



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 Form 9)

Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges – both available on the Council’s web page.

1. Pre-Lodgement Meeting

Have you met with a Council Resource Consent representative to discuss this application prior to lodgement? Yes / No

2. Type of Consent being applied for (more than one circle can be ticked):

- Land Use
- Fast Track Land Use*
- Subdivision
- Discharge
- Extension of time (s.125)
- Change of conditions (s.127)
- Change of Consent Notice (s.221(3))
- Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)
- Other (please specify) _____

***The fast track for simple land use consents is restricted to consents with a controlled activity status and requires you provide an electronic address for service.**

3. Would you like to opt out of the Fast Track Process? Yes / No

4. Applicant Details:

Name/s: One Thats Good Ltd

Electronic Address for Service (E-mail): _____

Phone Numbers: _____

Postal Address: _____
(or alternative method of service under section 352 of the Act)

5. Address for Correspondence: Name and address for service and correspondence (if using an Agent write their details here).

Name/s: Bay of Islands Planning - Steve Sanson

Electronic Address for Service (E-mail): office@bayplan.co.nz

Phone Numbers: Work: _____ Home: _____

Postal Address: _____
(or alternative method of service under section 352 of the Act)

Post Code: _____

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

6. 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: One Thats Good Ltd

Property Address/
Location: Loke Cres, Coopers Beach

7. Application Site Details:

Location and/or Property Street Address of the proposed activity:

Site Address/
Location: Loke Cres, Coopers Beach

Legal Description: Lot 3 DP 556617 Val Number: _____

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

Site Visit Requirements:

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

Is there a dog on the property? Yes / No

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

8. Description of the Proposal:

Please enter a brief description of the proposal here. Attach a detailed description of the proposed activity and drawings (to a recognized scale, e.g. 1:100) to illustrate your proposal. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

The proposal is for a 9 lot subdivision in the residential zone.

If this is an application for an Extension of Time (s.125); Change of Consent Conditions (s.127) or 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) or extension being sought, with reasons for requesting them.

9. Would you like to request Public Notification Yes/No

10. Other Consent required/being applied for under different legislation (more than one circle can be ticked):

- Building Consent (BC ref # if known)
- Regional Council Consent (ref # if known)
- National Environmental Standard consent
- Other (please specify)

11. 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 (further information in regard to this NES is available on the Council's planning web pages):

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? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle). 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

12. 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.

Please attach your AEE to this application.

13. Billing Details:

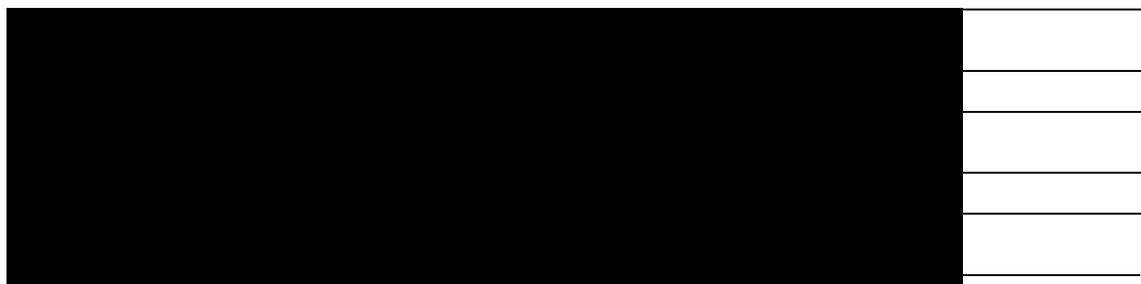
This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write all names in full) One Thats Good Ltd

Email:

Postal Address:

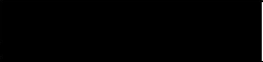
Phone Numbers:

A large black rectangular redaction box covers the email, postal address, and phone numbers fields.

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 print)

Signature:  (signature of bill payer – **mandatory**) Date: 24/11/2023

14. 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.

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

Name: _____ (please print)

Signature: _____ (signature)

Date: _____

(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)
- 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.

Only one copy of an application is required, but please note for copying and scanning purposes, documentation should be:

UNBOUND

SINGLE SIDED

NO LARGER THAN A3 in SIZE



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land
Transfer Act 2017**




R.W. Muir
Registrar-General
of Land

Identifier 972617
Land Registration District North Auckland
Date Issued 22 June 2021

Prior References
862475

Estate Fee Simple
Area 5806 square metres more or less
Legal Description Lot 3 Deposited Plan 556617

Registered Owners

Interests

Excepting all minerals within the meaning of the Land Act 1924 on or under the land

Subject to Section 8 Coal Mines Amendment Act 1950

Appurtenant hereto are drainage rights specified in Easement Certificate D491137.1 - 27.3.2000 at 2:35 pm

Subject to a cable television supply right (in gross) over part marked B on DP 556617 in favour of the Far North Cable TV Limited created by Transfer D506002.5 - 16.5.2000 at 1:22 pm

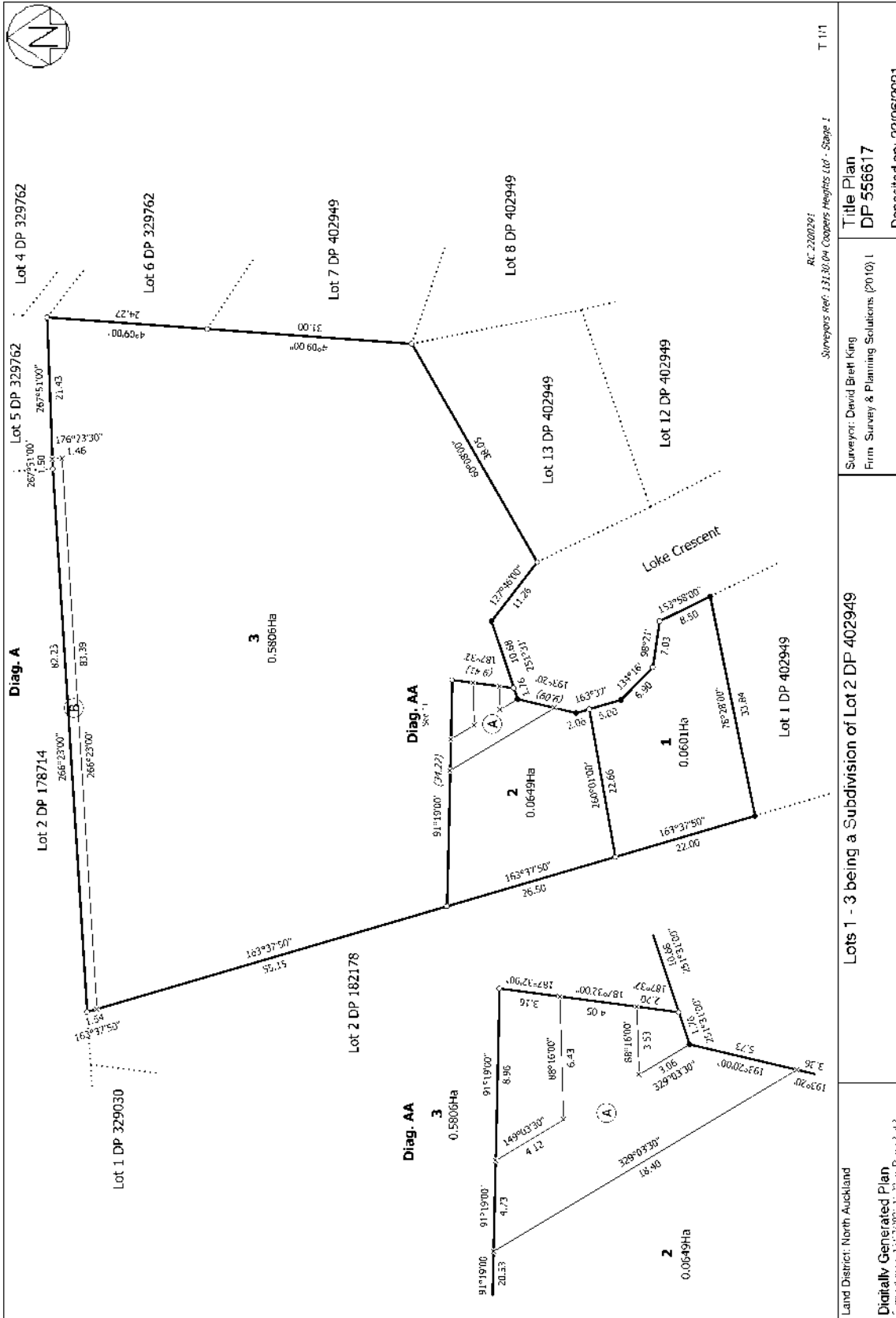
Subject to a cable television supply right over part marked B on DP 556617 created by Transfer D506002.6 - 16.5.2000 at 1:22 pm

7890742.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 28.7.2008 at 10:41 am

Land Covenant in Easement Instrument 7890742.8 - 28.7.2008 at 10:41 am

12104331.7 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 22.6.2021 at 4:15 pm

12175482.2 Mortgage to Family Finance Limited - 16.7.2021 at 11:27 am



AC 2200291
 Surveyors Ref: 131.00 (4) Coopers & Lybrand Ltd - Stage 1
 T 1/1

Surveyor: David Brett King
 Firm: Survey & Planning Solutions (2010) L

Title Plan
 DP 556617

Deposited on: 22/06/2021

Land District: North Auckland
 Digitally Generated Plan
 Computer File: 17/27500-1-2021 Page 1 of 3

Lots 1 - 3 being a Subdivision of Lot 2 DP 402949

CONO 7890742.4 Consent

Copy - 01/07, Pgs - 001, 28/07/08, 11:07



DocID: 313156448



Private Bag 752, Memorial Ave

Kaikōhe 0400, New Zealand

Freephone: 0800 920 029

Phone: (09) 405 2750

Fax: (09) 401 2137

Email: ask.us@fndc.govt.nz

Website: www.fndc.govt.nz

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221 : CONSENT NOTICE

REGARDING RC 2030431 and 2071043
the Subdivision of Lot 21 DP 202062
North Auckland Registry

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

SCHEDULE

Lots 1 – 16 & 23- 28 Stage 2A

- All stormwater from buildings, tank overflows and paved areas is to be piped to the stormwater system connection points.
- Any crossing point to be formed onto legal road is to be constructed and completed so as to comply with the Councils FNDC/S/02 Residential Crossing Standard as defined in the Councils Engineering Standards and Guidelines.

SIGNED:



Mr Pat Killalea

By the **FAR NORTH DISTRICT COUNCIL**
Under delegated authority:
RESOURCE CONSENTS MANAGER

DATED at **KERIKERI** this

22nd day of *July* 2008

BAY OF ISLANDS PLANNING (2022) LIMITED



**2 Cochrane Drive, Kerikeri
PO Box 318
Pahia**

Phone [09] 407 5253; Email – office@bayplan.co.nz Website - www.bayplan.co.nz

27 November 2023

Resource Consents Department
Far North District Council
John Butler Centre
Kerikeri

Dear Team Leaders

Application for Resource Consent: Subdivision – One That’s Good Limited.

The proposal is for the creation of nine lots at the end of Loke Crescent, Coopers Beach. The proposal will be a two-stage development as outlined on the Scheme Plan.

We have now completed a subdivision application and are pleased to attach this within the following information.

Should you require any further information please do not hesitate to contact me.

Yours faithfully,



Steven Sanson
Bay of Islands Planning [2022] Limited
on behalf of One That’s Good Limited

Form 9

APPLICATION FOR RESOURCE CONSENT

Section 88, Resource Management Act 1991

To the **Far North District Council**:

We, **One Thats Good Limited**, apply for the following type of resource consent:

Subdivision [staged] to create eight additional residential lots and one shared reserve lot as detailed within the supporting information.

The location of the proposed activity is as follows:

The property is located on the end of Loke Crescent, Coopers Beach and has the legal description of Lot 3 DP 556617 with a combined area of 0.5806ha.

No additional resource consents are needed for the proposed activity.

We attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects that corresponds with the scale and significance of the effects that the proposed activity may have on the environment. **[see below]**

We attach any information required to be included in this application by the district plan, the regional plan, the Resource Management Act 1991, or any regulations made under that Act, as listed below:

Planning Report, including Assessment of Environmental Effects;
Appendix A – Record of Title & Instruments;
Appendix B - Plan of Subdivision [prepared by Von Sturmers]
Appendix C - Subdivision Suitability Report [prepared by Cook Costello & Reviewed by TA Structures].
Appendix D – Top Energy
Appendix E – Telecoms
Appendix F – Doubtless Bay Water

As this is an application for a subdivision consent, we attach information that is sufficient to adequately define:

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.



Date: 24 November 2023

.....
Steven Sanson
on behalf of One Thats Good Limited.

Address for service: Bay of Islands Planning Limited [2022], PO Box 318, Kerikeri 0245
Telephone: (09) 4075253
email: steve@bayplan.co.nz

INTRODUCTION

1. Bay of Islands Planning Ltd. has been engaged by One That's Good Limited to prepare this resource consent application to subdivide their property off Loke Crescent, Coopers Beach.
2. The application seeks consent to subdivide the land containing an area of 0.5806ha into eight additional residential sites and one shared recreational reserve.

LOCALITY AND PROPERTY DESCRIPTION

3. The property is located on the end of Loke Crescent, Coopers Beach as shown by the blue arrow on **Figure 1** below. It has the legal description Lot 3 DP 556617 contained in Record of Title Number 972617 attached at **Appendix A**.



Figure 1 – Surround area sitemap (Source – Prover)

4. Loke Crescent has a legal width of 16.0m and has been formed with a sealed running surface and kerb and channel and footpath. This is seen on the aerial below – **Figure 2**. The site has rolling features and is elevated with views across Doubtless Bay. Man-made ponds are located on the site and are retained for the purposes of the subdivision.



Figure 2 - Surround area aerial (Source – Prover)

APPLICATION DESCRIPTION

- The applicants intend to subdivide the site into the following allotments –

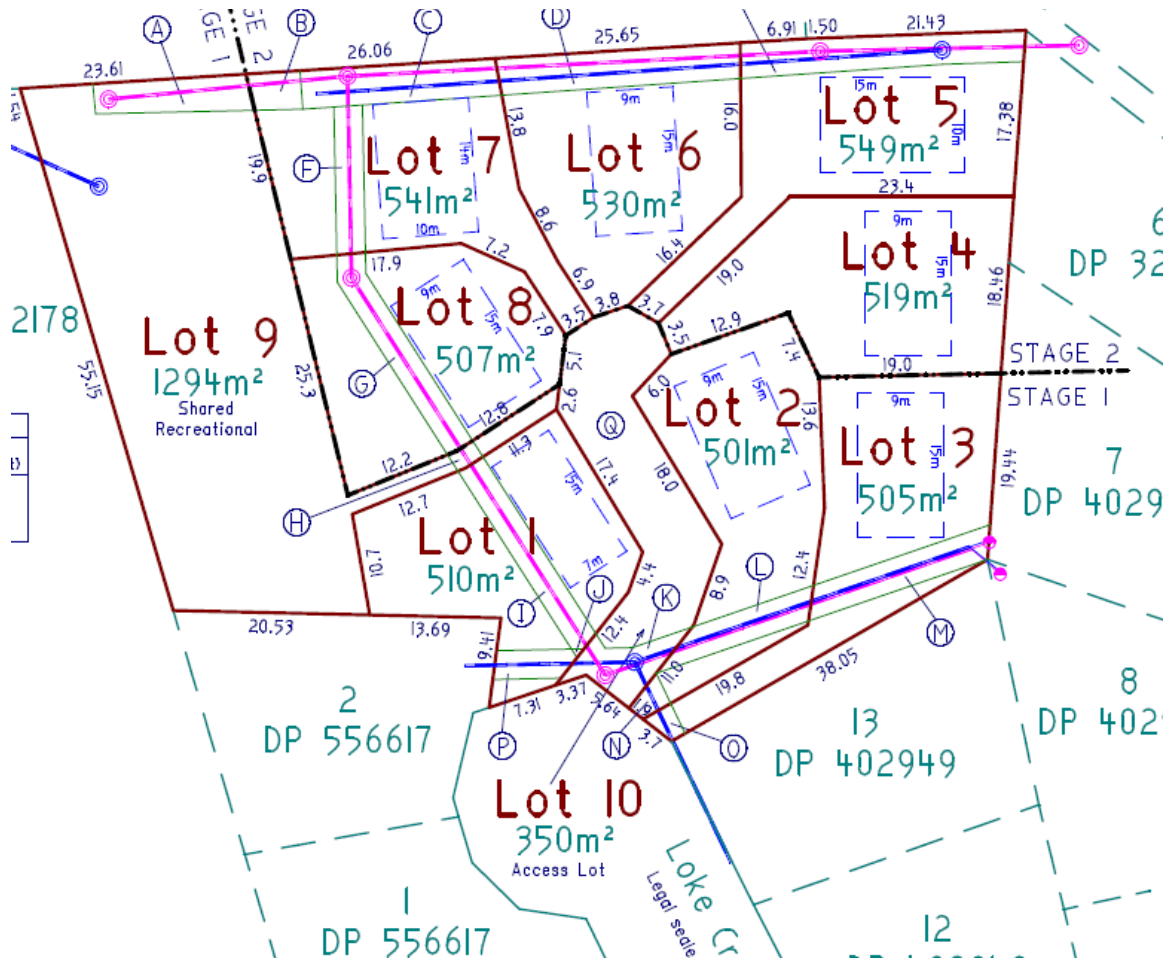


Figure 3 – Scheme Plan (Source – Von Sturmers)

- Lot 1 – 510m²
- Lot 2 – 501m²
- Lot 3 – 505m²
- Lot 4 – 519m²
- Lot 5 – 549m²
- Lot 6 – 530m²
- Lot 7 – 541m²
- Lot 8 – 507m²
- Lot 9 – 1294m² (Shared recreational)
- Lot 10 – 350m² (access lot)

6. Access to the new lots is existing from Loke Crescent. Not all eight sites are of sufficient size and dimension to accommodate the required minimum 14m x 14m diameter square building envelope, this is discussed below. All reticulated services are capable of connection to the new lots.
7. Please note that Lot 9 and 10 are to be split amongst Lots 1-8. Splitting Lot 9 by 8 shares gives each site an additional 161.75m². Splitting Lot 10 gives an additional 35m². This brings all lots above 600m² in size.
8. Consent notices are applied to the title, and these are found in Appendix 1. These have been assessed and there are no resulting consequences from the proposal.

CONSENT REQUIREMENTS

9. In the Operative Far North District Plan [ODP], the site is zoned **Residential**. The site is not subject to any resource classifications.

