



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.

**Pre-Lodgement Meeting**

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

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

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

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.

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

Yes/No

**Applicant Details:**

Name/s:

Bidfood Ltd.

Electronic Address for Service (E-mail):

Phone Numbers:

Postal Address; or alternative method of service under Section 352 of the Act

Code: 8441

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

Name/s:

Integrated Planning Solutions Ltd

Electronic Address for Service (E-mail):

Phone Numbers:

Postal Address; or alternative method of service under Section 352 of the Act

4314

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 1 of 376 - 11/07/2023 - NZBTC

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: Bidfood Limited  
Property Address/ Location: 15-19 Kahikatearua Lane, Waipapa.

7. Application Site Details:

Location and/or Property Street Address of the proposed activity:  
Site Address/ Location: 15-19 Kahikatearua Lane, Waipapa

Legal Description: Lots 6-8 DP567982 Val Number:  
Certificate of Title: 1019564, 1019565, 1019566  
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.

To construct and operate a storage and distribution facility with ancillary offices and undertake associated works and services.

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)

1. 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

2. 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.

3. 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)

Bidfood Ltd - Att: Grea McGale

Email:

Postal Address:

Phone Numbers:

**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 20<sup>th</sup> 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: Grea McGale (please print)

Signature:  (signature of bill payer - mandatory)

Date: 11/7/2024

**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](http://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: Paul Sousa (please print) Coily authorised agent

Signature:  (signature) Date: 1/7/2024 applicant

(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**

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

- Building Consent (BC) (if known)       Regional Council Consent (if # 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 the 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 (HIAL)  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:

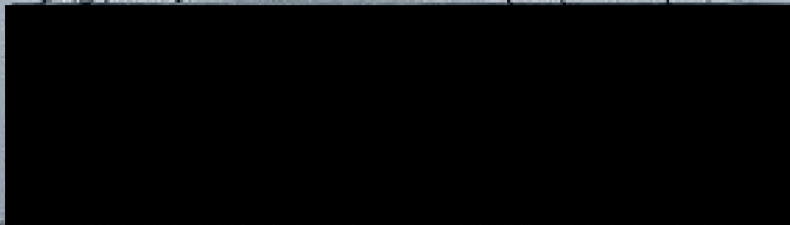
This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s (please write all names in full)

BidPool Ltd - Att: Grea McGale

Email

Postal Address



Phone Numbers:

Fee Information: An invoice for processing this application is prepared at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the lodgement 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 20<sup>th</sup> 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 347B 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: Grea McGale (please print)



Signature: (signature of bill payer - mandatory)

Date: 1/7/2024



Integrated Planning Solutions

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**APPLICATION FOR LAND USE CONSENT  
&  
ASSESSMENT OF ENVIRONMENTAL EFFECTS**

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**ESTABLISHMENT AND OPERATION OF A FOOD  
STORAGE AND DISTRIBUTION FACILITY**

**AT**

**15 - 19 KAHIKATEAROA LANE, WAIPAPA**

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**FOR**

**BIDFOOD LIMITED**

**JULY 2024**

# RESOURCE CONSENT APPLICATION

## 1. THE APPLICANT AND PROPERTY DETAILS

**To:** Far North District Council

**Applicant's Name:** Bidfood Limited

**Address for Service:** C/- Integrated Planning Solutions Ltd  
(Details as per application form)

**Site Address:** 15 – 19 Kahikatearoa Lane, Waipapa

**Legal Description:** Lots 6 – 8 DP 567982

**Owners of Site:** Bidfood Limited

**Site Area:** 3799m<sup>2</sup>, 4035m<sup>2</sup>, 4047m<sup>2</sup> = Total area  
11,881m<sup>2</sup>

**Operative Far North District  
Plan Zoning,  
Overlays, Controls and  
Designations:** Industrial Zone

**Proposed Far North District  
Plan Zoning,  
Overlays, Controls and  
Designations** Light Industrial Zone  
River Flood Hazard Zone (100 year ARI  
Event)

**Locality diagram:** Refer to Site Description.

**Brief description of proposal:** Consent is sought to establish and  
operate a food storage and distribution  
facility and undertake associated  
works.

### Summary of reasons for obtaining consent:

Resource Consent is required for the following matters:

- 7.8.5.1.2(a) Visual Amenity and Environmental Protection – **Discretionary Activity under 7.8.5.4.**
- 7.8.5.1.4 Transportation – **Restricted Discretionary Activity under 7.8.5.4.**

Transportation

- 15.1.6b Parking – Shortfall of 25 Spaces – **Discretionary Activity under 15.1.6B.3** as other standards of Part 3 not meet.
- 15.1.6C.1.4 Access Over Footpaths – two vehicle crossings being 9m wide - **Discretionary Activity under 15.1.6C.2** as other standards of Part 3 not meet.
- 

Natural and Physical Resources - 12.3 Soils and Minerals

- 12.3.6.1.3(a) – Earthworks Exceed 200m<sup>3</sup> – **Discretionary Activity under 12.3.6.3**

**Overall, the proposed activity requires resource consent as is a discretionary activity.**

**Other types of consents required or obtained:**

**Building Consent has been applied for (reference number unknown).**

**Resource consent APP.045320.01.01 was obtained from NRC on 28 September 2023 for the preloading of the building platform area of approximately 5,325m<sup>2</sup> with approximately 6,058m<sup>3</sup> of aggregate with the excess metal removed from the foundation area to be stored on site for use in the construction of the accessways and parking areas**

**Investigations into the need for any additional consents is presently taking place. If any additional consents are required under the Northland Regional Plan the applicant undertakes to obtain these prior to commencing works on site.**

I attach an assessment of environmental effects that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

**List of other information attached:**

- Attachment 1: Application Plans – Peter Swan Limited
- Attachment 2: Flood Hazard Assessment – Prepared by Haigh Workman Ltd
- Attachment 3: Preliminary Geotechnical Appraisal Report - Prepared by Haigh Workman Ltd
- Attachment 4: Ground Improvement Design Report for Settlement Trial – Prepared by Haigh Workman Ltd approved by FNDC
- Attachment 5: On-site Wastewater System design – Prepared by Haigh Workman Ltd
- Attachment 6: Onsite Stormwater Disposal System Report – Peter Swan Ltd
- Attachment 7: Copy of Regional Consent to pre-load the building platform with metal to prepare it to take the load of the proposed building and avoid future settlement of land.



- Attachment 8: Original NRC Resource Consent Decision for Bulk Earthworks associated with Underlying Subdivision
- Attachment 9: Engineering report for original NRC bulk earthworks consent
- Attachment 10: Approved Building Consent plans to construct building foundations
- Attachment 11: Records of Title

## 2.0 INTRODUCTION & PROPOSAL

### Introduction

Bidfood Limited (**the Applicant**) proposes to construct and operate a food storage and distribution facility (distribution facility) including all works and services required to facilitate this across 15 – 19 Kahikatea Lane, Waipapa (**the site**). The sites form part of recently created industrial subdivision in which only 2 of the 8 developable lots presently accommodate industrial activity with the remainder of the lots being vacant.

The applicant has purchased 15 – 19 Kahikatea Lane, being Lots 6 – 8 DP 567982 and having obtained the consent of the Northland Regional Council has preloaded the building platform with heaped metal to prevent future settlement of the building. As the works were directly related to a building platform no district consent was deemed necessary for these works.

### Background

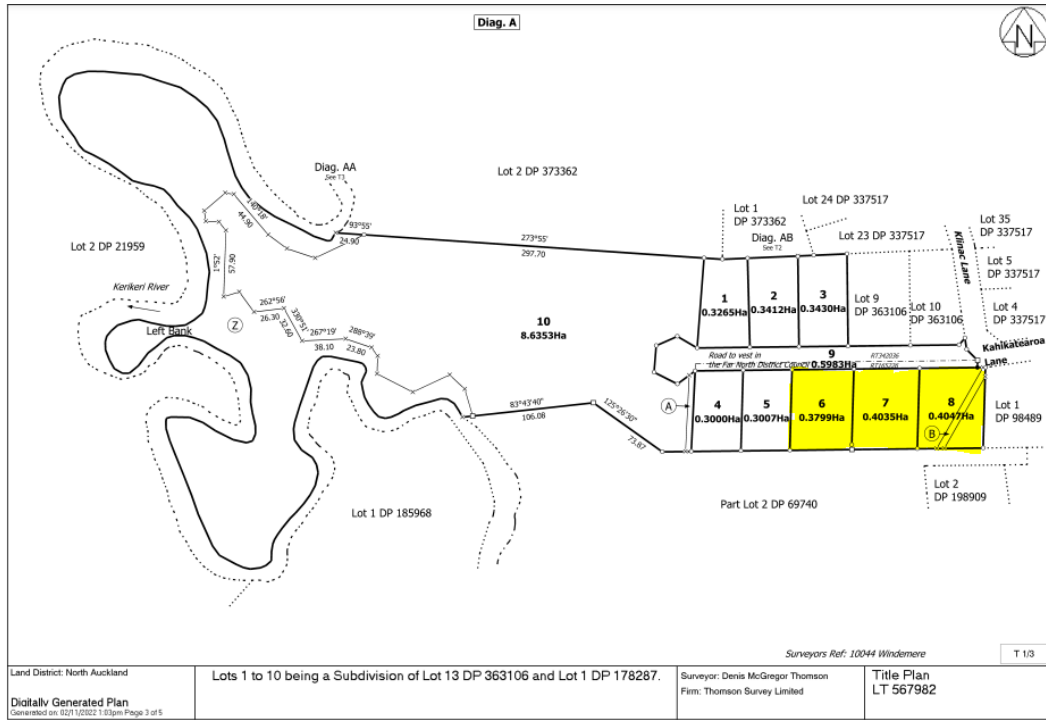
On 16 June 2016, Far North District Council (**FNDC**) resource consent 2160324 was granted to Brian Parrish to subdivide land at 66 Klinac Lane, Waipapa (Lot 1 DP 178287 and Lot 13 DP 363106) into eight industrial lots and a balance rural lot.

Subsequently, on 28 October 2021, by way of a 'minor correction' decision, the Northland Regional Council (**NRC**) granted consent reference number 43067 to undertake the physical works that were required to give effect to the approved subdivision referenced as:

- |                  |   |
|------------------|---|
| AUT.043067.01.01 | Earthworks for site development within a high-risk flood hazard zone. |
| AUT.043067.02.01 | Divert stormwater during land disturbing activities.                  |
| AUT.043067.03.01 | Discharge stormwater during land disturbance activities               |
| AUT.043067.04.01 | Divert floodwater within a subdivision development.                   |

The subdivision has been completed, the record of title for the lots has been issued and development has commenced within the subdivision.

Bidfood Ltd (**The applicant**) has purchased Lots 6, 7 & 8 DP 567982, shown below for the purpose of establishing a food storage and distribution facility.



The applicant obtained building consent from the FNDC on 13 July 2023 to construct the foundations as detailed on the attached plans. As the proposed works are solely for the creation of the building foundation area, the building consent has been issued without a s37 restriction requiring resource consent. This is understood to be because, the definition of 'Fill' in the operative District Plan excludes '*filling associated with building foundations*' which was the sole purpose of the earthworks that have been carried out on site to date.

Resource consent APP.045320.01.01 was obtained from NRC on 28 September 2023 for the preloading of the building platform area of approximately 5,325m<sup>2</sup> with approximately 6,058m<sup>3</sup> of aggregate with the excess metal removed from the foundation area to be stored on site for use in the construction of the accessways and parking areas. The preloading works have been completed in accordance with this consent.

### Proposal

The land use activity is detailed as follows:

#### Operational Details

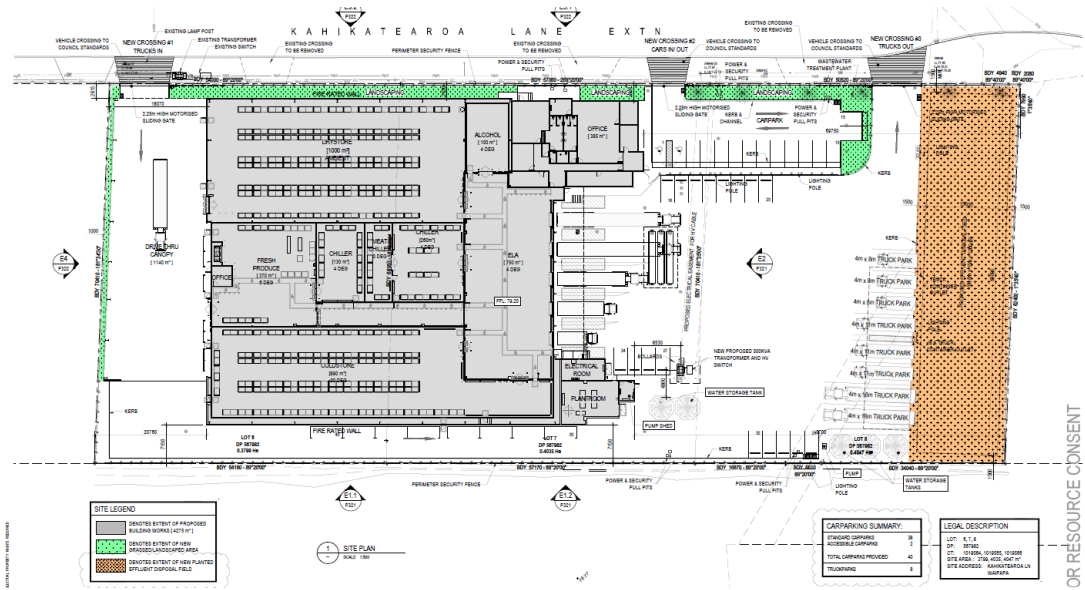
- Hours of Operation: up to 24 hours 7 days a week.
- Staff Numbers: 50 staff spread over staggered 24/7 daily shifts.
- Truck movements per day: Bidfood Trucks – a total of 120 truck movements in and out per day.
- Other Trucks – A total 30 truck movements in and out per day.

#### Building Design:

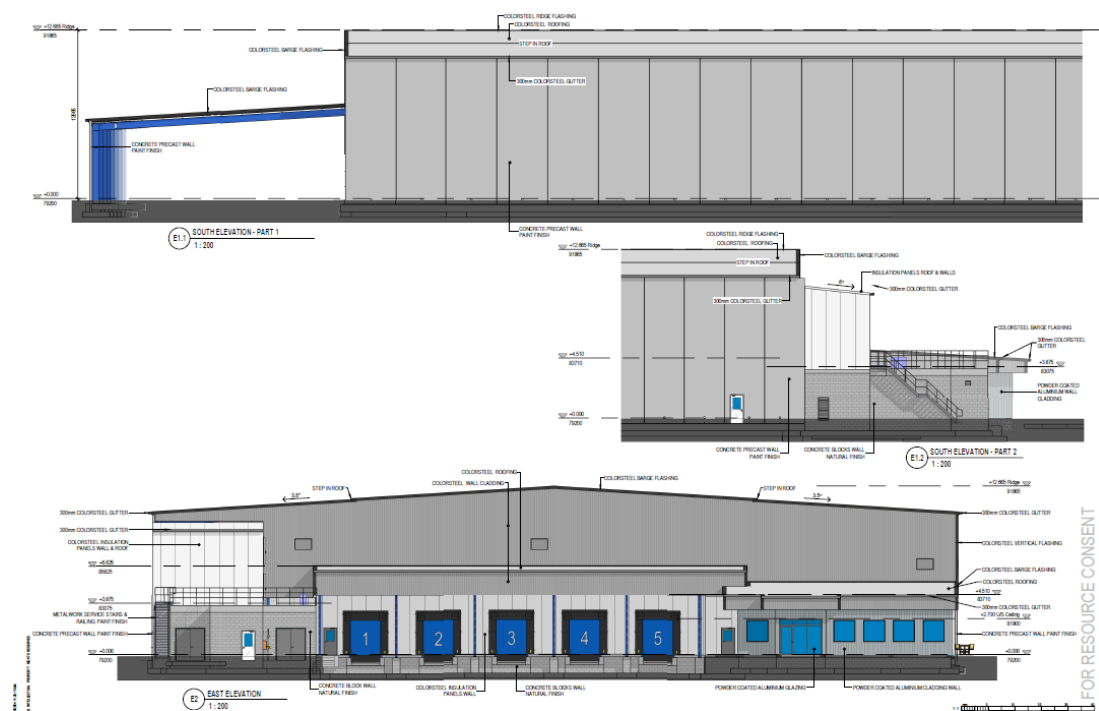
The proposed building has been designed to meet the specific needs of the distribution activity with the height of the building correlating with the standard goods racking systems and the need for operational roof clearance levels to optimise the storage of goods and their movement within the building.

The attached plans and elevations prepared by Peter Swan Limited clearly show the location and construction of the proposed building. These are reproduced below.

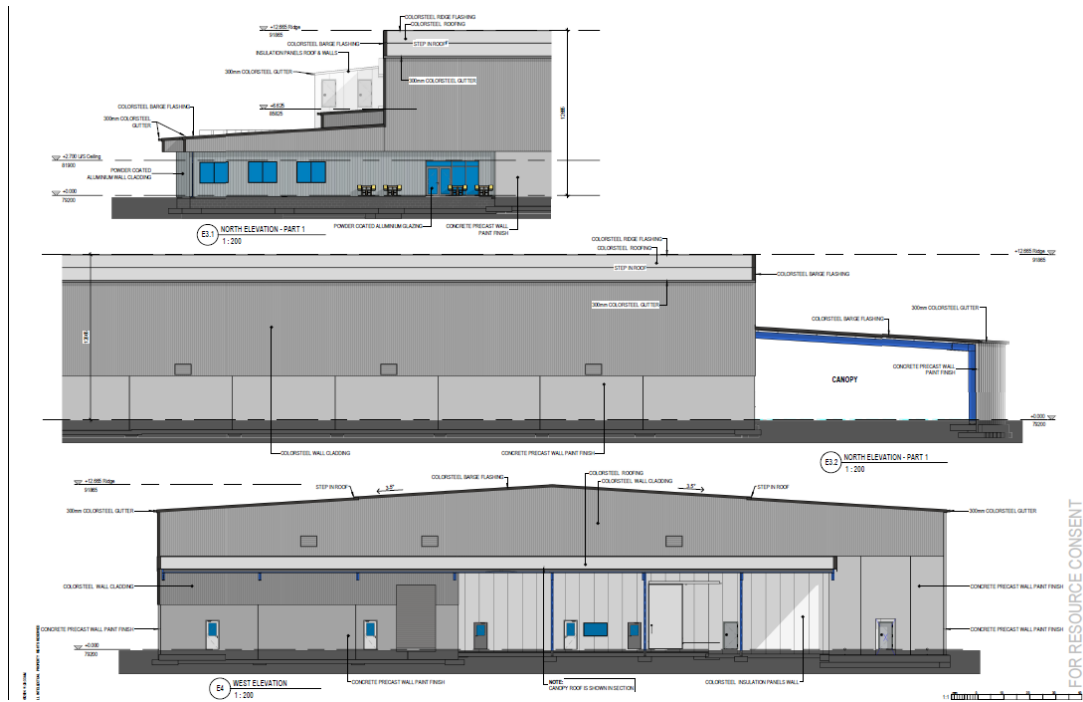
Below: Site plan:



Below: Elevations of the building.



FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 12 of 376 - 11/07/2023 - NZBTC



As can be seen, the proposal consists of three differing areas of built form being the office area, the storage area and canopy drive through area.

The roof heights and form have been designed to be at differing heights to create visual layers and reduce massing effects. The roof height of the buildings at their highest point will be 12.665m above existing ground.

The areas of the various uses within the building are set out on the 'Layout Plan'. The Gross Business Area (GBA) consists of the warehouse and office area having a total GBA of 4018m<sup>2</sup>, which excludes the plant room of 107m<sup>2</sup> and the canopy above loading area of 965m<sup>2</sup>.

The location of the building relative to all boundaries is stated on the site plans but in summary the building observes the following boundary setbacks:

- Setback from Kahikatearoa Lane is 2.620m.
- Setback from adjoining industrial adjoining industrial site to west ranges between 18.07m and 20.760m
- Setback from the adjoining industrial eastern boundary ranges between 68.7m and 69.75m.
- Setback from southern boundary interface with the Rural zone is 7.150m

Earthworks:

Although the site and its surrounds have been subject to bulk earthworks as part of creating the underlying industrial subdivision, site works across most of the site have either been undertaken to create the building platform or are still required to prepare the subgrade for the access circulation area, parking and manoeuvring areas.

The earthworks details are provided on the attached Siteworks plans bundle and supplementary calculations determining the volume and area of the site works.

Having already carried out the earthworks/pre-loading for the building platform (as these are excluded from the definition of 'fill' in the District Plan and having obtained consent from the regional Council) it is proposed to largely undertake a scrape of the remainder of the site (except effluent field along eastern boundary) taking the excess metal used for pre-loading the building platform to establish the base course for the yard areas, internal access ways and parking areas.

It is important to note that site works and pre-loading of the building platform with aggregate has been completed with the heaped metal in place to stabilise the building platform to prevent future settlement of ground given the type of soil on this site. The existing area of the preloaded building platform is 5,325m<sup>2</sup> having a volume of 6,058m<sup>3</sup>. Consent was obtained from the Northland Regional Council for these works as detailed in the attached consent. As the works were for the creation of the building platform area it was deemed that these works fell outside the definition of fill in the operative District Plan.

Therefore, excluding the building platform area and mounded wastewater field that is also excluded from the definition of fill, the area and volumes of the earthworks requiring consent are:

- Total area of siteworks: 4,900m<sup>2</sup>
- Total volume of excavation siteworks 2160m<sup>3</sup>
- Total volume of fill siteworks 240m<sup>3</sup>
- Maximum depth of cut is approximately 1.0m.
- Maximum height of fill is approximately 1.0m high.

The sediment and erosion controls are detailed on Siteworks plans and details provided.

The site works phase is anticipated to take approximately 6 weeks and will generate approximately 172 heavy vehicle movements in total.

#### Parking and Access:

Applying the parking ratio of 1 space per 100m<sup>2</sup> of GBA (4018m<sup>2</sup>) at total of 40 car parking spaces are required to be provided on site.

It is proposed to provide 15 parking spaces (including 2 mobility spaces) on site immediately adjacent the office area. In addition, to meet Council requirements and serve any need for staff overflow parking needs, a further 25 spaces are located around the site outside of the operational yard areas. There will be 40 spaces in total complying with the Council parking ratio requirements. All spaces will meet Council's design specifications with the dimensions of the car parking spaces and manoeuvring aisles annotated on the site plan.

This number of spaces is considered appropriate to accommodate staff and visitor needs on site.

As can be seen on the site plan, the formal bank of parking spaces are located adjacent to the road boundary are served by their own two-way vehicle crossing that complies with the requirements of the operative District Plan and are physically separated from the operational area used by trucks.

In addition to the two-way vehicle crossing located centrally on site serving the car park area, two more vehicle crossings are provided to be largely used by the trucks visiting the site. The 9m wide vehicle crossings are located at the

eastern and western ends of the frontage and are only egress and ingress respectively with on-site traffic circulation being in a counter clockwise direction. As detailed on the site plan, the vehicle crossing widths as measured along the site boundary with the widths derived by the size of the vehicles using them and their required turning radiuses.

#### Stormwater Control, treatment and detention.

At the time of granting subdivision consent, consent notices were imposed on each of the lots requiring specifically designed onsite stormwater systems to be provided at the time of seeking building consent. Attached is the stormwater design report, calculations and plans. In summary, the proposed stormwater system comprises of the following to accommodate the additional stormwater runoff created by the increase in impervious area.

- a. *Roof Areas Stormwater from the building roof areas is collected by a system of external gutters and downpipes sized in accordance with E2. The downpipes have leaf guards and first flush devices incorporated in them to reduce the debris entering the system as the roof water will be re-used on site. The roof water is piped to underground storage tanks and then in turn pumped into above ground storage tanks.*

*If the storage tanks are full the stormwater will overflow from the underground storage and be discharged into the public stormwater system.*

- b. *Yard areas Stormwater from yard areas is collected by inground cesspit chambers with sediment filters then discharged into the public stormwater system via an inground pipe system.*
- c. *Stormwater Attenuation As required by the site consent notices the stormwater discharge from site is attenuated and this is achieved using an underground detention tank located under the office carparking area. The piped stormwater flows from both the yard areas and roof tank overflow is connected to a 154m<sup>3</sup> rainsmart storage tank which then discharges through orifice plates into the public stormwater system in Kahikatea lane.*

#### Wastewater Disposal

At the time of granting subdivision consent, consent notices were imposed on each of the lots requiring specifically designed onsite wastewater systems to be provided at the time of seeking building consent.

Building consent has been applied for inclusive of the onsite wastewater system designs with copies of this report attached to this application.

#### Flooding

Although the Council maps show all of Lot 6 is subject to a 100yr AEP flood plain with only parts of Lots 7 and 8 affected as shown below this information was generated prior to the completion of the underlying subdivision. As part of the bulk earthworks undertaken for the subdivision the ground was recontoured with the flood plain extending down Kahikatea Lane rather than over the

application site. The original flooding report and subsequent flood report specific to this development prepared by Haigh Workman Ltd are attached.

Landscaping:

Landscaping of the site's frontage yard is proposed in accordance with the requirements of the operative District Plan with the areas shown on the site plan. If required, the applicant is agreeable to a detailed landscape plan being required as a condition of granting consent.

### 3.0 SITE & SURROUNDS

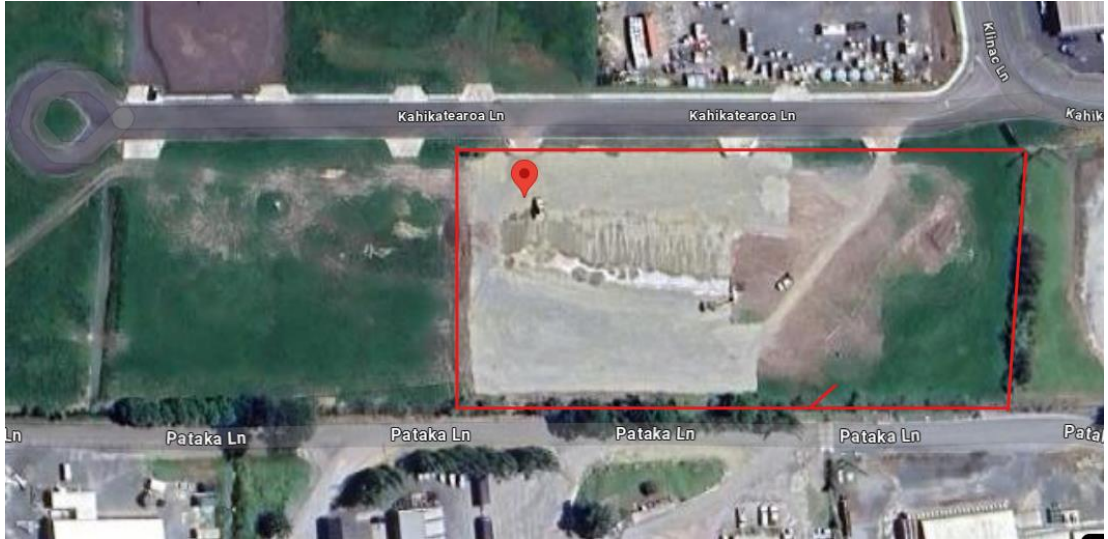
The site:

The site on which the proposed distribution facility is to be located consists of three lots, being lots 6 – 8 DP 567982 numbered 15 – 19 Kahikatearoa Lane, Waipapa. The location of the site is shown in the aerial photograph below:



Below: The Google Maps represent the current form of the subdivision and the site inclusive of the metal area pre-loading the building platform area. Other than the metallated area, the site is flat in contour and in grass with the vegetation lining the eastern and southern boundaries located on the adjoining property.





Below: The power lines that across the eastern portion of the site that are removed from the proposed building platform (shown as pink shaded area).





Below: The site's frontage showing the pre-loaded metal area.



Below: The grassed eastern portion of the site in the foreground and metal building platform to the west. Beyond is the concrete batching plant and area proposed to be rezoned 'heavy industry' in the Proposed District Plan.



Surrounds:

Development of the underlying industrial subdivision has commenced with the lots opposite the application site occupied by Kerikeri Hire yard and building. However the rest of the subdivision is vacant flat grassed sites.

To the south of the site, along with the batching concreter plant there is a saw mill operation, a transport company and concreter panel construction operation with various other industries all located on land presently zoned 'Rural'. Immediately to the East of the site is the Balance Agri nutrients operation with a range of light industrial and commercial activities containing industrial activities to the north-east and north with rural land located to the west beyond the Kahikatearoa Lane subdivision.

Being a new subdivision the roading and services are newly installed to Council standards with vehicle crossings having been constructed for each lot as shown below. The site is on the left of the photograph below:



#### 4.0 DISTRICT PLAN & NATIONAL STANDARDS ASSESSMENT & REASONS FOR THE APPLICATION

##### OPERATIVE DISTRICT PLAN ASSESSMENT

The Far North District Council has notified its Proposed District Plan and is presently in the hearings phase of that process. Comment on the status and provisions of the Proposed District Plan will follow the assessment of the relevant provisions of the operative Far North District Plan (**FNDP**) considered below.

The particulars of the site under the **FNDP** are as follows:

**Zone: Industrial Zone**

**Designations: None.**

The proposed activity is assessed against the relevant provisions of the **FNDP** in the following tables:

Standards/rules	Compliance	Comment
<b>7.8 Industrial Rules</b>		
7.8.5.1.1 SUNLIGHT - No part of any building shall project beyond a 45-degree recession plane as measured inwards from any point 2m vertically above ground level on the nearest site boundary which adjoins a Residential, Coastal Residential, Russell Township, Rural Living or Coastal Living zones	<b>N/A</b>	The site does not share a boundary with these other zones. This standard does not apply to the rural production zone. the rural production zone.
7.8.5.1.2 VISUAL AMENITY AND ENVIRONMENTAL PROTECTION (a) Along boundaries adjoining any zone other than the Commercial or Industrial Zone, outdoor areas providing for activities such as parking, loading, outdoor storage and other outdoor activities associated with non-residential activities on the site shall be screened from adjoining sites by landscaping,	<b>(a) Does not comply</b>	a) Although containing heavy industrial activities and proposed to be rezoned in the Proposed Far North District Plan, the land to the south is zoned Rural Production Zone. It is not proposed to screen this boundary and as such the proposed development does not meet this standard.



<p>components of wastewater treatment systems.</p> <p>12.7.6.1.1 SETBACK FROM LAKES, RIVERS AND THE COASTAL MARINE AREA - river (where the average width of the riverbed is 3m or more) - (c) a minimum of 20m in the Commercial and Industrial Zones.</p> <p>12.7.6.1.2 SETBACK FROM SMALLER LAKES, RIVERS AND WETLANDS - smaller continually flowing rivers (where the average width of the riverbed is less than 3m) - (b) 10 x the average width of the river where it passes through or past the site;</p>		
<p>7.8.5.1.8 BUILDING HEIGHT The maximum height of buildings in the Industrial Zone at Opuia (refer Map 92) is 12m. This restriction does not apply elsewhere in the Industrial Zone.</p>	<p><b>Complies</b></p>	<p>There is no maximum building height and as such the proposed height of approximately 12.665m is a permitted height.</p>
<p>7.8.5.1.9 STORMWATER The disposal of collected stormwater from the roof of all new buildings and new impervious surfaces provided that the activity is within an existing consented urban stormwater management plan or discharge consent</p>	<p><b>Will Comply</b></p>	<p>It is understood that a discharge consent has been granted for the underlying area and that a consent notice has been imposed on the title requiring specific design. The proposal includes onsite detention/retention and treatment of stormwater from the proposed impervious surfaces as detailed in the attached report and as submitted with the associated building consent.</p>
<p>Chapter 15 – TRANSPORTATION</p>		
<p><b>15.1.6A TRAFFIC</b></p>		
<p>15.1.6A TRAFFIC - Table 15.1.6A.1 MAXIMUM DAILY ONE-WAY TRAFFIC MOVEMENTS</p>	<p><b>Complies</b></p>	<p>The application site comprises of 3 lots each having the ability to have a Traffic Intensity threshold value of up to 200 per day</p>

<p>– 200 movements</p>		<p>thereby enabling a total Traffic Intensity threshold value of 600 over all the sites when viewed holistically. Applying the Traffic Intensity Factor for a proposed Industrial activity stated at Appendix 3A part 4 of 10 per 100m<sup>2</sup> of GBA, the overall intensity factor will be 401.8 movements per day being below the permitted combined total levels provided for the three lots making up the application site. This has been calculated as follows:</p> <p>Area of warehouse + Area of Office = 4018m<sup>2</sup> Divided by 100 = 40.18 X the factor of 10 = Traffic Intensity threshold value of 401.8. This excludes the canopy area as this is a loading area and the plant room as this is services that are both exempt from the GBA definition.</p>
<p><b>15.1.6B PARKING</b></p>		
<p>15.1.6B PARKING – 1 space per 100m<sup>2</sup></p>	<p><b>Complies</b></p>	<p>The activity is provided with 40 car parking spaces including two accessible car parking spaces meeting the 40 spaces required by the District Plan when applying the ratio of 1 space per 100m<sup>2</sup> of GBA (4018m<sup>2</sup>)</p>
<p>15.1.6B.1.4 ACCESSIBLE CAR PARKING SPACES</p>	<p><b>Complies</b></p>	<p>Two accessible parking spaces are provided in accordance with the requirements with the dimensions able to be designed to comply.</p>
<p>15.1.6B.1.6 LOADING SPACES – 500m<sup>2</sup> – 5,000m<sup>2</sup> – two loading spaces</p>	<p><b>Complies</b></p>	<p>Given the nature of the activity, being a distribution facility, there are numerous loading spaces and areas provided meeting these requirements.</p>
<p><b>15.1.6C ACCESS</b></p>		
<p>15.1.6C.1.1 PRIVATE ACCESSWAY IN ALL ZONES</p>	<p><b>N/A</b></p>	<p>N/A applies to accesses serving multiple sites</p>
<p>15.1.6C.1.2 PRIVATE ACCESSWAYS IN URBAN ZONES</p>	<p><b>N/A</b></p>	<p>N/A applies to accesses serving multiple sites</p>
<p>15.1.6C.1.3 PASSING BAYS ON PRIVATE ACCESSWAYS IN ALL</p>	<p><b>N/A</b></p>	<p>N/A applies to accesses serving multiple sites</p>

<p>ZONES</p>		
<p>15.1.6C.1.4 ACCESS OVER FOOTPATHS – The following restrictions shall apply to vehicle access over footpaths: (a) no more than two crossings per site; and (b) the maximum width of a crossing shall be: - 6m</p>	<p><b>A) Complies</b> <b>B) Does not comply</b></p>	<p>a) There are three underlying sites each entitled to having up to 2 vehicle crossings each. A total of three crossings is proposed maintaining the existing number of one per lot albeit in differing locations.</p> <p>b) The central vehicle crossing serving small personal vehicles will comply with the 6m width requirement. However, the two vehicle crossings located at the eastern and western ends of the site will have a width of 9m at the site boundary as these vehicle crossings accommodate large multi-axled trucks delivering and taking goods to and from the site and exceed the maximum permitted width of 6m.</p>
<p>15.1.6C.1.6 VEHICLE CROSSING STANDARDS IN URBAN ZONES (a) Private access off streets in the urban zones the vehicle crossing is to be constructed in accordance with Council’s “Engineering Standards and Guidelines” (June 2004 – Revised 2009). (b) Where the vehicle crossing serves two or more properties the vehicle crossing is to be widened to provide a double width vehicle crossing.</p>	<p><b>Will comply</b></p>	<p>The proposed vehicle crossings will be constructed in accordance with Council’s “Engineering Standards and Guidelines” (June 2004 – Revised 2009).</p>
<p>15.1.6C.1.7 GENERAL ACCESS STANDARDS (a) Provision shall be made such that there is no need for vehicles to reverse off a site except where there are less than 4 parking spaces gaining access from a local road. (b) All bends and corners on the private accessway are to be constructed to allow for the passage of a Heavy Rigid Vehicle. (c) Any access where legal width exceeds formation</p>	<p><b>Complies</b></p>	<p>The proposal provides for onsite manoeuvring for each of the parking spaces in accordance with the relevant standards.</p> <p>All stormwater from the impervious areas will be collected and shall be managed in such a way as will reduce the volume and rate of stormwater runoff and contaminant loads using water storage tanks with drainage details to be provided at building consent stage.</p>



<p>requirements shall have surplus areas (where legal width is wider than the formation) grassed. (d) Runoff from impermeable surfaces shall, wherever practicable, be directed to grass swales and/or shall be managed in such a way as will reduce the volume and rate of stormwater runoff and contaminant loads.</p>		
<p>12 NATURAL AND PHYSICAL RESOURCES</p>		
<p>12.3 SOILS AND MINERALS</p>		
<p>12.3.6.1.3 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RESIDENTIAL, INDUSTRIAL, HORTICULTURAL PROCESSING, COASTAL RESIDENTIAL AND RUSSELL TOWNSHIP ZONES</p> <p>(a) it does not exceed 200m<sup>3</sup> in any 12-month period per site; and</p> <p>(b) it does not involve a cut or filled face exceeding 1.5m in height i.e., the maximum permitted cut and fill height may be 3m.</p>	<p><b>Does not comply</b></p>	<p>Although the site is generally flat earthworks across the site are proposed to establish the yards, parking areas and manoeuvring areas noting that fill for the building platform and effluent fields are excluded from the definition of fill. Therefore, the total volume of earthworks forming part of this consent is approximately 2,400m<sup>3</sup>.</p>
<p>12.3.6.1.5 EXCAVATION AND/OR FILLING, INCLUDING MINING AND QUARRYING WITHIN THE NATIONAL GRID YARD IN ALL ZONES</p> <p>Anywhere in the National Grid Yard:</p> <p>(a) does not create an unstable batter that will affect a National Grid support structure; and/or</p> <p>(b) does not result in a reduction in the ground to conductor clearance distances as required by</p>	<p><b>Will comply</b></p>	<p>Although power lines forming part of the national grid are strung across the site there are no support tower structures on the site and the proposed works will not result in the reduction of reduction in the ground to conductor clearance distances as required by Table Four of the New Zealand Electrical Code of Practice 34 (NZCEP34:2001) meeting these standards.</p>

<p>Table Four of the New Zealand Electrical Code of Practice 34 (NZCEP34:2001)</p> <p>Around Towers:</p> <p>(a) Is no deeper than 300mm within 6m of the outer visible edge of a National Grid support tower structure; and/or (b) Is no deeper than 3m when between 6m to 12m of the outer visible edge of a National Grid support tower structure.</p>		
<p>12.4 NATURAL HAZARDS</p>	<p><b>N/A</b></p>	<p>N/A as only applied to Coastal hazards not River Flood Hazards</p>
<p>12.7 LAKES, RIVERS, WETLANDS AND THE COASTLINE</p> <p>12.7.6.1.1 SETBACK FROM LAKES, RIVERS AND THE COASTAL MARINE AREA - &gt;3m wide river = 20m setback</p> <p>12.7.6.1.2 SETBACK FROM SMALLER LAKES, RIVERS AND WETLANDS - &lt;3m wide rivers</p> <p>(b) 10 x the average width of the river where it passes through or past the site; provided that in both cases the minimum setback shall be 10m and the maximum setback shall be no more than the minimum required by Rule 12.7.6.1.1 above;</p>	<p><b>Will Comply</b></p>	<p>The site is not located in proximity to a stream or other water body affected by this standard.</p>
<p>12.7.6.1.4 LAND USE ACTIVITIES INVOLVING DISCHARGES OF HUMAN SEWAGE EFFLUENT Land use activities which produce human sewage effluent (including grey water) are permitted provided that:</p>	<p><b>Will comply</b></p>	<p>As per the consent notices on the certificate of title and to meet the requirements of this rule Haigh Workman Ltd have designed a wastewater system with the design report attached. However, the site is well removed from the nearest river to meet the required setbacks in</p>

<p>(a) the effluent discharges to a lawfully established reticulated sewerage system; or</p> <p>(b) the effluent is treated and disposed of on-site such that each site has its own treatment and disposal system no part of which shall be located closer than 30m from the boundary of any river, lake, wetland or the boundary of the coastal marine area.</p> <p>Note: The discharge may also require consent under the Regional Water and Soil Plan.</p>		<p>this rule.</p>
<p>12.8 HAZARDOUS SUBSTANCES</p>	<p><b>Will comply</b></p>	<p>The proposed storage activity is not known to include the storage or use of hazardous substances of the type or volume prescribed in this rule.</p>

**PROPOSED DISTRICT PLAN ASSESSMENT**

The Proposed Far North District Plan (**Proposed District Plan**) is presently going through the hearing stage of the statutory adoption process with no decisions having yet been made. This being the situation only those rules of the Proposed District Plan that protect water, air, soil, significant indigenous vegetation, significant habitats of indigenous fauna, historic heritage or aquaculture activities (as identified under Section 86B (3) of the Resource Management Act 1991) have immediate effect.

Those rules with immediate effect that are of relevance to the proposed activity are considered below. As can be seen the proposal does not trigger the need for resource consent under those rules with immediate effect.

