui Formation	19	4	26
Residual Soil of UTC Basalt	18	2	24
Completely to Highly Weathered UTC Basalt	19	4	28
Moderately to Slightly Weathered UTC Basalt	20	8	35

Table 2 Notes:

CW= Completely Weathered HW= Highly Weathered

MW= Moderately Weathered SW= Slightly Weathered

Peak ground acceleration (PGA) and magnitude for this analysis have been adopted from Table A1, Appendix A of the MBIE/NZGS Earthquake Geotechnical Engineering Practice Module 1, 2021. Input parameters for the liquefaction assessment are summarised in Table 3 below:

Table 3: Liquefaction Assessment Input Parameters

Importance Level	Limit State	Probability of Exceedance (per annum)	PGA	Earthquake Magnitude
2	DCLS	Undefined (>1,000)	0.19	6.5

Initial slope modelling was undertaken to ascertain the most appropriate balance of earthworks, drainage, and slope mitigation required for the proposed development; referred to herein as the 'proposed' slope conditions. The proposed building sites have been modelled with a 10kPa surcharge load to represent the potential infrastructure and fill used for the formation of flat building platforms.

These include building sites formed within either excavations or a combination of excavation and fill. Excavations are expected to be no deeper than 1.5m, with fill expected to be no greater than 1.5m thick. Battering of fill is not acceptable and retaining is required

where: fill is greater than 1.0m deep, slopes are greater than 24°, and/or within 2.0m of the proposed building site and/or driveway / accessway / road. Drainage shall be installed to re-route surface water runoff away from ≥24°, the building site accessway, and shall not be disposed to ground immediately downslope of batters or retaining walls.

Groundwater has conservatively been modelled at 2.0m bgl for elevated conditions and at 5.0m bgl for normal conditions. Actual groundwater transmissions (elevated and normal) are likely to be much deeper based on an absence of groundwater transmissions across majority of the property.

Results of our numerical slope stability analyses identify the lowest FoS in relation to the nominated critical building sites and are presented in Table 4 below:

Table 4: Assessed Critical FoS of Different Conditions Under the Proposed Building Sites

Cross-Section	Condition	Existing FoS		Proposed FoS	
		Left to Right	Right to Left	Left to Right	Right to Left
Cross-Section A Lot 1, Lot 2, Lot 4, & Lot 5	Normal Groundwater Transmissions	>2.00	>2.00	>2.00	>2.00
	Elevated Groundwater Transmissions	>2.00	>2.00	>2.00	1.65
	Seismic - DCLS	1.89	1.58	1.33	1.33
Cross-Section B Lot 8	Normal Groundwater Transmissions	>1.50	NA	>1.50	NA
	Elevated Groundwater Transmissions	>1.50	NA	>1.50	NA
	Seismic - DCLS	>1.50	NA	>1.50	NA

Table 4 Notes:

- The FoS presented above have been rounded to the nearest two decimal places.

Results of our numerical stability analyses indicate that the FoS against rotational failure for slopes near and/or beneath the proposed building sites are acceptable subject to adequate drainage, battering of fill and excavations, and retaining where necessary.

Results of the sensitivity analyses indicate that site conditions are sensitive to changes in loads, groundwater depths, and appropriate retaining.

The FoS for the proposed building platform, as described above, are compliant with engineering best practice.

9. Liquefaction Assessment

Liquefaction is a phenomenon where saturated low plasticity soils lose strength due to high pore pressure development during earthquake shaking. This generally occurs in loose to medium dense, cohesionless soils such as sand and other river deposited non-plastic silts, most common in low-lying and coastal areas with associated high groundwater transmissions. Liquefaction of near-surface soils typically results in surface cracking, dislocation, ground deformation, and lateral spreading.

Results of our subsoil investigation found the nominated building sites to be underlain by cohesive silty clays / clay, before transitioning into weathered bedrock, which was inferred from depths of 3.0m bgl. These soils are normally to over consolidated with no significant sands present within any of the hand augered boreholes. These soils are not considered susceptible to liquefaction processes.

Hand augered boreholes, shear vanes, and DCPTs were undertaken in correspondence with a ‘Level B’ calibrated desktop assessment of liquefaction risk, as per the Planning and Engineering Guidance released by EQC, MBIE, and MfE in 2017 (PEG 2017). The assessment was completed to provide a significant reduction in the uncertainty level of liquefaction related risks.

No numerical analysis has been undertaken.

9.1. Lateral Spreading

Lateral spreading normally occurs along an open slope face such as a riverbank or steep coastal slope, where loose, saturated sandy soils are commonly encountered at shallow depths. The effect of lateral spreading generally decreases with increased distance from the slope face.

The subject property is gently sloping, with the nominated building sites to be situated over flat building platforms that are to be excavated into existing slopes, using fill to level the building sites as necessary. No evidence of loose to medium dense sand was encountered, therefore the property is considered highly unlikely to be at risk of lateral spreading.

10. Static Settlement

Consolidation settlement is the process of excess porewater pressure dissipation, whereby when a load is applied to a soil structure, the load is initially taken up by the porewater pressure and gradually transferred to the soil structure. This process results in the consolidation of the soil structure over time, referred to as ‘primary consolidation settlement’.

Creep settlement occurs over an extensive period and is the re-adjustment of soil particles under constant load, generally commencing once all excess pore water pressure dissipates (at the end of consolidation settlement), referred to as ‘secondary settlement’.

The nominated building sites are typically underlain by silty clay / clay, these soils are typically very stiff to hard and normally to over-consolidated, with low susceptibility to consolidation under load, such as the proposed infrastructure and potential fill.

11. Stormwater

To comply with the requirements of the Far North District Plan, management of stormwater run-off from the development will be required to ensure that flows discharging from the development do not exceed pre-development levels, and downstream properties are not adversely affected as a result. The proposed stormwater management design is generally in accordance with the requirements of Far North District Council Engineering Standards 2023.

The proposed development will consist of 6 residential lots, right of way, and road to vest. The proposed ROW will require attenuation in addition to any attenuation required for impervious areas created on the lots. However, the stormwater runoff from the road to vest is proposed to discharge directly to the existing council's reticulation along Karamea Road.

It is considered appropriate that a specific design of attenuation and the installation be carried out for proposed impervious surfaces within the lots at the building consent stage. We have however designed an example solution for a lot assuming an impervious coverage of 325m² per lot, and site-specific design for the ROW based on attenuation of the post-development peak flow to 80% of the pre-development rates**.**

The stormwater management design for the lot includes an attenuation storage using a 12.5m^3 tank for the roof area while flows from the associated driveway or parking area are managed through a granular storage zone. The proposed design for the right-of-way (ROW) incorporates granular storage zone for stormwater attenuation. Stormwater runoff from the proposed road will be discharged directly into the existing roadside drain located to the north of Karamea Road, as the drain has sufficient capacity to accommodate the additional flow. However, the drain is currently obstructed by vegetation, and its capacity must be restored by clearing the overgrowth.

The storage elements have been designed to address the runoff generated by a 50% AEP (2-year ARI) 20% (5-year ARI) and a 1% AEP (100-year ARI) storm event with an allowance of 20% for climate change.

The site has been modelled in HydroCAD using SCS-TR20 methodology and a Type 1A storm profile for pre- and post-development using rainfall data from HIRDS V4.

11.1. ROW Attenuation

The design is based on using a granular storage zone to collect and store stormwater runoff generated by the proposed ROW areas with the overflows piped to the proposed stormwater reticulation along eastern property boundary.

11.1.1. Pre-Development

The pre-development form has been defined as 100m² of grass with a CN of 80 with hydrologic soil type D.

The pre-development runoff rates were defined by applying a 50% AEP, 20% AEP and a 1% AEP storm event established from HIRDS v4 and then limiting peak flow to 80%. The resulting pre-development peak flow is calculated as 0.2ℓ/sec for the 50% AEP storm event, 0.4ℓ/sec for the 20% AEP storm event and 0.9ℓ/sec for the 1% AEP storm event. These are used as the upper limits for controlled runoff post-development peak flows.

11.1.2. Post-Development

The ROW has been modelled with a total impervious area of 100m². All runoff from the ROW is to be captured via site reticulation to a granular storage zone 24m² x 0.5m in depth, with overflows to the proposed stormwater reticulation along eastern boundary.

The post-development peak flow from the granular storage zone area is calculated as 0.2ℓ/sec for a 50% AEP storm event including climate change allowance,0.4ℓ/sec for a 20% AEP storm event including climate change allowance and as 0.9ℓ/sec for a 1% AEP storm event including climate change allowance. Refer to the attached Sheet C03 for discharge control details.

11.2. Lot Attenuation

The example design for the lot is based on attenuation storage using a 12.5m³ water tank to collect stormwater runoff from the dwelling roof, with a proposed impervious coverage of 200m². The 125m² driveway will be managed using a suitable granular storage zone to promote infiltration and controlled discharge.

11.2.1. Pre-Development

Currently, the site is grassed. The soil has been assessed as hydrologic soil group D and as a result, a CN of 80 has been used. The pre-development form has been defined as 325 m² of pasture area (for a lot).

The pre-development runoff rates were defined by applying a 50% AEP, 20%AEP and a 1% AEP storm event established from HIRDS v4 and then limiting peak flow to 80%. The resulting pre-development peak flow for a lot is calculated as 0.7ℓ/sec for the 50% AEP storm

event,1.2ℓ/sec for the 20% AEP storm event and 2.9 ℓ/sec for the 1% AEP. These are used as the upper limits for controlled runoff post-development peak flows.

11.2.2. Post-Development

The lot has been modelled with a total impervious area of 325m², allowing for a roof area of 200m² and a driveway area of 125m². All roof downpipes are to discharge to the attenuation tank and runoff from the driveway is allowed to discharge to granular storage of size 60m^2 x0.3m.

The peak flow from the lot has been calculated as 0.6 ℓ/sec for a 50% AEP storm event with a 20% allowance for climate change, 1.2 ℓ/sec for a 20% AEP storm event with a 20% allowance for climate change, and 2.7 ℓ/sec for a 1% AEP storm event with a 20% allowance for climate change. Refer to the attached Sheet C02 for details of the attenuation tank discharge control and Sheet C03 for granular storage zone details and outlet controls.

The attenuated stormwater runoff from Lots 1-3 will be directed to the proposed stormwater reticulation along the eastern boundary. Meanwhile, the attenuated stormwater discharges from Lots 4 and 5 will discharge into the existing swale just outside the northeastern boundary (relying on natural servitude) and the attenuated stormwater runoff from Lot 6 will be directed to the proposed stormwater reticulation along the road.

The effective catchment area for the existing swale is limited to the proposed boundaries of Lots 4–6 within the development footprint. While Lot 6 will discharge independently into the reticulated network along the road to vest, the attenuated flows from Lots 4 and 5 will be directed to the swale.

There is no development potential downstream of the discharge points from the lots and the existing swale beyond the northeastern boundary. As such, the proposed discharge arrangement is considered appropriate.

11.3. Road to vest

The proposed road to vest with the total impervious area coverage of approximately 500m², will generate peak stormwater flow of 4.8 ℓ/sec for a 20% AEP storm event including climate change allowance and 8.7 ℓ/sec for a 1% AEP storm event including climate change allowance.

Stormwater runoff from the road is proposed to be discharged to the existing roadside drain located to the north of Karamea Road, with an estimated capacity of 1.4m^3/s (constrained by several driveway crossings culverts with an estimated capacity of 0.32 cumecs). The total upstream catchment contributing to this roadside drain is estimated at approximately 2.2ha generating peak flow of 0.18 cumecs during a 20% AEP storm event including climate change allowance and 0.35 cumecs during a 1% AEP storm event including climate change.

Even if the culvert capacity is exceeded, stormwater flows are expected to remain well contained within the roadside drain, without causing flooding issues to any adjacent properties. The additional runoff from the proposed road will remain within the available capacity of the roadside drain under both storm scenarios; therefore, attenuation measures are not considered

necessary. However, the existing drain is currently obstructed by vegetation, and its capacity must be restored by clearing the overgrowth.

11.4. Stormwater Infrastructure to Be Constructed as Part of Development Stages

Refer to Figures 3A and Figure 3B for details of the stormwater infrastructure to be constructed as part of Stages 1 & 2 of the subdivision. Based on review of Council property files, it is understood that proposed Lot 2 has access to the existing council vested stormwater reticulated network (600mm diameter pipe) across Lot 2, which is shown as an open drain in the FNDC GIS. The exact location of the connection will be confirmed once the development arrangement is known (at the BC stage). Proposed stormwater connections for all other lots are also illustrated in Figures 3A and 3B.

12. Traffic Assessment

All residential lots will be accessed from the proposed road to vest off Karamea Road. Karamea road is a dead-end road with no direct linkage to SH10 containing few industrial sites. The proposed access is from Karamea Road, an access road shown on Mobile Road as having a width of 5.3m and an estimated AADT (Annual Average Daily Traffic) load of 306vpd (vehicles per day), with 6% heavy traffic component. However, this AADT estimate appears to be on the lower side. Referencing the traffic intensity factor from Appendix 3A of Far North District Plan, the traffic intensity factor for Building supply outlet is 10 per 100m^2 GBA (Gross Business Area). The estimated AADT for Mangonui ITM, located at the end of Karamea Road is approximately 600vpd (using a GBA of 6000m^2). Allowing additional 150 vehicle movements associated with residential properties and other retail businesses along Karamea Road, the total AADT equates to 750vpd.

As per section 7.6.5.1.2 of the Far North District Plan, the maximum permitted density is 1 residential unit per 600m^2 for sewered sites. The proposed subdivision will create 6 residential lots and considering the potential for further subdivision of the balance lot (2.34ha), the maximum permitted density is estimated at 29 lots for the net lot area. Assuming a traffic generation of 8 vehicles per day (vpd) per lot, the proposal (including further subdivision potential of the balance lot) will result in a traffic generation rate of 232vpd.

The increase in traffic movements along Karamea Road due to the proposed development is 31% (using estimated AADT of 750), resulting in a total AADT of 982, but within the capacity of an access road. As per NZTA One Network Road Functional Classification summary, an urban access road can handle up to 1000 AADT.

Therefore, the effect on the roading network as a result of the traffic generation from the development is considered to be less than minor.

12.1. Sight Distance

For Karamea Road, which is classified as an access road with a posted speed limit of 50km/hr, the required sight distance as per Sheet 4 of FNDC ES is 60m. The sight distance to the east and west exceeds 100m and therefore meets the minimum sight distance requirement.

12.2. Road width

In considering vested road widths within the proposed subdivision for an access road, the default requirements of Table 3.2 of Far North District Council Engineering Standards 2023 are for a carriageway width at 10.5m. The constituents for this include two main 3.0m traffic lanes and two 2.25m wide on-site parking lanes.

Given the lot sizes are 600m^2 or more, on-site parking lanes along the road corridor are unnecessary, as the lots themselves can accommodate sufficient parking. The proposal is to provide two 3.5m wide traffic lanes, with a total carriageway width of 7m and legal width of 20m without the footpath provision as Karamea Road currently lacks a footpath.

The perception of narrower, clearly delineated but visually constraining travel lanes in residential subdivisions can foster a greater sense of awareness among drivers, result in naturally slower driving speeds and an associated improved ability to stop, while maintaining compliant visibility requirements for the road standard.

The reduced width also results in a reduction of impervious area associated with the roading network.

Therefore, we consider 7m wide carriageway is the appropriate provision for this development.

12.3. Vehicle crossings

Refer to Figure 7 for the location of the vehicle crossing to Lot 1. The proposed Lot 2 in Stage 1 has legal access to Melody Lane, however, the exact location of the vehicle crossing will be confirmed once the lot development arrangement is known (at the time of BC). The same approach will apply to the lots in Stage 2 except for the ROW, with crossing locations to be determined during the BC stage for Lots 1-3 and 6.

13. Servicing

13.1. Wastewater

The proposed development will be connected to the FNDC vested sewer gravity main across Karamea Road via a proposed sewer manhole. This connection will be established in accordance with the relevant requirements of the FNDC ES.

In terms of wastewater flow generation, using a wastewater flow allowance of 200litres/person/day as per Table 5-1 of FNDC ES 2023 and assuming a 4-person household, the wastewater flow generation per lot is 800litres/day. For 29 lots, which includes the further subdivision of the balance lot to the maximum potential, the peak flow generation is 1.3litres/sec using a peaking factor of 5.

The hydraulic capacity of a 100mm diameter sewer is estimated at approximately 6litres/sec and therefore the development flows are well-within the capacity of a 100mm diameter sewer.

However, in order to comply with the minimum pipe size requirements in Table 5-8 of the FNDC ES, a minimum diameter of 150mm is required for new gravity sewer mains.

An alternative option to connect to the existing sewer manhole in front of 9A Karamea Road was considered. However, this manhole currently connects to a 100mm diameter sewer main, which does not meet the FNDC ES minimum pipe size requirement. Upgrading this section to a 150mm diameter pipe would be necessary but would involve earthworks within the road carriageway. To avoid such disruptions, this option has not been considered further.

13.1.1. Sewer Infrastructure to Be Constructed as Part of Development Stages

Refer to Figures 6A and 6B for details of the sewer infrastructure to be constructed as part of Stages 1 and 2 of the subdivision, including proposed connections to all lots. For Stage 2, a rising main is proposed along the right of way, which will transition into a gravity main at a satellite manhole to connect to the existing councils reticulated sewer network.

13.2. Potable Water and Firefighting

The potable water and firefighting requirements for Stage 1 of the subdivision will be met through the installation of rainwater harvesting tanks. A consent notice will be registered on the titles of Lots 1 and 2, requiring the installation of these tanks at the building consent stage.

For Stage 2, the potable water supply will be provided via connection to the Doubtless Bay water supply network, which has confirmed sufficient capacity to service the proposed lots.

The fire-fighting requirements of the stage 2 of the subdivision cannot be met by connecting to Doubtless Bay water supply network and therefore a tank cluster (2*25m^3 tanks) is proposed within the road shoulder within 135m from all lots.

The fire-fighting tanks is proposed to vest to Doubtless Bay water company in conjunction with their proposed water supply network.

14. Recommendations and Conclusions

14.1. Liquefaction

Results of our subsoil investigation found the property underlain by cohesive soils, comprising silty clay / clay overlying normally to over consolidated, weathered bedrock belonging to UTC basalt.

A ‘Level B’ liquefaction assessment was completed to reduce the uncertainty of liquefaction related risks. Ground damage induced by an earthquake or similar shaking has a >85% likelihood of not occurring at this site. Winter groundwater levels are approximated to be no shallower than 3.0m deep based on an absence of soil evidence, however, are expected to be much deeper.

Results of the assessment undertaken in this report indicate that the areas where the building sites are proposed to be situated are considered highly unlikely to liquefy during a DCLS level seismic event or smaller. Surface manifestation of liquefaction surficial damage is considered highly unlikely to occur beneath the building sites during a DCLS level seismic event or smaller. Catastrophic failure of the infrastructure during a DCLS level seismic event or smaller would be extremely unlikely to occur.

This site is considered to have a very low liquefaction vulnerability in areas that underwent a subsoil investigation and is unlikely to occur in all other areas as established from PEG 2017.

14.2. Stability

Slopes over the property range between planar to steep slopes (up to 32°), with slopes beneath the proposed building sites typically gently sloping (7°). Steep slopes are present in localised areas in the southwest of the property situated no less than 20m from the proposed building sites.

Locally, steep slopes are assessed to be the result of a historic overland flowpath causing erosion, over steepening, and slippage. These slopes are currently heavily vegetated and show minimal signs of continual / active movement. Terracettes were not observed over the property and are likely to form at gradients greater than 24° (1V:2.25H) based on nearby geomorphology and experience with the encountered soils.

The building sites are likely to be formed via excavations or cut to fill, with neither excavations nor fill exceeding 1.5m. Battering of excavations and fill is appropriate over the property where less than 2.0m deep. Retaining walls are required to support the proposed excavations and to support the fill where battering is not considered appropriate. The fill shall be benched into the underlying soils with appropriate drainage installed.

Development within the wider property (Lot 10) outside of the southeast area shall maintain a minimum 20m setback from the steep slopes, unless subject to specific engineering design.

Access to the proposed development's building sites shall be via a new road off Karamea Road which is likely to be formed via cut / fill. Minor earthworks will be required for the formation of the road and subsequent accessway and driveways at appropriate grades, with fill and excavations not exceeding depths at 1.0m.

Stormwater management shall not rely on soakage due to the presence of clays and shall be appropriately diverted away from slopes greater than 24° (batters, excavations, or natural slopes).

14.3. Static Settlement

Results of our subsoil investigation indicate that the property is typically underlain by normally to over-consolidated Mangonui Formation and UTC basalt residual soils and rock. We do not consider the property subject to settlement.

14.4. Earthworks

The total volume of earthworks associated with stage 2 of the subdivision (road to vest and drainage services) is estimated to be approximately 900m^3. There may be additional earthworks associated with each house site subsequently depending on the form of the development. The proposed earthworks management approach will be designed to comply with the requirements of GD05 for the control of sediment-laden runoff generated during site works.

All areas to be filled and /or found over must be stripped of topsoil prior to filling. Clean topsoil may be used for the formation of lawns and gardens or shall be removed from site.

Based on the results of our subsoil investigation and our experience with similar soils, we consider clean, cohesive site excavated soils appropriate for use as 'site-won' engineered fill. All excess site-won material shall be removed from the property in a controlled manner.

Where fill beneath building sites and the road is required, it shall be clean (topsoil free) site-won material or imported materially approved by a geotechnical professional familiar with this report. All batters completed over the property shall be covered in topsoil, coconut matting and planted to prevent weathering / erosion of exposed soils.

All infrastructure shall be setback a minimum 2.0m from batters (batter head or batter toe) unless specific engineering design has been undertaken. Where a setback less than 2.0m is desired and a batter is unable to achieve the appropriate Factor of Safety, retaining will be required. Where fill or excavations are to be less than 1.0m high, battering may be at 1V:1H (45°).

Driveways to each building site may require fill placed to meet the proposed shared accessway elevation. This fill will be up to 1.5m high to form an appropriate driveway gradient. The fill shall be battered appropriately at 24° (1V:2.25H) or retained. If retaining walls are required to support the road, they shall consider a 12.5kPa surcharge load during their design to account for heavy vehicle movements.

All retaining walls for the excavations and fill shall be subject to specific engineered design completed at the Building Consent stage and approved by a suitably qualified engineer (i.e., CPEng geotechnical and/or structural engineer).

All earthworks undertaken over the property shall be completed in general accordance with NZS 4431:2022 and shall be subject to engineering specification and supervision.

14.5. Fill Specification

Testing of cohesive fill shall be performed at 500mm fill depth intervals with a minimum of two tests per 1,000m^2 of placed fill. All cohesive filling over the site will be subject to engineer monitoring and Nuclear Densometer (NDM) testing, to the following engineering specification:

- Strip all unsuitable topsoil from beneath the area to be filled, extending a minimum 2.0m from the edge of the proposed filling perimeter.

- Average undrained shear strengths as measured with a handheld shear vane shall average 170kPa with no single value less than 150kPa, and

- Air voids measured by the NDM testing and following water content correction testing, the results shall average no greater than 8%, with no single value greater than 10%.

Alternatively, the site may be brought to the design level by placing compacted engineered non-cohesive gravel (GAP40 or similar). This fill shall adhere to the following specification:

- Strip all unsuitable topsoil from beneath the fill area, extending a minimum 2.0m from the edge of the proposed filling perimeter.

- Gravel fill shall be placed at nominal uncompacted thicknesses of no greater than 150mm and be compacted to achieve a Clegg Impact Value (CIV) of not less than 20.

- Testing of compacted fill shall be undertaken at nominal 500mm lifts.

Appropriate compaction equipment and methodology shall be adopted to achieve the desired level of compaction for any material used. All areas to be filled must be stripped of topsoil prior to filling.

14.6. Building Site Suitability

Results of our subsoil investigation indicate that the site is underlain by residual soils and weathered rock of the Mangonui Formation and UTC basalt. Undrained shear strengths of the residual soils measured typically greater than 180kPa, with an ultimate geotechnical bearing capacity of 300kPa. These soils are not considered suitable for NZS 3604 type foundations as the encountered cohesive soils are likely highly expansive and susceptible to expansivity processes.

At the specific design of any future development, the geo-professional engaged by the subsequent landowner shall undertake an appropriate assessment of the ground conditions to ascertain the classification of soil expansivity. This may be undertaken in accordance with Clause 7.5.13.1 “Identification of Expansive Soils” outlined in the NZ Building Code B1/As1 (Amd 19).

Subject to the above, the site is considered suitable for residential development found over either shallow timber pile foundations or a shallow concrete pad, such as a waffle raft or a conventional concrete slab. Foundations will likely require specific engineering design and shall be determined during the site specific Building Consent investigation.

14.7. Stormwater

The example stormwater management design for the proposed lots and the ROW as outlined above and on the attached calculations and figures, meets the requirements of the FNDC ES 2023 in terms of stormwater attenuation and disposal of post-development peak flows. Specific design and installation of lot attenuation should be carried out at the building consent stage.

14.8. Traffic

The effect on the roading network as a result of the traffic generation from the development is considered to be less than minor.

14.9. Resource Management Act (RMA) – Section 106(1)

Based on our findings and subject to our recommendations on stability and building site suitability for each of the proposed lots and nominated building sites, the risk of future instability affecting the property is low, and in terms of Section 106(1) of the RMA:

a) the land in respect of which a consent is sought, or any structure on the land, is not, and is not likely to be, subject to material damage by slippage, or subsidence from any source,
b) repealed; and
c) that sufficient provision has been made for stable physical access to each allotment to be created by the subdivision.

15. Limitation

Recommendations and opinions in this report are based on data from the investigation described herein. The nature and continuity of subsoil conditions away from the boreholes is inferred and it is possible that actual conditions could vary from those assumed. Should subsoil conditions vary from those described in this report, it is essential that Hawthorn Geddes engineers and architects ltd be contacted to confirm the applicability of the recommendations.

This report has been prepared solely for the benefit of our client Max Beckham and the Far North District Council in relation to the resource consent application for which this report has been prepared.

The comments in it are limited to the purpose stated in this report. No liability is accepted by Hawthorn Geddes engineers & architects ltd in respect of its use by any other person, and any other person who relies upon any matter contained in this report does so entirely at their own risk.

Appendix A. Figures

LEGEND

HA — Hand Auger Locations

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A Fig02

A Fig02

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CLIENT **MAX BECKHAM**

PROJECT **SUBDIVISION SUITABILITY**
11 KARAMEA ROAD, MANGONUI

DRAWING **GEOTECHINCAL SITE PLAN**

SCALE @ A3 1:1000

PROJECT No. **13301**

FIGURE No. **01**

REV. **-**

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LEGEND

- Residual Mangonui Formation Soil
- Completely Weathered Mangonui Formation
- Completely to Highly Weathered Undifferentiated Tangihua Complex Basalt
- Moderately to Slightly Weathered Undifferentiated Tangihua Complex Basalt

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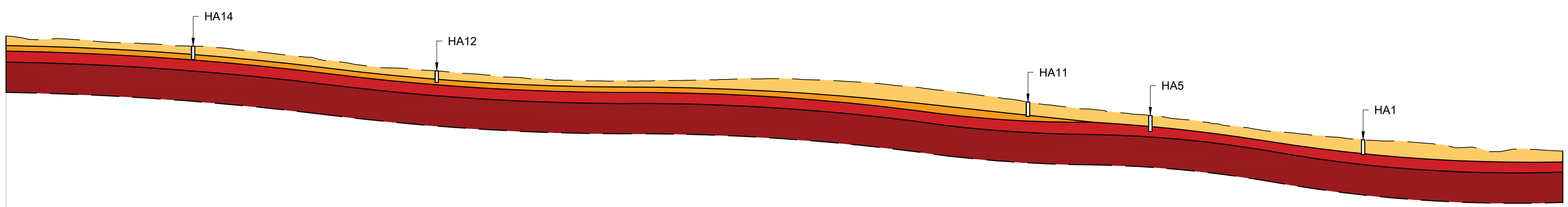

DATUM: 0.00

CHAINAGE	EXISTING LEVELS
0	41.34
5	40.70
10	40.86
15	40.54
20	40.16
25	39.97
30	39.60
35	39.49
40	39.13
45	38.54
50	37.99
55	37.49
60	36.73
65	36.00
70	35.56
75	35.21
80	34.87
85	34.48
90	33.92
95	33.62
100	33.32
105	33.22
110	33.17
115	33.18
120	33.26
125	33.34
130	33.47
135	33.60
140	33.61
145	33.44
150	33.29
155	32.98
160	32.56
165	32.07
170	31.50
175	30.86
180	30.21
185	29.48
190	28.79
195	28.15
200	27.65
205	27.16
210	26.71
215	26.09
220	25.42
225	24.75
230	24.04
235	23.61
240	23.07
245	22.63
250	22.32
255	22.12
260	21.65
265	21.13
270	20.37
275	20.84
280	20.59
283	20.49

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PROJECT **SUBDIVISION SUITABILITY**

11 KARAMEA ROAD, MANGONUI

DRAWING **GEOLOGICAL CROSS SECTION A-A**

SCALE @ A3: 1:1000

PROJECT No. **13301**

FIGURE No. **02**

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LEGEND

- SW reticulation
- ex SW reticulation
- Swale
- SWMH
- SW Culvert

Ex 600mmØ concrete culvert

Ex SWMH

Ex SWMH

Ex 600mmØ concrete culvert

Ex SWMH

Ex Grated SWMH

Ex Scruffy Dome SWMH

Ex 150mmØ uPVC SW culvert

Drainage Easement

Lot 1
0.54Ha

Lot 2
2.27Ha

150mmØ culvert

Existing culvert under accessway to be removed and drain reinstated

300mmØ culvert under new accessway to FNDC standards

Road Apron (Stage 1)

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PROJECT **SUBDIVISION SUITABILITY**
11 KARAMEA ROAD, MANGONUI

DRAWING **STORMWATER SITE PLAN - STAGE 1**

SCALE @ A3 1:1000

PROJECT No. **13301**

FIGURE No. **03**

REV. **2**

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NOTE:
Roadside swale drain along southern property boundary is to be cleared

LEGEND

- SW — SW reticulation
- SW — ex SW reticulation
- Swale
- SWMH
- SW Culvert

Ex 600mmØ concrete culvert
Ex SWMH
Ex 600mmØ concrete culvert
Ex SWMH
Ex Grated SWMH
Ex Scruffy Dome SWMH
Ex 150mmØ uPVC SW culvert
Lot 5 is to connect to existing swale drain through easement in lot 4
Lots 4 & 5 to connect to existing swale drain just outside of lot boundary
Graunular storage zone for driveway (24.0m² x 0.5m deep) Refer to Fig 05 for detail
Lot 4 753m²
Lot 5 611m²
Lot 6 616m²
Lot 3 723m²
Lot 2 647m²
Lot 1 654m²
Lot 7 1453m²
Road to vest (20m wide)
Drainage Easement
Lot 2 DP*** (Stage 2)
Manhole for connection to future developement
Temporary Metal Turning Head
Proposed 150mmØ @ 1% min gradient for lots 1,2 & 3
? Proposed 300mmØ @1%min gradient for lot 6
Proposed headwall outlet
Road Apron (Stage 1)

THIS FIGURE IS TO BE READ ONLY IN CONJUNCTION WITH ASSOCIATED REPORT

USE WRITTEN DIMENSIONS. DO NOT SCALE FROM DRAWING.

