

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for

(more than one circle can be ticked):

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

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

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

Yes No

4. Consultation

Have you consulted with Iwi/Hapū? Yes No

If yes, which groups have you consulted with?

Who else have you consulted with?

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

5. Applicant Details

Name/s:

Far North District Council – Infrastructure Strategy Department C/O - Ana Gilroy

Email:

Phone number:

Postal address:

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

6. Address for Correspondence

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

Name/s:

Melissa McGrath

Email:

Phone number:

Postal address:

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

** 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:

Various - Please refer to Section 1 of the AEE

**Property Address/
Location:**

Postcode _____

8. Application Site Details

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

Name/s:

**Site Address/
Location:**

Postcode

Legal Description:

Val Number:

Certificate of title:

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

Site visit requirements:

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

Is there a dog on the property? Yes No

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

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.

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

10. Would you like to request Public Notification?

Yes No

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

(more than one circle can be ticked):

- Building Consent
- 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
- Changing the use of a piece of land
- Disturbing, removing or sampling soil
- Removing or replacing a fuel storage system

13. Assessment of Environmental Effects:

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

Your AEE is attached to this application Yes

13. Draft Conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full)

Far North District Council

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

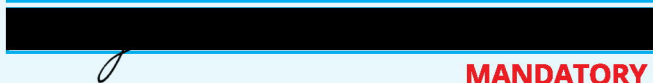
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without 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)

Mary Moore

Signature:

(signature of bill payer)



Date 23-Oct-2024

MANDATORY

15. Important Information:

Note to applicant

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

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

Fast-track application

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

Privacy Information:

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

15. Important information continued...

Declaration

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

Name: (please write in full)

Signature:


Date

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

Checklist (please tick if information is provided)

- Payment (cheques payable to Far North District Council)
- A current Certificate of Title (Search Copy not more than 6 months old)
- 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.



Moerewa Stormwater Improvements

24 Pembroke Street, 23 Plunket Street and Lot 1 DP
165005 Moerewa

Assessment of Environmental Effects and Statutory Analysis

17 October 2024

B&A
Urban & Environmental

Prepared for:
Far North District Council

B&A Reference:

20610

Status:

Final Revision A

Date:

17 October 2024

Prepared by:



Melissa McGrath

Senior Associate, Barker & Associates Limited

Reviewed by:



Makarena Dalton

Senior Associate, Barker & Associates Limited

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Appendix 3	Moerewa Stormwater Improvements Concept Design Report (GHD)
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Appendix 5	Ecological Assessment (Wild Ecology)
Appendix 6	Erosion and Sediment Control Plan (Hoskin Civil)
Appendix 7	Rules Assessment
Appendix 8	Written Approvals

1.0 Applicant and Property Details

To:	Far North District Council
Site Address:	Pembroke Street, Plunket Street, Williams Street, Reed Street and Lot 1 DP 165005
Applicant Name:	Far North District Council – Infrastructure Strategy Department
Address for Service:	Barker & Associates Ltd PO Box 1986 Shortland Street Auckland 1140 Attention: Melissa McGrath
Legal Description:	Road reserve, parcel 5205238, Lot 15 DP 5100, NA805/64 (Freehold), Part Allotment 140 Parish of Kawakawa and Lot 1 DP 165005 (refer to Records of Title as Appendix 1)
Site Area:	Various locations – earthworks over an area of 7,500m ²
Site Owner:	Far North District Council (Road authority and Parks) Sarah Kidwell Bay of Islands County Council Ministry of Education (23 Plunket Street) Kiwi Rail Tauhara North Farming and Company LP
District Plan:	Operative Far North District Plan (ODP) Proposed Far North District Plan (PDP)
Operative Plan Zone	Residential Zone/Rural Production Zone
Operative Plan Overlays & Controls:	New Zealand Rail Designation
Proposed Plan Zone:	Settlement Zone/Rural Production Zone
Proposed Plan Overlays & Controls:	Kiwi Rail Holdings Designation River Flood Hazard Zone 10, 50 and 100-year ARI Event
Locality Diagram:	Refer to Figure 1
Brief Description of Proposal:	Public stormwater network upgrades

Summary of Reasons for Consent:

ODP: Restricted discretionary consent is required pursuant to rule 7.6.5.3.7 Setback from boundaries in Residential Zone. Discretionary consent is required pursuant to rule 12.2.6.1.2 indigenous vegetation clearance exceeding 500m² and rule 12.3.6.3 excavation exceeding 20,000m³ in the Rural Production Zone.

A summary of reasons for consent is outlined in **Section 5** below.

2.0 Overview

This report has been prepared in support of a resource consent application on behalf of the applicant, Far North District Council ('**FNDC**'), for public stormwater network upgrades at Moerewa.

This Assessment of Environmental Effects ('**AEE**') has been prepared in accordance with the requirements of section 88 of and Schedule 4 to the Resource Management Act 1991 ('**the Act**') and is intended to provide the information necessary for a full understanding of the activity for which consent is sought and any actual or potential effects the proposal may have on the environment.

2.1 Background

The area under consideration falls within the confines of the Moerewa Catchment, characterised mainly by low density residential. In July 2020, Te Taitokerau and Moerewa in particular experienced a significant storm event that led to widespread flooding of residential properties. The aftermath of this event prompted a closer examination of the stormwater management within the Moerewa catchment area, with a particular focus on ameliorating the existing conditions. The repercussions of the flooding emphasised the need for effective stormwater improvement measures to safeguard the local residential properties and enhance the resilience of the area against future inclement weather.

The extensive flooding that occurred during this event highlighted the deficiencies in the existing stormwater infrastructure. As a result, there is a growing impetus to undertake comprehensive stormwater improvement works within the Moerewa catchment. These improvements are intended not only to mitigate the risks of future flooding but also to enhance the overall liveability and safety of the residential properties in the catchment area.

The purpose of the proposed stormwater improvements is to redirect overland flow and convey it safely to the Waiharakeke Stream that is located south of Moerewa. The objective of this project is to:

1. Reduce frequent flooding of several properties at Otiria Road, Plunket Street, Pembroke Street and Nisbet Street.
2. Reduce safety risks to the local community and road users.

2.2 Pre-lodgement Consultant

As part of the design process consultation has been on-going with landowners directly affected, Kiwi Rail and Far North District Council Roading Department with written approval being obtained (refer to **Appendix 8**).

Far North District Council representatives and project managers Hoskin Civil have been undertaking on-going community liaison throughout the design phase of the project. Review and approval of the final project design was obtained from Pamela-Anne (Moerewa Community Liaison), Josephine Kemp-Baker (Ngāti Kopaki Hapū Representative) and Roddy Pihema (Bay of Islands-Whangaroa Community Board community on 8 October 2024 (**Appendix 8**)).

3.0 Site Context

3.1 Site Description

The subject site is located in the southern extent to Moerewa township, with works largely being contained within road reserve of Otiria Road, Pembroke Street, Williams Street, Plunket Street and Reed Street. The location of works is illustrated in **figure 1** below.

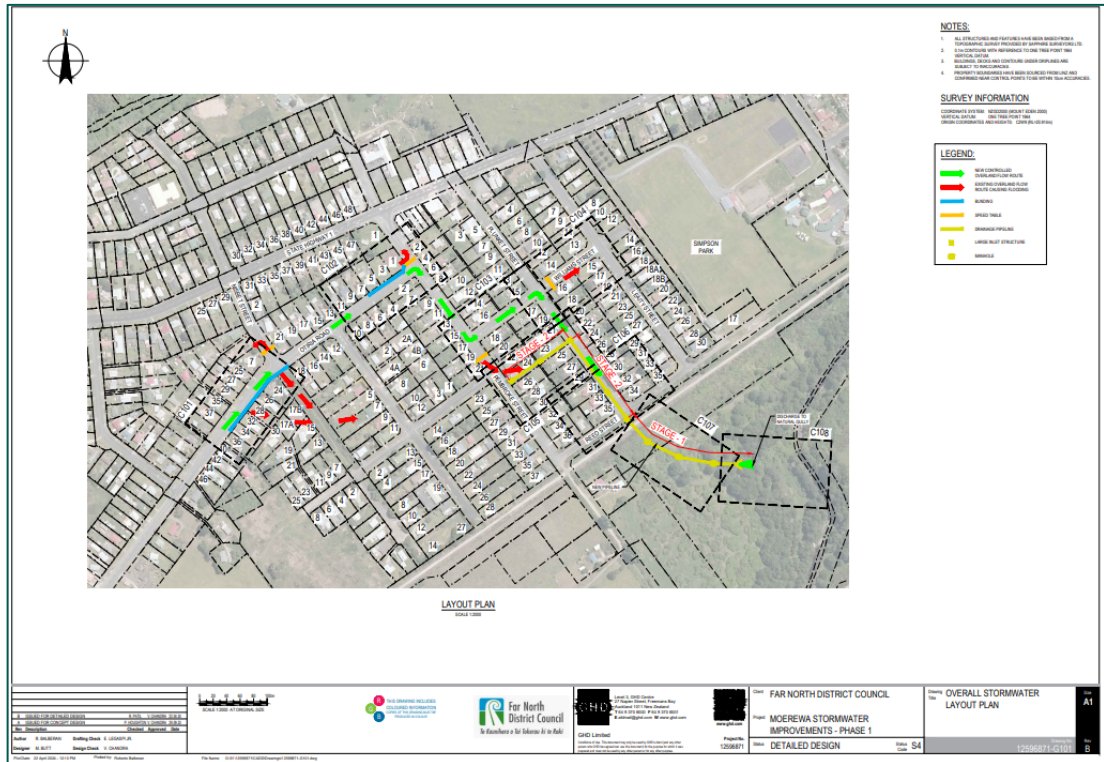


Figure 1: Locality plan. Source: GHD (refer to Appendix 3 for scaled plans).

Works will extend along the southern of privately owned sites 24 Pembroke Street and 23 Plunket Street these sites contain existing residential units, ancillary sheds and vegetation. A large stonewall is located between 24 Pembroke Street and 23 Plunket Street that is located in a narrow site owned by Bay of Islands County and forms the rear boundary of both sites. 24 Pembroke Street has an existing road frontage with vehicle crossing located in the northern corner of the site, the road berm is occupied by a footpath and a power pole located in the south-western extent of 24 Pembroke Street. 23 Plunket Street has an existing vehicle crossing located in the western corner of the site; the road berm is grassed with large bushes.

Works extend south across Reed Street, Kiwi Rail designation and into private property Lot 1 DP 165005, being a vacant rural allotment largely vegetated located at the southern edge of Moerewa township. This site is partly identified as a Protected Natural Areas (PNAs) overlay PNA05/054 'Waiharakeke Stream Alluvial Forest', described as representative site for secondary riverine podocarp forest (tōtara forest and tōtara-kahikatea forest) - one of only two examples in the Ecological District of the latter - with some plant species which are only found in riparian situations, e.g. lowland ribbonwood (*Plagianthus regius*) (see **Figure 2**).

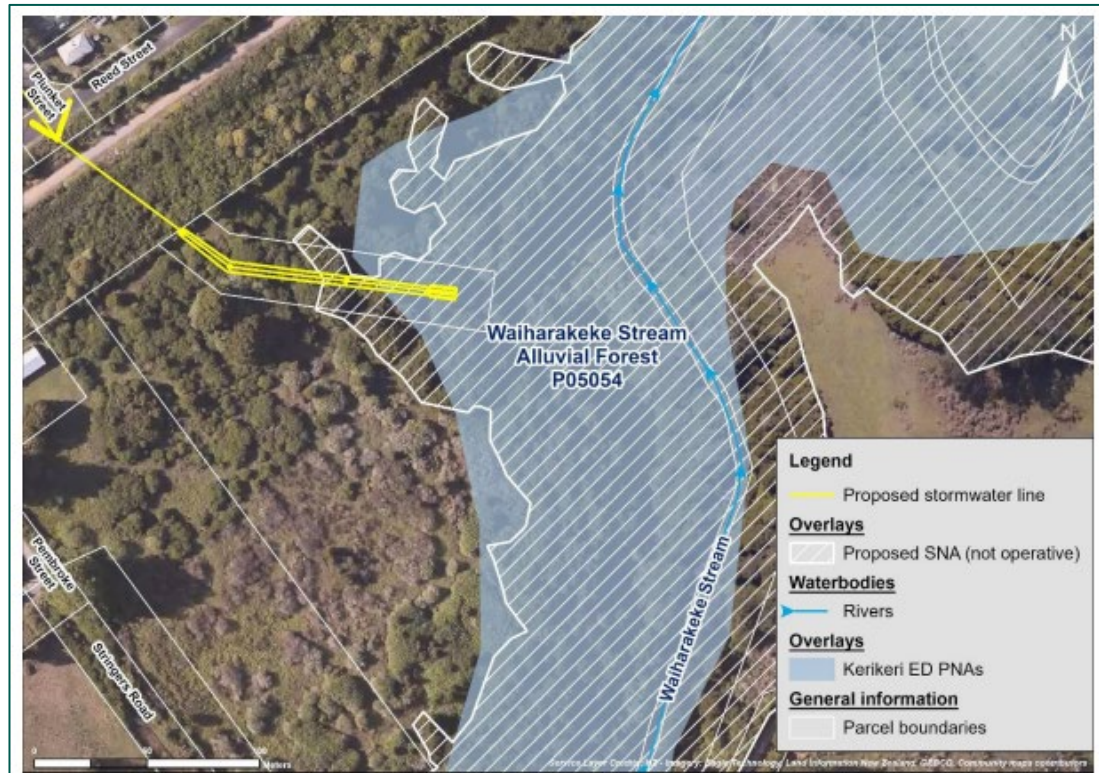


Figure 2: Proposed SNA and PNA. Source: Wild Ecology (refer to Appendix 5).

The topography of the site is predominantly flat to gently sloping towards Waiharakeke Stream. Waiharakeke Stream is a permanent watercourse which flows to the south of the proposed stormwater improvement works. Waiharakeke Stream is approximately 6m-10m wide at parts and its stream margins have been identified as NRC as a Flood Hazard Zone 10, 50 and 100-year extent. Wild Ecology have identified the vegetation types as detailed in **Figure 3** below and described further in their Ecological Assessment (**Appendix 5**).

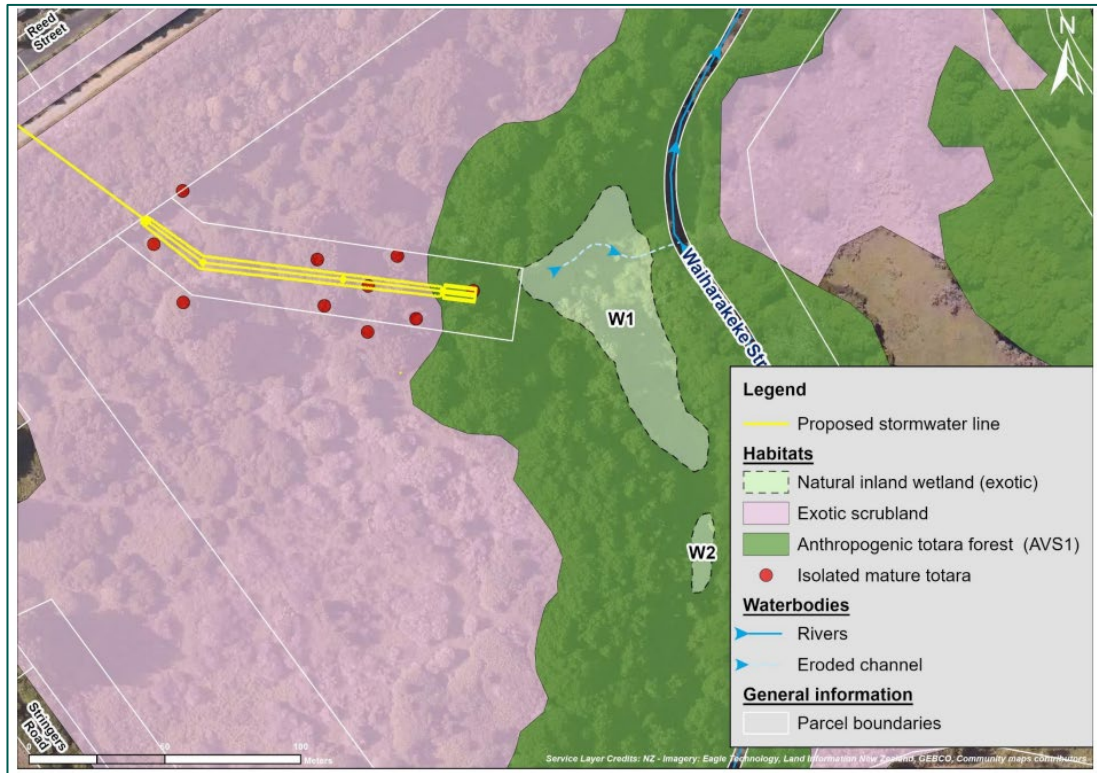


Figure 3: General habitat types. Source: Wild Ecology (refer to Appendix 5).

In terms of the Operative Far North District Plan ('ODP'), the site is zoned Residential Zone/Rural Production Zone, with Council roads being designated and Kiwi Rail Designation. Portions of the site are identified as Flood Susceptible and is not subject to any overlays or controls.

In terms of the Proposed Far North District Plan ('PDP'), the site is zoned Settlement Zone and Rural Production Zone and is subject to River Flood Hazard Zone 10- and 100-year ARI Event overlays.

3.2 Surrounding Locality

The subject site is located in the southern extent of the urban area of Moerewa township.

North, east and west of the subject site, the area is categorised by residential allotments typically accommodated within older, single unit dwellings with relatively flat topography. Moerewa main street is located north of the subject site, comprised of a range of commercial activities fronting State Highway 1.

To the south of the site, the area is categorised by rural allotments, being a mix of vegetated sites and productive farming.

In terms of nearby natural features, the Waiharakeke River is located to the south of the site. The river spans approximately 30km, before flowing into the Rangauni Harbour.

4.0 Proposal

A detailed description of the proposed stormwater improvements is set out in the Concept Design Report and Concept Design prepared by GHD and included as **Appendix 3**. A summary of the key elements of the proposal is set out below.

- **Stormwater Upgrades:** The civil plans are included in **Appendix 2** supported by Concept Design Report in **Appendix 3**. The concept design details the following upgrades:
 - Installation of a proposed 1,050mm diversion pipeline from the Plunket Street depression under Reed Street and the adjoining railway land to the Waiharakeke Stream via the easement in place over private land.
 - Installation of a proposed 600mm stormwater pipeline from Pembroke Street to Plunket Street.
- **Earthworks:** Land disturbance of approximately 28,000m³ cut/fill over an area of 7500m² is required install stormwater pipes and facilitate the works described above. Maximum cut depths and fill heights will not exceed 1.5m. Erosion and sediment control measures are proposed in accordance with GDO5. **Vegetation Clearance:** 4,343m² of vegetation clearance is proposed, Ecological Assessment completed by Wild Ecology (**Appendix 5**) concludes that majority of the vegetation contained within the construction footprint is comprised of exotic scrubland, and scattered tōtara trees which are deemed of low ecological value/significance (i.e 'not significant'/not of SNA quality). However, a small section of (567m²) of anthropogenic tōtara forest considered to be of moderate ecological significance (i.e 'significant'/of SNA quality) will also require clearance to enable the construction of the stormwater outlet.
- **Building Relocation:** The existing car parking shed within 23 Plunket Street will be relocated within the site.
- **Vehicle Crossing and Footpath Upgrades:** Various existing vehicle crossings and footpaths will be upgraded and reinstated.

5.0 Reasons for Consent

5.1 Operative Far North District Plan

A rules assessment against the provisions of the Operative Far North District Plan ('ODP') is attached as **Appendix 7**.

5.1.1 Utility Services

The OPD defines Utility Services as:

Utility Services include:

(a) the distribution or transmission by pipeline of natural or manufactured gas, petroleum or geothermal energy;

(b) the operation of a network for the purpose of telecommunication and radio communication as defined in s2(1) of the Telecommunications Act 1987 (including amateur radio networks);

- (c) the transformation, transmission, or distribution of electricity, including all poles, lines, structures and support structures;*
- (d) the distribution of water for supply including irrigation;*
- (e) the operation of a drainage or sewerage system;*
- (f) the construction and operation of a road network or railway line;*
- (g) lighthouses, meteorological activities, navigational aids and beacons and ancillary structures and includes:*
 - (i) all ancillary structures; and*
 - (ii) any incidental activity in relation to the network utility including without limitation, the operation, maintenance and upgrading of the network utility.*

The proposed stormwater improvement works includes underground pipes which are considered to fall within the definition of Network Utility.

According to rule 17.2.6.1.1 utility services (with the exception of high pressure gas lines) situated below ground in all zones is a permitted activity provided that

- (a) closed system structures for the conveyance of water or sewage, and incidental equipment including connections; and/or*
- (b) closed system pipes and fittings for the distribution or transmission of water, whether treated or untreated, for supply, including irrigation may be located above ground level where necessary for stream crossings and areas where gravity flow requires otherwise.*

Therefore, it is considered that the in-ground stormwater pipes are a permitted activity.

The OPD defines Site as:

(a) An area of land which is:

- (i) composed of one allotment in one certificate of title or two or more contiguous allotments held together in one or more certificates of title in such a way that the allotments cannot be dealt with separately without the prior consent of the Council; or*
- (ii) contained in a single allotment on an approved survey plan of subdivision for which approvals under s223 and/or s224 of the Act have been obtained and for which a separate certificate of title could be issued without further consent of the Council.*

(b) Except that in the case of:

- (i) land subdivided under the Unit Titles Act 1972, or stratum subdivision, "site" shall be deemed to be the whole of the land subject to the unit development or stratum subdivision; and*
- (ii) land subdivided under the cross lease or company lease systems (other than strata titles), "site" shall be defined as an area of land containing: • any building, accessory buildings, plus any land exclusively restricted to the users of those buildings; or • a remaining share or shares in the fee simple creating a vacant part of the whole for future cross lease or company lease purposes.*

(c) In the case of Maori land within the meaning of Te Ture Whenua Maori Act 1993:

- (i) includes a parcel of land created by a partition under s289, provided that its area complies with the Residential Intensity rule for the zone in which the land is located; or*

(ii) parcels of land partitioned and given effect to, by approval of the Maori Land Court, before 28 April 2000.

As road is not contained within a certificate of title, for the purposes of assessment of ODP rules which refer to “site”, road has not been considered to be a “site”.

5.1.2 Designations

Far North District Council:

ODP applies a designation to all Council’s roads:

The designation provides for the Council, either itself or through its agents, to control, manage and improve the local road network, including planning, design, research, construction and maintenance relating to all land within the designation. Such activities may also involve, but not necessarily be limited to, realigning the road, altering its physical configuration, culverts, bridges and associated protection works. The appropriate resource consents under the Act will be applied for where required. Note: No further resource consents will be required under the Plan but may be required under Regional Plans.

Therefore, all works proposed within the road reserve is considered to be permitted under the designation and approval has been granted from the Far North District Council Roadway Department as requiring authority.

New Zealand Railways Corporation:

Land designated for railway purposes is shown on the Planning maps and no schedule is incorporated into this Plan. New Zealand Railways Corporation’s Requiring Authority Status relates to the operation, maintenance and improvement of the existing railway system.

The proposed stormwater pipe located underground, bisecting the New Zealand Railways Corporation designation. Written approval has been granted from Kiwi Rail as requiring authority for works within this designation.

5.1.3 Chapter 7 – Residential Zone

- Pursuant to **Rule 7.6.5.3.7**, the relocated car parking shed within 23 Plunket Street will be 2m setback from the road boundary and not comply with the minimum permitted building setback from road boundary being 3m under rule 7.6.5.1.7, and is a **restricted discretionary activity**.

5.1.4 Chapter 12 – Natural and Physical Resources

- Pursuant to **Rule 12.3.2.2**, excavation and filling of approximately 28,000m³ in the Rural Production Zone is a **discretionary activity**.
- Pursuant to **Rule 12.2.6.3.1**, indigenous vegetation clearance of approximately 567m² of anthropogenic totara forest will require clearance to enable the construction of the stormwater outlet located within the Rural Production Zone, which will infringe permitted standards of rule 12.2.6.1.2 and is a **discretionary activity**.

5.2 Proposed Far North District Plan

Only those rules which are deemed to have immediate legal effect have been considered.

- Pursuant to **Rule IB-R3**, indigenous vegetation clearance of approximately 567m² of anthropogenic totara forest within an identified SNA, being more than the 100m² per site in any calendar year is a **discretionary activity**.

5.3 National Environmental Standard – Contaminated Soils

The NES Contaminated Soils were gazetted on 13th October 2011 and took effect on 1st January 2012.

The standards are applicable if the land in question is, or has been, or is more likely than not to have been used for a hazardous activity or industry and the applicant proposes to subdivide or change the use of the land, or disturb the soil, or remove or replace a fuel storage system.

The subject site is not mapped on Northland Regional Councils Selected Land Use register and there is no information that suggests that the sites have been used for any activities that are on the Hazardous Activities and Industry List (HAIL) or evidence of migration of hazardous substances from adjacent land use.

Based on the above, the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS) does not apply to the proposal.

5.4 National Environmental Standard for Freshwater

In respect to NES-FW, it is considered that the proposal is a restricted discretionary activity under Regulation 45 'Specified infrastructure' of NES-FW (2020). Resource consent will be sought concurrently from Northland Regional Council.

5.5 Proposed Northland Regional Plan (PRP)

Resource consent will be sought concurrently from Northland Regional Council as necessary for earthworks and stormwater discharge.

5.6 Activity Status

Overall, this application is for a discretionary activity.

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

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

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

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

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

The above does not apply to the proposal.

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

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

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

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

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

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

6.1.4 Step 4: Public notification in special circumstances

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

Special circumstances are those that are:

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

It is considered that there is nothing noteworthy about the proposal. It is therefore considered that the application cannot be described as being out of the ordinary or giving rise to special circumstances.

6.2 Section 95D Statutory Matters

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

In determining whether adverse effects are more than minor:

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

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

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

In this case the permitted baseline considered relevant to this proposal are:

- Underground Network Utilities within any Zone;
- Earthworks in the Residential Zone with a maximum excavation and fill volume of 200m³ with a cut or fill height less than 1.5m;
- Earthworks in the Rural Production Zone with a maximum area 5000m³ that does not have a cut or filled face exceeding an average of 1.5m over a length of 3m;
- Buildings within 3m of the Road Boundary; and
- Traffic movements associated with construction traffic.

- Trade competition must be disregarded.

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

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

Written approval to the proposal has been obtained from the following land owners:

- Far North District Council Roading Department
- Kiwi Rail New Zealand
- Moerewa School (Ministry of Education)
- Tauhara North No.2 Trust

Approval to the proposal has been obtained from the following occupiers:

- Stephen Herries
- Skip Kidwell

Therefore, adverse effects on these persons have been disregarded.

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

6.3 Land Excluded from the Assessment

In terms of the tests for public notification (but not for the purposes of limited notification or service of notice), the adjacent properties to be excluded from the assessment are shown in **Figure 4** below, and include:

- 23 and 25 Pembroke Street;
- 22 and 26 Pembroke Street; and
- 20, 22 and 24 Plunket Street;

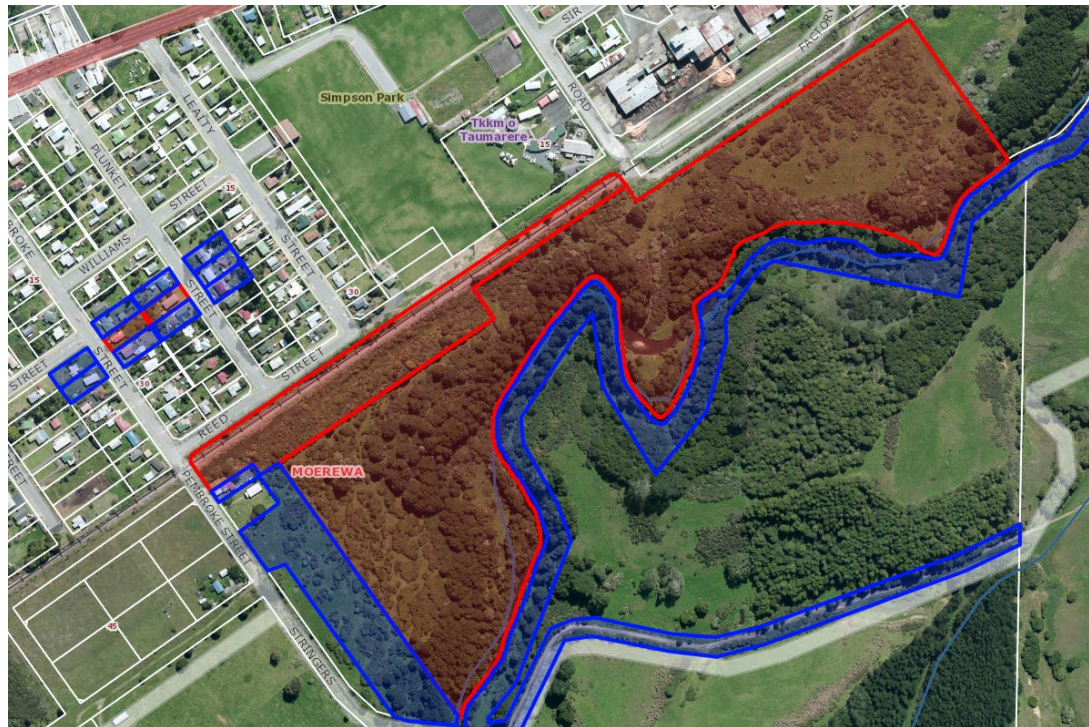


Figure 4: Adjacent properties in relation to subject site. Source: Emap.

6.4 Assessment of Effects on the Wider Environment

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

- Land Disturbance and Construction Activities;
- Character and Amenity Effects;
- Flood Hazard;
- Ecological Effects;
- Cultural Effects; and
- Cumulative Effects.

These matters are set out and discussed below.

6.4.1 Land Disturbance and Construction Activities

Land disturbance of approximately 28,000m³ cut/fill over an area of 7,500m² is required to facilitate the works described in **Section 4**.

In terms of timing and duration, the staging proposed in the Erosion and Sediment Control Plan (ESCP) prepared by Hoskin Civil Limited and included as **Appendix 6** demonstrates that earthworks will be undertaken within the construction season (Summer of 24/25). Avoidance of winter works will aid in reducing the risk of sediment generation and discharge from the site.

The ESCP includes the following control measures (summarised):

- The topsoil bunds will be immediately covered either with geotextile fabric (or seeded and mulched). Stockpiles will be placed away from water bodies and the drip lines of protected

trees (if any). All vegetation clearing works will be undertaken in stages. The reinstated areas will be vegetated with the appropriate native vegetation to enhance the ecological value of the area.

- The primary sediment control measures for the project will include silt fences and straw wattles. Silt fences will be installed to slow down the initial sheet flow and allow large particles to settle during rain events.
- Cesspits protection will be placed around the grate during active work hours and will be removed at the end of each day once the work is complete (if the area is stabilized). This will allow the stormwater network to operate as designed.
- Earthworks will be managed to prevent the deposition of earth, mud, dirt, or other debris on adjoining to the construction site roads and footpaths outside the designated work areas.
- On-site dewatering might possibly be required during excavations, which could pose a risk of sediment discharge into the surrounding environment. To manage this risk, a water treatment receptacle (such as SEDITROL or similar) will be established, which will follow GD05 principles for 14 dimension ratios. The treated water may be discharged into the stream at the designated location as approved by the Project Engineer(s).
- Number of the residential properties along Plunket and Reed Streets are situated close to the construction works, with many at medium to high risk of experiencing significant dust impacts. A comprehensive dust management and monitoring will be implemented by the Contractor across the construction zone within residential development.
- No erosion and sediment control (ESC) measures will be decommissioned without written approval from Project Engineer(s).

In terms of construction effects, it is acknowledged that the proposal includes earthworks which will result in heavy vehicle movements to and from the site as well as heavy machinery utilised on site. It is anticipated the Construction Management Plan (CMP) will be required as a condition of consent. The CMP will outline timeframes and duration of the works proposed. With regards to construction traffic related to the earthworks it is noted that there is sufficient space on the site to provide for parking for earthworks related construction vehicles. Traffic and parking capacity effects of the construction period will be able to be appropriately managed and will be temporary in nature.

In terms of noise, construction noise will be generated by the proposal, particularly noise from vehicle movements and machinery to undertake the works. However, this is anticipated to comply with the relevant constructions noise standards.

With respect to traffic movements these are exempt from the overall traffic generation calculations and are is considered relevant in terms of trip generation. This acknowledges the temporal nature of construction traffic on the character and amenity of the wider and immediate locality.

For the reasons described above, adverse effects generated by the location, extent, timing and duration of earthworks proposed are considered to be temporary in nature with measures proposed to manage effects to a level that is less than minor.

6.4.2 Character and Amenity Effects

The site is largely comprised of Moerewa residential township, with works being undertaken within road reserve. Temporary effects will occur during construction, following reinstatement no change to character and amenity will occur.

Land disturbance and vegetation to install the stormwater discharge outlet will occur within the site in the Rural Production Zone. Works will result in temporary exposure of soil, however, will be progressively stabilised with seed with no faces left exposed upon completion of the works. Trees located adjacent to the channel will be retained where possible.

On this basis, effects of the proposed works are considered temporary, resulting in less than minor adverse effects on the character and amenity of the wider environment.

6.4.3 Flooding Hazard

The proposed stormwater improvements are part of broader stormwater management strategy aimed at reducing the risk of flooding in the area. The site is located within the mapped Flood Hazard area. The potential effects on the flood hazard have been considered within the Moerewa Stormwater Improvements Concept Report prepared by GHD included as **Appendix 3**. In summary, the report confirms that:

“The envisaged enhancements within the Moerewa catchment hold significant importance in fortifying the area’s flood management capabilities. By establishing a more robust stormwater infrastructure, these improvements will effectively facilitate the smooth conveyance of floodwaters during varying storm intensities, including events as significant as the 100-year storm, while also accounting for the potential impact of climate change.

These proposed measures are poised to bring about a transformative shift by eradicating the persistent flooding concerns associated with storms reaching up to and including the 10-year event. This forward-looking initiative not only assures an increased level of safety for the local residents and critical infrastructure but also underscores a dedication to sustainable urban development that remains resilient in the face of evolving weather patterns and the demands of a growing population.”

On this basis and taking into account the advice of technical inputs, it is considered that potential flooding effects will be less than minor and reduce the flood hazard risk within the Moerewa township.

6.4.4 Ecological Effects

The subject site and confirms that the vacant rural allotment located to the south of Moerewa which is largely vegetated This site is identified partly Protected Natural Areas (PNAs) overlay PNA05/054 ‘Waiharakeke Stream Alluvial Forest’. Waiharakeke Stream and Wetland are located at the southern edge. Wild Ecology has undertaken an ecological assessment (**Appendix 7**) of the site and confirms that:

“A key aspect of the Moerewa Stormwater Improvement Works development has been minimizing potential ecological impacts. This has been achieved through an iterative process involving Wild Ecology’s ecological mapping and value descriptions, which have been integrated into the project’s overall design. Opportunities to reduce adverse ecological effects were carefully considered during the concept design phase, including refining the project footprint configuration”.

“the proposal entails limited vegetation removal, primarily of exotic scrubland, to facilitate the construction of stormwater infrastructure. This type of vegetation, common in unmaintained pastoral areas, has low ecological value. Although some indigenous vegetation within the proposed existing PNA overlay and SNA overlay (not operative) will be cleared, this has been minimized as much as practicable. The affected habitat, mainly mature tōtara with a sparse understory of weedy species such as privet, is widespread in the broader landscape. Vegetation clearance and earthworks are not proposed within a 10m setback from wetland area W1 and the Waiharakeke Stream. “

“Overall, with the implementation of the appropriate erosion and sediment control measures, and the recommended ecological management measures, it is considered that the construction and operation of the proposed stormwater infrastructure can be managed to ensure that adverse effects on indigenous terrestrial and aquatic habitats are low.”

Overall, it is considered that subject to the mitigation measures recommended by Wild Ecology in section 7.0 of the Ecological Assessment Report and compliance with conditions of consent, the proposal will have less than minor ecological effects.

6.4.5 Cultural and Heritage Effects

The application site is not located within an identified area of cultural significance to Māori or have any notations that indicate the site contains sensitive archaeological material. Further, should there be any discovery of sensitive material, accidental discovery protocols under the Heritage New Zealand Pouhere Taonga Act 2014 will stop works and enable suitable engagement to be undertaken as required.

On-going engagement and consultation with Ngāti Kopaki has been undertaken throughout the design of the project, and representative Josephine Kemp-Baker has confirmed support for the project (**Appendix 8**).

For these reasons the proposal is considered to have less than minor effect on known cultural and heritage values.

6.4.6 Cumulative Effects

Cumulative adverse effects have the potential to arise as a result of the earthworks in combination with potential stormwater runoff. However, in this instance, it is considered that the proposal involves sufficient mitigation measures to manage the effects of the proposed works. In particular, the detailed erosion and sediment control measures in combination with temporary stormwater runoff and treatment devices designed to direct and treat any runoff. Further, the CMP will ensure construction works will be undertaken in a manner that are acceptable to avoid generating effects that have potential to create nuisance to surrounding properties or cause damage to the local transport network.

Taking into account the mitigation and monitoring measures proposed, cumulative adverse effects are considered to be less than minor.

6.5 Summary of Effects

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

6.6 Public Notification Conclusion

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

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

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

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

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

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

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

Step 1 requires limited notification where there are any affected protected customary rights groups or customary marine title groups; or affected persons under a statutory acknowledgement affecting the land.

In this case the above does not apply to this application.

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

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

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

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

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

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

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

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

7.1.4 Step 4: Further notification in special circumstances

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

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

7.2 Section 95E Statutory Matters

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

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

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

These matters were addressed in section 6.2 above and written approvals have been obtained from the owners of road reserve, parcel 5205238, Lot 15 DP 5100, NA805/64 (Freehold), Part Allotment 140 Parish of Kawakawa and Lot 1 DP 165005 .

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

7.3 Assessment of Effects on Persons

Wider effects, such as land disturbance and construction activities, character and amenity effects, flood hazard, ecological effects, cultural effects and cumulative effects were considered in section 6.4 above, and considered to be less than minor. The same conclusions are considered to apply in a localised context. In particular:

- Written approvals have been provided from the directly affected land owners. Any potential effects to these parties have therefore been disregarded.
- It is anticipated that a CMP required as a condition of consent will ensure detail the timeframes, duration, noise, traffic, and hours of operation of the works to manage any construction effects generated by the proposal. Further, the effects generated by construction works are considered to be temporary in nature and with noise anticipated to comply with the permitted activity standards of the zone. With respect to construction traffic and taking into account the

permitted baseline, there is sufficient area within the site to accommodate construction vehicles;

- In terms of character and amenity, the proposal is to maintain and improve the stormwater system. The proposal will not change the outlook for properties within the surrounding area. However, as described above the site will be progressively stabilised with grass and trees will be retained where possible.
- Land disturbance and construction effects were considered in section 6.4.1 and were concluded as less than minor.
- Stormwater quality and flood hazard effects were considered in section 6.4.2 and were concluded as less than minor.
- Cumulative effects are considered to be suitably managed by the mitigation measures proposed and detailed in the erosion and sediment control plan included as **Appendix 6**.

7.3.1 Summary of Effects

Taking the above into account, it is considered that there are no adversely affected persons in relation to this proposal.

7.4 Limited Notification Conclusion

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

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

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

8.0 Consideration of Applications (Section 104)

8.1 Statutory Matters

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

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

As a discretionary activity, section 104B of the Act states that a council:

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

8.2 Weighting of Proposed Plan Changes: Proposed FNDC

The Act requires that before a proposed plan becomes operative, any resource consent application is considered in terms of the provisions of both the operative plan and the proposed plan.

With regard to the assessment of an application for resource consent and the decision-making process, where an application is being assessed under both an operative plan and a proposed plan, it is standard practice to establish a weighting of the plans. Case law indicates that more weight should generally be placed on the controls of an operative plan until such time as a proposed plan has advanced sufficiently through the statutory process, although this is not the only criterion.

Weighting only becomes relevant in the event different outcomes arise from assessments of objectives and policies under the operative and proposed plans.

On the 27th July 2022 FNDC notified their PDP, at the time of preparing this AEE, only rules identified as having immediate legal effect have been considered. This will remain the case until FNDC releases a decision on the PDP (this will occur once hearings have been completed).

Evaluation of the objectives and policies of the ODP and PDP is provided in Section 10.2 and 10.3 of this report. While there are some differences noted, it is considered that the proposal is not contrary to the PDP and it is considered that the proposal is consistent with both sets of provisions. Accordingly, 'weighting' has not been considered necessary, and has not been applied.

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

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

Further, it is considered that the proposal will also result in positive effects including facilitating improvements to the existing situation as it relates to flooding.

Overall, it is considered that when taking into account the positive effects, any actual and potential adverse effects on the environment of allowing the activity are acceptable.

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

10.1 Northland Regional Policy Statement

The Northland Regional Policy Statement (RPS) covers the management of natural and physical resources across the Northland Region. The provisions within the RPS give guidance at a higher planning level in terms of the significant regional issues. As such it does not contain specific rules that trigger the requirement for consent but rather give guidance to consent applications and the development of Plans on a regional level.

Objectives range from integrated catchment management, improvement of overall quality of Northland's water quality, maintaining ecological flows, protecting areas of significant indigenous ecosystems and biodiversity, sustainable management of natural and physical resources in a way that is attractive for business and investment that will improve the economic wellbeing. Enabling economic wellbeing, regional form, the role of tangata whenua kaitiaki role is recognised and provided for in decision making, risks and impacts of natural hazards are minimised, outstanding natural landscapes and features and historic heritage are protected from inappropriate subdivision, use and development.

Relevant policy has been identified and summarised as follows:

- Policy 4.2.1 seeks to improve the overall quality of Northland's water resources by, establishing freshwater objectives, reducing loads of sediment, nutrients and faecal matter to water and promoting and supporting the active management, enhancement and creation of vegetated riparian margins. The proposed development will manage effect of stormwater discharge on the fresh water of the Waiharakeke Wetland and Stream.
- Policy 5.1.1 seeks to provide for subdivision, use and development that is located, designed and built in a planned and coordinated matter. The proposal will improve the functionality of the existing Moerewa residential area. With specific reference to 5.1.1(d) and (h), the proposal can be adequately serviced in terms of transportation, water, wastewater, and stormwater by existing and proposed infrastructure.
- According to Policy 7.1.1 subdivision, use and development of land will be managed to minimise risks of natural hazards. The proposed works seek to improve the management of stormwater Moerewa to minimise the risk of natural hazards.
- Policy 8.1.2 requires the district council to recognise and provide for the relationship of tangata whenua and their culture and traditions, have particular regard to kaitiakitanga and take into account the principles of the Treaty of Waitangi including partnership when processing resource consents. No sites of cultural significance or heritage are identified within the subject site and support for the project has been obtained from Ngati Kopaki.

For these reasons, it is considered that the proposal is consistent with the relevant RPS provisions.

10.2 Objectives and Policies of the Operative Far North District Plan

10.2.1 Residential Zone

The Residential Zone applies to areas that are predominantly residential, with typically medium density residential living, but are still compatible with the existing character and amenity of the area. The zone enables development while adhering to amenity standards designed to protect the special amenity values of residential sites.

The objectives and policies of chapter 7.6 seek to enable a wide range of activities, including the development of new residential areas where expansion would be sustainable, while outlining the protection of specific amenity values to ensure the protection of the special amenity values of residential sites. The proposed works are temporary in nature with road berms, footpaths etc being reinstated resulting in no change to the existing amenity and character of Moerewa.

Overall, the proposal infrastructure is considered to be consistent with intent of the Residential Zone.

10.2.2 Rural Production Zone

The Rural Production zone applies to the majority of land within the district, and seeks to enable the continuation of a wide range of activities for existing and future activities that are compatible with the productive purpose of the zone. The objectives and policies of the zone seek to provide for a wide range of activities, while managing the effects of activities that are incompatible with the rural production zone. The proposed works is not considered to be incompatible, as it does not restrict existing activities or generate reverse sensitivity effects that may limit the rural productive purpose of the zone. In conclusion, the proposed activity is considered to be consistent with the outcomes of the zone.

10.2.3 Indigenous Flora and Fauna

Chapter 12.2 seeks to maintain and enhance the life supporting capacity of ecosystems and the extent and representativeness of the District's indigenous biological diversity. Providing for the protection and active management of areas of significant indigenous vegetation and significant habitats of indigenous fauna. The proposed works have been designed to minimise the extent of indigenous vegetation clearance. Subject to implementation of the appropriate erosion and sediment control measures, and the recommended ecological management measures, Wild Ecology consider that the construction and operation of the proposed stormwater infrastructure can be managed to ensure that adverse effects on indigenous terrestrial and aquatic habitats are low. Therefore, it is considered that the proposal will give effect to the objectives and policies of Chapter 12.2.

10.2.4 Soils and Minerals

The Soils and Minerals Chapter seeks to maintain the life supporting capacity of the soils of the District, and to avoid, remedy or mitigate adverse effects associated with soil excavation or filling and soil erosion. It is considered that the proposed earthworks will be consistent with these objectives and policies of the ODP as the works have been designed and located to incorporate best practice erosion and sediment control measures, including silt fences, socks, stormwater inlet protection and monitoring for the duration of the works. The proposed works are not considered to give effect to the objectives and policies of Chapter 12.3.

10.2.5 Natural Hazards

The objectives and policies of the natural hazards chapter are contained within Chapter 12.4 of the ODP and seek to reduce the threat of natural hazards to life, property and the environment. The proposed stormwater improvements will reduce flood risk to the community within Moerewa. The proposal is considered consistent with the intent of the natural hazards chapter.

10.3 Objectives and Policies of the Proposed Far North District Plan

10.3.1 Part 2 – District Wide Matters – Natural Hazards

The natural hazards objectives and policies seek to manage the risks from natural hazards to people, infrastructure and property, including taking into account the likely long-term effects of climate change, to ensure the health, safety and resilience of communities. The proposed stormwater improvements will reduce flood risk to the community within Moerewa, improving their health, safety and resilience. The proposed works have been designed to accommodate

potential effect of climate change. For these reasons the proposal is considered to give effect to objectives and policies of the natural hazards chapter.