Standards/rules	Compliance	Comment
<p><b>Earthworks</b></p>		
<p>EW-R12 Earthworks and the discovery of suspected sensitive material - The <a href="#">earthworks</a> complies with standard EW-S3 - Accidental Discovery Protocol.</p>	<p><b>Will Comply</b></p>	<p>Although unlikely to contain sensitive material due to bulk site works having been undertaken across the site as part of the underlying subdivision, the applicant will observe the requirements of EW-S3 on discovery of any suspected sensitive material.</p>
<p>EW-R13 Earthworks and erosion and sediment control -</p>	<p><b>Will comply</b></p>	<p>Erosion and sediment control measures will: 1. for their duration be</p>

<p>The <a href="#">earthworks</a> complies with standard EW-S5 Erosion and sediment control.</p>		<p>controlled in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005); and</p> <p>2. shall be implemented to prevent silt or sediment from entering <a href="#">water bodies</a>, coastal marine area, any <a href="#">stormwater</a> system, <a href="#">overl and flow paths</a>, or <a href="#">roads</a>.</p>
<p><b>Hazardous substances</b></p>		
<p>HS-R2 Establishment of a new significant hazardous facility</p>	<p><b>Complies</b></p>	<p>The proposed storage and distribution activity is not a Significant Hazardous facility</p>

#### NORTHLAND REGIONAL PLAN

Resource consent APP.045320.01.01 was obtained from NRC on 28 September 2023 for the preloading of the building platform area of approximately 5,325m<sup>2</sup> with approximately 6,058m<sup>3</sup> of aggregate with the excess metal removed from the foundation area to be stored on site for use in the construction of the accessways and parking areas. The preloading works have been completed in accordance with this consent.

If any additional consents are required under the Northland Regional Plan the applicant undertakes to obtain these prior to commencing works on site.

#### NATIONAL STANDARDS ASSESSMENT:

##### National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES:Contamination)

The site is a newly created lot that has been through the Council's Subdivision process under the RMA at which time the land would have been subject to an assessment against the requirements of the NES:Contamination. The issuing of the subdivision consent demonstrates that the Far North District Council were satisfied that the site was not subject to contamination and accordingly no consent is required under the NES:Contamination standards or this was satisfactorily dealt with at the time of subdivision.

##### Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES:FW)

The proposal does not involve any works within a stream or wetland area. Accordingly no consent is required under the NES:FW standards.

#### SUMMARY OF ACTIVITY STATUS.

In summary, resource consent is required as the proposal does not meet the following Performance Standards that apply across the site as the most restrictive district plan provisions;

Industrial Zone:

- 7.8.5.1.2(a) Visual Amenity and Environmental Protection – **Discretionary Activity under 7.8.5.4.**
- 7.8.5.1.4 Transportation – **Restricted Discretionary Activity under 7.8.5.4.**

Transportation

- 15.1.6C.1.4 Access Over Footpaths – two vehicle crossings being 9m wide - **Discretionary Activity under 15.1.6C.2** as other standards of Part 3 not meet.
- 

Natural and Physical Resources - 12.3 Soils and Minerals

- 12.3.6.1.3(a) – Earthworks Exceed 200m<sup>3</sup> – **Discretionary Activity under 12.3.6.3**

**The proposed activity shall therefore be considered as a discretionary activity with all relevant effects on the environment and persons being assessed along with the relevant provisions of the District Plan.**

**Given the all encompassing assessment of effects required for a discretionary activity, if during the processing of this application the Far North District Council considers that there are other matters triggering the need for resource consent it is requested that these matters be added to the reasons for resource consent with the following assessment being relied upon in respect of all potential and actual effects that may arise from the activity when considered holistically.**

## **6.0 PERMITTED BASELINE ASSESSMENT & MATTERS FOR DISCRETION**

Far North District Plan:

The site is zoned industrial with the FNDC. In this zone, industrial activities of the type proposed are generally anticipated and provided for as a permitted activity.

Although only 200m<sup>3</sup> of earthworks is permitted, which would require most industrial activities to seek resource consent, regard should be had for the permitted activity bulk and location standards as setting a baseline as to the size and scale of any industrial buildings that may establish in this environment. In this regard, the proposed building complies with all relevant permitted activity bulk and location standards and as such its visual effects are comparable to what may be established as a permitted activity on the site.

In addition, the site comprises of three allotments. In respect of traffic intensity effects, each of the lots may generate a traffic threshold value of 200

movements each or a total of 600 movements (6000m<sup>2</sup> of GBA). The proposed activity spread across the three allotments will generate approximately 401 movements being less than what would be permitted to be generated if each lot was developed independently. Therefore, the traffic intensity effects will be less than a may be generated by permitted development and should be discounted from the assessment of effects on the environment.

We respectfully request that a pragmatic comparative assessment be applied having regard for the zoning of the site and the environmental outcomes anticipated when the underlying industrial subdivision was created. However, out of an abundance of caution an assessment has been provided in respect of the ALL the effects arising from the overall development.

#### Unimplemented Resource Consents:

There are no approved but unimplemented resource consents to be considered.

#### Existing & Approved Environments:

The existing site and surrounds have been described at Sections 3 & 4 foregoing and represent the benchmark against which all effects arising from this activity shall be assessed. **In this instance the key environmental features that the Council may have regard for are:**

- The site has been extensively site worked as part of the underlying subdivision;
- The underlying subdivision and the associated earthworks altered the landform of the lots so that they would not be subject to flooding and relocated the flood hazard to the road way.
- In granting consent to the underlying industrial subdivision that is within the Industrial Zone, Council would have had regard for the future industrial nature of this environment given rise to by the subdivision of this land and the proposed activity is considered consistent with this.
- Although the adjoining land to the south has a rural zoning it is used for heavy industrial activities and this is reflected in its proposed rezoning by the Proposed District Plan and as such the level of amenity the current FNDC seeks to retain on this land does not take into account the existing environment.
- The lots are already served by three vehicle crossings and this does not change as a result of the proposed development.

#### Persons who have given their written approval

No person's approval has been sought in relation to the proposal as any adverse effects on any persons are considered to be less than minor for the reasons stated in the assessment of adverse effects that follows.

## **7.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS (INCLUDING EFFECTS ON PEOPLE) - (95A, S95B & 104(1)(A))**

Having regard for the existing environment and the permitted baseline effects, the potential and actual effects arising from the proposed activities can be divided into the following effects based matters:

- Amenity and Character Effects

- Traffic and Parking Effects
- Earthworks;
- Flooding and Infrastructure Effects
- Positive Economic and Social Effects

### **Amenity and Character Effects**

The site sits amongst an industrial subdivision that is part of an existing wider industrial environment. Accordingly, the site is located in an establishing industrial environment with the size, scale and design of the buildings in proximity to the site reflecting this as shown in the foregoing photographs of the area surrounding the site. Therefore, the size, scale and design of the building is commensurate with the character of building either existing or being developed in this environment.

The frontage of the site will be landscaped with detailed landscape plans to be provided at building consent stage. The extent of the landscaping complies with the permitted activity requirements and will serve to screen the car parking area of the site from ready view from the road and will provide visual depth between the operational activity occurring on site and the streetscape.

Although infringing the visual amenity and environmental protection standard by not constructing a screen along the rear southern boundary, the proposed activity will not adversely affect the visual amenity of the land to the south and that of those people on it because, although zoned 'Rural', the activities occurring to the south may be described as being heavy industrial in character and not requiring or generating the degree of amenity that is typically associated with a rural environment. To construct a fence along the boundary of the site to prevent viewing from the heavy industrial estate into the site would not appreciably enhance the on-site amenity of this adjacent land noting further that the remnant mixed vegetation on along the interface of the site is sufficient to maintain the existing level of amenity for the neighbours to the south.

The land to the west, east and north of the site shares the same industrial zone and in complying with the permitted activity bulk and location standards the proposed building maintains the character of this industrial environment and will not adversely affect the amenity of any adjacent or surrounding land.

The site is presently served by three vehicle crossings with the number to remain unchanged but with the proposed vehicle crossings located in different positions and in two instances having widths of 9m. Given the overall length of the combined frontage of the site is approximately 170m in length and each lot could have up to two vehicle crossings as a permitted activity, it is considered that the amenity of the streetscape will be maintained as the vehicle crossings are well separated from each other and do not serve to break up the large extent of front yard landscaping.

### **Traffic and Parking Effects**

The distribution centre is served by 15 formal parking spaces and 25 overflow spaces round the site for staff if required in compliance with the Council's required parking ratios. Given the nature of the activity there are a number of loading bay areas. These spaces have been determined taking into account

staff numbers, modes of travel, ride sharing and differing shift times and the nature of the distribution activity to ensure that all parking can be accommodated on site and no large vehicles will need to wait on the roadway before entering the site.

The nature of the activity is that very few visitors are received to the site with the main generator of private motor vehicle trips being staff movements. The main parking area is located to the front of the site adjacent Kahikatea Lane and is separated from the large vehicles entrances to the east and west. The internal accessway and parking areas are flat in gradient and will comply with the design requirements of the FNDP.

The site is served by 3 vehicle crossings. This is the same number of crossings that have been constructed to serve the three underlying lots but are in differing positions. Each of these vehicle crossings has been purposefully located and allocated to segregate vehicle type to assist in the avoidance of adverse effects on traffic and pedestrian safety.

The central vehicle crossing will comply with Council's design and width requirements. However, the eastern and western vehicle crossings are widened to 9m to serve the large truck and trailer units that will be delivering and picking up goods. The widened crossings are necessary to provide for the turning paths of the trucks into and out of the site and in so doing will reduce the likelihood of traffic conflict and delays along the road way. The FNDP recognises that in some instances widened crossings are appropriate to accommodate larger vehicles particularly in industrial areas.

The proposal results in less points of ingress and egress than is permitted under the FNDP (two vehicle crossings per lot are permitted and the site has three underlying lots). The combined site has a frontage of approximately 170m with each of the proposed vehicle crossings well separated. The on-site large vehicle circulation is counter-clockwise with a one-way entrance and exit at the western and eastern ends respectively. The combination of these elements will maintain pedestrian safety as there will be fewer crossings to be traversed than is the permitted situation, being one way in and out there are clear lines of sight to entering and exiting drivers to see clearly if any pedestrians are approaching and conversely pedestrians need only check in one direction when traversing the wider crossings thereby maintaining an acceptable level of pedestrian safety along Kahikatea Lane.

Although the traffic intensity value calculation indicates movements of 401.8 per day, the applicant has indicated that the activity is unlikely to generate more than 200 vehicles per day. As identified above in the permitted baseline assessment, the site comprises of three allotments. In respect of traffic intensity effects, each of the lots may generate a traffic threshold value of 200 movements each or a total of 600 movements (6000m<sup>2</sup> of GBA). The proposed activity spread across the three allotments will generate approximately 401 movements being less than what would be permitted to be generated if each lot was developed independently. Therefore, the traffic intensity effects will be less than a may be generated by permitted development.

This situation combined with the newly constructed road layout designed for industrial traffic and approved by the Council is considered ensure the ongoing safe movement of pedestrians and traffic through this environment.



### Earthworks Effects:

The proposed site works are necessary to provide a coherent stable building platform and to provide suitable on-site manoeuvring and parking areas. The proposed earthworks will have a less than minor adverse effect on the environment for the following reasons:

- Other than the pre-loading for and creation of the building platform that has been completed, the proposed site works are relatively shallow being required to take the slight 'even out' a relatively flat site created when the land was earth-worked as part of the underlying large scale industrial subdivision. Therefore, having been already modified the proposed site works do not significantly alter the topography of the site, which will remain flat in relief and does not contain any significant natural features;
- As the area has already been subject to bulk site works as part of the underlying industrial subdivision it is unlikely that any artefacts or items of cultural importance will be uncovered during the earth works. However, the applicant will abide any accidental discovery protocol standards that may be imposed as conditions of consent;
- The application includes measures to contain sediment laden stormwater on site thereby avoiding any adverse effects on the receiving stormwater infrastructure or waterway;
- In addition to the measures set out in the erosion and sediment control plan, the applicant undertakes to dampen the earthworks area to avoid or mitigate any potential dust generation.
- As a result of the earthworks previously undertaken and the creation of the road way that was designed to take flood waters along the riad and not over the lots, there is no overland flow paths affected by the proposed site works and, as the works consist largely of excavation, the proposed works do not result in raising land that may otherwise have directed surface water onto adjoining properties.
- As the site is generally flat and the site works generally consist of a scrape of topsoil and the laying of a base course for construction to very shallow depths, as detailed on the earthworks plans, the proposed site works are unlikely to generate any adverse stability effects on any adjacent land.
- Noting that the site and its immediate surrounds are industrial sites on which truck depots and distribution centres are generally anticipated, the number of truck movements generated by the proposed earthworks will be no greater than would be generated by an industrial activity and are of a type of vehicle movement characteristics of an industrial environment and so it is considered that these adverse effects can be accommodated within the roading network without generating and adverse effects on its functioning or amenity. In addition, the site has ready access to those roads in the local roading hierarchy intended to carry moderate to heavier traffic numbers thereby avoiding the need to move through the more intimate residential roading network thereby avoiding any adverse effects on any sensitive environments.
- A 6-week long period to complete the proposed site works in a robust industrial environment where the adverse effects can be managed by the measures proposed in this application and the conditions offered below, is considered to have an insignificant adverse effect on the amenity of this environment. This is because the aural and visual amenity characteristics of an industrial environment are more robust than other environments and such these construction effects are readily 'absorbed' into the day to day

character of these environments, particularly given that this area is a developing one where such scale of site works is occurring within this new industrial environment.

- The in addition to the foregoing, the applicant offers the following conditions as part of this application:

#### *Maintain Access to Site*

*There shall be no obstruction of access to public footpaths, berms, private properties, public services/utilities, or public reserves resulting from the earthworks activity. All materials and equipment shall be stored within the subject site's boundaries.*

#### *Dust Nuisance*

*There shall be no airborne or deposited dust beyond the subject site as a result of the earthworks activity, that in the opinion of the Council's Monitoring Officer is noxious offensive or objectionable.*

#### *Prevent Damage to Assets or Property*

*There shall be no damage to public roads, footpaths, berms, kerbs, drains, reserves or other public asset as a result of the earthworks activity. In the event that such damage does occur, the Council's monitoring team will be notified within 24 hours of its discovery. The costs of rectifying such damage and restoring the asset to its original condition will be met by the consent holder.*

#### *Erosion and Sediment Control*

*All earthworks shall be managed to minimise any discharge of debris, soil, silt, sediment or sediment-laden water from the subject site either to land, stormwater drainage systems, watercourses or receiving waters. In the event that a discharge occurs, works shall cease immediately and the discharge shall be mitigated and/or rectified to the satisfaction of the Council's Monitoring Officer.*

#### *Discharge of Sediment-laden Water*

*To prevent discharge of sediment-laden water or other debris into any public stormwater drainage systems or watercourses and therefore into receiving waters, and to prevent nuisance and amenity impacts on users of the road reserve, there shall be no deposition of earth, mud, dirt or other debris on any public road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.*

#### **Flooding Effects**

This application is supported by a specific flood hazard assessment prepared by Haigh Workman Ltd suitably qualified engineers who also designed the underlying industrial subdivision that obtained resource consent from the NRC to undertake bulk earthworks in the flood hazard area associated with the creation of the underlying subdivision so that it would be able to sustain future development of the type proposed by the applicant.

Both the specific flood assessment for the proposed works and that provided in support of the original subdivision works consent are attached and this assessment of effects relies on those specialist documents and the expertise of the authors.

Haigh Workman Ltd have identified that '*the modelling presented on NRC maps was carried out prior to the subdivision works and does not recognise the changes made to the management of floodwaters achieved with the subdivision works*'. Accordingly, the flood hazard areas on the current NRC mapping system pertaining to the site still convey the flood modelling that was undertaken prior to the subdivision works being completed.

The pre-subdivision works model indicated floodwaters from Kerikeri River pond across the very flat ground of Lots 4-6 before spilling over a saddle in Lot 7. This data was used to inform the flood management solution for the subdivision. The design solution implemented under the NRC consent involved raising ground levels on the lots and lowering the level of the road so that flood water would be diverted around the lots down the road constructed as part of the subdivision and not spill onto any other land.

Having reviewed the proposed filling of the building platform and the height of the finished floor level Haigh Workman Ltd consider that the proposal will not result in a worsening of any flood hazard, will not divert flood waters on to any other property and the floor level of the proposed building will be suitably above the *expected '100 year ARI CC flood' level*.

The relevant assessments of the Haigh Workman flood hazard report are:

*The Haigh Workman report that accompanied the resource consent 43067 addressed this issue [diverting of flood waters onto other properties] in regard to filling in the saddle on Lot 7. It was accepted that the filling will not alter flood levels on neighbouring properties as floodwaters will be diverted on to the road. Similarly filling on Lot 6 will not change flood flows on neighbouring sites.*

*The concept of the flood management strategy for the subdivision is that instead of having flood waters spill across the saddle on Lot 7, flood waters are to spill down the road... This was achieved by both lowering ground levels within the Road corridor and raising ground levels within Lot 7. Hydraulic calculations were undertaken to inform the design levels and provide expected flood levels. The flood level over the saddle in the road outside of Lot 6 was modelled to be 78.54 m RL for the 100 year ARI CC flood. It is likely that the water level will be very similar at the northwestern corner of Lot 6, hence we adopt a flood level of 78.6 m RL for the Site..... Forming ground levels at 78.6 m RL within Lot 6 [where the majority of the building platform is located] will prevent any flood water spilling into the site during the 100-year ARI flood.*

In addition to the analysis undertaken by Haigh Workman Ltd, the site comprises of three lots and has a total area of 1.1881ha. the preloading/filling area covers less than 50% of the total site. Noting that had the lots been developed individually a greater extent of works is likely to have been required overall, the proposed works retains a large area of ground that is at or close to existing ground level to continue to accommodate ponding and surface flows toward the road and not displace this onto any other property.

Based on the flood hazard assessments undertaken by Haigh Workman Ltd, it is considered that the works undertaken as part of the underlying subdivision serve to enable development of the site of the scale proposed and that the

filling of the building platform area to preload the ground for foundation works and set the minimum floor level along with minor ground preparation works to create the subgrade for the parking, loading, manoeuvring and accessway areas can be undertaken without adversely affecting the propensity for flooding to occur or worsen within the surrounding environment or up or down stream of the site.

### **Infrastructure & Stormwater Effects**

Public infrastructure was extended to serve the site and the surrounding lots as part of the recent subdivision creating this industrial enclave. Each lot including the application lot has been provided with water, electricity and telecommunications services. However, at the time of granting subdivision consent it was acknowledged that specific onsite wastewater and stormwater solutions for any future development would be required.

Consent notices were imposed on the records of title requiring that in conjunction with the construction of any building (building consent) an onsite wastewater and stormwater systems would need to be designed in accordance with the underlying engineering reports provided with the subdivision. The applicant has engaged Haigh Workman Ltd, who were the engineers who prepared the reports for the underlying subdivision to also prepare the necessary wastewater and stormwater reports for the proposed development. The wastewater report is attached and the stormwater report will be provided at the time of seeking building consent as per the requirements of the consent notice. As the same engineers who designed the subdivision are preparing the specific site reports, it is considered that the design solution will meet council standards and will avoid adverse effects on the receiving environment from the treatment of wastewater on site or the discharge of stormwater.

### **Positive Economic and Social Effects**

The proposal will have the following positive effects:

- The establishment of the storage and distribution facility near Kerikeri means that food stuffs can be distributed more efficiently to outlets in the wider surrounds thereby potentially reducing unit costs per food item that would otherwise be passed on to the consumer if having to be transported in from other depots, such as that in Whangarei as presently occurs;
- The proposed activity will provide approximately 50 employment opportunities, which, as well as having direct positive effects for those employed, will have positive flow on social and economic effects for the local community.

### **Summary of Environmental Effects**

In summary of the activity and the foregoing assessment, the proposal seeks to use land zoned Industrial for its intended purpose of accommodating industrial activities and in turn creating a number of job opportunities thereby generating positive social and economic effects.

Due to the setting of the site being within an establishing industrial environment and the development complying with the permitted activity bulk and location standards applicable in the Industrial Zone, the proposal maintains the character and amenity of the local environment. Although not meeting the screening standard of the FNDC along the rear boundary the land beyond belies its Rural zoning and is used for heavy industrial purposes and accordingly the non-provision of a boundary screen will not adversely affect the amenity of this adjoining land or the people who work on it.

Kahikatea Lane was approved as part of the underlying subdivision consent as being acceptable for industrial traffic with its connections with the wider transport network also considered at the time of subdivision consent. The overall intensity of traffic movement is less than if the three sites had been developed independently and due to the comprehensive site circulation layout and specific means of ingress and egress tailored to the function of the crossing the potential adverse effects on traffic and pedestrian safety will be less than minor.

The proposed site works are necessary to establish the site for its intended industrial purpose but will not significantly alter its appearance as viewed from beyond the site with potential adverse effects on the receiving environment able to be mitigated or avoided on site.

The development is able to be serviced without adversely affecting the capacity of the network with the subdivision including new infrastructure to serve the site and those forming part of the underlying subdivision. The site is of sufficient size to enable the design and construction of onsite wastewater and stormwater systems in accordance with the consent notices imposed at the time of subdivision thereby ensuring that the values and quality of the receiving environment is maintained.

For the reasons set out above, the potential adverse effects will be less than minor with the proposal having an overall acceptable effect on the environment and those persons within it.

## 8.0 NOTIFICATION DETERMINATION

### Public Notification:

#### Step 1: mandatory public notification in certain circumstances

No mandatory notification is required as:

- **The applicant does not request that the application is publicly notified (s95A(3)(a))**
- **The applicant undertakes to provide all reasonable requests for further information (s95C and s95A(3)(b)); and**
- **The application does not involve any exchange of recreation reserved land under s15A of the Reserves Act 1977 (s95A(3)(c)).**

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

The application is not precluded from public notification as:

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

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

The application is not required to be publicly notified as the activities are not subject to any rule or a NES that requires public notification (s95A(8)(a)).

The above assessment of environmental effects addresses the adverse effects of the activity on the environment. For the reasons set out on the foregoing assessment, any adverse effects on the environment will be less than minor and therefore public notification is not required under s95A(8)(b).

## Step 4: public notification in special circumstances

If an application has not been publicly notified as a result of any of the previous steps, then the council is required to determine whether special circumstances exist that warrant it being publicly notified (s95A(9)).

Special circumstances are those that are:

- exceptional or unusual, but something less than extraordinary
- outside of the common run of applications of this nature, or
- circumstances which makes notification desirable, notwithstanding the conclusion that the adverse effects will be no more than minor.

In this instance, being for an industrial activity on a newly created site that was intended to accommodate industrial activities in an industrial zone, there is nothing exceptional or unusual about the application, and that the proposal has nothing out of the ordinary run of things to suggest that public notification should occur.

### **Public notification conclusion**

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

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

- Under step 4, there are no special circumstances that warrant the application being publicly notified.

**Therefore, this application can be processed without public notification.**

### **Limited Notification Assessment**

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

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

In addition, the council must determine whether the proposed activity is on or adjacent to, or may affect, land that is subject of a statutory acknowledgement under schedule 11, and whether the person to whom the statutory acknowledgement is made is an affected person (s95B(3)).

In this instance, the proposal is not on or adjacent to land that is subject to a statutory acknowledgement, and will not result in adversely affected persons in this regard

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

The application is not precluded from limited notification as:

- the application is not for one or more activities that are exclusively subject to a rule or NES which preclude limited notification (s95B(6)(a)), and
- the application is not exclusively for a controlled activity.

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

As this application is not for a boundary activity or a prescribed activity, there are no affected persons related to those types of activities (s95B(7)).

The foregoing assessment of effects on the environment, including people, assessed whether there are any affected persons and determined that any adverse effects on people will also be less than minor and as such the application need not be limited notified under s95B(8)).

#### **Step 4: further notification in special circumstances**

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

Special circumstances are those that are:

- exceptional or unusual, but something less than extraordinary;
- outside of the common run of applications of this nature; or

- circumstances which make limited notification to any other person desirable, notwithstanding the conclusion that no other person has been considered eligible.

In this instance, being for an industrial activity on a newly created site that was intended to accommodate industrial activities in an industrial zone, there is nothing exceptional or unusual about the application, and that the proposal has nothing out of the ordinary run of things to suggest that notification to any other persons should occur.

#### **Limited notification conclusion**

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

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

**Therefore, this application can be processed without limited notification.**

## **9.0 ASSESSMENT (SECTION 104)**

### **9.1 Statutory Matters**

Pursuant to Section 104 and 104(B), when considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to:

- (a) *any actual and potential effects on the environment of allowing the activity; and*
  - (b) *any relevant provisions of-*
    - (vi) *a plan or proposed plan; and*
  - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
- 104(2) of the Act directs that, when forming an opinion as to any actual or potential effects on the environment, a consent authority may disregard an adverse effect of the activity on the environment if the plan permits an activity with that effect and any effect that is beyond the scope of the matters to which the Council has restricted its discretion.

The Plans relevant to this application are the operative Far North District Plan and the Proposed far North District Plan.



**9.2 Actual and Potential Effects on the Environment (section 104(1)(a))**

For the reasoning explained in the foregoing assessment of environmental effects the actual and potential effects of the proposal on the environment are acceptable.

**9.3 District Plan and any Relevant Statutory Documents (section 104(1)(b))**

**Operative Far North District Plan**

The zones, overlays, controls and designations in the operative Far North District Plan applying to this site have been set out in the District Plan assessment foregoing.

Rules

The relevant rules have been considered at Section 5 foregoing

Assessment Criteria

Each matter requiring consent is discretionary activity for which a set of assessment criteria are prescribed. The development shall be considered against the relevant assessment criteria for each matter in the table that follows:

Assessment Criteria	Comment
<p><b>7.8 INDUSTRIAL ZONE</b></p> <p>As the application is a discretionary activity overall 7.8.5.4 Discretionary Activities identifies that the relevant assessment criteria in the Industrial zone are located at Chapter 11 as follows:</p> <p><b>11.4 VISUAL AMENITY AND ENVIRONMENT PROTECTION (COMMERCIAL AND INDUSTRIAL ZONES)</b></p> <p>(a) The extent to which activities and buildings on the site are visible from adjoining sites, and the extent to which, if any, reducing the landscaping incurs adverse effects in terms of the visual impacts of buildings and outdoor storage areas on those sites.</p> <p>(b) The visual appearance of the site from the road frontage and the zone boundary.</p>	<p>The intent of the visual amenity and environment protection assessment criteria at 11.4 is to protect more sensitive environments from the effects of industrial activities establishing on adjacent sites. As detailed in the foregoing assessment of amenity effects, the site to the south is used for heavy industry and despite having a rural zone has no rural characteristics. The land to the south can be considered to have a lower level of amenity than the newly created industrial subdivision in which the proposed development is</p>

<p>(c) The ability to mitigate adverse effects of reduced landscaping by the nature of planting, or by the location of parking, manoeuvring and storage areas in less visible parts of the site.</p> <p>(d) The ability to incorporate into landscaping any measures to retain, treat and/or dispose of stormwater generated on the site.</p> <p>(e) The need for, and practicality of providing, the required landscaping or screening given the inherent characteristics of the site including site shape, topography, access and layout of existing buildings and landscaping.</p> <p>(f) The extent to which the activity may cause or exacerbate natural hazards or may be adversely affected by natural hazards, and therefore increase the risk to life, property and the environment.</p>	<p>to be located. Therefore, the establishment of a screen along the common boundary to protect the amenity of the land to the south would be redundant. As the proposed development will not adversely affect the amenity or inherent values of the land zoned rural to the south the proposal is consistent with the relevant assessment criteria.</p>
<p><b>15.1.6C ACCESS</b>  <b>15.1.6C.4 ASSESSMENT CRITERIA</b></p> <p>(a) Adequacy of sight distances available at the access location.</p> <p>(b) Any current traffic safety or congestion problems in the area.</p> <p>(c) Any foreseeable future changes in traffic patterns in the area.</p> <p>(d) Possible measures or restrictions on vehicle movements in and out of the access.</p>	<p>The proposal satisfies the relevant assessment criteria as:</p> <p>a) The alignment of Kahikatearoa lane is straight and it is flat in gradient enabling good lines of sight along the roadway from each vehicle crossing.</p> <p>b) As a recently established industrial subdivision that is still developing there are no known congestion problems in the area.</p> <p>c) Although there may be potential for extension of Kahikatearoa Lane to the west any expansion of the subdivision will require resource consent and increased traffic movements can be assessed at that time.</p> <p>d) The proposal includes a one-way flow for large vehicles to avoid congestion and conflict at the vehicle crossing providing a clear means of ingress and egress to</p>

<p>e) The adequacy of the engineering standards proposed and the ease of access to and from, and within, the site.</p> <p>(f) The provision of access for all persons and vehicles likely to need access to the site, including pedestrian, cycle, disabled and vehicular.</p> <p>(g) The provision made to mitigate the effects of stormwater runoff, and any impact of roading and access on waterways, ecosystems, drainage patterns or the amenities of adjoining properties.</p> <p>(h) Not Applicable</p> <p>i) The provisions of the roading hierarchy, and any development plans of the roading network.</p> <p>(j) Not Applicable</p> <p>(k) Not Applicable</p>	<p>and from the site which assists in maintaining the safety of other vehicles and persons using Kahikatea lane.</p> <p>e) Other than the width of two of the vehicle crossings each will be designed to meet Council's engineering standards. As identified above, the separation of the large vehicles from the main personal vehicle car park as well as the one-way traffic route within the site will promote ease of access to and from the road with ease and safety of access being the reason for creating the 9m wide vehicle crossings.</p> <p>f) Visitor parking including disability parking is separated from the operational areas of the site ensuring safe access for all persons and vehicles.</p> <p>g) The development includes a stormwater design to accommodate the stormwater runoff from the proposed impervious areas with the final design to be provided at the time of seeking building consent as required by the consent notice on the records of title for each lot.</p>
<p><b>12.3 SOILS AND MINERALS</b>  <b>12.3.7 ASSESSMENT CRITERIA</b>  (a) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline;</p>	<p>The proposal satisfies the relevant assessment criteria as:</p> <p>a) The ground levels of the site and allotments within this environment were altered as part of the bulk works associated with the underlying subdivision to divert overland flow paths and floodwaters along the road and not across the site. Accordingly, further site works to create the building platform and access,</p>

<p>(b) any effects on the life supporting capacity of the soil;</p> <p>(c) any adverse effects on stormwater flow within the site, and stormwater flow to or from other properties in the vicinity of the site including public roads;</p> <p>(d) any reduction in water quality;</p> <p>(e) any loss of visual amenity or loss of natural character of the coastal environment;</p> <p>(f) effects on Outstanding Landscape Features and Outstanding Natural Features (refer to Appendices 1A and 1B in Part 4, and Resource Maps);</p> <p>(g) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna;</p> <p>(h) the extent to which the activity may adversely affect heritage resources, especially archaeological sites;</p> <p>(i) the extent to which the activity may adversely affect the cultural and spiritual values of Maori, especially Sites of Cultural Significance to Maori and waahi tapu (as listed in Appendix 1F in Part 4, and shown on the Resource Maps);</p> <p>(j) any cumulative adverse effects on the environment arising from the activity;</p>	<p>parking and yard areas does not result in any adverse effects on the flood hazard within this environment.</p> <p>b) The site is zoned for industrial activity and has been subject to bulk siteworks as part of the subdivision. Therefore, the additional works will not adversely affect the life supporting capacity of the soil given the purpose of the site.</p> <p>c) Sediment and erosion control measures will be implemented prior to carrying out the proposed site works to prevent silt laden stormwater from entering adjacent drains to maintain the quality of any nearby waterway.</p> <p>d) As for C above.</p> <p>e) The works are not near the coast.</p> <p>f) The works are not in proximity to any OLF or ONF.</p> <p>g) The site and surrounds do not contain any significant vegetation or habitats.</p> <p>h) The site has been subjected to bulk earthworks as part of the subdivision and as such it is unlikely that any artefacts exist on site and the site is not recognized as an archaeological site or a heritage site.</p> <p>i) The site is not identified as a Sites of Cultural Significance to Maori.</p> <p>j) At present, the proposed development is the only known</p>
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<p>(k) the effectiveness of any proposals to avoid, remedy or mitigate any adverse effects arising from the activity;</p> <p>(l) the ability to monitor the activity and to take remedial action if necessary;</p> <p>(m) the criteria in Section 11.20 Development Plans in Part 2.</p> <p>(n) the criteria (p) in Section 17.2.7 National Grid Yard.</p>	<p>development occurring within the Kahikatea industrial subdivision and as such there are unlikely to be any cumulative adverse effects.</p> <p>k) The works will be carried out in accordance with Council standards and engineering guidelines to ensure that all potential adverse effects on the receiving environment will be less than minor.</p> <p>l) The works are consistent with any standard ground preparation works, the site is flat and there are no sensitive water bodies nearby ensuring that the works may be readily monitored by the Council and remedial works undertaken in the unlikely event of a breach in the sediment and erosion measures.</p> <p>m) N/A</p> <p>n) N/A</p>
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Objectives and Policies

The relevant objectives and policies of each of the sections of the FNDC are considered in the table below:

Objectives and Policies	Comments
<p><b>7.8 INDUSTRIAL ZONE</b></p> <p><b>7.8.3 OBJECTIVES</b></p> <p>7.8.3.1 To avoid, remedy or mitigate adverse effects of new industrial activities on existing activities in the Industrial zone, and on activities on adjoining land, and on the natural and physical resources of the District.</p> <p><b>7.8.4 POLICIES</b></p> <p>7.8.4.1 That the Industrial Zone be applied to those areas in which industry is a significant activity and where expansion or intensification of the industrial character can be accomplished without damage to the environment.</p>	<p>The proposal is consistent with the relevant objectives and policies because:</p> <ul style="list-style-type: none"> <li>The site is located in an industrial subdivision and, although abutting the rural zone to the south, the rural zoned land adjoining is used for heavy industrial activities and as such the proposal will not adversely affect the amenities of any site or persons and being industrial in nature will not adversely effect the ability of any lawfully established activity to continue to operate.</li> </ul>

<p>7.8.4.2 That the range of activities provided for in the Industrial zone be limited only by the acceptability of the effects generated by the particular activity in relation to other activities in the zone.</p> <p>7.8.4.3 That standards be applied that protect visual and environmental amenity within the Industrial zone, and the amenity of adjacent zones.</p> <p>7.8.4.4 All activities should provide for a stormwater disposal system incorporating Low Impact Design principles, particularly for car park and landscaped areas.</p> <p>7.8.4.5 That stormwater disposal systems do not result in suspended solids, industrial by-products, oil, or other contaminated substance or waste entering the stormwater collection system in concentrations that are likely to pose an immediate or long term hazard to human health or the environment.</p>	<ul style="list-style-type: none"> <li>• The proposed activity is of the type provided for in the industrial zone.</li> <li>• The proposal complies with the relevant standards within the industrial zone and where the amenity protection standard is infringed along the rural zone boundary the adjacent land use is heavy industrial activities and so the amenity of this land beyond the site is maintained.</li> <li>• A comprehensive stormwater system inclusive of detention and treatment devices will be designed for the site in accordance with the requirements of the consent notice and provided at the time of building consent.</li> </ul>
<p><b>12.3 SOILS AND MINERALS</b></p> <p><b>12.3.3 OBJECTIVES</b></p> <p>12.3.3.1 To achieve an integrated approach to the responsibilities of the Northland Regional Council and Far North District Council in respect to the management of adverse effects arising from soil excavation and filling, and minerals extraction.</p> <p>12.3.3.2 To maintain the life supporting capacity of the soils of the District.</p> <p>12.3.3.3 To avoid, remedy or mitigate adverse effects associated with soil excavation or filling.</p> <p>12.3.3.4 To enable the efficient extraction of minerals whilst avoiding, remedying or mitigating any adverse environmental effects that may arise from this activity.</p> <p><b>12.3.4 POLICIES</b></p>	<p>The assessment criteria considered in the foregoing are directly derived from these higher order objectives and policies. Therefore, to avoid repetition, the proposal is consistent with these objectives as policies, which are effects based in their approach, for the reasons set out in the foregoing consideration of the assessment criteria and assessment of environmental effects.</p>

12.3.4.1 That the adverse effects of soil erosion are avoided, remedied or mitigated.

12.3.4.2 That the development of buildings or impermeable surfaces in rural areas be managed so as to minimise adverse effects on the life supporting capacity of the soil.

12.3.4.3 That where practicable, activities associated with soil and mineral extraction be located away from areas where that activity would pose a significant risk of adverse effects to the environment and/or to human health. Such areas may include those where:

(a) there are people living in close proximity to the site or land in the vicinity of the site is zoned Residential, Rural Living, Coastal Residential or Coastal Living;

(b) there are significant ecological, landscape, cultural, spiritual or heritage values;

(c) there is a potential for adverse effects on lakes, rivers, wetlands and the coastline;

(d) natural hazards may pose unacceptable risks.

12.3.4.4 That soil excavation and filling, and mineral extraction activities be designed, constructed and operated to avoid, remedy or mitigate adverse effects on people and the environment.

12.3.4.5 That soil conservation be promoted.

12.3.4.6 That mining tailings that contain toxic or bio-accumulative chemicals are contained in such a way that adverse effects on the environment are avoided.

12.3.4.7 That applications for discretionary activity consent involving mining and quarrying be accompanied by a Development Plan.

12.3.4.8 That as part of a Development

<p>Plan rehabilitation programmes for areas no longer capable of being actively mined or quarried may be required.</p> <p>12.3.4.9 That soil excavation and filling in the National Grid Yard are managed to ensure the stability of National Grid support structures and the minimum ground to conductor clearances are maintained.</p> <p>12.3.4.10 To ensure that soil excavation and filling are managed appropriately, normal rural practices as defined in Chapter 3 will not be exempt when determining compliance with rules relating to earthworks, except if the permitted standards in the National Grid Yard specify that activity is exempt.</p>	
<p><b>15 TRANSPORTATION</b></p> <p><b>15.1.3 OBJECTIVES</b></p> <p>15.1.3.1 To minimise the adverse effects of traffic on the natural and physical environment.</p> <p>15.1.3.2 To provide sufficient parking spaces to meet seasonal demand in tourist destinations.</p> <p>15.1.3.3 To ensure that appropriate provision is made for on-site car parking for all activities, while considering safe cycling and pedestrian access and use of the site.</p> <p>15.1.3.4 To ensure that appropriate and efficient provision is made for loading and access for activities.</p> <p>15.1.3.5 To promote safe and efficient movement and circulation of vehicular, cycle and pedestrian traffic, including for those with disabilities.</p> <p><b>15.1.4 POLICIES</b></p> <p>15.1.4.1 That the traffic effects of activities be evaluated in making decisions on resource consent applications.</p>	<p>The proposal is consistent with the relevant objectives and policies as:</p> <ul style="list-style-type: none"> <li>• For the reasons set out in the assessment of traffic effects and the foregoing consideration of assessment criteria, the proposal will have acceptable effects on the traffic environment and will not adversely affect traffic or pedestrian safety.</li> <li>• The site has sufficient area to accommodate both formal and informal parking spaces to meet anticipated parking demand on site.</li> <li>• The one-way traffic circulation and separation of the main car park and operational areas ensures efficient provision is made for loading and access on site.</li> <li>• Disability parking along with visitor parking is provided immediately adjacent to the office area to promote safe and efficient movement of people.</li> </ul>



<p>15.1.4.2 That the need to protect features of the natural and built environment be recognised in the provision of parking spaces.</p> <p>15.1.4.3 That parking spaces be provided at a location and scale which enables the efficient use of parking spaces and handling of traffic generation by the adjacent roading network.</p> <p>15.1.4.4 That existing parking spaces are retained or replaced with equal or better capacity where appropriate, so as to ensure the orderly movement and control of traffic.</p> <p>15.1.4.5 That appropriate loading spaces be provided for commercial and industrial activities to assist with the pick-up and delivery of goods.</p> <p>15.1.4.6 That the number, size, gradient and placement of vehicle access points be regulated to assist traffic safety and control, taking into consideration the requirements of both the New Zealand Transport Agency and the Far North District Council.</p> <p>15.1.4.7 That the needs and effects of cycle and pedestrian traffic be taken into account in assessing development proposals.</p> <p>15.1.4.8 That alternative options be considered to meeting parking requirements where this is deemed appropriate by the Far North District Council.</p>	
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**Proposed Far North District Plan**

Although not requiring resource consent under the Proposed Far North District Plan, the objectives and policies of the Proposed District Plan are relevant and are considered as follows:

**Objectives and Policies**

The relevant objectives and policies of each of the sections of the FNDC are considered in the table below:

Objectives and Policies	Comments
<p><b>Light industrial Zone</b></p> <p><b>Objectives</b></p> <p><b>LIZ-01</b></p> <p>The Light Industrial zone is utilised for the efficient operation of light industrial activities and is managed to ensure its long-term protection, including from:</p> <p>land fragmentation; land sterilisation; and reverse sensitivity effects.</p> <p><b>LIZ-02</b></p> <p>The Light Industrial zone accommodates a range of light industrial activities that:</p> <p>efficiently use the physical resources of the zone; are characterised largely by light manufacturing, contractor depots, automotive and marine repair and service industries; are not unreasonably constrained by surrounding activities, and</p> <p>avoid compromising the operation of future light industrial activities within the zone.</p> <p><b>LIZ-03</b></p> <p>Enable land use and subdivision in the Light Industrial zone where there is adequacy and capacity of available or programmed development infrastructure to support it.</p> <p><b>LIZ-04</b></p> <p>The adverse environmental effects generated by light industrial activities are managed, in particular at zone boundaries.</p> <p><b>LIZ-05</b></p>	<p>The Light Industrial objectives and policies seek similar outcomes to those of the Industrial Zone in the FNDP and accordingly the proposal will be consistent with these for the reasons set out in the assessment of effects and the consideration of the relevant provisions of the FNDP considered in the foregoing.</p>

The Light Industrial zone accommodates a limited range of commercial activities which either support light industrial activities or are not anticipated in the Mixed Use zone.