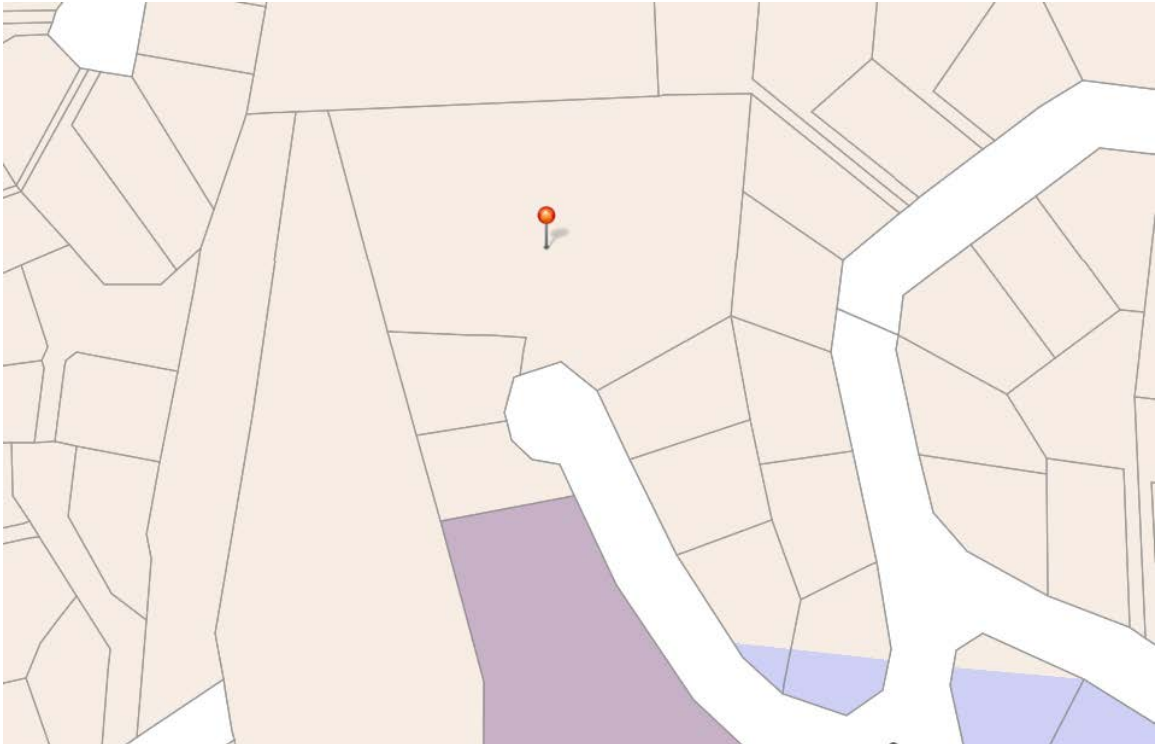


Figure 4 – Residential Zone (Source – Far North Maps)

10. In regard to the Northland Regional Council Regional Policy Statement the property sits outside of the Coastal Environment [Figure 5] –

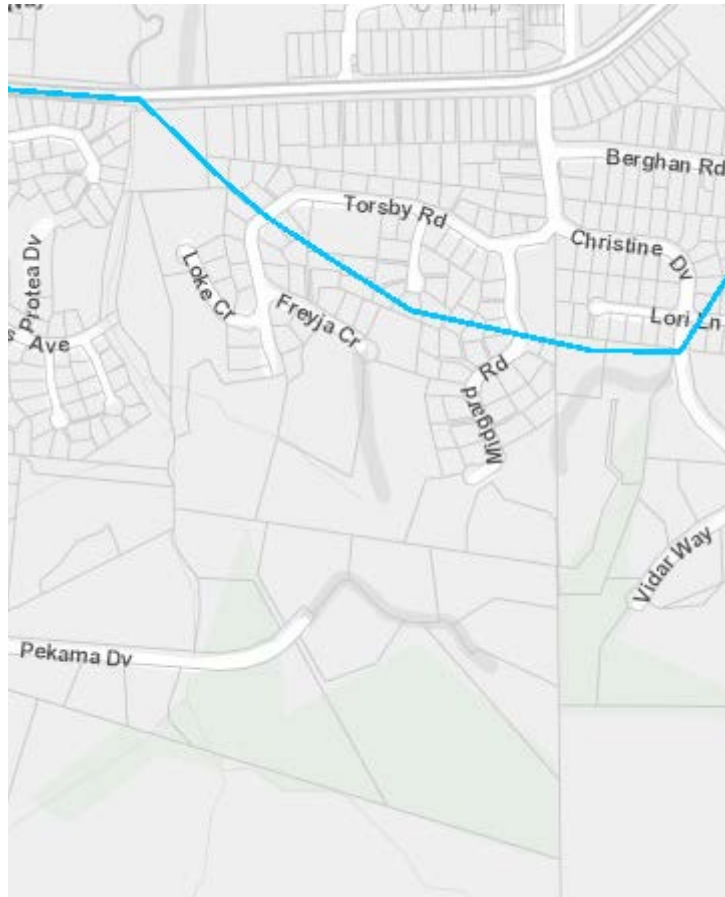


Figure 5 – Coastal Environment (Source – NRC Maps)



Figure 6 – Hazard Maps (Source – NRC Maps)

Proposed Far North District Plan

11. Under the Proposed Far North District Plan, the site is zoned **General Residential**. There are no other Resource Features that apply to this site.



Figure 7 – General Residential Zone (Source – Far North Maps)

ACTIVITY ASSESSMENT

12. Under Rule 13.7.2.1(v) 'Subdivision of Residential Zoned Land' creating reticulated lots with a minimum site area of 600m is a **Controlled Activity**. The proposed subdivision complies with this standard. Other standards that apply to this application include:

Table 1 - Subdivision Performance Standards

Performance Standard	Comment
Rule 13.7.2.2 – Allotment dimensions	The proposed subdivision cannot achieve the required 14m x 14m square building envelope for all proposed lots. <u>Discretionary</u>
Rule 13.7.2.3 -Amalgamation of land in a rural zone with land in an urban or coastal zone	Not applicable
Rule 13.7.2.4 – Lots divided by zone boundaries	Not applicable
Rule 13.7.2.5 - Sites divided by an outstanding landscape, outstanding landscape feature or outstanding natural feature	Not applicable
Rule 13.7.2.6 – Activities, Utilities, Roads and Reserves	Not applicable
Rule 13.7.2.7 – Savings as to previous approvals	Not applicable
Rule 13.7.2.8 – Proximity to Top Energy transmission lines	Not applicable
Rule 13.7.2.9 – Proximity to National Grid	Not applicable

Table 2 – Discretionary (Subdivision) Activity – Other Matters to be taken in Account

Performance Standard	Comment
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Rule 13.10.1 - Allotment sizes and Dimensions	Although some of the proposed lots cannot provide a 14m x 14m building platform, they can provide sufficient size for operational and maintenance requirements. Please see below further assessment of this breach and the associated effects.
Rule 13.10.2 – Natural and other Hazards	While a small area of the site [Lot 9] is affected by potential flooding as identified on the NRC hazard maps. This is not an issue as Lot 9 will be a shared recreational site and will not be developed for residential use. The site suitability report provides additional details regarding natural hazards (see Appendix C).
Rule 13.10.3 – Water Supply	Reticulated water supply is available to Stage 1 (see Appendix F). This approval relates to the first stage. Approval of the 2 nd stage can be provided at time of s224c for Stage 2 or likely provided by DBW during the processing of this consent.
Rule 13.10.4 – Stormwater Disposal	Stormwater would be disposed of in the manner described in the site suitability report (see Appendix C).
Rule 13.10.5 – Sanitary Sewage Disposal	Wastewater from all lots would be reticulated to the existing Council wastewater system as described in the site suitability report (see Appendix C).
Rule 13.10.6 – Energy Supply	All lots to be connected to be connected to local electricity supply system in accordance with Top Energy approval (see Appendix D). This approval relates to the first stage. Approval of the 2 nd stage can be provided at time of s224c for Stage 2.
Rule 13.10.7 – Top Energy Transmission Lines	There are no Top Energy transmission lines in this area.
Rule 13.10.8 – Telecommunications	All lots (stage 1) to be connected to local telecommunications supply system in accordance with Chorus approval (see Appendix E). This approval relates to the first stage. Approval of the 2 nd stage can be provided at time of s224c for Stage 2.
Rule 13.10.9 – Easements for any purpose	Easements are proposed as depicted on the Scheme Plan (see Appendix B).
Rule 13.10.10 – Provision of Access	Proposal complies with performance standards for property access.
Rule 13.10.11 – Effect of Earthworks and Utilities	Proposed earthworks and mitigation measures are outlined within the Site Suitability Report (see Appendix C).
Rule 13.10.12 – Building Locations	Proposed building locations have been shown on the scheme plan (see Appendix B).
Rule 13.10.13 – Preservation of Heritage Resources, Vegetation, Fauna and Landscape, and land set	None of these features are present onsite.

aside for conservation purposes	
Rule 13.10.14 – Soil	The site is within the residential zone therefore considerations of soil are not necessary.
Rule 13.10.15 – Access to Waterbodies	The site does not directly adjoin a waterbody.
Rule 13.10.16 – Land Use Incompatibility	The proposal is for a residential development within a residential zone. Neighbouring properties are also used for residential use therefore there are no land use incompatibility issues.
Rule 13.10.17 – Proximity to Airports	There are no airports within proximity of the site.
Rule 13.10.18 – Natural Character of the Coastal Environment	The site is not within the coastal environment.
Rule 13.10.19 – Energy Efficiency and renewable energy development/use	Not applicable.
Rule 13.10.20 – National Grid Corridor	Not applicable.

FNDC Proposed District Plan

13. These comprise relevant rules that have immediate effect under the Proposed District Plan.

Table 6: PDP Rules

Proposed District Plan				
Matter	Rule/Std Ref	Relevance	Compliance	Evidence
Hazardous Substances Majority of rules relates to development within a site that has heritage or cultural items scheduled and mapped however Rule HS-R6 applies to any development within an SNA – which is not mapped	Rule HS-R2 has immediate legal effect but only for a new significant hazardous facility located within a scheduled site and area of significance to Māori, significant natural area or a scheduled heritage resource HS-R5, HS-R6, HS-R9	N/A	Yes	Not indicated on Far North Proposed District Plan

<p>Heritage Area Overlays (Property specific) This chapter applies only to properties within identified heritage area overlays (e.g. in the operative plan they are called precincts for example)</p>	<p>All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)</p>	<p>N/A</p>	<p>Yes</p>	<p>Not indicated on Far North Proposed District Plan</p>
<p>Historic Heritage (Property specific and applies to adjoining sites (if the boundary is within 20m of an identified heritage item)). Rule HH-R5 Earthworks within 20m of a scheduled heritage resource. Heritage resources are shown as a historic item on the maps) This chapter applies to scheduled heritage resources – which are called heritage items in the map legend</p>	<p>All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect</p>	<p>N/A</p>	<p>Yes</p>	<p>Not indicated on Far North Proposed District Plan</p>
<p>Notable Trees (Property specific) Applied when a property is showing a scheduled notable tree in the map</p>	<p>All rules have immediate legal effect (NT-R1 to NT-R9) All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect</p>	<p>N/A</p>	<p>Yes</p>	<p>Not indicated on Far North Proposed District Plan</p>
<p>Sites and Areas of Significance to Māori (Property specific) Applied when a property is showing a site / area of significance to Maori in the map or within the Te Oneroa-a Tohe</p>	<p>All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect</p>	<p>N/A</p>	<p>Yes</p>	<p>Not indicated on Far North Proposed District Plan</p>

Beach Management Area (in the operative plan they are called site of cultural significance to Maori)				
Ecosystems and Indigenous Biodiversity SNA are not mapped	All rules have immediate legal effect (IB-R1 to IB-R5)	N/A	Yes	No vegetation clearance is proposed for the subdivision.
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	N/A	Yes	Not indicated on Far North Proposed District Plan
Earthworks all earthworks (refer to new definition) need to comply with this	The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5	Yes	Yes	Earthworks required to establish the proposed subdivision should it be approved will be in accordance with the relevant standards including GD-05 and will have an ADP applied.
Signs (Property specific) as rules only relate to situations where a sign is on a scheduled heritage resource (heritage item), or within the Kororareka Russell or Kerikeri Heritage Areas	The following rules have immediate legal effect: SIGN-R9, SIGN-R10 All standards have immediate legal effect but only for signs on or attached to a scheduled heritage resource or heritage area	N/A		Not indicated on Far North Proposed District Plan
Orongo Bay Zone (Property specific as rule relates to a zone only)	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	N/A		Not indicated on Far North Proposed District Plan.
Subdivision Rules refer to environmental benefit subdivision. Subdivision of sites within a heritage	The following rules have immediate legal effect SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17.	Yes	No	Not indicated on Far North Proposed District Plan.

overlay, containing a scheduled heritage resource, Māori site/area of significance or SNA.				
Comments:				
No consents are required under the PDP in relation to the proposed subdivision.				

14. Overall, this subdivision falls to be considered as a **Discretionary Activity**.

DISCRETIONARY ACTIVITY ASSESMENT

15. Section 104B of the Resource Management Act controls the determination of applications for discretionary activities:

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—
authority—

- (a) may grant or refuse the application; and
- (b) if it grants the application, may impose conditions under [section 108](#).

Section 104B: inserted, on 1 August 2003, by [section 44](#) of the Resource Management Amendment Act 2003 (2003 No 23).

16. With respect to discretionary activities, a consent authority may refuse to grant an application and may impose conditions.

17. When considering an application for resource consent, a consent authority must have regard to the matters under section 104 of the Resource Management Act 1991, including any matters relating to Part 2. References to Part 2 in applications are only required where Plans may be deficient in terms of giving effect to the purpose and principles of the Act.

18. Section 104 of the RMA sets out matters to be considered when assessing an application for a resource consent.

“the consent authority must, subject to Part II, have regard to –

- (a) *any actual and potential effects on the environment of allowing the activity; and*
- (b) *any relevant provisions of –*
 - i. a national environmental standard:*
 - ii. other regulations:*
 - iii. a national policy statement:*
 - iv. a New Zealand Coastal Policy Statement:*
 - v. a regional policy statement or proposed regional policy statement:*
 - vi. a plan or proposed plan; and*
- (c) *any other matter the consent authority considers relevant and*

reasonably necessary to determine the application.”

Section 104 (1)(a) Assessment of Effects on the Environment

19. Section 104(1)(a) requires that consent authorities have regard to any actual or potential effects on the environment of allowing the activity. Section 2 of the RMA defines ‘Environment’ as follows:

environment includes—

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (c) amenity values; and
- (d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) which are affected by those matters

20. Section 3 defines the meaning of ‘effect’ to include:

3 Meaning of effect

In this Act, unless the context otherwise requires, the term **effect** includes—

- (a) any positive or adverse effect; and
- (b) any temporary or permanent effect; and
- (c) any past, present, or future effect; and
- (d) any cumulative effect which arises over time or in combination with other effects—
regardless of the scale, intensity, duration, or frequency of the effect, and also includes—
- (e) any potential effect of high probability; and
- (f) any potential effect of low probability which has a high potential impact.

Section 3: amended, on 7 July 1993, by section 3 of the Resource Management Amendment Act 1993 (1993 No 65).

21. Positive effects arising from the subdivision would include enablement of additional residential sites in an urban Coopers Beach location around existing development and infrastructure. This form and intensity of subdivision is anticipated in the Residential zone.
22. Potential adverse effects associated with this activity relate to the subdivision of the site. This will be addressed in the sections below.

Subdivision Assessment of Effects

23. Potential adverse effects arising from subdivision occur as a result of changes to land use patterns and the activities that are enabled through subdivision. With respect to this application, the proposal seeks to establish a pattern of urban residential subdivision that is appropriate for the Residential zone given the proposed design. This includes the size and dimension of each lot which can provide for adequate building and curtilage areas, vehicle access and on-site carparking and required infrastructure services including wastewater and water supply reticulation as well as the management of stormwater runoff.
24. Development potential of the land has been assessed in the site suitability report. Natural hazards exist within Lot 9 [flooding] however no development is proposed on that Lot. The sites geological features require detailed design analysis

described in the site suitability report prepared by Cook Costello / TA Structures as attached.

Allotment Dimensions Effects

25. A 14m x 14m building envelope can't be provided within any of the proposed lots. Please see the below evaluation of this rule breach under the relevant assessment criteria.

Allotment Sizes and Dimensions	
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.	<p>Proposed Lot 1-8 cannot accommodate a 14mx14m building envelope or 196m².</p> <p>The smallest building platform can still provide 135m² which can easily provide enough area for a modest dwelling. The site suitability report has provided recommendations that will be implemented. Also, services such as wastewater, water supply are reticulated along with appropriate management of stormwater. Adequate land is provided on the proposed sites for these activities.</p>
Whether the proposed allotment sizes and dimensions are sufficient for operational and maintenance requirements.	The proposed allotment size will have sufficient area for operational and maintenance requirements include the construction of a dwelling which is anticipated on proposed lots 1-8.
The relationship of the proposed allotments and their compatibility with the pattern of the adjoining subdivision and land use activities, and access arrangements.	<p>As previously mentioned, the site is within a residential area. Directly adjoining neighbouring lots are slightly bigger although the proposed sized lots are not uncommon within the wider area.</p> <p>An additional access will be added to the end of Loke Crescent which will provide access to each of the proposed lots.</p>
Whether the cumulative and long term implications of proposed subdivisions are sustainable in terms of preservation of the rural and coastal environments.	<p>The proposed subdivision is in an area of similar sized lots that are used as residential properties.</p> <p>The proposal is not anticipated to adversely affect the characterises associated with the existing environment. The property is not within a rural or coastal environment.</p>

RELEVANT PLAN CONSIDERATIONS

26. Section 104 (1)(b) requires that regard be given to the relevant provisions of:

- A national environmental standard;
- Other regulations;
- A national policy statement;
- A New Zealand coastal policy statement;
- A regional policy statement or proposed regional policy statement;
- A plan or proposed plan

National Environmental Standards & Other Regulations

27. The National Environment Standards (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health is not of relevance to this site. The property is not an identified HAIL site or known to have been used for HAIL activities.

28. The NES for Freshwater is of relevance to this site. The proposal is considered permitted in terms of this legislation. Given the permitted activity status it is considered that the overarching aim to protect freshwater resources in particular wetlands will be achieved. The existing ponds on proposed Lot 9 are manmade and are not considered to be wetlands. There are no other mapped wetlands according to NRC on the site or within 100m of the subdivided sites.

National Policy Statement(s)

29. There are no National Policy Statements directly relevant to this application. The NPS for Highly Productive Land is not relevant as the site is within a residential zone. The NPS for Indigenous Biodiversity is also not relevant as no vegetation clearance is proposed.

New Zealand Coastal Policy Statement

30. The New Zealand Coastal Policy Statement is not relevant to this application as the property in question is not within the coastal environment.

Regional Policy Statement or Proposed Regional Policy Statement

31. The subject site is within the Northland region and is subject to the governing objectives and policies of the operative Northland Regional Policy Statement (operative May 2016). Although the jurisdiction for land use and subdivision activities is governed by the Far North District Council and the policy framework for subdivision activities and the management of potential adverse effects is set out in the Far North District Plan. This Plan is subject to the governing regional policy framework set out in the Northland Regional Policy Statement. With respect to any identified features, the site is not within any area of 'High' or 'Outstanding' Natural Area, or within the Coastal Environment boundary.

32. Of statutory relevance to this proposal are regional objectives and policies relating to sustainable management, enabling economic wellbeing and planned/coordinated development. The proposed subdivision is considered to

promote sustainable management as the additional lots will attract investment to the community and enable additional options with the existing housing within the Waipapa area. The cumulative effects of this subdivision are assessed as being compatible within this environment. The development seeks to subdivide land within a rural area, where infrastructure is existing on site. The existing character of the area is a mixture of rural and rural residential therefore the development will not be out of character. It is not proposed to clear vegetation to enable the subdivision.

33. Overall, it is considered that the proposal would not be inconsistent with the Northland Regional Policy Statement objectives and policies.

Plans or Proposed Plans

Operative Plan

34. This subdivision application is subject to the provisions of the operative Far North District Plan. The site is zoned Residential and is to be assessed in terms of the objectives and policies for the zone and the district-wide subdivision and environment provisions. The subdivision would achieve the purpose of the Residential zone which is to provide for residential activities at densities similar to the surrounding area (Residential zone objective 7.6.3). Other policies that seek to achieve suitable outdoor areas and to manage infrastructure requirements would also be achieved (Residential zone policies 7.6.4.7 and 7.6.4.8) as well as subdivision objectives to achieve the Residential zone purpose (Objective 13.3.1), avoid, remedy or mitigate adverse effects on the natural environment and natural hazards (Objective 13.3.2) and adequately provide for infrastructure services (Objective 13.3.8 – 13.3.10).

35. The proposed subdivision is considered appropriate for the Residential Zone as it will create 8 vacant lots that can be used for residential activities and can be appropriately serviced (Objective 13.2.1 and 13.3.5). The life supporting capacity of air, water, soil and ecosystems will be adequately protected and natural hazards avoided where possible by the proposed design and recommendations outlined in the site suitability report (Objective 13.3.2 and Policy 13.4.3).