10.3.2 Part 2 – District Wide Matters – Natural Environment Values – Ecosystems and Indigenous Biodiversity

The objectives and policies of this chapter seek to identify and protect areas of significant indigenous vegetation and significant habitats of indigenous fauna (Significant Natural Areas), whilst maintaining the extent and diversity of indigenous biodiversity in a way that provides for the social, economic and cultural well-being of people and communities. The proposed works have been designed to minimise the extent of indigenous vegetation clearance. Subject to implementation of the appropriate erosion and sediment control measures, and the recommended ecological management measures, Wild Ecology consider that the construction and operation of the proposed stormwater infrastructure can be managed to ensure that adverse effects on indigenous terrestrial and aquatic habitats are low. Therefore, it is considered that the proposal will give effect to the objectives and policies of this chapter.

10.3.3 Part 2 – District Wide Matters – General District Wide Matters - Earthworks

The objectives and policies of this chapter seek to enabled earthworks where they are required to facilitate the efficient subdivision and development of land, while managing adverse effects on waterbodies, coastal marine area, public safety, surrounding land and infrastructure. It is considered that the proposed earthworks will be consistent with the objectives and policies of the Earthworks chapter as the works have been designed and located to incorporate best practice erosion and sediment control measures, including silt fences, socks, stormwater inlet protection and monitoring for the duration of the works.

10.4 Summary

It is considered that the proposed development is generally in accordance with the objectives and policies of the Northland Regional Policy Statement, Operative and Proposed Far North District Plans.

11.0 Part 2 Matters

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

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

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

maintenance and enhancement of amenity values, and maintenance and enhancement of the quality of the environment.

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

Overall, as the effects of the proposal are considered to be acceptable, and the proposal accords with the relevant Proposed Northland Regional Plan objectives and policies, it is considered that the proposal will not offend against the general resource management principles set out in Part 2 of the Act.

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

12.1 Other Approvals

A resource consent application has been prepared seeking resource consent from the Northland Regional Council. It is considered that this process can occur in parallel with the resource consent application sought from Far North District Council.

12.2 Record of Title Interests

The Record of Title for the site are subject to a number of interests (refer **Appendix 1**). None of these are anticipated to affect the resource consent application as discussed in **Table 1** below:

Table 1: Record of Title interests

Interest	Comment
NA99B/818 Subject to a water right over part marked A on DP 165005 for a term expiring on 30.6.2000 created by Transfer 288301 Subject to a right (in gross) to drain stormwater over part marked A on DP 547169 in favour of Far North District Council created by Easement Instrument 11766514.1	Easements in place to enable stormwater drainage and discharge proposed.
NA694/297 Fencing Agreement in Transfer 277938	Private fencing agreement.

13.0 Conclusion

The proposal involves improvement of the Moerewa stormwater network within Moerewa township based upon the above report it is considered that:

- Public notification is not required as adverse effects in relation to land disturbance, construction activities, flood hazard, character and amenity, ecological, cultural and cumulative effects are considered to be less than minor. There are also positive effects including improving the existing situation as it relates to reducing the flood extent;
- Limited notification is not required as effects to all persons are less than minor;

- The proposal accords with the relevant RPS, ODP and PDP objectives and policies; and
- The proposal is considered to be consistent with Part 2 of the Act.

It is therefore concluded that the proposal satisfies all matters the consent authority is required to assess, and that it can be granted on a non-notified basis.



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



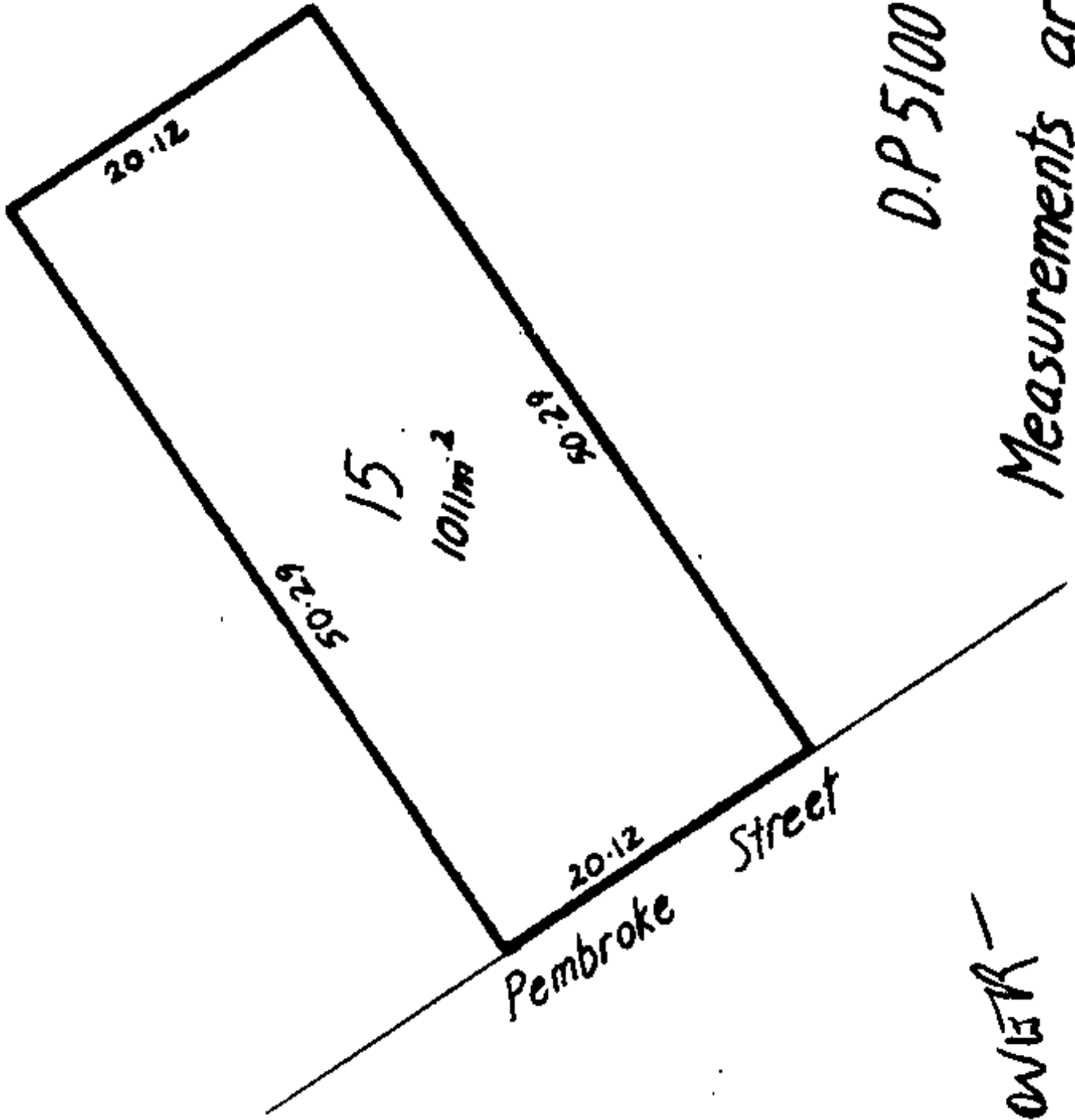

R. W. Muir
Registrar-General
of Land

Identifier NA41D/544
Land Registration District North Auckland
Date Issued 23 June 1978

Prior References
NA690/6

Estate Fee Simple
Area 1011 square metres more or less
Legal Description Lot 15 Deposited Plan 5100
Registered Owners
Sarah Kidwell

Interests





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

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




R. W. Muir
Registrar-General
of Land

Identifier **NA99B/818**
Land Registration District **North Auckland**
Date Issued 14 June 1996

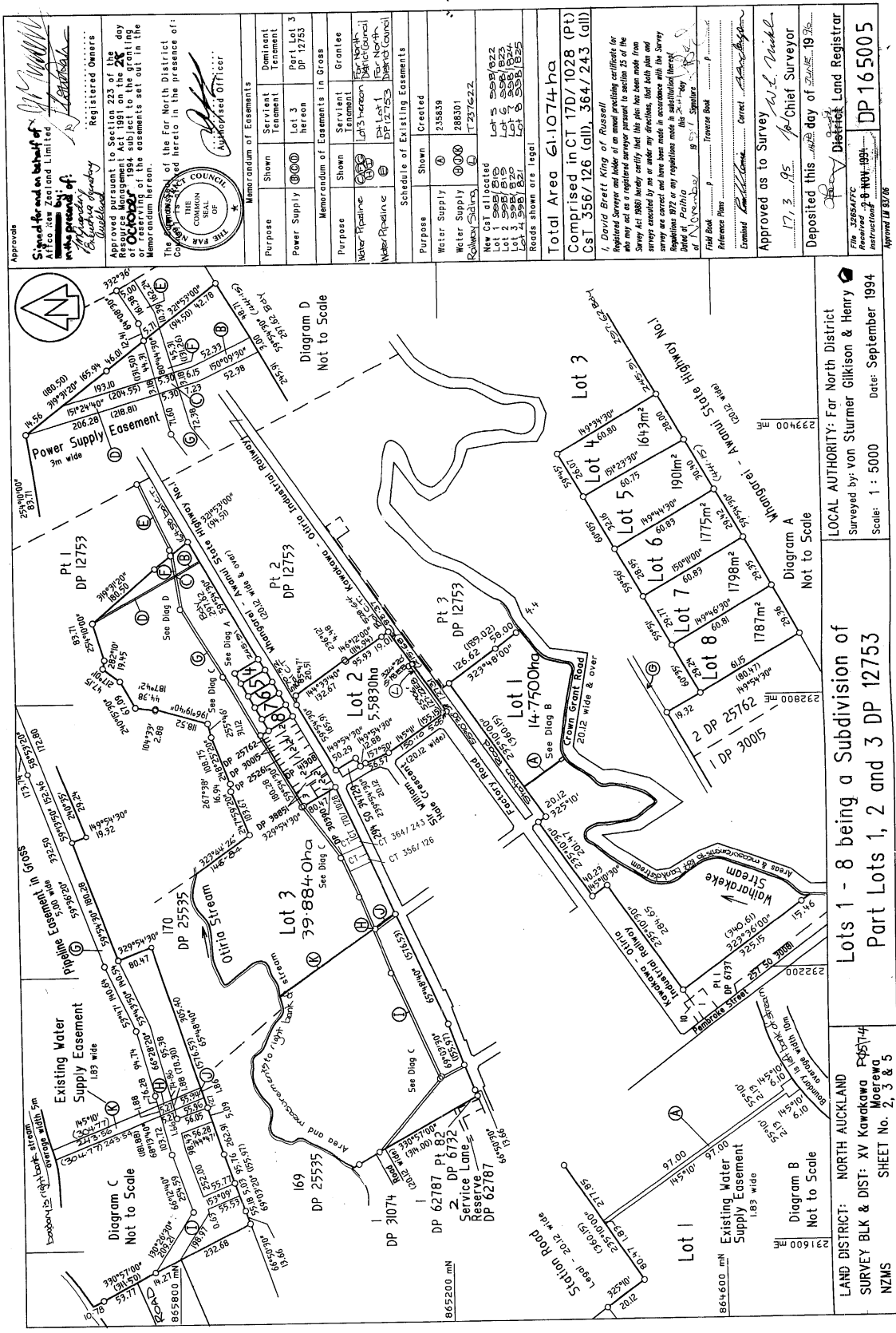
Prior References
NA17D/1028

Estate Fee Simple
Area 14.7500 hectares more or less
Legal Description Lot 1 Deposited Plan 165005

Registered Owners
Tauhara North Farming and Company LP

Interests

Subject to a water right over part marked A on DP 165005 for a term expiring on 30.6.2000 created by Transfer 288301
Subject to a right (in gross) to drain stormwater over part marked A on DP 547169 in favour of Far North District Council created by Easement Instrument 11766514.1 - 1.3.2021 at 1:04 pm



LAND DISTRICT: NORTH AUCKLAND
 SURVEY BLK & DIST: XV Kawakawa P49574
 NZMS
 SHEET No. 2, 3 & 5

LOCAL AUTHORITY: Far North District
 Surveyed by: von Stummer Glikson & Henry
 Scale: 1 : 5000 Date: September 1994

Approve: *[Signature]*
 Signed for and on behalf of
 Afico New Zealand Limited
 was prepared by:
[Signature]
 Registered Owners

Approved pursuant to Section 223 of the Resource Management Act 1991 on the 26th day of October 1999. The easements set out in the Memorandum hereon.

The Memorandum of the Far North District Council is hereby approved in the presence of:
 THE FAR NORTH DISTRICT COUNCIL
 CHAIRMAN
 DEPUTY CHAIRMAN
 COUNCILLORS
[Signature]
 Authorized Officer

Memorandum of Easements		
Shown	Dominant Tenement	
Power Supply (P)	Part Lot 3 DP 12753	
Memorandum of Easements in Gross		
Shown	Servient Tenement	Grantee
Water Pipeline (W)	Lot 3 hereon	Far North District Council
Water Pipeline (W)	Part Lot 1 DP 12753	Far North District Council
Schedule of Existing Easements		
Created		
Water Supply (A)	258839	
Water Supply (P)	268301	
REMAINING RIGHTS		
New Crown Grant	Lot 5 5581622	
Lot 2 5581622	Lot 5 5581622	
Lot 3 5581622	Lot 6 5581622	
Lot 4 5581622	Lot 7 5581622	
Lot 5 5581622	Lot 8 5581622	
Rights shown are legal		
Total Area 61,074-ha		
Comprised in CT 170/1028 (PT)		
CST 356/126 (all), 364/243 (all)		

1. David Brett King of Russell Registered Surveyor and holder of an annual practicing certificate for who may act as a registered surveyor pursuant to the provisions of the Survey Act 1980 hereby certifies that the survey was made from surveys executed by and have been made in accordance with the Survey Regulations 1977 or any regulations made in substitution thereof. Dated at Paritutu this 26th day of October 1999.

Field Book: *[Blank]* Traverse Book: *[Blank]*

Reference Plans: *[Blank]*

Examined: *[Signature]* Correct: *[Signature]*

Approved as to Survey: *[Signature]* Chief Surveyor

Deposited this day of October 1999.

DP 165005

Approved 18/07/96





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




R.W. Muir
Registrar-General
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

Identifier NA99B/818
Land Registration District North Auckland
Date Issued 14 June 1996

Prior References
NA17D/1028

Estate Fee Simple
Area 14.7500 hectares more or less
Legal Description Lot 1 Deposited Plan 165005
Original Registered Owners
Moerewa Farm Limited

Interests

Subject to a water right over part marked A on DP 165005 for a term expiring on 30.6.2000 created by Transfer 288301

7776286.1 Transfer to MJ & CM Pinny Limited - 1.5.2008 at 3:26 pm

7776286.2 Mortgage to ANZ National Bank Limited - 1.5.2008 at 3:26 pm

9220686.1 Variation of Mortgage 7776286.2 - 1.11.2012 at 4:24 pm

9305707.1 Discharge of Mortgage 7776286.2 - 8.3.2013 at 1:09 pm

9305707.2 Transfer to Moerewa Station Limited - 8.3.2013 at 1:09 pm

9346081.1 Mortgage to ANZ Bank New Zealand Limited - 22.3.2013 at 4:14 pm

10951575.1 Forestry Right pursuant to the Forestry Rights Registration Act 1983 to Moerewa Station Limited - 4.12.2017 at 4:40 pm

11466877.2 Discharge of Mortgage 9346081.1 - 2.7.2019 at 3:37 pm

11466877.3 Surrender of the Forestry Right created by Easement Instrument 10951575.1 - 2.7.2019 at 3:37 pm

11466877.4 Transfer to Kauri Forestry LP - 2.7.2019 at 3:37 pm

Subject to a right (in gross) to drain stormwater over part marked A on DP 547169 in favour of Far North District Council created by Easement Instrument 11766514.1 - 1.3.2021 at 1:04 pm

12124386.1 Transfer to Tauhara North Farming and Company LP - 2.6.2021 at 2:32 pm

References: 17D/1028
Prior C/T
Document No. D.007724.2



REGISTER

No. 99B 818

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 14th day of June one thousand nine hundred and ninety six under the seal of the District Land Registrar of the Land Registration District of NORTH AUCKLAND WITNESSETH that AFFCO NEW ZEALAND LIMITED at Auckland

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 14.7500 hectares more or less being Lot 1 Deposited Plan 165005



vm Interests at date of issue:

Subject to a water easement over the part marked 'A' on Plan 165005 appurtenant to:
1) part Lot 8 Plan 129191 (CT 75D/323)
2) Lot 1 Plan 134883 (CT 79C/537)
3) part Lot 4 Plan 134883 (CT 93D/50)
4) part Lot 1 Plan 140610 (CT 83C/154)
for a term expiring on 30.6.2000 created by Transfer 288301

C.098645.5 Mortgage Bank of New Zealand - 22.11.90 at 236 oc

DISCHARGED FOR DLR 11.8

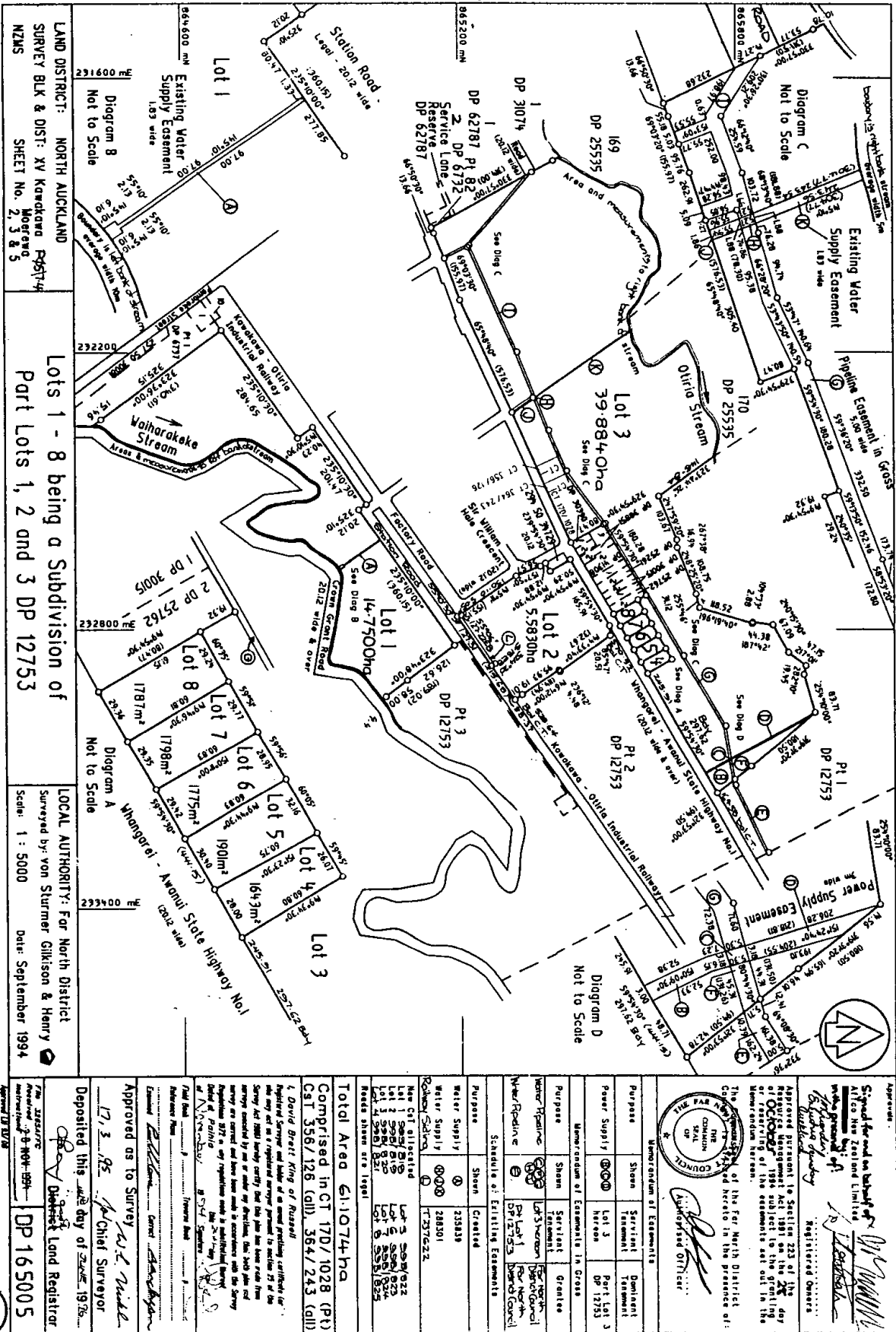
A.L.R.

D181218.2 Transfer to Moerewa Farm Limited 11.8.1997 at 1.06

for DLR

No. 99B 818

No. 99B 818



LAND DISTRICT: NORTH AUCKLAND
 SURVEY BLK & DIST: XV Kawakawa Post 14
 NZMS SHEET No. 2, 3 & 5

Lots 1 - 8 being a Subdivision of
 Part Lots 1, 2 and 3 DP 12753

LOCAL AUTHORITY: For North District
 Surveyed by: von Slumer Gillison & Henry
 Scale: 1 : 5000 Date: September 1994

Approved: *[Signature]*
 Special for and on behalf of
 Alico New Zealand Limited
 Registered Owners

Approved pursuant to Section 223 of the Resource Management Act 1991 on the 28th day of October 1994 subject to the granting of the easements set out in the Memorandum of Easements.

The Council of the For North District
 Council
 in the presence of:
[Signature]
 Mayor

Memorandum of Easements	
Purpose	Shown
Power Supply	Lot 3 hereon DP 12753
Memorandum of Easements in Gross	
Purpose	Shown
Water Easement	Lot 3 hereon DP 12753
Water/Roadline	Lot 1 hereon DP 12753
Schedule of Existing Easements	
Purpose	Shown
Water Supply	238439
Water Supply	248501
Other	17297622

Total Area 61,074 ha
 Comprised in CT 1707/1028 (P1)
 CST 3567/126 (G11), 364/243 (G11)

4 David Brett King of Russell
 Registered Surveyor and holder of the licence authorizing him to survey for the purposes of the Survey Act 1976, certifies that this plan has been made in accordance with the provisions of the Survey Act 1976, and that the boundaries and areas shown are correct and true to the best of his knowledge and belief.

Approved as to Survey *[Signature]*
 Chief Surveyor

Deposited this 28th day of October 1994
[Signature]
 District Land Registrar

DP 165005



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




R. W. Muir
Registrar-General
of Land

Identifier **NA99B/818**
Land Registration District **North Auckland**
Date Issued 14 June 1996

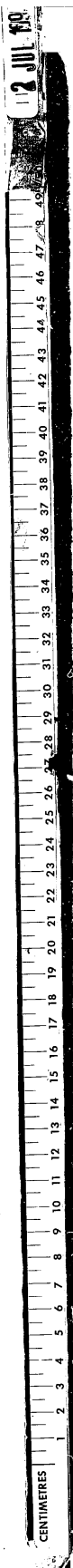
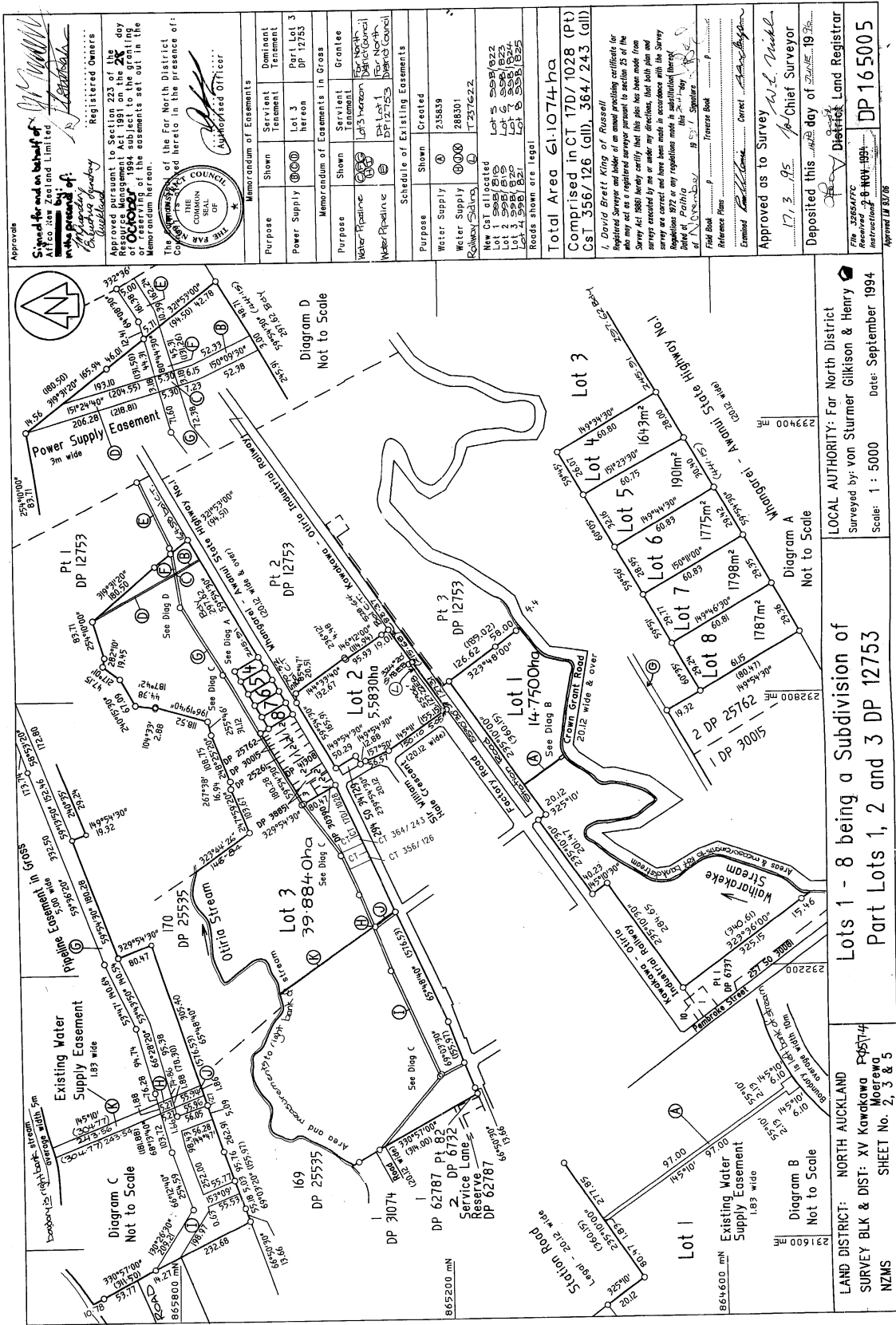
Prior References
NA17D/1028

Estate Fee Simple
Area 14.7500 hectares more or less
Legal Description Lot 1 Deposited Plan 165005

Registered Owners
Tauhara North Farming and Company LP

Interests

Subject to a water right over part marked A on DP 165005 for a term expiring on 30.6.2000 created by Transfer 288301
Subject to a right (in gross) to drain stormwater over part marked A on DP 547169 in favour of Far North District Council created by Easement Instrument 11766514.1 - 1.3.2021 at 1:04 pm





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



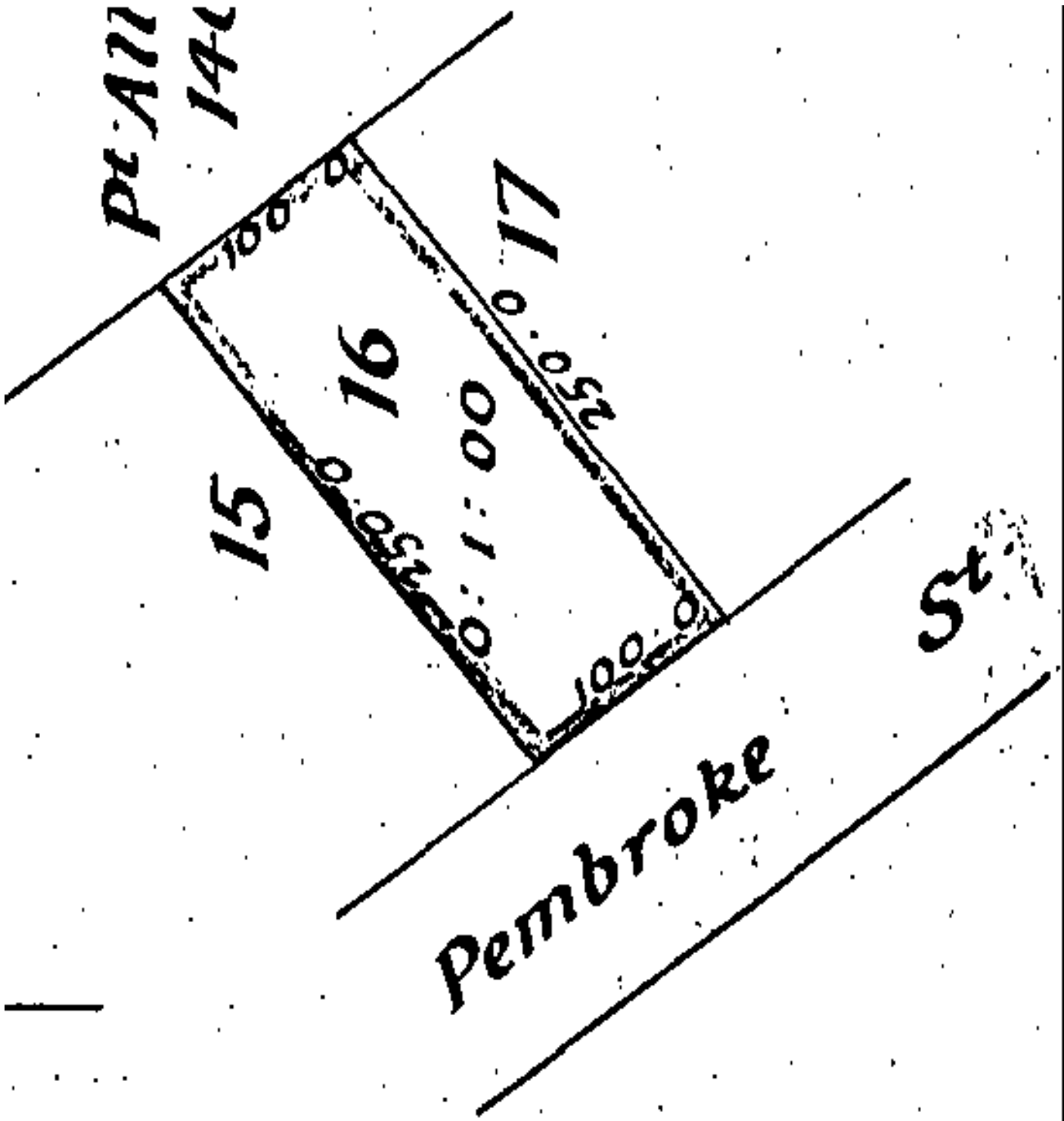

R. W. Muir
Registrar-General
of Land

Identifier **NA694/297**
Land Registration District **North Auckland**
Date Issued 08 November 1937

Prior References
NA677/86

Estate Fee Simple
Area 1012 square metres more or less
Legal Description Lot 16 Deposited Plan 5100
Registered Owners
Messalena Rose Reti

Interests
Fencing Agreement in Transfer 277938





Title Plan - DP 547169

Survey Number DP 547169
Surveyor Reference 2029 Kauri Forestry Easement
Surveyor Mark Richard Lagerstedt
Survey Firm Far North District Council Legal
Surveyor Declaration I Mark Richard Lagerstedt, being a licensed cadastral surveyor, certify that:
(a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and
(b) the survey was undertaken by me or under my personal direction.
Declared on 23 Jun 2020 03:07 PM

Survey Details

Dataset Description Easement over Lot 1 DP 165005
Status Deposited
Land District North Auckland
Submitted Date 23/06/2020
Survey Class Class B
Survey Approval Date 08/07/2020
Deposit Date 01/03/2021

Territorial Authorities

Far North District

Comprised In

RT NA99B/818

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area A Deposited Plan 547169	Easement		
Total Area		0.0000 Ha	

Schedule / Memorandum

Land Registration District

North Auckland

Survey Number

LT 547169

Territorial Authority (the Council)

Far North District

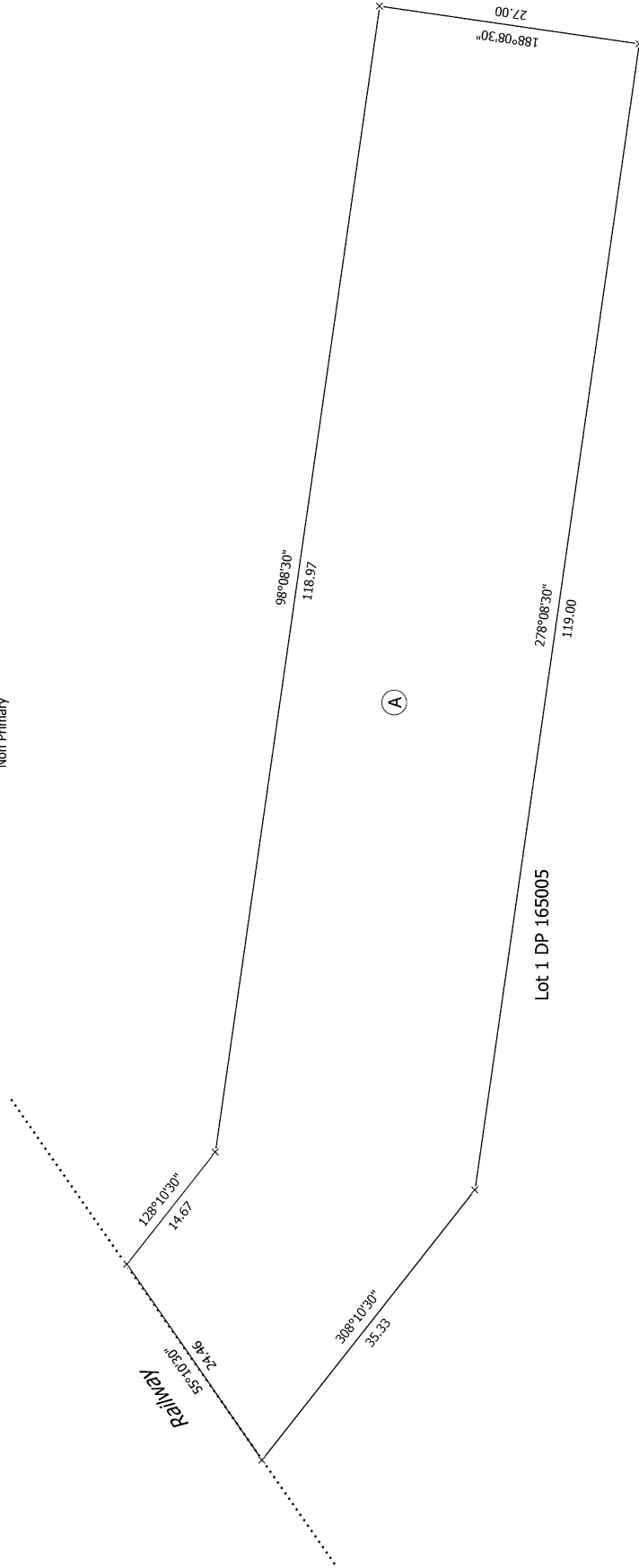
Schedule of Easements in Gross

Last Edited: 04 Mar 2020 14:27:51

<u>Purpose</u>	<u>Shown</u>	<u>Servient Tenement</u> <u>(Burdened Land)</u>	<u>Grantee</u>
Right to drain storm water	A	Lot 1 DP 165005	Far North District Council



Non Primary



Lot 1 DP 165005

(A)

T 1/1

Land District: North Auckland
 Dataset Type: Parcels without Survey Information
Digitally Generated Plan
 Generated on: 09/03/2021 09:02am Page 3 of 3

Easement over Lot 1 DP 165005

Surveyor: Mark Richard Lagerstedt
 Firm: Far North District Council Legal

Title Plan
 DP 547169

Deposited on: 1/03/2021



CSD Plan - DP 547169

Survey Number DP 547169
Surveyor Reference 2029 Kauri Forestry Easement
Surveyor Mark Richard Lagerstedt
Survey Firm Far North District Council Legal
Surveyor Declaration I Mark Richard Lagerstedt, being a licensed cadastral surveyor, certify that:
(a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and
(b) the survey was undertaken by me or under my personal direction.
Declared on 23 Jun 2020 03:07 PM

Survey Details

Dataset Description Easement over Lot 1 DP 165005
Purpose Easement
Status Deposited **Type** Parcels without Survey Information
Land District North Auckland **Survey Class** Class B
Meridional Circuit Mount Eden 2000 **Vertical Datum** None

Survey Dates

Surveyed Date 04/03/2020 **Certified Date** 23/06/2020
Submitted Date 23/06/2020 15:07:37 **Survey Approval Date** 08/07/2020
Deposit Date 01/03/2021

Referenced Surveys

Survey Number	Land District	Bearing Correction
DP 110156	North Auckland	0°00'00"
DP 165005	North Auckland	0°00'00"

Territorial Authorities

Far North District

Comprised In

RT NA99B/818

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area A Deposited Plan 547169	Easement		
Total Area		0.0000 Ha	

Mark and Vector

Survey Number DP 547169
 Meridional Circuit Mount Eden 2000

From	To	Code	Bearing	Adpt Surv	Bearing Correction	Distance	Adpt Surv	Class
PEG 1 DP 6737	UNMK 2 DP 547169	ob0	55°10'30"	A DP 165005		40.15 C		Class B
UNMK 2 DP 547169	UNMK 3 DP 547169	ob1	55°10'30"	A DP 165005		24.46 C		Class B
UNMK 3 DP 547169	PEG 6 SO 12080	ob2	55°10'30"	A DP 165005		220.04 C		
UNMK 3 DP 547169	UNMK 4 DP 547169	ob3	128°10'30"	C		14.67 C		Class B
UNMK 4 DP 547169	UNMK 5 DP 547169	ob4	98°08'30"	C		118.97 C		Class B
UNMK 5 DP 547169	UNMK 6 DP 547169	ob5	188°08'30"	C		27.00 C		Class B
UNMK 6 DP 547169	UNMK 7 DP 547169	ob6	278°08'30"	C		119.00 C		Class B
UNMK 7 DP 547169	UNMK 2 DP 547169	ob7	308°10'30"	C		35.33 C		Class B

*** End of Report ***

Schedule / Memorandum

Land Registration District

North Auckland

Survey Number

LT 547169

Territorial Authority (the Council)

Far North District

Schedule of Easements in Gross

Last Edited: 04 Mar 2020 14:27:51

<u>Purpose</u>	<u>Shown</u>	<u>Servient Tenement (Burdened Land)</u>	<u>Grantee</u>
Right to drain storm water	A	Lot 1 DP 165005	Far North District Council



6 SO 12080

S5°10'30"
220.04

(284.65)

3

S5°10'30"
40.15

1 DP 6737

S 1/1

Easement over Lot 1 DP 165005

Land District: North Auckland
Dataset Type: Parcels without Survey Information
Digitally Generated Plan
Generated on: 06/03/2021 09:02am Page 4 of 5

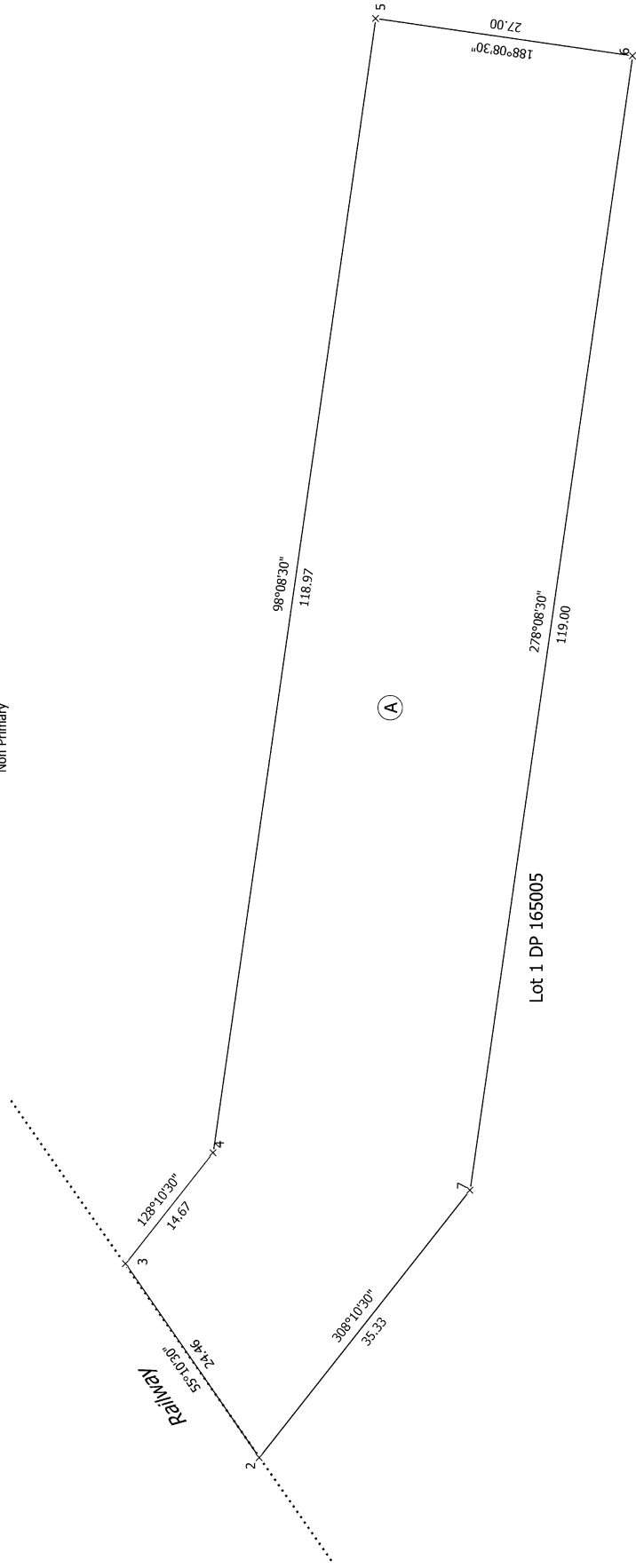
Surveyor: Mark Richard Lagerstedt
Firm: Far North District Council Legal
Survey Date: 4/03/2020

CSD Plan
DP 547169

Deposited on: 1/03/2021



Non Primary



<p>Land District: North Auckland Dataset Type: Parcels without Survey Information Digitally Generated Plan Generated on: 06/03/2021 09:02am Page 5 of 5</p>	<p>Easement over Lot 1 DP 165005</p>	<p>Surveyor: Mark Richard Lagerstedt Firm: Far North District Council Legal Survey Date: 4/03/2020</p>	<p>CSD Plan DP 547169</p>	<p>Deposited on: 1/03/2021</p>
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FAR NORTH DISTRICT COUNCIL MOEREWATA TOWN



MOEREWATA STORMWATER IMPROVEMENTS 12596871

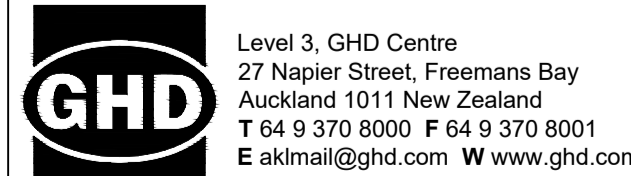
DRAWING LIST							
DRAWING NO.	DRAWING TITLE	REVISION NO.			REVISION DATE	DRAWING STATUS	
12596871-G001	COVER SHEET AND DRAWING REGISTER	C			13.09.24	IFT	
12596871-G002	GENERAL NOTES AND STORMWATER SCHEDULE	B			13.09.24	IFT	
12596871-G003	SAFETY IN DESIGN	B			13.09.24	IFT	
12596871-G101	OVERALL STORMWATER LAYOUT PLAN	C			13.09.24	IFT	
12596871-C105	PLUNKET STREET STORMWATER LAYOUT PLAN SHEET 5 OF 8	C			13.09.24	IFT	
12596871-C106	PLUNKET STREET AND REED STREET STORMWATER LAYOUT PLAN SHEET 6 OF 8	C			13.09.24	IFT	
12596871-C107	SOUTH OF REED STREET STORMWATER LAYOUT PLAN SHEET 7 OF 8	C			13.09.24	IFT	
12596871-C108	SOUTH OF REED STREET STORMWATER LAYOUT PLAN SHEET 8 OF 8	C			13.09.24	IFT	
12596871-C301	STORMWATER LONGITUDINAL SECTION SHEET 1 OF 5	B			13.09.24	IFT	
12596871-C302	STORMWATER LONGITUDINAL SECTION SHEET 2 OF 5	B			13.09.24	IFT	
12596871-C303	STORMWATER LONGITUDINAL SECTION SHEET 3 OF 5	B			13.09.24	IFT	
12596871-C304	STORMWATER LONGITUDINAL SECTION SHEET 4 OF 5	B			13.09.24	IFT	
12596871-C305	STORMWATER LONGITUDINAL SECTION SHEET 5 OF 5	B			13.09.24	IFT	
12596871-C306	OUTLET CHANNEL LONGITUDINAL SECTION	B			13.09.24	IFT	
12596871-C201	TYPICAL STORMWATER DETAILS SHEET 1 OF 5	B			13.09.24	IFT	
12596871-C202	TYPICAL STORMWATER DETAILS SHEET 2 OF 5	B			13.09.24	IFT	
12596871-C203	TYPICAL STORMWATER DETAILS SHEET 3 OF 5	B			13.09.24	IFT	
12596871-C204	TYPICAL STORMWATER DETAILS SHEET 4 OF 5	B			13.09.24	IFT	
12596871-C205	TYPICAL STORMWATER DETAILS SHEET 5 OF 5	B			13.09.24	IFT	

DRAWING STATUS	
C	CONCEPT
P	PRELIMINARY
D	DETAIL
IFT	FOR TENDER
CN	CONSTRUCTION
ASB	AS-BUILT

SURVEY INFORMATION

1. COORDINATE DATUM: NZGD2000, (MOUNT EDEN 2000)
2. VERTICAL DATUM: ONE TREE POINT 1964
3. ORIGIN COORDINATES AND HEIGHTS: C2W9 (RL=20.914m)
4. AERIAL PHOTO SOURCED FROM LINZ DATA SERVICE

C	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
B	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
A	ISSUED FOR CONCEPT DESIGN	P. HOUGHTON	V. CHANDRA	29.09.23
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



Client FAR NORTH DISTRICT COUNCIL
Project MOEREWATA STORMWATER IMPROVEMENTS
Status FOR TENDER

Drawing Title COVER SHEET AND DRAWING REGISTER

Status Code S4

Drawing No. 12596871-G001

Size A1

Rev C

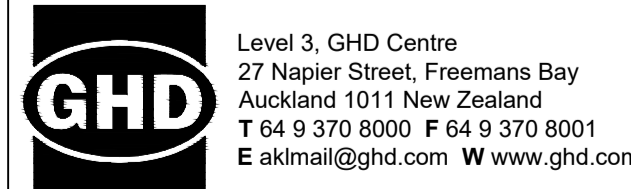
GENERAL NOTES:

- ALL DIMENSIONS SHOWN ON THESE DRAWINGS ARE METRIC DIMENSIONS AND ARE NOT TO BE SCALED FROM THE DRAWINGS.
- COORDINATE SYSTEM: NZGD2000, (MOUNT EDEN 2000). VERTICAL DATUM: ONE TREE POINT 1964, ORIGIN COORDINATES AND HEIGHTS: C2W9 (RL=20.914m).
- AERIAL PHOTO SOURCED FROM LINZ DATA SERVICE.
- PROPERTY BOUNDARIES, EXISTING CONTOURS AND SURVEY PLANS PROVIDED BY CLIENT FAR NORTH DISTRICT COUNCIL (FNDC).
- FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS AND GUIDELINES 2004 - REVISED MARCH 2009 (USE IN CONJUNCTION WITH NZS 4404:2004) APPLY UNLESS SHOWN OTHERWISE.
- FINISHED LEVELS, GEOMETRY AND OVERALL STORM WATER LAYOUT IS TO BE IN ACCORDANCE WITH THE SETOUT MODEL.
- FINAL LEVELS TO BE CONFIRMED ON SITE BY SURVEYOR AND DESIGNER'S SITE REPRESENTATIVE PRIOR TO THE BACKFILLING AND NETWORK BECOMING OPERATIONAL.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FAR NORTH DISTRICT COUNCIL KAWAKAWA MOERewa CATCHMENT FHM MODEL UPDATE MAY 2021 AND MOERewa STORMWATER IMPROVEMENTS DETAILED DESIGN REPORT.
- FOR STORMWATER NETWORK DESIGN (PIPELINE, MANHOLES, MEGAPITS, CATCHPITS, SCRUFFYDOME, OUTLET RIPRAP) TYPES, LEVELS SETOUT INFORMATION AND DETAILS, REFER TO LONG SECTIONS AND TYPICAL DETAIL DRAWINGS.
- THE LOCATION OF EXISTING STORMWATER LAYOUT SHOWN ON THESE DRAWINGS IS APPROXIMATE AND IS TO BE CONFIRMED ON SITE BY THE CONTRACTOR PRIOR TO PROCEEDING WITH ADJOINING OR INTERFACING DRAINAGE WORKS.
- WHERE THE CONTRACTOR CONSIDERS ADJUSTMENTS TO GRADE AND LOCATIONS OF FEATURES ARE DESIRABLE TO BETTER SUIT THE IN SITU CONTOUR, THE DESIGNERS SITE REPRESENTATIVE SHALL BE ADVISED AND APPROVAL (OR ALTERNATIVE SOLUTION) OBTAINED BEFORE ANY CHANGES ARE MADE.
- ALL STORMWATER PRODUCTS TO BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS.
- NO SUBSOIL DRAINS CONSIDERED IN THIS PROJECT.
- ROCK OF RIPRAP TO BE CLEAN, HARD, ANGULAR QUARRIED ROCK (UNWEATHERED GREYWACKE OR SIMILAR) WITH A SPECIFIC DENSITY OF NOT LESS THAN 2.6 TONNES/m³. RIVER OR RIVER WEATHERED BOULDERS ARE NOT AN ACCEPTABLE MATERIAL. ROCKS ARE TO BE GENERALLY SQUARE, RECTANGULAR OR OVAL IN GENERAL CROSS SECTION WITH THE LEAST DIMENSION DEING SQUARE, RECTANGULAR OR OVAL IN GENERAL CROSS SECTION WITH THE LEAST DIMENSION BEING NOT LESS THAN HALF OF THE GREATEST DIMENSION.
- ADJUST MANHOLE LID LEVELS TO TIE INTO PROPOSED SURFACE LEVELS.
- ALL OTHER DRY/WET UTILITIES (SUCH AS WASTEWATER, WATER, POWER, FIBER, GAS ETC.) MUST BE RELOCATED AND ADJUSTED ACCORDING TO THE NEW STORM WATER LAYOUT ON SITE FOLLOWING THE STANDARD VERTICAL AND HORIZONTAL CLEARANCES.

