

27th July 2026

Resource Consents Team
Far North District Council
Private Bag 752
Kaikohe 0440

Attention Team Leader Resource Consents

RESOURCE CONSENT APPLICATION BY BALLANCE AGRI-NUTRIENTS TO REPLACE THEIR EXISTING FACILITY WITH A NEW PURPOSE BUILT FACILITY WHICH INCLUDES ONSITE SERVICING AND WHICH IS LOCATED AT CAREY ROAD, KAIKOHE.

Zenith Planning Consultants have been engaged by Ballance Agri-Nutrients to prepare a landuse resource consent application the redevelopment of their property at Carey Road, Kaikohe.

I have attached the following information in support of the application:

- Completed Application Form
- Planning Report and Assessment of Effects
- Proposed Building and Site Plans
- Engineers' Reports for onsite servicing
- Other technical reports
- Current Certificate of Titles and legal instruments

The applicant has paid the application fee online using the reference "Ballance RC".

Should you have any queries in respect to this application please contact me.

Wayne Smith

Zenith Planning Consultants Ltd

Principal | Director

BD120 | RSO001 | MN701

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

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

☒ Yes ☐ No

2. Type of consent being applied for

(more than one circle can be ticked):

☒ Land Use

☐ Fast Track Land Use*

☐ Change of Consent Notice (s.221(3))

☐ Certificate of Compliance (s.139)

☐ Extension of time (s.125)

☐ Other (please specify)

☐ Discharge: Total volume = m³

Note; volumes >3m³ requires NRC Consent.

☐ Subdivision

☐ Existing Use Certificate (s.139A)

☐ Consent under National Environmental Standard
(e.g. Assessing and Managing Contaminants in Soil)

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

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

☒ Yes ☐ No

4. Consultation

Have you consulted with Iwi/Hapū? ☐ Yes ☒ No

If yes, which groups have you consulted with?

Who else have you consulted with?

Discussed with neighbour - advised them of the proposal

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

5. Applicant details

Name/s:

Ballance Agri-Nutrients c/- Attika Architectural

Email:

Phone number:

Postal address:

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

de

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

If yes, please provide details.

6. Address for correspondence

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

Name/s:

Zenith Planning Consultants Ltd. - Att Wayne Smith

Email:

Phone number:

Postal address:

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

Postcode 0204

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

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

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

Name/s:

Ballance Agri-Nutrients

Property address/
location:

8. Application site details

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

Name/s:

Ballance Agri-Nutrients

Site address/
location:

18-20 Carey Road

Kaikohe

Postcode

Legal description:

Lot 1 DP 68108, Lot 1 DP 42810

Val Number:

Certificate of title:

NA 23C/561, NA 82C/128, NA 82D/241

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

Site visit requirements:

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

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

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

Please phone Jessica Wieldraayer or _____ or to undertaking a site visit as the site has restricted access and requires sign in and potentially safety equipment to be worn.

9. Description of the proposal

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

To replace the existing storage and distribution depot for Ballance Agri-Nutrients with a purpose built modern building with all activities fully enclosed within the building. The scale of the operations is not changing but all activities will be enclosed.

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

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

☐ 2009 ☒ 2023

10. Would you like to request public notification?

☐ Yes ☒ No

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

(more than one circle can be ticked):

☒ Building Consent

☐ Regional Council Consent (ref # if known)

☐ National Environmental Standard Consent

☐ Other (please specify)

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

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

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

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

☐ Subdividing land

☒ Disturbing, removing or sampling soil

☐ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

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

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

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

☐ Flooding

☐ Active Faults

☐ Landslips

☐ Liquefaction

☐ Coastal Erosion

☐ Tsunami

☐ Coastal Inundation

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

14. Assessment of environmental effects:

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

Your AEE is attached to this application ☒ Yes

15. Draft conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full)

Email:

Phone number:

Postal address:

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

Fees Information

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

Declaration concerning Payment of Fees

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

Name: (please write in full)

Signature:

(signature of bill payer)

Date 24/4/26

MANDATORY

15. Important Information:

Note to applicant

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

You may apply for 2 or more resource consents that are needed for the same activity on the same form. You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement. A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:

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

Checklist of your information

Please tick if information is provided

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

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

Planning Report and Assessment of Effects

Landuse Consent

Ballance Agri-Nutrients

18-20 Carey Road, Kaikohe

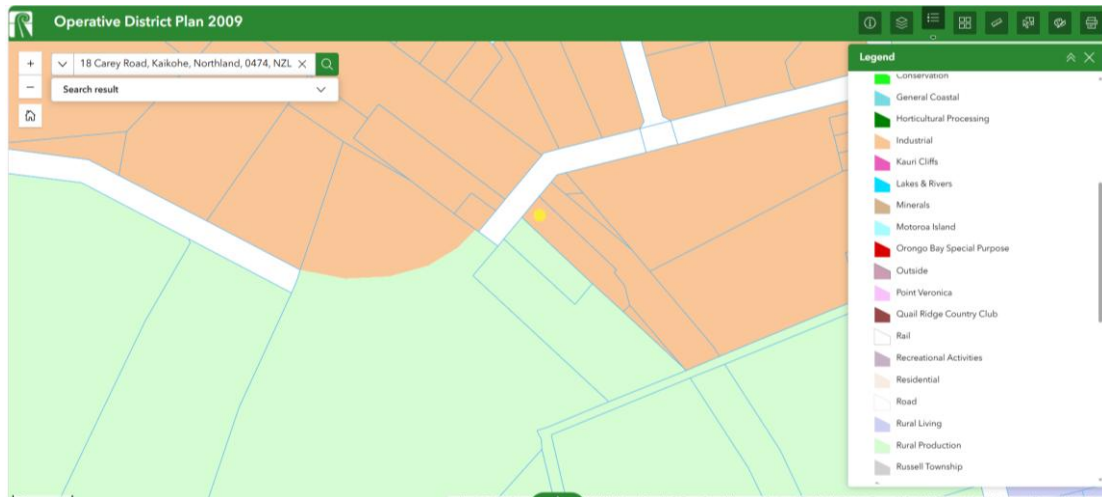
PLANNING REPORT AND ASSESSMENT OF EFFECTS

APPLICATION AND SITE DESCRIPTION

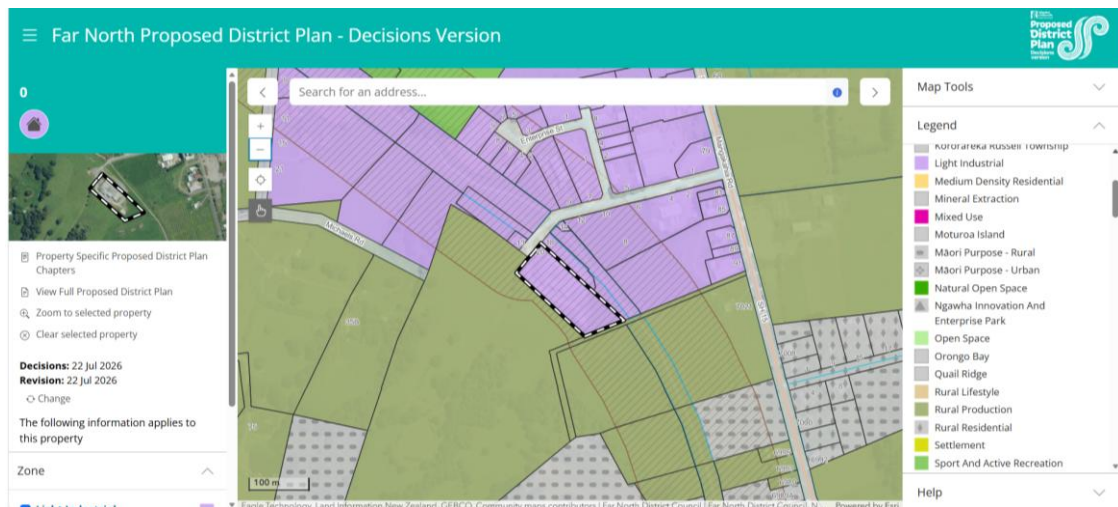
- 1.01 Zenith Planning Consultants have been engaged by Ballance Agri-Nutrients to secure landuse resource consent for the re-development of their site at 18-20 Carey Road, Kaikohe. The site is adjacent to the Pou Herenga Tai - Twin Coast Cycle Trail which passes through the Kaikohe township, open farm land, and industrial sites located on Carey Road.
- 1.02 The application is for landuse consent with Ballance Agri-Nutrients looking to re-development their existing site by replacing the existing storage and distribution building with a larger purpose built facility with all activities to be located within the building. The re-development sees the building footprint increase while the scale and onsite traffic manoeuvring remains consistent with the current situation.
- 1.03 Presently part of the current building is unsafe, some activities are exposed to the elements, and parts of the facility still contain dirt floors. The new proposal seeks to ensure all of these functions are located indoors and meet expected industry standards. The facility is part of an upgrading programme for Ballance with many existing facilities having already been upgraded.
- 1.04 Operationally, apart from everything being indoors, the operations on site will remain the same with trucks and tractors (with trailers) sourcing their required products from the loading facility and then leaving the site. There will be perimeter fencing and restricted access to reflect the onsite safety and operational requirements.
- 1.05 During the construction phase the operation will temporarily move to the Waipapa depot and then return back to Carey Road, once the construction and onsite works are completed.
- 1.06 The existing operation is located at the end of Carey road and over the former railway corridor which is now the Pou Herenga Tai - Twin Coast Cycle Trail. There is an element of existing use rights around the scale of the operation as this will not change. The same level of staffing and traffic movements is expected for the updated facility and which is governed by seasonal demand and farming sector spending which varies depending on market demand for farmer's products.
- 1.07 The property is legally described as Lot 1 DP 139346, Lot 1 DP 42810 and Lot 1 DP 68108. The site has a total area of 13,113m².
- 1.08 The application site has a split zoning under the Operative District Plan with the site being both Rural Production and Industrial under the Far North Operative District Plan. There are no resource features applicable to the application site. Under the Proposed

Plan – Decisions Version, which now has legal status, the application site is zoned Light Industrial only.

- 1.09 The following maps illustrate the zoning requirements and the titles which apply to the application site.



The industrial lot is highlighted with the two Rural Production lots immediately to the west



The application site is zoned Light Industrial under the Proposed Plan – Decisions Version.

Land Record Search

Address Enter a place, street or address. e.g. Newlan

Results for "18 Carey Road, Kaikohe" ▶ Title NA82D/241

This summary page does not constitute a Record of Title. To obtain the Record of Title please order it below.

Title summary NA82D/241

Type	Freehold
Land Registration District	North Auckland
Date Issued	2 August 1990
Estate	Fee Simple
Indicative Area	2387 square metres
Legal Description	Lot 1 Deposited Plan 139346

▼ Historical Instruments

▼ Referenced Surveys



This title includes the access and the current offices

Land Record Search

Address Enter a place, street or address. e.g. Newlan

Results for coordinates "-35.41806848805562 173.80545142562536" ▶ Title NA82C/128

This summary page does not constitute a Record of Title. To obtain the Record of Title please order it below.

Title summary NA82C/128

Type	Freehold
Land Registration District	North Auckland
Date Issued	23 August 1990
Prior References	NA1157/10
Estate	Fee Simple
Indicative Area	1836 square metres
Legal Description	Lot 1 Deposited Plan 42810

▼ Current Instruments

▼ Historical Instruments



This title includes part of the existing building which is to be replaced

Land Record Search

Address Enter a place, street or address. e.g. Newlan

Results for coordinates "-35.41811014066103 173.80537430722828" ▶ Title NA23C/561

This summary page does not constitute a Record of Title. To obtain the Record of Title please order it below.

Title summary NA23C/561

Type	Freehold
Land Registration District	North Auckland
Date Issued	1 June 1973
Prior References	NA6A/492
Estate	Fee Simple
Indicative Area	8890 square metres
Legal Description	Lot 1 Deposited Plan 68108

▼ Historical Instruments

▼ Referenced Surveys



The primary title which includes part of the existing boundary and the washdown facility.

- 1.10 The property has a flat to slightly sloping contour with the higher end being near Carey Road and the lowest part of the site being the southern end of the site. Onsite works involve the larger building platform and stormwater management aspects.

APPLICATION PROPOSAL

- 2.01 The application includes the redevelopment of and replacement of the existing storage and distribution building on site which does not meet current standards which apply to Ballance sites throughout New Zealand. The building is generally in poor condition. It is intended to upgrade to the standard of other facilities throughout the country.
- 2.02 The building is to be replaced as detailed within the proposed plans and the existing access and onsite manoeuvring will be retained and a replacement washdown area will be established. Related drainage works for stormwater and wastewater will be completed as noted on the design plans from Haigh Workman.
- 2.03 In terms of staffing, hours of operation and operational aspects (other than everything now occurring within the building) will remain the same as it currently is. There will be additional restrictions to access with restricted access proposed to reflect the health and safety requirements for an operational site. The new construction does breach a number of rules primarily due to the Rural Production zoning of the Operative Plan.
- 2.04 The development is to occur over three parcels of land and these parcels will be required to be legally held together. The most likely means to achieve this will be under the Building Act. This can all be addressed at the Building Consent Stage when the appropriate documentation can be completed.
- 2.05 The following assessment addresses the breaches of the district plan for all landuse activities as noted in the application description.

OPERATIVE PLAN ASSESSMENT

RURAL PRODUCTION ZONE RULES

RULE	ASSESSMENT
8.6.5.1.1 RESIDENTIAL INTENSITY Residential development shall be limited to one unit per 12ha of land.	No new dwelling is proposed. Not applicable
8.6.5.1.2 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 any site boundary (refer to definition of Recession Plane in Chapter 3 - Definitions), except where a site boundary adjoins a legally established entrance strip, private way, access lot, or access way serving a rear site, the measurement shall be taken from the farthest boundary of the entrance strip, private way, access lot, or access way.	The lots which make up the application site can be held together under the Building Act or RMA to ensure that the internal lot boundaries are not applicable. The proposal complies with the sunlight rule. Permitted
8.6.5.1.3 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%.	The zone allows for 15% coverage of the site for a permitted activity. The combined lots equal 13113m ² with a permitted allowance of 1966m ² .

	The Engineer confirms that proposed impermeable surfaces are approximately 8668m² or 66.7% comprising the following buildings: Bulk Store – 2025.5m² Bagging Area – 700m² Dispatch Area – 376m² Office – 95m² The remaining amount is onsite manoeuvring, access, parking and other hard stand. The existing impermeable surfaces is approximately 52%. The total impermeable surfaces exceed the permitted allowance.
8.6.5.1.4 SETBACK FROM BOUNDARIES No building shall be erected within 10m of any site boundary; with the following exceptions;	The building will comply with the 10m setback with the three lots held together under the Building Act or RMA meaning that internal boundaries are not applicable. Permitted
8.6.5.1.5 TRANSPORTATION Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules	See below
8.6.5.1.6 KEEPING OF ANIMALS	N/A
8.6.5.1.7 NOISE (a) All activities except Temporary Military Training Activities shall be so conducted as to ensure that noise from the site shall not exceed the following noise limits as measured at or within the boundary of any other site in this zone, or at any site in the Residential, Coastal Residential or Russell Township Zones, or at or within the notional boundary of any dwelling in any other rural or coastal zone: 0700 to 2200 hours 65 dBA L10 2200 to 0700 hours 45 dBA L10 and 70 dBA Lmax	The current operation complies with the noise rules, and the enclosing of the proposed activities will further reduce noise generated. Permitted
8.6.5.1.8 BUILDING HEIGHT The maximum height of any building shall be 12m.	The proposed replacement building is 14.175m in height at its apex and therefore above the maximum permitted allowance for the Rural Production Zone. Not Permitted
8.6.5.1.9 HELICOPTER LANDING AREA	N/A
8.6.5.1.10 BUILDING COVERAGE Any new building or alteration/addition to an existing building is a permitted activity if the total Building Coverage of a site does not exceed 12.5% of the gross site area.	The Rural Production zone allows for 12.5% coverage of the site for a permitted activity which equates to 1639m² of buildings for the 13113m² site. The proposed buildings total Bulk Store – 2025.5m² Bagging Area – 700m² Dispatch Area – 376m² Office – 95m² The total building coverage proposed is 3196.5m² or 24.38% The proposal does not comply with this rule.

8.6.5.1.11 SCALE OF ACTIVITIES For activities other than those provided for in the exemptions below, the total number of people engaged at any one period of time in activities on a site, including employees and persons making use of any facilities, but excluding people who normally reside on the site or are members of the household shall not exceed i. For activities ancillary to farming or plantation forestry activities, 8 persons per site or 2 person per 1 hectare of net site area, whichever is the greater ii. For all other activities, 4 persons per site or 1 person per 1 hectare of net site area, whichever is the greater.	The applicant has advised that the proposed re-development does not increase staffing levels for the site. The operations on site do not require a large number of staff. Permitted Activity
8.6.5.1.12 TEMPORARY EVENTS	N/A
8.6.5.2.1 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%.	The proposal exceeds this 20% limit as previously assessed and does not comply
8.6.5.2.2 PAKAINGA HOUSING	N/A
8.6.5.2.3 MINOR RESIDENTIAL UNIT	N/A
8.6.5.2.4 NOISE LIMITS FOR TEMPORARY MILITARY TRAINING	N/A
8.6.5.2.5 BUILDING COVERAGE Any new building or alteration/addition to an existing building is a controlled activity if the total Building Coverage of a site does not exceed 15% of the gross site area.	The proposal exceeds this 15% limit as previously assessed and does not comply
8.6.5.3.1 TRANSPORTATION Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules	See Assessment below
8.6.5.3.2 BUILDING HEIGHT The maximum height of any building shall be 15m.	The buildings comply with the 15m height limit that this rule requires with the building being 14.175m at its highest.
8.6.5.3.3 SUNLIGHT In assessing an application resulting from a breach of Rule 8.6.5.1.2 Sunlight the matters to which the Council will restrict its discretion are:	Proposal meets the permitted standard – see above
8.6.5.3.4 SETBACK FROM BOUNDARIES In assessing an application resulting from a breach of Rule 8.6.5.1.4 Setback from Boundaries the matters to which the Council will restrict its discretion are: (	Proposal meets the permitted standard – see above
8.6.5.3.5 NOISE In assessing an application resulting from a breach of Rule 8.6.5.1.7	Proposal meets the permitted standard – see above
8.6.5.3.6 RESIDENTIAL INTENSITY Excluding a Minor Residential Unit, which is covered in Rule 8.6.5.2.3, residential development shall be limited to one unit per 4ha of land.	Not applicable
8.6.5.3.7 SCALE OF ACTIVITIES Activities ancillary to farming or forestry that breach Rule 8.6.5.1.11(i) Scale of Activities are a Restricted Discretionary Activity.	Proposal meets the permitted standard – see above

8.6.5.4.1 RESIDENTIAL INTENSITY Excluding a Minor Residential Unit, which is covered in Rule 8.6.5.2.3, residential development shall be limited to one unit per 2ha of land.	Not applicable
8.6.5.4.2 INTEGRATED DEVELOPMENT	N/A – This rule applies to Maori Freehold and Maori Customary land only
8.6.5.4.3 HELICOPTER LANDING AREA	N/A
8.6.5.4.4 SCALE OF ACTIVITIES When the total number of people engaged at one period of time in activities on a site, other than activities ancillary to farming or forestry, including employees and persons making use of facilities, but excluding people who normally reside on a site or are members of the household, does not comply with Rule 8.6.5.1.11(ii), it is a discretionary activity.	Proposal meets the permitted standard as previously assessed.

INDUSTRIAL ZONE

RULE	ASSESSMENT
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 (refer to definition of Recession Plane in Chapter 3 - Definitions), except where a site boundary adjoins a legally established entrance strip, private way, access lot, or access way serving a rear site, the measurement shall be taken from the farthest boundary of the entrance strip, private way, access lot, or access way.	The proposal complies with rule the sunlight rule with the site not bordering any of the zones noted within this rule. Permitted
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, wall/s, close boarded fence/s or trellis/es or a combination thereof. They shall be of a height sufficient to wholly or substantially separate these areas from the view of neighbouring properties. Structures shall be at least 1.8m in height, but no higher than 2.0m, along the length of the outdoor area. Where such screening is by way of landscaping it shall be a strip of vegetation which has or will attain a minimum height of 1.8m for a minimum depth of 2m. (b) At least 50% of that part of the site between the road boundary and a parallel line 6m therefrom, where it is not occupied by buildings, shall be landscaped. (c) Any landscaping required by these rules shall remain on the site for the duration of the activity and be maintained, and if such landscaping dies, or becomes diseased or damaged, shall be replaced.	This rule could be complied with but applies to a small part of the site which is not to be used for buildings or internal access. This is land located and adjoining industrial zoned land. Permitted.

Attention is also drawn to the setback from Lakes, Rivers, Wetlands and the Coastline provisions in Chapter 12.7. Note: This rule does not apply to the below ground components of wastewater disposal systems. However, provisions in Chapter 12.7 – Lakes Rivers Wetlands and the Coastline still apply to below ground components of wastewater treatment systems. Attention is also drawn to the TP58 On-site Wastewater Systems: Design and Management Manual and the Regional Water and Soil Plan for Northland, as consent may be required.	
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.	There is no height restriction for this portion of the Industrial Zone
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.	There is no existing consented urban stormwater system into which the application site could discharge its water. The site does however provide for its on management of stormwater within the site and details of this are included within the application. Permitted.
7.8.5.1.10 HELICOPTER LANDING AREA A helicopter landing area shall be at least 200m from the nearest boundary of any of the Residential, Coastal Residential, Russell Township or Point Veronica Zones.	N/A

EXCAVATION AND FILLING – CHAPTER 12.3

12.3.6.1.1 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL PRODUCTION ZONE OR KAURI CLIFFS ZONE Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Production Zone or Kauri Cliffs Zone is permitted, provided that: (a) it does not exceed 5,000m³ in any 12 month period per site; and (b) it does not involve a continuous cut or filled face exceeding an average of 1.5m in height over the length of the face i.e. the maximum permitted average cut and fill height may be 3m.	The total excavation and filling proposed is as follows: Cut : 1531m³ Fill: 1887m³ Total cut and fill equates to 3418m³. Parts of the cut face will be 2m but on average this is well below this cut or fill height. The bulk of the earthworks is occurring the Rural Production part of the site and on this basis is Permitted.
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TRAFFIC AND PARKING

15.1.6A.2.1 TRAFFIC INTENSITY The Traffic Intensity threshold value for a site shall be determined for each zone by Table 15.1.6A.1 above. The Traffic Intensity Factor for a proposed activity (subject to the exemptions identified below) shall be determined by reference to Appendix 3A in Part 4.	The total traffic movements include an element of existing use rights with the current Gross Business Area equating to 6818m² assuming all impermeable surfaces for the site. The expansion increases this impermeable surface to 8668m² for an increase of 1869m².
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This rule only applies when establishing a new activity or changing an activity on a site. However, when considering a new activity or changing an activity, the Traffic Intensity Factor for the existing uses (apart from those exempted above) on site need to be taken into account in order to address cumulative effects. Exemptions:	The whole of the site could be considered however the recent purchase of land removes this prospect. The 1850m² extra generates 185 more traffic movements based on 10 traffic movement per 100m² of Gross Business Area. In theory and based on the overall business area calculated traffic movements would be 867 per day which for the current and future operation is excessive. Allowances in the Rural Production Zone are limited to 60 which triggers a consent.
15.1.6B.1.1 ON-SITE CAR PARKING SPACES Where: (i) an activity establishes; or (ii) the nature of an activity changes; or (ii) buildings are altered to increase the number of persons provided for on the site; the minimum number of on-site car parking spaces to be provided for the users of an activity shall be determined by reference to Appendix 3C, unless an activity complies with the exemptions below.	Increases to Gross Business Area of 1850m² results in an additional 19 car parks being required based on 1 carpark per 100m². The overall site should provide 87 car parks based on this formula. The proposal provides 8 car parks which for the current and future operation would be more than sufficient. Consent required
15.1.6B.1.4 ACCESSIBLE CAR PARKING SPACES	Accessible parking spaces can be provided for the development in accordance with the required standards
15.1.6B.1.5 CAR PARKING SPACE STANDARDS (a) The required size of off-street car parking spaces, the manoeuvring space between, and the vehicle circulation routes providing access to them, shall be as set out in Appendix 3D. (b) Stacked parking will be permitted for one of two spaces associated with a specific residential unit. In determining the extent of area required for manoeuvring space, the Council will be guided by the Tracking Curve diagrams as shown in Appendix 3E. (c) All parking, loading, access drives and manoeuvring areas shall be formed and provided with an all weather surface, drained, marked out and maintained to the satisfaction of the Council, and shall be kept free and available for the uses intended. Where a parking area provides four or more car parking spaces is adjacent to a road, a kerb or a barrier shall be provided to prevent direct access except at the designated vehicle access point.	There is sufficient space within the site to comply with the Engineering design requirements for both the car space dimensions which provide for casual users and which includes all onsite manoeuvring. The spaces will be in an all weather metalled surface Permitted
15.1.6B.1.6 LOADING SPACES (a) Loading spaces are required where activities established within a Commercial or Industrial Zone at the following ratio etc (c) All loading areas shall be formed and provided with an all weather surface, drained, marked out and maintained to the satisfaction of the Council, and shall be kept free and available for the uses intended.	Loading Spaces are not required within the Rural Production Zone. Not applicable
15.1.6C.1.1 PRIVATE ACCESSWAY IN ALL ZONES (a) The construction of private accessway, in addition to the specifics also covered within this rule, is to be undertaken in accordance with Appendix 3B-1 in Part 4 of this Plan. (b) Minimum access widths and maximum centreline gradients, are set out in the Appendix 3B-1 table except that the grade shall be:	Access within the site is already provided to the required Engineering Standards. Permitted

All urban zones; excluding the Commercial and Industrial Zones No steeper than 1:8 adjacent to the road boundary for at least 5m.	
15.1.6C.1.5 VEHICLE CROSSING STANDARDS IN RURAL AND COASTAL ZONES (a) Private access off roads in the rural and coastal zones the vehicle crossing is to be constructed in accordance with Council's "Engineering Standards and Guidelines" (June 2004 – Revised 2009).	The entrance crossing onto the internal road and then onto Carey Road complies. Permitted

2.06 The assessment concludes that there several rules which cannot be met by the proposed re-development and this includes:

- Building Coverage
- Stormwater
- Parking
- Traffic Movements
- Height

The breaches are all applicable to the Rural Production zone or district wide provisions. There are no breaches which apply for the Industrial zone component.

The application is Discretionary activity.

PROPOSED DISTRICT PLAN

2.07 The Proposed District Plan has now progressed to the point where Council has now produced a "decisions version" of the proposed plan. At this stage although the plan is subject to a 30 day appeal period which commenced on the 30th June 2026, the rules now have legal effect and are required to be considered in assessing the application and its activity status.

2.08 The proposal will now be assessed against the relevant rules from the proposed district plan decisions version.

2.09 The following rules are those who have relevance to the development proposal. Not all rules have been included and only those which are particular to the application.

LIGHT INDUSTRIAL ZONE

LIZ – S1 Maximum Height The maximum height of a building or structure, or extension or alteration to an existing building or structure is 16m above ground level, except that any fence or standalone wall along a side or rear boundary which adjoins a site zoned General Residential, Medium Density Residential, Rural-Residential, Māori Purpose, Open Space, Natural Open Space, or Sport and Active Recreation does not exceed 2m in height.	Permitted Building is 14.175m
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LIZ – S2 Height to Boundary Any building or structure, or extension or alteration to an existing building or structure, adjoining a site zoned General Residential, Medium Density Residential, Rural Residential, Māori Purpose, Open Space, Natural Open Space, or Sport and Active Recreation must be contained within a building envelope defined by recession planes measured inwards from the respective boundary: 1. 55 degrees at 2m above ground level at the northern boundary of the site. 2. 45 degrees at 2m above ground level at the eastern and western boundaries of the site. 3. 35 degrees at 2m above ground level at the southern boundary of the site	Not applicable as the adjoining zoning is not one of the listed zones in this rule.
LIZ – S3 Setback The building or structure, or extension or alteration to an existing building or structure must be setback at least 3m from the boundary of any site zoned General Residential, Medium Density Residential, Rural Residential, Māori Purpose, Open Space, Natural Open Space, or Sport and Active Recreation or any KHR designation boundary.	Not applicable as the site does not border any of the listed zones
LIZ – S4 – Outdoor Storage Where a site adjoins another site that is not zoned light industrial or heavy industrial any outdoor storage areas, except for the display of goods for retail sale, must be fully screened by a solid fence or wall of a minimum height of 1.8m so that it is not visible from adjoining sites and public land.	No outdoor storage of goods will be outside the building – permitted
LIZ – S5 - Landscaping and screening on road boundaries 1. Where a site adjoins a road boundary, at least 50% of that road boundary not occupied by buildings or driveways shall be landscaped with plants or trees within a strip that is at least 2m in width. A separate pedestrian accessway may be provided within this strip, and its width shall not exceed 2m. 2. The landscaping shall reach a minimum height of 1m within two years after planting.	No landscaping is proposed but could be conditioned if required. The road frontage is limited to the access point only.
LIZ – S6 - Landscaping for sites that adjoin any sites other than mixed use or industrial Site boundaries that adjoin any zone other than Mixed Use, Light Industrial or Heavy Industrial zones must: 1. be fenced with a solid fence or wall of a minimum height of 1.8m; or 2. be landscaped with plants or trees of a minimum height of 1m at installation which will achieve a continuous screen of 1.8m in height and 1.5m in width within five years; or 3. be screened with a combination of (1) and (2) above.	The property adjoins Rural Production on three boundaries. Fencing is proposed for the perimeter but could be re-enforced with conditions.
LIZ – S7 – Coverage 1. At least 10% of the site area shall be planted in grass, vegetation or landscaped with permeable material; and 2. Where a connection to Council's reticulated stormwater system is not available then stormwater	More than 10% of the site will be in grass. The site is required to deal with its own stormwater. An engineer's report is included within the application which addresses this.

must be disposed of within the site. An engineering / site suitability report is required to determine compliance with this standard.	
LIZ – S8 – Pedestrian Frontage For sites with pedestrian frontage identified on the planning maps: 1. At least 65% of the building frontage at ground floor must be clear glazing; and 2. The principal public entrance to the building must be located on the front boundary.	Not applicable

2.10 In reviewing the rules above compliance can be achieved with all requirements with conditions of consent imposed for fencing and landscaping aspects. Road frontage is limited but there may be space for compliance of the respective rule. In all other instance the rule either does not apply or compliance can be achieved.

2.11 The only other consideration was with respect to traffic and parking. With respect to parking the same formula is used as the Operative Plan with one space required per 100m² of GBA. The total parking required is 87 spaces but only 8 are proposed to be provided. This reflects the staffing levels and that customers do not typically leave their vehicles which tend to be trucks or tractors with trailers. A full assessment of this has been completed within the assessment of effects where it is concluded that effects are less than minor. Traffic movements appear to be compliant based on Table 12 which is referenced in the rules.

2.12 On this basis a breach of parking rules applies with all other rules either compliant, not applicable, or could be conditioned to comply.

ASSESSMENT OF EFFECTS

3.01 Landuse applications generally have their own assessment criteria and this is used for the purposes of the respective breaches. Some of the breaches are technicalities but nevertheless still need to be considered accordingly.

3.02 It is necessary to consider the potential of Permitted Baseline and Existing Environment comments in considering the relevant matters to be assessed.

PERMITTED BASELINE

3.03 Pursuant to section 104(2) of the Act, when forming an opinion for the purposes of section 104(1)(a) a council may disregard an adverse effect of the activity on the environment if the plan or a NES permits an activity with that effect (i.e. a council may consider the "permitted baseline"). When considering an application for resource consent it is important to reference and place some reliance on Permitted Baseline arguments. This provides the expectation for development proposals within the zone and enables the consideration of the differences between what could be undertaken "as of right" and that which is proposed. When referencing and using Permitted Baseline such arguments should not be fanciful but based on realistic proposals and expectations.

- 3.04 In addition to Permitted Baseline considerations, Existing Use Right considerations could also apply especially where the proposed activity is similar in nature and previously lawfully established.
- 3.05 In this circumstance, the storage and distribution centre exists and operates largely how the replacement facility will. The biggest difference other than modernising the buildings and increasing the building footprint is that everything will now occur within the building. Parts of the operation currently occurring outside will no longer be uncovered. The increased footprint is reflective of these changes.
- 3.06 The existing use rights and permitted baseline are therefore important considerations when measuring and considering the expanded operations. The following considerations are the breaches that the new development will trigger.
- 3.07 Building Height is one of the breaches and the following assessment criteria includes some matters related to similar matters but which are not relevant.

11.2 BUILDING HEIGHT, SCALE AND SUNLIGHT

- (a) The extent to which adjacent properties will be adversely affected in terms of visual domination, overshadowing, loss of privacy and loss of access to sunlight and daylight.

The proposed building is over the permitted height but well away from boundaries and located near to any other development. The immediate surrounds is farmland on three boundaries (north, west and south) and the cycle trail (former rail corridor) to the east. There are no buildings which orientate toward the building and there is no overshadowing or visual domination by the proposed development.

The potential effects are less than minor.

- (b) The ability to mitigate any adverse effects by way of increased separation distances between buildings or the provision of landscaping and screening.

There is only one building and there are no identified adverse effects. Landscaping could potentially break up the bulk of the building but would need to be carefully located to avoid any impact on operational elements.

Planting would not screen the building due to its height. With part of the site (Industrial) having no height limitation, the issue only applies to the Rural Production zone.

Landscaping could be required and would mitigate if planted in the correct location and with appropriate plantings. It would not screen the development but lessen the bulk of the building. It is however contended that landscaping is unnecessary.

Effects are considered to be less than minor.

- (c) The extent of the building area and the scale of the building and the extent to which they are compatible with both the built and natural environments in the vicinity.

The site adjoins an industrial area and farmland. Larger buildings are often associated with these types of properties, and this proposal is no different. The existing building is slightly smaller but is located within the same location.

- (d) The spatial relationship between the new building and adjacent residential units, and the outdoor space used by those units.

There are no residential dwellings close to the proposed buildings.

- (e) The nature of the activity to be carried out within the building and its likely generated effects.

The activity to occur within the building already exists and operates and no changes are proposed.

3.08 The second breach is related to total impermeable surfaces as noted within the rules assessment. The following assessment criteria focuses on the matters most relevant to a breach of the stormwater rules. Engineering commentary is provided as part of the assessment.

11.3 STORMWATER MANAGEMENT

- (a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.

The extent of the onsite development is slightly larger than currently exists and it is intended that stormwater be collected into attenuation tanks and then directed to existing stormwater drains. The discharge rate will be controlled to ensure that no scouring can occur.

Water from the washdown facility is to be collected and placed into a purpose built wetland into which stormwater will eventually discharge.

Some water from above the site is also received and this has been assessed and included in the calculations for entire stormwater management.

This proposed stormwater system represents an overall upgrading of the existing facility.

A Regional Consent is recommended as per the Engineer's report and this will be secured as required. Effects from stormwater are considered to be less than minor.

- (b) The extent to which Low Impact Design principles have been used to reduce site impermeability.

The proposal has adopted Low Impact Design principles into the final design. In considering the proposed design.

The proposal provides for the release of surplus water from the site and the stormwater ponds at rates which are comparable to the pre development levels.

(c) Any cumulative effects on total catchment impermeability.

The engineer's report includes (as noted above) water received onto the site from upstream sources. The estimations are based on anticipated flows with an appropriate margin as is common practice. The stormwater onsite both received and created is directed and channelled and ultimately discharged to the existing network at an acceptable rate.

The increase in stormwater from within the site from the proposed development is included in the attenuation measures proposed.

The rate of disposal is designed to match pre-development levels.

There will also be measures required during the construction phase where sediment control measures are put in place. The recommended system will limit potential effects resulting from the extent of built form and impermeable surfaces.

(d) The extent to which building site coverage and impermeable surfaces will alter the natural contour or drainage patterns of the site or disturb the ground and alter its ability to absorb water.

The site is already modified, and this proposal requires further modifications with the proposed building having a larger footprint. As noted above there is a re-working of the existing stormwater drainage network and this involves re-routing the existing pipework and drains and modify the network to not only accommodate the building footprint but the expected stormwater from upstream sources as well as onsite sources.

(e) The physical qualities of the soil type.