36. Overall it is considered that the proposal would not be contrary to any District Plan objective or policy.

Proposed Far North District Plan

Part 3 – Area Specific Matters / ZONES / Residential zones / General residential

Objectives	Assessment
<p>GRZ-O1 - The General Residential zone provides a variety of densities, housing types and lot sizes that respond to:</p> <ol style="list-style-type: none"> 1. housing needs and demand; 2. the adequacy and capacity of available or programmed development infrastructure; 	<p>The proposed subdivision will enable this objective to be achieved.</p>

<p>3. the amenity and character of the receiving residential environment; and</p> <p>4. historic heritage.</p>	
<p>GRZ-O2 - The General Residential zone consolidates urban residential development around available or programmed development infrastructure to improve the function and resilience of the receiving residential environment while reducing urban sprawl.</p>	<p>The proposed lots can access existing infrastructure such as the reticulated wastewater and water supply connections.</p>
<p>GRZ-O3 - Non-residential activities contribute to the well-being of the community while complementing the scale, character and amenity of the General Residential zone.</p>	<p>The proposed subdivision will create eight lots for residential use.</p>
<p>GRZ-O4 - Land use and subdivision in the General Residential zone is supported where there is adequacy and capacity of available or programmed development infrastructure.</p>	<p>The proposed subdivision can be adequately serviced.</p>
<p>GRZ-O5 - Land use and subdivision in the General Residential zone provides communities with functional and high amenity living environments.</p>	<p>The proposed subdivision is anticipated to meet this objective.</p>
<p>GRZ-O6 - Residential communities are resilient to changes in climate and are responsive to changes in sustainable development techniques.</p>	<p>The proposed subdivision is anticipated to meet this objective.</p>
<p>Policy</p>	<p>Assessment</p>
<p>GRZ-P1 - Enable land use and subdivision in the General Residential zone where:</p> <ol style="list-style-type: none"> 1. there is adequacy and capacity of available or programmed development infrastructure to support it; and 2. it is consistent with the scale, character and amenity anticipated in the residential environment. 	<p>The proposed subdivision is anticipated to meet this objective. Council reticulation services are anticipated to have the required capacity to service the proposed lots.</p>
<p>GRZ-P2 - Require all subdivision in the General Residential zone to provide the following reticulated services to the boundary of each lot:</p> <ol style="list-style-type: none"> 1. telecommunications: 	<p>Approval has been obtained from Top Energy, Chorus and Doubtless Bay Water supply for the proposed subdivision. Wastewater can also be connected, and stormwater will be managed in accordance with the recommendations within the site</p>

<ol style="list-style-type: none"> 1. fibre where it is available; or 2. copper where fibre is not available; 2. local electricity distribution network; 3. wastewater; and 4. potable water and stormwater where it is available. 	<p>suitability report.</p>
<p>GRZ-P3 - Enable multi-unit developments within the General Residential zone, including terraced housing and apartments, where there is adequacy and capacity of available or programmed development infrastructure.</p>	<p>The proposal relates to subdivision of vacant sites.</p>
<p>GRZ-P4 - Enable non-residential activities that:</p> <ol style="list-style-type: none"> 1. do not detract from the vitality and viability of the Mixed Use zone; 2. support the social and economic well-being of the community; 3. are of a residential scale; and 4. are consistent with the scale, character and amenity of the General Residential zone. 	<p>The proposal relates to subdivision of vacant sites that are anticipated to be used for residential activities.</p>
<p>GRZ-P5 - Provide for retirement villages where they:</p> <ol style="list-style-type: none"> 1. compliment the character and amenity values of the surrounding area; 2. contribute to the diverse needs of the community; 3. do not adversely affect road safety or the efficiency of the transport network; and 4. can be serviced by adequate development infrastructure. 	<p>The proposal relates to subdivision of vacant sites that are anticipated to be used for residential activities.</p>
<p>GRZ-P6 - Encourage and support the use of on-site water storage to enable sustainable and efficient use of water resources.</p>	<p>The proposed lots have access to reticulated water supply as confirmed by Doubtless Bay Water.</p>
<p>GRZ-P7 - Encourage energy efficient</p>	<p>Not applicable to the proposed</p>

<p>design and the use of small-scale renewable electricity generation in the construction of residential development.</p>	<p>subdivision.</p>
<p>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:</p> <ol style="list-style-type: none"> 1. consistency with the scale, design, amenity and character of the residential environment; 2. the location, scale and design of buildings or structures, potential for shadowing and visual dominance; 3. for residential activities: <ol style="list-style-type: none"> 1. provision for outdoor living space; 2. privacy for adjoining sites; 3. access to sunlight; 4. for non-residential activities: <ol style="list-style-type: none"> 1. scale and compatibility with residential activities 2. hours of operation 5. at zone interfaces, any setbacks, fencing, screening or landscaping required to address potential conflicts; 6. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity, including: <ol style="list-style-type: none"> 1. opportunities for low impact design principles 2. ability of the site to address stormwater and soakage; 7. managing natural hazards; and 8. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6. 	<p>The application provides adequate information to address these matters.</p>

Part 2 – District wide matters / SUBDIVISION / Subdivision

Objectives	Assessment
<p>SUB-O1 - Subdivision results in the efficient use of land, which:</p> <ul style="list-style-type: none"> 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. 	<p>The proposed subdivision is anticipated to achieve the matters specified in this objective as outlined within the remainder of the application.</p>
<p>SUB-O2 - Subdivision provides for the:</p> <ul style="list-style-type: none"> 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 	<p>As previously outlined, none of these characteristics are identified on the site.</p>

<p>Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.</p>	
<p>SUB-O3 - Infrastructure is planned to service the proposed subdivision and development where:</p> <ul style="list-style-type: none"> 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. 	<p>Infrastructure is anticipated to be utilised in accordance with the information provided in this application. This objective can be meet.</p>
<p>SUB-O4 - Subdivision is accessible, connected, and integrated with the surrounding environment and provides for:</p> <ul style="list-style-type: none"> a. public open spaces; b. esplanade where land adjoins the coastal marine area; and c. esplanade where land adjoins other qualifying waterbodies. 	<p>The proposed subdivision is not of a size and scale that is anticipated to require the provision of public open spaces. A shared recreational Lot is proposed.</p> <p>Requirements for esplanades are also not applicable.</p>

Policy	Assessment
<p>SUB-P1 - Enable boundary adjustments that do not alter: the degree of non-compliance with District Plan rules and standards;</p>	<p>The proposal does not include a boundary adjustment.</p>

<p>the number and location of any access; and the number of certificates of title; and are in accordance with the minimum lot sizes of the zone and comply with access, infrastructure and esplanade provisions.</p>	
<p>SUB-P2 - Enable subdivision for the purpose of public works, infrastructure, reserves or access.</p>	<p>The proposal does not relate to this.</p>
<p>SUB-P3 - Provide for subdivision where it results in allotments that: are consistent with the purpose, characteristics and qualities of the zone; comply with the minimum allotment sizes for each zone; have an adequate size and appropriate shape to contain a building platform; and have legal and physical access.</p>	<p>The proposal can meet the matters specified in this policy.</p>
<p>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</p>	<p>The proposal can meet the matters specified in this policy.</p>
<p>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: minimising vehicle crossings that could affect the safety and efficiency of the current and future transport network; avoid cul-de-sac development unless the site or the topography prevents future public access and connections; providing for development that encourages social interaction,</p>	<p>The proposed subdivision design is anticipated to meet these matters.</p>

<p>neighbourhood cohesion, a sense of place and is well connected to public spaces;</p> <p>contributing to a well connected transport network that safeguards future roading connections; and</p> <p>maximising accessibility, connectivity by creating walkways, cycleways and an interconnected transport network.</p>	
<p>SUB-P6 - Require infrastructure to be provided in an integrated and comprehensive manner by:</p> <p>demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and</p> <p>ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.</p>	<p>The proposed utilisation of infrastructure has been outlined within the application. The proposal can meet the matters specified in this policy.</p>
<p>SUB-P7 - Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.</p>	<p>Not applicable.</p>
<p>SUB-P8 - Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision:</p> <p>will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and</p> <p>will not result in the loss of versatile soils for primary production activities.</p>	<p>Not applicable.</p>
<p>SUB-P9 - Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the</p>	<p>Not applicable.</p>

<p>development achieves the environmental outcomes required in the management plan subdivision rule.</p>	
<p>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.</p>	<p>The existing property is vacant. Not applicable.</p>
<p>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:</p> <p>consistency with the scale, density, design and character of the environment and purpose of the zone;</p> <p>the location, scale and design of buildings and structures;</p> <p>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;</p> <p>managing natural hazards;</p> <p>Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and</p> <p>any historical, spiritual, or cultural association held by tangata whenua, with</p>	<p>The specified matters are considered to be adequately addressed within the application.</p>

regard to the matters set out in Policy TW-P6.	
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Proposed Far North District Plan Objectives & Policies & Weighting

34. Section 88A(2) provides that “any plan or proposed plan which exists when the application is considered must be had regard to in accordance with section 104(1)(b).” This requires applications to be assessed under both the operative and proposed objective and policy frameworks from the date of notification of the proposed district plan.

35. In the event of differing directives between objective and policy frameworks, it is well established by case law that the weight to be given to a proposed district plan depends on what stage the relevant provisions have reached, the weight generally being greater as a proposed plan move through the notification and hearing process. In *Keystone Ridge Ltd v Auckland City Council*, the High Court held that the extent to which the provisions of a proposed plan are relevant should be considered on a case by case basis and might include:

- The extent (if any) to which the proposed measure might have been exposed to testing and independent decision making;
- Circumstances of injustice; and
- The extent to which a new measure, or the absence of one, might implement a coherent pattern of objectives and policies in a plan.

36. In my view the PDP has not gone through the sufficient process to allow a considered view of the objectives and policies for the General Residential Zone and Subdivision however this has still been provided. Both the PDP and ODP have been assessed accordingly and the proposal is deemed to meet the relevant objectives and policies.

NOTIFICATION ASSESSMENT (s95matters)

37. The Council will need to determine the basis on which the application will be processed. These include public notification, limited notification, or non-notification.

PUBLIC NOTIFICATION (s95A)

38. Section 95A outlines the steps that must be followed to determine whether an application should be publicly notified.

Step 1 – Details requirements for mandatory public notification. None of these apply to the proposal.

Step 2 – Details situations where public notification is precluded (if not required under step 2). The application is for a non-complying activity, therefore public notification is not precluded under this step.

Step 3 – Details requirements for public notification in certain circumstances. This includes applications that are determined to be publicly notified under s95D. For this application, it is concluded that potential adverse effects would be less than minor.

Step 4 – Details requirements in special circumstances. It is considered that there are no special circumstances that would warrant notification.

LIMITED NOTIFICATION (s95B)

39. The amended s95B also includes steps to be followed when deciding whether an application should be subject to limited notification.

Step 1 – relates to the consideration of certain affected groups and affected persons including any protected customary rights groups or affected marine title groups. There are no such groups affected by this application.

Step 2 – details requirements for limited notification where the application is for one or more activities that is precluded from limited notification by a rule or standard or is a controlled or prescribed activity. This step does not preclude this application from limited notification. The activity does not meet this step.

Step 3 – relates to boundary adjustments, where an owner of an infringed boundary is to be notified or a prescribed activity. It also relates to any other activity where it is required to determine if a person is an affected person in accordance with s95E. For the purpose of limited notifying an application, a person is an affected person if a consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor). Given the proposed lot sizes can meet the discretionary assessment criteria, neighbouring property owners are deemed to be affected in a less than minor way.

Step 4 – relates to requirements to notify where special circumstances exist.

40. There are no special circumstances that would warrant limited notification of this application.

PART II

Purpose

41. The proposal can promote the sustainable management of natural and physical resources on site, as current and future owners and users of the land are able to provide for their social, cultural and economic wellbeing and their health and safety.
42. The proposed lots are vacant and are anticipated to be developed for residential activities. The proposed subdivision provides opportunities for people looking to purchase a vacant site and build a residential dwelling within the area. Those persons help contribute to the local economy and utilise local services and infrastructure. Housing is needed within the local area and although the proposal will not increase the number of houses it will provide opportunities for development of housing for the future owners. In doing so, this achieves all four well beings as identified within Part 2. Air, water, soil, and ecosystems are not anticipated to be adversely affected by this subdivision within the Residential Zone. Any effects on the environment are not anticipated to be more than minor.

Matters of National Importance

43. The site is mapped as being within a Kiwi 'present' distribution area, however adverse effects on kiwi habitat are not anticipated. Māori are not considered to be adversely affected by this proposal, nor is any historic heritage likely to be impacted, however in the event anything is discovered the accidental discovery protocol will be adhered to.

Other Matters

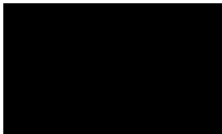
44. The development will result in an efficient use of resources with the development occurring within the Residential zone providing for activities associated with this zone including residential uses where other activities will not be adversely impacted. There will be no adverse impacts on local ecosystems or overall.

CONCLUSION

45. This application seeks a discretionary activity resource consent to undertake a subdivision within the Residential Zone. The assessment of effects on the environment concludes that for the reasons outlined in the application, the effects of undertaking this proposal will be no more than minor on the surrounding environment.
46. The proposal was considered to be consistent with the purpose of the National Environmental Standard for Assessing and Managing Contaminates in Soil to Protect Human Health and National Environmental Standard for Freshwater.
47. No currently gazetted National Policy Statements including the NZ Coastal Policy Statement, National Policy Statement for Highly Productive Land and National Policy Statement for Indigenous Biodiversity were considered to be undermined by this proposal.

48. The Regional Policy Statement for Northland was also reviewed as part of this application. The proposal was considered to be consistent with the aims of this document.
49. In terms of the operative Far North District Plan, the proposal was assessed against the objectives and policies for the Urban Environment in general, District Wide Matters and the Residential Zone, with the conclusion that it is generally compatible with the aims of the District Plan as expressed through those relevant objectives and policies.
50. The FNDC Proposed District Plan has also been assessed against the objectives and policies for the General Residential zone, with the conclusion that it is generally compatible with the aims of the Proposed District Plan as expressed through those relevant objectives and policies.
51. The relevant assessment criteria within the District Plan were also considered, the conclusions reached being that the proposal fulfilled the relevant criteria when assessed within the context of the outcomes the rules aim to achieve.
52. In terms of the potential adverse effects being minor or more than minor, it is considered that there are no directly affected parties to this proposal as all effects can be adequately mitigated.
53. An assessment of Part II of the Act has also been completed with the proposal generally able to satisfy this higher order document also.
54. We look forward to receiving acknowledgment of the application and please advise if any additional information is required.

Yours sincerely,



Steven Sanson
Consultant Planner

View Instrument Details



Instrument No 12104331.7
Status Registered
Date & Time Lodged 22 June 2021 16:15
Lodged By Baker, Lisa Anne
Instrument Type Consent Notice under s221(4)(a) Resource Management Act 1991



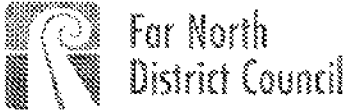
Affected Records of Title	Land District
972615	North Auckland
972616	North Auckland
972617	North Auckland

Annexure Schedule Contains 2 Pages.

Signature

Signed by Sarah Elizabeth Kayll as Territorial Authority Representative on 07/07/2021 11:53 AM

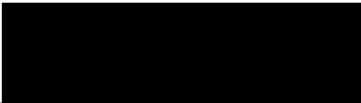
*** End of Report ***



Wairarapa District Council
Upper Floor, Box 100-1
Cannockburn Road
Palmerston North
New Zealand

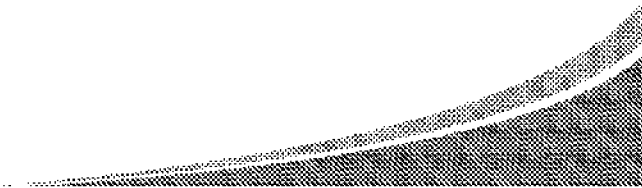
To: *Whakarua o te Takekura o te Kōwhiri*

Whakarua o te Takekura o te Kōwhiri
P.O. Box 100-1, Palmerston North



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

DATED at **KERIKERI** this 6th day of July 2021



Notes:
Existing easements & easements in gross are to be cancelled (Ref: TE D506002.5 & D506002.6)

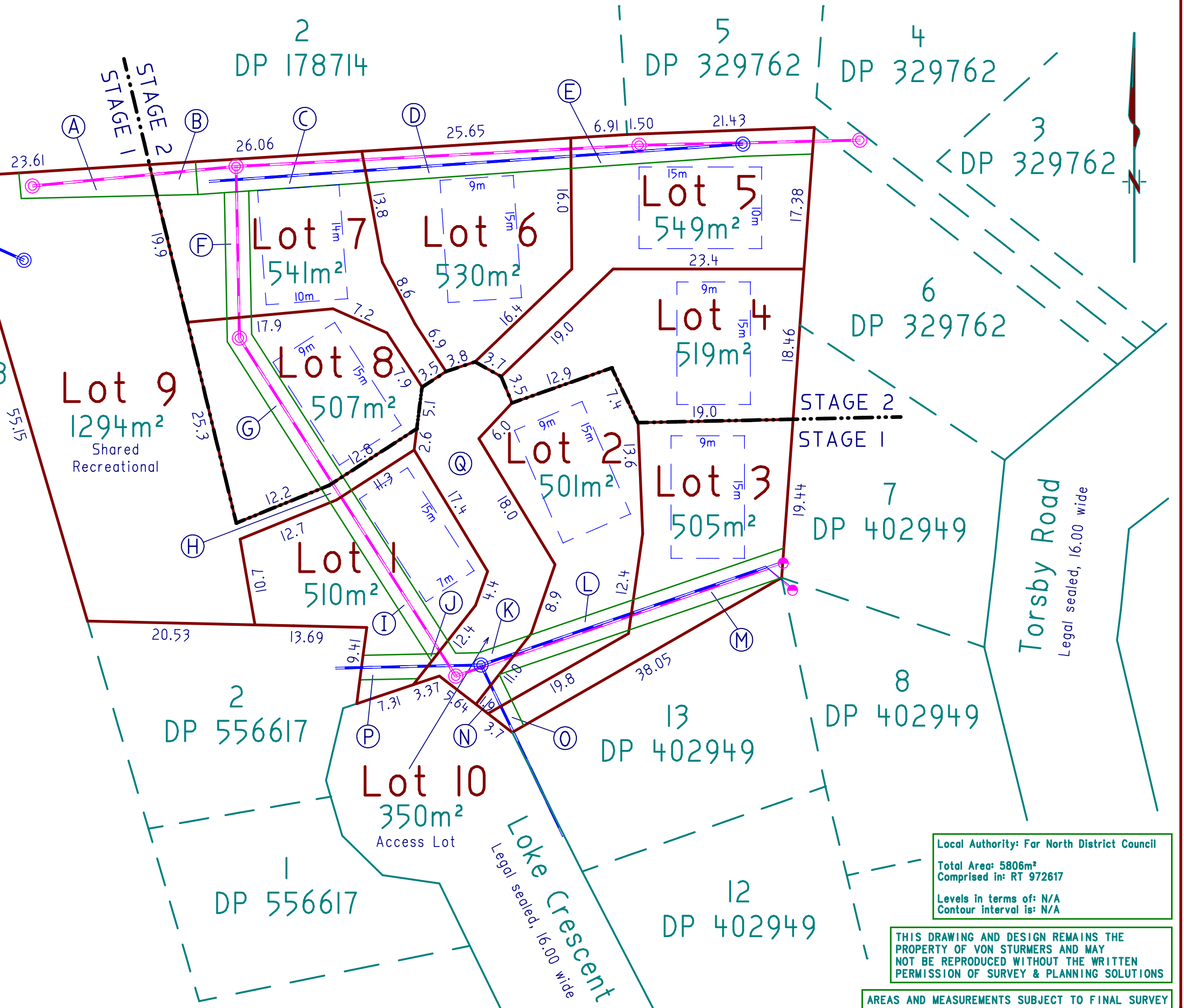
Amalgamation condition:
That Lots 9 & 10 hereon (legal access & shared recreational) be held as to eight undivided one-eighth shares by the owners of Lots 1 - 8 hereon as tenants in common in the said shares and that individual Records of Title be issued in accordance therewith.

Shape factor - variable sizes
(Min. 1.2m from boundary)

SCHEDULE OF PROPOSED EASEMENTS			
Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right of Way Right to convey Water	ⓀⓀ	Lot 10 hereon	Lots 1-8 hereon

MEMORANDUM OF EASEMENTS IN GROSS			
Purpose	Shown	Burdened Land (Servient Tenement)	Grantee
Right to convey Electricity	ⓀⓀ	Lot 10 hereon	Top Energy Ltd
Right to convey Telecommunications	ⓀⓀ	Lot 10 hereon	Chorus Ltd
Right to drain water & sewage	ⓐ	Lot 7 hereon	Far North District Council
	ⓓ	Lot 6 hereon	
	ⓔ	Lot 5 hereon	
	Ⓤ	Lot 1 hereon	
	Ⓚ	Lot 10 hereon	
	Ⓛ	Lot 2 hereon	
Right to drain water	Ⓜ	Lot 3 hereon	Far North District Council
	Ⓝ	Lot 2 hereon	
	Ⓞ	Lot 3 hereon	
Right to drain sewage	Ⓟ	Lot 1 hereon	Far North District Council
	ⓐⓗ	Lot 9 hereon	
	ⓑⓕ	Lot 7 hereon	
	Ⓒ	Lot 8 hereon	
	ⓓ	Lot 1 hereon	

This plan and accompanying report(s) have been prepared for the purpose of obtaining a Resource Consent only and for no other purpose. Use of this plan and/or information on it for any other purpose is at the user's risk.



