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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for

(more than one circle can be ticked):

- ◯ **Land Use**
- ◯ **Fast Track Land Use***
- ◯ **Subdivision**
- ◯ **Consent under National Environmental Standard** (e.g. Assessing and Managing Contaminants in Soil)
- ◯ **Discharge**
- ◯ **Change of Consent Notice (s.221(3))**
- ◯ **Extension of time (s.125)**
- ◯ **Other (please specify)** Outline Plan of Works waiver under Section 176A(2)(c) RMA

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** Not applicable

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ◯ **No** Not applicable

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 (District Facilities)

Email: [redacted]

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: Martell Letica

Email: [redacted]

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: Far North District Council and Kororāreka Marae Society

Property Address/ Location: [redacted] de

8. Application Site Details

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

Name/s:

Site Address/ Location:

Postcode

Legal Description: See Designation Attached **Val Number:**

Certificate of title: NA

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: **Not applicable for an Outline Plan of Works waiver.**

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.

Not applicable for an Outline Plan of Works waiver.

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** Not applicable for an Outline Plan of Works waiver

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

(more than one circle can be ticked):

- ◯ **Building Consent** Enter BC ref # here (if known)
- ◯ **Regional Council Consent (ref # if known)** Ref # here (if known)
- ◯ **National Environmental Standard consent** Consent here (if known)
- ◯ **Other (please specify)** Specify 'other' here

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

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

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

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

- ◯ **Subdividing land**
- ◯ **Changing the use of a piece of land**
- ◯ **Disturbing, removing or sampling soil**
- ◯ **Removing or replacing a fuel storage system**

NOT APPLICABLE FOR AN OUTLINE PLAN OF WORKS WAIVER

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** NOT APPLICABLE FOR AN OUTLINE PLAN OF WORKS WAIVER

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** **NOT APPLICABLE FOR AN OUTLINE PLAN OF WORKS WAIVER**

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:	Infra.Support@fndc.govt.nz
Phone number:	Work / Home
Postal address: (or alternative method of service under section 352 of the act)	Postcode

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

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

Name: (please write in full)	Not required, email billing information to email supplied
Signature: (signature of bill payer	[redacted] Date

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) Martell Letica

Signature: [redacted] Date 24-Jul-2025

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.

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

Request for approval of engineering plans and reports required by conditions of ~~Resource Consent or Consent Notice~~ Designation

1. Applicant details (Consent Holder or Property Owner):

Name/s: (please write all names in full): Far North District Council (District Facilities)

Phone numbers: Work: _____ Home: _____

Email: infra.support@fndc.govt.nz

☐ **Check this box if the you wish to be included in correspondence regarding this application.**

2. Designer/Engineer contact details (Contact Person):

Name/s: (please write all names in full): Martell Letica, Coordinating Planner

Contact phone number: 0204 135 0589

Email: Martell@Letica-ep.co.nz

3. Primary Contact details:

(Please specify which person identified above is the primary point of contact):

Name/s: Martell Letica

4. The document number for which these plan(s) or report(s) relate:

Please note the ~~Resource Consent or Consent Notice~~ reference below. Please ensure the correct suffix is used if there are any variations or objections associated with this application.

2240208-RMADES

5. Conditions to be approved:

List the conditions to which this request relates and specify which documents relate to each.

If additional space is required, please attach a summary document.

Condition	Document reference	Drawing numbers
s 176A(2)(c)	RMA Outline Plan of Works Waiver request	

6. Does this application include any of the following (tick where appropriate):

Infrastructure:	To be vested:	Upgrades:	New connection:
Roads			
Street lighting			
Wastewater			
Stormwater			
Potable Water			

7. Please note any associated Building Consent reference (if applicable):

9. Billing details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this request for approval of engineering plans and reports. Staff time required to process this approval will be charged on completion of the work. Please also refer to the council's Fees and Charges document (available at www.fndc.govt.nz). A deposit is payable when you submit this request.

Name/s: (please write all names in full) Far North District Council (District Facilities)

Postal address:

Post code:

Phone numbers: Work: Home:

Fax: Email: infra.support@fndc.govt.nz

Name of bill payer: FNDC (please print)

Signature: NA, invoice to be sent to email (signature of bill payer – mandatory) Date: NA

Important information:

Privacy information: Once this application is lodged with the council it becomes public information. Please advise us if there is sensitive information included in this request. The information you have provided on this form is required so that your application for approval can be processed. The information will be stored on the council's property files and held by the Far North District Council and will be made available on request.

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

Name: Martell Letica (please print)

Signature: (signature) Date: 11/07/2025

SPECIFICATION

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

Russell Cemetery Extension Stage 1

(project name)

30-32 Long Beach Road, Russell 0202, New Zealand

(project address)

Far North District Council

(client)

Project Ref: 07

Date: 26 June 2025

TABLE OF CONTENTS

1220 PROJECT

1 GENERAL

This general section describes the project including:

- A description of the work
- Design construction safety
- Principal's Health & Safety matters
- Site description, features and restrictions
- Design parameters for design by contractor
- Archaeological discovery

1.1 READ ALL SECTIONS TOGETHER

Read all general sections together with all other sections. Refer also to the Parklife Specification for the Grizzly Tower and D-Court.

1.2 DESCRIPTION OF THE WORK

Landscape works involved with the extension of the cemetery including new concrete interment beams, bollards, a chain gate, rocks, planted areas, specimen tree transplanting, relocation of a memorial seat, bin, sign, hand cleansing water taps and development of a kōiwi (reburial area) with pou whenua and concrete edge.

1.3 RESTRICTED BUILDING WORK

This project does not include Restricted Building Work

Design Construction Safety

1.4 DESIGN CONSTRUCTION SAFETY MATTERS

The project has the following unusual or atypical features, which a reasonably experienced contractor may not be aware of, that may present an unexpected hazard or risk during a typical construction process.

ITEM	COMMENT
Public access and visitors	The cemetery may remain open to the public during works. Work with FNDC to understand the process of burial or ash interment during the physical works period.
Uneven ground and subsidence	Historic graves may cause localised ground instability or subsidence. Caution must be taken with heavy machinery and excavation near burial plots.
Human remains or kōiwi are disturbed	Risk of disturbing known or unknown burial sites, including historic unmarked graves or ancestral remains. Culturally sensitive handling procedures must be followed. Engagement with mana whenua and adherence to any FNDC accidental discovery protocols is mandatory.
Vehicle access to the cemetery extension area is across private land	The contractor shall work with Council and the private land owner to understand any hazards that may be on site.
Overhead and underground services	The contractor shall be responsible for locating all underground services and for protecting the same for the duration of the construction works.

Provide particular health and safety procedures and methods to mitigate these hazards or risks, and specifically include them as well as any other health and safety matters in the site Health and Safety Plan (refer to section 1260 PROJECT MANAGEMENT for Plan requirements). The Contractor is still required to undertake its own assessment, to determine if they consider there are further safety matters and provide for these in carrying out the construction of the work.

Principal's Health & Safety Matters

1.5 PRINCIPAL'S KNOWN SITE HAZARDS

Site hazards known to the principal are:

KNOWN CONSTRUCTION HAZARDS (incomplete list - contractor to undertake own hazard analysis):

- Excavation machinery could damage existing underground or overhead services during earthworks
- Overhead powerlines could be hit by machinery and cause electrocution and injury or fatality
- Material and equipment risk of theft or vandalism
- Collision of vehicles and people causing injury or fatality
- Collision of vehicles with other vehicles causing damage to property, injury or fatality
- Assault to onsite personnel causing injury
- Falling tree branch(es) causing harm to onsite personnel
- Collapse of concrete formwork causing injury
- Uneven ground and subsidence causing damage to machinery or injury to people

KNOWN ENVIRONMENTAL HAZARDS (incomplete list - contractor to undertake own hazard analysis)

- Extreme rainfall concentrated in a short period of time causing flooding or overland flow paths across excavated areas.
- Seismic tremors of various intensities from earthquake causing injury to people on site, damage to underground or overhead services, vehicles, equipment or damage to site
- High winds causing potential injury to workers or fatality (including material in eyes). Loss of material. Fallen branches. Damage to buildings, equipment and vehicles.
- Environmental pollution due to spill or chemical or gases into waterways causing potential injury to workers or fatality. Potential contamination of water and loss of materials.
- Insect bites/stings causing severe anaphylactic reaction, serious illness or fatality in the worst case scenario.
- Exposure to UV rays causing sunburn, sunstroke, fatigue, skin cancer or fatality
- Noise and vibration from machinery operation causes neighbourhood complaints or damage to hearing
- Air pollution from dust or site machinery causing environmental pollution or causing injury

KNOWN HEALTH AND SAFETY HAZARDS (incomplete list - contractor to undertake own hazard analysis)

- Member of the public enters the work site area and is injured
- Electrical faults of equipment or improper use of electrical equipment causing injury or fatality
- Spread of illness or infection causing illness or loss of productivity (including COVID19)
- Use of drugs, illegal substances and alcohol on the site causing injury or conflct
- Vibration from vibratory rollers or handheld tools causing HAVS

(Han-Arm Vibration Syndrome) or other injury
- Noise from cutting tools causing injury to hearing, disturbance or wellbeing or stress
- Manual handling or lifting causing injury
- Tripping, slipping or hazard from falling objects causing injury or fatality
- Fall from height causing injury or fatality
- Inadequate communication among workers causing failure to follow safety protocols and procedures and leading to injury or fatality
- Lack of emergency response plans or first aid training causing confusion and in turn injury or fatality
- Insufficient personal protective equipment (PPE) resulting in injury or fatality

KNOWN OPERATION AND MAINTENANCE HAZARDS (incomplete list - contractor to undertake own hazard analysis)
- on-site machinery could tip over causing injury or fatality
- Emergency services are unable to access the site during construction causing severity of injury to increase
- refer also to hazards listed under 'KNOWN CONSTRUCTION HAZARDS'

The contractor is to conduct a comprehensive site assessment and work in collaboration with Far North District Council and safety professionals to identify and mitigate specific hazards unique to the construction of the Russell Cemetery upgrade. Additionally, compliance with local safety regulations and standards is essential to ensure a safe working environment.

1.6 PRINCIPAL'S SITE HEALTH AND SAFETY PLAN

The contractor is to obtain a copy of the principal's site health and safety plan.

Site

1.7 SITE

The site consists of:	A steep grassed area with existing body and ash interment burials and minor works an, ash interments and kōiwi (reburials) some tree planting at the entrance and on the southern boundary and a small playground. The site is flanked by High Street on the western side, and residential properties to the north, east and south.
As shown on drawing:	L101 General Arrangement Plan Stage 1

1.8 LEGAL DESCRIPTION

Site Address:
Russell Cemetery, 30-32 Long Beach Road, Russell

Legal Description:
Section 57 Block 1 Russel SD (Local Purpose (Cemetery) Reserve; NZ Gazette 1984 p2863)
Section 58 Block 1 Russel SD (Local Purpose (Cemetery) Reserve; NZ Gazette 1984 p2863)
Section 50 Block 1 Russel SD (Local Purpose (Cemetery) Reserve; NZ Gazette 1984 p2863)
Section 2 SO 364056 (Land acquired for cemetery (Long Beach Road Russell) NZ Gazette 2006 p3198 Vested in the Far North District Council)
Extension Area - Section 1 SO 565 982 (Land acquired for cemetery purposes NZ Gazette 2021 in 5024 vested in Far North District Council)
ADJOINING LAND / NOT PART OF CEMETERY: Section 56 Block 1 Russel SD MS10-49 (a Reserve, Marae Purposes; Kororareka Marae Society)

District Plan Zoning:
The existing 5172m2 cemetery is currently zoned ‘Recreational Activities’ in the Far North District Council Operative District Plan and ‘Open Space’ in the Proposed District Plan.
The extension area is zoned Recreational Activities under the Operative District Plan and Rural Production in the Proposed District Plan.

1.9 EXISTING SERVICES

The contractor shall be responsible for locating all underground and overhead services and for protecting the same for the duration of the construction works. The contractor must undertake a 'Before you Dig' (or similar) request for further information. Health and Safety and industry best practice guidance requires the contractor to have organised a locate to determine that your excavation zone is clear of services. DO NOT rely on plans alone.

Indicative locations are shown on L103 Demolition and Earthworks Plan

The following are known services within the site extent:

LINZ survey mark:	The site has a possible survey mark within the vicinity of this area that must be protected (LINZ). Undertake a 'Before you Dig' request for further information..

1.10 SITE FEATURES

Russell Cemetery is a small, hillside cemetery containing a mix of early European, recent and Kōiwi burials. The site includes a variety of established vegetation, including mature pohutukawa and exotic species, which contribute to its heritage character. The cemetery is irregularly shaped and slopes signifcantly, with views over the Bay of Islands. Pedestrian access is provided via a gate off Long Beach Road. A recent extension area to the north has been cleared, with the intention of future development for additional burial and ash interment plots. The cemetery is surrounded by housing and undeveloped land.

Site environment - Durability

1.11 EXPOSURE ZONE

The exposure zone is to NZS 3604, Section 4 Durability, 4.2 Exposure zones and NZBC E2/AS1.
The site zone is: Zone D (High)

Site environment - Seismic

1.12 EARTHQUAKE ZONE - NON SPECIFIC DESIGN

The zone is to NZS 3604, Section 5 Bracing design, 5.3 Earthquake bracing demand.

The earthquake zone is:	Zone 1

Archaeological discovery

1.13 ACCIDENTAL DISCOVERY PROTOCOL

Archaeological Considerations
Northern Archaeological Research Ltd has confirmed that no known archaeological sites will be affected by the proposed works within the Russell/Kororāreka Cemetery Extension Area at Long Bay, Bay of Islands. As such, there is no requirement for an Authority under the Heritage New Zealand Pouhere Taonga Act 2014.

Notwithstanding this, all works are to proceed under an **Accidental Discovery Protocol (ADP)**. The Contractor shall liaise with the Far North District Council (FNDC) to ensure that all personnel on site are aware of the ADP process and associated requirements.
In the unlikely event that any subsurface archaeological features or material (such as human remains, kōiwi, artefacts, or structural remains) are uncovered during earthworks:

- **All work in the immediate area shall cease immediately.**Work may not recommence in the affected area until authorised by the archaeologist and, if required, relevant authorities.
- **Northern Archaeological Research Ltd must be notified without delay** so that appropriate archaeological assessment and advice can be provided.
- Work may not recommence in the affected area until authorised by the archaeologist and, if required, relevant authorities.

These measures are intended to ensure compliance with best practice heritage protection and the Heritage New Zealand Pouhere Taonga Act 2014.

1232 INTERPRETATION & DEFINITIONS

1 GENERAL

This general section relates to definitions and interpretation that are used in this specification.

Definitions

1.1 DEFINITIONS

Hold point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may not proceed on that particular part until the contract administrator and any other nominated person has advised that work can continue. A notice period of 2 Working Days is required unless stated otherwise.
Notification point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may continue and the contract administrator and any other nominated person may choose whether or not they wish to witness the particular work being carried out. A notice period of 2 Working Days is required unless stated otherwise.
Product:	A thing or substance produced by natural process or manufacture.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Required:	Required by the documents, the New Zealand Building Code or by a statutory authority.
Review:	Review by the contract administrator and other consultants is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.
Working day:	Working day means a calendar day other than any Saturday, Sunday, public holiday or any day falling within the period from 24 December to 5 January, both days inclusive, irrespective of the days on which work is actually carried out.
Workplace:	Workplace means the place where work is being carried out, or is customarily carried out, for a business or undertaking including any place where a worker goes, or is likely to be, while at work (under Health and Safety at Work Act 2015).

1.2 PERSONNEL

Principal:

	The person defined as "Principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.
Contract administrator:	The person appointed by the principal to administer the contract on the principal's behalf. Where no person has been appointed by the principal, it means the principal or the principal's representative.

1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
BPIR	Building Product Information Requirements
BRANZ	Building Research Association of New Zealand
BS	British Standard
COP	Code of practice
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
MBIE	Ministry of Business, Innovation and Employment
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
NZTA	New Zealand Transport Agency
NUO	Network Utility Operator
OSH	Occupational Safety and Health
PCBU	Person Conducting a Business or Undertaking (under Health and Safety at Work Act 2015)
RBW	Restricted Building Work
SARNZ	Scaffolding and Rigging New Zealand Inc
SED	Specific Engineering Design
TA	Territorial Authority
TNZ	Transit New Zealand (Transit New Zealand is now New Zealand Transport Agency NZTA - some specifications are still prefixed TNZ)

1.4 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

1232S1 EXPLANATION OF SCHEDULE SECTIONS

1 GENERAL

This general section provides an explanation of schedule sections and their relationship to general sections and work sections. Specific schedule sections contained within this specification are also identified.

1.1 EXPLANATION OF SCHEDULE SECTIONS

A schedule section identifies work sections that contain common requirements, as identified in the title of the schedule section.

1.2 SCHEDULE SECTIONS

The following Schedule sections are contained within the specification:

1270S2 Schedule of Spares & Maintenance Products

1233 REFERENCED DOCUMENTS

1 GENERAL

1.1 REFERENCED DOCUMENTS

Throughout this specification, reference is made to various New Zealand Building Code Compliance Documents (NZBC __), acceptable solutions (__ AS_) and verification methods (__ VM_) for criteria and/or methods used to establish compliance with the New Zealand Building Code.

Reference is also made to various standards produced by Standards New Zealand (NZS, AS/NZS, NZS/AS), overseas standards and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise.

It is the responsibility of the contractor to be familiar with the materials and expert in the techniques quoted in these publications.

Documents cited both directly and within other cited publications are deemed to form part of this specification. However, this specification takes precedence in the event of it being at variance with the cited documents.

1.2 DOCUMENTS

Documents referred to in the GENERAL sections are:

NZBC F5/AS1	Construction and demolition hazards
AS/NZS 1170.2:2011	Structural design actions - Wind actions
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
NZS 3602	Timber and wood-based products for use in building
NZS 6803	Acoustics - Construction Noise

Building Act 2004
Building Regulations 1992
Health and Safety at Work Act 2015
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
Health and Safety at Work (Hazardous Substances) Regulations 2017
Health and Safety in Employment Regulations 1995
New Zealand Building Code
Heritage New Zealand Pouhere Taonga Act 2014
Resource Management Act 1991
Smoke-free Environments Act 1990

WorkSafe	Guidelines for the provision of facilities and general safety in the construction industry
WorkSafe	Good Practice Guidelines - Excavation Safety
WorkSafe	Scaffolding in New Zealand - Good Practice Guidelines
WorkSafe	Managing Work Site Traffic - Good Practice Guidelines

1234 DOCUMENTATION

1 GENERAL

This general section relates to documentation required by the Territorial Authority for compliance with the various documentation issued for this project. It also includes documentation relating to:

- Substitutions
- Manufacturers' documents
- Branded work sections
- Care of construction documents
- Confidentiality of documents
- Receipt of construction documents

1.1 PROJECT PERSONNEL

Provide names and contact details of the contractor's key personnel and tradespersons who are involved with the project. Review the list once a month and reissue it if changes have been made.

Substitutions

1.2 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.3 NO SUBSTITUTIONS

Where specifically stated in a section/on the drawings, substitutions are not permitted without prior written approval from the Contract administrator.

1.4 PROPOSED SUBSTITUTIONS

A substitution may be proposed where specified products are not reasonably available. A substitution may also be proposed by the Contractor where the Contractor considers a proposed substitution to be an alternative to the specified product. Except where a specified product is not available, the Contract administrator is not bound to accept any substitutions. Where branded work sections are included in this specification, substitution of those products or systems will not be allowed.

1.5 ACCEPTANCE OF SUBSTITUTIONS

Acceptance of any proposed substitutions will be given in writing by the contract administrator.

Manufacturer's documents

1.6 MANUFACTURER'S AND SUPPLIER'S INSTALLATION REQUIREMENTS

Manufacturer's and supplier's requirements, instructions, specifications or details mean those issued by them for their particular product, material or component and are the latest edition.

1.7 CONTRACTOR TO OBTAIN CURRENT DOCUMENTATION

Where manufacturer's installation, application and execution requirements are referred to in this specification, the Contractor must ensure they are fully aware of this documentation. Whenever necessary obtain and keep on site the relevant latest version of such documentation and make it available to workers carrying out that part of the work.

Branded work sections

1.8 CROSS REFERENCED WORK SECTIONS

If any related work is cross referenced to a generic work section, but only the equivalent branded section is included in the specification, use that branded section. Confirm with the contract administrator if there is any doubt.

Care of construction documents

1.9 CONSTRUCTION ISSUE

Take receipt of the plans, specifications and other documents issued "for construction". Keep at least one copy on site available for use by all on site workers. Keep a record of copies provided to others including subcontractors. Protect the documents as appropriate. Obtain replacement copies for documents that have become damaged.

1.10 REVISIONS TO CONSTRUCTION ISSUE

Where revised plans and other documents are issued ensure that superseded documents are deleted from the working sets. Ensure that subcontractors are provided with amended documents. Delete superseded documents by either:

- removing them from the working copy of the construction issue; or
- marking them as superseded

1.11 RETURN DOCUMENTS ISSUED FOR CONSTRUCTION

On completion of the contract works:

- Keep such copies of the plans, specification and other documents as reasonably required for contractor's record purposes.
- Retrieve all other copies no longer required by parties.
- Agree method of disposal of such documents with the Contract Administrator.

The Contract Administrator will advise whether such documents shall be:

- delivered to the Contract Administrator/Owner; or
- disposed of by normal waste disposal methods; or
- disposed of by secure document disposal methods.

Confidentiality of documents

1.12 CONFIDENTIALITY OF DOCUMENTS

Documents shall not be given or copied to others who do not require them for carrying out services required for the construction of the works. Documents are only to be used for the contract. Maintain confidentiality of documents.

2 SELECTIONS

Receipt of construction documents

2.1 DOCUMENT RECEIPT - ELECTRONIC DOCUMENTS

Electronic documents issued for construction shall be obtained as an email attachment to an agreed address or obtained from a file hosting service.

1238 AS BUILT DOCUMENTATION

1 GENERAL

This general section relates to common requirements for the preparation, submission and review of as built documentation referred to within this specification and referred to within separate specifications/documents relating to this project. Detailed requirements for as built documentation for particular parts of the work may be included in specific work sections.

1.1 SCHEDULE SECTION

Refer to 1238S1 SCHEDULE OF AS BUILT DOCUMENTATION for work sections contained in this specification that have requirements for as built documentation.

1.2 AS BUILT DOCUMENT REQUIREMENTS

Where requirements for the as built documents and records are not stated in a specific section, they shall include:

As built drawings recording:

- The actual positions as constructed of all concrete beams.
- The actual positions as constructed of all new or relocated assets.
- Other significant deviations and changes (to be confirmed and agreed with the Project Administrator)

Records of:

- Products and materials selected for alternatives specified
- Approved substitutions and accepted alternatives
- Other approved changes and deviations to items specified.

1.3 PROVISIONAL AS BUILT DOCUMENTS

Prior to practical completion provide provisional/draft as built documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works and to allow for review by the reviewer. Where no named reviewer has been nominated, submit the as built documentation to the contract administrator. Submit in hard copy and electronic form.

1.4 AS BUILT DOCUMENT REVIEW

As built document review indicates only that the reviewer is satisfied that the documents are legible. The review is not a check of the accuracy or completeness of the documents, however the reviewer may comment on any aspect of the documentation and require the documents to be revised and resubmitted. Review of as built documents does not relieve the contractor of responsibility for their correctness.
Where no time is stated in a specific section, allow 10 working days for review by the reviewer. Where a large amount of documentation is involved more time will be necessary.

1.5 COMPLETE AS BUILT DOCUMENTS

Prior to the end of the defects notification/liability period, provide complete as built documents reflecting any review requirements, with all Information of good quality and properly titled, numbered, cross-referenced and dated. Provide documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works. Submit in hard copy and electronic form to the contract administrator.

1.6 AS BUILT DOCUMENTS - ELECTRONIC COPY

Provide an electronic copy of the as built documents in the following format:

Drawings:	DWG files and PDF
Other documents:	PDF format

1240 ESTABLISHMENT

1 GENERAL

This general section relates to site establishment including:

- Notices and approvals
- Inspections
- Site preparation
- Temporary construction

Notices and approvals

1.1 STATUTORY OBLIGATIONS

Comply with all statutory obligations and regulations of regulatory bodies controlling the execution of the works.

1.2 AUTHORITY AND NETWORK UTILITY APPROVALS

Attend on Development Engineers, statutory and network utility inspectors, as necessary to obtain approvals, including those required for the completion of the works.

1.3 NOTIFY NETWORK UTILITY OPERATORS

Notify all network utility operators of proposed works before commencing site operations. Ascertain location of services or confirm that none exist in the vicinity of the works. Take all necessary precautions to avoid damage to existing services. A limit to machinery use within a 2m safe zone either side of the main underground pipes if possible.

1.4 WORKING AREA

Limited to the following designated working areas on the site: The site boundary is mapped out on L102 General Arrangement Plan

Temporary construction

1.5 TEMPORARY BUILDINGS

Provide as necessary temporary sheds, offices, lunch rooms, sanitary accommodation and other temporary buildings required for storage, management of the works, for the use of workers while on site and as required by Acts and Regulations.

1.6 TEMPORARY SITE FENCING

Provide and maintain a temporary site fence, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards.

1.7 SITE - SAFETY SIGNAGE

Provide hazard board and other safety signage as required.

1.8 SITE - PROJECT SIGN

Obtain approval to, provide and erect a timber framed sign board. Sign to be, fully painted with vinyl lettering or fully printed, and displaying:

- Title of contract
- Principal's name
- Contractor's name

- Consultants as listed in general section 1222 PROJECT PERSONNEL
- If the contractor wishes, names of subcontractors.

First aid

1.9 FIRST AID EQUIPMENT

Provide first aid equipment.

1247 TRAFFIC CONTROL

1 GENERAL

This general section relates to temporary on and off site traffic control including:

- Access and egress
- Traffic control and signage
- Deliveries
- Parking
- Vehicle wash down

Access and egress

1.1 TRAFFIC MANAGEMENT PLAN

Refer to territorial authority requirements relating to the provision of a traffic management plan. Submit the plan to the contract administrator.

1.2 TRAFFIC SAFETY

The management of traffic safety on-site and related traffic off-site, to WorkSafe Managing Work Site Traffic - Good Practice Guidelines. Movement on and off-site also to territorial authority and/or NZTA requirements.

1.3 PROTECT EXISTING VEHICLE CROSSING

Provide protection to existing vehicle crossing for use by construction traffic for the duration of the contract. Comply with territorial authority requirements for the construction of temporary protection to the crossing. Ensure the protection is capable of supporting the heaviest loads to be delivered to the site. Maintain to an acceptable standard until it is no longer required for construction traffic. Replace the crossing if the temporary protection has not properly protected the existing crossing.

Traffic control and signage

1.4 TRAFFIC CONTROL - WORK IN THE ROADWAY

Where temporary works are required to be carried out in the roadway, obtain all required consents and comply with the road network authorities traffic management requirements.