STORMWATER SCHEDULE											
STRUCTURE NO	STRUCTURE TYPE	STRUCTURE RL	COORDINATES		PIPE					REMARKS/PLOT NO.	
			EASTING	NORTHING	U/S PIPE-IL	DIA(mm)	TYPE	D/S PIT NO	D/S PIPE-IL		D/S LENGTH(m)
SR01-1	HYNDS MEGAPIT	21.140	331995.550	964986.352	19.011	600.000	RCRRJ	SR01-2	18.340	51.266	ALONG PEMBROKE STREET INFRONT OF PLOT # 24
SR01-2	HYNDS LOW PROFILE (TYPE 2) SCRUFFY DOME	20.453	332037.247	965016.177	18.290	600.000	RCRRJ	SR01-3	17.974	63.072	IN PLOT 24
SR01-3	MANHOLE	20.261	332088.540	965052.879	17.824	750.000	RCRRJ	SR01-4	17.788	7.245	ALONG PLUNKET STREET INFRONT OF PLOT # 23
SR01-5	MANHOLE	20.341	332094.737	965049.126	17.488	1050.000	RCRRJ	SR01-7	17.280	41.678	ALONG PLUNKET STREET INFRONT OF PLOT # 25
SR01-7	MANHOLE	20.221	332119.451	965015.566	17.230	1050.000	RCRRJ	SR01-9	17.019	42.080	ALONG PLUNKET STREET INFRONT OF PLOT # 29
SR01-9	MANHOLE	20.446	332144.237	964981.561	16.969	1050.000	RCRRJ	SR01-10	16.715	50.883	ALONG PLUNKET STREET
SR01-10	MANHOLE	22.189	332173.847	964940.180	16.665	1050.000	RCRRJ	SR01-11	16.511	65.937	ALONG REED STREET
SR01-11	MANHOLE	21.334	332229.752	964898.753	16.461	1050.000	RCRRJ	SR01-12	16.292	25.556	-
SR01-12	MANHOLE	21.184	332250.349	964883.624	16.242	1050.000	RCRRJ	SR01-13	16.068	51.932	-
SR01-13	MANHOLE	20.590	332301.910	964877.425	16.018	1050.000	RCRRJ	SR01-14	15.897	36.362	-
SR01-14	HEADWALL	16.947	332338.012	964873.084	-	-	-	-	-	-	-
SR01-4	HYNDS MEGAPIT	20.170	332091.741	965046.979	18.256	750.000	RCRRJ	SR01-5	18.219	3.686	ALONG PLUNKET STREET INFRONT OF PLOT # 25
SR01-6	HYNDS MEGAPIT	20.052	332116.430	965013.355	18.146	750.000	RCRRJ	SR01-6	18.109	3.743	ALONG PLUNKET STREET INFRONT OF PLOT # 29
SR01-8	HYNDS MEGAPIT	20.266	332141.259	964979.386	18.371	750.000	RCRRJ	SR01-9	18.334	3.688	ALONG PLUNKET STREET INFRONT OF PLOT # 33
SWP0-51	EXISTING CATCHPIT	20.218	332092.884	965062.328	18.808	300.000	RCRRJ	SR01-3	18.703	10.439	ALONG PLUNKET STREET INFRONT OF PLOT # 22
SWP0-49	EXISTING CATCHPIT	19.989	332137.839	965000.947	18.495	300.000	RCRRJ	SR01-9	18.287	20.744	ALONG PLUNKET STREET INFRONT OF PLOT # 30
SWP0-47	EXISTING CATCHPIT	20.913	332179.102	964957.484	19.430	300.000	RCRRJ	SR01-10	19.233	19.745	ALONG REED STREET INFRONT OF PLOT # 34
SWP0-46	EXISTING CATCHPIT	20.745	332162.105	964947.927	19.293	300.000	RCRRJ	SR01-10	19.155	13.774	ALONG REED STREET INFRONT OF PLOT # 35

B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	

Plot Date: 13 September 2024 - 3:48 PM Plotted by: Elmer Legaspi Jr. File Name: G:\511\2596871\CADD\Drawings\12596871-G001_G003.dwg



Client FAR NORTH DISTRICT COUNCIL
 Project MOERewa STORMWATER IMPROVEMENTS
 Status FOR TENDER

Drawing Title GENERAL NOTES AND STORMWATER SCHEDULE
 Drawing No. 12596871-G002
 Status Code S4

Size A1
 Rev B

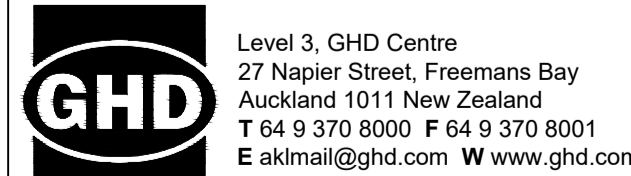
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Project No. 12596871

SAFETY IN DESIGN

	RISK	PROJECT STAGE			DESIGN TREATMENT TO ELIMINATE OR MITIGATE RISKS	RESIDUAL RISKS
		CONSTRUCTION	OPERATION AND MAINTENANCE	DECOMMISSIONING AND RENEWAL		
1	DAMAGING EXISTING UNDERGROUND UTILITIES	√		√	1. COLLECTED ALL THE AVAILABLE INFORMATION FOR EXISTING UNDERGROUND UTILITIES FROM AS BUILT DATA AND SURVEY DRAWINGS. LOCATION OF STORM WATER STRUCTURES DECIDED TO MITIGATE THE RISK OF POTENTIAL DAMAGE TO EXISTING UNDERGROUND UTILITIES AND ANY FUTURE DEVELOPMENTS. 2. THE CONTRACTOR WILL BE INSTRUCTED TO POT HOLE AND LOCATE ALL UNDERGROUND UTILITIES IN CLOSE PROXIMITY/SURROUNDINGS OF THE PROJECT BEFORE THE START OF THE CONSTRUCTION TO FURTHER MITIGATE IT.	1. THE CONTRACTOR HAS TO DEVELOP A SUITABLE CONSTRUCTION PLAN TO MITIGATE THE RESIDUAL RISK OF DAMAGING EXISTING UNDERGROUND UTILITIES IN CLOSE PROXIMITY/SORROUNDINGS.
2	CHANNELIZE THE STORMWATER TO DISCHARGE INTO THE STORMWATER STRUCTURES	√	√		1. POSITIONED THE STORM WATER STRUCTURES AT THE LOW POINT IN THE AREA TO ENSURE THAT CATCHMENT FLOW SHOULD ENTER INTO CATCHPITS / SCRUFFY DOMES EASILY.	1. THE CONTRACTOR TO TAKE EXTRA CAUTIOUS AND MEASURES DURING CONSTRUCTION TO MAKE SURE THAT SURROUNDING AREAS OF STORM WATER STRUCTURES ALLOWS THE WATER TO ENTER INTO STORM WATER STRUCTURES WITHOUT ANY HINDRANCE AND DAMAGE.
3	HEALTH AND SAFETY (H&S) RISK TO THE GENERAL PUBLIC	√	√	√	1. SELECTED A SITE THAT IS EASY TO BE FENCED OFF DURING CONSTRUCTION PERIOD. 2. MINIMUM ACCESSES INTO SITE THROUGH LOCKABLE ENTRIES.	1. THE CONTRACTOR WILL NEED TO IMPLEMENT A ROBUST H & S MANAGEMENT PLAN DURING CONSTRUCTION. 2. THE CONTRACTOR WILL NEED TO FENCE OFF THE CONSTRUCTION AREA IN ORDER TO ENSURE THE HEALTH AND SAFETY OF THE PUBLIC.
4	INSPECT AND UNBLOCK THE INLETS AND OUTLETS	√	√		1. INLETS ARE PROPOSED NEAR TO ROAD WHICH MAKES THESE STRUCTURES EASY TO REACH AND EASY TO UNBLOCK. 2. CONTRACTOR TO PERIODICALLY CHECK AND CLEAN THE INLETS/OUTLETS.	1. CONTRACTOR TO INSTALL SIGNBOARD WITH FULL DETAIL NEAR INLETS/OUTLETS TO INFORM PUBLIC. 2. DEVELOP THE COMPREHENSIVE MAINTENANCE PLAN AND WORK ACCORDINGLY.
5	WORKING IN CONFINED SPACES	√	√		1. DESIGN ENSURES DEEP STRUCTURES/ZONES ARE KEPT TO A PRACTICABLE MINIMUM. 2. DESIGN ALLOWS ACCESS OF MOST FITTINGS FROM SURFACE REDUCING THE NEED TO ENTER CONFINED SPACES FOR OPERATION AND MAINTENANCE. 3. DESIGN COMPLIES WITH THE COUNCIL STANDARDS, WHICH REQUIRES ALL ASSETS TO PROVIDE SAFE ACCESS TO CONFINED SPACES DURING OPERATION AND MAINTENANCE.	1. THE CONTRACTOR'S H & S PLAN HAS TO TAKE NOTE OF THE NEED TO WORK IN CONFINED SPACES.
6	EXPOSURE TO ROAD TRAFFIC	√	√	√	1. THE CONTRACTOR TO HAVE ADEQUATE TEMPORARY TRAFFIC MANAGEMENT DURING CONSTRUCTION.	1. THE CONTRACTOR TO DEPLOY EXPERIENCED TRAFFIC MANAGEMENT STAFF DURING CONSTRUCTION ACTIVITY IN THE ROAD CORRIDOR. 2. THE CONTRACTOR TO FENCE OFF THE SITE WHILE WORKING IN/NEAR THE ROAD CORRIDOR.

B	ISSUED FOR TENDER	R. PATIL	N. CAULTON 13.09.24	
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA 22.04.24	
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



Client **FAR NORTH DISTRICT COUNCIL**

Project **MOEREWA STORMWATER IMPROVEMENTS**

Status **FOR TENDER**

Drawing Title **SAFETY IN DESIGN**

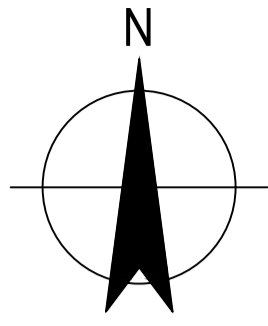
Size **A1**

Project No. **12596871**

Status Code **S4**

Drawing No. **12596871-G003**

Rev **B**



NOTES:

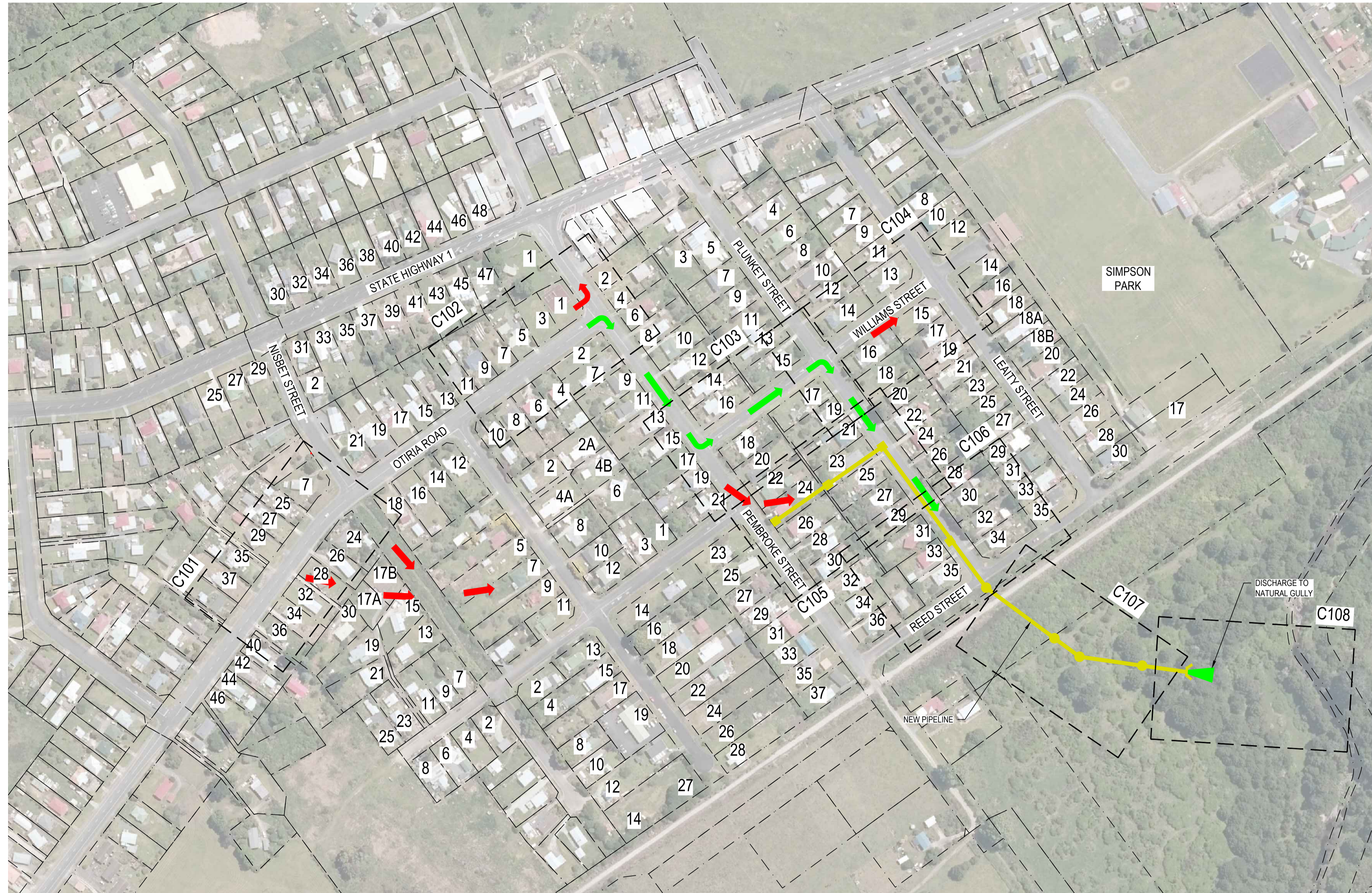
1. ALL STRUCTURES AND FEATURES HAVE BEEN BASED FROM A TOPOGRAPHIC SURVEY PROVIDED BY SAPPHIRE SURVEYORS LTD.
2. 0.1m CONTOURS WITH REFERENCE TO ONE TREE POINT 1964 VERTICAL DATUM.
3. BUILDINGS, DECKS AND CONTOURS UNDER DRIPLINES ARE SUBJECT TO INACCURACIES.
4. PROPERTY BOUNDARIES HAVE BEEN SOURCED FROM LINZ AND CONFIRMED NEAR CONTROL POINTS TO BE WITHIN 10cm ACCURACIES.

SURVEY INFORMATION

COORDINATE SYSTEM: NZGD2000 (MOUNT EDEN 2000)
 VERTICAL DATUM: ONE TREE POINT 1964
 ORIGIN COORDINATES AND HEIGHTS: C2W9 (RL=20.914m)

LEGEND:

- NEW CONTROLLED OVERLAND FLOW ROUTE
- EXISTING OVERLAND FLOW ROUTE CAUSING FLOODING
- RAINAGE PIPELINE
- LARGE INLET STRUCTURE
- MANHOLE



LAYOUT PLAN
SCALE 1:2000

C	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
B	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
A	ISSUED FOR CONCEPT DESIGN	P. HOUGHTON	V. CHANDRA	29.09.23
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



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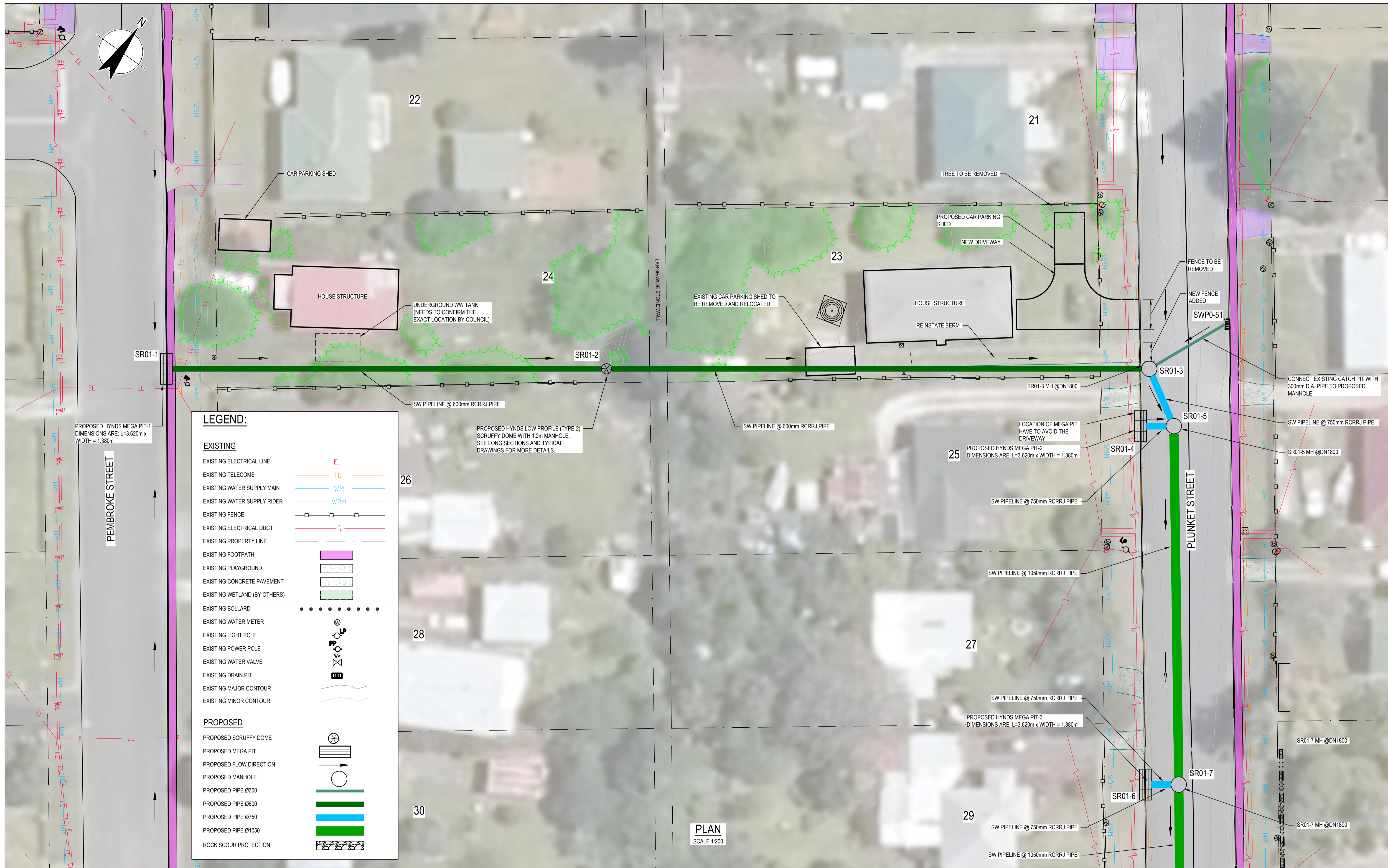
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Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title	OVERALL STORMWATER LAYOUT PLAN
Drawing No.	12596871-G101
Status Code	S4

Size **A1**
Rev **C**



LEGEND:

EXISTING	
EXISTING ELECTRICAL LINE	EL
EXISTING TELECOMS	TE
EXISTING WATER SUPPLY MAIN	WM
EXISTING WATER SUPPLY RIDER	WRM
EXISTING FENCE	[Symbol]
EXISTING ELECTRICAL DUCT	[Symbol]
EXISTING PROPERTY LINE	[Symbol]
EXISTING FOOTPATH	[Symbol]
EXISTING PLAYGROUND	[Symbol]
EXISTING CONCRETE PAVEMENT	[Symbol]
EXISTING WETLAND (BY OTHERS)	[Symbol]
EXISTING BOLLARD	[Symbol]
EXISTING WATER METER	[Symbol]
EXISTING LIGHT POLE	[Symbol]
EXISTING POWER POLE	[Symbol]
EXISTING WATER VALVE	[Symbol]
EXISTING DRAIN PIT	[Symbol]
EXISTING MAJOR CONTOUR	[Symbol]
EXISTING MINOR CONTOUR	[Symbol]
PROPOSED	
PROPOSED SCRUFFY DOME	[Symbol]
PROPOSED MEGA PIT	[Symbol]
PROPOSED FLOW DIRECTION	[Symbol]
PROPOSED MANHOLE	[Symbol]
PROPOSED PIPE Ø300	[Symbol]
PROPOSED PIPE Ø600	[Symbol]
PROPOSED PIPE Ø750	[Symbol]
PROPOSED PIPE Ø1050	[Symbol]
ROCK SCOUR PROTECTION	[Symbol]

C ISSUED FOR TENDER	R. PATIL N. CAULTON 13.09.24			
B ISSUED FOR DETAILED DESIGN	R. PATIL V. CHANDRA 22.04.24			
A ISSUED FOR CONCEPT DESIGN	P. HOUGHTON V. CHANDRA 29.09.23			
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



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Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

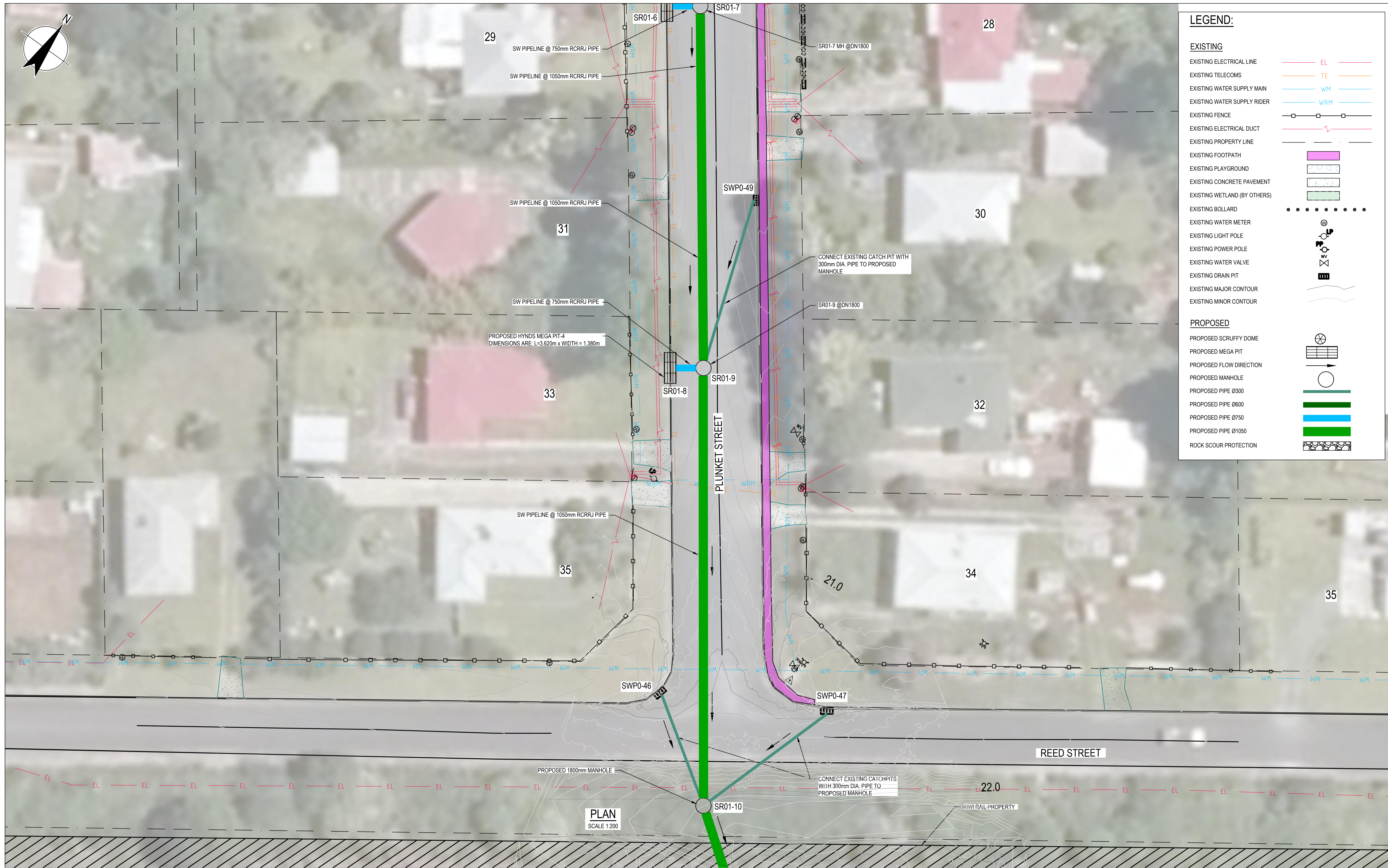
Drawing Title **PLUNKET STREET STORMWATER LAYOUT PLAN SHEET 5 OF 8**

Status Code **S4**

Drawing No. **12596871-C105**

Size **A1**
Rev **C**

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LEGEND:

EXISTING

- EXISTING ELECTRICAL LINE (EL)
- EXISTING TELECOMS (TE)
- EXISTING WATER SUPPLY MAIN (WM)
- EXISTING WATER SUPPLY RIDER (WRM)
- EXISTING FENCE
- EXISTING ELECTRICAL DUCT
- EXISTING PROPERTY LINE
- EXISTING FOOTPATH
- EXISTING PLAYGROUND
- EXISTING CONCRETE PAVEMENT
- EXISTING WETLAND (BY OTHERS)
- EXISTING BOLLARD
- EXISTING WATER METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- EXISTING WATER VALVE
- EXISTING DRAIN PIT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

PROPOSED

- PROPOSED SCRUFFY DOME
- PROPOSED MEGA PIT
- PROPOSED FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED PIPE Ø300
- PROPOSED PIPE Ø600
- PROPOSED PIPE Ø750
- PROPOSED PIPE Ø1050
- ROCK SCOUR PROTECTION

PLAN
SCALE 1:200



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Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

Drawing Title **PLUNKET STREET AND REED STREET STORMWATER LAYOUT PLAN SHEET 6 OF 8**

Size **A1**
Rev **C**

C	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
B	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
A	ISSUED FOR CONCEPT DESIGN	P. HOUGHTON	V. CHANDRA	29.09.23
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



LEGEND:

EXISTING	
EXISTING ELECTRICAL LINE	EL
EXISTING TELECOMS	TE
EXISTING WATER SUPPLY MAIN	WM
EXISTING WATER SUPPLY RIDER	WRM
EXISTING FENCE	[Symbol]
EXISTING ELECTRICAL DUCT	[Symbol]
EXISTING PROPERTY LINE	[Symbol]
EXISTING FOOTPATH	[Symbol]
EXISTING PLAYGROUND	[Symbol]
EXISTING CONCRETE PAVEMENT	[Symbol]
EXISTING WETLAND (BY OTHERS)	[Symbol]
EASEMENT (AS PER SURVEY DATA PROVIDED BY FNDC)	[Symbol]
EXISTING BOLLARD	[Symbol]
EXISTING WATER METER	[Symbol]
EXISTING LIGHT POLE	[Symbol]
EXISTING POWER POLE	[Symbol]
EXISTING WATER VALVE	[Symbol]
EXISTING DRAIN PIT	[Symbol]
EXISTING MAJOR CONTOUR	[Symbol]
EXISTING MINOR CONTOUR	[Symbol]
PROPOSED	
PROPOSED SCRUFFY DOME	[Symbol]
PROPOSED MEGA PIT	[Symbol]
PROPOSED FLOW DIRECTION	[Symbol]
PROPOSED MANHOLE	[Symbol]
PROPOSED PIPE Ø300	[Symbol]
PROPOSED PIPE Ø600	[Symbol]
PROPOSED PIPE Ø750	[Symbol]
PROPOSED PIPE Ø1050	[Symbol]
ROCK SCOUR PROTECTION	[Symbol]

PLAN
SCALE 1:200

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B	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
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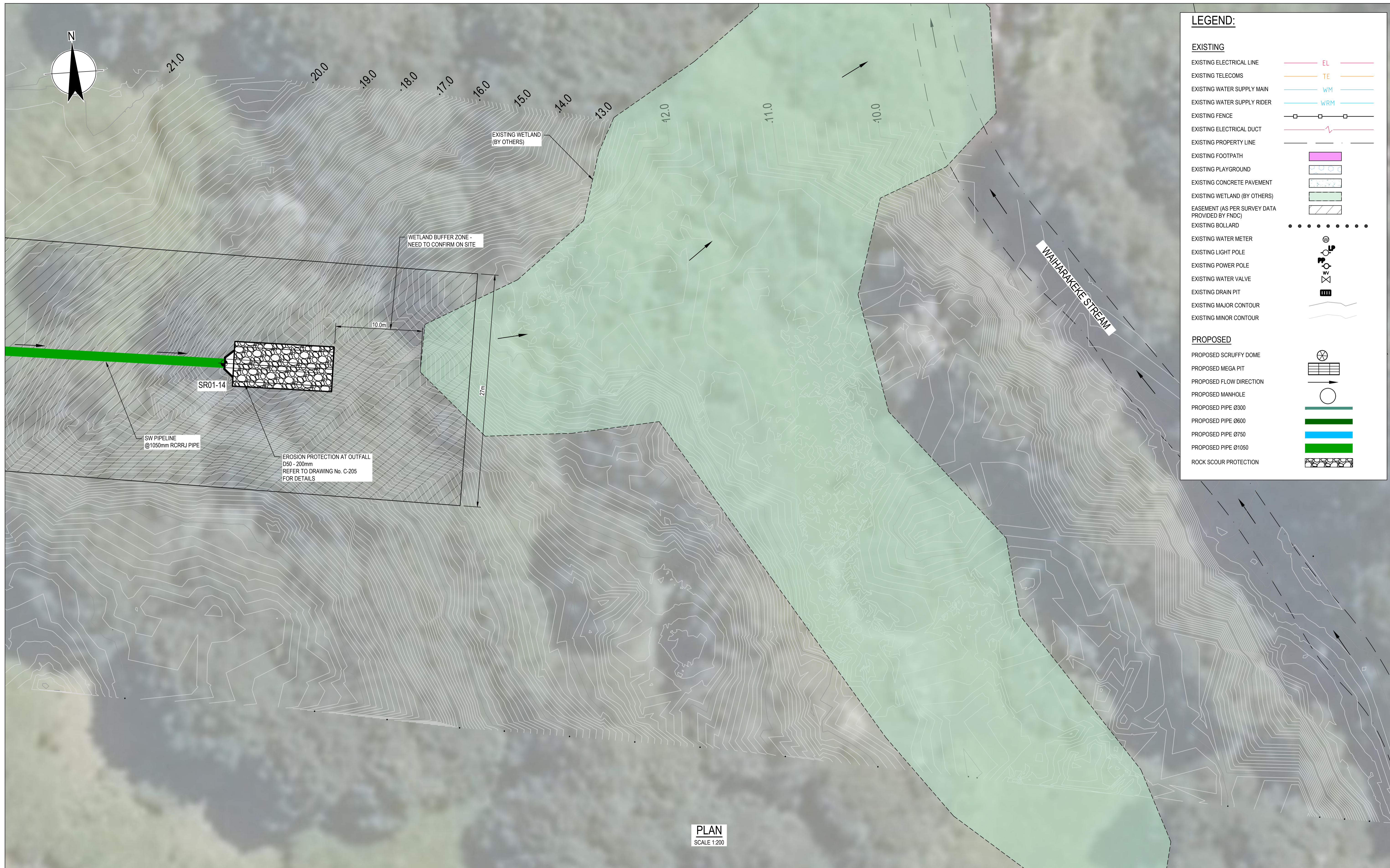
Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

Drawing Title **SOUTH OF REED STREET STORMWATER LAYOUT PLAN SHEET 7 OF 8**

Status Code **S4**

Drawing No. **12596871-C107**

Size **A1**
Rev **C**



PLAN
SCALE 1:200

C	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
B	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
A	ISSUED FOR CONCEPT DESIGN	P. HOUGHTON	V. CHANDRA	29.09.23
Rev	Description	Checked	Approved	Date
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	V. CHANDRA	



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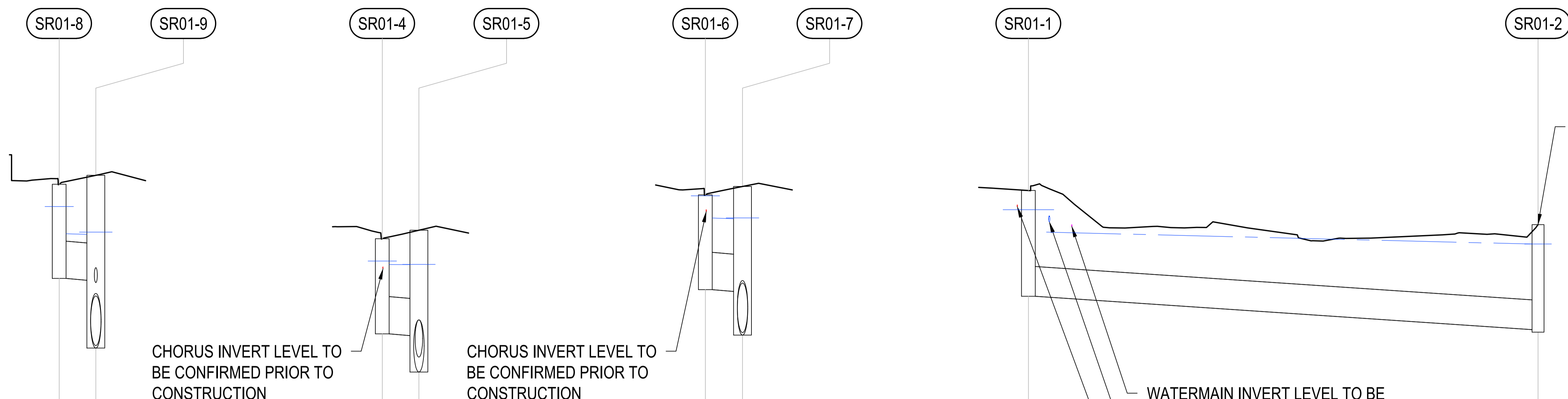
Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

Drawing Title **SOUTH OF REED STREET STORMWATER LAYOUT PLAN SHEET 8 OF 8**

Status Code **S4**

Drawing No. **12596871-C108**

Size **A1**
Rev **C**



VELOCITY (m/s)	2.61	
Q100 PIPE FLOW (cu.m/s)	0.640	
PIPE CAPACITY (cu.m/s)	1.114	
PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 IN X)	100.0	
PIPE SIZE (mm)	750	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	9.00	
HYDRAULIC GRADE LINE (100-yr ARI)	19.817	19.270 19.258 19.304 18.844
DEPTH TO INVERT FROM DESIGN SURFACE	1.896	2.112 3.477
INVERT LEVEL	18.371	18.334 16.969
FINISH SURFACE LEVEL	20.266	20.446
CHAINAGE	0.000	3.688 3.688

PIPELINE - SR01

VELOCITY (m/s)	2.21	
Q100 PIPE FLOW (cu.m/s)	0.340	
PIPE CAPACITY (cu.m/s)	1.114	
PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 IN X)	100.0	
PIPE SIZE (mm)	750	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	10.00	
HYDRAULIC GRADE LINE (100-yr ARI)	19.720	19.651 19.649 19.653 19.595
DEPTH TO INVERT FROM DESIGN SURFACE	1.914	2.122 2.853
INVERT LEVEL	18.256	18.219 17.488
FINISH SURFACE LEVEL	20.170	20.341
CHAINAGE	0.000	3.686 3.686

PIPELINE - SR01

VELOCITY (m/s)	2.52	
Q100 PIPE FLOW (cu.m/s)	0.560	
PIPE CAPACITY (cu.m/s)	1.114	
PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 IN X)	100.0	
PIPE SIZE (mm)	750	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	9.00	
HYDRAULIC GRADE LINE (100-yr ARI)	20.033	19.586 19.572 19.588 19.357
DEPTH TO INVERT FROM DESIGN SURFACE	1.906	2.112 2.991
INVERT LEVEL	18.146	18.109 17.230
FINISH SURFACE LEVEL	20.052	20.221
CHAINAGE	0.000	3.743 3.743

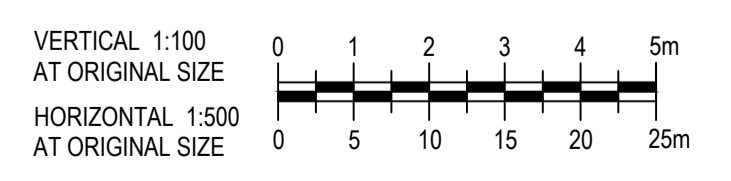
PIPELINE - SR01

VELOCITY (m/s)	2.60	
Q100 PIPE FLOW (cu.m/s)	0.420	
PIPE CAPACITY (cu.m/s)	0.703	
PIPE GRADE (%)	1.3%	
PIPE SLOPE (1 IN X)	76.4	
PIPE SIZE (mm)	600	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	10.00	
HYDRAULIC GRADE LINE (100-yr ARI)	20.754	20.302 20.063
DEPTH TO INVERT FROM DESIGN SURFACE	2.129	2.113
INVERT LEVEL	19.011	18.340
FINISH SURFACE LEVEL	21.140	20.453
CHAINAGE	0.000	51.266 51.266

PIPELINE - SR01

DRAINAGE SR-01
LONGITUDINAL SECTION
SCALE 1:500 H; 1:100 V

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



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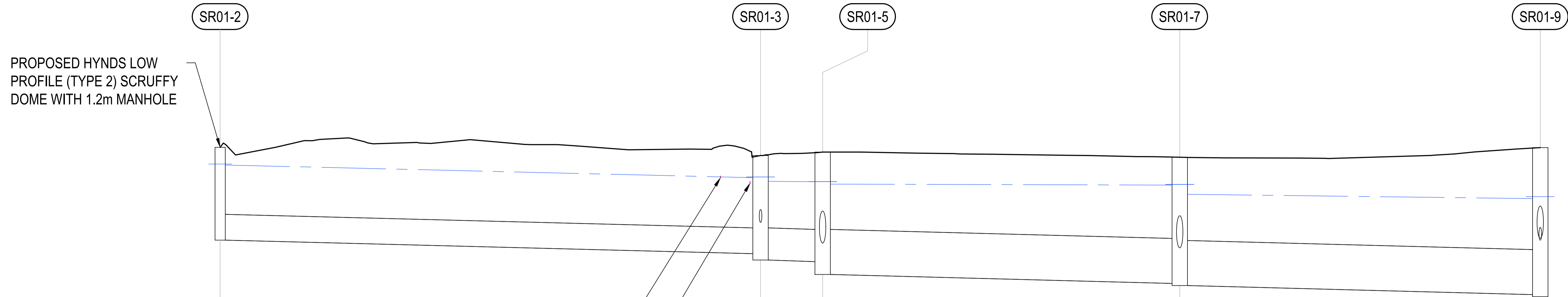
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Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title	STORMWATER LONGITUDINAL SECTION SHEET 1 OF 5
Drawing No.	12596871-C301

Size **A1**
Rev **B**



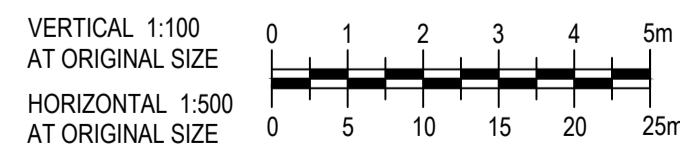
VELOCITY (m/s)	1.75	1.81	2.01	2.40
Q100 PIPE FLOW (cu.m/s)	0.420	0.420	0.650	1.327
PIPE CAPACITY (cu.m/s)	0.434	0.788	1.932	1.932
PIPE GRADE (%)	0.5%	0.5%	0.5%	0.5%
PIPE SLOPE (1 IN X)	200.0	200.0	200.0	200.0
PIPE SIZE (mm)	600	750	1050	1050
PIPE CLASS / BEDDING	RCRRJ	RCRRJ	RCRRJ	RCRRJ

DATUM R.L.	9.00				
HYDRAULIC GRADE LINE (100-yr ARI)	20.063 20.040	19.745 19.761 19.659	19.649 19.653 19.595	19.572 19.588 19.357	19.258 19.304
DEPTH TO INVERT FROM DESIGN SURFACE	2.113 2.163	2.287 2.437	2.553 2.853	2.941 2.991	3.427
INVERT LEVEL	18.340 18.290	17.974 17.824	17.788 17.488	17.280 17.230	17.019
FINISH SURFACE LEVEL	20.453	20.261	20.341	20.221	20.446
CHAINAGE	51.266	63.072	114.338 7.245 121.583	41.678	163.261 42.080 205.340

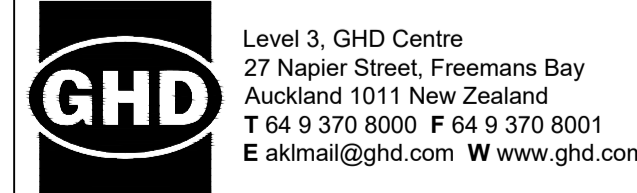
PIPELINE - SR01

**DRAINAGE SR-01
LONGITUDINAL SECTION**
SCALE 1:500 H ; 1:100 V

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



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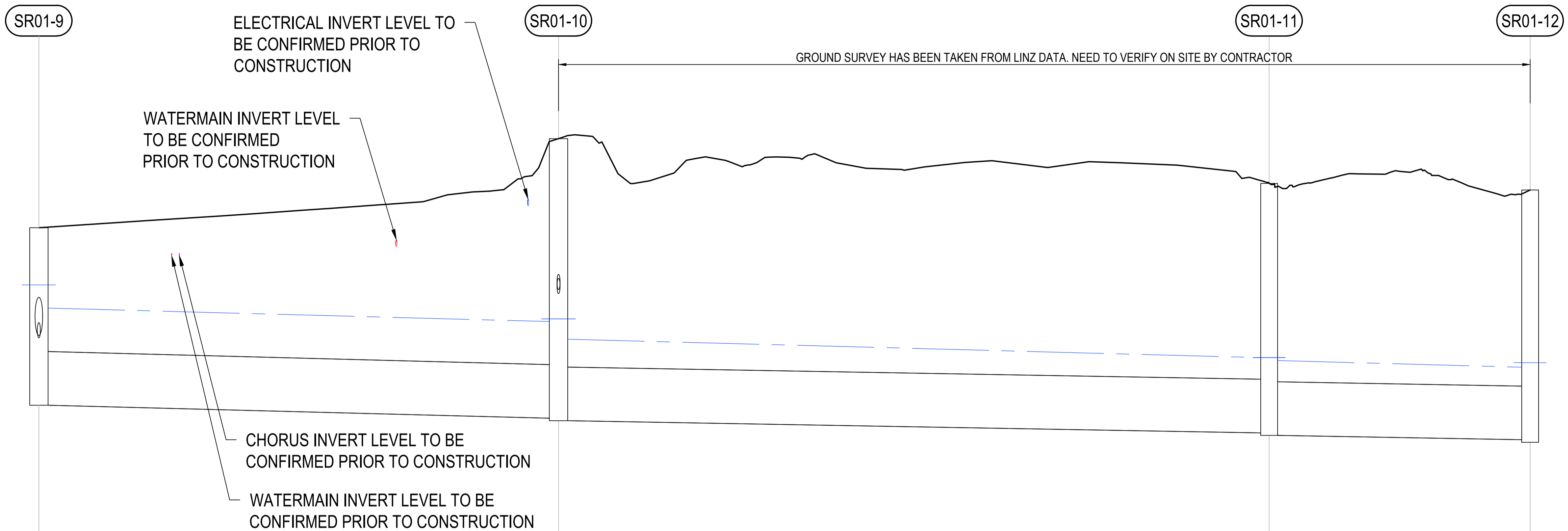
Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title
**STORMWATER
LONGITUDINAL SECTION
SHEET 2 OF 5**