**Policies**

**LIZ-P1**

Enable development and operation of light industrial activities in the Light Industrial zone.

**LIZ-P2**

Require all subdivision in the Light Industrial zone to provide the following reticulated services to the boundary of each lot:

telecommunications:

fibre where it is available;

copper where fibre is not available;

copper where the area is identified for future fibre deployment.

local electricity distribution network; and

wastewater, potable water supply and stormwater where they are available.

**LIZ-P3**

Avoid the establishment of activities that do not support the function of the Light Industrial zone, including:

heavy industrial activities;

residential activities;

community facilities;

retirement villages;

education facilities; and

sport and recreation facilities.

**LIZ-P4**

Allow commercial activities in the Light Industrial zone that:

are complementary to and support light industrial activities; or  
require larger sites and may not accommodate amenity values anticipated in the Mixed Use zone.

**LIZ-P5**

Ensure that built form is of a scale and design that is:

consistent with the amenity of the Light Industrial zone; and

complementary to the character and amenity of adjoining zones.

**LIZ-P6**

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:

consistency with the scale, density, design and character of the light industrial environment and purpose of the zone;

the location, scale and design of buildings or structures, outdoor storage areas, parking and internal roading;

for non-industrial activities:

scale and compatibility with industrial activities;

potential reverse sensitivity effects on industrial activities.

at zone interfaces:

any setbacks, fencing, screening or landscaping required to address potential conflicts;

any adverse effects on the character and amenity of adjacent zones.

the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; including:

opportunities for low impact design principles;

management of three waters infrastructure and trade waste such as

<p>industrial by-products.          managing natural hazards;          the adequacy of roading infrastructure to service the proposed activity;          any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity; and          any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.</p>	
<p><b>Earthworks</b></p> <p><b>Objectives</b></p> <p><b>EW-01</b></p> <p>Earthworks are enabled where they are required to facilitate the efficient subdivision and development of land, while managing adverse effects on waterbodies, the coastal marine area, public safety, surrounding land and infrastructure.</p> <p><b>EW-02</b></p> <p>Earthworks are appropriately designed, located and managed to protect historical and cultural values, natural environmental values, preserve amenity and safeguard the life-supporting capacity of soils.</p> <p><b>EW-03</b></p> <p>Earthworks are undertaken in a manner which does not compromise the stability of land, infrastructure and public safety.</p> <p><b>Policies</b></p> <p><b>EW-P1</b></p> <p>Enable earthworks necessary to provide for the district's social, economic and cultural well-being, and their health and safety where they</p>	<p>The earthworks objectives and policies seek similar outcomes to the corresponding objectives and policies in the Soils and Minerals section of the FNDC to enable the efficient use of the site while protecting the natural and sensitive environments from the effects of undertaking the site works. Accordingly, the proposal will be consistent with the provisions of the Proposed District Plan for the reasons set out in the assessment of effects and in the consideration of the relevant provisions of the FNDC foregoing.</p>

provide for:

- urban land uses and development within urban zones;
- rural land uses and development including, farm tracks, land drainage, and other farming activities within the Rural zones;
- conservation and recreation activities;
- land drainage and flood control works;
- and
- installation, upgrade and maintenance of infrastructure.

**EW-P2**

Ensure earthworks are managed, when it has the potential to:

- create new or exacerbate existing natural hazards, including but not limited to flooding, instability, and coastal hazards;
- result in adverse effects on the amenity, characteristics and qualities of outstanding natural landscapes, outstanding natural features, historic heritage, cultural values, indigenous biodiversity and significant natural areas and features; and
- adversely affect waterbodies and the coastal marine area due to inadequate setbacks.

**EW-P3**

Ensure earthworks are located and designed appropriately to manage the effects of the activity by:

- controlling maximum depth and height and maximum area or volume of earthworks;
- requiring appropriate setbacks to be maintained from adjoining property boundaries, waterbodies and the coastal environment;
- managing the location and design of infrastructure;
- managing impacts on natural drainage patterns and overland flow paths; and

controlling the movement of dust and sediment beyond the area of development to avoid:

nuisance effects and/or amenity effects on surrounding sites, or

silt and sediment entering stormwater systems or waterbodies and the coastal marine area.

**EW-P4**

Require earthworks to be of a type, scale and form that is appropriate for the location having regards to the effects of the activity, and:

existing site constraints, opportunities and specific engineering requirements;

the impact on existing natural landforms, features, historic heritage and indigenous biodiversity;

compatibility with the visual amenity and character values of the area;

changes in the natural landform that will lead to instability, erosion and scarring;

impacts on natural drainage patterns and overland flow paths;

using materials for retaining structures that are compatible with the visual amenity and the characteristics and qualities of the surrounding area;

minimising adverse visual effects associated with any exposed cut faces or retaining structures, including with the use of screening, landscaping and/or planting; and

loss of flood storage within flood hazard areas.

**EW-P5**

Manage effects on historic heritage and cultural values that may be discovered when undertaking earthworks by:

requiring a protocol for the accidental discovery of archaeology, kōiwi and artefacts of Māori origin; and

undertaking appropriate actions in accordance with mātauranga and tikanga Māori when managing effects

<p>on cultural values.</p> <p><b>EW-P6</b></p> <p>Require that all earthworks are designed and undertaken in a manner that ensures the stability and safety of surrounding land, buildings or structures.</p> <p><b>EW-P7</b></p> <p>Ensure all earthworks associated with land development are designed and assessed in a coordinated and integrated manner at the time of subdivision, by:</p> <p>controlling earthworks associated with subdivision, including for the purpose of site preparation, creating roads or access to/within the subdivision, and for the provision of infrastructure; and considering the appropriateness of earthworks in conjunction with site design and layout of future subdivision and/or development of land, particularly for future infill or greenfield subdivision.</p> <p><b>EW-P8</b></p> <p>Manage earthworks 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>the location, scale and volume;  depth and height of cut and fill;  the nature of filling material and whether it is compacted;  the extent of exposed surfaces or stockpiling of fill;  erosion, dust and sediment controls;  the risks of natural hazards, particularly flood events;  stormwater controls;  flood storage, overland flow paths and drainage patterns;  impacts on natural coastal processes;  the stability of land, buildings and</p>	
--	--



<p>infrastructure;</p> <p>visual amenity, natural character and landscape values,</p> <p>historic heritage values, and whether any assessment or advice from a suitably qualified and experienced heritage expert is required;</p> <p>any historical, spritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;</p> <p>the life-supporting capacity of <b>soils</b>;</p> <p>the extent of indigenous biodiversity clearance and its effect on biodiversity values;</p> <p>outstanding natural character, outstanding natural landscapes and outstanding natural features;</p> <p>riparian margins;</p> <p>the location, operational and functional needs and use of infrastructure;</p> <p>temporary or permanent nature of any adverse effect; and</p> <p>traffic and noise effects.</p>	
<p><b>Transport Objectives</b></p> <p><b>TRAN-O1</b></p> <p>The State Highways, transport networks and cycleways of strategic significance are recognised and managed as regionally significant infrastructure to support the economic, cultural, environmental and social wellbeing of current and future generations.</p> <p><b>TRAN-O2</b></p> <p>The transport network is designed and located to minimise adverse effects on historical, cultural and natural values.</p> <p><b>TRAN-O3</b></p> <p>Land use and all modes of transport are integrated so that the transport network is safe, efficient and well-connected.</p>	<p>The Transport objectives and policies seek similar outcomes to the corresponding objectives and policies in the Transport section of the FNDC to ensure the ongoing safe and efficient operation of the road network while also ensuring the parking and access needs of any activity are met and avoiding adverse effects on the natural environment. Accordingly, the proposal will be consistent with the provisions of the Proposed District Plan for the reasons set out in the assessment of effects and in the consideration of the relevant provisions of the FNDC foregoing.</p>

**TRAN-O4**

Parking, loading and access provisions support the needs of land use and subdivision activities, and ensure safe and efficient operation for users.

**TRAN-O5**

The safe and efficient movement of vehicular, cycle and pedestrian traffic that also meets the needs of persons with a disability or limited mobility.

**TRAN-O6**

The transport network is resilient to the likely current and future effects of climate change, and supports urban environments designed to reduce greenhouse gas emissions.

**Policies**

**TRAN-P1**

Recognise the transport network as regionally significant infrastructure by having particular regard to the significant social, economic, and cultural benefits of transport projects when determining resource consent applications or making recommendations on notices of requirement.

**TRAN-P2**

Establish and maintain a transport network that:

provides safe efficient linkages and connections;

avoids and mitigates adverse effects on historical, cultural and natural environment values to the extent practicable;

recognises the different functions and design requirements for each road classification under the most current

National Transport Network classification system;  
 supports reductions of greenhouse gases from vehicle movements;  
 considers the likely current and future impacts of climate change when new sections of the network are proposed or existing sections upgraded; and  
 provides for existing and future pedestrian and cycling pathways, including the Pou Herenga Tai Twin Coast Cycle Trail.

**TRAN-P3**

Ensure the safe, efficient and well connected operation of the transport network through the management of:

- the subdivision layout, and location of buildings, structures and other potential visual obstructions that may impact on sightlines and the integrity of the road carriageway;
- the design of access and parking;
- vehicular access to and from sites;
- the volume of traffic from land use activities;
- vehicular, pedestrian, and cyclist needs, including persons with a disability or limited mobility;
- the adverse cumulative effects of land use and subdivision on the transport network; and
- reverse sensitivity effects that may impact regionally significant infrastructure.

**TRAN-P4**

Manage the design, location and supply of parking to:

- achieve the safe, efficient and effective operation of the transport network;
- support the operational and functional requirements of activities;
- appropriately manage character and amenity effects on the local environment, including on the streetscape;

minimise the impact of large parking areas on the stormwater network by encouraging low impact design; provide sufficient parking for persons with a disability or limited mobility; and comply with any relevant Parking Management Plans.

**TRAN-P5**

Encourage new land uses to support an integrated and diverse transport network by:

- promoting alternative transport modes;
- the provision of safe and secure parking facilities for bicycles and associated changing or showering facilities for staff;
- allocation of parking facilities for motorcycles, car share vehicles, pick/up/drop off areas for ride share services and charging stations for electric vehicles; and
- supporting the establishment and operation of accommodation and tourism related activities in close proximity to the Pou Herenga Tai Twin Coast Cycle Trail, provided reverse sensitivity effects can be avoided.

**TRAN-P6**

Provide flexibility for a reduction in on-site parking where it can be demonstrated that:

- there are no adverse effects on public parking or the transport network; or
- there is a lower parking demand; or
- alternative modes of transport are provided for, if appropriate; or
- the reduction will protect cultural or heritage values.

**TRAN-P7**

Only allow high traffic generating activities exceeding the thresholds in TRAN-Table 11 - Trip generation where these activities support the safe,

<p>efficient and effective use of transport infrastructure, as demonstrated through an integrated transport assessment (ITA). All ITAs should be completed by a suitably qualified and experienced transport professional.</p> <p><b>TRAN-P8</b></p> <p>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> <p>the type and level of traffic anticipated;</p> <p>the location of high traffic generating activities and their relationship to existing roads and their status under the National Transport Network classification system, and adjacent properties;</p> <p>low impact design principles, including green spaces;</p> <p>safety requirements and improvements;</p> <p>the management of stormwater;</p> <p>any natural hazards;</p> <p>any cumulative effects arising from lawfully established activities in the surrounding environment;</p> <p>current and future connectivity including pathways and parking, and open space networks;</p> <p>any traffic assessment prepared by a suitably qualified and experienced transport professional;</p> <p>impacts on any State Highway or Limited Access Road; and</p> <p>any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.</p>	
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Summary of District Plan Assessment

In summary of the foregoing assessment of the relevant provisions of the FNDC and Proposed District Plan, In respect of the zoning and other matters requiring consent there is no change in policy approach and in finding that the proposal is consistent with the relevant provisions of the FNDC so too is it

considered that the relevant provisions of the Proposed District Plan are satisfied and no weighting exercise need be carried out.

## **10.0 OTHER MATTERS (Section 104(1)(c))**

There are no other matters considered relevant to making an appropriate determination on whether to grant or refuse consent to this application. The matters covered by sections 104(1) (a) and 104(1) (b) are considered sufficient.

## **11.0 PART 2 MATTERS**

As the proposal to construct a large industrial food storage and distribution facility that provides for the needs of the community on vacant land anticipated for industrial use represents the efficient use of an existing industrial land resource and any adverse effects on the receiving environment will be less than minor, the proposal is consistent with the matters located in Part 2 of the Act.

In the context of this discretionary activity application, as the objectives and policies of the relevant statutory documents were prepared having regard to Part 2 of the RMA, they capture all relevant planning considerations and contain a coherent set of policies designed to achieve clear environmental outcomes. They also provide a clear framework for assessing all relevant potential effects and there is no need to go beyond these provisions and look to Part 2 in making this decision as a more detailed assessment against Part 2 would not add anything to the evaluative exercise

## **12.0 CONCLUSION**

Consent is sought to construct a building to accommodate a food storage and distribution facility inclusive of ancillary administrative offices at 15 – 19 Kahikatearoa Lane, Waipapa. The site is zoned for industrial purposes under both the FNDC and the Proposed District Plan.

Land Use Resource Consent is required because the proposal does not provide screening along its southern boundary at the Rural Zone interface, two of the three vehicle crossings have widths of 9m being greater than the permitted 6m and to facilitate the construction of the building and provide for site access, loading and parking areas with site works required across the site.

Having undertaken an assessment of the potential effects, it is considered that the adverse effects on the environment will be less than minor and that, overall, the proposal will have an acceptable effect on the environment and those people within it.

The activity has also been assessed against the relevant provisions of the operative Far North District Plan and the Proposed Far North District Plan. In respect to the zoning of the site and the matters requiring consent the two plans are similar in their approach with no divergence in overall policy direction. The proposal is considered to be consistent with these provisions as the proposal represents a well-planned and designed industrial activity creating employment opportunities as is the purpose of the zone in a manner that maintains the amenity of the area and the potential adverse effects arising from

the site works can be contained within the site and the safety of pedestrians and motorists in this environment can be maintained.

Therefore, it is considered that the Council may grant consent to this land use resource consent application.



Paul Sousa BREP (MNZPI)  
Director  
Integrated Planning Solutions Limited

1 July 2024







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



  
R. W. Muir  
Registrar-General  
of Land

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 65 of 376 - 11/07/2023 - NZBTC**

**Identifier** 1019564  
**Land Registration District** North Auckland  
**Date Issued** 04 October 2022

**Prior References**  
65226

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**Estate** Fee Simple  
**Area** 3799 square metres more or less  
**Legal Description** Lot 6 Deposited Plan 567982

**Registered Owners**  
Bidfood Limited

---

**Interests**

2554072.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 4.10.2022 at 8:57 am  
2781191.1 CERTIFICATE PURSUANT TO SECTION 77 BUILDING ACT 2004 THAT THIS RECORD OF TITLE IS  
SUBJECT TO THE CONDITION IMPOSED UNDER SECTION 75(2) (ALSO AFFECTS 1019565 ) - 13.7.2023 at 7:00  
am





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
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R. W. Muir  
Registrar-General  
of Land

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 67 of 376 - 11/07/2023 - NZBTC**

**Identifier** 1019565  
**Land Registration District** North Auckland  
**Date Issued** 04 October 2022

**Prior References**  
65226

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**Estate** Fee Simple  
**Area** 4035 square metres more or less  
**Legal Description** Lot 7 Deposited Plan 567982

**Registered Owners**  
Bidfood Limited

---

**Interests**

2554072.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 4.10.2022 at 8:57 am  
2781191.1 CERTIFICATE PURSUANT TO SECTION 77 BUILDING ACT 2004 THAT THIS RECORD OF TITLE IS  
SUBJECT TO THE CONDITION IMPOSED UNDER SECTION 75(2) (ALSO AFFECTS 1019564 ) - 13.7.2023 at 7:00  
am





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



  
R.W. Muir  
Registrar-General  
of Land

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 69 of 376 - 11/07/2023 - NZBTC**

**Identifier** 1019566  
**Land Registration District** North Auckland  
**Date Issued** 04 October 2022

**Prior References**  
65226

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**Estate** Fee Simple  
**Area** 4047 square metres more or less  
**Legal Description** Lot 8 Deposited Plan 567982

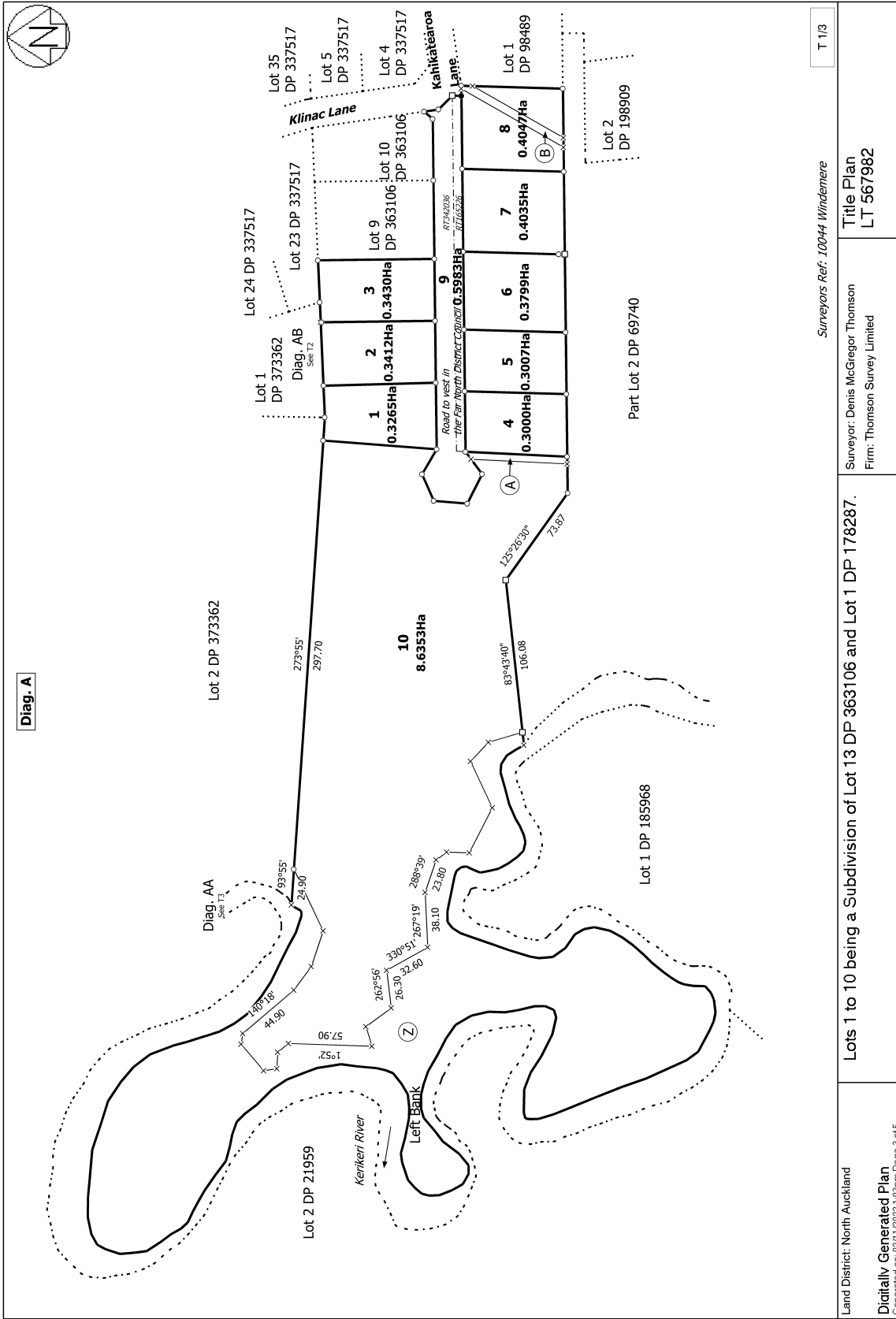
**Registered Owners**  
Bidfood Limited

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**Interests**

Subject to a right (in gross) to convey electricity over part marked B on DP 567982 in favour of Top Energy Limited created by Easement Instrument 7220454.2 - 5.2.2007 at 9:00 am  
2554072.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 4.10.2022 at 8:57 am

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 70 of 376 - 11/07/2023 - NZBTC**



# View Instrument Details



**Instrument No** 12554072.4  
**Status** Registered  
**Date & Time Lodged** 04 October 2022 08:57  
**Lodged By** Thompson, Emma Jane  
**Instrument Type** Consent Notice under s221(4)(a) Resource Management Act 1991



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Affected Records of Title	Land District
1019559	North Auckland
1019560	North Auckland
1019561	North Auckland
1019562	North Auckland
1019563	North Auckland
1019564	North Auckland
1019565	North Auckland
1019566	North Auckland
1019567	North Auckland

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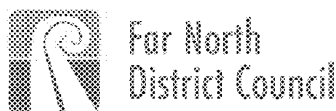
**Annexure Schedule** Contains 2 Pages.

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## Signature

Signed by Emma Jane Thompson as Territorial Authority Representative on 28/09/2022 02:09 PM

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



P.O. Box 102, Whangarei  
 0101 540 New Zealand  
 Telephone 0907 760 117  
 Fax 09 431 755  
 E-mail: [info@fndc.govt.nz](mailto:info@fndc.govt.nz)  
[www.fndc.govt.nz](http://www.fndc.govt.nz)

*Te Kaitiaki o Te Taiarua Ki Te Kaitiaki*

Hei te kaitiaki whakaiti  
 o Te Taiarua, Whangarei

**THE RESOURCE MANAGEMENT ACT 1991**

**SECTION 221: CONSENT NOTICE**

**REGARDING RC 2160324 RMAVAR/B**

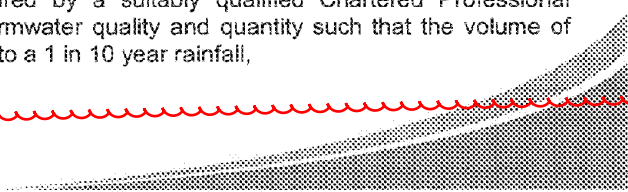
Being the Subdivision of Lot 13 DP 363106 and Lot 1 DP 178287  
North Auckland Registry

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

**SCHEDULE**

**Lots 1 to 8 – DP 567982**

- i. Any building erected on the lot shall have foundations specifically designed by a suitably qualified chartered professional engineer. The minimum floor level for which will be set above the 1 in 100 year flood level and in accordance with the recommendations contained in the Engineers Report prepared by Haigh Workman Civil and Structural Engineers Ltd and submitted with Resource Consent 2160324. The details of design shall be submitted in conjunction with the Building Consent application.
- ii. In conjunction with the construction of any building which includes a wastewater treatment & effluent disposal system the applicant shall submit for Council approval a TP58 Report prepared by a Chartered Professional Engineer or an approved TP58 Report Writer. The report shall be prepared generally in accordance with the recommendations in the Engineers Report prepared by Haigh Workman Civil and Structural Engineers Ltd and submitted with Resource Consent 2160324. It shall identify a suitable method of wastewater treatment for the proposed development along with an identified effluent disposal area plus a 100% reserve disposal area. The report shall confirm that all of the treatment & disposal system can be fully contained within the lot boundary and comply with the Regional Water & Soil Plan Permitted Activity Standards.
- iii. Provide, at the time of lodging a building consent application for Lots 1 - 8, a specific design for stormwater management, prepared by a suitably qualified Chartered Professional Engineer, which addresses both stormwater quality and quantity such that the volume of stormwater discharged is attenuated to a 1 in 10 year rainfall,







Phone: 09 431 3000  
Fax: 09 431 3137  
Email: [enr@fnrc.govt.nz](mailto:enr@fnrc.govt.nz)  
Website: [www.fnrc.govt.nz](http://www.fnrc.govt.nz)

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*Te Kaitiaki o te Tai Tokerau  
www.fnrc.govt.nz*

(being the design capacity of the stormwater reticulation) for rainfall event up to those with a 2% AEP. The stormwater quality standard shall comply with section 4.4.2 of the Councils Engineering Standards (2009) or for a lower level of contaminant where required by an NRC Stormwater Discharge Consent.

Any stormwater discharged into the Council's stormwater system is to comply with the requirements and conditions of the Far North District Council's stormwater discharge consent.

**Lot 10 – DP 567982**

- iv. The owner shall preserve the indigenous trees and bush contained within the Protected Natural Area by Bush Covenant, and shall not without the prior written consent of the Council and then only in strict compliance with any conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall maintain and upgrade where necessary a stock fence, which excludes the intrusion of grazing stock into the Covenanted area. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

**All Lots – DP 567982**

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

SIGNED:

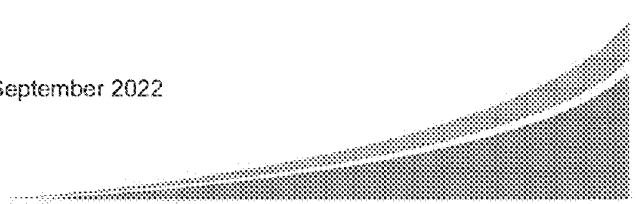
Mr Patrick John Killalea - Authorised Officer

By the FAR NORTH DISTRICT COUNCIL

Under delegated authority:

PRINCIPAL PLANNER – RESOURCE MANAGEMENT

DATED at KERIKERI this 23<sup>rd</sup> day of September 2022



Approved by Registrar-General of Land under No. 2002/6055

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

Sections 90A and 90F, Land Transfer Act 1952

**EI 7220454.2 Easement I**

Land registration district

**NORTH AUCKLAND**



Cpy - 01/01, Pgs - 007,05/02/07,12:54



DocID: 312797839

Grantor

*(70) [Signature]*

Surname(s) must be underlined or in CAPITALS.

**Brian Jeffrey PARRISH, ~~William James WALLING~~ and Kenneth Raymond WRIGHT**

*Michelle Joy Twigg*

Grantee

Surname(s) must be underlined or in CAPITALS.

**TOP ENERGY LIMITED**

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

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

Dated this 26th day of January 2007

Attestation

	<b>Signed in my presence by the Grantor</b>
	<i>[Signature]</i>
	Signature of witness
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name <u>S Rockell</u>
	Occupation <u>Client Manager</u>
Signature [common seal] of Grantor	Address <u>Kemp Rd, Kerikeri</u>

<b>SIGNED BY THE GRANTEE BY ITS DULY APPOINTED ATTORNEY</b> 	<b>Signed in my presence by the Grantee</b>
	<i>[Signature]</i>
	Signature of witness
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name <u>KEVIN HUGH QUICKFALL</u>
	Occupation <u>ACCOUNTANT</u>
Signature [common seal] of Grantee	Address <u>KERIKERI</u>

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

*[Signature]*

[Solicitor for] the Grantee

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

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 74 of 376 - 11/07/2023 - NZBTC

**Annexure Schedule 1**



Easement instrument

Dated

[Empty box for date]

Page

1

of

5

pages

**Schedule A**

(Continue in additional Annexure Schedule if required.)

Purpose (nature and extent) of easement, profit, or covenant	Shown (plan reference)	Servient tenement (Identifier/CT)	Dominant tenement (Identifier/CT or in gross)
Right to convey electricity	Marked "B" on Deposited Plan 371334	NA165226	In gross

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

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

Unless otherwise provided below, the rights and powers implied in specific classes of easement are those prescribed by the Land Transfer Regulations 2002 and/or the Ninth Schedule of the Property Law Act 1952.

The implied rights and powers are ~~varied~~ ~~negated~~ ~~added to~~ or ~~substituted~~ by:

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

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

**Covenant provisions**

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

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

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

~~[Annexure Schedule 2].~~

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

*[Handwritten signatures and initials]*

**Annexure Schedule**



Insert type of instrument  
"Mortgage", "Transfer", "Lease" etc

Easement

Dated

Page 2 of 5 Pages

(Continue in additional Annexure Schedule, if required.)

**Annexure Schedule 2**

**1. Interpretation**

1.1 In this instrument, unless the context otherwise requires:

- (a) "Easement Area" means that part of the Servient Land marked on Deposited Plan 371334 with the letters "B"
- (b) "Servient Land" means the land owned by the Grantor described in Schedule A of Annexure Schedule 1;
- (c) "Transmission Line" means wires or conductors of any other kind (including fibre optic or coaxial cables) used or intended to be used for the transmission of electricity and/or telecommunication signals, waves or impulses; and includes any insulators, towers, poles, ground stays, supporting structures, crossarms, foundations, casings, tubes, tunnels, minor fixtures and other items, equipment or material used or intended to be used for supporting, securing, enclosing, surrounding and protecting a Transmission Line; and also includes any buildings, towers or pole mounted transformers, fuses, fuse holders, automatic switches, voltage regulators, capacitors or other instruments, apparatus or devices used in association with a Transmission Line; and anything in replacement or substitution of any of the foregoing;
- (d) words importing the singular include the plural and vice versa; and
- (e) references to the Grantor and Grantee include their respective heirs, executors, administrators, successors and assigns.

**2. Grant of electricity easement**

2.1 The Grantor grants to the Grantee as an easement in gross an electricity supply easement over the Servient Land with the following rights and powers:

- (a) to convey, send, transmit and transport electricity and telecommunications signals, waves or impulses, without interruption or impediment and in any quantity by means of the Transmission Line;
- (b) to survey, investigate, lay, install and construct the Transmission Line on, over or under the Easement Area, at a depth or height and along a line determined by the Grantee;
- (c) to inspect, operate, use, maintain, repair, renew, upgrade, replace, change the size of and remove, the Transmission Line;
- (d) with the Grantee's agents, contractors and employees, and with any vehicles, equipment, tools and materials, to enter and remain for a reasonable time on the Servient Land for any purposes

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 76 of 376 - 11/07/2023 - NZBTC

**Annexure Schedule**



Insert type of instrument  
"Mortgage", "Transfer", "Lease" etc

Easement

Dated

Page

3

of

5

Pages

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

necessary or convenient for the Grantee to exercise its rights under this instrument (including the right to extinguish fires);

- (e) to construct on the Servient Land whatever roads, tracks, access ways, fences, gates and other works are deemed necessary by the Grantee for it to exercise its rights under this instrument and which are approved by the Grantor (that approval not to be unreasonably withheld);
- (f) to keep the Easement Area cleared of all buildings and structures by any means the Grantee considers necessary;
- (g) to keep the Easement Area cleared of all fences, trees and vegetation by any means the Grantee considers necessary where such items:
  - (i) breach any statutory or regulatory requirements or standards or codes of practice or otherwise breach generally accepted engineering standards as to the minimum clearance of the Transmission Line;
  - (ii) impede the exercise by the Grantee of its rights under this instrument or the Grantee's access over the Servient Land or the Easement Area or to the Transmission Line; or
  - (iii) inhibit the safe and efficient operation of the Transmission Line; and
- (h) by whatever means the Grantee considers necessary, to level and grade any stockpiled soil, sand, gravel or other substance or any materials, walls or other earthworks that may exist on the Easement Area in order to ensure that the clearance above the ground level of the Transmission Line is maintained greater than any minimum clearance height that may exist from time to time in statute, regulations, code of practice or otherwise.

2.2 The Grantee has no obligation to construct the Transmission Line or convey electricity through it continuously or at all.

**3 Ownership of the Transmission Line**

The Transmission Line will at all times remain the property of the Grantee.

**4 Restrictions on Grantee's use**

4.1 The Grantee must, in exercising its rights under this instrument, cause as little disturbance as is reasonably possible to the Grantor, the Servient Land and the Grantor's stock and other property and must ensure that, where applicable, all gates on the Servient Land are left as the Grantee finds them.

4.2 The Grantee must restore any part of the surface of the Servient Land that is affected by the Grantee exercising any of its rights under this instrument to a condition equivalent, as far as reasonably practicable, to that existing before the Grantee exercised those rights.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.

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**Annexure Schedule**



Insert type of instrument  
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Easement

Dated

Page 4 of 5 Pages

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

- 5 Grantor's Continued Use of Servient Land**
- Subject to clause 6, the Grantor may use the Servient Land as long as that use does not unreasonably interfere with the enjoyment of the Grantee's rights and interests granted under this instrument.
- 6 Restrictions on Grantor's use**
- 6.1 The Grantor must not do or allow any act which may interfere with or affect the rights of the Grantee or the operation of the Transmission Line and, in particular, the Grantor must not, without the consent in writing of the Grantee:
- (a) On the Easement Area, or within the minimum distance from the Transmission Line as advised by the Grantee (having regard to relevant statutory or regulatory requirements, codes of practice and engineering standards applicable from time to time), erect or permit the erection of any buildings or structures, or alter or allow to be altered the overall dimensions of existing buildings or structures, or carry out any earthworks or stockpiling, or construct or permit the construction of any roads, dam, walls or driveways, or allow any vegetation to become established, or remove or permit the removal of any soil, sand, gravel or other substance;
  - (b) disturb the soil below the depth of 0.3 metres within a distance of 6 metres from the visible outer edge of any tower, pole, ground stay, support or foundation comprising part of the Transmission Line;
  - (c) cause or knowingly permit flooding of the Easement Area;
  - (d) burn off crops, trees or undergrowth on the Servient Land;
  - (e) operate or permit to be operated any machinery or equipment (including any cranes, drilling-rigs, pile-drivers and excavators) in close proximity to any tower, pole, ground stay or support comprising part of the Transmission Line;
  - (f) disturb any survey pegs or markers placed on the Easement Area by the Grantee;
  - (g) impede the Grantee's access over the Servient Land or the Easement Area or to the Transmission Line; or
  - (h) do anything on or in the Servient Land which would or could damage or endanger the Transmission Line.
- 6.2 The consent of the Grantee required under clause 6.1 will not be unreasonably withheld, but may be given subject to conditions.
- 6.3 The Grantee may consent in writing to certain existing buildings, structures, fences or vegetation on the Easement Area at the date of this instrument remaining there, but such consent may be given subject to conditions.

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**Annexure Schedule**



Insert type of instrument  
 "Mortgage", "Transfer", "Lease" etc

Easement

Dated

Page 5 of 5 Pages

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

- 6.4 If any act or item consented to under clause 6.2 or 6.3 subsequently results in a situation described in clause 2.1 (g)(i) – (iii), then such consent may be revoked by the Grantee without compensation.
- 6.5 Before exercising any right under this instrument to remove a fence, the Grantee must consult with the Grantor so the Grantor is given a reasonable opportunity to co-ordinate the erection of any necessary replacement fence. The cost of any replacement fence will be borne by the Grantor and the Grantor must comply with any reasonable directions of the Grantee as to the height, materials used and location of such replacement fence.
- 6.6 If the Grantor does not meet its obligations under this instrument within such reasonable timeframe as is specified in a notice from the Grantee requiring it to do so then the Grantee may meet those obligations (and enter the Servient Land for that purpose) and the Grantor is liable to pay to the Grantee the costs incurred in doing so.
- 7 **Indemnity against third party claims**  
  
 Each party ("Indemnifying Party") must indemnify the other ("Indemnified Party") against all claims or demands from third parties for any loss, damage or liability in respect of, or arising out of, the use of the land by the Indemnifying Party (or any person authorised, whether expressly or impliedly by it) **EXCEPT THAT** it will not be liable to indemnify where such loss, damage or liability was caused by the Indemnified Party. Where the actions of the Indemnified Party contribute to that loss, damage or liability, the indemnity given by the Indemnifying Party will be reduced in proportion to that contribution.
- 8 **Licence and assignment**  
  
 The Grantee may assign, licence or otherwise grant any right of all or any part of any estate or interest conferred by this instrument.
- 9 **Perpetual easement**  
  
 There is no power implied in this instrument for the Grantor to terminate the easement for any breach of this instrument or for any other reason. It is the intention of the parties that the easement created by this instrument will continue forever unless surrendered.
- 10 **Arbitration**  
  
 If any dispute arises between the parties in relation to this instrument or any matter arising under it and that dispute cannot be resolved by negotiation, then the parties must submit the dispute to arbitration in accordance with the Arbitration Act 1996 (and its amendments or any statute which replaces it). The arbitration will be commenced by either party giving written notice to the other of the details of the dispute and that party's desire to have the matter referred to arbitration. The arbitration will be by one arbitrator, if the parties can agree upon one, and, if not, then by two arbitrators, one to be appointed by each party, and their umpire to be appointed by the arbitrators before they begin to consider the dispute. The award in the arbitration will be final and binding on the parties.

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**CERTIFICATE OF NON-REVOCATION OF POWER OF ATTORNEY**

I, **STEVEN RICHARD JAMES** of Kerikeri, General Manager – Corporate Services, hereby certify:

1. **THAT** by a deed dated the 3rd day of May 2005, TOP ENERGY LIMITED, a duly incorporated company having its registered office at Kaikohe, appointed me attorney on the terms and subject to the conditions set out in the deed.
2. A copy of the power of attorney is deposited in the Land Titles Office at North Auckland under No 6440969.1.
3. **THAT** as at this date I have not received any notice or information of the revocation of this appointment by the dissolution or otherwise of TOP ENERGY LIMITED.