1.5 TRAFFIC SIGNS - OTHER TRAFFIC

Provide signs as required to identify changes and diversions to non-construction site traffic. Where appropriate use NZTA standard signs including temporary signs as appropriate.

1.6 CONES AND BARRIERS

Provide marker cones and barriers to demark restricted and dangerous areas and for other site safety reasons as required.

Deliveries

1.7 GOODS DELIVERY AREA

Refer to SELECTIONS for goods delivery area. Delivery vehicles that are not able to use the designated delivery area must queue in the designated off site waiting area.

Parking

1.8 PARKING

Refer to SELECTIONS for on site parking areas and parking restrictions.

Vehicle wash down

1.9 WHEEL WASH AREA

Where required due to the nature of the work construct, maintain and use a wheel wash area to ensure that the wheels of vehicles leaving the site are free of mud.

Completion

1.10 REMOVE TEMPORARY PROTECTION

When no longer required remove temporary protection. Clean and leave in the condition prior to the contract works commencing. Replace surfaces where the protection has not provided the required protection.

2 SELECTIONS

1250 TEMPORARY WORKS & SERVICES

1 GENERAL

This general section relates to temporary works and services required for the construction of the contract works. It includes

- Temporary works and services including temporary fencing and hoardings
- General care and protection
- Rubbish removal

Temporary works

1.1 COSTS RELATING TO TEMPORARY WORKS

Pay all rates/fees in respect of temporary works.

1.2 MAINTENANCE OF TEMPORARY WORKS

Maintain alter, adapt and move temporary works and services as necessary. Clear away when no longer required and make good.

1.3 SAFEGUARD THE SITE, THE WORKS AND MATERIALS

Take reasonable precautions to prevent unauthorised access, including access outside working hours, to the site, the works and adjoining property. Safeguard the site, the works, materials and plant from damage and theft.

1.4 CONSULTANTS TEMPORARY SITE OFFICE

Provide temporary accommodation and facilities for site meetings and for use by consultants while on site.

1.5 SITE FENCING

Provide and maintain a site fence, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings.
Construct the fence with:

- galvanized chain link netting with a 50mm x 50mm maximum grid size
- posts at 2.5 metre centres maximum
- gap at the bottom of the fence no greater than 100mm

1.6 SITE FENCING - NON-PUBLIC AREAS

Provide and maintain a 1 metre high site fence to non-public areas. Construct using:

- warratah stakes at 1.5 metre centres fitted with safety caps
- plastic safety mesh

1.7 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
Prevent silt run off by:

- exposing only as much ground as required at any time
- providing run off channels, contour drains or earth bunds to divert

clean water away from the site on to stable sealed or grassed ground
- capture silt by the use of silt fences, vegetation buffer strips, sediment ponds or earth bunds.

Provide sediment control by:
- earth bunds constructed across the slope to control and detain run off
- silt fences constructed using filter fabric stretched between posts at a maximum of 1 metre spacing.

Filter dirty water before discharging into drainage system.

1.8 PROVIDE CONCRETE WASHWATER RUN OFF PROTECTION

Provide appropriate measures to prevent cement/concrete washwater or slurry run off to; drains or waterways, landscaped areas new or remaining and adjoining public or private properties. Comply with territorial and other authority requirements (Auckland Council's Erosion and Sediment Control Guide (GD05) as used by Far North District Council).

Control run off from:
- Cement/concrete based material production, placing and finishing.
- Hosing down and cleaning of, tools and equipment, fresh material, and spilt or surplus material, pumps and mixers etc.
- Wet cutting or grinding.
- Slab watering etc.
- Water cleaning of new concrete elements, fresh used formwork etc.

Small project with relatively large exposed ground areas - prevent run off by:
- directing small amounts of washwater onto the area of ground closest to the work.
- for larger amounts provide run off channels, and small soak pits
- very small amounts of washwater with no aggregate and only a small amount of sand may be spread over existing lawns.

Large project and those without suitable ground area - prevent run off by:
- plan and implement washwater control measures based on the expected volumes, allow for the timely removal and safe disposal of liquids and solids.
- limit the volume of water used for washing down to the extent required.
- Control the flow of washwater so that it is directed to proper catchments.
- providing watertight bunds, pits or tanks, filtered washwater is not to be discharged to drains.

Spilt or surplus material:
- if possible allow to set and either use or dispose of as hardfill.
- pre-made concrete items, either use or dispose of as hardfill.

Pump washwater away from drains, waterways and adjoining property.

1.9 EXCAVATION SAFETY

To the Health and Safety at Work Act 2015.
Carry out excavation to WorkSafe, Good Practice Guidelines - Excavation Safety. This may include deep excavation, trenching, and areas behind unfilled retaining walls.
Carry out excavation using plant and equipment suitable for the purpose.

Temporary services

1.10 WATER

Provide clean, fresh water for the works and make arrangements for distributing about the site.

1.11 ELECTRICITY

To AS/NZS 3012.
Nominate the person to install and be responsible for the complete temporary electrical installation. The name and designation of the person responsible is to be displayed prominently and close to the main switch or circuit breaker.

Inspect and overhaul the installation at such intervals as are prescribed by the network utility operator but not more than three monthly intervals.

Care and protection - Site

1.12 LOCATE AND PROTECT SURVEY MARKS

Review information provided relating to survey marks. Physically locate and protect survey marks. Where required use a licensed cadastral surveyor to reinstate survey marks disturbed during construction.

1.13 LOCATE EXISTING SERVICES

Review information provided relating to underground and above ground services. Physically locate the position of all such services. Arrange with the network utility operator for all necessary exploratory work, location, protection, isolation, off-setting, reinstatement or alterations required. Record any alterations made to such utilities.

1.14 PROTECT EXISTING SERVICES

Protect existing services and parts of service systems, whether indicated or not, that are to remain in place during the execution of the works. Provide temporary caps or covers to prevent the ingress of dust and other contaminants into the systems, ducts, pipes etc. Reinstate where required and repair any damage resulting from carrying out the contract works.

1.15 PROTECT EXISTING LANDSCAPE ELEMENTS

Protect existing burial areas, monuments, places, trees, gardens and other designated landscape features which are to remain in position during the execution of the works. Comply with territorial authority requirements.

1.16 MAKE GOOD - SITE

Make good all damage to existing roads, footpaths, grounds, services, landscape elements and site features caused in carrying out the contract works.

Care and protection - Project

1.17 TEMPORARY PROTECTION

Provide and maintain temporary protection as required to protect products during transport, storage and handling. Provide temporary protection as required to protect the work in progress and the finished work.

1.18 SPECIAL PROTECTION GENERAL

Refer to individual work sections for any special protection requirements.

Care and protection - miscellaneous

1.19 TEMPORARY STORAGE

Provide temporary storage areas and protective covers and screens to meet the requirements of the products to be stored.

Rubbish removal

1.20 PERIODIC RUBBISH REMOVAL

Maintain on site appropriate means for the storage and removal of construction waste material. Where required or appropriate provide for the separate storage of recyclable waste and other materials requiring special disposal.

1256 WASTE MANAGEMENT

1 GENERAL

2 PRODUCTS

Equipment

2.1 CONTAINERS

Provide appropriately sized and sited containers/bins for the storage of reusable, recyclable and waste products. Clearly label each container.

3 EXECUTION

Conditions

3.1 STORAGE

Store all materials so they are not damaged prior to use.

3.2 PLANNING

Plan the measurement and ordering of materials and components to minimise waste.

Statutory requirements

3.3 HAZARDOUS WASTE

Conform to applicable regulations for disposal and removal of common and hazardous waste.

Handle and dispose of all hazardous and banned materials in accordance with national and local regulations - these hazardous and banned materials may include but are not limited to abandoned chemicals (petrol, pesticides, herbicides, flammable and combustible substances), freon from cooling equipment and contaminated soil or fill.

4 APPLICATION

4.1 DEMOLITION

- Sort concrete for recycling as sub-base material.
- Sort asphalt (if any) material by type for milling and recycling.

4.2 DISMANTLING/REUSE

- Dismantle, store and protect items, elements and components for reuse on site.
- Dismantle, store and protect items, elements and components for recycling off site.
- Dismantle store and protect items, elements and components for return to the owner.

4.3 SITE CLEARING

- Sort asphalt material by type for milling and recycling.
- Provide suitable on-site locations for the disposal of excavated rock,

soil and vegetation.

4.4 CONCRETE

- Plan for maximum re-use of concrete formwork.
- Separate and recycle concrete.
- Provide a suitable on-site location for the disposal of excess concrete.

4.5 WOOD

- Separate and recycle wood off-cuts and waste.
- Separate timber for reuse
- Provide a suitable storage area for sizeable off-cuts for use as spacers or blocking.
- Separate CCA treated timber from untreated timber.

Completion

4.6 CLEANING

All cleaning materials used on the project to be biodegradable and non-toxic.

1260 PROJECT MANAGEMENT

1 GENERAL

This general section relates to project management requirements including:

- Meetings
- Reporting
- Cost control
- Communicating and records
- Confidentiality
- Programming
- Hold points and notification points
- Working hours
- Health and safety

Site Meetings

1.1 PURPOSE OF SITE MEETINGS

The purpose of site meetings is to:

- Ensure that the Contractor has all information required to construct the work
- To address and clarify aspects of construction of the work including quality
- To address issues relating to project delivery including, site progress and cost

1.2 SITE MEETING ATTENDANCE

The following persons to attend:

- Principal
- Contract administrator
- Project manager
- Contractor
- Landscape Architect (when needed)
- Engineer (when needed)
- Services consultants when needed
- Subcontractors when needed (contractor to inform them)

1.3 REPORTING

The following reports are required to be presented at site meetings:

Contractor: A detailed status report

1.4 SITE MEETING MINUTES

The contract administrator is to keep full minutes of all site meetings and arrange distribution to all those involved within 3 working days.

The minutes are to record

- Documentation and information issued and required
- Directions and variations issued
- Confirmation of contract insurances
- Programme items
- General business
- Site health and safety
- Payment claim processing including costing variations

Reporting

1.5 CONTRACTORS DETAILED STATUS REPORT

A contractor's detailed status report is to address the following:

- Progress performance, addressing actual progress against the programme and any variance from the programme.
- Procurement progress on parts of the work being undertaken under a monetary allowance including the time by which direction must be given on monetary allowances to conform to the programme.
- Details of measures being taken to get work back on programme where there has been a delay and details of any future events that will or are likely to affect compliance with the programme.
- Site health and safety including any notifiable incidents.
- Details of any discrepancies in the contract documents that require clarification or determination
- A list of information requests by the contractor, the date when they were made, the person who they were directed to and the date by which a response is required.
- A variation report including progress on agreed variations, variations to be agreed and anticipated variations and the time implication of variations.
- Variation costing and the adjusted contract price including an assessment of the cost of known and potential variations.
- Review of sums not yet directed for expenditure.

Communicating and records

1.6 MEANS OF COMMUNICATION

Communications between the parties shall be as follows: -

Directions:	In writing delivered by email
Meeting minutes:	In writing delivered by email
RFI's:	(Requests for information) by email to the contract administrator

1.7 DELIVERY OF COMMUNICATIONS

Deliver communications to the addresses listed in the contract agreement by means as allowed.
Where such addresses are not included in the contract agreement:

- send by email to the email address stated in the Project Directory; or
- where agreed, deliver via a file hosting service or an electronic project management system.

1.8 SERVICE OF NOTICES

Serve notices to the addresses listed in the contract agreement by means as allowed.

1.9 CHANGE OF ADDRESS

The principal, contractor and the contract administrator must notify the others if they change their address for delivery or transmission of communications.

1.10 RECORDS

Ensure all records specified are kept, held and collated on site in a form that makes the information easily accessible when it is needed. Distribute copies as and when necessary to those persons entitled under the contract to that information.

1.11 EXISTING STRUCTURES PHOTOGRAPHS

Before commencing work take digital photographs recording existing conditions of existing structures, including adjacent areas that may be affected by the carrying out of the contract works. Include adjacent roadways and footpaths and neighbouring fences and the like. Where there is existing damage to adjacent structures, ensure that the photographs adequately record the extent of the damage or failure. Refer to SELECTIONS.

1.12 PROGRESS PHOTOGRAPHS

Take digital photographs recording progress. Refer to SELECTIONS.

1.13 SPECIFIC PHOTOGRAPHS

Take digital photographs recording specified subject matter. Refer to SELECTIONS.

Confidentiality

1.14 CONFIDENTIALITY - PUBLICITY

Unless specifically agreed photographs and other images of the work are not to be used by the contractor, subcontractors, material suppliers and others involved in the construction of the works.

Photographs taken for record purposes may be kept but must not be passed to other persons.

1.15 CONFIDENTIALITY AGREEMENT

Where required as a condition of the contract arrange for workers to provide a confidentially agreement. Workers who have not provided such an agreement shall be excluded from the site.

Programming

1.16 PROGRAMME

Include the proposed sequence of all significant on-site and off-site activities, including any intermediate key dates mentioned in the contract. Identify the critical path. Provide a tabulated schedule of information for each activity in order of:

- brief description
- duration in suitable time unit
- earliest start and latest finish time
- total float
- key dates for the supply of information or materials by others.

Identify the dates by which particular information, material or plant need to be supplied or arranged by the contract administrator. Also identify any constraints which may have been imposed by the programme.

Supply copies of the programme to the following:
Contract administrator - 1
Principal - 1
Site supervisor - 1

Monitor the programme by:

- recording progress regularly on the site chart
- informing the contract administrator promptly of any circumstances affecting any part of the programme structure and timing
- reviewing the programme once a month making alterations as needed and agreed to and re-issuing the required copies.

Working hours

1.17 WORKING HOURS RESTRICTIONS

Work on site is restricted to:

Weekdays:	7.30am - 6pm only
Saturdays:	7.30am - 6pm only
Sundays:	No noisy construction allowed
Public holidays:	No noisy construction allowed

Set-up and preparation for work/pack-down is allowed from Monday-Friday between 6.30 and 7.30am and 6pm - 8pm but no noisy construction is allowed.

Work outside these hours may be permitted with the contract administrators consent. Allow a minimum of 24 hours notice (in writing) when seeking the contract administrators consent. If the contract administrator consent is given obtain any required permits and permission for such work

Health and safety

1.18 HEALTH AND SAFETY LEGISLATION

Refer to the requirements of the Health and Safety at Work Act 2015. Comply also with all other relevant New Zealand safety legislation.

The Contractor will ensure, so far as is reasonably practicable, that, each subcontractor they engage and each separate contractor is aware of and complies with its obligations under health and safety-related law.

For the purpose of health and safety-related law, the contract administrator and others involved in contract administration and observation and construction monitoring will not at any time have management or control of the Workplace.

1.19 HEALTH AND SAFETY REGULATIONS, CODES AND GUIDES

Comply with:

- Relevant New Zealand safety legislation including, Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, also Health and Safety in Employment Regulations 1995 as amended by that Regulation and the appropriate Health and Safety at Work Regulations.
- WorkSafe publications including "Guidelines for the provision of facilities for general safety in the construction industry".
- Relevant codes of practice, guides, guidelines and standards.

Until further regulations are made under the Health and Safety at Work Act 2015 to cover them, the transitional provisions of the Act continue in force until revoked or amended.

1.20 HEALTH AND SAFETY IMPLEMENTATION

Take all practical steps to make the site and the contract works safe and to provide and maintain a safe working environment. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards and risks.

Co-operate, consult and co-ordinate health and safety matters with each PCBU including all subcontractors, suppliers, separate contractors, others engaged on the project and others who may be affected by the construction of the works.

Identify any significant hazards and risks.

Maintain proper procedures for dealing with any emergencies that may arise. Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm. Provide a copy of any report which the contractor is required to make to a public authority on any accident which is associated with carrying out the contract works and results in serious harm to any person.

Refer to individual work sections for detailed requirements on this project.

1.21 SUSPENSION OF HAZARDOUS WORK

On the request of the contract administrator, acting on reasonable grounds, suspend any identified hazardous activities and proceed to eliminate, isolate or minimise them in order to comply with the Act, without prejudice to any other rights of the principal under the contract.

1.22 SITE SAFETY PERSON

Appoint a suitably qualified site safety person to co-ordinate site safety and to attend all site meetings.

1.23 HEALTH AND SAFETY PLAN

Prepare and submit a health and safety plan to the contract administrator before commencing work on site. Include in that plan all people on site and the general public, as well as the following items and any other necessary items:

- identification of existing and potential construction hazards and risks
- Any design construction safety matters identified in section 1220 PROJECT and/or any separate project design construction safety report.
- safety procedures to eliminate, isolate or minimise construction hazards and risks
- the equipment to be used to minimise the hazards and risks
- the maintenance of a register of hazards and risks for the site
- the name and qualifications of the site safety person
- emergency procedures
- first aid facilities and safety equipment
- the methodology for notifying, recording and investigating accidents and injuries.

Advise the contract administrator of unusual or atypical features in the Plan in addition to any features already identified in section 1220 PROJECT and/or any separate project design construction safety report. Keep a copy of the plan in the site office.

1.24 MAINTAIN HEALTH AND SAFETY PLAN

Maintain health and safety plan and alter to accommodate changing situations and /or substitutions. Advise contract administrator of changes.

1.25 COMPLY WITH SITE SAFETY PLAN

Carry out all construction operations in accordance with the submitted health and safety plan.

1.26 INFORM WORKERS OF HAZARDS AND RISKS

Inform workers and others on the site of:

- hazards and risks they may be exposed to while working or other legitimate activities
- hazards and risks they may create while working which could harm others
- how these hazards and risks may be minimised
- emergency procedures
- the location of first aid facilities and safety equipment.

1.27 EXPLOSIVES

Explosives are not to be used on this project.

1.28 POWDER-ACTUATED FASTENING TOOLS

Comply with the requirements of WorkSafe and the Health and Safety at Work Act 2015. Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

2 SELECTIONS

Meetings

2.1 SITE MEETINGS

Frequency:	weekly
Start date:	To be arranged
Time:	To be arranged
Venue:	On site
Convener:	Contract administrator

Photographs

2.2 EXISTING STRUCTURES PHOTOGRAPHS

Copies required:	Electronic copy by email or via a file hosting service
Recipient:	Contract Administrator

2.3 PROGRESS PHOTOGRAPHS

Position:	As directed by Contract Administrator throughout contract period
Frequency:	As required
Copies required:	Electronic copy by email or via a file hosting service
Recipient:	Contract Administrator

2.4 SPECIFIC PHOTOGRAPHS

Subject matter:	Photographs of existing fence and footing construction to be reconstructed like-for-like. Other photos as required by Contract Administrator throughout contract period.
Frequency:	Prior to demolition or as required
Copies required:	Electronic copy by email or via a file hosting service
Recipient:	Contract Administrator

1270 CONSTRUCTION

1 GENERAL

This GENERAL section relates to common requirements for construction issues including:

- Quality control and assurance
- Noise and nuisance
- Set-out and tolerances
- Common execution requirements
- Qualifications
- Common product requirements
- Common requirements for samples and prototypes
- Common requirements for spare and maintenance products
- Cleaning during the works
- Removal of protection
- Completion requirements
- Commissioning
- Practical completion submission
- Defects period submissions
- Completion submissions

Quality control and assurance

1.1 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including:

- Concrete quality and finish.

Where any material, quality or dimension falls outside specified or required tolerances, obtain written direction from the contract administrator.
Provide all materials, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met by all project personnel.

1.2 NOTICE

Give notice to the contract administrator and any other nominated person of hold points and notification points. Refer to work sections and 1260 PROJECT MANAGEMENT for hold points and notification points required.

1.3 NOTIFIABLE WORK

Lodge notice of the intention to commence any notifiable work and any work that will at any time include any notifiable work, in accordance with Health and Safety in Employment Regulations 1995.

Noise and nuisance

1.4 LIMIT CONSTRUCTION NOISE

Minimise the effects of noise generation by including in the planning of the work such factors as placing of plant, programming the sequence of operations and other management functions. Limit construction noise to comply with the requirements of NZS 6803, the requirements of the Resource Management Act sections 326, 327 and 328 and the Health and Safety in Employment Regulations 1995 clause 11.

1.5 ACCEPTABLE NOISE LEVELS

Refer to NZS 6803 Tables 2 and 3 for the upper limits of construction work noise received in residential zones, dwellings in rural areas, industrial areas and commercial areas, note also the allowed adjustments. Do not exceed these limits or any limits imposed by regional councils or territorial authorities.

1.6 PROVIDE INFORMATION TO NEIGHBOURS

Provide information to neighbours of any noise generation from the site liable to constitute a problem. Explain to them the means being used to minimise excessive noise and establish with them the timings most suitable for the noise generating work to be carried on.

Discuss with any complainant the measures being used to minimise noise. Where possible modify these measures to accommodate particular circumstances. Finally, determine the sound level at the location under discussion using methods and observation reporting as laid down in NZS 6803. If the noise level is above the upper limits of NZS 6803, table 2 and table 3, cease the noise generating operation and remedy the problem.

1.7 ROADWAY AND FOOTPATH

Keep the adjacent footpath and road clear at all times. Where work must be carried out in the roadway or footpath, obtain required consents from the territorial authority. Where temporary use is made of the footpath or roadway for deliveries and the like ensure that public safety is protected and the goods and materials moved as soon as practicable. Sweep, wash and otherwise clean the roadway/footpath and restore it to its previous condition.

1.8 VEHICLE CROSSING

Make good damage that has occurred as a result of carrying out the contract works. Where there has been significant damage, contact the territorial authority and obtain instructions for making good. Pay the territorial authority costs associated with making good.

1.9 TRAFFIC SAFETY

The management of traffic safety on-site and related traffic off-site, to WorkSafe Managing Work Site Traffic - Good Practice Guidelines. Movement on- and off-site also to territorial authority and/or NZTA requirements.

1.10 DIRT AND DROPPINGS

Remove dirt and droppings deposited on public or private thoroughfares from vehicles servicing the site to the satisfaction of the appropriate authorities and the contract administrator.

1.11 DAMAGE AND NUISANCE

Take precautions to prevent damage and nuisance from water, fire, smoke, dust, rubbish and all other causes resulting from the construction works.

1.12 SMOKE FREE REQUIREMENTS

In accordance with the Smoke Free Environments Act 1990 smoking is not allowed on site.

1.13 RESTRICTIONS

Do not:

- light rubbish fires on the site.
- bring dogs on to or near the site.
- bring radios/audio players on to the site.

Set-out and tolerances

1.14 SURVEY INFORMATION

Locate and verify survey marks and datum points required to set out the works. Where these do not exist or cannot be located advise the contract administrator who will arrange for the required points to be established.

Record and maintain their position. Re-establish and replace disturbed or obliterated marks.

1.15 DATUM

Establish a permanent site datum to confirm the proposed levels and their relationship to all other existing and new levels.

1.16 SET-OUT

Set out the work to conform with the drawings.

1.17 USE OF SET-OUT INSTRUMENTS

Permit without charge, the use of instruments already on site for checking, setting out and levels.

1.18 CHECK DIMENSIONS

Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

1.19 TOLERANCES

All work to be level, plumb, and true to line and face. Unless otherwise specified in specific work sections of this specification, tolerances for structural work shall comply with the following:

Concrete construction:	To NZS 3109 Concrete construction Clause 3.9 Tolerances for reinforcement Table 5.1 Tolerance for precast components Table 5.2 Tolerance for in situ construction To NZS 3114 Concrete surface finishes
Structural steelwork:	To NZS 3404.1 Steel structures standard Section 14.4 Tolerances (after fabrication) Section 15.3 Tolerances (erection)

Refer to work sections for tolerance requirements for finishes.

Execution

1.20 EXAMINE PREVIOUS WORK

Before commencing any part of the work carefully examine the previous work on which it depends, to ensure it is of the required standard.

1.21 REPORT DEFECTIVE PREVIOUS WORK

Refer defects to the contractor to be remedied, if the remedy is outside the scope of the contract documents the contractor shall obtain direction from the contract administrator. Do not carry out work over previous work that is defective and will affect the required standard.

1.22 EXECUTION GENERALLY

Construct the work in accordance with the documents issued for construction including any direction that may have been given by the contract administrator that varies the construction document.

1.23 EXECUTION - NO DETAIL IS PROVIDED

The documents issued for construction will not include all details relating to every material, junction and interface with other materials.

Where the detail provided is of a general nature, or where no detail is provided, refer to the manufacturer's documents for information relating to installation and execution of that part of the work.

Where there is more than one method or detail appropriate to the part of the work in question, refer the options to the Contract Administrator for direction as to which detail or method to use.

1.24 EXECUTION - ACCEPTABLE SOLUTION IS REFERRED TO

Where a NZBC Acceptable Solution is referred to in the specification but not shown on the plans, obtain a copy of that Acceptable Solution and make it available to the workers carrying out that part of the work.

1.25 MINIMISE DELAYS DUE TO WEATHER

Use appropriate techniques and methods to prevent damage and minimise delays due to weather.

Defective or damaged work

1.26 DEFECTIVE OR DAMAGED WORK

Repair defective, damaged and marked elements, or replace them where repair is not possible or will not be acceptable. Adjust operation of equipment and moving parts not working correctly. Refer to individual work sections for any special requirements.

Hot work - fire safety

1.27 HOT WORK

Generally, to NZS 4781 Code of Practice for Safety in Welding and Cutting, includes but not limited to: Welding; flame cutting; disc cutting; grinding; bitumen blowers; blow lamps; brazing; burning off; soldering; use of hot air guns.
Note - where the standard refers to the use of asbestos, alternative fire-resistant materials are to be used.

1.28 COMBUSTIBLE MATERIAL

Manage fire risk to adjacent combustible materials by isolating hot work at a safe distance away, or store combustible materials away from fire hazards. Additional precautions may be necessary if combustible material cannot be separated from hot work, refer to NZS 4781, 6.1.4.

1.29 HOT WORK PERMIT

A hot work permit, issued by the main contractor, is required when it is not possible to isolate hot work from adjacent fire hazards. Refer to example in NZS 4781, Appendix A.

1.30 DURING SUSPENDED WORK

Maintain a fire watch at least 30-minutes after hot works are suspended e.g. during lunch breaks or overnight, to NZS 4781, clause 6.2.7.
For hot works in confined spaces, prevent potential ignition of flammable gases, to NZS 4781 clause 6.5.

Qualifications

1.31 QUALIFICATIONS GENERALLY

The work is to be carried out by workers and / or supervisors who are experienced, competent and familiar with the materials and the techniques specified. Workers must also be familiar with the manufacturers' and suppliers' installation and application instructions and standard details provided by them in relation to the use of the products for this project. If requested provide evidence of qualification / experience.

1.32 QUALIFICATIONS WORKERS – MANUFACTURER / SUPPLIER REQUIREMENTS

Where required by a manufacturer or supplier, workers must be specifically trained /approved / accredited / registered / licensed / certified by them. Refer to individual work sections for details.

1.33 QUALIFICATIONS WORKERS – LICENSED UNDER STATUTE

Where workers and / or supervisors of work are required to be licensed, registered or similar under legislation, they must have a current license before they start the work and maintain currency until their part of the work has been completed and all documentation that is required has been provided.