Status Code
S4

Drawing No.
12596871-C302

Size
A1
Rev
B



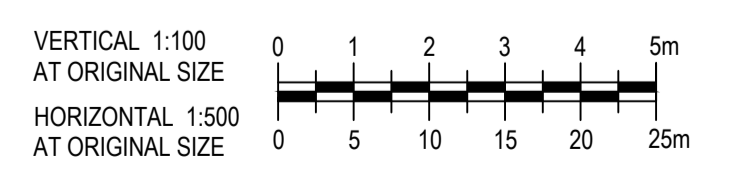
VELOCITY (m/s)	2.54	2.27	2.27
Q10 PIPE FLOW (cu.m/s)	1.965	1.965	1.965
PIPE CAPACITY (cu.m/s)	1.932	1.597	1.576
PIPE GRADE (%)	0.5%	0.3%	0.3%
PIPE SLOPE (1 IN X)	200.0	292.8	300.3
PIPE SIZE (mm)	1050	1050	1050
PIPE CLASS / BEDDING	RCRRJ	RCRRJ	RCRRJ

DATUM R.L.	9.00						
HYDRAULIC GRADE LINE (100-yr ARI)	19.280 19.326	18.871	18.608 18.660 18.262	17.902 17.903	17.845	17.713 17.802	
DEPTH TO INVERT FROM DESIGN SURFACE	3.427	3.477	5.474 5.524	4.887	4.937	4.892	
INVERT LEVEL	17.019	16.969	16.715 16.665	16.427	16.377	16.292	
FINISH SURFACE LEVEL	20.446		22.189	21.314		21.184	
CHAINAGE	205.340	50.883	256.224	69.582	325.805	25.556	351.361

PIPELINE - SR01

**DRAINAGE SR-01
LONGITUDINAL SECTION**
SCALE 1:500 H ; 1:100 V

Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.
Designer	M. BUTT	Design Check	N. CAULTON



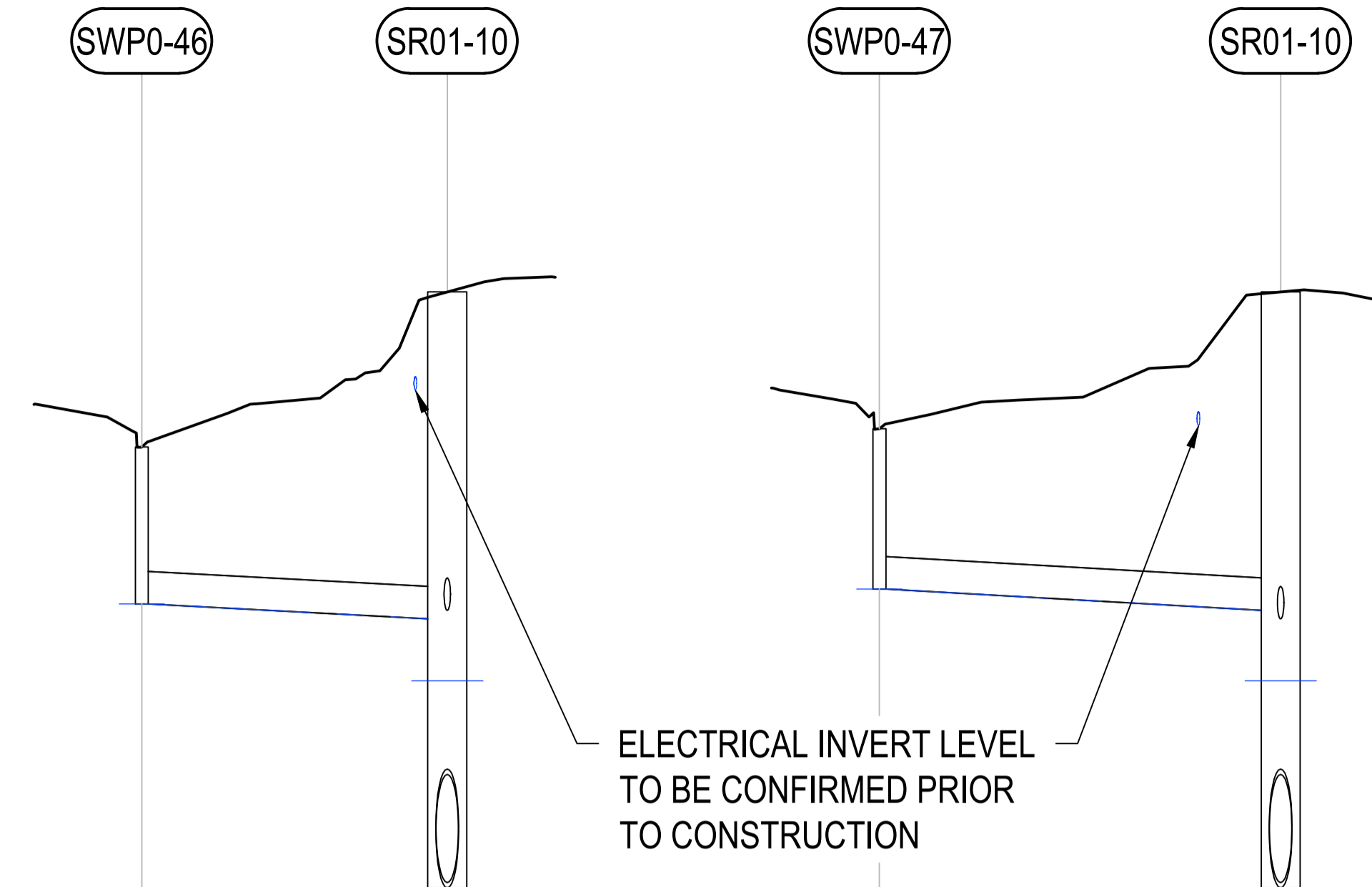
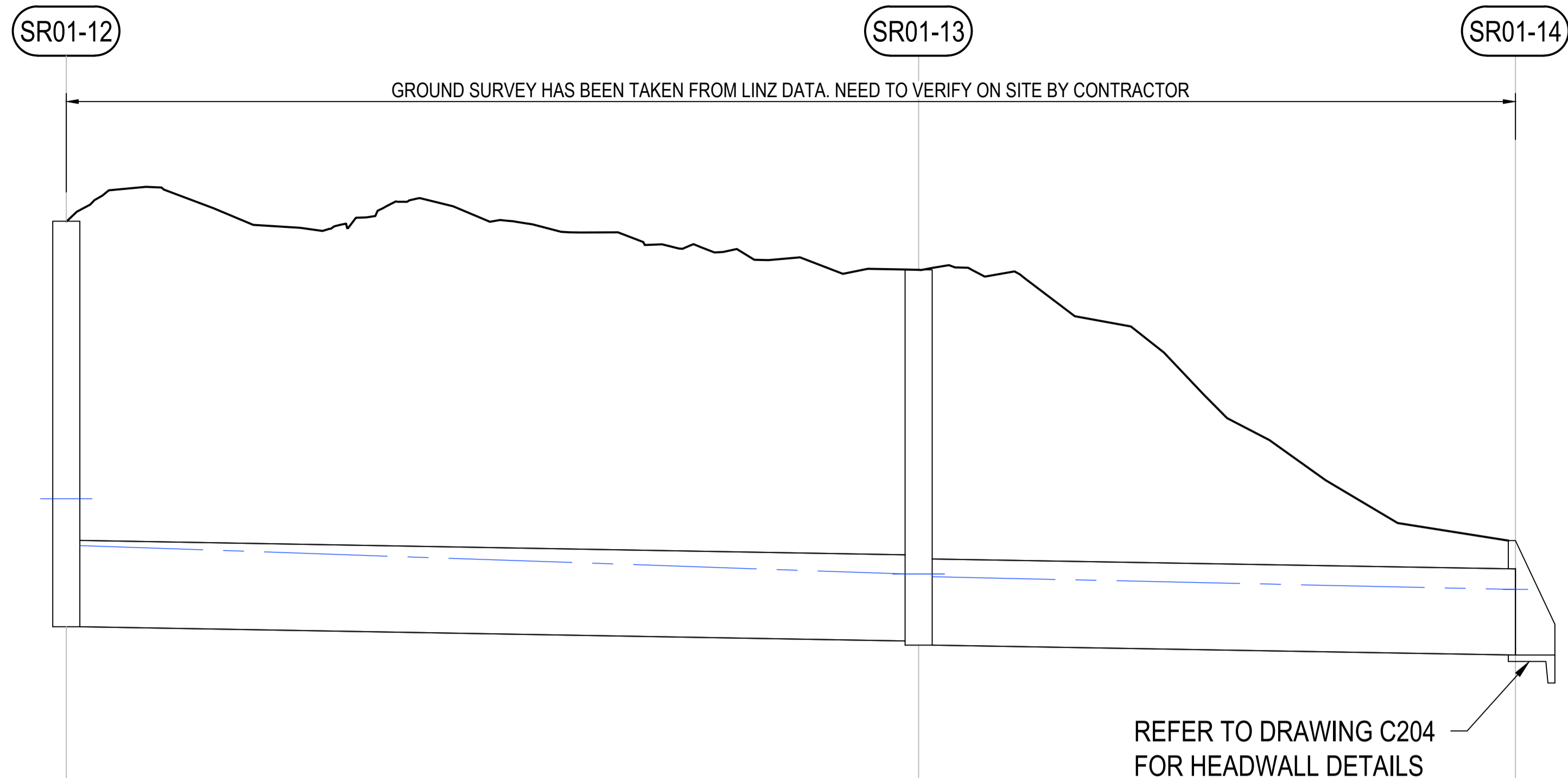
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Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title	STORMWATER LONGITUDINAL SECTION SHEET 3 OF 5
Project No.	12596871
Status Code	S4
Drawing No.	12596871-C303

Size **A1**
Rev **B**



VELOCITY (m/s)	2.27		2.27	
Q10 PIPE FLOW (cu.m/s)	1.965		1.965	
PIPE CAPACITY (cu.m/s)	1.584		1.582	
PIPE GRADE (%)	0.3%		0.3%	
PIPE SLOPE (1 IN X)	297.6		300.4	
PIPE SIZE (mm)	1050		1050	
PIPE CLASS / BEDDING	RCRRJ		RCRRJ	
DATUM R.L.	8.00			
HYDRAULIC GRADE LINE (100-yr ARI)	17.713 17.802 17.230		16.885 16.851	16.696
DEPTH TO INVERT FROM DESIGN SURFACE	4.892 4.942		4.523 4.573	1.050 1.050
INVERT LEVEL	16.292 16.242		16.068 16.018	15.897 15.897
FINISH SURFACE LEVEL	21.184		20.590	16.947 16.947
CHAINAGE	351.361	51.932	403.294	36.362 439.655

VELOCITY (m/s)	0.00		0.00	
Q10 PIPE FLOW (cu.m/s)	0.000		0.000	
PIPE CAPACITY (cu.m/s)	0.096		0.100	
PIPE GRADE (%)	1.0%		1.1%	
PIPE SLOPE (1 IN X)	102.6		94.0	
PIPE SIZE (mm)	300		300	
PIPE CLASS / BEDDING	RCRRJ		RCRRJ	
DATUM R.L.	9.00			
HYDRAULIC GRADE LINE (100-yr ARI)	19.293		19.155 18.581	18.523
DEPTH TO INVERT FROM DESIGN SURFACE	1.453		3.024 5.514	1.483 5.514
INVERT LEVEL	19.293		19.155 16.665	19.233 16.665
FINISH SURFACE LEVEL	20.745		22.179	22.179
CHAINAGE	0.000	14.134	14.134	18.565

PIPELINE - SR01

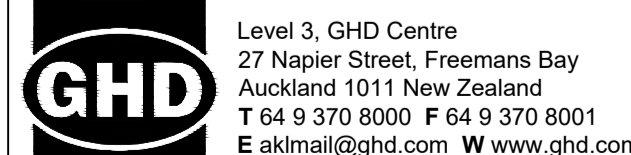
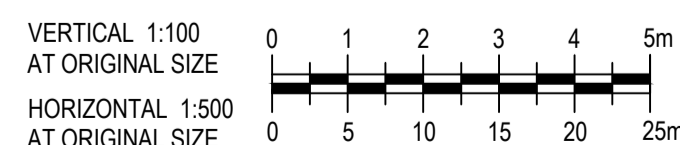
PIPELINE - SWP0

PIPELINE - SWP0

DRAINAGE SR-01
LONGITUDINAL SECTION

SCALE 1:500 H ; 1:100 V

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Author R. BALBERAN Drafting Check E. LEGASPI JR. Designer M. BUTT Design Check N. CAULTON				



Client FAR NORTH DISTRICT COUNCIL

Project MOEREWA STORMWATER IMPROVEMENTS

Status FOR DETAIL

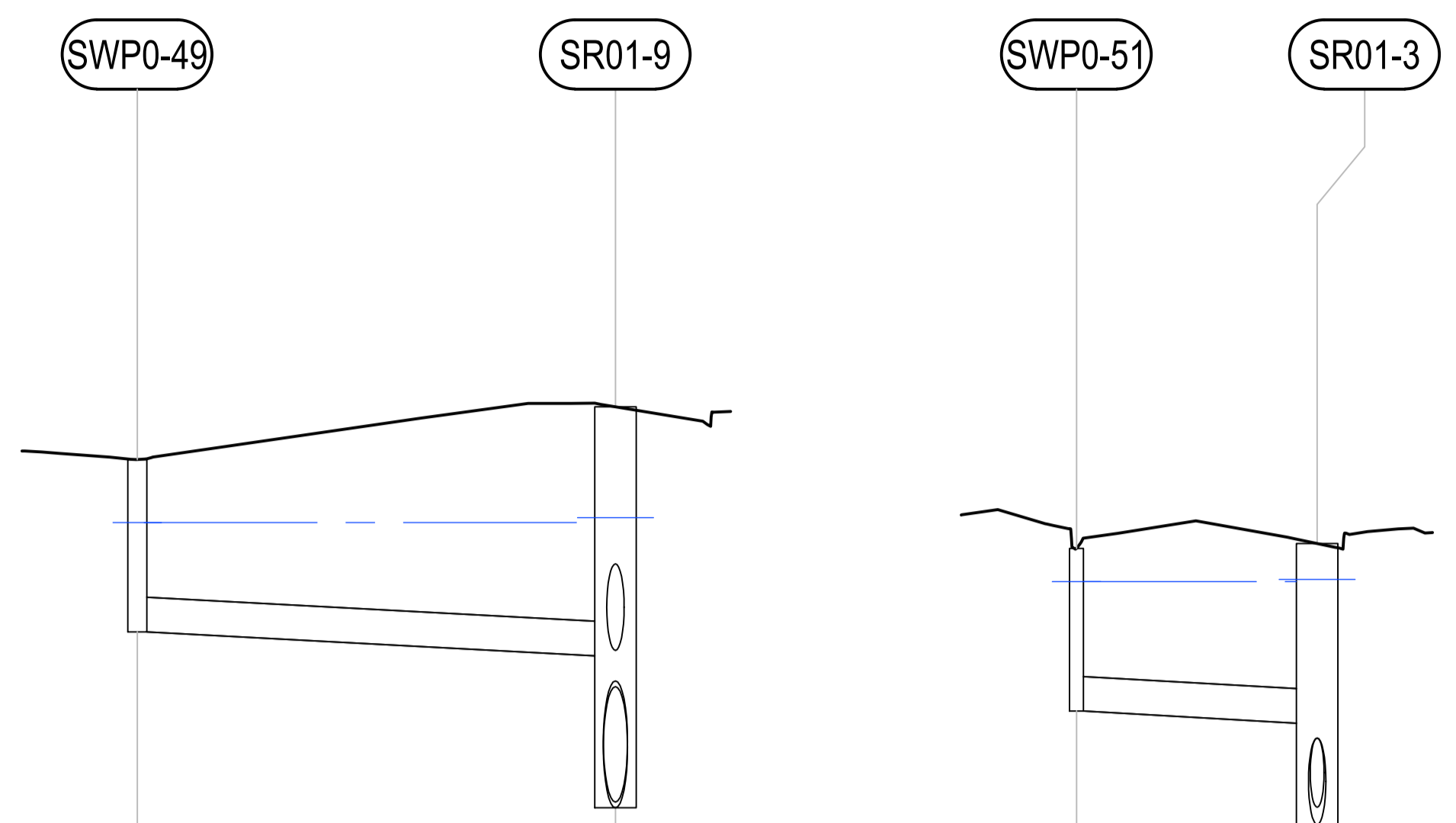
Drawing Title STORMWATER LONGITUDINAL SECTION SHEET 4 OF 5

Size A1

Rev B

Status Code S4

Drawing No. 12596871-C304



VELOCITY (m/s)	0.00	
Q100 PIPE FLOW (cu.m/s)	0.000	
PIPE CAPACITY (cu.m/s)	0.097	
PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 IN X)	100.0	
PIPE SIZE (mm)	300	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	9.00	
HYDRAULIC GRADE LINE (100-yr ARI)	19.442	19.442 19.485 19.047
DEPTH TO INVERT FROM DESIGN SURFACE	1.494	2.159 3.477
INVERT LEVEL	18.495	18.287 16.969
FINISH SURFACE LEVEL	19.989	20.446 20.446
CHAINAGE	0.000	20.744 20.744

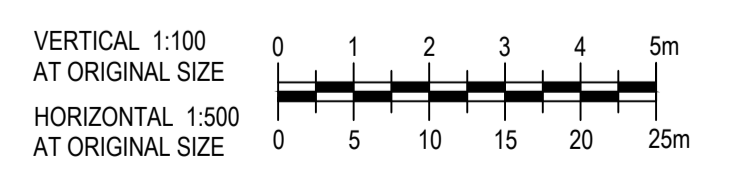
PIPELINE - SWP0

VELOCITY (m/s)	0.00	
Q100 PIPE FLOW (cu.m/s)	0.000	
PIPE CAPACITY (cu.m/s)	0.097	
PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 IN X)	100.0	
PIPE SIZE (mm)	300	
PIPE CLASS / BEDDING	RCRRJ	
DATUM R.L.	10.00	
HYDRAULIC GRADE LINE (100-yr ARI)	19.931	19.931 19.949 19.847
DEPTH TO INVERT FROM DESIGN SURFACE	1.410	1.558 2.437
INVERT LEVEL	18.808	18.703 17.824
FINISH SURFACE LEVEL	20.218	20.261 20.261
CHAINAGE	0.000	10.439 10.439

PIPELINE - SWP0

DRAINAGE SR-01
LONGITUDINAL SECTION
SCALE 1:500 H; 1:100 V

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	



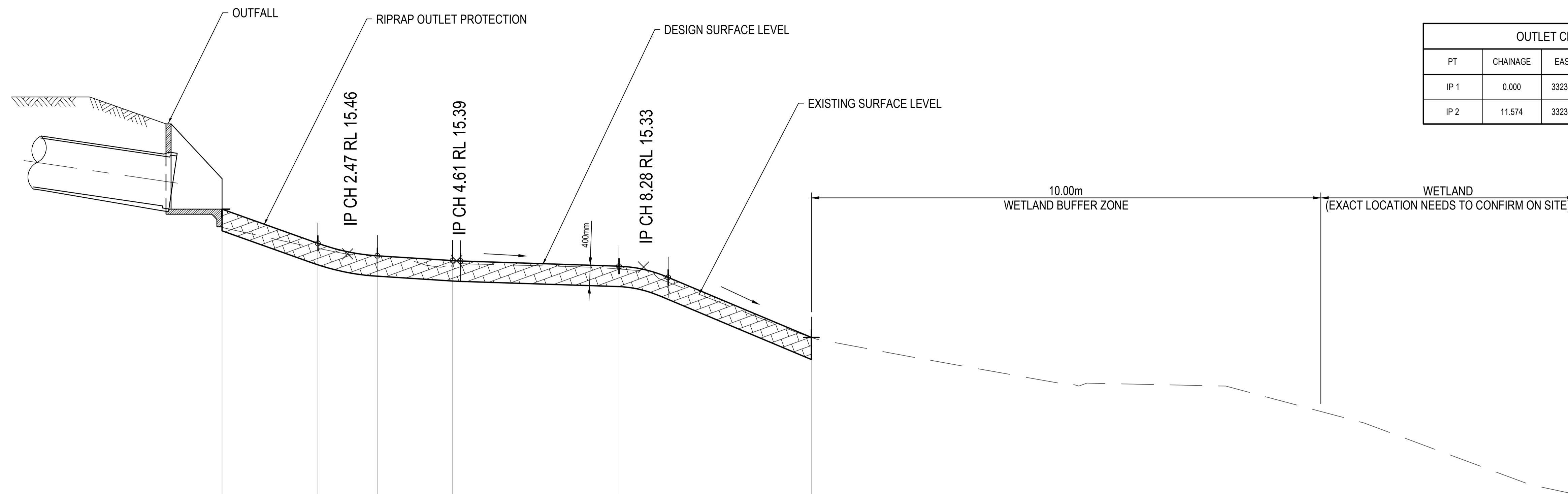
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Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title	STORMWATER LONGITUDINAL SECTION SHEET 5 OF 5
Project No.	12596871
Status Code	S4
Drawing No.	12596871-C305

Size A1
Rev B



OUTLET CHANNEL SETOUT TABLE					
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	332339.103	964872.950	15.720	96°57'41.50"
IP 2	11.574	332350.592	964871.548	14.638	96°57'41.50"

NOTE:
 1. FOR MORE DETAILS FOR OUTLET RIPRAP DESIGN, REFER TO DRAWING C205.

DATUM RL. 12.00

VERTICAL ALIGNMENT						
HORIZONTAL ALIGNMENT	L=11.57m					
DESIGN SURFACE LEVEL	15.890	15.562	15.439	15.392	15.337	14.638
EXISTING SURFACE LEVEL	15.72	15.51	15.44	15.36	15.31	14.64
CHAINAGE	0.00	1.88	3.05	4.53	7.80	11.57
						13.10
						26.57

**OUTLET CHANNEL
 LONGITUDINAL SECTION**
 SCALE 1:100 H : 1:50 V

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	N. CAULTON	

VERTICAL 1:50
 AT ORIGINAL SIZE
 HORIZONTAL 1:100
 AT ORIGINAL SIZE

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Project No.
 12596871

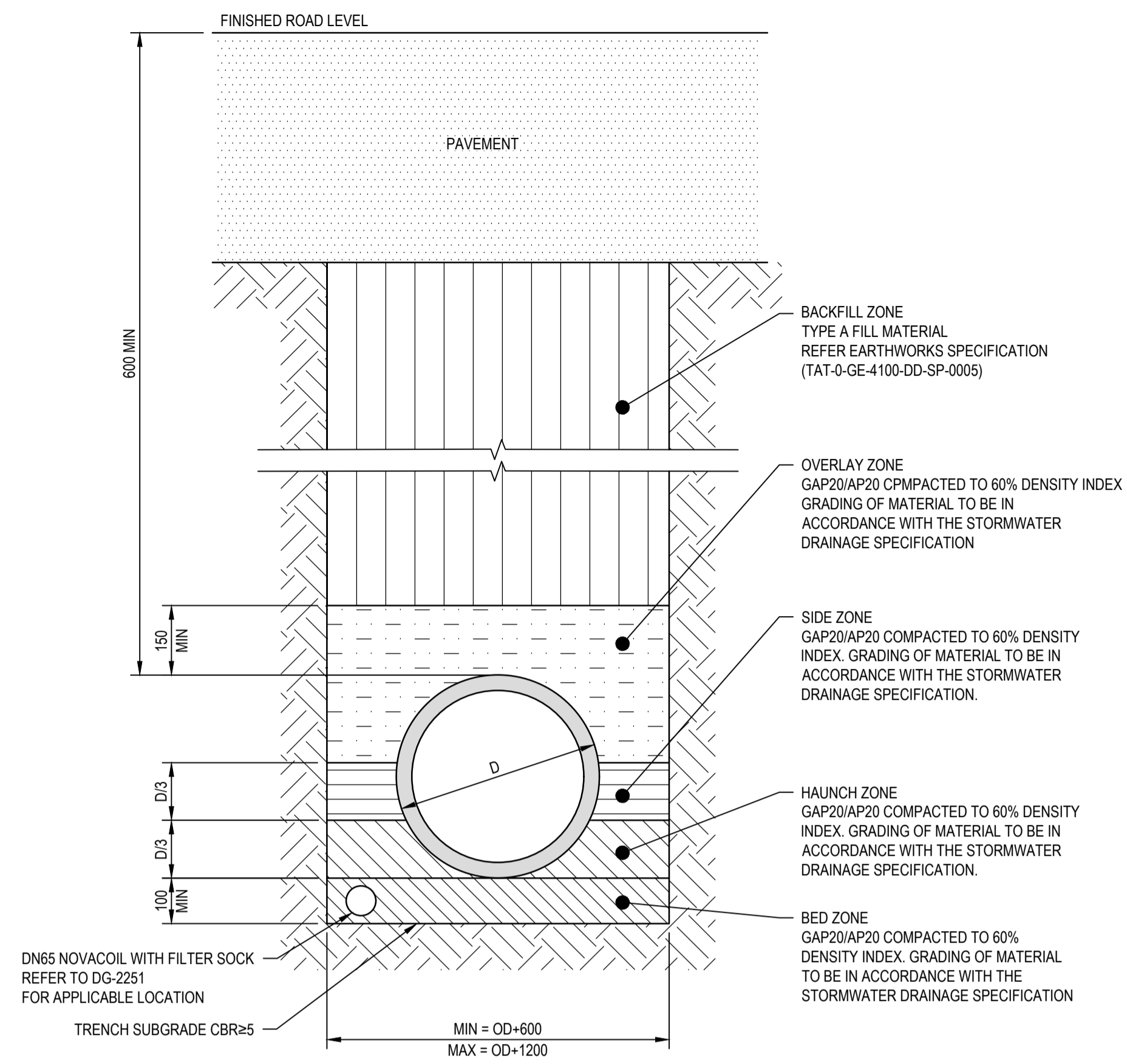
Client FAR NORTH DISTRICT COUNCIL
 Project MOERewa STORMWATER IMPROVEMENTS
 Status FOR TENDER

Drawing Title
 OUTLET CHANNEL LONGITUDINAL SECTION

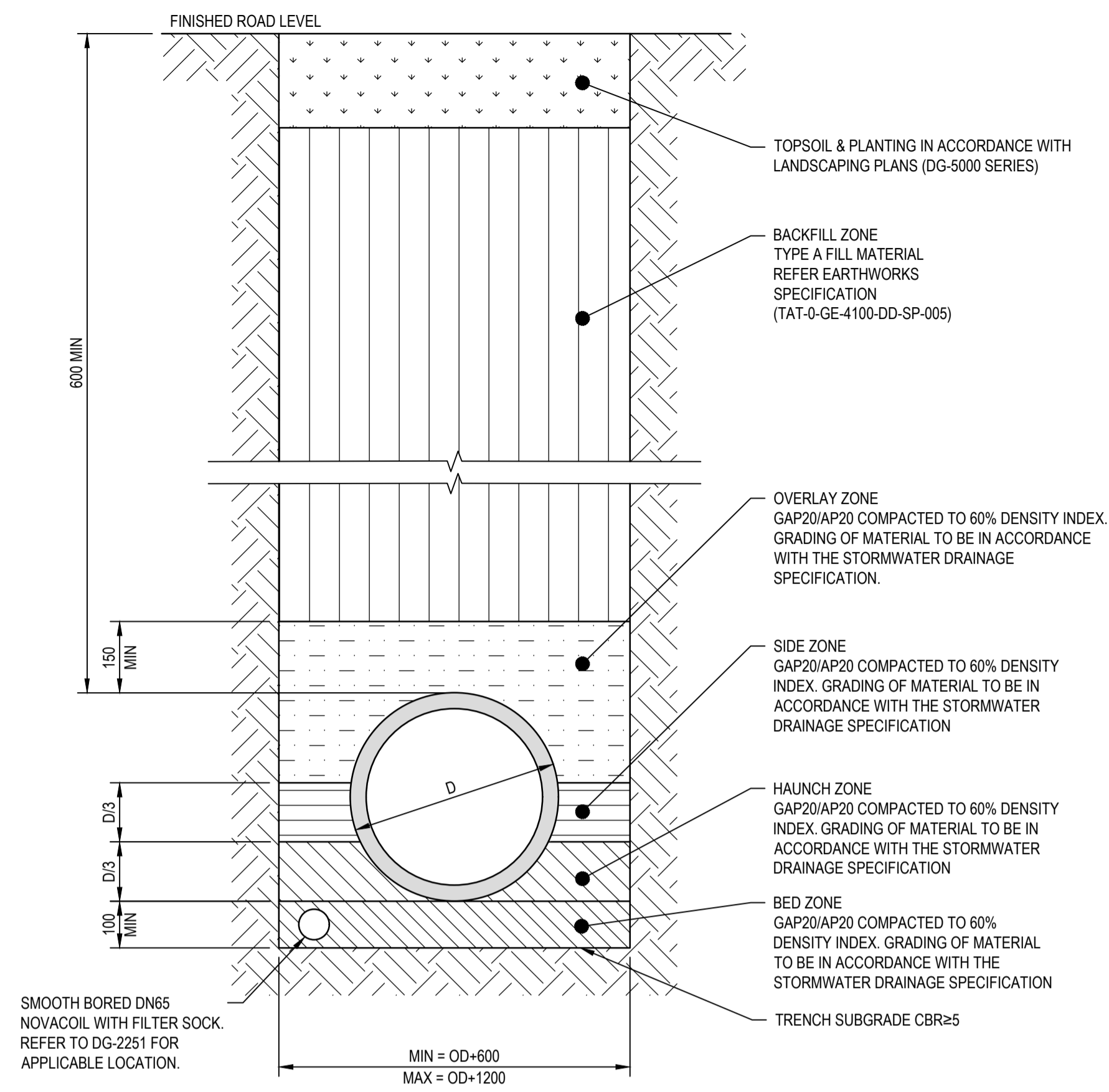
Status Code
 S4

Drawing No.
 12596871-C306

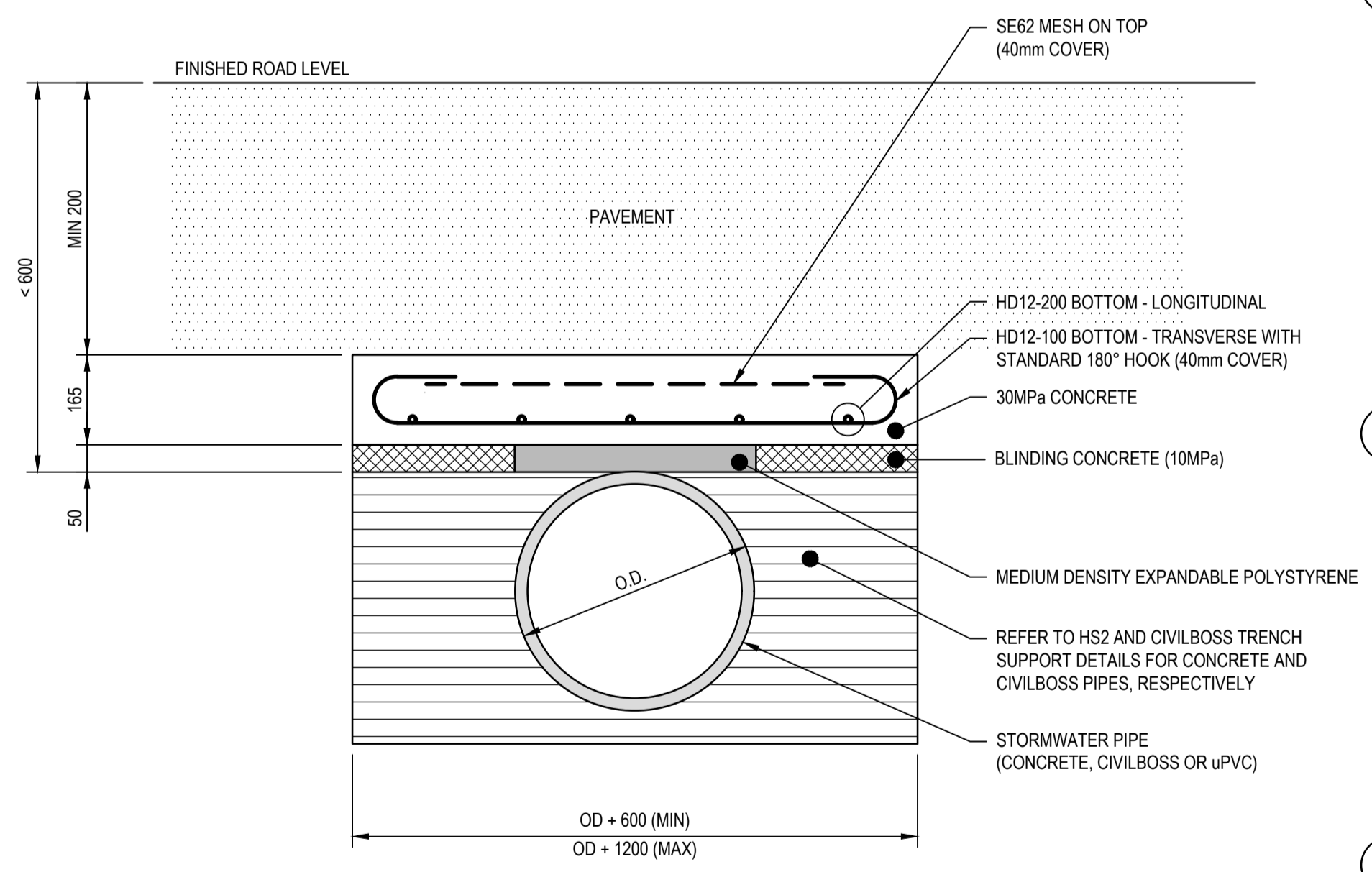
Size
 A1
 Rev
 B



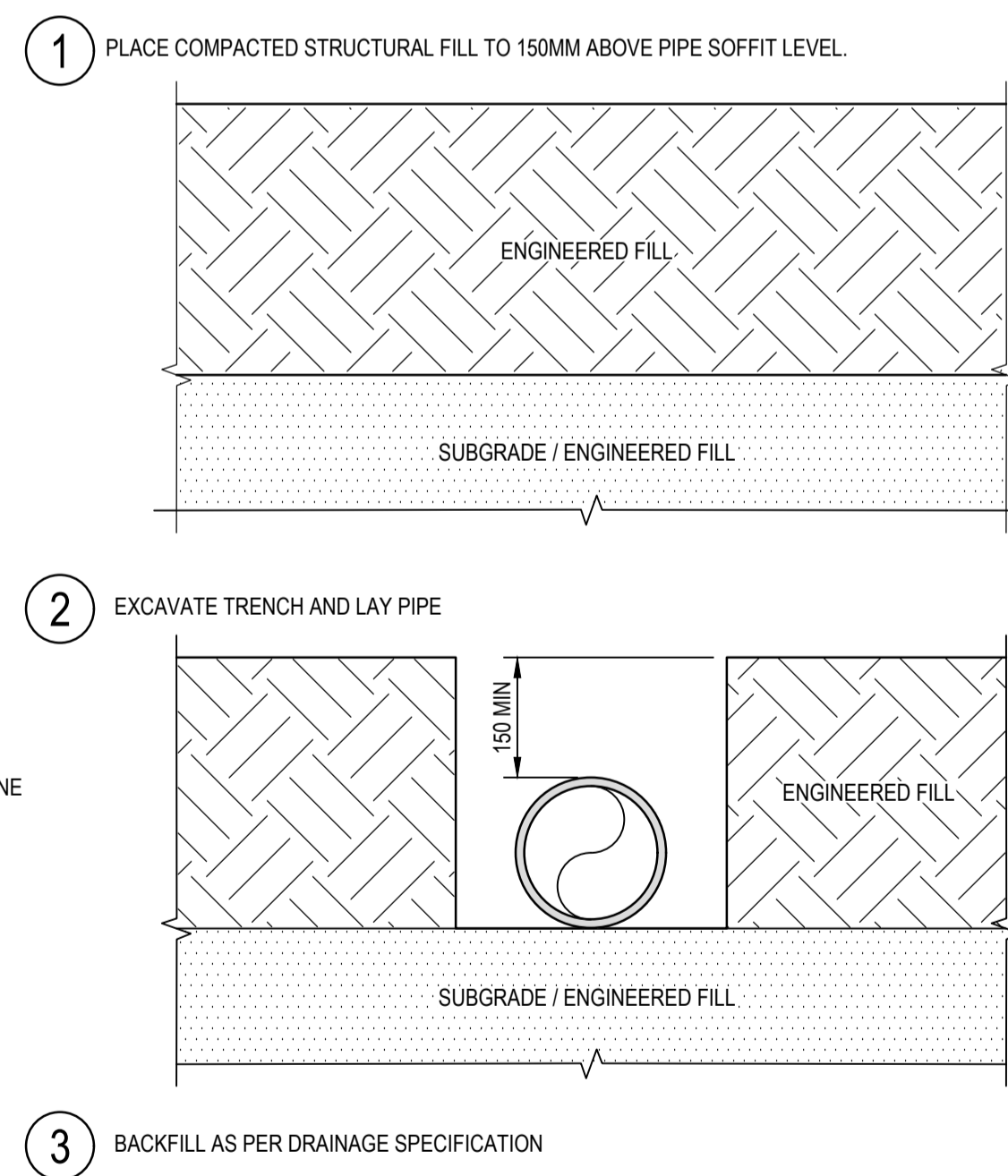
**TYPICAL CONCRETE PIPE TRENCH AND BACKFILL
TRAFFICABLE AREAS - HS2 SUPPORT (RCRRJ)**
SCALE 1:10



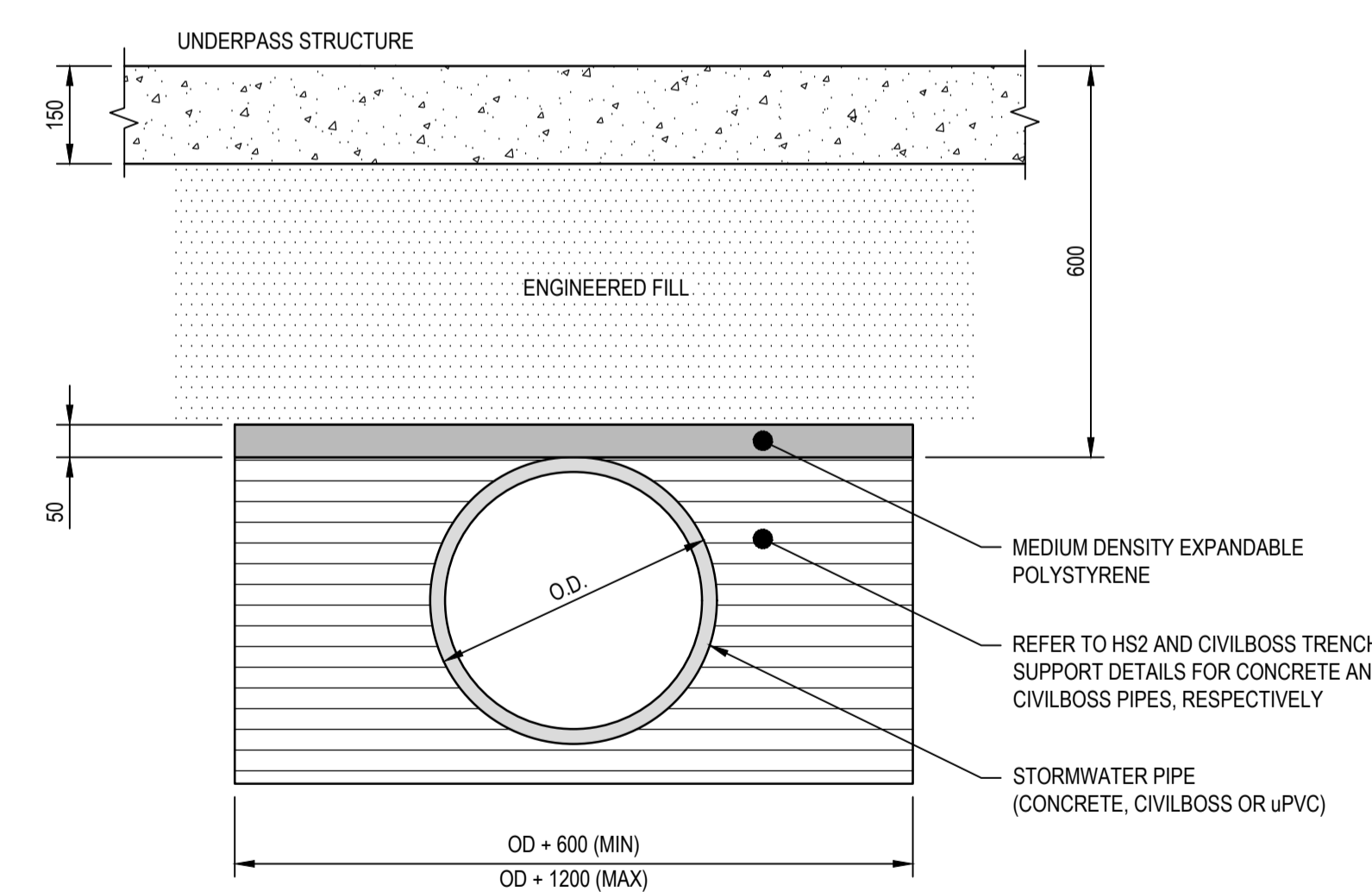
**TYPICAL CONCRETE PIPE TRENCH AND BACKFILL
NON TRAFFICABLE AREAS - HS2 SUPPORT (RCRRJ)**
SCALE 1:10



PIPE PROTECTION FOR CONCRETE AND CIVIL BOSSPIPES WITH COVER < 600mm
SCALE 1:10



**CONSTRUCTION SEQUENCE FOR PIPES
INSTALLED IN FILL EMBANKMENTS**
SCALE 1:10



TYPICAL UNDERPASS PIPE PROTECTION DETAIL
NTS

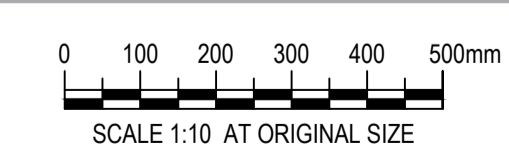
SUBGRADE CBR	UNDERCUT REQUIRED
3.5% < CBR < 5%	UNDERCUT 150mm AND REPLACE WITH COMPACTED AP65 OR OTHER APPROVED GRANULAR MATERIAL
2% < CBR < 3.5%	UNDERCUT 300mm AND REPLACE WITH COMPACTED AP65 OR OTHER APPROVED GRANULAR MATERIAL
CBR < 2%	SEEK DESIGNERS ADVICE. TYPICAL RESPONSE IS LIKELY TO INVOLVE UNDERCUT OF 450mm AND REPLACE WITH COMPACTED AP65 OR OTHER APPROVED GRANULAR MATERIAL

TABLE 1: UNDERCUT REQUIREMENTS IF CBR < 5%

- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 - DO NOT SCALE OFF THIS DRAWING.
 - MATERIAL IN ALL ZONES SHALL BE PLACED/COMPACTED IN LAYERS NOT EXCEEDING 200mm.
 - WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN TRENCH INVERTS, THE MATERIAL SHALL BE UNDERCUT AND RECOMPACTED AS PER TABLE 1.
 - CONCRETE PIPE INSTALLATION TO BE IN ACCORDANCE WITH AS/NZS 3725.
 - OD REFERS TO OUTSIDE DIAMETER OF THE PIPE. D REFERS TO THE INTERNAL DIAMETER OF THE PIPE.
 - ALL CONCRETE PIPES ARE TO BE INSTALLED WITH HS2 SUPPORT UNLESS OTHERWISE NOTED.