DATED this 26<sup>th</sup> day of JANUARY 2007



\_\_\_\_\_  
Steven Richard James



# DISTRIBUTION CENTRE DEVELOPMENT



BIDFOOD LIMITED  
KAHIKATEAROA LANE EXTN,  
WAIPAPA

FOR RESOURCE CONSENT

PROJECT No.: 110695

DRAWINGS PREPARED BY

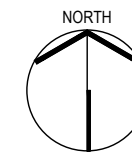


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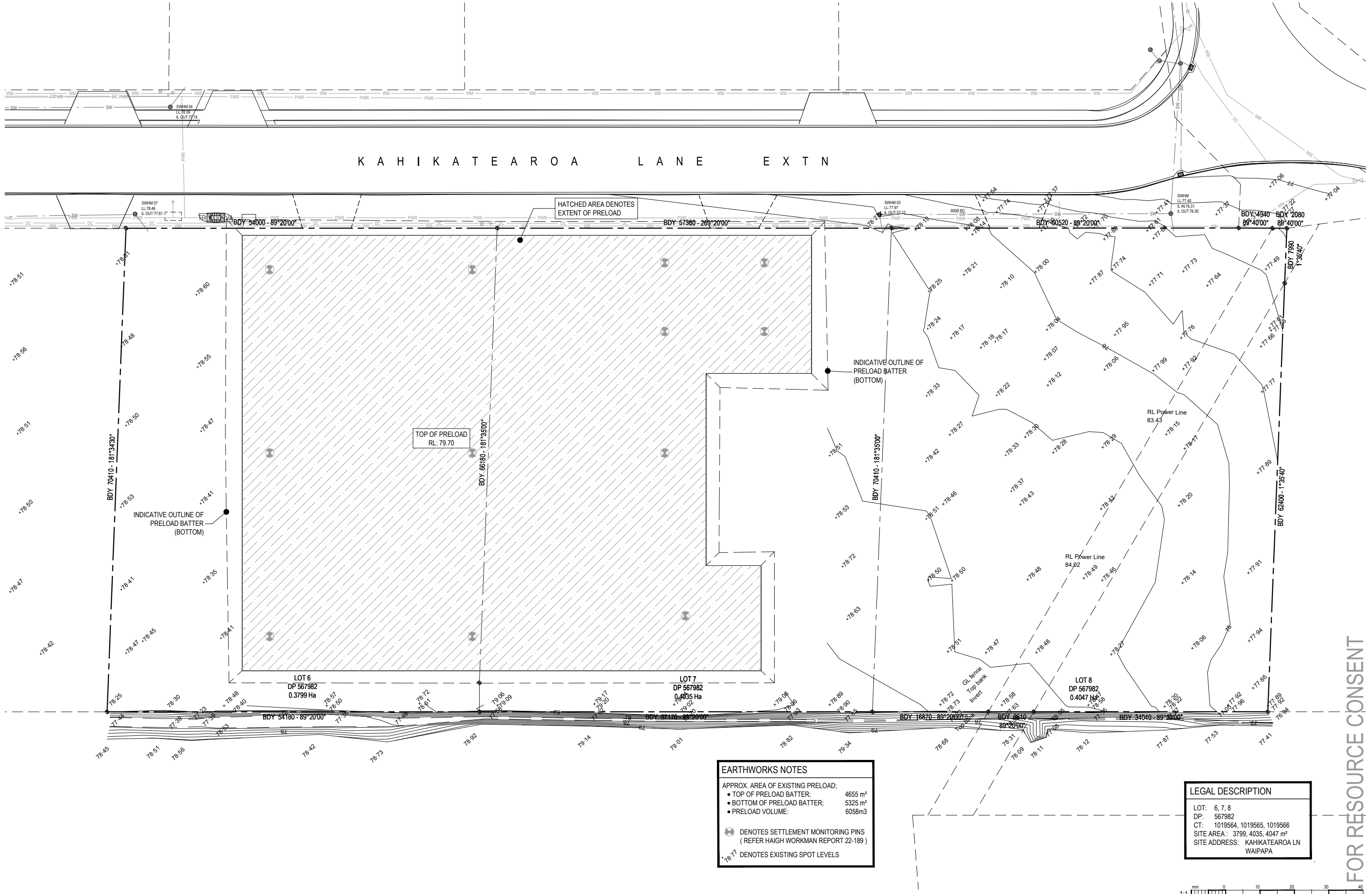


## DISTRIBUTION CENTRE DEVELOPMENT SITE LOCATION

### LEGAL DESCRIPTION

LOT: 6, 7, 8  
DP: 567982  
CT: 1019564, 1019565, 1019566  
SITE AREA: 3799, 4035, 4047 m<sup>2</sup>  
SITE ADDRESS: KAHIKATEAROA LN  
WAIPAPA





**EARTHWORKS NOTES**

APPROX. AREA OF EXISTING PRELOAD;

- TOP OF PRELOAD BATTER; 4655 m<sup>2</sup>
- BOTTOM OF PRELOAD BATTER; 5325 m<sup>2</sup>
- PRELOAD VOLUME; 6058m<sup>3</sup>

⊗ DENOTES SETTLEMENT MONITORING PINS (REFER HAIGH WORKMAN REPORT 22-189)

• DENOTES EXISTING SPOT LEVELS

**LEGAL DESCRIPTION**

LOT: 6, 7, 8  
 DP: 567982  
 CT: 1019564, 1019565, 1019566  
 SITE AREA: 3799, 4035, 4047 m<sup>2</sup>  
 SITE ADDRESS: KAHIKATEA LANE  
 WAIPAPA

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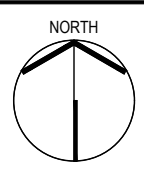
T: + 64 9 373 5880  
 F: + 64 9 373 5883 E: mail@pswan.co.nz

CLIENT: PROJECT TITLE:

**Bidfood**

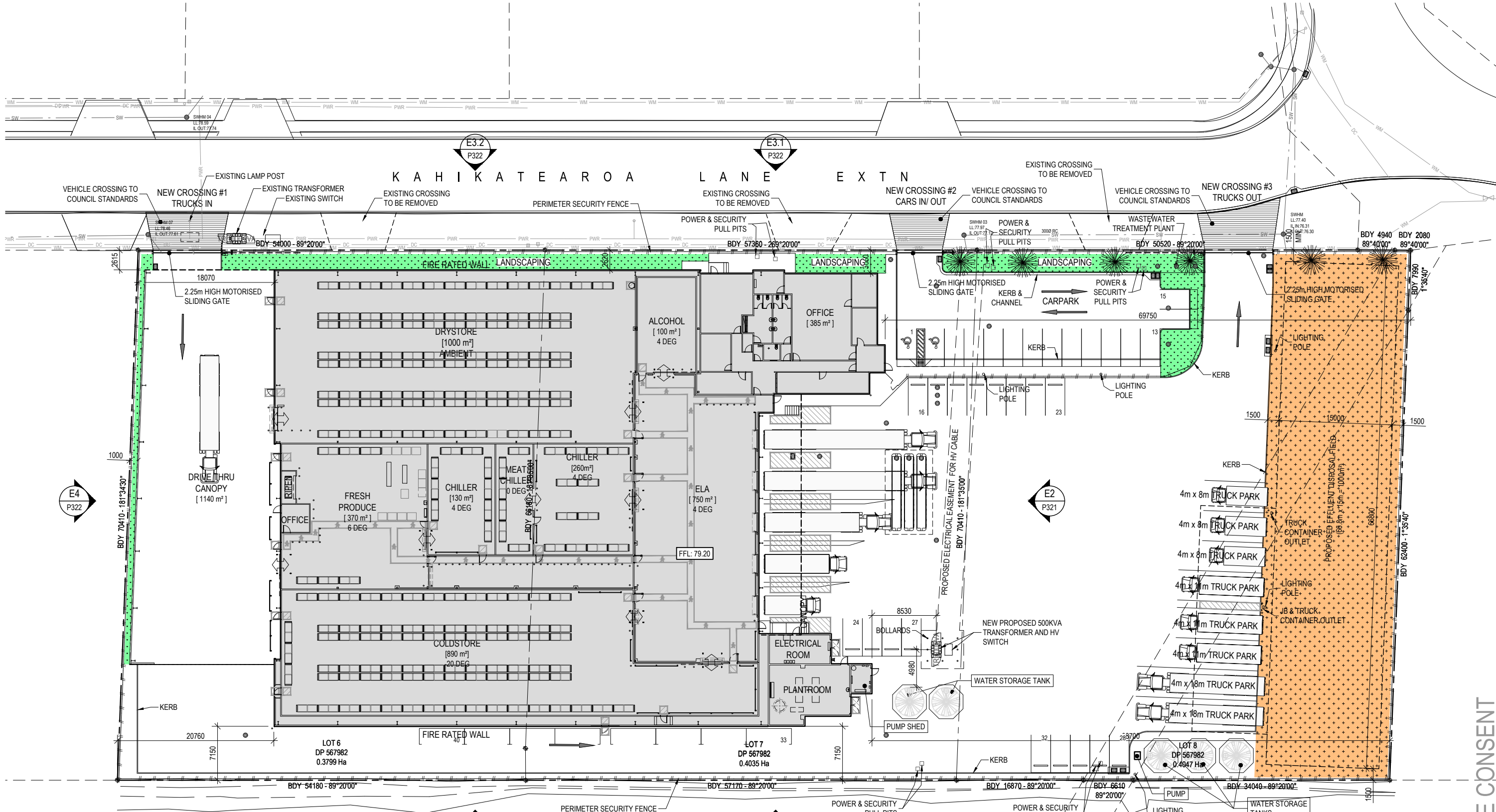
NEW DISTRIBUTION CENTRE  
 FOR  
**BIDFOOD LIMITED**  
 AT  
 (LOTS 6-9) KAHIKATEA LANE EXT N, WAIPAPA

DRAWING TITLE: EXISTING SITE PLAN



FOR RESOURCE CONSENT	01-07-24	1
REVISION:	DATE:	No.:

SCALE: A3 - 1:500 A1 - 1:250		ORIGINAL SHEET SIZE: A3
DESIGNED: BB	CHECKED:	REF: --
DRAWN: RE	APPROVED:	DATE: JUN 2024
DRAWING No.: 110695 - P301		REV: 1



**SITE LEGEND**

- DENOTES EXTENT OF PROPOSED BUILDING WORKS [ 4275 m<sup>2</sup> ]
- DENOTES EXTENT OF NEW GRASSED/LANDSCAPED AREA
- DENOTES EXTENT OF NEW PLANTED EFFLUENT DISPOSAL FIELD

1 SITE PLAN  
 SCALE 1:500

**CARPARKING SUMMARY:**

STANDARD CARPARKS	38
ACCESSIBLE CARPARKS	2
<b>TOTAL CARPARKS PROVIDED</b>	<b>40</b>
TRUCKPARKS	8

**LEGAL DESCRIPTION**

LOT: 6, 7, 8
DP: 567982
CT: 1019564, 1019565, 1019566
SITE AREA: 3799, 4035, 4047 m <sup>2</sup>
SITE ADDRESS: KAHIKATEAROA LN WAIPAPA

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CLIENT: PROJECT TITLE:  
**Bidfood**  
**NEW DISTRIBUTION CENTRE**  
 FOR  
**BIDFOOD LIMITED**  
 AT:  
**(LOTS 6-9) KAHIKATEAROA LANE EXTN, WAIPAPA**

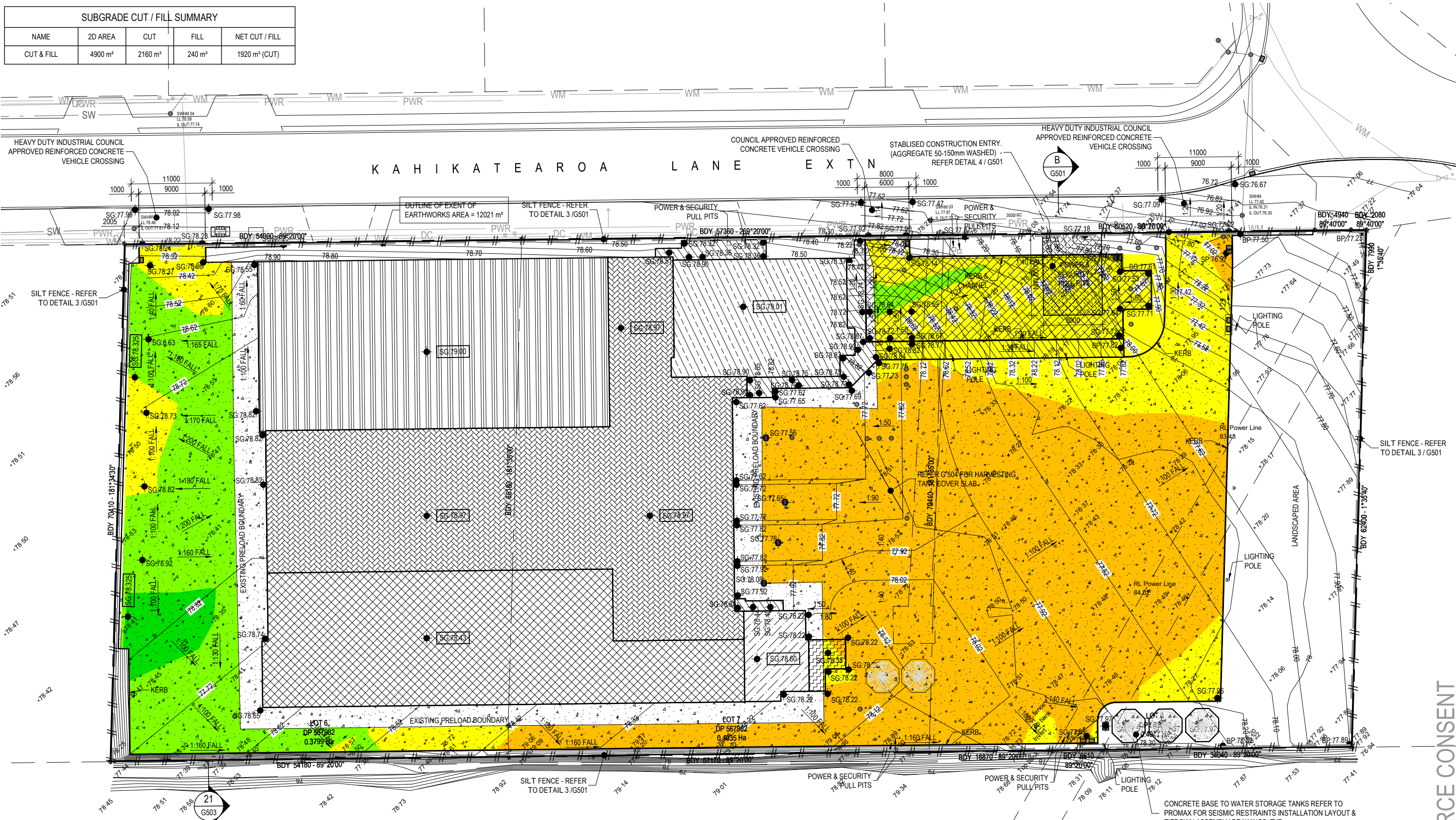
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 NORTH

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DRAWN: RE APPROVED: DATE: OCT 2023
GENERAL UPDATE 01-07-24 2
FOR RESOURCE CONSENT 24-06-24 1
REVISION: DATE: No:
DRAWING No.: <b>110695 - P311</b> REV. 2

FOR RESOURCE CONSENT

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SUBGRADE CUT / FILL SUMMARY				
NAME	2D AREA	CUT	FILL	NET CUT / FILL
CUT & FILL	4900 m <sup>2</sup>	2160 m <sup>2</sup>	240 m <sup>2</sup>	1920 m <sup>2</sup> (CUT)



**LEGEND - SUBGRADE**

REFER TO DWG 110695-G502 FOR DETAILS

	SECTION 1 G501		SECTION 4 G501		SECTION 7 G501	30.90 INDICATES SUBGRADE LEVEL CONTOUR
	SECTION 2 G501		SECTION 5 G501		SECTION 8 G501	RL.31.20 INDICATES SUBGRADE LEVEL SPOT HEIGHT
	SECTION 3 G501		SECTION 6 G501		SECTION 9 G501	

Subgrade Elevation Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-1.000	-0.500	Orange
2	-0.500	0.000	Yellow
3	0.000	0.500	Light Green
4	0.500	1.000	Dark Green

**NOTE:**  
THIS BULK EARTHWORKS PLAN INDICATES WORKED CONTOURS & LEVELS TO THE TOP OF SUBGRADE (BELOW SUBBASE OR BUILDING PLATFORM HARDFILL)

**NOTE:**  
STRIPPED SUBGRADE PLATFORMS TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ANY FILL

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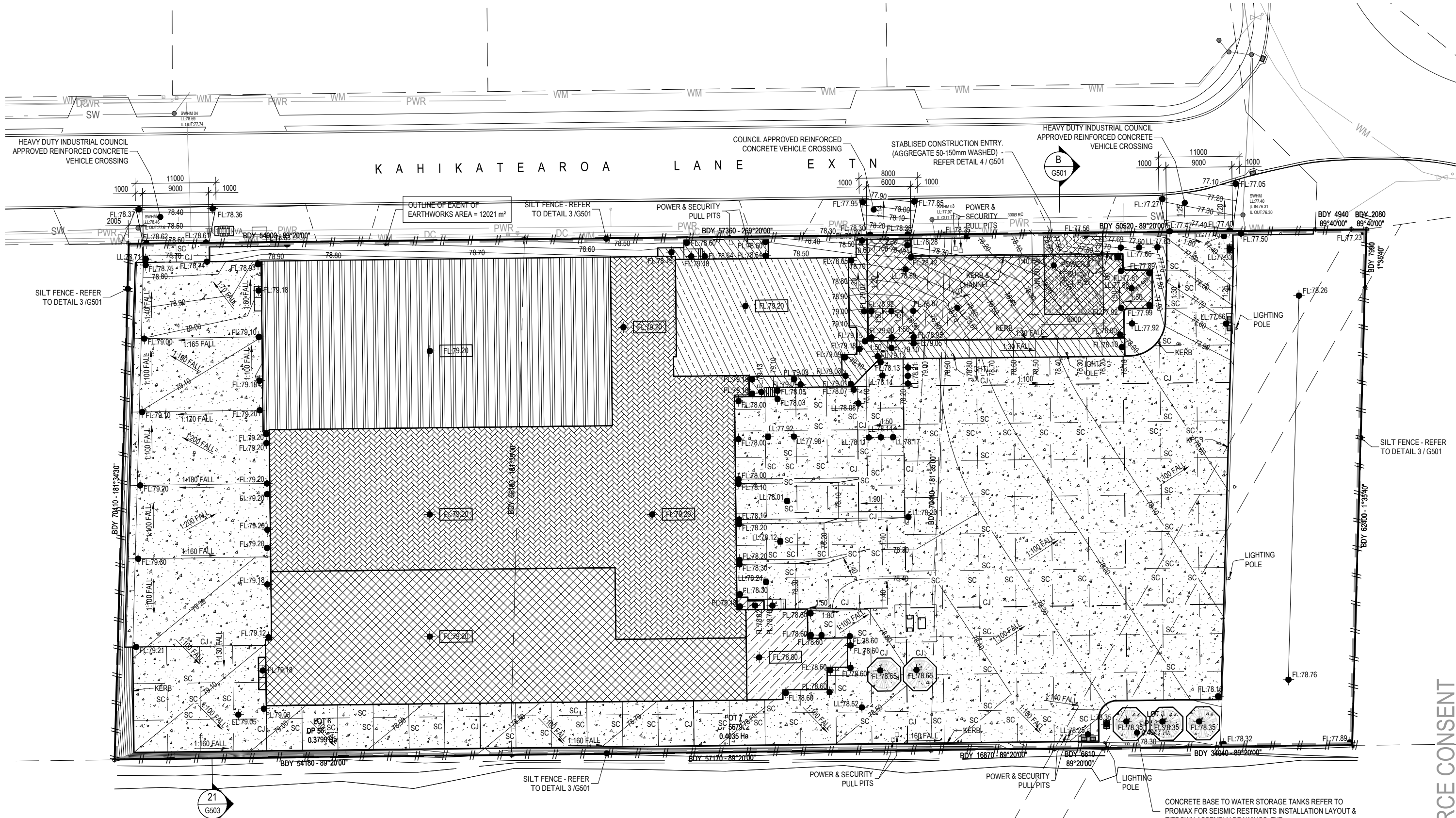
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**Bidfood**  
NEW DISTRIBUTION CENTRE  
FOR  
**BIDFOOD LIMITED**  
AT:  
NEW DISTRIBUTION CENTRE  
**(LOTS 6-9) KAHIKATEAROA LANE EXTN, WAIPAPA**

DRAWING TITLE:  
**SITWORKS  
EARTHWORKS CUT & FILL PLAN  
SUBGRADE LEVELS**

**NORTH**

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DRAWN: RCE	APPROVED: PMS	DATE: MAY 2024
GENERAL UPDATE	01-07-24	2
FOR RESOURCE CONSENT	21-05-24	1
REVISION:	DATE:	No:
DRAWING No.: 110695 - P312		REV: 2

FOR RESOURCE CONSENT



**LEGEND - SITE FINISHES**

REFER TO DWG 110695-G502 FOR DETAILS

	SECTION 1 G501		SECTION 4 G501		SECTION 7 G501		INDICATES SUBGRADE LEVEL CONTOUR
	SECTION 2 G501		SECTION 5 G501		SECTION 8 G501		INDICATES SUBGRADE LEVEL SPOT HEIGHT
	SECTION 3 G501		SECTION 6 G501				CONSTRUCTION JOINT
							SAW CUT LOCATION

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CLIENT: PROJECT TITLE:  
**Bidfood**

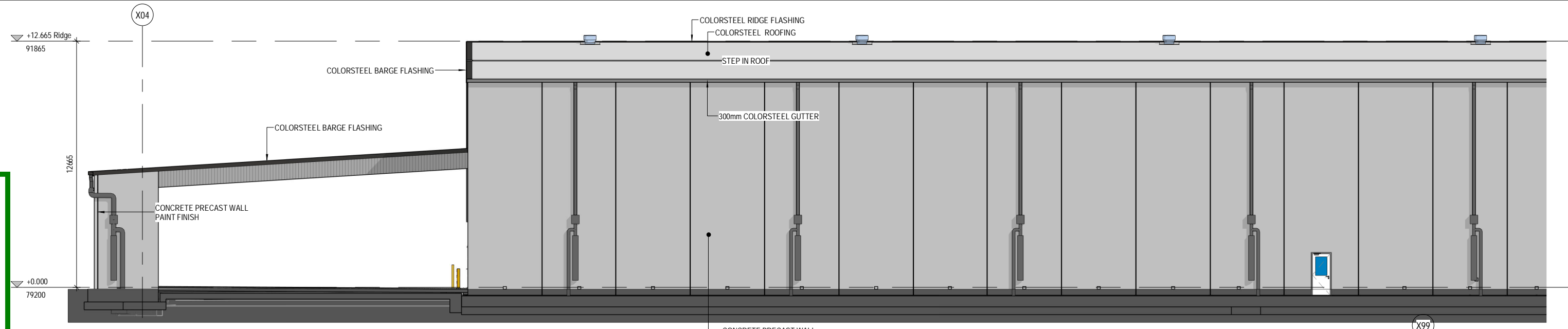
**NEW DISTRIBUTION CENTRE**  
 FOR  
**BIDFOOD LIMITED**  
 AT  
**(LOTS 6-9) KAHIKATEAROA LANE EXTN, WAIPAPA**

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**SITWORKS FINISHED LEVELS PLAN**

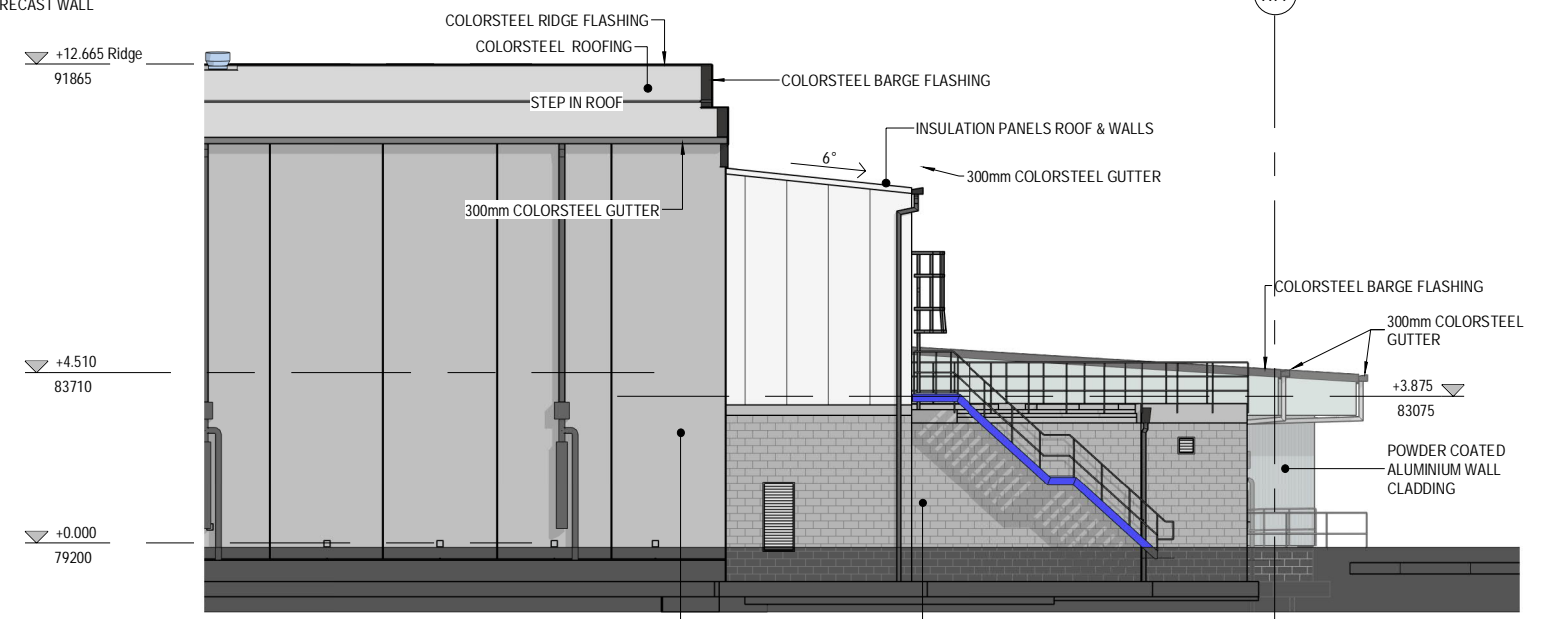
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FOR RESOURCE CONSENT	21-05-24	1
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DRAWING No.: <b>110695 - P314</b>		REV. <b>2</b>

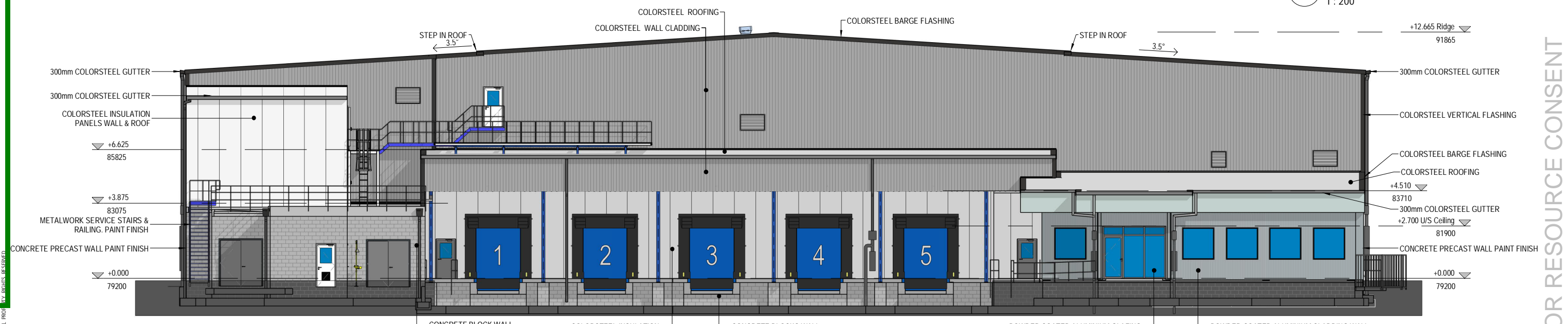
FOR RESOURCE CONSENT



E1.1 SOUTH ELEVATION - PART 1  
1 : 200



E1.2 SOUTH ELEVATION - PART 2  
1 : 200



E2 EAST ELEVATION  
1 : 200

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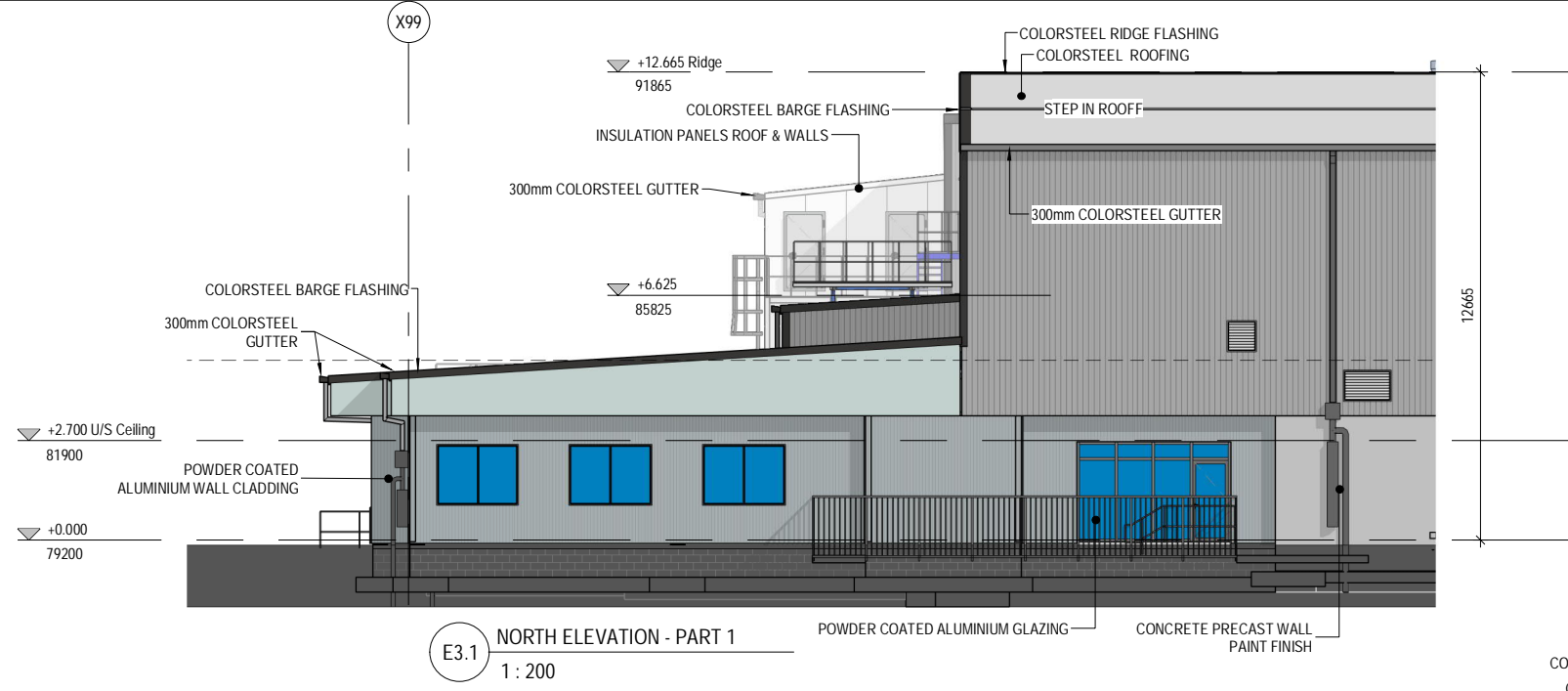
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FOR:  
**BIDFOOD LIMITED**  
AT:  
(LOTS 6-9) KAHIKATEAROA LANE EXTN, WAIPAPA

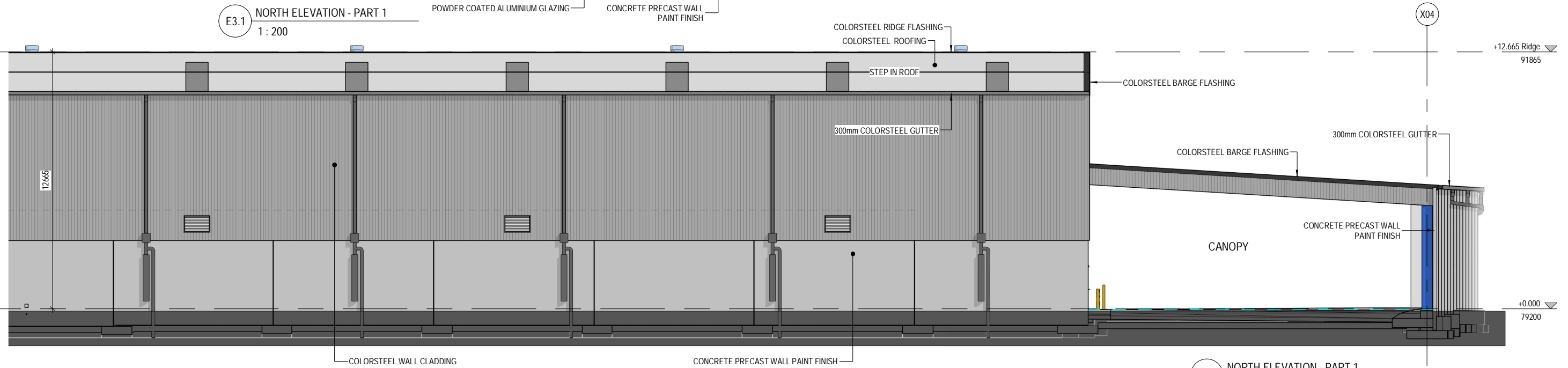
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FOR RESOURCE CONSENT	21-05-24	1	
REVISION	DATE	REF	

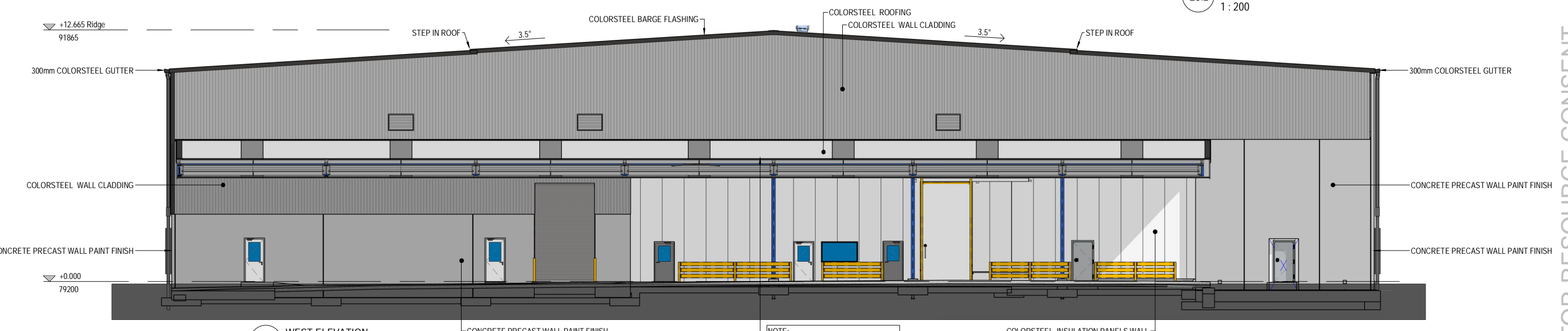
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E3.1 NORTH ELEVATION - PART 1  
1: 200



E3.2 NORTH ELEVATION - PART 1  
1: 200



E4 WEST ELEVATION  
1: 200

NOTE:  
CANOPY ROOF IS SHOWN IN SECTION

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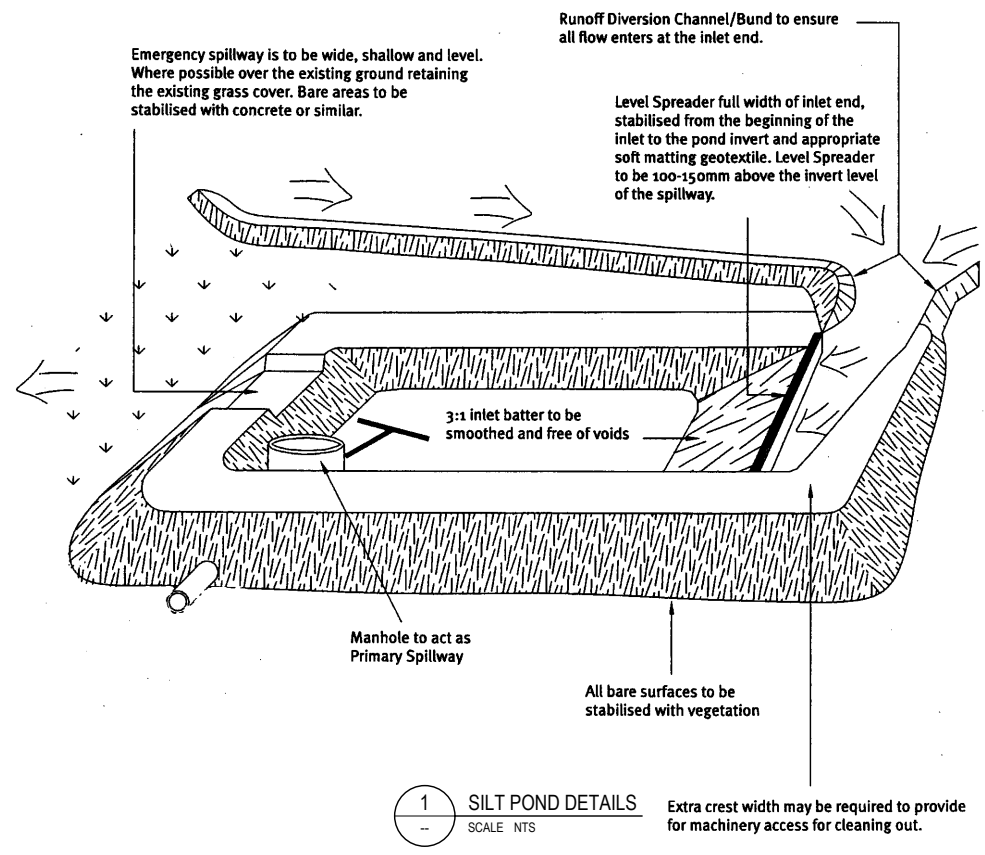
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 (LOTS 6-9) KAHIKATEAROA LANE EXTN, WAIPAPA

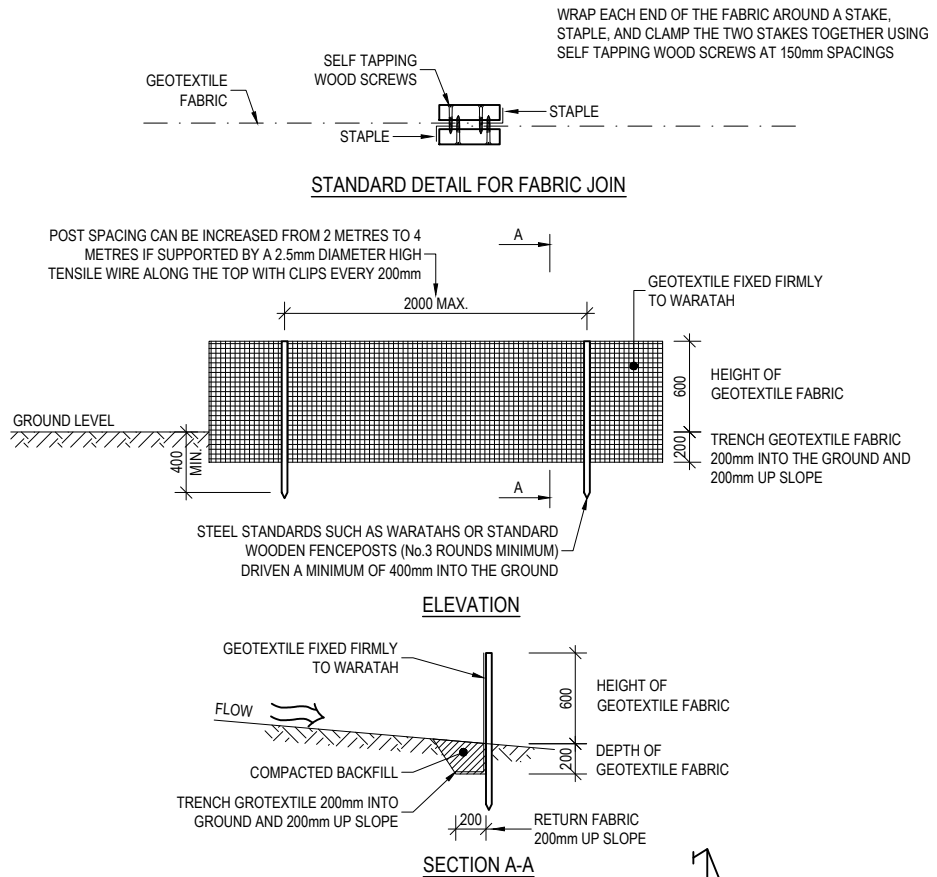
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REVISION	DATE	REF	REV 1			

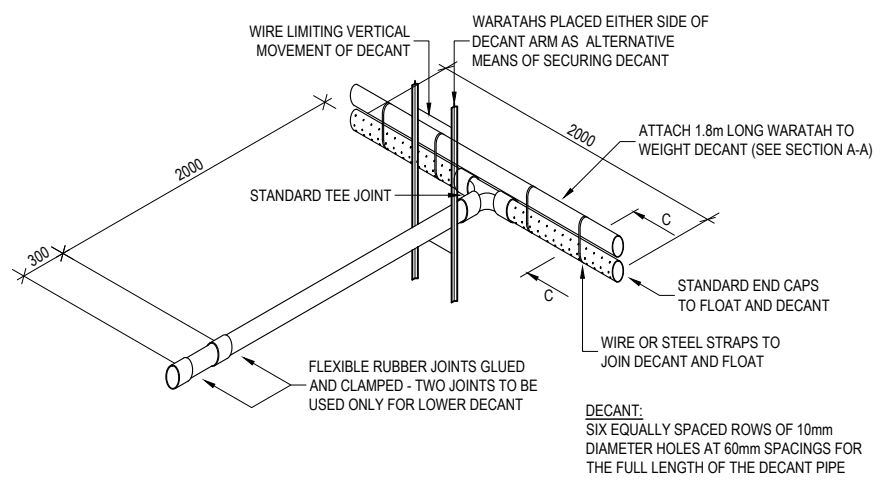
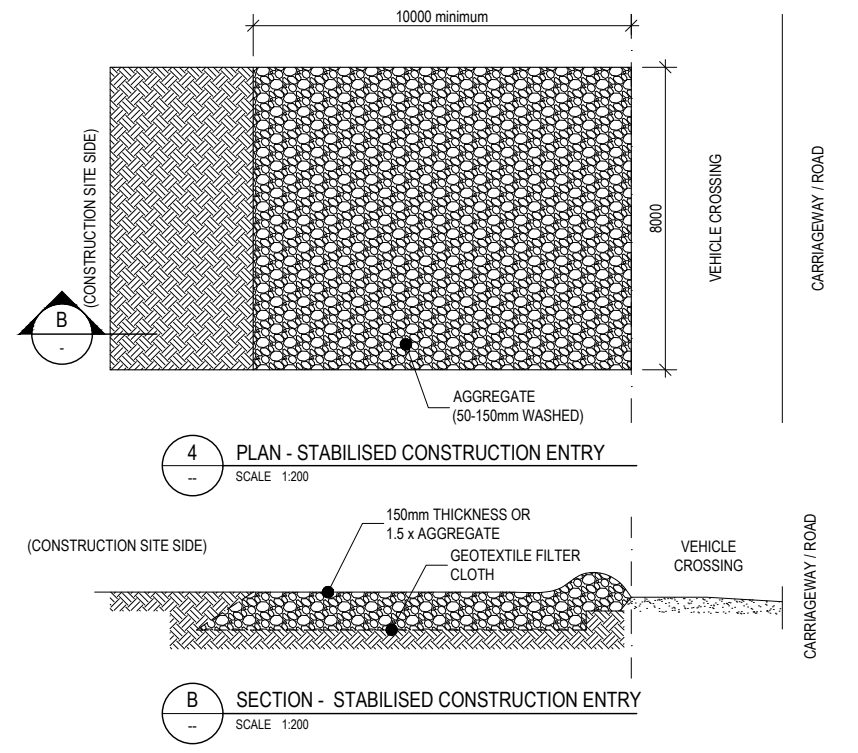
FOR RESOURCE CONSENT