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CLIENT: MAX BECKHAM
PROJECT: SUBDIVISION SUITABILITY
11 KARAMEA ROAD, MANGONUI
DRAWING: STORMWATER SITE PLAN - STAGE 2

SCALE @ A3: 1:1000
PROJECT No.: 13301
FIGURE No.: 03A
REV.: 1

4/08/2025 1:32:03 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

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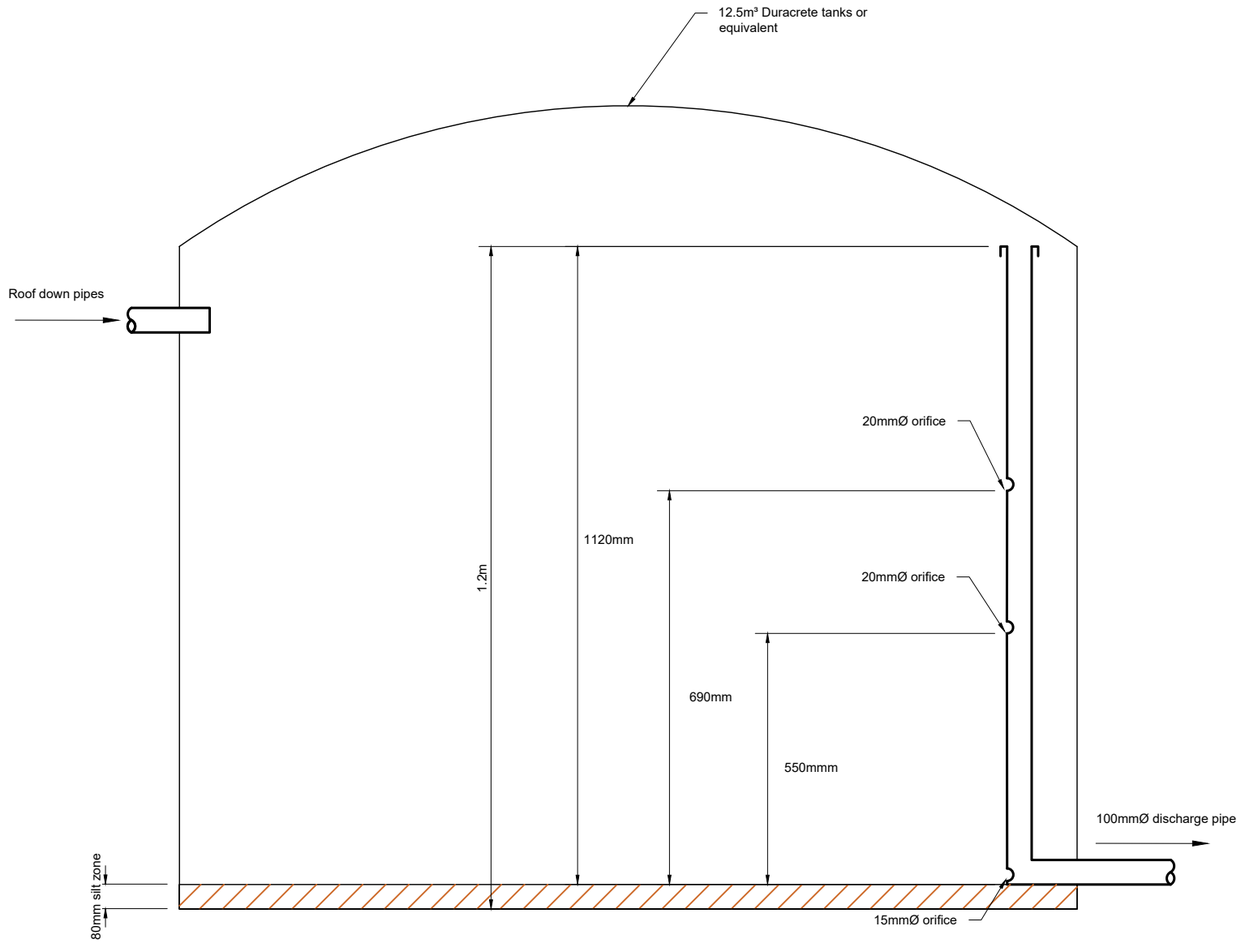

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CLIENT MAX BECKHAM

PROJECT SUBDIVISION SUITABILITY
11 KARAMEA ROAD, MANGONUI

DRAWING ATTENUATION TANK DETAIL

SCALE @ A3 1:1000

PROJECT No. 13301

FIGURE No. 04

REV. -

17/06/2025 3:06:54 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

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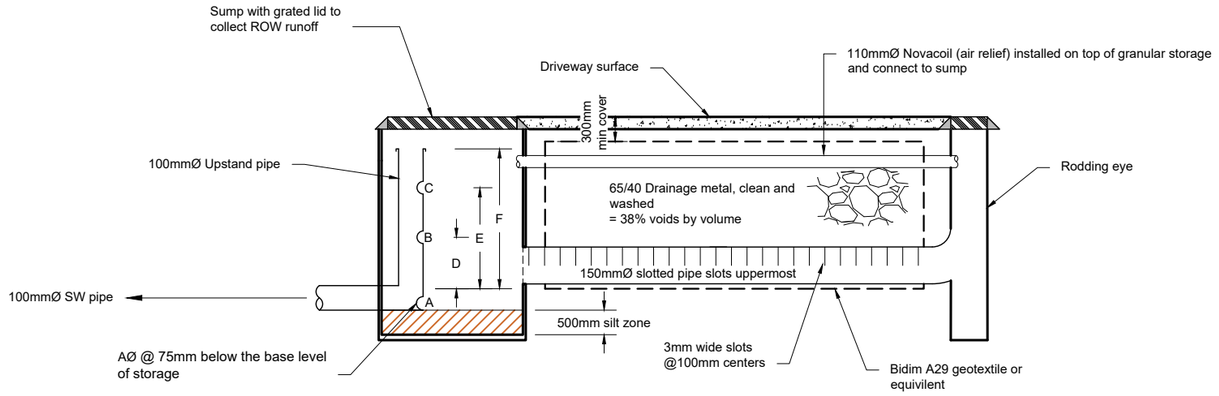
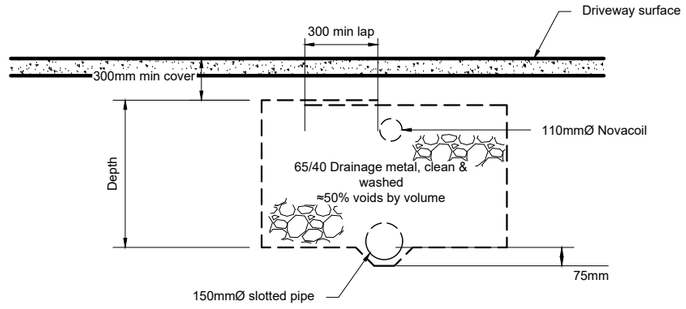


	Orifice diameter (mm)			Height of Orifice (mm)			Area	Depth
	A	B	C	D	E	F		
Right Of Way (Lots 4 & 5)	15	20	15	235	300	495	24m²	0.5m
Private Driveway (Individual)	20	25	15	125	160	275	60m²	0.3m



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CLIENT: MAX BECKHAM
PROJECT: SUBDIVISION SUITABILITY
11 KARAMEA ROAD, MANGONUI
DRAWING: STORAGE ZONE DETAIL

SCALE @ A3: 1:1000
PROJECT No.: 13301
FIGURE No.: 05
REV.: -

17/06/2025 3:06:59 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

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LEGEND

- SS — SS reticulation
- SS — ex SS reticulation
- SSMH

N

Rodding eye

Ex 100mmØ uPVC SS gravity main

Ex SSMH

Ex SSMH

Ex SSMH

Lot 1
0.54Ha

Lot 2
2.27Ha

New sewer manhole
to connect onto
existing sewer line

New 150mmØ
uPVC sewer main

New sewer manhole

New sewer manhole

Road Apron
(Stage 1)

THIS FIGURE IS TO BE READ ONLY IN CONJUNCTION WITH ASSOCIATED REPORT

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CLIENT **MAX BECKHAM**

PROJECT **SUBDIVISION SUITABILITY**
11 KARAMEA ROAD, MANGONUI

DRAWING **SEWER SITE PLAN - STAGE 1**

SCALE @ A3 1:1000

PROJECT No. **13301**

FIGURE No. **06**

REV. **2**

4/08/2025 1:33:54 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

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ALL INFORMATION MUST BE CONFIRMED ON SITE.

THIS DRAWING WAS PRODUCED IN COLOUR. DO NOT USE FOR CONSTRUCTION PURPOSES IF THIS NOTE IS IN BLACK & WHITE

LEGEND

- SS — SS reticulation
- SS — ex SS reticulation
- SSMH
- BK — Boundary Kit

Rodding eye
Ex 100mmØ uPVC SS gravity main
Ex SSMH
Ex SSMH
Ex SSMH
Lot 4 753m²
Lot 5 611m²
Lot 6 616m²
New 40mmØ rising main
Satellite MH
Vested to Council
Private
Lot 3 723m²
Temporary Metal Turning Head
Lot 2 DP*** (Stage 2)
Lot 2 647m²
Lot 7 1453m²
Road to vest (20m wide)
Lot 1 654m²
New 150mmØ uPVC sewer main
Road Apron (Stage 1)

THIS FIGURE IS TO BE READ ONLY IN CONJUNCTION WITH ASSOCIATED REPORT

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CLIENT **MAX BECKHAM**
PROJECT **SUBDIVISION SUITABILITY**
11 KARAMEA ROAD, MANGONUI
DRAWING **SEWER SITE PLAN - STAGE 2**

SCALE @ A3 1:1000
PROJECT No. **13301**
FIGURE No. **06A**
REV. **1**

4/08/2025 1:37:25 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

NOTE:
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N

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NOTE:
The legal status of the land housing the fire fighting tanks is to be confirmed with FNDC in consultation with the client.

Lot 4
753m²

Lot 5
611m²

Lot 6
616m²

Lot 3
723m²

Lot 2
647m²

Lot 7
1453m²

Lot 1
654m²

Temporary Metal
Turning Head

Lot 2 DP***
(Stage 2)

2 x 25m³
Fire fighting tanks

Road
to vest
(20m wide)

water pipe connection

To connect to
Doubtless Bay Water Control
network

Road Apron
(Stage 1)

THIS FIGURE IS TO BE READ ONLY IN CONJUNCTION WITH ASSOCIATED REPORT

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CLIENT **MAX BECKHAM**

PROJECT **SUBDIVISION SUITABILITY**
11 KARAMEA ROAD, MANGONUI

DRAWING **FIRE FIGHTING AND ACCESS**

SCALE @ A3 1:1000

PROJECT No. **13301**

FIGURE No. **07**

REV. **2**

4/08/2025 1:32:09 PM K:\13301 Beckham - Subdivision Suitability - 26 Melody Lane, Mangonui\13301 250617.dwg

Appendix B. Borehole Logs

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA01

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24 **COORDINATES** 1648590.22E, 6127319.31N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.		
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; light grey and golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)		0.800		
1		SV = 181 / 42 kPa (Geo 3928)		CLAY, with some silt; yellowish brown and grey. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 170 / 77 kPa (Geo 3928)				
		SV = 181 / 67 kPa (Geo 3928)				
		SV = 164 / 56 kPa (Geo 3928)				
2		SV = 195+ kPa (Geo 3928)		2.2m: With trace gravel; red. Wet; gravel, fine to medium, angular to subangular.		
		SV = 195+ kPa (Geo 3928)		2.5m: Saturated.	17/12/2024	
				2.700 EOH: 2.70m		
	7	SV = 195+ kPa (Geo 3928)		2.7m: EOH: Target depth achieved.		
	4					
3	6					
	9					
	10					
	11					
	11					
	13					
	17					
	17					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks
17/12/2024 12:00:00 p.m.	2.500	Inflow	

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA02

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24 **COORDINATES** 1648564.04E, 6127314.09N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
			TS	0.100 TOPSOIL; dark brown.		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
1		SV = 195+ kPa (Geo 3928)		1.000		
		SV = 178 / 63 kPa (Geo 3928)		CLAY, with some silt; light grey and light brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
				1.4m: With minor silt.		
		SV = 118 / 56 kPa (Geo 3928)				
		SV = 184 / 89 kPa (Geo 3928)				
2		SV = 181 / 98 kPa (Geo 3928)		2.2m: With minor silt; red and brown.		
		SV = 195+ kPa (Geo 3928)		2.600 EOH: 2.60m		
				2.6m: EOH: Target Depth Achieved.		
3						

Groundwater Not Encountered

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA03

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24 **COORDINATES** 1648541.84E, 6127307.63N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 187 / 44 kPa (GEO287)		CLAY, with some silt, with trace rootlets; brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 221+ kPa (GEO287)				
		SV = 148 / 56 kPa (Geo 3928)		1.000		
1				CLAY; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = UTP (GEO287)				
				1.400 EOH: 1.40m		
				1.4m: EOH: Unable to Penetrate.		
2						
3						

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA04

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24 **COORDINATES** 1648531.30E, 6127325.72N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
1		SV = 195+ kPa (Geo 3928)		1.1m: Grey and brown.		
				1.200		
		SV = 167 / 49 kPa (Geo 3928)		CLAY, with minor silt; light grey and brown mottled orange. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
				1.700		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; dark red . Very stiff; high plasticity; moist; Residual Undifferentiated Tagihua Complex Soil.		
				2.000		
2	11			EOH: 2.00m		
	6			2.0m: EOH: Unable to Penetrate		
	4					
	6					
	7					
	8					
	11					
	12					
	11					
	13					
3	15					
	20					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA05

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24
COORDINATES 1648554.83E, 6127330.71N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY, with trace rootlets; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
1		SV = 167 / 84 kPa (Geo 3928)				
		SV = 181 / 70 kPa (Geo 3928)		1.1m: Light grey mottled orange.		
		SV = 167 / 70 kPa (Geo 3928)				
		SV = 195+ kPa (Geo 3928)				
				2.000		
2		SV = 195+ kPa (Geo 3928)		CLAY; dark red. Very stiff; high plasticity; moist; Completely Weathered Undifferentiated Tangihua Complex.		
		SV = 195+ kPa (Geo 3928)				
				2.6m: Light blue with red staining.		
		SV = 153 / 42 kPa (Geo 3928)				
				2.900 EOH: 2.90m		
3				2.9m: EOH: Target depth achieved.		

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA06

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24
COORDINATES 1648586.10E, 6127334.96N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY WK
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.300		
		SV = 221+ kPa (GEO287)		Silty CLAY; dark brown and light golden brown. Hard; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 221+ kPa (GEO287)		0.6m: Brown and light grey.		
1		SV = 221+ kPa (GEO287)				
				1.200		
		SV = 221+ kPa (GEO287)		CLAY; light grey and brown. Hard; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 221+ kPa (GEO287)				
		SV = 221+ kPa (GEO287)		1.8m: Golden brown.		
2		SV = 221+ kPa (GEO287)		2.1m: Brown and grey.		
				2.300 EOH: 2.30m		
				2.3m: EOH: Unable to Penetrate		
3						

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA07

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648575.79E, 6127348.64N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY WK
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 202 / - kPa (GEO287)		Silty CLAY; brown. Hard; high plasticity; moist; Residual Mangonui Formation Soil.		
				0.4m: With red inclusions.		
		SV = 187 / 32 kPa (GEO287)		0.6m: Very stiff.		
				0.900		
1		SV = 193 / 60 kPa (GEO287)		CLAY, with minor silt; light grey and brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 221 / - kPa (GEO287)				
		SV = 171 / 79 kPa (GEO287)				
		SV = 190 / 82 kPa (GEO287)		1.8m: With trace silt; light grey.		
2		SV = 139 / 60 kPa (GEO287)				
				2.400 EOH: 2.40m		
	5			2.4m: EOH: Target Depth Achieved.		
	6					
	7					
	6					
	9					
	12					
3	12					
	15					
	15					
	15					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA08

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648567.83E, 6127378.89N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200 Silty CLAY; light brown stained red. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
		SV = 192 / 70 kPa (Geo 3928)				
1		SV = 195+ kPa (Geo 3928)				
		SV = 181 / 70 kPa (Geo 3928)		1.400 CLAY, with some silt. Very stiff; high plasticity; moist; Residual Undifferentiated Tangihua Complex Soil.		
		SV = 195+ kPa (Geo 3928)				
		SV = 195+ kPa (Geo 3928)				
2		SV = 195+ kPa (Geo 3928)		2.2m: No silt.		
		SV = 195+ kPa (Geo 3928)				
				2.7m: Light bluish grey and red brown. Completely Weathered.		
3				3.000 EOH: 3.00m		
				3.0m: EOH: target depth achieved.		

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA09

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648552.01E, 6127377.51N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
			TS	0.100 TOPSOIL; dark brown.		
		SV = 181 / 70 kPa (Geo 3928)		Silty CLAY; brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)		0.6m: With trace rootlets.		
				0.800		
		SV = 181 / 70 kPa (Geo 3928)		CLAY, with minor silt; light brown and light grey. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
1		SV = 174 / 56 kPa (Geo 3928)		1.2m: Stained red.		
		SV = 181 / 70 kPa (Geo 3928)				
		SV = 181 / 70 kPa (Geo 3928)				
2		SV = 195+ kPa (Geo 3928)		2.2m: Red and light brown.		
	9	SV = 167 / 70 kPa (Geo 3928)		2.400 EOH: 2.40m		
	8					
	6					
	13					
	12					
	11					
3	15					
	15					

Groundwater Not Encountered

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA10

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648533.76E, 6127365.91N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
		SV = 167 / 49 kPa (Geo 3928)	TS	0.100 TOPSOIL; dark brown. Silty CLAY, with trace rootlets; brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.	Groundwater Not Encountered	
		SV = 167 / 56 kPa (Geo 3928)		0.800 CLAY; yellowish brown. Very stiff; high plasticity; moist; Residual Undifferentiated Tangihua Complex Soil.		
1		SV = 185 / 70 kPa (Geo 3928)		1.1m: Light grey.		
		SV = 195+ kPa (Geo 3928)		1.3m: Dark red inclusions. 1.4m: With trace sand.		
		SV = 195+ kPa (Geo 3928)		1.600 EOH: 1.60m 1.6m: EOH: Unable to Penetrate		
2						
3						

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

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LOG OF HAND AUGER

HA11

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 17/12/24 **COMPLETED DATE** 17/12/24
COORDINATES 1648535.32E, 6127345.43N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.		
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 181 / 49 kPa (Geo 3928)				
		SV = 167 / 56 kPa (Geo 3928)				
1				1.100		
		SV = 181 / 56 kPa (Geo 3928)		CLAY, with some silt; light grey and light brown. Very stiff; high plasticity; moist; Residual Mangonui Formation.		
		SV = 195+ kPa (Geo 3928)		1.4m: Minor dark red staining.		
		SV = 195+ kPa (Geo 3928)				
2						
		SV = 195+ kPa (Geo 3928)				
		SV = 167 / 56 kPa (Geo 3928)				
				2.600 EOH: 2.60m		
				2.6m: EOH: Unable to Penetrate.		
3						

Groundwater Not Encountered

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA12

CLIENT	Max Beckham	**PROJECT**	Beckham - Subdivision Suitability
PROJECT NUMBER	13301	**PROJECT LOCATION**	26 Melody Lane, Mangonui
START DATE	18/12/24	**COMPLETED DATE**	18/12/24
COORDINATES	1648442.43E, 6127361.56N	**LEVEL**	0.00
DRILLING CONTRACTOR			
DRILLING METHOD	50mm Hand Auger		
LOGGED BY	WK		
HOLE LOCATION			

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				0.100 TOPSOIL; dark brown.		
		SV = 171 / 33 kPa (GEO287)		Silty CLAY; golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 153 / 65 kPa (GEO287)				
1		SV = 130 / 35 kPa (GEO287)				
		SV = 127 / 35 kPa (GEO287)		1.400		
		SV = 158 / 19 kPa (GEO287)		CLAY, with some silt; light grey and golden brown with dark red inclusions. Very stiff; high plasticity; moist; Residual Undifferentiated Tangihua Complex Soil.		
		SV = 104 / 32 kPa (GEO287)		2.0m: Dark red.		
2				2.100 EOH: 2.10m 2.1m: EOH: Unable to Penetrate.		
	4					
	3					
	3					
	5					
	6					
	7					
	10					
	8					
	12					
3	12					
	13					
	12					
	13					
	9					
	20					

Groundwater Not Encountered

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

Hawthorn Geddes engineers & architects ltd

LOG OF HAND AUGER

HA13

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648412.41E, 6127332.75N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; dark golden brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 195+ kPa (Geo 3928)				
1		SV = 167 / 70 kPa (Geo 3928)				
		SV = 181 / 84 kPa (Geo 3928)				
		SV = 181 / 84 kPa (Geo 3928)				
				1.800		
		SV = 174 / 70 kPa (Geo 3928)		CLAY; grey and light golden brown. Very stiff; high plasticity; moist; Residual Undifferentiated Tangihua Complex Soil.		
2				2.0m: Grey and yellowish brown.		
		SV = 181 / 84 kPa (Geo 3928)				
		SV = 181 / 70 kPa (Geo 3928)		2.4m: Dark pinkish red.		
				2.700 EOH: 2.70m		
	6	SV = 167 / 84 kPa (Geo 3928)		2.7m: EOH: Unable to Penetrate.		
	7					
	8					
3	10					
	12					
	13					
	17					
	23					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

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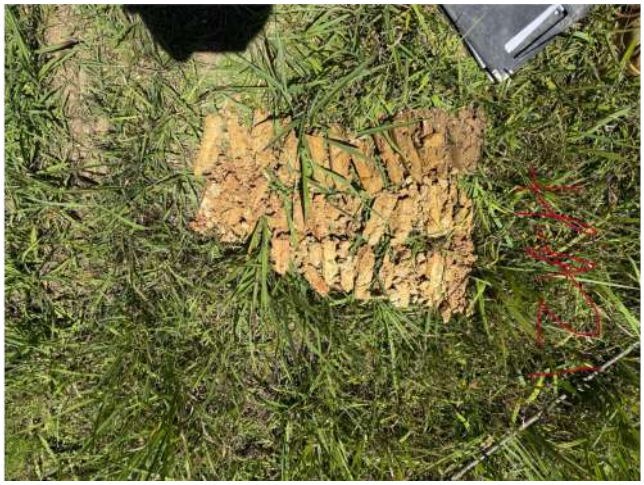
LOG OF HAND AUGER

HA14

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648390.01E, 6127387.51N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 181 / 91 kPa (Geo 3928)				
		SV = 181 / 70 kPa (Geo 3928)		0.9m: Light grey & golden brown.		
1				1.200		
		SV = 167 / 70 kPa (Geo 3928)		CLAY, with some silt; grey and brown with minor red staining. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 153 / 63 kPa (Geo 3928)				
		SV = 167 / 70 kPa (Geo 3928)		1.8m: With trace dark red inclusions.		
2						
		SV = 167 / 70 kPa (Geo 3928)		2.1m: With minor silt.		
				2.400 EOH: 2.40m		
	4	SV = 178 / 84 kPa (Geo 3928)		2.4m: EOH: Unable to Penetrate.		
	5					
	6					
	6					
	7					
	10					
3	10					
	13					
	13					
	13					
	15					
	15					

PHOTO / SKETCH



WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

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LOG OF HAND AUGER

HA15

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24 **COORDINATES** 1648468.28E, 6127435.50N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY US
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
				TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.200		
		SV = 195+ kPa (Geo 3928)		Silty CLAY; dark brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 181 / 84 kPa (Geo 3928)		0.6m: With trace rootlets.		
1		SV = 167 / 84 kPa (Geo 3928)		1.000		
		SV = 112 / 42 kPa (Geo 3928)		CLAY; grey and brown. Very stiff; high plasticity; moist; Residual Mangonui Formation Soil.		
		SV = 84 / 35 kPa (Geo 3928)		1.5m: Stiff.		
		SV = 63 / 28 kPa (Geo 3928)		1.8m: Golden brown.		
2		SV = 63 / 28 kPa (Geo 3928)		2.2m: Golden brown with trace red inclusions. Firm; wet.		
		SV = 42 / 11 kPa (Geo 3928)		2.500 EOH: 2.50m		
	1			2.5m: EOH: Unable to Penetrate.		
	1					
	1					
	4					
	4					
3	5					
	5					
	6					
	10					
	8					
	7					
	13					
	9					
	10					
	11					
4	12					
	12					
	15					
	15					
	12					
	14					
	11					
	15					
	15					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

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LOG OF HAND AUGER

HA16

CLIENT Max Beckham
PROJECT Beckham - Subdivision Suitability
PROJECT NUMBER 13301
PROJECT LOCATION 26 Melody Lane, Mangonui
START DATE 18/12/24 **COMPLETED DATE** 18/12/24
COORDINATES 1648420.19E, 6127414.10N **LEVEL** 0.00
DRILLING CONTRACTOR
DRILLING METHOD 50mm Hand Auger
LOGGED BY WK
HOLE LOCATION

DEPTH (m)	SCALA (Blows / 100mm)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER	DEPTH (m)
			TS	TOPSOIL; dark brown.	Groundwater Not Encountered	
				0.300		
		SV = 172 / 33 kPa (GEO287)		Silty CLAY; brown. Very stiff; high plasticity; moist; Residual Fill.		
		SV = 136 / 47 kPa (GEO287)				
1		SV = 138 / 51 kPa (GEO287)				
		SV = 122 / 55 kPa (GEO287)				
		SV = 130 / 59 kPa (GEO287)		1.7m: No silt.		
				1.8m: Brown, minor grey and light blue.		
		SV = 123 / 63 kPa (GEO287)		1.900		
2				CLAY; light grey, light brown, and light blue. Very stiff; high plasticity; moist; Residual Undifferentiated Tangihua Complex Soil.		
		SV = 123 / 63 kPa (GEO287)				
				2.400 EOH: 2.40m		
	2	SV = 136 / 63 kPa (GEO287)		2.4m: EOH: Unable to Penetrate.		
	3					
	5					
	8					
	8					
3	5					
	9					
	10					
	11					
	15					
	16					