The topsoil for the development area will be removed to enable the construction of the building platform with some soil also stockpiled or reutilised elsewhere on the site.

(f) Any adverse effects on the life supporting capacity of soils.

The proposal does rely on soils of the site and the site is zoned Light Industrial in the Proposed District Plan.

(g) The availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites.

There is sufficient land on the application site to attend to and address onsite wastewater treatment and disposal (albeit with water disposed to existing drainage networks) and for onsite wastewater treatment and disposal. These areas are clearly detailed on the engineering plans.

(h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.

The additional impermeable surfaces is largely confined to additional building which will now house all parts of the storage and distribution operations.

The existing circular internal roading will require slight modifications to align with the proposed building but the roading will largely remain the same as what currently exists.

(i) The extent to which landscaping may reduce adverse effects of run-off.

The implementation of landscaping will not result in a significant reduction in stormwater runoff. Stormwater runoff from the site will be fully functional and accounts for the surrounding catchment.

The proposed wetland to be used for the washdown area will be planted and there will be a functional need in this aspect but for ordinary stormwater, landscaping will not reduce the expected less than minor effects.

(j) Any recognised standards promulgated by industry groups.

The original stormwater design has been completed in accordance with industry standards.

(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold.

Stormwater management is targeted to release water at predevelopment levels which is higher than the permitted allowance.

The washdown aspect is recommended for Regional Consent as noted within the stormwater report.

(l) The extent to which the proposal has considered and provided for climate change.

The proposed design accounts for climate change within the calculations provided. There are sufficient allowances and provision within the design for additional loadings in accordance with the relevant standards and which recognises the potential additional loadings from climate change.

(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.

The design includes extensive Engineering input which results in less than minor effects.

TRAFFIC INTENSITY

3.09 The Operative District Plan assesses traffic movements based on a set formula and reacts only where changes occur. New activities trigger an assessment as does any proposal which increases the size and scale of operations. In this instance, the changes to the activity proposed, result in an increase in the Gross Business Area which sees an increase from 6818m² to 8668m². This increase is then assessed using the Appendices and traffic movements are calculated.

3.10 The assessed traffic movements provides an activity status for the application and does not necessarily reflect actual traffic movements which the activity creates. In this instance the assessed traffic movements are inflated when compared to actual numbers.

3.11 The proposal is now considered in accordance with the assessment criteria within the district plan.

- (a) The extent by which the expected traffic intensity for a proposed activity exceeds the assumed value set by the Traffic Intensity Factor contained in Appendix 3A in Part 4 of the Plan.

The assessed traffic movements for the additional Gross Business Space is the difference between the current area 6818m² to 8668m² which is 1850m² and which equates to 185 additional traffic movements or 867 traffic movements overall.

This is significantly greater than the actual figures.

- (b) The time of day when the extra vehicle movements will occur.

The peak periods are identified as relating to employees arriving and leaving work with a steady flow of traffic throughout the day comprising trucks or tractors with trailers. It is noted that the site has restricted access with limited vehicles arriving and leaving the site.

- (c) The distance between the location where the vehicle movements take place and any adjacent properties.

The access to the property is located at the end of Carey Road and there are several properties which have entrance points in this location. The road turns into the internal access as you progress over the cycle trail corridor.

- (d) The width and capability of any street to be able to cope safely with the extra vehicle movements.

The proposal is unlikely to generate increased traffic movements as the additional Gross Business Area is as a result of an increased footprint for the building but scale or operation remains largely similar to that which currently exists. The proposal is a modernisation exercise of the existing operation which involves buildings which are no longer fit for purpose.

The design has been tailored to the proposed activity and considered to be consistent and compliant with Engineering Standards.

- (e) The location of any footpaths and the volume of pedestrian traffic on them.

There are no footpaths near the proposed development.

- (f) The sight distances associated with the vehicle access onto the street.

The entrance to the site is more than adequate to cope with the traffic generated from onsite activities.

- (g) The existing volume of traffic on the streets affected.

Activities on Carey Road do not generate extensive traffic movements. The street is however wide to cope with the types of vehicles which frequent the properties on this short no-exit road. It is not considered that there are any issues with traffic flow onto or within Carey Road.

- (h) Any existing congestion or safety problems on the streets affected.
There is no known congestion or problems on Carey Road.
- (i) With respect to effects in local neighbourhoods, the ability to mitigate any adverse effects through the design of the access, or the screening of vehicle movements, or limiting the times when vehicle movements occur.
There are no identified effects from the proposed re-development which require mitigation measures to be imposed. The site although not zoned industrial involves a current industrial type activity and is surrounded by industrial uses.

The farmland immediate adjacent contains no buildings but the current poor condition of buildings to be replaced will be a welcome improvement from a visual perspective even if the building is larger and slightly taller.
- (j) With respect to the effects on through traffic on arterial roads, strategic roads and State Highways, any measures such as right-turn bays, flush medians, left turn deceleration tapers, etc. proposed to be installed on the road as part of the development to accommodate traffic turning into and out of the site.
Carey Road joins onto Mangakahia Road and the intersection appears to be fit for purpose. No upgrading is considered to be required.
- (k) 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.
There are no known natural hazards which will be impacted on by this application.
- (l) Whether providing or having access to bicycle parking, shower/changing facilities or alternative transportation would reduce the number of vehicle movements associated with the proposed activity.
The applicant could provide facilities for their staff who use alternative forms of transportation. There are few staff and all customers will not be on bicycles as they will be there to load product from the storage and distribution operation.
- (m) the provision of safe access for pedestrians moving within or exiting the site.
As noted previously the site has restricted access and no pedestrians will likely arrive at the site as customers.

PARKING

- 3.12 The district plan requires parking to be provided in accordance with the district plan and which is based on the Gross Business Area for the activity. As noted for the traffic intensity factor previously, in some instances the formula places unrealistic numbers for required parking spaces when compared to the reality of the activity and its operation. In this instance this is again an issue for some of the proposed activities. It is noted that the application site is considered to be a destination and insular in nature. The proposal has been designed to meet actual demand based on staffing levels as customers only use the loading zones.
- 3.13 The following assessment criteria is required to be satisfied where the provided parking does not meet the assessed requirement. In addition to the provision of parking spaces, the Rural Production zone does not require activities establishing within it to provide any

loading spaces. Based on the assessment criteria within the plan the following parking assessments have been made for the proposed development.

3.14 The required number of spaces assessed under the district plan is based on 1 space per 100m² of Gross business Area. The Gross Business Area is 8668m² meaning that 87 car spaces are required. Only 8 spaces are provided which is expected to address staff and visitors to the site.

- (a) Whether it is physically practicable to provide the required car parks on site.
There are no physical constraints within the site which prevent the required number of spaces to be provided. It is however noted that actual demand is what is critical rather than what is specifically detailed within the district plan.
- (b) Whether there is an adequate alternative supply of parking in the vicinity, such as a public car park or angled road parking.
The site is insular and does not require additional parking. There are no public parking within the immediate area.
- (c) Whether there is another site nearby where a legal agreement could be entered into with the owner of that site to allow it to be used for the parking required for the application.
This is unnecessary as in the unlikely situation that more parking is required then the space mentioned above could be utilised. This would mean slight amendments to the overall park design but effects would remain less than minor.
- (d) Whether it can be shown that the actual parking demand will not be as high as that indicated in Appendix 3C.
The nature of the business means that vehicles entering the site are likely to be pick up product and will only be on site for the duration of time it takes to load the product. Parking would be limited to staff and visitors not picking up product which would be very low daily numbers. Given the operation is not significantly changing the applicant has a good handle and idea of expected demand. Restricted access will ensure that only customers (trucks or tractors with trailers or staff/ expected visitors) will enter into the site.
- (e) Adequacy of the layout and design of the car parking areas in terms of other recognised standards, including 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.
The parking design and layout ensures that stormwater runoff is managed and directed to the appropriate stormwater network. The stormwater is to be managed to ensure that discharges from the site remain at pre-development levels.
- (f) Degree of user familiarity with the car park and length of stay of most vehicles.
The majority of carpark users will be employees with occasional visitors. The restricted access will mean that there will be unlikely to be unexpected visitors to the site. The parking design has been based on “casual users” which provide more generous widths and manoeuvring spaces. The site has sufficient space to accommodate this provision and has been designed accordingly. The length of stay is likely to be for the entire day although visitors are not likely to stay long given the nature of onsite business

- (g) Total number of spaces in the car park.
The total number of spaces to be provided is 8 car spaces with a total assessed car space requirement of 87.
- (h) Clear space for car doors to be opened even if columns, walls and other obstructions intrude into a car parking space.
There are no impediments within the proposed carpark areas.
- (j) Whether cycling facilities or open green space have been considered or are appropriate as an alternative to car parking.
The only parking demand would be for staff and visitors who could cycle to work. The parking has been assessed to reflect likely demand rather than what the plan considers to be the amount of parking required.
- (k) Whether adequate consideration has been given to providing accessible car parking spaces for those with disabilities, the location of these spaces and regulating inappropriate use of the spaces.
The required number of accessible parking will be provided and are illustrated on the site plans and parking plans. The parking and its proposed uses will comply with the appropriate regulations.
- (l) The extent to which the site can be accessed by alternative transport means such as buses, cycling or walking.
It is unlikely that alternative traffic will utilise or access the site given the nature of the onsite activities. The predominant vehicles will be trucks and tractors with trailers and staff vehicles. It is possible that staff may cycle to work and in this instance there would be no restriction on this occurring.
- (m) The extent to which the reduced number of car parking spaces may increase congestion along arterial and strategic roads.
The prospect of this occurring is low as there is space for informal parking required. The impact on Mangakahia Road (State Highway 15) is not likely given that there is additional space on site and Carey Road offers roadside parking.
- (n) The degree to which provision of on-site car parking spaces may have resulted in adverse visual effects or fragmented pedestrian links.
The amount of proposed parking is modest and does not create any visual effect.

There are no pedestrian links within the immediate area and this is not considered to be a material consideration.
- (o) Whether a financial contribution in lieu of car parking spaces is appropriate.
This is not considered necessary.
- (p) Consideration given to shared parking options between adjacent sites and activities that have varying peak parking demands.
This is not a practical option and is not required in this instance.
- (q) The varying parking requirements for staff and customers.
The proposed activities are not retail in nature and therefore the demand for customer spaces is likely to be low. Visitors are usually only there to pick up

product or to meet with staff. The proposed parking as illustrated is more than adequate for the proposed onsite activities.

OTHER MATTERS

- 3.15 The proposed earthworks are detailed within the rule assessment in which it is concluded that they fall within the permitted allowances.
- 3.16 Signage is to comply with the plan requirements.
- 3.17 As noted within the rule assessment, staffing levels will remain at current levels and while the building will be larger it is to modernize the facility and to ensure all activities occur within the building rather than some activities which currently occur outside.

OPERATIVE DISTRICT PLAN – OBJECTIVES AND POLICIES

- 4.01 The following assessment of objectives and policies is focused on the relevant provisions which apply to a proposal where a breach of stormwater and building coverage applies.

RURAL PRODUCTION

8.6.3 OBJECTIVES

- 8.6.3.1 To promote the sustainable management of natural and physical resources in the Rural Production Zone.*
- 8.6.3.2 To enable the efficient use and development of the Rural Production Zone in a way that enables people and communities to provide for their social, economic, and cultural well being and for their health and safety.*
- 8.6.3.3 To promote the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.*
- 8.6.3.6 To avoid, remedy or mitigate the actual and potential conflicts between new land use activities and existing lawfully established activities (reverse sensitivity) within the Rural Production Zone and on land use activities in neighbouring zones.*
- 8.6.3.7 To avoid remedy or mitigate the adverse effects of incompatible use or development on natural and physical resources.*
- 8.6.3.8 To enable the efficient establishment and operation of activities and services that have a functional need to be located in rural environments.*
- 8.6.3.9 To enable rural production activities to be undertaken in the zone.*

13.4 POLICIES

- 8.6.4.1 That the Rural Production Zone enables farming and rural production activities, as well as a wide range of activities, subject to the need to ensure that any adverse effects on the environment, including any reverse sensitivity effects, resulting from these activities are avoided, remedied or mitigated and are not to the detriment of rural productivity.*
- 8.6.4.2 That standards be imposed to ensure that the off site effects of activities in the Rural Production Zone are avoided, remedied or mitigated.*
- 8.6.4.3 That land management practices that avoid, remedy or mitigate adverse effects on natural and physical resources be encouraged.*
- 8.6.4.4 That the type, scale and intensity of development allowed shall have regard to the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.*
- 8.6.4.5 That the efficient use and development of physical and natural resources be taken into account in the implementation of the Plan.*
- 8.6.4.7 That although a wide range of activities that promote rural productivity are appropriate in the Rural Production Zone, an underlying goal is to avoid the actual and potential adverse effects of conflicting land use activities.*
- 8.6.4.8 That activities whose adverse effects, including reverse sensitivity effects, cannot be avoided remedied or mitigated are given separation from other activities*
- 8.6.4.9 That activities be discouraged from locating where they are sensitive to the effects of or may compromise the continued operation of lawfully established existing activities in the Rural Production zone and in neighbouring zones.*

COMMENTARY ON OBJECTIVES AND POLICIES – OPERATIVE PLAN

- 4.02 Many of the above objectives and policies relate to matters addressed within the assessment of effects. The outcome of the assessment of effects was that the proposal did not result in adverse effects and furthermore concluded that there were no persons deemed to be potentially affected. The above objectives are enabling in that if there are matters of concern resulting from the assessment of effects, that there may well be means to reduce these effects with conditions and other mitigation measures.
- 4.03 Furthermore the zone provides for a wide range of matters to be provided for within the zone. The proposed re-development is of an existing activity which has existed for close to 50 years in this location. There has been additions and other work completed over the years but it has proven to be an acceptable use within the location. The re-development in my opinion lessens the already minor effects further by ensuring that the entire operation except for the washdown area is completed indoors.

- 4.04 Despite having operated from the site for 50 years, there are no new activities close to the site to which concerns over reverse sensitivity could be applicable. The applicant could simply replace like for like and existing use rights would apply to the development. The increases are however to modernise the facility and enclose some activities which presently are exposed to the weather.
- 4.05 The site is also unique in that it is attached to an industrial parcel which forms part of the application site. This split zone can occasionally result in a conflict although there are many industrial or commercial activities located in the Rural Production zone where effects are considered to be less than minor. The establishment of the current operation was lawfully established and concluded as being appropriate for the location. The subsequent plan reviews did not change the zoning although the current Proposed Plan (Decisions Version) has zoned the property as Light Industrial. This zoning is wholly appropriate given that the used is essentially a rural distribution centre for product needed for rural production purposes.
- 4.06 The proposal is a rural support industry and appropriately located within the present location with limited potential effects resulting from the re-development of the site. The effects are concluded as being less than minor which is what many objectives and policies strive to achieve. There are no reverse sensitivity issues which apply to the site as there are no activities close to the facilities which could be considered and noise sensitive.
- 4.07 While the Industrial Zoning applies to a portion of the site there are no buildings on this portion of the site but rather part of the internal roading network. The use is considered to reflect a light industrial type use and would fall within the scope and intent of the zone. The zone is acknowledged but is not considered necessary to undertake an assessment of policies and objectives given that it is only applicable to part of the site and this parcel will only be used for access.
- 4.08 It is contended that the proposal is not inconsistent with the objectives and policies of the Operative District Plan.

5.0 PROPOSED PLAN – DECISIONS VERSION

- 5.01 The following are the relevant objectives and policies from the Proposed Plan – Decisions Version.

LIZ-O1

The Light Industrial zone is utilised for the efficient operation of industrial activities and is managed to ensure its long-term protection, including from:

- c. reverse sensitivity effects.*

LIZ-O2

The Light Industrial zone accommodates a range of industrial activities that:

- a. efficiently use the physical resources of the zone;*
- b. include, but are not limited to, warehouse storage, automotive repairs, minor engineering and light manufacturing activities, product assembly;*
- c. are not unreasonably constrained by surrounding activities, and*
- d. avoid compromising the operation of future industrial activities within the zone.*

LIZ-O4

The adverse environmental effects generated by industrial activities are managed, in particular at zone boundaries.

LIZ-O5

The Light Industrial zone provides for a limited range of commercial activities which either support industrial activities or are not anticipated in the Mixed Use or Town Centre zone.

Relevant Policies Include:

LIZ-P1

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

LIZ-P2

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

- a. offensive trade (excluding waste management facility);*
- b. residential activities (where they are not ancillary to an Industrial activity);*
- c. community facilities;*
- d. retirement villages;*
- e. education facilities (excluding trades training); and*
- f. sport and recreation facilities.*

LIZ-P3

Allow commercial activities in the Light Industrial zone that:

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

LIZ-P4

Ensure that built form and landscaping is:

- a. consistent with the amenity of the Light Industrial zone; and*
- b. complementary to the character and amenity of adjoining zones.*

LIZ-P5

Consider the following matters where relevant when assessing and managing the effects of land use and subdivision in the Light Industrial zone:

- a. consistency with the scale, density, design and character of the light industrial environment and purpose of the zone;*
- b. the location, scale and design of buildings or structures, outdoor storage areas, parking and internal roading;*
- c. opportunities for connectivity, within and between developments, public open space, services and facilities;*
- d. for non-industrial activities:*
 - i. scale and compatibility with industrial activities;*
 - ii. potential reverse sensitivity effects on industrial activities.*
- e. at zone interfaces:*
 - i. any setbacks, fencing, screening or landscaping required to address potential conflicts;*
 - ii. any adverse effects on the character and amenity of adjacent zones.*
- f. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; including:*

- i. opportunities for water sensitive design methods;*
- ii. management of three waters infrastructure and Industrial Waste and Trade Waste such as industrial by-products.*
- h. the adequacy of roading infrastructure to service the proposed activity;*
- j. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

COMMENTARY ON OBJECTIVES AND POLICIES – PROPOSED PLAN – DECISIONS VERSION

- 5.02 The proposal has been considered in terms of the above proposed objectives and policies and is considered to be a good fit into the expected use for the site. This is not unexpected as the proposal exists and the Light Industrial Zoning is an appropriate zoning for the activity on site. In all of the above considerations the assessment concludes that the proposal is consistent or could be made (via conditions) to meet expectations in terms of amenity and the zone interface with the Rural Production Zone. The adjoining zone is less sensitive than some urban zones but is nevertheless required to be considered.
- 5.03 The compliance with rules is also a material consideration and other than parking provision, compliance is met or can be met by the imposition of conditions. These conditions will assist in ensuring that the proposal remains consistent with the relevant objectives and policies which have been noted above.
- 5.04 The proposed re-development is a listed activity which is expected in this zone and while a parking shortfall is noted, the demand for spaces on site is limited due to the type of operation and the time spent by customers onsite. Typically, the client progresses through the loading space facilities and receives the product and then continues with their activity. Time on site is limited to loading the product and occasionally washing down the equipment. Visitors could be permanent staff or usually organized by appointment due to the access requirements and safety processes.

HIGHER ORDER PLANNING CONSIDERATIONS AND REGIONAL COUNCIL REQUIREMENTS

Regional Consent

- 6.01 The Engineer's Report provided details that the washdown facility and related stormwater works trigger a regional consent under the regional plans. An application for this breach will be lodged shortly with NRC.
- 6.02 The conclusion of the Engineer's report is that the expected outputs from the onsite development can be mitigated and that effects are less than minor.
- 6.03 The proposal, under the Operative Plan does not comply with impermeable surface allowances but does meet the permitted allowances of the Proposed Plan. Notwithstanding the permitted status under the proposed plan, the proposal is still required to adequately put measures in place to address stormwater and water discharges from onsite activities. It is contended that the design proposal presented within the Haigh workman report addresses this issue more than adequately.
- 6.04 The proposal is considered to be consistent with the regional planning requirements.

National Policy Statement for Highly Productive Land 2022 (NPS-HPL)

- 6.05 The site although mapped as highly productive land is to be an urban zone in the proposed plan and will not apply in the future. Technically while there is a transition phase and the Proposed Plan (Decision Version) is subject appeal, the zones although applicable have not been fully ratified. There were no submissions to be land from a brief review of the submissions received and certainly not in terms of the proposed zoning.
- 6.06 With the proposed plan unlikely to change the zoning it is almost certain that the Light Industrial zoning will remain. As a result the NPS which would apply to Rural Production zoned land does not apply to the new zoning.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS)

- 6.07 Land Development and Engineering completed a PSI and DSI for the site and concluded based on site assessments that a Controlled Resource Consent is required for onsite works associated with the proposed re-development of the site.
- 6.08 It is considered that the recommended measures within the report be conditioned and that as it is a controlled activity that effects can be concluded as being less than minor assuming conditions are satisfied.
- 6.09 With the activity already established the issue is around the surplus soil from the proposed excavation and filling and that a management plan be provided on how the soil will be disposed of. This can be conditioned accordingly.
- 6.10 There is no reason as to why this controlled activity under the Regulation cannot be approved as part of this landuse consent.

7.0 PART 2 CONSIDERATIONS

- 7.01 The application does not conflict with any matter or consideration under Part 2 of the Act. The proposal provides for the social and economic well-being of the district by maintaining an important rural supply operation for locals to the immediate area. Ensuring that the potential effects of the proposal are less than minor.
- 7.02 It is therefore contended that the proposed re-development of the existing fertiliser storage and supply facility is appropriate and consistent with the purpose of the Act.

8.0 NOTIFICATION ASSESSMENT S95A TO 95G OF THE ACT

- 8.01 Sections 95A to 95G require Council to follow specific steps in determining whether to notify an application. In considering the conclusions findings within this report are relied upon. For the purposes of this assessment all components of the application are to be considered collectively as the application components are all interrelated.

8.02 Public Notification section 95A

Step 1

Mandatory public notification in certain circumstances

- (a) the applicant has requested that the application be publicly notified:
- (b) public notification is required under section 95C:
- (c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

The applicant has not requested public notification and none of the remaining matters as described are applicable.

Step 2 Public Notification precluded in certain circumstances

The criteria for step 2 are as follows:

- (a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification:
- (b) the application is for a resource consent for 1 or more of the following, but no other, activities:
 - (i) a controlled activity:
 - (ii) a restricted discretionary or discretionary activity, but only if the activity is a subdivision of land or a residential activity:
 - (iii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity:
 - (iv) a prescribed activity (see section 360H(1)(a)(i)).

The application is considered to be discretionary activity in terms of the rules of the plan with a breaches of impermeable surfaces, building coverage, traffic movements, parking, & height while under the proposed plan only a breach of parking is noted. There are a number of rules which can be conditioned and these relate to landscaping and confirming that perimeter fencing will be completed.

The proposed activities and their activity classifications are not listed as an exemption.

The application is not precluded from public notification.

Step 3 – Public Notification required in certain circumstances

The criteria for Step 3 are as follows:

- (a) the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:
- (b) the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.

The NES Regulation (contaminated land) requires a controlled application to be applied for and this requirement is included as a controlled activity in this application. The

consent relates not to a change of use but the treatment and/or disposal of surplus soil from the development proposal.

The DSI presented notes the measures recommended to be undertaken.

The overall effects from the proposed re-development are considered to be less than minor as concluded within earlier sections of this report. The proposal seeks to replace an existing operation with a modern purpose built facility which is both higher and has a greater footprint. The proposal will see all operations from the site be completed indoors rather than currently with some operation elements subject to the elements.

There are no sensitive uses near to the site and site is bordered by Rural Production land and Industrial. Under the proposed plan the site is zoned Light Industrial which is an zoning in which this type of facility is expected.

The effects on the wider environment are considered to be less than minor.

8.03 Affected Persons Assessment – Limited Notification Section 95B

If the application is not required to be publicly notified, a Council must follow the steps of section 95B to determine whether to limited notify the application.

Step 1: certain affected groups and affected persons must be notified

(2) Determine whether there are any—

- (a) affected protected customary rights groups; or
- (b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).

There are no protected customary rights or customary marine titles which apply to the application site.

Step 2: if not required by step 1, limited notification precluded in certain circumstances
The criteria for step 2 are as follows:

- (a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:
- (b) the application is for a resource consent for either or both of the following, but no other, activities:
 - (i) a controlled activity that requires consent under a district plan (other than a subdivision of land):
 - (ii) a prescribed activity (see section 360H(1)(a)(ii)).

The application is not precluded from Limited Notification as neither of the exemptions as described above apply to the application.

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

(7) Determine whether, in accordance with section 95E, the following persons are affected persons:

- (a) in the case of a boundary activity, an owner of an allotment with an infringed boundary; and
- (b) in the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity.

The application does not infringe on boundary setback or sunlight but does exceed the height limit in the Rural Production Zone. It is to be noted that it complies with the Industrial and proposed Light Industrial zoning within the Proposed Plan. Notwithstanding the height breach the proposal will not affect any immediate landowners and additionally there are no adjacent uses in which overshadowing or loss of visual perspective could be a relevant consideration.

The scale and extent of the operation will only increase in terms of building size rather than the scale of the operations. The extent of the increases will appear largely the same as presently exists.

The NES elements require a consent but is considered to be a Controlled activity. The focus will be on the disposal of surplus soil from the site and how this will be managed.

Traffic and parking are assessed at extreme levels due to the size of the Gross Business Area, however with restricted access to the site and few customers the overall effects from these two breaches are considered to be less than minor.

No persons are deemed to be affected by the three poly tunnels, the subdivision which is a boundary adjustment, and a landuse consent for existing development required only due to lot size changes to satisfy conditions of consent.

8.04 Notification Assessment Conclusion

Pursuant to sections 95A to 95G it is recommended that the Council determine that the application can be processed non-notified for the following reasons:

- In accordance with section 95A, public notification is not required, and in particular the adverse effects on the wider environment are considered to be less than minor;
- In accordance with section 95B, written approvals have not been sought as no persons are deemed to be affected by the proposed re-development of the site. The effects are concluded are less than minor and therefore no persons are considered to be affected persons; and,
- In accordance with section 95A(9) and 95B(10), there are no special circumstances to require public or limited notification.

9.0 **WEIGHTING OF THE PROPOSED DISTRICT PLAN AND OPERATIVE DISTRICT PLAN.**

- 9.01 The weighting which shall be applied to any plans as they progress through the process is difficult to quantify and largely determined by the individual provision or could be resulting from changes or other decisions. The weighting in this instance is really down to whether focus should be placed on a misplaced inappropriate zone (Rural Production) or a new zone (Light Industrial) which is wholly appropriate for the re-development and existing activity.

- 9.02 It is therefore my view that more weight be placed on the Proposed Plan in this instance and that the proposal apart from a parking shortfall which is provided for is not to be required would be a permitted activity.
- 9.03 It is unclear as to whether there will be further changes to the proposed zoning but for the proposed re-development it is fit for purpose and appropriate.
- 9.05 On this basis, a lesser weighting should be applied to the operative plan with more weight applied to the Proposed Plan (decisions version)

10 SUMMARY

- 10.01 The application seeks to re-develop the existing Ballance – Agri-Nutrient site at Carey Road, Kaikohe. The new facility will be purpose built and replace an aging series of buildings with a modern facility where all activities other than the washdown facility will be indoors.
- 10.02 The proposal breaches a number of rules as a result of the Operative Plan and Rural production zoning which applies to the site. A small parcel of the site is also zoned Industrial. The breaches relate to height, impermeable surfaces, building coverage in terms of the Rural Production zoning and exceeding traffic movements and providing insufficient parking based on district wide standards.
- 10.03 Under the Proposed Plan (Decisions Version) the only breach is in terms of a parking shortfall.
- 10.04 The proposal also triggers a consent under NES Regulation and has been assessed as a Controlled Activity.
- 10.05 The conclusions reached within the assessments are that the effects of the proposed development are less than minor and that the proposal is not inconsistent with objectives and policies.
- 10.06 When applying a weight to the Operative and Proposed Plans more weight has been applied to the Proposed Plan given it has a more appropriate zoning which provides for the activity which is occurring on site.
- 10.07 The effects of this application have been assessed and concluded as being less than minor. No persons are considered to be affected by the development. The effects on the wider environment are considered to be less than minor with appropriate mitigation measures proposed.
- 10.08 The proposal is not contrary to relevant objectives and policies of the Far North District Operative or Proposed Plans. The Light Industrial zoning means that
- 10.09 Regional consent is required for stormwater and wastewater related purposes and this will be lodged within the next few weeks.
- 10.10 The proposal is considered to be acceptable and meets the purposes of the Resource Management Act. The proposal is not contrary to Part 2 of the Act.

10.11 The applicant would appreciate the opportunity to review any draft set of conditions for the respective decisions and provide comments on them if necessary.

Should you have any queries in respect to this application please contact me.

Yours faithfully

Wayne Orman
Zenith Planning Consultants Ltd
Principal | Director
BPlan | BSocSci | MNZPI
wayne@zenithplanning.co.nz



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



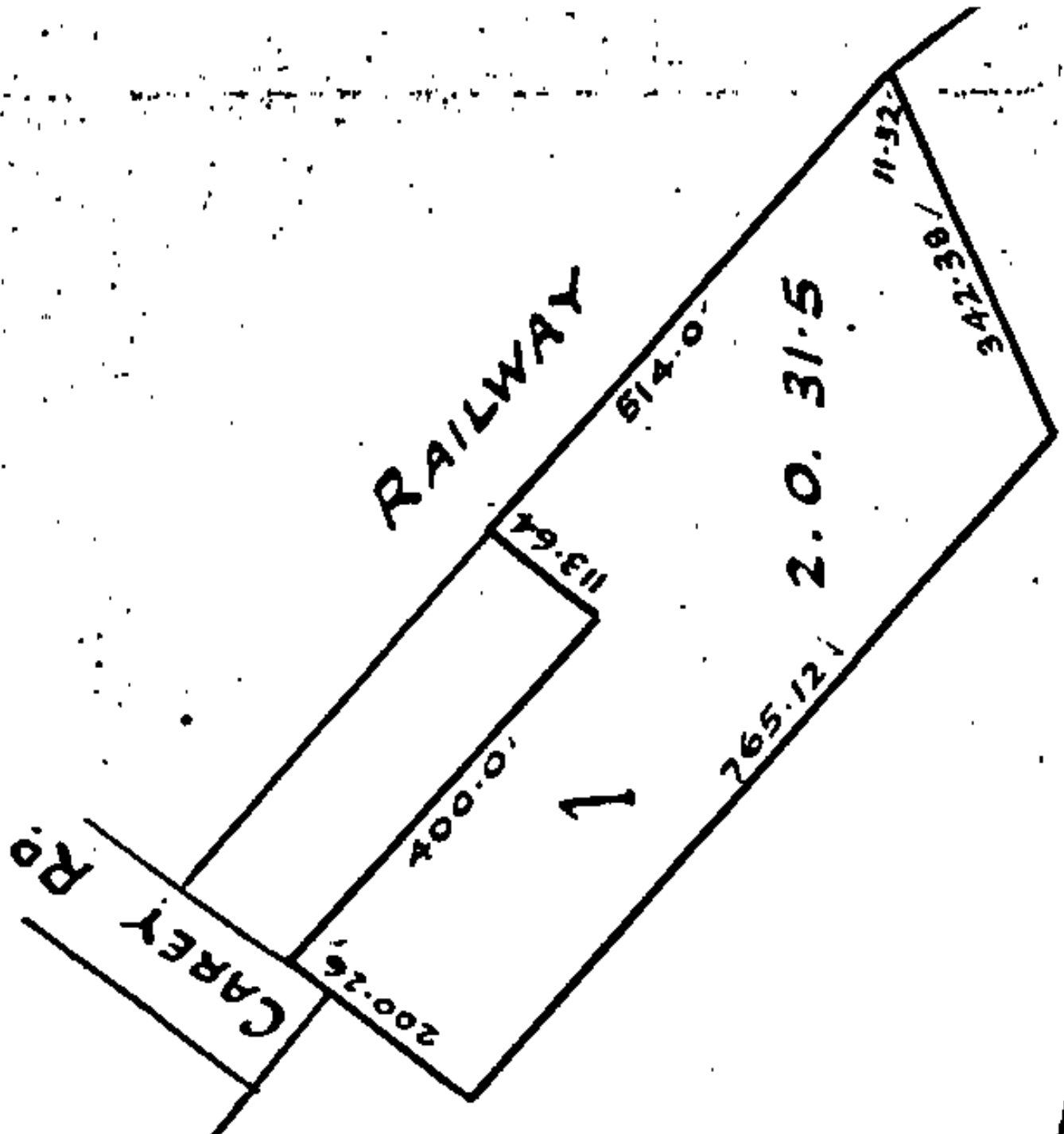

R.W. Muir
Registrar-General
of Land

Identifier **NA23C/561**
Land Registration District **North Auckland**
Date Issued 01 June 1973

Prior References
NA6A/492

Estate Fee Simple
Area 8890 square metres more or less
Legal Description Lot 1 Deposited Plan 68108
Registered Owners
Ballance Agri-Nutrients Limited

Interests





RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




R.W. Muir
Registrar-General
of Land

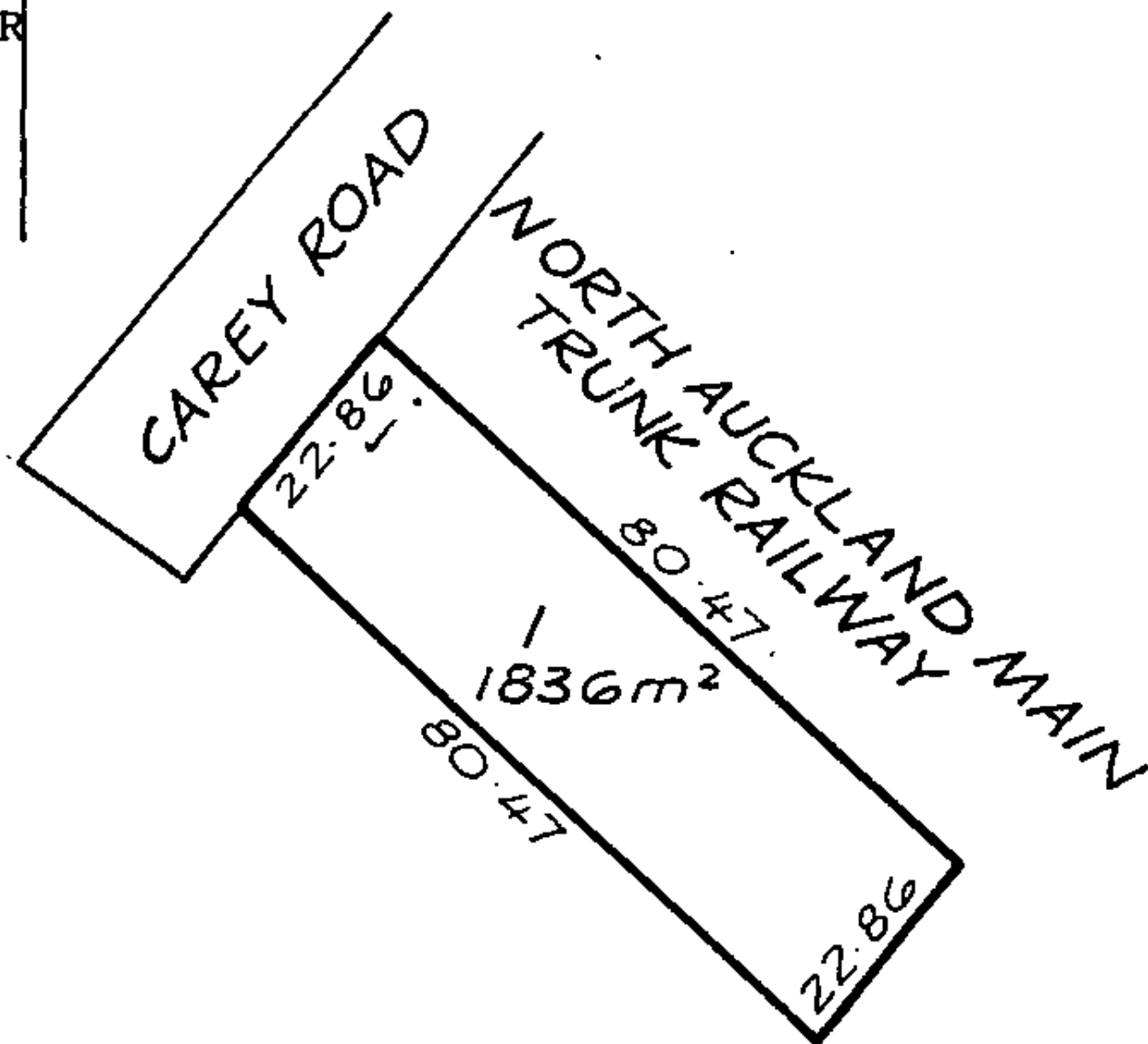
Identifier **NA82C/128**
Land Registration District **North Auckland**
Date Issued 23 August 1990