1.34 QUALIFICATIONS WORKERS – INDUSTRY QUALIFICATION REQUIREMENTS

Where workers and / or supervisors of work are required to be trained / licensed / certified or similar under industry rules or contractual requirements, they must have a current qualification before they start the work and maintain currency until their part of the work has been completed. Refer to individual work sections for details.

1.35 REPLACEMENT OF PERSON

Should it be necessary to replace a person, ensure that records of work, producer statements, warranties and the like required for the part of the work they have carried out are obtained.

Ensure that the replacement person takes responsibility for the work they carry out and that they are able to provide such records of work, producer statements, warranties and the like required as a condition of the contract and the building consent.

Products

1.36 NEW PRODUCTS

Products to be new unless stated otherwise, of the specified standard, and complying with all cited documents.

1.37 COMPATIBILITY OF PRODUCTS

Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

1.38 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Protect products during transit and delivery on site and / or off site. Reject and replace goods that are defective or damaged or will not provide the required finish.

Handle products carefully to avoid damage and distortion and in accordance with codes of practice and the manufacturer's or supplier's requirements. Avoid any contact with potentially damaging surfaces or conditions.

Store products to avoid visual damage, environmental damage, mechanical damage and distortion. Store in accordance with codes of practice and the product manufacturer's or supplier's requirements. Maintain the proper condition of any protective packaging, wrapping and support.

Refer to individual work sections for any special requirements.

1.39 SUBSTRATE CONDITIONS

Ensure substrate conditions are within the manufacturer's or supplier's stated guidelines both before and during the installation of any material, product or system. Obtain written instructions on the necessary action to rectify unsatisfactory conditions.

1.40 INSTALLING PRODUCTS

Install in accordance with the manufacturer's or supplier's technical literature. Ensure that all installers are familiar with the required substrate conditions and the manufacturer's or supplier's specified preparation, fixing and finishing techniques.

1.41 COMPLY WITH STANDARDS

Comply with the relevant and/or cited Standard for any material or component. Obtain certificates of compliance when requested by the contract administrator.

1.42 CONDITION OF PRODUCTS

To be in perfect condition when incorporated into the work.

1.43 INCOMPATIBLE PRODUCTS

Separate incompatible materials and metals with separation layers, sleeves or gaskets of plastic film, bituminous felt or mastic or paint coatings, installed so that none are visible on exposed surfaces.

Spares & maintenance products

1.44 SPARES & MAINTENANCE PRODUCTS

Collect, protect, package, label and store safely all spares and maintenance products specified in the work sections. Give the contract administrator an inventory of all spares and maintenance products.

If no instruction is given within a work section for the location of spares and maintenance products, then deliver to the owner.

If no instruction is given within a work section for timing in relation to the provision of spares and maintenance products, then provide at practical completion.

Refer to SPARES & MAINTENANCE PRODUCTS clauses in work sections for further detail.

Cleaning during the works

1.45 PERIODIC SITE CLEANING

Carry out periodic site cleaning during the contract period. Place waste material in appropriate storage pending removal from the site. Keep food waste separate from construction waste.

1.46 TRADE CLEANING

Keep the work area clean, remove of all debris, unused and temporary materials and elements from the site as work progresses and on completion. Refer to individual work sections for any specific requirements.

1.47 SPECIAL SITE CLEANING

Remove protection

1.48 REMOVE PROTECTION

Remove all temporary markings, labels, packaging and coverings to products unless instructed otherwise, or where they are required for protection.

Maintain temporary protection until removal is required by the manufacturer/supplier, the execution of the work or the requirements of individual work sections. Re-establish protection as necessary.

Remove temporary protection and special protection immediately prior to practical completion or before when there is no further risk of damage.

Refer to individual work sections for any special removal requirements.

Completion

1.49 SPECIAL REQUIREMENTS

Refer to individual work sections for any special completion requirements.

1.50 LEAVE WORK

Leave work to the standard required for the following procedures.

1.51 COMPLETION - TESTS & CERTIFICATION

Carry out tests as detailed in the work sections. If testing identifies a failure to meet performance requirements, notify the contract administrator and any nominated recipient, identify and correct the cause of failure and repeat the test. Submit test results and certification documentation to the contract administrator and any nominated recipient.

1.52 REMOVE CONSTRUCTION WASTE

Remove all debris, unused materials and the like from the site. Arrange for material to be recycled to be collected or delivered to the recycler.

1.53 COMPLETE ALL SERVICES

Ensure all services are complete and operational, with all temporary labelling removed, required labelling fixed and service instructions provided.

1.54 CLEANING BY CONTRACTOR

Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust.
- Wash down external concrete including driveways and concrete masonry.
- Remove rubbish and building material from the area immediately adjacent to the contract works.

Commissioning

Practical completion submission

1.55 ADDITIONAL PRACTICAL COMPLETION REQUIREMENTS

Refer to the conditions of contract for the definition of practical completion and the conditions relating to practical completion.

Defects period submissions

1.56 DEFECTS REMEDIATION - SUBMISSIONS

Provide the following at periods required by the contract administrator, where no period is stated, provide this information monthly:

- A copy of the contractor’s check list identifying remaining defects and omissions to be completed recording progress made in completing and correcting the items.
- A copy of lists issued by the principal/employer identifying omissions and defects recording progress made in completing and correcting the items.
- A copy of lists issued by the contract administrator identifying omissions and minor defects recording progress made in completing and correcting the items.

Completion submissions

1.57 FINAL COMPLETION - SUBMISSIONS

In addition to requirements in the contract and contained elsewhere in the specification provide:

- Contractors advice that all defects have been corrected and omissions and deferred work completed.

1270S2 SCHEDULE OF SPARES & MAINTENANCE PRODUCTS

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for spares and maintenance products.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1270 CONSTRUCTION

Spares & maintenance products

1.2 SPARES & MAINTENANCE PRODUCTS

Refer to the following sections:

8331 Plant Propagation
8332 Planting
8333 Turf Laying & Lawn Seeding

1.3 SPARES & MAINTENANCE PRODUCTS - ADDITIONAL ITEMS

Refer to separate documentation for sample requirements not contained within this specification.

2110 DEMOLITION WORKS

1 GENERAL

This section relates to the demolition of existing buildings and structures in whole or in part, to the extent necessary to carry out the new work.

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC F5/AS1	Construction and demolition hazards
NZS 6803	Acoustics - Construction noise
NZDAA	Best practice guidelines for demolition in New Zealand
WorkSafe	Management and Removal of Asbestos (Approved CoP)

Health and Safety at Work Act 2015
Health and Safety at Work (Asbestos) Regulations 2016

Requirements

1.2 QUALIFICATION

Carry out demolition only under the supervision of a suitably experienced person and using only experienced operators and drivers.

1.3 NOISE

Refer to NZS 6803, tables 2 and 3 for the allowable upper limits of construction work noise in residential, commercial and industrial areas over the various time periods. Use silenced and noise insulated plant to ensure compliance with these requirements.

1.4 NUISANCE

Take all precautions necessary to minimise nuisance caused by dust, dirt, rubbish and water.

1.5 HEALTH AND SAFETY

Comply with the Health and Safety at Work Act 2015 in general, NZBC F5/AS1 and NZDAA Best practice guidelines for demolition in New Zealand, section 5 Demolition Safety.

1.6 SERVICES

Before commencing demolition, arrange with all utility network operators to disconnect services and remove fittings and equipment if required. The contractor shall be responsible for locating all underground and overhead services and for protecting the same for the duration of the construction works. The Contractor shall limit machinery use within a 2m safe zone either side of the main pipes if possible. Pay all fees and charges for this work.

1.7 MATERIAL

Material from the demolition becomes the property of the contractor except where expressly provided otherwise. Remove redundant materials from the site as work proceeds.

1.8 SALVAGE

Designated items remain the property of the owner.

1.9 BURNING OF MATERIALS

Burning of materials is not permitted on site.

2 PRODUCTS

2.1 ELEMENTS FOR SALVAGE OR RE-USE

Carefully dismantle, remove and store on site where directed. Protect from damage and weather until required.

3 EXECUTION

3.1 DEMOLITION GENERALLY

Comply with the requirements of NZDAA Best practice guidelines for demolition in New Zealand. Submit a written demolition plan to the requirements of section 4.7, Demolition plan (method statement).

3.2 PROTECT

Protect adjoining property, the site and site structures, trees and shrubs. Take care in the cutting away and stripping out to reduce the amount of making good.

3.3 TEMPORARY SCREENS

Erect approved screens wherever penetration of weather, dust and dirt needs to be prevented. Adjust screens as work proceeds.

3.4 SITE SAFETY

Prevent access by unauthorised persons. Illuminate and protect all holes and other hazards. Leave site and buildings safe at the close of each day's work.

3.5 FLAMMABLE OR EXPLOSIVE CONDITIONS

Prevent fire or explosion and arrange to alert the appropriate authority where any danger exists.

3.6 DEMOLISH

Demolish existing pathway, fence posts, existing removable timber bollards and footings down to the existing finished ground level as per L201.

3.7 DIG OUT

Dig out footings, paths, swale, drains, sump, pipes, nature play area, garden bed, trees pits and D-court as per L202.

3.8 SALVAGE

Carefully dismantle and store safely all salvage items where directed; for removal, use on the site, or until completion of the works.

3.9 REINSTATE AND MAKE GOOD

Reinstate and make good demolition damage to adjoining properties, existing work, services, or property.

3.10 TAKE AWAY

Take away from the site all plant and equipment, temporary access works and demolished materials and elements. Leave the site completely clean and tidy.

4 SELECTIONS

4.1 ELEMENTS FOR DEMOLITION AND DISPOSAL

Element/component	Location
Existing Pathway	As per L201 and L202
Existing fence post and timber bollard footings	As per L201 and L202
Topsoil not required for later re-use	As per L201 and L202

4.2 ELEMENTS FOR SALVAGE AND DELIVERY TO OWNER

Salvage the following elements and deliver to the owner.

Element/component	Location	Delivery requirements
Removable timber bollards	As per L201	Co-ordinate with Contract Administrator

4.3 ELEMENTS FOR SALVAGE AND DISPOSAL BY CONTRACTOR

Salvage the following elements.

Element/component	Location	Disposal requirements
Removed section of existing playground timber edge	As per L201	Co-ordinate with Contract Administrator

4.4 ELEMENTS FOR RE-USE

Element/component	Location	Location for re-use
Entrance fence panels	As per L201 and L202	As per L201 and L202
Existing cushion fall within the vicinity of the proposed ramp	As per L201 and L202	Existing playground
Stripped topsoil	As per L201 and L202	As per L202

2210 PREPARATION & GROUNDWORK

1 GENERAL

Documents

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

WorkSafe Good Practice Guidelines - Excavation Safety

1.2 SITE SAFETY

Provide adequate support for all excavations. Cover holes and fence off open trenches and banks.

1.3 ARCHAEOLOGICAL DISCOVERY

If fossils, antiquities and other items of value are found refer to the general section 1220 PROJECT for actions to be taken with archaeological discovery.

2 PRODUCTS

2.1 EXCAVATED CLEAN FILL

Clean, free of contamination, mineral soil from other formations in the excavation which may be selected and approved as suitable for filling by having grading and moisture content properties that will allow recompaction to 95% of maximum density.

2.2 HARD FILL

Scoria or crushed rock to GAP (General All Passing) 40 grading.

2.3 DRESSING COURSE

Scoria to GAP 20 grading, or "dirty footpath scoria", or equivalent "all in" graded crushed metal aggregate.

3 EXECUTION

3.1 EXCAVATION GENERALLY

Carry out excavation, using plant suitable for the purpose, to the guidelines set by the WorkSafe, Good Practice Guidelines - Excavation Safety.

3.2 BURNING OF MATERIALS

Burning of materials is not permitted on site.

3.3 PROTECT EXISTING WORK

Protect from damage existing buildings, structures, roads, paving and services nominated on the drawings as being retained.

3.4 PROTECT EXISTING TREES, PLANTING, OR LANDSCAPE FEATURES

Protect from damage trees, shrubs, natural site features and existing landscaped areas nominated on the drawings as being retained.

3.5 EROSION CONTROL

Ensure measures are in place to contain silt dislodged as a result of water infiltration and to prevent it being carried off site with stormwater.

3.6 SURFACE PREPARATION

Comply with NZS 3604, section 3.5, **Site preparation**. Remove all turf, topsoil, stumps and rubbish from the area to be built on.

3.7 STOCKPILE TOPSOIL

Stockpile excavated topsoil on site where directed. Keep separate from other excavated materials. Spread and level where directed before completion of the works.

3.8 GENERAL EXCAVATION

Trim ground to required profiles, batters, falls and levels. Remove loose material. Protect cut faces from collapse. Keep excavations free from water.

3.9 ROCK EXCAVATION

If rock is found at any level above the underside of the structural foundations, or above required base levels for site service trenches, immediately notify the owner. Obtain written instructions from the owner on the proposed approach to rock excavation, or consequent alterations to subgrade construction. Confirm any changes with the territorial authority.

3.10 STANDARD OF COMPACTION

Place fill in layers of not more than 150mm and compact to achieve 95% of maximum dry density. For granular fill material, the fill shall be compacted to 80% of saturated dry density.

3.11 GENERAL BACKFILLING

Obtain written confirmation from the owner before using any excavated material. Compact approved backfilling in 150mm layers with the last 200mm in clean topsoil, lightly compacted and neatly finished off.

3.12 SURPLUS MATERIAL

Remove surplus and excavated material from the site.

2241 EXCAVATION

1 GENERAL

This section relates to the excavating required for the building works, removing surface soils and the disposal of excavated material.

Related work

Documents

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZS 4402	Methods of testing soils for civil engineering purposes
WorkSafe	Good Practice Guidelines - Excavation Safety

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

Requirements

1.2 ARCHAEOLOGICAL DISCOVERY

If fossils, antiquities and other items of value are found refer to the general section 1220 PROJECT for actions to be taken with archaeological discovery.

Performance

1.3 ACCESS FOR MACHINES

Determine working conditions and access for machines. Take into account the time of year, the nature of the ground and subsoil to be excavated, the ground water table and all matters influencing the carrying out of the work. The contractor shall limit machinery use within a 2m safe zone either side of the main underground pipes if possible.

1.4 SAFE WORKING CONDITIONS

Provide safe working conditions and adequate support to excavations at all times to WorkSafe, Good Practice Guidelines - Excavation Safety. Cover holes and fence off trenches and banks.

1.5 SITE MEASUREMENT, OTHER FORMATIONS

If for any reason the excavations have to vary from the drawings, those affected to be solid measured and the quantity recorded and agreed to in writing as the excavation proceeds.

2 PRODUCTS

Materials

2.1 TOPSOIL

Weathered soil, with organic inclusions capable of supporting the growth of vegetation.

2.2 CUT MATERIAL

Consisting of sands, gravels, sedimentary materials, clays, scoria and similar deposits.

2.3 ROCK

Defined as material encountered in excavations which because of its size or position can be removed only by breaking up by explosives or mechanical plant such as jack hammers or percussion drills.

2.4 UNCONTROLLED FILL

Variable fill material placed with little or no compaction control.

2.5 EXCAVATED FILL

Material from other formations in the excavation which may be selected and approved as suitable for filling and complying with NZS 4402 by having grading and moisture content properties that will allow compaction to 95% of maximum density.

3 EXECUTION

Conditions

3.1 REPORT

Report any survey pegs, bench marks, and the like on any features, leaving them undisturbed until approval is given for removal.

3.2 RETAINED FEATURES

Refer to SELECTIONS/drawings for those features to be retained. Mark out those features to be retained with 1 metre high 50mm x 50mm timber stakes with yellow plastic tape between, to eliminate accidental damage.

3.3 COMPLY

Comply with the requirements of WorkSafe, Good Practice Guidelines - Excavation Safety.

3.4 WORK BY OTHERS

Before taking over work done on the site by others check all levels and conditions and report any discrepancies affecting further work.

3.5 EXISTING SERVICES AND FOUNDATIONS

Locate underground and overhead services before work is started. Any information provided regarding the location of these services and foundations is given from available records but with no guarantee of accuracy as regards alignment or depth. Furthermore no guarantee is given or implied that the information provided covers all existing services and foundations. Make good at no extra cost damage to existing services to the satisfaction of the appropriate network utility operator. Protect existing roads, footpaths, gutters, crossings etc from damage during work.

3.6 EXCAVATION NEAR TREES

Do not excavate or remove topsoil within the drip line of retained trees unless specifically directed. If excavation is directed, use hand methods, taking care to avoid damage to roots. Do not cut roots greater than 50mm diameter. Do not stockpile spoil against tree trunks or beneath the drip line of retained trees. Report any damage to tree boles or branches, with necessary remedial work by an approved tree surgeon.

3.7 KEEP FREE OF WATER

Keep excavations free from water and keep water from excavations clear of other construction work.

3.8 TERRITORIAL AUTHORITY REQUIREMENTS

Obtain from the territorial authority requirements for the method of discharging water from the site.

3.9 SILT CONTROL

Undertake silt control measures required by territorial authorities and network utility operators in relation to design, location and discharge into the drainage system. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.

Application

3.10 EXCAVATION GENERALLY

Excavate to the profiles and levels shown on the drawings. Allow clearance for working space and formwork as necessary. Bench surface of sloping ground to receive filling.
Use equipment suitable for the purpose.

3.11 OVER EXCAVATION

Make good with well compacted backfill.

3.12 EXCAVATED BACKFILL

Stockpile selected excavated backfill on site where directed so that it does not impede continuing works until it is required.

Completion

3.13 LEAVE

Leave work to the standard required by following procedures.

3.14 SURPLUS TOPSOIL

Relocate to the bund shown on the plans any unwanted stripped soil from the site continually as the work proceeds. Clean up continually any soil if dropped on footpaths or roads.

3.15 SURPLUS MATERIAL

Remove surplus excavated material from the site continually as the excavation proceeds. Clean up continually any excavated material dropped on footpaths or roads.

4 SELECTIONS

3101 CONCRETE WORK - BASIC

1 GENERAL

This section relates to formwork, reinforcement, concrete mixes and the placing of concrete.

1.1 ABBREVIATIONS AND DEFINITIONS

The following definitions apply specifically to this section:

ACRS	Australian Certification Authority for Reinforcing Steels - An independent certification scheme for reinforcing steel and structural steel, by product and manufacturer/processor. Certifies compliance with Australia/New Zealand Standards.

ACRS web site - www.steelcertification.com

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B1/AS1	Structure
NZBC E2/AS3	External moisture
NZS 3101.1	Concrete structures standard
NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
AS/NZS 4671	Steel reinforcing materials

Requirements

1.3 QUALIFICATIONS

Workers to be experienced, competent trades people familiar with the materials and techniques specified.

1.4 STEEL REINFORCING COMPLIANCE

Steel reinforcing materials for concrete to AS/NZS 4671. Steel to be manufactured in New Zealand, or by an overseas manufacturer holding a current valid (or equivalent) NZ S Mark or ACRS certificate for that type of steel. Confirm compliance and provide evidence if requested.

2 PRODUCTS

2.1 NORMAL CONCRETE

Normal concrete 20 MPa grade, (or as otherwise shown on plans).

2.2 REINFORCEMENT

Bars to AS/NZS 4671. Grade 300E deformed, other than for ties unless shown otherwise on the drawings.

2.3 TYING WIRE

Mild drawn steel wire not less than 1.2mm diameter.

2.4 SPACERS AND CHAIRS

Precast concrete or purpose made moulded PVC to approval. Where concrete spacer blocks are used in exposed concrete work use blocks matching surrounding concrete.

3 EXECUTION

3.1 HANDLE AND STORE

Handle and store reinforcing steel and accessories without damage or contamination. Store on timber fillets on hard ground in a secure area clear of any building operation. Lay steel fabric flat.

Ensure reinforcement is clean and remains clean so that at the time of placing concrete it is free of all loose mill scale, loose rust and any other contamination that may reduce bonding capacity.

3.2 FALSEWORK AND FORMWORK

Use falsework and formwork of sufficient strength to retain and support the wet concrete to the required profiles and tolerances. Select formwork finish to produce the specified finished quality. Ensure timber or plywood used for formwork is non-staining to the set concrete.

Securely fix and brace formwork sufficiently to support loads and with joints and linings tight enough to prevent water loss. Do not use tie wires or rods unless approved in writing by the Contract Administrator.

Water blast to clean formwork. Keep formwork wet before concrete is placed.

3.3 CUT AND BEND REINFORCEMENT

Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3109: 3.3 Hooks and bends. Minimum radii of reinforcement bends to NZS 3109, table 3.1, Minimum radii of reinforcement bends. Do not rebend bars. Where rebending is approved, use a purpose built tool, proper preparation and preheating.

3.4 ADJUSTMENTS

Use a purpose built tool for on site bending and to deal with minor adjustments to steel reinforcement.

3.5 TOLERANCES, BENDING

To NZS 3109, 3.9, Tolerances for reinforcement.

3.6 SECURE REINFORCEMENT

Secure reinforcement adequately with tying wire and place, support and secure against displacement when concreting. Bend tying wire back well clear of the formwork. Spacing as dimensioned, or if not shown, to the clear distance minimums in NZS 3109, 3.6, Spacing of reinforcement.

3.7 CONSTRUCTION JOINTS

Locate and construct as shown on the drawings or in accordance with NZS 3109, 5.6, Type B.

3.8 SURFACE FINISHES

To NZS 3114, 105, Specification of finishes, as scheduled or as denoted on the drawings.

3.9 CONCRETE SURFACE TOLERANCES

To NZS 3114, 104, Surface tolerances and NZS 3114, 105, Specification of finishes, with the suggested tolerances becoming the required tolerances.

3.10 PUMPING CONCRETE

Set up and supervise pump operation, placing and compaction of the mix to NZS 3109, 7.4, Handling and placing and NZS 3109, 7.6, Compaction Advise the ready-mix supplier of the type of pump and the slump required, in addition to the concrete grade, strength and quantity.

3.11 CURING OF CONCRETE

Keep damp for not less than seven days. Ensure curing of slabs commences as soon as possible after final finishing, by the use of continuous water sprays, or ponding. Alternately, apply a curing membrane. Ensure any membrane used will not affect subsequent applied finishes.

3.12 STRIKE FORMWORK

Strike formwork without damaging or overloading structure. Do not remove formwork before the following minimum periods:

12 hours:	Sides of beams, walls and columns

3.13 REMOVE

Remove all unused materials and all concrete and reinforcing debris from the site.

4 SELECTIONS

4.1 NORMAL CONCRETE

Normal concrete:
20 MPa or as shown on drawings

3410 STRUCTURAL STEEL

1 GENERAL

This section relates to the fabrication, erection and specialist coating of structural steelwork of a general nature, for Construction Category CC1 or CC2 (to AS/NZS 5131).

Refer to SELECTIONS for project Construction Category.

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AESS	Architecturally Exposed Structural Steelwork
CC	Construction Category
NDE	Non-Destructive Examination

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC F5/AS1	Construction and demolition hazards
AS 1111.1	ISO metric hexagon bolts and screws - Product grade C - Bolts
AS 1111.2	ISO metric hexagon bolts and screws - Product grade C - Screws
AS 1112.1	ISO metric hexagon nuts - Style 1 - Product grades A and B
AS/NZS 1163	Cold-formed structural steel hollow sections
AS/NZS 1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
AS/NZS 1252.1	High-strength steel fastener assemblies for structural engineering - Bolts, nuts and washers - Technical requirements
AS 1397	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS/NZS 1554.1	Structural steel welding - Welding of steel structures
AS 1554.2	Structural steel welding - Stud welding (steel studs to steel)
AS/NZS 1554.3	Structural steel welding - Welding of reinforcing steel
AS/NZS 1554.4	Structural steel welding - Welding of high strength quenched and tempered steels
AS/NZS 1554.5	Structural steel welding - Welding of steel structures subject to high levels of fatigue loading
AS/NZS 1594	Hot-rolled steel flat products
AS 1627.4	Metal finishing - Preparation and pretreatment of surfaces - Abrasive blast cleaning
AS 1627.9	Metal finishing - Preparation and pretreatment of surfaces - Pictorial surface preparation standards for painting steel surfaces
AS/NZS 2312:2002	Guide to the protection of iron and steel against atmospheric corrosion by the use of protective coatings
NZS 3404.1	Steel Structures Standard

AS 3597	Structural and pressure vessel steel - Quenched and tempered plate
AS/NZS 3678	Structural steel - Hot-rolled plates, floorplates and slabs
AS/NZS 3679.1	Structural steel - Hot-rolled bars and sections
AS/NZS 3679.2	Structural steel - Welded I sections
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS/NZS 5131	Structural steelwork - Fabrication and erection
AS/NZS ISO 13918	Welding - studs and ceramic ferules for arc stud welding
GANZ	Galvanizing Association of New Zealand - After-Fabrication Hot Dip Galvanizing. A practical reference for designers, specifiers, engineers, consultants, manufacturers and users

Requirements

1.3 QUALIFICATIONS

Welding operators (and supervisors) to be experienced, competent workers, qualified to AS/NZS 5131, Table 7.4, to suit relevant Construction Category and weld category.

1.4 TOLERANCES

To AS/NZS 5131 Section 12 and Appendix F, Tolerance Class 1.

1.5 VERIFY DETAILS AND DIMENSIONS

Refer to drawings to ensure all required details and fixings are provided for in the structural steelwork. Verify dimensions against site measurements prior to fabrication.

1.6 TESTS

To AS/NZS 5131, Section 13, Inspection, Testing And Correction and AS/NZS 5131 Appendix I, Inspection of Welding and Bolting (New Zealand Only), as follows:

- Welds: Non-destructive examinations (NDE)

1.7 HOT WORK - FIRE SAFETY

Refer to section 1270 CONSTRUCTION

2 PRODUCTS

2.1 STRUCTURAL STEEL

Comply with New Zealand, Australian, British or Japanese Standards for steel as required by NZS 3404.1, section 2, including, type, category, and suppression of brittle fracture. Also to AS/NZS 5131, Section 5.

Steel members and sections steel grade table

Component	Conforming to	Grade
Hot rolled steel sections	AS/NZS 3679.1	300; 350; 300L0; 300S0; 350L0, 300L15; 350L15
Plates and flats	AS/NZS 3678; AS/NZS 1594;	250; 300; 350; 400; 450; WR350; 250L0, 300L0; 350L0; 300L15; 350L15

Plates and flats	AS/NZS 1594; TS 102	HA250; HA300; HA350; HA400; HW350
Circular hollow sections	AS/NZS 1163; TS 102	C250L0; C350L0; C450L0
Square hollow sections	AS/NZS 1163; TS 102	C350L0; C450L0
Rectangular hollow sections	AS/NZS 1163; TS 102	C350L0; C450L0
Welded beams and columns	AS/NZS 3679.2; TS 102	300; 400
Quench & tempered plate	AS 3597	500; 600; 700; 900; 1000
Purlins and girts	AS 1397	G250; G300; G350; G450; G500; G550, Z350, Z450

2.2 WELDING CONSUMABLES

To comply with and be selected for grade of steel being welded as required by AS/NZS 1554 series of standards.