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24

Author: R. BALBERAN, Drafting Check: E. LEGASPI JR., Designer: M. BUTT, Design Check: V. CHANDRA

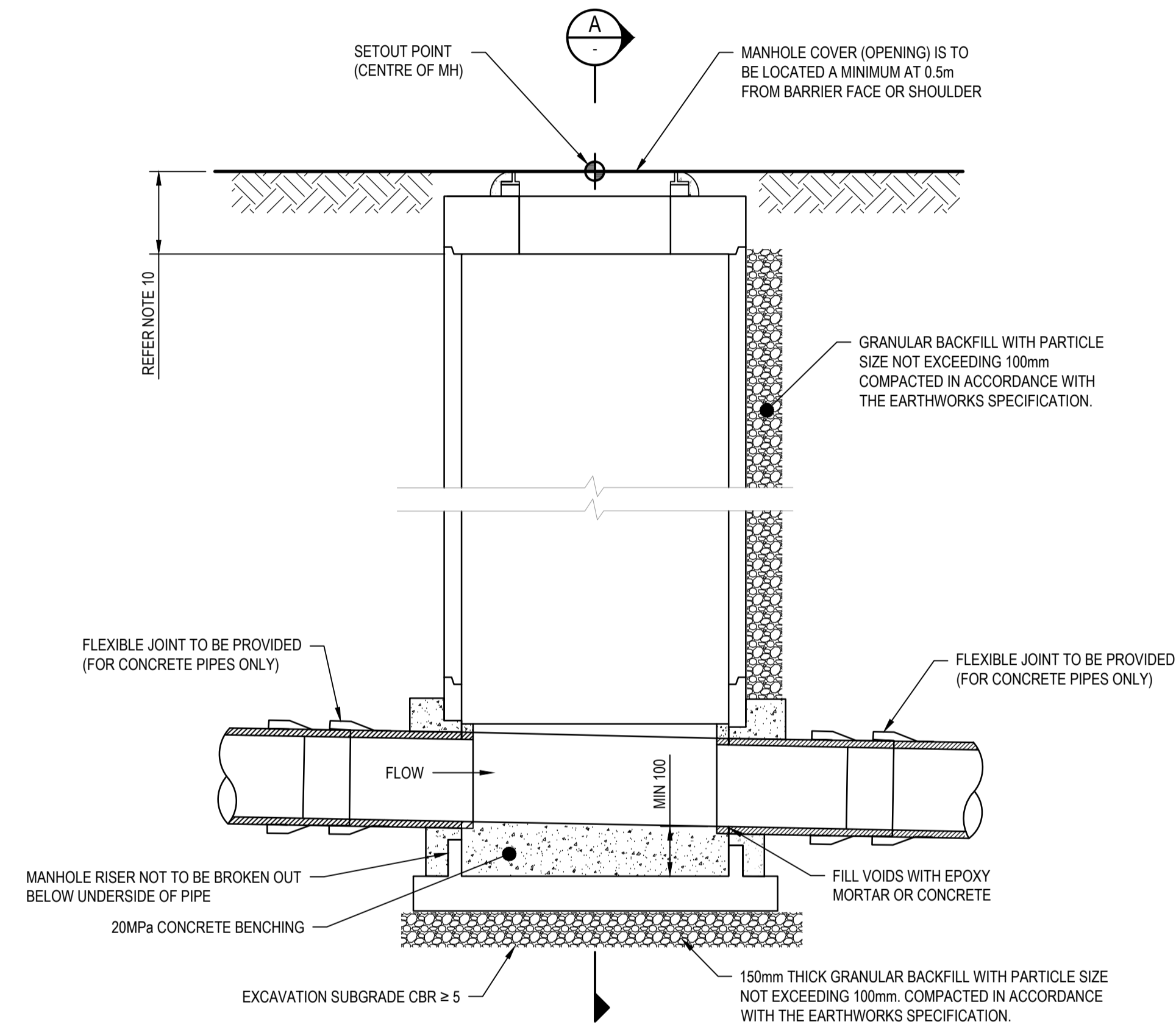


Client	FAR NORTH DISTRICT COUNCIL
Project	MOEREWA STORMWATER IMPROVEMENTS
Status	FOR TENDER

Drawing Title	TYPICAL STORMWATER DETAILS SHEET 1 OF 5
Drawing No.	12596871-C201
Rev	B

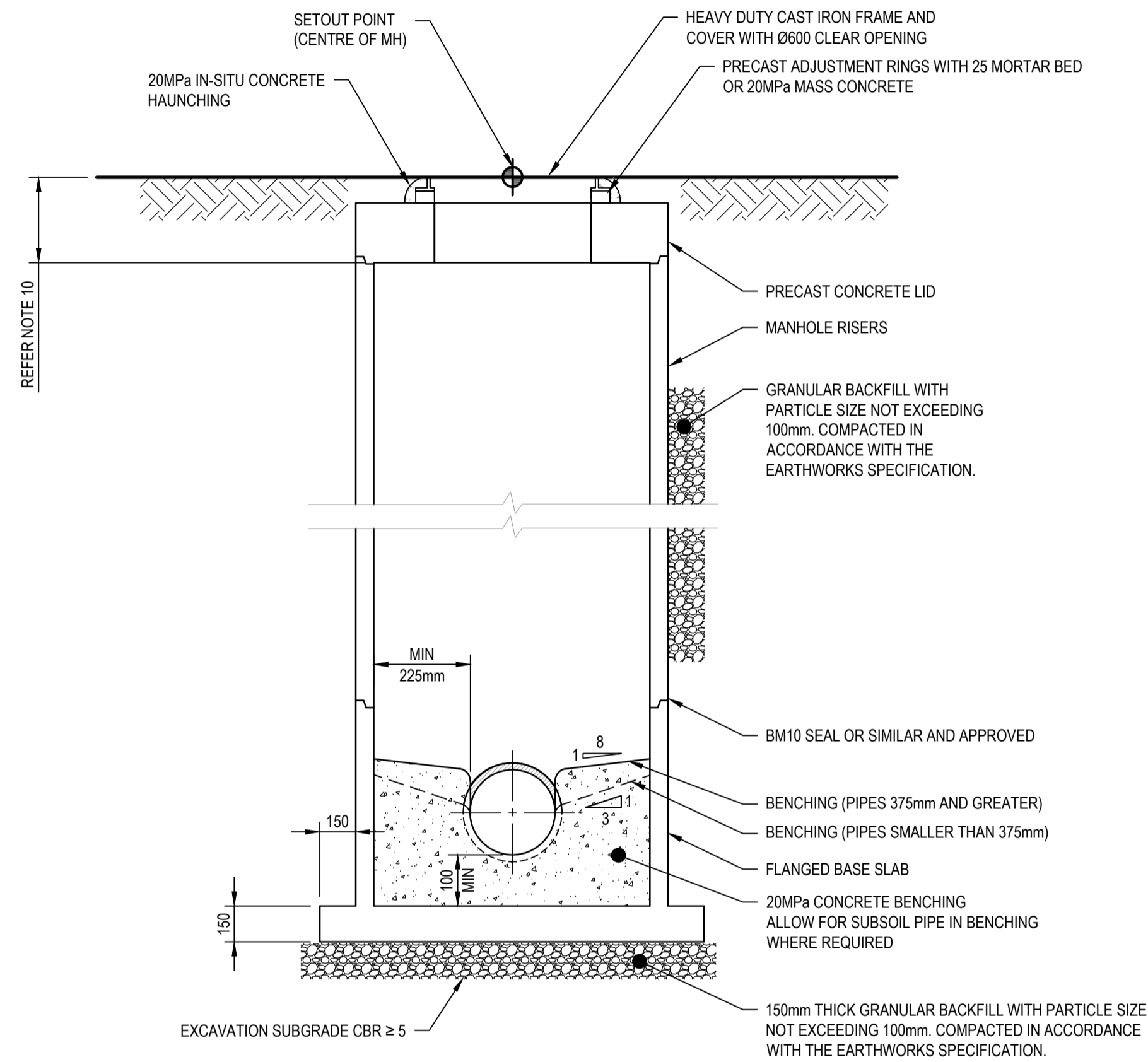
NOTES:

1. DO NOT SCALE OFF THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
3. ALL PIPE OPENINGS TO BE CONCRETE SAW CUT. MANHOLE OPENINGS ARE NOT TO BE BROKEN OUT WITH HAMMERS.
4. MANHOLES SHALL COMPRISE OF THE MINIMUM NUMBER OF RISERS. NO RISERS SHALL BE CUT DOWN TO HEIGHT.
5. FLEXIBLE CIVILBOSS PIPES SHALL BE CONNECTED TO MANHOLE USING BOSS HYDROSEAL MANHOLE CONNECTION OR APPROVED EQUIVALENT.
6. MANHOLES TO INCORPORATE PRECAST FLANGE BASES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. BENCHING SHALL BE FORMED WITH 20MPa CONCRETE.
8. THICKNESS OF HEAVY DUTY MANHOLE LIDS (SUBJECT TO HN-HO-72 LOADING) TO BE DETERMINED BY PRECAST MANUFACTURER.
9. MANHOLE EXCAVATION TO BE BACKFILLED WITH AP65 HARDFILL EARTHWORKS SPECIFICATION.
10. MAXIMUM THROAT DEPTH ON MANHOLES TO BE 600mm.
11. FOR MANHOLES LOCATED IN PAVEMENT AREAS, ADJUSTMENT RISERS SHALL BE USED TO ENSURE THAT BASECOURSE AND SUBBASE LAYERS ARE ABLE TO EXTEND OVER THE PRECAST CONCRETE MANHOLE LID.
12. IF EXCAVATION SUBGRADE CBR IS <5, UNDERCUT IN ACCORDANCE WITH TABLE 1 IN C-201 DRAWING.



STANDARD MANHOLE WITH FRAME AND COVER (MH)

SCALE 1:20



A SECTION

SCALE 1:20



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Project No.
12596871

Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **DETAILED DESIGN**

Drawing Title **TYPICAL STORMWATER DETAILS SHEET 2 OF 5**

Status Code **S4**

Drawing No.
12596871-C202

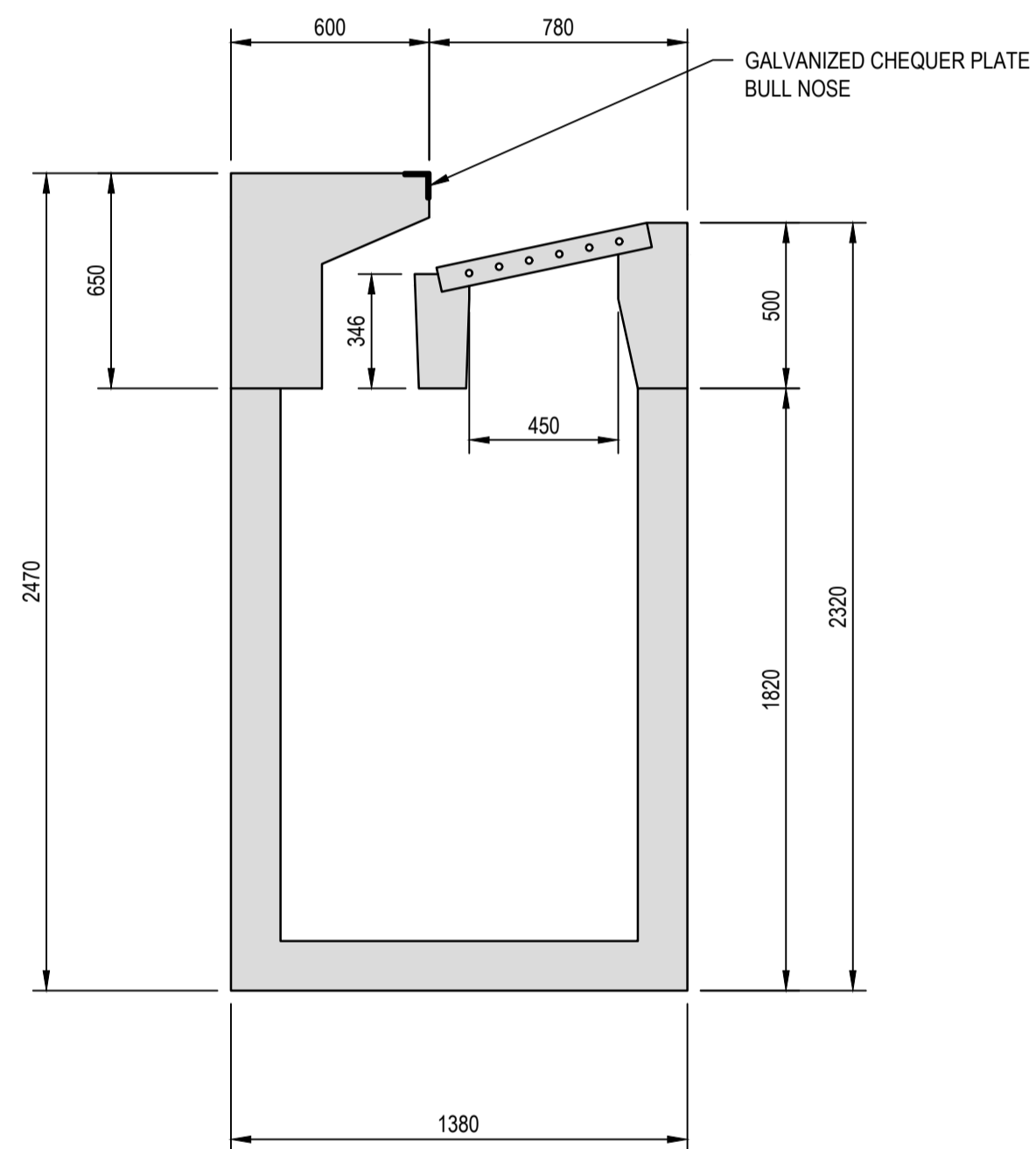
Size **A1**

Rev **B**

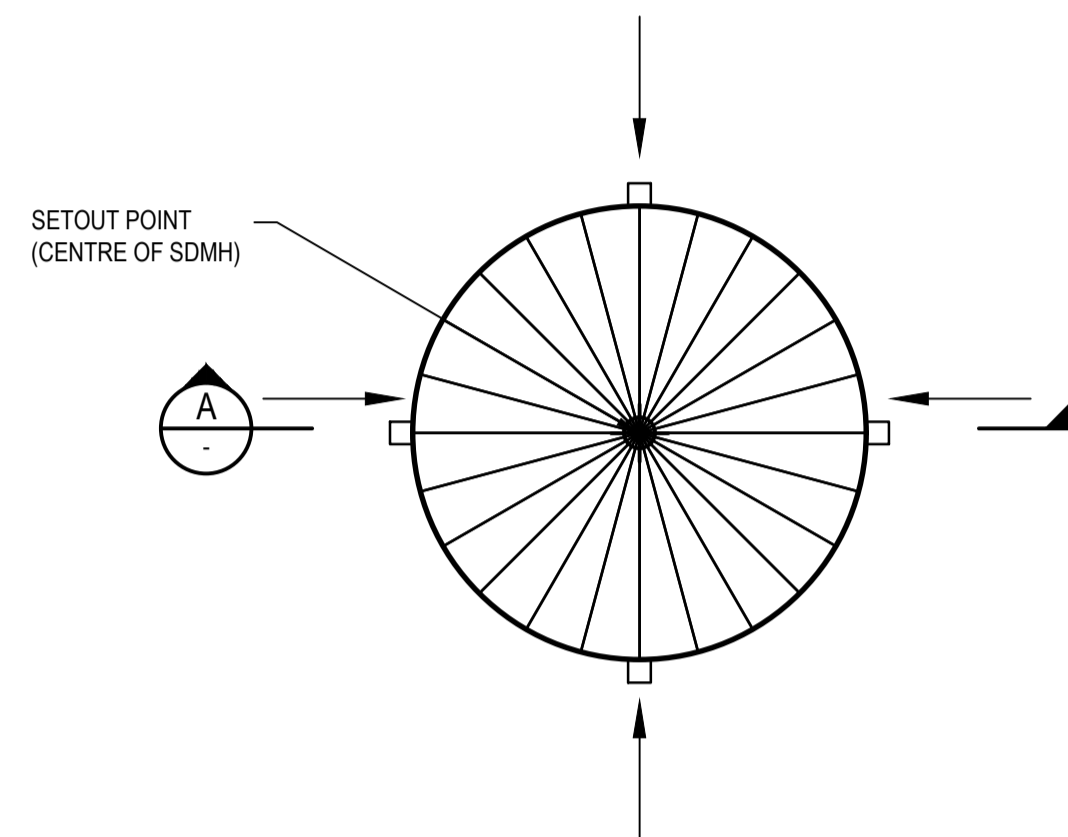
Author	R. BALBERAN	Drafting Check	E. LEGASPI JR.	
Designer	M. BUTT	Design Check	V. CHANDRA	
Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24



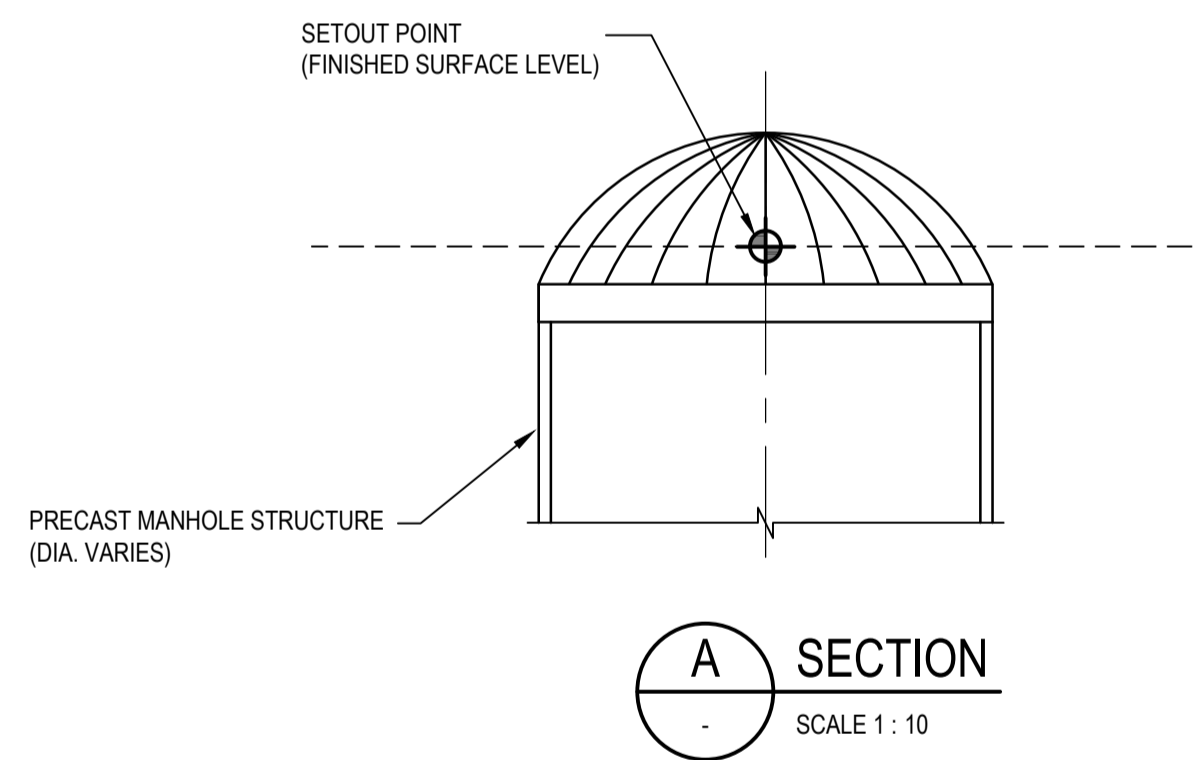
HYNDS MEGAPIT IMAGE REFERENCE
NTS



EXTRA DEEP MEGAPIT
SCALE 1:20



PLAN
SCALE 1:10



A SECTION
SCALE 1:10

**TYPICAL SCRUFFY DOME MANHOLE INLET
IN GRASS / PLANTED CHANNEL**
SCALE 1:10

NOTES:

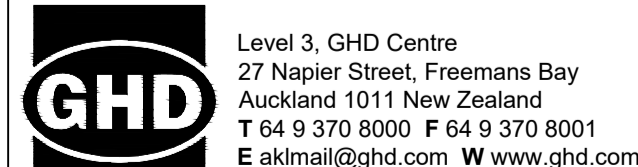
1. DO NOT SCALE OFF THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
3. REFER TO GROUND TOPO SURVEY FOR FINISHED SURFACE LEVELS.
4. SCRUFFY DOME MANHOLE RIM LEVEL TO BE OFFSET 30mm BELOW THE FINISHED SURFACE LEVELS.
5. SETOUT POINT IS PROVIDED TO THE CENTRE OF MANHOLE.
6. PROPOSED MEGA PITS AND SCRUFFY DOME ARE PRODUCTS OF HYNDS.

	200	150	100
GUTTER FLOW DEPTH	150	100	50
AVERAGE HEAD OVER GRATE (mm)	3.24	3.24	3.24
LENGTH OF BACK ENTRY (m)	2.88	2.88	2.88
THEORETICAL FLOW (LITRES/SECOND)	800	680	500

PROPOSED FOR THE PROJECT

UNIT	LENGTH (mm)	WIDTH (m)	DEPTH (m)	WEIGHT (kg)
TANK (STANDARD)	3620	1255	1320	5950
TANK (EXTRA DEEP)	3620	1380	1820	8400
LID	3620	1380	650 / 500	3760

PROPOSED FOR THE PROJECT



Project No.
12596871

Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

Drawing Title **TYPICAL STORMWATER DETAILS SHEET 3 OF 5**

Status Code **S4**

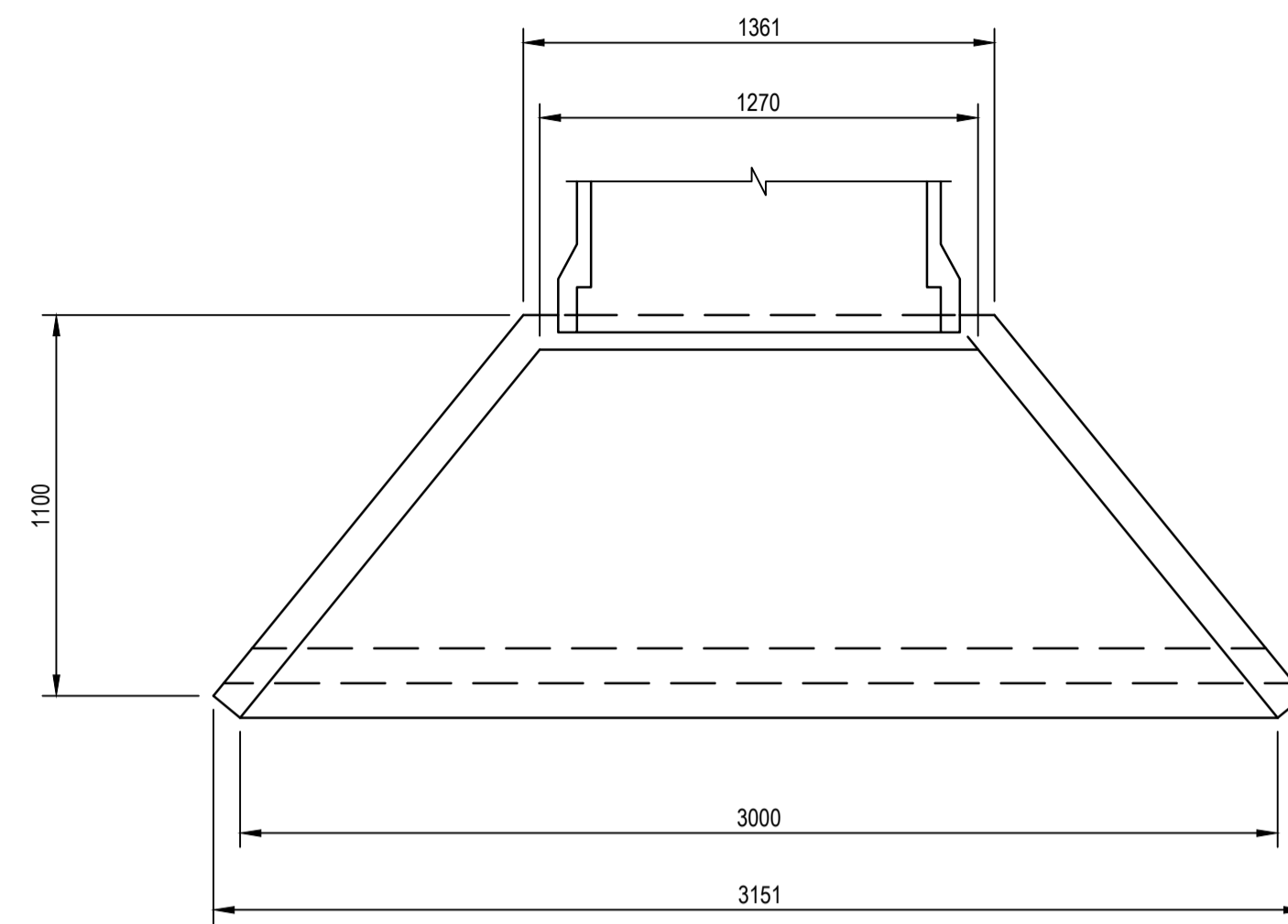
Drawing No. **12596871-C203**

Size **A1**

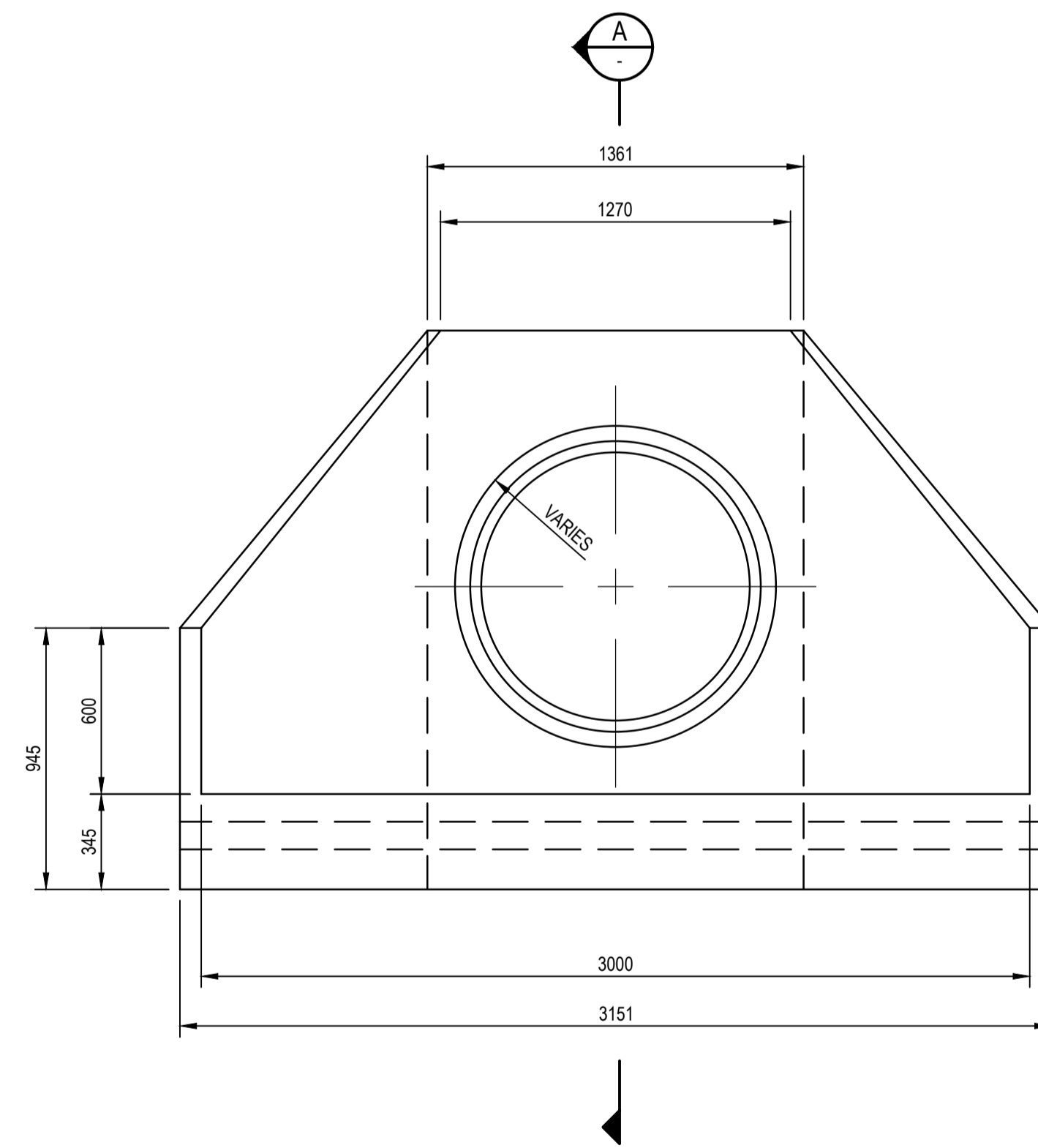
Rev **B**

NOTES:

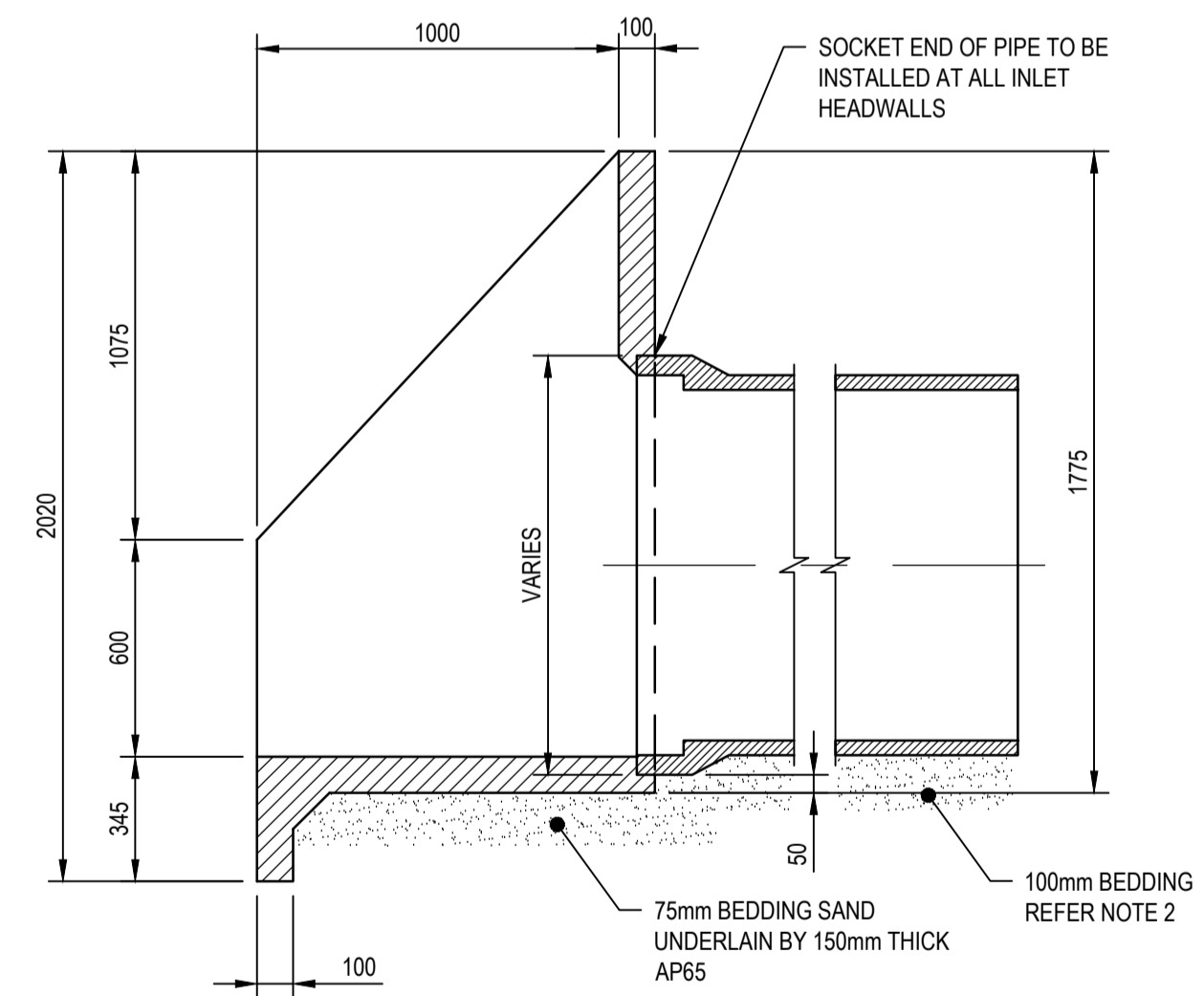
1. INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. BEDDING, HAUNCH, SIDE AND OVERLAY ZONES, IN ADDITION TO BACKFILL TO BE COMPACTED AS PER DRAWING C-201.
3. WW1050 TO BE USED FOR INLETS AND OUTLETS TO 6000 - 10500 (SOCKET END OF PIPE).
4. WING WALLS TO BE BACKFILLED WITH MINIMUM 400mm THICK GRANULAR MATERIAL.



HYNDS WW1050 - PLAN OF INLET
SCALE 1:20



HYNDS WW1050 - FRONT ELEVATION OF INLET
SCALE 1:20



A SECTION
SCALE 1:20



SCALE 1:20 AT ORIGINAL SIZE

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Project No.
12596871

Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**

Status **FOR TENDER**

Status Code **S4**

Drawing Title **TYPICAL STORMWATER DETAILS SHEET 4 OF 5**

Drawing No.
12596871-C204

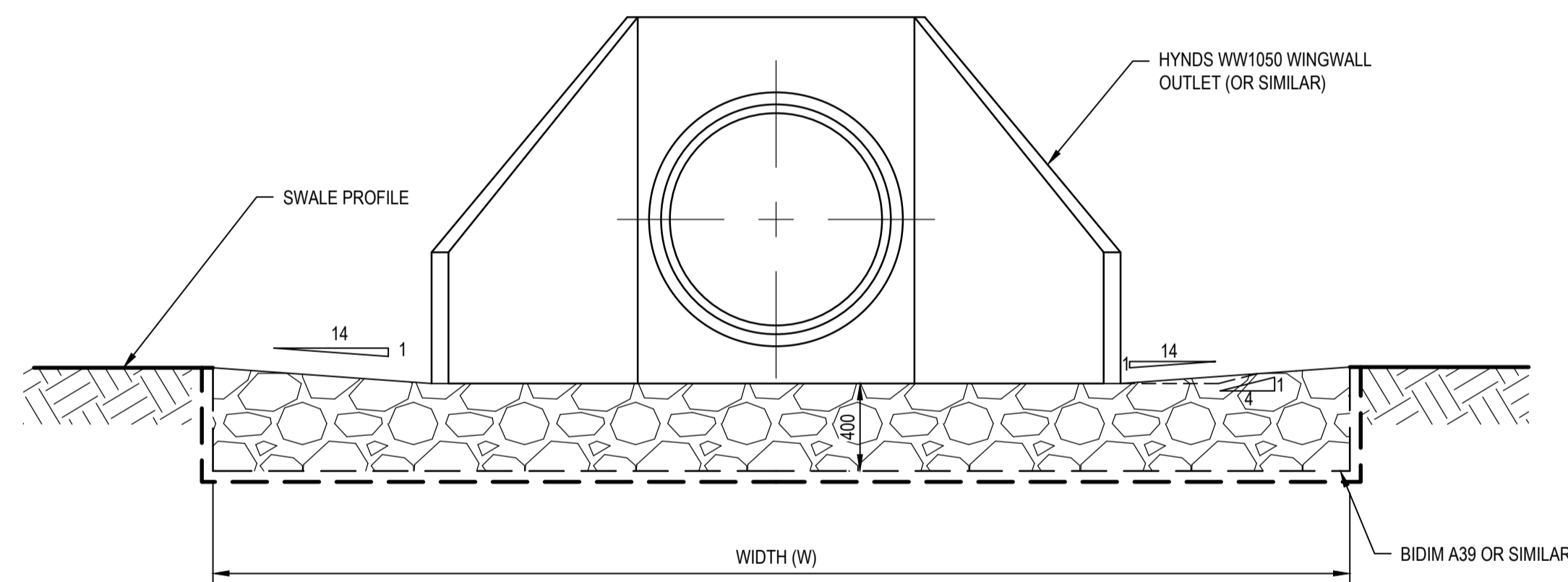
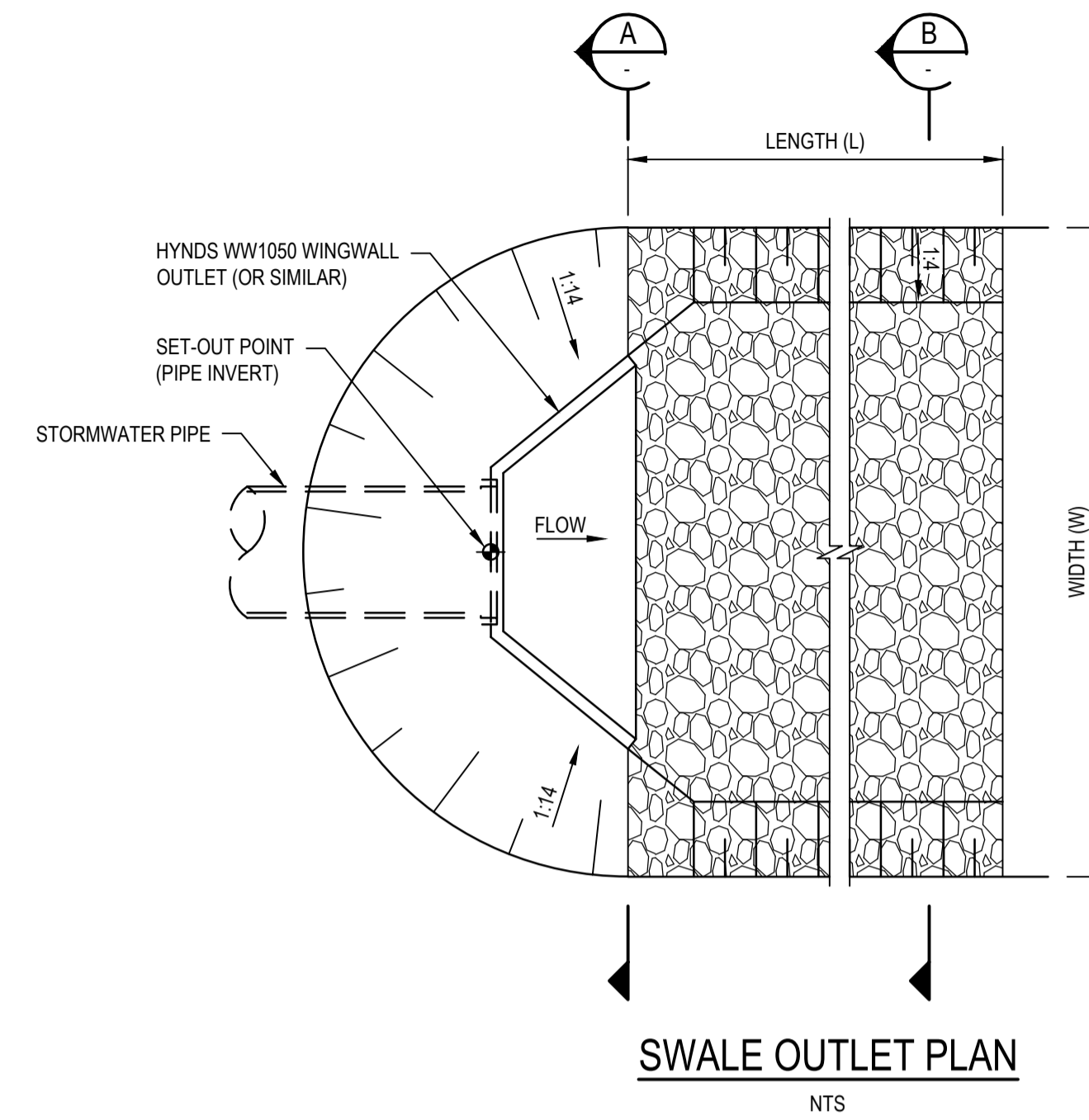
Size
A1

Rev
B

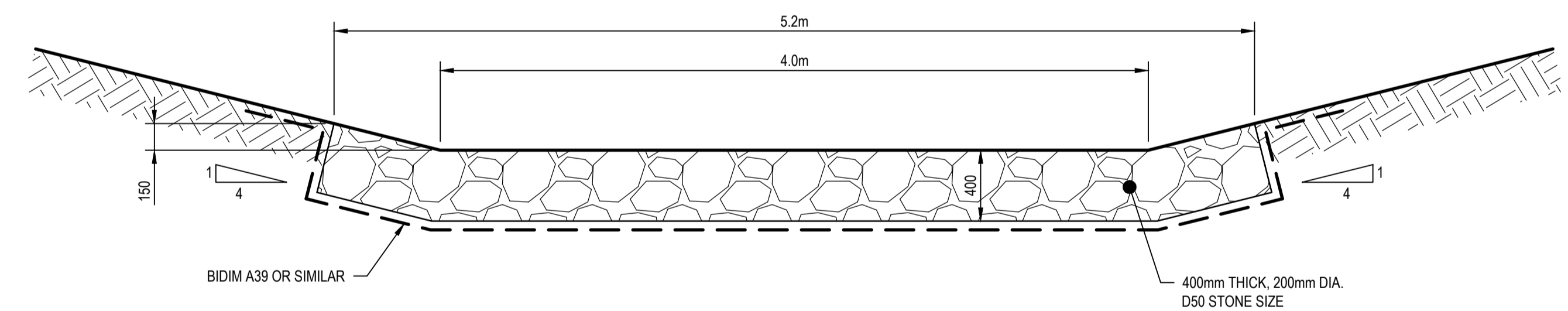
RIPRAP DIMENSIONS						
HEADWALL ID	DISCHARGE ORIENTATION	PIPE DIAMETER (mm)	D50 STONE SIZE (mm)	LENGTH, L (m)	WIDTH, W (m)	THICKNESS, T (mm)
HW	STRAIGHT	1050	200	12.700	5.2	400

NOTES:

- FOR LAYOUT DETAILS FOR OUTLET RIPRAP DESIGN, REFER TO C306 DRAWING.
- ROCK OF RIPRAP TO BE CLEAN, HARD, ANGULAR QUARRIED ROCK (UNWEATHERED GREYWACKE OR SIMILAR) WITH A SPECIFIC DENSITY OF NOT LESS THAN 2.6 TONNES/m³. RIVER OR RIVER WEATHERED BOULDERS ARE NOT ACCEPTABLE MATERIAL. ROCKS ARE TO BE GENERALLY SQUARE, RECTANGULAR OR OVAL IN GENERAL CROSS SECTION WITH THE LEAST DIMENSION BEING SQUARE, RECTANGULAR OR OVAL IN GENERAL CROSS SECTION WITH THE LEAST DIMENSION BEING NOT LESS THAN HALF OF THE GREATEST DIMENSION.



A SECTION
SCALE 1:25



B SECTION
SCALE 1:25



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Client **FAR NORTH DISTRICT COUNCIL**
Project **MOEREWA STORMWATER IMPROVEMENTS**
Status **FOR TENDER**

Drawing Title **TYPICAL STORMWATER DETAILS**
SHEET 5 OF 5

Size **A1**

Rev	Description	Checked	Approved	Date
B	ISSUED FOR TENDER	R. PATIL	N. CAULTON	13.09.24
A	ISSUED FOR DETAILED DESIGN	R. PATIL	V. CHANDRA	22.04.24

Author R. BALBERAN Drafting Check E. LEGASPI JR.
Designer M. BUTT Design Check V. CHANDRA

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Project No. **12596871**

Status Code **S4**

Drawing No. **12596871-C205**

Rev **B**

Technical Memorandum

12 September 2024

To	Ana Gilroy	Contact No.	0273708199
Copy to	Winston Gee (GHD)	Email	zoe.pattinson@ghd.com
From	Zoë Pattinson	Project No.	12596871
Project Name	Moerewa SW Improvements Detailed Design		
Subject	Moerewa stormwater discharge hydrological assessment		

1. Introduction and purpose of memorandum

Far North District Council (FNDC) are in the process of implementing upgrades to the stormwater network in Moerewa, Northland, to assist with mitigating frequent flooding issues. The proposed stormwater design includes the installation of megapits, catchpits and scruffy domes at topographic low points within the town and conveyance of stormwater along Plunket Street to a discharge structure on the bank of the Waiharakeke Stream.

GHD have been engaged by FNDC to undertake an assessment of the potential effect of the proposed stormwater discharge on the receiving environment, which includes a natural inland wetland and the Waiharakeke Stream.

1.1 Scope and limitations

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If this Technical Memorandum is required to be accessible in any other format this can be provided by GHD upon request and at an additional cost if necessary.

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The opinions, conclusions and any recommendations in this memorandum are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this memorandum are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this memorandum.

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2. Regulatory requirements

The Northland Regional Council (NRC) Proposed Regional Plan for Northland (February 2024) indicates that stormwater discharges are a controlled activity (Rule C.6.4.3), with the following matters of control:

1. The maximum concentration or load of contaminants in the discharge
2. The size of the zone of reasonable mixing
3. The adequacy of measures to minimise erosion
4. The adequacy of measures to minimise flooding caused by the stormwater network
5. The design and operation of the stormwater system and any staging of works.

3. Site setting and hydrological data

The proposed stormwater upgrade works are located within the town of Moerewa, approximately 5 km west of Kawakawa, Northland. Moerewa is located within a valley and is bounded by the Otiria Stream to the northwest and the Waiharakeke Stream to the southeast (Figure 1), which both flow northeast before discharging to the Kawakawa River. The Moerewa stormwater catchment is predominantly characterised by low-density residential land use situated in a relatively flat topographical area.

The published 1:250,000 geological map of the area (Edbrooke and Brooke, 2009¹) is presented in Figure 2, with unit descriptions presented in Table 1. The map indicates that Moerewa is located on a basalt lava flow with Tauranga Group sediments deposited to the south of the town, approximately at the boundary with the Waiharakeke Stream. The basalt is reported by Waterhouse (1961²) to be confined to the Moerewa Valley by up-faulted Greywacke to the north and Cretaceous claystones to the south and separates the Otiria and Waiharakeke Streams on the north and south sides of the valley, respectively. The stream catchments are noted to drain areas of soft claystones and argillaceous limestones.

¹ Edbrooke, S.W. and Brooke, F.J. (compilers). Geology of the Whangarei Area. Institute of Geological and Nuclear Sciences 1:250,000 Geological map 2. GNS Science Lower Hutt, New Zealand.

² Waterhouse, B.C. 1961. Note on Kawiti Basalt and hydrology of the Kawakawa area, Northland. New Zealand Journal of Geology and Geophysics, 4:4, 357-371.