Prior References
NA1157/10

Estate Fee Simple
Area 1836 square metres more or less
Legal Description Lot 1 Deposited Plan 42810
Registered Owners
Ballance Agri-Nutrients Limited

Interests
Fencing Agreement in Transfer 563254

FAR NORTH DISTRICT





RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




R.W. Muir
Registrar-General
of Land

Identifier **NA82D/241**
Land Registration District **North Auckland**
Date Issued 02 August 1990

Prior References
PROC 3527 PROC 6309

Estate Fee Simple
Area 2387 square metres more or less
Legal Description Lot 1 Deposited Plan 139346
Registered Owners
Ballance Agri-Nutrients Limited

Interests
Subject to Part IV A Conservation Act 1987
Subject to Section 11 Crown Minerals Act 1991

Approvals ROAD SHOWN IS LEGAL FOR NEW ZEALAND RAILWAYS CORPORATION <i>P.K. Johnson</i> 24/5/90 MANAGER, TECHNICAL SERVICES FOR AND ON BEHALF OF N.Z. RAILWAYS CORPORATION ACT 1981 FILE REF. L.O. 24898/- I hereby certify that this plan is exempt from Local Authority consent pursuant to Sec 270(5) of the Local Government Act 1974 <i>P.K. Johnson</i> 24/5/90 Manager, Technical Services N.Z. Railways Corporation		NEW C.I.T. ALLOCATED LOT 1 - 82 D / 241 LOT 2 - 82 D / 242 Total Area 2950 m² Comprised in PROC. 6309, 3527 I, MARK R. ROBERTSON, a Registered Surveyor and holder of an annual practicing certificate for who may act as a registered surveyor pursuant to section 76 of the Survey Act 1981, hereby certify that this plan has been made from surveys executed by me or under my direction and supervision, that the surveys are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof. Dated at KAIKŌHE this 25 day of May 1990 at MY 1990 Signature <i>[Signature]</i> Field Book Reference Plans Examined <i>P. Dally</i> Connected <i>James J. Inghre</i> Approved as to Survey 4.17.190 Chief Surveyor <i>[Signature]</i> Deposited this 25 day of May 1990 District Land Registrar <i>[Signature]</i> File DP199346 Instructions	
DISORTED DIAGRAM OF PT PROC. 6309, 3527 CONTAINED IN LOTS 1 & 2 SEALING KAIKŌHE RAILWAY STATION CAREY ROAD LOT 1 2387 m² LOT 2 563 m² LOT 3 1640 m² LOT 4 747 m² LOT 5 1640 m² LOT 6 1640 m² LOT 7 1640 m² LOT 8 1640 m² LOT 9 1640 m² LOT 10 1640 m² LOT 11 1640 m² LOT 12 1640 m² LOT 13 1640 m² LOT 14 1640 m² LOT 15 1640 m² LOT 16 1640 m² LOT 17 1640 m² LOT 18 1640 m² LOT 19 1640 m² LOT 20 1640 m² LOT 21 1640 m² LOT 22 1640 m² LOT 23 1640 m² LOT 24 1640 m² LOT 25 1640 m² LOT 26 1640 m² LOT 27 1640 m² LOT 28 1640 m² LOT 29 1640 m² LOT 30 1640 m² LOT 31 1640 m² LOT 32 1640 m² LOT 33 1640 m² LOT 34 1640 m² LOT 35 1640 m² LOT 36 1640 m² LOT 37 1640 m² LOT 38 1640 m² LOT 39 1640 m² LOT 40 1640 m² LOT 41 1640 m² LOT 42 1640 m² LOT 43 1640 m² LOT 44 1640 m² LOT 45 1640 m² LOT 46 1640 m² LOT 47 1640 m² LOT 48 1640 m² LOT 49 1640 m² LOT 50 1640 m² LOT 51 1640 m² LOT 52 1640 m² LOT 53 1640 m² LOT 54 1640 m² LOT 55 1640 m² LOT 56 1640 m² LOT 57 1640 m² LOT 58 1640 m² LOT 59 1640 m² LOT 60 1640 m² LOT 61 1640 m² LOT 62 1640 m² LOT 63 1640 m² LOT 64 1640 m² LOT 65 1640 m² LOT 66 1640 m² LOT 67 1640 m² LOT 68 1640 m² LOT 69 1640 m² LOT 70 1640 m² LOT 71 1640 m² LOT 72 1640 m² LOT 73 1640 m² LOT 74 1640 m² LOT 75 1640 m² LOT 76 1640 m² LOT 77 1640 m² LOT 78 1640 m² LOT 79 1640 m² LOT 80 1640 m² LOT 81 1640 m² LOT 82 1640 m² LOT 83 1640 m² LOT 84 1640 m² LOT 85 1640 m² LOT 86 1640 m² LOT 87 1640 m² LOT 88 1640 m² LOT 89 1640 m² LOT 90 1640 m² LOT 91 1640 m² LOT 92 1640 m² LOT 93 1640 m² LOT 94 1640 m² LOT 95 1640 m² LOT 96 1640 m² LOT 97 1640 m² LOT 98 1640 m² LOT 99 1640 m² LOT 100 1640 m²		Scale 1: 500 Date APRIL 1990 TERRITORIAL AUTHORITY FAR NORTH DISTRICT COUNCIL Surveyed by FRASER THOMAS PINERS Scale 1: 500 Date APRIL 1990 W.A. ROBERTSON, DIRECTOR GENERAL SURVEYOR GENERAL DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND	

BALLANCE KAIKOHE

20 CAREY ROAD, KAIKOHE

ALPINE BUILDING NZ LTD



6 Fairway Drive
Kerikeri, BOI.

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

Project No. 26 036

00
FOR CONSENT
22/06/2026



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

BALLANCE KAIKOHE
20 CAREY ROAD, KAIKOHE
ALPINE BUILDING NZ LTD

Project No. 26 036

00
FOR CONSENT
22/06/2026

Drawing Register

[illegible]



Locality Plan (NTS)

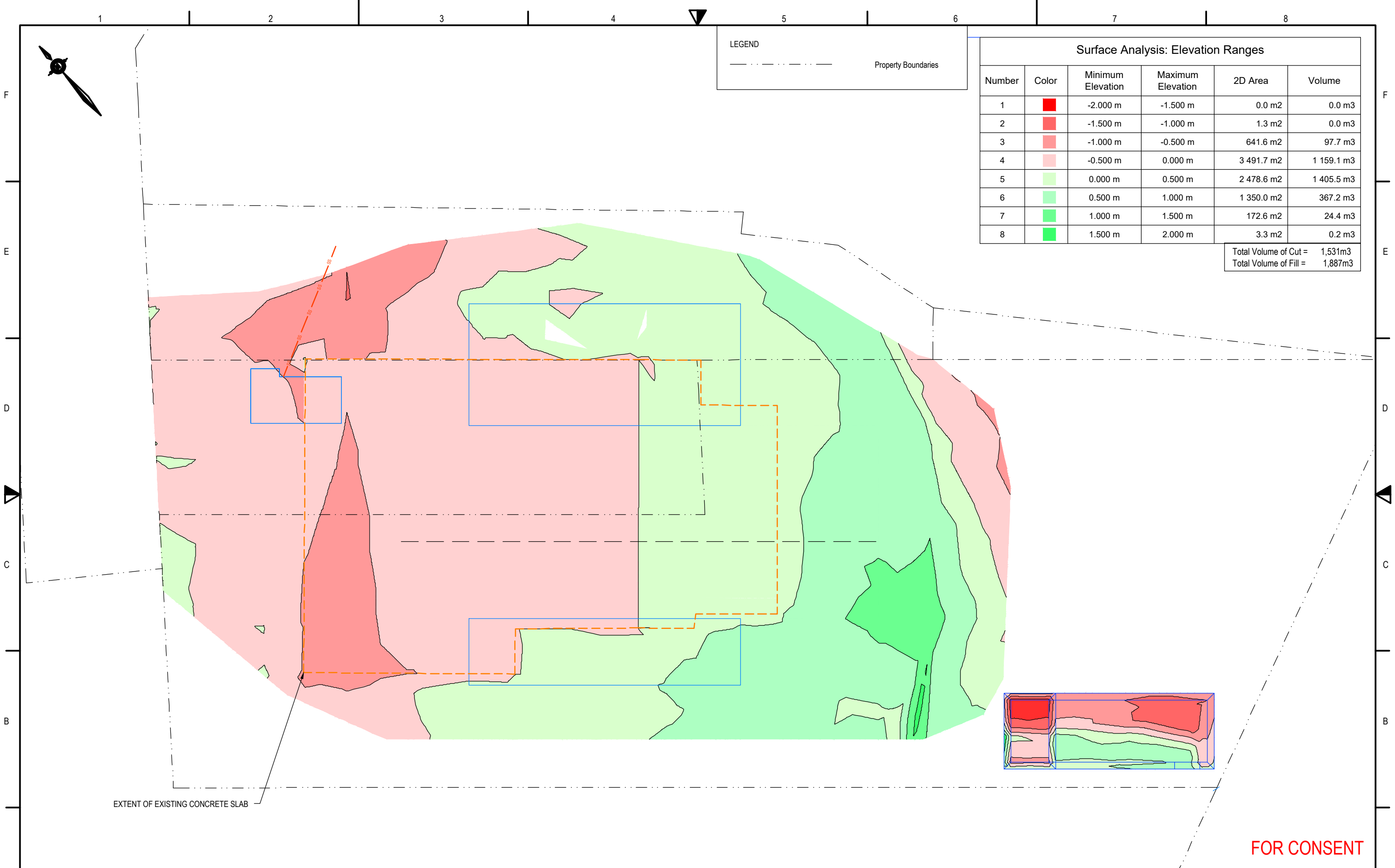
SITE INFORMATION:
Address: 18 and 20 Carey Road, Kaikohe
Legal Description:
Lot 1 DP 139346, Area: 2,387m², Industrial (FNDC)
Lot 1 DP42810, Area: 1,836m², Rural Production (FNDC)
Lot 1 DP68108, Area: 8,890m², Rural Production (FNDC)
Area in total: 13,113m²

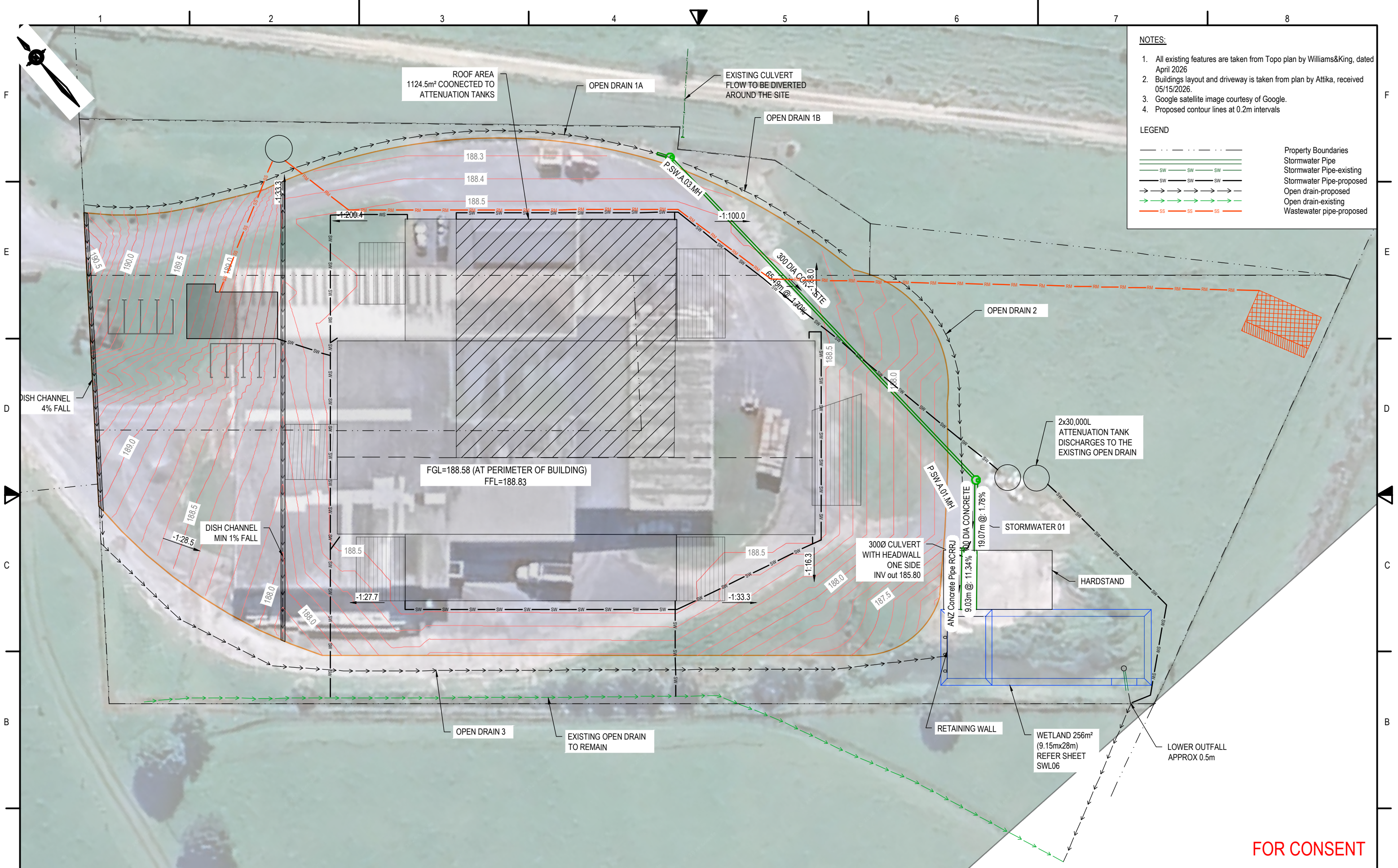
- NOTES:**
- 1. All features are taken from Topo plan by Williams&King, dated April 2026.
 - 2. Google satellite image courtesy of Google.
 - 3. Contour lines at 0.5m intervals by W&K (NZVD 2016, SM 1030 SO 61968, RL 191.6).

LEGEND	
	Property Boundaries
	Water Supply (FNDC Map)
	Stormwater Pipe (Survey)
	Open drain
	Flowpath

FOR CONSENT

A	Rev	Date	Description	By	Checked	DWG EXISTING SITE PLAN	 6 Fairway Drive Kerikeri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz 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 HAI GH WORKMAN LTD. ©2020	Project		BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00	A
	1	22/06/2026	FOR CONSENT	LP	TMA			Client		ALPINE BUILDING NZ LTD		Dwg No. EXP01	
								Project No. 26 036		RC no.	Sheet No. 1 of 1		
A3 Scale 1: 750							Date	22/06/2026					
Drawn LP				Checked TMA		Approved JP							
File				T:\CLIENTS\ALPINE BUILDINGS\26 036 - 20 CAREY ROAD, KAIKOHE\ENGINEERING\DRAWINGS\26 036_C30 EXISTING SITE PLAN.DWG									

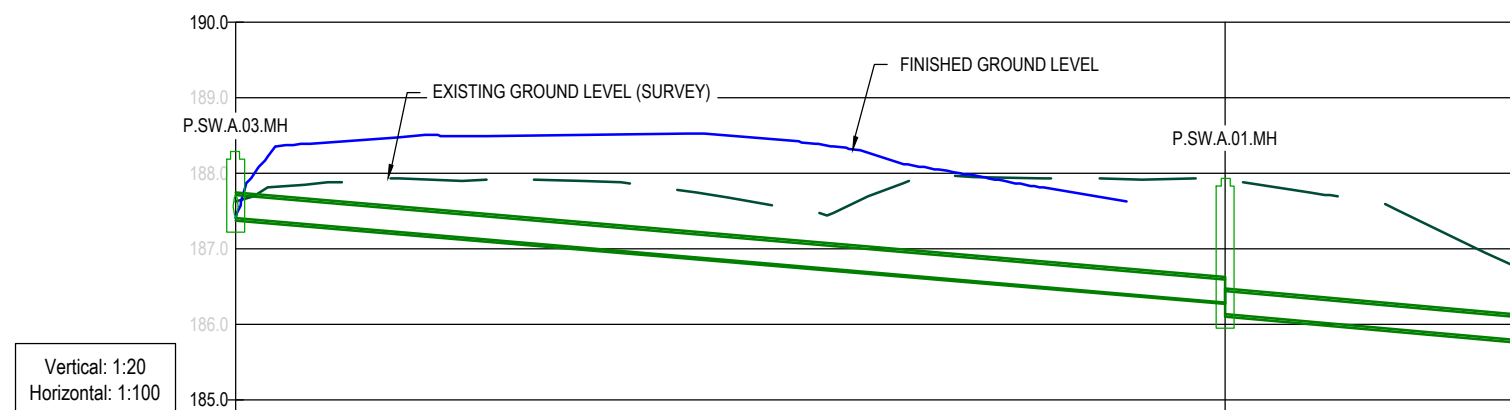




- NOTES:**
1. All existing features are taken from Topo plan by Williams&King, dated April 2026
 2. Buildings layout and driveway is taken from plan by Attika, received 05/15/2026.
 3. Google satellite image courtesy of Google.
 4. Proposed contour lines at 0.2m intervals
- LEGEND**
- | | |
|-----|--------------------------|
| --- | Property Boundaries |
| --- | Stormwater Pipe |
| --- | Stormwater Pipe-existing |
| --- | Stormwater Pipe-proposed |
| --- | Open drain-existing |
| --- | Open drain-proposed |
| --- | Wastewater pipe-proposed |

FOR CONSENT

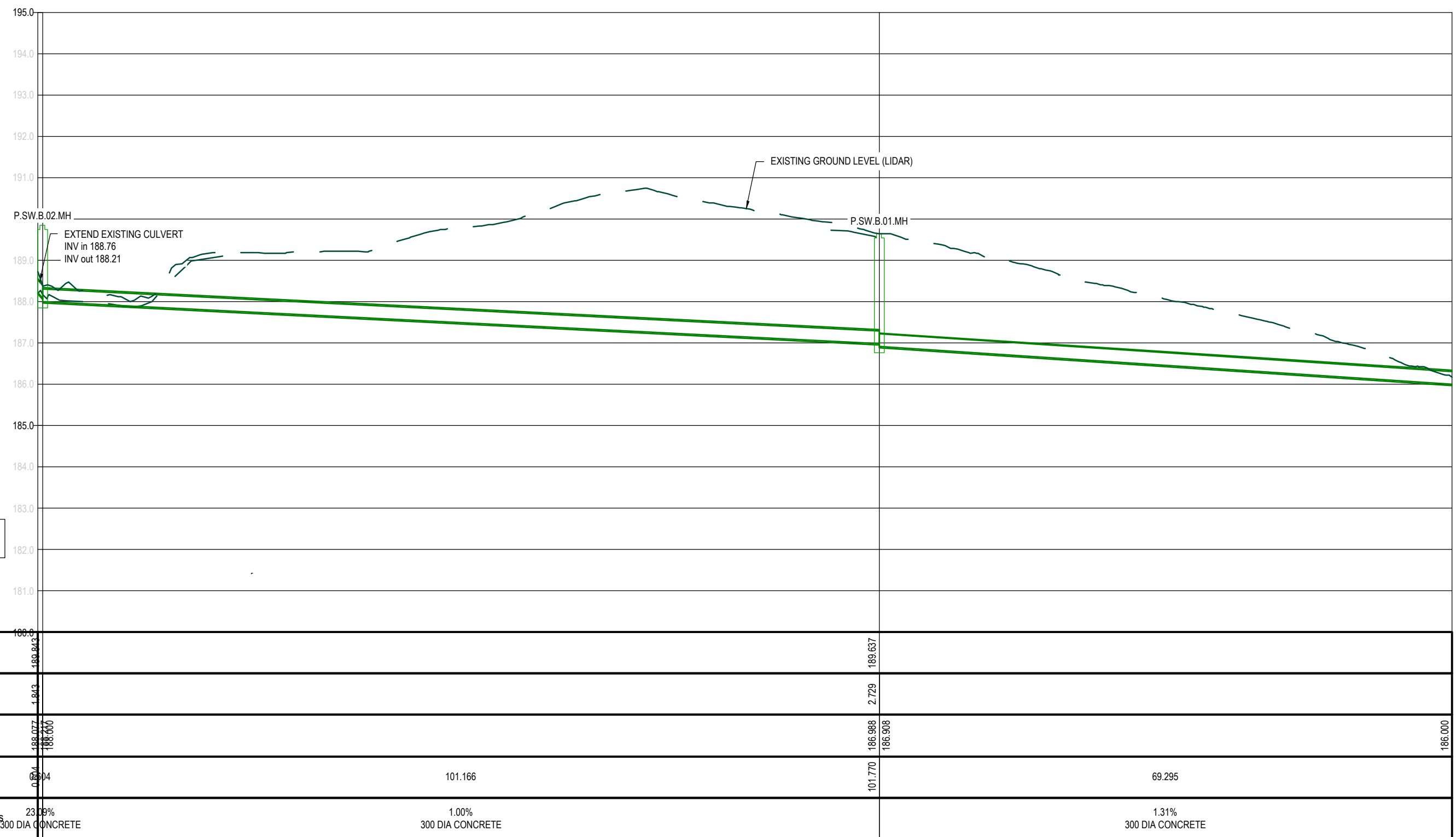
A	Rev	Date	Description	By	Checked	DWG STORMWATER PIPE NETWORK	HAIGH WORKMAN Civil & Structural Engineers 6 Fairway Drive Kenikeri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz DIMENSIONS MUST NOT BE SCALE MEASURED FROM THESE DRAWINGS. THE CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS 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 LTD. ©2020	Project		BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00	A		
	1	22/06/2026	FOR CONSENT	LP	TMA			A3 Scale 1: 500		Date 22/06/2026	Client	ALPINE BUILDING NZ LTD		Dwg No. SWP01	
												Project No. 26 036		RC no.	Sheet No. 1 of 1
Drawn LP					Checked TMA	Approved JP	Project No. 26 036		RC no.		Sheet No. 1 of 1				
File					T:\CLIENTS\ALPINE BUILDINGS\26 036 - 20 CAREY ROAD, KAIKOHE\ENGINEERING\DRAWINGS\26 036_C3D DESIGN_PLAN.DWG										



Lid Level	188.265	187.930	
Depth to Invert	0.909	1.823	
Invert Level	187.409	186.199	
Chainage & Distance	0.000	65.488	19.069
Gradient & Pipe Materials		1.70% 300 DIA CONCRETE	1.78% 300 DIA CONCRETE

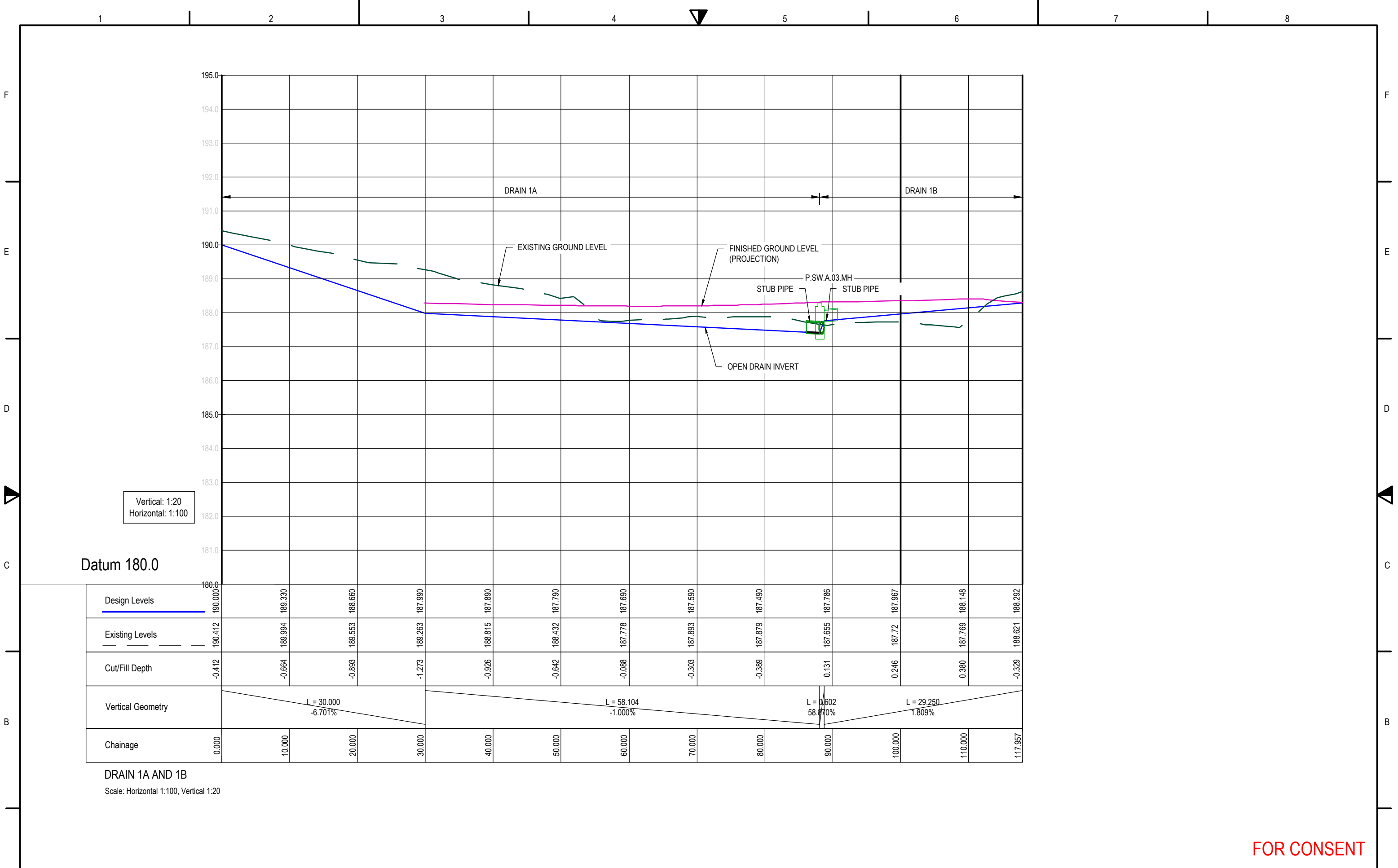
FOR CONSENT

Rev	Date	Description	By	Checked	DWG STORMWATER 01 LONG SECTION			 6 Fairway Drive Kenikiri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz	Project BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00		
A	22/06/2026	FOR CONSENT	LP	TMA					Client ALPINE BUILDING NZ LTD	Dwg No. SWL01			
					A3 Scale 1: 500		Date 22/06/2026	Project No. 26 036		RC no.	Sheet No. 1 of 1		
					Drawn LP	Checked TMA	Approved JP	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 LTD., ©2020					
					File T:\CLIENTS\ALPINE BUILDINGS\26 036 - 20 CAREY ROAD, KAIKOHE\ENGINEERING\DRAWINGS\26 036_C3D DESIGN_PLAN.DWG								

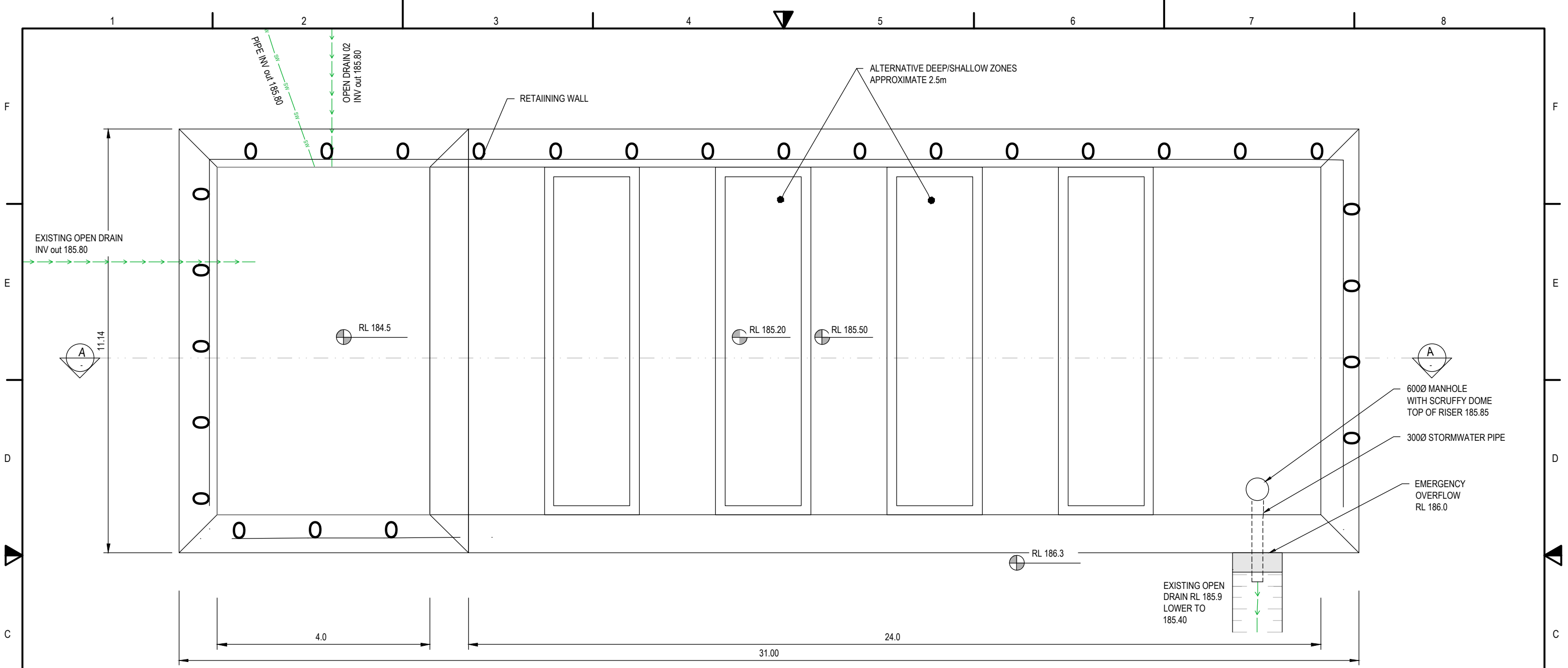


FOR CONSENT

Rev	Date	Description	By	Checked	DWG STORMWATER 02		 6 Fairway Drive Kerikeri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz 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 LTD. ©2020	Project		BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00	
1	22/06/2026	FOR CONSENT	LP	TMA				 A3 Scale 1: 500 Date 22/06/2026	Client		ALPINE BUILDING NZ LTD		Dwg No. SWL02
									Project No. 26 036		RC no.		Sheet No. 1 of 1
					Drawn LPChecked TMAApproved JP								
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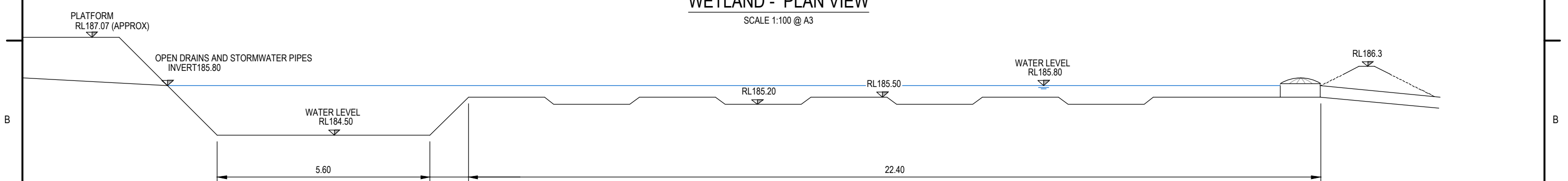


A	Rev	Date	Description	By	Checked	DWG OPEN DRAIN 1A AND 1B LONG SECTION		Project BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00		A	
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								A3 Scale 1: 500		Date 22/06/2026			Dw No. SWL03
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WETLAND - PLAN VIEW

SCALE 1:100 @ A3



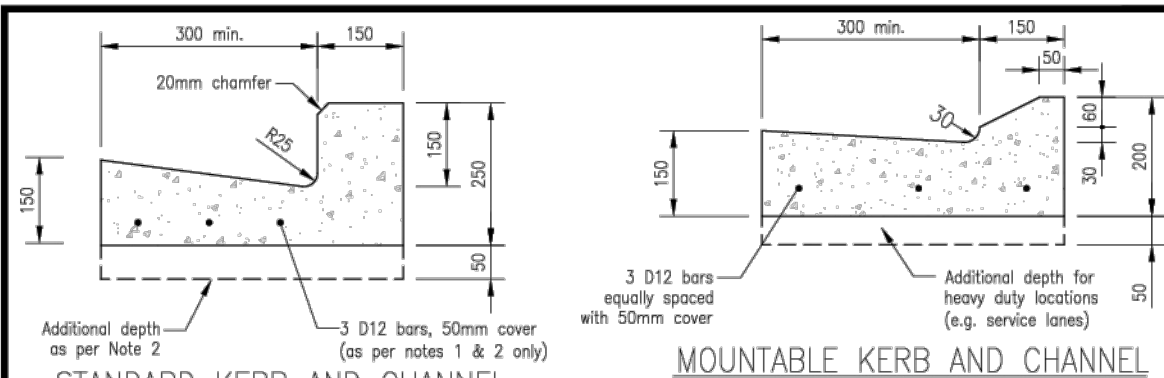
WETLAND - SECTION A

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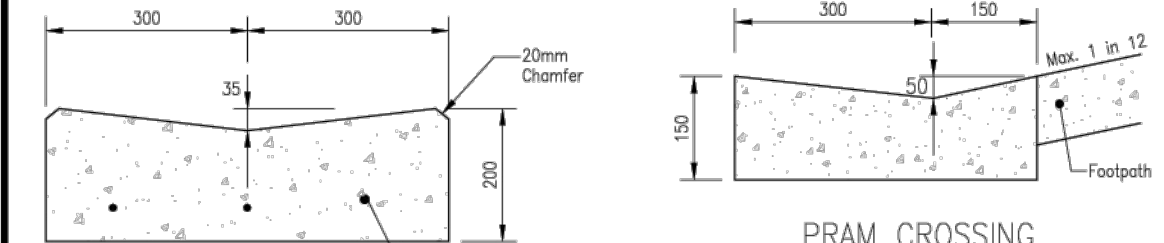
FOR CONSENT

Rev	Date	Description	By	Checked	DWG	WETLAND PLAN AND SECTION	Project	BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE	Stage	00
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					Drawn	LP	Project No.	26 036	Sheet No.	1 of 1
					Checked	TMA	RC no.			
					Approved	JP				
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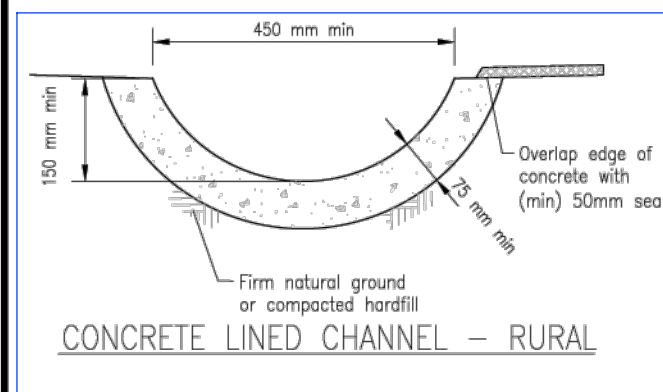
Sheet 13 Kerb & Channel Details



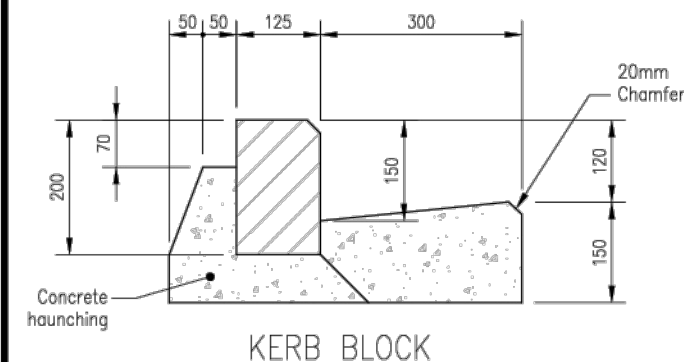
STANDARD KERB AND CHANNEL



DISHED CHANNEL

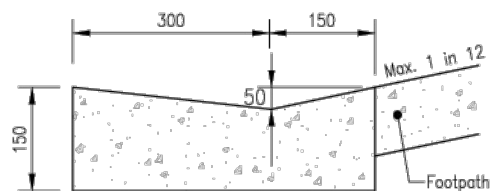


CONCRETE LINED CHANNEL - RURAL

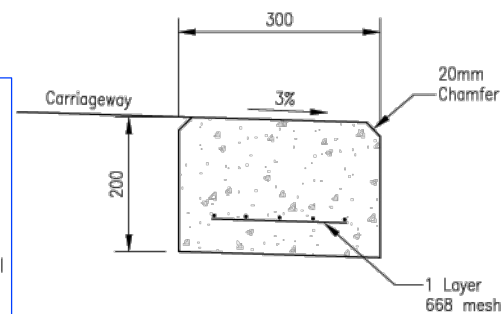


KERB BLOCK

MOUNTABLE KERB AND CHANNEL



PRAM CROSSING



FLUSH EDGE BEAM

NOTES:

- 3/D12 reinforcing bars to be placed around all curves, and intersections between tangent points in Business environments.
- Commercial and industrial crossings to be additional 50mm in depth as well as having 3-D12's equally spaced in the channel.
- Concrete for Standard Kerb and Channel shall be 20MPa at 28 days.
- Concrete for Dish Channel, Flush Edge Beam and Mountable Kerb and Channel shall be 30MPa at 28 days.
- Concrete for Concrete Lined Channel - Rural shall be 25MPa at 28 days.
- Crack control joints to be formed at maximum of 3.5 metre intervals. To be a minimum depth of 30mm.
- Profiles may be modified slightly to suit kerbing machine.
- Mountable kerbs may only be used for service lanes and traffic islands.
- Use of kerb blocks subject to specific approval. Haunching to be 20 MPa at 28 days.