2.3 FLUX

Welding flux to be dry and from sealed containers.

2.4 BOLTS, NUTS AND WASHERS

Grade 4.6, screws AS 1111.2 and bolts to AS 1111.1. Grade 4.6 nuts to comply with AS 1112.1. Property Class 8.8 bolts and equivalent nuts and washers (high strength structural quality only) to comply with AS/NZS 1252.1. Hot-dip galvanize to AS/NZS 4680 (and AS/NZS 1214), bolts, nuts and washers forming a permanent part of a structure subject to a protective coating.

Bolt Categories and tensioning

Bolting category	Bolt standard	Property Class	Tension method	Tensioned joint type
4.6/S	AS 1111.1	4.6	Snug tight	
8.8/S	AS/NZS 1252.1	8.8	Snug tight	
8.8/TB	AS/NZS 1252.1	8.8	Full tension	Bearing
8.8/TF	AS/NZS 1252.1	8.8	Full tension	Friction

In bearing type connections where the thread position relative to the shear plane is to be controlled.
N - threads included in shear plane
X - threads excluded from shear plane
F - friction type joints - prepare faying surfaces

2.5 GROUT

To AS/NZS 5131, 5.8.

3 EXECUTION

Preparation, assembly and Fabrication

3.1 GENERALLY

To AS/NZS 5131, Section 6.

3.2 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.3 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements. Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.4 SURFACE FINISH

Grind off all burrs and sharp arrises.

3.5 CUTTING

To AS/NZS 5131, Section 6.5.

3.6 HOLING

To AS/NZS 5131, Section 6.7
Do not use slotted holes for connections, other than those documented.

Welding

3.7 WELDING GENERALLY

To AS/NZS 5131, Section 7 and AS/NZS 1554.1. Equipment to comply with AS/NZS 1554.1, clause 1.8.2.
Site weld only when correct alignment and preset or camber have been achieved.
Weld types as documented elsewhere or on drawings
Weld categories not documented elsewhere or on drawings to be Category GP.

3.8 NON-DESTRUCTIVE WELD EXAMINATION

Non-destructive weld examination (NDE) to AS/NZS 5131, clause 13.6.2 and AS/NZS 5131 Appendix I, Inspection of Welding and Bolting (New Zealand Only).
If non-visual NDE is required, use a third party testing authority.
Repair any welds revealed as faulty by NDE and repeat the examination.

Mechanical fastening

3.9 MECHANICAL FASTENING GENERALLY

To AS/NZS 5131.
Connection contact surfaces to AS/NZS5131, 8.4.1.
Category 8.8/TF bolting to be clean, as rolled and free from applied finishes.
For washers, place one washer under the part rotated during tightening process (nut or bolt head).
Permanent bolt only when correct alignment and preset or camber have been achieved.

3.10 TENSIONING BOLTS

For tensioning of bolting categories 8.8/TB and 8.8/TF, use part-turn method or a direct tension indicator device. Ensure clear thread run out beneath the nut after tensioning is to New Zealand requirement of AS/NZS 5131, 8.2.2.

3.11 THREADS EXCLUDED FROM SHEAR PLANE

Select length of bolts such that the threaded portion does not occur within the shear plane between joined parts.

Erection of structural steel

3.12 ERECTION GENERALLY

To AS/NZS 5131, Section 11.
Make sure every part of the structure has sufficient design capacity and is stable under construction loads produced by the construction procedure.
Comply with NZBC F5/AS1: Construction and demolition hazards, and the WorkSafe publication: Guidelines for the provision of facilities and general safety in the construction industry.

3.13 BOLTS AND ANCHORAGES

For each group of anchor bolts, provide a template with set-out lines clearly marked for positioning the bolts when casting in.
Start erection only when the holding down bolts and anchorages have been cast-in-place long enough to achieve sufficient strength.

3.14 TEMPORARY WORK

Provide temporary bracing, propping and restraint as required to make structure safe. Fix any temporary members so as not to weaken or deface permanent steelwork. Leave temporary bracing and restraint in place until the erection is sufficiently advanced to allow safe removal of temporary bracing.

3.15 SITE WORK

Other than work shown on the shop detail documentation as site work, do not fabricate, modify or weld structural steel on-site.

3.16 GROUTING SUPPORTS

Before grouting steelwork supported by concrete or masonry, set steelwork on packing or wedges as follows:

- Permanent packing or wedges - Form with solid steel or grout of similar strength to the permanent grout.
- Temporary packing or wedges - Remove before completion of grouting.

Grout at supports before constructing supported floors, walls and roofing.
Do not grout if the base plate or the footing surface temperature are outside the range 3°C to 35°C or to manufacturer's requirements.
Fill the space beneath the base plate with grout, if necessary hammered in tight to ensure complete filling of space.

3.17 DRIFTING

Use drifting only to bring members into position, without enlarging holes or distorting components.

3.18 EARTHING STRUCTURAL STEEL

If it is a project electrical requirement, ensure that any electrically at-risk, steel frames or isolated members, are earthed (or at least conductor cable attached) before the steel has any in-situ finishes applied or is enclosed.

3.19 TEMPORARY CONNECTIONS

Remove temporary elements on completion and restore the surface.

Completion & Commissioning

3.20 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

8212 SUB BASES TO SEALING & PAVING

1 GENERAL

This section relates to the supply, placing and compaction of basecourse as required for paving.

Documents

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZS 4402	Methods of testing soils for civil engineering purposes
TNZ M/4	Specification for basecourse aggregate

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

2 PRODUCTS

Materials

2.1 TNZ BASECOURSE

Metal aggregate to AP 40 grading.

3 EXECUTION

Conditions

3.1 TESTING - BEFORE METALLING

Before commencing metalling test subgrade to NZS 4402, test 6.1.1. Remove unsuitable filling material from the site.

3.2 REMOVE SURPLUS

Remove surplus imported filling materials from the site.

3.3 PLACE FILLING

Place filling using approved methods, to required dimensions, levels, lines and profiles and so that surface water drains freely.

3.4 PROTECTION OF FORMATION

Do not allow construction traffic on filling until the level has been raised not less than 150mm above formation level by properly compacted temporary protective filling. Remove temporary protective filling from the site before beginning permanent construction. Do not stockpile materials on newly filled areas.

3.5 DIFFERING MATERIALS

Where materials of widely divergent characteristics are used for filling, spread and compact in clearly defined separate layers.

3.6 COMPACTION

Do not use earthmoving equipment for compaction.

3.7 COMPACTION NEAR EDGE SUPPORTS

Ensure that edge supports are strong enough to support compaction forces without movement, cracking or other damage. Make good damage caused by compaction.

3.8 MOISTURE CONTENT, GENERAL FILL

Moisture content at time of compaction to be within the range of optimum less 6% up to optimum. Do not use filling with moisture content above optimum value. If necessary:

- Adjust moisture content of filling by turning and drying.
- Provide water sprinkling equipment if fill is too dry.

Application

3.9 TESTING - COMPLETION

On completion of metalling test top of subbase to NZS 4402, test 6.1.1. and confirm acceptance.

Completion

3.10 TAKE AWAY

Take away from the site excavated material or brought-in material not used for backfilling, leaving the site clear and tidy.

3.11 LEAVE

Leave work to the standard required by following trades.

3.12 REMOVE

Remove debris and unused materials from the site.

8310 LANDSCAPE SITE PREPARATION

1 GENERAL

This section relates to:

- removal and disposal of existing inorganic debris
- weed spraying
- minor landscape earthworks
- removal of existing hardstand surfaces

1.1 RELATED WORK

Refer to 8321 SOIL AND SOIL PREPARATION.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS 8409	Management of Agrichemicals
TNZ F/01	Specification for Earthworks construction

Requirements

1.3 ARCHAEOLOGICAL DISCOVERY

If fossils, Maori artefacts, antiquities and other items of value are found refer to the general section 1220 PROJECT for actions to be taken with archaeological discovery.

1.4 QUALIFICATIONS

Workers to be experienced, competent trades people familiar with the materials and techniques specified. Construction plant and equipment shall only be operated by licensed or experienced operators as appropriate.

1.5 QUALIFICATIONS - CHEMICALS

Where chemicals are to be used, staff dealing with and applying the chemical shall hold an appropriate Growsafe Certificate from the N.Z. Agrichemical Education Trust. In addition, for HSNO class 6.1A and B substances, also hold a Certified Handler Compliance Certificate to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

1.6 ACCESS FOR MACHINES

Determine working conditions and access for machines. Take into account the time of year, the nature of the ground and subsoil to be excavated, the ground water table and all matters influencing the carrying out of the work.

1.7 MYRTLE RUST

For identification and treatment of myrtle rust and the growing, transporting and planting plants in the myrtle family (family Myrtaceae) follow the protocols and precautions of the NZ Plant Producers Inc. (NZPPI) website guidelines: www.nzppi.co.nz/myrtlerust.

Any suspected myrtle rust finds must be reported immediately to the Project Administrator. On direction of the Project Administrator immediately notify the Ministry for Primary Industries (MPI) Exotic Pest and Disease Hotline on 0800 80 99 66

Quality control and assurance

1.8 INSPECTIONS

Notify the Contract Administrator for inspection of the works following:

- Identification of unsuitable materials requiring removal
- Prior to the placement of any fill material
- At the completion of the Site preparation

2 PRODUCTS

Materials

2.1 HERBICIDES

Post-emergence selective chemical to control broadleaf weeds and/or a non-selective chemical. Submit for review the proposed chemical and area of use.

3 EXECUTION

Conditions

3.1 DELIVERY

Only deliver material to the site that can be immediately placed in its final location from the delivery vehicle.

3.2 REPORT

Report any survey pegs, bench marks, and the like on any features, leaving them undisturbed until approval is given for removal.

3.3 RETAINED FEATURES

Refer to drawings for those features to be retained. Mark out those features to be retained with 1.0m high 50mm x 50mm timber stakes with yellow plastic tape between, to eliminate accidental damage.

3.4 SETTING OUT

As described on the drawings, confirm with the Contract Administrator prior to commencing works.

3.5 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks. Refer to the general section 1250 TEMPORARY WORKS & SERVICES for more details.

Undertake regular inspections and maintain the erosion and sediment control measures in operational order.
On stabilisation of disturbed soil or upon sufficient ground cover, remove control measures including the disposal of silt off site.

Installation/application

3.6 TOLERANCES

All cut and fill work shall be free draining and be constructed to the design levels and shapes to ±100mm. Ensure all surfaces are graded to shed water and maintain overland flow paths.

3.7 CLEARING - GENERAL

To TNZ F/01 Earthworks construction. Clear the working area of all vegetation and structures except those specifically required to remain.
Include all areas affected by cutting and filling together with sufficient additional areas on which to stockpile stripped topsoil.
Include the complete removal of all inorganic debris, fences, hardstand surfaces and other materials as specified.
Take particular care around the root zone of trees to be retained.

The clearing of hardstand surfaces shall include saw cutting where necessary, breaking and excavation of bedding materials and disposal off site. Store on site cleared materials for re-use.

3.8 WEED SPRAYING

All work generally to NZS 8409.
Provide details of the proposed herbicide and spraying method prior to spraying.
Spray all vegetated areas to be planted with 2 applications of approved herbicide one week apart, and one week prior to clearing.
Clear or mow any vegetation exceeding 200mm in height prior to application of herbicide. Herbicide shall be applied to cleared or mown areas following sufficient re-growth of the weeds through the mulch as approved by the Contract Administrator.

Existing grass areas to be re-sown shall be eradicated by an application of translocated herbicide. Spraying of herbicides shall not take place in windy conditions and the Contractor shall be responsible for reinstating any damage caused by drift of spray.
Where a translocated herbicide is used around plants in leaf to be retained, an adequate guard must be used, or a suitable hood applicator used for spot treatment.

Carefully calibrate all spraying equipment to prevent over or under dosing.
No herbicide containers, empty or full, are to be left unattended on site at any time.
Planting shall not proceed until at least two weeks after the first application of the residual herbicide, unless prior approval is obtained.

3.9 TOPSOIL STRIPPING

Do not start topsoil stripping until silt control measures are installed.
Strip all topsoil including turfs, humus and organic materials. Stockpile stripped topsoil separately and neatly outside of the stripped areas for later re-spreading or disposal. Trim the stockpiles to a free draining slope to reduce ingress of rainwater.

Unless otherwise specified, do not remove topsoil from the site, and surplus topsoil shall remain on site.

3.10 MINOR EARTHWORKS

Earth-worked surfaces to have sufficient fall to shed water in a controlled manner and prevent ponding.
Obtain suitable fill material for the earthworks from the cut areas if available, or import where there is a shortfall. Ensure fill material is free of organic material, contaminants, stumps, branches and construction debris.

Place and compact the material to be used for general landscape shaping in layers not exceeding 150mm, and compact by track rolling in 4 passes with equipment in excess of 10 tonnes weight or other approved methods to prevent undue settlement.

Fill material placed adjacent to pipes, walls and other structures shall be compacted by hand held vibrating plate compaction equipment. Heavy equipment shall not be operated within one metre of any pipes or structures. Ensure that all batters are maintained in a stable condition at all times.

3.11 UNSUITABLE MATERIALS

Advise the Contract Administrator if unsuitable materials are encountered. Remove and dispose of these materials and backfill with compacted clay or hardfill as directed by the Contract Administrator.

3.12 TOPSOIL RESPREADING

Refer to 8321 SOIL AND SOIL PREPARATION.

3.13 SURPLUS MATERIAL

Remove surplus excavated material from the site continually as the excavation proceeds.
Clean up continually any excavated material dropped on footpaths or roads.

Completion

3.14 ROUTINE CLEANING

Reinstate all areas affected by the works to pre-construction condition or better. Remove all rubbish and spoil from the site on completion of the works, leaving the site in a clean and tidy condition.

4 SELECTIONS

8321 SOIL & SOIL PREPARATION FOR PLANTING

1 GENERAL

This section relates to the supply, preparation and placement of soil and plant mix for the planting of:

- transplanted trees
- shrubs
- lawns

1.1 RELATED WORK

Refer to 8310 LANDSCAPE SITE PREPARATION.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS 4402	Methods of testing soils for civil engineering purposes
NZS 4454	Composts, soil conditioners and mulches
TNZ F/1	Specification for Earthworks construction

Requirements

1.3 QUALIFICATIONS

Landscapers to be experienced competent workers, familiar with the materials and the techniques specified.

2 PRODUCTS

Materials

2.1 TOPSOIL

To NZS 4402 and NZS 4454. Top quality screened topsoil stripped from its original
location to a maximum depth of 200mm:
- free of pernicious weeds, straw, stones, sticks, clay lumps
- free of foreign matter exceeding 25mm dimension.
- pH value between 6.5 and 7.5
- humus content greater than 50%.

2.2 COMPOST

Weed free premium compost, to be approved by the Landscape Architect

2.3 BACKFILLING

Thoroughly mixed medium of 50% site won topsoil and 50% compost as above by volume.

3 EXECUTION

Conditions

3.1 DELIVERY

Only deliver material to the site that can be immediately placed in its final location from the delivery vehicle.

3.2 SERVICES

Check for services in the area of this work. Avoid interference or damage to them. Ensure that all new services are in place before commencing work.

3.3 ENSURE

Ensure that all areas are clean, ready to be worked and clear of any continuing work by others.

Application

3.4 PREPARATION OF PLANTING AREAS

Manually cultivate existing soil layer in planting areas to a depth of 200mm, ensuring that the sub grade is free draining.

If required, thoroughly spray planting areas which contain weed growth with a non-selective herbicide. Apply using protective clothing, in dry, still-air conditions to the spray manufacturer's requirements.

3.5 PREPARATION OF GRASS AREAS

3Rotary hoe final levels to a depth of 300mm, ensuring that subgrade is free-draining. Rake to a fine tilth, level and smooth with run-offs to drainage outlets. Ensure no stones, clods, clay sections, weeds or other undesirable material is present prior to seeding.

3.6 TOPSOIL SPREADING

Spread topsoil to the compacted depth as stated in TNZ F/01 for the areas shown on the drawings and g*rassed areas to level ground unless otherwise suitable following rotary hoeing. Assume rotary hoe will be sufficient.*

Do not place and spread topsoil when the ground or topsoil are excessively wet or in a condition which would be detrimental to the work.

Carry out final grading of to ensure a true specified level and slope and to avoid hollows or other depressions where water may collect. Loosen unduly compacted areas (such as in traffic routes) by ripping or discing prior to final levelling.
The final grade shall allow for subsidence so that after settlement the levels shall be the final specified levels.

3.7 FINAL GRADING

When topsoil is reasonably dry and workable, grade it to smooth, flowing contours, with falls, for adequate drainage, removing all minor hollows and ridges.
Crown all planter beds to provide a gently rounded profile.

Completion

3.8 CLEAN UP

Clean up and remove surplus soil from the site.

3.9 REMOVE

Remove debris, unused materials and elements from the site.

4 SELECTIONS

8331 PLANT PROPAGATION

1 GENERAL

This section relates to;

- on growing of plants
- hardening of plants

1.1 RELATED WORK

Refer to 8332 PLANTING for Planting

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

PB	Planter Bag
L	Litre Bag Size

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS 4454	Composts, Soil Conditioners and Mulches
NZS 8409	Management of Agrichemicals

Warranties

1.4 WARRANTY

Provide a material supplier warranty:

6 months:	For Nursery faults, diseases and weeds.

- Provide this warranty on the supplier standard form.
- Commence the warranty from the date of supply.

Requirements

1.5 QUALIFICATIONS

Workers to be experienced, competent trades people familiar with the materials and techniques specified, and supervised by a qualified Horticulturalist.

1.6 MYRTLE RUST

For identification and treatment of myrtle rust and the growing, transporting and planting plants in the myrtle family (family Myrtaceae) follow the protocols and precautions of the NZ Plant Producers Inc. (NZPPI) website guidelines: www.nzppi.co.nz/myrtlerust.

Ensure:
Plants from a commercial nursery have the appropriate completed copies of the NZPPI Nursery Management Declaration form and Plant Transport Declaration form.
Treatment records are provided for non-commercially sourced plants

Myrtaceous plants are within the effective period of cover for the treatment used at time of dispatch (different treatments and cover periods are on the NZPPI website).

Any suspected myrtle rust finds must be reported immediately to the Project Administrator. On direction of the Project Administrator immediately notify the Ministry for Primary Industries (MPI) Exotic Pest and Disease Hotline on 0800 80 99 66.

Quality control and assurance

1.7 INSPECTIONS

the contract administrator will inspect the plants at the following stages;

- prior to shipment of plants
- upon delivery of plants

2 PRODUCTS

2.1 PLANT MATERIALS

Plants required for the project as specified on the drawings. Confirm the genetic origin of all plant material, and the ecological area.
Plant material to be of the highest quality nursery stock, true to type and name. Plants to be of good form with a well developed root structure, well shaped stem or trunk and head, and grown on in poly bags of the specified PB or L (Litre) size.

2.2 CONDITION

All plant material shall be well hardened off and acclimatised to the site conditions for the proposed delivery area, prior to delivery.

2.3 PEST FREE

Plants shall be free from pests, diseases and physiological disorders.

2.4 ROOTS

Roots shall have a high percentage of fibrous roots that are just touching the edge of their containers. Plants with roots that are wound round their containers in circular fashion shall be rejected.

2.5 SIZE AND GRADE

Ensure all plants are of the minimum size and grade specified in the plant schedule. Plant heights to be the minimum sizes for a given PB or L (litre) size.
Attach labels to each plant, or to each box, bundle or bale of plants. Labels to show botanical name, size, age, quantity and any other salient information.

2.6 CONTAINER GROWN SHRUBS

To the container size (PB) or (L) specified in the schedule. Plants to have been in the container a maximum of 12 months before being potted on.

Accessories

2.7 FERTILIZERS

Proprietary fertilizers to NZS 4454 applied at the appropriate rate.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE AND HANDLING

Liaise with the planting contractor to arrange delivery times, dates and plant numbers required.
Water all plants prior to transporting, and carefully load by hand. Do not remove pots and protective material prior to delivery, or leave roots uncovered at any time.
Protect from damage and adverse conditions during transit, including exposure to drying winds, prolonged heat, and water-logging. Provide documentation with each consignment, showing the species, grades and quantities of plants. Allow for regular delivery of reasonable numbers of plants within the dates stated in the consignment table.

Application

3.2 STANDARDS AND TOLERANCES

Plants should not be less than the heights and sizes stated.

3.3 OPERATIONS

Undertake all horticultural operations, including regular potting-up, control of pests and diseases, watering, shade, frost and wind protection, in a method that ensures healthy, vigorous and hardy stock. Allow for an appropriate "hardening off" period prior to despatch.

3.4 PRUNING GENERALLY

Immediately prior to delivery, prune all shrub material in accordance with the best horticultural practice appropriate to the type of plant. Remove all injured twigs and branches without any bruising or tearing of the bark. Use sharp clean implements to give a clean sloping cut with one flat face.

3.5 FINAL INSPECTION

Undertaken on shipment of the plants. Plants shall be healthy, in a weed-free state, free of pests and diseases and true to name and size.
Any plants that are dead, dying, not true to name or size as specified, or not in a satisfactory state of growth, shall be rejected.

4 SELECTIONS

4.1 CONSIGNMENT TABLE

Plant	Size (PB)	Number	Earliest Date	Latest Date
All shrubs and trees	As shown on Planting Plan	As shown on Planting Plan	30th June	15th August

Spares & maintenance products

4.2 SPARES & MAINTENANCE PRODUCTS

Confirm a specific location and watering regime for spares (if any) to cover plant losses within the maintenance period with the Contract Administrator.

8332 PLANTING

1 GENERAL

This section relates to Planting
It includes;

- Preparing ground conditions
- Planting trees, shrubs and groundcovers
- Applying soil, fertiliser and mulch
- Staking and generally securing trees

1.1 RELATED WORK

Refer to 8310 LANDSCAPE SITE PREPARATION for excavation.
Refer to 8321 SOIL AND SOIL PREPARATION for topsoil.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

PB	Planter Bag
L	Litre Bag Size

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS 4454	Composts, Soil Conditioners and Mulches

Requirements

1.4 QUALIFICATIONS

Landscape contractors to be experienced, competent landscapers familiar with the materials and techniques specified.

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any of the products listed in this section.

1.6 SAMPLES

Provide the following portable sample for review:
On-site planting layout to be approved by the Landscape Architect and/or Contract Administrator prior to proceeding with planting. Lay out all plants in natural groups of 3, 5 or 7 (or as shown on Planting Plan)

Reviewer: Landscape Architect and/or Contract Administrator.

Time for review: Provide the Landscape Architect and/or Contract Administrator ample notification of the sample for review. Allow 10 working days for review.

Quality control and assurance

1.7 INSPECTIONS

Contract Administrator to inspect all plants before planting. They shall be inspected on delivery to site or at the contractor's depot in a single batch. Any plant not approved by the Contract Administrator shall be replaced.

Plants to be first class specimens of nursery stock, true to name and type with well developed and well shaped trunk or stem and head. They shall be well hardened off to cope with the climatic conditions of the site, and free from pests and disease.
The roots shall have a high percentage of fibrous roots that are just touching the edge of their containers. Plants with roots that are wound round their containers in circular fashion shall be rejected.
Plants shall be free from disfiguring knots, bark abrasions, wind, or freezing injury or other disfigurements and shall bear evidence of proper pruning.
Where several specimens of the same species are to be selected, evenness of shape and size is required within the size range specified.

1.8 IDENTITY

Plants to be good and true representatives of their species, cultivar or variety and each batch shall be labelled.

1.9 LABELLING

Attach legible labels to each plant delivered to site as a separate unit, or to each box, bundle or bale containing plants. The labels shall give the approved botanical name, size, age and quantity and other information required to identify the plant or plants.

1.10 PLANTER BAGS

UV stabilised black plastic planter bags (PB). Standard bag sizes range from PB3 to PB150. Plant sizes are specified by PB bag size (pint bag) up to PB150. Thereafter specimen trees may be specified by bag size, girth or height or a combination of these.

1.11 HEALTH

Ensure plants are free of pests, diseases, disorders, disfiguring knots damage or pruning injury.

1.12 RESPONSIBILITY FOR CONTINUED SURVIVAL, HEALTH AND GROWTH

The Contractor is responsible for the survival, good health and adequate growth of plants connected with this contract during transportation, storage or when planted on the site during the contract and maintenance period.

Replace any plants which die, are significantly damaged, or which show signs of significant stress or declining health during the contract and maintenance period. Plants destroyed by vandalism by others or theft once planted are excluded from this condition.

1.13 MYRTLE RUST

For identification and treatment of myrtle rust and the growing, transporting and planting plants in the myrtle family (family Myrtaceae) follow the protocols and precautions of the NZ Plant Producers Inc. (NZPPI) website guidelines: www.nzppi.co.nz/myrtlerust.

Ensure:

- Plants from a commercial nursery have the appropriate completed copies of the NZPPI Nursery Management Declaration form and Plant Transport Declaration form.
- Treatment records are provided for non-commercially sourced plants
- Myrtaceous plants are within the effective period of cover for the treatment used at time of dispatch (different treatments and cover

periods are on the NZPPI website).

Any suspected myrtle rust finds must be reported immediately to the Project Administrator. On direction of the Project Administrator immediately notify the Ministry for Primary Industries (MPI) Exotic Pest and Disease Hotline on 0800 80 99 66.

Weed Control

1.14 WEED CONTROL

Use Chemical Herbicides with caution. They shall conform in every respect to the mixture required and be applied strictly in accordance with the manufacturers instructions. Do not spray herbicide in windy conditions. Make good any damage caused by excess spray drift.

All chemical herbicides used are to be non-toxic to human beings, birds and animals under normal use and only those chemical herbicides registered under the Pesticides Act may be used.
Where a translocated herbicide such as glyphosate is used around plants in leaf, an adequate guard must be used for all spraying.

Carefully calibrate all spraying equipment to prevent under or over dosing. Replace any plants damaged by misplaced herbicide. No herbicide containers, empty or full, are to be left on site at any time.

Cultivation

1.15 CULTIVATION OF PLANTING AREAS

Cultivate planting areas to a depth of 300mm to form a firm and friable tilth suitable for pit planting by hand.
During cultivations remove all weed including weed root off site.
Grade to smoothly flowing or even contours to the finished levels by hand or machine as necessary.

1.16 STONE/DEBRIS PICKING

After cultivating remove all stones, grass sods and other debris larger than 75mm in any dimension and all roots in excess of 15mm diameter or 200mm length.

2 PRODUCTS

Materials

2.1 CONTAINER GROWN SHRUBS

Container grown shrubs to be strong well-rooted sturdy plants, without stakes or canes, with two or three main stems and a good bushy form. They must have been grown in the containers for at least 6 months over a summer period prior to planting out. The container shall be full of root but not root bound. Recently 'Containerised' or 'bagged up' plants will not be accepted.
Plants shall not have been grown in the container for longer than 12 months without having been potted on.

2.2 SPECIMEN TREES

As per existing trees on site to be relocated

2.3 ROOT SYSTEMS

All plants to have good, vigorous, fibrous root systems in keeping with the normal rooting habit of the species. Root balls and container growing medium shall be free from perennial weed and soil borne plant diseases.