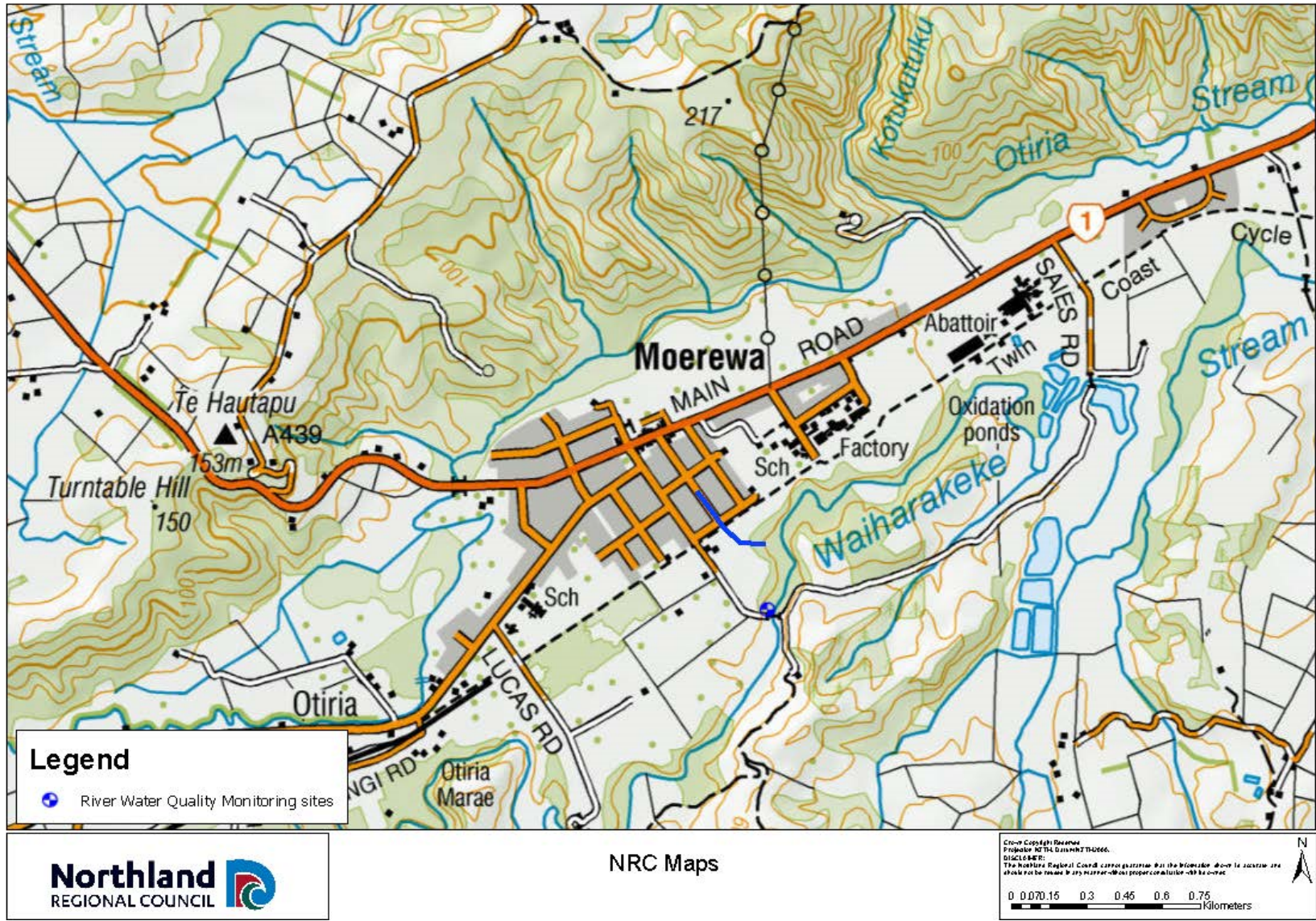


Figure 1 Proposed stormwater alignment (blue line), topographic contours and Waiharakeke Stream monitoring site (Waiharakeke at Willowbank / Stringers Road) (NRC, 2024)

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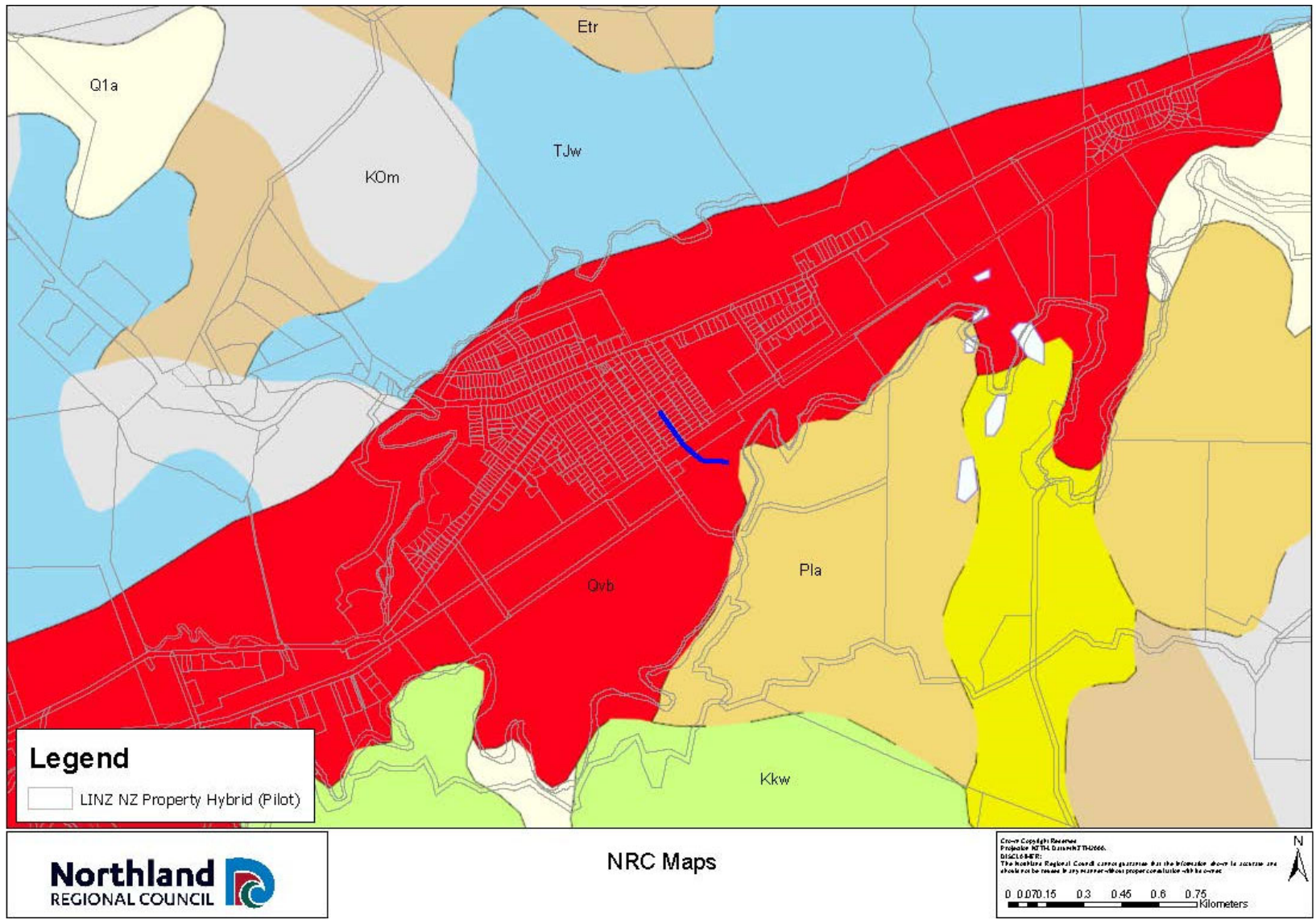


Figure 2 1:250,000 geological map (Edbrooke and Brook, 2009) and proposed stormwater alignment (blue line) (NRC, 2024)

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Table 1 1:250,000 geological map descriptions (refer to Figure 2) (Edbrooke and Brook, 2009)

Unit	Stratigraphic Unit	Description
Qvb	Kerikeri Volcanic Group	Basalt lava and volcanic plugs
Pla	Tauranga Group	Carbonaceous sandstone and mudstone
Kkw	Whangai Formation	Mudstone with thin glauconitic sandstone interbeds
TJw	Waipapa Group	Greywacke
Etr	Rautangata Sandstone	Sandstone
KOm	Undifferentiated Melange	Melange
Q1a	Tauranga Group	Alluvial / colluvial deposits

The proposed discharge point for the stormwater alignment is located west of the Waiharakeke Stream and a natural inland wetland (Figure 3). The extent of the wetland has been determined by ecological specialists from Wild Ecology.

The natural inland wetland (Figure 4) is located at an approximate elevation of 11 – 12 mRL, with the Waiharakeke Stream located a lower elevation of approximately 9 mRL (Figure 3). Discharge of water from the wetland to the Waiharakeke Stream has formed a small, eroded channel, as presented in Figure 5. The discharge channel appears to have eroded surficial unconsolidated sand/silt materials, however cobble/rock is visible within the base of the channel, with this potentially exposed basalt material. The presence of hard basalt rock appears to have limited erosion of the discharge channel, as well as erosion of the bank of the Waiharakeke Stream. The presence of the basalt layer is likely to have supported formation of the wetland, which is situated on a platform where overlying sediments have been eroded by flood waters.

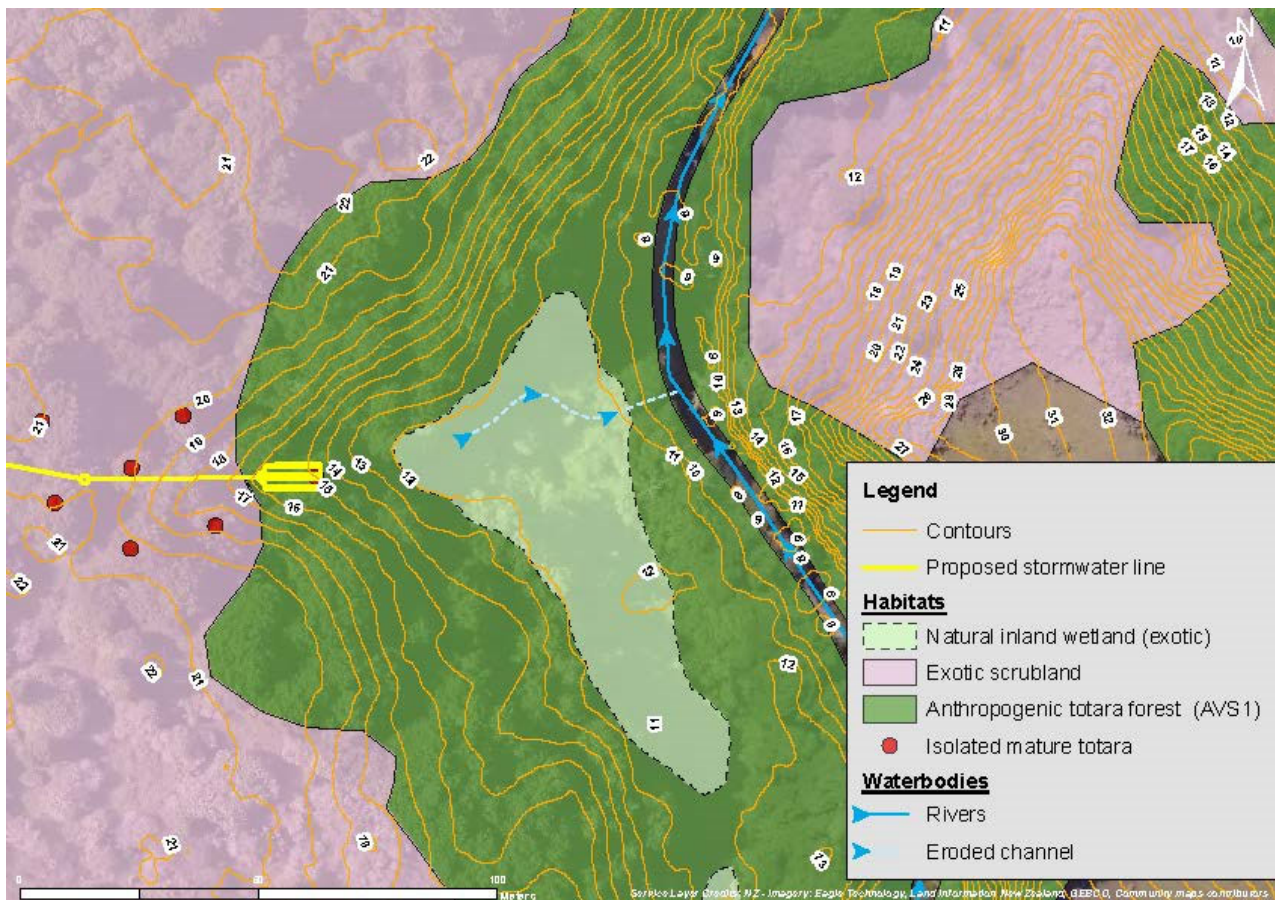


Figure 3 Figure source: Wild Ecology. Location of natural inland wetland, proposed stormwater line and discharge point and topographic contours.



Figure 4 *Photo source: Wild Ecology. Natural inland wetland.*



Figure 5 *Photo source: Wild Ecology. Discharge channel from wetland to Waiharakeke Stream.*

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Hydrological data for the Waiharakeke Stream is available from the NRC environmental database³, including flow, level (stage), and total suspended solids (TSS). Flow and level data was obtained for the "Waiharakeke at Willowbank" site and TSS for the "Waiharakeke at Stringers Road" site. The location of these monitoring sites is approximately 250 m upstream of the discharge point from the natural inland wetland, as presented in Figure 1. Rainfall was also obtained from the "Waitangi at McDonald Road" site, which is located approximately 7 km northeast of Moerewa. The hydrology and rainfall data is summarised in Figure 6 and Figure 7. While hourly flow, level, and rainfall records date back to 1987, TSS records comprise approximately monthly sample collection which began in 2013 and has a gap between June 2015 and November 2020.

The data demonstrates the following response of the Waiharakeke Stream to rainfall events:

- Level (stage) of the Waiharakeke Stream appears to regularly increase by 3–4 m in response to rainfall events. Minimum level (stage) is typically 300 – 600 mm. A stage height of at least 4,000 mm was recorded in 23 years of the 37-year data period (1987–2023).
- The maximum recorded level (stage) and flow between 1987 – 2024 is 6,380 mm and 268 m³/s, respectively, both recorded on 12 July 2014 following 314 mm of rainfall in the preceding four days. No corresponding TSS result was available until 16 July 2014 (52 g/m³). HIRDS⁴ data for Kawakawa 72-hour rainfall during this event had an approximate ARI of 10 years.
- The maximum TSS concentration of 191 g/m³ was recorded 20 August 2014, following 111 mm of rainfall recorded the day prior and corresponded with a level (stage) and flow of 2,836 mm and 32.5 m³/s, respectively. Since monitoring of TSS recommenced in 2020, the maximum TSS concentration of 34 g/m³ was recorded 3 May 2023, following 133.5 mm of rainfall in the preceding four days. The peak level (stage) and flow in response to the same event was recorded to be 2,811 mm and 38 m³/s, respectively, on 4 May 2023.

The monitoring results indicate a large response in level (stage) of the Waiharakeke Stream to rainfall events, with the natural inland wetland likely to be inundated by flood waters when stage increases by approximately 2–3 m. The data recorded since 1987 indicates this is likely to occur at least once every 2 years. It is also noted that the 100-year flood results in a stage increase to 15.00 mRL (as per FNDC maps), approximately 3–4 m above the approximate elevation of the existing natural inland wetland.

As monitoring of TSS within the Waiharakeke Stream is only undertaken monthly, understanding of how this parameter changes in response to storm events is limited. Reported TSS concentrations are therefore unlikely to represent the maximum concentrations that occur during storm events. The maximum TSS concentration on 20 August 2014 (191 g/m³) was recorded when river level (stage) and river flow were approximately 44% and 12% of the peak data set values recorded on 12 July 2014, respectively. It is likely that the maximum TSS concentration during the 12 July 2014 event exceeded the maximum recorded value on 20 August 2014.

³ Northland Regional Council. Environmental data hub.

<https://www.nrc.govt.nz/environment/environmental-data/environmental-data-hub/?moduleId=5&collectionId=19&displayId=2> [Accessed August 2024]

⁴ NIWA, 2024. High intensity rainfall design system (HIRDS) V4. <https://hirds.niwa.co.nz/> [Accessed September 2024]

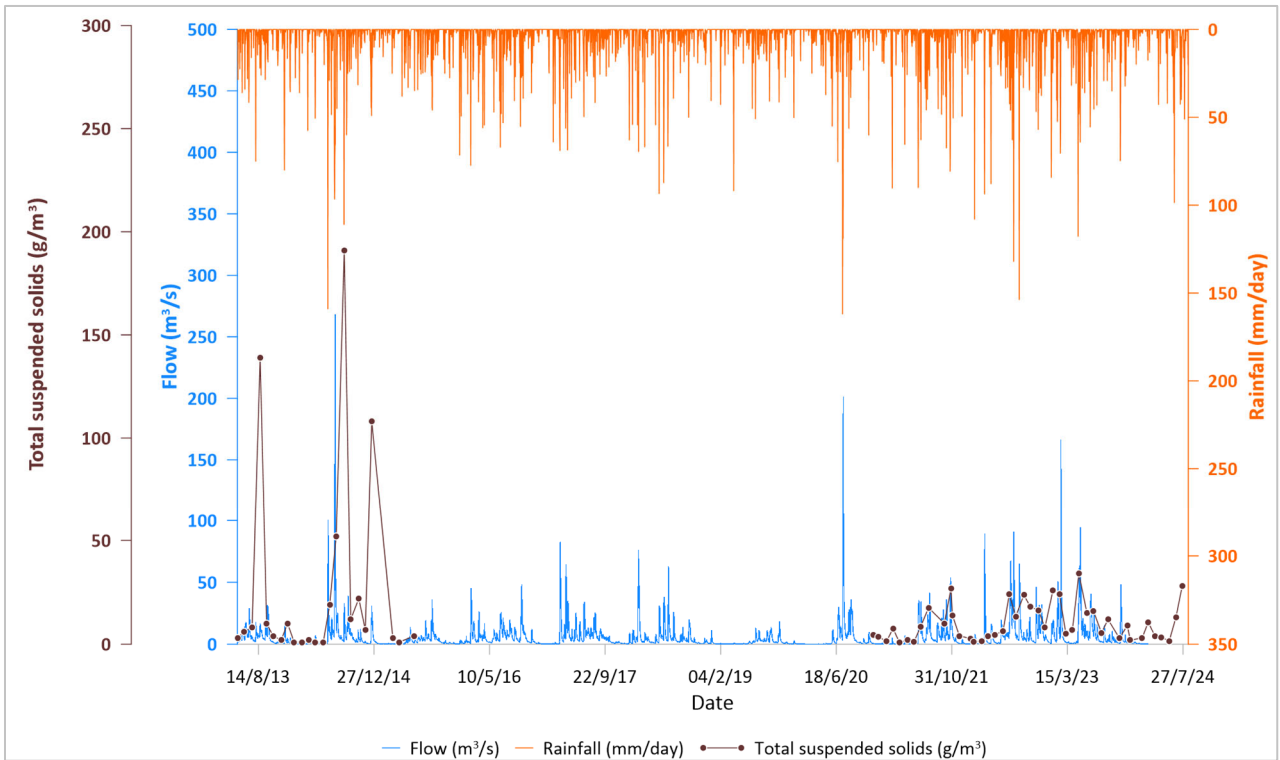


Figure 6 Flow, rainfall and total suspended solids records for the Waiharakeke Stream

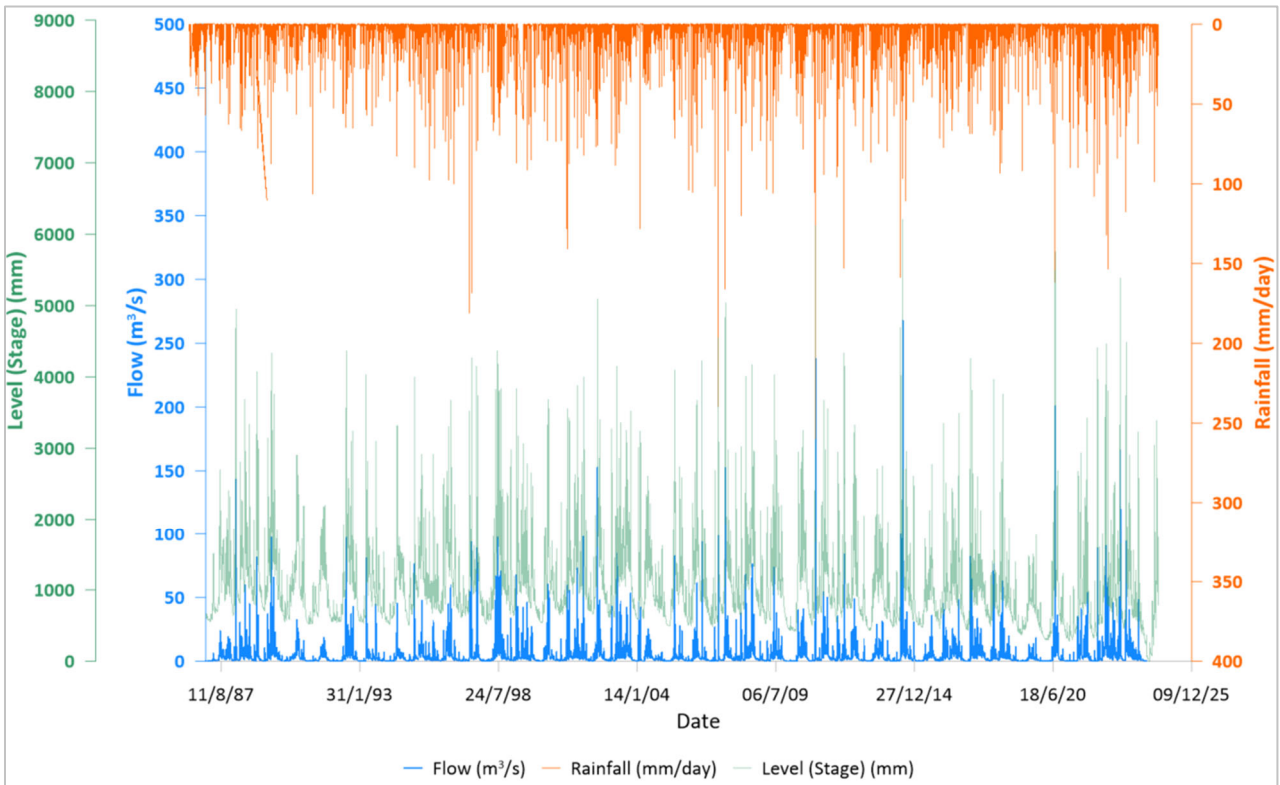


Figure 7 Flow, rainfall and level (stage) records for the Waiharakeke Stream

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4. Assessment

4.1 Proposed activity

The proposed stormwater upgrades include:

1. Installation of a scruffy dome at a local depression (rear section of 24 Pembroke Street) and proposed 600 mm pipeline with larger inlet (mega pit) on Pembroke Street to capture the extra overland flow.
2. The installation of a diversion pipeline (750 mm) originating from the 23 Plunket Street upsize to 1050 mm in front of 25 Plunket Street depression (low point), passing through the Plunket Street, crossing Reed Street and adjoining railway land to discharge structure adjacent to Waiharakeke Stream.
3. Scour protection (rip rap) proposed to mitigate the effects of stormwater flow at the discharge outlet. This will be constructed at least 10 m from the edge of the natural inland wetland.

The proposed stormwater upgrades are estimated to result in stormwater discharge rates as presented in Table 2.

Table 2 Estimated stormwater discharge

Stormwater event	Estimated stormwater discharge (m ³ /s)
Q ₁₀	1.18
Q ₁₀₀	2.63

Discharge of stormwater has the potential to impact the natural inland wetland and Waiharakeke Stream due to increased flow volumes, flow velocity and entrainment of suspended sediment. Suspended sediments can also be associated with other contaminants which bind to particulate matter, including hydrocarbons, heavy metals and nutrients. For the purpose of assessing the potential effects of these contaminants consideration has been given to the fate of suspended sediment.

Sources of suspended sediment in the Moerewa catchment are likely to include atmospheric deposition of fine particles, wear of roads, vegetation, residential activities (e.g. landscaping/gardening and vehicle/property maintenance) and erosion of pervious areas. The highest suspended sediment concentrations typically occur during 'first flush' events, where initial runoff from a surface contains the highest proportion of contaminant load compared to runoff in the remainder of the storm.

A range of estimated total suspended solids (TSS) within stormwater are presented in Table 3.

Table 3 Total suspended sediment (TSS) within stormwater

TSS concentration (g/m ³)	Reference
24.6	Auckland Contaminant Load Model ⁽¹⁾ Adopting residential paved surface (32 g/m ² /year) and 1,300 mm/year annual rainfall for Moerewa
34.6	Auckland Contaminant Load Model ⁽¹⁾ Adopting urban grassland and trees with slope <5 degrees (45 g/m ² /year) and 1,300 mm/year annual rainfall
50	Christchurch City Council Waterways, Wetlands and Drainage Guide ⁽²⁾ (Urban (10%ile))
150 – 180	Melbourne Water MUSIC stormwater quality software tool input values ⁽³⁾ (Rural – Urban residential)
1) Auckland Regional Council. Contaminant Load Model User's Manual. Auckland Regional Council Technical Report TR 2010/003 2) Christchurch City Council, 2003. Waterways, wetlands and drainage guide. 3) Fletcher, 2007, Background Study for the Revision of Melbourne Water's MUSIC Input Parameter Guidelines. Unpublished.	

It is noted that Duncan (1999⁵) reported that TSS concentrations decrease with increased annual rainfall when analysing stormwater quality from Australian and overseas studies, therefore the estimates by Christchurch City Council and Melbourne Water in Table 3 may overestimate TSS within the Moerewa catchment where annual rainfall is significantly higher (approximately 1,300 mm).

The Moerewa stormwater catchment is noted to comprise a flat, low-density residential, low road use area, likely to result in TSS concentrations at the lower end of those expected within stormwater discharge. Some form of sediment control will also be provided by the mega pits, which have inbuilt sediment retention due to the outlet being 0.3 m above the base of the pit. In addition, there are also existing soakage pits within Moerewa that are still functional and capable of handling flow and sediment for smaller stormwater events, with these also contributing to the management of sediment and debris entrained within the stormwater.

4.2 Natural inland wetland

Excess sediment has the potential to impact negatively on freshwater ecosystems, either when suspended in the water column or through deposition. The potential impact of sediment discharge on the natural inland wetland following construction of the stormwater discharge outlet has therefore been considered.

It is noted that some sediment will naturally settle within the base of the mega pits, due to the inbuilt sediment control (outlet 0.3 m above the base of the pit) with stormwater discharge likely to contain a reduced amount of suspended sediment. Regular cleaning and maintenance of the mega pits is required to ensure removal of captured sediment, and to ensure the mega pits continue to function effectively. There are also existing soakage pits within Moerewa that are still functional and capable of handling flow and sediment for smaller stormwater events, with these also contributing to the management of sediment and debris entrained within the stormwater. Maintenance of these existing features should also be undertaken to remove captured sediment.

Where sediment is discharged from the outlet structure and migrates into the wetland, it is likely to settle due to the dissipation of velocity of the inflowing stormwater. This has the potential to cause smothering and infill of the wetland.

Effects to the wetland are anticipated to be mitigated by:

- **Erosion and sediment:** Mitigation of flow velocity of the stormwater discharge will in part be provided through use of rip rap installed at the discharge outlet structure. In addition, existing vegetation downstream of the outlet (between the outlet and the wetland) is also likely to assist with reducing flow velocity and capture of sediment prior to the stormwater entering the wetland.
- **Sediment:** As discussed in Section 3, inundation of wetland by flow in the Waiharakeke Stream is estimated to occur at least once every two years in response to storm events (where stream level increases greater than 3.5 m). This inundation flow is likely to have relatively high velocity and the potential to flush out sediment that may have settled within the wetland. This is also likely to be the mechanism by which the wetland has been maintained through to present, as opposed to being infilled by natural sediment build up.

The increased water volumes within the wetland are likely to increase the rate of discharge from the wetland into the Waiharakeke Stream. While some minor erosion of the existing discharge channel can be expected, this is likely to be in the form of a slightly wider channel. Due to the presence of the basalt underlying the surficial unconsolidated sediments, significant incision of the channel is not expected to occur.

It is noted that the ecological assessment has recommended the development and implementation of an adaptive management plan for the stormwater outlet, natural inland wetland and discharge channel between the wetland and the Waiharakeke Stream.

In summary, while an increase in water volume and suspended sediment is likely within the natural inland wetland following installation of the stormwater discharge outlet, this is anticipated to be at least partially mitigated by sediment retention within the stormwater network as well as use of rip rap and existing

⁵ Duncan, H.P. 1999. Urban stormwater quality: A statistical overview. Report 99/3. Cooperative research centre for catchment hydrology.

vegetation between the wetland and the discharge outlet to reduce flow velocity and sediment capture. In addition, any sediment build-up that does occur is likely to be flushed out of the wetland relatively frequently when inundation by the Waiharakeke Stream occurs in response to storm events. The effect to the wetland from the proposed stormwater discharge is therefore expected to be less than minor. Should effects be observed to be more than minor following construction and operation of the stormwater discharge outlet, actions outlined in the recommended adaptive management plan will be implemented to mitigate these effects.

4.3 Waiharakeke Stream

Discharge from the wetland to the stream is only likely to include entrained sediment during large storm events, with sediment likely to settle in the wetland during small storm events and then be flushed out during inundation by the Waiharakeke Stream.

TSS concentrations recorded in the Waiharakeke Stream range between 0.8 – 191 g/m³ (Figure 6), however as sampling has been undertaken monthly and not in response to storm events, these results are likely to underestimate peak TSS. The range of estimated TSS within stormwater is between 24.6 – 180 g/m³ (Table 3) indicating that TSS concentrations within the Waiharakeke Stream during storm events are likely to be similar to, or greater than, suspended sediment concentrations in the proposed stormwater discharge.

As discussed in Section 3, the largest recorded flow and level (stage) values in the Waiharakeke Stream occurred in response to a 72-hour storm event with a 10-year ARI on 12 July 2014. Maximum Waiharakeke Stream flow recorded during this event was 268 m³/s, while the Q10 stormwater discharge is estimated to be approximately 1.18 m³/s (Table 2). As the stormwater discharge is less than 1% of stream flow, this indicates significant dilution of the stormwater discharge will occur during storm events, with any contribution of TSS from the stormwater discharge, or mobilised through flushing of the inundated wetland, likely to be negligible in comparison to TSS within the stream. Mixing within the Waiharakeke Stream is likely to occur within approximately 50 m of the discharge point.

5. Summary and recommendations

5.1 Matters of control for stormwater discharge (Rule C.6.4.3)

The following summary is provided in relation to the matters of control for stormwater discharge:

1. *The maximum concentration or load of contaminants in the discharge*

The maximum TSS concentration within stormwater is likely to be similar to TSS concentrations within the Waiharakeke Stream in response to storm events.

2. *The size of the zone of reasonable mixing*

Stormwater contribution to the stream is likely to be negligible (less than 1% of stream flow) with mixing anticipated to occur within approximately 50 m of the discharge point.

3. *The adequacy of measures to minimise erosion*

Use of rip rap at the discharge outlet will reduce velocity and erosion potential. Furthermore, existing vegetation between the discharge structure and the wetland will further reduce velocities and the potential for erosion. Although a minor increase in erosion is expected to occur in the discharge channel between the wetland and the Waiharakeke Stream, due to the increase in water volumes within the wetland, the underlying basalt rock is anticipated to prevent significant incision of this channel. Erosion is predominantly expected to occur within the superficial unconsolidated sand and silt sediments, resulting in a slightly wider discharge channel.

4. *The adequacy of measures to minimise flooding caused by the stormwater network*

To effectively manage and control flooding caused by the stormwater network, it is crucial to prioritise regular cleaning and maintenance of the proposed stormwater infrastructure. By ensuring that existing

systems, such as soakage pits, are well-maintained and functioning efficiently, we can significantly reduce the risk of blockages and overflows during heavy rainfall. Furthermore, optimising the existing infrastructure as proposed will enhance its ability to handle stormwater, thereby reducing the overall impact of flooding.

In conjunction with the proposed erosion protection measures on the outlet structure (installation of riprap) the existing downstream wetland will play a role in assisting to reduce the discharge velocity and in part attenuate the flow, thus minimising downstream flood impacts.

The outlet being positioned above the 100-year flood level ensures that there is no risk of backflow or flooding within the town. The impact on downstream areas is expected to be very minor due to the negligible contribution of stormwater to the stream (less than 1% of the overall stream flow). Moreover, the areas downstream are primarily farmland, further reducing any potential risk to development or infrastructure along the stream.

This strategic combination of infrastructure optimisation, protective measures and natural wetland collection/absorption of flow will collectively enhance the stormwater network's ability to manage and control flooding effectively.

5. *The design and operation of the stormwater system and any staging of works.*

Currently, there is no proposed staging of work for designs, operations, or construction within the project. It is recommended that the site contractor ensure project activities are conducted in a manner that does not obstruct any existing or proposed stormwater downstream flow paths.

5.2 Recommendations

The following recommendations are made in relation to the implementation and maintenance of the proposed stormwater upgrades:

- Regular cleaning and maintenance of the proposed and existing stormwater infrastructure will be required to remove captured sediment and debris. The frequency of this maintenance will need to be determined following installation and operation by the asset owner.
- Follow the recommendation by the Ecologist to develop and implement an adaptive management plan for the stormwater outlet, natural inland wetland and discharge channel between the wetland and the Waiharakeke Stream.

Regards



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Erosion and Sediment Control Plan

August 2024



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Document History and Status

Revision	Date	Author	Reviewed by:	Approved by:
1	12 Aug 2024	A. Gilroy	K. Hoskin	K. Hoskin

Document Details

Revision	Details
Document Name	Erosion and Sediment Control Plan
Status	Draft
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Status	For Resource Consent Application

Limitations

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The services provided by Hoskin Civil Ltd in preparing this report were limited to those explicitly detailed within the report.

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1. Introduction

1.1 Purpose

This Erosion and Sediment Control Plan (ESCP) is a part of the broader Construction (Environmental) Management Plan (CEMP) for the Moerewa Stormwater Improvements Project. The primary goal of this plan is to mitigate environmental impacts related to erosion and sediment control (ESC) throughout the construction process, ensuring that the effects on the surrounding environment are managed to the satisfaction of the Far North Council (FNDC) and Northland Regional Council (NRC). The Site Specific ESCPs will be prepared and submitted by the Contractor prior to the commencement of work in each area or activity, in alignment with this proposed document.

Further updates to this plan are anticipated throughout the project's duration. After the plan has been finalised, any subsequent revisions to contractor's SSES CP will be submitted to FNDC's Project Engineer(s) for additional review and approval.

This document has been created to support the Resource Consent Application and outlines the minimum requirements for Contractor to adhere to on-site.

1.2 Objectives

The objectives of this Plan can be summarised as follows:

- To define the appropriate standards with regards to ESC adopted for this project.
- To outline potential environmental impacts associated with earth disturbing activities and the environment.
- To define the ESC principles to be adopted during construction.
- To outline procedures for monitoring of ESC practices during construction.
- To support the Resource Consent Application.

2. Resource consent condition requirements

This document sets the framework and provides standard detail information for the preparation of the Site-Specific Erosion and Sediment Control Plan (SSESCP).

All the requirements of the resource consent will be implemented into SSESCP prepared by the contractor. This document can be used as the basis for the SSESCPs.

If there is a conflict between the management plan and the relevant legislative requirements, including consent conditions, the legislative requirements will take precedence.

3. Potential impact if earthworks on the environment

3.2 Protection of waterways

The National Policy Statement for Freshwater Management (January 2024) policy establishes environmental values and water quality objectives for New Zealand waters.

These guidelines are used to assess environmental harm and inform both statutory and non-statutory decisions. The water quality objectives also help determine whether environmental values are being protected. These values and objectives will be applied when assessing the risk of environmental harm from water releases or runoff, and in implementing best practice erosion and sediment controls.

Therefore, all watercourses impacted by construction will be protected from the adverse effects of sediment by implementing the principles and practices outlined in this proposed ESCP.

3.3 Major environmental impacts of construction on the environment

Construction environmental impacts are primarily associated with earthworks. Furthermore, construction-related earthworks significantly accelerate erosion rates. This occurs due to soil particles being disturbed and detached from the ground surface, making them more susceptible to being carried by stormwater into downstream environments. Without the implementation of effective erosion and sediment control (ESC) measures to mitigate increased sediment runoff, one or more of the following adverse environmental effects on water quality and mahinga kai may occur (Source: Niwa.co.nz):

1. Decreased water clarity - increased sediment loading into a stream will decrease water clarity and reduce visibility for fish seeking food and places to live.
2. Damage to fish gills and filter feeding apparatus of invertebrates.
3. Changes to the benthic (bottom) structure of the stream/riverbed - coarse substrates such as gravels and boulders are replaced/smothered by sand and silt.
4. Decreased numbers of invertebrate species from smothering of habitat - invertebrates are a food source to some mahinga kai (e.g., kōura and fish) and diverse invertebrate communities are also an indicator of healthy stream systems.
5. Decreased algal food supply at base of food chain – sediments can scour algae from rocks, make algae unpalatable, or reduce light to levels where algae cannot grow (because plants need light to photosynthesise).
6. Increased contaminants from surrounding land - sediments can transport attached pollutants such as nutrients, bacteria, and toxic chemicals from agriculture and horticulture into our streams.
7. Increased water temperature - loss of shading from trees or overhanging streamside vegetation means waterways become more exposed and are more liable to fluctuate in temperature. (New Zealand native fish generally cannot tolerate temperatures over 25°C and trout need temperatures to be less than 19°C for growth.)

3.4 Projects objectives and methodology

This project involves constructing and installing stormwater networks to mitigate flooding at low points within the Plunket and Pembroke Streets in Moerewa township.

The construction of the project will comprise of two zones management approach: road and easement zones, allowing work to progress concurrently across multiple areas to meet the specified program requirements as highlighted below.

The proposed methodology involves open trenching, which will necessitate the removal of all vegetation along the pipeline route. The proposed pipeline outfall structure will terminate 10 meters before the wetland setback zone. Riprap rocks will be placed in the outfall zone, serving as an energy dissipator and sediment control post-construction for the stormwater discharge through an open culvert. No work will be undertaken within the wetland or the Waiharakeke Stream.

All land disturbances will be reinstated to its original condition within the road reserve and private properties. Planting within the easements will be designed to meet ecological requirements of this particular environment.

3.5 Overall project design approach

The erosion and sediment control measures will be designed to, construct and maintained in accordance with Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

These following design principles has been adopted in this ESCP:

- Emphasis on most effective means to minimise potential generation of the sediment and sediment discharge from the proposed stormwater improvements project.
- Sediment controls will be carefully managed to maximise their efficiency due to sensitivity of the neighbouring wetland and Waiharakeke Stream environments.
- A sequential treatment approach will be implemented, utilizing a series of erosion and sediment control measures, including staging and stabilization, to optimize sediment treatment efficiency and minimize sediment output.
- Clean water will be diverted away from works sites along the residential roads via the existing kerb and channel network already in place.
- Any soil disturbance will be carefully phased and minimized whenever possible to reduce the risk of sediment generation.

3.6 Proposed construction works

The site features a mostly flat topography with a short stretch of moderate slope leading toward the wetland and Waiharakeke Stream. Because of the site's topography, stormwater runoff to the construction area will be minimal. Part of the site is located within a high-risk area that is historically prone to flooding during severe weather event. Stormwater ponding may occur in low-lying areas within or outside of the project's boundaries during severe weather events. If ponding and flooding occur due to adverse weather events, they will not be managed under this ESCP and will be allowed to naturally subside.

The construction work will primarily take place at 24 Pembroke Street, 23 Plunket Street, road reserves on Plunket and Reed Streets, the Railway Reserve, and an easement through Lot 1 DP 165005.

The soils have been classified as Orthic Allophanic, characterized by high porosity and rapid permeability. The bulk density of this type of soil is very low. The topsoil is relatively stable and can resist the impact of machinery in wet weather. Both the topsoil and subsoil horizons are friable. Erosion rates are generally low, except on steep slopes or exposed sites.

The construction footprint of the pipeline will span roughly 5 meters in width along the Plunket Street and approximately 25 meters in width in the easement and Railway corridor. Access to the construction site will be through private properties, as well as local roads. The approximate total volume of earthworks is 28,000 m³. The volume of earthworks and the project widths could potentially be reduced depending on the methodology offered by the Contractor. The proposed work layout is shown below in Figure 1.

The construction is proposed to commence in the summer of 2024-2025, with an estimated duration of 6 to 7 months.

The Project will include the construction of the following:

- Excavating to the required depth for pipe installation on Plunket and Reed Street.
- Excavating to the required depth for pipe installation within the Railway corridor and easement.
- Construction of the outfall culvert.
- Constructing of a rip-rap outfall.
- Resurfacing of the roads.
- Reinstatement and planting.

Project construction works will typically involve the following:

- Vegetation clearing: Removal of vegetation along the pipeline alignment and associated sites.
- Topsoil Stockpiling: Gathering and storing topsoil for later use in rehabilitation.
- Access Easement and Rail Corridor: Building temporary stabilised construction entry/exit to facilitate access to the pipeline corridor.

- Pipe Delivery and Stringing: Transporting pipes to the site and arranging them along the pipeline corridor.
- Trenching and Pipe/Structures Installation: Excavating a trench, installing the pipe, manholes and backfilling with materials.
- Outfall Construction: Placing Rip Rap rock.
- Site Rehabilitation: Restoring construction areas.
- Site Planting: Re-planting easement area with appropriate native vegetation.

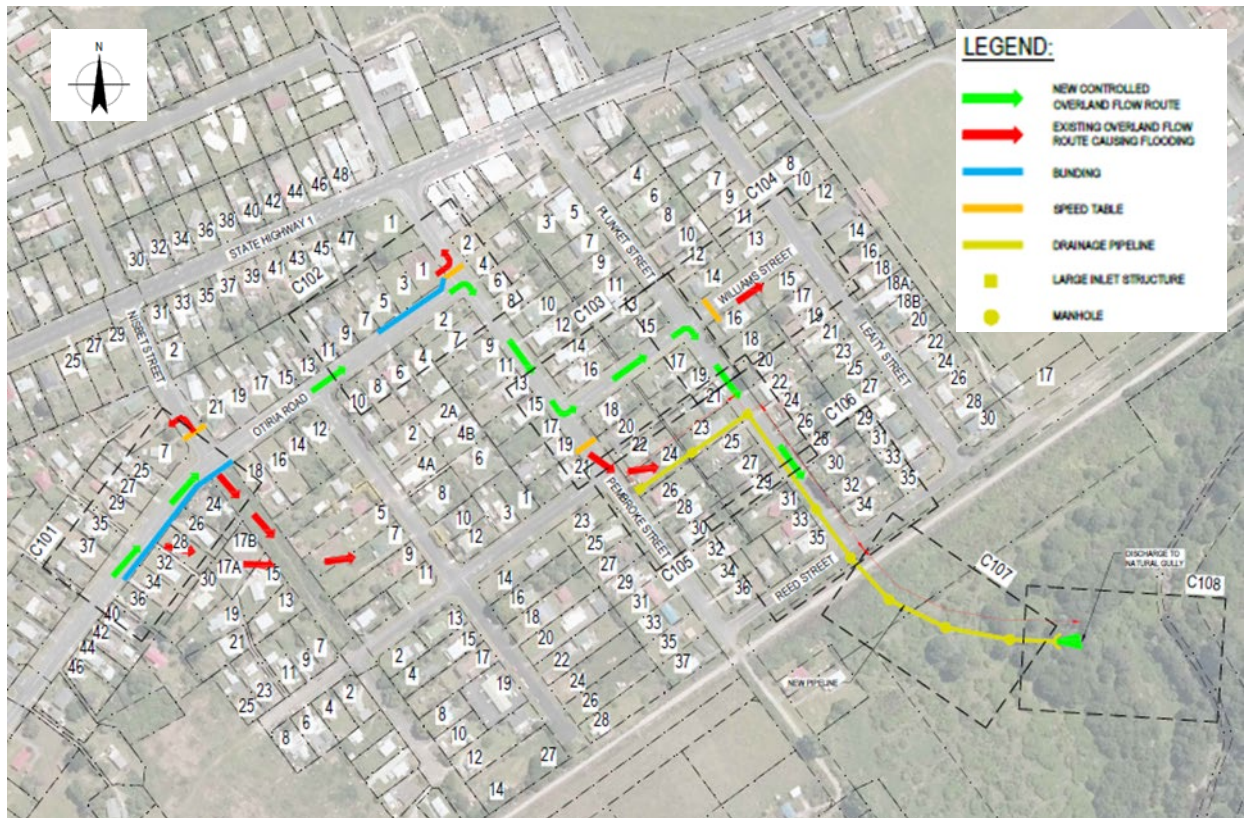


Figure 1 – Proposed works layout.

3.7 Vegetation Clearing

Vegetation clearing will be necessary throughout the easement and railway corridor.

Vegetation clearing close to the wetland 10-meter setback zone will be restricted to a 10-meter-wide construction corridor (or less if achievable) and postponed until it is absolutely necessary.

If vegetation clearing will occur well in advance of earthworks, the Contractor will focus on removing only woody vegetation, leaving the understory intact. Grubbing and the removal of ground cover and understory should be delayed until immediately before earthworks begin due to the physical characteristic of the soil.

Mulch generated from clearing activities potentially can be used (if approved by the ecologist) as temporary ground cover. It will be placed in a way that minimizes the risk of mulch entering adjacent wetland.

4. Proposed Construction and Erosion and Sediment Control Methods

Before earthworks begin in each area or activity, detailed Site-Specific Erosion and Sediment Control Plans (SSESCPs) will be prepared and submitted. The SSESCPs will be crafted to align with the project's requirements and the standards outlined in GD05. They will contain details to accommodate the simultaneous operations across multiple locations, ensuring flexibility in managing the works according to the project schedule.

The SSESCPs will be developed in accordance with this ESCP and will specifically respond to Resource Consent Conditions.

4.1 Proposed erosion and sediment retention measures

Stabilisation

The topsoil bunds will be immediately covered either with geotextile fabric (or seeded and mulched). Stockpiles will be placed away from water bodies and the drip lines of protected trees (if any).

All vegetation clearing works will be undertaken in stages. The reinstated areas will be vegetated with the appropriate native vegetation to enhance the ecological value of the area.

The earthworks operations will be staged and progressively stabilized, ensuring that the site remains in a continual state of stabilization. It should be noted that placement of pipes will be staged in sections that can be completed within the day's operations. In most areas, apart from the initial topsoil stripping and required pipe bedding materials, the work will be carried out using the excavated material (if approved by the Project engineer(s)). Furthermore, excess material will be removed off site on the day of operations (or stockpile off site) to minimise potential erosion risk from this material.

Rapid excavate and cover method will be used that enables same-day construction during fine weather. The sediment control strategy behind this approach ensures that exposed soil is not left uncovered overnight. Small areas are quickly worked on and then either covered or stabilized immediately or within a few hours. Stabilization methods may include the use of geotextile fabrics, or hay mulch. The advantage of the excavate and cover methodology is that it reduces reliance on sediment controls while being more efficient in minimizing sediment discharge. Given the project's proximity to the sensitive environments, it is expected these methodologies will be widely employed by the Contractor.

Entry and exit points to the sites will be strictly controlled. These points will be stabilized with the use of the geotextile fabric and rock aggregate (as shown on Figure 2).