Local Authority: Far North District Council
Total Area: 5806m²
Comprised in: RT 972617
Levels in terms of: N/A
Contour interval is: N/A

THIS DRAWING AND DESIGN REMAINS THE PROPERTY OF VON STURMERS AND MAY NOT BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF SURVEY & PLANNING SOLUTIONS

AREAS AND MEASUREMENTS SUBJECT TO FINAL SURVEY

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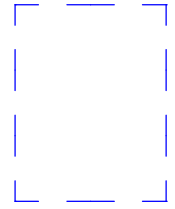
PROPOSED SUBDIVISION OF LOT DP 556617
PREPARED FOR: COOPERS HEIGHTS LIMITED

Name	Date	ORIGINAL SCALE	SHEET SIZE
Survey		1:500	A3
Design			
Drawn	SH 07-11-2023		
Rev	SH 16-11-2023		

Surveyors Ref. No: **15353**
Series of

Amalgamation condition:
That Lots 9 & 10 hereon (legal access & shared recreational)
be held as to eight undivided one-eighth shares by the
owners of Lots 1 - 8 hereon as tenants in common in the
said shares and that individual Records of Title
be issued in accordance therewith.

Notes:
Existing easements & easements in gross are to
be cancelled (Ref: TE D506002.5 & D506002.6)

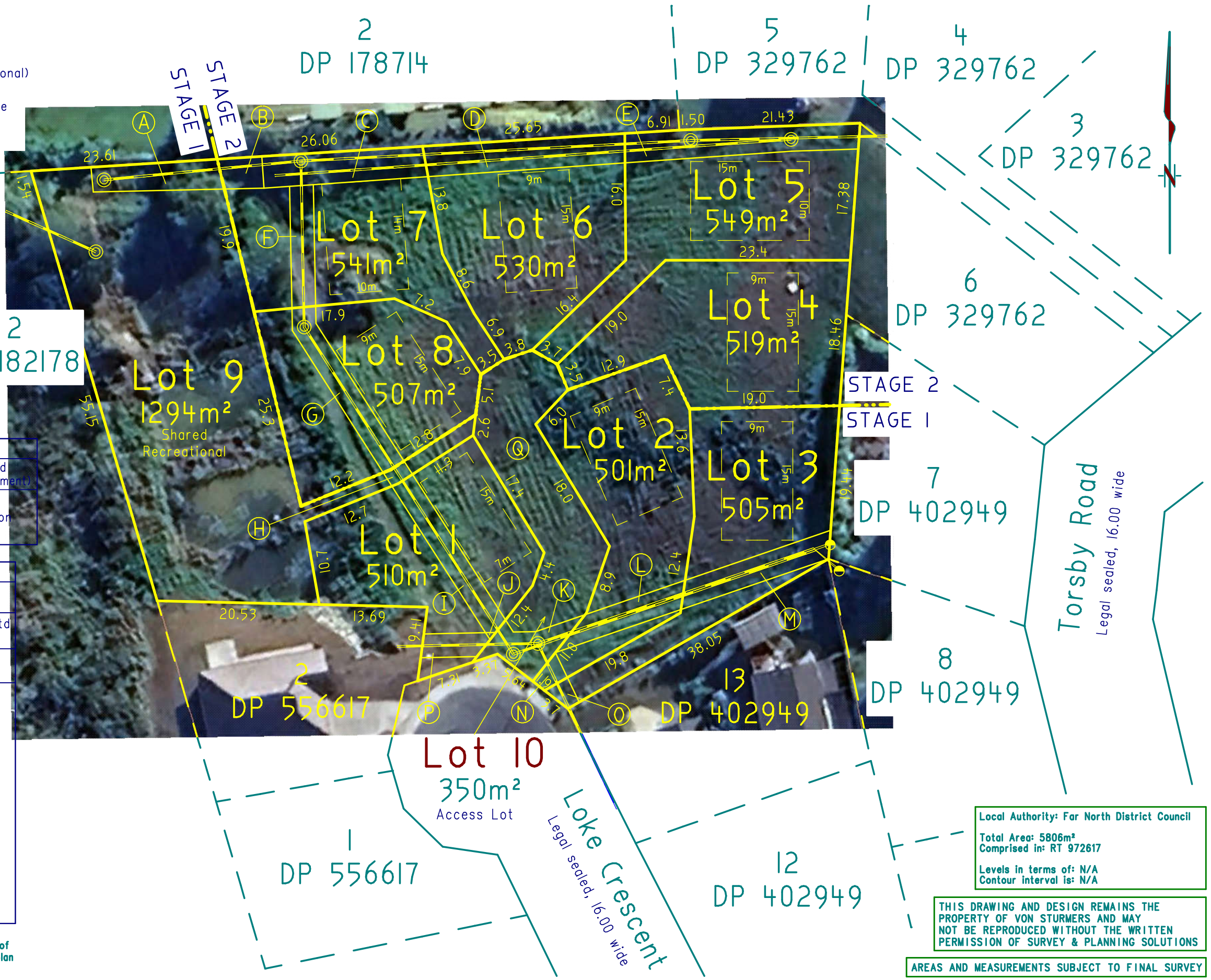


Shape factor - variable sizes
(Min. 1.2m from boundary)

SCHEDULE OF PROPOSED EASEMENTS			
Purpose	Shown	Burdened Land (Servient Tenement)	Benefited Land (Dominant Tenement)
Right of Way Right to convey Water	ⓀⓀ	Lot 10 hereon	Lots 1-8 hereon

MEMORANDUM OF EASEMENTS IN GROSS			
Purpose	Shown	Burdened Land (Servient Tenement)	Grantee
Right to convey Electricity	ⓀⓀ	Lot 10 hereon	Top Energy Ltd
Right to convey Telecommunications	ⓀⓀ	Lot 10 hereon	Chorus Ltd
Right to drain water & sewage	ⓐ	Lot 7 hereon	Far North District Council
	ⓑ	Lot 6 hereon	
	ⓒ	Lot 5 hereon	
	ⓓ	Lot 1 hereon	
	ⓔ	Lot 10 hereon	
	ⓕ	Lot 2 hereon	
Right to drain water	ⓖ	Lot 3 hereon	Far North District Council
	ⓗ	Lot 2 hereon	
	ⓓ	Lot 3 hereon	
Right to drain sewage	ⓐⓗ	Lot 9 hereon	Far North District Council
	ⓑⓕ	Lot 7 hereon	
	ⓒ	Lot 8 hereon	
	ⓓ	Lot 1 hereon	

This plan and accompanying report(s) have been prepared for the purpose of
obtaining a Resource Consent only and for no other purpose. Use of this plan
and/or information on it for any other purpose is at the user's risk.



Local Authority: Far North District Council
Total Area: 5806m²
Comprised in: RT 972617
Levels in terms of: N/A
Contour interval is: N/A

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NOT BE REPRODUCED WITHOUT THE WRITTEN
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AREAS AND MEASUREMENTS SUBJECT TO FINAL SURVEY

VON STURMERS
Registered Land Surveyors, Planners &
Land Development Consultants
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**PROPOSED SUBDIVISION OF
LOT DP 556617**
PREPARED FOR: COOPERS HEIGHTS LIMITED

Name	Date	ORIGINAL SCALE	SHEET SIZE
Survey		1:500	A3
Design			
Drawn	SH 07-11-2023		
Rev	SH 16-11-2023		

Surveyors
Ref. No:
15353
Series
Sheet of



cook | costello

Subdivision Suitability Report

Per Lugnet

Loke Crescent

Coopers Beach, Cable Bay

Project Number: 14596

Date: 20/11/2019

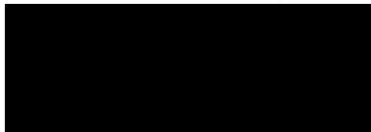


DOCUMENT CONTROL RECORD

Client: Per Lugnet
Project description: Subdivision Suitability Report
Client address: Loke Crescent, Coopers Beach, Cable Bay

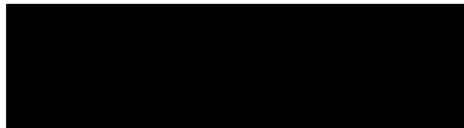
Date of issue: Wednesday, 20 November 2019

Status: Issue



Originator: Louis Freeland
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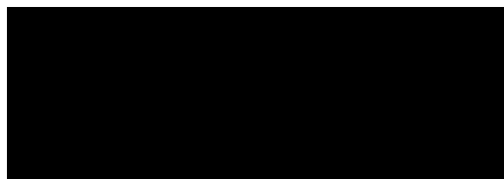
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Approved for issue:



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1. Executive Summary

Site Classification:

AS2870 Site class	H
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Groundwater Level:

Hand Auger Tests	2.0 mbgl
Adopted Design Depth	2.0 mbgl

Bearing Capacity Summary:

Depth to 200 kPa Uncorrected Ultimate Bearing Capacity	0.20 mbgl
Depth to 300 kPa Uncorrected Ultimate Bearing Capacity	0.70 mbgl

Site Foundation Option:

Concrete Slab Foundation:	Stiffened raft or waffle raft (RibRaft) at 0.30 mbgl designed in accordance with AS2870 Class 'H' soils.
Timber Pile Foundation:	Suspended timber floor with timber piles embedded 1.5 mbgl to mitigate effects of expansive soils.

2. Introduction

Cook Costello have been engaged by Per Lugnet to provide a geotechnical assessment for use in support of a Subdivision and land Use Consent application for subdivision with the Far North District Council.

It is proposed to subdivide Lot 2 DP 402949 Loke Crescent, in Coopers Beach, Cable Bay into five residential lots. A scheme plan for the proposed subdivision has been produced by Von Strumers (Lots 1 – 5 Being a Proposed Subdivision of Lot 2 DP 402949, dated May 2019) and is attached as Appendix 1. Cook Costello has not received any conceptual plans for the proposed dwellings, however it is expected that they will be single-story residential dwellings.

The property currently has an area of 7,055 m². The majority of the proposed lots will have an area in the range of approximately 601 m² to 1,407 m², with the exception of Lot 3 which will have an area of approximately 3,195 m².

This report considers the following aspects of site development:

- Existing stability of the site
- Effects of the development on stability
- Suitable building foundations
- Assessment of the stability of the building site in terms of Section 92 of the Building Act, 2004
- Wastewater management
- Stormwater management
- Potable water supply
- Other subdivision civil factors

A site plan is attached in Appendix 2 showing the property boundaries, and associated site investigations.

2.1. Relevant Documentation

- AS 2870: 2011 - Construction of residential slabs and footings
- Far North District Council: 2019 – GIS Maps
- Far North District Council – District Plan
- Far North District Council: 2009 – Engineering Standards and Guidelines
- NRC: 2016 – GIS Maps
- NRC: 2004 – Regional Water and Soil Plan
- NRC: 2019 – Proposed Regional Plan

- NZS 3604: 2011 - Timber-framed buildings
- NZS 4402:1986 - Methods of testing soils for civil engineering purposes.
- NZ Building Code: B1/VM4

Good Ground – means any soil or rock capable of permanently withstanding an ultimate bearing pressure of 300 kPa (i.e. an allowable bearing of 100 kPa using a factor of safety of 3.0) but excludes;

- a) Potentially compressible ground such as topsoil, soft soils such as clay which can be moulded easily in the fingers, and uncompacted loose gravel which contains obvious voids,
- b) Expansive soils being those that have a liquid limit of more than 50% when tested in accordance with NZS4402 Test 2.2 and a linear shrinkage of more than 15% when tested from the liquid limit in accordance with NZS 4402 Test 2.6, and
- c) Any ground which could foreseeably experience movement of 25mm or greater for any reason including one or a combination of the following: land instability, ground creep, subsidence, seasonal swelling and shrinking, frost heave, changing groundwater level, erosion, dissolution of soil in water, and effects of tree roots.

A site visit was carried out by Geocivil and Cook Costello on 15 August 2019 with the following intrusive investigations being conducted:

- 2 no. hand-augured boreholes to determine the nature of near-surface soils.
- 4 no. Scala penetrometer tests to determine the strength of near-surface soils.

A desktop study using the New Zealand Geotechnical Database (NZGD) was also completed to provide further information about the site.

3. Desktop Study

3.1. Site Description

The property is located on Loke Crescent, Coopers Beach, Cable Bay. The site is accessed directly off Loke Crescent to the south. The legal description of the site is Lot 2 DP 402949 and the total size of the lot is 7,055 m².

The site is flat to gently sloping on the west side and slopes moderately up to the east side towards Torsby Road. There is a watercourse on the west side of the section and an existing pond within proposed Lot 3. The site is currently empty with grass coverage.

3.2. Proposed Development

The proposed subdivision is to consist of five lots with five dwellings. Cook Costello has not received any conceptual plans for the proposed dwellings, however, it is expected that they will be single-storey residential dwellings. Access to the dwellings will be directly from Loke Crescent.

Cook Costello has not been provided with an earthworks plan showing proposed building platform levels. Building and building platform information will be provided by individual lot owners at the time of Building Consent.

3.3. Published Geology

The GNS Science online geology map (Figure 1) defines the underlying geology of the site as Mangonui Formation (Reinga Group). However, the site is on the boundary of an area of estuary, river and swamp deposits and it is expected that these may be encountered on site.

The soil type in the area is defined on NZMS290 Sheet O04/05 Kaitaia - Rawene (SOILS) as Rangiora CLAY (RU) with remnants of Te Kopuru SAND (TEK).

The rock type in the area is defined on NZMS290 O04/05 Kaitaia - Rawene (ROCK TYPES) as Alluvium: mud, sand and gravel, lignite carbonaceous sandstone and mudstone, rare iron oxide pans, forming dissected terrace surfaces up to 150 m above sea level; very soft to moderately soft. Weathered to multi-coloured clay with some rock fragments to the depth of 10 m. Surfaces are modified by erosion.

However, these are regionally scaled documents and should not be relied on for site-specific acceptance.

Figure 1: NZGS geology of site at 10 Loke Crescent, Coopers Beach, Cable Bay (site location in red).

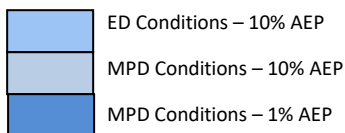
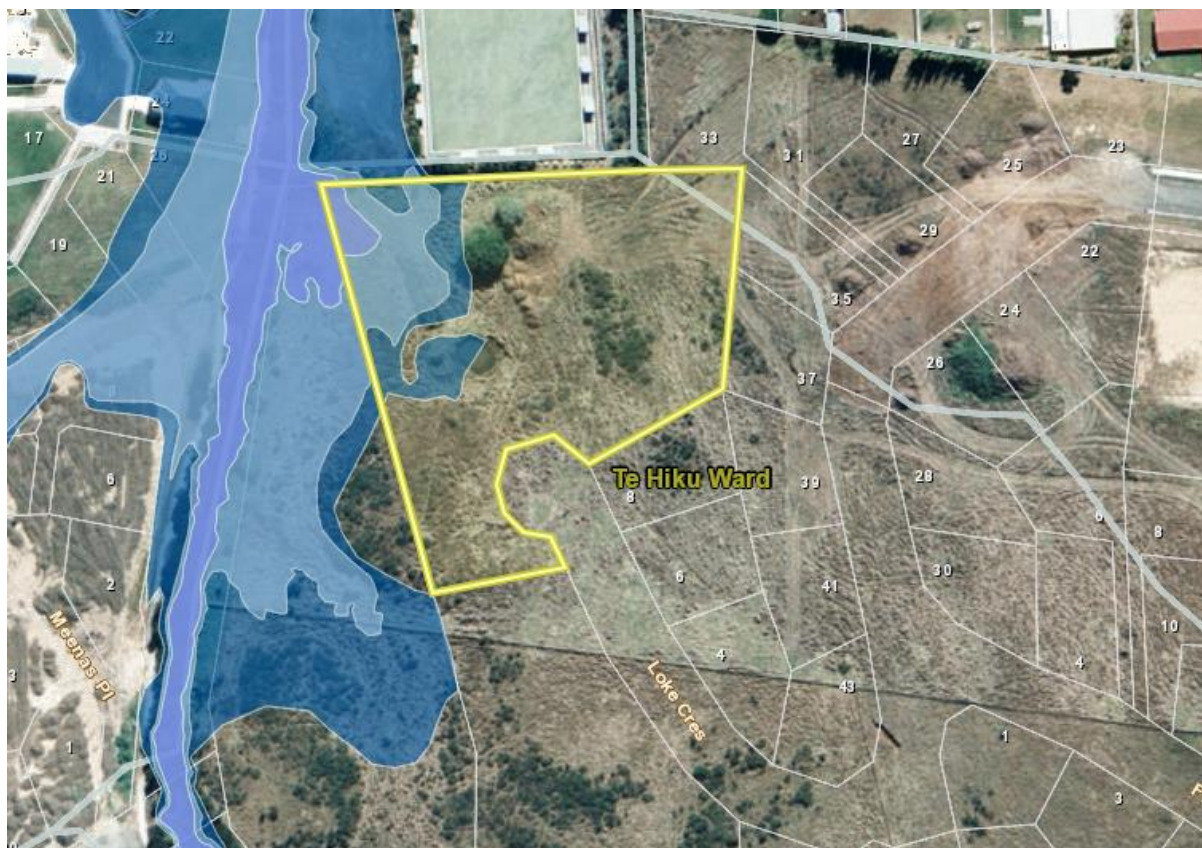


	Mangonui Formation (Reinga Group)
	Awhitu Group Alluvium
	Undifferentiated Tangihua Complex basalt in Northland Allochthon
	OIS4 – OIS1 Late Pleistocene – Holocene) estuary, river and swamp deposits

3.4. Flood Susceptibility

The Far North District Council GIS map was consulted for the flood risk. This shows that the northwest corner of the site is at risk under Existing Development (ED) conditions for a 10% AEP event and Maximum Probable Development (MPD) conditions for 10% AEP and 1% AEP events. The extent of these zones is shown in Figure 2.

Figure 2: Flood susceptibility at 10 Loke Crescent, Coopers Beach, Cable Bay.



4. Onsite Investigations

A geotechnical site investigation was carried out on 15 August 2019. This investigation consisted of:

- Visual inspection and walkover
- 2 no. hand augered boreholes (HA) with shear vane measurements to verify subsoil properties;
- 4 no. Scala penetrometer tests (SP) to identify uniformity of the soil

The test locations are shown on the site investigation plan attached as Appendix 2. The test results are attached in Appendix 3.

4.1. Site Walkover Observations

The following observations were made during the site walkover:

- The site was predominantly covered in long grass and shrubs;
- There is a large pond located towards the north-western corner of the site;
- The north-eastern side of the site is moderately sloping down towards the pond;

- Anecdotal evidence from the landowner indicates that some non-engineered fill has been placed along the western boundary, towards the pond. SP3 was conducted within this fill. The approximate extent of this fill is shown in Appendix 3 (site plan).
- Some minor earthworks have taken place on the eastern side of the pond, at the base of the slope to create a flat platform.
- No obvious signs of land instability were visible to the north-eastern slope. However, it should be noted that this slope was covered in long grass and shrubs, making it difficult to observe the natural contours of the ground.

4.2. Hand Auger Investigations

The two HA investigations carried out at the site are summarised in Table 1. The locations of each of the tests are shown in Appendix 2 and full results can be found in Appendix 3.

The hand augers undertaken at the building site identified variable SILT and CLAY to the target depth of 3.0 mbgl. This indicates a consistent soil profile over the site.

Table 1: Summary of hand auger results

Test ID	Depth (mbgl) ¹	GWL ² (mbgl)	Test Results		
			(mbgl)	Soil Type	Undrained Shear Strength (kPa)
HA01	3.00 (target depth)	>3.00 (not encountered)	0.0 – 0.15	Clayey TOPSOIL	-
			0.15 – 1.5	Hard silty CLAY	209+
			1.5 – 2.6	Very stiff variable clayey SILT	176
			2.6 – 3.0	Very stiff silty CLAY	164
			3.0	End of borehole. Target depth reached.	-
HA02	2.70 (no retrieval)	2.00	0.0 – 0.4	Silty CLAY with minor amorphous organics [TOPSOIL]	-
			0.4 – 1.5	Firm silty CLAY	88 – 193
			1.5 – 2.7	Stiff silty CLAY	50 – 88
			2.7	End of borehole. No retrieval.	-

1. mbgl = meters below ground level

2. GWL = groundwater level

4.3. Scala Penetrometer Investigations

Scala penetrometer results show that an ultimate bearing capacity (UBC) in excess of 200 kPa (100 kPa dependable) is available from approximately 0.2 m below the existing ground level across the majority of the site, below any topsoil or fill. A UBC in excess of 300 kPa (150 kPa dependable) is available from approximately 0.7 m below the existing ground level across majority of the site. It should be noted that SP03 was conducted within the fill present on the western side of the site. A UBC in excess of 200kPa

and 300kPa is available from approximately 1.2 m below the existing ground level in this area. It should be noted that it is unknown how deep the fill layer is.