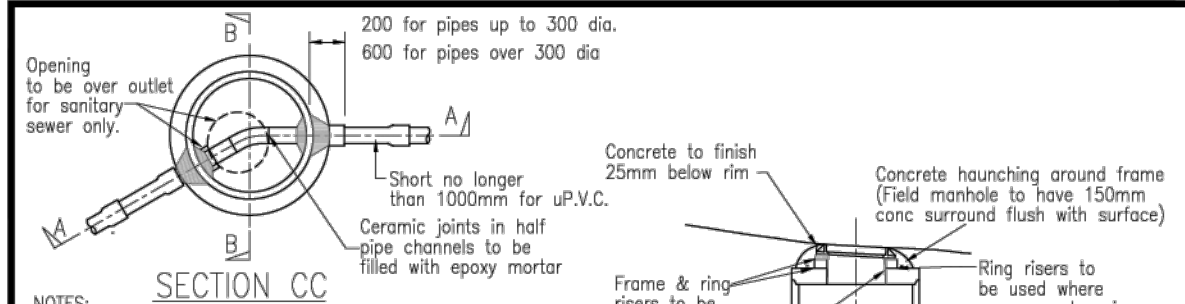
KERB & CHANNEL DETAILS
FOR ALL ENVIRONMENTS



FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

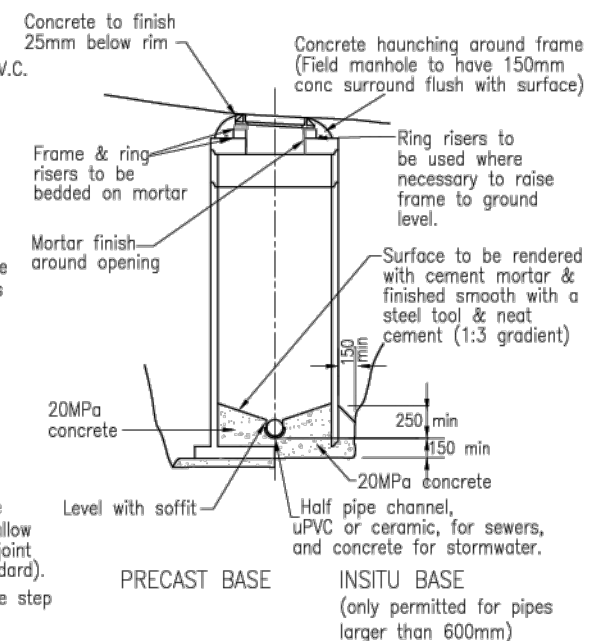
Date: JAN 2021
Revision: 0.1
Scale: NTS
SHEET No. 13

Sheet 39 Standard Precast Manhole

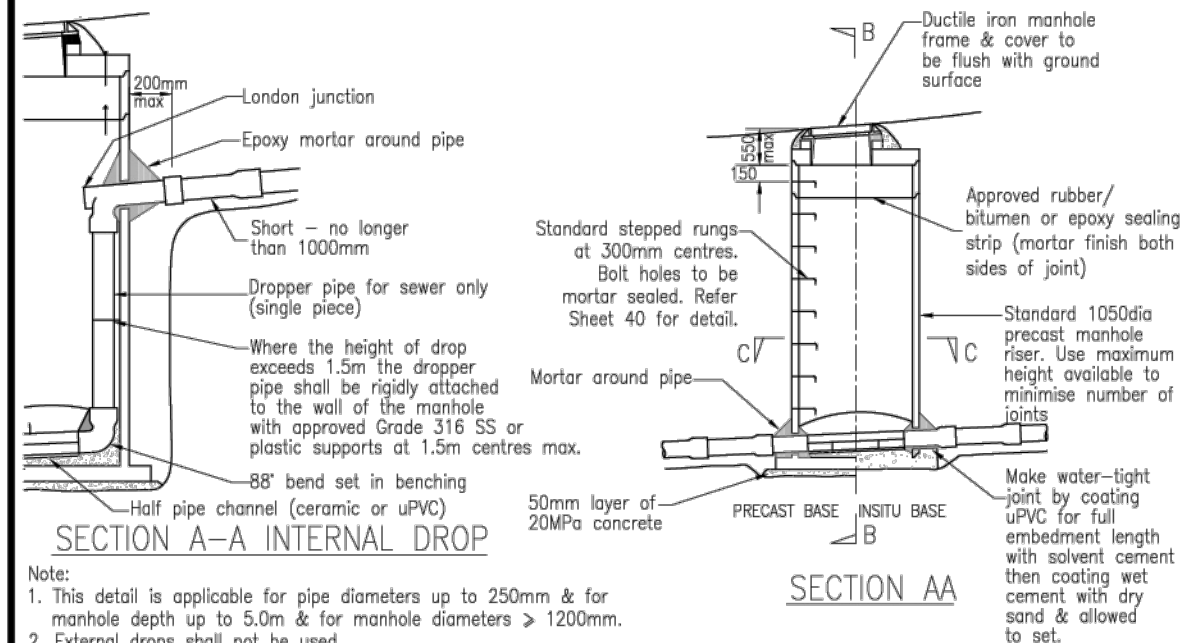


NOTES:

- This detail is applicable for pipe diameters up to 600mm & for manhole depths up to 5.0m.
- 150mm thick reinforced concrete lids with heavy duty ductile iron frames & covers to be used in driveways, carriageways & berms. 100mm thick concrete lids with light duty cast iron frames & covers may be used elsewhere.
- Precast manhole bases shall be used in all instances with minimum sized holes cut for pipe entry.
- No additional thin plastering of benching or benching of inverts is permitted.
- All concrete to be 20MPa.
- Where non-concrete pipe connections are made to concrete manholes, then a grouted starter pipe shall be installed to allow bond between manhole and pipe material. Also, a 3flexible joint should be specified as part of grouted starter pipe (as standard).
- All manholes >1.2m in depth shall be provided with manhole step rungs. These shall follow the requirements on sheet 40



SECTION BB



SECTION A-A INTERNAL DROP

Note:

- This detail is applicable for pipe diameters up to 250mm & for manhole depth up to 5.0m & for manhole diameters > 1200mm.
- External drops shall not be used

STANDARD PRECAST MANHOLE SEWER AND STORMWATER
FOR ALL ENVIRONMENTS



FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date: FEB 2022
Revision: 0.2
Scale: AS SHOWN
SHEET No. 39

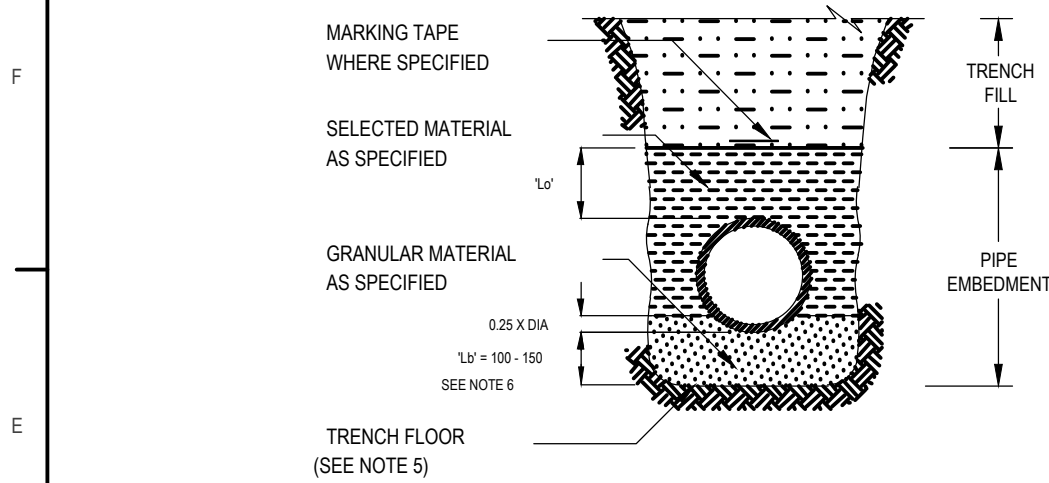
FOR CONSENT

Rev	Date	Description	By	Checked
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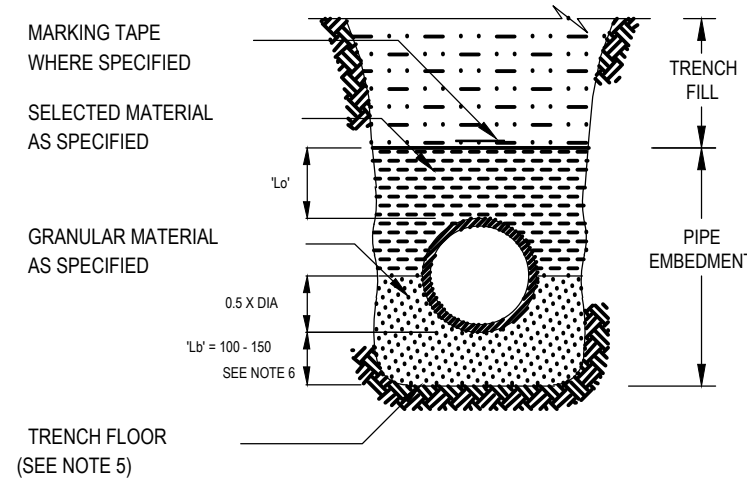
DWG	CONCRETE LINED CHANNEL AND MANHOLE DETAILS
A3 SCALE	1:300
Drawn	LP
Checked	TMA
Approved	JP
Date	22/06/2026
File	T:\CLIENTS\ALPINE BUILDINGS\26 036 - 20 CAREY ROAD, KAIKOHE\ENGINEERING\DRAWINGS\26 036_C3D_DETAILS.DWG

6 Fairway Drive Kerikeri, BOI	T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz
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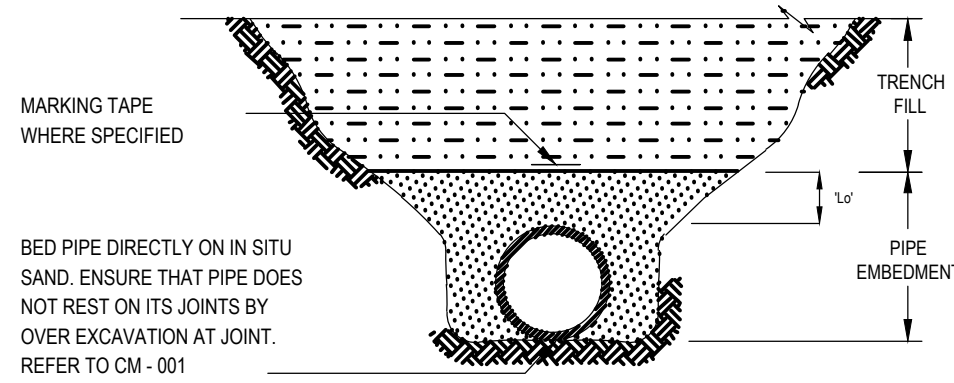
Project	BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE	Stage	00
Client	ALPINE BUILDING NZ LTD	Dwg No.	SWD01
Project No.	26 036	Sheet No.	1 of 1
RC no.			



TYPE 2 SUPPORT
(SEE NOTE 9)

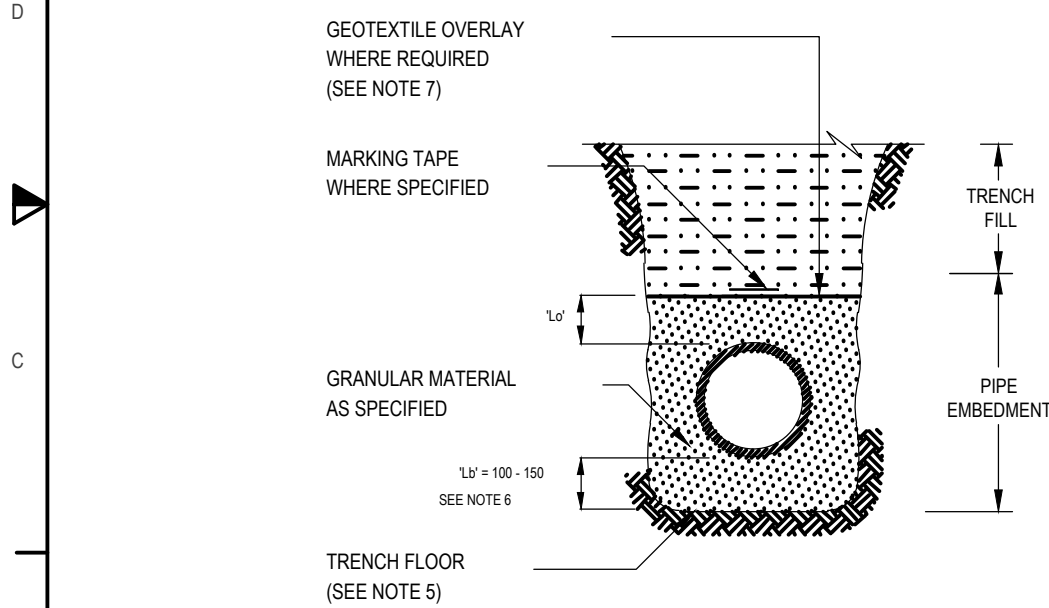


TYPE 2 SUPPORT
FOR RIGID PIPES ONLY (SEE NOTE 3)
(SEE NOTE 9)

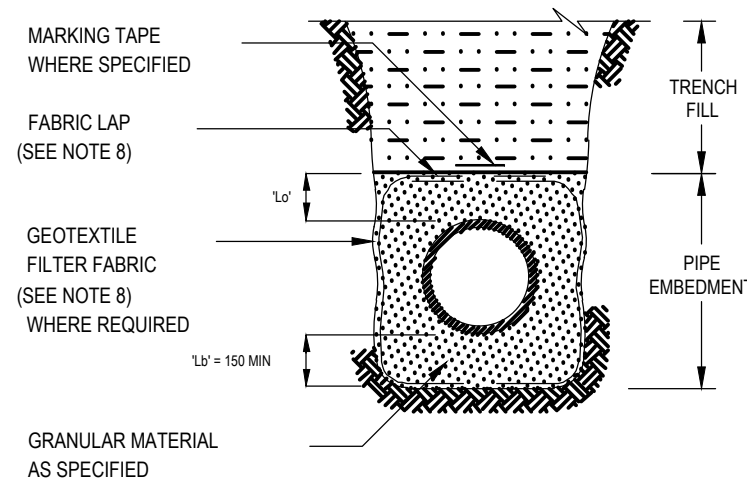


TRENCH IN SAND STRATA

- NOTE:
- ALL DIMENSIONS IN MILLIMETRES.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH CM - 001.
 - PIPE CLASSIFICATION:
(a) RIGID PIPES: VC, RC, STEEL, AND DI
(b) FLEXIBLE PIPES: PVC, GRP, AND PE.
 - PLACEMENT OF EMBEDMENT, TRENCHFILL, & COMPACTION TO MEET THE REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS.
 - EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED FOR BEDDING OR ADOPT TYPE 1, 2, 3, OR 4 SUPPORT AS REQUIRED.
 - ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR - SEE CM - 001.
 - TYPE 4 SUPPORT TO BE USED WHERE MIGRATORY NATIVE SOILS (SANDS & CLAYS) ARE ENCOUNTERED ADJACENT TO THE EMBEDMENT ZONE AND SINGLE SIZE AGGREGATE IS USED.
 - GEOTEXTILE OVERLAY IS REQUIRED FOR COARSE AGGREGATE EMBEDMENT ≥ 5 mm. LAY GEOTEXTILE FILTER FABRIC AGAINST TRENCH FLOOR AND WALLS SUCH THAT IT FULLY ENCASES THE EMBEDMENT. - PRESS FILTER FABRIC INTO THE VOIDS BEFORE INSTALLING EMBEDMENT TO PREVENT FABRIC TEARING. - PROVIDE A MINIMUM OF 250 OVERLAP AT ALL FILTER FABRIC JOINTS.
 - IN SOME AREAS LOCAL PRACTICE MAY ALLOW USE OF SELECTED EXCAVATED MATERIAL AS PIPE EMBEDMENT.
 - IN UNSUITABLE GROUND CONDITIONS SPECIFIC DESIGN IS REQUIRED. SEE WSA 03 & WSA 04 DRAWINGS FOR GUIDANCE.
 - CONCRETE PIPES SHOULD BE BASED ON FIGURES 11 - 13 IN AS/NZS 3725.



TYPE 3 SUPPORT
FOR FLEXIBLE & RIGID PIPES (SEE NOTE 3)



TYPE 4 SUPPORT
WITH GEOTEXTILE FOR FLEXIBLE & RIGID PIPES (SEE NOTE 3)

EMBEDMENT TYPES TO BE SPECIFIED
IN DESIGN DRAWINGS

FOR CONSENT

Rev	Date	Description	By	Checked	DWG PIPE EMBEDMENT	 6 Fairway Drive Kerikeri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz	Project	BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE	Stage 00
1	22/06/2026	FOR CONSENT	LP	TMA	A3 SCALE 1:300		Client	ALPINE BUILDING NZ LTD	Dwg No. SWD02
					Drawn LP		Project No. 26 036	RC no.	Sheet No. 1 of 1
					Checked TMA				
					Approved JP				
					File				

F

E

D

C

B

A

MATERIAL		ZONE	
ROAD SURFACE	NON ROAD SURFACES		
ROAD SURFACE LAYER	TO MATCH EXISTING	SURFACE COURSE	
TO MATCH EXISTING ROAD BASE OR TO TERRITORIAL AUTHORITY REQUIREMENTS	TRENCH FILL MATERIALS TO BE SIMILAR WITH SNZ HB 2002 APPENDIX L OR TO TERRITORIAL AUTHORITY REQUIREMENTS OR INORGANIC FILL MATERIAL WITH 75 MAXIMUM STONE SIZE	ROAD BASE	
TRENCH FILL MATERIALS TO BE SIMILAR WITH SNZ HB 2002 APPENDIX L OR TO TERRITORIAL AUTHORITY REQUIREMENTS OR INORGANIC FILL MATERIAL WITH 75 MAXIMUM STONE SIZE		TRENCH FILL (AS SPECIFIED IN DESIGN DRAWINGS)	
EMBEDMENT MATERIAL IN ACCORDANCE WITH DESIGN DRAWINGS AND TERRITORIAL AUTHORITY (SEE NOTE 4) BEDDING MAY BE OMITTED IF TRENCH BASE IS GRANULAR SAND OR GRAVEL OF SUITABLE GRADING		OVERLAY	EMBEDMENT
		SIDE SUPPORT	
		BEDDING	
		OVER-EXCAVATION	

VEHICULAR LOADING

- 'Lo' - 100 mm MIN. NON TRAFFICABLE
- 'Lb' - 300 mm MIN. TRAFFICABLE
- REFER TO CM - 002

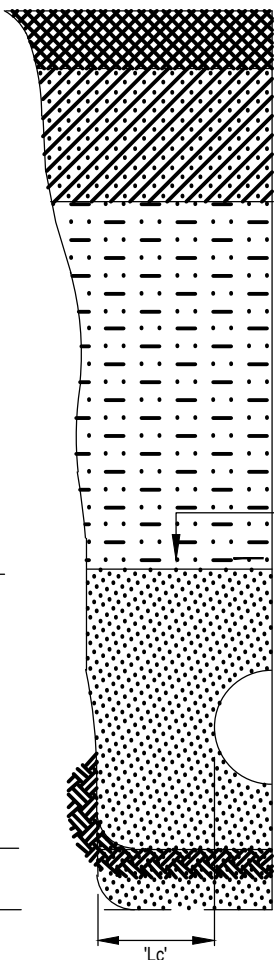
NOTE:

1. ALL DIMENSIONS IN MILLIMETRES.
2. SPECIFY SPECIAL BEDDING TO SUIT THE CONDITIONS IF THE TRENCH FLOOR HAS:

- IRREGULAR OUTCROPS OF ROCK OR

- BEEN DISTURBED BY UNCONTROLLED GROUND WATER.
3. COMPACT AND EVENLY GRADE FINISHED TRENCH FLOOR.
4. EMBEDMENT, TRENCH FILL AND COMPACTION TO MEET THE REQUIREMENT OF DESIGN DRAWINGS OR SPECIFICATIONS.
5. USE GEOTEXTILE FILTER FABRIC WHERE SPECIFIED.
6. SIDES OF EXCAVATION TO BE KEPT VERTICAL TO AT LEAST 150 ABOVE THE PIPE.

FINISHED SURFACE LEVEL

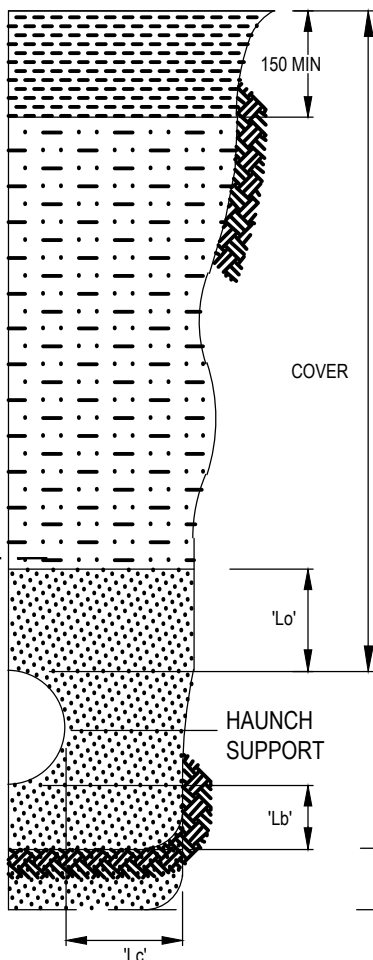


SPRING LINE TRENCH CLEARANCE

NOMINAL DIAMETER DN	MINIMUM CLEARANCE 'Lc'
≤150	100
>150 - ≤300	150
>300 - ≤450	200
>450 - ≤900	300
>900 - ≤1500	350

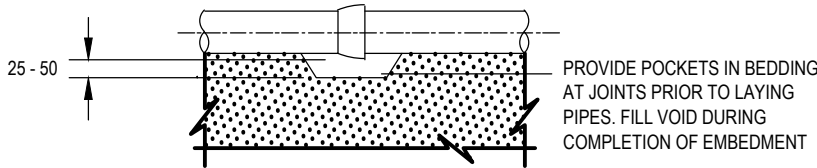
TRENCH WIDTH TO BE SUFFICIENT TO SAFELY LAY PIPE AND COMPACT THE SIDE SUPPORT ZONE

FINISHED SURFACE LEVEL



NO VEHICULAR LOADING

INCLUDES LOCATIONS WHERE OCCASIONAL VEHICLE LOADING OCCURS SUCH AS RESERVES AND FOOTWAYS



PIPE JOINT BEDDING POCKETS

FOR JOINT PROJECTIONS (SOCKETS, FLANGES, AND SO ON)

FOR CONSENT

Rev	Date	Description	By	Checked
01	22/06/2026	FOR CONSENT	LP	TMA

DWG PIPE BEDDING AND BACKFILL	
A3 SCALE 1:300	Date 22/06/2026
Drawn LP	Checked TMA
Approved JP	
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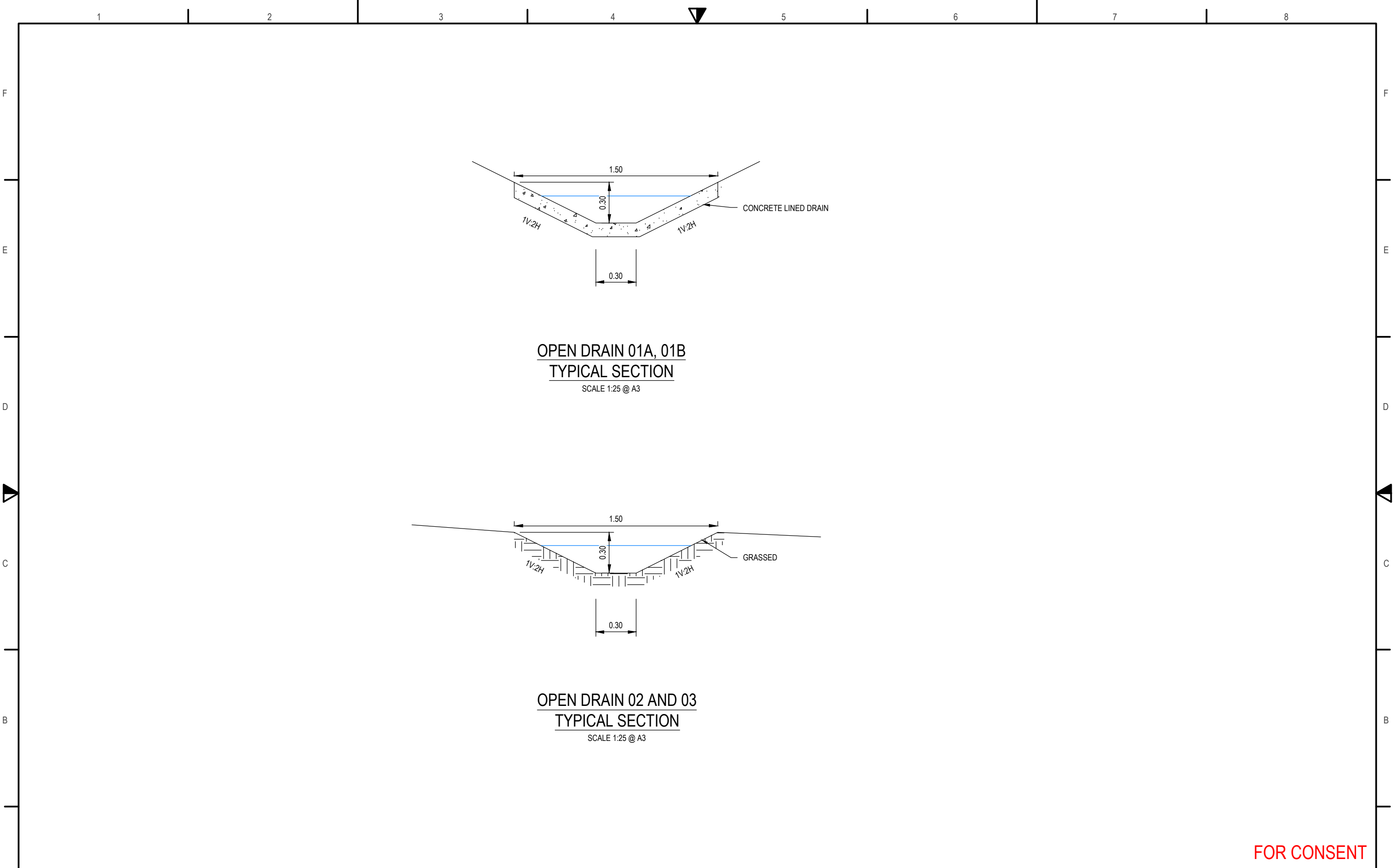
HAIGH WORKMAN
Civil & Structural Engineers

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Kerikeri, BOI

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Project	BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE	Stage	00
Client	ALPINE BUILDING NZ LTD	Dwg No.	SWD03
Project No.	26 036	RC no.	
		Sheet No.	1 of 1



FOR CONSENT

A	Rev	Date	Description	By	Checked	DWG OPEN DRAINS 01A, 01B, 02 AND 03 - TYPICAL SECTION					Project BALLANCE KAIKOHE 20 CAREY ROAD, KAIKOHE		Stage 00		A		
	01	22/06/2026	FOR CONSENT	LP	TMA	A3 SCALE 1:25 0 0.5m 1.25m Date 22/06/2026			6 Fairway Drive Kenken, BOI		T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz		Client ALPINE BUILDING NZ LTD			Dwg No. SWD04	
									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 LTD. ©2020		Project No. 26 036		RC no.			Sheet No. 1 of 1	
						Drawn LP			Checked TMA			Approved JP			File T:\CLIENTS\ALPINE BUILDINGS\26 036 - 20 CAREY ROAD, KAIKOHE\ENGINEERING\DRAWINGS\26 036_C3D_DETAILS.DWG		



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26 036,

3rd July 2026

Alpine Buildings NZ Ltd
c/o Attika Architectural

By email: jessica.wieldraayer@attika.co.nz

Attention: Jessica Wieldraayer, Architectural Team Leader

Dear Jessica,

**Alpine Buildings NZ Ltd - Replacement Fertiliser Depot for Balance Agri-Nutrients
LOT 1 DP 68108, LOT 1 DP 42810, LOT 1 DP 139346, 18/20 CAREY ROAD, KAIKOHE,**

ONSITE WASTEWATER DESIGN REPORT

Haigh Workman Limited has been engaged by Alpine Buildings NZ Ltd (Client) to design an on-site wastewater system to service the proposed re-development for a fertiliser storage depot located 18/20 Carey Road, Kaikohe. This design has been carried out in general accordance with AS/NZS1547:2012.

SITE DESCRIPTION

The site is located at the end of Carey Road and comprises a total land of approximately 13,113m². The property is developed with an industrial storage building, a detached office, associated yarding and a stormwater pond in the southernmost corner. The site is bordered to the north by land gazetted as railway which is currently used by the Pou Herenga Tai - Twin Coast Cycle Trail. The landform is slightly rolling with a gradual south-westerly slope (approximately 3 degrees) on to rural farmland.

It is proposed that all existing buildings will be demolished and replaced with new development, as shown on the enclosed Preliminary Site Plan by Attika, dated 5/12/2025.

The site naturally drains towards the south and southwest. Stormwater runoff on the northern side of the building platform including a 300mm culvert outlet from the Railway Gazetted land is captured by a shallow water table drain, which together with roof down pipe outlets is piped to the pond in the southern corner. The pipe system has a single cesspit inlet which is unable to cope with large flows so secondary flow follows the water table leading around the eastern perimeter of the platform to the pond.

The property is not mapped by FNDC or NRC as being prone to flooding.

SITE INVESTIGATIONS

A representative of Haigh Workman visited the site on 23 February 2026 to investigate features and ground conditions. Site investigations included several attempts with a hand-auger, all of which either hit refusal or were too difficult to advance. In lieu of these difficulties the profile of an existing 0.9m deep earthworks cut on the northeastern side of the platform was mapped to gain an understanding of the subsoils.

The underlying soils comprised gravely silt with cobbles to the base of the cut. The topsoil depth varied across the proposed disposal area with a minimum depth of 100 mm. Vegetation cover was grass and poor in condition corresponding with the thinner topsoil and having dried out in the summer conditions.

No fill was encountered as part of the investigations. No evidence of groundwater seepage or static groundwater level was observed at the soil investigation location. The ground slope in the proposed disposal area was measured as 3 degrees.

The underlying soils are mapped as Kiripaka bouldery silt loam (KB) which is typically described as 'well drained'.

Based on our site investigations the natural soils were categorised as AS/NZS1547:2012 Category 3: Loams – moderately well drained or TP58 Category 4: Sandy loam, loam and silt loam – moderate drainage.

WASTEWATER GENERATION

Water supply will be town water. Design wastewater flows can be calculated using the guidelines in Table H4 of AS/NZS1547:2012.

The treatment system is intended to serve the proposed development during operating hours. A design occupancy of four staff members has been adopted. Two staff members operating the plant will use the shower daily, whilst office staff will have a lower usage. Adopting Table H4 (rural factories) indicates a daily wastewater flow of 50L/person/day for a town water supply and standard reduction fixtures. Similarly, TP58 Table 6.2 specifies a typical water consumption range of 40–60L/person/day for high water usage day staff (factories) on town supply with standard reduction fixtures.

Accordingly, a conservative average daily loading rate of 50L/person/day has been adopted. This results in a total estimated daily wastewater flow of 200L/day.

TREATMENT SYSTEM

A secondary treatment aerated wastewater system is to be utilised to replace the existing primary treatment system. The treatment plant is to meet the quality output of AS/NZS 1546.3:2003 and be capable of producing effluent having less than 20 g/m³ of BOD₅ and 30 g/m³ TSS.

The proposed treatment plant location achieves good accessibility for regular maintenance and servicing and is set back more than 3 m from buildings and 1.5m from boundaries. A summary of regulatory requirements is included in Appendix C.

The existing septic tank falls within the footprint of the replacement building. The tank shall be pumped out and the contents disposed of to an authorised facility. Decommissioning of the structure shall be in accordance with the recommendations of the engineer responsible for designing the building foundations.

DISPOSAL SYSTEM

In accordance with AS/NZS1547:2012, a design irrigation rate (DIR) of 4 mm/day for category 3 soils has been adopted for design. The required land application area is 50m², southwest facing, gently sloping at average 3 degrees and affording the required minimum setback from the open drains and pond. A minimum 30 % reserve area (15m²) is available on-site, per the appended site plan.

A thin layer of poor-quality topsoil was identified on site. Suitable quality topsoil shall be used to achieve a minimum topsoil depth of 200 mm. Should insufficient material be available on site, then topsoil may need to be imported.

Pressure-compensating dripper lines are to be laid generally across the slope following the contour at the location shown on the attached site plan at a spacing of 1m. The tubing shall be surface mounted, firmly pinned to the ground surface and covered with a minimum 100mm bark mulch.

An upslope stormwater interception drain is not required due to the small catchment area. Overflow from the water tanks and developed surfaces such as vehicle access and parking shall be piped into the stormwater system on the property.

The maximum length of laterals is to be 100m, meaning only one laterals pipe is required. This shall be fitted with a flush valve for maintenance flushing of the field.

We recommend the disposal area be planted with evapo-transpiration species to encourage the uptake of water; a suitable plant list is appended.

DESIGN SUMMARY

ITEM	DESCRIPTION
Design Occupancy	4 persons (day staff)
Water fixtures	Standard water reduction fixtures including dual flush water closets, shower-flow restrictors, aerator faucets (taps)
Wastewater generation	200 L/d
Treatment system	Secondary treatment plant
Location of effluent disposal	As per drawings
Effluent disposal system	surface mounted dripper tubes spaced at 1m firmly pinned to ground surface
Maximum length of dripper line lateral	100 m
Irrigation pump	Davey 42A/B or equivalent as specified by the plant manufacturer
Soil type	AS/NZS1547 category 3
Application rate	4 mm/day
Land application area	50 m ²
Reserve area (30%)	15 m ²
Total area required	65 m ²
Slope of land application area	3°

DISCLAIMER

This report has been prepared for the sole use of our Client, Alpine Buildings NZ 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.