PHOTO / SKETCH

WATER OBSERVATIONS

Date / Time	Water Level (m)	Type	Remarks

REMARKS

SYMBOLS

- Standing Water Level
- Water Out flow
- Water In flow

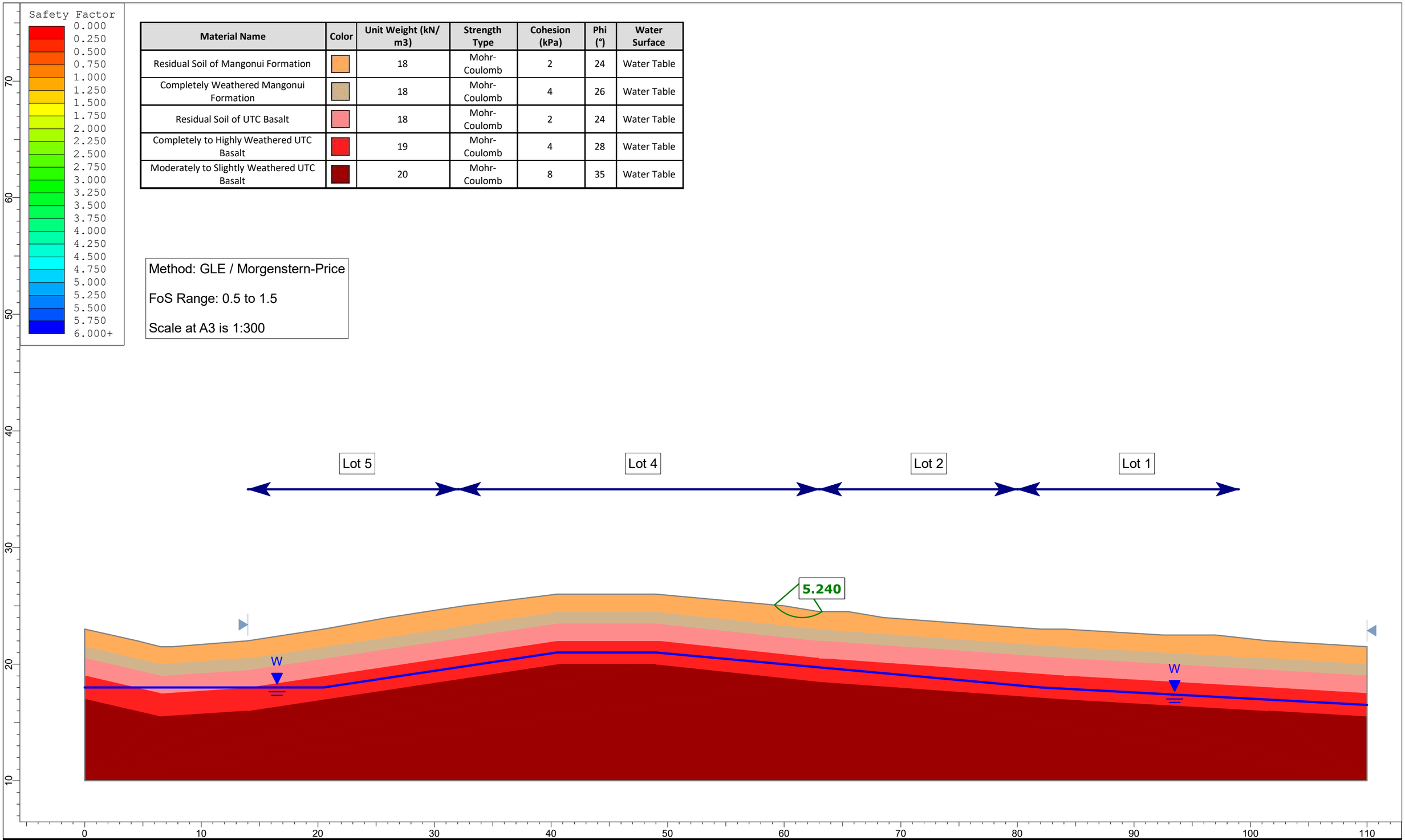
Appendix C. Slope Stability Outputs

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



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SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Left to Right)	Scenario	NGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd

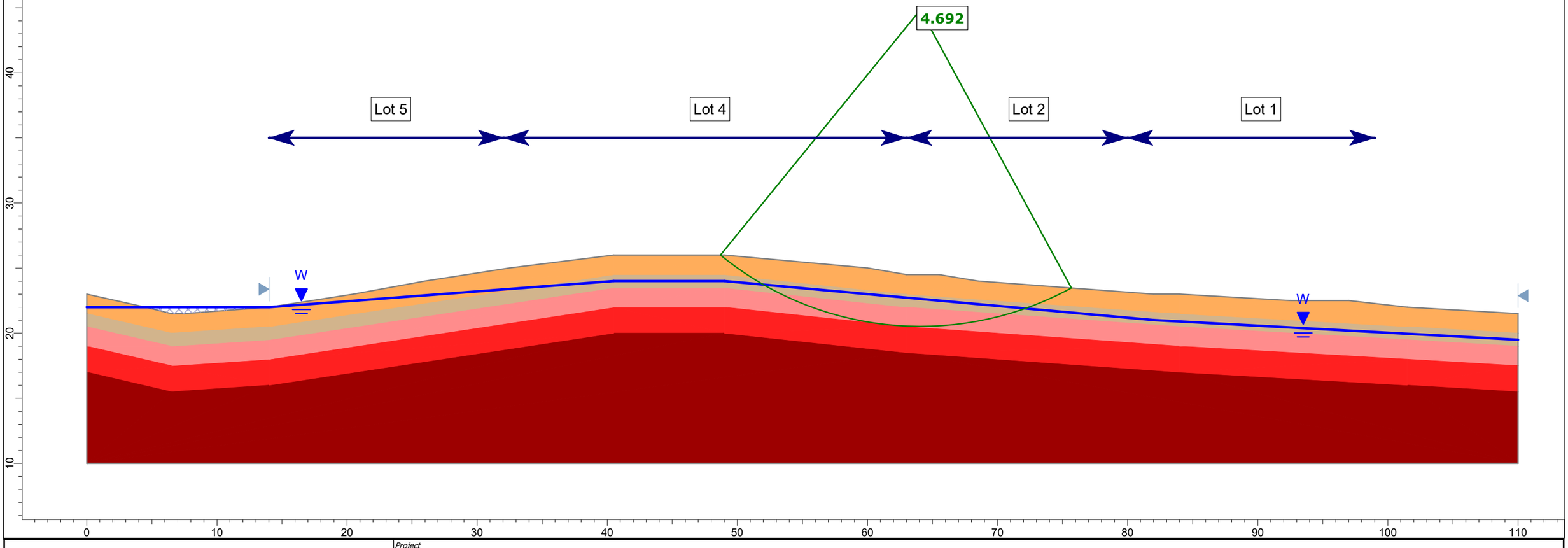
Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	None
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	None

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Left to Right)	Scenario	EGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd

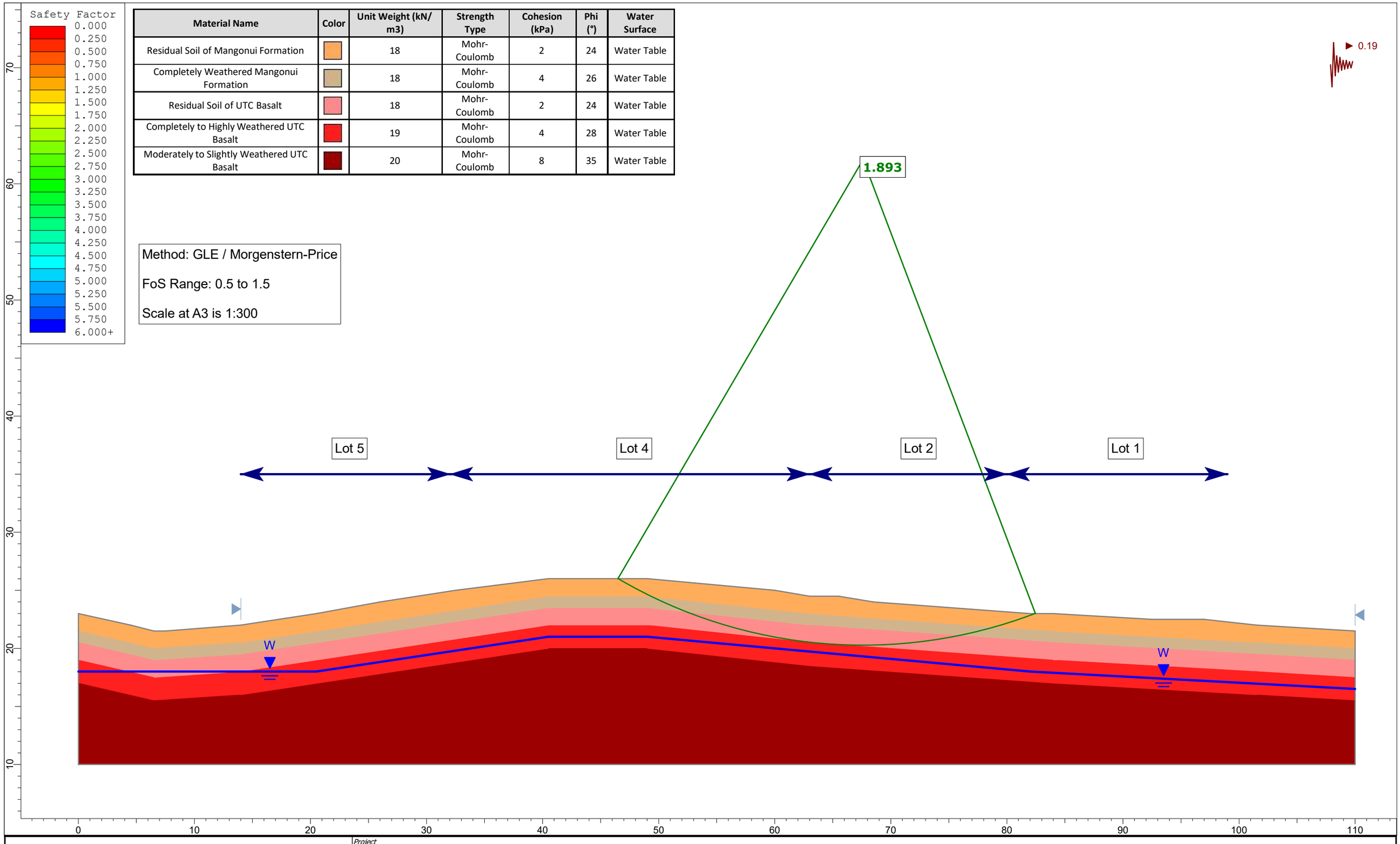
Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



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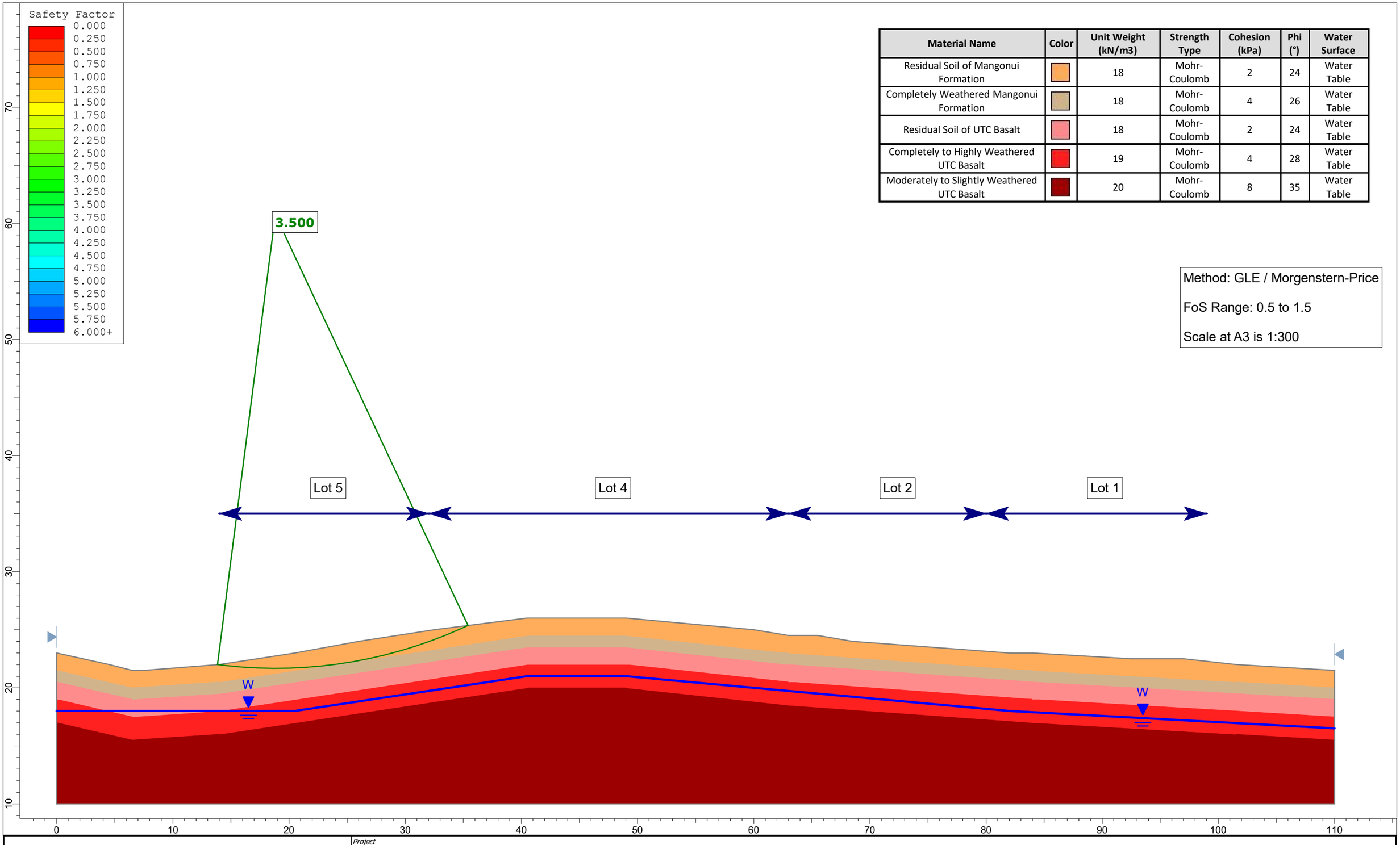
SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Left to Right)	Scenario	Seismic - DCLS
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

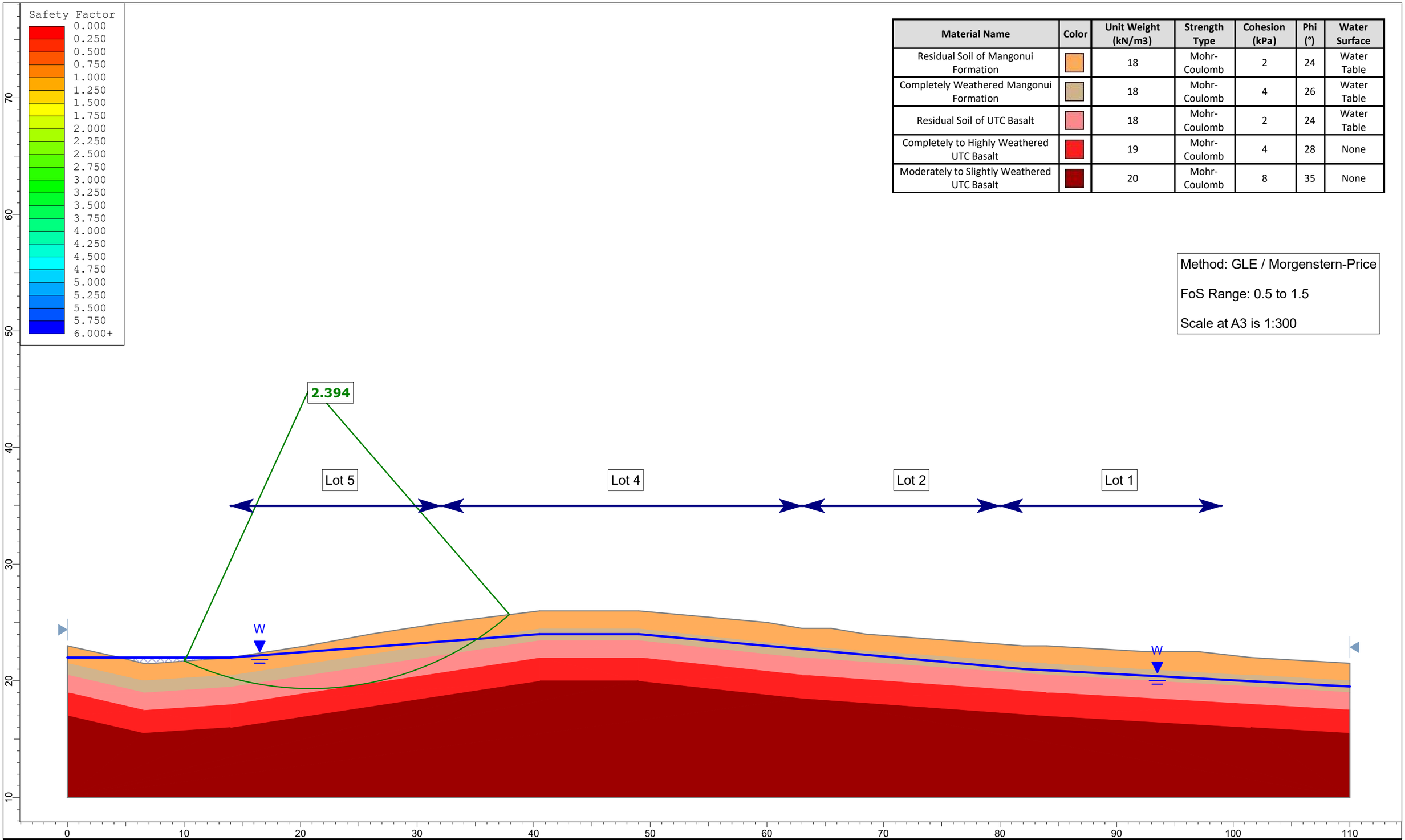
FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Right to Left)	*Scenario*	NGWT
Drawn By	KB	*Company*	HGEA
Date	20/01/2025	*File Name*	geo 250108 slope stability analysis.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	None
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	None

Method: GLE / Morgenstern-Price

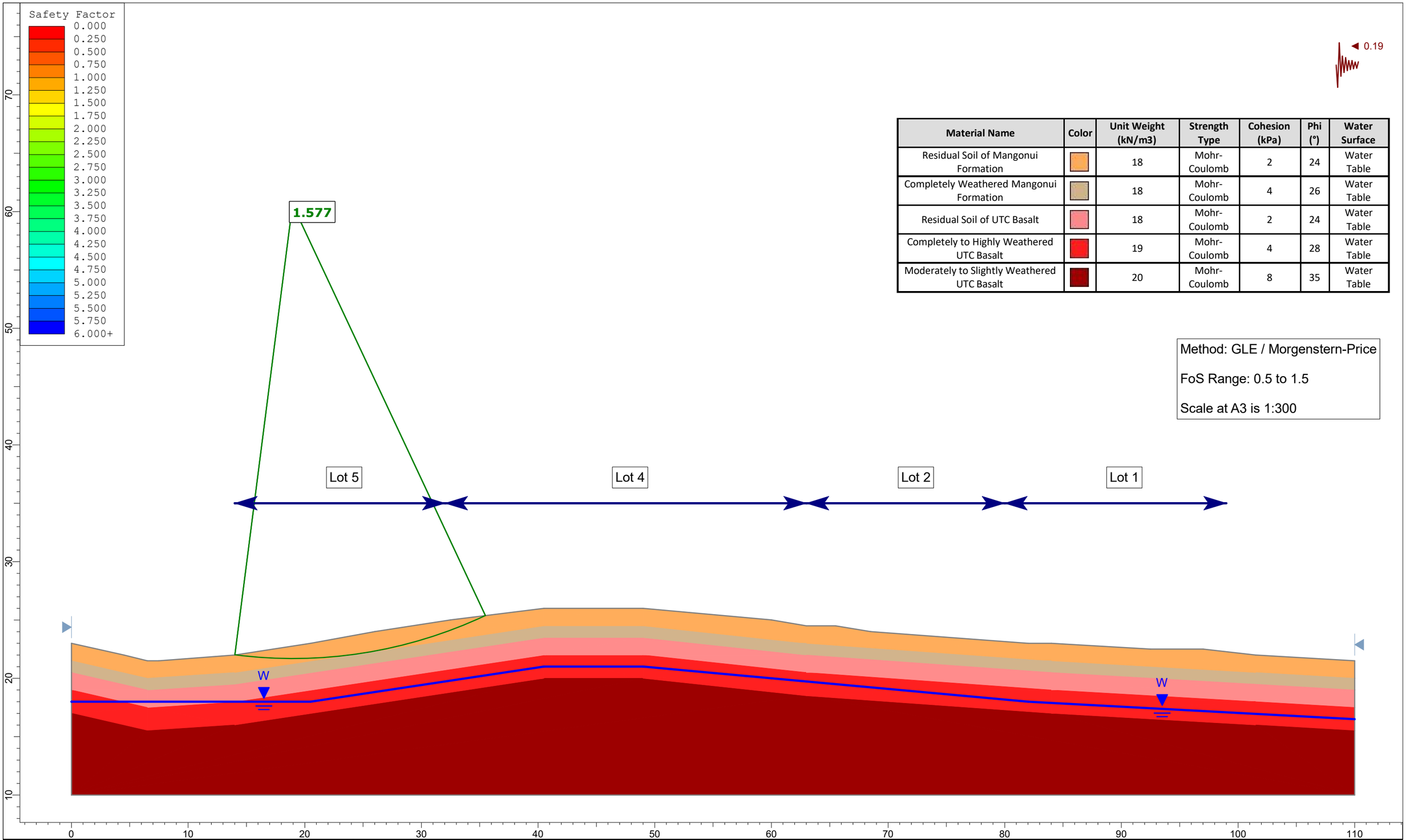
FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Right to Left)	*Scenario*	EGWT
Drawn By	KB	*Company*	HGEA
Date	20/01/2025	*File Name*	geo 250108 slope stability analysis.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Existing Slope Conditions (Right to Left)	*Scenario*	Seismic - DCLS
Drawn By	KB	*Company*	HGEA
Date	20/01/2025	*File Name*	geo 250108 slope stability analysis.slmd

Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

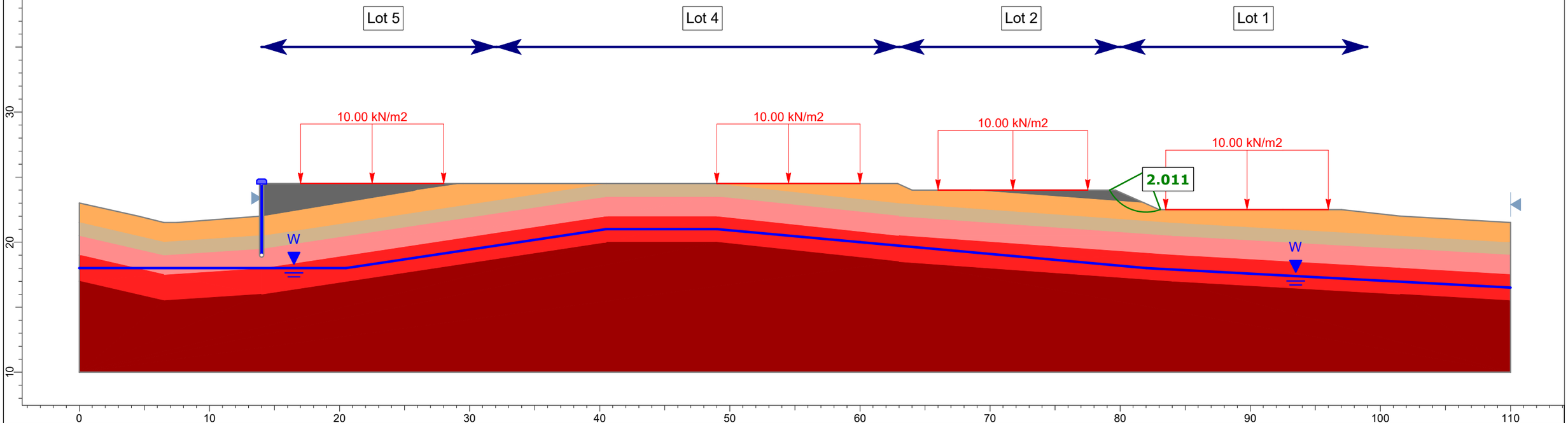
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



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SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Left to Right)	Scenario	NGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd

Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

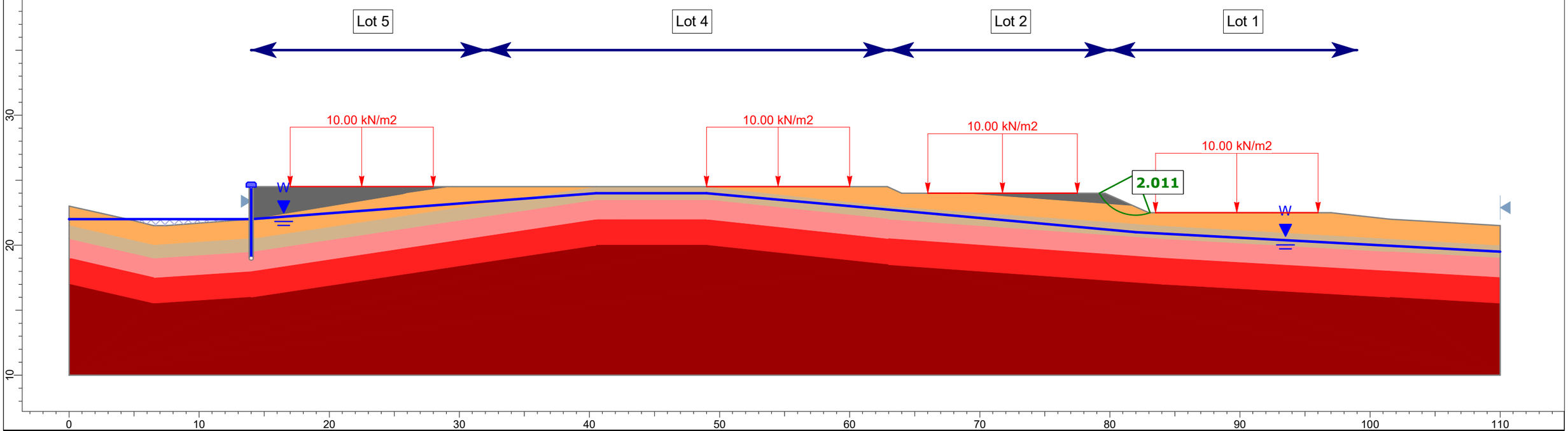
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	None
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	None
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

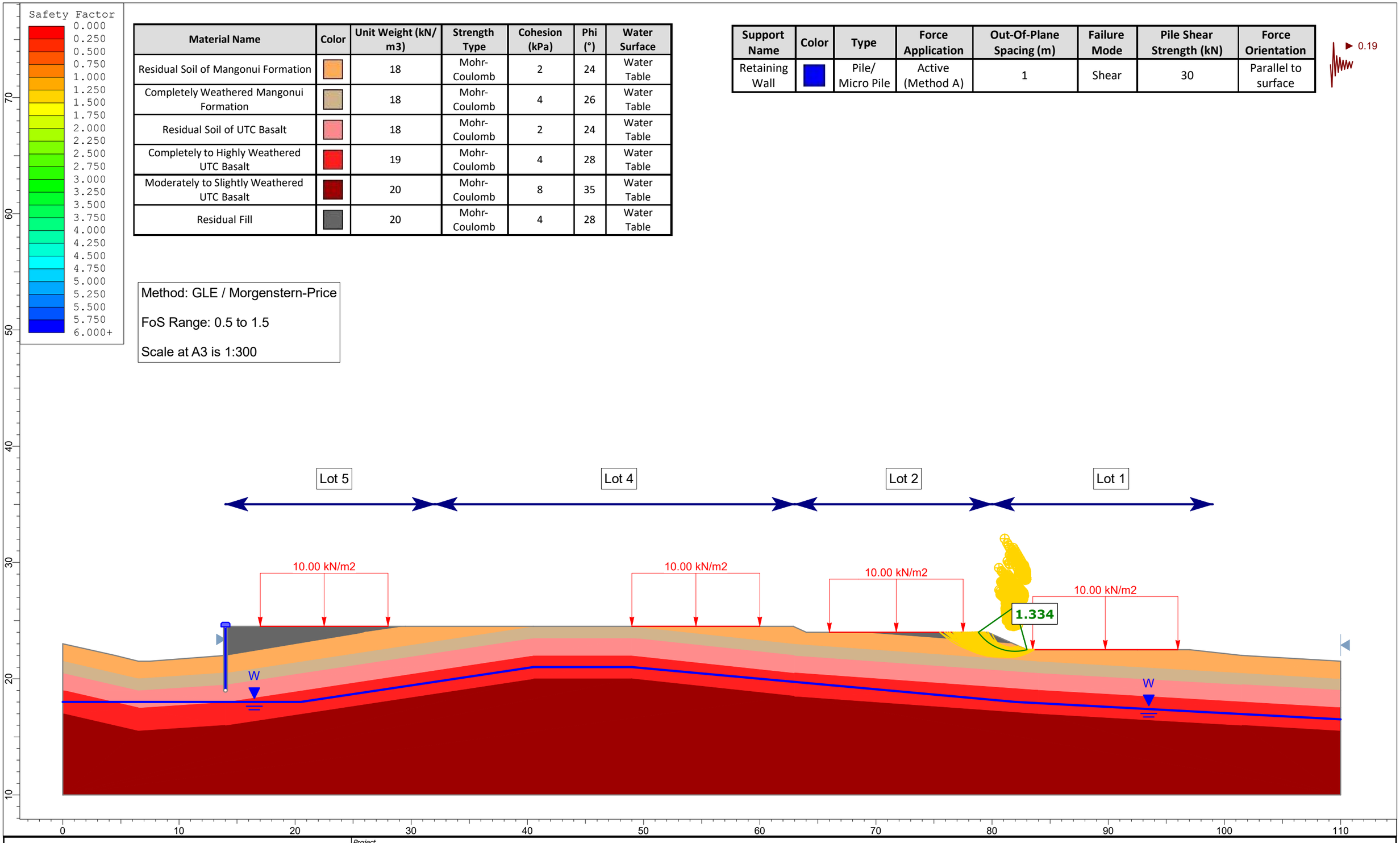
Scale at A3 is 1:300



Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Left to Right)	Scenario	EGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/ Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Left to Right)	Scenario	Seismic - DCLS
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd

Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

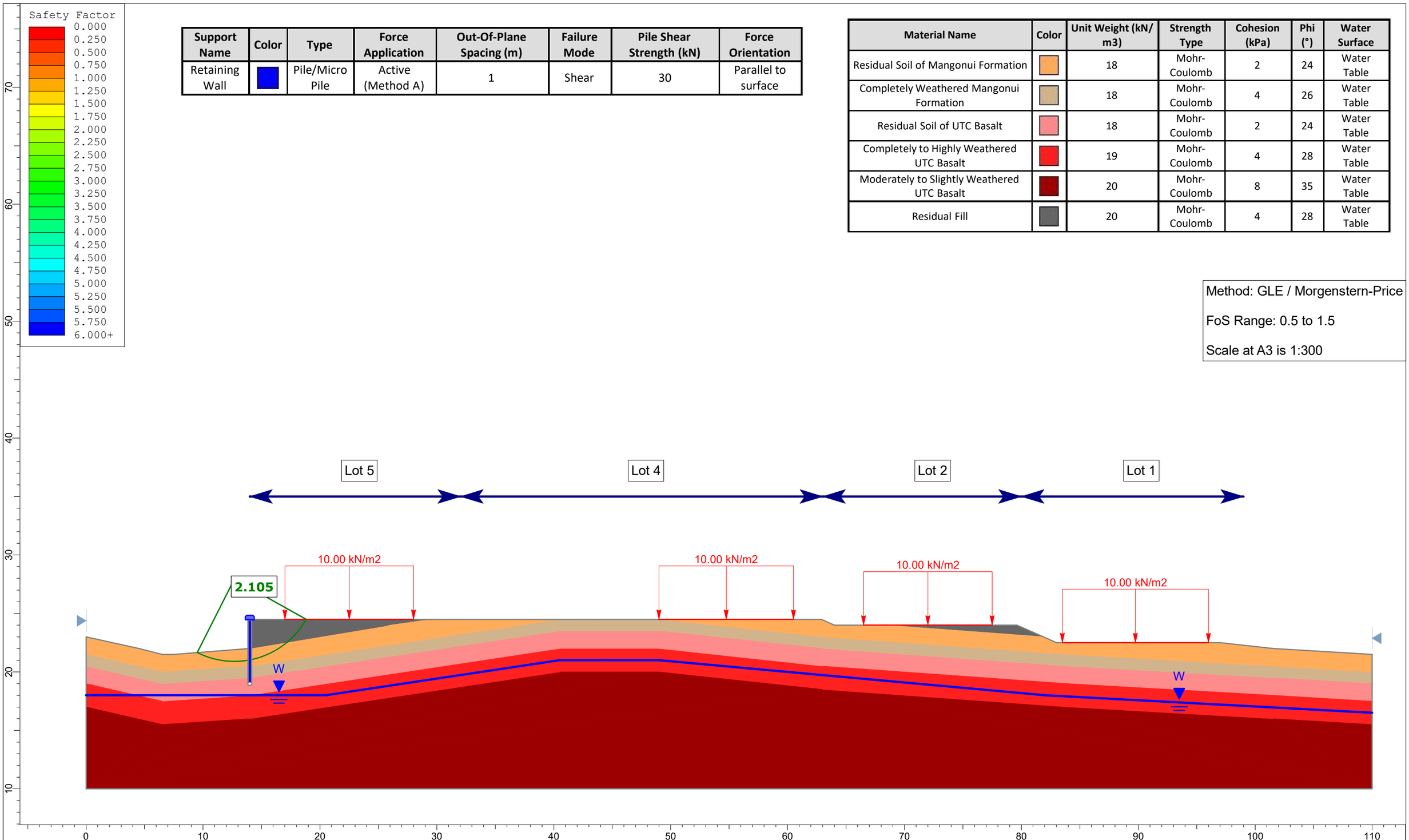
Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Right to Left)	Scenario	NGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd

Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

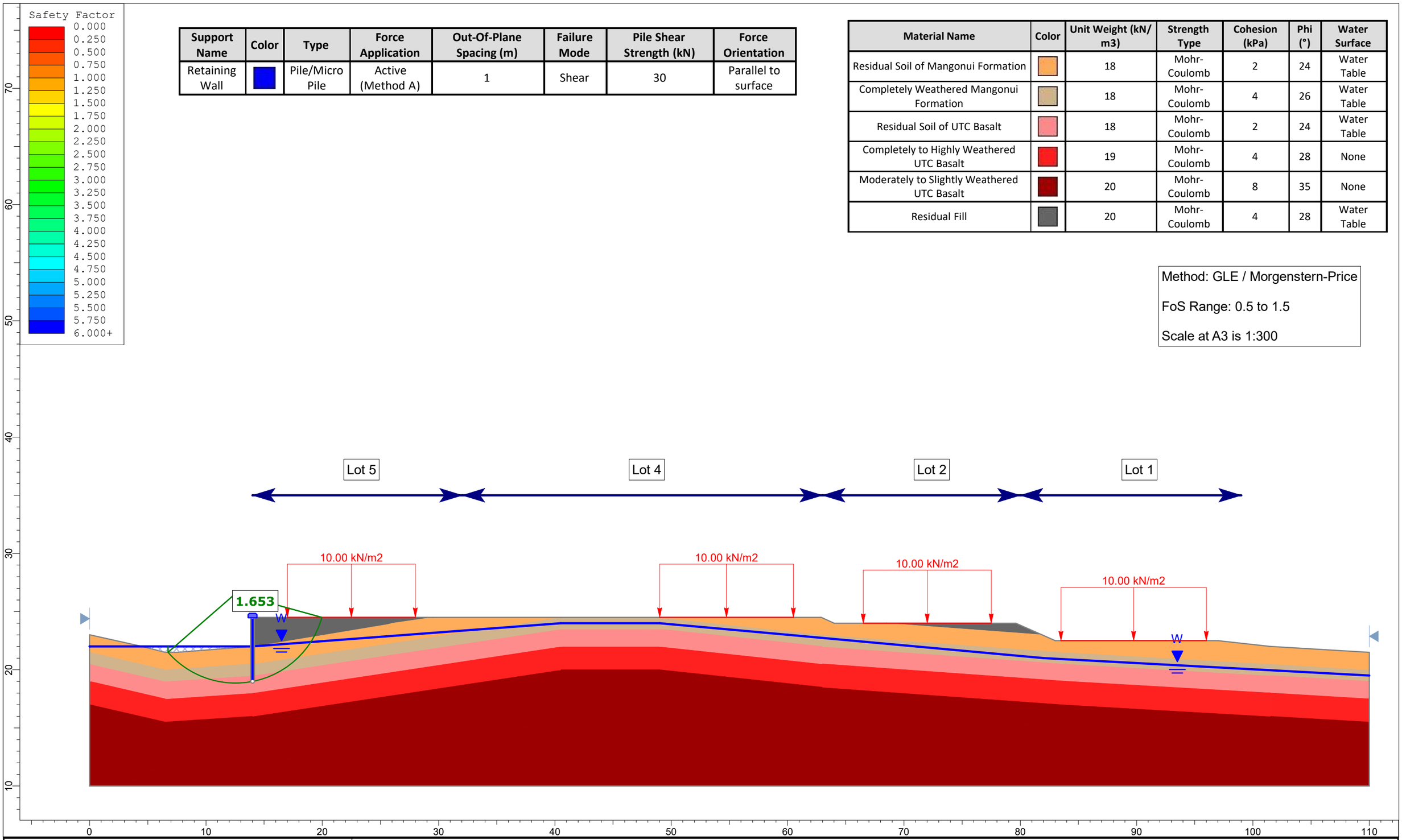
Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	None
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	None
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

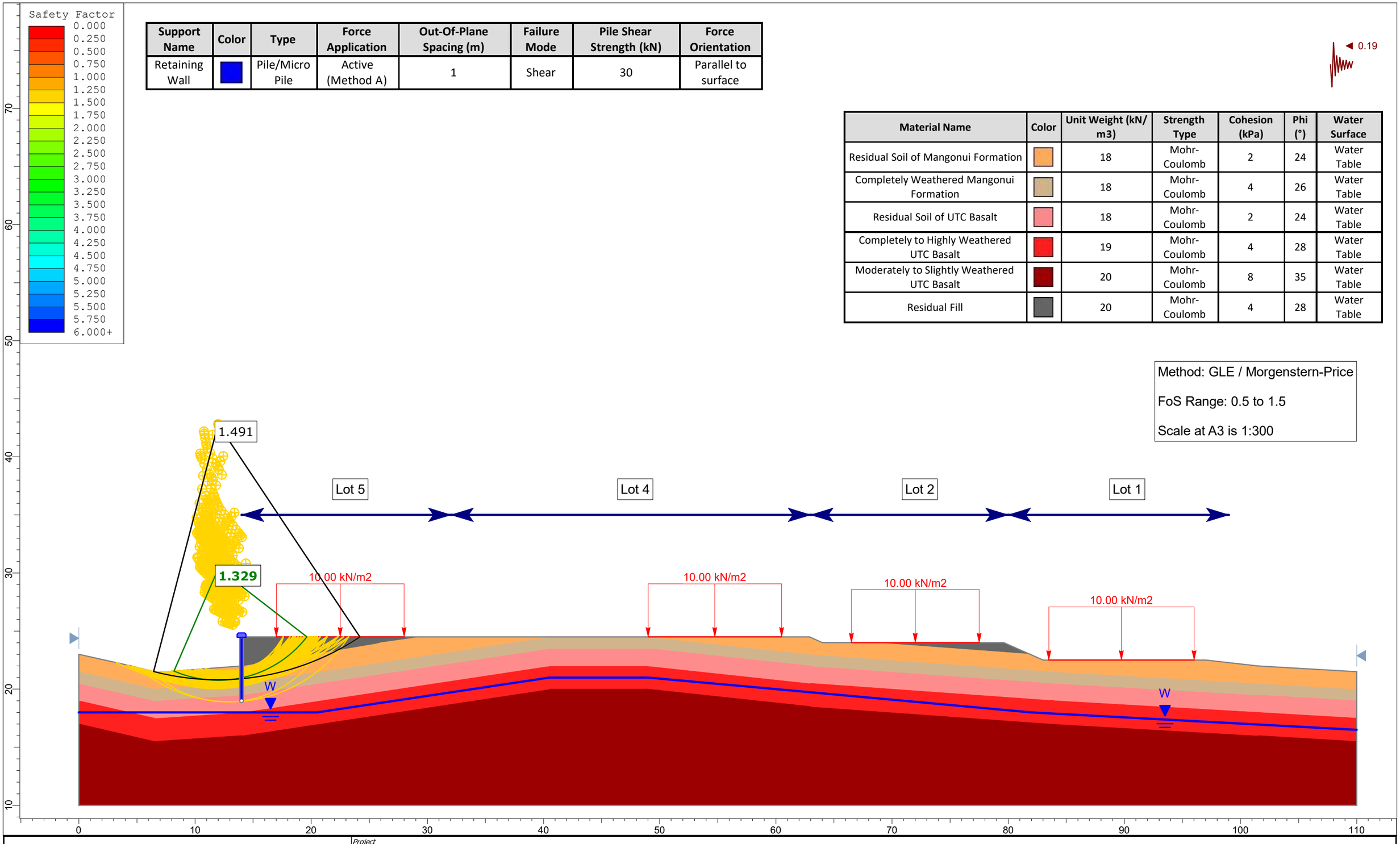
Scale at A3 is 1:300



Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Right to Left)	Scenario	EGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd



Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	Water Table
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	Water Table
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table
Residual Fill		20	Mohr-Coulomb	4	28	Water Table

Method: GLE / Morgenstern-Price

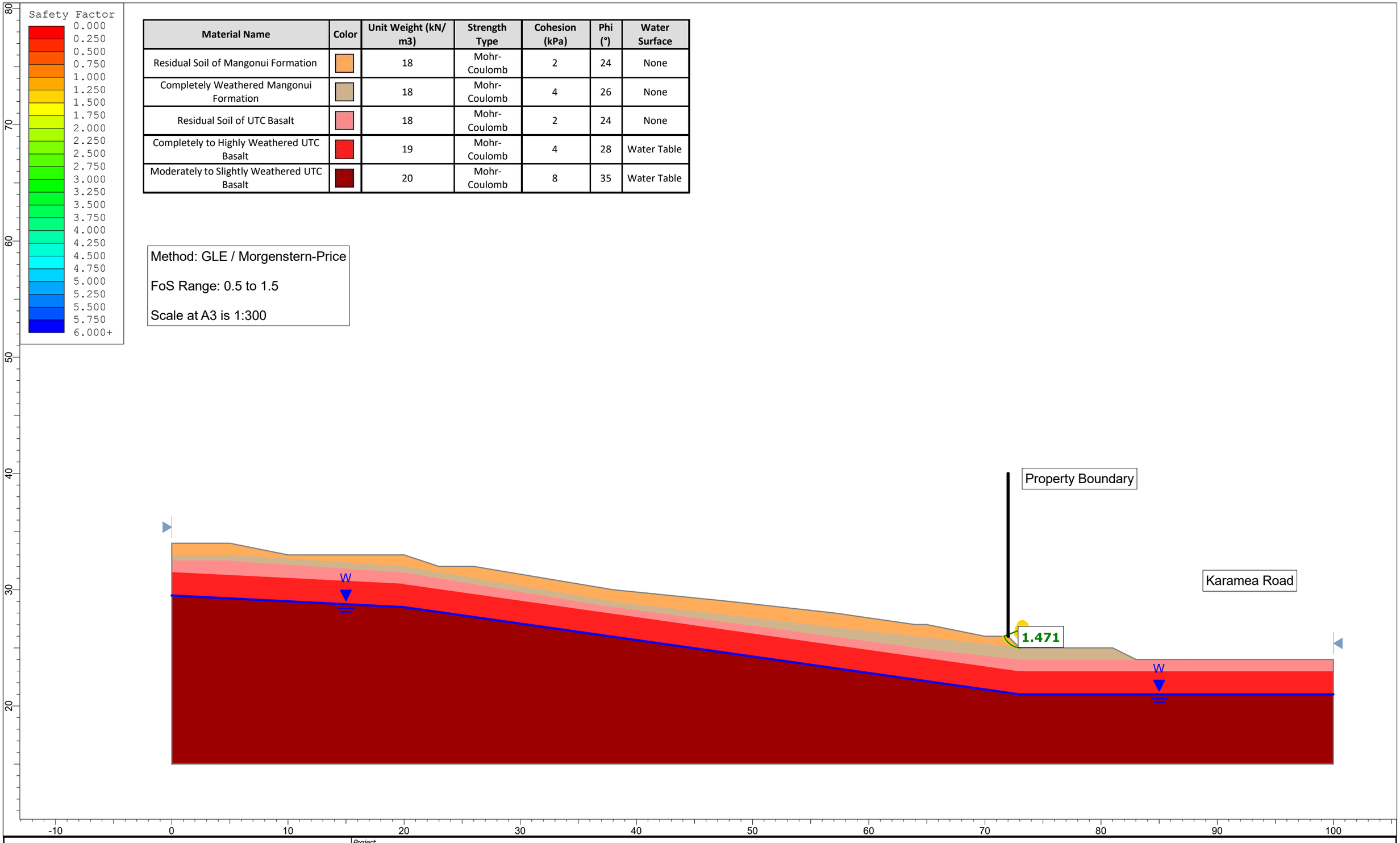
FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Proposed Slope Conditions (Right to Left)	Scenario	Seismic - DCLS
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	None
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Existing Conditions (Left to Right)	*Scenario*	NGWT
Drawn By	KB	*Company*	HGEA
Date	20/01/2025	*File Name*	geo 250108 slope stability analysis 13301.slmd

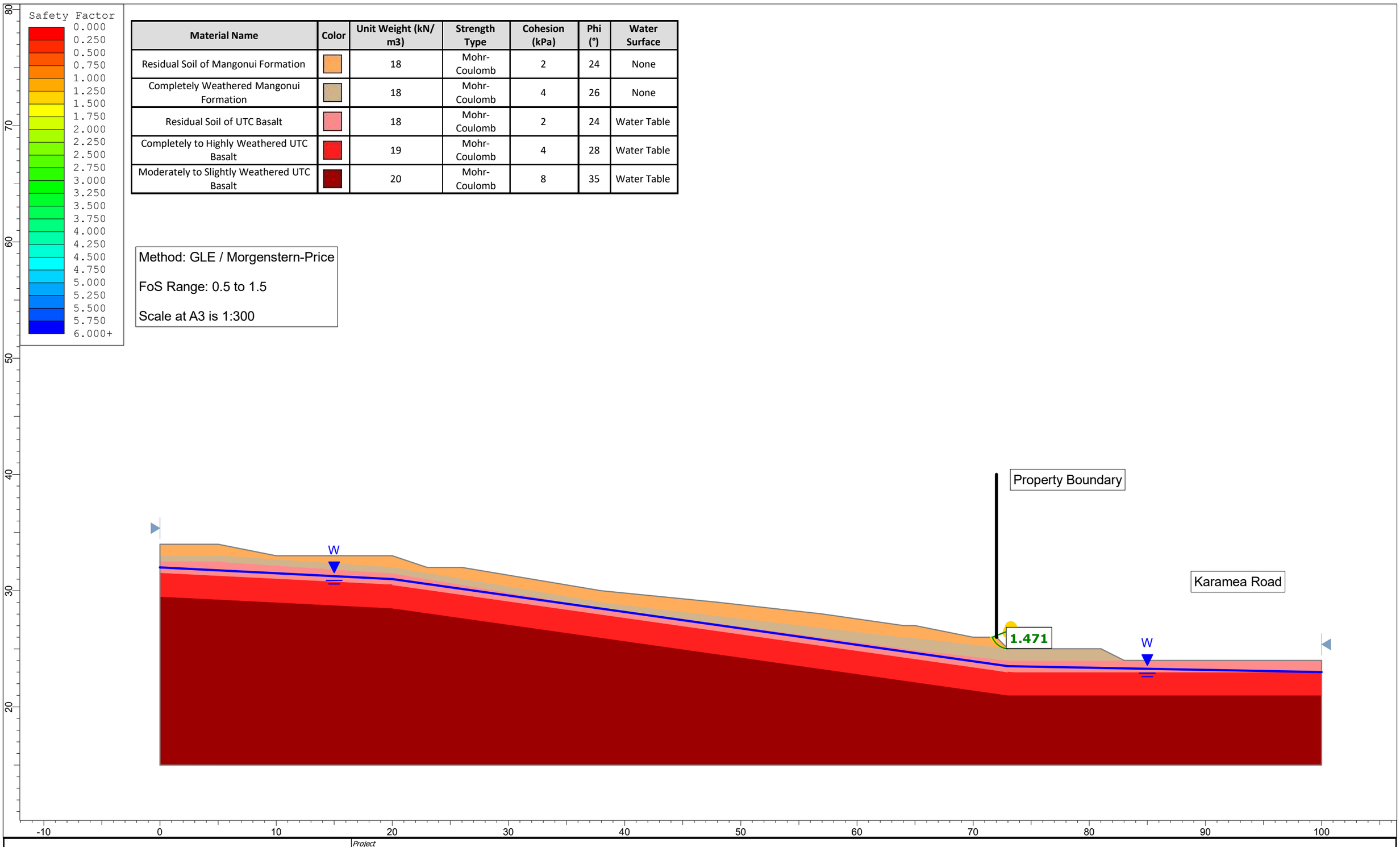
Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300



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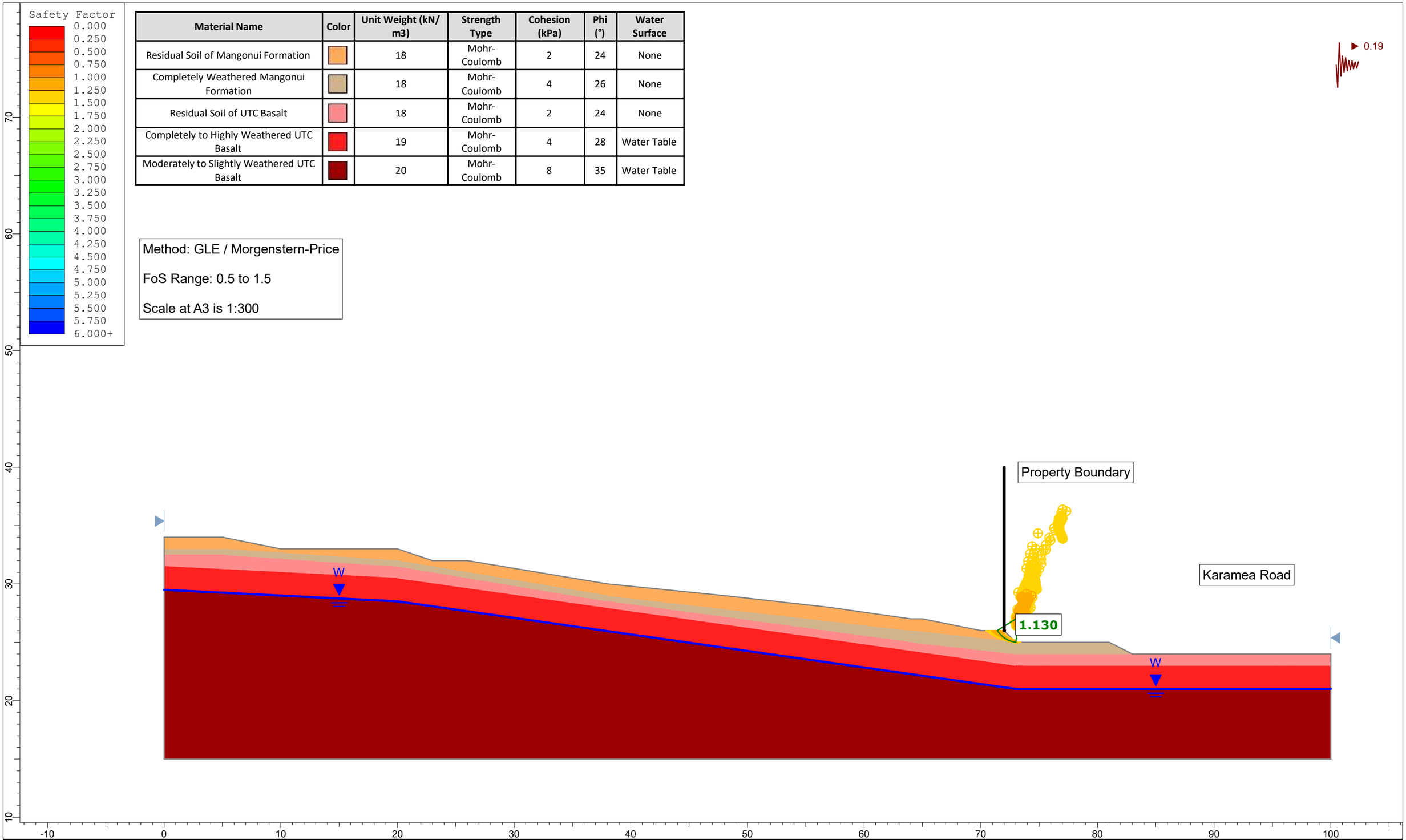
SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Existing Conditions (Left to Right)	Scenario	EGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis 13301.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	None
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Method: GLE / Morgenstern-Price

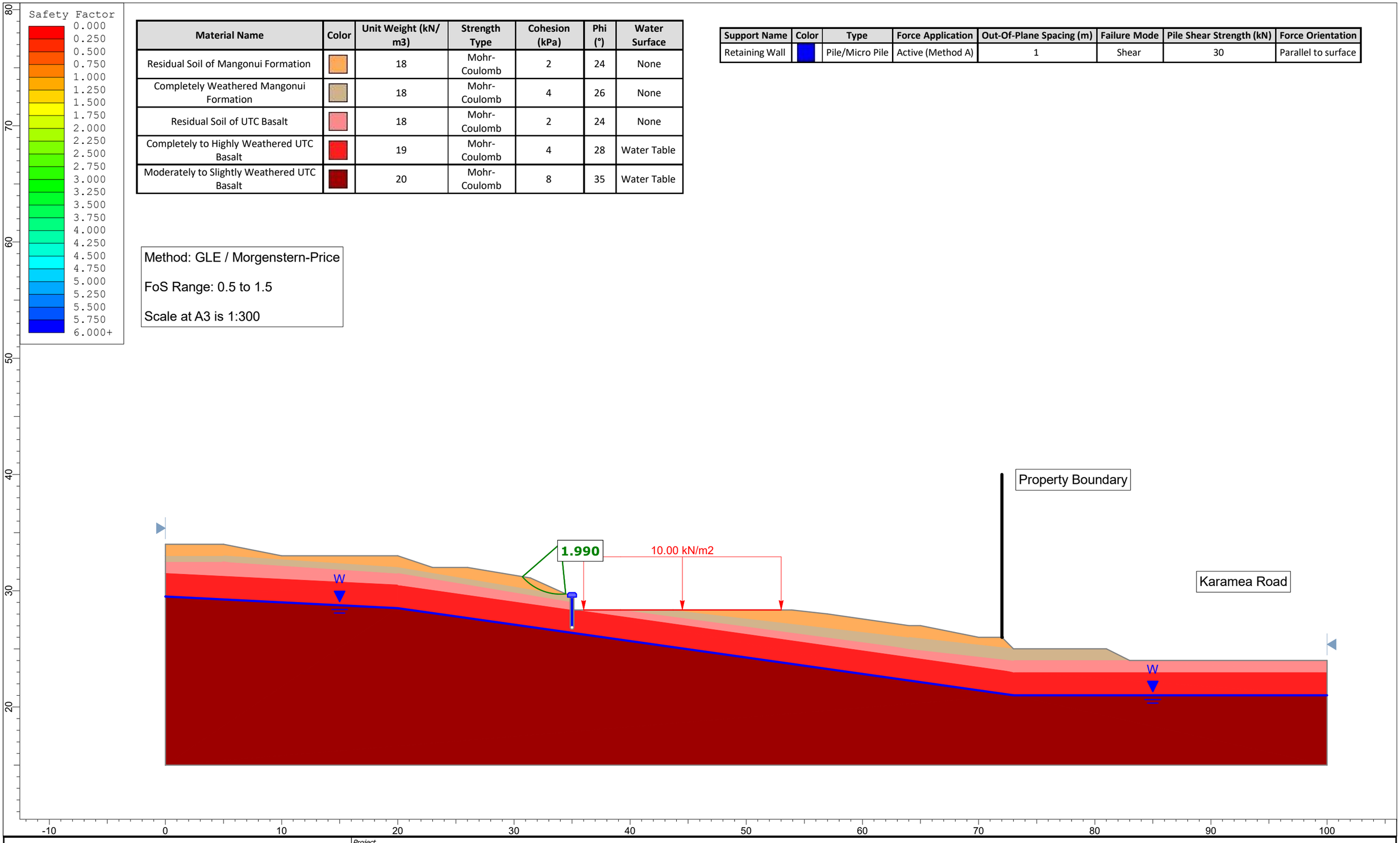
FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Existing Conditions (Left to Right)	*Scenario*	Seismic - DCLS
Drawn By	KB	*Company*	HGEA
Date	20/01/2025	*File Name*	geo 250108 slope stability analysis 13301.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	None
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Method: GLE / Morgenstern-Price

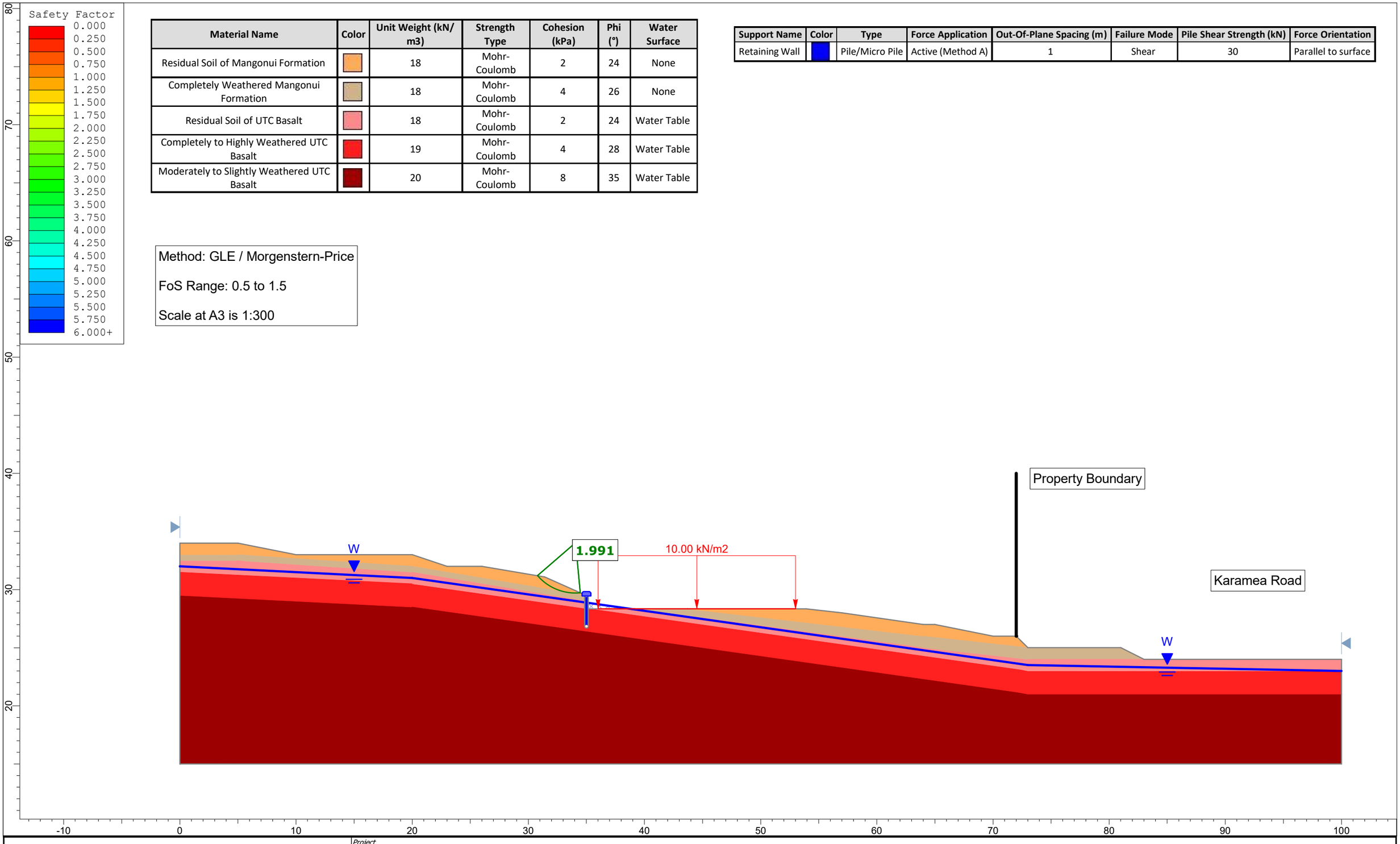
FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Proposed Conditions (Left to Right)	Scenario	NGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis 13301.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	Water Table
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Proposed Conditions (Left to Right)	Scenario	EGWT
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis 13301.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface
Residual Soil of Mangonui Formation		18	Mohr-Coulomb	2	24	None
Completely Weathered Mangonui Formation		18	Mohr-Coulomb	4	26	None
Residual Soil of UTC Basalt		18	Mohr-Coulomb	2	24	None
Completely to Highly Weathered UTC Basalt		19	Mohr-Coulomb	4	28	Water Table
Moderately to Slightly Weathered UTC Basalt		20	Mohr-Coulomb	8	35	Water Table