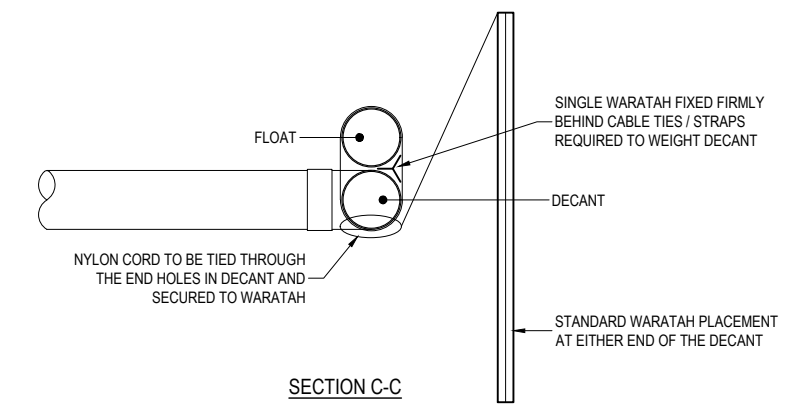
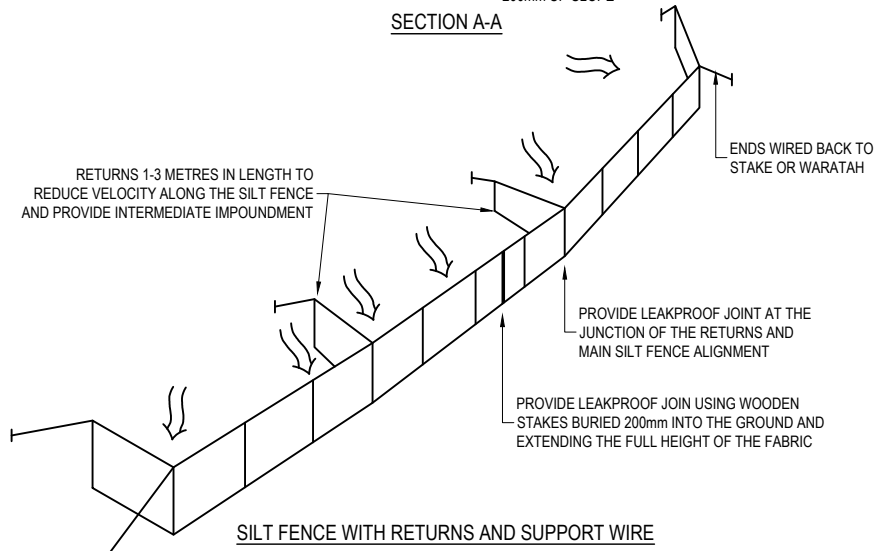
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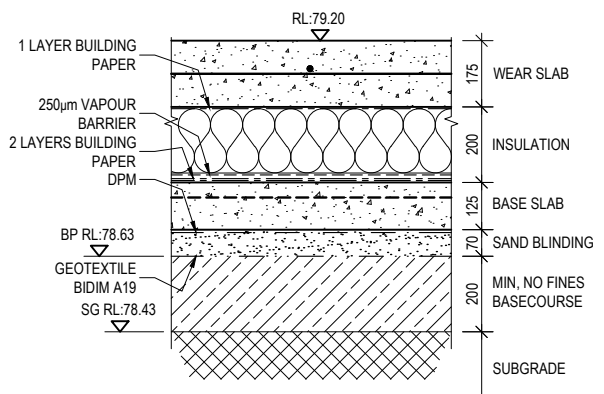
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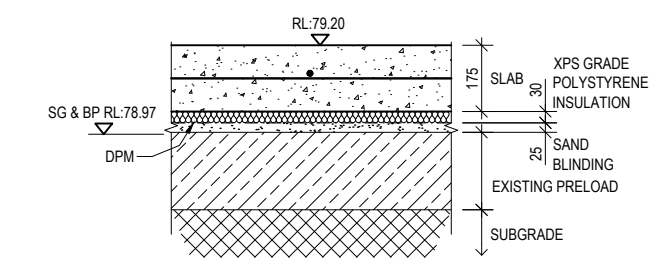
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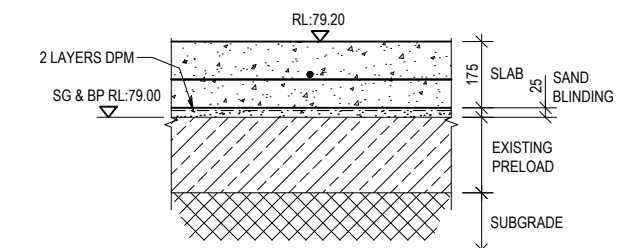




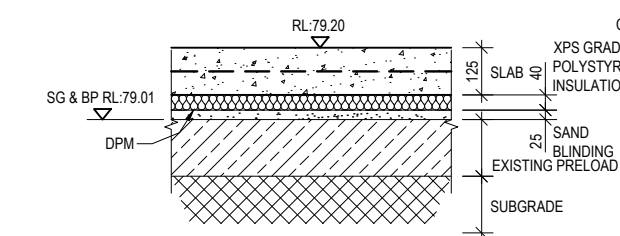
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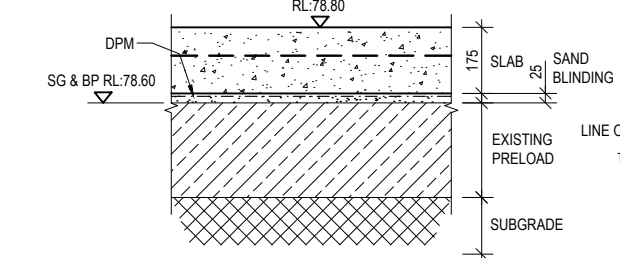
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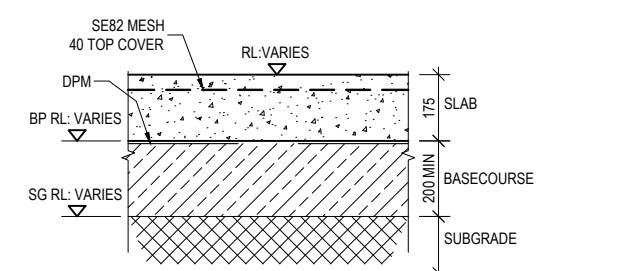
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SCALE 1:20



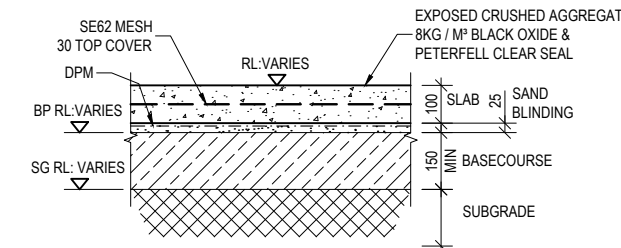
4 SECTION THROUGH OFFICES  
SCALE 1:20



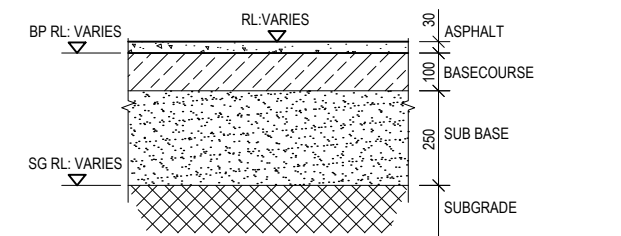
5 SECTION THROUGH PLANT ROOM ON PRELOAD  
SCALE 1:20



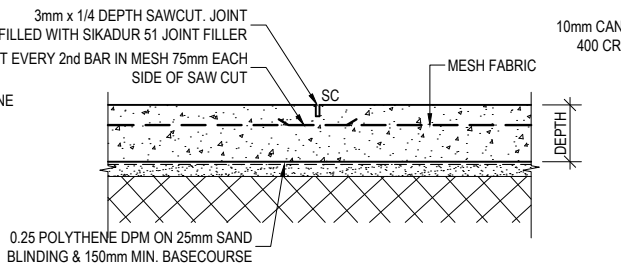
6 SECTION THROUGH YARD / TRUCK DOCK / DRIVE THROUGH  
SCALE 1:20



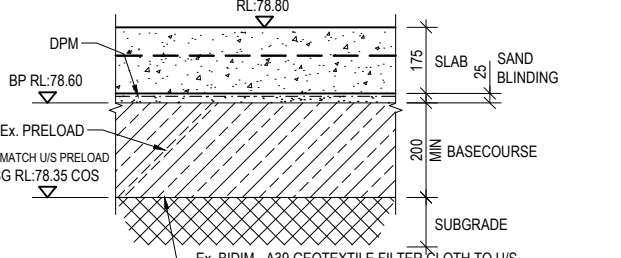
7 SECTION THROUGH SIDE WALK  
SCALE 1:20



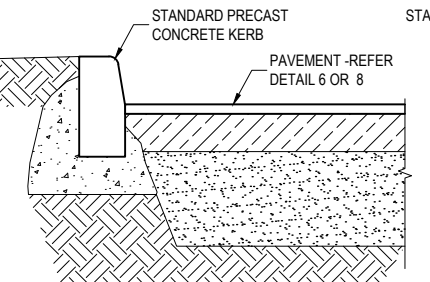
8 SECTION THROUGH CAR PARK  
SCALE 1:20



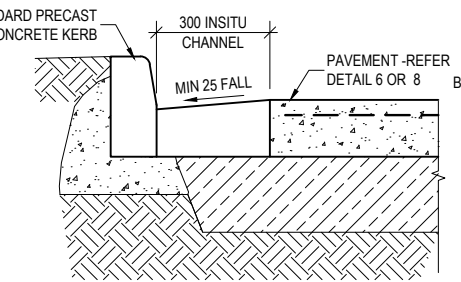
SC TYPICAL SAW CUT DETAIL  
SCALE 1:20



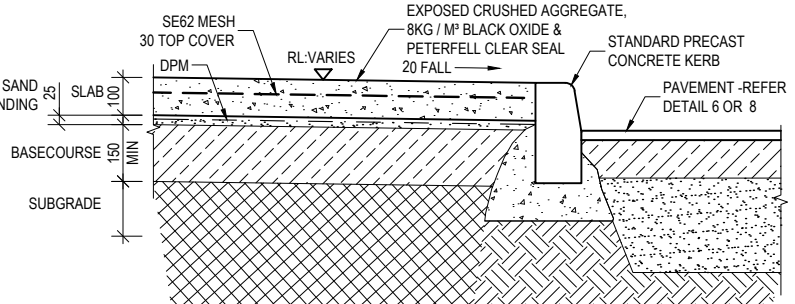
9 SECTION THROUGH PLANT ROOM NOT ON PRELOAD  
SCALE 1:20



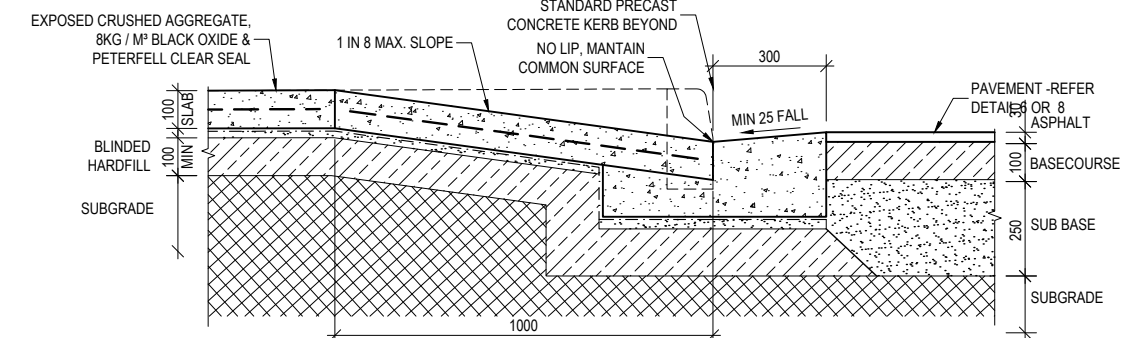
11 SECTION THRU STANDARD KERB  
SCALE 1:20



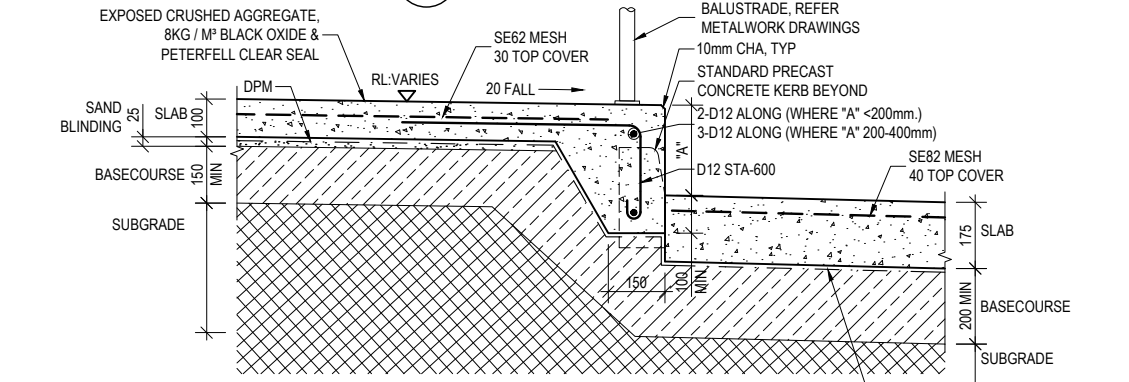
12 SECTION THRU KERB & CHANNEL  
SCALE 1:20



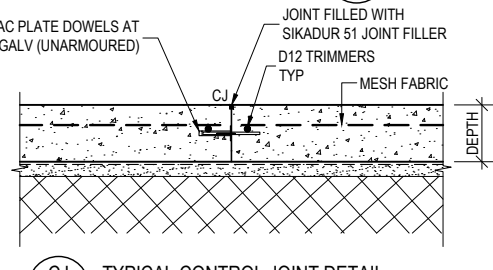
14 SECTION THRU SIDEWALK / KERB  
SCALE 1:20



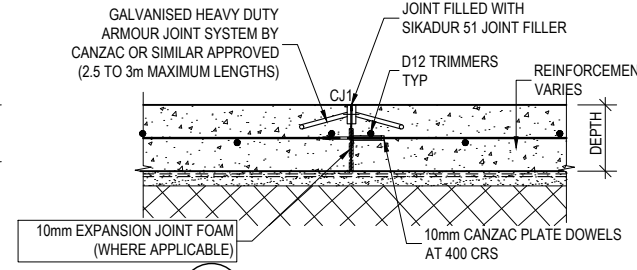
15 ACCESSIBLE KERB CROSSING  
SCALE 1:20



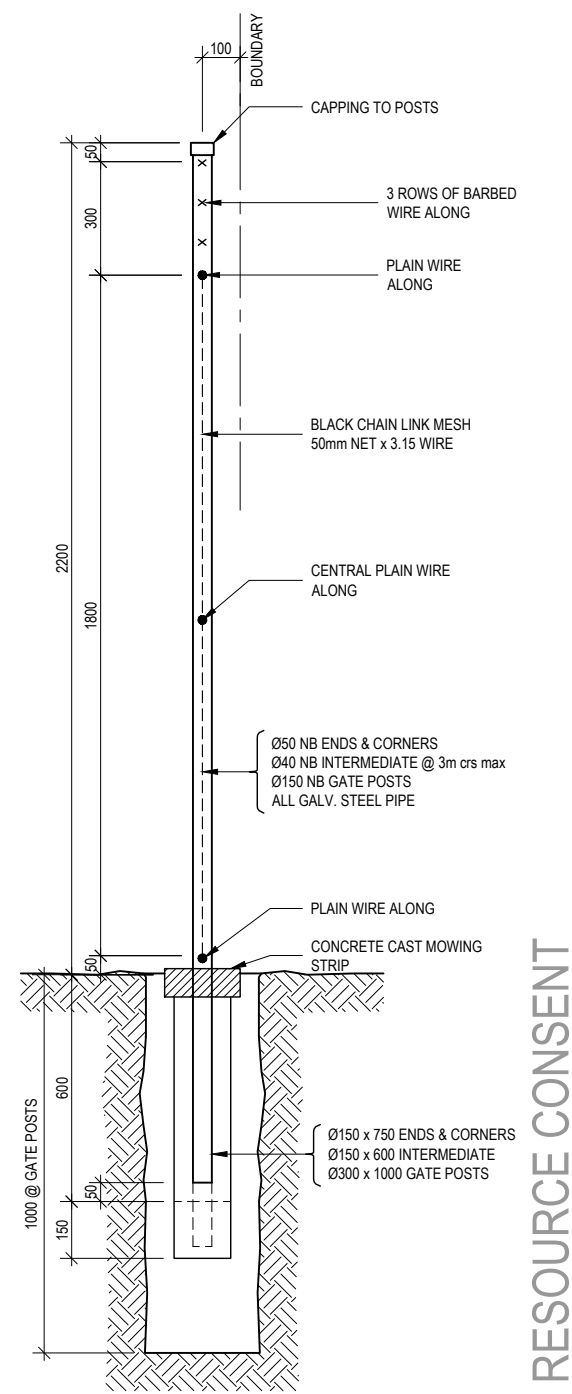
16 SECTION THRU SIDEWALK / DRIVEWAY WHERE "A" > 120mm  
SCALE 1:20



CJ TYPICAL CONTROL JOINT DETAIL  
SCALE 1:20



CJ1 TYPICAL CONTROL JOINT DETAIL  
SCALE 1:20



13 TYPICAL PERIMETER SECURITY FENCE  
SCALE 1:20

22 189

Brett Burridge  
C/- Peter Swan Ltd  
brett@pswan.co.nz

11/08/2023

Dear Brett

### **Flood Hazard Assessment at Lots 6-8 DP 567982 on Kahikatearoa Lane extension**

#### **Introduction**

This letter presents our findings relating to the projected flood hazard at the proposed Bidfood distribution depot at Lots 6-8 DP 567982 (herein referred to as “the Site”).

The Site is part of an industrial subdivision that was consented in 2021 and completed in 2022. In addition to the subdivision consent obtained by FNDC, consent was also obtained from NRC to completed earthworks in a flood prone area, and to divert flood water. The modelling presented on NRC maps was carried out prior to the subdivision works and does not recognise the changes made to the management of floodwaters achieved with the subdivision works.

The Northland Regional Council resource consent for earthworks and flood diversion was issued on 28 October 2021 with reference number 43067. It allowed to “divert floodwater within a subdivision development” in accordance with a design accompanying the application. The design was detailed in a report prepared by Haigh Workman, titled “Application to Northland Regional Council for Resource Consent”, dated 28 September 2021 and with job number 21 131. This advice letter describes the subdivision design in regards to flood management and also assesses the proposed development in relation to the flood hazard.

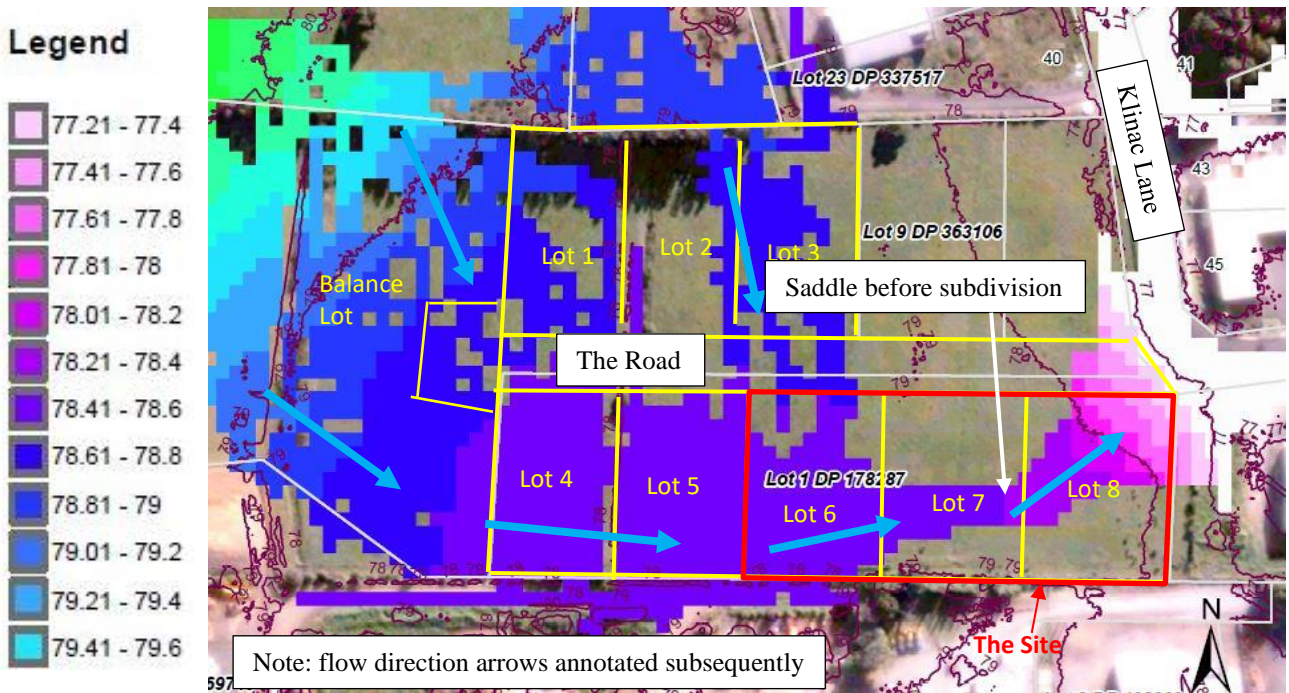
#### **Published flood data**

Flood modelling has been published by Northland Regional Council. The 100-year ARI CC flood extent and levels are presented in Figure 1. The model indicates floodwaters from Kerikeri River pond across the very flat ground of Lots 4-6 before spilling over a saddle in Lot 7.

This data was used to inform the flood management solution for the subdivision.

#### **Subdivision flood management**

The concept of the flood management strategy for the subdivision is that instead of having flood waters spill across the saddle on Lot 7, flood waters are to spill down the road as indicated in Figure 1. This was achieved by both lowering ground levels within the Road corridor and raising ground levels within Lot 7. Hydraulic calculations were undertaken to inform the design levels and provide expected flood levels. The flood level over the saddle in the road outside of Lot 6 was modelled to be 78.54 m RL for the 100 year ARI CC flood. It is likely that the water level will be very similar at the northwestern corner of Lot 6, hence **we adopt a flood level of 78.6 m RL for the Site**. The enclosed drawings illustrate the design described above.



**Figure 1: Output from NRC model for 100 year ARI CC flood**

**Minimum Floor Level**

For a commercial development we recommend minimum floor levels of 78.9 m RL to provide a minimum 300 mm freeboard about the 100 year ARI flood event, in accordance with the recommendations of NZS4404. It is our understanding that the proposed floor level is 79.2 m RL which provides a 600 mm freeboard above the 100 year ARI event.

Forming ground levels at 78.6 m RL within Lot 6 will prevent any flood water spilling into the site the 100-year ARI flood.

**Proposed Regional Plan Rule C.3.1.9 – Diverting Floodwater**

Proposed Regional Plan Rule C.3.1.9 addresses obstructions that divert flow on to other properties. The Haigh Workman report that accompanied the resource consent 43067 addressed this issue in regards to filling in the saddle on Lot 7. It was accepted that the filling will not alter flood levels on neighbouring properties as floodwaters will be diverted on to the road. Similarly filling on Lot 6 will not change flood flows on neighbouring sites. As a result, rule C.3.1.9 will not be breached

**Disclaimer**

This letter has been prepared for the sole use of our client, Peter Swan Ltd, for the particular brief and on the terms and conditions agreed with our client. It may not be used or relied on (in whole or part) by anyone else, or for any other purpose or in any other contexts, without our prior written agreement. This letter may only be read or reproduced in its entirety.

Prepared by

*Rory Howell*

Rory Howell  
Civil/Environmental Engineer  
BE (Natural Resources)  
MEngNZ

Reviewed and Approved by

*John Papesch*

John Papesch  
Senior Civil Engineer - Director  
BE(Civil)  
CPEng, CMEngNZ

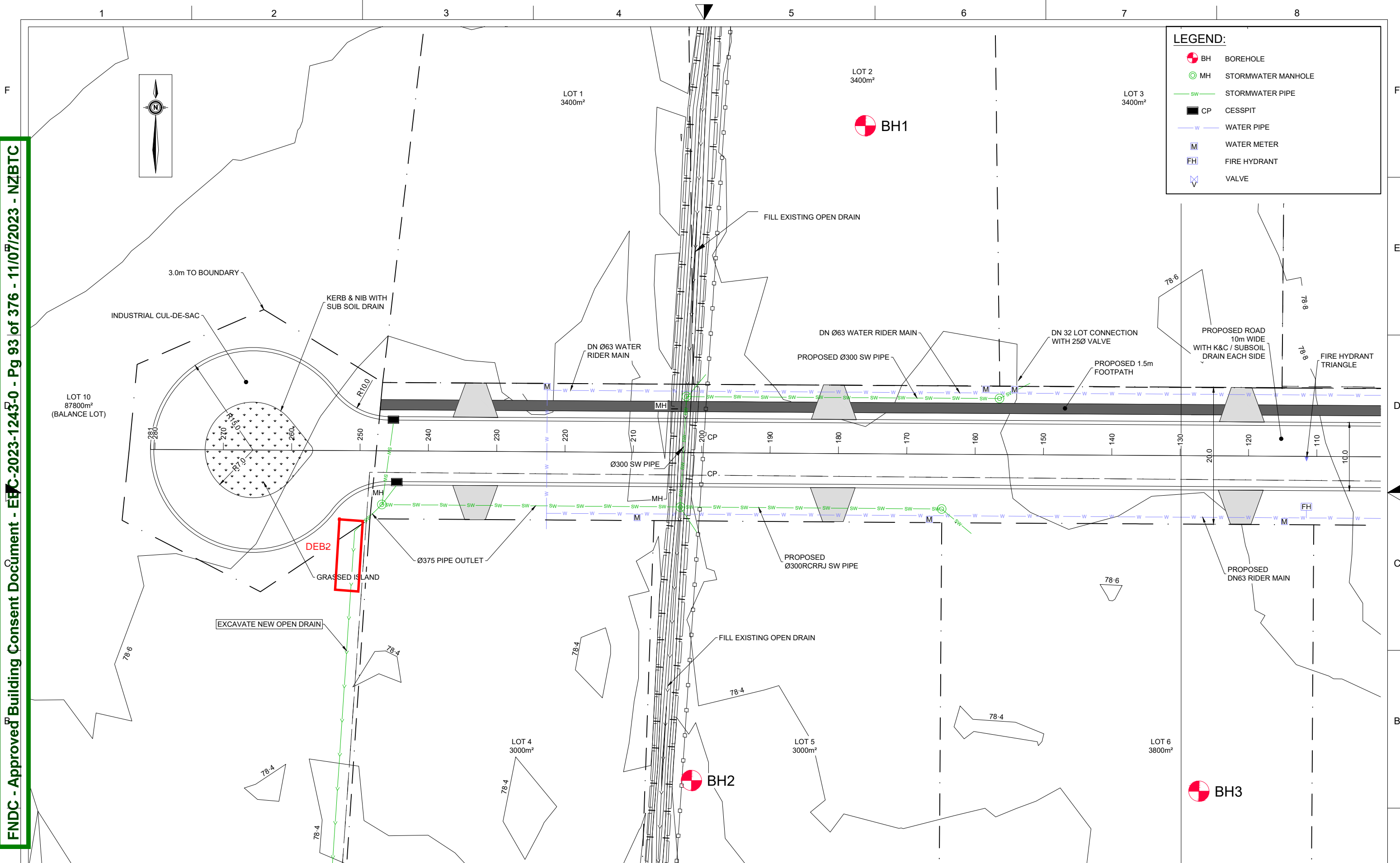
Enclosures:

Roading and services plan showing chainages and filling in saddle

Roading longitudinal section

Cross-section at design weir on Road

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 92 of 376 - 11/07/2023 - NZBTC**



Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m
C	24/08/2021	DEB2 ADDED

DWG **ROADING AND SERVICES A**

Scale 1:500 @A3

Drawn AP Checked MW Approved JP

Date 02/07/2021

File X:\21 JOBS\21 131 WINDERMERE HOLDINGS LTD\ENGINEERING\DRAWINGS\21 131 WINDERMERE ENERGY LTD.DWG

**HAIGH WORKMAN**  
Civil & Structural Engineers

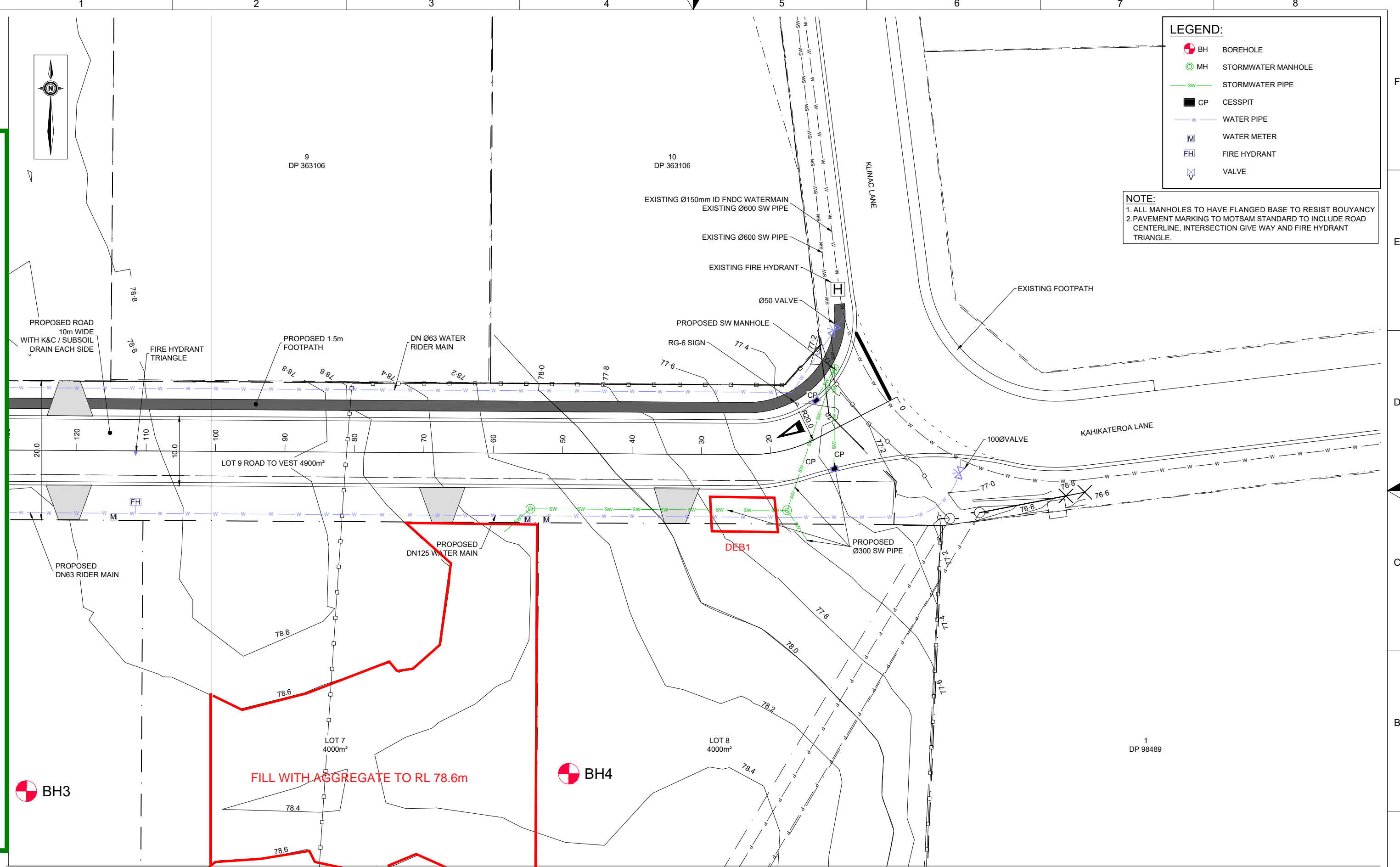
6 Fairway Drive  
Kerikeri, BOI.

T: 09 407 8327  
F: 09 407 8378  
E: info@haighworkman.co.nz

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Project	Proposed Subdivision Klinac Lane, Kerikeri	
Client	Windermere Energy Ltd.	
Project No.	21 131	RC no. 2160324

DWG No.	<b>P1</b>
Sheet No.	<b>1 of 3</b>



Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m
C	24/08/2021	FILL ADDED ON LOT 7; DEBS ADDED

DWG **ROADING AND SERVICES B**

Scale 1:500 @A3

Drawn AP Checked MW Approved JP

Date 02/07/2021

File X:\21 JOBS\21 131 WINDERMERE HOLDINGS LTD\ENGINEERING\DRAWINGS\21 131 WINDERMERE ENERGY LTD.DWG

**HAIGH WORKMAN**  
Civil & Structural Engineers

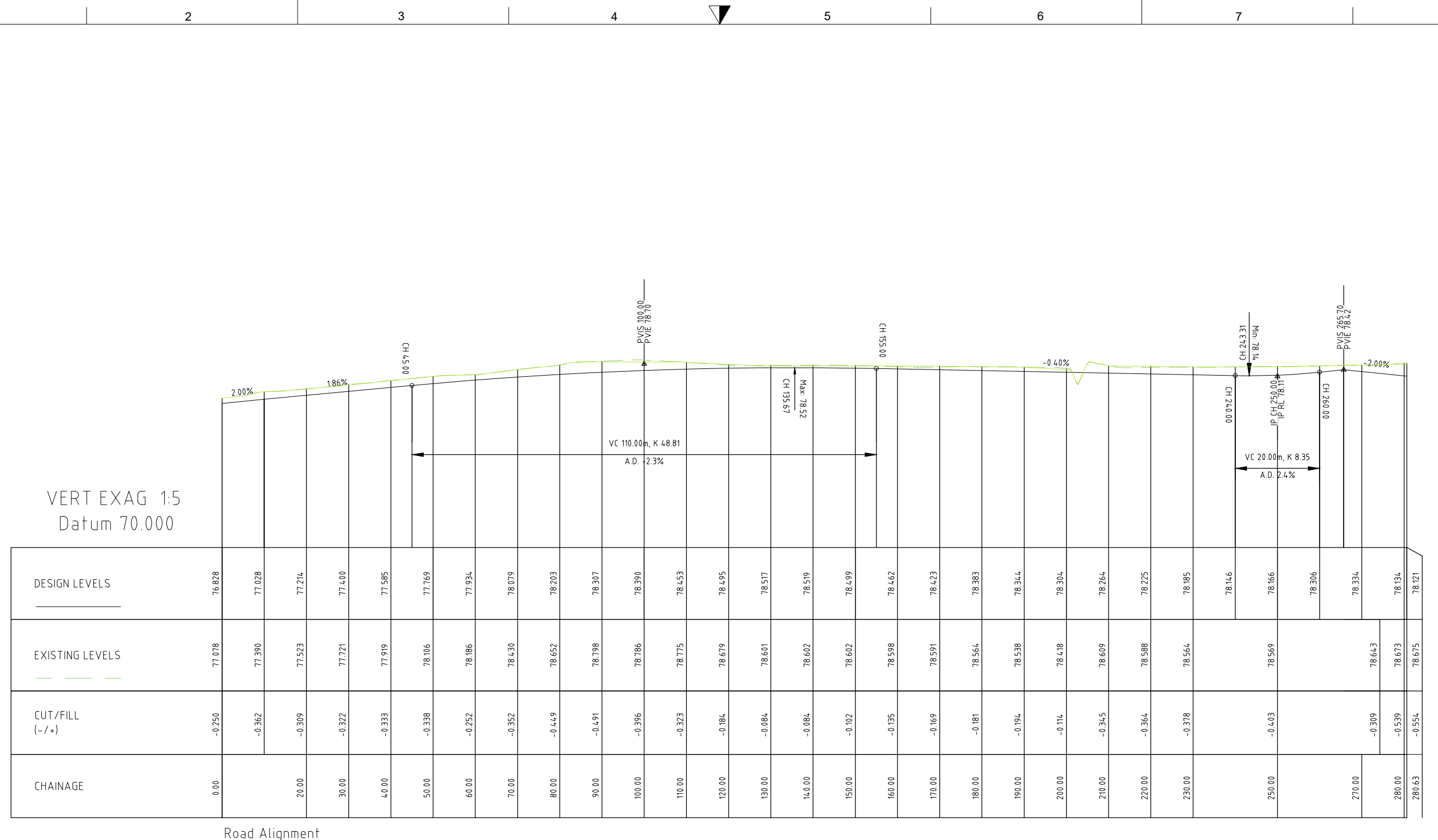
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Project	Proposed Subdivision Klinac Lane, Kerikeri	
Client	Windermere Energy Ltd.	
Project No.	21 131	RC no. 2160324

DWG No.	<b>P2</b>
Sheet No.	<b>2 of 3</b>



CHAINAGE	CUT/FILL (-/+)	EXISTING LEVELS	DESIGN LEVELS
0.00	-0.250	77.078	76.828
20.00	-0.362	77.390	77.028
30.00	-0.309	77.523	77.214
40.00	-0.322	77.721	77.400
50.00	-0.333	77.919	77.585
60.00	-0.338	78.106	77.769
70.00	-0.252	78.186	77.934
80.00	-0.352	78.430	78.079
90.00	-0.449	78.652	78.203
100.00	-0.491	78.798	78.307
110.00	-0.396	78.786	78.390
120.00	-0.323	78.775	78.453
130.00	-0.184	78.679	78.495
140.00	-0.084	78.601	78.517
150.00	-0.084	78.602	78.519
160.00	-0.102	78.602	78.499
170.00	-0.135	78.598	78.462
180.00	-0.169	78.591	78.423
190.00	-0.181	78.564	78.383
200.00	-0.194	78.538	78.344
210.00	-0.114	78.418	78.304
220.00	-0.345	78.609	78.264
230.00	-0.364	78.588	78.225
240.00	-0.378	78.564	78.185
250.00	-0.403	78.569	78.146
260.00	-0.403	78.569	78.166
270.00	-0.309	78.643	78.306
280.00	-0.539	78.673	78.334
280.63	-0.554	78.675	78.134
			78.121

Road Alignment

VERT EXAG 1:5  
Datum 70.000

Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
	18/06/2021	ROAD WIDENED TO 10.0m

DWG **Roading Longitudinal Section**

Scale 1:1000 @A3

Date 02/07/2021

Drawn AM Checked MW Approved JP

File X:\21 JOBS\21 131 Windermere Holdings Ltd\Engineering\Drawings\21 131 Windermere Energy Ltd.dwg

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Civil & Structural Engineers

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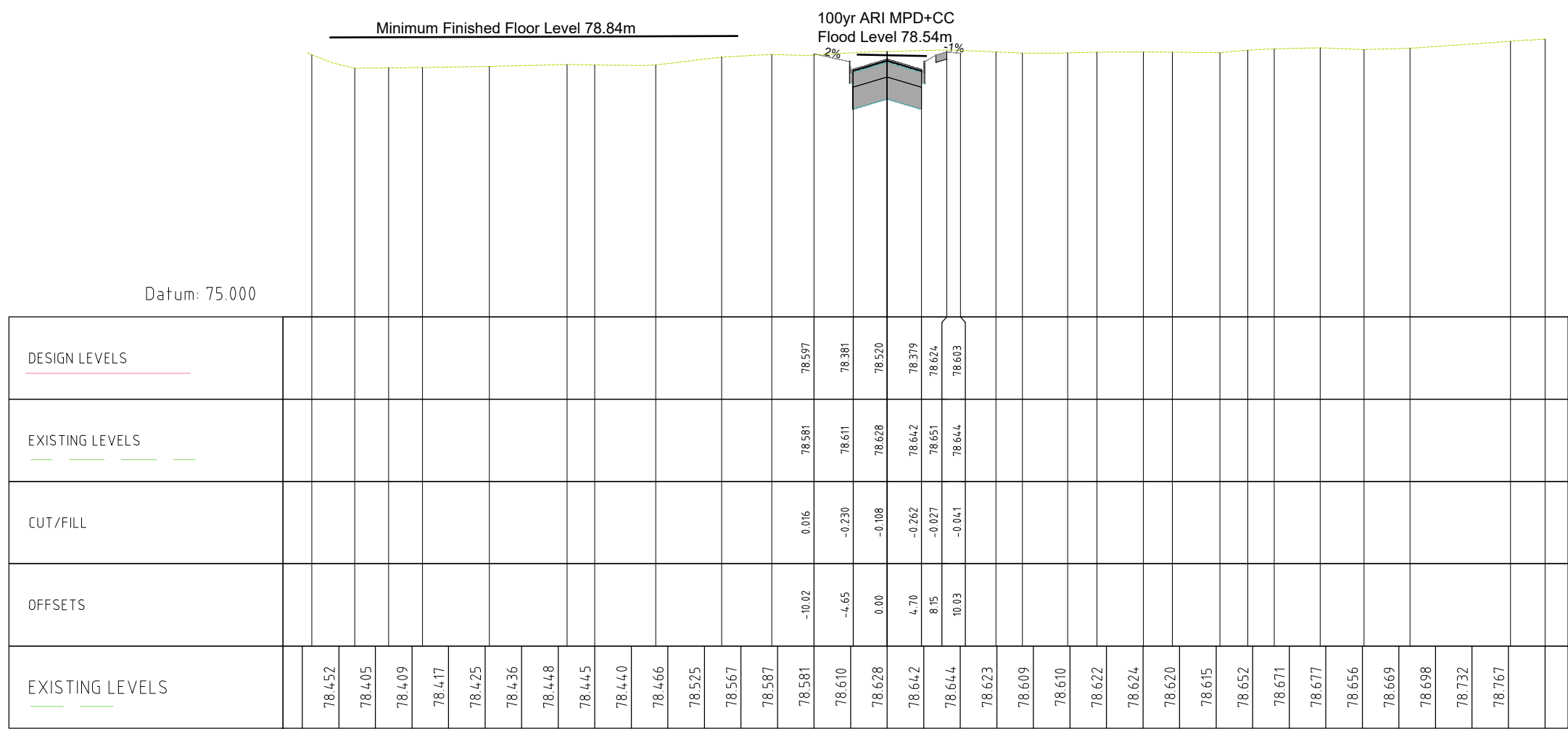
Project **Proposed Subdivision**  
Kinac Lane, Kerikeri

Client **Windermere Energy Ltd.**

Project No. 21 131 RC no. 2160324

DWG No. **LS1**

Sheet No. **1** of **1**



Chainage 135.670 Proposed Overland Flow Path

NOTE:  
10x VERTICAL EXAGGERATION  
HORIZONTAL 1:750  
VERTICAL 1:75

Issue	Date	Revision
A	16/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m

DWG CROSS SECTIONS

Scale 1:750 @A3

Date 22/06/2021

Drawn TV Checked JP Approved JP

File: OBS21 131 Windermere Holdings Ltd\Engineering\Drawings\21 131 Windermere Holdings Ltd.dwg

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Project	Proposed Subdivision <small>Kinac Lane, Kerikeri</small>
Client	Windermere Holdings Ltd.
Project No.	21 131 RC no. 2160324

DWG No.	<b>CS11</b>
Sheet No.	<b>2 of 2</b>



21 131

25 August 2021

Windermere Energy Ltd

Attention: Matthew Holton [matt@whltd.co.nz](mailto:matt@whltd.co.nz)

Copy to: Lynley Newport [lynley@tsurvey.co.nz](mailto:lynley@tsurvey.co.nz)

## INDUSTRIAL SUBDIVISION, WAIPAPA

### APPLICATION TO NORTHLAND REGIONAL COUNCIL FOR RESOURCE CONSENTS

#### 1. Introduction

On 16 June 2016, FNDC resource consent 2160324 was granted to Brian Parrish to subdivide land at 66 Klinac Lane, Waipapa (Lot 1 DP 178287 and Lot 13 DP 363106) into eight industrial lots and a balance rural lot.