Table 8: Stabilised entranceway specifications

Design parameter	Specification
Aggregate size	50 - 150 mm washed aggregate
Minimum thickness	150 mm
Minimum length	10 m
Minimum width	4 m

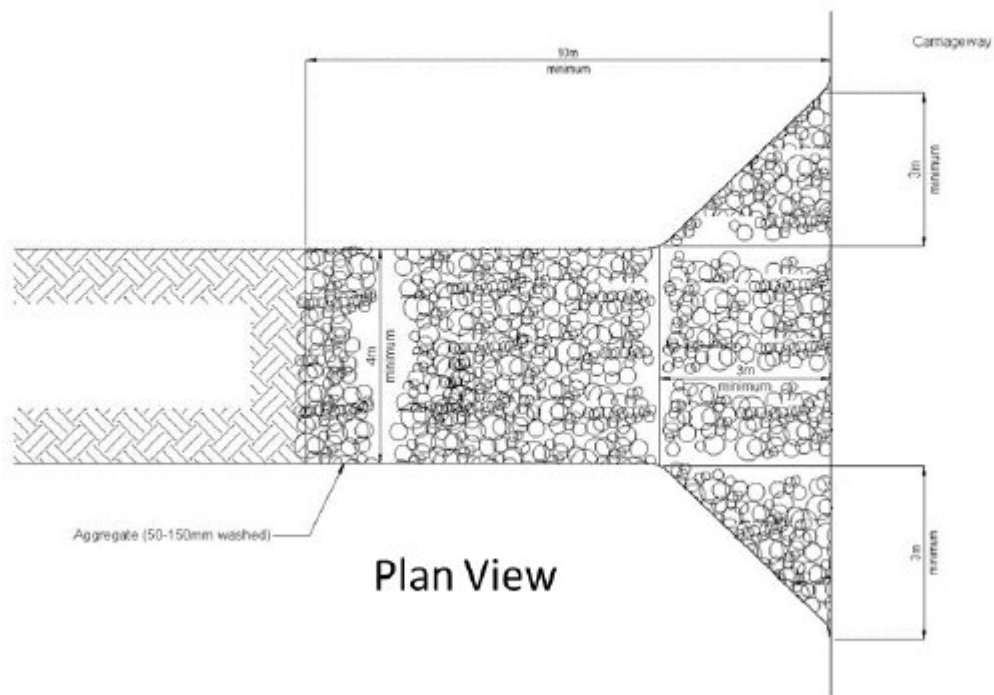
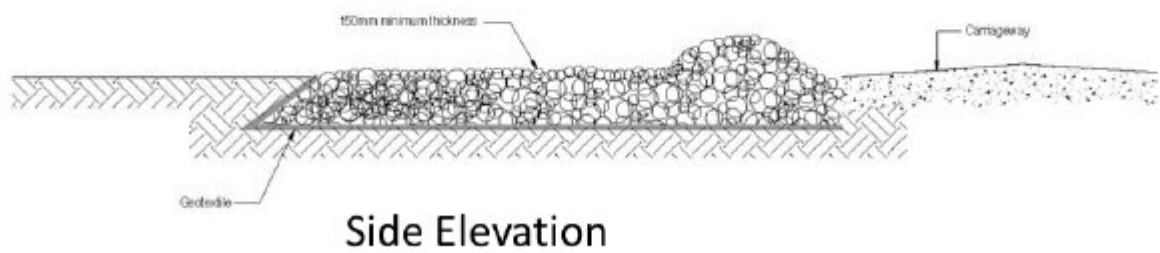


Figure 2 – Stabilised Entranceway (Source: GD05)

The focus will be on keeping vehicles/trucks in a "clean" state to maximize the effectiveness of the stabilized site entrances and further reduce the risk of tracking sediment off-site. Any material tracked onto a road will be promptly cleaned up.

Silt Fences & Straw Wattles

The primary sediment control measures for the project will include silt fences and straw wattles. Silt fences will be installed to slow down the initial sheet flow and allow large particles to settle during rain events.

The silt fence will be installed at various points along the pipeline alignment through the Railway corridor and the easement (as shown in Figure 5). Straw wattles will be placed along the slope as a secondary measure (as shown in Image 1) to stabilize against erosion while filtering out pollutants and chemicals from the runoff. Additionally, the wattles act as sediment barriers and further will reduce sheet flow, complementing the effectiveness of the silt fences.



Image 1 – Straw Wattles (Source: One Clarion (left), Advances Landscape Systems NZ)

Moreover, the setup will be mobile, allowing the silt fence to move along with the pipe installation and outfall construction to ensure rigorous sediment control. The wattles should be reinstated post-construction to the topsoiled slope to maximize soil's stability and enhance erosion protection during establishment of new vegetation.

All components of Erosion Control's straw wattles will be fully biodegradable, offering additional benefits such as minimal ground disturbance, ease of installation, lightweight construction, enhancement of vegetation regrowth, and the elimination of waste products sent to landfills.

The exact location and quantity of straw wattles will be assessed on-site before vegetation clearing begins. They will be installed according to the manufacturer's instructions and best practice guidance.

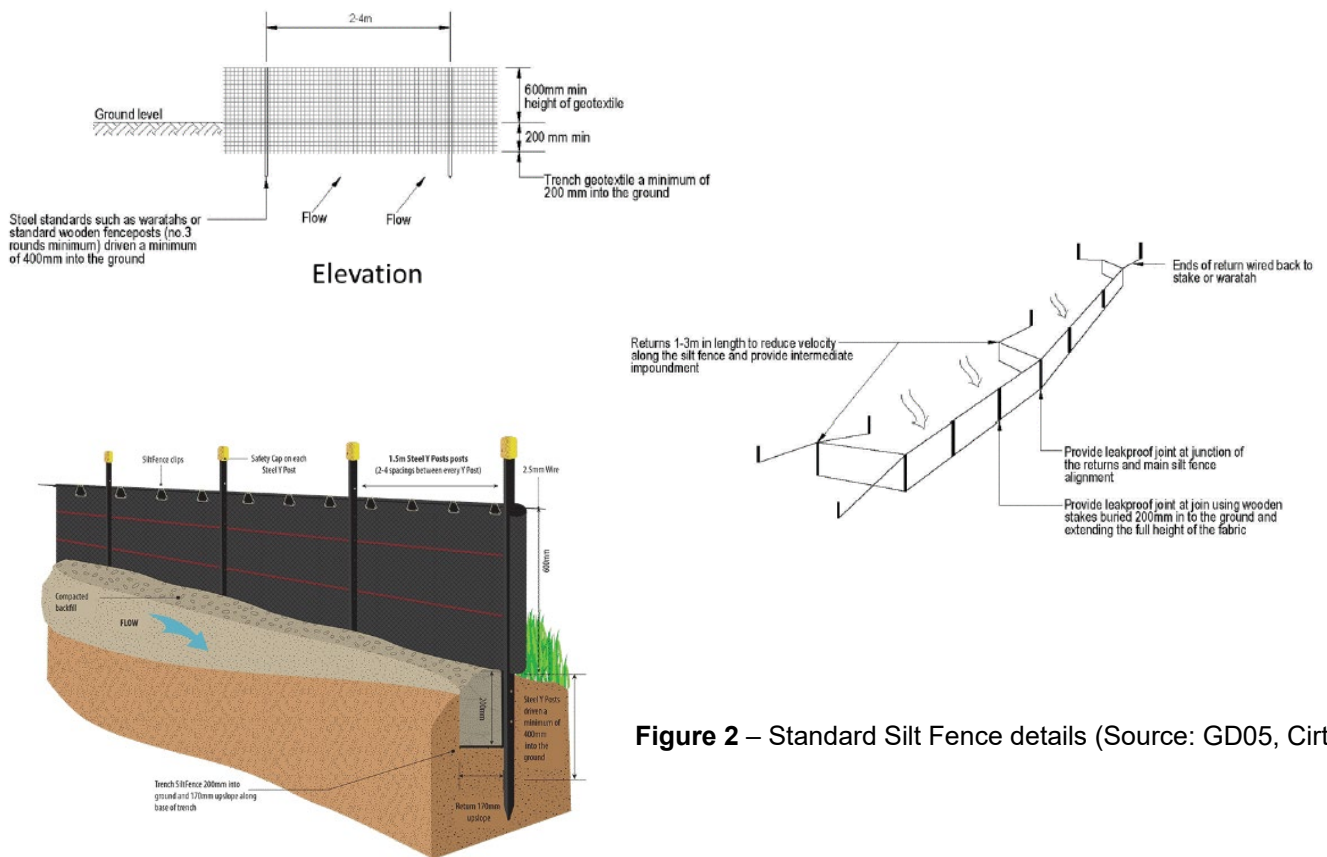


Figure 2 – Standard Silt Fence details (Source: GD05, Cirtex)

Cesspit Protection & Silt Socks

Cesspits protection will be placed around the grate during active work hours and will be removed at the end of each day once the work is complete (if the area is stabilized). This will allow the stormwater network to operate as designed.

Footpath Maintenance & Road Sweeping

Earthworks will be managed to prevent the deposition of earth, mud, dirt, or other debris on adjoining to the construction site roads and footpaths outside the designated work areas. If this occurs, it will be addressed promptly.

Moreover, footpaths and roads will not be washed down unless suitable erosion and sediment control measures are in place.

Silt socks (or straw wattles) will also be placed in roadside berms near property entrances and along the perimeters of flat or nearly flat sections of exposed, unsurfaced areas.

Dewatering

On-site dewatering might possibly be required during excavations, which could pose a risk of sediment discharge into the surrounding environment. To manage this risk, a water treatment receptacle (such as SEDITROL or similar) will be established, which will follow GD05 principles for

dimension ratios. The treated water may be discharged into the stream at the designated location as approved by the Project Engineer(s).

Figure 3 – Examples of dewatering Devices (Source: GD05)



During pumping, the clarity of the water in the container will be assessed using the black disc method, and pH levels will be measured with pH strips or an electronic pH meter. Test results will be recorded. If the water does not meet acceptable standards for clarity (less than 100 mm depth) or pH (between 5.5 and 8.5), pumping will cease, and corrective actions will be taken.

The flocculation (chemical treatment) procedure will follow industry best practices to maximize sediment removal efficiency.

To establish the most effective chemical dosing regime, samples will be gathered from the excavated materials at the start of earthworks. Bench testing will be performed to determine the ideal dosing and its effect on the pH of the treated water. The results will be submitted to Project Engineer(s). Continuous monitoring will be carried out, and if any deficiencies are detected, further bench testing will be conducted.



Figure 4 – SEDITROL 300 system (Source: Seditrol.co.nz)

Seditrol 300 Specifications
 Hydraulic Capacity (per unit) | 21m³/hr (6L/s)
 Typical Operating Range | 3.6 – 20 m³/hr (1 – 5.6 L/s)
 Effective settlement area | 38.6 m²
 Simple and Efficient Sludge Extraction System
 Tare mass | 1,800kg
 Operating mass maximum | 11,000kg
 Height | 2.1 m
 Length | 3.7 m
 Width | 1.5 m
 Minimum site area | 8 m²

The Site-Specific Chemical Treatment Plan will be prepared as part of the contractor's SSESCPs and Project's CEMP for Project Engineer's review and approval. The plan will outline management methods, controls, and reporting standards for the chemical treatment of sediment control devices used on this project.

Dust Control

Number of the residential properties along Plunket and Reed Streets are situated close to the construction works, with many at medium to high risk of experiencing significant dust impacts. A comprehensive dust management and monitoring will be implemented by the Contractor across the construction zone within residential development. This will include methods for minimizing dust emissions, monitoring procedures, and adaptive management strategies for addressing dust nuisance events. Areas predicted to have a high risk of dust impact during construction and those near construction activities will be subject to more stringent dust management and prevention measures.

Effective dust mitigation measures will be implemented in accordance with the practices outlined in Section 8 of the Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions (Ministry for the Environment, 2016) and other relevant dust mitigation guidelines.

Potential dust sources applicable to this project:

- Saw cutting of existing road surfaces, footpaths and kerbs.
- Disturbances of the soil material.
- Transport of surplus spoil off site.
- Movement of plant and equipment across exposed (unsealed) ground.
- Driving trucks and light vehicles on unsealed surfaces.
- Wind erosion of uncovered stockpiles of spoils.

The site's dust approach will focus on prevention as much as practically possible. Topsoil stockpiles will be promptly covered with either geotextile fabric (or mulched with grass). Speed restrictions will be placed on all vehicle movements to help reduce dust generation. A water cart will be available on standby or as needed. Weather reports will be obtained daily and distributed to all relevant staff, ensuring awareness of dust risks during dry conditions. Dust control measures will be on standby and applied when required.

Additional dust management measures include, but are not limited to:

- Protective screening where necessary.
- Suppression of dust during concrete cutting or other dust generating activities.
- Reducing double handling and drop heights of spoil or fill materials where possible.
- Implementing site-specific speed limits to minimise generation of dust.

Dust monitoring outside the construction site boundaries will involve a combination of visual inspections and stakeholder communications. Monitoring efforts will focus on areas and activities with a higher risk of generating dust.

4.2 Decommissioning of ESC measures

No erosion and sediment control (ESC) measures will be decommissioned without written approval from Project Engineer(s). Once written approval has been received, the process for decommissioning an ESC device will be as follows:

- Removal during dry weather conditions or limited to light showers.
- If the dewatering control is holding water, it will only be discharged if it has at least 100mm of visual clarity. If not, the water will be treated to achieve this clarity or disposed of via tanker to another impoundment or an authorized facility.
- Silt fences removed and disposed of responsibly.
- All areas are grassed, mulched and planted.
- Contractor to notify Project Engineer(s) of the decommissioning, confirming that the controls have been removed.

5. Monitoring and maintenance

Erosion and sediment control measures will be inspected daily by the Contractor's Site foreman and regularly by the Project Engineer(s). Additionally, site monitoring will occur before and after rainfall, as well as during heavy rain events. Any necessary maintenance or improvements to control measures will be addressed immediately. All control measures will be maintained in accordance with GD05 Guidelines.

It will be required by the Contractor's Construction Manager to monitor weather forecasts and provide regular updates to the on-site construction team. This will ensure that the staff is informed of any predicted adverse weather conditions and can implement additional controls if heavy rainfall is expected.

Contractor's Project team, such as Construction Manager along with the Site Engineers, Site Foreman and Supervisors will be responsible for the implementation and oversight of ESC measures on site. They will be responsible to handle the development of SSES CP, supervise ESC construction and conduct inspections, monitoring, maintenance and decontamination of ESC practices.

The following list outlines the minimal level of requirements:

- The project team responsible for ESC must be familiar with this Project's resource consent conditions, the ESCP plan, best practice guidelines, monitoring requirements, site geology, and areas sensitive to sediment generation.

- The project team will develop and maintain SSESCPs. These plans will be continuously updated throughout construction and will be used during ESC site inspections.
- The project team will monitor weather forecasts closely, as construction activities may need to be adjusted, or in extreme cases, stopped to prevent sediment generation during severe weather events.
- The project team will ensure daily visual inspections of ESC measures will be conducted. The brief written update will be submitted to the Project Engineer(s) if any concerns are found.
- The project team will also require carrying out weekly inspections and self-audits to ensure ongoing compliance and effectiveness. Those will also be provided to Project Engineer(s) if request for review.

Table 1 - Summary of the proposed Inspection Activities.

Inspection Activity	Proposed Frequency
Weather forecast	Daily
Silt Fences & wattles	Before and after rainfall events, otherwise weekly
Cesspit protection	Daily
Site Entranceway (housekeeping/ free from dirt)	Daily
Completed areas stabilised	Daily
Excavate and cover operations	Daily
Topsoil stockpiles	Before and after rainfall events, otherwise weekly
Watercart	Daily
Heavy machinery inspection (trucks transporting excavated material)	Before leaving the site
Housekeeping (fuel, chemical storage and etc)	Daily
Spill kits	Daily

5.1 Reporting & Auditing

The Contractors project team will be required to conduct an internal audit at least once a week. Any necessary maintenance actions will be carried out on the same day.

5.2 Training

For successful ESC Project outcomes, the Contractor's construction team will undergo training to understand the environmental impact of their roles and the importance of compliance with standards and regulations.

This training is crucial for achieving strong compliance and positive environmental outcomes for this Moerewa Stormwater Improvements Project. The Construction manager will be responsible for ensuring that this training is provided.

Staff directly involved in the day-to-day implementation of ESC measures will receive more specialized training. This will include hands-on, practical instruction on the construction, maintenance, and decommissioning of control measures. These records will be provided to Project Engineer(s) with any subsequent updates.

Moreover, induction training will be undertaken to all contractor's staff and subcontractors to ensure that the construction teams are aware of resource consent conditions, environmental control procedures, and the SSES CP requirements. Individuals with specific environmental responsibilities will also undertake additional training in the following areas:

- Emergency response.
- Spill response.
- Environmental auditing.
- Sampling and monitoring.

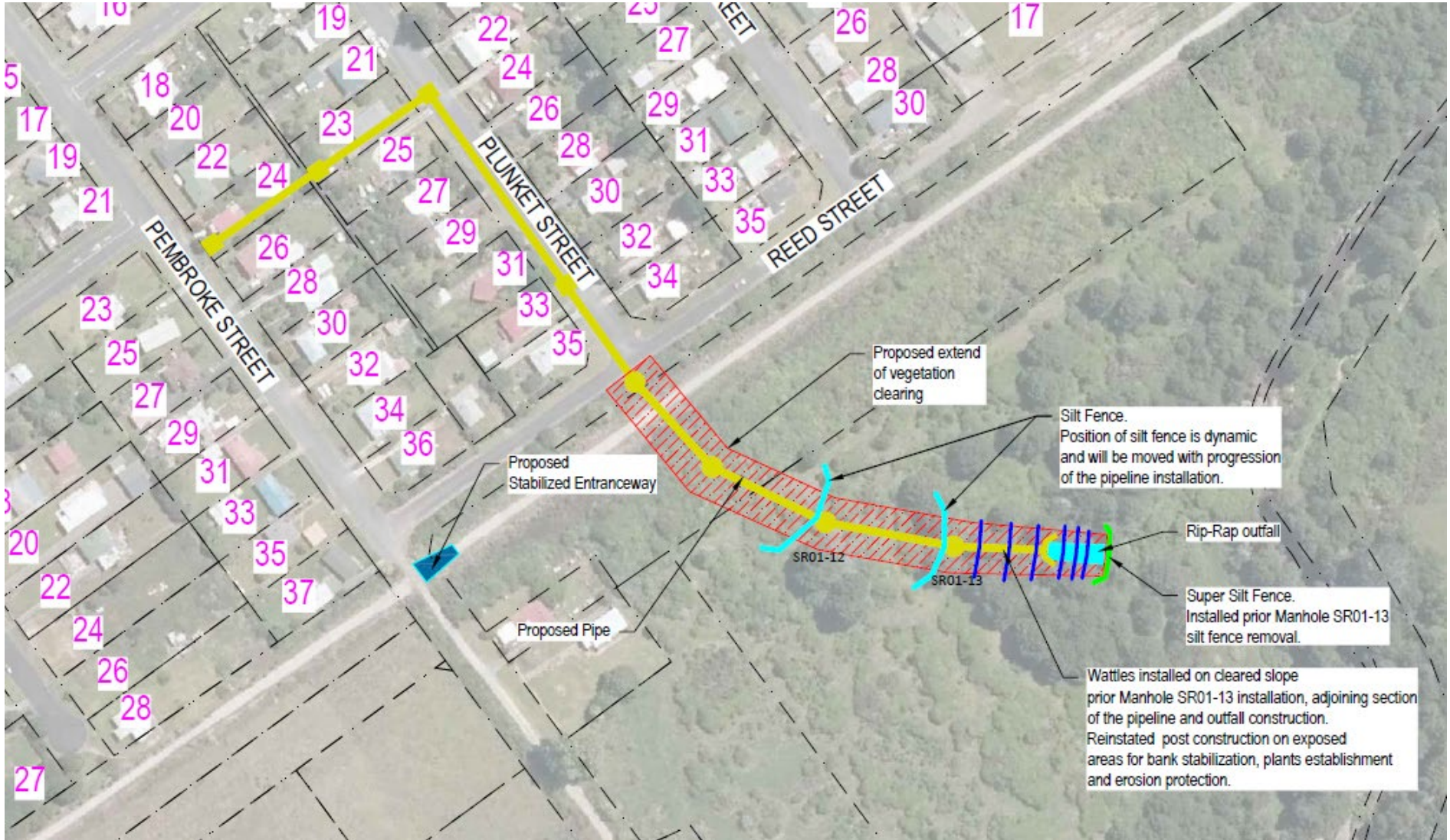


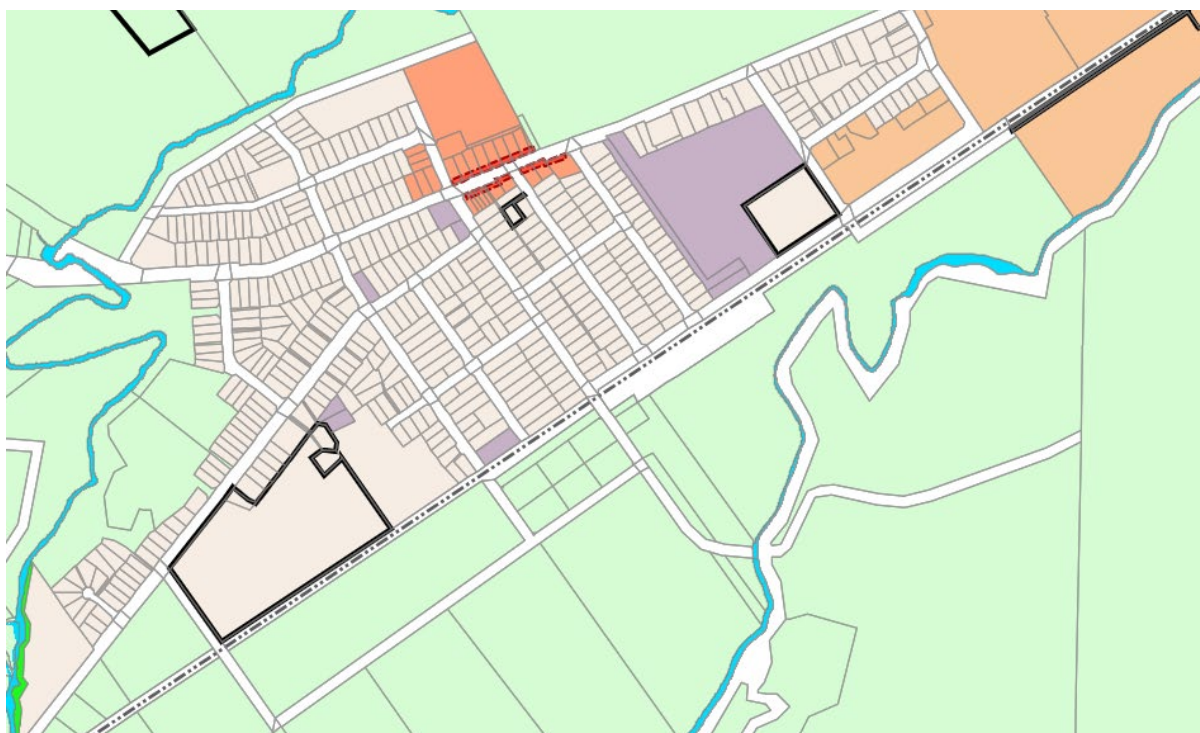
Figure 5 – Proposed Erosion and Sediment Control Plan (NOT TO SCALE).

Rules Assessment

Proposal: Moerewa Stormwater Improvements

Address: Nisbet Street, Otiria Road, Pembroke Street, Plunket Street, Williams Street, Reed Street and Lot 1 DP 165005

District Plan: Far North District Plan (Operative)



Site Zoning

Zone	Residential Zone and Rural Production Zone
Overlays/Controls	Nil within Residential Zone / Flood Susceptible
Designations	Council's Roding Network and crossing New Zealand Railways Designation

Chapter 7.6 Residential Zone:

Rule	Compliance	Non-Compliance
Residential Zone - 7.6.5.1 PERMITTED ACTIVITIES		
7.6.5.1.1 RELOCATED BUILDINGS	N/A	
7.6.5.1.2 RESIDENTIAL INTENSITY	N/A	
7.6.5.1.3 SCALE OF ACTIVITIES	N/A	
7.6.5.1.4 BUILDING HEIGHT	Carport to be relocated will comply.	
7.6.5.1.5 SUNLIGHT	Carport to be relocated will comply.	

Rule	Compliance	Non-Compliance
<p>7.6.5.1.6 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 50%.</p>	Will comply.	
<p>7.6.5.1.7 SET BACK FROM BOUNDARIES (a) The minimum building setback from road boundaries shall be 3m, except that; (b) The minimum set-back from any boundary other than a road boundary, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots), shall be 1.2m except that no set-back is required for a maximum total length of 10m along any one such boundary; and (c) Not less than 50% of that part of the site between the road boundary and a parallel line 2m there from (i.e. a 2m wide planting strip along the road boundary) shall be landscaped, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots). For the landscaping required on Lot 1 DP 28017 and Lot 1 DP 46656 (and any sites created as a result of a subdivision of these lots) refer to Rule 7.6.5.1.10 (b) below; and ...</p>	<p>(b) Carport to be relocated will comply.</p> <p>(c) No change to status quo.</p>	<p>(a) Proposed Carport to be relocated will be setback 2m from the boundary of Plunket Road. Restricted discretionary activity pursuant to rule 7.6.5.3.7.</p>
<p>7.6.5.1.8 SCREENING FOR NEIGHBOURS - NON-RESIDENTIAL ACTIVITIES</p>	N/A	
<p>7.6.5.1.9 OUTDOOR ACTIVITIES</p>	N/A	
<p>7.6.5.1.10 VISUAL AMENITY</p>	N/A	
<p>7.6.5.1.11 TRANSPORTATION Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules.</p>		
<p>7.6.5.1.12 SITE INTENSITY - NON-RESIDENTIAL ACTIVITIES</p>	N/A	
<p>7.6.5.1.13 HOURS OF OPERATION - NON-RESIDENTIAL ACTIVITIES</p>	N/A	

Rule	Compliance	Non-Compliance
7.6.5.1.14 KEEPING OF ANIMALS	N/A	
7.6.5.1.16 HELICOPTER LANDING AREA	N/A	
7.6.5.1.17 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 45% of the gross site area.	Complies, existing carport to be relocated within 23 Plunket Street, no change to building coverage.	

Chapter 8.6 Rural Production Zone:

Rule	Compliance	Non-Compliance
Rural Production Zone - 8.6.5.1 PERMITTED ACTIVITIES		
8.6.5.1.1 RESIDENTIAL INTENSITY	N/A	
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	N/A	
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%.	Complies.	
8.6.5.1.4 SETBACK FROM BOUNDARIES	N/A	
8.6.5.1.5 TRANSPORTATION Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules		
8.6.5.1.6 KEEPING OF ANIMALS	N/A	
8.6.5.1.7 NOISE	Complies.	
8.6.5.1.8 BUILDING HEIGHT	N/A	
8.6.5.1.9 HELICOPTER LANDING AREA	N/A	
8.6.5.1.10 BUILDING COVERAGE	N/A	
8.6.5.1.11 SCALE OF ACTIVITIES	N/A	
8.6.5.1.12 TEMPORARY EVENTS	N/A	

Chapter 12 Natural and Physical Resources

Rule	Compliance	Non-Compliance
INDIGENOUS VEGETATION - 12.2.6.1 PERMITTED ACTIVITIES		

Rule	Compliance	Non-Compliance
12.2.6.1.1 INDIGENOUS VEGETATION CLEARANCE PERMITTED THROUGHOUT THE DISTRICT	Complies.	
<p>12.2.6.1.2 INDIGENOUS VEGETATION CLEARANCE IN THE RURAL PRODUCTION AND MINERALS ZONES</p> <p>Clearance of indigenous vegetation in the Rural Production and Minerals Zones which is more than 10 years old is a permitted activity where:</p> <p>(a) it is not in a remnant forest, not within 20m of a lake (as scheduled in Appendix 1C), indigenous wetland or continually flowing river, and the clearance does not exceed 2ha per site existing as at 1 February 2005 in any 10 year period while this rule is in force; or</p> <p>(b) if in a remnant forest, it is not within 20m of a lake (as scheduled in Appendix 1C), indigenous wetland or continually flowing river, and the clearance does not exceed 500m² per site existing as at 1 February 2005 in any 10 year period while this rule is in force.</p>		<p>An area of approximately 567 m² of anthropogenic totara forest will require clearance to enable the construction of the stormwater outlet.</p> <p>The proposal is a discretionary activity pursuant to rule 12.2.6.3.1 refer to Ecological Report in Appendix 6 for further details.</p>
SOILS AND MINERALS - 12.3.6.1 PERMITTED ACTIVITIES		
<p>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.</p>		<p>Approximately 28,000m³ of earthworks is proposed.</p> <p>The proposal is a discretionary activity pursuant to rule 12.3.6.3.</p>
<p>12.6.3.1.3 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RESIDENTIAL, INDUSTRIAL, HORTICULTURAL PROCESSING, COASTAL RESIDENTIAL AND RUSSELL TOWNSHIP ZONES Excavation and/or filling, excluding mining and quarrying, on any site in the</p>	<p>Complies</p> <p>Minimal earthworks are proposed within 24 Pembroke Street and 23 Plunket Street to install the stormwater pipe.</p>	

Rule	Compliance	Non-Compliance
Residential, Industrial, Horticultural Processing, Coastal Residential or Russell Township Zones is permitted, provided that: (a) it does not exceed 200m ³ in any 12 month period per site; and (b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.		

LAKES, RIVERS, WETLANDS AND THE COASTLINE - 12.3.6.1 PERMITTED ACTIVITIES

12.7.6.1.3 PRESERVATION OF INDIGENOUS WETLANDS Any land use activity within an indigenous wetland of 200m ² or more that does not change the natural range of water levels or the natural ecosystem or flora and fauna it supports is a permitted activity, provided that the harvesting of plantation forestry that existed prior to 28 August 2004 is permitted where it is provided for by a rule in a Regional Plan for Northland or by a resource consent granted by Northland Regional Council.	Complies The proposed works is not within an indigenous wetland.	
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Chapter 15 Transportation

Rule	Compliance	Non-Compliance
15.1.6A.2.1 TRAFFIC INTENSITY	Complies no new activity or change in activity is proposed.	
15.1.6B.1.1 ON-SITE CAR PARKING SPACES	Complies no new activity or change in activity is proposed. Works include the relocation of a carport and parking area within 23 Plunket Street maintaining 2 parking spaces to serve the existing residential unit.	
15.1.6B.1.5 CAR PARKING SPACE STANDARDS	Complies Works include the relocation of a carport and parking area within 23 Plunket Street maintaining 2 parking spaces to serve the existing residential unit.	
15.1.6C.1.1 PRIVATE ACCESSWAY IN ALL ZONES	Complies works include upgrading of a number of	

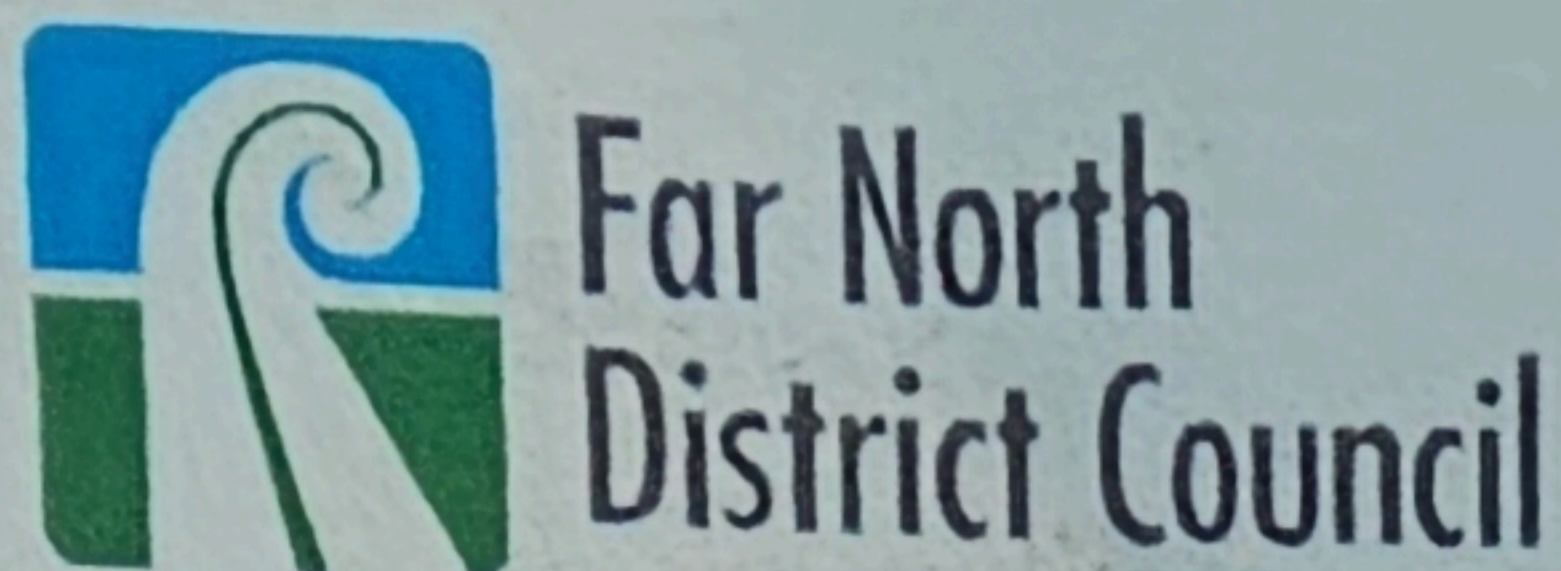
Rule	Compliance	Non-Compliance
15.1.6C.1.2 PRIVATE ACCESSWAYS IN URBAN ZONES	vehicle crossings and the relocation of a vehicle crossing and private accessway within 23 Plunket Street.	
15.1.6C.1.4 ACCESS OVER FOOTPATHS	Complies.	
15.1.6C.1.6 VEHICLE CROSSING STANDARDS IN URBAN ZONES	Will comply.	
15.1.6C.1.7 GENERAL ACCESS STANDARDS	Complies.	
15.1.6C.1.10 SERVICE LANES, CYCLE AND PEDESTRIAN ACCESSWAYS	Complies works include the reinstatement of pedestrian accessway within 23 Plunket Street.	

District Plan: Proposed Far North District Plan 'PDP'

Site Zoning	
Zone	Settlement Zone/Rural Production Zone
Overlays/Controls	River Flood Hazard Zone 10, 50 and 100-year ARI Event
Designations	Kiwi Rail Holdings Designation

Rule	Compliance	Non-Compliance
Part 2 – District Wide Matters / National Environment Values / Ecosystems and Indigenous Biodiversity		
IB-R1 Indigenous Vegetation Pruning, Trimming and Clearance and Any Associated Land Disturbance for Specified Activities Within and Outside a Significant Natural Area	Complies – where the clearance is located outside of the SNA.	
IB-R2 Indigenous Vegetation Clearance and Any Associated Land Disturbance within a Significant Natural Area for Papakāinga	N/A	
IB-R3 Indigenous Vegetation Clearance and Any Associated Land Disturbance Within a Significant Natural Area		567m ² of anthropogenic tōtara forest considered to be of moderate ecological significance (i.e 'significant'/of SNA quality) will also require clearance to enable the construction of the stormwater outlet. Discretionary Activity.

Rule	Compliance	Non-Compliance
IB-R4 Indigenous Vegetation Clearance and Any Associated Land Disturbance Outside a Significant Natural Area	Complies, Ecological Assessment prepared by Wild Ecology confirms the extent of vegetation which is not SNA. Proposed clearance is 3776m ² .	
IB-R5 Plantation Forestry and Plantation Forestry Activities Within a Significant Natural Area	N/A	
Part 2 – District Wide Matters / General District Wide Matters / Earthworks		
EW-R12 Earthworks and the Discovery of Suspected Sensitive Material	Will comply.	
EW-R13 Earthworks and Erosion and Sediment Control	Will comply.	
EW-S3 Accidental Discovery Protocol	Will comply.	
EW-S5 Erosion and Sediment Control	Will comply.	



Te Kaunihera o Tai Tokerau ki te Raki

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Private Bag 752, Memorial Avenue
Kaikohe 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137

02 October 2024

Dear Householder/Occupant,

**RE: Request for Approval for Stormwater Pipe Construction through Property at 24
Pembroke Street, Moerewa**

I am writing on behalf of the Far North District Council to seek your approval for the construction of a stormwater pipe through the property you currently occupy at 24 Pembroke Street, Moerewa. This project is part of a broader initiative aimed at reducing flooding in the Moerewa area, which has been identified as a concern affecting your property.

The construction of this stormwater pipe is a critical step in improving the drainage infrastructure to reduce future flooding risks. FNDC's contractor will take all necessary precautions to protect the property and restore the affected areas by the construction after project's completion.

We value your cooperation in this matter and are happy to discuss any questions or concerns you may have regarding the project. If you could please provide written consent for the works to proceed on your property, it would be greatly appreciated. We are also available to meet with you to review the project details and outline the timeline for the construction.

Please feel free to contact me directly via email kevin.hoskin@hoskincivil.co.nz should you require further information or wish to arrange a meeting.

Please kindly sign this authorization letter

Stef Kidwell Signature

Full Name

Date : 7/10/2024

Yours Sincerely

Kevin Hoskin

Senior Project Manager

Hoskin Civil Ltd

From: [Kevin Hoskin](#)
To: [Anastasiia Gilroy](#)
Subject: FW: Moerewa SW Improvements_ FNDC Rooding Approval
Date: Thursday, 10 October 2024 2:16:40 pm
Attachments: [image001.png](#)
[Outlook-cabq3nhh.png](#)

FYI

signature_743170681



Kevin Hoskin

Senior Project Manager
027 571 9125 • kevin@hoskincivil.co.nz

From: Rob Gilmore <Rob.Gilmore@fndc.govt.nz>
Sent: Thursday, 10 October 2024 1:36 pm
To: Kevin Hoskin <Kevin@Hoskincivil.co.nz>
Subject: Re: Moerewa SW Improvements_ FNDC Rooding Approval

Kevin

Thank you for the information relating to the Morewa SW upgrade
FNDC Transport support this project



Rob Gilmore

Acting Transportation Services Manager
M 0272711048 | Rob.Gilmore@fndc.govt.nz

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

From: Kevin Hoskin <Kevin@Hoskincivil.co.nz>
Sent: Thursday, 10 October 2024 1:31 pm
To: Rob Gilmore <Rob.Gilmore@fndc.govt.nz>
Subject: FW: Moerewa SW Improvements_ FNDC Rooding Approval

CAUTION: This email originated from outside Far North District Council.

Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Rob

Please see attached drawings and design detail for a stormwater project we are delivering on behalf of FNDC.

The consent planner has asked for evidence that the FNDC Rooding Team have been consulted and are happy with the proposal. The scope of work includes a new SW pipe in Plunket Street and Reed Street.

Let me know if you have any questions, and if you are happy with the proposal can you please respond with your support/approval. Construction is planned to commence in

early 2025.

Kind regards
Kevin

signature_743170681



Kevin Hoskin

Senior Project Manager
027 571 9125 • kevin@hoskincivil.co.nz

From: Anastasiia Gilroy <Ana@Hoskincivil.co.nz>

Sent: Tuesday, 1 October 2024 11:06 am

To: Kevin Hoskin <Kevin@Hoskincivil.co.nz>

Subject: Moerewa SW Improvements_ FNDC Roding Approval

Importance: High

Morning, Kevin.

As part of our resource conditions, we are required to provide an approval from the Roding department at FNDC.

I have attached the drawings and the GHD MEMO for road reinstatement and set of drawings.

Regards,

signature_743170681



Ana Gilroy

Project Manager/Senior Estimator
021 140 8832 • ana@hoskincivil.co.nz

From: [Anastasiia Gilroy](#)
To: [Melissa McGrath](#)
Subject: FW: Moerewa SW Project_Tauhara Approval
Date: Monday, 14 October 2024 10:00:44 am
Attachments: [image001.png](#)
[image005.png](#)
[image002.png](#)
Importance: High

Please see below the approval from the Tauhara Trust representative.

Regards,



Ana Gilroy

Project Manager/Senior Estimator
021 140 8832 • ana@hoskincivil.co.nz

From: Mark Thompson <Mark.Thompson@tauharano2.co.nz>
Sent: Monday, 14 October 2024 9:57 am
To: Anastasiia Gilroy <Ana@Hoskincivil.co.nz>
Cc: Bruce Shepherd <Bruce.Shepherd@tauharano2.co.nz>
Subject: RE: Moerewa SW Project_Tauhara Approval

Mōrena Ana

Thanks for following up. Given the easement gives the FNDC a right of access to undertake this stormwater project, as landowner we acknowledge being notified and give our support.

I have spoken with our tenant, Stephen Herries and he doesn't believe he will be impacted by the stormwater pipe installation mahi. We look forward to being advised once a tender has been accepted and a timetable established.

All the best with the project.

Ngā mihi, Mark

From: Anastasiia Gilroy <Ana@Hoskincivil.co.nz>
Sent: Monday, 14 October 2024 7:13 AM
To: Mark Thompson <Mark.Thompson@tauharano2.co.nz>
Subject: Moerewa SW Project_Tauhara Approval

Good morning, Mark.

Checking if you have had the opportunity to talk to the board about this project?

I will be submitting all the signatures to our planner this morning.

Regard,



Ana Gilroy

Project Manager/Senior Estimator
021 140 8832 • ana@hoskincivil.co.nz

From: Mark Thompson <Mark.Thompson@tauharano2.co.nz>

Sent: Tuesday, 8 October 2024 1:55 pm

To: Anastasiia Gilroy <Ana@Hoskincivil.co.nz>

Subject: Stephen Herries

Kia ora Ana

Here are the contact details for our tenant on the Moerewa property. I've told him about the project and to expect contact.



Ngā mihi, Mark



Mark Thompson

Kaiarahi Kai Whenua, Tauhara North No.2 Trust Commercial

t: [07 345 7537](tel:073457537) | m: [027 5555 186](tel:0275555186)

e: Mark.Thompson@tauharano2.co.nz | w: www.tauharano2.co.nz

a: 283 Vaughan Rd, Rotorua

"Kia mau ki te whenua; Whakamahia te whenua;

Hei painga mo nga uri whakatipuranga"

**KIWIRAIL LIMITED
(KiwiRail)**

**FAR NORTH DISTRICT COUNCIL
(Grantee)**

**AGREEMENT TO GRANT RIGHT TO HAVE A
63.42M STORMWATER PIPE AT MOERewa
AT 282.607KM ON THE NORTH AUCKLAND
LINE**

G91041-1

KiwiRail 

AGREEMENT dated 11th October 2020-2021

BETWEEN

KIWIRAIL LIMITED ("KiwiRail")

AND

FAR NORTH DISTRICT COUNCIL ("Grantee")

BACKGROUND

- A.** NZRC is a statutory corporation established under the New Zealand Railways Corporation Act 1981 ("**NZRC Act**").
- B.** Pursuant to the NZRC Act, NZRC may grant interests, easements, privileges, or concessions in relation to railway land.
- C.** By the Core Lease, the Crown and NZRC granted to New Zealand Rail Limited a lease of certain land owned by the Crown or owned, held, used, or occupied by NZRC. KiwiRail is now the lessee under the Core Lease.
- D.** The Grantee has requested KiwiRail grant certain rights to the Grantee in respect of the Land as set out in Schedule 1 hereto.
- E.** The parties enter into this Agreement to record the terms on which the above will occur.

EXECUTED AS AN AGREEMENT

SIGNED by **KIWIRAIL LIMITED** as Grantor by:



Authorised Signatory

and witnessed by:

Signature of witness




Name of witness
Delilah Atoaga

Occupation
Grants - Property

City/town of residence
Auckland


Roye Maitland
Obt - Property

SIGNED by **FAR NORTH DISTRICT COUNCIL** as Grantee by:



Authorised Signatory


Helen Ronaldson

Name of Signatory

Authorised Signatory

Name of Signatory

and witnessed by:



Signature of witness

Mary Jacqueline Moore

Name of witness

Chartered Accountant

Occupation

Russell

City/town of residence

SCHEDULE 1

REFERENCE SCHEDULE

ITEM 1	Land:	The railway land at Moerewa as is identified on the plan G91041/1-1 attached at Schedule 2.
ITEM 2	Grant Area:	Means that part (or those parts) of the Land more particularly shown as a yellow line on the plan G91041/1-1 attached at Schedule 2.
ITEM 3	Initial Term:	12 months.
ITEM 4	Commencement Date:	1 February 2020
ITEM 5	Grant Fee:	\$373.00 plus GST per annum, subject to review in accordance with clause 5.
ITEM 6	Grant Fee payment frequency:	Annually in advance.
ITEM 7	Review Dates:	Each anniversary of the Commencement Date, a fixed increase of 2% added to the Grant Fee payable immediately prior to the Review Date. Market Review Date: Each fifth anniversary of the Commencement Date
ITEM 8	Default Interest Rate:	5% above Bank of New Zealand prime overdraft rate.
ITEM 9	Minimum Public Risk Cover:	\$5,000,000.00 or such greater amount as required from time to time by KiwiRail.
ITEM 10	Purpose:	To have and maintain a 63.42m stormwater pipe at a minimum depth of 2.3m from the top of the rail at Moerewa at 282.607km on the North Auckland Line.
ITEM 11	Grantee's Works:	To install by open trenching a 63.42m stormwater pipe at Moerewa at 282.607km on the North Auckland Line.

SPECIAL CONDITIONS

A Service Locate must be undertaken prior to any construction or works being conducted in the rail corridor.

A Permit to Enter must be obtained before any work is carried out on this work site.

A set of as-built plans must be forwarded to this office no later than 3 months after this project is completed.

KiwiRail can review the installation methodology to ensure that we have no objection.