Uncorrected bearing capacities derived from Scala penetrometer tests were estimated using the procedure presented by M.J. Stockwell in the paper 'Determination of allowable bearing pressure under small structures (June 1977)'. Bearing capacities should be corrected for the proposed foundation dimensions once known.

Table 2: Summary of uncorrected ultimate bearing capacity identified at each SP location

Test ID	Depth Below Ground (m)	Scala Penetrometer (blows/mm)	Uncorrected Ultimate Bearing Capacity (kPa)
SP01	0.20	<50mm/blow	>200
	0.20	<28mm/blow	>300
SP02	0.20	<50mm/blow	>200
	0.30	<28mm/blow	>300
SP03	0.10	<50mm/blow	>200
	0.70	<28mm/blow	>300
SP04	0.10	<50mm/blow	>200
	0.50	<28mm/blow	>300

4.4. Water Table

The groundwater table was encountered at 2.0 m in HA02 and not encountered in HA01. It is safe to assume a design water table depth of 2.0 mbgl. However, the groundwater table is most likely higher locally around the existing pond feature and the site-specific depth should be determined for buildings in this area.

5. Geotechnical Assessment

5.1. Site Stability

The proposed subdivision area and surrounding land have a gently to moderately sloping contour. No evidence of instability was observed within the subdivision at the time of the site inspection. The site is considered to be consistent with the above geological description. The site is considered suitable for the development as proposed. The proposed development is unlikely to have a detrimental effect on the site stability, provided the development is carried out in a responsible manner and in accordance with recommendations stated within this report.

5.2. Peak Ground Acceleration (PGA)

According to NZS 1170.5:2004, Importance Level 2 buildings are required to be designed to resist earthquake shaking with an annual probability of exceedance of 1/500 (i.e. a 500-year return period).

This is the ultimate limit state (ULS) design seismic loading. Structures are expected to retain their structural integrity during the ULS earthquake, and not collapse or endanger life.

Furthermore, Importance Level 2 structures should sustain little or no structural damage under a serviceability limit state (SLS) design load case, which is based on earthquake shaking with a 25 year return period.

Peak horizontal ground accelerations (PGA) have been calculated in accordance with MBIE/NZGS Module 1 (2016) using the following formula:

$$PGA = C_{0,1000} R f g / 1.3$$

$$C_{0,1000} = 0.13 \text{ for Whangarei/Far North (NZTA Bridge Manual (2016) Table 6A.1)}$$

$$R = 1.0 \text{ for a 500 year return period event (NZS1170.5)}$$

$$f = 1.33 \text{ for Class C (Assumed as worst case for slope stability)}$$

Thus, the $PGA = 0.13 \times 1.0 \times 1.33 g / 1.3 = 0.13 g$.

As a lower bound, the ultimate limit state effects to be designed for shall not be taken to be less than those due to a 6.5 magnitude earthquake at 20km distance, for which the peak ground acceleration coefficients shall be derived from table 6.3 of The NZ Transport Agency's Bridge manual SP/M/022 (version May 2016).

Thus, the $PGA = 0.19 g$ and effective magnitude for the site is 6.5.

The PGA may be affected considering the topographic amplification factor A_{topo} according to the following situations, as illustrated in NZGS - Module 6. Ground shaking may be significantly amplified by certain topographic features including long ridges and cliff tops. The phenomenon of topographic amplification is well recognised internationally and the following simplified recommendations have been adapted from Eurocode 8, Part 5: BS EN 1998-5: 2004 (Annex A). Amplification factors are provided below with respect to the topographic situation.

For cliff features >30 m in height, $A_{topo} = 1.2$ at the cliff edge and the area on top of the cliff of width equal to the height of the cliff;

For ridge lines >30 m in height with crest width significantly less than base width, and average slope angle greater than 30 degrees, $A_{topo} = 1.4$ at the crest diminishing to unity at the base;

For ridge lines >30 m in height with crest width significantly less than base width, and average slope angle greater than 15 degrees and less than 30 degrees, $A_{topo} = 1.2$ at the crest diminishing to unity at the base;

For average slope angles of less than 15 degrees the topography effects may be neglected.

The last parameter which shall be taken into consideration is the displacement factor, which reduces the PGA and depends on the amount of permanent displacement that can be tolerated for the particular design case. PGA is considered overly conservative in most cases for pseudo-static analyses in the

slope stability and retaining wall design (e.g. Kramer, 1996). Therefore, international practice is to reduce PGA by a factor of between 0.33 to 0.5.

In this specific case we can consider the following parameters for A_{topo}

$Wd=0.5$ (Case 4 from NZGS Guidelines Module 6)

$A_{topo} = 1.0$ (as the average slope angle is less than 15 degrees)

The relationships to calculate the seismic design parameters are given below.

$$K_h = PGA/g \times A_{topo} \times Wd = 0.19 \times 1.0 \times 0.5 = 0.10$$

The seismic parameters are summarised in Table 3.

Table 3: Seismic parameters

Limit State	Displacement Factor Wd	Topographic Amplification Factor A_{topo}	Peak Ground Acceleration, PGA or $C(T)$ (g)	Horizontal Acceleration Coefficient, K_h
ULS ¹	0.5	1.0	0.19	0.10

1. Ultimate Limit State

5.3. Slope Stability Analysis

The risk of slope failure is determined by the Factor of Safety, and is derived by the ratio of stabilising forces to destabilising forces. The criteria of an acceptable slope will generally have a factor of safety of 1.2 to 1.5, having a normal factor value of 1.5 for residential construction. These factors of safety have been developed by geotechnical engineers to accommodate uncertainties in geometric accuracy, rock properties, analysis method and the validity of assumptions made.

It is important to note that the modelled factor of safety does not assure safety from instability or slope movement, but indicates a reduced risk of failure. Table 4 shows the approximate likelihood of failures for different values of factors of safety.

Table 4: Approximate likelihood of failures for different values of factor of safety

Factor of Safety (FOS)	Likelihood of Failure Per Annum
1.1	1:10
1.3	1:50
1.5	1:200
1.7	1:1000

Generally the higher the risk category for the asset under consideration, the higher the design FOS to be adopted. The Building Research Association of New Zealand (BRANZ) has completed two quantitative study reports (SR004 and SR083) on slope stability at potential building sites. It is from these reports that we have adapted our methodology for slope stability analysis.

The likelihood of slope failure was modelled using the software “SLIDE” by Rocscience. The analyses have been performed on a cross-section, located as shown on our Site Plan (Appendix 1). The slope geometry has been determined using LIDAR data sourced from Northland Regional Council. The cross-section shows the worst-case section of the proposed subdivision in terms of slope stability. It is located through the section of the steepest proposed slope angle (10° from horizontal).

We have modelled three separate scenarios for each cross-section:

- Normal groundwater conditions;
- Raised groundwater conditions;
- Seismic conditions (ULS) as per NZS1170.5:2004 & Module 1 NZGS 2016.

For all scenarios modelled, we assessed potential circular failure surfaces. The soil parameters used for slope stability are presented in Table 5.

Table 5: Soil parameters used for slope stability analysis

Soil Type	Density (γ) kN/m ³	Effective Cohesion (c') kPa	Effective Friction Angle (ϕ') deg.	Unconfined Compressive Strength kPa
Hard Silty CLAY / Clayey SILT	18	5	30	-
Stiff Silty CLAY / Clayey SILT	18	4	28	-
Alluvial ROCK	20	-	-	20,000

Geotechnical design parameters have been determined based upon the in-situ test data, soil descriptions and knowledge of the local geology. Conservative estimations of some parameters have been made where available data is lacking.

A summary of the factor of safety results from the analyses is presented in Table 6. For detailed results, please refer to Appendix 4.

Table 6: Summary of stability results for the proposed development using SLIDE by ‘Rocscience’

Cross Section	Assumed surface model	Static current groundwater conditions	Assumed ‘raised’ groundwater conditions	Seismic loading
A – A'	Circular	2.4	1.7	1.5
Required	Circular	1.5	1.3	1.2

As shown above, a satisfactory factor of safety was achieved in all three scenarios.

For the modelling, the following assumptions have been made:

- The dwelling loads have been assumed at 5 kPa.
- The dwelling locations have been assumed based on the probable building platform locations.

- These loads have been applied to the natural slope and no modelling has been undertaken to account for any earthworks or retaining structures.
- There is an inferred deep layer of Alluvial Rock which was not encountered during the site investigations.

Site-specific slope stability modelling should be undertaken once the subdivision layout, building platforms, building loads and retaining structures have been decided.

5.4. Shallow Foundations and Earthworks

Many of the soils located within the Northland region are considered to be expansive soils. There are three basic types of soil naturally occurring in the Northland Area: sand, silt, and clay. Clay soils are generally classified as "expansive." This means that a given amount of clay will tend to expand (increase in volume) as it absorbs water and it will shrink (lessen in volume) as water is drawn away. The action of seasonal shrink/swell of soils can have a significant impact on foundations of structures and also on other components of developments such as services, claddings, windows, doors, roading etc. It is evident from historical reports and site inspections that the effect of expansive soils is a major problem in Northland.

The surficial soils observed during the field investigations are considered to be highly plastic and expansive and are likely to be subject to shrink-swell effects. It is considered that the building site does not meet the requirements for Good Ground as defined in the New Zealand Building Code. Foundations will require engineering design in accordance with AS 2870 Class 'H' soils (Highly Expansive soils). Specific design for highly expansive and plastic soils has to be taken into account in the foundation design. However, no shrink-swell testing has been carried out, therefore the Class H soils has been conservatively inferred due to the high plasticity of the encountered clays. It is recommended that lab testing is carried out as part of specific design of foundations to determine more accurately the expansivity of the underlying soils.

House plans and construction of the proposed dwellings have not been finalised however it is anticipated that the foundation will consist of a concrete slab foundation or a suspended floor on timber piles. Minor earthworks will be required to create a level platform; all excess fill material shall be removed from the building site.

In order to mitigate the effects of expansive soils for a concrete slab foundation, we recommend designing a stiffened raft or waffle raft (RibRaft), embedded 0.3 m below the ground level, specifically designed in accordance with AS2870 Class 'H' soils.

In order to mitigate the effects of expansive soils for a timber pile foundation, we recommend designing the timber piles to be embedded 1.50 m below the ground level. However, the embedment depth should be confirmed at the detailed design stage once the final building loads and layout have been confirmed.

Cut to fill earthworks will likely be required. Topsoil shall be stripped from the building platform. Surficial soils (below any topsoil and fill) at a depth below 0.70 m below the ground level were shown to have adequate bearing capacity (>300 kPa ultimate bearing capacity, refer to Table 2) to support the

foundation load. A Dependable Bearing Capacity (q_0) of 150 kPa is available for Ultimate Limit State Design for shallow foundations carried out in accordance with AS/NZS 1170:2002. A Strength Reduction Factor of $\phi_s = 0.5$ has been applied to the Ultimate Bearing Capacity value to determine the Dependable Bearing Capacity.

Some earthworks involving filling to raise the ground level at the building platform will likely be undertaken. All filling should be controlled fill, compacted to 95% MDD as determined by a standard compaction test. The fill must be tested and certified in accordance with NZS4431 if the thickness exceeds 300 mm and monitored by a suitably qualified engineer. The extent of the fill to be removed should be confirmed on-site with a suitably qualified engineer. Fill may be battered down to natural ground at a maximum grade of 1V in 2.5H.

5.5. Static Settlements

It is recommended designing the buildings to tolerate differential settlements of up to 1 in 240 (approximately 25 mm over a 6 metre length of building) as required by the New Zealand Building Code Handbook, Appendix B Section B1/VM4, clause B1.0.2, under the serviceability limit state load combinations of NZS 4203 or NZS 1170.0, unless the structure is specifically designed to limit damage under a greater settlement.

5.6. Uncontrolled Fill

An area of uncontrolled fill was identified on the west edge of lots 1 and 2, extending towards the pond area in lot 3. The approximate extent of this fill is shown in Appendix 3 (Geocivil Site Plan). Uncontrolled fill has the potential to have high levels of settlement even under small loading conditions. These settlements can cause damage to buildings that are built on or adjacent to these areas.

It is recommended that the area of uncontrolled fill is removed from the site if the proposed foundation's line of influence falls within this area of fill. The line of influence can be determined by extending a 45-degree line from the base of the footing.

If this fill is to be removed, it should be replaced by controlled fill, compacted to 98% MDD as determined by a standard compaction test. The fill must be tested and certified in accordance with NZS4431 if the thickness exceeds 300 mm and monitored by a suitably qualified engineer. The extent of the fill to be removed should be confirmed on-site with a suitably qualified engineer.

Alternatively, further testing will be required to determine if piling through the non-engineered fill will be suitable. It is anticipated that dwelling foundation will be required to be underpinned by piles into the natural ground. Further testing will be required during specific design of foundations in this area to determine an appropriate founding depth for the piles.

5.7. Further Investigation

Further site-specific geotechnical investigation is required for the design of buildings on the site. This should be done as part of the building consent process. Matters that should be considered include, but are not limited to:

- Site-specific geotechnical investigation and testing for individual lots, confirming site-specific foundation recommendations and design parameters.
- Slope stability analysis, particularly for lots 4 and 5, once final foundation solutions and building platforms have been decided.

6. Water Supply

Far North District Council GIS maps show that no reticulated water network is available in Coopers Beach. However, it is our understanding that a reticulated water supply runs to the eastern side of the existing cul-de-sac. The dwellings for the new development will be able to connect directly to this using a rider main that will be extended around the cul-de-sac. This is shown in Appendix 2.

7. Stormwater Management

Currently, the site drainage is by general surface runoff following the natural topography of the site. Stormwater from the surrounding area is discharged into the pond on the site and this is drained to the stream on the west boundary by an outlet pipe.

All stormwater created from the newly formed impermeable surfaces should be collected and conveyed away from the habitable areas by pipe. Care will need to be taken to ensure that the concentrated stormwater does not have a detrimental effect on slope stability and shall be disposed of away up gradient structures with scour protection required at outlets and steep gradients. Likewise, all overflow from storage tanks should be disposed of in a similar manner.

No evidence of erosion was identified at the site, however further concentration of stormwater flows and lack of vegetation post-development may cause severe erosion of exposed areas if not protected. Cut and fill batter slopes are sensitive to stormwater runoff and it is recommended those cut faces or fill batters not retained by a permanent structure be replanted with suitable vegetation to reduce the potential for erosion.

Disposal of stormwater will be from the individual lots discharging into pipes that drain into the existing retention ponds for all of the lots due to the topography of the site.

7.1. Stormwater attenuation

Stormwater attenuation will be achieved by the retention ponds already on site. It is our understanding that these are capable of taking flows from a fully developed subdivision.

7.2. Flood Susceptible Areas

A flood susceptible area is mapped northwest of the subdivision site. This shows that the northwest corner of the site is at risk under Existing Development (ED) conditions for a 10% AEP event and Maximum Probable Development (MPD) conditions for 10% AEP and 1% AEP events. The extent of these zones is shown in Figure 2.

Lots 1, 2 and 3 will need to have floor levels 500 mm above the 100 year return period flood level to comply with the requirements of the Far North District Council Engineering Standards. Flooding is not considered to be an issue for lots 4 and 5.

The proposed building platform areas are outside of the mapped flood hazard extent.

8. Wastewater

Surrounding residents are serviced by a piped wastewater network. The individual lots will be able to connect into the existing gravity network to dispose of wastewater. This is shown in Appendix 2.

9. Vehicle Access

Vehicle access will be provided to each of the lots in the development by direct access to Loke Crescent. It is expected that the development will comply with the Far North District Council Engineering Standards with regards to vehicle access requirements.

10. Erosion and Sediment Control

The approach to erosion and sediment control will be to avoid erosion as early as possible before soil particles become dislodged and mobilised. Given the earthworks to be completed on site is generally minor, it is recommended to use relatively simple but effective methods such as contour drains, mulching and earth bunds to control erosion during the construction phase. Vegetation cover will also be maintained where possible to reduce the erosion potential.

11. Construction Monitoring

It is recommended that Cook Costello is engaged to complete further site-specific investigation and testing once the building types have been finalised. In the case that the actual ground conditions deviate from the ground conditions presented in this report, Cook Costello would be in a position to recommend appropriate design and/or construction modifications that suit the actual ground conditions.

12. Conclusion

Geotechnical investigations indicate that the proposed subdivision site is presently stable and the subsoil properties have adequate strength parameters necessary for the proposed development.

The development will need to be carried out in accordance with proper engineering practice and the following guidelines:

12.1. Geotechnical

1. Soils are known to be Highly Expansive, Class H soils as per AS2870. This means that the encountered clays are prone to high volume changes (swelling and shrinking) that are directly related to changes in water content. Shrinkable soils are a significant risk to foundations and floor slabs. Expansive soils fall outside the definition of “good ground” according to NZS 3604:2011, therefore specific foundation design is required for the site.
2. The slope stability assessment carried out identified no deep-seated slope instability and a satisfactory Factor of Safety was achieved under all three scenarios. The slope stability models must be updated once final building designs are chosen.
3. A stiffened raft or waffle raft (RibRaft), embedded 0.3 m below the ground level (and below any topsoil or fill), specifically designed in accordance with AS2870 Class ‘H’ soils, will mitigate the effects of expansive soils. Alternatively, suspended timber floor on timber piles could be used with an embedment depth of 1.5 mbgl.
4. Further site-specific investigation and testing is required once final building and foundation layouts have been finalised.
5. Scala penetrometer testing shows the uncorrected ultimate bearing capacity is >200 kPa below 0.30 mbgl and >300 kPa below 0.70 mbgl across the site.
6. For Ultimate Limit State Design for shallow foundations carried out in accordance with AS/NZS 1170:2002, a Strength Reduction Factor of $\phi_s = 0.5$ shall be applied to the Ultimate Bearing Capacity value to determine the Dependable Bearing Capacity.
7. It is recommended designing all buildings to tolerate differential settlements of up to 1 in 240 (approximately 25 mm over a 6 metre length of building) as required by the New Zealand Building Code
8. Any earthworks conducted at the site should be undertaken and tested in accordance with NZS4431:1989. Compacted hardfill beneath the building platform exceeding a depth of 300 mm will require testing and certification by a suitably qualified engineer.
9. It is recommended that any soft material or uncontrolled fill identified during excavation is removed and replaced with compacted hard FILL in accordance with NZS4431:1989. Hard FILL specification is recommended to be AP40- AP65 (98% MDD compaction). Any ground testing during the construction monitoring phase should be carried out in accordance with NZS4402.

12.2. Subdivision Services

1. Stormwater from the development will be piped away from the building platform and attenuated in the existing attenuation ponds on Lot 3.
2. Lots 1, 2 and 3 will need to have floor levels 500 mm above the 100 year return period flood level to comply with the requirements of the Far North District Council Engineering Standards. Flooding is not considered an issue for lots 4 and 5.
3. Potable water supply shall be by connection to a rider main which will extend from the existing reticulated water supply.
4. Wastewater from the development will be disposed into the Council wastewater network.
5. It is expected that the development will comply with the Far North District Council Engineering Standards with regards to vehicle access requirements.

Providing that the above-mentioned recommendations are followed then the conclusion drawn from the site investigation and analysis of the property as identified above, the site is capable of being developed as proposed, and in terms of Section 106 of the Resource Management Act, it can be confirmed that:

- The land on which the building work is to take place neither subject to nor likely to be subject to subsidence or slippage,
- The building work itself is unlikely to accelerate or worsen or result in subsidence or slippage of that land or any other property.

All works should be carried out under the guidance of a Chartered Professional Engineer with relevant experience.

While this report provides generic solutions; once final building and foundation systems are selected they should be confirmed with a Chartered Professional Engineer with relevant experience prior to undertaking the building consent application process.

13. Limitations

This report has been prepared for the benefit of Per Lugnet, as our client with respect to subdivision suitability and for Far North District Council approval of the proposal as defined in the brief. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

Opinions and judgments expressed herein are based on our understanding and interpretation of current regulatory standards, and should not be construed as legal opinions. Where opinions or judgments are to be relied on they should be independently verified with appropriate legal advice. Any recommendations, opinions, or guidance provided by Cook Costello in this report are limited to technical engineering requirements and are not made under the Financial Advisers Act 2008.