2.4 BRANCH SYSTEMS

Plants to have well developed vigorous branch systems of normal habit, dimensions and density for a well grown nursery plant of their species. Plants which have 'leggy', narrow or thin branch systems will not be accepted.

2.5 HARDINESS

Plants to be fully hardy having been acclimatized in the nursery to sun, exposure and cold. Plants which have not been hardened off, drawn plants with soft growth or plants requiring additional support to that specified will not be accepted.

2.6 DRYING OUT

Plants which have dried out or show signs of desiccation or wilting will not be accepted.

2.7 SIZES

For acceptable sizes of plants refer to SELECTIONS. Plants which are larger than the maximum size may be accepted at the discretion of the Contract Administrator who may require oversize plants to be pruned. Where plants have been recently "bagged on" from a smaller nursery grade they will be deemed to only fulfil the size requirements of the smaller grade.
All plants of the same species to be of similar height and stature (±10%). Plants supplied later in the contract to replace defective plants are to match the current size of those previously planted.

Components

2.8 TIMBER FOR STAKES

All staking timber is to be treated as follows and as per the drawings:
Timber in contact with the ground: H4

2.9 TREE TIES

Hessian tree ties fixed with galvanised staples. The tie shall be 50mm - 75mm wide and of sufficient strength to hold the tree firmly without stretching or cracking.

2.10 ORGANIC MULCH

Living Earth or similar approved to 75mm thickeness after settlement. Ensure mulch is well aged (3 month minimum).
Aged Bark Mulch to be consistent in colour and form to the cushion fall surfacing to avoid unsightly mixing of bark mulch and cushionfall.

2.11 COMPOST

To NZS 4454. Provide well rotted vegetative material or animal manure, free from harmful chemicals, grass and weed growth.

2.12 IMPORTED TOPSOIL

Top quality screened topsoil, free of weeds and stones. Screened site topsoil may be used.

2.13 TOPSOIL FROM STOCKPILE

Site won topsoil shall be used as a backfill material for planting holes. Ensure that it is free of stones and weeds and naturally friable.

2.14 FERTILISER FOR PLANTING

Well-balanced 6 month slow release fertiliser including available nitrogen, phosphorus and potassium plus magnesium and trace elements. Fertiliser in granular form to allow distribution through the backfill mix.

Apply slow release fertiliser at a rate of 100g per specimen tree and mixed evenly with the backfill mix.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE AND HANDLING

Take delivery of materials and goods and store on site and protect from damage.
Cover plants during transportation. Plant roots shall be protected at all times from sun or drying winds. Plants that cannot be planted immediately on delivery shall be kept in the shade, well protected, with soil well watered.
If shoots or roots suffer slight damage they shall be carefully pruned and treated with an approved fungicidal sealant. Replace damaged plants.
Remove pots and other protective materials immediately prior to planting. Do not leave roots uncovered at any time.

3.2 APPROVAL

Do not start preparation or planting until the setting out has been inspected and approved by the Landscape Architect and/or the Contract Administrator

3.3 PRE-INSTALLATION REQUIREMENTS

Prepare all planting areas indicated on the drawings including clearing out, controlling weeds, forming new planters, cultivating, and adding soil conditioner, fertiliser and bark mulch.

3.4 CLEAN OUT PLANTER AREAS

Remove weeds, unwanted plants, stumps, rubbish, and excess earth.

3.5 PROTECT EXISTING PLANTING TO BE RETAINED

Protect plants that are indicated on the plans to be retained. Make good any damage, including replacement where necessary.

3.6 TOPSOIL

Supply and install topsoil to planting areas to achieve finished surface levels, and to ensure specified topsoil depths are achieved. Remove existing earth where necessary to accommodate topsoil and soil conditioner in planters to achieve finished surface levels.

3.7 SOIL CULTIVATION AND CONDITIONER

Supply and incorporate soil conditioner to all planting areas where indicated on the plans at the rate of 0.075m^3 per m^2 (75mm depth) worked into the top 150mm of existing soil.

3.8 FINISHED SURFACE LEVELS

The finished surface soil level as per drawings.

3.9 MARKING & DIMENSIONS

Set out the outlines of seeding, turfing and planting areas. Use sand, paint or short canes close enough together to accurately define the shapes on the ground.

Installation/application

3.10 PLANT LAYOUT

Place and plant at the same density throughout that species area, group or drift. Do not plant in regular rows unless this is shown on the drawings. Planting should be arranged on a triangular grid. Where mixes of plats are given, arrange plants of the same species in clumps of 5s, 7s and 9s. Pay particular attention to the distribution of plants around the perimeter of areas to ensure they are evenly spaced and that the front row of plants follows the shape of the area.

3.11 MAINTAINING MARKINGS

Keep all setting out visible until planting has been finished.

3.12 PIT SIZE

Dig the planting pit large enough to allow the root-ball of plants to be accommodated without distortion or, in the case of bare root/open ground plants, for their roots to be fully spread. Do not distort or bend roots to fit into the planting pit.

3.13 PRUNING

Prune any damaged or diseased roots and branches.

3.14 PLANT POSITIONING

Place plants in the centre of the planting pit with their main stem vertical and at such a depth that the firmed down soil after planting is at the same height as the nursery ground level or the container soil level.
Pierce the bottom of each hole to a depth of 200mm with the tines of a fork or similar implement to ensure root penetration and free drainage. Roughen the sides of pits dug by rotary augers.

The base of each hole shall be provided with a 25mm layer of proprietary compost. Apply fertiliser to the base of the dug hole.

Remove container from container grown plants immediately prior to planting. Take care to ensure that the root ball is not disturbed during container removal or planting.
Set plants in their final positions with main stem vertical and at such a depth that the soil, when firmed down is at the same height as the nursery earth marks on the stem or the container soil level. Spread out loose roots in a natural fashion, carefully place the soil under and amongst them to fill all voids and firmed in.

3.15 BACKFILL

Back fill with 50% finely broken down site-won topsoil (free from weeds, stones, clay lumps and large clods) and 50% organic compost. Thoroughly mix with slow release planting fertiliser. Spreading of planting fertiliser on the soil surface after planting will not be accepted.

3.16 TWIG PULL TEST

It should not be possible to lift or disturb the roots of a properly firmed plant by pulling on leaves or un-lignified shoots.

3.17 HEELING IN

Heel the soil firmly after planting and thoroughly water.

3.18 BACKFILL FERTILISER

Incorporate backfill fertiliser into the backfill of each planting hole at the following rates:

nursery grade	per plant
Pb3 / 2L	10g or as per the manufacturers specifications
150L	500g or as per the manufacturers specifications

3.19 WATER GENERALLY

Provide water supply for watering (or water carts if necessary) and water the installed plants to the level required for the season the planting is programmed to be installed. Additional watering will be required during the drier seasons. Attention must be paid to watering during and after planting to ensure successful establishment. All plants shall be thoroughly watered a few hours prior to planting, and again immediately after planting.

3.20 STAKING FRAME

Skate as per the drawings

3.21 MULCHING

Dress all planter areas with a minimum 100mm depth of mulch.
Apply mulch following planting. Level the soil surface prior to mulch being applied. Ensure that soil is not mixed with the mulch.
Spread mulch to a generally even level but in particular grade away from plant stems to avoid the possibility of collar rot.
Ensure mulch is graded away from the paths and kerbs in a way that avoids mulch spilling from planters.

Completion

3.22 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal of all debris, unused materials and elements from the site.

4 SELECTIONS

Materials

4.1 PLANTING SCHEDULE

As per L702 Planting Schedule

Spares & maintenance products

4.2 SPARES & MAINTENANCE PRODUCTS

Confirm a specific location and watering regime for spares (if any) to cover plant losses within the maintenance period with the Contract Administrator.

8333 TURF LAYING & LAWN SEEDING

1 GENERAL

This section relates to the laying of turf and seeding of lawns.
It includes, fertilizer and initial mowing

1.1 RELATED WORK

Refer to drawings L202 for Earthworks and L701 for Planting

Requirements

1.2 QUALIFICATIONS

Workers to be experienced, competent trades people familiar with the materials and techniques specified.

1.3 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named on the drawings, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.4 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Quality control and assurance

1.5 INSPECTIONS

Contract Administrator to inspect the works following:

- cultivation and preparatory work prior to seeding
- completion of respreading topsoil prior to final levelling and seeding
- completion of turf establishment

2 PRODUCTS

Materials - Seed

2.1 LAWN SEED MIX

All seed shall be certified and less than 12 months old at the time of sowing. Ryegrass component (if used) to be certified as having greater than 80% live entophyte content.

All seed label analysis data shall comply with trade standards. Germination tests must have occurred within the past six months. The germination capacity of each constituent of the mixture should be not less than 80%, and the purity of the mixture not less than 90%.

2.2 WEED FREE

Ensure seed is free of noxious weeds. Other crop not to exceed 1%. Weed seed shall not exceed 0.05%.

3 EXECUTION

Conditions

3.1 PRE-INSTALLATION REQUIREMENTS -SEEDING

Topsoiled areas to be grassed shall be cultivated to a depth of 100 - 150mm, clod free to provide a suitable tilth for seed distribution and grass growth. Remove weeds, root material, stones, rubble and any other debris exposed during cultivation.
Cultivate by mechanical means with rotary hoes except within the root zones of trees to be retained. Within the root zone, cultivate with hand tools (spades etc). Following cultivation, spread area with 100mm compacted depth of topsoil. Carry out minor regrading to ensure an even surface with no low points, particularly at junctions with edgings, kerbs, manholes and paths etc.

Installation/application

3.2 SOIL PH LEVEL

Target a soil pH level of between 5.5 and 6.0. Dress clay based soils with agricultural lime, applied at the rate of 150gms/m², and thoroughly 'work in' during cultivation (unless soil tests prove otherwise).

3.3 STANDARDS AND TOLERANCES - SEEDING & TURFING

Completed topsoil shall be 15mm above paths, paving and tops of kerbs, manhole covers and catchpit aprons, and free draining. It shall not have depressions capable of ponding.

Grassed surfaces shall be deemed to be in an acceptable condition when;

- fully established with vigorous growth
- no ponding of surface water occurs
- grass covers 95% of the grassed areas
- single areas of exposed soil are less than 100mm diameter in any one location
- broad leafed weeds visible by eye through 360 degrees from any location, are limited to 4 plants/m².

Lawn Seeding

3.4 SOWING

Sow the seed mix by broadcasting in two directions, in suitable calm weather, at a rate of 30 gm/m² using a mechanical spreader.
Lightly brush soil to cover seeds, and lightly roll to ensure a good moisture content.
Water immediately after sowing and then as often as necessary to keep it moist until germination and grass is well established.

3.5 TIMING

Sowing should generally be carried out from 1st April to 31st May, or from 1st September to 30th November. When sowing takes place outside this period, when the weather changes, or when silt control requires its use, mulch the seeding area using hay.

3.6 FERTILISER

Apply a dressing of fertiliser and work into the top 50mm of soil immediately prior to sowing.
Refer to SELECTIONS.

3.7 FENCING

Install "Pigs Tails" and warning tape fencing around the perimeter of the sown area to prevent damage from unauthorised access.

3.8 WEED CONTROL

Control weeds, which affect the establishment of the grassed surface during the establishment period.
Apply a fine layer of topsoil or straw mulch over these areas to promote germination and protect the grass.
Prior to Practical Completion, remove all weeds within grassed areas and re-sow as necessary.

3.9 FAILURE TO ESTABLISH A SUCCESSFUL GRASS SURFACE

Make good the grass areas that fail to establish successfully.

3.10 MOWING

Mow the grass when it has reached a height of 100mm. Cut to 50mm high. Mow only one third grass length at one mowing. Mow in dry conditions with sharp mower blades and remove clippings. Use only reel mowers on fine grasses.
For subsequent mowings, the mowing frequency shall be governed by growth rate.
Grass height at the completion of the contract to be 20mm to 25mm for coarser grasses like Ryegrass.

Generally

3.11 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal of all debris, unused materials and elements from the site.

3.12 MAINTENANCE

The contractor shall be required to maintain the surface of all grassed areas, and to cut the grass at intervals throughout the period of the contract works, including the defects notification/liability period. A final cut shall be made just prior to the expiration of the defects notification/liability period, and ground surfaces shall present a uniform, dense continuous surface free from bare patches.

4 SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

Materials

4.1 SEED

Location: As per Planting Schedule L806
Mix/Brand PGG Wrightson DURAturf Kerbside

Species	%
Species mix	Perennial ryegrass,Chewings fescue and Browntop

Spares & maintenance products

4.2 SPARES & MAINTENANCE PRODUCTS

Provide any leftover seed or fertiliser to the owner at practical completion.

8380 LANDSCAPE MAINTENANCE

1 GENERAL

This section relates to Landscape Maintenance.
It includes:

- Plants
- Grass
- Mulch
- Planting ancillaries

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

NPK	The labelling of fertiliser based on the relative content of Nitrogen (N), Phosphorus (P), and Potassium (K).
ESD	Environmentally Sustainable Design.

Requirements

1.2 QUALIFICATIONS

Workers to be experienced, competent landscape people familiar with the materials and techniques specified.

1.3 PERIOD

Undertake maintenance of the landscaping works regularly for:

3 months	From Practical completion of the Landscape Work.

The degree required and frequency is detailed in these specifications.

Quality control and assurance

1.4 NOTIFICATION OF MAINTENANCE VISITS

Supply to the Contract Administrator a maintenance schedule detailing the dates of proposed visits and work to be undertaken. In addition, notify the Contract Administrator immediately prior to those visits being made.

2 MAINTENANCE

2.1 GENERAL

Maintenance shall include watering, weed removal, plant trimming, cultivation, insect and disease control, checking stakes and ties, pruning and other accepted horticultural operations to ensure normal and healthy plant establishment and growth.
Ensure that the plants installed will survive and grow. Water the plants installed as frequently as necessary.
Inspect the landscaping works no less than monthly to confirm the health of the plants, existence of pests, diseases, or vandalism.

3 EXECUTION

3.1 WATERING

Where planter beds and trees are watered by an automatic irrigation system, operate and manage the system to ensure that all beds receive adequate water at all times.
Adjust the watering periods as necessary to accommodate seasonal fluctuations.

Monitor Trees planted into paved areas for symptoms of water stress and provide additional watering as necessary.
Carefully monitor transplanted trees for symptoms of water stress and provide additional watering as necessary.

Additional to automatic irrigation, carry out watering by hand held hoses at regular intervals as necessary during dry conditions to ensure successful plant establishment and growth.
Water shall be applied until the top 200mm of topsoil around each plant is saturated.
Do not water during the hot part of the day. Watering nozzles shall be fine rose or sprinkler heads to prevent damage to growth areas of the plants.

3.2 WEED CONTROL

Remove and control weeds regularly throughout the period of maintenance. Keep weed free all cultivated planted areas to the extent that perennial weed species are eradicated and annual weed species are well controlled. Take care not to disturb the shrub roots and excessive compaction of the bed surface. Additional weed control may be required in spring when the ground warms and seeds in the soil germinate.

Remove weeds by hand wherever possible. Spaying of weeds with an approved organic herbicide with all necessary safety precautions may be required for persistent weeds; however the visible portion of the weed shall be removed as soon as the weed has died. Apply herbicide by spot spraying using a protective spray nozzle/cone. Selective weed sprays may be used in appropriate circumstances.
Inadequate mulch depth may allow excessive weed growth; therefore keep mulch topped up to the original specified depth.

3.3 NOXIOUS PESTS AND DISEASES

Monitor the works for insect and plant disease problems. If present, identify the problem and apply appropriate remedy by accepted horticultural practices including chemical or biological methods.
Take all suitable precautions for the safe handling and application of herbicides, fungicides and insecticides and use these strictly in accordance with the manufacturer's specifications. In all cases, apply sprays on windless days. If the site is in a public area, the public shall be advised by signage that spraying is occurring and shall be directed away from the spray area.
Avoid damage to neighbouring properties caused by spraying.

3.4 FERTILISER

Apply slow release fertiliser to the bedding soil of plants at the time of plant installation.
Application rates shall be as recommended by the fertiliser manufacturer with regard to the size of plant.
'Water-in' fertiliser after application.

3.5 MULCH

Supply and install additional mulch and/or bark (the same material as existing) to ensure all mulch areas have a minimum depth of 75mm.

3.6 PROTECTION OF TREES AND STRUCTURES

Avoid damage to existing and newly planted trees during cutting or trimming operations. Trim or cut using small appliances (weedeater or hand mower) for a minimum diameter of 1.0m from the trunk, to avoid ring barking by larger appliances.
Take due care to locate and protect all structures from damage by mowers. Boundary pegs are included in structures to be protected.

Specimen Trees

3.7 OPERATIONS - TREES

Planted trees are to be encouraged to grow to maturity as naturally as possible to achieve their natural characteristic form. Employ sound management practices including weeding, trimming, checking of stakes and ties, pruning and other accepted horticultural operations. Pruning may also be required as a safety measure to remove overhanging branches causing obstruction to footpaths, driveways and car parking.

3.8 STAKING

Repair or replace staking as required.
Check ties every two months, to ensure that they have not broken or become too tight around the trunk. Ties should be maintained firm but not so tight as to cause damage to the bark. They should be adjusted accordingly over the initial three growing seasons for planted trees, after which time the majority of stakes can be removed.

3.9 PRUNING

Remove dead and broken branches. Care must be taken when removing branches to prevent further damage to the tree.
Prune back to a sound healthy branch with a clean cut, in accordance with good arboricultural practice. Final cuts shall be made as close as possible to the branch collar without damaging the collar, and apply wound treatment where necessary.
Dispose of all pruning waste off site.

Shrubs and Ground Cover

3.10 OPERATIONS - SHRUBS AND GROUND COVER

Maintain planting beds to establish good plantings, and achieve a high level of lush vegetation with visual impact. Maintenance shall include weed control, watering and fertilising. Ground cover plants should grow to fully cover the ground and thus reduce weed growth and maintenance.
Maintain planting beds to a neat and tidy appearance to at least the same condition as at Practical Completion.

3.11 TRIMMING

Undertake regular trimming of shrubs to maintain the following aspects:

- Removal of dead heads after flowering
- Removal of dead or old weak growth
- Cutting back to encourage growth vigour

Grass

3.12 GRASSED AREAS

Protect and maintain grassed areas to produce an even sward of grass at a uniform height and healthy colour by watering, mowing and spraying. Maintain turf to a good quality with a neat appearance.
Protect newly sown and grassed areas against traffic until the grass is well established.

If necessary top dress the turf with clean screened soil to eliminate minor hollows. Applications shall be less than 15mm at any one time, preferably applied in spring or autumn.
Protect and maintain all grassed areas by watering, mowing and spraying to maintain a good quality turf with a neat appearance.

3.13 GRASS CUTTING

Undertake grass cutting in dry conditions using a suitable mower with sharp blades. The first cut shall be after the grass has reached a height of 100mm. Cut off one third of the height of the grass.
Cutting thereafter shall be undertaken in accordance with the maintenance schedule. Refer to SELECTIONS.
Before each cut, remove all litter, stones and other debris so that a tidy appearance is maintained at all times.
Neatly trim edges to paths and around trees or structures each time the grass is mowed.

Completion

3.14 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal of all cuttings, trimmings, debris and elements from the site.

3.15 PROTECTION

Provide the following temporary protection of the finished work:
- safe, temporary fencing (suitable for within play areas) around re-grassed areas and planted areas until the end of the maintenance period.

4 SELECTIONS

4.1 MAINTENANCE SCHEDULE - TREES, SHRUBS, GROUND COVER

Maintenance Period Duration - 3 months from Practical Completion

The contractor is to undertake maintenance that includes:
Watering Trees and Shrubs - During dry periods water trees and shrubs twice a week as necessary. Monitor tree and shrub growth when watering for signs of stress and overwatering and adjust accordingly.

Watering Lawn (new areas only) - As per seed suppliers specifications

Weeding - Inspect for weed growth and hand weed as necessary.

Refirming - Inspect and refirm planting as required.

Supports - Check and repair/replace tree stakes and ties.

Replacements - Replace dead or damaged plants.

Pruning - Prune newly planted trees if required and any other remedial tree work.

Detailing - Deadhead, tidy, groom and prune plants as necessary.

Mulch - Inspect and top up mulch as required.

Mow and Trim Lawn (new areas only) - Mow and trim lawn as required and re-level with soil and re-sow any dead or dying patches.

Site Inspection prior to the end of maintenance period with Contract Administrator - Includes assessment and replacement of plants and to identify reasons for dead, dying or diseased plants, treatment of pest and/or diseases accordingly.

8430 FENCES & GATES

1 GENERAL

This section relates to fencing and gates.
It includes;

- Timber post and chain gate
- Timber bollards

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

FSC	Forest Stewardship Council
PEFC	Programme for the Endorsement of Forest Certification

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 1163	Cold formed structural steel hollow sections
NZS 3104	Specification for concrete production

Warranties

Requirements

1.3 QUALIFICATIONS

Workers to be experienced, competent trades people familiar with the materials and techniques specified.

1.4 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Quality control and assurance

1.5 INSPECTIONS

Notify the Contract Administrator for inspection of the following:

- Set out of fence line prior to commencing construction
- Excavation of foundation prior to post embedment.
- Completion of work.

Performance

1.6 DESIGN PARAMETERS WIND - DESIGN BY CONTRACTOR

Design the installation to the manufacturer's requirements and as appropriate for the project wind design stated in the general section 1220 PROJECT.

2 PRODUCTS

Materials

2.1 TIMBER BOLLARDS

Bollards as per the drawings (L801)

Components

2.2 NAILS, HINGES & LATCHES

All nails, hinges, latches and hardware hot dip galvanized.

2.3 CONCRETE

Concrete as per the drawings (L801)

2.4 BOLLARD CHAIN

Hot Dipped Galvanised Chain Link as per the drawing L802.

2.5 CORROSION RISKS

For exterior timber, timber in damp areas and timber subject to occasional wetting, use only stainless steel (or equivalent) fixings and components.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE AND HANDLING

Take delivery of materials and goods and store on site and protect from damage.
Move/handle goods in accordance with manufacturer's requirements.
Reject and replace goods that are damaged or will not provide the required finish

Installation/application

3.2 STANDARDS AND TOLERANCES

Refer to the general section CONSTRUCTION for general requirements.

3.3 EXCAVATIONS

Excavate by auguring to the dimensions detailed on the drawings. Driving of posts will not be accepted.

3.4 POST EMBEDMENT

Embed posts with a minimum of 100mm clearance between the base of the excavation and bottom of the post.
Place concrete under and around the post and compact by tamping or vibrating. Ensure the posts are set vertical and temporarily prop for at least two days after placement of concrete.

3.5 TIMBER BOLLARDS

Set up vertically and true to line and level. Install at 1.5m spacing without chains and 3.6 metre spacing with chain.

3.6 TOLERANCES

Posts shall not deviate by more than 30mm from the vertical over the height of the post.

3.7 REINSTATE

Ensure all surfaces affected by the works are reinstated to pre-construction condition (e.g. topsoiled and grassed).

Completion

3.8 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused and temporary materials and elements from the site.

3.9 DEFECTIVE OR DAMAGED WORK

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Adjust operation of equipment and moving parts not working correctly. Leave work to the standard required for following procedures.

4 SELECTIONS

Where in SELECTIONS, a material, component or accessory is named by brand, manufacturer or model number; substitutions are not permitted unless otherwise agreed.

Ground Floor, 236 Hereford Street,
Christchurch Central, Christchurch 8011

RUSSELL CEMETERY EXTENSION - STAGE 1

LONG BEACH ROAD, RUSSELL

LANDSCAPE ARCHITECTURAL DRAWING SET

FOR: CONSTRUCTION

DATE: 26 JUNE 2025

DRAWINGS

SURVEYED	BEM	19.12.2023
DESIGNED		
DRAWN	JGF	19.12.2023
CHECKED		
APPROVED		

APPROVED DATE

REV #	CHANGES	CHKD	DATE
0	ORIGINAL ISSUE	RDC	20.12.23
1	ADDITIONAL SURVEY CAPTURED	JGF	12.01.24
2	ADDITIONAL SURVEY DIGITISED	JGF	25.01.24
3	EXCAVATED WALKWAY IN EXPANSION AREA	JGF	10.06.24

NOTES:

1. COORDINATES ARE IN TERMS OF NZGD2000, MT EDEN CIRCUIT. THE ORIGIN OF COORDINATES ARE: "SM 1108 SO 58877" GD CODE: **C8EE**. **979587.239mN 342279.949mE**
2. LEVELS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016. THE ORIGIN OF LEVELS ARE: "SM 1108 SO 58877" GD CODE: **C8EE**. **RL=58.37m**
3. AERIAL IMAGE FLOWN AND GENERATED BY SURVEY WORX ON 19-12-2023.
4. CALCUALTED BOUNDARY PARCELS SHOWN FOR PRIMARY LOTS. ADJACENT LOTS HAVE XML PARCELS ARE SHOWN. BOUNDARY INFORMATION SUBJECT TO SURVEY.
5. CONTOURS ARE SHOWN AT 0.2m INTERVALS.