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (m)	Failure Mode	Pile Shear Strength (kN)	Force Orientation
Retaining Wall		Pile/Micro Pile	Active (Method A)	1	Shear	30	Parallel to surface

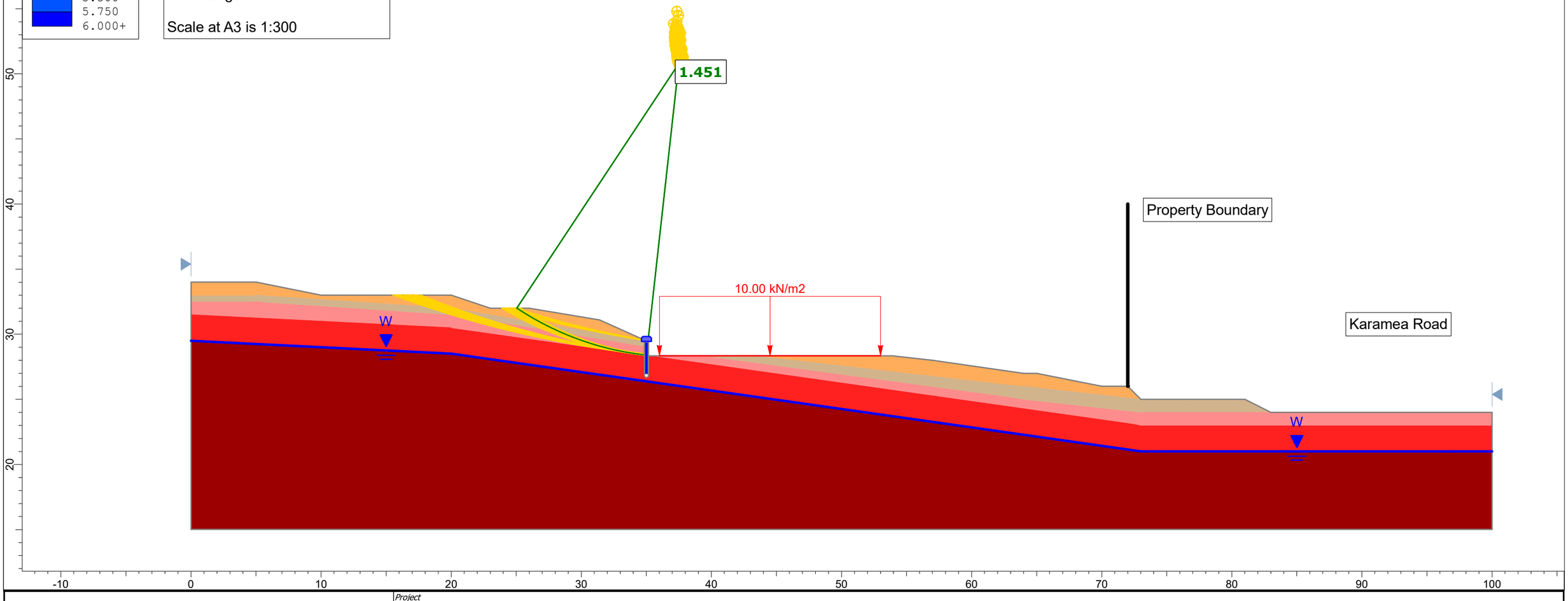
► 0.19

Safety Factor
0.000
0.250
0.500
0.750
1.000
1.250
1.500
1.750
2.000
2.250
2.500
2.750
3.000
3.250
3.500
3.750
4.000
4.250
4.500
4.750
5.000
5.250
5.500
5.750
6.000+

Method: GLE / Morgenstern-Price

FoS Range: 0.5 to 1.5

Scale at A3 is 1:300

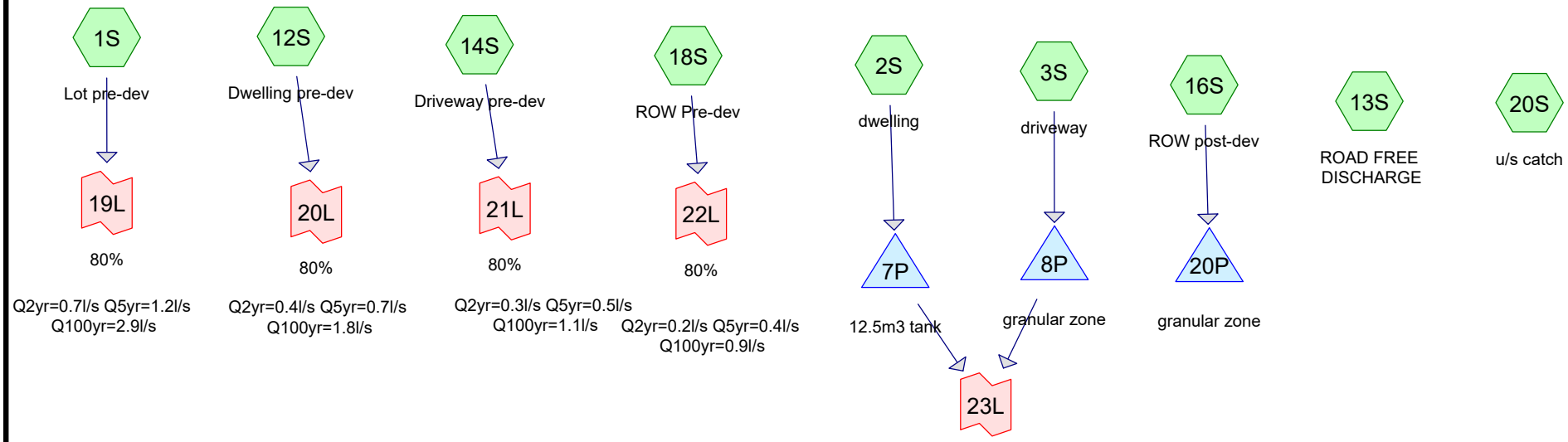


Hawthorn Geddes engineers & architects ltd

SLIDEINTERPRET 9.036

Project	Beckham - Subdivision Suitability		
Group	Cross-Section B - Proposed Conditions (Left to Right)	Scenario	Seismic - DCLS
Drawn By	KB	Company	HGEA
Date	20/01/2025	File Name	geo 250108 slope stability analysis 13301.slmd

Appendix D. HydroCAD Outputs



Subcat Reach Pond Link

Routing Diagram for SW Attenuation LJ - Rev 310325

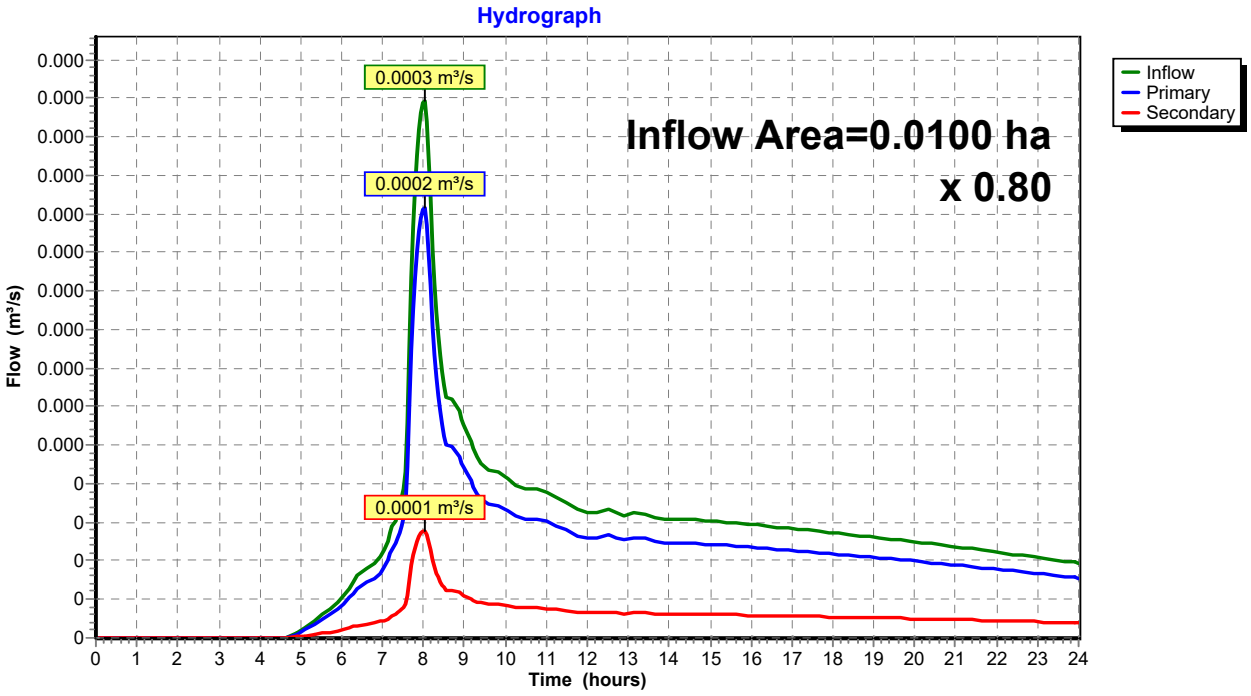
Prepared by Hawthorn Geddes Eng & Arch Ltd, Printed 31/03/2025

Summary for Link 22L: 80%

Inflow Area = 0.0100 ha, 0.00% Impervious, Inflow Depth > 44 mm for 2 Year event
Inflow = 0.0003 m³/s @ 8.02 hrs, Volume= 0.004 Ml
Primary = 0.0002 m³/s @ 8.02 hrs, Volume= 0.004 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0001 m³/s @ 8.02 hrs, Volume= 0.001 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 22L: 80%

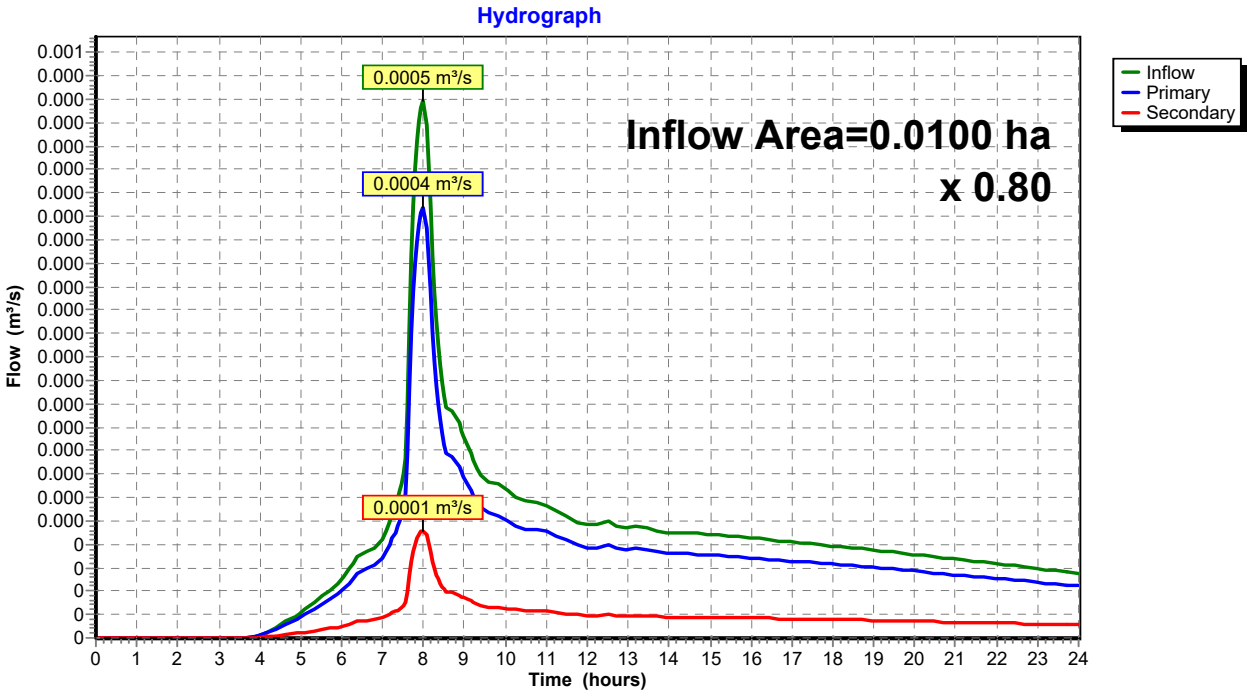


Summary for Link 22L: 80%

Inflow Area = 0.0100 ha, 0.00% Impervious, Inflow Depth > 68 mm for 5 Year event
Inflow = 0.0005 m³/s @ 8.00 hrs, Volume= 0.007 Ml
Primary = 0.0004 m³/s @ 8.00 hrs, Volume= 0.005 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0001 m³/s @ 8.00 hrs, Volume= 0.001 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 22L: 80%

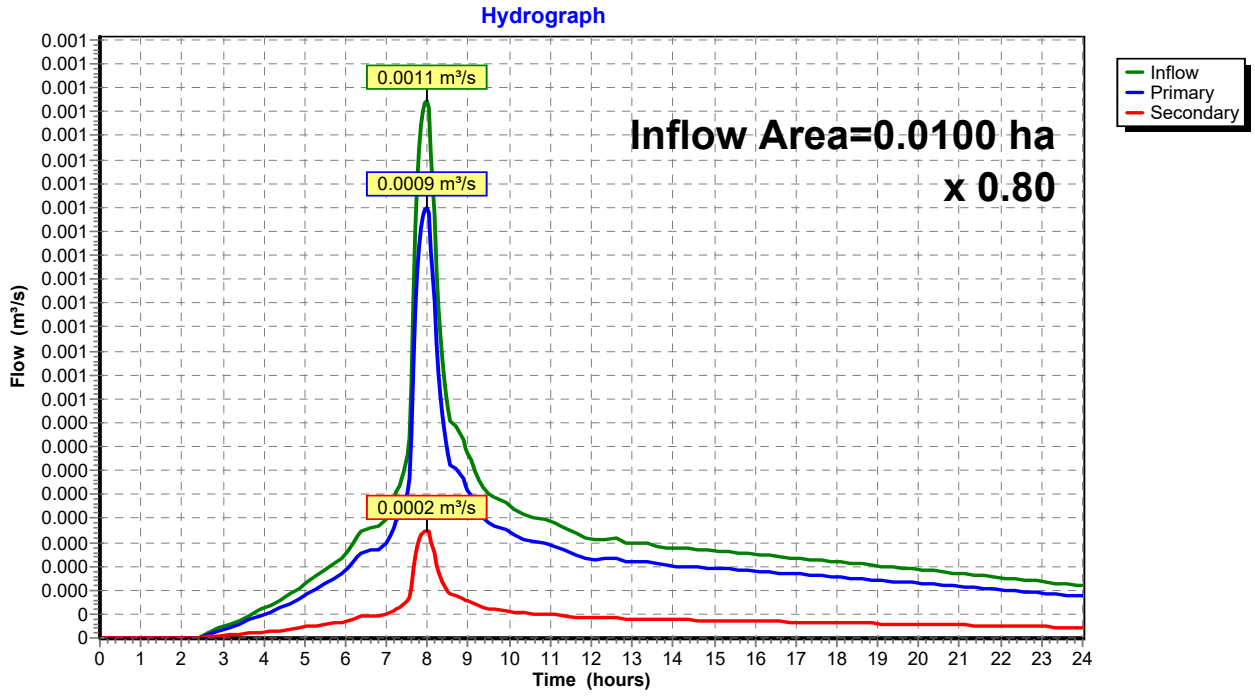


Summary for Link 22L: 80%

Inflow Area = 0.0100 ha, 0.00% Impervious, Inflow Depth > 157 mm for 100 year event
Inflow = 0.0011 m³/s @ 7.98 hrs, Volume= 0.016 Ml
Primary = 0.0009 m³/s @ 7.98 hrs, Volume= 0.013 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0002 m³/s @ 7.98 hrs, Volume= 0.003 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 22L: 80%



Summary for Pond 20P: granular zone

Inflow Area = 0.0100 ha,100.00% Impervious, Inflow Depth > 104 mm for 2 Year+cc event
Inflow = 0.0007 m³/s @ 7.94 hrs, Volume= 0.010 Ml
Outflow = 0.0002 m³/s @ 9.02 hrs, Volume= 0.010 Ml, Atten= 69%, Lag= 64.7 min
Primary = 0.0002 m³/s @ 9.02 hrs, Volume= 0.010 Ml

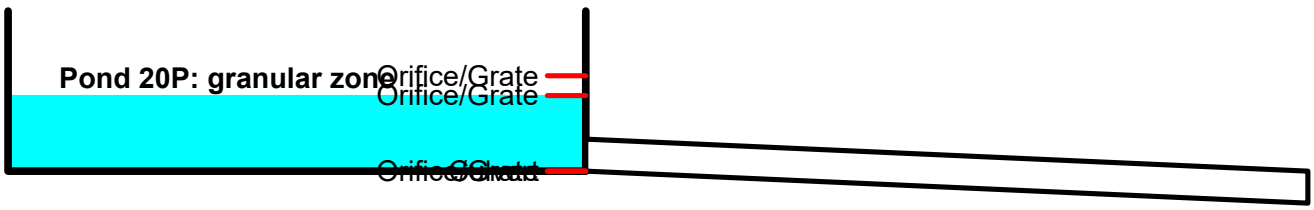
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 0.236 m @ 9.02 hrs Surf.Area= 24.0 m² Storage= 2.2 m³

Plug-Flow detention time= 110.0 min calculated for 0.010 Ml (98% of inflow)
Center-of-Mass det. time= 91.4 min (751.0 - 659.7)

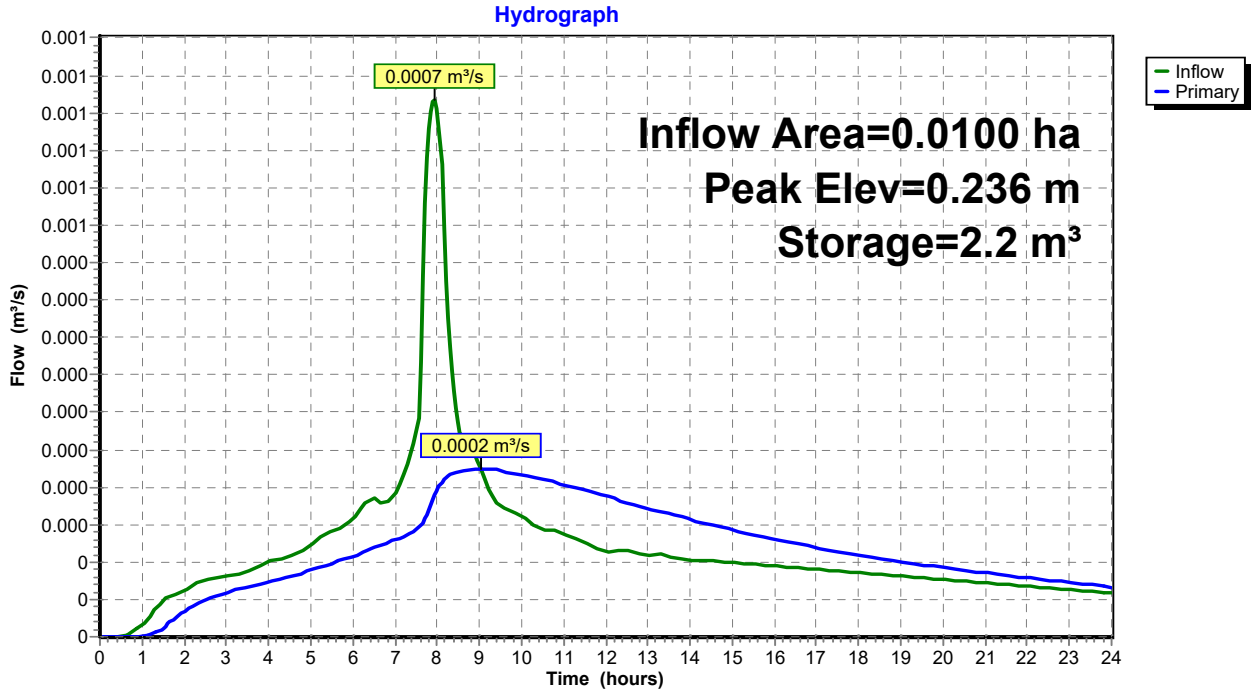
Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	4.6 m³	**3.00 mW x 8.00 mL x 0.50 mH Prismatoid** 12.0 m³ Overall x 38.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	**100 mm Round Culvert** L= 10.00 m Ke= 0.500 Inlet / Outlet Invert= 0.000 m / -0.100 m S= 0.0100 m/m Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.008 m²
#2	Device 1	0.000 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	0.236 m	**20 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	0.298 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.0002 m³/s @ 9.02 hrs HW=0.236 m (Free Discharge)
↑—**1=Culvert** (Passes 0.0002 m³/s of 0.0083 m³/s potential flow)
—**2=Orifice/Grate** (Orifice Controls 0.0002 m³/s @ 1.27 m/s)
—**3=Orifice/Grate** (Orifice Controls 0.0000 m³/s @ 0.03 m/s)
—**4=Orifice/Grate** (Controls 0.0000 m³/s)



Pond 20P: granular zone



Summary for Pond 20P: granular zone

Inflow Area = 0.0100 ha,100.00% Impervious, Inflow Depth > 139 mm for 5Year +cc event
Inflow = 0.0010 m³/s @ 7.94 hrs, Volume= 0.014 Ml
Outflow = 0.0004 m³/s @ 8.39 hrs, Volume= 0.013 Ml, Atten= 53%, Lag= 26.9 min
Primary = 0.0004 m³/s @ 8.39 hrs, Volume= 0.013 Ml

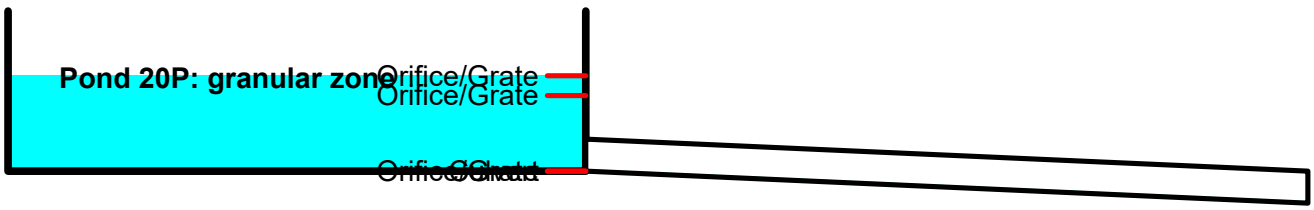
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 0.298 m @ 8.39 hrs Surf.Area= 24.0 m² Storage= 2.7 m³

Plug-Flow detention time= 114.6 min calculated for 0.013 Ml (97% of inflow)
Center-of-Mass det. time= 90.9 min (745.0 - 654.1)

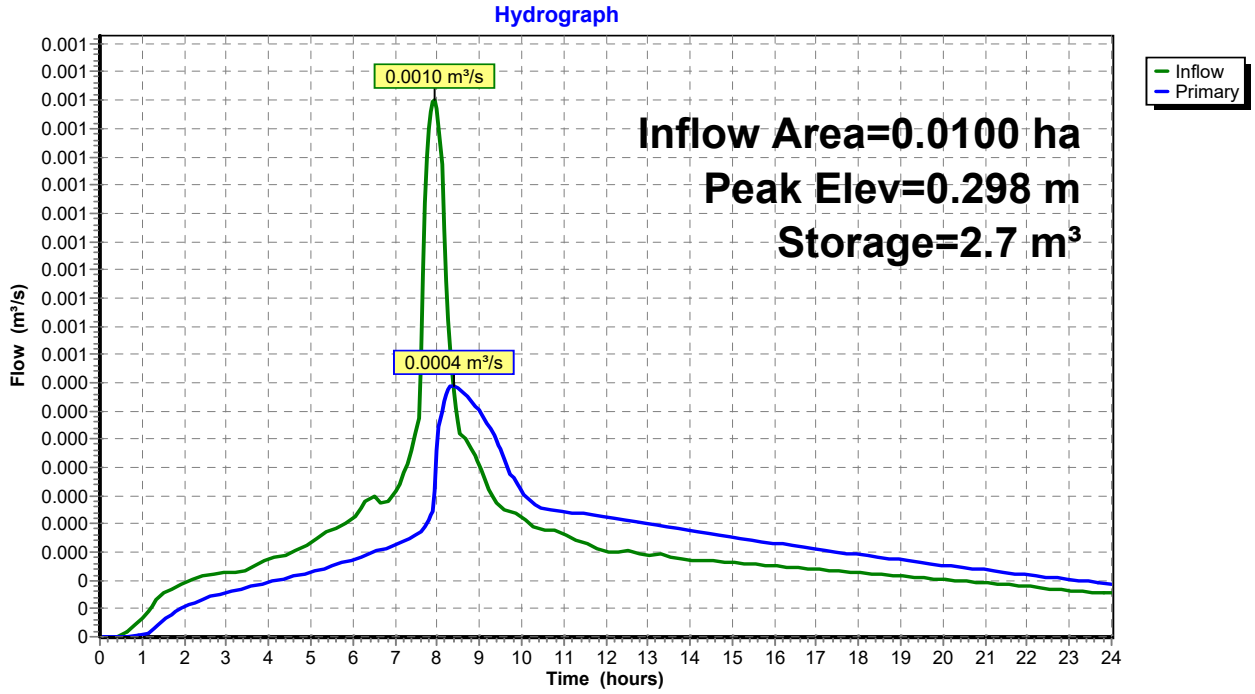
Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	4.6 m³	**3.00 mW x 8.00 mL x 0.50 mH Prismatoid** 12.0 m³ Overall x 38.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	**100 mm Round Culvert** L= 10.00 m Ke= 0.500 Inlet / Outlet Invert= 0.000 m / -0.100 m S= 0.0100 m/m Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.008 m²
#2	Device 1	0.000 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	0.236 m	**20 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	0.298 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.0004 m³/s @ 8.39 hrs HW=0.298 m (Free Discharge)
└**1=Culvert** (Passes 0.0004 m³/s of 0.0093 m³/s potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.0003 m³/s @ 1.43 m/s)
├**3=Orifice/Grate** (Orifice Controls 0.0002 m³/s @ 0.61 m/s)
└**4=Orifice/Grate** (Orifice Controls 0.0000 m³/s @ 0.03 m/s)



Pond 20P: granular zone



Summary for Pond 20P: granular zone

Inflow Area = 0.0100 ha,100.00% Impervious, Inflow Depth > 256 mm for 100 Year +cc event
Inflow = 0.0017 m³/s @ 7.94 hrs, Volume= 0.026 Ml
Outflow = 0.0009 m³/s @ 8.29 hrs, Volume= 0.024 Ml, Atten= 45%, Lag= 21.4 min
Primary = 0.0009 m³/s @ 8.29 hrs, Volume= 0.024 Ml

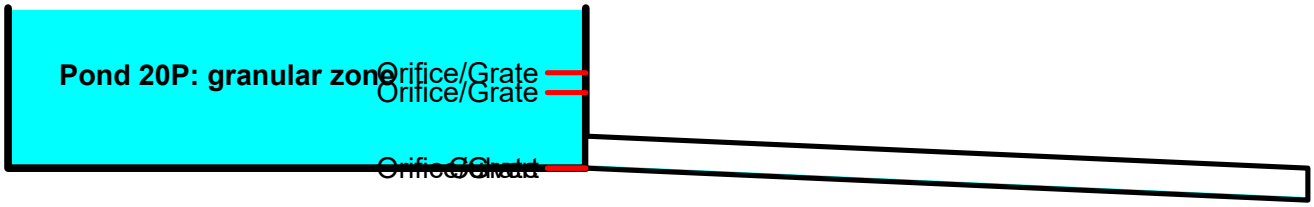
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 0.493 m @ 8.29 hrs Surf.Area= 24.0 m² Storage= 4.5 m³

Plug-Flow detention time= 112.6 min calculated for 0.024 Ml (94% of inflow)
Center-of-Mass det. time= 71.0 min (716.6 - 645.6)