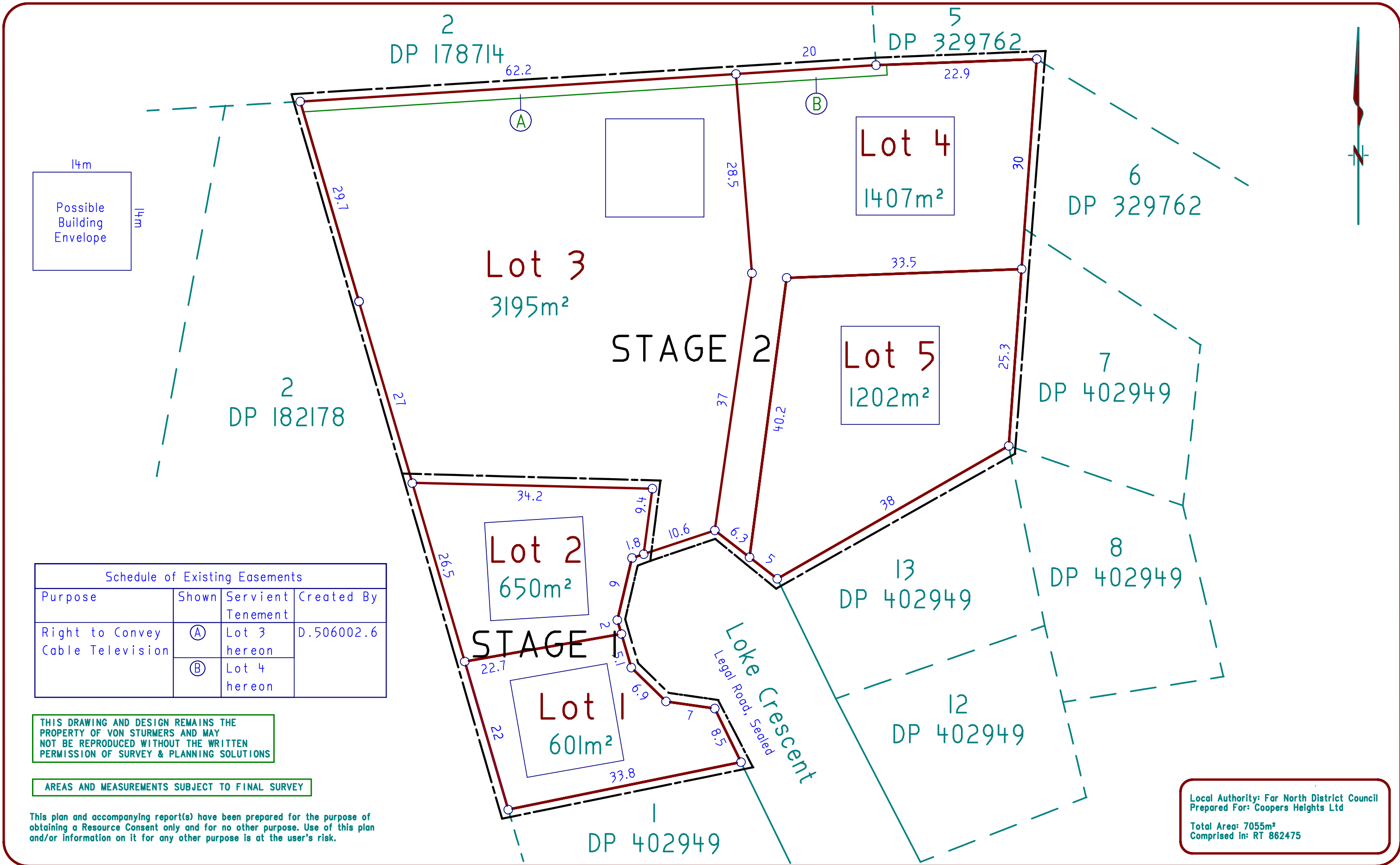
Recommendations and opinions in this report are based on data from testing undertaken on site. The nature and continuity of subsoil conditions away from the tests are inferred and it must be appreciated that actual conditions could vary considerably from the assumed model.

During excavation and construction, the site should be examined by a Cook Costello Engineer or Engineering Geologist to judge whether the exposed subsoils are compatible with the inferred conditions on which the report has been based. It is possible that the nature of the exposed subsoil's may require further investigation and the modification of the design based on this report. In any event, it is essential that the firm is notified if there is any variation in subsoil conditions from those described in the report as it may affect the design parameters recommended in the report.

Cook Costello have performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

There is no investigation which is thorough enough to preclude the presence of materials at the site which presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable now may in the future become subject to different regulatory standards which cause them to become unacceptable and require further remediation for this site to be suitable for the existing or proposed land use activities.

Appendix 1: Scheme Plan



Schedule of Existing Easements			
Purpose	Shown	Servient Tenement	Created By
Right to Convey Cable Television	Ⓐ	Lot 3 hereon	D.506002.6
	Ⓑ	Lot 4 hereon	

THIS DRAWING AND DESIGN REMAINS THE PROPERTY OF VON STURMERS AND MAY NOT BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF SURVEY & PLANNING SOLUTIONS

AREAS AND MEASUREMENTS SUBJECT TO FINAL SURVEY

This plan and accompanying report(s) have been prepared for the purpose of obtaining a Resource Consent only and for no other purpose. Use of this plan and/or information on it for any other purpose is at the user's risk.

Local Authority: Far North District Council
 Prepared For: Coopers Heights Ltd
 Total Area: 7055m²
 Comprised in: RT 862475

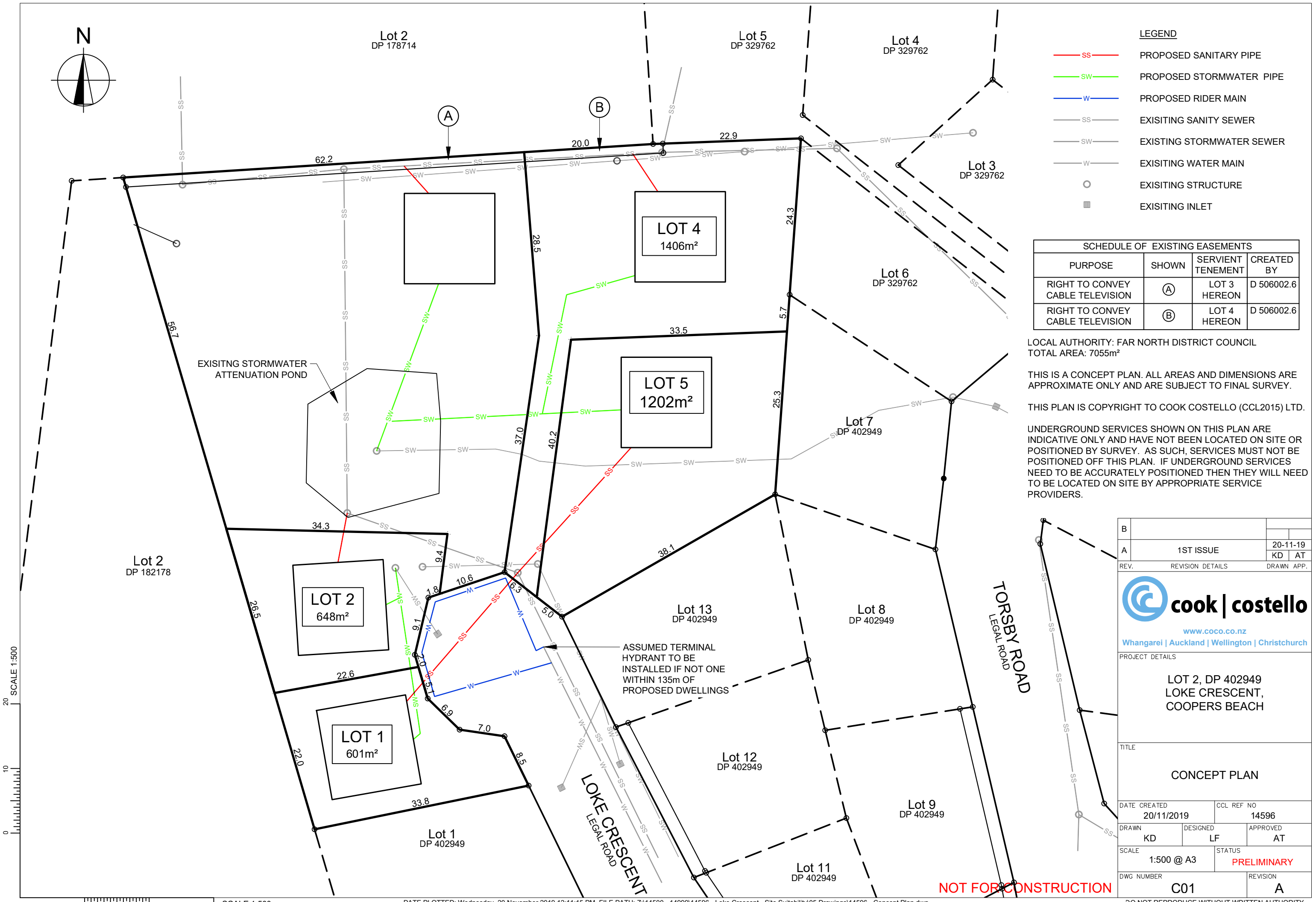
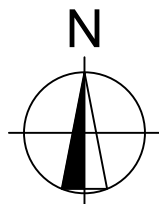
VON STURMERS
 Registered Land Surveyors, Planners & Land Development Consultants
 Ph: (09) 408 6000
 Email: kaitaia@saps.co.nz
 131 Commerce St
 P.O. Box 128
 Kaitaia

Lots 1 - 5 Being a Proposed Subdivision of Lot 2 DP 402949

Name	Date	ORIGINAL SCALE	SHEET SIZE
Survey		1:500	A3
Design			
Drawn	SH 01/05/19		
Approved			
Rev			

Surveyors Ref. No:
13130.04
 Series
 Sheet of

Appendix 2: Site Plan



LEGEND

— SS	PROPOSED SANITARY PIPE
— SW	PROPOSED STORMWATER PIPE
— W	PROPOSED RIDER MAIN
— SS	EXISTING SANITARY SEWER
— SW	EXISTING STORMWATER SEWER
— W	EXISTING WATER MAIN
○	EXISTING STRUCTURE
■	EXISTING INLET

SCHEDULE OF EXISTING EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	CREATED BY
RIGHT TO CONVEY CABLE TELEVISION	Ⓐ	LOT 3 HEREON	D 506002.6
RIGHT TO CONVEY CABLE TELEVISION	Ⓑ	LOT 4 HEREON	D 506002.6

LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL
TOTAL AREA: 7055m²

THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.

THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL2015) LTD.

UNDERGROUND SERVICES SHOWN ON THIS PLAN ARE INDICATIVE ONLY AND HAVE NOT BEEN LOCATED ON SITE OR POSITIONED BY SURVEY. AS SUCH, SERVICES MUST NOT BE POSITIONED OFF THIS PLAN. IF UNDERGROUND SERVICES NEED TO BE ACCURATELY POSITIONED THEN THEY WILL NEED TO BE LOCATED ON SITE BY APPROPRIATE SERVICE PROVIDERS.

SCALE 1:500

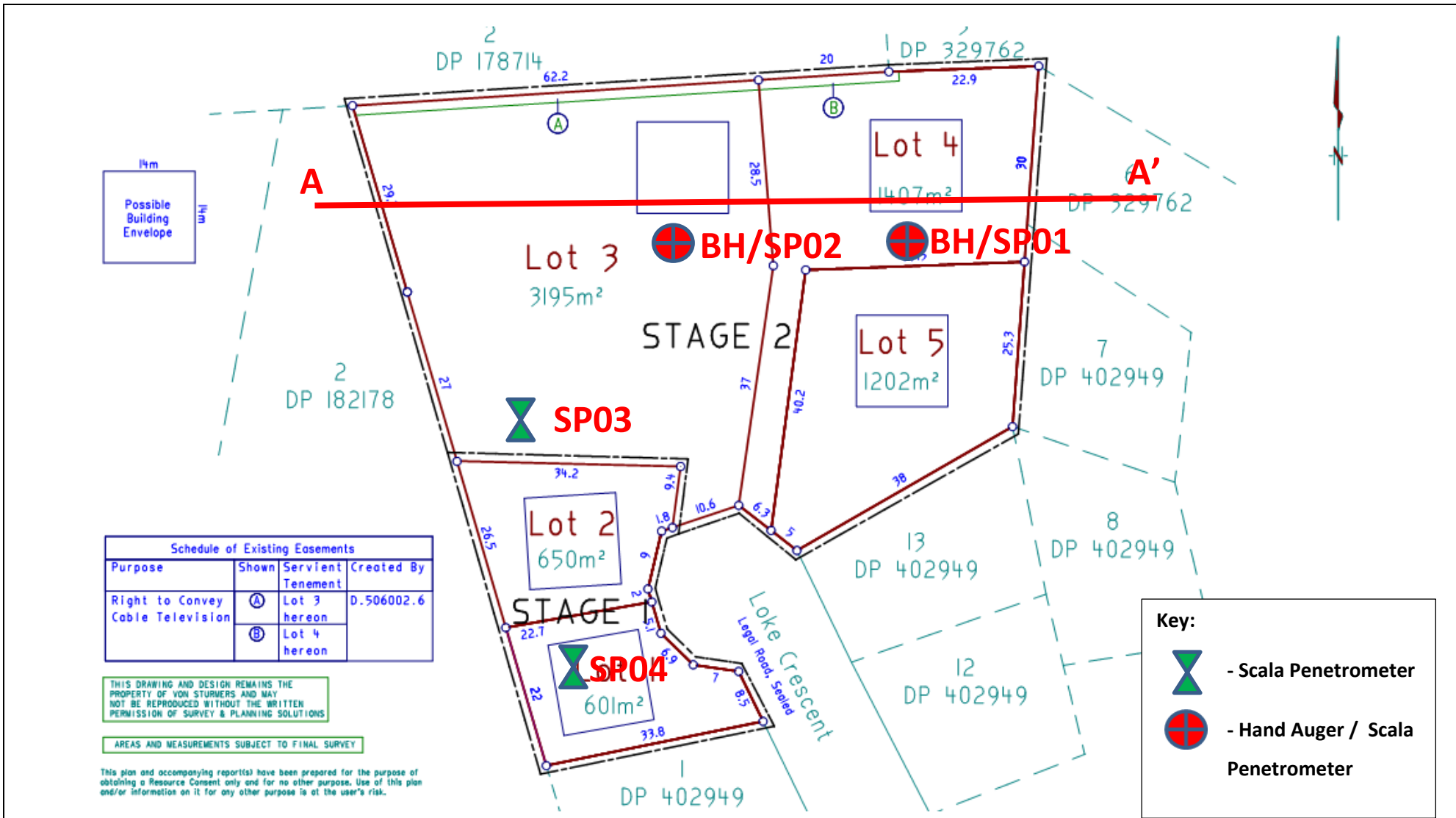
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DATE PLOTTED: Wednesday, 20 November 2019 12:11:15 PM FILE PATH: Z:\14500 - 14999\14596 - Loke Crescent - Site Suitability\05 Drawings\14596 - Concept Plan.dwg

B			
A	1ST ISSUE		20-11-19
REV.	REVISION DETAILS		DRAWN APP.
 www.coco.co.nz Whangarei Auckland Wellington Christchurch			
PROJECT DETAILS LOT 2, DP 402949 LOKE CRESCENT, COOPERS BEACH			
TITLE CONCEPT PLAN			
DATE CREATED	20/11/2019	CCL REF NO	14596
DRAWN	KD	DESIGNED	LF
		APPROVED	AT
SCALE	1:500 @ A3	STATUS	PRELIMINARY
DWG NUMBER	C01	REVISION	A

NOT FOR CONSTRUCTION

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



SCALES:	Not To Scale		Geotechnical Investigation		DATE:	3/10/19		
DRAWN:	LF	3/10/19			SITE TESTING PLAN	CCL JOB No:	14596	
CHECKED:	CA	3/10/19			Address: 10 Loke Crescent, Coopers Beach, Cable Bay	Client:	Per Lugnet	
APPROVED:	SR	3/10/19				Client contact		

Appendix 3: Site Investigation Results

TEST REPORT

Lab Job No.: 8020-1740
Your Ref.: 15121
Date of Issue: 09/09/2019
Page: 1 of 8

Test Report.

No. W19-574

PROJECT: 8 Loke Cres, Coopers Beach
CLIENT: Cook Costello
2 Norfolk Street,
Whangarei, 0110

ATTENTION: Cole Anderson

INSTRUCTIONS: Augerholes where required (not accredited)
Determination of the penetration resistance using a dynamic cone
(scala) penetrometer
Hand Held Shear Vane Test

TEST METHODS: NZGS December 2005 (not accredited)
NZS4402: 1988 Test 6.5.2
NZGS: August 2001

SAMPLING METHOD: N/A

TEST RESULTS: As per laboratory sheets attached.



Gemma Breckon
Laboratory Technician



Sean Kokich
Approved Signatory

- CPT - Aggregates - Soil - Roading -

This report shall not be reproduced except in full, without the written approval of the laboratory.

AUGERHOLE LOG

Lab Job No.: 8020-1740 **Borehole No.:** BH01 **Sheet:** 1 of 1
Client: Cook Costello **Hole Depth:** 3.00 m
Job: Geotechnical Investigation **Coordinates:** **Date:** 15/08/19
Report No.: W19-574 **Location:** 8 Loke Cres, Coopers Beach **Ground Level:**
Client Ref. No.: 15121

Unit	Geological Interpretation In accordance with NZGS 2005	UCS	Legend	Depth (m)	Water	Relative Density	Vane Shear Strength (kPa)		Samples					
							Scala Penetrometer NZS4402: 1988 Test 6.5.2 - Procedure 2 (blows / 100mm)							
	Clayey TOPSOIL, with traces of fine sand and organics (rootlets), dark brown, moist	CL		0.0 - 0.5	Groundwater Not Encountered		25	Blows	209+					
	Silty CLAY, with traces of fine sand, light brown, moist, moderate plasticity, hard	CL		0.5 - 1.0			50	Peak		209+				
	Colour change to reddish brown	CL		1.0 - 1.5			75	Residual			188/96			
	Clayey SILT, with traces of fine sand, reddish brown with grey mottling, moist, low to moderate plasticity, very stiff, sensitive	ML		1.5 - 2.0			100					176/72		
	Clayey SILT, with traces of fine sand, reddish brown with some grey mottling and light orange streaking, moist, friable, very stiff, moderately sensitive	ML		2.0 - 2.5			125						152/51	
	Silty CLAY, with traces of fine sand, reddish orange, wet, moderate plasticity, very stiff, moderately sensitive	CH		2.5 - 3.0			150							164/51
	End of borehole, target depth achieved			3.0			175							
					200									
					225									

Remarks		Water		Investigation Type	
		<input type="checkbox"/> Standing Water Level <input type="checkbox"/> Out flow <input type="checkbox"/> In flow		<input checked="" type="checkbox"/> Hand Auger <input type="checkbox"/> Hand Auger + Scala (DCP)	
Note: All Scala Penetrometer readings taken below 1.5m from start depth are outside the scope of this test Note: Scala Penetrometer interpretation is not endorsed		Contractor: Geocivil		Equipment: Hand Auger	
Recorded By: L.C. Recorded Date: 15/08/2019		Laboratory Technician: Gemma Breckon		Approved Signatory: Sean Kokich	

AUGERHOLE LOG

Lab Job No.: 8020-1740 **Borehole No.:** BH02 **Sheet:** 1 of 1
Client: Cook Costello **Hole Depth:** 2.70 m
Job: Geotechnical Investigation **Coordinates:** **Date:** 15/08/19
Report No.: W19-574 **Location:** 8 Loke Cres, Coopers Beach **Ground Level:**
Client Ref. No.: 15121