Windermere Energy Limited has entered into an agreement with Brian Parrish to develop the subdivision. The subdivision will now be developed in one stage in accordance with FNDC consent 2160324.

Haigh Workman provided an Engineering Report for the proposed subdivision (HW reference 15 227 dated February 2016) detailing flood hazards, access, earthworks, stormwater and wastewater management and water supply.

This report provides an engineering assessment in support of an application by Windermere Energy Ltd to Northland Regional Council for resource consents for the subdivision earthworks, road construction and future industrial development.

The subdivision is accessed off the intersection of Klinac Lane and Kahikatearoa Lane, Waipapa. It extends to within 150m of the Kerikeri River as shown below:



## 2. Proposed Road Construction

A 280m long road to vest is proposed with 10.0 m wide hotmix surface carriageway with kerb & channel on each side and a footpath on one side. The road to vest includes a 30m diameter cul-de-sac head.

Construction of the road to vest includes

- Earthworks
- Stormwater drainage
- Watermain
- Power and telecom
- Kerb and channel
- Pavement construction
- Hotmix surfacing
- Concrete footpath construction
- Associated works

The works are detailed on the construction drawings included in Appendix B.

The soils on site are soft alluvium. Ground water is approximately 1.0m below the existing ground surface.

Earthworks volumes within the site for the road to vest are estimated as follows:

Description	Area (m <sup>2</sup> )	Cut Volume (m <sup>3</sup> )	Fill Volume (m <sup>3</sup> )
Strip topsoil (typ 200mm deep)	6,400	1140	
Cut to waste		2640	
Stormwater and services trenches		260	
Fill existing open drains	300		300
Excavate new open drain	100	120	
<b>Total</b>	<b>6,800</b>	<b>4160</b>	<b>300</b>

All volumes are solid measure.

Approximately 350 m<sup>3</sup> (solid measure) of topsoil is required to reinstate the grassed berms. This material will be stockpiled in windrows on each side of the road to vest and moved on to the berms on completion of road construction.

The remainder of the excavated soil will be placed on adjoining farmland 300m northwest of the proposed cul-de-sac as shown on drawing 16 153A/06. The spoil disposal land (Lot 2 DP 373362) and access between the contract site and spoil disposal (Lot 13 DP 363106) is owned by Brian Parrish. A resource consent (ref 39230) has been issued by Northland Regional Council for fill in this area. The Contractor shall be responsible for constructing access between the construction site and spoil disposal site, including placing any culverts required, removal on completion of the works, and compliance with the resource consent conditions.

On completion of excavation for the road, aggregate will be placed for the road pavement. The estimated volume of aggregate is 1634 m<sup>3</sup> (solid measure).

### 3. Aggregate on Lot 7

A ridge traverses Lot 9 DP 363106 and Proposed Lot 7 controlling flood levels upstream. As can be seen on the NRC flood map included in drawing 21 131/P4, flood water is expected to spill over a saddle on Proposed Lot 7 in the 1% AEP flood event.

In the same season that the Road to Vest is constructed, it is proposed to place aggregate on proposed Lot 7 to build up the ground level to a minimum RL 78.6 to be above the 1% AEP Flood level and ensure that floodwater is diverted to the road.

The aggregate will be placed in a manner that is suitable for future development of the lot. Topsoil will be removed from the area of fill and placed on the spoil disposal site (Lot 2 DP 373362).

**Earthworks** associated with the fill on Lot 7 comprises stripping 350 m<sup>3</sup> of topsoil over an area of 1760 m<sup>2</sup>. Following removal of topsoil, 570 m<sup>3</sup> (solid measure) of aggregate will be placed on proposed Lot 7.

### 4. Future Development

Following construction of the Road to Vest, the lots will be developed for industrial purposes. The lots are currently mapped as being subject to flooding in the 2% AEP and 1% AEP MPD + CC storm events. As noted in the Engineering Report, the site is not affected by 10% AEP (10 year ARI) flood event.

Development of the lots will involve stripping topsoil over most of the site and building up the site with aggregate to be above the 1% AEP flood level. Stripping topsoil will involve 400 to 500 m<sup>3</sup> of cut per lot. The development is expected to include buildings and sealed driveways / yards. Approximately 15% of each lot will be maintained as permeable / landscaped ground and used for wastewater disposal. The effluent field will need to be raised above existing ground level to comply with the Regional Plan permitted activity rules regarding flood areas and winter ground water level. This will use some of the excavated topsoil; the remainder will be removed from site.

The total area of all the industrial lots is 28,000m<sup>2</sup>; the total volume of topsoil stripped is approximately 5,600 m<sup>3</sup>. This may be staged over several years as the lots are developed.

### 5. Maximum Development per Earthworks Season

At this stage the timing and extent of development on any industrial lot has not been finalised. The maximum probable extent of earthworks could comprise:

- Year 1: Road to Vest plus development of three of the southern industrial lots
- Year 2 or later: Development of remaining five Industrial Lots

If this were to occur, the quantity of earthworks per season would comprise:

Year	Area (m <sup>2</sup> )	Cut Volume (m <sup>3</sup> )	Fill Volume (m <sup>3</sup> )	Volume in Flood Hazard Area (m <sup>3</sup> )
Road to Vest	6,800	4160	300	4460
Year 1 Industrial Development	10,000	1700	300	1700
Year 1 Total	16,800	5860	600	6160
Year 2 or later	18,000	3000	600	2100
Total	34,800	8860	1200	8260

## 6. Regional Plan Rules

The proposed activities have been assessed for compliance with the Proposed Regional Plan for Northland (Appeals Version August 2020) as follows:

### C.8.3.1 Earthworks – Permitted Activity

Location	Earthworks Threshold	Assessment
Within 10m of a natural wetland, the bed of a continually or intermittently flowing river or lake	200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12- month period.	The proposed work is more than 10m from a natural wetland or river.
Catchment of an outstanding lake	2500 square metres of exposed earth at any time.	Not Applicable
Erosion-prone land	2500 square metres of exposed earth at any time.	Not Applicable
High-risk flood hazard area (10-year ARI)	50 cubic metres of moved or placed earth in any 12- month period	Complies – the proposed earthworks are outside the 10-year ARI flood hazard area
Coastal riparian and foredune management area	Excluding for coastal dune restoration, 200 square metres of exposed earth at any time.	Not Applicable
Flood hazard area (100-year ARI)	100 cubic metres of moved or placed earth in any 12- month period.	Does not comply. The road to vest will be within the 100-year flood area and involves up to 4160 m <sup>3</sup> of excavation and 300 m <sup>3</sup> of fill. If three of the industrial lots are developed in the same season, a further 1700m <sup>3</sup> of topsoil stripping will occur in the flood hazard area.
Other areas	5000 square metres of exposed earth at any time.	Does not comply – the total area of earthworks may be up to 18,000 m <sup>2</sup> in any construction season.

### Rules C.3.1 Diverting Floodwater

Placing aggregate on the road to vest and industrial lots is not included within the definition of earthworks and is therefore not encompassed by Rule C.8.3.1.

However, placing aggregate and constructing buildings in the flood area may affect flood flows. Placing aggregate on Lot 7 will ensure that the flood water is diverted to the road to vest when it is constructed and no overland flow remains on the industrial lots. The diversion will be contained within the site of the subdivision and not affect flood levels upstream and downstream. As the industrial lots are subdivided, sold and developed, placing fill or buildings on the land will displace static flood water, but not change flood flows through the site.

Rule C.3.1.8 relates to Obstructions that divert water onto other property:

The placement of an obstruction (including a structure) in a flood hazard area (including a high-risk flood hazard area), an overland flow path, a river or an artificial watercourse that will, or is likely to, divert water onto other property, is a discretionary activity.

Future development will not divert floodwater onto other property and therefore will not require consent under Rule C.3.1.8.

### Rule C.6.4.2 Other Stormwater Discharges

Approximately 40% of the site drains towards Klinac Lane and will be connected to FNDC's reticulated stormwater system. The stormwater discharge for this area is covered by FNDC's resource consent and Rule 6.4.1.

The remainder of the site drains towards the Kerikeri River by way of open drains. Existing open drain through Lots 1 and 5 will be filled and the stormwater diverted into a new open drain in the balance lot which will connect to the existing open drain that carries stormwater from the site.

The subdivision consent RC 2160324 contains a Consent Notice on all lots:

Provide, at the time of lodging a building consent application for Lots 1 - 8, a specific design for stormwater management, prepared by a suitably qualified Chartered Professional Engineer, which addresses both stormwater quality and quantity such that the volume of stormwater discharged is attenuated to a 1 in 10 year rainfall, (being the design capacity of the stormwater reticulation) for rainfall event up to those with a 2% AEP. The stormwater quality standard shall comply with section 4.4.2 of the Councils Engineering Standards (2009) or for a lower level of contaminant where required by an NRC Stormwater Discharge Consent.

Any stormwater discharged into the Council's stormwater system is to comply with the requirements and conditions of the Far North District Council's stormwater discharge consent.

This will ensure compliance with Rule C.6.4.2 condition (2). Future landowners will be responsible for complying with the water quality conditions of Rule C.6.4.2.

### Regional Water and Soil Plan

Earthworks rules in the Proposed Regional Plan are under appeal, meaning the Regional Water and Soil Plan (RWSP) is still operative for earthworks. The volume of earthworks proposed for the road to vest is within the 5,000 m<sup>3</sup> per year threshold of permitted activity Rule 33.1.3. If development of the industrial lots occurs in the same year as the road to vest construction, the threshold will be exceeded. Consent is sought under Regional Water and Soil Plan Rules 33.2.1 for earthworks. There do not appear to be any rules in the Regional Water and Soil Plan for the diversion of floodwater.

**7. Flood Assessment**

The flood hazard at the site has been identified in the Haigh Workman Engineering Report (HW reference 15 227 dated February 2016).

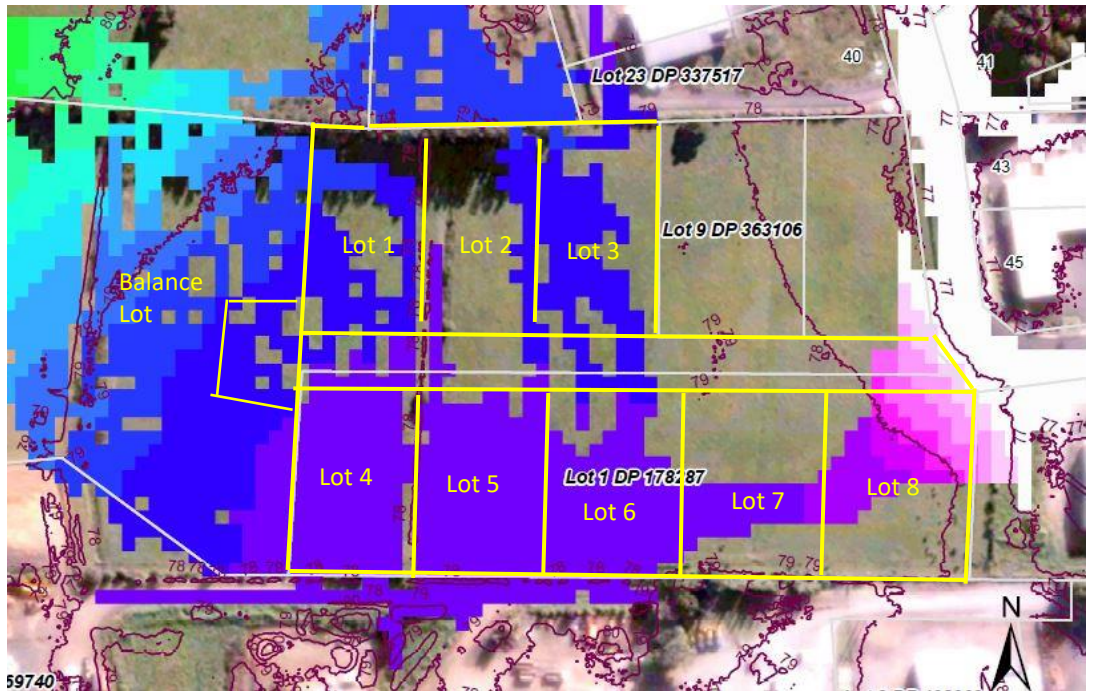
Flood levels for the 10 year ARI, 50 year ARI and 100 year ARI MPD + CC flood events have been modelled by Northland Regional Council and shown on Council’s GIS website as follows:



Flood levels predicted for the 100 year ARI flood are shown in the Engineering Report Appendices. Flood levels for the 100 year ARI flood on the proposed industrial lots are shown below (all elevations in OTP datum):

**Legend**

77.21 - 77.4
77.41 - 77.6
77.61 - 77.8
77.81 - 78
78.01 - 78.2
78.21 - 78.4
78.41 - 78.6
78.61 - 78.8
78.81 - 79
79.01 - 79.2
79.21 - 79.4
79.41 - 79.6



All lots are affected to some degree. The flooding on Lots 1 to 3 is surface ponding, however the flooding on Lots 4 to 8 is the result of an overland flow path shown.

Flow and velocities of the overland flow path are identified in the screenshot provided by Northland Regional Council's hydrologist below:

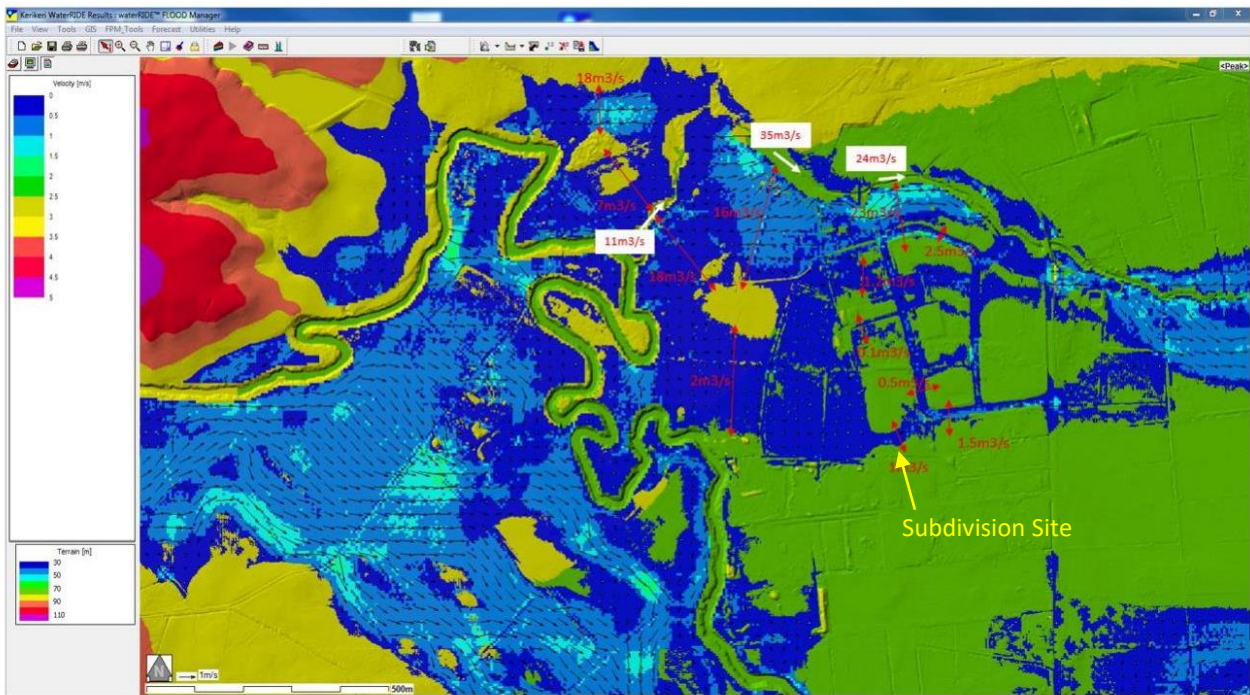


Figure: 100yr ARI CC Velocity shading and Vectors for Kerikeri River Overland flow through the Industrial Estate (Annotated)

**Legend**

- (Red Text in floodplain) Peak Flow in the 2D flood Model through the marked section.
- (Red Text in White Text Box) Peak Flow in the 1D channel Model along reach marked with white arrow

The NRC model shows a flow of 1.0 m<sup>3</sup>/s through Lots 4 to 8 in the 100 year ARI MPD + CC flood.

This flow is controlled by a low ridge through the site with a saddle on Lot 7 as shown on the contour plan drawing 21 131/P2. The lowest point in the saddle is 78.46 m OTP datum. As shown in the calculations in Appendix A, floodwater over the saddle has an average depth of 63 mm and velocity of 0.8m/s. The calculated flood level of 78.52m corresponds with the NRC modelled flood level at the saddle.

The Engineering Report recommends constructing the road to vest approximately 300mm lower than the industrial lots to provide an overland flow path away from the buildings. In essence, it is proposed to divert the flood overland flow away from the industrial lots to the road to vest.

As shown on cross section drawings 21 131/CS10 and CS11, the 100 year ARI MPD + CC flood waterway area can be maintained at the critical cross section with a crest level in the road to vest of 78.52 m OTP datum.

As shown in the calculations in Appendix A, the crest in the road will act as a broad-crested weir with an average flowing depth of 100 mm and velocity of 1.0 m/s. The calculated flood level of 78.54 m corresponds with the NRC modelled flood level at this location.

The flood water will continue along the road to vest with a maximum depth of 140 mm and velocity of 1.5 m/s. These are well within the safe parameters for overland flow paths identified in FNDC Engineering Standards clause 4.3.2.4.

The diversion of flood water from the industrial lots to a road to vest with a crest level of 78.52 m will not affect upstream flood levels or increase flood flows into Kahikatearoa Lane.

## 8. Erosion and Sediment Control

During construction it will be important for the contractor to control the potential mobilisation of silt to prevent it entering into any watercourses, to the greatest extent practicable.

The erosion sediment control measures predominantly comprise:

- Clean water diversions
- Decanting Earth Bunds
- Silt fences around topsoil stockpiles
- Prompt stabilisation of earthworks areas

Best practice site controls are to be implemented during the works, as generally outlined in NRC publications. The following advice is in accordance with Auckland Council Guidance Document GD05 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region: June 2016 (Incorporating Amendment 1, October 2018).

Relevant sections of GD05 are listed below and should be referred to in constructing and maintaining the sediment control measures. All sedimentation controls shall be maintained in place until bare earthworks areas have been stabilised with aggregate or re-grassing has established.

### *Clean Water Diversion (E2.1)*

Separation of clean and dirty water greatly reduces the effort needed to prevent sediment run-off by limiting the quantity of run-off that can become contaminated with silt.



*Stabilised Entrance (E2.6)*

Access to the site is off the intersection of Klinac Lane and Kahikatearoa Lane. As part of constructing the road to vest carriageway, aggregate will be placed on areas of bare soil. This will create a stabilised entrance to the site to reduce dust and sediment being tracked off-site onto the road network.

*Topsoiling and Grass Seeding (E3.1)*

Cut and fill batter slopes and berms will be topsoiled and re-grassed as soon as practicable following completion of each stage of earthworks.

*Decanting Earth Bunds (F1.2)*

Decanting earth bunds are appropriate for catchment areas of less than 0.3 ha (3,000 m<sup>2</sup>). The road to vest site comprises two catchments:

- Catchment 1 of 2600 m<sup>2</sup> drains to Klinac Lane and the associated FNDC stormwater reticulation system;
- Catchment 2 of 3400m<sup>2</sup> drains to an open drain discharging to the Kerikeri River.

The proposed locations of DEB1 and DEB2 are shown on drawings 21 131/P1 and P2.

The Decanting Earth Bunds have been designed in accordance with GD05 as follows:

	<b>DEB1</b>	<b>DEB2</b>
Maximum catchment area	2600 m <sup>2</sup>	3400 m <sup>2</sup>
Maximum catchment slope	2.0%	0.4%
Maximum catchment length	130 m	120 m
Minimum volume of DEB (20 m <sup>3</sup> per 1,000 m <sup>2</sup> catchment)	52 m <sup>3</sup>	68 m <sup>3</sup>
Pond base (length x width)	9.0m x 3.0m	12.0m x 3.0m
Side slopes	2:1	2:1
Pond size (length x width x depth) measured at spillway level	9.0m x 5.5m x 1.0m	9.0m x 5.5m x 1.0m
Dead storage (30%)	14.9 m <sup>3</sup> (400mm depth)	19.5 m <sup>3</sup> (400mm depth)
Live storage (70%)	41.1 m <sup>3</sup> (600mm depth)	51.5 m <sup>3</sup> (600mm depth)

Outlet details are shown on GD05 Figure 78.

*Silt Fences (F1.3)*

Silt fences are useful for small, disturbed areas or sloping areas and are considered appropriate for this site. These will be deployed down-slope area of topsoil stockpile areas.

*Maintenance*

Silt controls shall be checked on a regular basis and immediately prior to any forecast for rain. Maintenance shall be carried out as necessary and any build-up of silt removed following rainfall events.

*Heavy or Prolonged Rainfall*

Where heavy rain is forecast, the site will be stabilised as much as practicable and sediment control measures checked to ensure they are in correct working condition. Earthworks operations will cease during heavy or prolonged rainfall events. Prior to work resuming, all sediment control measures will be inspected and maintained, as necessary.

*Review*

Review of sedimentation control measures is to be undertaken at each major stage of the earthworks and following heavy rainstorm events.

*Construction Details*

Diagrams showing standard details are contained in GD05. It is expected that specific design details will be required as a condition of resource consents.

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 106 of 376 - 11/07/2023 - NZBTC

**9. Assessment of Environmental Effects**

The effects of the proposed earthworks and flood diversion have been assessed in respect of engineering issues as follows:



Issue	Assessment
1) Proximity to Water Bodies	<p>The proposed earthworks are located more than 150m from the closest water body, the Kerikeri River.</p> <p>The soil disposal site is more then 100m from the Kerikeri River.</p>
2) The location, extent, timing, and duration of earthworks.	<p>Earthworks will be carried out during the summer earthworks season.</p>
3) Erosion and Sediment Control	<p>Erosion and Sediment Control will be designed and implemented in accordance with GD05. It is recommended that design details be required as a condition of consent.</p>
4) The adequacy of site rehabilitation and revegetation measures.	<p>The road to vest will be paved; berms will be topsoiled and re-grassed.</p>
5) Effects of flood hazard risks, land instability and land subsidence on other property.	<p>The diversion of floodwater has been designed to avoid any change to flood levels on other properties. The diversion will be contained within the subdivision site and will not affect other existing properties.</p> <p>Land instability or subsidence are not at risk.</p>

### 10. Limitations

This report has been prepared for the sole use of our Client Windermere Holdings Ltd with respect to the particular brief outlined to us. It may not be used or relied on (in whole or part) by anyone else, or for any other purpose or in any other contexts, without our prior written agreement. This report may not be read or reproduced except in its entirety.

The comments and opinions presented in this report are based on the findings of the desk study and information available from reference reports. There may be other facts prevailing for the site which have not been revealed by this investigation and which have not been considered by this report. Responsibility cannot be accepted for any conditions not revealed by this investigation.

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 107 of 376 - 11/07/2023 - NZBTC

<p>Prepared by</p>  <p>Michael Winch Senior Civil Engineer BE (Civil)</p>	<p>Approved by:</p>  <p>John Papesch Senior Civil Engineer BE (Civil), CMEngNZ, CPEng</p>
--	---

## Appendix A Calculations

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 108 of 376 - 11/07/2023 - NZBTC

Existing Flood Overland Flow Path.

Ridge through Lot 7 acts as broad-crested weir  
lowest point in saddle 78.46 m

$$v = \sqrt{g y}$$

$$y = \frac{2}{3} h$$

$$Q = v \cdot y \cdot L$$

y = flowing water depth

h = water depth upstream

$$= \sqrt{g} y^{3/2} L$$

$$y = \left( \frac{Q}{\sqrt{g} L} \right)^{2/3}$$

Q = 1.0 m<sup>3</sup>/s from NRC  
flood modelling

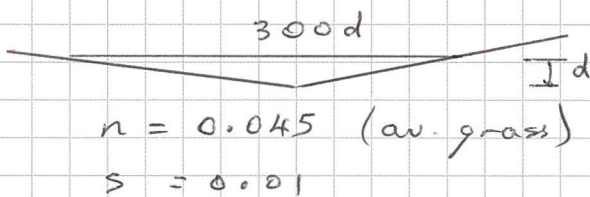
$$L \approx 20m \quad y = 0.063m \quad v = 0.8m/s$$

$$\text{Flood level} = 78.46 + 0.06 = 78.52m$$

$$\text{Static Flood level upstream} = 78.46 + h = 78.56m$$

(agrees with NRC model)

Overland flow through Lot 8



$$A = 150d^2$$

$$P = 300d$$

$$R = A/P = 0.5d$$

$$Q = \frac{1}{n} A R^{2/3} s^{1/2}$$

$$= \left( \frac{1}{0.045} \right) (150d^2) (0.5d)^{2/3} (0.01)^{1/2}$$

$$= 210 d^{2.67}$$

$$d = \left( \frac{Q}{210} \right)^{0.375} = 0.135m$$

$$\text{width} = 300d = 40m$$

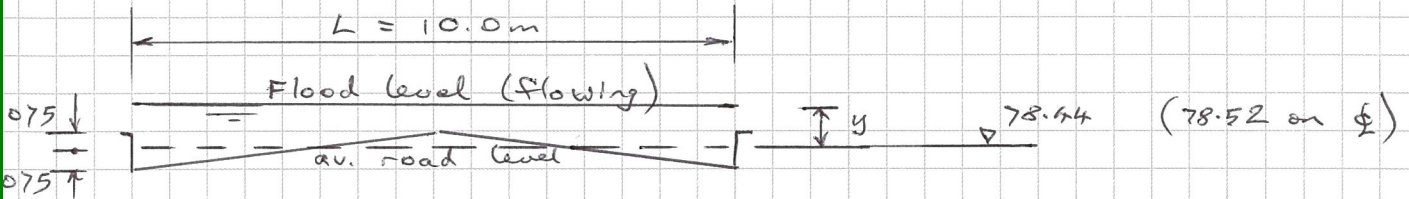
$$A = 150d^2 = 2.734m^2$$

$$v = \frac{Q}{A} = 0.37m/s$$

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 110 of 376 - 11/07/2023 - NZBTC

Flood Overland Flow Path on Road to Vest

High point in road (78.52 on  $\phi$ ) acts as broad-crested weir



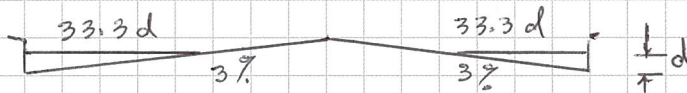
Broad-crested weir flow :  $Q = \sqrt{g} y^{3/2} L$   $Q = 1.0 \text{ m}^3/\text{s}$   
 $y = \left( \frac{Q}{\sqrt{g} L} \right)^{2/3}$  from NRC

$L = 10.0 \text{ m}$   $y = 0.10 \text{ m}$   $v = \sqrt{gy} = 1.0 \text{ m/s}$

Flowing water flood level =  $78.44 + 0.10 = 78.54$

Static Flood level upstream =  $78.44 + 0.15 = 78.59$   
(same as NRC flood model)

Flow along road



$n = 0.015$   
 $s = 0.0186$

$A = 33.3 d^2$  (both sides)  
 $P = 66.7 d$   
 $R = A/P = 0.5 d$

$Q = \frac{1}{n} A R^{2/3} s^{1/2}$   
 $= \left( \frac{1}{0.015} \right) (33.3 d^2) (0.5 d)^{0.67} (0.0186)^{0.5}$   
 $= 191 d^{2.67}$

$Q = 1.0 \text{ m}^3/\text{s}$   $d = \left( \frac{Q}{191} \right)^{0.375} = 0.140 \text{ m}$

width = 4.67m each side.

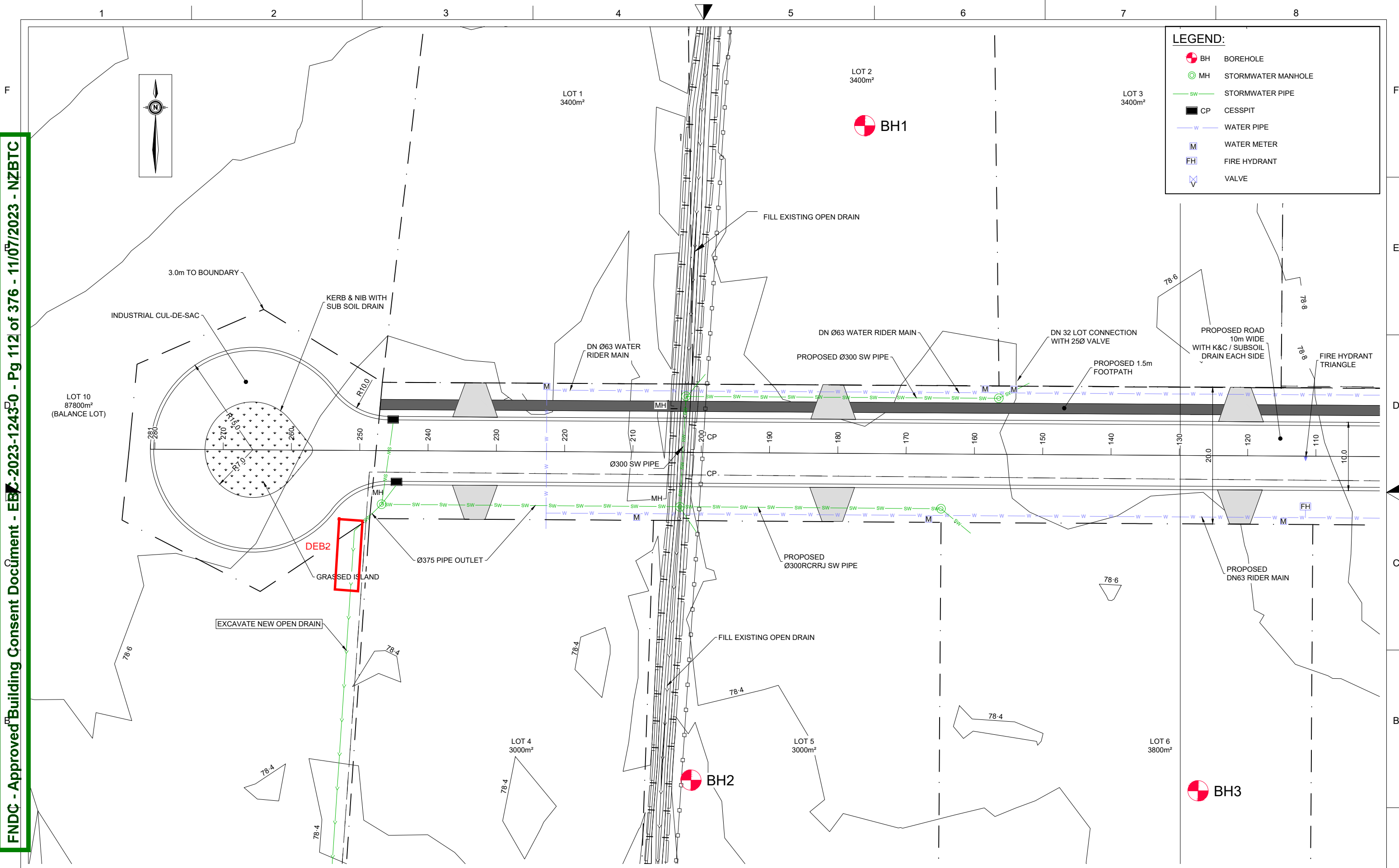
$A = 0.649 \text{ m}^2$

$v = 1.54 \text{ m/s}$

## Appendix B Drawings

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 111 of 376 - 11/07/2023 - NZBTC

FNDCC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 112 of 376 - 11/07/2023 - NZBTC



**LEGEND:**

- BH BOREHOLE
- MH STORMWATER MANHOLE
- SW STORMWATER PIPE
- CP CESSPIT
- W WATER PIPE
- M WATER METER
- FH FIRE HYDRANT
- ▽ VALVE

Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m
C	24/08/2021	DEB2 ADDED

DWG **ROADING AND SERVICES A**

Scale 1:500 @A3

Drawn AP Checked MW Approved JP

Date 02/07/2021

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Civil & Structural Engineers

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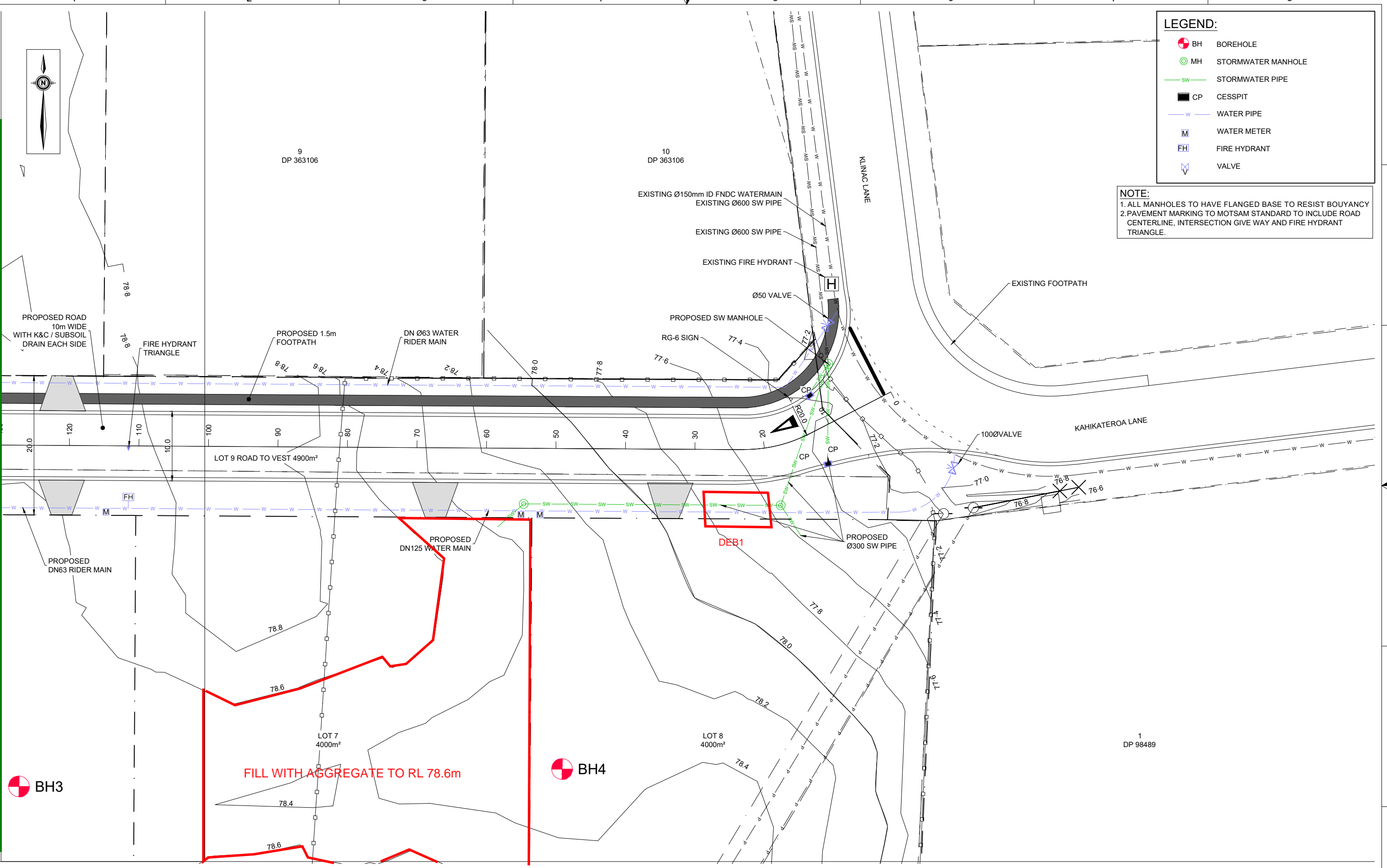
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Project No.	21 131	RC no. 2160324

DWG No.	<b>P1</b>
Sheet No.	<b>1 of 3</b>





Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m
C	24/08/2021	FILL ADDED ON LOT 7; DEBS ADDED

DWG **ROADING AND SERVICES B**

Scale 1:500 @A3

Drawn AP Checked MW Approved JP

Date 02/07/2021

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DWG No.	<b>P2</b>
Sheet No.	<b>2 of 3</b>

FNDCC - Approved Building Consent Document - ERK-2023-12430 - Pg 114 of 376 - 11/07/2023 - NZBTC

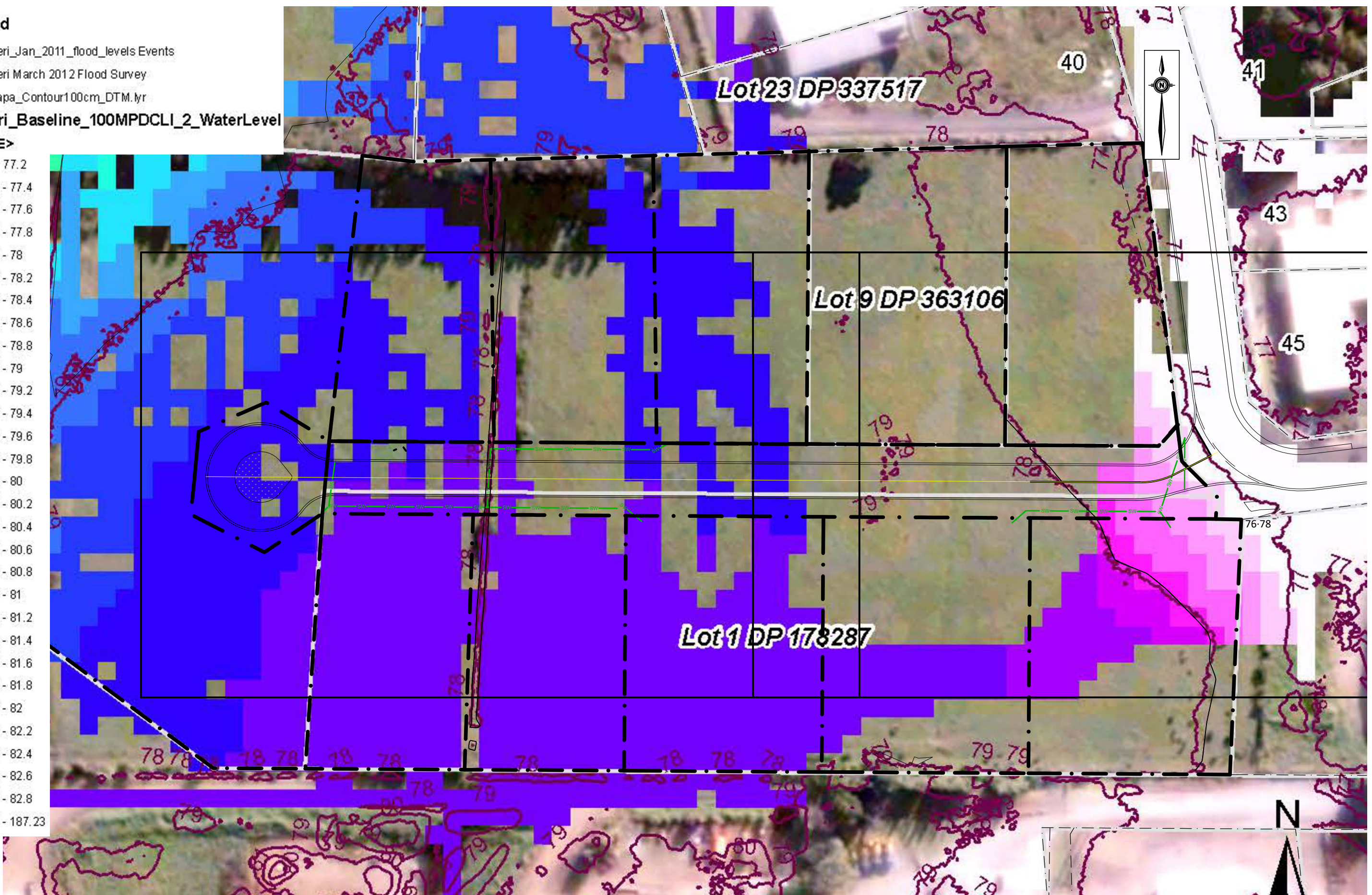
**Legend**

- Kerikeri\_Jan\_2011\_flood\_levels Events
- Kerikeri March 2012 Flood Survey
- Waipapa\_Contour100cm\_DTM.lyr