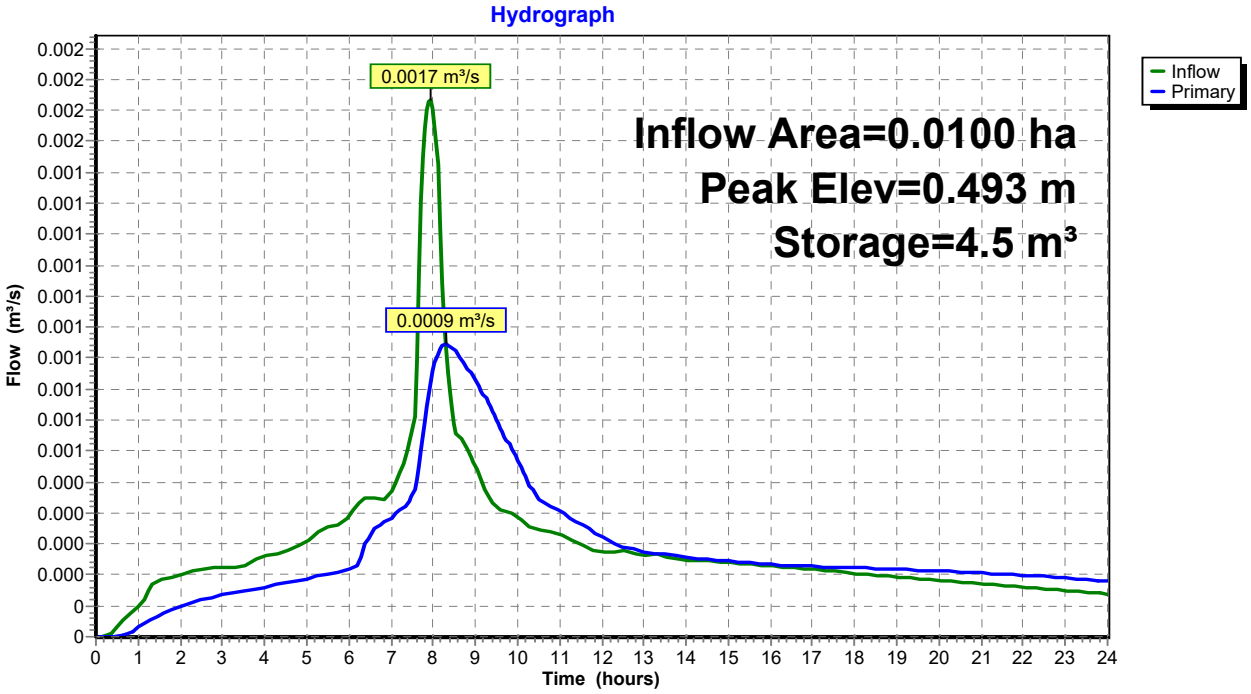
Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	4.6 m³	**3.00 mW x 8.00 mL x 0.50 mH Prismatoid** 12.0 m³ Overall x 38.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	**100 mm Round Culvert** L= 10.00 m Ke= 0.500 Inlet / Outlet Invert= 0.000 m / -0.100 m S= 0.0100 m/m Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.008 m²
#2	Device 1	0.000 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	0.236 m	**20 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	0.298 m	**15 mm Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.0009 m³/s @ 8.29 hrs HW=0.493 m (Free Discharge)
└**1=Culvert** (Passes 0.0009 m³/s of 0.0119 m³/s potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.0003 m³/s @ 1.85 m/s)
├**3=Orifice/Grate** (Orifice Controls 0.0004 m³/s @ 1.32 m/s)
└**4=Orifice/Grate** (Orifice Controls 0.0002 m³/s @ 1.15 m/s)



Pond 20P: granular zone

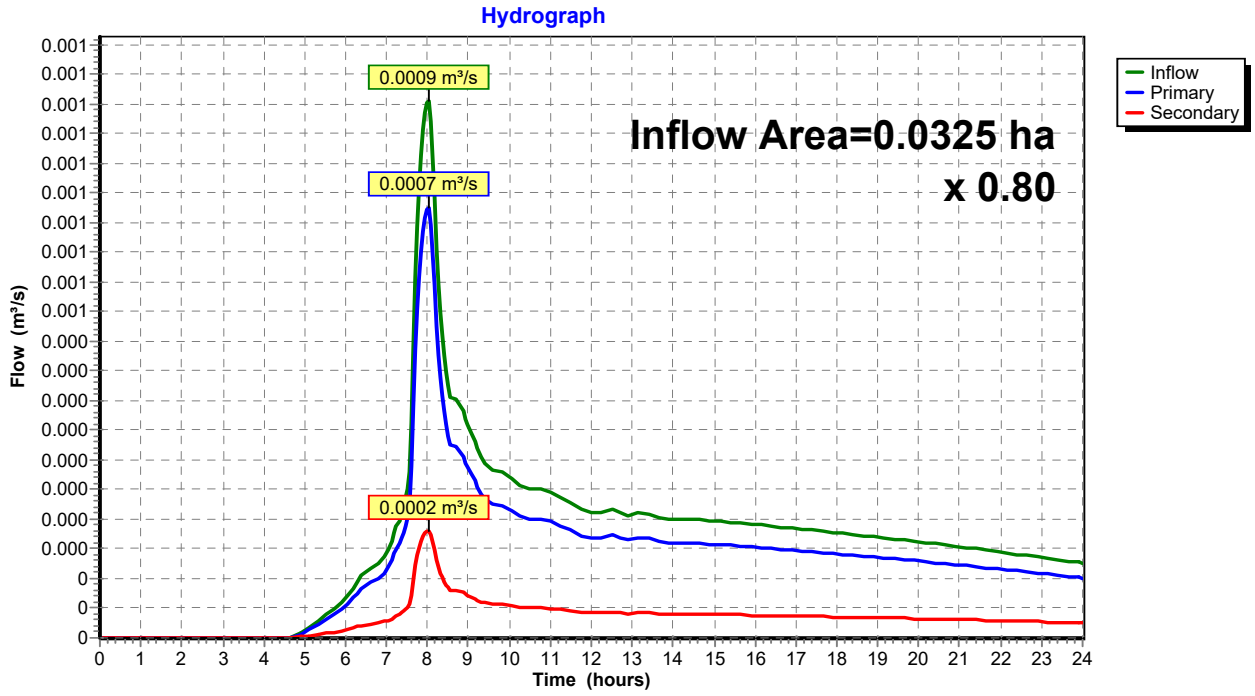


Summary for Link 19L: 80%

Inflow Area = 0.0325 ha, 0.00% Impervious, Inflow Depth > 44 mm for 2 Year event
Inflow = 0.0009 m³/s @ 8.02 hrs, Volume= 0.014 Ml
Primary = 0.0007 m³/s @ 8.02 hrs, Volume= 0.011 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0002 m³/s @ 8.02 hrs, Volume= 0.003 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 19L: 80%

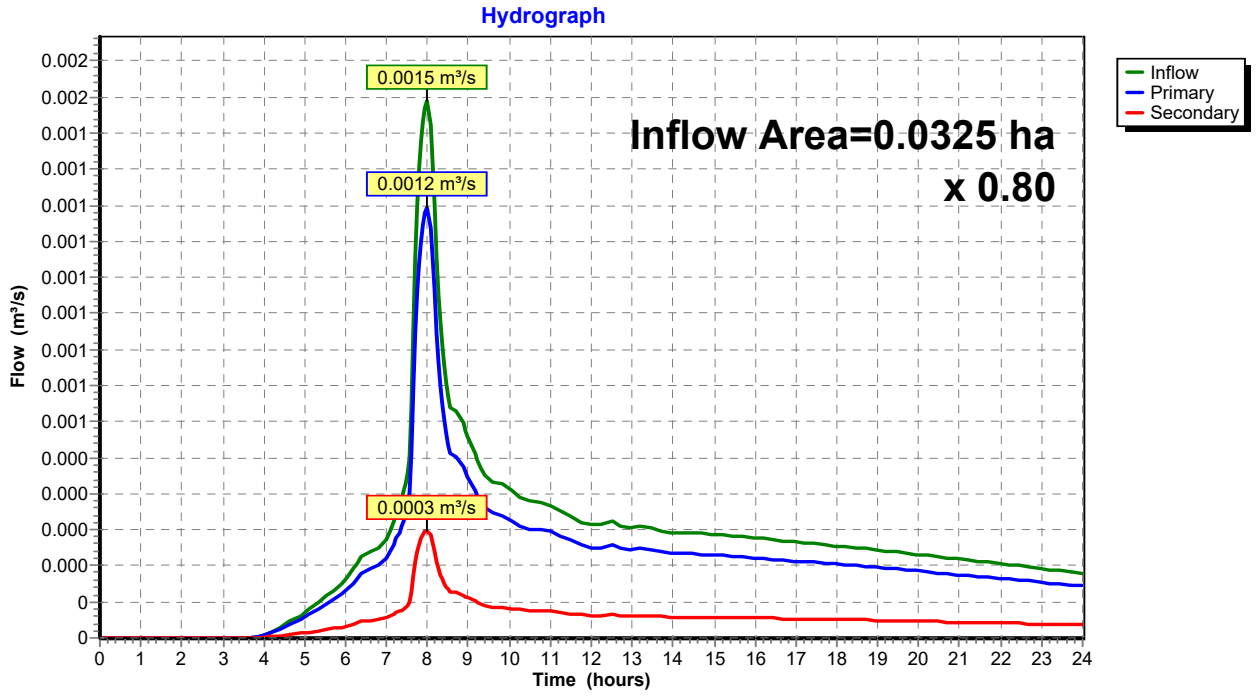


Summary for Link 19L: 80%

Inflow Area = 0.0325 ha, 0.00% Impervious, Inflow Depth > 68 mm for 5 Year event
Inflow = 0.0015 m³/s @ 8.00 hrs, Volume= 0.022 Ml
Primary = 0.0012 m³/s @ 8.00 hrs, Volume= 0.018 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0003 m³/s @ 8.00 hrs, Volume= 0.004 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 19L: 80%

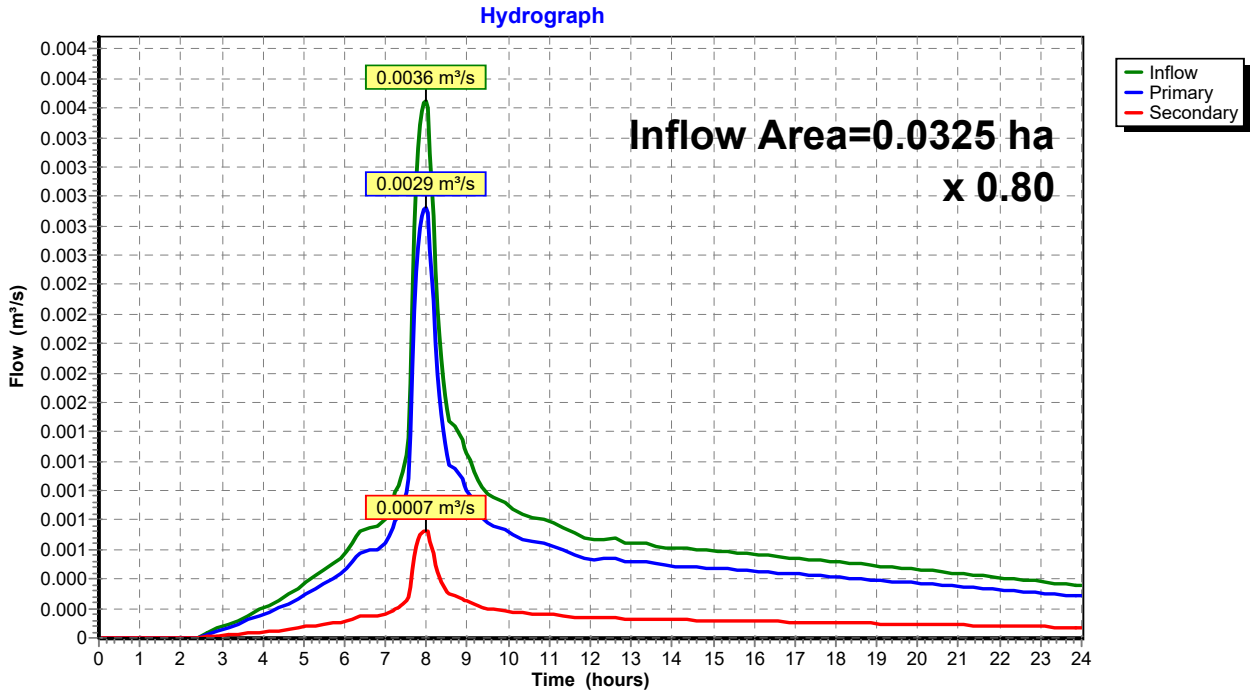


Summary for Link 19L: 80%

Inflow Area = 0.0325 ha, 0.00% Impervious, Inflow Depth > 157 mm for 100 year event
Inflow = 0.0036 m³/s @ 7.98 hrs, Volume= 0.051 Ml
Primary = 0.0029 m³/s @ 7.98 hrs, Volume= 0.041 Ml, Atten= 20%, Lag= 0.0 min
Secondary = 0.0007 m³/s @ 7.98 hrs, Volume= 0.010 Ml

Primary outflow = Inflow x 0.80, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 19L: 80%

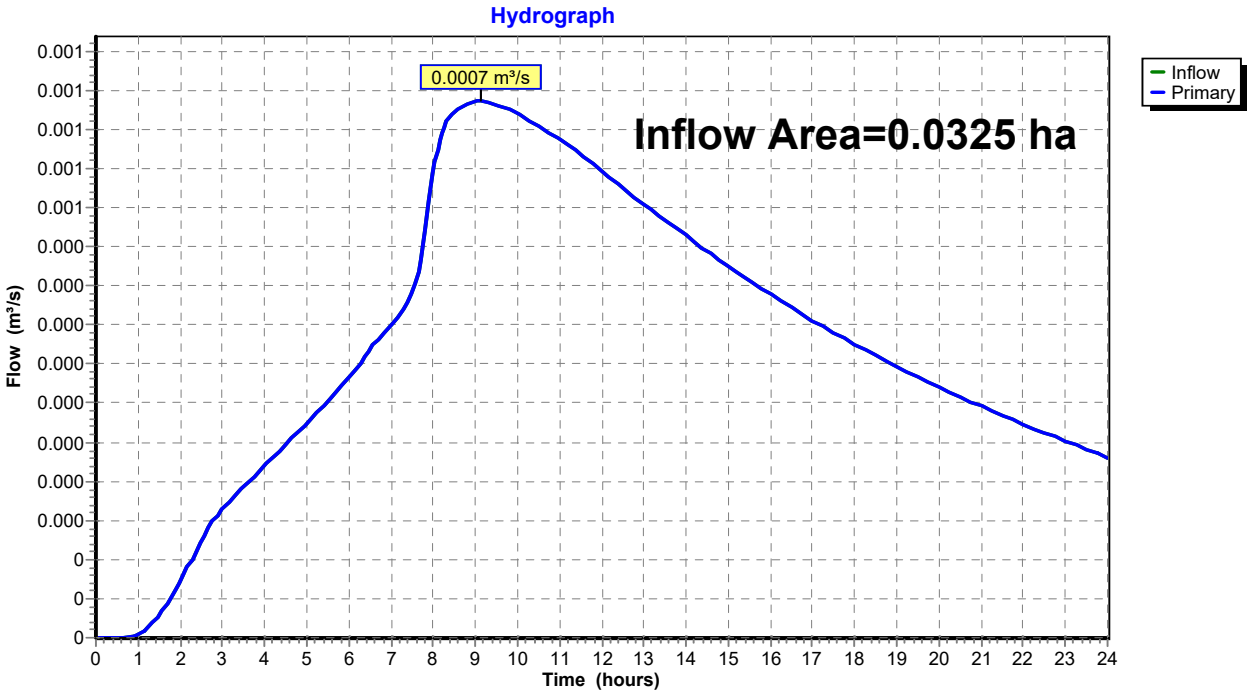


Summary for Link 23L:

Inflow Area = 0.0325 ha,100.00% Impervious, Inflow Depth > 100 mm for 2 Year+cc event
Inflow = 0.0007 m³/s @ 9.11 hrs, Volume= 0.032 Ml
Primary = 0.0007 m³/s @ 9.11 hrs, Volume= 0.032 Ml, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 23L:

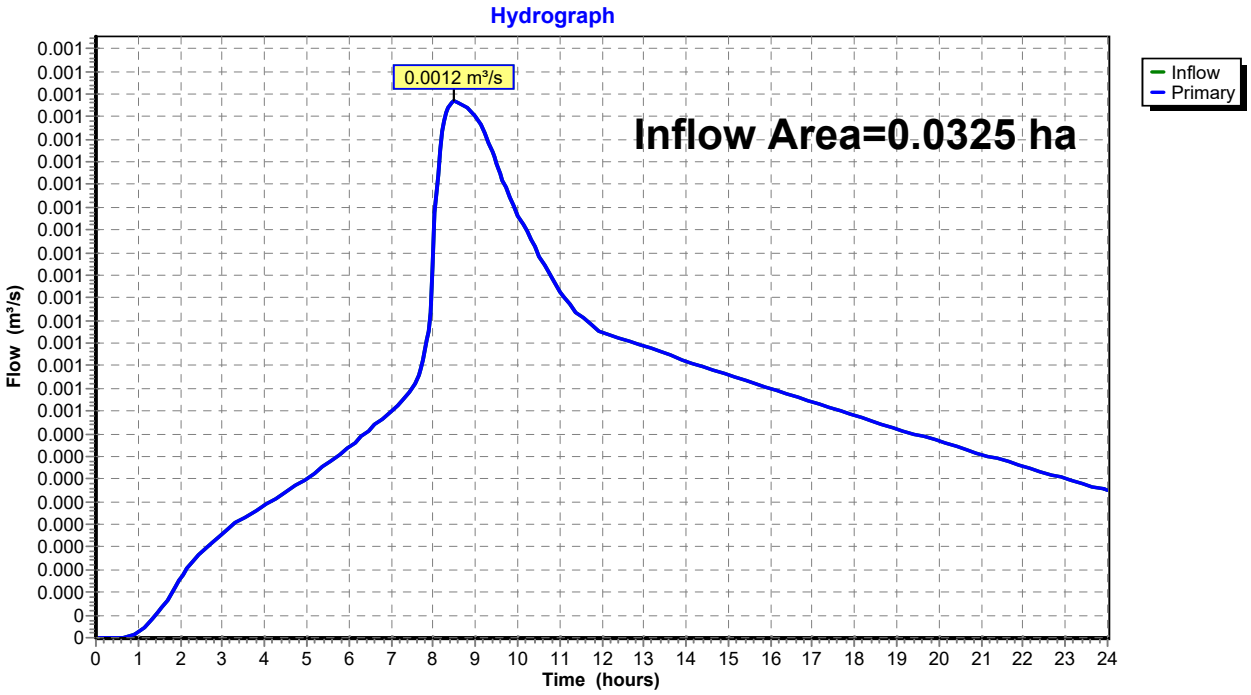


Summary for Link 23L:

Inflow Area = 0.0325 ha,100.00% Impervious, Inflow Depth > 132 mm for 5Year +cc event
Inflow = 0.0012 m³/s @ 8.51 hrs, Volume= 0.043 Ml
Primary = 0.0012 m³/s @ 8.51 hrs, Volume= 0.043 Ml, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 23L:

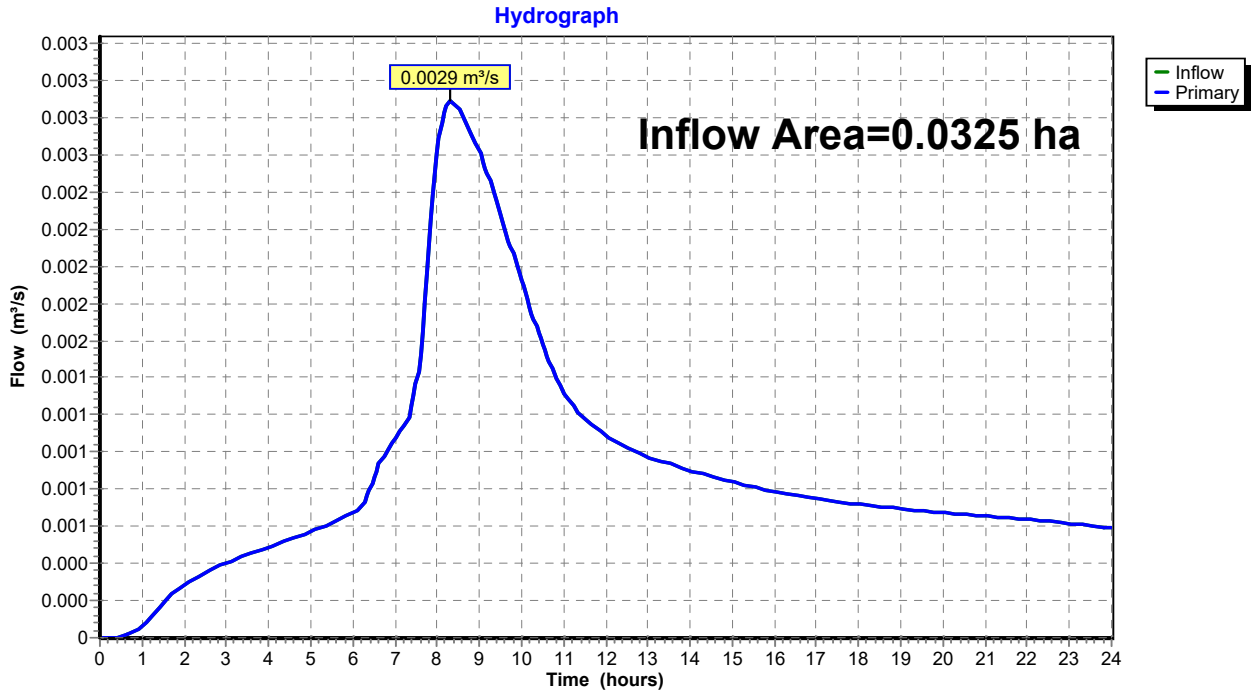


Summary for Link 23L:

Inflow Area = 0.0325 ha,100.00% Impervious, Inflow Depth > 238 mm for 100 Year +cc event
Inflow = 0.0029 m³/s @ 8.33 hrs, Volume= 0.077 Ml
Primary = 0.0029 m³/s @ 8.33 hrs, Volume= 0.077 Ml, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 23L:



Summary for Subcatchment 13S: ROAD FREE DISCHARGE

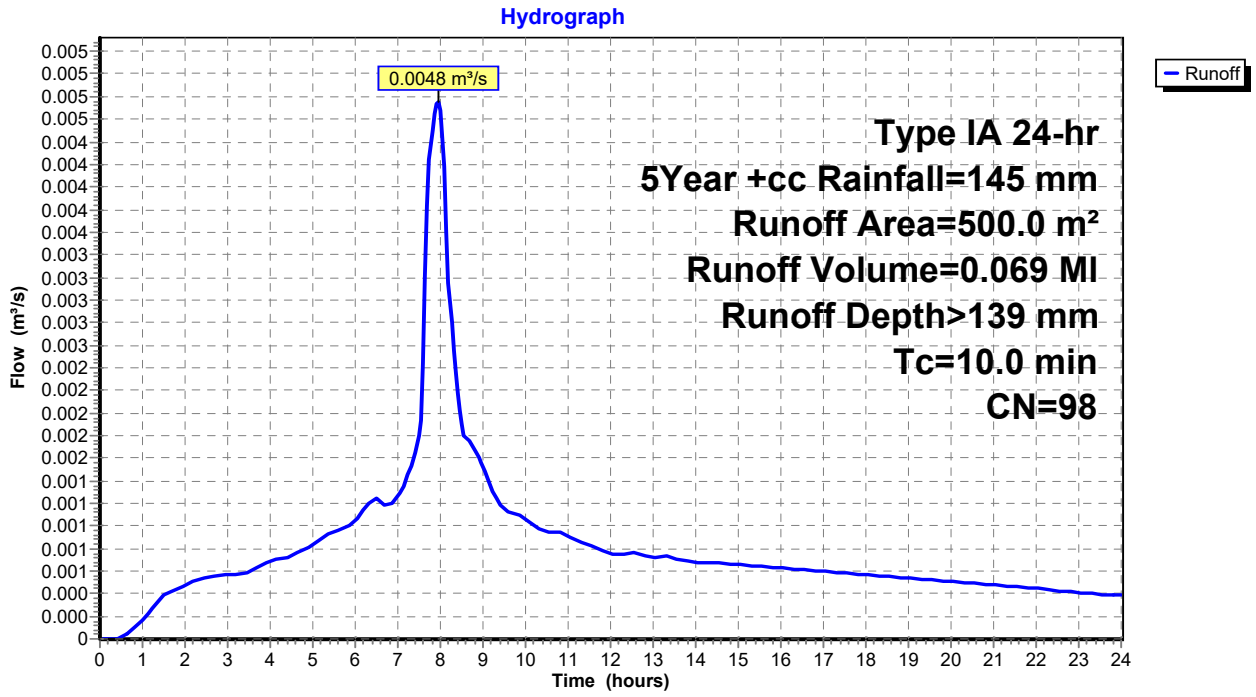
Runoff = 0.0048 m³/s @ 7.94 hrs, Volume= 0.069 Ml, Depth> 139 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 5Year +cc Rainfall=145 mm

	Area (m²)	CN	Description
*	500.0	98	impervious
	500.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry,**

Subcatchment 13S: ROAD FREE DISCHARGE



Summary for Subcatchment 20S: u/s catch

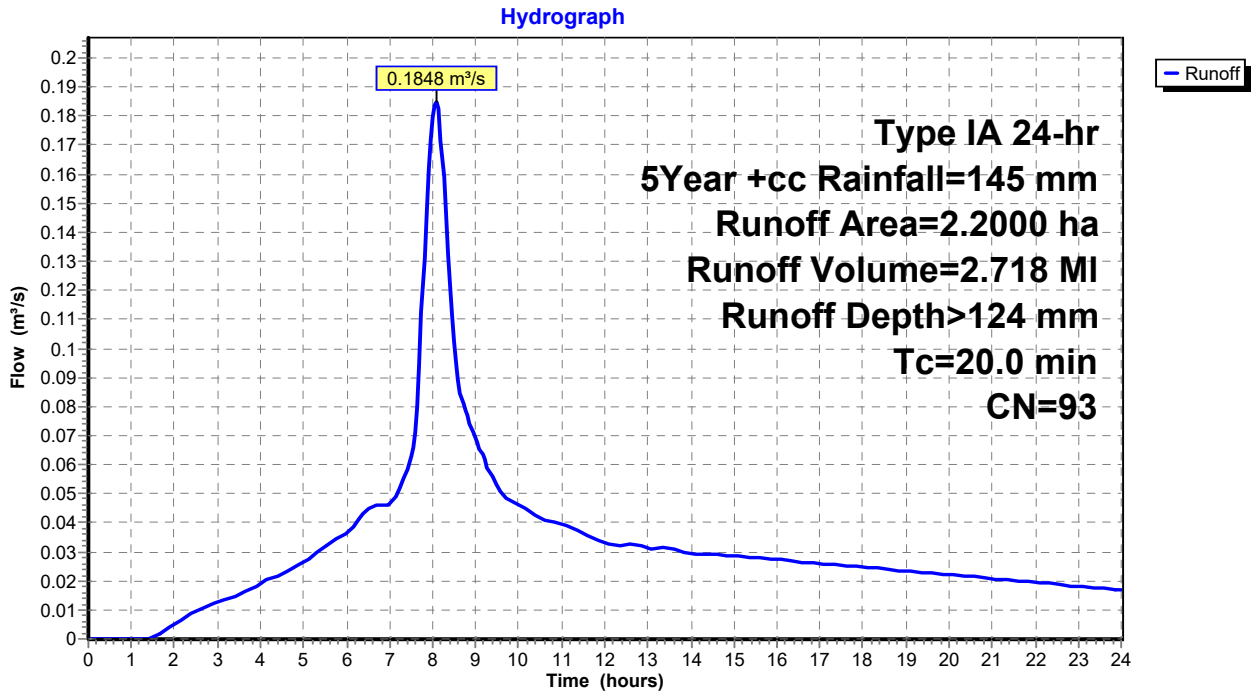
Runoff = 0.1848 m³/s @ 8.08 hrs, Volume= 2.718 Ml, Depth> 124 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 5Year +cc Rainfall=145 mm

	Area (ha)	CN	Description
*	2.2000	93	industrial area HSG:D
	2.2000		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
20.0					**Direct Entry,**

Subcatchment 20S: u/s catch



Summary for Subcatchment 13S: ROAD FREE DISCHARGE

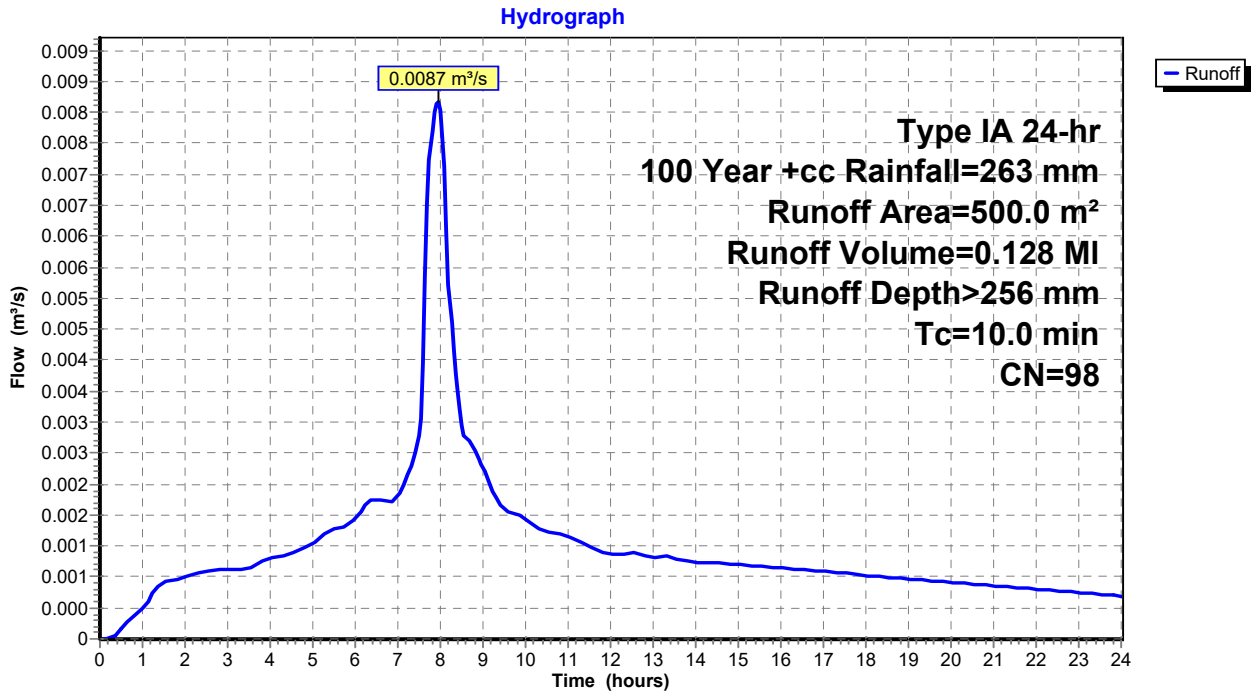
Runoff = 0.0087 m³/s @ 7.94 hrs, Volume= 0.128 Ml, Depth> 256 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 100 Year +cc Rainfall=263 mm