Markers should be installed as described within C-SP-AE-64322 eg: at points of entry to railway land, at changes of direction and at 40m intervals on straight runs. This is so buried services can be identified on site, in the event that any excavation/ penetration of the ground is required;

SCHEDULE 2

OPERATIVE PROVISIONS

1. INTERPRETATION

In this Agreement unless the context indicates otherwise:

1.1 Definitions:

"**Authority**" means and includes every governmental, local, territorial and statutory authority having jurisdiction or authority over the Land, the Grant Area or any part of it, or its use;

"**Building Act**" means the Building Act 2004;

"**Commencement Date**" means the date set out in Schedule 1;

"**Core Lease**" means the Memorandum of Lease dated 20 December 1991 entered into between the Crown and NZRC (as lessor), and New Zealand Rail Limited as lessee, as varied from time to time before the date of this Agreement;

"**Crown**" means Her Majesty the Queen in Right of New Zealand acting by and through her Ministers of Finance and State Owned Enterprises;

"**Default Interest Rate**" means the rate set out in Schedule 1;

"**Fixed Review Date**" means the fixed review dates set out in Schedule 1;

"**Grant Area**" means the area specified in Schedule 1 and shown on the plan attached at Schedule 3;

"**Grantee**" means the Grantee, its successors and permitted assigns together with the Grantee's servants, agents, employees, workers, invitees and contractors with or without vehicles, machinery or equipment;

"**Grantee's Property**" means all equipment, chattels, partitions and fixtures and fittings installed by the Grantee in the Grant Area;

"**Grantee's Works**" means the works to be erected or constructed by the Grantee on or within the Grant Area as described in Schedule 1, such works being necessary or desirable for the Grantee's use and enjoyment of the Grant Area for the Purpose;

"**Grant Fee**" means the amount set out in Schedule 1;

"**GST**" means tax levied under the Goods and Services Tax Act 1985 and includes any tax levied in substitution for that tax;

"**Initial Term**" means the initial term of this Agreement as set out in Schedule 1;

"**KiwiRail**" means KiwiRail Limited and includes KiwiRail's successors and assigns;

"**Land**" means all that land described in Schedule 1;

"**Market Review Date**" means the date set out in Schedule 1;

"**NZRC**" means the New Zealand Railways Corporation;

“Permit to Enter” means an access permit granted pursuant to section 75 of the Railways Act 2005;

"Purpose" means the purposes for which the Grantee shall be entitled to use the Grant Area specified in Schedule 1;

“Railway Infrastructure” means the definition given to that term in the Railways Act 2005;

“Railway Line” means the definition given to that term in the Railways Act 2005;

“Resource Management Act” means the Resource Management Act 1991;

"Review Dates" means the dates set out in Schedule 1;

“Service Locate” means the identification and marking of any underground services (whether operated by KiwiRail or any other person) prior to the commencement of any excavation that is undertaken as part of the Grantee’s Works;

"Structure" means any structure constructed or erected on or within the Grant Area pursuant to the Grantee's Works including any supports incidental to such structure;

"Working Day" means any day of the year other than Saturdays, Sundays, the provincial anniversary as observed in Auckland, Wellington and the province where the Land is situated, Waitangi Day, Good Friday, Easter Monday, Anzac Day, the Sovereign's birthday, Labour Day and any day in the period commencing 24 December and ending on 5 January the next year (both days inclusive).

- 1.2 **Building Act:** The terms "building code", "building consent", "building work" and "code compliance certificate" have the meanings given to those terms in the Building Act.
- 1.3 **Defined Expressions:** Expressions defined in the main body of this Agreement have the defined meaning in the whole of this Agreement including the background.
- 1.4 **Headings:** Section, clause and other headings are for ease of reference only and do not form any part of the context or affect this agreement's interpretation.
- 1.5 **Negative Obligations:** Any obligation not to do anything includes an obligation not to suffer, permit or cause that thing to be done.
- 1.6 **Persons:** References to persons include references to individuals, companies, corporations, partnerships, firms, joint ventures, associations, trusts, organisations, governmental or other regulatory bodies or authorities or other entities in each case whether or not having separate legal personality.
- 1.7 **Plural and Singular:** Singular words include the plural and vice versa.
- 1.8 **Sections and Clauses:** References to sections and clauses are references to this Agreement's sections and clauses.
- 1.9 **Statutes and Regulations:** References to a statute include references to regulations, orders, rules or notices made under that statute and references to a statute or regulation include references to all amendments to that statute or regulation whether by subsequent statute or otherwise.
- 1.10 **Implied Terms excluded:** To the fullest extent permitted by law the implied provisions of the Property Law Act 2007, Land Transfer Act 1952 and the Land Transfer Regulations 2002 are expressly excluded from this Agreement.

2. GRANT OF RIGHT

- 2.1 **Grant of Right for Term:** KiwiRail grants to the Grantee the right to use the Grant Area for the Purpose during the term, upon payment of the Grant Fee and subject to the terms, covenants, conditions herein contained or implied and the provisions of section 35 of the New Zealand Railways Corporation Act 1981, and the Railways Act 2005. The Grantee accepts those rights and covenants with KiwiRail to observe and perform the terms and stipulations set out in this Agreement.

3. TERM

- 3.1 The term of this Agreement shall commence on the Commencement Date and, subject to clauses 3.2 and 14, shall expire at the end of the Initial Term.
- 3.2 Subject to clause 14, at the end of the Initial Term the Agreement shall automatically renew in respect of the Grant Area for a further period of twelve months unless the Grantee has given to KiwiRail not less than three months' written notice notifying KiwiRail that the Grantee does not wish to renew the Agreement. The renewed agreement shall be on the same terms and conditions as this Agreement including this clause 3.2. For the avoidance of doubt, in the event that a termination notice has been validly served pursuant to either clause 14.1 or 14.3 of this Agreement but termination is not effective by the relevant renewal date, then the Agreement shall be renewed up until the termination date specified in the termination notice.

4. PAYMENT OF GRANT FEE

- 4.1 **Payment:** The Grantee must, during the term, pay the Grant Fee to KiwiRail in the frequency specified in Schedule 1 commencing with a first payment on the Commencement Date and thereafter as follows:
- (a) if the payment frequency is annually, then on each anniversary of the Commencement Date; or
 - (b) if the payment frequency is monthly, then by way of equal monthly instalments on the 1st day of each and every month during the term,

and such payments shall be in full without any deduction or set-off. The Grant Fee and any other payments to be made under this Agreement shall be paid to KiwiRail by direct bank payment or as KiwiRail may direct.

- 4.2 **Default Interest:** If the Grantee fails to pay any instalment of the Grant Fee or any other money payable under this Agreement for 10 Working Days after the due date for payment or the date of KiwiRail's demand, if there is no due date, then the Grantee must pay on demand interest at the Default Interest Rate on the money unpaid from the due date or the date of KiwiRail's demand (as the case may be) down to the date of payment.

5. GRANT FEE REVIEWS

- 5.1 **Review of Grant Fee:** The Grant Fee will be reviewed on each Review Date with such reviewed grant fee to be determined in accordance with the following formula:

$$A = B + (0.02 \times B)$$

Where:

A is the new Grant Fee.

B is the Grant Fee payable immediately prior to the Review Date,

and such new Grant Fee will be invoiced accordingly by KiwiRail for payment by the Grantee pursuant to clause 4.

- 5.2 **Cost review of Grant Fee:** Notwithstanding clause 5.1, if KiwiRail has reviewed and adjusted its standard fees, and the new standard fee applicable to this Grant ("**New Standard Fee**") is more than the new Grant Fee would be immediately following the next Review Date ("**Upcoming Review Date**"):
- (a) KiwiRail may notify the Grantee in writing at any time prior to the Upcoming Review Date that the new Grant Fee immediately following the Upcoming Review Date will be equal to KiwiRail's New Standard Fee; and
 - (b) the Grant Fee will not be reviewed under clause 5.1 on the Upcoming Review Date.
- 5.3 **Market Review of Grant Fee:** The Grant Fee will be reviewed on the Market Review Date by KiwiRail giving written notice to the Grantee specifying the reviewed grant fee, determined by KiwiRail on its assessment of the current market fee of the Grant Area taking into account the highest and best use of the Grant Area as at the Market Review Date.
- 5.4 **Grantee may dispute reviewed fee:** If the Grantee disputes the proposed new fee, it must advise KiwiRail of this within 20 Working Days of receipt of the Review Notice by way of written notice ("**Dispute Notice**") which must also state the Grantee's assessment of the current market fee of the Grant Area (time being of the essence). If the Grantee does not serve the Dispute Notice within the specified timeframe, then the Grantee will be deemed to have accepted the new fee contained in the Review Notice. The new Grant Fee payable immediately following a Fixed Review Date shall be deemed correct and conclusive evidence of the new fee save in the case of manifest error.
- 5.5 **Resolution if reviewed fee disputed:** If the Grantee does serve the Dispute Notice within the timeframe set out in clause 5.4, then the parties must negotiate in good faith in order to agree the new fee. If the parties cannot agree the new fee within 10 Working Days of receipt of the Dispute Notice, then either party may elect to refer the dispute to arbitration in Auckland by serving written notice on the other party.
- 5.6 **Conduct of arbitration:** If the dispute is referred to arbitration, then the following provisions shall apply:
- (a) the arbitration shall be submitted to a single arbitrator if one can be agreed upon by the parties, or failing agreement being reached within 10 Working Days, referred to the President for the time being of the New Zealand Law Society (or his or her nominee) who will appoint the arbitrator who is a member of the Arbitrators and Mediators Institute of New Zealand;
 - (b) the arbitration is to be carried out in accordance with the provisions of the Arbitration Act 1996 as amended and replaced from time to time and the arbitrator shall in directing the processes to be followed, have regard to the value of the sum in dispute so as to ensure that the costs of the arbitration are proportionate to the subject matter of the arbitration;

- (c) in determining the current market rent of the Grant Area, the arbitrator shall:
- (i) have regard to:
 - (aa) the current market fee payable for comparable areas and uses as this Agreement at the Market Review Date;
 - (bb) any abnormal use by the Grantee of the Grant Area;
 - (cc) the provisions of this Agreement and, in particular, to any liability on the part of the Grantee under this Agreement to pay any additional charges; and
 - (dd) any other use to which the Grant Area may be lawfully put;
 - (ii) disregard:
 - (aa) any deleterious condition of the Grant Area, if such condition results from any breach of this Agreement by the Grantee;
 - (bb) that portion of the Term which has expired, and determine the current market fee for the Grant Area at the Market Review Date as if the term commenced on such date;
 - (cc) any restriction on the use of the Grant Area imposed by this Agreement; and
 - (dd) the value of any goodwill attributable to the business of the Grantee and the value of the fixtures and fittings on the Grant Area belonging to the Grantee;
- (d) all costs of any arbitration under this clause 5.4 shall be borne equally by the parties unless:
- (i) the current market for the Grant Area as determined by the arbitrator is either equal to or greater than the fee specified in the Review Notice, in which event all costs shall be borne by the Grantee; or
 - (ii) it is decided by the arbitrator that because of some impropriety or lack of cooperation or unreasonableness on the part of one of the parties that such party shall bear the whole or some fraction of the costs in excess of one half in which case that party shall bear the proportion of costs determined by the arbitrator.

5.7 **Grantee to pay reviewed fee pending resolution:** If the Grantee validly serves the Dispute Notice, pending determination of the new fee in accordance with clause 5.4, the Grantee shall pay the new fee for the Grant Area as set out in the Review Notice from the Market Review Date. If the fee paid is more or less than the new fee payable following determination pursuant to clause 5.4, then an adjustment shall be made so that the correct fee has been paid as soon as practicable following such determination of the Grant Fee.

5.8 **Grant Fee not to be reduced:** Notwithstanding the foregoing provisions, the Grant Fee payable by the Grantee as a result of the review of the Grant Fee shall not be less than the Grant Fee payable by the Grantee immediately prior to the Market Review Date.

6. GRANTEE'S WORKS

- 6.1 **No Works in the Railway Corridor:** No works may be undertaken within 5 metres of the midline of the closest railway track to the Grant Area, without first obtaining from KiwiRail a Permit to Enter and in strict compliance with the terms of any Permit to Enter, and KiwiRail may in its absolute discretion:
- (a) approve the application on such terms as it sees fit, including as to KiwiRail supervision, train control and recovery of Costs;
 - (b) approve the work, but require it to be undertaken by KiwiRail or a contractor approved by KiwiRail with all Costs to be borne by the Grantee; or
 - (c) decline approval.
- 6.2 **Preconditions to construction:** The Grantee shall not proceed with construction or erection of the Grantee's Works including any Structure until and unless:
- (a) the Grantee has submitted to KiwiRail for its approval detailed plans and specifications of the Grantee's Works including any Structure (including plans and specifications for any temporary Structure) which are duly certified by a suitably qualified engineer of the applicable engineering practice area given the nature of the Grantee's Works with at least 5 years' current and continuous standing in the engineering profession;
 - (b) KiwiRail has provided written approval for the construction or erection of the Grantee's Works (which may be subject to any conditions KiwiRail imposes), including (where relevant):
 - (i) the plans and specifications referred to in clause 6.2(a);
 - (ii) the location of any Structure; and
 - (iii) the required clearances from railway lines and other Railway Infrastructure; and
 - (c) the Grantee has made payment to KiwiRail of KiwiRail's reasonable costs for appraising and approving such plans and specifications.
- 6.3 **Building Work:** In addition to the provisions of clause 6.2, the Grantee must:
- (a) not carry out any building work on the Grant Area without first obtaining all building consents and resource consents required to enable that building work to be lawfully carried out. If KiwiRail is as owner of the land required to provide its consent to the relevant Authority to enable such building consent to be obtained, then such consent shall, if provided, be solely for the purposes of enabling the building consent to be obtained and shall not be taken as being approval pursuant to clause 6.1 or 6.2;
 - (b) carry out all building work strictly following the building code and the building consents issued for that building work (including conditions of those consents), and only while the building consents for that building work are current and otherwise in strict compliance with all conditions and requirements imposed by KiwiRail as part of providing its approval under clause 6.2(b);
 - (c) take all necessary steps to ensure that the Grantee's Works are carried out safely and do not disrupt rail services and KiwiRail's operation and use of the Land;

- (d) comply immediately with all notices issued by any Authority (including, without limitation, KiwiRail) relating to any building work carried out by the Grantee;
- (e) obtain a code compliance certificate for any building work carried out by the Grantee on the Grant Area immediately on completion of that building work; and
- (f) not do or allow anything to be done (including any building work) which would be a breach of any obligation under the Building Act, or which would constitute an offence under the Building Act.

6.4 **Indemnity:** To the extent it is not limited from doing so under any New Zealand Law, The Grantee indemnifies KiwiRail against all notices, calls, orders, liabilities, actions, claims, demands, losses, proceedings, damages, costs (including legal costs) and expenses of any kind:

- (a) imposing a liability on KiwiRail;
- (b) suffered or incurred by KiwiRail; or
- (c) for which KiwiRail is or may become liable,

arising from a breach by the Grantee or any person for whom the Grantee is responsible, of any obligations under the Building Act or the Resource Management Act.

6.5 **Responsibility:** Notwithstanding the provisions of clause 6.3, the Grantee acknowledges that the Grantee shall be solely responsible for the erection, construction and materials comprised in the Grantee's Works and for the design and safety of the Grantee's Works and any associated temporary works.

6.6 **Supervision of works:** Following satisfaction of the requirements in clause 6.2, the Grantee shall complete the Grantee's Works in accordance with the plans approved by KiwiRail pursuant to clause 6.2(b) at the Grantee's sole cost in accordance with the provisions of clause 6.3 (where relevant) and to the entire satisfaction of KiwiRail. KiwiRail shall be entitled to require that completion of the Grantee's Works shall either in whole or part be supervised by KiwiRail's appointed railway personnel in which case, the costs of such supervision shall be paid by the Grantee.

6.7 **Variations to plans:** If the Grantee wishes to vary the plans approved by KiwiRail in accordance with clause 6.1, the Grantee shall submit to KiwiRail revised plans for approval ("**Revised Plans**"). KiwiRail shall advise the Grantee within 20 Working Days of receipt whether:

- (a) the Revised Plans are approved;
- (b) it requires further changes to be made to the Revised Plans; or
- (c) the Revised Plans are rejected.

6.8 **No nuisance:** In the course of construction or maintenance of the Grantee's Works, the Grantee shall not unduly interfere with or obstruct any other lawful user of the Grant Area or the Land and shall carry out all work expeditiously and on completion of the work shall immediately restore the surface of any affected part of the Land or the Grant Area as nearly as possible to its former state and condition at the Grantee's sole cost and expense.

6.9 **KiwiRail not liable for damage:** The Grantee shall not hold KiwiRail liable for any accident or damage to the Grantee's Works howsoever caused and must pay to

KiwiRail the cost of removing or making any alteration to the position of any part of the Grantee's Works necessitated by any alteration or addition to the railway on the Land including all infrastructure, structural and other features comprised in the current or future operations of the railway on the Land.

- 6.10 **Grantee liable for damage:** The Grantee shall pay KiwiRail the cost of repairing any damage which may occur directly or indirectly to the railway, the Land or the Grant Area by the use of the Grant Area for the Purpose or caused as a result of any breakage, leakage or the existence or use of the Grantee's Works including any Structure.
- 6.11 **Grantee liable for additional expenditure:** The Grantee shall pay to KiwiRail the costs KiwiRail incurs in respect of the installation, maintenance, alteration or relocation of its own infrastructure necessitated by any alteration, addition or development to the Land including any Railway Infrastructure that it would not otherwise have incurred but for the existence or use of the Grantee's Works including any Structure.

7. LIMITATION ON RIGHTS

- 7.1 **Security Interest:** The Grantee must not grant or agree to grant any security interest (as defined in the Personal Property Securities Act 1999) in or over its interest this Agreement.
- 7.2 **No Registration / Caveat:** The Grantee acknowledges that this Agreement does not create a registrable interest in the Grant Area or the Land and that the Grantee must not register a caveat over the title(s) to the Land relating to the Grantee's interest under this Agreement.

8. ASSIGNMENT

- 8.1 **No assignment:** The Grantee acknowledges that the rights provided by this Agreement are in personam rights only and may not be assigned or transferred and the granting of the rights pursuant to this Agreement does not create a lease or an interest in land relating to the Grant Area or otherwise confer on the Grantee any rights of exclusive possession.
- 8.2 **Change in shareholding:** For the purposes of clause 8.1, where the Grantee is a company which is not listed on the main board of a public stock exchange, any change or re-arrangement of the beneficial ownership of the principal shareholding of the Grantee or the Grantee's holding company, and any change in the Grantee's shareholding altering the effective control of the Grantee will be treated as an assignment of this Agreement in breach of clause 8.1.

9. GENERAL PROVISIONS RELATING TO GRANT

- 9.1 **Use of the Grant Area:** The Grantee shall use the Grant Area only for the Purpose and such use shall comply with the requirements of the Resource Management Act 1991, or any other statutory provisions relating to resource management.
- 9.2 **Structural alterations:** The Grantee may not make any alterations to the Grantee's Works (including any Structure forming part of the Grantee's Works), or construct any building, undertake any excavation or earthmoving on the Grant Area without the written consent of KiwiRail which may be granted or withheld in KiwiRail's

absolute discretion. Any consent granted by KiwiRail pursuant to this clause 9.2 shall, if KiwiRail determines necessary, be subject to the provisions of clause 6.

- 9.3 **Compliance:** The Grantee must at all times and at its own cost comply with:
- (a) all statutes, ordinances, regulations, by-laws or other enactments affecting or relating to the use of the Grant Area and with all requirements which may be given by any Authority and all obligations and requirements exercised under statute or regulation from time to time, including in compliance with the requirements of all railway legislation;
 - (b) all statutes, ordinances, regulations, by-laws or other enactments governing the design, erection, maintenance, use and construction of the Grantee's Works including any Structures and to submit to KiwiRail proof that any necessary consent or approval required from the relevant Authority has been obtained and continues to be held current including, but not limited to, consent and compliance certificates as required pursuant to the Building Act 2004; and
 - (c) any rules or building regulations imposed by KiwiRail which apply to the control, safe use, security and protection of, access to, use and occupation of, improvements to and the operation of any equipment installed in the Grant Area and the Land.
- 9.4 **Structures:**
- (a) The Grantee shall at its own cost comply with all written requests by KiwiRail for the removal, alteration (including additions to) or relocation of any structures on the Grant Area, together with making good any damage caused thereby, owned by either KiwiRail, the Grantee or any other third party where such removal, alteration or relocation is:
 - (i) necessary for KiwiRail's use of the Land; or
 - (ii) required in order for the Grantee to comply with clause 9.3.
 - (b) If the Grantee fails to carry out any work or make good any damage in accordance with any notice issued by KiwiRail in relation to clause 9.4(a) within the time specified, KiwiRail may at all reasonable times enter the Grant Area and (if applicable) the structures on the Grant Area bringing all necessary equipment and materials and execute all or any of the required work or repairs as KiwiRail shall think fit.
 - (c) In addition to KiwiRail's other remedies, KiwiRail shall be entitled to recover from the Grantee all costs of such work or repairs pursuant to clause 9.4(b), including all fees and expenses for inspecting the Grant Area and (if applicable) any structure, the issue of the notice and all sums of money paid on account of any insurance or indemnities or otherwise with respect to such work or repairs, together with interest at the Default Interest Rate as if the same (including interest) were rent in arrears.
- 9.5 **Compliance with easements:** The Grantee shall perform and observe the obligations of KiwiRail in connection with any easement or 3rd party interest of any kind in the Land for the time being affecting the Grant Area.
- 9.6 **Access by Grantee:** The Grantee shall only access the Grant Area in the manner pre-approved by KiwiRail with such access being reasonable given the nature of the Purpose for which the Grantee has been granted rights in respect of the Grant Area.

9.7 **Access by KiwiRail:** KiwiRail reserves the right for KiwiRail together with KiwiRail's employees, agents, contractors and invitees to at all times:

- (a) pass and re-pass with or without vehicles, materials or implements of any kind over the Grant Area for the purpose of carrying out any works or inspections to the railway or the Grant Area; and
- (b) erect, construct and maintain advertising hoardings and/or drainage pipes and other works including telecommunications, electric power lines or cables on, over or within the Grant Area together with any necessary supports, and the Grantee will make no claim against KiwiRail on account of any such works; and

KiwiRail will use all reasonable endeavours to ensure that such works or access do not in KiwiRail's opinion materially adversely inhibit the Grantee's use of the Grant Area pursuant to this Agreement.

9.8 **No Interruption to KiwiRail's Activities:** The Grantee must not do or permit to be done in the Grant Area anything which may become a nuisance, disturbance or obstruction to KiwiRail.

9.9 **Core Lease:** The Grantee will comply with all of KiwiRail's obligations in the Core Lease insofar as they relate to the Grant Area (other than the covenants for payment of rent and other money under the Core Lease) as if all those obligations were set out in this Agreement as obligations on the Grantee.

9.10 **Responsibility for Loss or Damage:** KiwiRail is not responsible for or liable to the Grantee for:

- (a) any loss or damage caused or sustained in any way to the Grant Area or any equipment, fixtures, fittings and chattels installed or located in the Grant Area; and
- (b) the theft or loss of any of the Grantee's equipment, fixtures, fittings or chattels.

9.11 **Responsibility for rates:** The Grantee shall be responsible for the payment of all rates, charges, duties, taxes and assessments together with any GST which are or may be charged, levied assessed or imposed upon KiwiRail and KiwiRail shall be entitled to recover those sums from the Grantee where these are levied on KiwiRail as a result of or related in any way to this Grant.

10. SPECIFIC PROVISIONS RELATING TO GRANTEE'S WORKS

10.1 **Application:** The following additional provisions in clauses 10.1 shall apply where the Grantee's Works are specified to include such works.

10.2 Below Ground Structures

- (a) **Markers:** The Grantee shall, unless otherwise directed by KiwiRail, erect and maintain to the entire satisfaction of KiwiRail, sufficient markers or signs on the Grant Area to indicate the location and nature of the Structure together with any warning or safe working information.

11. REPAIR AND MAINTENANCE

11.1 **Maintenance:** The Grantee shall be solely responsible for the cost of repairs and maintenance to the Grantee's Works and shall, subject to the provisions of clause

11.2, at all times keep and maintain the Grant Area and the Grantee's Works in and on the Grant Area in good and substantial repair, including making good any damage however caused to the Grant Area or the Grantee's Works, so as to ensure no loss, cost or damage shall be caused to or suffered by KiwiRail as a result of any failure by the Grantee to keep the Grantee's Works in such condition. For the purposes of ensuring the Grantee complies with its repair and maintenance obligations, the Grantor shall be entitled subject to the provisions of clause 11.2 to conduct an engineering inspection of the Grantee's Works, including any Structure in the Grant Area not less frequently than annually and following such inspection(s) being completed will provide the Grantee with a copy of the finalised engineering report once available.

- 11.2 **Access for maintenance and repairs:** Prior to entering the Grant Area for the purposes of carrying out any repairs or maintenance to the Grantee's Works, the Grantee shall first obtain a Permit to Enter the Grant Area from KiwiRail. Any permit granted by KiwiRail pursuant to this clause 11.2 shall be subject to the provisions of clause 6.6 in relation to supervision.
- 11.3 **KiwiRail may undertake repairs:** KiwiRail may give notice in writing to the Grantee requiring the Grantee within a reasonable time to repair, maintain or clean the Grant Area, in accordance with the Grantee's liability under this Agreement. If the Grantee fails to carry out any work or make good any damage in accordance with any such notice within the time specified, KiwiRail may at all reasonable times enter the Grant Area and (if applicable) the structures on the Grant Area bringing all necessary equipment and materials and execute all or any of the required work or repairs as KiwiRail shall think fit.
- 11.4 **Recovery of Costs:** In addition to KiwiRail's other remedies, KiwiRail shall be entitled to recover from the Grantee all costs of such work or repairs pursuant to clause 11.3, including all fees and expenses for inspecting the Grant Area and (if applicable) any Structure, the issue of the notice and all sums of money paid on account of any insurance or indemnities or otherwise with respect to such work or repairs, together with interest at the Default Interest Rate as if the same (including interest) were rent in arrears.

12. INSURANCE

- 12.1 **Public Risk Insurance:** The Grantee must take out and keep current at all times during the term of this Agreement a public liability insurance policy for a sum not less than the Minimum Public Risk Cover for any one claim or series of claims arising out of one event (such policy to treat KiwiRail property as third party property) specified in Schedule 1 or such greater amount as is required by KiwiRail from time to time.
- 12.2 **Disclosure to KiwiRail:** The Grantee agrees to provide to KiwiRail promptly at the written request of KiwiRail details (including certificates of currency, schedules to policies, and policy wording) of all insurance effected by the Grantee from time to time as required under the terms of this Agreement and by all relevant legislation.
- 12.3 **KiwiRail to be Noted as Interested Party:** The Grantee agrees to procure that KiwiRail be noted as an interested party on all policies of insurance required under the terms of this Agreement and by all relevant legislation.
- 12.4 **Grantee not to Invalidate Insurance:** The Grantee agrees it shall not, by act or omission, invalidate or increase the cost of any insurance effected by KiwiRail for its own business assets and business operations from time to time.

13. SUITABILITY OF GRANT AREA

- 13.1 **Rail Use:** KiwiRail does not make any warranty or representation, express or implied, that the Grant Area is or will remain suitable or adequate for the Purpose. All warranties as to suitability and adequacy implied by law are expressly excluded to the fullest extent permitted by law. The Grantee acknowledges that trains may pass without warning at any time during the day or night and use of the Grant Area shall be at the sole risk of the Grantee. Where the Purpose specified in this Agreement includes use of the Grant Area as a right of way with or without a level crossing, such risk shall extend to all persons using the Grant Area pursuant to the Grantee's rights under this Agreement. The Grantee acknowledges that KiwiRail may not own or lease the Land and the Grant Area, and that third parties may have an interest in the Land, being, without limitation, an ownership or leasehold interest. KiwiRail makes no warranty or representation that third parties having an interest in the Land (if any) have consented to, or approved of, this Grant. The Grantee will conduct its own investigations in this regard and will obtain all necessary consents, permissions, or approvals to the entry into this Agreement.
- 13.2 **Safety Measures:** KiwiRail is not responsible for providing any safety measures to protect the Grantee's Works including any Structure from water damage, fire, explosion, storm, earthquake, hazard or potential hazard whether coming from inside the Grant Area (including equipment installed in the Grant Area) or from outside.

14. TERMINATION

- 14.1 **Termination by either party:** Either party may terminate this Agreement for any reason whatsoever at any time by giving the other party twelve (12) calendar months' written notice of such termination.
- 14.2 **Termination for breach by Grantee:** If:
- (a) the Grantee fails to pay the Grant Fee or any other money payable under this Agreement to KiwiRail for 10 Working Days after either the due date for payment, or the date of KiwiRail's demand (if there is no due date) and the Grantee has failed to remedy that breach within 10 Working Days;
 - (b) the Grantee fails to perform or observe any of the Grantee's other obligations under this Agreement for a reasonable period of time taking into account the nature of the breach and the process required to remedy such breach;
 - (c) the Grantee assigns or attempts to assign the Grantee's rights under this Agreement, either in whole or part,
- then KiwiRail may terminate this Agreement by notice in writing served on the Grantee either immediately or at any later time.
- 14.3 **Termination by KiwiRail – Railways Use:** The Grantee acknowledges that KiwiRail may terminate this Agreement upon 3 months' notice, where the Grant Area is required for railways use.
- 14.4 **No Compensation:** In the event of termination of this Agreement under clauses 14.1, 14.2 or 14.3 from whatsoever cause, no compensation shall be payable to the Grantee.

15. LIABILITY FOR BREACH

15.1 **Grantee's Liability:** Without limiting the scope of the indemnity provisions in clauses 6.3 and 15.2, the Grantee shall at all times be liable to KiwiRail, the Minister of Railways and the Government of New Zealand for or in respect of:

- (a) any accident or injury to any person or for damage to any property arising out of or caused or contributed to either directly or indirectly by the use or existence of the Structure or anything connected therewith or by any defect in the construction or maintenance of the Structure.
- (b) all costs (including legal costs) and expenses incurred by KiwiRail in taking action to demand and/or recover any part of the Grant Fee or other money payable by the Grantee under this Agreement; and
- (c) all actions, proceedings, calls, costs (including legal costs), expenses, claims, demands, damages, losses or liabilities of any kind suffered or incurred by KiwiRail as a result of:
 - (i) the act or neglect of the Grantee or of any person for whom the Grantee is responsible relating to the use of the Grant Area (including any Structure forming part of the Grantee's Works on the Grant Area) or the use or operation of any equipment installed in the Grant Area;
 - (ii) the Grantee's breach of, or failure to comply with, the Grantee's obligations under this Agreement;
 - (iii) the Grantee's breach of, or failure to recognise, any 3rd party's interests in the land; or
 - (iv) damage to the Land or improvements on the Land where the damage causes any 3rd party having an interest in the Land or improvements thereon to suffer a loss.

15.2 **Grantee's Indemnity if Applicable:** Further and without derogating from the Grantee's liability under clause 15.1, the Grantee indemnifies KiwiRail, the Minister of Railways and the Government of New Zealand to the fullest extent permitted under the laws of New Zealand in respect of all events, matters, costs (including legal costs), expenses, actions, proceedings, claims, demands, damages, losses or liabilities of any kind that arise under clause 15.1.

15.3 **Payment by Grantee:** The Grantee must pay on demand all amounts owing to KiwiRail as a result of the Grantee's liabilities contained in clauses 15.1 and 15.2, together with interest on those amounts at the Default Interest Rate calculated on a daily basis from the date KiwiRail incurs that liability until the Grantee pays the relevant amount.

16. REMOVAL OF GRANTEE'S WORKS ON EXPIRY OR TERMINATION

16.1 **Removal on Expiry or Termination:** The Grantee must remove all the Grantee's Works and the Grantee's Property (including any Structures forming part of the Grantee's Works and any other alterations or additions made to the Grant Area pursuant to clause 6), and repair any damage caused by that removal within 10 Working Days of the expiry of the term or termination of this Agreement.

16.2 **Failure to Comply:** If the Grantee fails to comply with clause 16.1 KiwiRail may remove the Grantee's Works (including Structures forming part of the Grantee's Works and any other alterations or additions made to the Grant Area pursuant to

clause 6), the Grantee's Property and repair any damage caused by that removal and the Grantee must pay to KiwiRail on demand all costs incurred by KiwiRail in doing so.

- 16.3 **Removal by Grantee:** Notwithstanding the provisions of clause 16.2, KiwiRail may choose not to remove the Grantee's Works and the Grantee's Property, and then the Grantee's Works and the Grantee's Property will become KiwiRail's property and KiwiRail will not have to pay compensation for the Grantee's Works or the Grantee's Property to the Grantee.

17. COSTS

- 17.1 **Costs:** The Grantee must pay to KiwiRail on demand all reasonable costs (including legal costs), charges and other expenses which KiwiRail may incur or for which KiwiRail may become liable relating to:
- (a) **Preparation of Agreement:** the negotiation, preparation and execution of this Agreement and of any variation of this Agreement;
 - (b) **Grantee Fee Review:** any documents evidencing a review of the Grant Fee;
 - (c) **Renewal of Term:** any documents evidencing a renewal or extension of the term;
 - (d) **Remedying Breach:** KiwiRail remedying the Grantee's breach of any term of this Agreement;
 - (e) **Exercise of Powers:** KiwiRail's exercise or attempted exercise or enforcement of any power, right or remedy conferred on KiwiRail by this Agreement; and
 - (f) **Proposals:** the consideration and approval (if given) of any proposals, including Permits to Enter, made to KiwiRail by the Grantee in respect of any matter contemplated by this Agreement (including costs incurred in employing consultants).

18. RESOLUTION OF DISPUTES

- 18.1 **Disputes:** If any dispute, difference or question arises between the parties about:
- (a) the interpretation of this Agreement;
 - (b) anything contained in or arising out of this Agreement;
 - (c) the rights, liabilities or duties of KiwiRail or the Grantee; or
 - (d) anything else relating to the relationship of KiwiRail and the Grantee under this Agreement (including claims in tort as well as in contract);

the parties may refer that matter to informal mediation, if both parties agree, having regard to the nature of the dispute or difference between them and the potential delays and costs which might arise if that matter is referred to arbitration.

- 18.2 **Appointment of Mediator:** The parties must try to agree on the mediator, who must be a senior solicitor or barrister practising in the district in which the Land is situated. If they cannot agree, the president of the New Zealand Law Society (or his or her nominee) will nominate the mediator on either party's application.

- 18.3 **Arbitration:** If the parties do not agree to refer the dispute, difference or question to mediation under clause 18.1 within 10 Working Days of that dispute, difference or question arising, then it will be referred to the arbitration of a single arbitrator under the Arbitration Act 1996.
- 18.4 **Arbitrator:** The parties must try to agree on the arbitrator. If they cannot agree, the president or any vice-president for the time being of the New Zealand Law Society (or his or her nominee) will nominate the arbitrator on either party's application.
- 18.5 **Action at Law:** The parties must go to arbitration under this section before they can begin any action at law (other than an application for injunctive relief or debt collection).

19. NOTICES

- 19.1 **Service of Notices:** Any notice to be given by KiwiRail under this Agreement shall be sufficient if the notice is signed in accordance with clause 19.2 and shall be validly given if sent by letter or facsimile addressed to the Grantee at the Grantee's last known residential or business address.
- 19.2 **Signature of Notices:** Any notice or document to be delivered or served under this Agreement must be in writing and may be signed by:
- (a) the party giving or serving the notice;
 - (b) any attorney, officer, employee or solicitor for the party serving or giving the notice; or
 - (c) the solicitor or any director, officer, employee or any other person authorised by that party to give or serve the notice.
- 19.3 **Time of Service:** Any notice or other document will be treated as delivered or served and received by the other party:
- (a) on personal delivery;
 - (b) three Working Days after being posted by prepaid registered post to the addressee's last known residential or business address in New Zealand; or
 - (c) on completion of an error free transmission, when sent by facsimile.

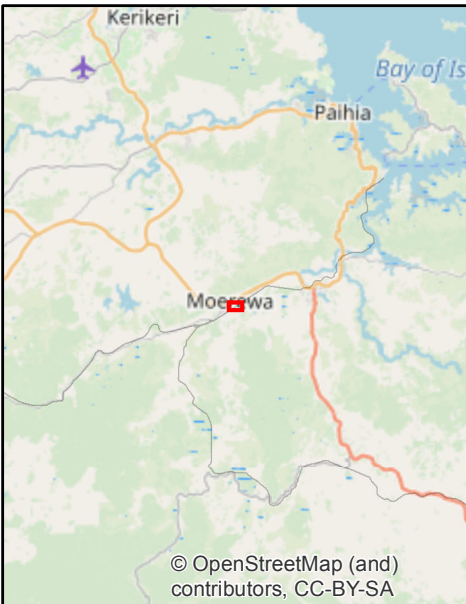
20. FIBRE OPTIC CABLE

- 20.1 **Cable located on Land:** Vodafone New Zealand Limited ("**Vodafone**") and KiwiRail have certain ownership, access and other rights in respect of a fibre optic system ("**System**") located on the Land by virtue of an agreement dated 28 September 1990 ("**Fibre Optic Cable Agreement**"). Where future extensions to the System are constructed on or under the Land, Vodafone's and KiwiRail's rights under the Fibre Optic Cable Agreement shall take precedence over the Grantee's rights under this Agreement to the extent of any conflict, and the Grantee acknowledges that this Agreement shall be subordinate to, and shall not derogate from, those rights.
- 20.2 **Grantee's covenants in respect of the cable:** The Grantee covenants and agrees:

- (a) not to interfere with or disturb the System;
- (b) not to do anything which might cause increased maintenance or operating expenses of the System, or reduce the System's efficacy;
- (c) to indemnify Vodafone and KiwiRail for any liability, claim, damage or loss arising out of installation maintenance or use by the Grantee of its facilities or interference with the use, operation or maintenance of the System or failure to comply with this clause of the Agreement;
- (d) to reimburse Vodafone and KiwiRail for the costs of any relocation which Vodafone or KiwiRail carries out to meet the Grantee's requirements;
- (e) that either Vodafone or KiwiRail shall be entitled to seek injunctive relief restraining any actual or threatened breach of this Agreement by the Grantee causing interference with or disturbance to the System; and
- (f) that for the purpose of the Contracts (Privity) Act 1982, Vodafone and KiwiRail are each designated to benefit under this Agreement in respect of their respective rights under the Fibre Optic Cable Agreement.

20.3 **Limitation of access:** In respect of the two metre strip centred on the fibre optic cable of the System, the Grantee shall have no right of entry (except for normal use in passing over the strip (without obstructing it)) or excavation or subterranean activities, without notifying and obtaining the prior written consent of KiwiRail and Vodafone.

SCHEDULE 3
PLAN OF GRANT AREA



Legend

Land (Railway Boundary)



Grant/Right



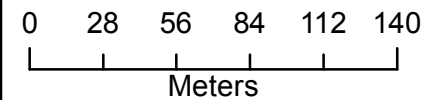
Note: Right does not extend beyond Railway Land Boundary

G91041/1 Stormwater Pipe Moerewa



A4

1:2,885



G91041/1

23/12/2019

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Moerewa SW Improvements – Progress Meeting

Project Name: Moerewa SW Improvements **Meeting No:** 01

Date / Time: Tuesday 8th October 2024 7.35 a.m. to 8:50 a.m.

Attendees: Ana Gilroy (HC), Kevin Hoskin (HC), Pamela-Anne (Moerewa Community Liaison), Josephine Kemp-Baker (Ngati Kopaki Hapu Representative), Roddy Pihema (Bay of Islands-Whangaroa Community Board)

Apologies: Terina (Ngati Te Ara)

Venue: **55 Main Road, Moerewa**

Purpose of Meeting

- To provide the update on the project
- To discuss/review project details related to the discharge of the stormwater
- To obtain Private properties approvals
- To consult and engage with Hapu and seek their support for the project

Meeting Agenda/Minutes

No.	Item	Attendees Notes
1.	Meeting opened with Karakia. Introduction: Kevin Hoskin. The design remains unchanged from the original proposal, and the project is currently out for tender. Resource consent has not yet been lodged and is pending landowner approvals. The clearing works has been explained. The blessing will take place prior project commencement and Totara Tree removal.	Noted, Agreed
2.	The project was thoroughly explained, with Ana Gilroy providing a detailed discussion on the pipe's depths and construction. She also illustrated and explained the outfall discharge on the white board and sequence of the water flow from inlets to the final discharge into the Kawakawa River.	Noted, Agreed
3.	Pamela-Anne mentioned that some of the excavated rocks could be transported to the local area for stockpiling.	Agreed, Ana notify contractor
4.	Pamela-Anne mentioned that Skip, at 24 Pembroke Street, would like the trees near the concrete wall to be removed.	Agreed, Pamela-Anne to provide photos, Ana issue NTT to tenderers
5.	Due to number of contractors pricing the work, Ana Gilroy will accompany contractors through the road, railway and easement reserves. Ana will notify Pamela-Anne in writing of the contractor's visits.	Noted, Agreed
6.	Kevin explained wider stormwater initiatives for Moerewa	Noted
7.	Ana to set up meetings for second Tuesday of every month	Noted, Agreed



8.	Kelly Hayhurst (from NZEM) was introduced as the lead ecologist responsible for managing lizards through the easement and tree-clearing work.	Noted
9.	Meeting Closed with Karakia.	

From: [Del Bristow](#)
To: [David Landreth](#)
Cc: [Maia Cooper](#); [Jayne Barnett](#); [Anastasiia Gilroy](#)
Subject: Re: Moerewa SW Improvements Garage 23 Plunket St Moerewa
Date: Tuesday, 8 October 2024 3:27:04 pm
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

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Kia ora David

Board have passed a motion that the Improvements to Moerewa SW 23 Plunket St Moerewa proceed; this was the following motion:

MOTION:

"Board moves that improvements to 23 Plunket St school house proceed as described in the plan provided by Hoskin Civil"

Moved: D Bristow Presiding Member

Seconded: P Ngaika

Carried

kia tau te rangimarie

del bristow

021898893

On Mon, Sep 23, 2024 at 8:13 AM David Landreth <David.Landreth@education.govt.nz> wrote:

Tēnā koutou,

Thanks all for working through this together.

Please let me know when the board has approved and send me through a brief resolution. I can then advise The Property Group (TPG) who are acting for the Ministry to proceed.

Ngā mihi,

David Landreth | Principal Advisor – Housing
Te Pou Hanganga, Matihiko | Infrastructure & Digital (TPHM)

DDI +6444638899
National Office

8 Gilmer Terrace | Wellington

education.govt.nz

He mea tārai e mātou te mātauranga kia rangatira ai, kia mana taurite ai ōna huanga
We shape an education system that delivers equitable and excellent outcomes

Te Tūhuru o te Mātauranga



From: Del Bristow <delbristow3@gmail.com>

Sent: Thursday, September 19, 2024 2:09 PM

To: Anastasiia Gilroy <Ana@hoskincivil.co.nz>

Cc: Maia Cooper <principal@moerewa.school.nz>; Jayne Barnett <office@moerewa.school.nz>; David

Landreth <David.Landreth@education.govt.nz>

Subject: Re: Moerewa SW Improvements Garage 23 Plunket St Moerewa

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Thank you Ana really appreciated your discussion about this and the revised final proposal..

Will advise BoT accordingly.

kia tau te rangimarie

del bristow

Presiding Member (Chairperson)

Board of Trustees

Moerewa School

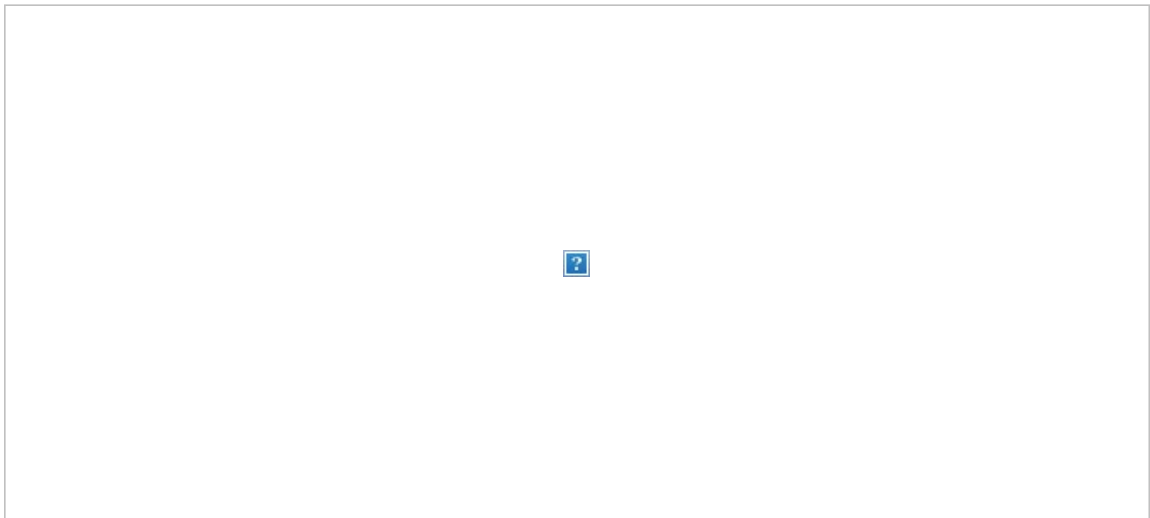
021 898 893

On Thu, Sep 19, 2024 at 12:05 PM Anastasiia Gilroy <Ana@hoskincivil.co.nz> wrote:

Hi Del.

Thank you for your time this morning.

I have revised the final proposal to ensure compliance with FNDC's District Plan Rules, therefore located the garage 3 m away from the boundaries, please see below:



As discussed,

1. the driveway and the vehicle crossing will be concreted.
2. All disturbed areas will be reinstated.
3. All fences removed during construction will be reinstated with new like for like fences.

I will review some options for a carport with an attached tool shed, but I'm not having much success so far. There is an option for just a carport with a separate garden shed, but nothing that combines them into a single

structure.

Regards,

signature_743170681



Ana Gilroy

Project Manager/Senior Estimator

021 140 8832 · ana@hoskincivil.co.nz

From: Del Bristow <delbristow3@gmail.com>
Sent: Thursday, 19 September 2024 10:26 am
To: Anastasiia Gilroy <Ana@Hoskincivil.co.nz>
Cc: Maia Cooper <principal@moerewa.school.nz>; Jayne Barnett <office@moerewa.school.nz>
Subject: Moerewa SW Improvements Garage 23 Plunket St Moerewa

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Kia ora Ana

Board of Trustees Moerewa School have received the plans you proposed for 23 Plunket St ie. pre fab garage and gravel drive and location for stormwater pipes by FNDC.

Do you have a date for the proposed works? This item will be tabled at our next monthly meeting in October however if this exceeds your timeframe let me know so we can approve before.

Queries I have are:-

- who is responsible for returning the grass areas?
- can we confirm what the final driveway from garage to roadside will look like ie. sealed driveway rather than gravel?
- has a carport (with attached tool shed) been considered with pad and sealed driveway the same?

The school Principal Maia Cooper has been cc'd as has Jayne Barnett Administrator for the school.

Would be happy to discuss further

kia tau te rangimarie

del bristow

Presiding Member (Chairperson)

Board of Trustees

Moerewa School

021 898 893

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