**Kerikeri\_Baseline\_100MPDCLI\_2\_WaterLevel**

<VALUE>

1.85 - 77.2
77.21 - 77.4
77.41 - 77.6
77.61 - 77.8
77.81 - 78
78.01 - 78.2
78.21 - 78.4
78.41 - 78.6
78.61 - 78.8
78.81 - 79
79.01 - 79.2
79.21 - 79.4
79.41 - 79.6
79.61 - 79.8
79.81 - 80
80.01 - 80.2
80.21 - 80.4
80.41 - 80.6
80.61 - 80.8
80.81 - 81
81.01 - 81.2
81.21 - 81.4
81.41 - 81.6
81.61 - 81.8
81.81 - 82
82.01 - 82.2
82.21 - 82.4
82.41 - 82.6
82.61 - 82.8
82.81 - 187.23



Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m

DWG **NRC FLOOD HAZARD 100 YEAR ARI CC FLOOD ELEVATION**

Scale 1:1000 @A3

Drawn AP Checked MW Approved JP

Date 22/06/2021

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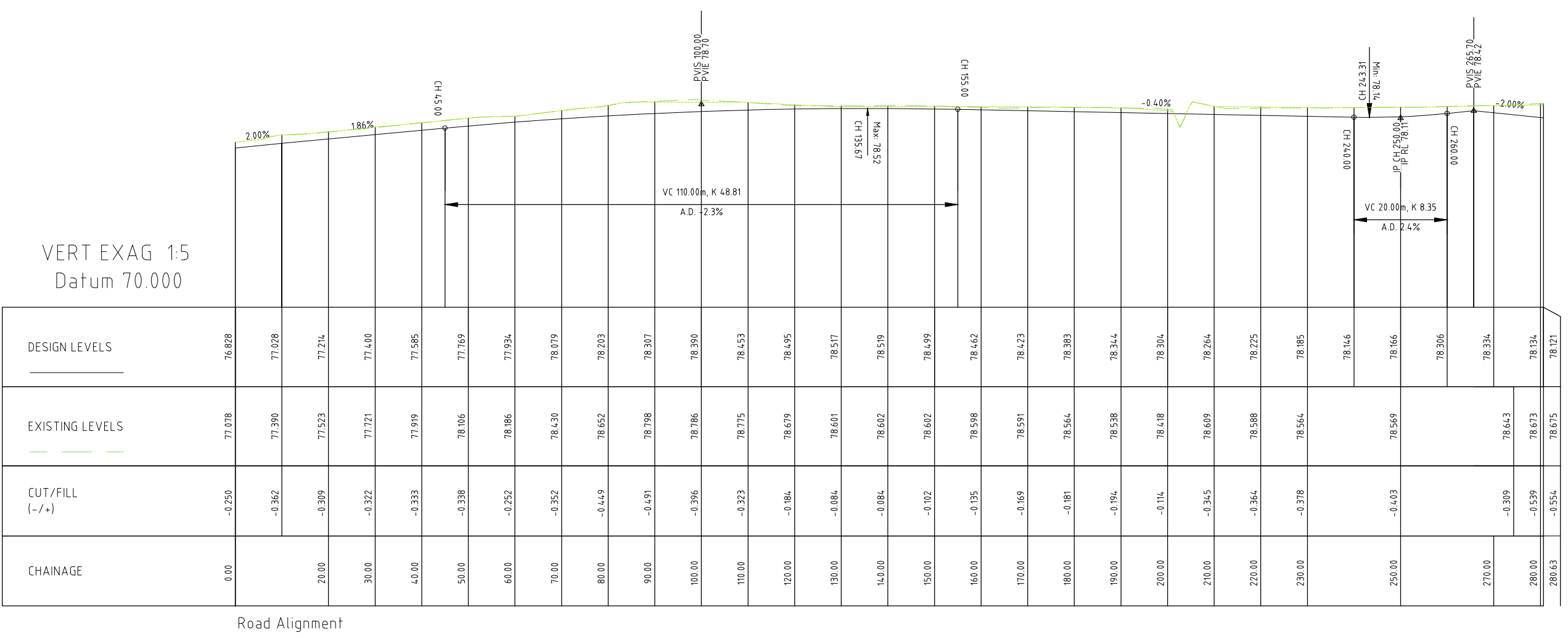
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DWG No.	<b>P4</b>
Sheet No.	<b>3 of 3</b>



Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
	18/06/2021	ROAD WIDENED TO 10.0m

DWG **Roading Longitudinal Section**

Scale 1:1000 @A3

Drawn AM Checked MW Approved JP

Date 02/07/2021

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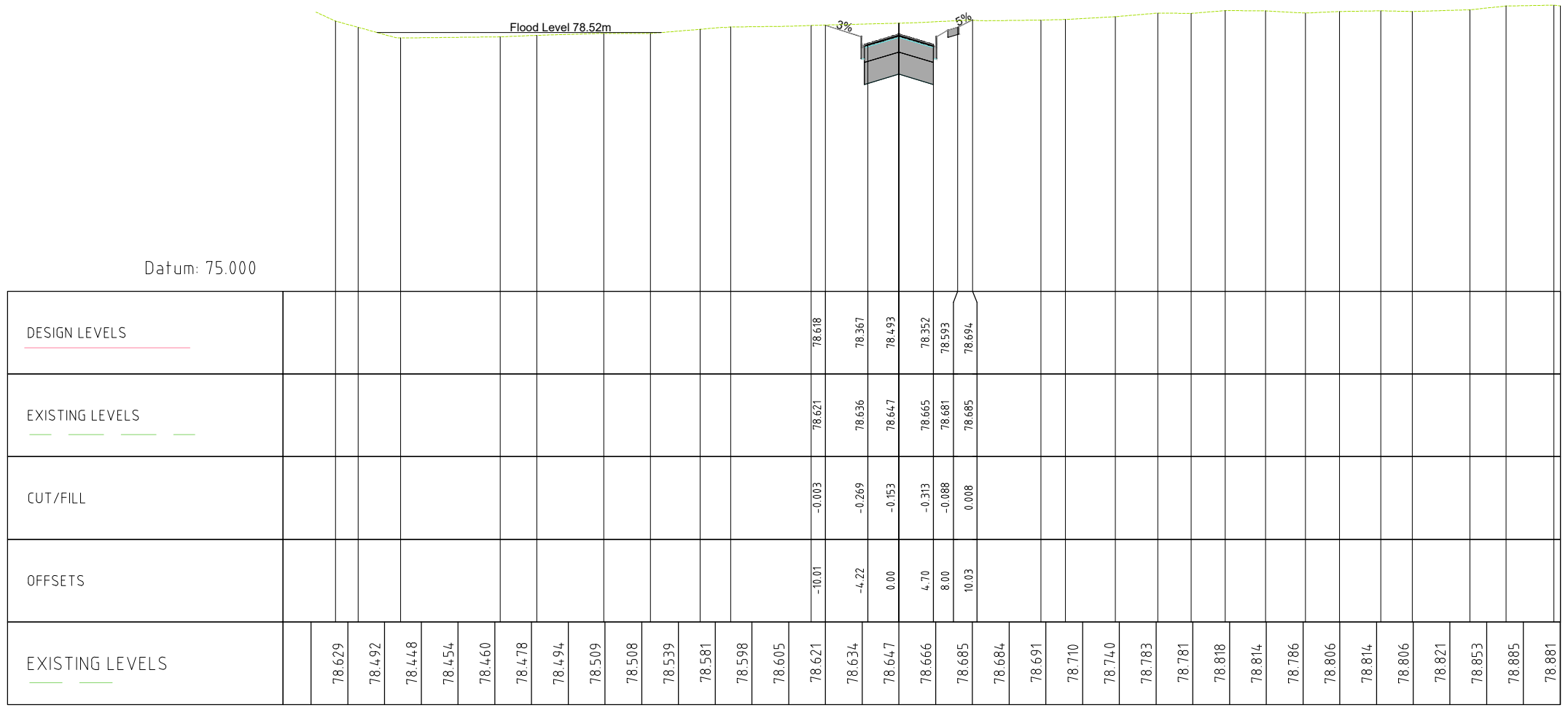
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Kinac Lane, Kerikeri

Client **Windermere Energy Ltd.**

Project No. **21 131** RC no. **2160324**

DWG No. **LS1**

Sheet No. **1 of 1**



Chainage 119.480 Existing Overland Flow Path

NOTE:  
10x VERTICAL EXAGGERATION  
HORIZONTAL 1:750  
VERTICAL 1:75

Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m

DWG Cross Sections

Scale 1:750 @A3

Drawn TV Checked JP Approved JP

Date 22/06/2021

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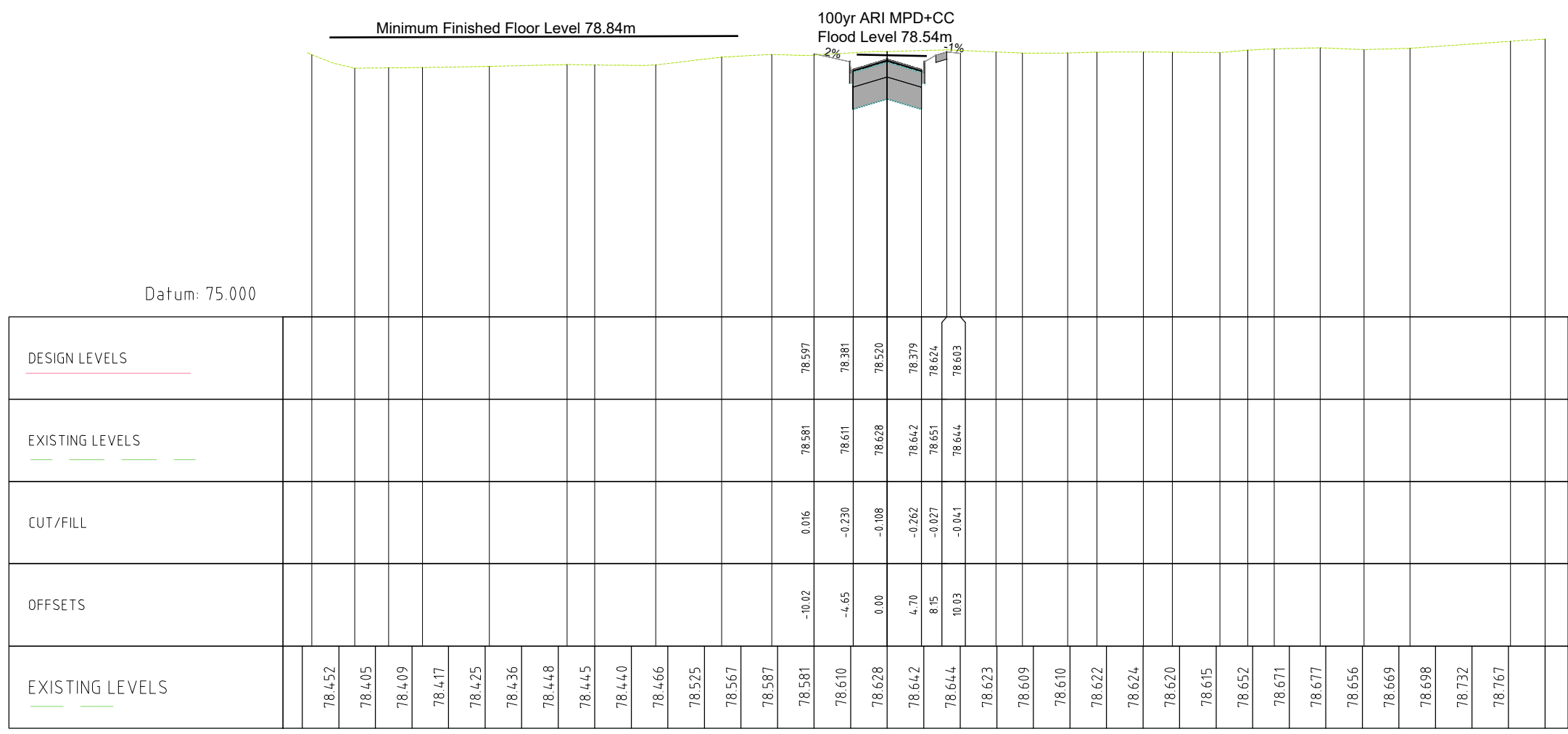
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Client	Windermere Holdings Ltd.
Project No.	21 131 RC no. 2160324

DWG No.	<b>CS10</b>
Sheet No.	<b>1 of 2</b>

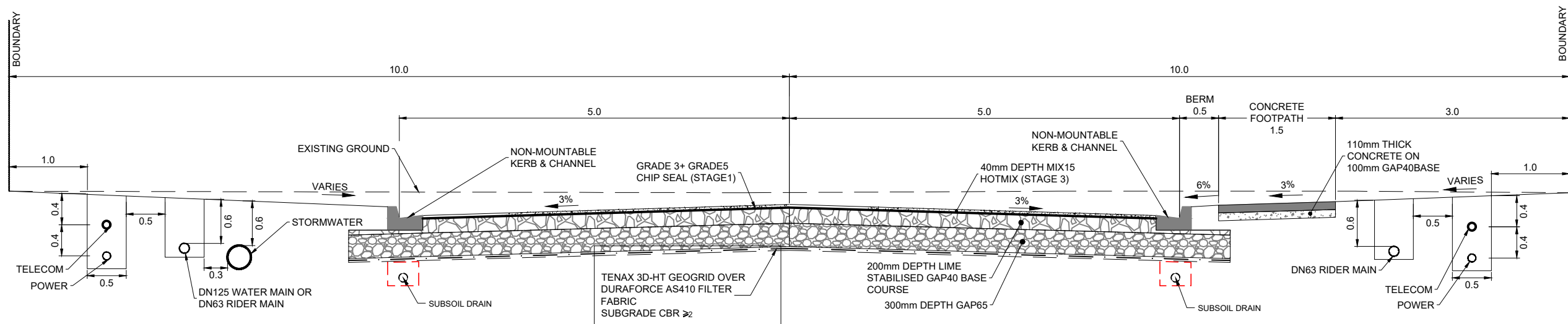
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Chainage 135.670 Proposed Overland Flow Path

NOTE:  
10x VERTICAL EXAGGERATION  
HORIZONTAL 1:750  
VERTICAL 1:75

Issue	Date	Revision	DWG CROSS SECTIONS			Project Proposed Subdivision		DWG No. CS11
			Scale 1:750 @A3  Date 22/06/2021			Client Windermere Holdings Ltd.		Sheet No. 2 of 2
A	16/11/2020	FOR CONSTRUCTION	Drawn TV	Checked JP	Approved JP	Project No. 21 131 RC no. 2160324		
B	18/06/2021	ROAD WIDENED TO 10.0m	File: OBS21 131 Windermere Holdings Ltd\Engineering\Drawings\21 131 Windermere Holdings Ltd.dwg		DIMENSIONS MUST NOT BE SCALE MEASURED FROM THESE DRAWINGS. THE CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS INCLUDING, SITE LEVELS, HEIGHTS AND ANGLES ON SITE PRIOR TO COMMENCING ANY WORK. THE COPYRIGHT TO THESE DRAWINGS AND ALL PARTS THERE OF REMAIN THE PROPERTY OF HAIGH WORKMAN. ©2006			



ROAD TYPICAL SECTION

**NOTE:**  
HOTMIX ON CL-DE-SAC TO BE 50MM DEPTH MIX 25.

Issue	Date	Revision
A	06/11/2020	FOR CONSTRUCTION
B	18/06/2021	ROAD WIDENED TO 10.0m

DWG ROAD TYPICAL SECTION			
Scale	1:60 @A3	Date	22/06/2021
Drawn	AM	Checked	MW
Approved		Approved	JP
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Client	Windermere Holdings Ltd.	
Project No.	21 131	RC no. 2160324

DWG No.	<b>DE1</b>
Sheet No.	<b>1 of 1</b>

Ground Improvement Design Report for Settlement Trial  
Proposed Commercial Development  
Lot 6-8 – Waipapa Business Park

For  
Peter Swan Limited

April 2023

## Revision History

Revision N <sup>o</sup>	Issued By	Description	Date
A	Wayne Thorburn	First Issue	21/04/2023

Prepared By



Wayne Thorburn

Senior Geotechnical Engineer  
CMEngNZ, CPEng

Approved By



John Papesch

Senior Civil / Geotechnical Engineer  
CMEngNZ, CPEng



TABLE OF CONTENTS

Revision History.....	i
<b>1 Introduction .....</b>	<b>2</b>
1.1 General.....	2
1.2 Scope of Design Work.....	2
<b>2 Ground Improvements.....</b>	<b>2</b>
2.1 General.....	2
2.2 Settlement Analyses .....	3
2.3 Utilities.....	4
<b>3 Instrumentation and Monitoring .....</b>	<b>4</b>
3.1 Proposed instrumentation.....	4
3.2 Monitoring.....	4
3.3 Fill compaction testing.....	5
<b>4 Construction Risk.....</b>	<b>5</b>
<b>5 Limitations .....</b>	<b>6</b>
<b>Appendix A – Drawings .....</b>	<b>7</b>
<b>TABLES</b>	
Table 1 - Settlement results (Settle 3D Analysis).....	4
Table 2 - Monitoring frequencies.....	4
Table 3 - Construction Risks Assessed.....	5
<b>FIGURES</b>	
<b>No table of figures entries found.</b>	

# 1 Introduction

## 1.1 General

Haigh Workman Limited (Haigh Workman) has been engaged by Peter Swan Limited (the Client) to undertake design of a settlement preload a proposed and future warehouse development within Lots 6-8 of the Waipapa Business Park.

This report presents the results of the geotechnical assessments with respect to settlement of the foundation soils and summarises the settlement analyses and settlement preload design. This report is based on the preliminary geotechnical appraisal report prepared by Haigh Workman (Ref # 22 189, January 2022).

The purpose of this report is to present the geotechnical design of a settlement preload for the building platform to raise the ground level above the flood hazard level. The site is subject to a flood hazard according to the Northland Regional Council (NRC) modelling, with the 100-year annual recurrence interval (ARI) for Lot 6 being 78.6 mRL (OTP datum). Far North District Council (FNDC) require floor levels to be a minimum 300 mm above the flood hazard level for a non-habitable building, giving a finished floor level 78.9 mRL. The current ground level across the proposed warehouse is approximately 78.4 mRL and 78.77 mRL.

Based on the geotechnical investigations undertaken the underlying soils typically comprise Tauranga Group alluvial deposits to approximately 3.0 mbgl, underlain by Kerikeri Volcanic Group. A deeper sequence of alluvial soils was encountered within Lot 7 and Lot 8. Settlement preload and surcharge is required to mitigate against settlement for the proposed development.

## 1.2 Scope of Design Work

The scope of work covered by this report is the ground improvements required for the trial embankment. The geotechnical design advice presented in this report is limited to the following:

1. Description of the settlement preload embankment and subsurface conditions.
2. Design details for settlement and assessment of the effects.
3. Safety in Design / Construction risk.

# 2 Ground Improvements

## 2.1 General

The site is in a mapped flood zone and finished floor levels of any future buildings need to be raised above the flood hazard. To mitigate the predicted settlement from the building load and fill required to raise the ground level, a settlement preload trial is required and will be monitored using settlement plates.

## 2.2 Settlement Analyses

### 2.2.1 Primary Consolidation

Primary consolidation has been estimated using the in-situ testing data from the CPTs. The analysis was undertaken to determine the expected total settlement and differential settlement. The settlement analysis has been undertaken based on the following basis:

- Existing ground level is around 78.4 mRL to 78.6 mRL.
- Minimum FFL of proposed warehouse 78.9 mRL. As requested by the Client, we have further assessed an FFL of 79.2 mRL to provide greater resilience against flood risk potential. Subgrade assumed as 79.05 mRL with a 150 mm thick concrete slab assumed to bring FFL to 79.2 mRL.
- 20 kPa UDL (includes concrete slab) applied from subbase. Total preload will include an additional 500 mm surcharge above FFL, i.e., top of fill embankment will be 79.7 mRL.
- Remove preload back to subbase level 79.05 mRL (timing is estimated to be in the order of 3 to 6 months to complete settlement and will be subject to verification by survey results).

The surcharge preload embankment construction is recommended to be constructed in stages. The remainder of the works will need to be staged to allow for the remainder of the settlement to complete. We recommend the following steps are undertaken at the dwelling location:

1. Survey the exact extent of the proposed building and carpark area.
2. Strip the site of all unsuitable material. Additional topsoil was brought onto the site during subdivision to raise the average ground level above the 78.6 mRL flood level.
3. If on-grade stiffened raft foundation, place geotextile and geogrid at base of fill. Grid strength shall be no less than 40 kN, and geotextile to be BIDIM A39 or equivalent. If conventional spread foundations, geotextile (A39) will be required at interface between granular fill and the natural ground.
4. Import granular fill to fully encapsulate the building area under supervision by an Engineer (CPEng – Geotechnical). Install settlement plates beneath the proposed building area. Fill material shall be compacted to an engineered standard e.g., 95% maximum dry density and placed in layers (loose) no greater than 200 mm. HOLD POINT – MONITOR SETTLEMENT AT REGULAR INTERVALS, WEEKLY FOR THE FIRST MONTH, EVERY 2<sup>ND</sup> WEEK FOR NEXT TWO MONTHS, AND MONTHLY THEREAFTER. REVIEW OF RESULTS BY ENGINEER TO BE DONE AT EACH READING.
5. Once settlement target has been achieved and approved by the Engineer, the fill can be trimmed back to sub-base level (approx. 79.05 mRL, assuming 150 mm thick slab) and preparing for the building platform can commence.

### 2.2.2 Summary of results

Settlement results at various locations across the proposed and future building platforms have been analysed. Table 1 below provides total settlement values. The purpose of the surcharge loading to be added is to remove the effects of the differential settlement and mitigate against long-term settlement potential. We recommend the fill platform is extended beyond the building platform as much as possible, e.g., at least 2.0 m beyond the building and ramped

at a suitable angle to allow easy access during construction. The additional fill surcharge material can be used elsewhere on the site, subject to ongoing construction monitoring and approval by the Engineer.

**Table 1 - Settlement results (Settle 3D Analysis)**

Stage #	Loads	Total Settlement Potential (mm)
1	Filling to FFL, approx. 79.20 mRL for proposed warehouse – maximum 18 kPa pressure from filling only	60
2	Surcharge preload 500 mm to 79.7 mRL (to take into consideration of 20 kPa UDL flood load and reduce the overall settlement timeframe)	150

We further recommend the carpark area and concrete hardstand areas around the buildings to be raised to pre-seal levels for a minimum 3 months to mitigate settlement external to the building e.g., a step occurring between the building and the concrete entry apron. Filling for these areas should be done at the same as the building areas to mitigate adverse effects, e.g., drag down effect from filling on the side.

### 2.3 Utilities

It is our understanding that no existing services are located near the trial fill embankment. Any new or proposed services should be installed following pre-loading. Further advice can be provided following commencement of the trial.

## 3 Instrumentation and Monitoring

### 3.1 Proposed instrumentation

The proposed instrumentation for the trial embankment is to comprise:

- 12x settlement plates to be installed at the base of the preload embankment for the proposed warehouse to measure the embankment total settlements.

The locations of the instruments mentioned above are shown on drawings in Appendix A.

### 3.2 Monitoring

A summary of the minimum monitoring frequencies is provided in Table 2. It is anticipated that the settlement monitoring will continue to a point where consolidation settlement is determined as completed by the Designer.

**Table 2 - Monitoring frequencies**

Instrument Type	Standard monitoring frequency (subject to written approval from Designer)
Settlement plate	Weekly for the first month, fortnightly for the next 2 months, and monthly thereafter if ongoing monitoring is required.

### 3.3 Fill compaction testing

The preload embankment shall comprise granular hardfill (GAP65 or GAP40). A representative sample should be sourced from the quarry prior to commencing the trial embankment to ensure the material is suitable, including standard compaction curves and the bulk density of the material being used as pre-load.

Quality control testing shall be undertaken at every lift, with a nominal 10 tests carried out across the trial embankment plan area, per lift. We recommend a maximum dry density (MDD) of 95% is achieved, and a Clegg Impact Value (CIV) of 25 can be adopted to assist the Contractor during compaction, i.e., the Contractor can use a Clegg hammer prior to booking an engineer’s inspection.

## 4 Construction Risk

The following issues have been identified during the development of the design which pose potential construction risks during construction and monitoring of the trial embankment. Please note that this is not an exhaustive list.

**Table 3 - Construction Risks Assessed**

Hazard Identified	Risk	Level of Risk	Proposed Mitigation
<b>Vandalism to instrumentation</b>	Risk of embankment monitoring equipment being damaged by the public	Moderate to high	Ensure the settlement plates are protected from vandalism. Steel pins can be set into the PVC pipe and a screw cap installed to minimise damage.
<b>Erosion protection</b>	Risk of localised erosion of trial embankment during storm event / heavy periods of rainfall	Medium to high	Bidim A29 non-woven geotextile (or approved equivalent) to be placed over the surface to prevent erosion.
<b>Security</b>	Safety of people playing on the trial embankment	Low to medium	Fence off embankment with temporary fencing and signage and remove embankment once sufficient data has been obtained.
<b>Excavations in front of the trial embankment</b>	Collapse of the trial embankment due to undermining at the toe	Medium to high	Any proposed excavations (temporary or permanent) within 5 m of the trial embankment should be referred to Haigh Workman for review prior to digging.

## 5 **Limitations**

This report has been prepared for the use of Peter Swan Limited with respect to the brief outlined to us. This report is to be used by our Client and their Consultants and may be relied upon when considering geotechnical advice. Furthermore, this report may be utilised in the preparation of building and/or resource consent applications with local authorities. The information and opinions contained within this report shall not be used in other context for any other purpose without prior review and agreement by Haigh Workman Ltd.

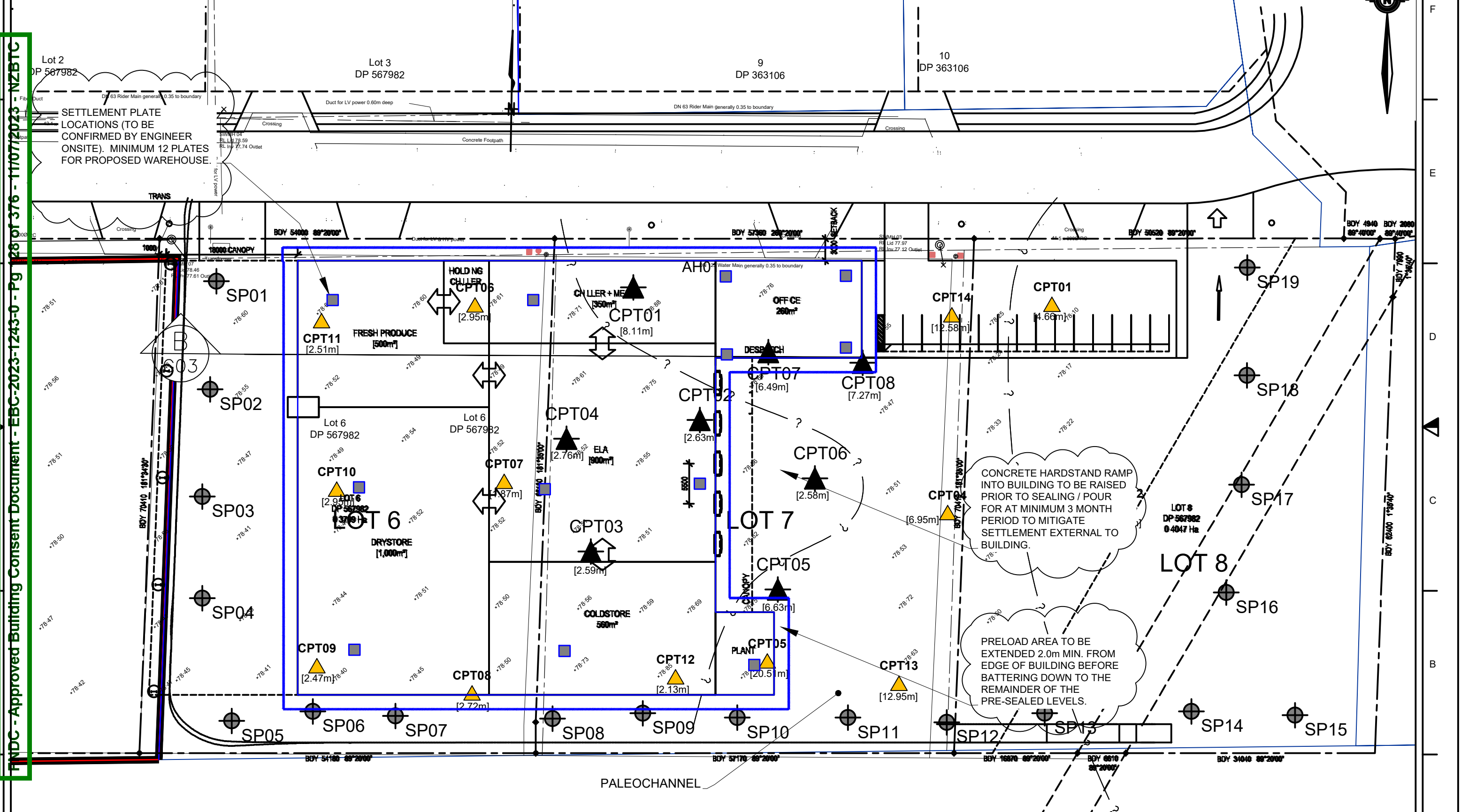
The recommendations given in this report are based on site data from discrete locations. Inferences about the subsoil conditions away from the test locations have been made but cannot be guaranteed. We have inferred an appropriate geotechnical model that can be applied for our analyses. However, variations in ground conditions from those described in this report could exist across the site. Should conditions encountered differ to those outlined in this report we ask that we be given the opportunity to review the continued applicability of our recommendations.

## Appendix A – Drawings

Drawing No.	Title
22 189/P01	Trial Embankment Site Plan
22 189/P02	Geological Cross Section
22 189/P03	Instrumentation and Monitoring Typical Details
	Concept Plan

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**NOTES:**  
 1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).



Issue	Date	Revision
A	20/04/2023	PRELOAD

DWG	SITE LOCATION PLAN		
Scale	1:500 @A3	Date	APR 2023
Drawn	WT	Checked	JP
Approved	JP		
File	C:\USERS\WAYNE\THORNBURN\HAIGH WORKMAN LIMITED\SITES\FILES - PETER SWAN LIMITED\JOBS\22 189 - KAHIKATEAROA LANE, WAIPAPA (LOT 1 DP 178287)\ENGINEERING\DRAWINGS\22 189_GEO TECHNICAL DRAWINGS (PRELOAD).DWG		

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Client	PETER SWAN LTD	
Project No.	22 189	RC no. N/A

DWG No.	<b>P01</b>
Sheet No.	<b>1 of 3</b>



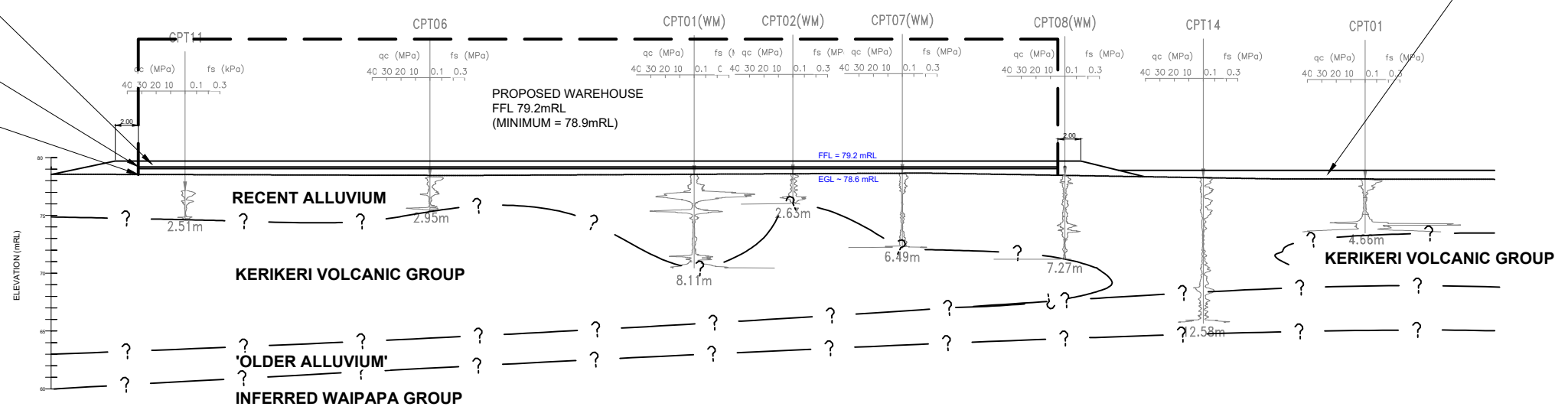
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PRELOAD SURCHARGE OF 500 mm OF GRANULAR HARDFILL (GAP65/40) ABOVE FFL TO 79.7mRL. PRELOAD TO REMAIN UNTIL ENGINEER APPROVES REMOVAL. REFER REPORT FOR HOLD POINTS AND SURVEY INTERVALS

FILLING REQUIRED TO RAISE ABOVE FLOOD HAZARD LEVEL (78.6mRL). DESIGN FFL = 79.2mRL (OTP)

GEOTEXTILE (BIDIM A39) TO BE LAYED OUT ONTO THE SUBGRADE PRIOR TO FILLING AND TO ENCOMPASS THE BUILDING PLATFORM ENTIRELY.

CONCRETE HARDSTAND RAMP INTO BUILDING TO BE RAISED PRIOR TO SEALING / POUR FOR AT MINIMUM 3 MONTH PERIOD TO MITIGATE SETTLEMENT EXTERNAL TO BUILDING.



Issue	Date	Revision
A	21/04/2023	FIRST ISSUE

DWG	<b>GEOLOGICAL SECTION B-B</b>	
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Approved	JP	
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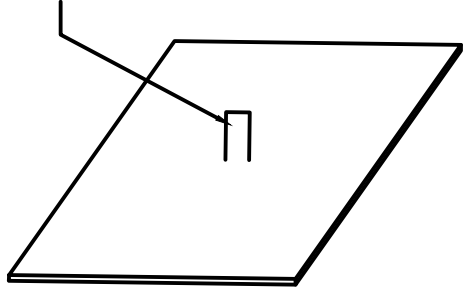
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Project	<b>PROPOSED WAREHOUSE BIDFOODS</b> LOTS 6 - 8, KAHIKATEAROA LANE	
Client	<b>PETER SWAN LTD</b>	
Project No.	<b>22 189</b>	RC no. N/A

DWG No.	<b>P02</b>
Sheet No.	<b>2 of 3</b>

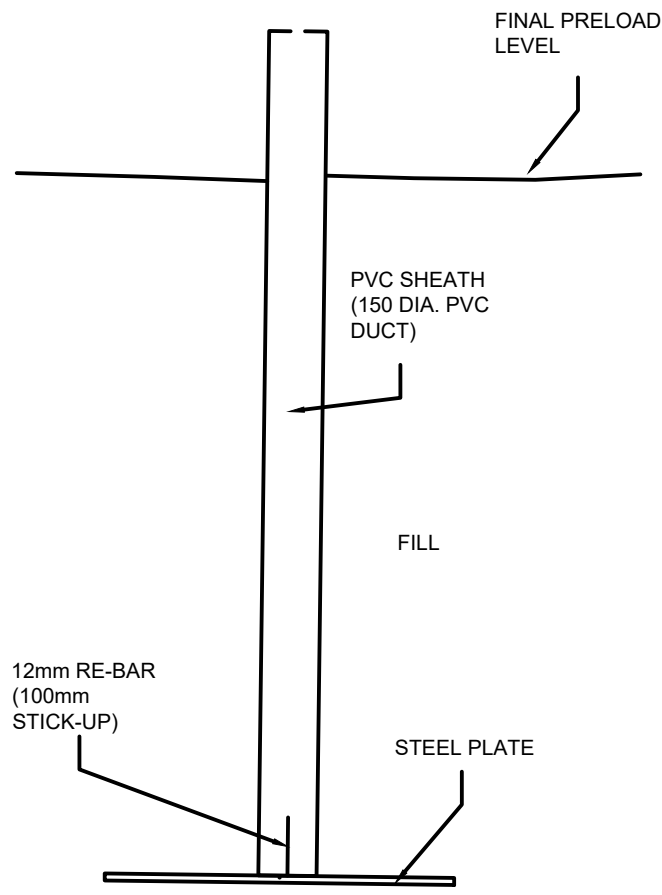


EXTENSION ROD COUPLER WITH INTERNAL THREAD WELDED TO THE CENTRE OF SETTLEMENT PLATE



SETTLEMENT PLATE  
NTS

300 x 300 mm  
5mm THICK PLATE



SETTLEMENT PLATE MONITORING BEFORE EXTENDING  
NTS

**NOTES:**

1. THE INTERNAL DIAMETER OF PVC SLEEVE MUST BE LARGER THE EXTERNAL DIAMETER OF THE EXTENSION ROD COUPLERS TO ALLOW FREE MOVEMENT.
2. THE ANCHOR PLATE SHOULD BE INSTALLED ON A 50mm THICK BLINDING LAYER OF SITE CONCRETE TO FORM AN EVEN, SMOOTH FOUNDATION. THE PLATE PLACED HORIZONTALLY ON THE SITE CONCRETE AND LEVELLED USING A SPIRIT LEVEL (OR BY SURVEY). THE ANCHOR PLATE SHOULD BE COVERED WITH FILL MATERIAL, COMPACTED TO THE SAME SPECIFICATIONS AS THE SURROUNDING FILL, PRIOR TO FILLING THE REST OF THE AREA.
3. SURVEY TOP OF THE SETTLEMENT ROD (SURVEY LEVEL 1) AT SPECIFIED MONITORING FREQUENCY. AT THE SAME TIME SURVEY THE LEVEL OF FILL ABOVE THE PLATE.

**SUGGESTED CONSTRUCTION METHODOLOGY:**

MANUFACTURE STEEL PLATE (300mm SQUARE) WITH CENTRAL 12mm STEEL NIB (100mm HIGH) AND PLACE ON THE GROUND LEVEL PRIOR TO FILLING. LOCATIONS TO BE AGREED UPON BEFORE INSTALLATION.

CONTRACTOR TO ENSURE PLINTHS ARE INSTALLED AND BASELINE LEVEL READINGS ARE RECORDED PRIOR TO BULK FILLING.

EACH SUBSEQUENT MONITORING ROUND OF SURVEY LEVELLING IS TO BE CARRIED OUT BY LOWERING THE SURVEY STAFF DOWN THE PVC DUCT AND RESTING ONTO THE STEEL NIB.

THE DUCTS SHOULD EXTEND TO AT LEAST 1.0m ABOVE THE FULL SURFACE AND EXTENSIONS PLACED AS NECESSARY TO ENSURE THEY REMAIN VISIBLE.

THE CONTRACTOR IS TO TAKE ALL REASONABLE CARE TO ENSURE SETTLEMENT PLINTHS AND DUCTS ARE NOT DAMAGED DURING ALL PHASES OF THE EARTHWORKS, UNTIL SUCH TIME AS THEY ARE DECOMMISSIONED.

MONITORING FREQUENCY IS TO BE EVERY WEEK FOR THE FIRST MONTH, AND FORTNIGHTLY THEREAFTER.