	Area (m²)	CN	Description
*	500.0	98	impervious
	500.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry,**

Subcatchment 13S: ROAD FREE DISCHARGE



Summary for Subcatchment 20S: u/s catch

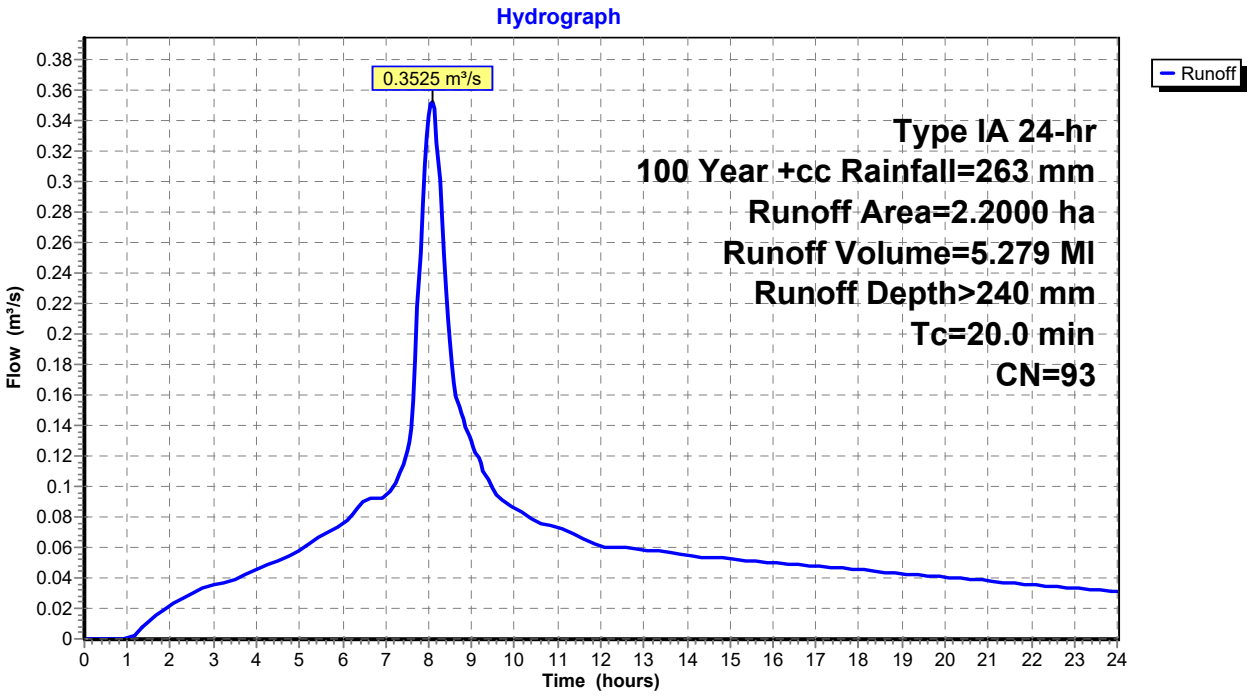
Runoff = 0.3525 m³/s @ 8.08 hrs, Volume= 5.279 Ml, Depth> 240 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 100 Year +cc Rainfall=263 mm

	Area (ha)	CN	Description
*	2.2000	93	industrial area HSG:D
	2.2000		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
20.0					**Direct Entry,**

Subcatchment 20S: u/s catch



Attachment 6

PROPOSED DISTRICT PLAN – DEVELOPMENT CONTROL CHECK S.86B OF THE RMA 1991

26 Melody Lane, Mangonui

Rule	Assessment
Hazardous Substances HS-R2, R5, R6, R9	The site does not contain, nor are any hazardous substance facilities proposed.
Heritage Area Overlays HA-R1 to R14 inclusive. HA S1 & S2	N/A as none apply to the application site.
Historic Heritage Rules and Schedule 2. Rules HH R1-R9 Inclusive.	N/A as the site does not have any identified (scheduled) historic heritage values.
Notable Trees NT R1 – R9 inclusive and NT S1 & S2	N/A – no notable trees present on the site.
Sites and Areas of Significance to Māori SASM R1 – R7 inclusive.	The PDP does not list any site or area of significance to Māori as being present on the site.
Ecosystems and Indigenous Biodiversity – IB-R1 to R5	No indigenous vegetation clearance is proposed.
Subdivision SUB R6, R13, R14, R15, R17.	The site contains no Heritage Resources, Scheduled Sites of Significance to Māori or a Scheduled Significant Natural Area. No Environmental Benefit subdivision is proposed.
Activities on the Surface of Water ASW R1 – R4 inclusive.	N/A as no such activities are proposed.
Earthworks EW R12 & EW R13 and EWS3 & EWS5	EW-R12 and associated EW-S3 relate to the requirement to abide by Accidental Discovery Protocol if carrying out earthworks and artefacts are discovered. EW-R13 and associated EW-S5 refer to operating under appropriate Erosion and Sediment Control measures. The proposal incorporates these requirement in the suggested consent conditions.
Signage – SIGN R9 & R10 and S1 to S6 Inclusive.	N/A – No heritage resources are present on the site and signage does not form part of this application.

Attachment 7

OPERATIVE DISTRICT PLAN – DEVELOPMENT CONTROL CHECK

26 Melody Lane, Mangonui

Chapter / Rule	Compliance Statement
Chapter 12.1 - Landscapes and Natural Features	Does not apply as there is no landscape or natural feature overlay applying to the site.
Chapter 12.2 Indigenous Flora and Fauna	Does not apply as there is no clearance of indigenous vegetation proposed.
Chapters 12.5, (5A) and (5B) Heritage	Does not apply as the site does not contain any heritage sites, notable trees, sites of cultural significance to Māori that are scheduled in the ODP.
Chapter 12.7 Waterbodies	There are no water bodies present on the site.
Chapter 12.8 Hazardous Substances	Does not apply as the activity being applied for is not a hazardous substances facility.
Chapter 12.9 Renewable Energy	Does not apply as the activity does not involve renewable energy.
13.6.5 Legal Road Frontage	The lots have adequate legal frontage as shown on plan of subdivision.
13.6.8 Subdivision Consent before work commences	The engineering assessment provides an estimate of 900m^3 earthworks required for the Stub Road and services. It is requested that these land development works are approved as part of this subdivision consent application.
13.7.2 Allotment size	Complies with standards for a controlled activity subdivision under Rule 13.7.2.1 (v) for sewered sites.
13.7.2.2 Allotment Dimensions	14 metre by 14 metre building platforms are able to be provided within the proposed allotments.
13.7.2.3 Amalgamation of Land	N/A
13.7.2.4 Lots Divided by Zone Boundaries	N/A
13.7.2.5 Outstanding Landscape, Outstanding Landscape Feature Or Outstanding Natural Feature	N/A as the ODP does not list any of these items on the site.
13.7.2.6 Access, Utilities, Roads, Reserves	N/A
13.7.2.7 Savings as to previous proposals	N/A
13.7.2.8 Proximity To Top Energy Transmission Lines	N/A
13.7.2.9 Proximity To The National Grid	N/A
13.7.3.1 Property Access	See assessment of Rules 15.1.6C.1.1 - 15.1.6C.1.11 below.
13.7.3.2 Natural And Other Hazards	Complies – see attached engineering report on s.106 matters.

13.7.3.3 Water Supply	Complies - Water supply will be via DBWS and also used for firefighting. See attached engineering report.
13.7.3.4 Stormwater Disposal	Complies – an engineering report from a Chartered Professional Engineer has been supplied.
13.7.3.5 Sanitary Sewage Disposal	Complies - a report from a Chartered Professional Engineer has been supplied.
13.7.3.6 Energy Supply	Complies - see correspondence from Top Energy confirming connections available.
13.7.3.7 Telecommunications	See correspondence from Chorus confirming connections are available.
13.7.3.8 Easements For Any Purpose	Please refer to proposed scheme plan.
13.7.3.9 Preservation Of Heritage Resources, Vegetation, Fauna And Landscape, And Land Set Aside For Conservation Purposes	N/ A as there are no listed items present.
13.7.3.10 Access To Reserves And Waterways	N/A
13.7.3.11 Land Use Compatibility	A consent notice is recommended on reverse sensitivity matters given the presence of industrial land uses to the south.
13.7.3.12 Proximity To Airports	N/A
Chapter 14 Financial Contributions	No esplanade reserve or strip is offered as part of this subdivision.
Chapter 15.1.6A.1 & 15.1.6A.2 & 15.1.6A.2.1 – Traffic Movements	The rules in Chapter 15.1.6A.1 & 15.16A.2 are clear that they are to be applied in conjunction with the Traffic Intensity Factor ("TIF") Tables in Appendix 3A. These only apply to land use activities.
15.1.6B - Parking Requirements)	As above, these rules apply to land use activities and not subdivision.
Rule 15.1.6C.1.1 to 15.1.6C.1.11 inclusive. Access	**Does Not Comply** – see attached engineering report for drawings. Maximum gradient, minimum access widths, length and number of units served all comply for the proposed ROW. However the Stub Road (if accepted for vesting by FNDC) will not meet the current FNDC Engineering Standards, and as required by Rule 15.1.6C.1.9 of the ODP. **Discretionary Resource Consent** therefore required under Rule 15.1.6C.2.

Attachment 8

Operative District Plan – Relevant Assessment Criteria

26 Melody Lane

Discretionary Land Use Consent Criteria for Transport Infringement

15.1.6C.4.3 NEW ROADS

(a) Whether the new road complies with the *"Engineering Standards and Guidelines" (June 2004 – Revised 2009).*

Discretionary Subdivision Consent Assessment Criteria

In considering whether or not to grant consent or impose conditions on applications for discretionary (subdivision) activities, the Council will have regard to s104, s105 and s106 of the Act, the objectives and policies of the Plan and to the assessment criteria set out below.

Note: Attention is drawn to the need to also refer to ***Chapter 15.1*** for rules relating to property access.

13.10.1 ALLOTMENT SIZES AND DIMENSIONS

(a) Whether the allotment is of sufficient area and dimensions to provide for the intended purpose or land use, having regard to the relevant zone standards and any District wide rules for land uses.

(b) Whether the proposed allotment sizes and dimensions are sufficient for operational and maintenance requirements.

(c) The relationship of the proposed allotments and their compatibility with the pattern of the adjoining subdivision and land use activities, and access arrangements.

(d) Whether the cumulative and long term implications of proposed subdivisions are sustainable in terms of preservation of the rural and coastal environments.

13.10.2 NATURAL AND OTHER HAZARDS

In assessing any subdivision, and for the purposes of s106 of the Act, the Council will have regard to:

(a) Any information held by the Council or the Northland Regional Council regarding natural hazards, contaminated sites or other hazards.

(b) Information obtained by suitably qualified experts, whose investigations are supplied for subdivision applications.

(c) Potential adverse effects on other land that may be caused by the subdivision or anticipated land use activities.

(d) In relation to inundation from any source, the Council shall have regard to the following factors:

- (i) the effects of any proposed filling being undertaken to avoid inundation and the consequential effects on the natural drainage pattern and adjoining land;
- (ii) flood plain management measures proposed;
- (iii) the proposed coastal protection mechanisms / techniques / measures and their environmental effects;
- (iv) any proposed boundary drainage to protect surrounding properties;
- (v) the adequacy of existing outfalls and any need for upgrading;
- (vi) any need for retention basins to regulate the rate and volume of surface run-off.

(e) In relation to erosion, falling debris or slippage, the need for ongoing conditions aimed at avoiding, remedying or mitigating future potential adverse effects, and any need for registration of consent notices on the allotment's Certificate of Title, pursuant to ***Rule 13.6.7***.

(f) In relation to subsidence, the provision of suitability certificates, such as NZS 4431, or if not appropriate, the setting of ongoing conditions, with consent notices registered on the Certificates of Title, pursuant to ***Rule 13.6.7***.

(g) In relation to contaminated sites, any soil tests establishing suitability, and methods to avoid, mitigate or remedy the effects, including removal to approved disposal points.

(h) In relation to land filling and excavation operations, the following factors:

(i) the effects on surrounding properties in terms of dust nuisance, visual detraction, or the potential height of buildings on filled land;

(ii) any adverse impacts on the natural pattern of surface drainage both on and outside the site;

(iii) the type of, and placement of, fill material in terms of its potential for contamination of land or water, or potential subsidence;

(iv) mitigation, or avoidance, of adverse effects caused by filtration affecting neighbouring properties;

(v) remedies necessary during emergencies;

(vi) the rules contained in ***Section 12.3*** relating to filling and excavation of land;

(vii) the impact of filling or excavation on heritage values, ecological values, cultural values, surface water quality, and access along waterways;

(viii) any beneficial effects in terms of waterway enhancement.

Attention is drawn to Northland Regional Council's natural hazards information and to s106 of the Resource Management Act 1991 which allows a consent authority to refuse subdivision consent in certain circumstances.

13.10.3 WATER SUPPLY

(a) Where there is no reticulated water supply available for connection, whether it would be appropriate to allow a private restricted flow rural-type water supply system; such supply being always available and complying with *"Drinking Water Standards of New Zealand" (1995)*.

(b) Whether the provisions of the *"Engineering Standards and Guidelines 2004 – Revised March 2009"* (to be used in conjunction with NZS 4404:2004) have been met in respect of fire fighting water supply requirements.

(c) Whether the provisions of the Council's *"Engineering Standards and Guidelines" (2004) - Revised March 2009* (to be used in conjunction with NZS 4404:2004) have been met in respect of installation of all necessary water supply pipe lines, and ancillary equipment necessary for the subdivision, including extensions to existing supply systems, and including mains, sub-mains, service and fire hydrants.

(d) Whether the existing water supply systems, to which the connection will be made, have sufficient capacity to service the subdivision.

(e) Whether it may be necessary to provide new reservoirs, pumping stations and rising mains, or increased pipe sizes leading to the subdivision in existing streets, or providing new wells and new pumping units.

(f) Whether there is a need for a local purpose reserve to be set aside and vested in the Council as a site for any public water supply utility required to be provided.

13.10.4 STORMWATER DISPOSAL

(a) Whether the application complies with any regional rules relating to any water or discharge permits required under the Act, and with any resource consent issued to the District Council in relation to any urban drainage area stormwater management plan or similar plan.

(b) Whether the application complies with the provisions of the Council's *"Engineering Standards and Guidelines" (2004) - Revised March 2009* (to be used in conjunction with NZS 4404:2004).

(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.

(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.

(e) The adequacy of the proposed means of disposing of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces.

(f) The adequacy of any proposed means for screening out litter, the capture of chemical spillages, the containment of contamination from roads and paved areas, and of siltation.

(g) The practicality of retaining open natural waterway systems for stormwater disposal in preference to piped or canal systems and adverse effects on existing waterways.

(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.

(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.

(j) The necessity to provide on-site retention basins to contain surface run-off where the capacity of the outfall is incapable of accepting flows, and where the outfall has limited capacity, any need to restrict the rate of discharge from the subdivision to the same rate of discharge that existed on the land before the subdivision takes place.

(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.

(l) In accordance with sustainable management practices, the importance of disposing of stormwater by way of gravity pipe lines. However, where topography dictates that this is not possible, the adequacy of proposed pumping stations put forward as a satisfactory alternative.

(m) The extent to which it is proposed to fill contrary to the natural fall of the country to obtain gravity outfall; the practicality of obtaining easements through adjoining owners' land to other outfall systems; and whether filling or pumping may constitute a satisfactory alternative.

(n) For stormwater pipes and open waterway systems, the provision of appropriate easements in favour of either the registered user or in the case of the Council, easements in gross, to be shown on the survey plan for the subdivision, including private connections passing over other land protected by easements in favour of the user.

(o) Where an easement is defined as a line, being the centre line of a pipe already laid, the effect of any alteration of its size and the need to create a new easement.

(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.

(q) The need for and extent of any financial contributions to achieve the above matters.

(r) The need for a local purpose reserve to be set aside and vested in the Council as a site for any public utility required to be provided.

13.10.5 SANITARY SEWAGE DISPOSAL

(a) Whether the capacity, availability, and accessibility of the reticulated system is adequate to serve the proposed subdivision.

(b) Whether the application includes the installation of all new reticulation, and complies with the provisions of the Council's *"Engineering Standards and Guidelines" (2004) - Revised March 2009* (to be used in conjunction with NZS 4404:2004).

(c) Whether the existing sanitary sewage disposal system, to which the outfall will be connected, has sufficient capacity to service the subdivision.

(d) Whether a reticulated system with a gravity outfall is provided, and where it is impracticable to do so, whether it is feasible to provide alternative individual pump connections (with private rising mains), or new pumping stations, complete pressure, or vacuum systems.

Note: Council consent to install private rising mains within legal roads will be required, under the Local Government Act.

(e) Where a reticulated system is not available, or a connection is impractical, whether a suitable sewage treatment or other disposal systems is provided in accordance with regional rules or a discharge system in accordance with regional rules or a discharge permit issued by the Northland Regional Council.

(f) Where a reticulated system is not immediately available but is likely to be in the near future, whether a temporary system is appropriate.

Note: Consent notices may be registered against Certificates of Title pursuant to ***Rule 13.6.7*** requiring individual allotments to connect with the system when it does become available.

(g) Whether provision has been made by the applicant for monitoring mechanisms to ensure contaminants are not discharged into the environment from a suitable sewage treatment or other disposal system, together with any consent notices to ensure compliance.

(h) Whether there is a need for, and the extent of, any development contributions to achieve the above matters.

(i) Whether there is a need for a local purpose reserve to be set aside and vested in the Council as a site for any public sewage utility for sanitary disposal purposes required to be provided.

(j) Whether the subdivision represents the best practical option in respect of the provision that is made for the disposal of sewage and waste water.

13.10.6 ENERGY SUPPLY

(a) Where the subdivision involves the construction of new roads or formed rights of way, whether an extended reticulation system will be installed (at the subdivider's cost), having regard to the provisions of the Council's *"Engineering Standards and Guidelines 2004 – Revised March 2009* (to be used in conjunction with NZS 4404:2004). The application for subdivision consent should also indicate how lots are to be reticulated.

(b) Whether the proposed reticulated system to be installed by the subdivider is adequate for the likely development.

(c) Where the proposed system will serve other land that is not part of the subdivision, whether the network operator is providing sufficient capacity as initially installed and the cost of such provision.

Note: Upgrading or cost sharing will be solely a matter for the network operator.

(d) Where a gas supply is proposed, whether the gas network operator is responsible for the installation of all pipelines and their future maintenance, in line with the provisions of the Council's *"Engineering Standards and Guidelines" (2004)- Revised March 2009* (to be used in conjunction with NZS 4404:2004).

(e) Whether there is a need for a local purpose reserve to be set aside as a site for any public utility required to be provided.

(f) Whether there will be potential adverse effects of the proposed reticulation system on amenity values.

(g) Whether the subdivision design, location of building platforms and proposed electricity supply has had adequate regard to the future adoption of appropriate renewable energy initiatives and technologies.

13.10.7 TOP ENERGY TRANSMISSION LINES

Where it is proposed to subdivide land to create new allotments within an area measured 20m of either side of the centre point of an electrical transmission line designed to operate at or above 50 kV, particular regard shall be had to the following matters:

(a) The extent to which the subdivision design mitigates the effects of the lines through the location of roads and reserves under the route of the line.

(b) The ability to carry out maintenance and inspection of transmission lines to avoid risk of injury and/or property damage.

(c) The outcomes of consultation with the affected utility operator.

(d) The subdivision design, location of building platforms, location of any proposed tree planting, extent and nature of earthworks.

13.10.8 TELECOMMUNICATIONS

(a) Where the subdivision involves construction of new roads or formed rights of way, whether an extended reticulation system has been installed (at the subdivider's cost), having regard to the Council's "*Engineering Standards and Guidelines 2004 – Revised March 2009* (to be used in conjunction with NZS 4404:2004) and "The National Environmental Standard for Telecommunication Facilities 2008".

(b) Where the proposed system will serve other land which is not part of the subdivision, whether the network operator is providing sufficient capacity as initially installed, and the cost of such provision.

(c) Whether the proposed reticulation system will have potential adverse effects on amenity values.

Note: Upgrading or cost-sharing will be solely a matter for the network operator.

13.10.9 EASEMENTS FOR ANY PURPOSE

Whether there is a need for an easement for any of the following purposes:

(a) Easements in gross where a service or access is required by the Council.

(b) Easements in respect of other parties in favour of nominated allotments or adjoining Certificates of Title.

(c) Service easements, whether in gross or private purposes, with sufficient width to permit maintenance, repair or replacement. Centre line easements shall apply when the line is privately owned and unlikely to require upgrading.

(d) Easements for any of the following purposes:
  (i) private ways, whether mutual or not;
  (ii) stormwater, sanitary sewer, water supply, electric power, gas reticulation;
  (iii) telecommunications;
  (iv) party walls and floors/ceilings.
  (v) any other network utilities.

(e) Easements in gross in favour of the Council adjoining banks of rivers, streams, lakes, wetlands or the coastal marine area not subject to an esplanade reserve or strip.

(f) Stormwater easements passing through esplanade reserves where drainage will be to the adjoining lake or river.

13.10.10 PROVISION OF ACCESS

(a) Whether provision for access to and within the subdivision, including private roads, has been made in a manner that will avoid, remedy or mitigate adverse effects on the environment, including but not limited to traffic effects, including effects on existing roads, visual effects, effects on vegetation and habitats, and natural character.

13.10.11 EFFECT OF EARTHWORKS AND UTILITIES

(a) Whether the effects of earthworks and the provision of services to the subdivision will have an adverse effect on the environment and whether these effects can be avoided, remedied or mitigated.

13.10.12 BUILDING LOCATIONS

(a) Whether the subdivision provides physically suitable building sites.

(b) Whether or not development on an allotment should be restricted to parts of the site.

(c) Where a proposed subdivision may be subject to inundation, whether the establishment of minimum floor heights for buildings is necessary in order to avoid or mitigate damage.

(d) Whether the subdivision design in respect of the orientation and dimensions of new allotments created facilitates the siting and design of buildings able to take advantage of passive solar gain (e.g. through a northerly aspect on an east/west axis).

Note: Attention is also drawn to the Visual Amenity rules applying in the General Coastal, South Kerikeri Inlet and Coastal Living Zones and in Outstanding Landscapes (see ***Chapter 10*** and ***Section 11.1***).

13.10.13 PRESERVATION AND ENHANCEMENT OF HERITAGE RESOURCES, VEGETATION, FAUNA AND LANDSCAPE, AND LAND SET ASIDE FOR CONSERVATION PURPOSES

(a) Whether any vegetation, habitats of indigenous fauna, heritage resources and landscape features are of sufficient value in terms of the objectives and policies in ***Chapter 12*** of the Plan, that they should be protected.

(b) Whether the means (physical and/or legal) by which ongoing preservation of the resource, area or feature will be achieved is adequate.

(c) Where there are Sites of Cultural Significance to Maori, (refer to ***Appendix 1F*** and the ***Resource Maps***), whether it is appropriate to require their protection by physical or legal means and/or to provide for access to the site over the land to be subdivided.

(d) Where a reserve is to be set aside and vested in the Council, whether the value of the reserve land is offset against the assessment of any financial contribution.

(e) Whether any measures are proposed to protect known high density kiwi habitats from predation by dogs, cats, rats, mustelids, pigs, and other animal pests.

(f) Whether the subdivision would have an adverse effect on the ability to protect listed historic buildings, places or objects and their setting or surrounds; and the protection of listed notable trees.

(g) Whether the subdivision will result in the permanent protection and/or enhancement of heritage resources, areas of significant indigenous vegetation and significant habitats of indigenous fauna, outstanding landscapes, outstanding landscape features or outstanding natural features.

(h) Whether the subdivision will result in the significant enhancement of biodiversity values through planting of native flora (preferably those species that naturally grow in the area) and ongoing management (including pest animal and plant control, fencing and replacement of failed plantings, stream enhancement and waterway protection).

Note: There are many ways in which preservation/protection can be achieved, and the appropriate means will vary according to the circumstance. In some cases physical means (e.g. fencing) may be appropriate. In other cases, a legal means will be preferred instead of (or as well as) physical means. Mechanisms other than a Consent Notice which may be acceptable include:

(i) a Maori reservation under s338 and s340 of Te Ture Whenua Maori (Maori Land) Act;

(ii) a conservation covenant with the Department of Conservation or the Council;

(iii) an open space covenant with the Queen Elizabeth II National Trust;

(iv) a heritage covenant with the Heritage New Zealand Pouhere Taonga;

(v) a reserve under the Reserves Act.

13.10.14 SOIL

(a) The extent to which any subdivision will contribute to or affect the ability to safeguard the life supporting capability of soil.

(b) The degree to which the life supporting capacity of the soil may be adversely affected by the subdivision and the degree to which any soils classified as I, II or III in the NZ Land Resource Inventory Worksheets are adversely affected by the subdivision.

13.10.15 ACCESS TO WATERBODIES

(a) Whether the subdivision provides public access to and along the coastal marine area or to and along banks of lakes or rivers, and whether that access is appropriate, given the nature of the land subject to the subdivision application, and the sensitivity of the waterbody to environmental effects resulting from the use of that access by the public.

13.10.16 LAND USE INCOMPATIBILITY

(a) The degree to which the proposed allotments take into account adverse effects arising from incompatible land use activities (including but not limited to noise, vibration, smell, smoke, dust and spray) resulting from an existing land use adjacent to the proposed subdivision.

13.10.17 PROXIMITY TO AIRPORTS

(a) The degree to which the proposal takes into account reverse sensitivity - adverse effects arising from incompatible land use activities arising from being in proximity to an airport (including, but not limited to, the hours of operation, flight paths, noise, vibration, glare and visual intrusion).

13.10.18 NATURAL CHARACTER OF THE COASTAL ENVIRONMENT

(a) The degree to which the proposal takes into account the preservation and/or enhancement of the natural character of the coastal environment.

13.10.19 ENERGY EFFICIENCY AND RENEWABLE ENERGY DEVELOPMENT/USE

The extent to which the application promotes energy efficiency and renewable energy development and use through the following initiatives:

(a) ability to develop energy efficient buildings and structures (e.g. by providing a north-facing site with the ability to place a building on an east/west axis);

(b) reduced travel distances and car usage by designing a layout with as many links to adjacent sites and surrounding roads as practicable;

(c) encouragement of pedestrian and cycle use by designing a layout that allows easy direct access to and from, shops, schools, work places, reserves and other amenities;

(d) access to alternative transport facilities;

(e) domestic or community renewable electricity generation;

(f) solar street lighting.

13.10.20 NATIONAL GRID CORRIDOR

Where it is proposed to have development within the National Grid Corridor particular regard shall be had to the following matters:

(a) Whether the design and construction of the subdivision allows for earthworks, buildings and structures to comply with the safe distance requirements of the New Zealand Electrical Code of Practice for Safe Distances (NZECP 34:2001);

(b) Provision for the ongoing operation, maintenance and planned upgrade of the National Grid.

Where an application is made for development within the National Grid Corridor as a non complying activity, Transpower New Zealand Limited will be considered an affected party in accordance with the Act.

Attachment 9

Fourth Schedule Assessment under Resource Management Act 1991

Compliance Check for Information Required

26 Melody Lane, Mangonui

Clause 2 Information Required in all applications	
(1) An application for a resource consent for an activity must include the following:	
(a) a description of the activity: .	Refer Paragraphs 2.1 to 3.9 of this Planning Report.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Paragraphs 2.1 to 3.9 and paragraphs 6.0 to 7.16 of this Planning Report.

(b) a description of the site at which the activity is to occur:	Refer to Paragraphs 1.4 to 1.15 of this Planning Report.
(c) the full name and address of each owner or occupier of the site:	This information is contained in the Form 9 attached to the application.
(d) a description of any other activities that are part of the proposal to which the application relates:	Refer to Paragraphs 4.5 to 4.7 of this Planning Report. The application is for subdivision and land use consent under the FNDC's ODP. No other breaches of the ODP have been identified.
(e) a description of any other resource consents required for the proposal to which the application relates:	Consent is being sought for subdivision and land use, under the FNDC ODP only.
(f) an assessment of the activity against the matters set out in Part 2:	Refer to Paragraphs 9.0 to 9.5 of this Planning Report.
(g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b), including matters in Clause (2): *(2) The assessment under subclause (1)(g) must include an assessment of the activity against—* *(a). any relevant objectives, policies, or rules in a document; and* *(b) any relevant requirements, conditions, or permissions in any rules in a document; and* *(c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).* *(3) An application must also include an assessment of the activity's effects on the environment that—* *(a) includes the information required by clause 6; and* *(b) addresses the matters specified in clause 7; and* *(c)includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.*	Refer to Paragraphs 7.0 to 7.17 of this Planning Report.