COPYRIGHT:

SURVEY EQUIPMENT USED:
INSTRUMENT: TRIMBLE ROBOTIC S8 1" / LEICA TS16 3"
GPS: TRIMBLE R6/R8 SYSTEMS / LEICA GPS08 PLUS
PRECISE LEVELLING: TRIMBLE DINI Series 0.3mm DIGITAL
VERTICAL PLUMMING: FOIF DZJ2 LASER PLUMMIT
LASER SCANNER: LEICA RTC360 / LEICA P30

SURVEY WORX
CONSTRUCTION & LAND SURVEYORS
mobile +64 021 824 084
office +64 09 948 6491
www.surveyworx.co.nz
1016A Great South Road, Penrose Auckland, NZ

NZIS REGISTERED PROFESSIONAL SURVEYOR
MEMBER OF: Survey and Spatial New Zealand

CLIENT
HOSKIN CIVIL LIMITED

PROJECT
RUSSELL CEMETERY EXPANSION

TITLE
AERIAL SURVEY

SCALE	1:250 (A1)	1:500 (A3)
DRAWING No	SHEET	REVISION
8674-805-001	1 of 1	3

KEY
CALCUALTED PROPERTY BOUNDARIES
XML PROPERTY BOUNDARIES

SCALEBAR (m) 0 5 10 25
SCALE | 1:500 @A3 | 1:250 @A1|

PLOT DATE: 6/10/2024 4:41 pm

FILE PATH: C:\ONEDRIVE\ONEDRIVE - SURVEY WORX LIMITED\8674 - RUSSELL CEMETERY EXPANSION, LONG BEACH ROAD, RUSSELL\SURVEY\805_UAV\8674-805-001 - AERIAL SURVEY - RUSSELL CEMETERY EXPANSION - 19-12-2023.DWG

RUSSELL / KORORAREKA CEMETERY EXTENSION CONCEPT PLAN

PROPOSED INTERMENT OPTIONS AND CAPACITY LEGEND

LB **LAWN BURIAL (headstone or plaque)**
(Area A = 110 single interment plots, Area B = 32 single interment plots)

LA **LAWN ASH (plaque only)**
(Area A = 205 first interment plots, Area B = 130 first interment plots)

GA **GARDEN OF REMEMBRANCE ASH (plaque only)**
29 interment plots

NA **NATIVE AREA ASH INTERMENT (name/dates only on combined sign)**
136 native ash interments along path

M **MEMORIAL WALL (small plaque only, no interment)**
approximately 60 memorial plaques

R **EXISTING RSA AREA (LAWN BURIAL AND ASH INTERMENTS)**
(remaining capacity - 64 Burial, 44 Ash)

K **KOIWI (RE-BURIAL AREAS) WITH POU WHENUA**

CONCEPT PLAN LEGEND

- land parcels
- concept plan site extent
- cemetery extension area
- 1m contours
- existing concrete beams / berms
- proposed concrete beams / berms
- interceptor drain
- existing trees / hedge
- native trees to be relocated
- proposed tree planting
- proposed low-growing <1m native ash area planting
- proposed low-growing <1m memorial garden planting
- proposed / existing seat

1. remove hedge and relocate existing memorial seat
2. proposed gravel pathway through native ash area
3. extend gravel carpark (where required) to accommodate space for a maintenance vehicle access route, 10 no. standard carparks and 2 no. accessible
4. install removable and and standard FNDC timber bollards. Iwi to paint 16 no. bollards.
5. remove 28.5m section of existing steel post and chain fence and relocate bin to where number is shown
6. install bollard and chain gate and install rocks to stop vehicles entering private land. Form soil bund from site-won soil and plant with natives.
7. install bespoke timber unit to conceal 2x 25L water tanks and install cemetery sign with map
8. maintenance area / soil stockpile
9. dense, low, native boundary planting on adjacent land
10. remove section of RSA fence to improve maintenance access

AREA B LA
AREA B LB
AREA A LB
AREA A LA
MAINTENANCE VEHICLES ONLY
M
K
NA
GA
R
TO LONG BEACH
LONG BEACH ROAD
TO RUSSELL TOWN CENTRE
N
SCALE 1:450 @ A3
0 2 4 6 8 10M

LEGEND

- Cemetery extent
- Property boundaries
- Stage 1 site boundaries
- Proposed low growing vegetation (refer to L803-2 and L803-3)
- Hedge to be removed
- Tree to be relocated
- Proposed relocated tree location (refer to L803-1)
- Existing tree
- Existing swale
- Existing steel bollards and strip footing to be removed
- Proposed concrete mowing strip and bollards with rope (refer to L801)
- Proposed removable bollards (refer to L802-3)
- Proposed chain gate and bollards (refer to L802-1 and L802-2)
- Proposed boulders to restrict vehicles entering private land
- Proposed extension to car park / road surfacing
- Pou Whenua and Kōiwi (reburial area)
- Proposed concrete lawn burial beams (refer to L804)
- Proposed concrete lawn ash beams (refer to L805)
- Furniture / assets to be relocated
- Relocated memorial seat on concrete pad
- Regrass area
- Excess soil mounding and planting and re-use of existing mulch.
- Future cemetery works including concrete beams, interment areas or carparks (not part of this contract)

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the Setout Plan (L102), Demolition Plan and Earthworks Plans (L103) and Levels Plan (L104) for further information.
2. The contractor shall be responsible for locating all underground and overhead services and for protecting the same for the duration of the construction works.
3. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
4. All adjacent burial plots and monuments, fences, trees and hardstand elements not scheduled for removal are to be protected for the duration of the contract works as per the conditions of the consent. The contractor will be required to make good any damage to these elements at their cost.
5. The site is to be fenced off from public access for the duration of the works and signage advising the public of the duration of the works and alternative access routes shall be displayed clearly on site. This signage is to be confirmed with the Council's Communication Team and will be arranged by the Contractor.
6. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

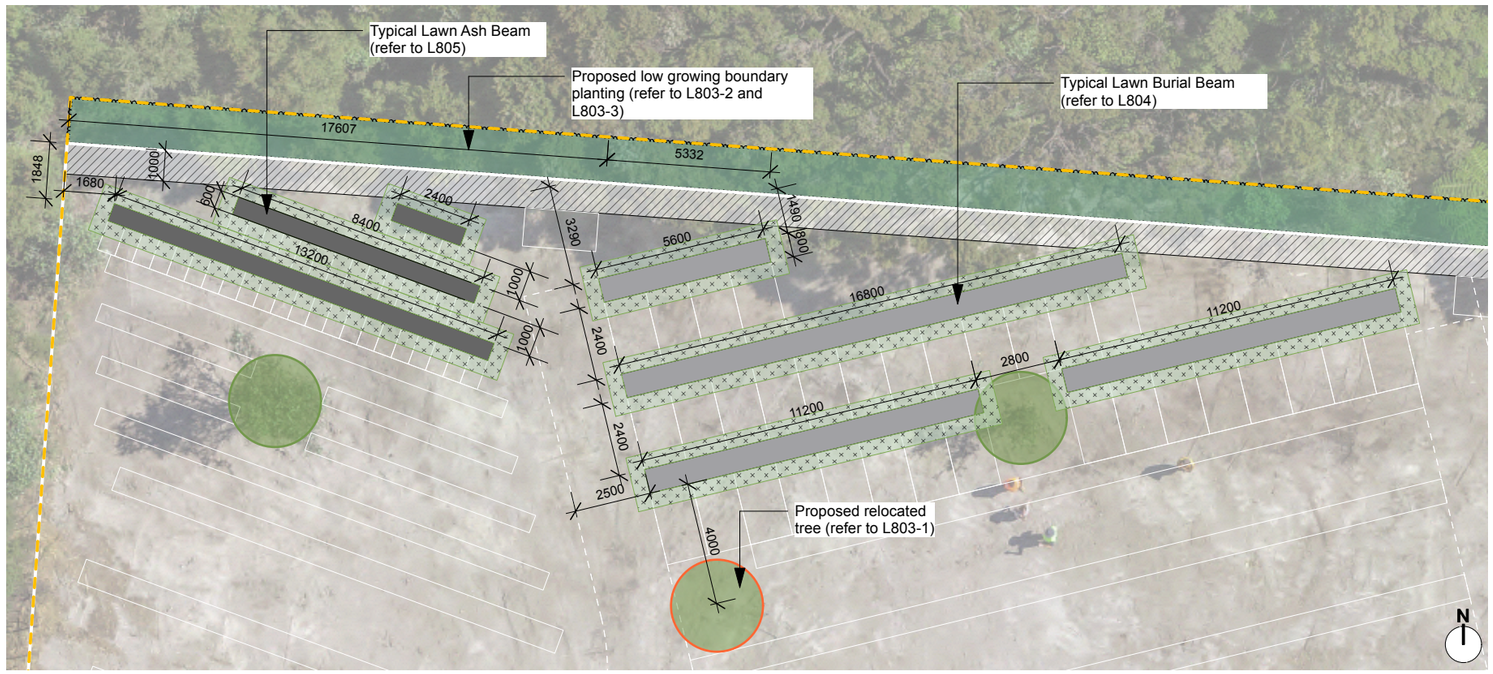
PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
General Arrangement Plan Stage 1

PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L101
DRAWN	MS/LO
CHECKED	LO
SCALE	1:450

N

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



1 Concrete Beam Setout Plan
Scale: 1:200

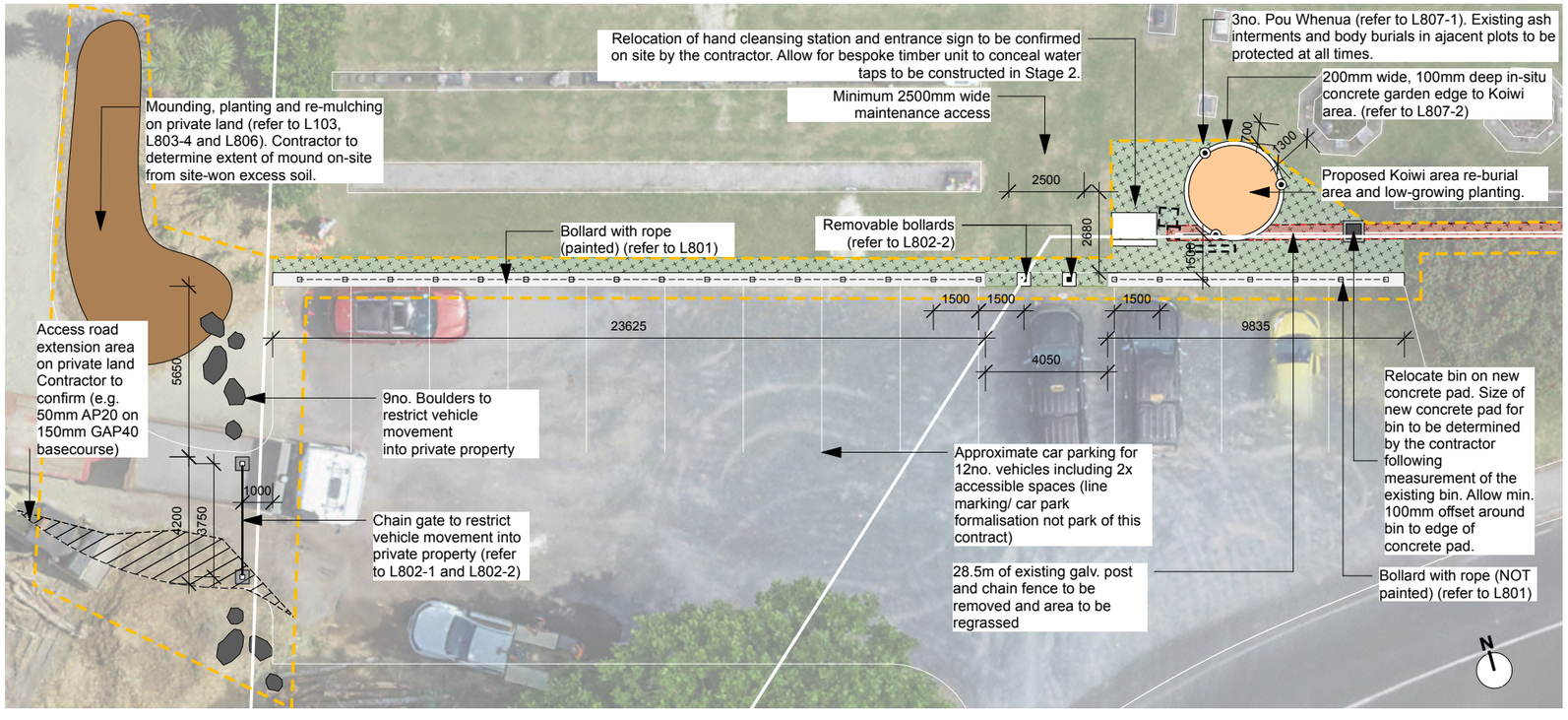
LEGEND

- Cemetery extent
- Property boundaries
- Stage 1 site boundaries
- Proposed low growing vegetation (refer to L803-2 and L803-3)
- Hedge to be removed
- Tree to be relocated
- Proposed relocated tree (refer to L803-1)
- Existing tree
- Existing swale
- Existing steel bollards and strip footing to be removed
- Proposed concrete mowing strip and bollards with rope (refer to L801)
- Proposed removable bollards (refer to L802-3)
- Proposed chain gate and bollards (refer to L802-1 and L802-2)
- Proposed boulders to restrict vehicles entering private land
- Proposed extension to car park / road surfacing (refer to L806)
- Proposed Kōiwi (reburial area)
- 3no. proposed pou whenua
- Proposed concrete lawn burial beams (refer to L804)
- Proposed concrete lawn ash beams (refer to L805)
- Seat / bin / hand cleansing station or sign to be relocated
- Relocated bin
- Relocated hand cleansing station and sign
- Relocated memorial seat on concrete pad
- Regrass area
- Excess soil mounding
- Future cemetery works including future interments concrete beams, or carparks (not part of this contract)

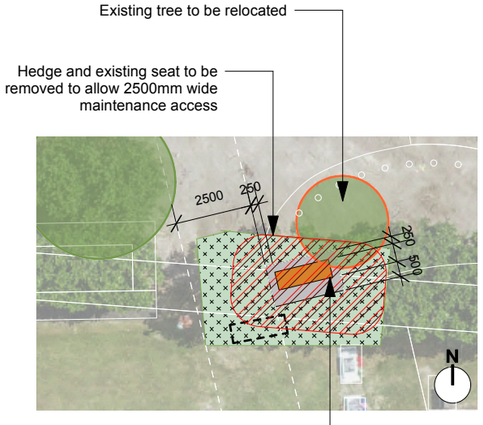
NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the General Arrangement Plan (L101) for further information.
2. The contractor shall be responsible for locating all underground and overhead services and for protecting the same for the duration of the construction works.
3. The site is to be fenced off from public access for the duration of the works and signage advising the public of the duration of the works and alternative access routes shall be displayed clearly on site. This signage is to be confirmed with the Council's Communication Team and will be arranged by the Contractor.
4. Refer to the Landscape Specification for more information



3 Car Park Setout Plan
Scale: 1:200



2 Memorial Seat Setout Plan
Scale: 1:200

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

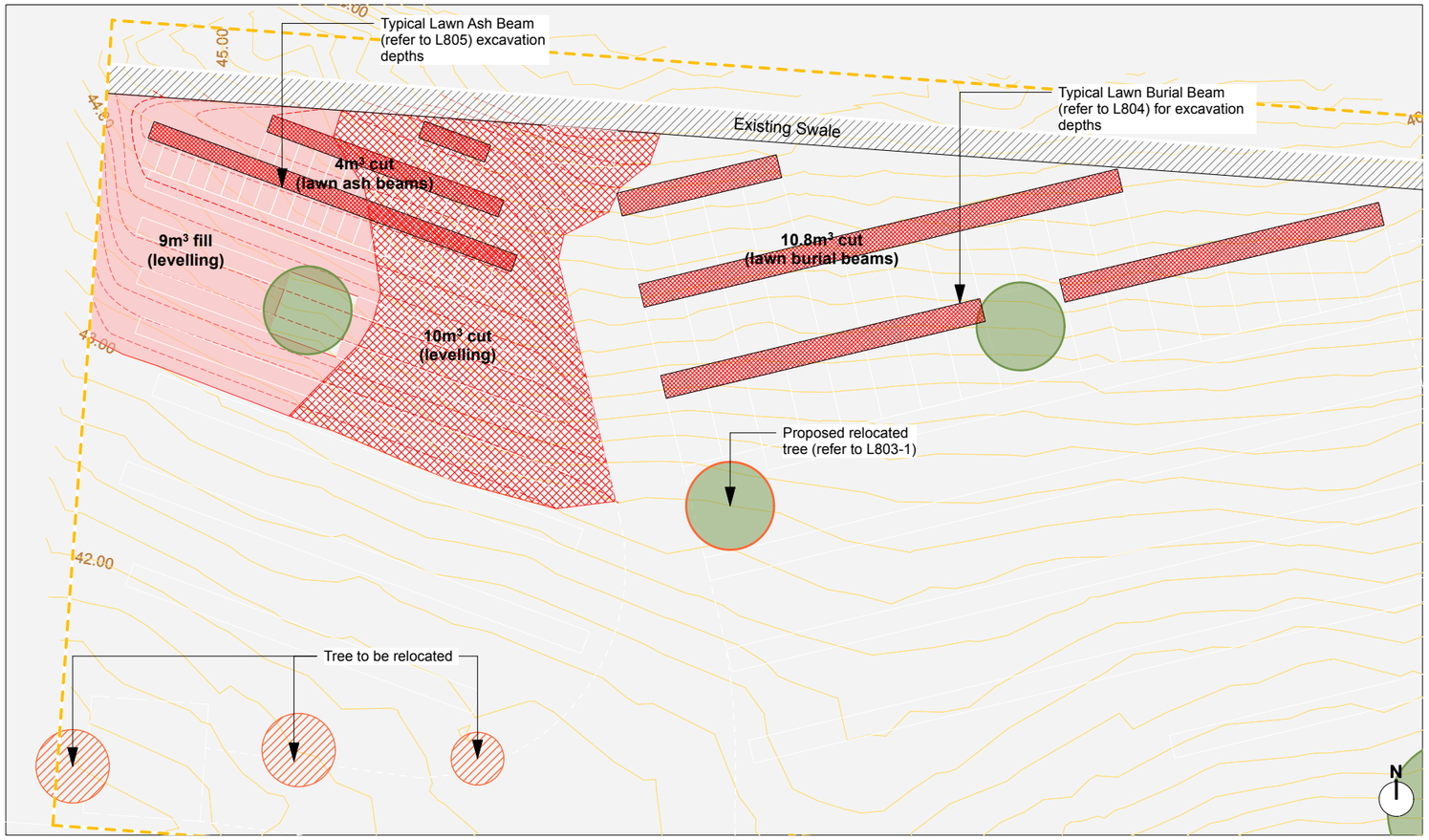
CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Setout Plans

PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L102
DRAWN	MS/LO
CHECKED	LO
SCALE	1:200

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



1 Cemetery Extension Area Demolition and Earthworks Plan
Scale: 1:200

INDICATIVE EARTHWORKS TOTAL: (solid measure)

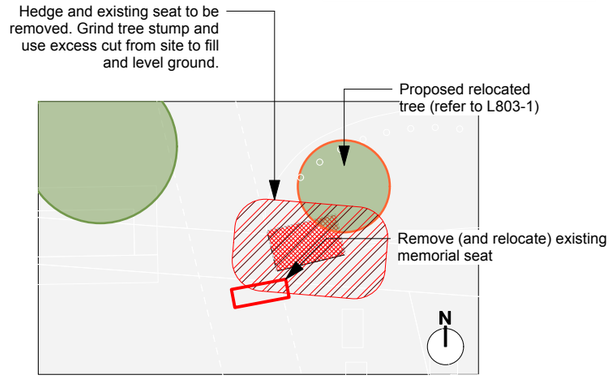
Topsoil / Soil:
- Excavated: c30.8m³

- Excess fill for regrading upper cemetery extension area: c10.5m³

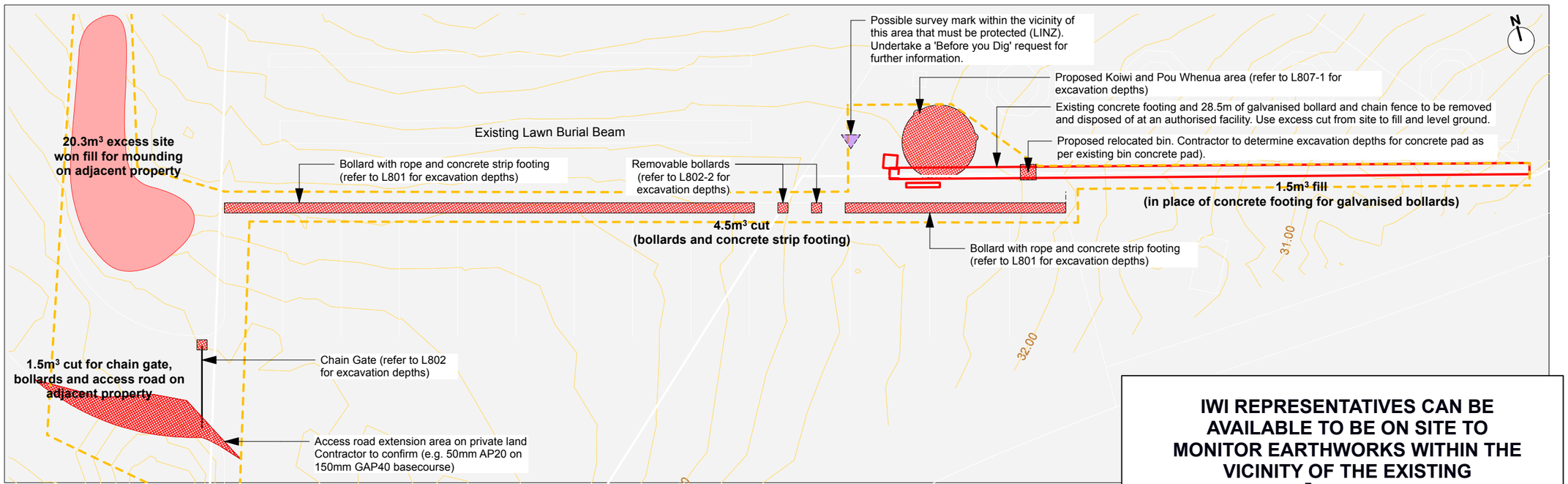
- Excess fill for mounding on adjacent property near carpark c20.3m³

KEY

- Stage 1 site boundary
- Existing contours
- Proposed contours
- Hedge to be removed
- Tree to be relocated
- Proposed relocated tree
- Existing tree (protect during earthworks)
- Spray off grass and excavate to achieve desired levels (levelling of ground)
- Fill to achieve desired levels (levelling of ground)
- Spray off grass and excavate to achieve desired levels for new structures
- Structure to be removed



3 Seat Demolition and Earthworks Plan
Scale: 1:200



2 Car Park Demolition and Earthworks Plan
Scale: 1:200

IWI REPRESENTATIVES CAN BE AVAILABLE TO BE ON SITE TO MONITOR EARTHWORKS WITHIN THE VICINITY OF THE EXISTING KŌIWI AREA.

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the General Arrangement Plan (L101), Setout Plans (L102) and the Demolition/Earthworks Plan (L103).
2. The contractor shall be responsible for locating all underground and overhead services and shall be responsible for protecting these for the duration of the construction works.
3. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
4. All demolished material is to be sent for recycling where possible and when not required to be repurposed on site (e.g. galvanised bollards). All stripped topsoil shall be stockpiled on site for later reuse outside of the dripline of existing trees. Any excavated fill/soil material removed from site shall be disposed of to an authorised facility.
5. All adjacent burial plots and monuments, trees and hardstand elements not scheduled for removal are to be protected for the duration of the contract works. The contractor will be required to make good any damage to these elements at their cost.
6. The site is to be fenced off from public access for the duration of the works and signage advising the public of the duration of the works and alternative access routes shall be displayed clearly on site. This signage is to be confirmed with the Council's Communication Team and will be arranged by the Contractor.
7. All works are to proceed under an Accidental Discovery Protocol (ADP). The Contractor shall liaise with the Far North District Council (FNDC) to ensure that all personnel on site are aware of the ADP process and associated requirements. In the unlikely event that any subsurface archaeological features or material (such as human remains, kōiwi, artefacts, or structural remains) are uncovered during earthworks:
All work in the immediate area shall cease immediately. Work may not recommence in the affected area until authorised by the archaeologist and, if required, relevant authorities.

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

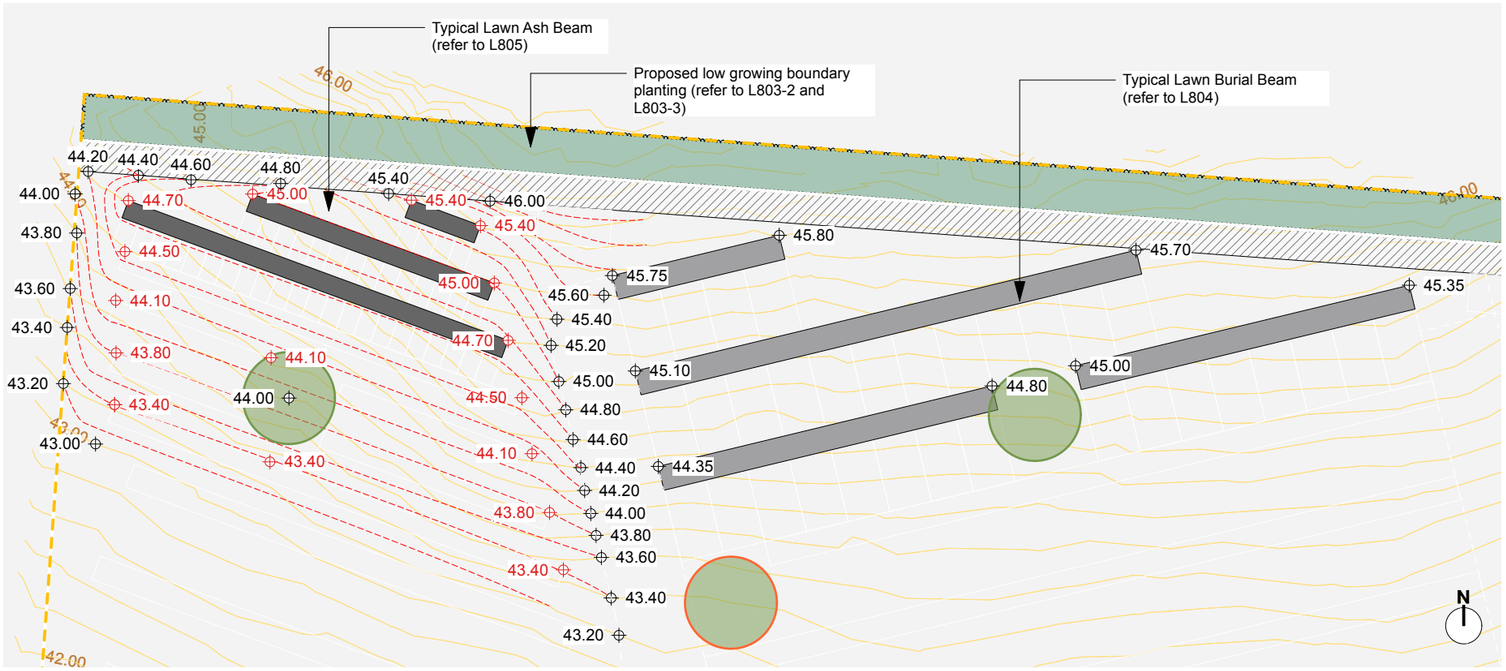
CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Demolition and Earthworks Plans