Issue	Date	Revision
A	21/04/2023	PRELOAD

DWG INSTRUMENTATION AND MONITORING TYPICAL DETAILS			
Scale	1: NTS @A3	Date	APR 2023
Drawn	WT	Checked	JP
Approved	JP	File C:\USERS\WAYNETHORBURN\HIGH WORKMAN LIMITED\SUITEFILES - PETER SWAN LIMITED\JOBS\22 189 - KAHIKATEAROA LANE, WAIPAPA (LOT 1 DP 178287)\ENGINEERING\DRAWINGS\INSTRUMENTATION.DWG	

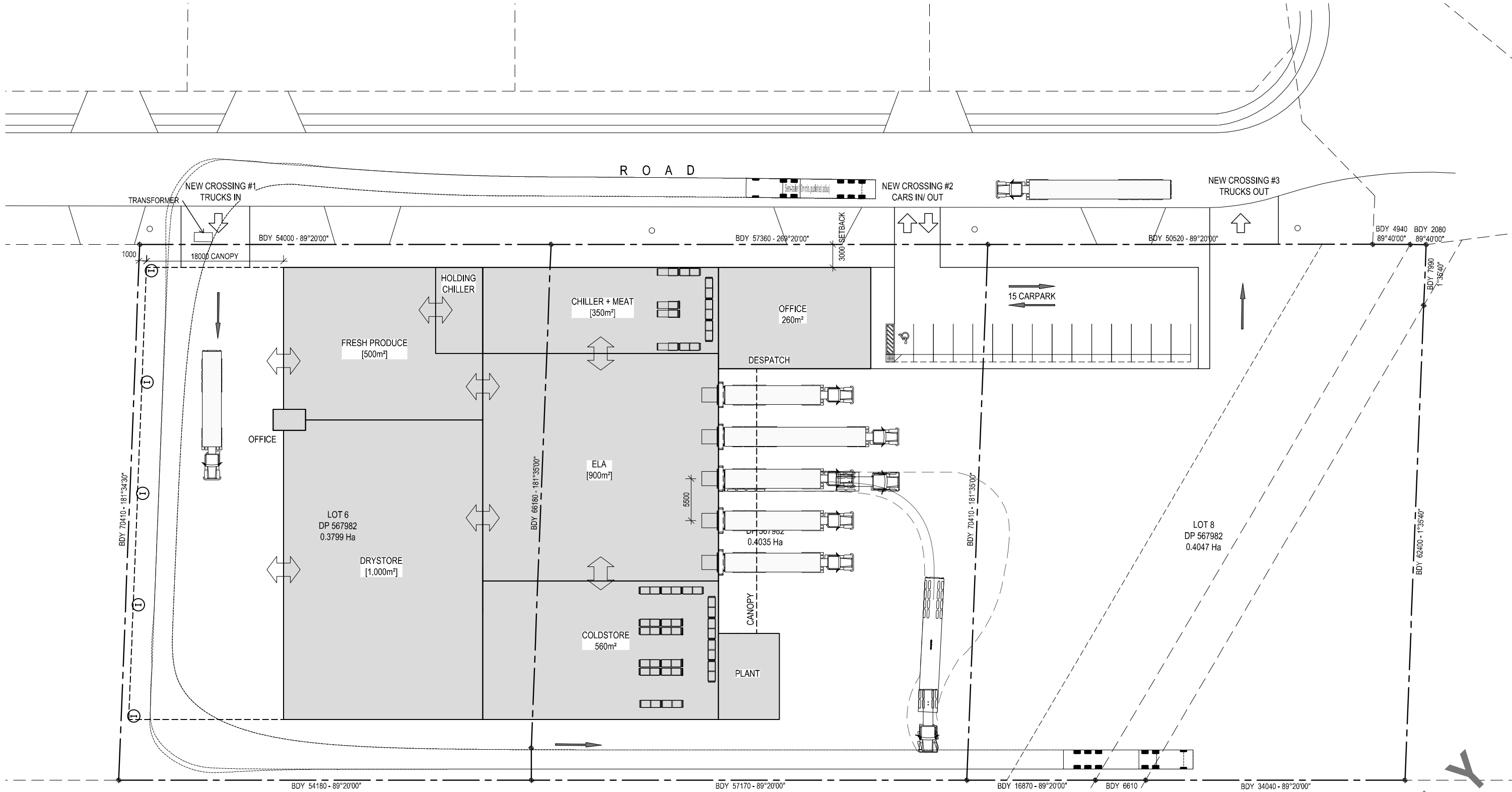
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Project	PROPOSED WAREHOUSE BUILDING LOT 6-8, KAHIKATEAROA LANE
Client	PETER SWAN LIMITED
Project No.	22 189
RC no.	N/A

DWG No.	<b>P03</b>
Sheet No.	<b>3 of 3</b>



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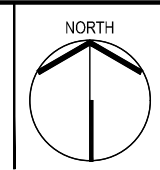
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CLIENT | PROJECT TITLE:

**SITE DEVELOPMENT**  
 FOR:  
**BIDFOOD LIMITED**  
 AT:  
**KERI KERI**

DRAWING TITLE:  
**SITE PLAN  
 OPTION -A1**



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DRAWN: CW	APPROVED:	DATE: NOV 2022
DRAWING No.: 110695 - P201		REV.
PRELIMINARY	DATE: --	No.: 1

Preliminary Geotechnical Appraisal Report  
Proposed Industrial Development  
Lots 6-8 Kahikatearoa Lane Extension, Waipapa  
For  
Peter Swan Limited

*Haigh Workman reference 22 189*

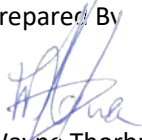
January 2023



## Revision History

Revision N <sup>o</sup>	Issued By	Description	Date
A	Wayne Thorburn	First Issue	19 January 2023

Prepared By



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Senior Geotechnical Engineer  
CPEng, CMEngNZ

Approved By



John Papesch

Senior Civil / Geotechnical Engineer, Director  
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TABLE OF CONTENTS

Revision History ..... i

**Executive Summary ..... 4**

**1 Introduction ..... 7**

1.1 Project Brief and Scope ..... 7

1.2 Proposed Development ..... 7

1.3 Site Description ..... 7

**2 Geology ..... 9**

2.1 Published Geology ..... 9

**3 Ground Investigations.....11**

3.1 Previous Investigations (2021)..... 11

3.2 Subsurface Investigations (2022-2023)..... 11

3.3 Ground Conditions..... 11

**4 Geotechnical Assessment .....13**

4.1 General..... 13

4.2 Geotechnical Design Parameters ..... 14

4.3 CPT Undrained Shear Strength ..... 14

4.4 Settlement Analysis ..... 15

4.5 Bearing Capacity ..... 16

4.6 Shrink Swell Soil Characteristics..... 17

4.7 Seismic Site Subsoil Category..... 17

4.8 Liquefaction Potential ..... 17

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 134 of 376 - 11/07/2023 - NZBTC

<b>5</b>	<b>Foundation Recommendations .....</b>	<b>20</b>
5.1	General.....	20
5.2	Shallow Foundations.....	21
<b>6</b>	<b>Construction.....</b>	<b>22</b>
6.1	Earthworks Operation and Compaction Control .....	22
6.2	Earthworks.....	23
6.3	Subgrade Protection .....	24
6.4	Stormwater Disposal.....	24
6.5	Services .....	24
6.6	Pavement Design .....	24
6.7	Geotechnical Review.....	25
6.8	Construction Observations .....	25
<b>7</b>	<b>Limitations .....</b>	<b>25</b>
	<b>Appendix A – Drawings .....</b>	<b>27</b>
	<b>Appendix B – Site Investigation Logs.....</b>	<b>28</b>
	<b>Appendix C – Settle 3D Analysis and Liquefaction Assessment Results .....</b>	<b>29</b>
	<b>Appendix D – Provided Development Drawings .....</b>	<b>30</b>
	<b>TABLES</b>	
	Table 1 - Geological Legend .....	9
	Table 2 - Summary of Borehole Results .....	12
	Table 3 – Geotechnical Design Parameters.....	14
	Table 4 - Settlement prediction results.....	16
	Table 5 - Summary of results.....	18
	Table 6 - Maximum dry density for granular fill.....	23

Table 7 - Clegg Impact Value (CIV) testing on granular fill ..... 23  
 Table 8 - Proof roll testing on granular hardfill ..... 23

**FIGURES**

Figure 1 - Site Location ..... 8  
 Figure 2 – Published geological maps ..... 10  
 Figure 3 –CPT Plots (undrained shear strength) ..... 15  
 Figure 4 - Cyclic softening triggering ..... 20

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 136 of 376 - 11/07/2023 - NZBTC



## Executive Summary

Haigh Workman Ltd. (Haigh Workman) has been commissioned by Peter Swan Limited to (the Client) to undertake a preliminary geotechnical appraisal for a proposed commercial development at Lots 6-8 Kahikatearoa Lane Extension, Waipapa.

Subsoil ground investigations were carried out and supervised by Haigh Workman, comprising six hand augered boreholes 14 cone penetration tests (CPTs), and 19 Scala penetrometer tests across the site. Previous investigations completed in 2021 (Haigh Workman Ltd, 21 131) comprised two hand augered boreholes, 8 CPTs, and samples collected for Atterberg Limit testing. Investigation logs are presented in Appendix B.

The surface soils directly underlying the site comprise recent alluvium overlying Kerikeri Volcanic Group, with a deeper paleochannel located through Lot 7. The deeper soils associated with the paleochannel were encountered within nine CPT test locations (2021 and 2022 results), refer appended drawings for geological sections. Sudden refusal was typically encountered across the site which has been inferred as top of Kerikeri Volcanic Group. Where Kerikeri Volcanic Group was not encountered, a consolidated alluvial (early to middle Pleistocene age) sequence was encountered overlying inferred completely to highly weathered Waipapa Group.

The site is subject to a flood hazard according to the Northland Regional Council (NRC), with a river flood hazard existing for 100-year return period event. The Far North District Council (FNDC) require floor levels to be a minimum 300 mm above the flood hazard level for a non-habitable building. The existing site is almost level, with a change in elevation across the building platform (Option 2) site in the order of 300 mm, with the south-western corner ground surface at 78.4 mRL and the north-eastern corner 78.1 mRL. The 1% AEP (including climate change) is 78.6 mRL. The finished floor level (FFL) for a commercial building needs to be 300 mm above the flood hazard level, therefore we have assumed a FFL of 78.9 mRL. Based on the existing contour data available at the time of preparing this report, fill will need to be imported to raise the ground level to the underside of the foundation slab, approximately 78.75 mRL (assuming a 150 mm thick floor slab).

A preliminary settlement analysis was undertaken based on the proposed FFL and Option B layout. Fill material will need to be imported to raise the ground level to the underside of the slab level. Based on the imported fill and the proposed 20 kPa building UDL, consolidation settlement is estimated to be 150 mm occurring over approximately 5 years. An additional fill surcharge, e.g., 500 mm additional hardfill, is recommended to reach the settlement target in a quicker timeframe, i.e., the aim of the settlement and preload surcharge is to achieve the total maximum settlement (estimated at 150 mm) within 3-6 months, rather than 5-10 years. A separate analysis was undertaken where the structural loads are supported on individual pad foundations, with a design bearing capacity of 100 kPa available for a maximum pad foundation size of 1.2 m x 1.2 m (size chosen to keep settlements below 25 mm for conventional foundation elements), and strip footings are limited to 0.60 m width. The magnitude and rate of consolidation varies across the site due to the shallow depth of alluvial soils over Lot 6 and the deeper soils within the paleochannel. A settlement preload design report will be required once the final building layout has been confirmed.

Geotechnical risk has been evaluated and is considered minor, provided the recommendations detailed within this report are followed. A summary of the geotechnical risks are as follows:

- Undercuts across the site may be required to remove unsuitable material. This includes the possibility of old field drains and non-certified filling.
- Groundwater level across the site is shallow. We recommend excavations be kept to a minimum and should not go any deeper than the groundwater level to reduce the risk of any groundwater drawdown induced settlements.
- Bearing capacity has been assessed in accordance with the methods presented in the New Zealand Building Code (B1/VM4). Recommended ultimate bearing capacity is 200 kPa (based on thickening the crustal layer and preloading the soils). The bearing capacity is limited to 1.2 x 1.2 m pad foundations and 0.6 m strip footings. The bearing capacity value is appropriate for vertical loads only, and do not allow for any imposed horizontal shear or moment actions and will require confirmation during specific design. A geotechnical strength reduction factor of 0.5 can be adopted for limit state design.
- Settlement – the foundation dimensions and final ground levels are not known at this stage of reporting. Section 4 presents the settlement estimates based on the assumed loads and load breakdown, e.g., spread footings and slab UDL. To limit consolidation settlement to 25mm, 0.60m wide strip footings should be adopted in design and maximum pad foundations of 1.2m x 1.2m, adopting a design bearing pressure of 100 kPa for limit state design (200 kPa x 0.5 = 100 kPa). Deflections have been estimated for floor slab loadings of 20 kPa and maximum 800 mm of fill placed (total 42 kPa). Based on the estimated settlements, we recommend that a settlement preload trial is undertaken.
- Liquefaction – A liquefaction assessment was undertaken, indicating liquefaction damage is unlikely. Based on our assessment we consider liquefaction induced ground damage is minor and liquefaction damage is unlikely based on 'Planning and engineering guidance for potentially liquefaction-prone land, MBIE, September 2017. We consider the effects from excess pore pressure and liquefaction to be between insignificant (L0) to moderate (L2) in accordance with Table 5.1 (Module 3), with relatively small differential settlements across the site due to limited excess pore water pressures. The free field settlement within the paleochannel is higher than the remainder of the site for the lower bound PGA = 0.19 g, Mw = 6.5 case and the structural designer should consider the ground deformation to ensure the structure can tolerate the estimated liquefaction induced settlement.
- Expansivity – The subsoils at this site are considered moderately expansive. Foundations should be designed under AS 2870 expansive site class of M (moderately) and adopting the recent Building Code revisions (B1/AS1) for surface movement. Strip and pad foundations shall be embedded a minimum 600 mm below finished ground level.
- Floor Slab design – Modulus of Subgrade Reaction values can be estimated once the final load breakdown is available and settlement preload trial undertaken.
- A geogrid (minimum 40 kN strength) and geotextile (BIDIM A-39) is recommended at the subgrade level prior to the settlement preload trial.

- All earthworks to be supervised by a CPEng (Geotechnical) familiar with the contents of this report and the ground conditions, including preload filling and monitoring.
- Concentrated stormwater flows – Must be collected and carried in sealed pipes to an approved outfall or other means of disposal and must not be allowed to saturate the subgrade soils to ensure the stability of the foundations is maintained.
- A design CBR of 2.0% should be adopted for pavement design purposes. Localised soft zones are expected and will need to be undercut and removed during construction. A minimum undrained shear strength of 50 kPa in the upper 1.0 m is required for pavement design. We recommend a geotextile and geogrid is installed between subgrade and pavement to minimise the ingress of fines into the pavement from dynamic loading.

# 1 Introduction

## 1.1 Project Brief and Scope

Haigh Workman Ltd. (Haigh Workman) has been commissioned by Peter Swan Ltd (the Client) to undertake a preliminary geotechnical appraisal for a proposed commercial development at Lots 6-8 Kahikatearoa Lane Extension, Waipapa. This report presents the information gathered during the site investigation, interpretation of data obtained and site-specific geotechnical recommendations relevant to the site.

The scope of this report encompasses the geotechnical suitability in the context of the proposed development as defined in the Short Form Agreement dated 12 December 2022. This appraisal has been designed to assess the subsoil conditions for foundation design and identify geotechnical constraints for the proposed development.

This report provides the following:

- A summary of the published geology with reference to the geotechnical investigations undertaken.
- Analysis of the data obtained from site investigations and a geological ground model.
- Foundation recommendations.
- Identification of any additional geotechnical risks and/or hazards.

## 1.2 Proposed Development

We understand that the Client intends to develop the site for with the construction of a commercial warehouse building. Three layout options were provided by the Client, Option A to C, with Option A building over Lots 6 and 7, and Option B and C building spread over Lots 6 to 8. A vehicle access route is proposed around the building for heavy vehicles.

Should the proposed development vary from the proposals described above and/or be relocated outside of the investigated area, further investigation and/or amendments to the recommendations made in this report may be required.

## 1.3 Site Description

The subject property forms part of an industrial subdivision of Lots 1 DP 178287 and Lot 13 DP 363106. Access to Lot 4 and 5 are off the newly constructed Kahikatearoa Lane extension that extends east from the existing Kahikatearoa Lane and the southern extent of Klinac Lane. The subject Lots will be parcel Lots 6 to 8, with a total land area of approximately 1.1881 hectares. Lots 6 to 8 are located on the southern side of the Kahikatearoa Lane extension. At the time of our investigations, Lots 6 to 8 were vacant. An existing shallow open stormwater drain is located along the southern boundary, beyond the subject Lots.

The proposed development footprint was not set out when the site investigation was undertaken and was interpreted from drawings provided by the Client (Appendix E). The approximate proposed building development locations are shown in Figure 1. The ground surface across the site is generally flat, with little change of elevation across both lots.

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 141 of 376 - 11/07/2023 - NZBTC

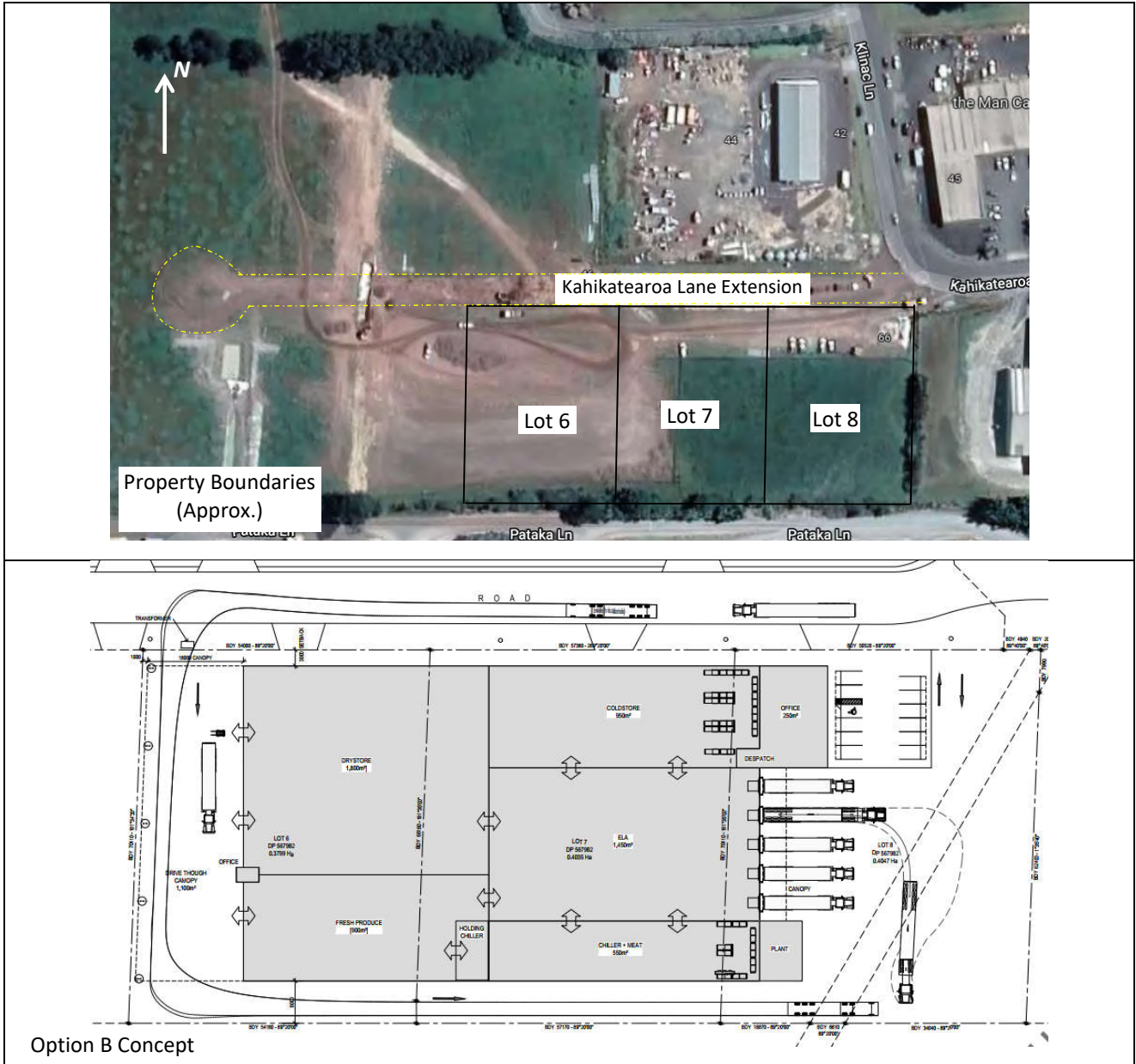


Figure 1 - Site Location

## 2 Geology

### 2.1 Published Geology

Sources of Information:

- Institute of Geological & Nuclear Sciences 1:250,000 Geological Map 2, 2009: *“Geology of the Whangarei area”*
- NZMS 290 Sheet P04/05, 1: 100,000 scale, 1982: *“Rock types map of the Whangaroa - Kaikohe area”*
- NZMS 290 Sheet P04/05, 1: 100,000 scale, 1980: *“Soil map of the Whangaroa - Kaikohe area”*

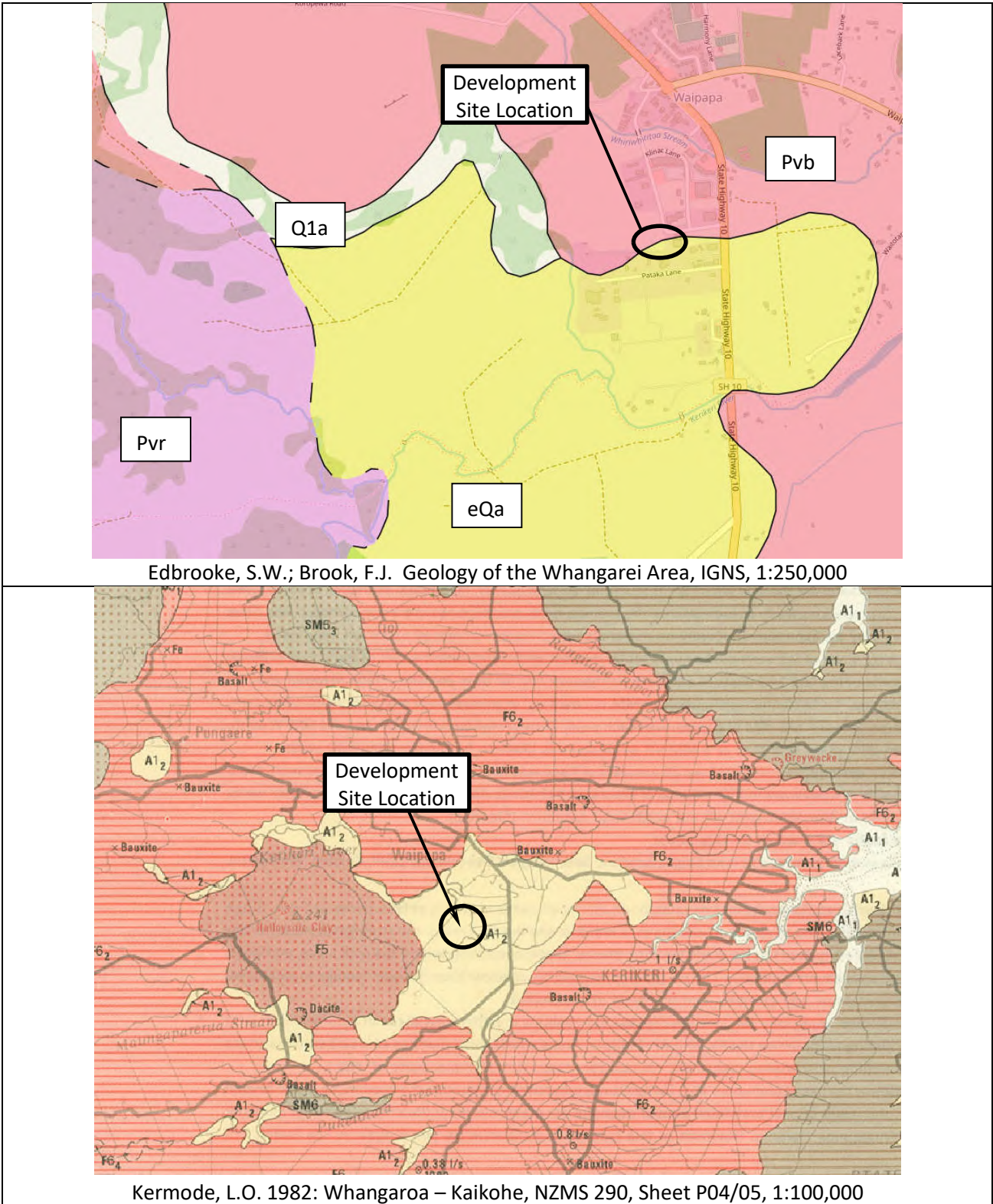
The site is within the bounds of the GNS Geological Map 2 *“Geology of the Whangarei area”*, 1:250,000 scale\*. The published geology shows the site to be located near a geological boundary of Kerikeri Volcanic Group and Tauranga Group alluvial soils. The Waipapa area, although mapped as Kerikeri Volcanic Group, typically is overlain by recent alluvial soils exhibiting variable strength. Further reference to the published New Zealand land inventory maps (Whangaroa-Kaikohe 1980) also indicates the site is underlain by alluvium (A1<sub>2</sub>), forming riverbed and flood plain deposits, in places forming a thin veneer (1-3m) over rugged surfaces of lava flows.

**Table 1 - Geological Legend**

Symbol	Unit Name	Description
Q1a / A1 <sub>2</sub>	Tauranga Group (Holocene)	Unconsolidated to poorly consolidated mud, sand, gravel, and peat deposits of alluvial, colluvial and lacustrine origins. Holocene river deposits.
eQa	Tauranga Group (Early to middle Pleistocene)	Partly consolidated mud, sand, gravel and peat or lignite of alluvial, colluvial, lacustrine, swamp and estuarine origins. Early Pleistocene – Middle Pleistocene estuary, river, and swamp deposits.
Pvb / F6 <sub>2</sub>	Kerikeri Volcanic Group (Late Miocene to early Pliocene)	Basalt lava, volcanic plugs, and minor tuff. Kerikeri Volcanic Group Late Miocene basalt of Kaikohe – Bay of Islands Volcanic Field.
Pvr / F5	Kerikeri Volcanic Group (Late Miocene to early Pliocene)	Alkaline and peralkaline rhyolite domes with some obsidian.

\* Edbrooke, S.W; Brook, F.J. (compilers) 2009. Geology of the Whangarei area.

FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 143 of 376 - 11/07/2023 - NZBTC



**Figure 2 – Published geological maps**

## 3 Ground Investigations

### 3.1 Previous Investigations (2021)

Haigh Workman have undertaken investigations within Lot 7 in May 2021. Investigations comprised eight cone penetrometer tests (CPT01WM to CPT08WM), two hand augered boreholes (HA01WM-HA02WM), and Atterberg laboratory testing of a single sample<sup>†</sup>.

### 3.2 Subsurface Investigations (2022-2023)

Haigh Workman have undertaken supplementary geotechnical investigations on 19-20 December 2023. The investigations comprised 14 cone penetration tests (CPT01 to CPT14) undertaken by LandTech Consulting, six hand augered boreholes and 19 Scala penetrometer tests by Haigh Workman Ltd.

Cone penetration testing was undertaken till refusal, anchor pull-out, or excessive pore pressure. A maximum depth of 20.52 m was achieved at CPT05 location. LandTech Consulting Ltd provided a Pagani CPT rig attached to a rubber tracked machine to test and record ground information. CPT soundings are presented in Appendix B.

### 3.3 Ground Conditions

Based on the results of the geotechnical investigation conducted by Haigh Workman and review of published geological maps, it is considered that the surface soils directly underlying the site comprise recent alluvium overlying Kerikeri Volcanic Group, with a deeper paleochannel located through Lot 7. The deeper soils associated with the paleochannel were encountered within nine CPT test locations (2021 and 2022 results), refer appended drawings for geological sections. Subsoil conditions on the site have been interpolated between the boreholes, therefore some variation between test positions is likely. Table 2 below summarises the materials encountered, with depth to base of each unit provided.

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<sup>†</sup> Geotechnical Investigation Report, Proposed Industrial Warehouse – Lot 7, Kahikatea Lane, Waipapa. Reference 21 131, July 2021.



**Table 2 - Summary of Borehole Results**

Test I.D.	Tauranga Group alluvial soils (mbgl)	Kerikeri Volcanic Group basalt (mbgl)	Inferred Residual Waipapa Group (mbgl)	Groundwater level (mbgl)
CPT01WM	7.6	>8.1	NE	1.3
CPT02WM	2.6	>2.6	NE	0.9
CPT03 WM	2.5	>2.6	NE	0.6
CPT04 WM	2.7	>2.8	NE	0.7
CPT05 WM	6.5	>6.6	NE	1.3
CPT06 WM	2.6	>2.6	NE	0.7
CPT07 WM	6.4	>6.5	NE	1.2
CPT08 WM	7.2	>7.3	NE	1.7
<b>CPT01</b>	4.4	>4.7	NE	1.3
<b>CPT02</b>	4.0	>4.1	NE	1.0
<b>CPT03</b>	8.4	>8.4	NE	1.0
<b>CPT04</b>	7.0	>7.0	NE	0.9
<b>CPT05</b>	19.0	NE	>19.0	1.6
<b>CPT06</b>	3.0	>3.0	NE	0.9
<b>CPT07</b>	1.9	>1.9	NE	0.7
<b>CPT08</b>	2.7	>2.7	NE	0.8
<b>CPT09</b>	2.4	>2.5	NE	0.7
<b>CPT10</b>	2.7	>3.0	NE	0.7
<b>CPT11</b>	2.5	>2.5	NE	0.8
<b>CPT12</b>	2.1	>2.1	NE	1.0
<b>CPT13</b>	12.9	NE	>12.95	1.2
<b>CPT14</b>	12.4	NE	>12.6	1.2
HA01WM	> 3.0	NE	NE	1.6
HA02WM	> 3.0	NE	NE	1.2
<b>HA03</b>	2.6	>2.6	NE	0.75
<b>HA04</b>	2.2	>2.2	NE	0.7
<b>HA05</b>	2.9	>3.0	NE	0.75
<b>HA06</b>	3.0	>3.4	NE	1.2
<b>HA07</b>	>9.0	NE	NE	0.8
<b>HA08</b>	>7.9	NE	NE	0.95

NE Not Encountered  
NT Not Tested  
\* Groundwater level measured from within test hole

### 3.3.1 **Fill**

Minor filling across the site was undertaken during subdivision works to raise the ground level to 78.6 mRL. The filling comprised topsoil fill only and will need to be stripped when it comes to preparing the site for building. The extra topsoil was placed across Lots 6 and 7.

**FNDC - Approved Building Consent Document - EBC-2023-1243-0 - Pg 145 of 376 - 11/07/2023 - NZBTC**

### 3.3.2 *Alluvium*

Alluvial soils were encountered at all locations near the surface, with a deeper alluvial sequence inferred within CPT05 and CPT13. The thickness of the alluvial fan deposits varied from 2.0 m to greater than 19.0 m across the site, with refusal on Kerikeri Volcanic Group typically in the upper 5.0 m. Thicker alluvial soils were encountered through Lot 7, indicating a paleochannel through the site.

The recent alluvial soils were encountered to 9.0 m depth in CPT05 location, underlain by an older alluvial deposit to 19.0 m below existing ground surface in CPT05. Sudden refusal was typically encountered across the site which has been inferred as top of Kerikeri Volcanic Group basalt rock. Where Kerikeri Volcanic Group was not encountered, a consolidated alluvial (early to middle Pleistocene age) sequence was encountered overlying inferred completely to highly weathered Waipapa Group.

CPT soundings and vane shear testing within the hand augers indicate the alluvial soils as consistent in undrained shear strength, with a stiff to very stiff crustal layer encountered in the upper 1.0 m across the site, underlain by soft to firm alluvium till refusal on Kerikeri Volcanic Group or till the older consolidated alluvium encountered at depth.

### 3.3.3 *Kerikeri Volcanic Group*

Kerikeri Volcanic Group rock has been inferred based on the CPT soundings and results of nearby geotechnical investigations. The basalt thickness is expected to be variable across the site.

### 3.3.4 *Groundwater*

Groundwater level was measured within the test holes at the completion of testing, which typically indicated groundwater within 1.0 m. No further groundwater monitoring has been undertaken. Groundwater levels can and do fluctuate and higher groundwater levels may be encountered following periods of prolonged or heavy rainfall. Ponding was observed across the site in the lower elevation parts of the site.

## 4 *Geotechnical Assessment*

### 4.1 *General*

Based on our site observations, geological appraisal, and the findings of our recent field investigations, we consider that the subject site is generally suitable for the proposed commercial warehouse development. The site is subject to a flood hazard according to the Northland Regional Council (NRC), with a river flood hazard existing for 100-year return period event. Far North District Council (FNDC) require floor levels to be a minimum 300 mm above the flood hazard level for a non-habitable building, the required FFL will be subject to specific analysis based on the flood hazard level. The existing ground level varies from 78.1 mRL to 78.8 mRL.

## 4.2 Geotechnical Design Parameters

Geotechnical design parameters recommended in this report are based on in-situ test results, empirical relationships, and local experience. Refer Table 3 for recommended design parameters.

**Table 3 – Geotechnical Design Parameters**

Soil Unit	Bulk Unit Weight - $\gamma$ (kN/m <sup>3</sup> )	Peak undrained shear strength - $S_u$ (kPa)	Effective cohesion - $c'$ (kPa)	Effective friction angle - $\phi'$ (degrees)	Coefficient of volume compressibility - $m_v$ (m <sup>2</sup> /MN)
Alluvium - Stiff Crust	17	60	3	26	0.1
Alluvium - Soft to Firm	15	20	1	26	0.30
Deeper alluvium – stiff to very stiff	17	100	5	28	0.25
Kerikeri Volcanic Group – Basalt	20	5000	50	35	N/A

## 4.3 CPT Undrained Shear Strength

The undrained shear strength has been assessed using the in-situ CPT data and vane shear strength, corrected using a Bjerrum correction factor of 0.7. Data plots are presented in Figure 3.

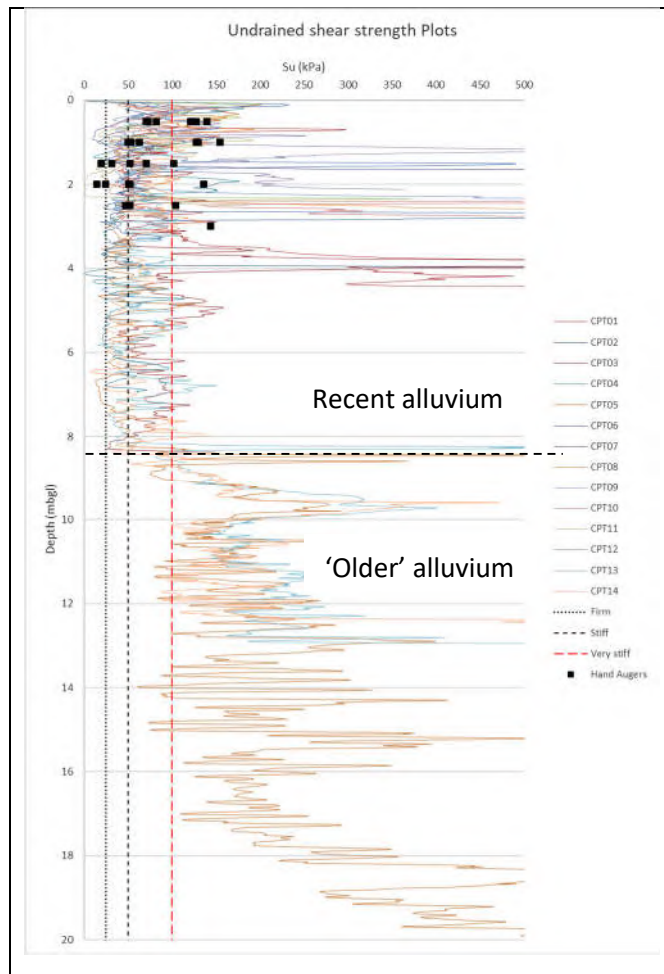


Figure 3 –CPT Plots (undrained shear strength)

#### 4.4 Settlement Analysis

The natural ground conditions across the site were found to be variable across the site, with shallow refusal encountered across Lot 6, and deeper alluvium encountered across Lot 7 and partially Lot 8. The locations with shallow refusal have been inferred as encountering top of basalt rock and have been included within the ground model to represent an incompressible layer, which has been confirmed with settlements preload trials undertaken on an adjacent Lot and other building sites located nearby.

The proposed development is still in concept stage with three options provided to Haigh Workman. Option B has been adopted for preliminary settlement analyses, comprising a single storey warehouse with approximately 6000 m<sup>2</sup> floor area with dry storage, chiller, and cold storage areas. Additional drive-through canopy's are shown on the western side of the building, with a sealed heavy vehicle accessway around the Lots and concrete yards. A floor loading of 20 kPa has been provided.

The existing site is almost level, with a change in elevation across the building platform (Option 2) site in the order of 300 mm, with the south-western corner ground surface at 78.4 mRL and the north-eastern corner 78.1 mRL. The 1% AEP (including climate change) is 78.6 mRL. The finished floor level (FFL) for a commercial building needs to be 300 mm above the flood hazard level, therefore we have assumed a FFL of 78.9 mRL. Based on the existing contour data available at the time of preparing this report, fill will need to be imported to raise the ground level to the underside of the foundation slab, approximately 78.75 mRL (assuming a 150 mm thick floor slab).

**Table 4 - Settlement prediction results**

Loading Condition	Total Max. settlement (mm)	Estimated time (years)
Raise ground level with granular fill to FFL (max. 18 kPa)	60	> 5 years
UDL Floor Loading – 20 kPa	150	> 5 years

Based on the preliminary settlement assessment, a settlement preload and surcharge are recommended to mitigate the settlement risk to the site. The magnitude and rate of consolidation varies across the site due to the shallow depth of alluvial soils over Lot 6 and the deeper soils within the paleochannel (Lot 7 and Lot 8).

To mitigate the settlement risk across the site, in particular the paleochannel area, a preload across the building platform (extending 2.0 m beyond the platform) is recommended and should include the 20 kPa building UDL and an additional fill surcharge, e.g., additional 500 mm of fill above the preload level. The additional fill surcharge will result in a greater magnitude of settlement occurring in a quicker timeframe, i.e., the aim of the settlement and preload surcharge is to achieve the total maximum settlement (estimated at 150 mm) within 3-6 months, rather than 5-10 years.

A separate analysis was undertaken where the structural loads are supported on individual pad foundations, with a design bearing capacity of 100 kPa available for a maximum pad foundation size of 1.2 m x 1.2 m (size chosen to keep settlements below 25 mm for conventional foundation elements), and strip footings are limited to 0.60 m width.

#### 4.5 Bearing Capacity

Undrained shear strength has been assessed using the investigation data. Based on the available geotechnical investigation data, and the requirement to raise the site above flood hazard level (thickening the crustal layer and preloading the soils), we recommended an undrained shear strength ( $S_u$ ) of 40 kPa is adopted for bearing capacity calculations. An ultimate bearing capacity of 200 kPa can be adopted for preliminary design purposes of shallow spread foundations, and is vertical loads only, i.e., horizontal shear or moment actions have not been assessed and will require specific analyses. A geotechnical strength reduction factor of 0.5 shall be applied for limit state design.

#### 4.6 Shrink Swell Soil Characteristics

The New Zealand Building Code Clause (B1) outlines expansive soils are those with a liquid limit greater than 50% and a linear shrinkage greater than 15%. Atterberg limits test results indicate the site subsoils are expansive. Based on the laboratory test results and visual tactile observations of the soils onsite, it is our opinion that the site would be classified as Class M, moderately expansive.

#### 4.7 Seismic Site Subsoil Category

The site conditions have been assessed to be consistent with seismic subsoil Class D (Deep or soft soil sites) in accordance with NZS1170.5:2004. For geotechnical design purposes, Site Class C (shallow soil site) has been adopted as it provides a more conservative assessment for peak ground acceleration estimates (PGA) and is more aligned to the MBIE geotechnical guidance, Module 1.

#### 4.8 Liquefaction Potential

The site geology is considered susceptible to liquefaction due the recent alluvial deposits and high groundwater level. The fine-grained clayey soils are not considered susceptible to liquefaction as they are too plastic to liquefy, laboratory testing of the surface soils completed during the 2021 investigation indicates a plasticity index of 32 in the upper soil column, which is considered not susceptible to liquefaction. However, the sandy lenses are potentially susceptible to liquefy which may result in liquefaction induced settlement.

The seismic coefficients for design are based on the NZTA Bridge Manual (NZBM), calculated based on the following formula:

$$PGA = C_{0.1000} * \frac{R_u}{1.3} * f * g$$

Un-weighted PGA coefficient for Class A/B	Return Period Factor (Ru = 1/500)	Site subsoil class factor
$C_{0.1000} = 0.13$	$R_u = 1.0$	$f = 1.33$

Peak ground acceleration (PGA) for the site is as follows:

- ULS – 0.13 g, Mw 5.8 earthquake.
- Lower bound ULS – 0.19 g, Mw 6.5 earthquake [used in analysis based on Module 1, NZGS & MBIE].

Based on the low seismic hazard of the Northland region, only the ULS condition has been analysed. Results are summarised in Table 5, with detailed results presented in Appendix C. The liquefaction severity number has been used to indicate the potential for surface manifestation, with all tests recording a LSN less than 10 (little to no expression of liquefaction, i.e., negligible risk). Analyses have been undertaken with a minimum 500 mm granular hardfill across the site.