Prepared by



Lidija Plantev

Civil Engineer

BSc (Civil Eng)

Reviewed by

pp


Tom Adcock

Senior Civil Engineer

BEng (Civil), MEngNZ

Approved by



John Papesch

Senior Civil Engineer

BE (Civil Eng.),

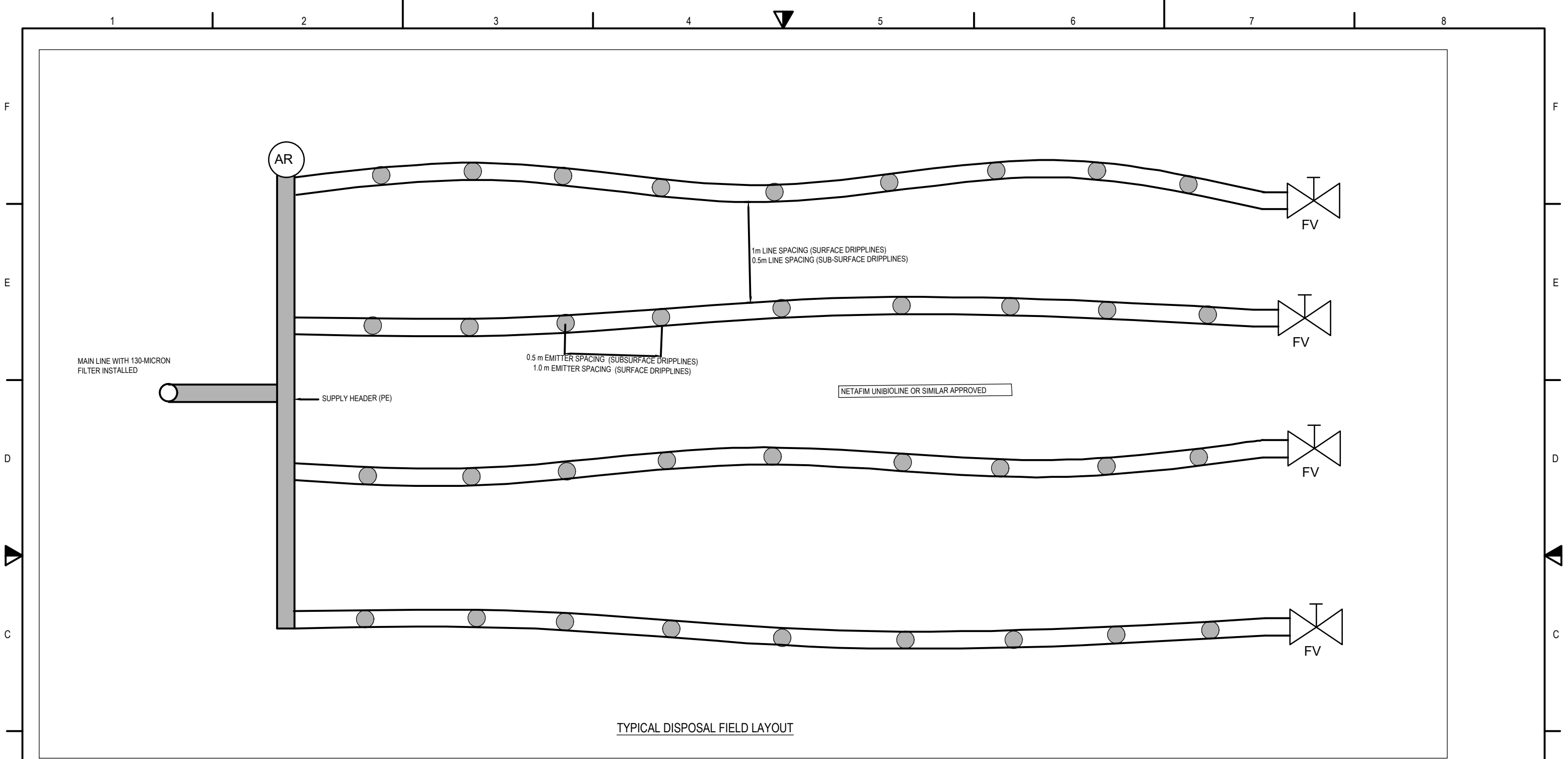
CMEngNZ, CPEng

Revision History

Revision N°	Issued By	Description	Date
A	Lidija Plantev	First Issue	3 rd March 2026
B	Lidija Plantev	Revision B	3 rd July 2026

Appendix A: Drawings

Drawing No.	Title
23 036 / WWP01, REV B	Wastewater Plan
23 036 / WWP02, REV B	Typical Disposal Area Layout
	Concept Plans provided by the client, dated 5/12/2025



TYPICAL DISPOSAL FIELD LAYOUT

LEGEND:

- AIR / VACUUM RELEASE VALVE
- FLUSHING VALVE

NOTE:

- 1. DNL VALVES TO BE PLACED ACCORDINGLY TO PREVENT SATURATION AT LOW POINTS DUE TO DRAIN DOWN.

Rev	Date	Description	By	Checked
A	03/03/2026	Issued for Information	LP	TMA
B	03/07/2026	ISSUED FOR CONSENT	LP	JP

DWG EFFLUENT DISPOSAL FIELD LAYOUT	
A3 Scale: NTS	Date 03/07/2026
Drawn LP	Checked TMA
Approved JP	
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HAIGH WORKMAN
Civil & Structural Engineers

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Project	PROPOSED DEVELOPMENT AT 18-20 CAREY ROAD, KAIKOHE	Stage
Client	ALPINE BUILDINGS NZ LTD	Dwg No. WWP02
Project No. 26 036	RC no.	Sheet No. 2 of 2

Appendix B: Onsite Wastewater Disposal Investigation (FNDC Engineering Standards 2023)

This form is to be read in conjunction with AS/NZS 1547:2012 (or any amendments as applicable), and, in particular with Part 4: Means of Compliance

Part A – Contact Details

1 - Applicant

Name: Alpine Buildings NZ Ltd

Property Address: 18/20 Carey Road, Kaikohe

Lot/DP Number: Lot 1 DP 139346, Lot 1 DP 42810 and Lot 1 DP 68108

2 – Consultant / Site Evaluator

Site Evaluator Name: Tom Adcock

Company Name: Haigh Workman Ltd

Postal Address: PO Box 89, Kerikeri

Business Phone: 09 407 8327

Mobile: _____

Email: info@haighworkman.co.nz

SQEP Registered¹: ☒ Yes ☐ No If no, details of suitably registered SQEP who will countersign the report are to be supplied below.

Name of SQEP: J John Papesch

Company Name: Haigh Workman Ltd

Postal Address: PO Box 89, Kerikeri

Business Phone: 09 407 327

Mobile: _____

¹ It is a requirement that the Evaluator be SQEP registered to carry out on-site effluent investigations/designs. If not, then evaluation/design will need to be counter-signed by a suitably registered SQEP

Email: johnp@haighworkman.co.nz
Part B - Site and Soil Evaluation
1: Desk Study

 Requirements (✓ appropriate box) Please complete **all** options. (If more than one option applies to land under consideration, please clarify with supporting information)

☐	FNDC REQUIREMENT	APPLIES TO LOT(S)	COMMENTS
1	Hazard maps/GIS Hazard layer - stability		
☒	Low instability risk		<i>The site is gently sloping at 3 degrees</i>
☐	Medium instability risk		
☐	High instability risk		
2	GIS Hazard layer - effluent on slope stability		
☒	Low disposal potential		
☐	Moderate disposal potential		
☐	High disposal potential		
3	GIS Hazard Layer - effluent suitability		
☒	Medium unsuitability		
☐	High unsuitability		
4	GIS Hazard Layer - Flood susceptibility		
☐	Is flood susceptible		
☐	Is partially flood susceptible		
☒	Is not flood susceptible		<i>No NRC or FNDC mapped flood risk on the site.</i>
5	GIS land resources layer - Streams		
Are there streams on or adjacent to land under investigation?		☐ Yes	
		☒ No	

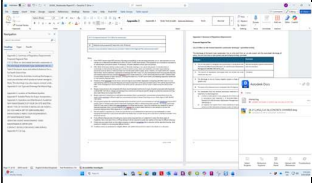
6	GIS land resources layer – aquifers at risk		
Is land situated over or adjacent to aquifer?	☒	Yes	Main Northland Aquifers: Kaikohe
	☐	No	
7	Annual Rainfall (HIRDS)		1500 mm

Note: It is to be noted that all information obtained from FNDC GIS/Hazard Maps is to be taken as a guide only.

Note: All information obtained from the above sites is to be confirmed by a specific site investigation as localised conditions could vary substantially. However, should the above data checks indicate the potential for a hazard/non-complying activity etc., this must be further investigated to confirm/deny the indicated situation.

2: On-Site Evaluation

a. Determination of Soil Category (refer table 4.1.1 AS/NZS 1547:2012) (✓ appropriate box)

Soil Category	Structure	Applies to lot(s)	Comments
1 Gravels & Sands	☐ Structureless (massive)		
2 Sandy loams	☐ Weakly Structured		
	☐ Massive		
3 Loams	☐ High/Moderate structured		
	☒ Weakly structured or Massive		In accordance with Appendix C & based on site observations
4 Clay loams	☐ High/moderate structured		
	☐ Weakly structured		
	☐ Massive		
5 Light clays	☐ Strongly structured		
	☐ Moderately structured		
	☐ Weakly structured or massive		
6 Medium to heavy clays	☐ Strongly structured		
	☐ Moderately structured		
	☐ Weakly structured or massive		

Note: Refer 4.1 A4 – Soil Assessment AS/NZS 1547:2012 for assessment criteria.

Note: Details of the method used to determine soil type etc. are to be clearly stated, along with positions of boreholes/test pits etc. clearly marked on a site plan. Bore logs are to be provided. Photos should be included.

Note: The site plan should also clearly show the intended area for effluent disposal, along with any site features such as drains, water bores, overland flows etc., along with separation distance achieved.

On-Site Evaluation Continued

b. Site Characteristics for Proposed Disposal Area: (if there is a marked difference between sites, please fill in a separate form for each site and clearly note which site the assessment applies to) (ü appropriate box)

☐	DETAILS	APPLIES TO SITE(S)
1	Flooding potential to proposed field and reserve field (refer note 1 below)	
☒	Fields will not flood, or	<i>Fields have been located outside of any mapped flood extent</i>
☐	Fields will flood in	
☐	20% AEP event	
☐	5% AEP event	
☐	1% AEP event	
2	Surface water separation to proposed field and reserve field (refer note 2 below)	
☒	Main/reserve disposal field comply with NRC rules	
☐	Main/reserve disposal field do not comply with NRC rules	
3	Surface water separation to proposed field and reserve field (refer note 2 below)	
☒	Main/reserve disposal field comply with NRC rules	<i>As above</i>
☐	Main/reserve disposal field do not comply with NRC rules	
4	Winter ground water separation to proposed field and reserve field (refer note 3 below)	
☒	Main and reserve disposal field comply with NRC rules	
☐	Main and reserve disposal field do NOT comply with NRC rules	
5	Slope of ground of proposed field and reserve field (refer note 4)	
Description	<i>Gentle slope at 3 degrees</i>	
6	Shape of ground of proposed field and reserve field (Refer note 5 below)	

	Waxing divergent		Linear divergent		Waning divergent
	Waxing planar	✓	Linear planar		Waning planar
	Waxing convergent		Linear convergent		Waning convergent
Comments		Gentle longitudinal fall. Drinker laterals to be fitted with DNL valves at 8m intervals			

☐	DETAILS	APPLIES TO SITE(S)	
7	Intended water supply source		
☒	Public supply		
☐	Rainwater		
☐	Bore		
8	Proposed method of disposal and recommended Daily Loading rate (DLR) (refer note 6 below)		
Description			
		Surface dripper lines. DIR 4 mm/day	
Peak loading factored in (refer note 6 below)		☐ Yes	☒ No
Comments		Bulk store building with detached office	
9	Site exposure (refer note 7 below)	Description	Applies to Site(s)
Site(s) aspect		Open	
Pre-dominant wind direction		All directions	
Presence of shelter belts		No	
Presence of topographical features or structures		Topography is planar covered in grass	
10	Proximity of water bores (include adjacent to properties) (refer note 9 below)		
The nearest water bore is located 300m from the property.			
11	Visible evidence of slips / instability (refer note 8 below)		
Nil			
12	Total suitable area available for type of effluent disposal proposed (including reserve area)		

50 m ² for disposal area and 15 m ² (30%) for reserve area.	
13	Setback areas proposed (if any) (refer note 10 below)
Exclusion areas and setback distances are provided in Table 9 of the Regional Plan and presented herein	

Notes

1. If the FNDC hazard maps/GIS indicate a flooding susceptibility on the site being evaluated, an on-site evaluation is to be carried out to determine the effects from 20%, 5% and 1% AEP storm events. This evaluation is to include all calculations to substantiate conclusions drawn. If necessary, include a detailed contour plan and photos.
2. NRC Water & Soil plan defines surface water as 'All water, flowing or not, above the ground. It includes water in continually or intermittently flowing rivers, artificial watercourses, lakes and wetlands, and water impounded by structures such as dams or weirs but does not include water while in pipes, tanks, cisterns, nor water within the Coastal Marine Area'. By this definition, separation (complying with NRC rules) is to be maintained by both the proposed disposal and reserve areas from any overland flowpaths and/or swale drains etc. or R/C will be required from NRC. Surface water is to be clearly marked on each site plan, showing the extent of a 1% AEP storm event, and detailing separation distances to main/reserve disposal areas.
3. Positions of test borehole/s to be shown and bore logs to be provided. Separation (complying with NRC rules) is to be maintained by both the proposed disposal and reserve areas from winter ground water level or R/C will be required from NRC. If the investigation is done outside of the winter period, allowance is to be made in determining the likely winter level.
4. Slopes of ground are to be compared with those recommended maximums for type of system proposed (refer Appendix 4.2B AS/NZS 1547:2012). Designs exceeding those maximums will require specific design to justify the proposal and may also need Resource Consent from NRC.
5. Shape of ground is important as it will determine whether there is potential for concentrated overland flows from the upper slopes and also if effluent might be concentrated at base of slope if leeching occurs. Refer Figure 4.1B2 AS/NZS 1547:2012.
6. The proposed system (for residential developments) should be sized to accommodate an average 3 bedroom house with 5 people. Sites in holiday areas need to take peak loading into effect in determining daily volumes. The design must state what DLR was used to determine area necessary (including reserve area). If ground conditions are marginal for type of disposal proposed, then a soil permeability test utilising the constant head method is to be carried out across the proposed disposal area. Refer Appendix 4.1F AS/NZS 1547:2012.
7. The site aspect is important as a north-facing site that is not sheltered from wind and sun by shelterbelts or other topographical features or structures will perform far better than a south-facing site on the lee of a hill that is shaded from wind and sun etc.
8. If any effluent disposal area (including any reserve area) proposed has or is adjacent to areas that show signs of instability, then a full report from a CPEng (Geotech) will be required to justify the viability of the area for effluent disposal.
9. If there are any water bores on the subject property or adjacent properties then a site plan will be required showing bore positions in relation to any proposed effluent field(s).
10. If setback areas are proposed to mitigate effects, the extent and position/s need to be shown on a site plan.

Appendix C: Summary of Regulatory Requirements

Proposed Regional Plan

C.6.1.3 Other on-site treated domestic wastewater discharge – permitted activity

The discharge of domestic type wastewater into or onto land from an on-site system and the associated discharge of odour into air from the on-site system are permitted activities, provided:

Criterion	Comment
1) The on-site system is designed and constructed in accordance with the Australian/New Zealand Standard. On-site Domestic Wastewater Management (AS/NZS 1547:2012), and	We have designed in general accordance with this standard.
2) The volume of wastewater discharged does not exceed two cubic metres per day, and	Complies
3) The discharge is not via a spray irrigation system or deep soakage system, and	Complies (drip irrigation proposed)
4) The slope of the disposal area is not greater than 25 degrees, and	Complies
5) For wastewater that has received secondary treatment or tertiary treatment, it is discharged via: a) a trench or bed system in soil categories 3 to 5 that is designed in accordance with Appendix L of Australian/New Zealand Standard On-Site Domestic Wastewater Management (AS/NZS 1547:2012); or b) an irrigation line system that is dose loaded and covered by a minimum of 50 millimetres of topsoil, mulch, or bark, and	Complies. The irrigation system will be dose limited. The dripper lines will be on the surface and covered by a minimum 100mm of bark mulch

6) for the discharge of wastewater <u>onto the surface of slopes greater than 10 degrees:</u> a) the wastewater, excluding greywater, has received at least secondary treatment, and b) the irrigation lines are firmly attached to the disposal area, and c) where there is an up-slope catchment that generates stormwater runoff, a diversion system is installed and maintained to divert surface water runoff from the up-slope catchment away from the disposal area, and d) a minimum 10 metre buffer area down-slope of the lowest irrigation line is included as part of the disposal area, and e) the disposal area is located within existing established vegetation that has at least 80 percent canopy cover, or f) the irrigation lines are covered by a minimum of 100 millimetres of topsoil, mulch, or bark, and	Wastewater will be subject to secondary treatment. Dripper lines to be covered with / buried into at least 100mm of mulch.
7) the disposal area and reserve disposal area are situated outside the relevant exclusion areas and setbacks in Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems, and	Surface water setbacks are complied with.
8) for septic tank treatment systems, a filter that retains solids greater than 3.5 millimetres in size is fitted on the outlet, and	NA
9) the following reserve disposal areas are available at all times: a) one hundred percent of the existing effluent disposal area where the wastewater has received primary treatment or is only comprised of greywater, or b) thirty percent of the existing effluent disposal area where the wastewater has received secondary treatment or tertiary treatment.	30% Reserve area provided
10) the on-site system is maintained so that it operates effectively at all times and maintenance is undertaken in accordance with the manufacturer's specifications, and	Proposed per Maintenance recommendations
11) the discharge does not contaminate any groundwater water supply or surface water, and	Will comply given provided design parameters
12) there is no surface runoff or ponding of wastewater, and	Will comply given provided design parameters
13) there is no offensive or objectionable odour beyond the property boundary.	Will comply given provided design parameters

Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems

Feature	Primary treated domestic type wastewater	Secondary and tertiary treated domestic type wastewater	Greywater
Exclusion areas			
Floodplain	5% annual exceedance probability	5% annual exceedance probability	5% annual exceedance probability
Horizontal setback distances			
Identified stormwater flow path (including a formed road with kerb and channel, and water-table drain) that is down-slope of the disposal area	5 metres	5 metres	5 metres
River, lake, stream, pond, dam or natural wetland	20 metres	15 metres	15 metres
Coastal marine area	20 metres	15 metres	15 metres
Existing water supply bore	20 metres	20 metres	20 metres
Property boundary	1.5 metres	1.5 metres	1.5 metres
Vertical setback distances			
Winter groundwater table	1.2 metres	0.6 metres	0.6 metres

Far North District Plan

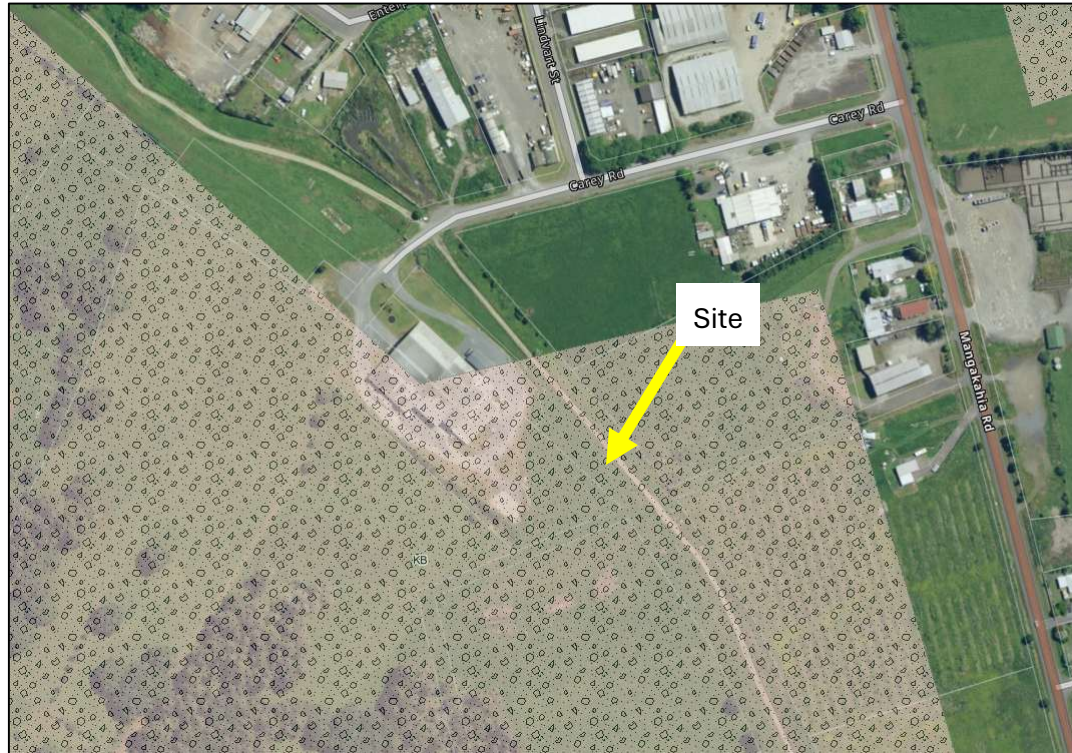
12.7.6.1.4 Land Use Activities Involving Discharges of Human Sewage Effluent

Land use activities which produce human sewage effluent (including grey water) are permitted provided that:

Criterion	Comment
The effluent discharges to a lawfully established reticulated sewerage system; or	
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.	Complies

Note: The discharge may also require consent under the Regional Water and Soil Plan.

Appendix D: Soil Type and Drainage Northland Regional Council Maps

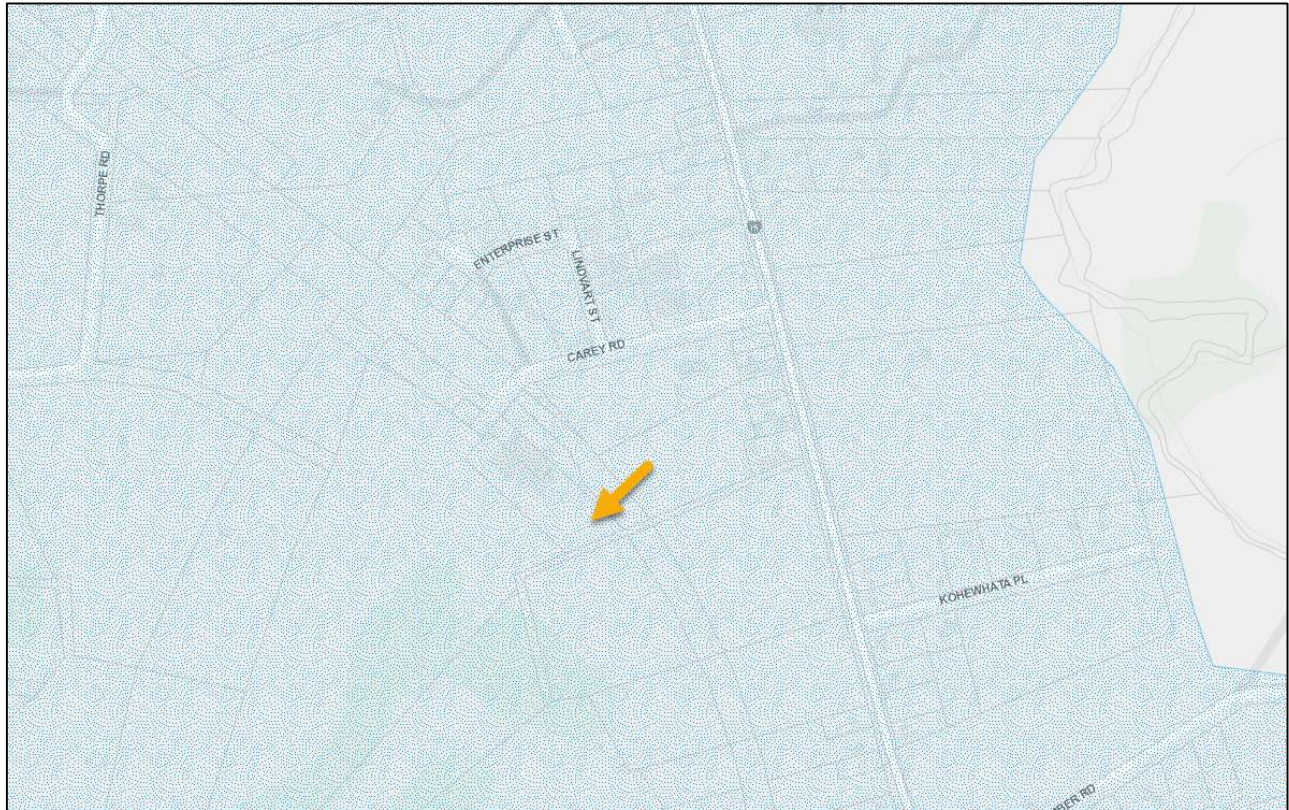


Drainage classes



Soil symbol	Full name	Drainage class
KIRIPAKA SUITE Basement rock: volcanic basalt lava flows		
KB,KBH	Kiripaka bouldery silt loam	4 - Well drained
KBb	Kiripaka bouldery silt loam with large boulders	4 - Well drained
OW	Ōhaeawai silt loam	4 - Well drained
OWb	Ōhaeawai shallow bouldery silt loam	4 - Well drained
WG	Whatitiri clay loam	4 - Well drained
WP	Whakapai clay loam	4 - Well drained
WPe	Whakapai friable clay	4⇒3 - Well to moderately drained
KBe	Kiripaka bouldery silt loam with compact subsoil	3 - Moderately drained
KBeb	Kiripaka bouldery silt loam, with compact subsoil, and large boulders	3 - Moderately drained

Appendix E: Location of Northland Aquifers



Appendix F: Suitable Plants for Evapo-transpiration Systems

SUITABLE PLANTS FOR EVAPO-TRANSPIRATION SYSTEMS

Native Shrubs and Trees

Coprosma	<i>Coprosma propinqua</i>
Hebe	<i>Hebe</i>
Manuka	<i>Leptospermum Scoparium</i>
Weeping Mapou	<i>Myrsine Divaricata</i>
Flax (fast)	<i>Phormium Tenax</i>
Pokaka (slow)	<i>Elaeocarpus Hookerianus</i>
Cabbage Tree (fast)	<i>Cordyline Australias</i>
Rangiora (fast)	<i>Brachyglottis Repanda</i>
Lacebark (fast)	<i>Hoheria Populnea</i>
Ribbonwood (fast)	<i>Plagianthus Regius</i>
Poataniwha	<i>Melicope Simplex</i>
Heketara	<i>Olearia Rani</i>
Poataniweta	<i>Carpodetus Serratus</i>
Kohuhu (fast)	<i>Pittosporum Tenufolium</i>

Grasses

Jointed Twig Sedge	<i>Baumea Articulata</i>
Longwood Tussock	<i>Carex Comans</i>
Pukio	<i>Carex Secta</i>
Toetoe (use native species- not invasive Pampas Grass)	<i>Cortaderia Fulvida</i>
Umbrella Sedge	<i>Cyperus Ustulatus</i>
Oioi	<i>Leptocarpus Similis</i>
Hooksedge	<i>Uncinia Unciniata</i>

Introduced Species

Canna Lilies, Taro, Aralia,
Fuschia, Philodendrons,
and Begonias



CARING FOR NORTHLAND AND ITS ENVIRONMENT

WHANGAREI: 36 Water Street, Private Bag 9021, Whangarei; Phone 09 438 4639, Fax 09 438 0012.

OPUA: Unit 10, Industrial Marine Park, Opuia; Phone 09 402 7516, Fax 09 402 7510.

DARGAVILLE: 61B Victoria Street, Dargaville; Phone 09 439 3300, Fax 09 439 3301.

KAITIA: 192 Commerce Street, Kaitia; Phone 09 408 6600, Fax 09 408 6601.

Freephone: 0800 002 004 Environmental Hotline: 0800 504 639 Website: www.nrc.govt.nz

Appendix G: Operation and Maintenance Guidelines



ON-SITE WASTEWATER SYSTEMS

Maintenance Guidelines For Homeowners



PROTECTING YOUR HEALTH, YOUR ENVIRONMENT, YOUR INVESTMENT

PRODUCED BY: SWANS-SIG

The Small Wastewater And Natural Systems Special Interest Group of Water New Zealand

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WHY MAINTENANCE OF YOUR ON-SITE WASTEWATER SYSTEM IS IMPORTANT

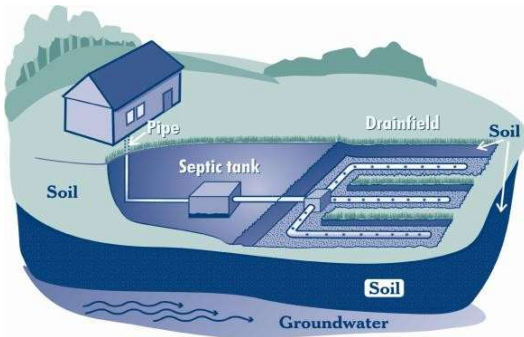
Whether you have a new “high-tech” treatment unit and drip irrigation system or an older “low-tech” septic tank and soakage trench system, regular attention to system inspection and maintenance is important. Effective regular maintenance of the wastewater servicing system on your property is essential for:

- (a) protecting family health by ensuring a high level of sanitary performance;
- (b) maintaining environmental values both within and beyond your property
- (c) protecting the investment in your wastewater system; and
- (d) enhancing amenity values in your neighbourhood through contributing to a high level of environmental performance for local on-site wastewater systems.

WHAT TYPE OF SYSTEM IS INSTALLED ON YOUR PROPERTY?

You are likely to have one of four types of system on your property:

- ☐ an old unknown system about which you have no information;
- ☐ an older style septic tank and soakage trench or soak hole system;
- ☐ a new modern septic tank and land application system (such as dosed trenches, or shallow planted evapo-transpiration beds, or a mound, or a low pressure dosed irrigation area);
- ☐ a new advanced treatment unit (such as an aerobic treatment plant, sand filter, or packed bed reactor) plus drip irrigation land application system.



Older style septic tank and soakage trench system



Modern septic tank, sand filter and drip irrigation field

Before you can attend to the maintenance requirements for your system you will have to establish the system type and capacity. This will require a detailed site inspection and/or a check of building records held by council. You may be able to do some of this yourself, but if a site investigation is needed, it is best to engage a drainage contractor or on-site wastewater servicing professional to investigate as follows:

- (a) For an older unknown system
 - Carry out a field inspection to locate and identify the treatment unit and soakage field area.
 - Excavate or probe as appropriate to identify system components, their size and condition.
 - Prepare a loading certificate based on an assessment of system capacity and its performance potential.

- Identify a suitable reserve area for extending the system if need be.
-

(b) For an older style septic tank and soakage trench or soak hole system

- If necessary, carry out a field inspection to locate the septic tank and soakage field area.
 - Check the maintenance record for the tank, and/or pumpout and inspect tank condition.
 - Evaluate the capacity and current performance of the soakage system.
 - Prepare a loading certificate based on an assessment of system capacity and its performance potential.
 - Identify a suitable reserve area for extending the system if need be.
-

(c) For a new modern septic tank and land application system

- Check council building consent records.
 - Check designer/installer reports and as-built records.
 - Obtain the designer's loading certificate (see box below).
 - Check availability of operation and maintenance instructions as provided by the designer.
 - Confirm the availability of a suitable reserve area for extending the system if need be.
-

(d) For a new advanced treatment unit and land application system

- Check council building consent records.
- Check designer/installer reports and as-built records.
- Obtain the designer's loading certificate.
- Check availability of operation and maintenance instructions as provided by the designer.
- Check if a maintenance contract is in place, and if not investigate options for and commission such a contract.



Ensure the maintenance contract is renewed



Checking scum and sludge levels in a septic tank



Servicing an advanced wastewater treatment unit

Whatever system is installed on your property, it is important that you understand the capabilities of the system. These are best identified and summarised in the preparation of a loading certificate. The loading certificate will enable you to understand the limitations or constraints of your system; however, the most important thing is to know your system type so that the right sort and frequency of maintenance can be carried out. This can simply be done through an inspection by a wastewater servicing specialist who will prepare the loading certificate.

LOADING CERTIFICATE

This should set out the following information:

- (a) System type (obtained from the as-built details provided by the designer/installer);
- (b) System capacity (number of persons and daily flow volume);
- (c) Summary of design criteria;
- (d) The location of and use of the 'reserve area';

It is also essential that if you have an advanced treatment and land application system subject to a maintenance contract, this contract is renewed annually.

DO YOU HAVE A SET OF USER GUIDELINES?

Your Regional, City or District Council is likely to have available a set of user guidelines for owner/occupiers of dwellings serviced by on-site wastewater systems. Such guidelines may be based on the provisions of the joint Australia New Zealand Standard AS/NZS 1547:2012 "On-site Domestic Wastewater Management", and will typically set out 'dos' and 'don'ts' related to household activities which generate wastewater flows (see box below).

USER ADVICE for a PROPERTY OWNER/OCCUPIER (from AS/NZS 1547:2012)

For the on-site system to work well, there are some good habits to encourage and some bad habits to avoid:

(a) To reduce sludge building up in the tank:

- (i) Scrape all dishes to remove fats, grease, and so on before washing
- (ii) Keep all possible solids out of the system
- (iii) Don't use a food waste disposal unit unless the wastewater system has been specifically designed to carry the extra load, and
- (iv) Don't put sanitary napkins and other hygiene products into the system;

(b) To keep the bacteria working in the tank and to maintain soil condition in the land application area:

- (i) Use biodegradable soaps
- (ii) Use a low-phosphorus detergent (less than 1 gram per wash – very good; “no phosphorus” labelled product – best)
- (iii) Use a low-sodium detergent in erosive or clayey soil areas (less than 20 grams per wash – OK; less than 10 grams per wash – best)
- (iv) Use detergents in the recommended quantities
- (v) Don't use powerful bleaches, whiteners, nappy soakers, spot removers and disinfectants
- (vi) Don't put chemicals or paint down the drain, and
- (vii) Check potential for effects from antibiotic and other medication use.

(c) Conservation of water will reduce the volume of effluent requiring disposal to the land application area, make it last longer and improve its performance. Conservation measures include:

- (i) Installation of water conservation fittings
- (ii) Taking showers instead of baths
- (iii) Washing clothes only when there is a full load, and
- (iv) Using the dishwasher only when there is a full load;

(d) Avoid overloading the system by spacing out water use as evenly as possible. For example:

- (i) Do not do all the washing on one day, and
- (ii) Do not run the washing machine and dishwasher at the same time.

MAINTENANCE INSPECTION REQUIREMENTS

Once you know the details and operating capacity of your on-site wastewater system then you can check out the maintenance inspection and servicing requirements from the table below. Note that your system will include a distribution device to convey the treated effluent to each element of your land application system so as to provide uniform use of the soil in further treating the wastewater flow.