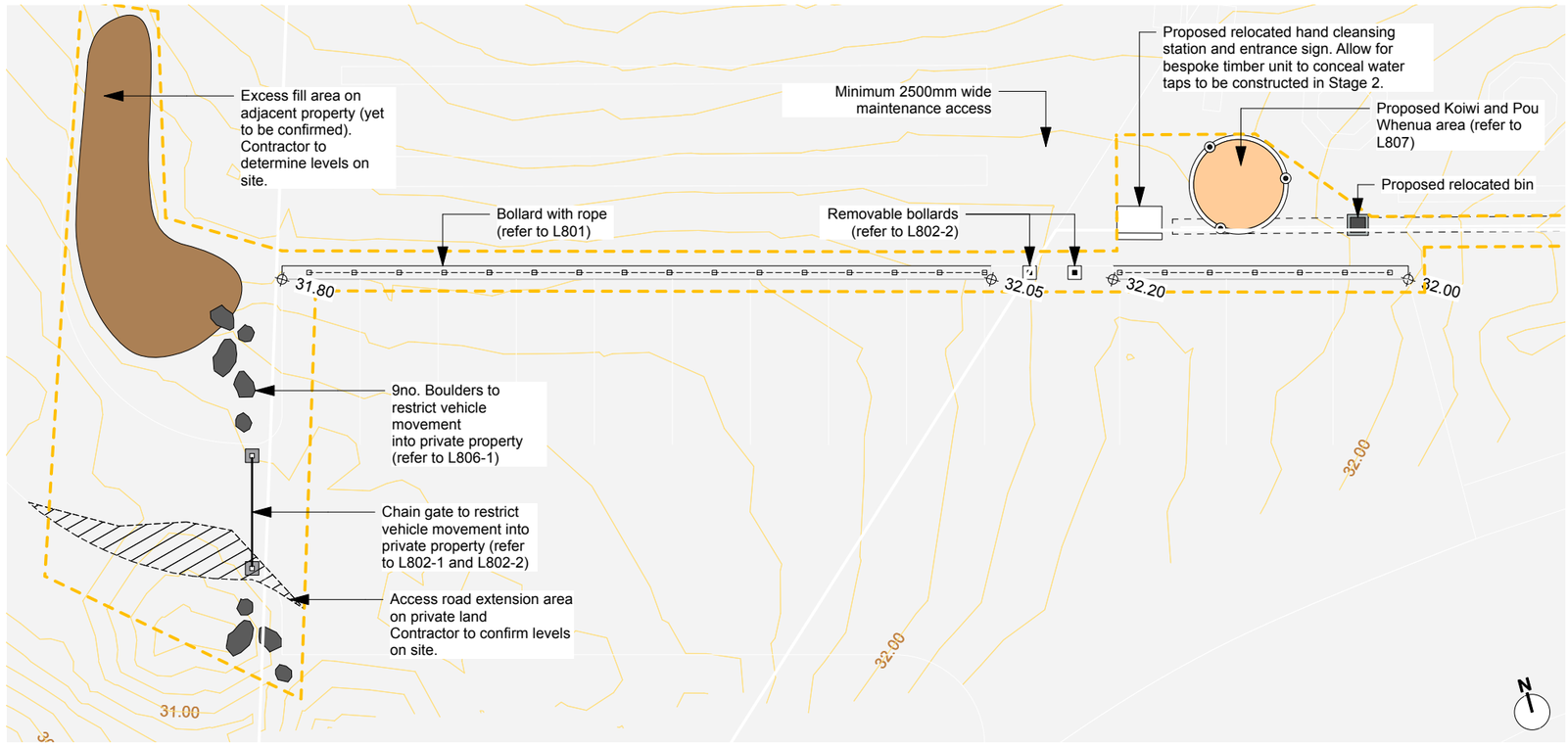
PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L103
DRAWN	MS/LO
CHECKED	LO
SCALE	1:200

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



1 Cemetery Extension Area Levels Plan

Scale: 1:200



2 Car Park Levels Plan

Scale: 1:200

FINAL LEVELS TO BY CONFIRMED ON SITE BY THE CONTRACTOR, HOSKIN CIVIL AND FAR NORTH DISTRICT COUNCIL

LEGEND

- Cemetery extent
- Property boundaries
- Stage 1 site boundaries
- Proposed low growing vegetation (refer to L803-2 and L803-3)
- Proposed relocated tree refer to L803-1)
- Existing tree
- Existing swale
- Proposed concrete mowing strip and bollards with rope (refer to L801)
- Proposed removable bollards (refer to L802-3)
- Proposed chain gate and bollards (refer to L802-1 and L802-2)
- Proposed boulders to restrict vehciles entering private land (refer to L806-1)
- Proposed extension to car park / road surfacing (refer to L806)
- Proposed Kōiwi (reburial area) and pou whenua
- Proposed relocated bin
- Proposed concrete lawn burial beams (refer to L804)
- Proposed concrete lawn ash beams (refer to L805)
- Future cemetery works including concrete beams, interment areas or carparks (not part of this contract)
- Existing spot heights
- Proposed spot heights
- Existing contours
- Proposed contours

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the General Arrangement Plan (L101), Setout Plans (L102) and the Demolition Plan and Earthworks Plan (L103).
2. The contractor shall be responsible for locating all underground and overhead services and shall be responsible for protecting these for the duration of the construction works.
3. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
4. All adjacent burial plots and monuments, trees and hardstand elements not scheduled for removal are to be protected for the duration of the contract works. The contractor will be required to make good any damage to these elements at their cost.
5. The site is to be fenced off from public access for the duration of the works and signage advising the public of the duration of the works and alternative access routes shall be displayed clearly on site. This signage is to be confirmed with the Council's Communication Team and will be arranged by the Contractor.
6. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Levels Plans

PROJECT STATUS Detailed Design

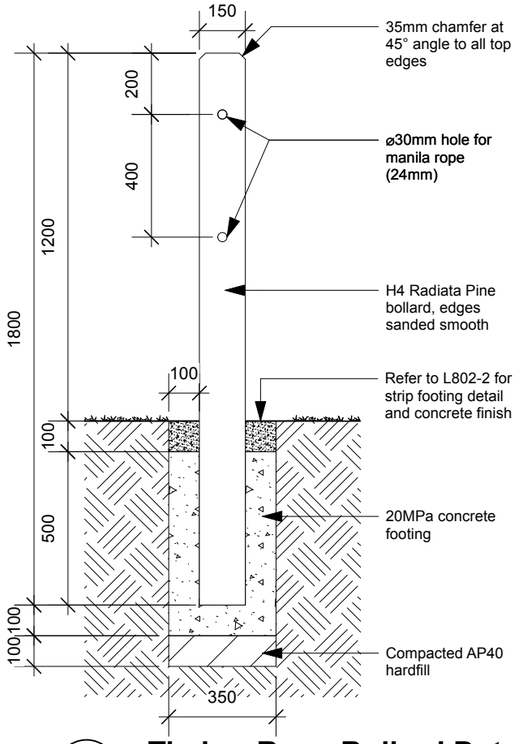
ISSUED FOR Construction

DWG NO. L104

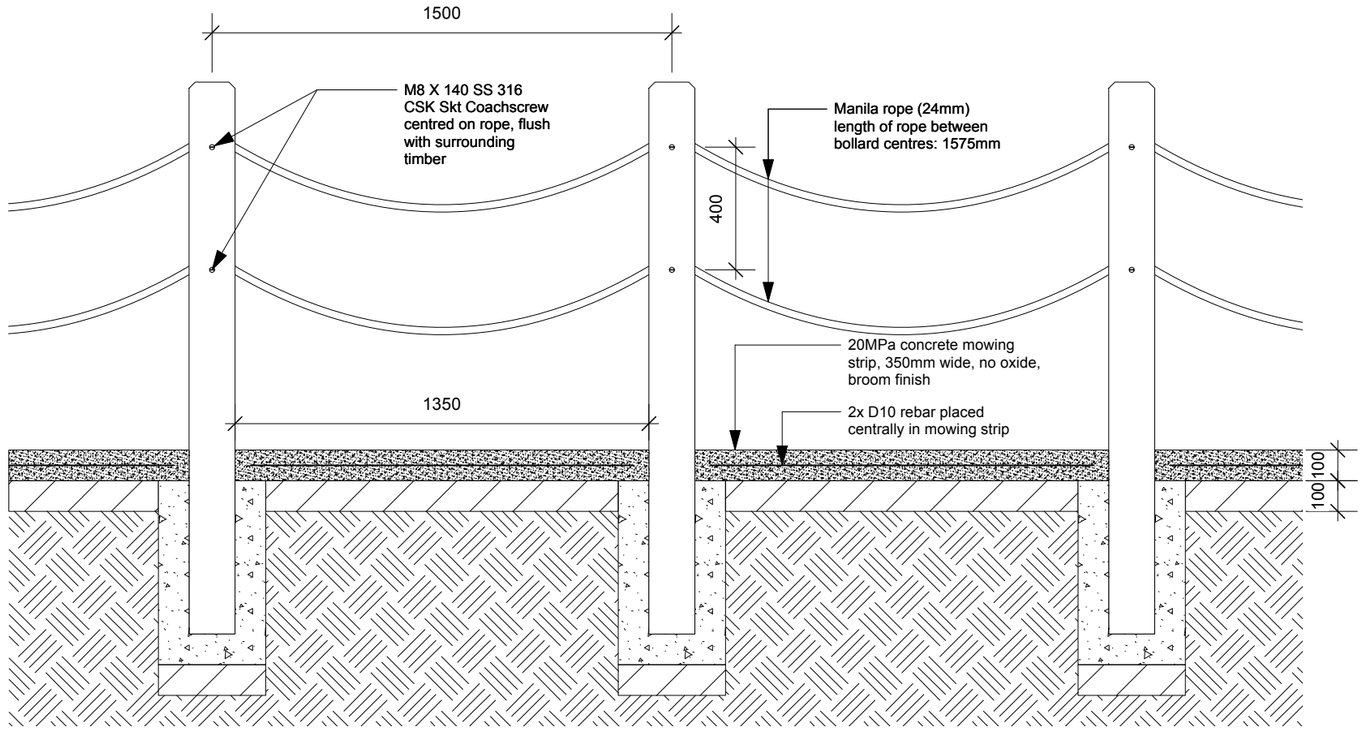
DRAWN MS/LO **CHECKED** LO

SCALE 1:200

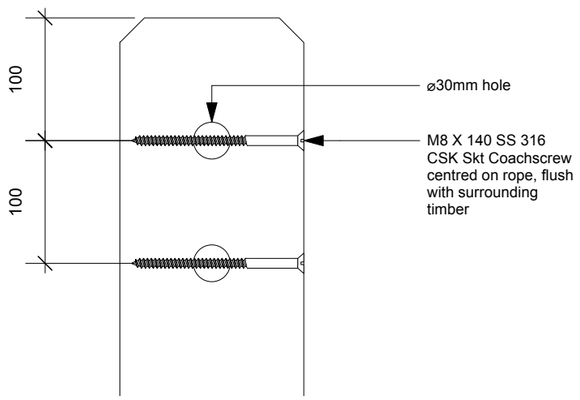
REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



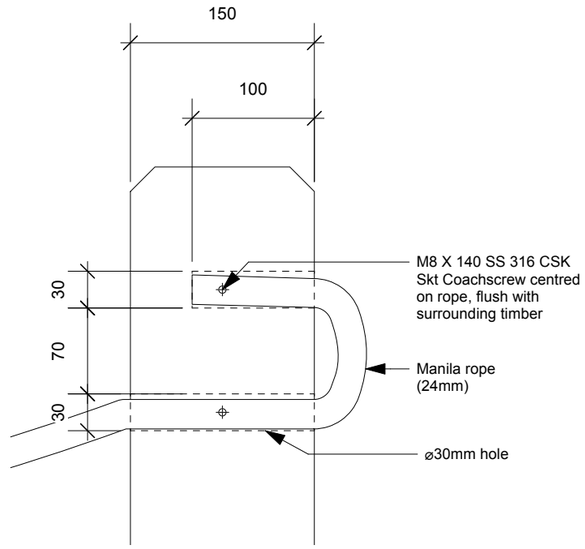
1 Timber Rope Bollard Detail
Scale: 1:20



2 Long Section: Timber Rope Bollard Detail
Scale: 1:20



3 Rope Fixing Detail
Scale: 1:5



4 End Bollard: Rope Fixing Detail
Scale: 1:5

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. All dimensions in millimetres.
2. Contractor is responsible for locating all underground services and the potential LINZ survey mark on site prior to comencing works and ensure that they are adequately protected.
3. Refer to the General Arrangement Plan (L101) and Setout Plans (L102)
4. All bollards be installed true upright and level.
5. All concrete to have a minimum strength of 20MPa.
6. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Bollard with Rope Details

PROJECT STATUS Detailed Design

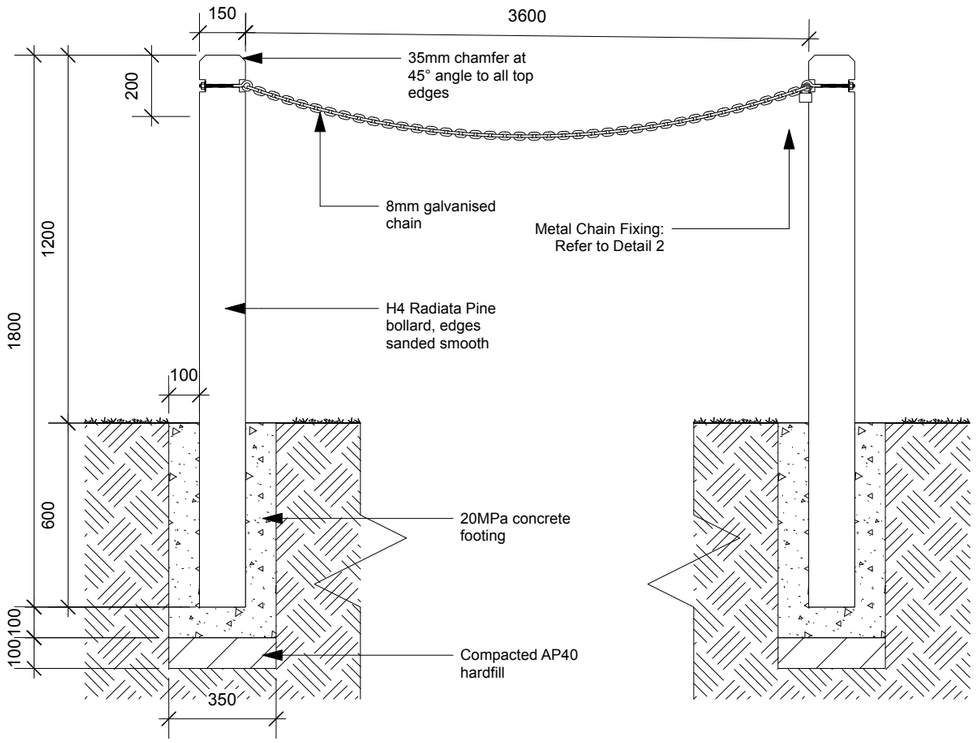
ISSUED FOR Construction

DWG NO. L801

DRAWN MS/LO **CHECKED** LO

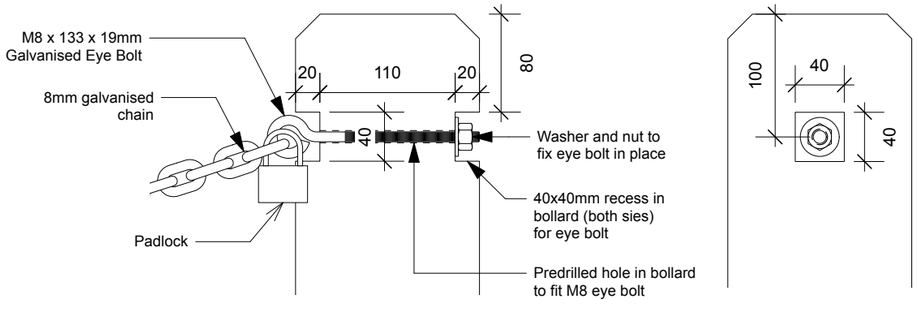
SCALE as shown

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



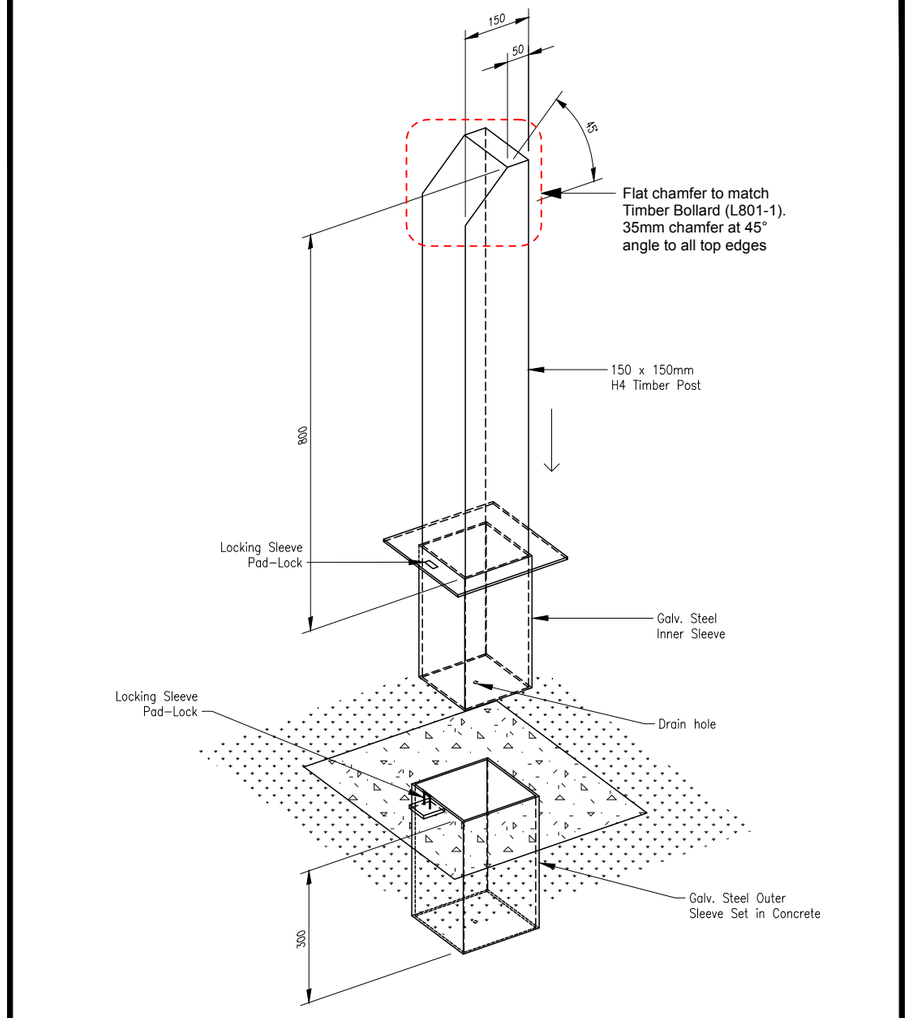
1 Metal Chain and Timber Bollard

Scale: 1:20



2 Metal Chain Fixing

Scale: 1:5



REMOVABLE BOLLARD DETAIL

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	58

3 FNDC Removable Bollard Detail

Scale: NTS

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. All dimensions in millimetres.
2. Contractor is responsible for locating all underground services on site prior to comencing works and ensure that they are adequately protected.
3. Refer to the General Arrangement Plan (L101)
4. All bollards be installed true upright and level.
5. All concrete to have a minimum strength of 20MPa.
6. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

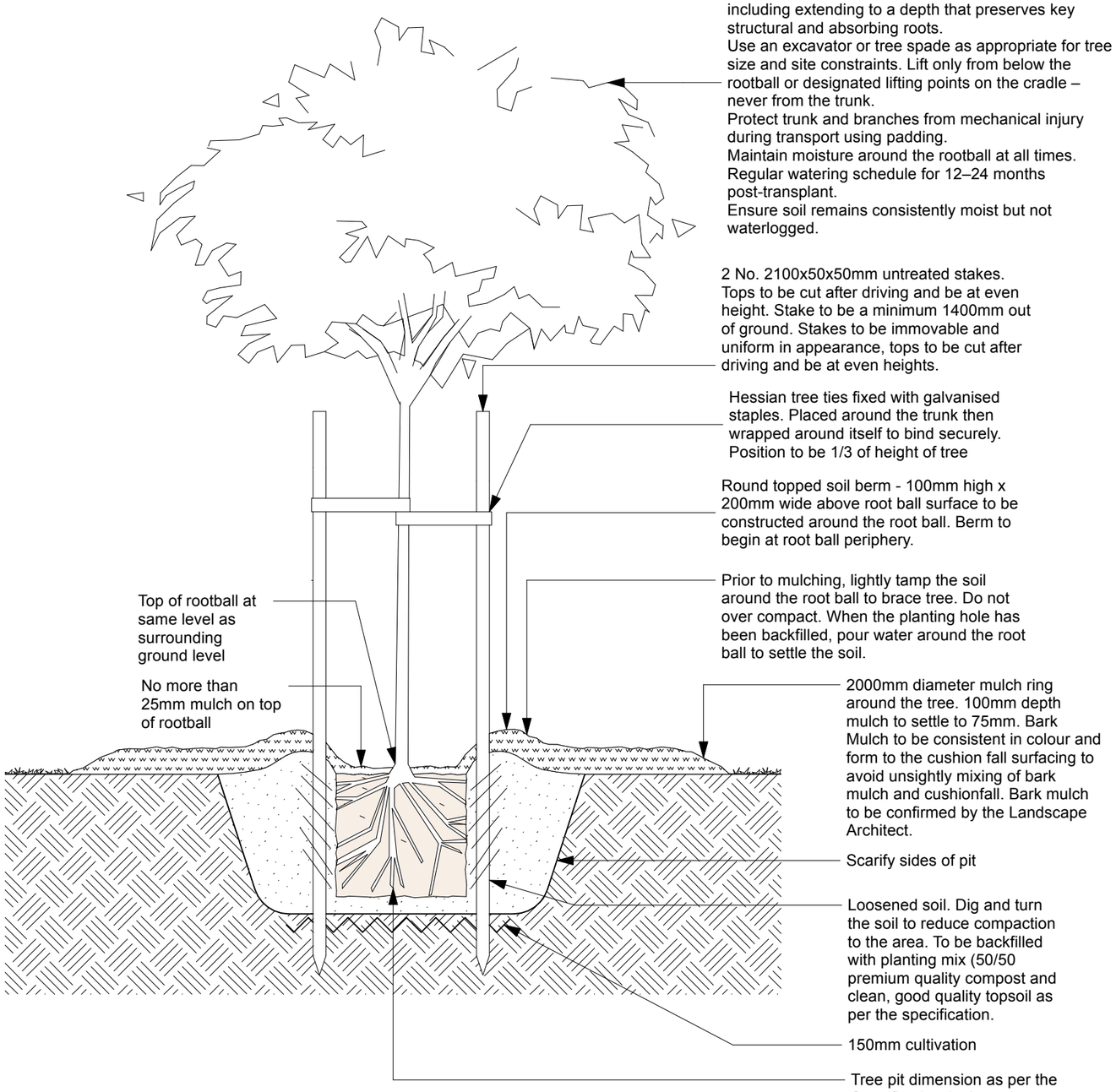
PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Chain Gate and Removable Bollard Details

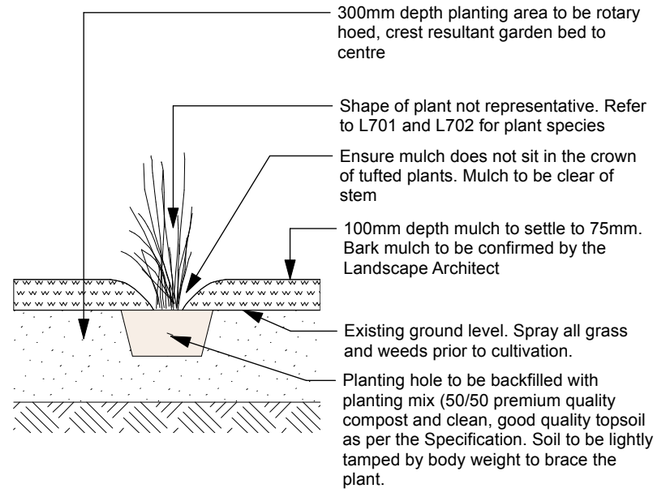
PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L802
DRAWN MS/LO **CHECKED** LO	
SCALE	as shown

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information

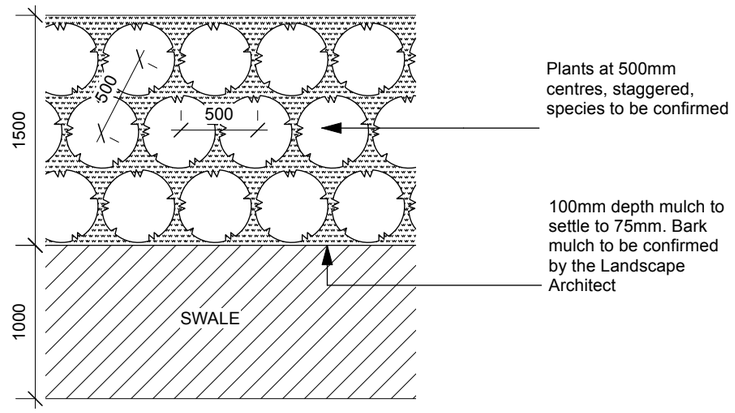
TRANSPLANTING OF TREES TO BE CONFIRMED BY HOSKIN CIVIL, A QUALIFIED ARBORIST AND FAR NORTH DISTRICT COUNCIL



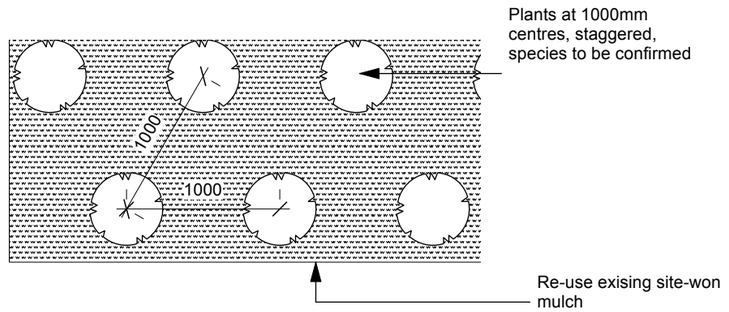
1 Relocated Site Tree Transplanting Detail
Scale: 1:20



2 Low Growing Planting Detail
Scale: 1:20



3 Low Growing Boundary Planting Detail
Scale: 1:40



4 Low Growing Bund Planting Detail
Scale: 1:40

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the General Arrangement Plan (L101), Setout Plan (L102), Demolition Plan and Earthworks Plans (L103) and Levels Plan (L104) and Planting Schedule (L806) for further information.
2. On-site planting layout to be approved by the Landscape Architect via video call prior to proceeding with planting. Lay out all plants as described in the details.
3. Plant selection is to be per the plant schedule
4. All tree pits are to be scarified, and backfilled after planting with a 50/50 mix of excavated topsoil and imported compost, and tamped down by foot to provide a lightly compacted final soil level.
5. All planting shall receive a dose of slow release fertiliser upon planting.
6. Cultivate all new planting area to 300mm depth generally and mix in 150mm depth premium quality compost. Crest resultant garden bed to centre and ensure sub-base is free draining.
7. All plants are to be well watered in following planting, with subsequent watering to be carried out as agreed by the client.
8. All transplanted trees to be double staked. Stakes to be upright, aligned parallel to predominant wind direction, and driven min. 400mm into firm, unmodified ground.
9. Disturbance to adjacent grass areas outside of the works area to be minimised, and all areas disturbed are to be recultivated/relevelled as per the Specification and seeded with grass immediately following completion of adjacent works.
10. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