Unit	Geological Interpretation In accordance with NZGS 2005	UCS	Legend	Depth (m)	Water	Relative Density	Vane Shear Strength (kPa)		Samples
							Scala Penetrometer NZS4402: 1988 Test 6.5.2 - Procedure 2 (blows / 100mm)		
	Silty CLAY, with minor amorphous organics and traces of rootlets, dark brown with brown particles, moist, low to moderate plasticity	CL							
	Silty CLAY, with traces of fine to medium sands, brown, moist, firm, high plasticity, very stiff, moderately sensitive	CH		0.5				193/76	
	Silty CLAY, with some fine to medium sands, light grey with light brown streaks, wet, moderate plasticity, stiff, normal to moderately sensitive	CL		1.0				131/70	
				1.5				88/47	
	Moisture change to wet to saturated	CL		2.0	SWL 2.00m			73/35	
	Silty CLAY, with some fine to medium sands, traces of very weak cemented sand particles, light grey with light brown streaks, saturated, moderate plasticity, stiff, moderately sensitive	CH		2.5				50/20	
	End of borehole, no retrieval								

Remarks		Water		Investigation Type	
		▼ Standing Water Level ◁ Out flow ▷ In flow		<input checked="" type="checkbox"/> Hand Auger <input type="checkbox"/> Hand Auger + Scala (DCP)	
<small>Note: All Scala Penetrometer readings taken below 1.5m from start depth are outside the scope of this test Note: Scala Penetrometer interpretation is not endorsed</small>					
Contractor: Geocivil	Equipment: Hand Auger	Recorded By: D.O	Laboratory Technician: 	Approved Signatory: 	
		Recorded Date: 15/08/2019	Gemma Breckon	Sean Kokich	

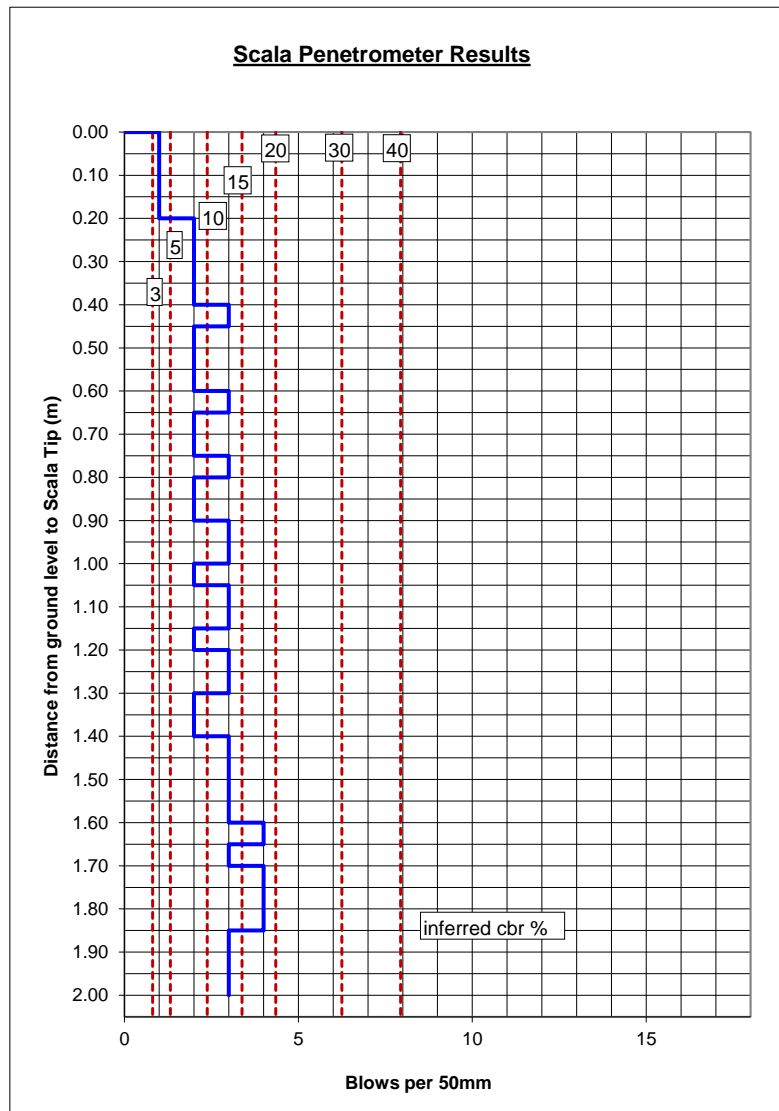
DYNAMIC CONE (SCALA) PENETROMETER
NZS 4402 :1988 Test 6.5.2 Procedure 2

Lab Job No: 8020-1740
Client: Cook Costello
Job: 8 Loke Cres
Location: Coopers Beach
Start Depth (m): 0

Scala No: SP01
Ref : 15121
Report No: W19-574
Page: 4 of 8

The line are the suggested correlation of CBR values based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR AUSTRROADS (2004) "Pavement Design - a guide to the design of road Pavements"
(This comment is excluded from endorsement)

Blows / 50mm	Blows / 100mm	Blows / 300mm	Total Blows	depth (m)
0	0	0	0	0.00
1	2	6	1	0.05
1	2	6	2	0.10
1	2	6	3	0.15
1	2	6	4	0.20
2	4	12	6	0.25
2	4	12	8	0.30
2	4	12	10	0.35
2	4	12	12	0.40
3	6	18	15	0.45
2	4	12	17	0.50
2	4	12	19	0.55
2	4	12	21	0.60
3	6	18	24	0.65
2	4	12	26	0.70
2	4	12	28	0.75
3	6	18	31	0.80
2	4	12	33	0.85
2	4	12	35	0.90
3	6	18	38	0.95
3	6	18	41	1.00
2	4	12	43	1.05
3	6	18	46	1.10
3	6	18	49	1.15
2	4	12	51	1.20
3	6	18	54	1.25
3	6	18	57	1.30
2	4	12	59	1.35
2	4	12	61	1.40
3	6	18	64	1.45
3	6	18	67	1.50
3	6	18	70	1.55
3	6	18	73	1.60
4	8	24	77	1.65
3	6	18	80	1.70
4	8	24	84	1.75
4	8	24	88	1.80
4	8	24	92	1.85
3	6	18	95	1.90
3	6	18	98	1.95
3	6	18	101	2.00



Recorded By: D.O/L.C
Date: 15/08/2019
Checked by: G.B
Date: 6/09/2019

Note: All readings taken below 1.5m from start depth are outside the scope of this test

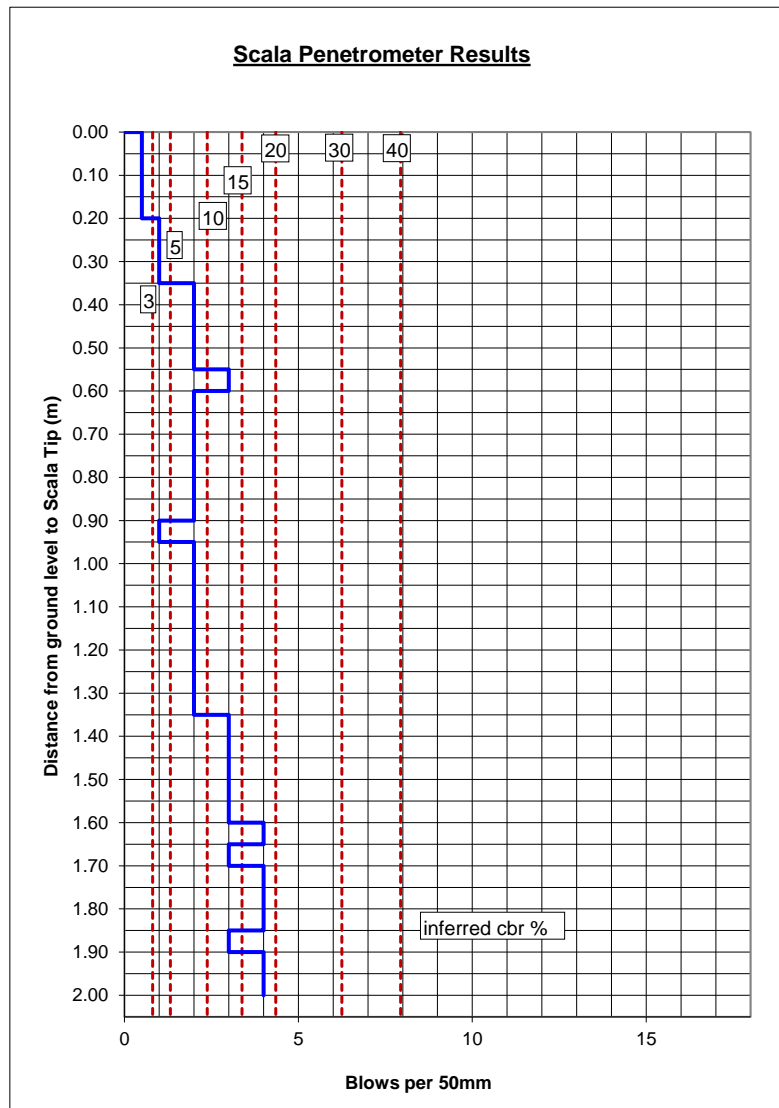
DYNAMIC CONE (SCALA) PENETROMETER
NZS 4402 :1988 Test 6.5.2 Procedure 2

Lab Job No: 8020-1740
Client: Cook Costello
Job: 8 Loke Cres
Location: Coopers Beach
Start Depth (m): 0

Scala No: SP02
Ref : 15121
Report No: W19-574
Page: 5 of 8

The line are the suggested correlation of CBR values based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (2004) "Pavement Design - a guide to the design of road Pavements"
(This comment is excluded from endorsement)

Blows / 50mm	Blows / 100mm	Blows / 300mm	Total Blows	depth (m)
0	0	0	0	0.00
0.5	1	3	0.5	0.05
0.5	1	3	1	0.10
0.5	1	3	1.5	0.15
0.5	1	3	2	0.20
1	2	6	3	0.25
1	2	6	4	0.30
1	2	6	5	0.35
2	4	12	7	0.40
2	4	12	9	0.45
2	4	12	11	0.50
2	4	12	13	0.55
3	6	18	16	0.60
2	4	12	18	0.65
2	4	12	20	0.70
2	4	12	22	0.75
2	4	12	24	0.80
2	4	12	26	0.85
2	4	12	28	0.90
1	2	6	29	0.95
2	4	12	31	1.00
2	4	12	33	1.05
2	4	12	35	1.10
2	4	12	37	1.15
2	4	12	39	1.20
2	4	12	41	1.25
2	4	12	43	1.30
2	4	12	45	1.35
3	6	18	48	1.40
3	6	18	51	1.45
3	6	18	54	1.50
3	6	18	57	1.55
3	6	18	60	1.60
4	8	24	64	1.65
3	6	18	67	1.70
4	8	24	71	1.75
4	8	24	75	1.80
4	8	24	79	1.85
3	6	18	82	1.90
4	8	24	86	1.95
4	8	24	90	2.00



Recorded By: D.O/L.C
Date: 15/08/2019
Checked by: G.B
Date: 6/09/2019

Note: All readings taken below 1.5m from start depth are outside the scope of this test

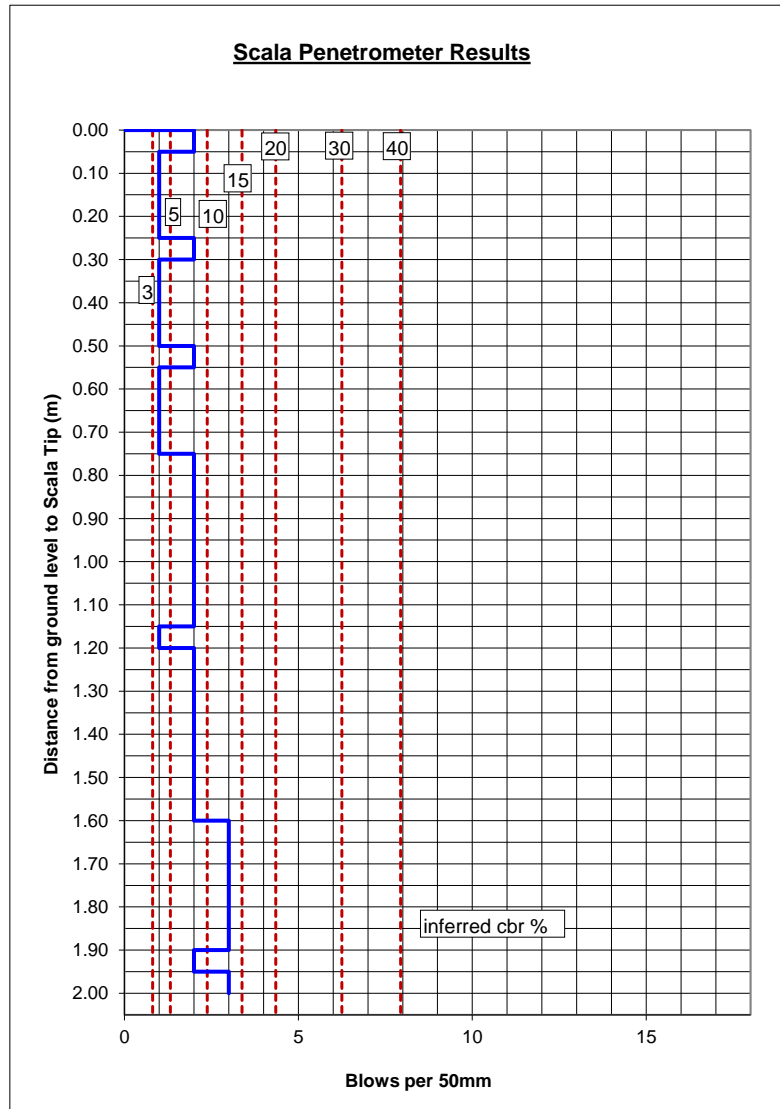
DYNAMIC CONE (SCALA) PENETROMETER
NZS 4402 :1988 Test 6.5.2 Procedure 2

Lab Job No: 8020-1740
Client: Cook Costello
Job: 8 Loke Cres
Location: Coopers Beach
Start Depth (m): 0

Scala No: SP03
Ref : 15121
Report No: W19-574
Page: 6 of 8

The line are the suggested correlation of CBR values based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (2004) "Pavement Design - a guide to the design of road Pavements"
(This comment is excluded from endorsement)

Blows / 50mm	Blows / 100mm	Blows / 300mm	Total Blows	depth (m)
0	0	0	0	0.00
2	4	12	2	0.05
1	2	6	3	0.10
1	2	6	4	0.15
1	2	6	5	0.20
1	2	6	6	0.25
2	4	12	8	0.30
1	2	6	9	0.35
1	2	6	10	0.40
1	2	6	11	0.45
1	2	6	12	0.50
2	4	12	14	0.55
1	2	6	15	0.60
1	2	6	16	0.65
1	2	6	17	0.70
1	2	6	18	0.75
2	4	12	20	0.80
2	4	12	22	0.85
2	4	12	24	0.90
2	4	12	26	0.95
2	4	12	28	1.00
2	4	12	30	1.05
2	4	12	32	1.10
2	4	12	34	1.15
1	2	6	35	1.20
2	4	12	37	1.25
2	4	12	39	1.30
2	4	12	41	1.35
2	4	12	43	1.40
2	4	12	45	1.45
2	4	12	47	1.50
2	4	12	49	1.55
2	4	12	51	1.60
3	6	18	54	1.65
3	6	18	57	1.70
3	6	18	60	1.75
3	6	18	63	1.80
3	6	18	66	1.85
3	6	18	69	1.90
2	4	12	71	1.95
3	6	18	74	2.00



Recorded By: D.O/L.C
Date: 15/08/2019
Checked by: G.B
Date: 6/09/2019

Note: All readings taken below 1.5m from start depth are outside the scope of this test

DYNAMIC CONE (SCALA) PENETROMETER

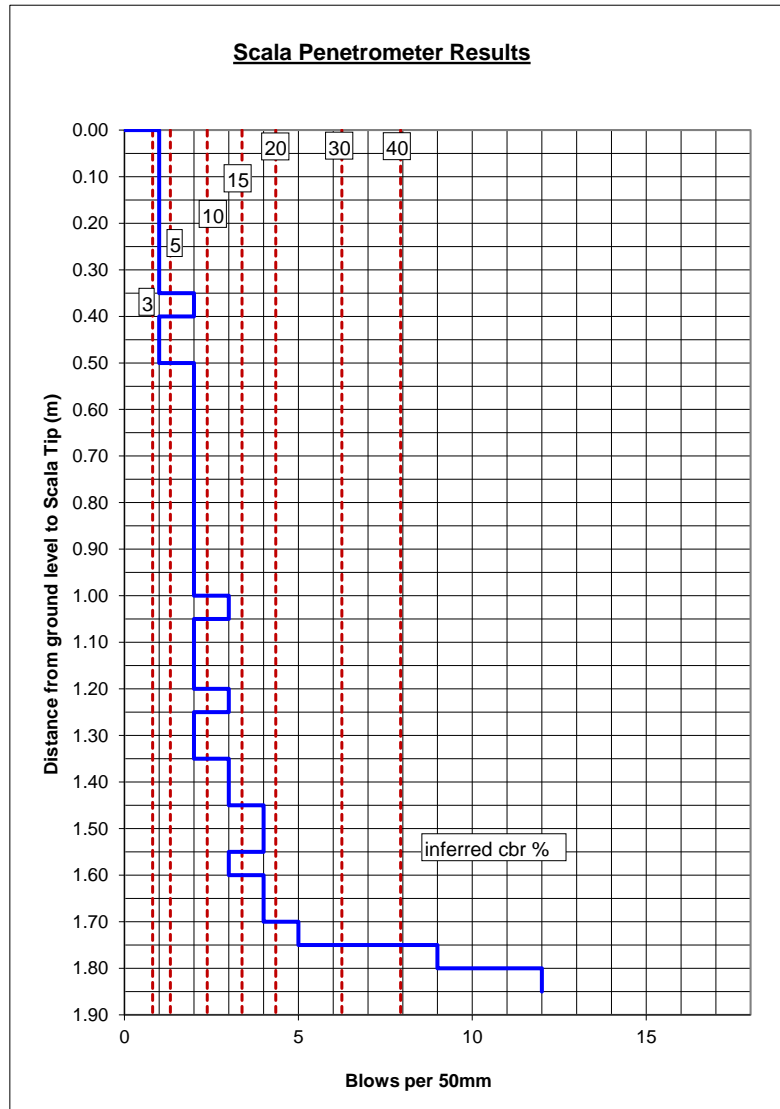
NZS 4402 :1988 Test 6.5.2 Procedure 2

Lab Job No: 8020-1740
Client: Cook Costello
Job: 8 Loke Cres
Location: Coopers Beach
Start Depth (m): 0

Scala No: SP04
Ref : 15121
Report No: W19-574
Page: 7 of 8

The line are the suggested correlation of CBR values based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (2004) "Pavement Design - a guide to the design of road Pavements"
(This comment is excluded from endorsement)

Blows / 50mm	Blows / 100mm	Blows / 300mm	Total Blows	depth (m)
0	0	0	0	0.00
1	2	6	1	0.05
1	2	6	2	0.10
1	2	6	3	0.15
1	2	6	4	0.20
1	2	6	5	0.25
1	2	6	6	0.30
1	2	6	7	0.35
2	4	12	9	0.40
1	2	6	10	0.45
1	2	6	11	0.50
2	4	12	13	0.55
2	4	12	15	0.60
2	4	12	17	0.65
2	4	12	19	0.70
2	4	12	21	0.75
2	4	12	23	0.80
2	4	12	25	0.85
2	4	12	27	0.90
2	4	12	29	0.95
2	4	12	31	1.00
3	6	18	34	1.05
2	4	12	36	1.10
2	4	12	38	1.15
2	4	12	40	1.20
3	6	18	43	1.25
2	4	12	45	1.30
2	4	12	47	1.35
3	6	18	50	1.40
3	6	18	53	1.45
4	8	24	57	1.50
4	8	24	61	1.55
3	6	18	64	1.60
4	8	24	68	1.65
4	8	24	72	1.70
5	10	30	77	1.75
9	18	54	86	1.80
12	24	72	98	1.85