Clause 3. Additional Information Required in Some Applications	
An application must also include any of the following that apply:	
a. *if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):*	Not Applicable.
b. *if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):*	Not applicable.
c. *if the activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, an assessment of the activity against any resource management matters set out in that planning document (for the purposes of section 104(2B)).*	The site is not within an area subject to a customary marine title group. Not applicable.

Clause 4 Additional Information required in application for subdivision consent	
An application for a subdivision consent must also include information that adequately defines the following:	
(a) the position of all new boundaries: *(b) the areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan:* *(c) the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips:* *(d) the locations and areas of any existing esplanade reserves, esplanade strips, and access strips:* *(e) the locations and areas of any part of the bed of a river or lake to be vested in a territorial authority* *under section 237A:* *(f) the locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A):* *(g) the locations and areas of land to be set aside as new roads.*	Refer to Scheme Plans in Attachment 3.

Clause 6: Information required in assessment of environmental effects	
(1) An assessment of the activity's effects on the environment must include the following information:	
(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:	The activity will not result in any significant adverse effect on the environment.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Paragraphs 2.1 to 3.9 and paragraphs 7.0 to 8.16 of this Planning Report.
(c) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use:	Not applicable as the application does not involve hazardous installations.
(d) if the activity includes the discharge of any contaminant, a description of—	The subdivision does not involve any discharge of contaminant (subject to conditions).

(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and *(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:*	
(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:	Refer to paragraphs 3.0 to 3.9 of this planning report.
(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:	Refer to Paragraphs 10.0 to 10.3 of this planning report. No affected persons have been identified.
g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:	No monitoring is required as the scale and significance of the effects do not warrant it.
(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).	No protected customary right is affected.

Clause 7: Matters that must be addressed by assessment of environmental effects	
(1) An assessment of the activity's effects on the environment must address the following matters:	
(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:	Refer to Paragraphs 2.1 to 3.9 and 6.0 to 6.4 of this planning report and to the assessment of objectives and policies in paragraphs 7.0 to 7.17 of this planning report.
(b) any physical effect on the locality, including any landscape and visual effects:	Refer to paragraphs 1.4 to 3.9 of this planning report. The site has no high or outstanding landscape or natural character values.
(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:	Refer to paragraphs 1.4 to 3.9 of this planning report. The subdivision has no effect on ecosystems or habitat.
(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical,	The site has no aesthetic, recreational, scientific, spiritual or cultural values that will be adversely affected by the act of subdividing.
spiritual, or cultural value, or other special value, for present or future generations:	
(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:	The subdivision will not result in the discharge of contaminants, nor any unreasonable emission of noise.
(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.	The site is partially within a mapped flood hazard area but is addressed in the engineering report contained in Attachment 5. The proposal does not involve hazardous installations.

Attachment 10

Northland Regional Policy Statement – Objectives and Policies

26 Melody Lane, Mangonui

Objective 3.13 - Natural Hazard Risk

The risks and impacts of natural hazard events (including the influence of climate change) on people, communities, property, natural systems, infrastructure and our regional economy are minimised by:

(a) Increasing our understanding of natural hazards, including the potential influence of climate change on natural hazard events;

(b) Becoming better prepared for the consequences of natural hazard events;

(c) Avoiding inappropriate new development in 10 and 100 year flood hazard areas and coastal hazard areas;

(d) Not compromising the effectiveness of existing defences (natural and man-made);

(e) Enabling appropriate hazard mitigation measures to be created to protect existing vulnerable development; and

(f) Promoting long-term strategies that reduce the risk of natural hazards impacting on people and communities.

(g) Recognising that in justified circumstances, critical infrastructure may have to be located in natural hazard-prone areas.

Objective 3.14 Natural character, outstanding natural features, outstanding natural landscapes and historic heritage

Identify and protect from inappropriate subdivision, use and development;

(a) The qualities and characteristics that make up the natural character of the coastal environment, and the natural character of freshwater bodies and their margins;

(b) The qualities and characteristics that make up outstanding natural features and outstanding natural landscapes;

(c) The integrity of historic heritage.

7.1.1 Policy – General risk management approach

Subdivision, use and development of land will be managed to minimise the risks from natural hazards by:

(a) Seeking to use the best available information, including formal risk management techniques in areas potentially affected by natural hazards;

(b) Minimising any increase in vulnerability due to residual risk;

(c) Aligning with emergency management approaches (especially risk reduction);

(d) Ensuring that natural hazard risk to vehicular access routes and building platforms for proposed new lots is considered when assessing subdivision proposals; and

(e) Exercising a degree of caution that reflects the level of uncertainty as to the likelihood or consequences of a natural hazard event.

Attachment 11

Operative District Plan - Subdivision Objectives and Policies

Objectives

13.3.1 To provide for the subdivision of land in such a way as will be consistent with the purpose of the various zones in the Plan, and will promote the sustainable management of the natural and physical resources of the District, including airports and roads and the social, economic and cultural well being of people and communities.

13.3.2 To ensure that subdivision of land is appropriate and is carried out in a manner that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and that any actual or potential adverse effects on the environment which result directly from subdivision, including reverse sensitivity effects and the creation or acceleration of natural hazards, are avoided, remedied or mitigated.

13.3.3 To ensure that the subdivision of land does not jeopardise the protection of outstanding landscapes or natural features in the coastal environment.

13.3.4 To ensure that subdivision does not adversely affect scheduled heritage resources through alienation of the resource from its immediate setting/context.

13.3.5 To ensure that all new subdivisions provide a reticulated water supply and/or on-site water storage and include storm water management sufficient to meet the needs of the activities that will establish all year round.

13.3.6 To encourage innovative development and integrated management of effects between subdivision and land use which results in superior outcomes to more traditional forms of subdivision, use and development, for example the protection, enhancement and restoration of areas and features which have particular value or may have been compromised by past land management practices.

13.3.7 To ensure the relationship between Maori and their ancestral lands, water, sites, wahi tapu and other taonga is recognised and provided for.

13.3.8 To ensure that all new subdivision provides an electricity supply sufficient to meet the needs of the activities that will establish on the new lots created.

13.3.9 To ensure, to the greatest extent possible, that all new subdivision supports energy efficient design through appropriate site layout and orientation in order to maximise the ability to provide light, heating, ventilation and cooling through passive design strategies for any buildings developed on the site(s).

13.3.10 To ensure that the design of all new subdivision promotes efficient provision of infrastructure, including access to alternative transport options, communications and local services.

13.3.11 To ensure that the operation, maintenance, development and upgrading of the existing National Grid is not compromised by incompatible subdivision and land use activities.

Policies

13.4.1 That the sizes, dimensions and distribution of allotments created through the subdivision process be determined with regard to the potential effects including cumulative effects, of the use of those allotments on:

(a) natural character, particularly of the coastal environment;

(b) ecological values;

(c) landscape values;

(d) amenity values;

(e) cultural values;

(f) heritage values; and

(g) existing land uses.

13.4.2 That standards be imposed upon the subdivision of land to require safe and effective vehicular and pedestrian access to new properties.

13.4.3 That natural and other hazards be taken into account in the design and location of any subdivision.

13.4.4 That in any subdivision where provision is made for connection to utility services, the potential adverse visual impacts of these services are avoided.

13.4.5 That access to, and servicing of, the new allotments be provided for in such a way as will avoid, remedy or mitigate any adverse effects on neighbouring property, public roads (including State Highways), and the natural and physical resources of the site caused by silt runoff, traffic, excavation and filling and removal of vegetation.

13.4.6 That any subdivision proposal provides for the protection, restoration and enhancement of heritage resources, areas of significant indigenous vegetation and significant habitats of indigenous fauna, threatened species, the natural character of the coastal environment and riparian margins, and outstanding landscapes and natural features where appropriate.

13.4.7 That the need for a financial contribution be considered only where the subdivision would:

(a) result in increased demands on car parking associated with non-residential activities; or

(b) result in increased demand for esplanade areas; or

(c) involve adverse effects on riparian areas; or

(d) depend on the assimilative capacity of the environment external to the site.

13.4.8 That the provision of water storage be taken into account in the design of any subdivision.

13.4.9 That bonus development donor and recipient areas be provided for so as to minimise the adverse effects of subdivision on Outstanding Landscapes and areas of significant indigenous flora and significant habitats of fauna.

13.4.10 The Council will recognise that subdivision within the Conservation Zone that results in a net conservation gain is generally appropriate.

13.4.11 That subdivision recognises and provides for the relationship of Maori and their culture and traditions, with their ancestral lands, water, sites, waahi tapu and other taonga and shall take into account the principles of the Treaty of Waitangi.

13.4.12 That more intensive, innovative development and subdivision which recognises specific site characteristics is provided for through the management plan rule where this will result in superior environmental outcomes.

13.4.13 Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the applicable zone in regards to s6 matters. In addition subdivision, use and development shall avoid adverse effects as far as practicable by using techniques including:

(a) clustering or grouping development within areas where there is the least impact on natural character and its elements such as indigenous vegetation, landforms, rivers, streams and wetlands, and coherent natural patterns;

(b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area;

(c) providing for, through siting of buildings and development and design of subdivisions, legal public right of access to and use of the foreshore and any esplanade areas;

(d) through siting of buildings and development, design of subdivisions, and provision of access that recognise and provide for the relationship of Maori with their culture, traditions and taonga including concepts of mauri, tapu, mana, wehi and karakia and the important contribution Maori culture makes to the character of the District (refer ***Chapter 2*** and in particular ***Section 2.5*** and Council's *"Tangata Whenua Values and Perspectives" (2004)*;

(e) providing planting of indigenous vegetation in a way that links existing habitats of indigenous fauna and provides the opportunity for the extension, enhancement or creation of habitats for indigenous fauna, including mechanisms to exclude pests;

(f) protecting historic heritage through the siting of buildings and development and design of subdivisions.

(g) achieving hydraulic neutrality and ensuring that natural hazards will not be exacerbated or induced through the siting and design of buildings and development.

13.4.14 That the objectives and policies of the applicable environment and zone and relevant parts of ***Part 3*** of the Plan will be taken into account when considering the intensity, design and layout of any subdivision.

13.4.15 That conditions be imposed upon the design of subdivision of land to require that the layout and orientation of all new lots and building platforms created include, as appropriate, provisions for achieving the following:

(a) development of energy efficient buildings and structures;

(b) reduced travel distances and private car usage;

(c) encouragement of pedestrian and cycle use;

(d) access to alternative transport facilities;

(e) domestic or community renewable electricity generation and renewable energy use.

13.4.16 When considering proposals for subdivision and development within an existing National Grid Corridor the following will be taken into account:

(a) the extent to which the proposal may restrict or inhibit the operation, access, maintenance, upgrading of transmission lines or support structures;

(b) any potential cumulative effects that may restrict the operation, access, maintenance, upgrade of transmission lines or support structures; and

(c) whether the proposal involves the establishment or intensification of a sensitive activity in the vicinity of an existing National Grid line.

Note 1: Structures and activities located near transmission lines must comply with the safe distance requirements in the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP34:2001). Compliance with this plan does not ensure compliance with NZECP34:2001.

Note 2: Vegetation to be planted within, or adjacent to, the National Grid Corridor should be selected and/or managed to ensure that it will not result in that vegetation breaching the Electricity (Hazards from Trees) Regulations 2003.

Operative District Plan – Residential Zone Objectives & Policies

Objectives 7.3

7.3.1 To ensure that urban activities do not cause adverse environmental effects on the natural and physical resources of the District.

7.3.2 To enable the continuing use of buildings and infrastructure in urban areas, particularly where these are under-utilised.

7.3.3 To avoid, remedy or mitigate the adverse effects of activities on the amenity values of existing urban environments.

7.3.4 To enable urban activities to establish in areas where their potential effects will not adversely affect the character and amenity of those areas.

7.3.5 To achieve the development of community services as an integral and complementary component of urban development.

7.3.6 To ensure that sufficient water storage is available to meet the needs of the community all year round.

Policies 7.4

7.4.1 That amenity values of existing and newly developed areas be maintained or enhanced.

7.4.2 That the permissible level of effects created or received in residential areas reflects those appropriate for residential activities.

7.4.3 That adverse effects on publicly-provided facilities and services be avoided or remedied by new development, through the provision of additional services.

7.4.4 That stormwater systems for urban development be designed to minimise adverse effects on the environment.

7.4.5 That new urban development avoid:

(a) adversely affecting the natural character of the coastal environment, lakes, rivers, wetlands or their margins;
(b) adversely affecting areas of significant indigenous vegetation or significant habitats of indigenous fauna;
(c) adversely affecting outstanding natural features, landscapes and heritage resources;
(d) adversely affecting the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;
(e) areas where natural hazards could adversely affect the physical resources of urban development or pose risk to people's health and safety;
(f) areas containing finite resources which can reasonably be expected to be valuable for future generations, where urban development would adversely affect their availability;
(g) adversely affecting the safety and efficiency of the roading network;
(h) the loss or permanent removal of highly productive and versatile soils from primary production due to subdivision and development for urban purposes.

7.4.6 That the natural and historic heritage of urban settlements in the District be protected (refer to ***Chapter 12***).

7.4.7 That urban areas with distinctive characteristics be managed to maintain and enhance the level of amenity derived from those characteristics.

7.4.8 That infrastructure for urban areas be designed and operated in a way which:

(a) avoids remedies or mitigates adverse effects on the environment;

(b) provides adequately for the reasonably foreseeable needs of future generations; and

(c) safeguards the life-supporting capacity of air, water, soil and ecosystems.

7.4.9 That the need for community services in urban areas is recognised and provided for.

7.6.3 Objectives

“These objectives supplement those set out in ***Section 7.3***.

7.6.3.1 To achieve the development of new residential areas at similar densities to those prevailing at present.

7.6.3.2 To enable development of a wide range of activities within residential areas where the effects are compatible with the effects of residential activity.

7.6.4 Policies

These policies supplement those set out in ***Section 7.4***.

7.6.4.1 That the Residential Zone be applied to those parts of the District that are currently predominantly residential in form and character.

7.6.4.2 That the Residential Zone be applied to areas which are currently residential but where there is scope for new residential development.

7.6.4.3 That the Residential Zone be applied to areas where expansion would be sustainable in terms of its effects on the environment.

7.6.4.4 That the Residential Zone provide for a range of housing types and forms of accommodation.

7.6.4.5 That non-residential activities only be allowed to establish within residential areas where they will not detract from the existing residential environment.

7.6.4.6 That activities with net effects that exceed those of a typical single residential unit, be required to avoid, remedy or mitigate those effects with respect to the ecological and amenity values and general peaceful enjoyment of adjacent residential activities.

Operative District Plan

Transport Objectives & Policies

26 Melody Lane

15.1.3 OBJECTIVES

15.1.3.1 To minimise the adverse effects of traffic on the natural and physical environment.

15.1.3.2 To provide sufficient parking spaces to meet seasonal demand in tourist destinations.

15.1.3.3 To ensure that appropriate provision is made for on-site car parking for all activities, while considering safe cycling and pedestrian access and use of the site.

15.1.3.4 To ensure that appropriate and efficient provision is made for loading and access for activities.

15.1.3.5 To promote safe and efficient movement and circulation of vehicular, cycle and pedestrian traffic, including for those with disabilities.

15.1.4 POLICIES

15.1.4.1 That the traffic effects of activities be evaluated in making decisions on resource consent applications.

15.1.4.2 That the need to protect features of the natural and built environment be recognised in the provision of parking spaces.

15.1.4.3 That parking spaces be provided at a location and scale which enables the efficient use of parking spaces and handling of traffic generation by the adjacent roading network.

15.1.4.4 That existing parking spaces are retained or replaced with equal or better capacity where appropriate, so as to ensure the orderly movement and control of traffic.

15.1.4.5 That appropriate loading spaces be provided for commercial and industrial activities to assist with the pick-up and delivery of goods.

15.1.4.6 That the number, size, gradient and placement of vehicle access points be regulated to assist traffic safety and control, taking into consideration the requirements of both the New Zealand Transport Agency and the Far North District Council.

15.1.4.7 That the needs and effects of cycle and pedestrian traffic be taken into account in assessing development proposals.

15.1.4.8 That alternative options be considered to meeting parking requirements where this is deemed appropriate by the Far North District Council.

Attachment 12

Proposed District Plan – Objectives and Policies

Objectives – Residential Zone

GRZ-01 - The General Residential Zone provides a variety of densities, housing types and lot sizes that respond to:

a. housing needs and demand
b. the adequacy and capacity of available or programmed development infrastructure.
c. the amenity and character of the receiving residential environment

GRZ-04 - Land use and subdivision in the General Residential zone is supported where there is adequacy and capacity of available or programmed development infrastructure.

Policies – Residential Zone

GRZ -P8 Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. Consistency with the scale, design, amenity and character of the residential environment;
b. The location, sale and design of buildings or structures, potential for overshadowing and visual dominance;
c. For residential activities
    i. Provision for outdoor living space;
    ii. Privacy for adjoining sites
    iii. Access to sunlight
d. For residential activities:
    i. Scale and compatibility with residential activities
    ii. Hours of operation
e. At zone interfaces, any setbacks, fencing, screening or landscaping required to address potential conflicts;
f. The adequacy or capacity of available or programmed development infrastructure to accommodate the proposal including:
    i. Opportunities for low impact design principles
    ii. Ability of the site to address stormwater and soakage
g. Managing natural hazards; and
h. Any historical, spiritual or cultural association held by tangata whenua, with regards to matters set out in Policy TW-P6

Objectives – Coastal Environment

CE-01 - The natural character of the coastal environment is identified and managed to ensure its long term preservation and protection for current and future generations

CE-03 - Land use and subdivision in the coastal environment within urban zones is of a scale that is consistent with existing built development

Policies – Coastal Environment

CE-P5 Enable land use and subdivision in urban zones within the coastal environment where:

a. There is adequacy and capacity of available or programmed development infrastructure: and
b. The use is consistent with, and does not compromise the characteristics and qualities.

Objectives – Subdivision

SUB-O1
Subdivision results in the efficient use of land, which:

a. achieves the objectives of each relevant zone, overlays and district wide provisions;
b. contributes to the local character and sense of place;
c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;
d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;
e. does not increase risk from natural hazards or risks are mitigates and existing risks reduced; and
f. manages adverse effects on the environment.

SUB-O2
Subdivision provides for the:

a. Protection of highly productive land; and
b. Protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, Areas of High Natural Character, Outstanding Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.

SUB-O3
Infrastructure is planned to service the proposed subdivision and development where:

a. there is existing infrastructure connection, infrastructure should provided in an integrated, efficient, coordinated and future-proofed manner at the time of subdivision; and
b. where no existing connection is available infrastructure should be planned and consideration be given to connections with the wider infrastructure network.

SUB-O4
Subdivision is accessible, connected, and integrated with the surrounding environment and provides for:

a. public open spaces;
b. esplanade where land adjoins the coastal marine area; and
c. esplanade where land adjoins other qualifying waterbodies.

Subdivision - Policies

SUB-P1
Enable boundary adjustments that:

a. do not alter:
    i. the degree of non compliance with District Plan rules and standards;
    ii. the number and location of any access; and
    iii. the number of certificates of title; and
b. are in accordance with the minimum lot sizes of the zone and comply with access, infrastructure and esplanade provisions.

SUB-P2
Enable subdivision for the purpose of public works, infrastructure, reserves or access.
SUB-P3
Provide for subdivision where it results in allotments that:

a. are consistent with the purpose, characteristics and qualities of the zone;
b. comply with the minimum allotment sizes for each zone;
c. have an adequate size and appropriate shape to contain a building platform; and
d. have legal and physical access.

SUB-P4
Manage subdivision of land as detailed in the district wide, natural environment values, historical an cultural values and hazard and risks sections of the plan
SUB-P5
Manage subdivision design and layout in the General Residential, Mixed Use and Settlement zone to provide for safe, connected and accessible environments by:

a. minimising vehicle crossings that could affect the safety and efficiency of the current and future transport network;
b. avoid cul-de-sac development unless the site or the topography prevents future public access and connections;
c. providing for development that encourages social interaction, neighbourhood cohesion, a sense of place and is well connected to public spaces;
d. contributing to a well connected transport network that safeguards future roading connections; and
e. maximising accessibility, connectivity by creating walkways, cycleways and an interconnected transport network.

SUB-P6
Require infrastructure to be provided in an integrated and comprehensive manner by:

a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and
b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.

SUB- P7
Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.
SUB-P8
Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision:

a. will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and
b. will not result in the loss of versatile soils for primary production activities.

SUB-P9
Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.
SUB-P10
To protect amenity and character by avoiding the subdivision of minor residential units from principal residential units where resultant allotments do not comply with minimum allotment size and residential density.
SUB-P11
Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application:

a. consistency with the scale, density, design and character of the environment and purpose of the zone;
b. the location, scale and design of buildings and structures;
c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;
d. managing natural hazards;
e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and
f. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Objectives - Natural Hazards

NH-O1
The risks from natural hazards to people, infrastructure and property are managed, including taking into account the likely long-term effects of climate change, to ensure the health, safety and resilience of communities.
NH-O2
Land use and subdivision does not increase the risk from natural hazards or risks are mitigated, and existing risks are reduced where there are practicable opportunities to do so.
NH-O3
New infrastructure is located outside of identified natural hazard areas unless:
it has a functional or operational need to be located in that area;
it is designed to maintain its integrity and function, as far as practicable during a natural hazard event; and
adverse effects resulting from that location on other people, property and the environment are mitigated.
NH-O4
Natural defences, such as natural systems and features, and existing structural mitigation assets are protected to maintain their functionality and integrity and used in preference to new structural mitigation assets to manage natural hazard risk.

Policies - Natural Hazards

NH-P2
Manage land use and subdivision so that natural hazard risk is not increased or is mitigated, giving consideration to the following:

a. the nature, frequency and scale of the natural hazard;
b. not increasing natural hazard risk to other people, property, infrastructure and the environment beyond the site;
c. the location of building platforms and vehicle access;
d. the use of the site, including by vulnerable activities;
e. the location and types of buildings or structures, their design to mitigate the effects and risks of natural hazards, and the ability to adapt to long term changes in natural hazards;
f. earthworks, including excavation and fill;
g. location and design of infrastructure;
h. activities that involve the use and storage of hazardous substances;
i. aligning with emergency management approaches and requirements;
j. whether mitigation results in transference of natural hazard risk to other locations or exacerbates the natural hazard; and
k. reduction of risk relating to existing activities.

NH-P3 Take a precautionary approach to the management of natural hazard risk associated with land use and subdivision.

NH – P5 Require an assessment of risk prior to land use and subdivision in areas that are subject to identified natural hazards, including consideration of the following:

a. the nature, frequency and scale of the natural hazard;
b. the temporary or permanent nature of any adverse effect;

c. the type of activity being undertaken and its vulnerability to an event, including the effects of climate change;
d. the consequences of a natural hazard event in relation to the activity;
e. any potential to increase existing risk or creation of a new risk to people, property, infrastructure and the environment within and beyond the site and how this will be mitigated;
f. the design, location and construction of buildings, structures and infrastructure to manage and mitigate the effects and risk of natural hazards including the ability to respond and adapt to changing hazards;
g. the subdivision/site layout and management, including ability to access and exit the site during a natural hazard event; and .
h. the use of natural features and natural buffers to manage adverse effects.

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

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

NH P8 - Locate and design subdivision and land use to avoid land susceptible to land instability, or if this is not practicable, mitigate risks and effects to people, buildings, structures, property and the environment.

Objectives – Transport

Objectives	
TRAN-O1	The State Highways, transport networks and cycleways of strategic significance are recognised and managed as regionally significant infrastructure to support the economic, cultural, environmental and social wellbeing of current and future generations.
TRAN-O2	The transport network is designed and located to minimise adverse effects on historical, cultural and natural values.
TRAN-O3	Land use and all modes of transport are integrated so that the transport network is safe, efficient and well-connected.
TRAN-O4	Parking, loading and access provisions support the needs of land use and subdivision activities, and ensure safe and efficient operation for users.
TRAN-O5	The safe and efficient movement of vehicular, cycle and pedestrian traffic that also meets the needs of persons with a disability or limited mobility.
TRAN-O6	The transport network is resilient to the likely current and future effects of climate change, and supports urban environments designed to reduce greenhouse gas emissions.

Policies – Transport

Policies	
TRAN-P1	Recognise the transport network as regionally significant infrastructure by having particular regard to the significant social, economic, and cultural benefits of transport projects when determining resource consent applications or making recommendations on notices of requirement.
TRAN-P2	Establish and maintain a transport network that: a. provides safe efficient linkages and connections; b. avoids and mitigates adverse effects on historical, cultural and natural environment values to the extent practicable; c. recognises the different functions and design requirements for each road classification under the most current National Transport Network classification system; d. supports reductions of greenhouse gases from vehicle movements; e. considers the likely current and future impacts of climate change when new sections of the network are proposed or existing sections upgraded; and f. provides for existing and future pedestrian and cycling pathways, including the Pou Herenga Tai Twin Coast Cycle Trail.
TRAN-P3	Ensure the safe, efficient and well connected operation of the transport network through the management of: a. the subdivision layout, and location of buildings, structures and other potential visual obstructions that may impact on sightlines and the integrity of the road carriageway; b. the design of access and parking; c. vehicular access to and from sites; d. the volume of traffic from land use activities; e. vehicular, pedestrian, and cyclist needs, including persons with a disability or limited mobility; f. the adverse cumulative effects of land use and subdivision on the transport network; and g. reverse sensitivity effects that may impact regionally significant infrastructure.
TRAN-P3	Ensure the safe, efficient and well connected operation of the transport network through the management of: a. the subdivision layout, and location of buildings, structures and other potential visual obstructions that may impact on sightlines and the integrity of the road carriageway; b. the design of access and parking; c. vehicular access to and from sites; d. the volume of traffic from land use activities; e. vehicular, pedestrian, and cyclist needs, including persons with a disability or limited mobility; f. the adverse cumulative effects of land use and subdivision on the transport network; and g. reverse sensitivity effects that may impact regionally significant infrastructure.
TRAN-P4	Manage the design, location and supply of parking to: a. achieve the safe, efficient and effective operation of the transport network; b. support the operational and functional requirements of activities; c. appropriately manage character and amenity effects on the local environment, including on the streetscape; d. minimise the impact of large parking areas on the stormwater network by encouraging low impact design; e. provide sufficient parking for persons with a disability or limited mobility; and f. comply with any relevant Parking Management Plans.
TRAN-P5	Encourage new land uses to support an integrated and diverse transport network by: a. promoting alternative transport modes; b. the provision of safe and secure parking facilities for bicycles and associated changing or showering facilities for staff; c. allocation of parking facilities for motorcycles, car share vehicles, pick/up/drop off areas for ride share services and charging stations for electric vehicles; and d. supporting the establishment and operation of accommodation and tourism related activities in close proximity to the Pou Herenga Tai Twin Coast Cycle Trail, provided reverse sensitivity effects can be avoided.
TRAN-P6	Provide flexibility for a reduction in on-site parking where it can be demonstrated that: a. there are no adverse effects on public parking or the transport network; or b. there is a lower parking demand; or c. alternative modes of transport are provided for, if appropriate; or d. the reduction will protect cultural or heritage values.
TRAN-P7	Only allow high traffic generating activities exceeding the thresholds in TRAN-Table 11 - Trip generation where these activities support the safe, efficient and effective use of transport infrastructure, as demonstrated through an integrated transport assessment (ITA). All ITAs should be completed by a suitably qualified and experienced transport professional.
TRAN-P8	Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application: a. the type and level of traffic anticipated; b. the location of high traffic generating activities and their relationship to existing roads and their status under the National Transport Network classification system, and adjacent properties; c. low impact design principles, including green spaces; d. safety requirements and improvements; e. the management of stormwater; f. any natural hazards; g. any cumulative effects arising from lawfully established activities in the surrounding environment; h. current and future connectivity including pathways and parking, and open space networks; i. any traffic assessment prepared by a suitably qualified and experienced transport professional; j. impacts on any State Highway or Limited Access Road; and k. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Attachment 13

Top Energy Limited
Level 2, John Butler Centre
60 Kerikeri Road
P O Box 43
Kerikeri 0245
New Zealand
PH +64 (0)9 401 5440
FAX +64 (0)9 407 0611

7 February 2025

Neil Mumby
Cable Bay Consulting Ltd

Email: neil.mumby@cablebayconsulting.co.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
Beckham – 11 Karamea Road, Mangonui. Lot 3 DP 199804.

Thank you for your recent correspondence with attached proposed subdivision scheme plans.

Top Energy's requirement for this subdivision is that power be made available for the additional proposed connections.
Costs to make power available for proposed lots 1 -6 would be provided after application and an on-site survey have been completed.
Link to application: Top Energy | Top Energy

In order to get a letter from Top Energy upon completion of your subdivision, a copy of the resource consent decision must be provided.

Yours sincerely

Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz

Chorus New Zealand Limited

07 February 2025

Chorus reference: 11130254

Attention: Neil Mumby

Quote: New Property Development

7 connections at 26 Melody Lane , Mangonui, Far North District, 0420

Your project reference: Beckham Subdivision, Karamea Road Block

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

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

Fibre network	$8,400.00

The total contribution we would require from you is **$9,660.00 (including GST)**. This fee is a contribution towards the overall cost that Chorus incurs to link your development to our network. This quote is valid for 90 days from 07 February 2025. This quote is conditional on you accepting a New Property Development Contract with us for the above development.

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

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

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

Kind Regards

Chorus New Property Development Team

Attachment 14