Treatment System Type	Inspection and Maintenance Requirements
Older style septic tank	- Pumpout at 3-year intervals - Alternatively, check scum and sludge levels and pumpout on demand (around half full of scum and sludge)
Modern septic tank with effluent outlet filter	- Check scum and sludge levels (2-yearly) and pumpout on demand (around 6 to 8 years) - Check and hose down effluent outlet filter during pumpout
Aerobic treatment unit (aerated system)	- Periodic effluent quality "sniff and look" inspection (6-months) - Check power consumption (3-months) - Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Septic tank/sand filter system	- Periodic effluent quality "sniff and look" inspection (6-months) - Confirm sand is draining satisfactorily and not clogging (12-months) - Replace upper sand layer if draining slowly (as required) - Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Packed bed reactor unit	- Periodic effluent quality "sniff and look" inspection (6-months) - Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)

Distribution System	Inspection and Maintenance Requirements
Gravity distribution box	- Check distribution evenly balanced to all outlets (12-months) - Remove any accumulated solids in base of box (12-months)
Flood load gravity dosing system	- Check distribution is evenly balanced to all outlets (12-months) - Remove any accumulated solids in base of dose chamber (12-months)
Siphon dosing system	- Check siphon operation (ensure system not dribbling following 'shut-off') (6-months) - Remove any accumulated solids in base of siphon chamber (6-

	months)
Pump chamber and manifold distribution to dosing lines	• Check pump start and stop level controllers (clean off grease and solids) (6-months) • Check pump power use (6-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Pump chamber and automatic sequencing valve distribution to dosing lines	• Check pump start and stop level controllers (clean off grease and solids) (6-months) • Check pump power use (6-months) • Check sequencing valve operation (6-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)

Land Application System Type	Inspection and Maintenance Requirements
Soakage trenches (or beds)	• Inspect soakage field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Check level of standing effluent in trenches using vent pipes for liquid depth observation (6-months) • Add extra trenches in reserve area if overload (wetness or flooded system) becomes apparent
ETS (evapo-transpiration seepage) beds (or trenches)	• Inspect space between ETS beds/trenches for signs of wetness, surface seepage and/or excess grass growth (12-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check level of standing effluent in beds/trenches using vent pipes for liquid depth observation (12-months) • Add extra beds/trenches in reserve area if overload (wetness or flooded system) becomes apparent
Mounds (for septic tank effluent)	• Inspect edges (toe) of mound for signs of wetness, surface seepage and/or excess grass growth (6-months) • Install and plant a 1 metre wide by 400mm deep topsoil layer around mound perimeter if toe seepage becomes apparent • Install extra mound in reserve area if toe seepage not managed by supplementary soil and ET plantings.
LPED (low pressure effluent distribution) irrigation field	• Inspect soakage field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check level of standing effluent in LPED trenches using vent pipes (6-months) • Add extra LPED trenches in reserve area if overload (wetness or flooded system) becomes apparent
Drip irrigation field	• Inspect irrigation field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check air release valves are operating effectively (6-months) • Operate irrigation line flush valves (6-months) • Add extra drip lines in reserve area if overload (wetness or flooded system) becomes apparent • Carryout service check at 6-months (as specified in the

	supplier/installer maintenance contract)
NOTE: Where your wastewater system is subject to a resource consent from your Regional Council, you should note and follow the maintenance conditions imposed by the consent.	

DIY MAINTENANCE TASKS

As homeowner (or occupier) there are several inspection and maintenance tasks which you can carry out yourself. However, you must remember at all times that you are dealing with unsanitary waste material which may potentially be infectious, and hence in handling equipment and effluent samples you must take adequate precautions to prevent contamination of yourself and your equipment.

The following simple tasks involve a commonsense approach to on-site wastewater system homeowner/occupier DIY inspection and maintenance requirements (see tables above).

- ☐ Check septic tank scum and sludge levels (organise pumpout if required).
- ☐ Check drainage lines for evidence of 'backup' (slow draining).
- ☐ If backup due to outlet filter blockage, lift and hose down filter into septic tank.
- ☐ Check distribution box for even distribution of flow to trenches.
- ☐ Inspect land application system (trenches, beds, mounds, LPED and drip irrigation fields) for signs of wetness, seepage, excess grass growth.
- ☐ Carry out "sniff and look" assessment of advanced treatment plant effluent quality (if a glass container full of effluent does not appear cloudy, and smells only slightly musty and not offensive, effluent quality is good).
- ☐ Check treatment unit and pumping system power consumption (if increases over time, need system check by servicing personnel).
- ☐ Check operation of irrigation line flush valves.
- ☐ If need be, call in drainage contractor, servicing specialist or maintenance contract service provider to undertake servicing and/or remedial works.



Healthy worm activity in septic tank scum layer



Septic tank pumpout



Backup to gully trap from clogged tank



Lifting and hosing down effluent outlet filter



Distribution box



Automatic sequencing valve

SERVICING AGENT MAINTENANCE TASKS

If you as owner/occupier wish to have no role in maintaining your system, this is fine, but you will need to engage a drainage contractor, servicing specialist or maintenance contract service provider to undertake servicing and/or remedial works.

Even if you do carry out DIY maintenance tasks as outlined above engaging servicing personnel will be essential to carrying out mechanical and electrical servicing as well as specialist servicing tasks such as effluent quality sampling and testing. In addition, servicing specialists are best fitted to undertake tasks such as:

- ☐ Checking scum and sludge levels in tanks.
- ☐ Lifting and hosing down effluent outlet filters.
- ☐ Checking distribution effectiveness from distribution boxes and automatic sequencing valves.
- ☐ Checking power consumption and adjusting treatment plant controls and pumping cycles to achieve better efficiency.
- ☐ Checking distribution effectiveness and flushing drip irrigation lines.
- ☐ Undertaking remedial works and system extensions.

MAINTENANCE CERTIFICATE

Where a specialist servicing check is undertaken, including servicing under a maintenance contract, you should be provided with a maintenance certificate (see box below). This certificate should be filed away and provided as required to your District or Regional Council as proof of maintenance. This requirement may be a consent condition.

A maintenance certificate shall include (from AS/NZS 1547:2012)

- (a) Certification by a qualified and experienced person that the on-site system is operating and performing effectively;
- (b) A note of any specific operation and maintenance attention which is due;
- (c) Identification of any operation and maintenance problems, their likely cause and recommended remedial action;
- (d) Any evidence of system capacity being exceeded or likely to be exceeded (for example, by extra residents, or by holiday period occupiers);

CONTACT DETAILS FOR ADVICE AND SERVICE

To find a wastewater servicing specialist, contact your local council, septic tank pumpout contractor, treatment plant supplier or plumbing/drainlaying company. Enter contact details/phone numbers in the boxes below of those persons whom you may need to call on at some stage to gain advice on issues related to operation, inspection and maintenance of your on-site wastewater system

System Designer

Council On-site Wastewater Officer

Maintenance Contract Servicing Agent

Local Drainage Contractor

Acknowledgements – Illustrations:

- Marlborough District Council
- US EPA Educational Materials
- Reflection Treatment Systems Ltd
- Ministry for the Environment
- Super-Treat NZ Ltd
- On-Site NewZ
- North Dakota State University
- InspectAPedia
- Southeast Septic, USA
- Dola Transport, USA

Appendix H: Cut Log

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6 Fairway Drive
Kerikeri, 0230
New Zealand



Phone 09 407 8327
Fax 09 407 8378
www.haighworkman.co.nz
info@haighworkman.co.nz

Cut Log - BH1

Hole Location: Refer to Site Plan

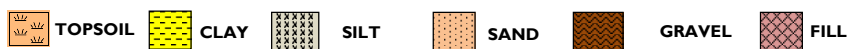
JOB No. 26 036

CLIENT: Alpine Buildings NZ Ltd
Date Started: 23/02/2026
Date Completed: 23/02/2026
SITE: 20 Carey Road, Kaikohe
DRILLING METHOD: Hand Auger
HOLE DIAMETER (mm): 50mm

LOGGED BY: LP
CHECKED BY: TMA

Soil Description Based on NZGS Logging Guidelines 2005	Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
Topsoil, SILT with some clay, dark grey, dry, rootlets.	0.0	TS					0 5 10 15 20
Gravelly SILT with some cobbles, brown with grey and white mottling, dry		Kerikeri Volcanics		Groundwater Not Encountered			
EOC	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

LEGEND



Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N:

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Appendix I: Producer Statement PS1

PRODUCER STATEMENT – PS1 DESIGN



association of
consulting and
engineering



Building Code Clause(s):	G13	Job number: 26 036
ISSUED BY: <i>(Engineering Design Firm)</i>	Haigh Workman Limited	
TO: <i>(Client)</i>	Alpine Buildings Limited	
TO BE SUPPLIED TO: <i>(Building Consent Authority)</i>	Far North District Council	
IN RESPECT OF: <i>(Description of building work)</i>	On-site Wastewater System	
AT: <i>(Address)</i>	18-20 Carey Road, Kaikohe 0405	
LEGAL DESCRIPTION	LOT 1 DP 68108, LOT 1 DP 42810, LOT 1 DP 139346	

We have been engaged by Alpine Buildings Limited to provide:

On-site Wastewater System

in respect of the requirements of the Clause(s) of the Building Code specified above for part only, as specified in the attached Schedule, of the proposed building work.

The design carried out by Haigh Workman Limited has been prepared in accordance with:

- ✓ compliance documents issued by the Ministry of Business, Innovation & Employment (Verification method /acceptable solution): AS/NZS 1547:2012

The proposed building work covered by this producer statement is described in the drawings specified in the attached Schedule, together with the specification, and other documents set out in the attached Schedule.

On behalf of Haigh Workman Limited, and subject to:

- all proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached Schedule, will comply with the relevant provisions of the Building Code specified above; and that
- the persons who have undertaken the design have the necessary competence to do so.

I recommend the CM1 level of construction monitoring.

I, John Papesch, am:

- CPEng number 224301
- and hold the following qualifications: B.E.

Haigh Workman Limited holds a current policy of Professional Indemnity Insurance no less than \$200,000.

✓ Haigh Workman Limited is a member of ACE New Zealand.

SIGNED BY:

John Papesch

(Signature):



Date: 3/7/2026

ON BEHALF OF:

Haigh Workman Limited

Note: This statement has been prepared solely for Far North District Council and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to Haigh Workman Limited only. As a condition of reliance on this statement, Far North District Council accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to Far North District Council in relation to this building work, whether in tort or otherwise, is limited to the sum of \$200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

SCHEDULE TO PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

- Engineering Drawing Set: Job: 26 036 Address: 18-20 Carey Road, Kaikohe Date: 03/03/2026

Limited Scope of Engagement

We have been engaged by Alpine Buildings Limited to provide services in respect of the requirements of the Clause(s) of the Building Code specified above for the following parts of the proposed building work:

On-site Wastewater System

GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on either the [ACE New Zealand](#) or [Engineering New Zealand](#) websites.

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with part of the reasonable grounds necessary for the issue of a Building Consent or a Code Compliance Certificate, without necessarily having to duplicate review of design or construction monitoring undertaken by others.

PS1 DESIGN: Intended for use by a suitably qualified independent engineering design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 DESIGN REVIEW: Intended for use by a suitably qualified independent engineering design review professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 CONSTRUCTION: Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 20112

PS4 CONSTRUCTION REVIEW: Intended for use by a suitably qualified independent engineering construction monitoring professional who either undertakes or supervises construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

Competence of Engineering Professional

This statement is made by an engineering firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its personnel.

The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent engineering professional".

Professional Indemnity Insurance

As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard practice for the relationship between the BCA and the engineering firm.

Professional Services during Construction Phase

There are several levels of service that an engineering firm may provide during the construction phase of a project (CM1-CM5 for engineers3).

The BCA is encouraged to require that the service to be provided by the engineering firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

BCAs should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued. No design professional should be expected to provide a producer statement unless such a requirement forms part of Haigh Workman Limited's engagement.

Refer Also:

- 1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
- 2 NZIA Standard Conditions of Contract SCC 2011
- 3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACE New Zealand/Engineering New Zealand 2004)
- 4 PN01 Guidelines on Producer Statements

www.acenz.org.nz

www.engineeringnz.org



Ballance Agri - Nutrients Ltd

PRELIMINARY AND DETAILED SITE INVESTIGATION (PSI/DSI)

20 Carey Road, Kaikohe

DOCUMENT CONTROL

Version	Date	Comments
A	January 2024.	Approved.

Version	Issued For	Prepared By	Reviewed & Authorised By
A	Issued for Consent	 Austen Heuvel <i>Environmental Scientist</i>	  James Gladwin Environmental Group Manager SQEP

EXECUTIVE SUMMARY

A contamination preliminary and detailed site investigation (PSI & DSI) has been conducted for the site located at 20 Carey Road, Kaikohe.

The objectives of the assessment were to identify any potential sources of contamination from past and present land-use activities at the site and surrounding area, to determine the contamination status of soils at the site, and to subsequently assess compliance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) for the proposed development at the site for the purpose of a due-diligence assessment.

The investigation comprises a PSI (i.e., site history review) and DSI (i.e., intrusive soil sampling investigation). Evidence from the PSI indicate that Activities on the MfE HAIL were identified at the site. These included **HAIL A10**: '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds*', **HAIL A17**: '*Storage tanks or drums for fuel, chemicals or liquid waste*', **HAIL E1**: '*Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition*', **HAIL F4**: '*Motor vehicle workshops*' and **HAIL I**: '*Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment*' are more likely than not to have occurred at the site. Soil sampling and analysis was therefore undertaken to identify if these activities have contributed to soil contamination that would be unacceptable for the proposed development.

Soil sampling was therefore carried out to provide an indication of the level of contamination in the soil (if any) from contaminants commonly associated with these activities undertaken at the site.

Soil testing indicates that contamination present at the site is below the applicable soil contaminant standards applicable for a 'Commercial/Industrial Outdoor Worker (Unpaved)' land-use but will exceed other more susceptible land uses.

Accordingly, should development works proceed, a controlled activity consent from the Far North District Council will be required. A Site Management Plan (SMP) will need to accompany a resource consent application which outlines appropriate site management and soil disposal procedures. ***A resource consent will be required before any groundworks can commence. As per Regulation 9 (3)(c) the regulatory authority must be provided a copy of this report.***

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1 INTRODUCTION

LDE has been engaged by Ballance Agri - Nutrients Ltd to undertake a soil contamination Preliminary Site and Detailed Site Investigation (PSI & DSI) for the site located at 20 Carey Road, Kaikohe as part of a due-diligence assessment.

The PSI stage was completed to identify if there are or were any current or historical land-use activities that could have caused soil contamination that is a risk to human health. The information gathered was used to guide the DSI investigations. The DSI component of the investigation includes the collection and analysis of soil samples taken at the site. It is required to quantify any soil contamination and to determine if any applicable standard was exceeded and to determine applicability and/or status of the site under the NESCS and provide information for the client as part of the due diligence process.

This site investigation has been prepared in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2021. It has been managed by a suitably qualified and experienced practitioner (SQEP); carried out in general accordance with the Contaminated Land Management Guidelines No.1- Reporting on Contaminated Sites in New Zealand (revised 2021) and Contaminated Land Management Guidelines No.5: Site Investigation and Analysis of Soils (revised 2021).

1.1 Investigation Objectives

The objectives of the investigation are to:

- Assess whether there has been (or is more likely than not to have been) a potentially contaminating land use.
- Assess the nature and source of potential or likely contaminants.
- Identify the possible locations of contamination.
- Identify known or potential exposure pathways by which identified receptors could be exposed to the contaminants whilst undertaking the current or proposed future land use.
- Identify known or potential human and ecological receptors that could be exposed to contaminants.
- Assess if the project is covered by the NESCS Regulations.
- Determine if further investigation in the form of a DSI is required.
- Determine if soil contamination exceeds the applicable standard and to identify if the site is restricted discretionary or controlled under the NESCS.
- Delineate the extent (vertically and horizontally) of the contamination on the site.

1.2 Site Identification

The site is located at 20 Carey Road, Kaikohe approximately 1.24kms to the east of Kaikohe town centre. The site is zoned Rural Production. The site comprises approximately 1.3ha of land and is legally described as LOT 1 DP 139356, LOT 1 DP 48210 and LOT 1 DP 68108. Figure 1 and Table 1 show the site location and land parcel details, respectively.



Figure 1. Site Location. Source: LINZ Data service¹.

¹ <https://data.linz.govt.nz/> Retrieved November 2023.

Table 1. Site Details.

Detail	Description
Site Address	20 Carey Road, Kaikohe
Legal Description	LOT 1 DP 139346, LOT 1 DP 42810 and LOT 1 DP 68108.
Area	1.31ha
Owners	Ballance Agri – Nutrients Ltd
Proposed Site Use	Expansion of the existing site dwellings (This report acts as pre-purchase information).

2 SITE DESCRIPTION

2.1 Environmental Setting

The site is a flat industrial site that is located in a rural area south of Kaikohe, Kerikeri.

2.1.1 Geology

The New Zealand Geology Web Map by GNS² Science identifies the site as being underlain by 'Kerikeri Volcanic Group Pleistocene basalt of Kaikohe to Bay of Islands Volcanic Field' described as '*Basalt lava and volcanic plugs.*'

There is no available S-Maps Online coverage for this site. The Landcare Soils Map Viewer identifies the soils as Orthic Allophanic (LO). Orthic Allophanic Soils are deep Allophanic Soils. They are dominated by allophane (also imogolite or ferrihydrite) minerals. These stiff, jelly-like minerals coat the sand and silt grains and maintain porous, low-density structure with weak strength. The soils are identified by a distinctly greasy feel when moistened and rubbed firmly between the fingers. The soil is easy to dig and samples crumble easily when crushed in the hand. Allophanic Soils occur predominantly in the North Island volcanic ash, and in the weathering products of other volcanic rocks.

2.1.2 Hydrology

The Totara Stream is the nearest body of water from the property and is located approximately 250 m south of the property at its closest point. The Waioro Stream is also located approximately 620 m east of the site. The site has a manmade open drain running along the southeastern boundary, this initially runs northwest before heading south towards the Ohuka Stream.

² <http://data.gns.cri.nz/geology/>. Retrieved November 2023.

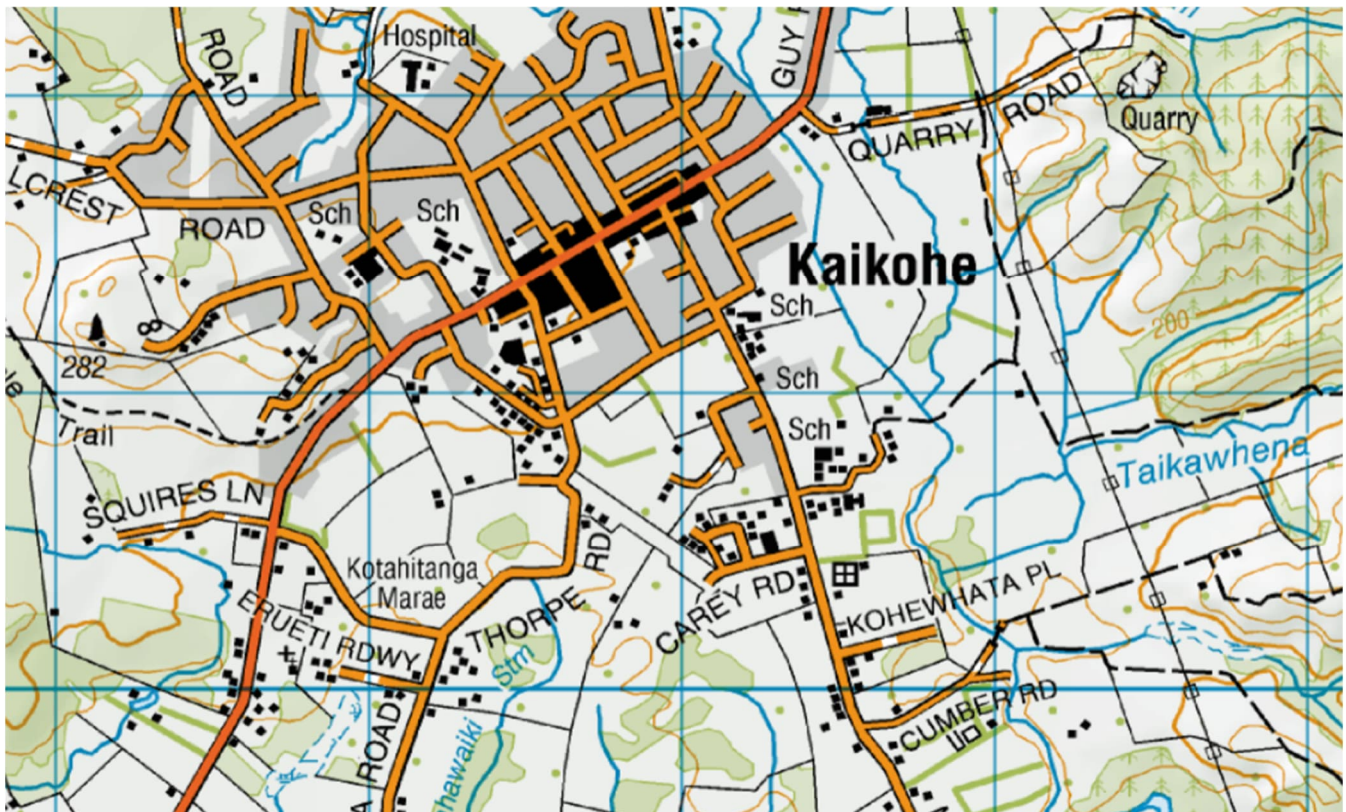


Figure 2. Topo map showing nearby waterbodies. Source LINZ / MapsPast³.

2.2 Site Layout and Current Site Uses

The site is flat with some undulation in the south. A large building is present in the centre of the site which appears to have undergone a number of extensions and alterations. Hardfill (gap graded) surrounds the building and used as a driveway. A small truck wash is located in the southwestern area of the site. The remaining area of the site is grassed.

³ <http://www.mapspast.org.nz/>. Retrieved November 2023.



Figure 3. Annotated location map showing the current site layout. Source: LINZ Data service⁴.

2.3 Surrounding Land Uses

Table 2 documents the surrounding land uses of the site.

Table 2. Surrounding Land Uses

Direction	Description
North	Pasture
East	Pasture
South	Pasture
West	Pasture

2.4 Site Inspection

A walkover assessment was undertaken at the site on 7th December 2023. The site is generally flat with some undulation. The large building is used as a storage depot for raw fertiliser chemicals. Customers are able to purchase these raw chemicals for their own use.

⁴ <https://data.linz.govt.nz/> Retrieved November 2023.



Figure 4. External cladding consisting of concrete on main dwelling.



Figure 5. Powered sulphur stored on site.



Figure 6. Deteriorated corrugated iron cladding.



Figure 7. Large machinery stored on site with workshop.



Figure 8. Workshop on site.



Figure 9. Bagged fertiliser storage.

3 HISTORIC SITE USE

The following information was reviewed to establish the history of the site:

- Council Records
- Historical aerial photographs
- Existing Investigation Reports
- Site walkover/visual assessment
- Interview with current site owner / past site owner

3.1 Existing Investigation Reports

3.1.1 Review of Recent LDE Geotechnical Investigation

Geotechnical testing was undertaken by LDE in December 2023. This included the soil logging of eight hand augured holes located throughout the site. The soil encountered was generally homogenous throughout. Uncontrolled fill was encountered within 500mm (bgl) and consisted of silty sandy gravel.

3.2 Council Information

The following sections provide a summary of information held by the local councils. Please refer to Appendix A for a copy of the search of council records.

3.2.1 Far North District Council

Far North District Council was contacted for property files / information however LDE were informed that none were available.

3.3 Historical Aerial Imagery

Aerial images from 1950 to 2023 have been analysed as part of this investigation. A summary of our review of these images is as follows.

1950: The site vacant and used for pasture.

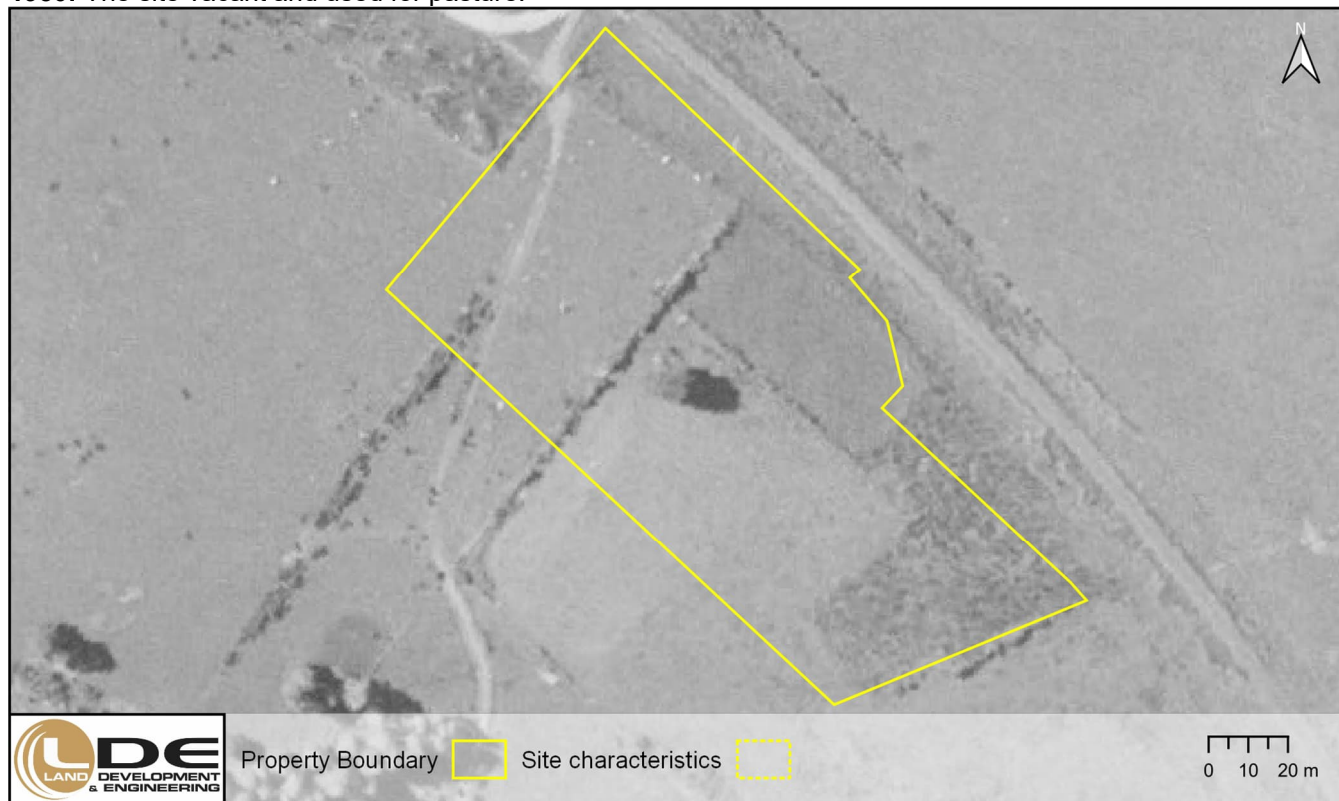


Figure 10. Aerial imagery 1950. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1969: Poor image quality. A building is present and a surrounded by a hardstand. The rest of the site is pasture.

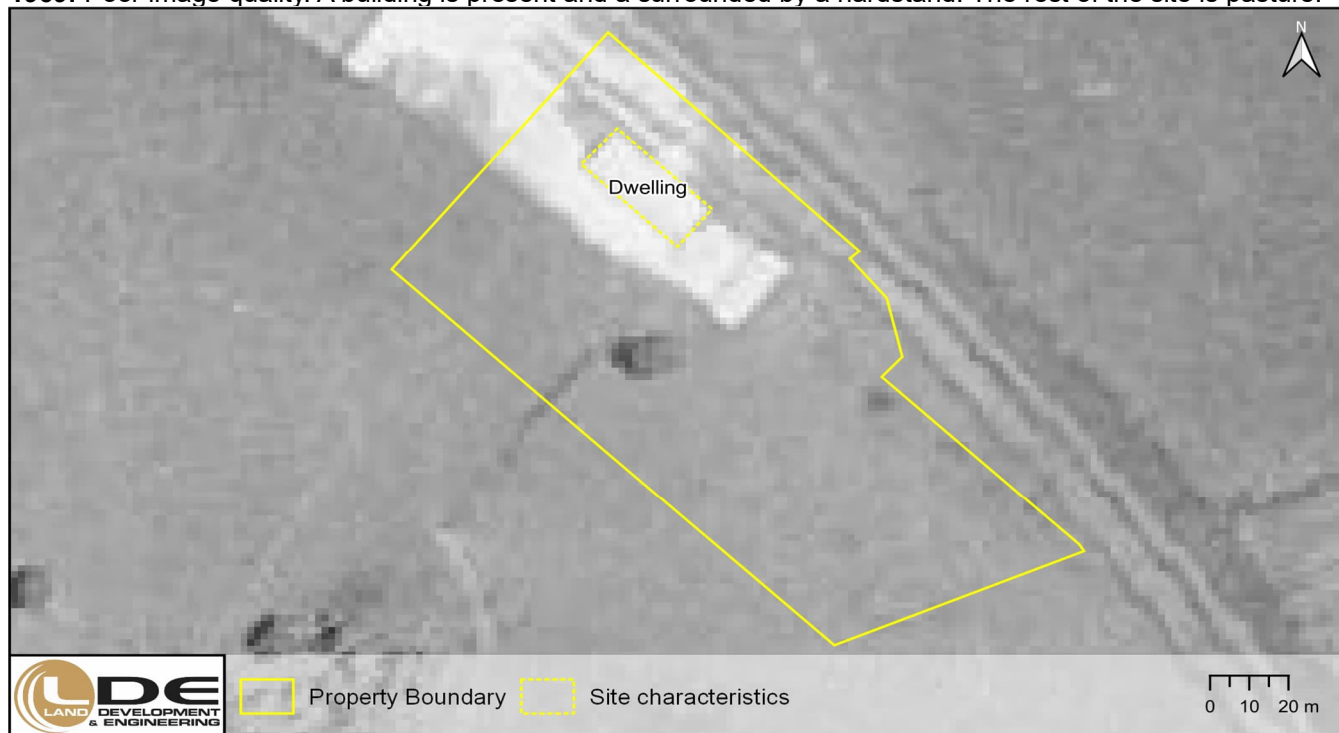


Figure 11. Aerial imagery 1969. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1982: The site is now developed with four standalone buildings and a significant amount surface disturbance.

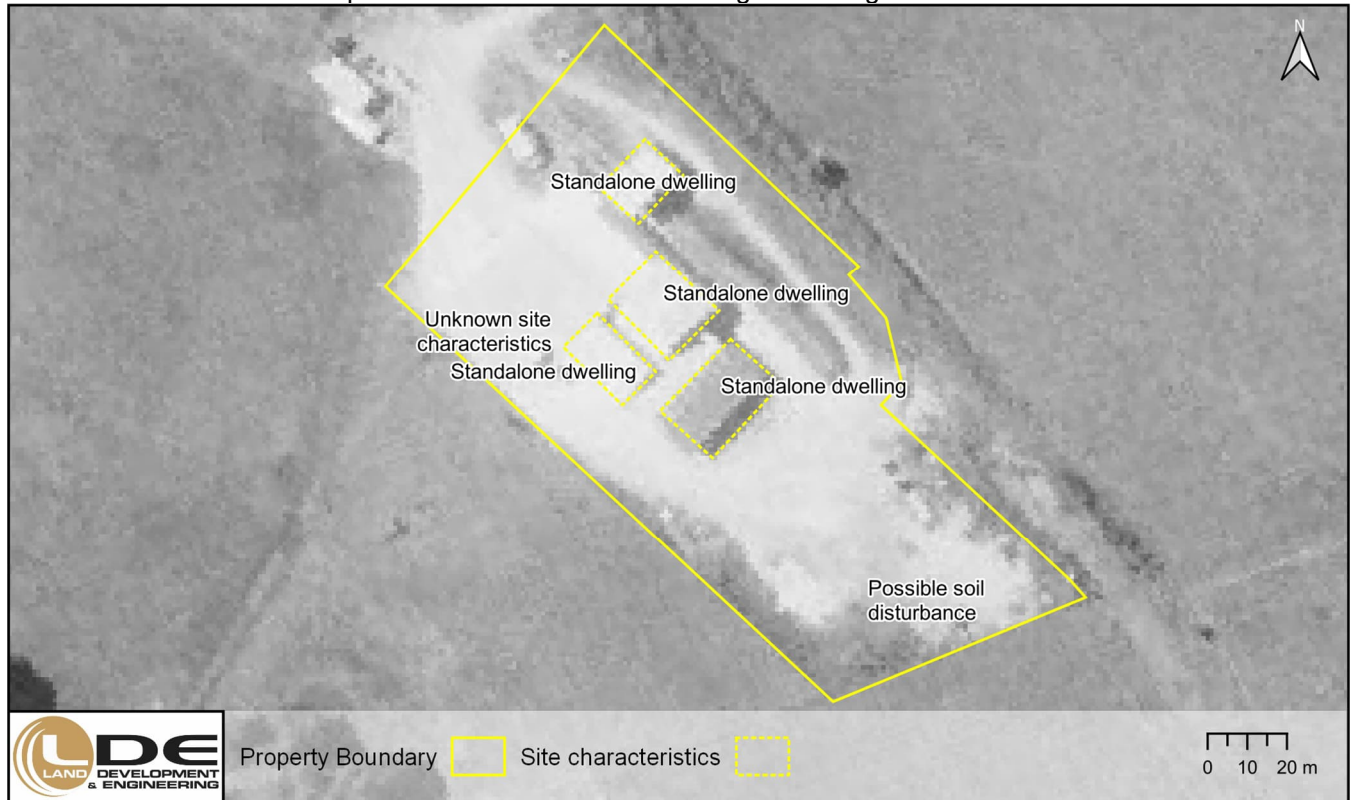


Figure 12. Aerial imagery 1982. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1993: A single major building has replaced three of the original buildings, the building to the north remains in situ, there appears to be a reasonable amount of debris around the site, particularly in the south-eastern area.

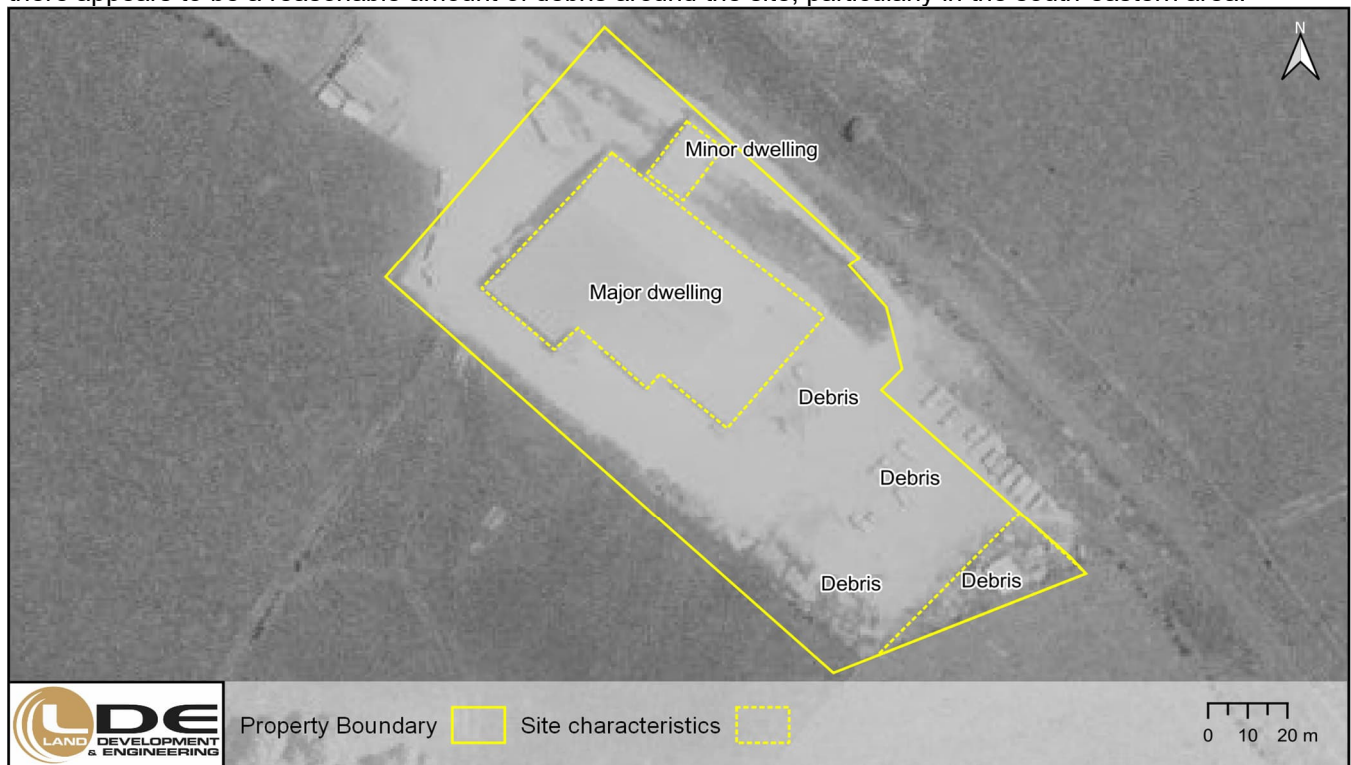


Figure 13. Aerial imagery 1993. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

2006: No significant changes, however the standalone minor building has been relocated / replaced to the southeast of its original position. What appears to be a water pond can be seen in the south or the property.