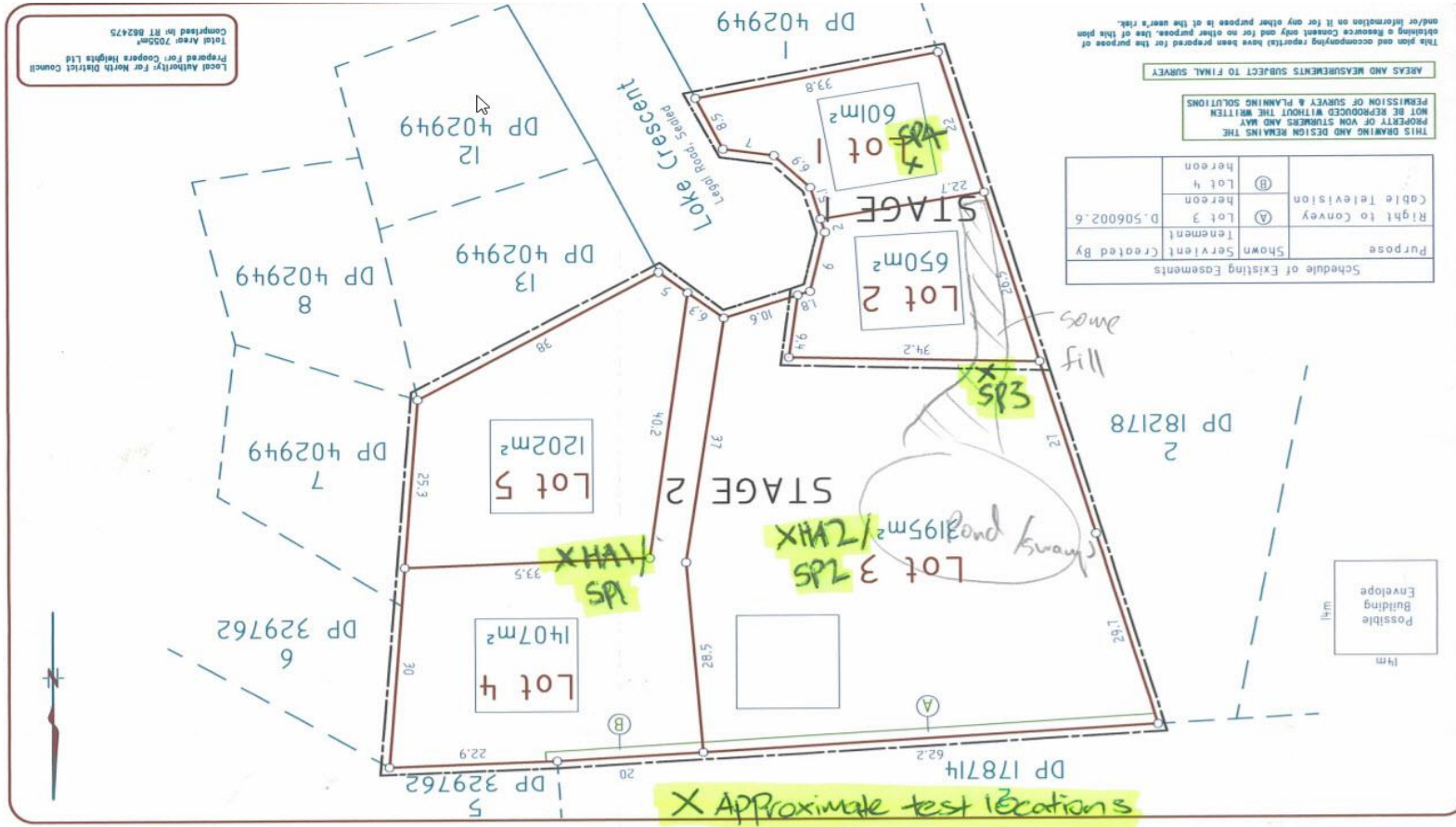
Recorded By: D.O/L.C
Date: 15/08/2019
Checked by: G.B
Date: 6/09/2019

Note: All readings taken below 1.5m from start depth are outside the scope of this test

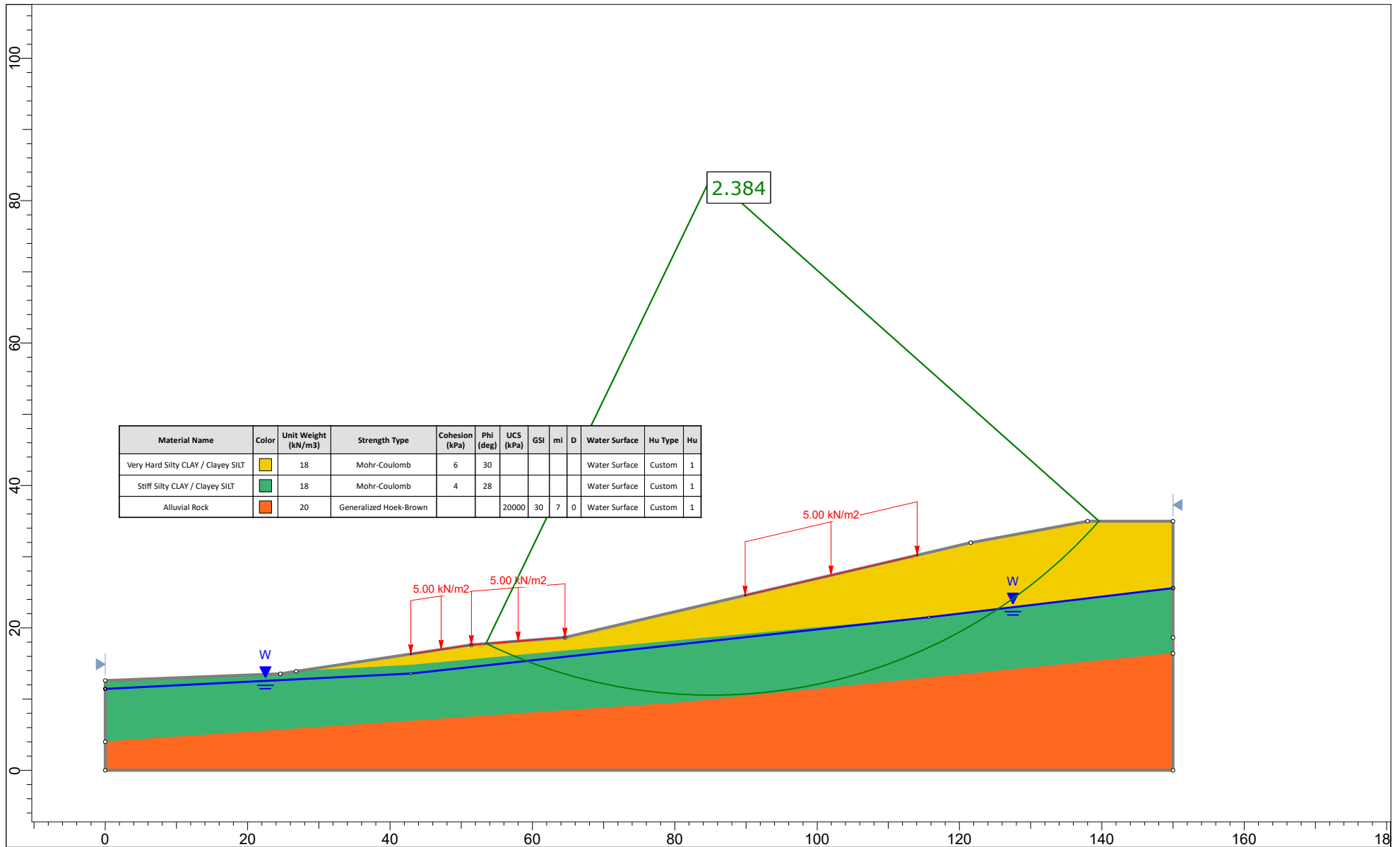
SITE PLAN

Lab Job No: 8020-1740
Client: Cook Costello
Project: 8 Loke Cres
Location: Coopers Beach

REF: 15121
Report No: W19-574
Page: 8 of 8

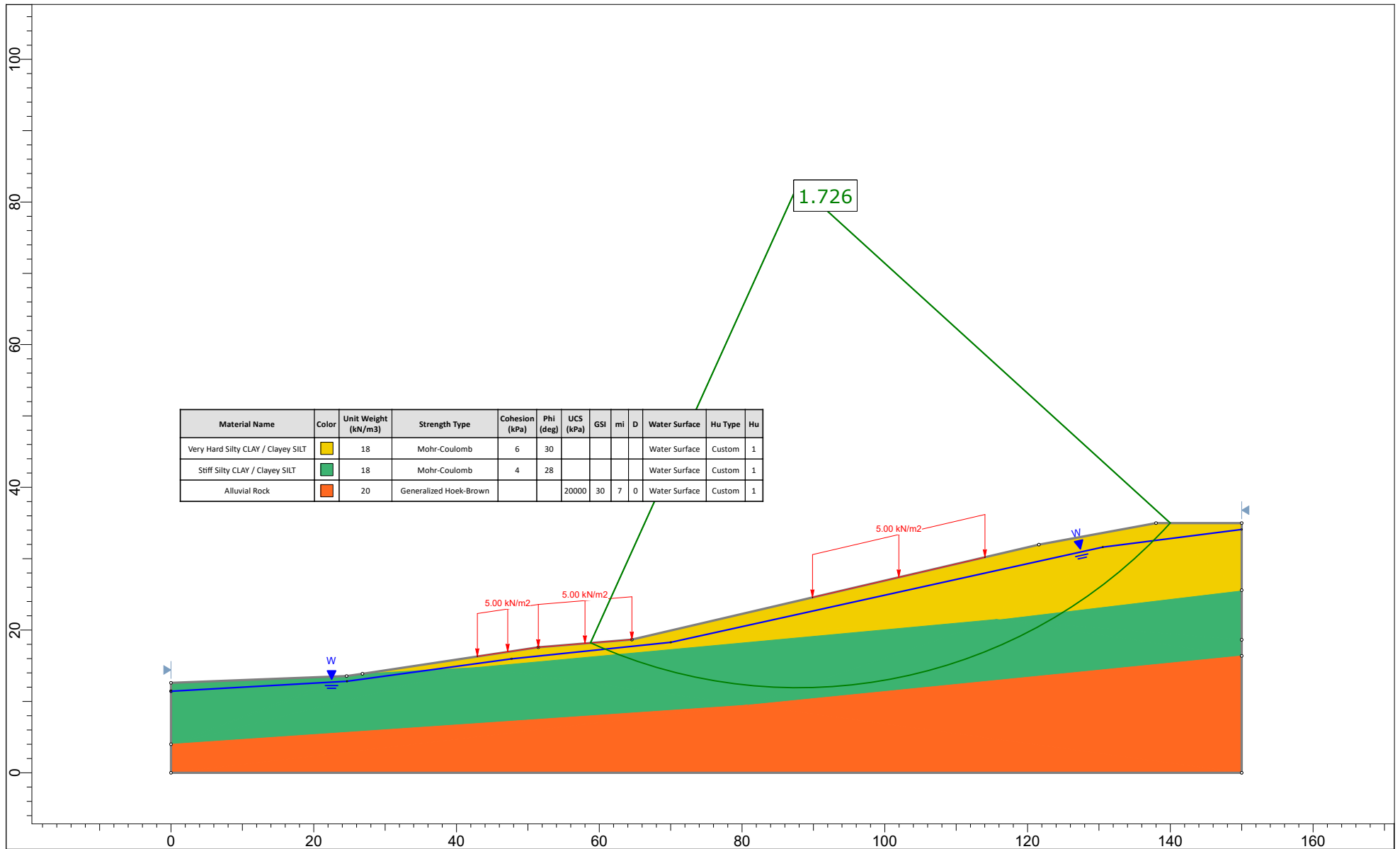


Appendix 4: Slope Stability Analysis




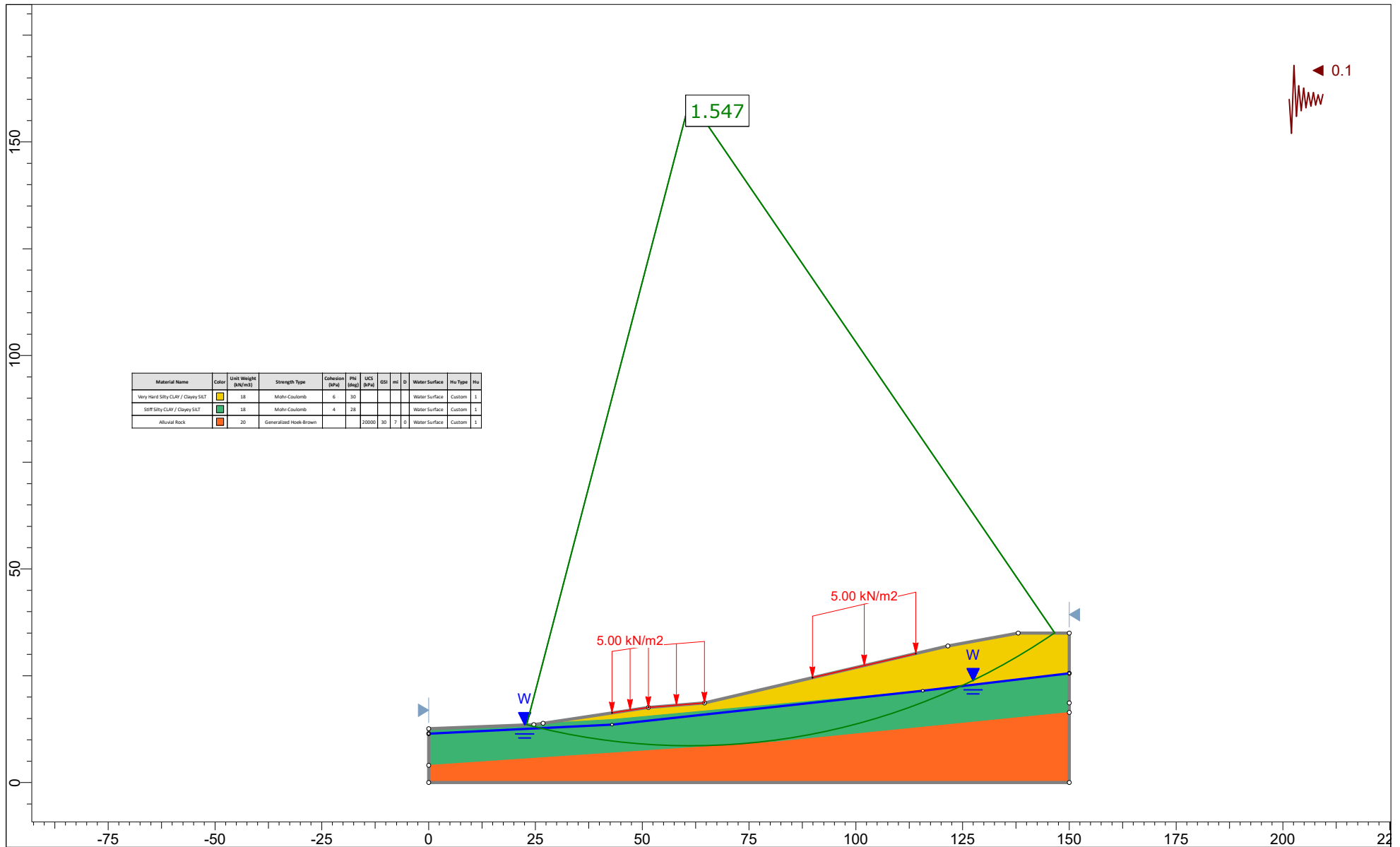
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (deg)	UCS (kPa)	GSI	mi	D	Water Surface	Hu Type	Hu
Very Hard Silty CLAY / Clayey SILT	Yellow	18	Mohr-Coulomb	6	30					Water Surface	Custom	1
Stiff Silty CLAY / Clayey SILT	Green	18	Mohr-Coulomb	4	28					Water Surface	Custom	1
Alluvial Rock	Orange	20	Generalized Hoek-Brown			20000	30	7	0	Water Surface	Custom	1

	Project			Loke Crescent Subdivision		
	Analysis Description			Static Conditions		
	Drawn By	LF	Scale	1:750	Company	Cook Costello
	Date	03/10/2019	File Name	Slide Models.slmd		




Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	UCS (kPa)	GSI	mi	D	Water Surface	Hu Type	Hu
Very Hard Silty CLAY / Clayey SILT	Yellow	18	Mohr-Coulomb	6	30					Water Surface	Custom	1
Stiff Silty CLAY / Clayey SILT	Green	18	Mohr-Coulomb	4	28					Water Surface	Custom	1
Alluvial Rock	Orange	20	Generalized Hoek-Brown			20000	30	7	0	Water Surface	Custom	1

	Project						
	Loke Crescent Subdivision						
	Analysis Description						
	Raised Groundwater Conditions						
Drawn By		LF		Scale	1:750	Company	Cook Costello
Date		03/10/2019		File Name		Slide Models.slmd	



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	UCS (kPa)	ES	ms	D	Water Surface	Hu Type	Hu
Very Hard Silty CLAY / Clayey SILT	Yellow	18	Mohr-Coulomb	6	30					Water Surface	Custom	1
Stiff Silty CLAY / Clayey SILT	Green	18	Mohr-Coulomb	4	28					Water Surface	Custom	1
Aluvial Rock	Orange	20	Generalized Hoek-Brown			20000	30	7	0	Water Surface	Custom	1

	Project		Loke Crescent Subdivision			
	Analysis Description		Seismic Conditions			
	Drawn By	LF	Scale	1:1250	Company	Cook Costello
	Date	03/10/2019	File Name	Slide Models.slmd		

26 October 2023

To the Building Officer
Far North District Council
Kerikeri, Far North

**Re: Subdivision Suitability Report prepared by Cook Costello
Proposed Loke Crescent Subdivision**

Dear Sir,

I have been given a copy of this report to give an opinion as to whether this report is still valid given that it was prepared on 20 November 2019.

As a professional engineer, I carry out engineering works in the form of foundation designs, structural design, engineering assessments, and sometimes, site suitability reports, mostly for residential projects. Since 2019, I have completed several jobs in this area (i.e., along Freyja Crescent, Torsby Road and Loke Crescent). With my familiarity of the area, I can confirm since this report was written (2019), there has been no substantial physical changes made to the land within the proposed subdivision that can make the report invalid.

This confirmation does not include assessments of any part of the report, whether they are still valid or not.

If you have any more questions, please don't hesitate to contact me.

Respectfully yours,



Chartered Professional Engineer
Structural Engineer, CMEngNZ CPEng
T&A STRUCTURES LTD.



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

27 January 2021

Von Sturmers
PO Box 128
KAITAIA

Email: kaitaia@saps.co.nz
CC: northstar.p@gmail.com

To Whom It May Concern:

**RE: COMPLETION RC-2200291-RMASUB.
Cooper Heights Ltd, Loke Crescent, Coopers Beach. Lot 2 DP 402949.**

Thank you for your recent correspondence regarding the above subdivision Stage 1 and 2.

Top Energy wish to advise that the sub divider has made provision for power as per conditions of Resource Consent Number: 2200291-RMASUB section 3(a) (v).

If you have any further queries, please do not hesitate to contact the writer.

Yours sincerely



Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz



P L <northstar.p@gmail.com>

8 Loke Crescent, Coopers Beach 0420

3 messages

Kathleen Polson <Kathleen.Polson@spark.co.nz>
To: "northstar.p@gmail.com" <northstar.p@gmail.com>

Wed, Oct 28, 2020 at 12:26 PM

Hi Per

Just following up from your call today.

At the address we can offer 4G Wireless internet and landline service. It is also showing at Fibre would be available to install.

Kathleen



Kathleen Polson

Customer Advisor
Spark New Zealand Trading Limited

T Chat with Us - www.spark.co.nz/chat

E Kathleen.Polson@spark.co.nz

www.spark.co.nz



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This communication, including any attachments, is confidential. If you have received this email in error, please let me know and then delete it - do not read, use or distribute it or its contents. This email does not designate an information system for the purposes of the Contract and Commercial Law Act 2017.

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Doubtless Bay
Water Supply

157 Cable Bay Block Road, Coopers Beach, Northland

Postal: PO Box 165, Mangonui 0442, Northland

Ph: +64 9 406 0520 Mobile: 021 820850

Email: office@doubtlessbaywater.com

www.doubtlessbaywater.com

17.11.2020

Coopers Heights Ltd

Attention: Andrik Lugnet

WATER NETWORK PROVISIONING - SUBDIVISION SIGN OFF

Subdivision Name: (RC 2200291, condition 3-a-ii).

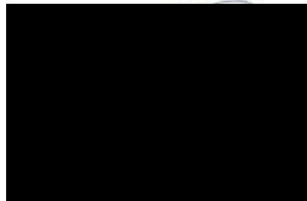
Subdivision Location: Loke Crescent, LOT 2 DP 402949

The above subdivision has been reticulated to Doubtless Bay Water Supply LTD standards within the subdivided area and the water network will be available to provide connections from 12/12/2020.

It should be noted that this certificate does not cover service lead-ins to individual lots or firefighting provisions. Service lead-ins may be provisioned by contacting Doubtless Bay Water Supply.

Sincerely,

Max Powers



Doubtless Bay Water Supply