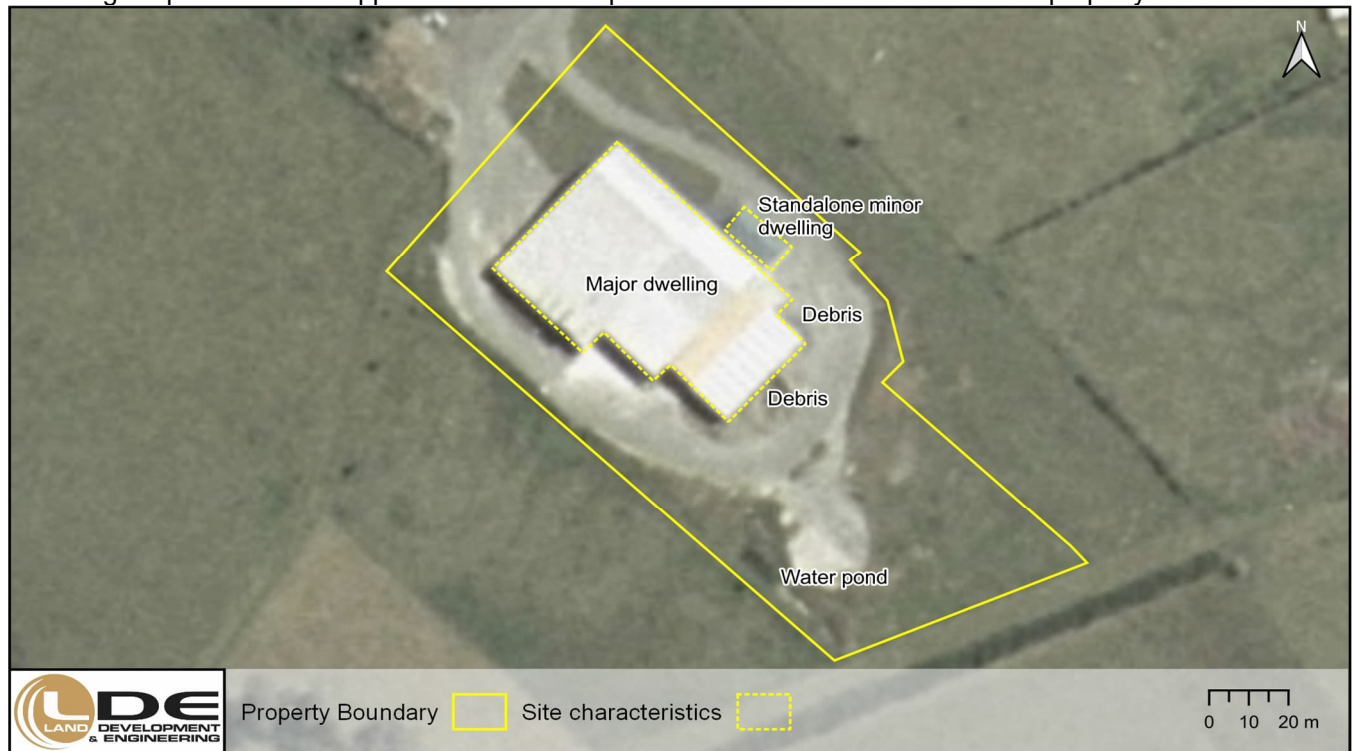


Figure 14. Aerial imagery 2006. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

2015: No significant change.

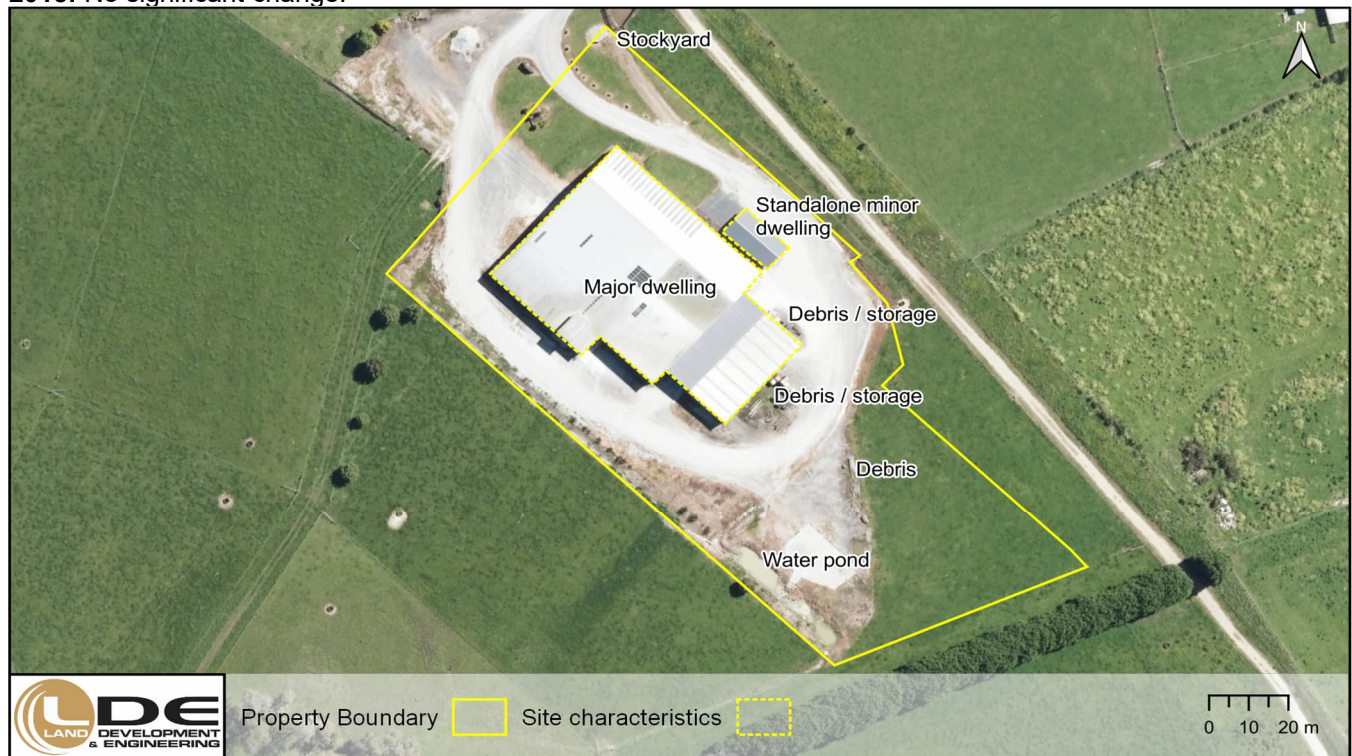


Figure 15. Aerial imagery 2015. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

2023: No significant change.



Figure 16. Aerial imagery 2023. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

4 PSI RISK ASSESSMENT

This section uses a Conceptual Site Model (CSM) to assess the currently available information presented in this report to determine:

- whether there has been (or is more likely than not to have been) a potentially contaminating land use.
- the nature and source of potential or likely contaminants.
- the possible locations of contamination.
- known or potential exposure pathways by which identified receptors could be exposed to the contaminants whilst undertaking the current or proposed future land use.
- known or potential human and ecological receptors that could be exposed to contaminants.
- if the project is covered by the NESCS Regulations.
- if further investigation in the form of a DSI is required

4.1 Conceptual Site Model

The preliminary site CSM is provided in Table 3 and Figure 17. A human health risk can only occur where there is a complete pathway between contaminant source and a receptor. Building floors and paved or sealed areas will

largely or completely prevent contact with underlying soils and therefore, direct exposure pathways are or will be incomplete for such areas.

Table 3. Conceptual Site Model at the PSI stage.

HAIL, Potential Contaminants and Location	Receptors	Potential Pathways
A17 - Storage tanks or drums for fuel, chemicals, or liquid waste	Construction workers	Ingestion, inhalation, dermal contact.
	Future site users	Ingestion, inhalation, dermal contact.
	Workers at off-site soil disposal sites	Ingestion, inhalation, dermal contact.
	Ecological receptors	Sediment runoff, shallow groundwater flows
E1 – Potential asbestos containing material (ACM) within the footprint of the existing building	Construction workers	Inhalation of dust (containing asbestos fibers)
	Future site users	Inhalation of dust (containing asbestos fibers)
	Workers at soil disposal sites	Inhalation of dust (containing asbestos fibers) during placement at an offsite disposal site.
F4 - PAHs and heavy metals associated with historic motor vehicle workshop	Construction workers	Ingestion, inhalation, dermal contact.
	Future site users	Ingestion, inhalation, dermal contact.
	Workers at off-site soil disposal sites	Ingestion, inhalation, dermal contact.
	Ecological receptors	Sediment runoff, shallow groundwater flows
A10 - Persistent pesticide use and presence on site identified through current and historical site use	Construction workers	Ingestion, inhalation, dermal contact.
	Future site users	Ingestion, inhalation, dermal contact.
	Workers at off-site soil disposal sites	Ingestion, inhalation, dermal contact.
	Ecological receptors	Discharges to air / water / land

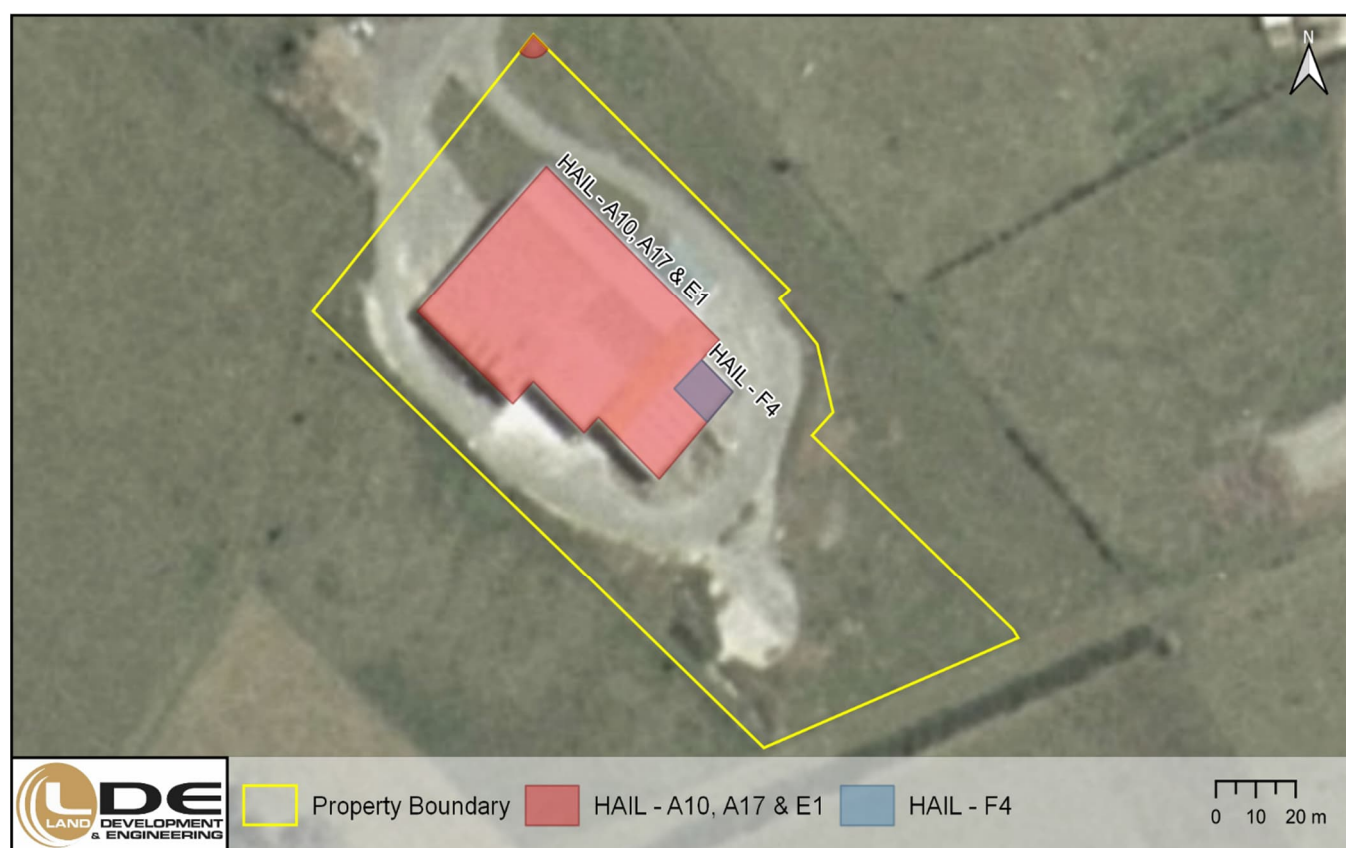


Figure 17. CSM plan showing areas of HAIL and potential areas of contamination.

4.1.1 NESCS application

As per Regulation 6 (3) it is considered that it is more likely than not an activity or industry described in the HAIL has not been undertaken on the piece of land. The likelihood that the soil is contaminated and is a risk to human health because of the activity or industry occurring is considered highly likely.

As per Regulation 8(4)(b), LDE considers that it not highly unlikely that there will be a risk to human health if the activity is done to the piece of land. As a result, LDE considers that the site is covered by the NESCS Regulations.

5 PSI CONCLUSION

Evidence from the PSI and site history review, indicates **HAIL A10**: '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds*', **HAIL A17**: '*Storage tanks or drums for fuel, chemicals or liquid waste*', **HAIL E1**: '*Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition*', **HAIL F4**: '*Motor vehicle workshops*' and **HAIL I**: '*Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment*' are more likely than not to have occurred at the site.

Based on the currently available information presented in this report LDE considers that the NESCS applies. This is because soil disturbance is covered by Regulation 5(4) and is in exceedance of the permitted activity conditions outlined in Regulation 8. The land is also covered by the NESCS because of HAIL activities that are more than likely to have been carried out at the site. A detailed site investigation is therefore required to establish if soil contamination exceeds the applicable standard and to determine if the site is restricted discretionary or controlled under the NESCS.

6 DETAILED SITE INVESTIGATION

Based on the findings of the PSI, further investigation was required to establish if soil contamination exceeds the applicable standard and to determine if the site is restricted discretionary or controlled under the NESCS.

The sampling objectives are to quantify the human health risk from potentially contaminated soil associated with the HAIL Activities identified in the PSI in relation to the end use of the site.

Based on the conceptual site model and taking into consideration the methodology for deriving soil contaminant standards (SCS) and the proposed development at the site, our investigation was designed to establish if site soils exhibit contaminant concentrations exceeding the soils contaminant standards applicable to the 'Commercial/Industrial Outdoor Worker (Unpaved)' and-use scenario.

6.1 Sampling and analysis plan

The field investigation was undertaken on 7th December 2023 by an LDE contaminated land scientist. Each one of the sample locations was selected based on the proposed development, site history and site characteristics. Discrete samples from locations AG-1 to S13 at selective depths between ground level and 500mm below ground level (bgl) were collected across the site. All samples were tested for heavy metals, and OCPs with one sample bulk sample analysed for asbestos. No duplicates were completed. The sample locations and details are shown in Figure 18 and Table 4.

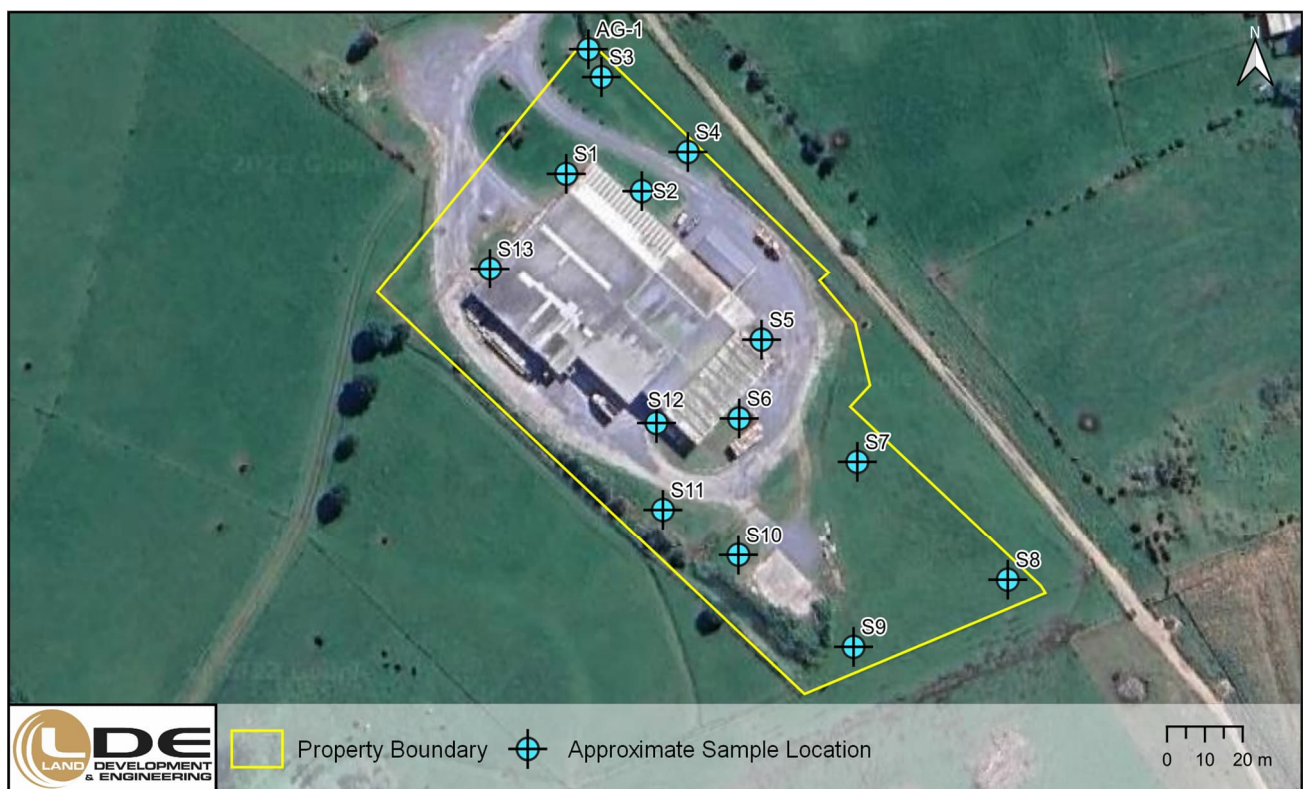


Figure 18. Soil sampling site plan. The approximate soil sampling locations are shown in yellow. Source: Google LINZ Data service. (annotated image).

Table 4. Sample Details.

Borehole	Depth (m)	Description	Analysis	Rational
AG-1	0.0	Topsoil	OCPs, Heavy metals	Animal pen
S1	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
	0.5	Silty clay	OCPs, Heavy metals	Storage of fertilizer
S2	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
	0.3	Fill	OCPs, Heavy metals	Storage of fertilizer
S4	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
	0.5	Silty clay	OCPs, Heavy metals	Storage of fertilizer
S5	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S6	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S7	0.0-0.5	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S8	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S9	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S10	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S11	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S12	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
S13	0.0	Topsoil	OCPs, Heavy metals	Storage of fertilizer
B-FRAG	-	Cladding	Asbestos Presence / Absence	Checking for asbestos contamination through ACM cladding.

6.2 Quality Assurance and Quality Control

6.2.1 Field QA/QC

The following procedures were adopted during soil investigation works:

- All fieldwork was carried out in compliance with a project specific Health and Safety Plan prepared for the site works.
- All works were conducted by trained LDE staff with precautions including implementation of procedures for the appropriate handling of potentially contaminated material.
- Prior to sampling, and between sample locations, equipment used to retrieve samples was cleaned by washing with potable water to minimise the chance of cross contamination.
- Soil samples were collected using a hand trowel / hand auger.
- A clean pair of nitrile gloves was also used for each sample location. All samples were placed into labelled laboratory supplied sample containers.
- Additional laboratory containers were taken to the site as a contingency for grab samples (one-off samples of material or soil that are of interest and observed by the sampler during a site inspection or sampling event) including soil stains, burn patches or pits, filled areas, and treated timber stockpiles.

- Following collection, all samples were transported, under standard chain of custody procedures, to an IANZ accredited laboratory (Hills Laboratories) for analysis. The chain of custody documentation is attached in Appendix B.

6.2.2 Laboratory QA/QC

Laboratory reports from Hills Laboratories have been included in Appendix B. These include the analytical methods and detection limits used by the laboratory and the laboratory accreditation for analytical methods used.

All Laboratory Analysis was completed through Hills Laboratories. Hills Laboratories are accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised.

6.3 Background Concentrations, Soil Contaminant Standards (SCSs) and Guideline Values (SGVs)

6.3.1 Human Health

The NESCS references the Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health (MfE, 2011). This is a national risk-based methodology for deriving soil contaminant concentrations protective of human health. Soil Contaminant Standards (SCS) and Soil Guideline Values (SGVs) have been selected in accordance with regulation 7.

Regulation 7 states that if the contaminant of concern is a priority contaminant⁵ and the land use fits within an exposure scenario adopted in the Methodology⁶, the applicable standard is the soil contaminant standard for the priority contaminant. If the contaminant of concern is a priority contaminant and the land use does not fit within an exposure scenario adopted in the Methodology, the applicable standard is whichever of the following is more appropriate in the circumstances:

- a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the Methodology:
- b) the soil contaminant standard for the priority contaminant of the exposure scenario adopted in the Methodology with greater assumed exposure than the actual exposure.

If the contaminant of concern is not a priority contaminant, the applicable standard is whichever of the following is more appropriate in the circumstances:

⁵ a contaminant for which the Methodology derives a soil contaminant standard.

⁶ The current edition of the Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health.

- a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the Methodology:
- b) a guideline value for the protection of human health that is chosen in accordance with the current edition of Contaminated Land Management Guidelines No. 2–Hierarchy and Application in New Zealand of Environmental Guideline.

Following the guidance, the Soil Contaminant Standards (SCS) for selected priority contaminants and for non-priority contaminants guidelines values were selected following Regulation 7 and the Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values (Revised 2021) as screening criteria for the risk to humans at the site and to inform on-site management actions. If exceeded, further investigation and a Tier 2 assessment would be considered.

No applicable New Zealand guideline criteria exist for some of the tested metals (i.e., nickel and zinc) and therefore Health Investigation Level (HIL) values from the Australian Guideline on the Investigation Levels for Soil and Groundwater have been used under the residential land-use scenario as outlined in the MfE document.

The soil samples were tested at the laboratory for total chromium. However, the methodology document distinguishes between the stable chromium III and the potentially toxic and less stable chromium VI. For the purposes of this analysis all total chromium results have been conservatively compared to the chromium VI.

Asbestos results are compared against the New Zealand Guidelines for Assessing and Managing Asbestos in Soils (NZ GAMAS) for Fibrous Asbestos (FA), Asbestos Fines (AF) and Asbestos Containing Materials (ACM).

6.3.2 Environmental

Soil results have also been compared against the permitted activity soil acceptance criteria under E30 of the Auckland Unitary Plan⁷ to determine resource consent requirements.

All results are compared against the Predicted Background Soil Concentrations (Landcare Research Limited)⁸ to determine if soil concentrations are anthropologically affected and the applicability of the NESCS.

6.3.3 Landfill Acceptance

The Class A and Class B landfill acceptance criteria from MfE have been used to determine appropriate disposal methods for contaminated material. Where results have exceeded the screening criteria then a TCLP analysis has been completed for comparison against the concentration in leachate limits. Sample locations with TCLP results exceeding the concentration in leachate limits will require treated prior to being removed from site.

⁷ <https://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20E%20Auckland-wide/5.%20Environmental%20Risk/E30%20Contaminated%20land.pdf>

⁸ <https://iris.scinfo.org.nz/layer/48470-pbc-predicted-background-soil-concentrations-new-zealand/>

6.4 Results

6.4.1 Heavy Metals

Table 5 summarises the laboratory results of soil samples tested for heavy metals. All metal concentrations were below the respective SCS for a '*Commercial/Industrial Outdoor Worker (Unpaved)*' land-use scenario. There are however numerous exceedances of the Predicted Background Soil Concentrations. The full lab results are included in Appendix B

Table 5. Laboratory tests (heavy metal) compared against the soil contaminant standard (SCS) for a 'Commercial/Industrial Outdoor Worker (Unpaved)' land-use.

Sample ID	Depth (m)	Sample Description	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
AG 1	0.0	Topsoil	12.70	0.65	23.00	34.00	47.00	0.32	24.00	77.00
S1	0.0	Topsoil	7.00	21.00	60.00	128.00	15.80	0.19	27.00	310.00
S1	0.5	Silty clay	8.80	18.50	46.00	100.00	14.90	0.18	28.00	250.00
S2	0.0	Topsoil	4.10	1.59	41.00	17.20	10.20	0.42	16.00	75.00
S2	0.3	Fill	5.20	5.00	30.00	29.00	10.70	0.22	29.00	200.00
S4	0.0	Topsoil	6.20	0.97	28.00	29.00	13.60	0.18	21.00	84.00
S4	0.5	Silty clay	3.10	0.16	30.00	14.80	11.20	0.25	12.80	41.00
S5	0.0	Topsoil	3.50	0.25	75.00	38.00	8.00	0.27	36.00	68.00
S6	0.0	Topsoil	16.80	1.86	34.00	46.00	46.00	0.04	14.90	780.00
S7	0.0-0.5	Topsoil	4.70	0.19	25.00	22.00	10.20	0.28	15.40	66.00
S8	0.0	Topsoil	4.10	0.61	21.00	26.00	12.90	0.24	17.50	82.00
S9	0.0	Topsoil	5.10	1.27	19.20	26.00	14.90	0.24	16.60	98.00
S10	0.0	Topsoil	6.50	2.20	17.70	32.00	17.90	0.07	21.00	112.00
S11	0.0	Topsoil	7.60	6.30	48.00	57.00	21.00	0.13	38.00	330.00
S12	0.0	Topsoil	9.80	13.10	61.00	71.00	54.00	0.09	35.00	900.00
S13	0.0	Topsoil	9.60	6.80	36.00	45.00	21.00	0.03	30.00	420.00
Commercial / industrial outdoor worker (unpaved) ¹			70	1300	6,300	>10,000	3,300	4,200	4,000 ²	400,000 ²
Predicted background soil concentrations ³			8.87	0.51	128.50	48.14	56.34	–	77.43	295.80
Screening criteria Class A landfills ⁴			100	20	100	100	100	4	200	200
Screening criteria Class B landfills ⁴			10	2	10	10	10	0.4	20	20

Notes: All results and standard values are presented in mg/kg (dry weight). All metals tested for 'Total Recoverable' at screen level. Depths are mm below ground level.

1. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Ministry for the Environment, 2011.
2. Commercial / industrial D values – Guideline on the Investigation Levels for Soil and Groundwater. NEPC, 2013.
3. [Predicted Background Soil Concentrations, New Zealand, Landcare Research Limited.](#)
4. Module 2: Hazardous Waste Guidelines, Landfill Waste Acceptance Criteria and Landfill Classification. Ministry for the Environment, 2004.

6.5 Organochlorine Pesticide (OCP)

Table 6 summarises OCP results. OCPs in all samples were below the guideline value. The laboratory transcripts are appended in Appendix B.

Table 6. Laboratory test results for OCP.

Sample ID	Depth (mm)	Total DDT	Dieldrin	Aldrin	Aldrin+Dieldrin
AG 1	0.0	< 0.08	< 0.013	< 0.013	<0.055
S1	0.0	0.33	< 0.014	< 0.014	<0.055
S1	0.5	0.24	< 0.014	< 0.014	<0.055
S2	0.0	< 0.09	< 0.014	< 0.014	<0.055
S2	0.3	< 0.09	< 0.015	< 0.015	<0.055
S4	0.0	< 0.10	< 0.016	< 0.016	<0.055
S4	0.5	< 0.09	< 0.014	< 0.014	<0.055
S5	0.0	< 0.09	< 0.015	< 0.015	<0.055
S6	0.0	< 0.08	< 0.013	< 0.013	<0.055
S7	0.0-0.5	< 0.09	< 0.015	< 0.015	<0.055
S8	0.0	< 0.09	< 0.015	< 0.015	<0.055
S9	0.0	< 0.09	< 0.014	< 0.014	<0.055
S10	0.0	< 0.08	< 0.013	< 0.013	<0.055
S11	0.0	< 0.09	< 0.014	< 0.014	<0.055
S12	0.0	< 0.08	< 0.013	< 0.013	<0.055
S13	0.0	< 0.08	< 0.013	< 0.013	<0.055
Commercial / industrial outdoor worker (unpaved)¹		1,000	160	160	160

Notes: All results and standard values are presented in mg/kg (dry weight). Depths are mm below ground level.

Total DDT = sum of DDT, DDD, and DDE.

DDT = dichlorodiphenyltrichloroethane.

DDD = dichlorodiphenyldichloroethane.

DDE = dichlorodiphenyldichloroethylene

1. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Ministry for the Environment, 2011.

6.6 Asbestos

Table 7 shows the semi-quantitative asbestos analysis completed for the site. The laboratory transcripts are appended in Appendix B.

Table 7. Asbestos Semi-Quantitative Analysis.

Sample ID	Depth (m)	Description	Asbestos (Presence / Absence)
B-Frag	N/A	Deteriorated building cladding	Absent

Notes: Depths are m below ground level.

7 DSI RISK ASSESSMENT

This section uses a Conceptual Site Model (CSM) to assess the currently available information presented in this report to determine:

- if the project is covered by the NESCS Regulations.
- if soil contamination exceeds the applicable standard and to identify if the site is restricted discretionary or controlled under the NESCS.

7.1 Conceptual Site Model

The preliminary site CSM is provided in Table 8 and Figure 19. A human health risk can only occur where there is a complete pathway between contaminant source and a receptor. Building floors and paved or sealed areas will largely or completely prevent contact with underlying soils and therefore, direct exposure pathways are or will be incomplete for such areas.

Table 8. Conceptual Site Model at the DSI stage.

HAIL, Potential Contaminants and Location	Receptors	Pathways (Complete / Incomplete)
E1 - Asbestos containing material (ACM) in the footprint of the existing building	Construction workers	Incomplete - Inhalation of dust (containing asbestos fibres). Contamination was not detected above the BRANZ Guidelines.
	Future site users	Incomplete - Inhalation of dust (containing asbestos fibres). Contamination was not detected above the BRANZ Guidelines.
	Workers at soil disposal sites	Incomplete - Inhalation of dust (containing asbestos fibers) during placement at an offsite disposal site. Contamination was not detected above the BRANZ Guidelines.
A17 - 17. Storage tanks or drums for fuel, chemicals, or liquid waste	Construction workers	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Future site users	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Workers at off-site soil disposal sites	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Ecological receptors	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
F4 - PAHs and heavy metals associated with historic motor vehicle workshop	Construction workers	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Future site users	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Workers at off-site soil disposal sites	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Ecological receptors	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.

HAIL, Potential Contaminants and Location	Receptors	Pathways (Complete / Incomplete)
A10 - Persistent pesticide use and presence on site identified through current and historical site use	Construction workers	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Future site users	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Workers at off-site soil disposal sites	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.
	Ecological receptors	Incomplete - Ingestion, inhalation, dermal contact. Contamination was not detected above the SCS or SGVs.

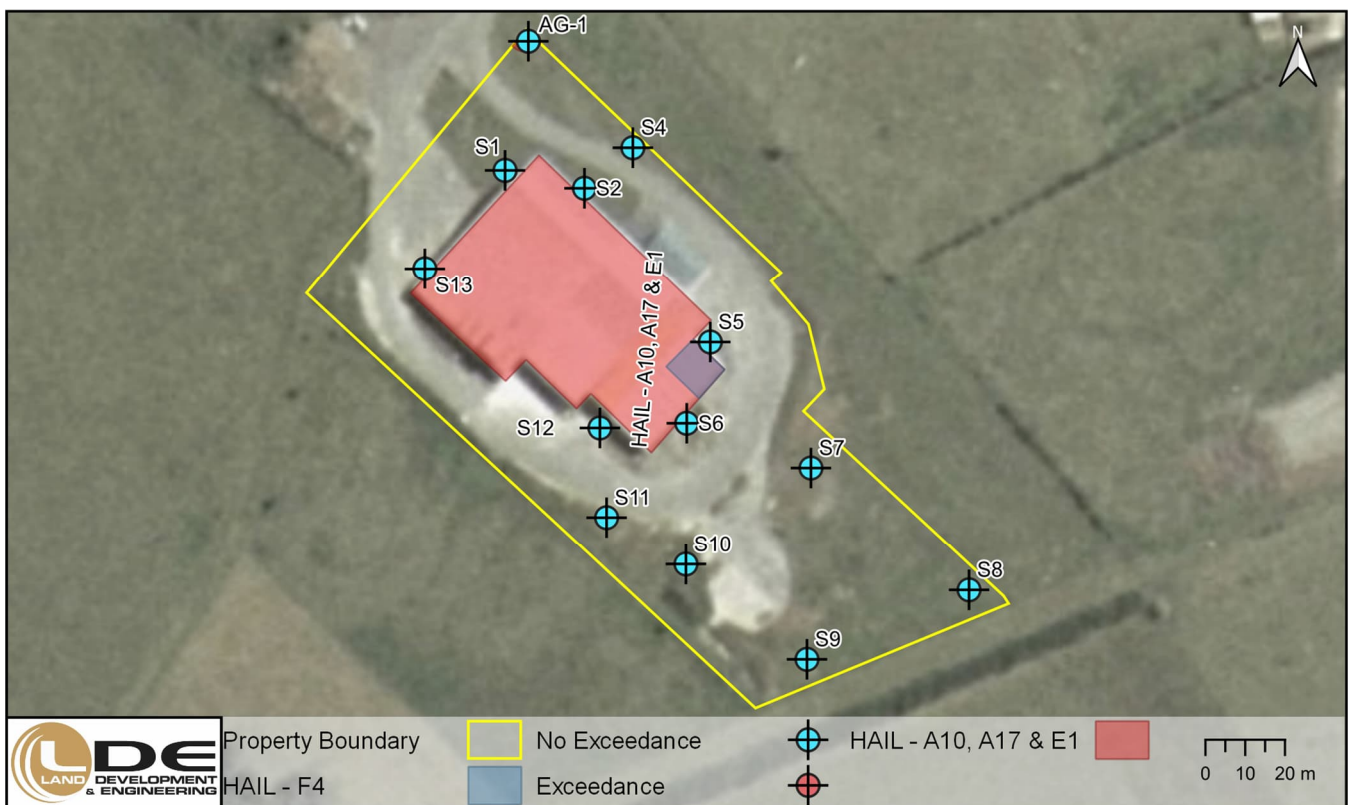


Figure 19. CSM plan showing areas of contamination. The approximate soil sampling locations are shown in yellow and the samples with exceedances above the adopted NESCS SCS are shown in red.

7.1.1 NESCS Application

As per Regulation 9, soil contamination does not exceed the applicable standard in Regulation 7 (refer to section 6.3.1 for description of each human health standard selected and the section 6.4 for results showing no exceedances of the human health standards) but is above background concentrations as per Regulation 5(9). As a result, LDE considers the site to be controlled under the NESCS.

8 CONCLUSIONS AND RECOMMENDATIONS

Activities on the MfE HAIL were identified at the site. These included **HAIL A10**: '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds*', **HAIL A17**: '*Storage tanks or drums for fuel, chemicals or liquid waste*', **HAIL E1**: '*Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition*', **HAIL F4**: '*Motor vehicle workshops*' and **HAIL I**: '*Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment*' are more likely than not to have occurred at the site. Soil sampling and analysis was therefore undertaken to identify if these activities have contributed to soil contamination that would be unacceptable for the proposed development.

Soil testing indicates that contamination present at the site is below the applicable soil contaminant standards applicable for a 'Commercial/Industrial Outdoor Worker (Unpaved)' land-use but will exceed other more susceptible land uses.

Accordingly, should development works proceed, a controlled activity consent from the Far North District Council will be required. A Site Management Plan (SMP) will need to accompany a resource consent application which outlines appropriate site management and soil disposal procedures. ***A resource consent will be required before any groundworks can commence. As per Regulation 9 (3)(c) the regulatory authority must be provided a copy of this report.***

8.1 Site Investigation Certifying Statement

The document signatories of LDE certify that:

1. this preliminary and detailed site investigation meets the requirements of the Resource Management (National Environmental Standard for assessing and managing contaminants in soil to protect human health) Regulations 2011 because it has been:
 - a. done by a suitably qualified and experienced practitioner, and
 - b. done in accordance with the current edition of Contaminated land management guidelines No 5 – Site investigation and analysis of soils, and
 - c. reported on in accordance with the current edition of Contaminated land management guidelines No 1 – Reporting on contaminated sites in New Zealand, and
 - d. the report is certified by a suitably qualified and experienced practitioner.

This detailed site investigation concludes that:

- a. [For activities under Regulation 9 of the NESCS] does not exceed the applicable standard in Regulation 7 of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner(s) (SQEPs) who have done this investigation and have certified this report is included in Appendix C.

9 LIMITATIONS

This investigation presents a preliminary and detailed site investigations of the potential for ground contamination, prepared exclusively for Ballance Agri - Nutrients Ltd and Far North District Council with respect to the brief given to us.

Information, opinions, and recommendations contained in it cannot be used for any other purpose or by any other entity without our review and written consent. LDE Ltd accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report by any third party.

Opinions given in this report are based on a review of existing data, evidence gathered during a site walkover, anecdotal information, and specific soil sampling at discrete locations. There is still some possibility that contaminating activities have taken place or contamination at the site is more than that described in this report and LDE should be contacted immediately if the conditions are suspected to differ from that described.

10 REFERENCES

- ANZECC. (2000). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Auckland: Australian and New Zealand Environment and Conservation Council.
- Auckland Regional Council. (2001). *Background Concentrations of Inorganic Elements in Soils in the Auckland Region*. Auckland: ARC.
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- MfE. (2004). *Landfill Waste Acceptance Criteria and Landfill Classification*. Wellington: Ministry for the Environment.
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- MfE. (2021). *Contaminated Land Management Guidelines No 1*. Wellington: Ministry for the Environment.
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- NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure*. Canberra: National Environmental Protection Council.
- Parliamentary Counsel Office. (2015). *Health and Safety at Work Act 2015*. Wellington: Parliamentary Counsel Office.
- PDP. (2015). *Guidance for Analysis of Soil Contamination Using a Portable X-Ray Fluorescence Spectrometer*. Auckland: PATTLE DELAMORE PARTNERS LTD.
- WasteMinz. (2018). *Technical Guidelines for Disposal to Land*. Auckland: Waste Management Institute New Zealand.

APPENDIX A

LABORATORY TEST RESULTS AND CHAIN OF CUSTODY RECORDS

Certificate of Analysis

Page 1 of 2

Client:	Land Development & Engineering Limited	Lab No:	3426550	A2Pv1
Contact:	Austen Heuvel	Date Received:	11-Dec-2023	
	C/- Land Development & Engineering Limited	Date Reported:	13-Dec-2023	
	201 Victoria Street West	Quote No:	115238	
	Auckland Central	Order No:		
	Auckland 1010	Client Reference:	25807	
		Add. Client Ref:	Sampled: 07/12/23	
		Submitted By:	Austen Heuvel	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
B-FRAG	3426550.1	Debris	11.80	Asbestos NOT detected. Organic fibres detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Analyst's Comments

Appendix No.1 - Chain of Custody

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	-	1
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.01 g	1
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 12-Dec-2023 and 13-Dec-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Mahaleel (May) Alfante BSc, PGDipSci
Laboratory Technician - Asbestos



Quote No

Primary Contact

Submitted By

Client Name

Address

Phone

Email

Charge To

Client Reference

Order No

Results To

Reports will be emailed to Primary Contact by default.
Additional Reports will be sent as specified below.

☒ Email Primary Contact☐ Email Submitter☐ Email Client☐ Email Other☐ Other

ADDITIONAL INFORMATION

ANALYSIS REQUEST

R J Hill Laboratories Limited
Ground Floor, 28 Heather Street
Parnell
Auckland 1052, New Zealand

Job No: Date Recv: 11-Dec-23 15:35

342 6550

Received by: May Alfante



3134265503

0508 HILL LAB (44 555 22)

+64 7 858 2000

mail@hill-labs.co.nz

www.hill-labs.co.nz

CHAIN OF CUSTODY RECORD

Sent to

Hill Laboratories

Date & Time:

Name:

☐ Tick if you require COC
to be emailed back

Signature:

Samples will be processed
capability and capacity. P
retained and analysed at

Temperature On Arrival testing to be

Received at

Hill Laboratories

21.4 °C

Temperature was measured on one or
more arbitrarily chosen samples in this
batch.

Priority

☐ Low☒ Normal☐ High☐ Urgent (ASAP, extra charge applies, please contact lab first)

Requested Reporting Date:

Please ensure all asbestos samples are **individually
double bagged** upon submission to the laboratory.

No.	Sample Name	Sample Material	Sample Location	Sample Date	Tests Required (if not as per Quote)
1	AG 1	Soil		7/12	DCP + HMB
2	S1 0.0				
3	S1 0.5				
4	S2 0.0				
5	S2 0.3				
6	S4 0.0				
7	S4 0.5				
8	S5 0.0				
9	S6 0.0				
10	S7 0.0-0.5				
11	S8 0.0				
12	S9 0.0				

Continued on next page

No.	Sample Name	Sample Material	Sample Location	Sample Date	Tests Required (if not as per Quote)
13	S10	Soil			OCD + HmP
14	S11	Soil			
15	S12	Soil			↓
16	B-FRAG	BUCK			ACM
17	S13	Soil			OCD + HmP
18					
19					
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21					
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23					
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40					

Certificate of Analysis

Page 1 of 4

Client:	Land Development & Engineering Limited	Lab No:	3426549	SPV1
Contact:	Austen Heuvel	Date Received:	11-Dec-2023	
	C/- Land Development & Engineering Limited	Date Reported:	15-Dec-2023	
	201 Victoria Street West	Quote No:	115238	
	Auckland Central	Order No:		
	Auckland 1010	Client Reference:	25807	
		Submitted By:	Austen Heuvel	

Sample Type: Soil						
Sample Name:		AG 1	S1 0.0	S1 0.5	S2 0.0	S2 0.3
		07-Dec-2023	07-Dec-2023	07-Dec-2023	07-Dec-2023	07-Dec-2023
Lab Number:		3426549.1	3426549.2	3426549.3	3426549.4	3426549.5
Individual Tests						
Dry Matter	g/100g as rcvd	80	76	72	69	70
Heavy metals, trace As,Cd,Cr,Cu,Ni,Pb,Zn,Hg						
Total Recoverable Arsenic	mg/kg dry wt	12.7	7.0	8.8	4.1	5.2
Total Recoverable Cadmium	mg/kg dry wt	0.65	21	18.5	1.59	5.0
Total Recoverable Chromium	mg/kg dry wt	23	60	46	41	30
Total Recoverable Copper	mg/kg dry wt	34	128	100	17.2	29
Total Recoverable Lead	mg/kg dry wt	47	15.8	14.9	10.2	10.7
Total Recoverable Mercury	mg/kg dry wt	0.32	0.19	0.18	0.42	0.22
Total Recoverable Nickel	mg/kg dry wt	24	27	28	16.0	29
Total Recoverable Zinc	mg/kg dry wt	77	310	250	75	200
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
alpha-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
beta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
delta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
4,4'-DDD	mg/kg dry wt	< 0.013	0.029	0.026	< 0.014	< 0.015
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
4,4'-DDE	mg/kg dry wt	< 0.013	0.120	0.075	< 0.014	< 0.015
2,4'-DDT	mg/kg dry wt	< 0.013	0.021	0.019	< 0.014	< 0.015
4,4'-DDT	mg/kg dry wt	< 0.013	0.153	0.120	< 0.014	< 0.015
Total DDT Isomers	mg/kg dry wt	< 0.08	0.33	0.24	< 0.09	< 0.09
Dieldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endosulfan I	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endosulfan II	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endrin	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Endrin ketone	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Heptachlor	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015
Methoxychlor	mg/kg dry wt	< 0.013	< 0.014	< 0.014	< 0.014	< 0.015

Sample Type: Soil						
Sample Name:		S4 0.0 07-Dec-2023	S4 0.5 07-Dec-2023	S5 0.0 07-Dec-2023	S6 0.0 07-Dec-2023	S7 0.0-0.5 07-Dec-2023
Lab Number:		3426549.6	3426549.7	3426549.8	3426549.9	3426549.10
Individual Tests						
Dry Matter	g/100g as rcvd	65	70	64	81	68
Heavy metals, trace As,Cd,Cr,Cu,Ni,Pb,Zn,Hg						
Total Recoverable Arsenic	mg/kg dry wt	6.2	3.1	3.5	16.8	4.7
Total Recoverable Cadmium	mg/kg dry wt	0.97	0.156	0.25	1.86	0.194
Total Recoverable Chromium	mg/kg dry wt	28	30	75	34	25
Total Recoverable Copper	mg/kg dry wt	29	14.8	38	46	22
Total Recoverable Lead	mg/kg dry wt	13.6	11.2	8.0	46	10.2
Total Recoverable Mercury	mg/kg dry wt	0.18	0.25	0.27	0.04	0.28
Total Recoverable Nickel	mg/kg dry wt	21	12.8	36	14.9	15.4
Total Recoverable Zinc	mg/kg dry wt	84	41	68	780	66
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
alpha-BHC	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
beta-BHC	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
delta-BHC	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
gamma-BHC (Lindane)	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
cis-Chlordane	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
trans-Chlordane	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
2,4'-DDD	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
4,4'-DDD	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
2,4'-DDE	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
4,4'-DDE	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
2,4'-DDT	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
4,4'-DDT	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Total DDT Isomers	mg/kg dry wt	< 0.10	< 0.09	< 0.09	< 0.08	< 0.09
Dieldrin	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endosulfan I	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endosulfan II	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endosulfan sulphate	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endrin	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endrin aldehyde	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Endrin ketone	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Heptachlor	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Heptachlor epoxide	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Hexachlorobenzene	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Methoxychlor	mg/kg dry wt	< 0.016	< 0.014	< 0.015	< 0.013	< 0.015
Sample Name:		S8 0.0 07-Dec-2023	S9 0.0 07-Dec-2023	S10 07-Dec-2023	S11 07-Dec-2023	S12 07-Dec-2023
Lab Number:		3426549.11	3426549.12	3426549.13	3426549.14	3426549.15
Individual Tests						
Dry Matter	g/100g as rcvd	66	70	80	70	77
Heavy metals, trace As,Cd,Cr,Cu,Ni,Pb,Zn,Hg						
Total Recoverable Arsenic	mg/kg dry wt	4.1	5.1	6.5	7.6	9.8
Total Recoverable Cadmium	mg/kg dry wt	0.61	1.27	2.2	6.3	13.1
Total Recoverable Chromium	mg/kg dry wt	21	19.2	17.7	48	61
Total Recoverable Copper	mg/kg dry wt	26	26	32	57	71
Total Recoverable Lead	mg/kg dry wt	12.9	14.9	17.9	21	54
Total Recoverable Mercury	mg/kg dry wt	0.24	0.24	0.07	0.13	0.09
Total Recoverable Nickel	mg/kg dry wt	17.5	16.6	21	38	35
Total Recoverable Zinc	mg/kg dry wt	82	98	112	330	900
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
alpha-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
beta-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013

Sample Type: Soil						
Sample Name:		S8 0.0 07-Dec-2023	S9 0.0 07-Dec-2023	S10 07-Dec-2023	S11 07-Dec-2023	S12 07-Dec-2023
Lab Number:		3426549.11	3426549.12	3426549.13	3426549.14	3426549.15
Organochlorine Pesticides Screening in Soil						
delta-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
2,4'-DDT	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.015	< 0.014	< 0.013	0.014	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.09	< 0.09	< 0.08	< 0.09	< 0.08
Dieldrin	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endosulfan I	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endosulfan II	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endrin	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Endrin ketone	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Heptachlor	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Methoxychlor	mg/kg dry wt	< 0.015	< 0.014	< 0.013	< 0.014	< 0.013
Sample Name:		S13 07-Dec-2023				
Lab Number:		3426549.16				
Individual Tests						
Dry Matter	g/100g as rcvd	78				
Heavy metals, trace As,Cd,Cr,Cu,Ni,Pb,Zn,Hg						
Total Recoverable Arsenic	mg/kg dry wt	9.6				
Total Recoverable Cadmium	mg/kg dry wt	6.8				
Total Recoverable Chromium	mg/kg dry wt	36				
Total Recoverable Copper	mg/kg dry wt	45				
Total Recoverable Lead	mg/kg dry wt	21				
Total Recoverable Mercury	mg/kg dry wt	0.03				
Total Recoverable Nickel	mg/kg dry wt	30				
Total Recoverable Zinc	mg/kg dry wt	420				
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013				
alpha-BHC	mg/kg dry wt	< 0.013				
beta-BHC	mg/kg dry wt	< 0.013				
delta-BHC	mg/kg dry wt	< 0.013				
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013				
cis-Chlordane	mg/kg dry wt	< 0.013				
trans-Chlordane	mg/kg dry wt	< 0.013				
2,4'-DDD	mg/kg dry wt	< 0.013				
4,4'-DDD	mg/kg dry wt	< 0.013				
2,4'-DDE	mg/kg dry wt	< 0.013				
4,4'-DDE	mg/kg dry wt	< 0.013				
2,4'-DDT	mg/kg dry wt	< 0.013				
4,4'-DDT	mg/kg dry wt	< 0.013				
Total DDT Isomers	mg/kg dry wt	< 0.08				
Dieldrin	mg/kg dry wt	< 0.013				
Endosulfan I	mg/kg dry wt	< 0.013				
Endosulfan II	mg/kg dry wt	< 0.013				
Endosulfan sulphate	mg/kg dry wt	< 0.013				

Sample Type: Soil		
Sample Name:		S13 07-Dec-2023
Lab Number:		3426549.16
Organochlorine Pesticides Screening in Soil		
Endrin	mg/kg dry wt	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013
Heptachlor	mg/kg dry wt	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	1-16
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation May contain a residual moisture content of 2-5%.	-	1-16
Heavy metals, trace As,Cd,Cr,Cu,Ni,Pb,Zn,Hg	Dried sample, <2mm fraction. Nitric/Hydrochloric acid digestion, ICP-MS, trace level.	0.010 - 0.8 mg/kg dry wt	1-16
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	1-16
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1-16
Total Recoverable digestion	Nitric / hydrochloric acid digestion. US EPA 200.2.	-	1-16

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 12-Dec-2023 and 14-Dec-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

APPENDIX B

QUALIFICATIONS AND EXPERIENCE OF THE SQEP

James Gladwin - BSc (Hons) Environmental Science, PgDip in Soil Science, CEnvP.

James is a Suitably Qualified and Experience Practitioner (SQEP). With 15+ years of experience in contaminated land covering a wide range of sites and contamination types, James has an excellent understanding of the investigation and remediation of contaminated land in accordance with the National Environmental Standards for Contaminated Land (NЕСS) and the Contaminated Land Management Guidelines (CLMG).

James is a certified environmental practitioner (CEnvP) and has provided a wide range of contaminated land services to an array of clients. Key clients include the District and City Councils of the Bay of Plenty, the Bay of Plenty Regional Council, Christchurch City Council, Gisborne City Council, New Plymouth District Council, and the NZ Transport Agency. He has been a panel member that provided technical review and guidance for the development of contaminated sites. He has also provided technical reviews for contaminated land investigations completed by third parties. James currently sits on the Bay of Plenty Regional Council Environmental Panel and is a permanent member of ALGA.

James worked on the Kopeopeo Canal Remediation Project, providing independent technical analysis for dioxin contamination in soils, sediment, water, and air. He monitored and reported on the effectiveness of the dredge trial within resource consent requirements. This provided proof that the remediation methods were effective and practical so that the full-scale remediation of the canal could be completed. James continued to provide technical input through the remediation stage of the project.



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BALLANCE KAIKOHE

SITE ADDRESS
**CAREY ROAD
KAIKOHE**

DRAWING
COVER PAGE

DRAWING STATUS
CONCEPT

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JAW

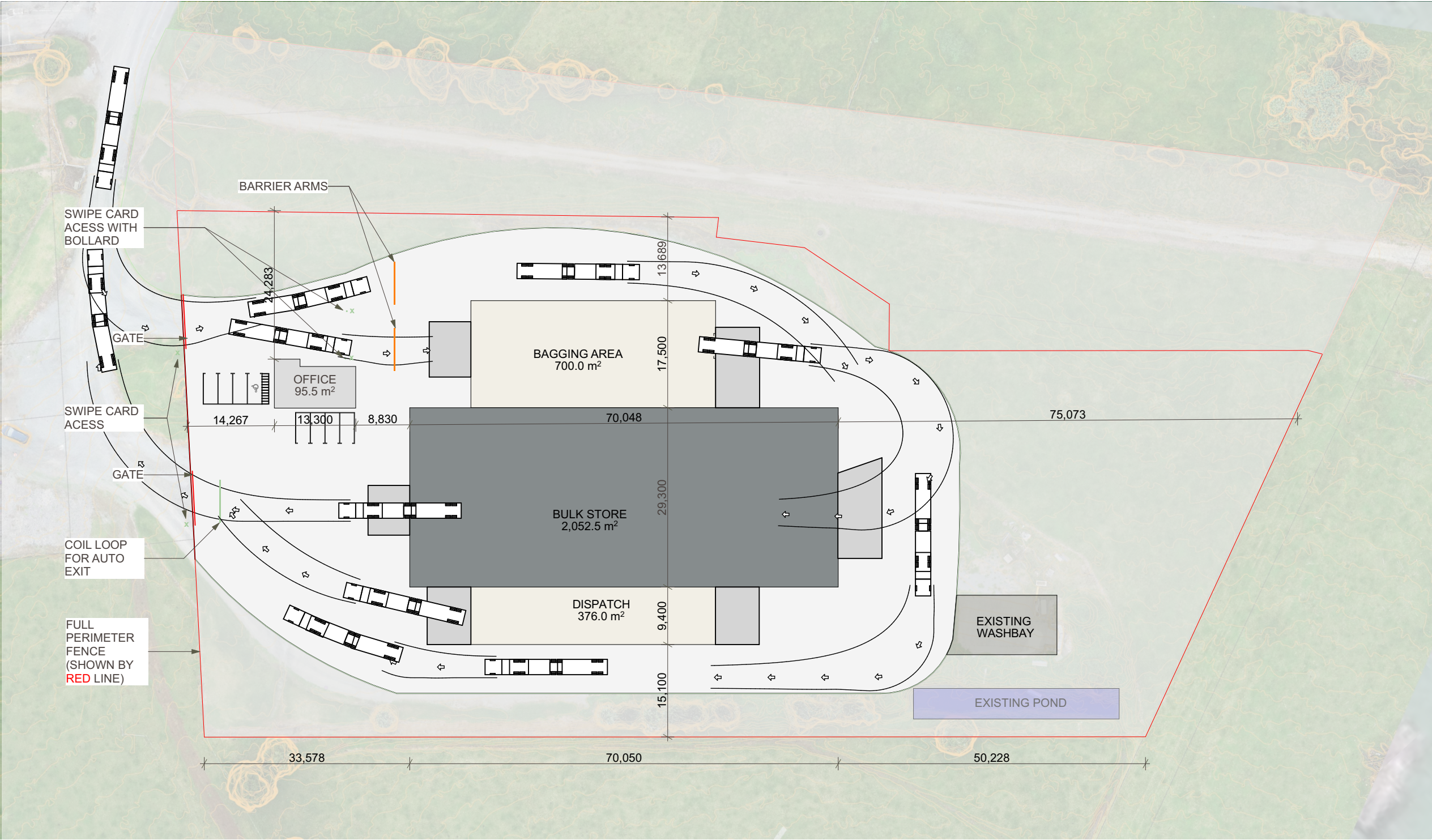
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PROJECT NO.

SHEET SIZE
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SITE ADDRESS
**CAREY ROAD
KAIKOHE**

DRAWING
SITE PLAN

DRAWING STATUS
CONCEPT

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SCALES
1:700

PROJECT NO.
PROJECT NO.

SHEET SIZE
A3

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PD03

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KAIKOHE**

SITE ADDRESS

CAREY ROAD
KAIKOHE

DRAWING

GROUND FLOOR PLAN

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CONCEPT

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SCALE

1:300

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SHEET SIZE

A3

SHEET NO

PD03

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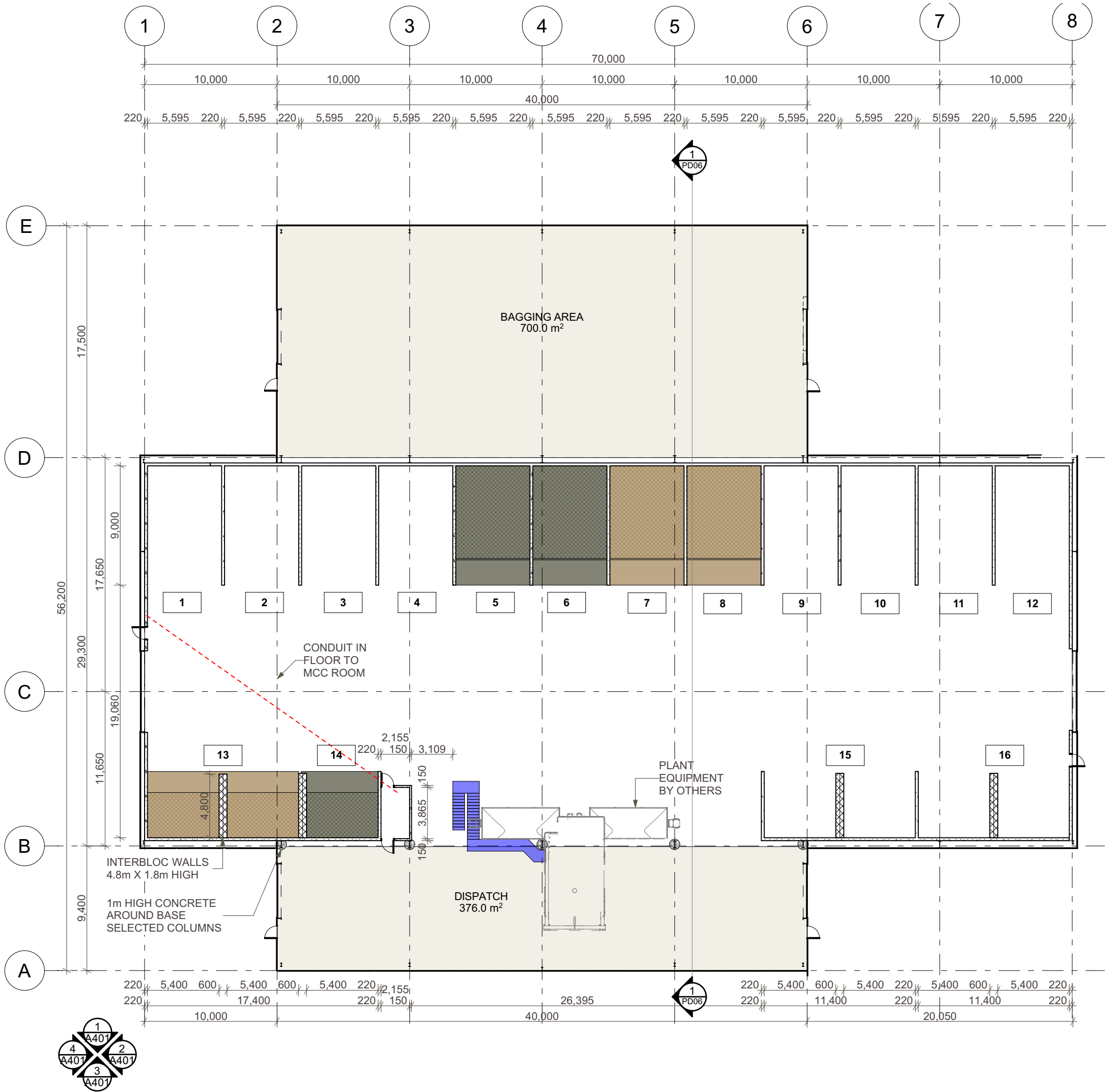
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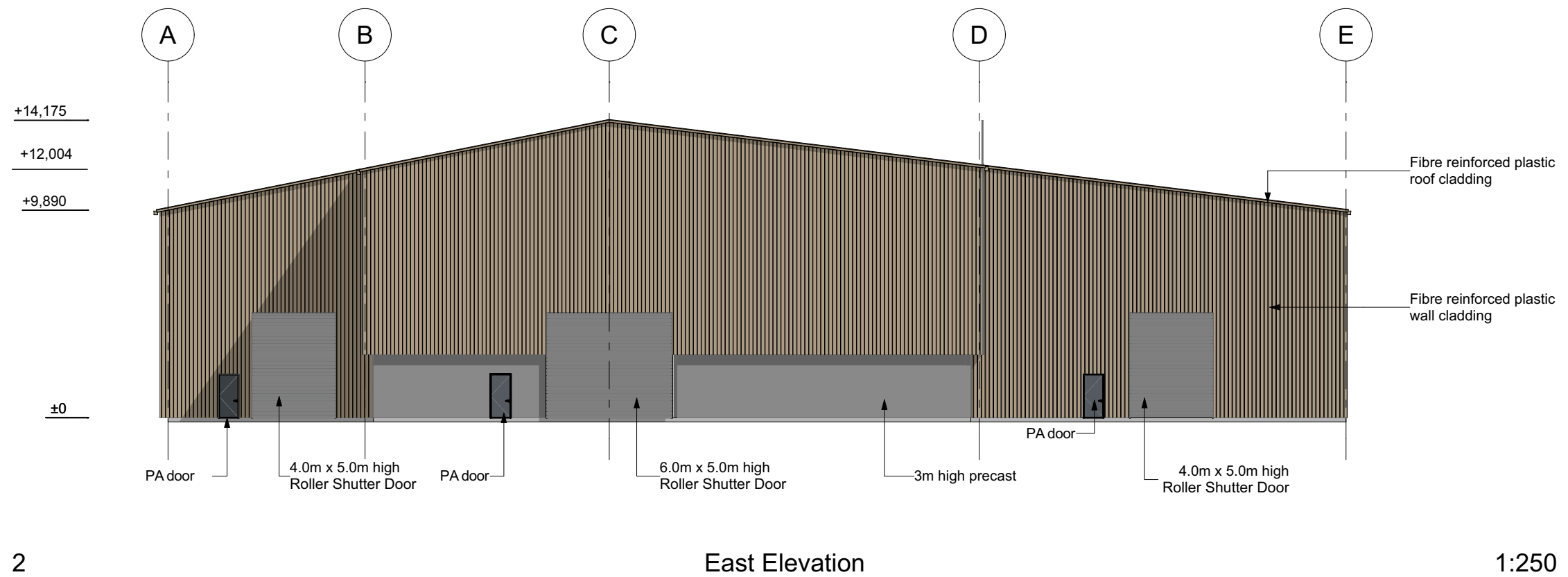
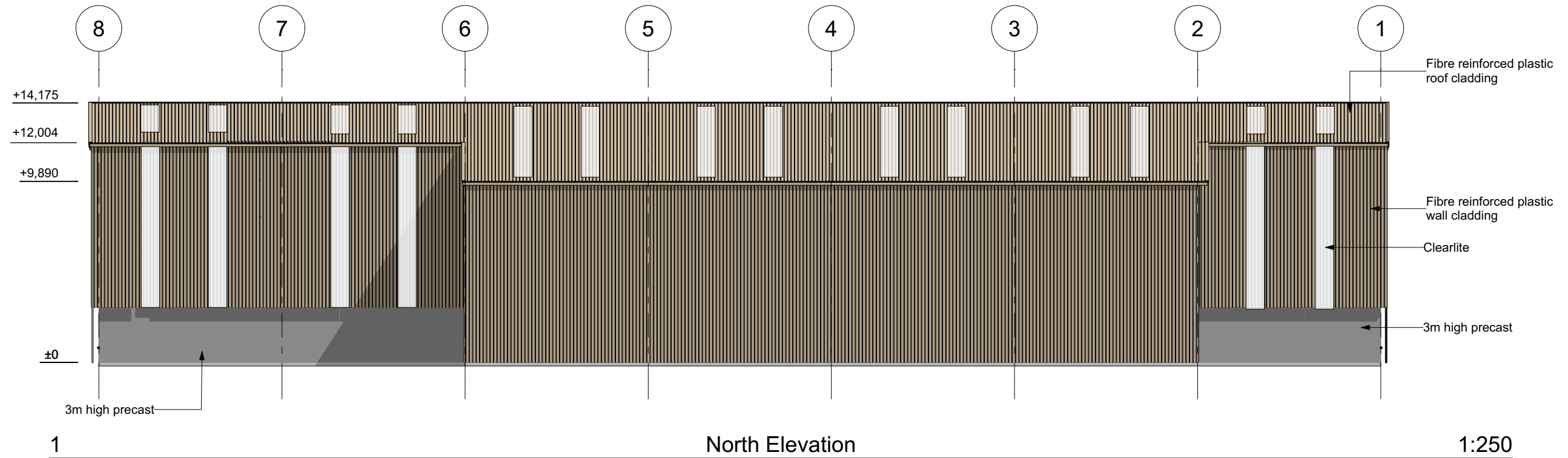
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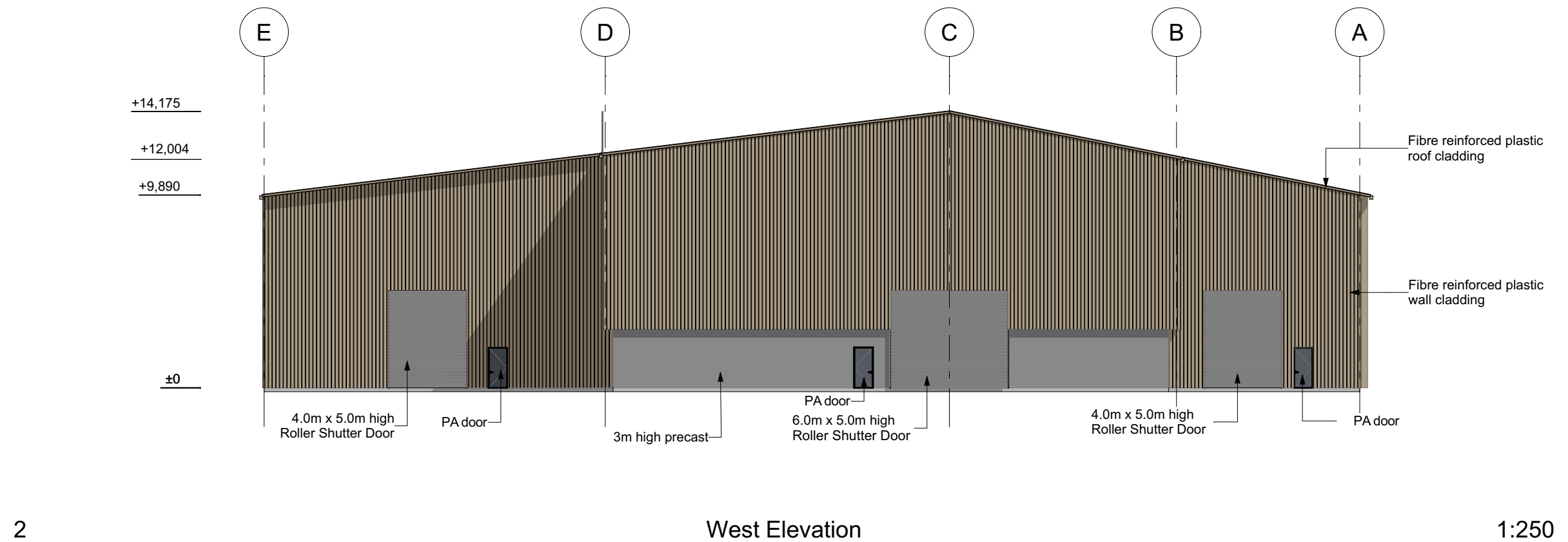
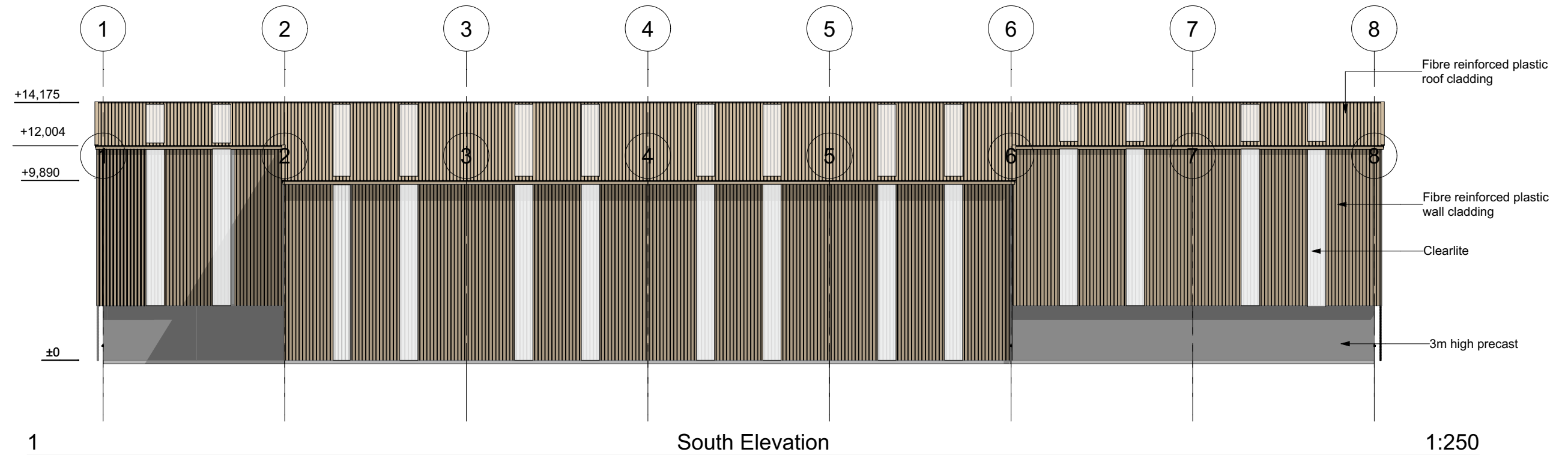
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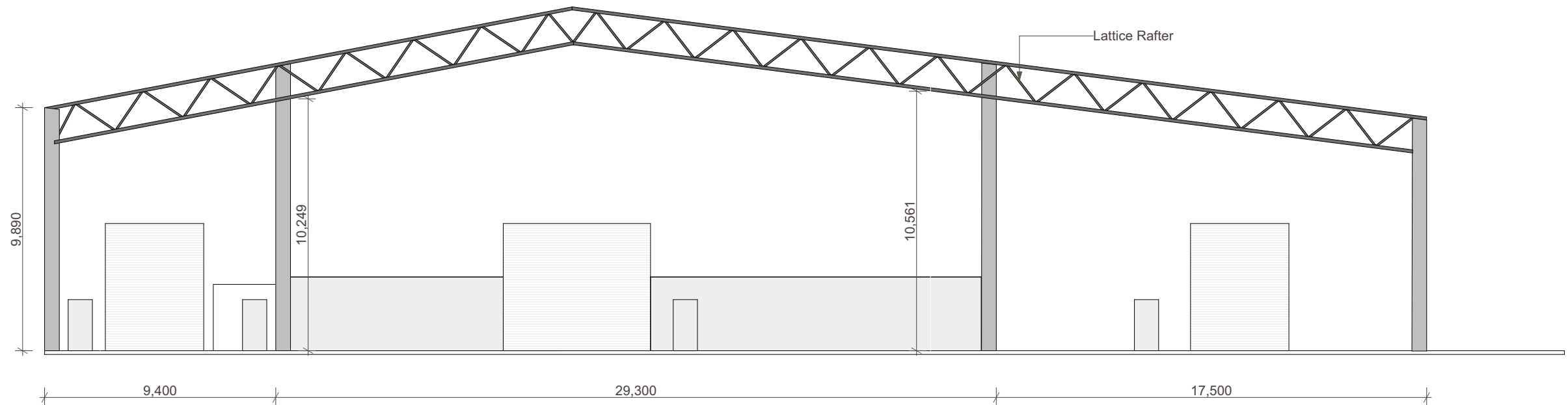
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Section A

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BALLANCE KAIKOHE

SITE ADDRESS

**CAREY ROAD
KAIKOHE**

DRAWING

SECTION A

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