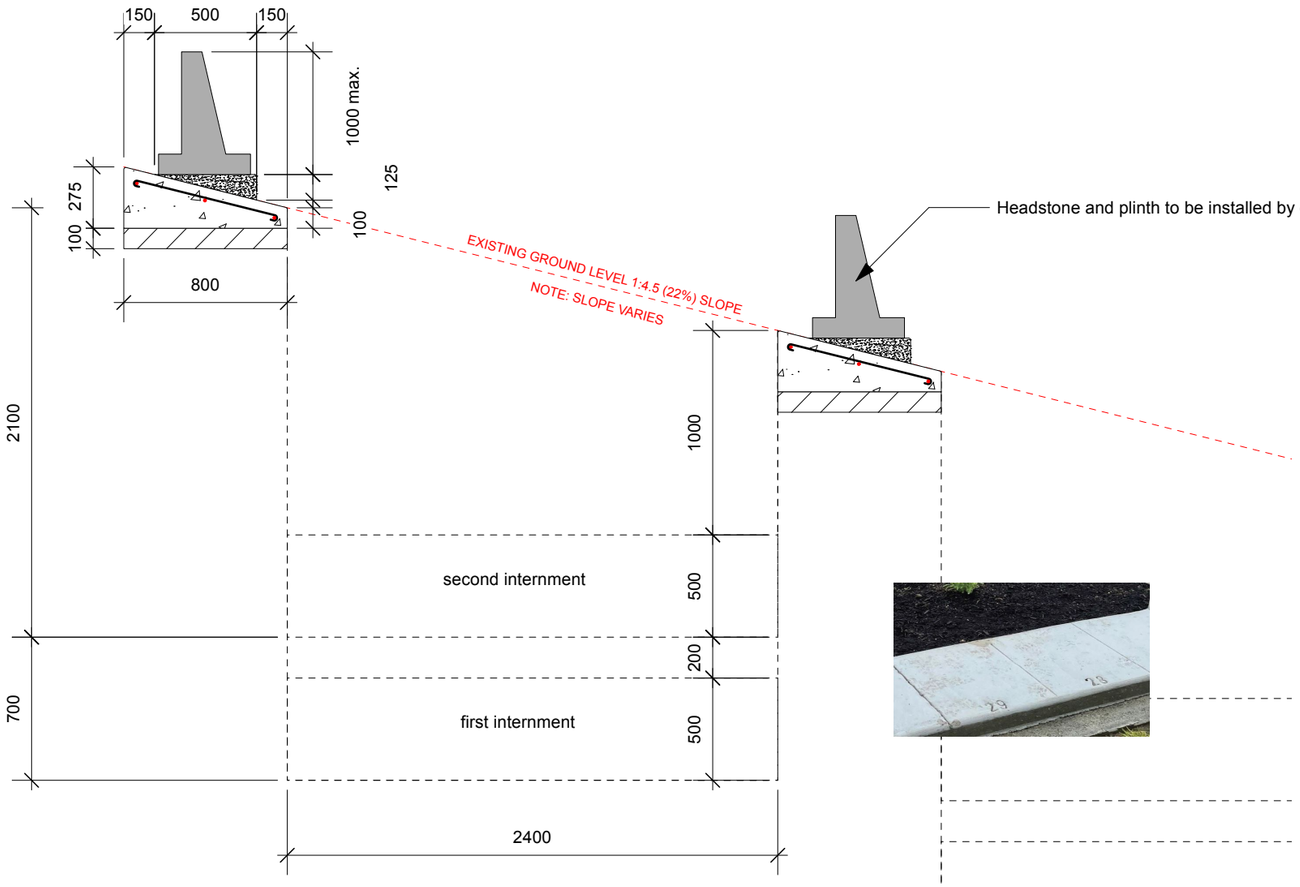
CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

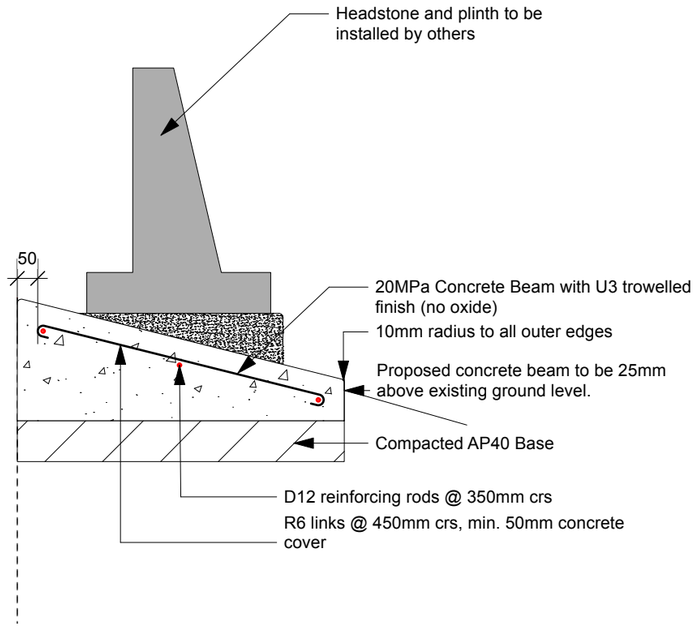
SHEET TITLE
Planting Details

PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L803
DRAWN	MS/LO **CHECKED** LO
SCALE	as shown

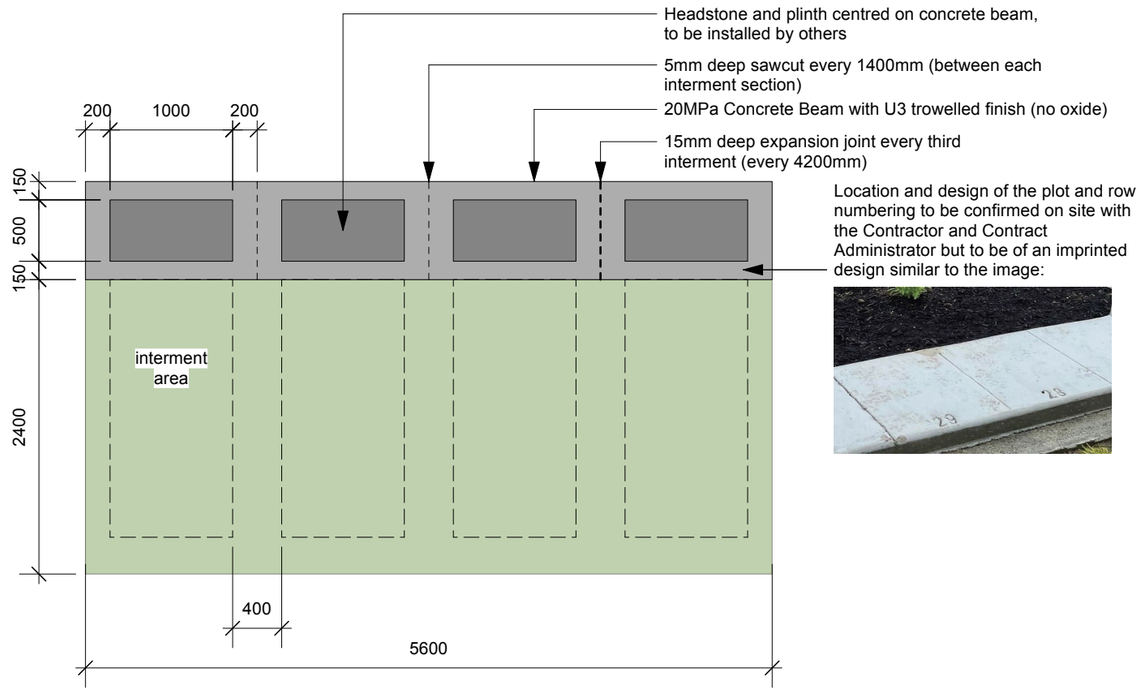
REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



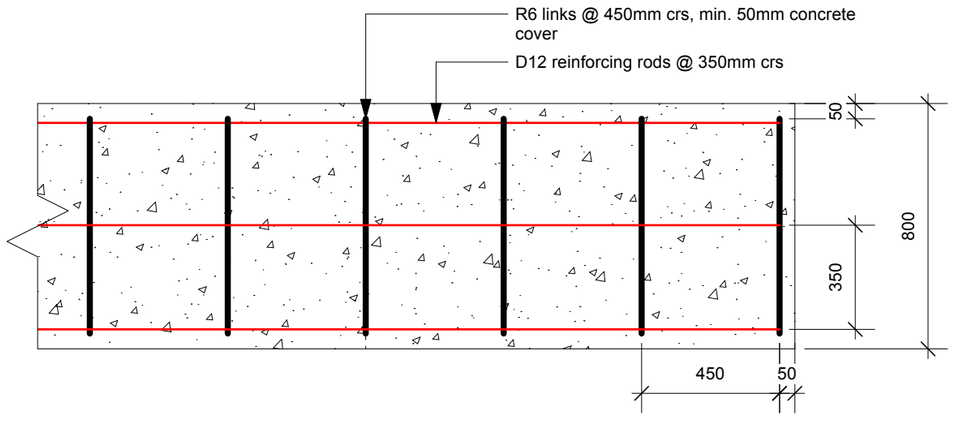
1 Typical Lawn Burial Concrete Beam Long Section
Scale: 1:30



2 Typical Lawn Burial Concrete Beam Section
Scale: 1:15



3 Lawn Burial Concrete Beam Plan
Scale: 1:50



4 Lawn Burial Beam Reinforcing Detail
Scale: 1:20

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. All dimensions in millimetres.
2. Refer also to the General Arrangement Plan (L101) and the Setout Plan (L102)
3. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
4. Boxing must be to the full depth of the concrete
5. All reinforcing to have min. 50mm concrete cover on all sides
6. Ensure the concrete does not dry out during the curing period
7. All the concrete to have a minimum strength of 20MPa and construction shall be in accordance with NZS 3109:1997
8. All concrete shall have U3 trowelled finish
9. All concrete shall have no oxide
10. Where ground level is inconsistent, high spots must be taken off and the ground evened out. Low spots back filled with existing excavation material before installing boxing
11. Final finishing, including floating and trowelling, is to provide for a true and level surface and clean edge
12. Ensure all disturbed areas of grass are reseeded upon completion of beam formation
13. All steel reinforcement shall comply with AS/NZS 4671
14. Ensure all disturbed areas of grass are reseeded upon completion of beam formation
15. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

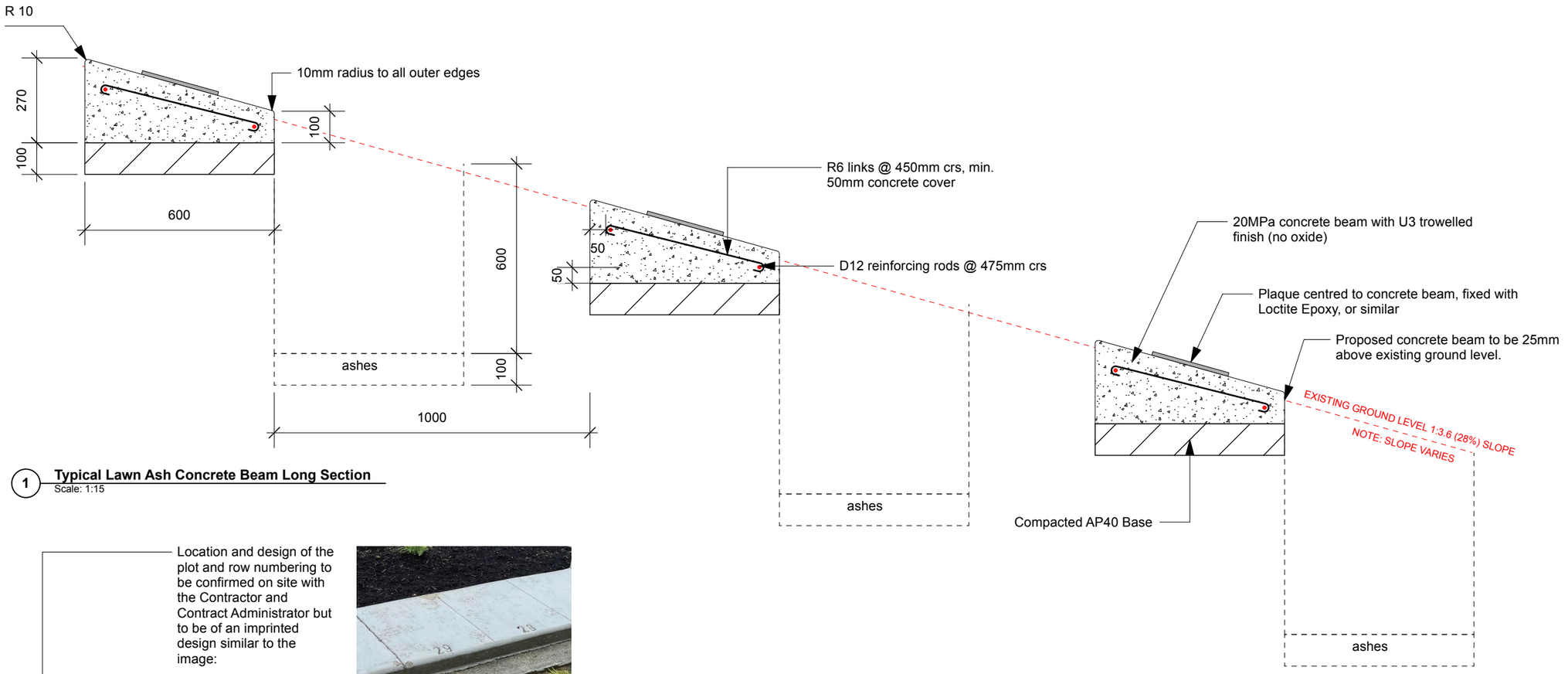
PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Typical Lawn Burial Beam Details

PROJECT STATUS	Detailed Design
ISSUED FOR	Construction
DWG NO.	L804
DRAWN	MS/LO
CHECKED	LO
SCALE	as shown

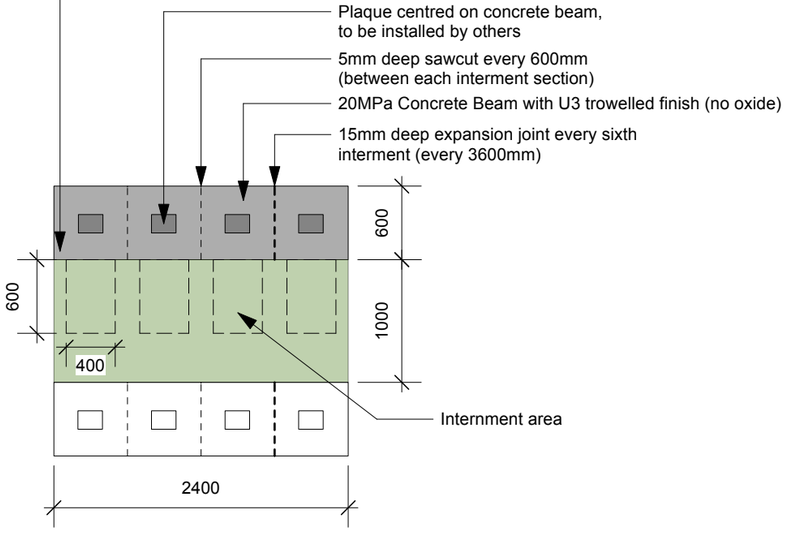
N

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information

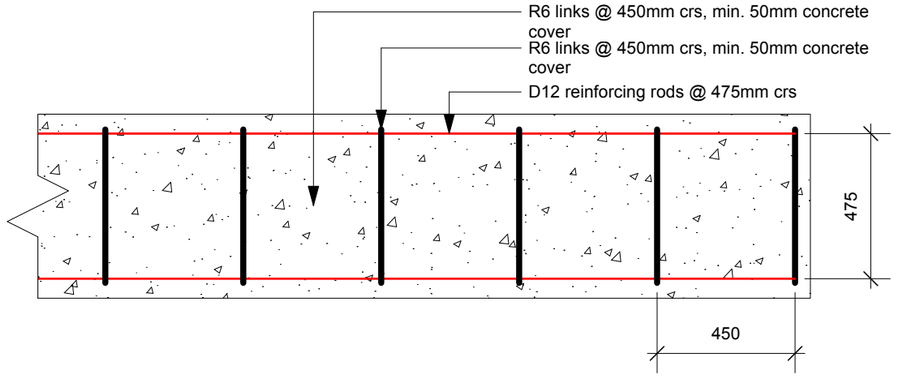


1 **Typical Lawn Ash Concrete Beam Long Section**
Scale: 1:15

Location and design of the plot and row numbering to be confirmed on site with the Contractor and Contract Administrator but to be of an imprinted design similar to the image:



2 **Lawn Ash Concrete Beam Plan**
Scale: 1:50



3 **Lawn Ash Reinforcing Detail**
Scale: 1:20

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. All dimensions in millimetres.
2. Refer also to the General Arrangement Plan (L101) and the Setout Plan (L102)
3. Silt control measures are to be established and maintained for the duration of the contract in accordance with the Auckland Council's Erosion and Sediment Control Guide (GD05) that is used by Far North District Council.
4. Boxing must be to the full depth of the concrete
5. All reinforcing to have min. 50mm concrete cover on all sides
6. Ensure the concrete does not dry out during the curing period
7. All the concrete to have a minimum strength of 20MPa and construction shall be in accordance with NZS 3109:1997
8. All concrete shall have U3 trowelled finish
9. All concrete shall have no oxide
10. Where ground level is inconsistent, high spots must be taken off and the ground evened out. Low spots back filled with existing excavation material before installing boxing
11. Final finishing, including floating and trowelling, is to provide for a true and level surface and clean edge
12. Ensure all disturbed areas of grass are reseeded upon completion of beam formation
13. All steel reinforcement shall comply with AS/NZS 4671
14. Ensure all distrurbed areas of grass are reseeded upon completion of beam formation
15. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Typical Lawn Ash Beam Details

PROJECT STATUS Detailed Design

ISSUED FOR Construction

DWG NO. L805

DRAWN MS/LO **CHECKED** LO

SCALE as shown

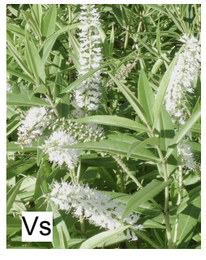
N

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information

PLANTING SCHEDULE

Code	*Botanical name*	Common name	Size	Spacing (mm)	Mix %	Quantity	Notes
Low Growing Boundary Planting (Mix) - Cemetery Extension Area							
As	*Apodasmia similis*	oioi	1L / RT	500crs / as shown	20%	92	Use root trainer size if available
Ab	*Astelia banksii*	kowharawhara / coastal astelia	1L / RT	500crs / as shown	20%	92	Use root trainer size if available
Vs	*Veronica stricta*	koromiko	1L / RT	500crs / as shown	20%	92	Use root trainer size if available
Pnz	*Parablechnum novae-zelandiae*	kiokio	1L / RT	500crs / as shown	20%	92	Use root trainer size if available
Ac	*Arthropodium cirratum*	Renga Renga Lily	1L / RT	500crs / as shown	20%	92	Use root trainer size if available
Low Growing Amenity Planting (Mix) - Koiwi Area							
Pp	*Pimelea prostrata*	Pinatoro, NZ Daphne	2L	500crs / as shown	50%	16	
Lpc	*Leptospermum 'Pink Cascade'*	prostrate manuka cultivar	2L	500crs / as shown	50%	16	
Planted bund near carpark							
Ca	*Cordyline australis*	New Zealand cabbage tree	2L	N/A	10%	5	No planting plan - lay out on site. Tree - plant further from road
As	*Apodasmia similis*	oioi	1L / RT	1000crs	30%	14	No planting plan - lay out on site.
Ab	*Astelia banksii*	kowharawhara / coastal astelia	1L / RT	1000crs	30%	14	No planting plan - lay out on site.
Car	*Coprosma acerosa 'red rocks'*	coprosma red rocks	1L / RT	1000crs	30%	14	No planting plan - lay out on site. Groundcover.
Tree Transplant Species							
Me	*Metrosideros excelsa*	Pohutukawa	Transplant	as shown on L101	N/A	3	
Lawn							
PGG Kerbside		PGG Wrightson DURAturf Kerbside or similar	-	Refer to Tech Spec	-	150m2	Species mix of Perennial ryegrass,Chewings fescue and Browntop

Low Growing Amenity Planting (Mix) - Cemetery Extension Area:



Low Growing Amenity Planting (Mix) - Kōiwi Area:

Planted bund near carpark (private land)

Trees to be transplanted:

TRANSPLANTING OF TREES TO BE CONFIRMED BY HOSKIN CIVIL, A QUALIFIED ARBORIST AND FAR NORTH DISTRICT COUNCIL

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. Refer also to the General Arrangement Plan (L101)
2. On-site planting layout to be approved by the Landscape Architect via video call prior to proceeding with planting.
3. Plants are to be arranged in a natural layout rather than a grid formation
4. Refer to manufacturers specifications for regrassing
5. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Planting Schedule

PROJECT STATUS Detailed Design

ISSUED FOR Construction

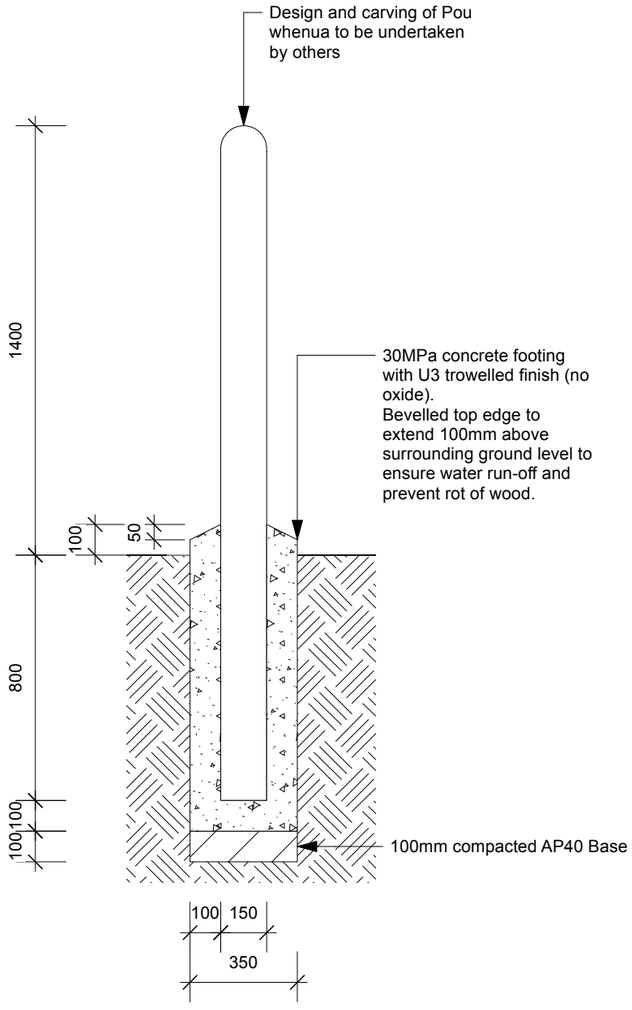
DWG NO. L806

DRAWN MS/LO **CHECKED** LO

SCALE as shown

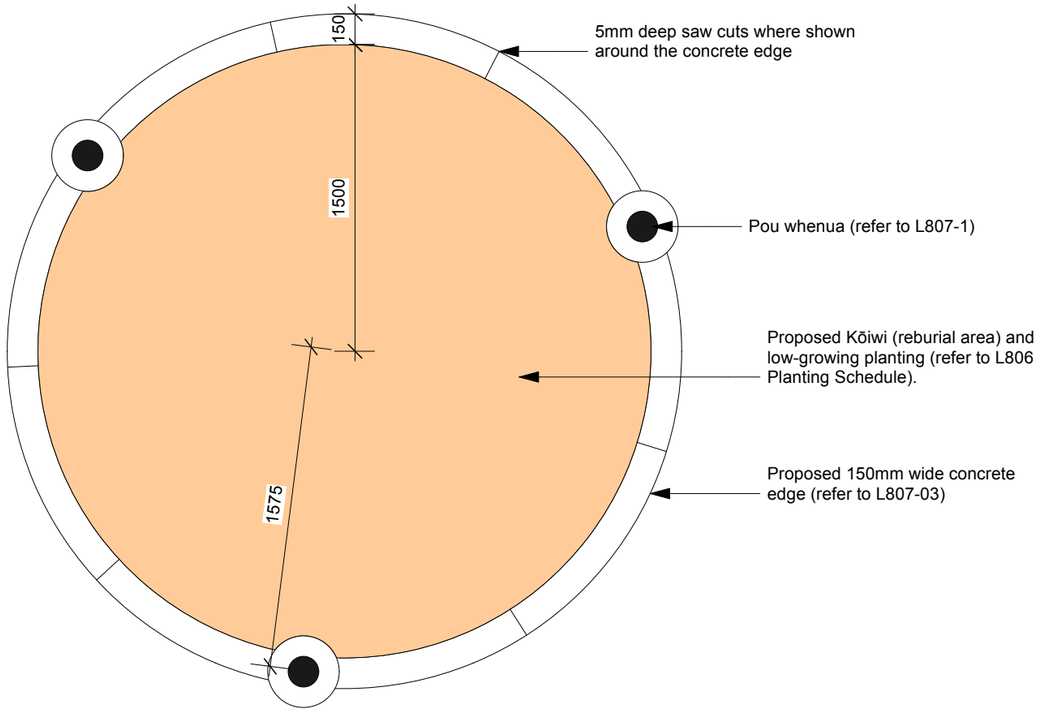
N

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information



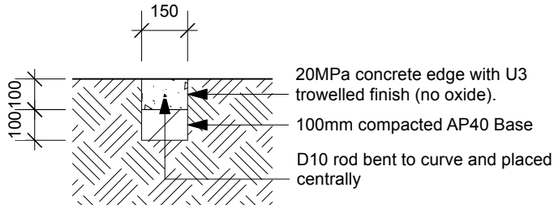
01 Pou Whenua Footing Detail

Scale: 1:20



02 Pou Whenua and Kōiwi (reburial area) Plan

Scale: 1:30



03 Kōiwi Concrete Edge Detail

Scale: 1:20

IWI REPRESENTATIVES CAN BE AVAILABLE TO BE ON SITE TO MONITOR EARTHWORKS WITHIN THE VICINITY OF THE EXISTING KŌIWI AREA.

NOTES

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS.

1. All dimensions in millimetres.
2. Contractor is responsible for locating all underground services and the potential LINZ survey mark on site prior to comencing works and ensure that they are adequately protected.
3. Refer to the General Arrangement Plan (L101) and Setout Plans (L102)
4. All pou whenua to be installed true upright and level.
5. Concrete to have a minimum strength of 30MPa for the pou whenua footing. All other concrete to have a minimum strength of 20MPa.
6. Contractor to work with Iwi to install pou whenua and concrete edge around koiwi
7. Refer to the Landscape Specification for more information

XYST - Ground Floor, 236 Hereford Street, Christchurch Central, Christchurch 8011

CLIENT
Far North District Council

PROJECT
Russell Cemetery Extension - Stage 1

SHEET TITLE
Pou Whenua and Kōiwi (reburial area) Edge Details

PROJECT STATUS Detailed Design

ISSUED FOR Construction

DWG NO. L807

DRAWN MS/LO **CHECKED** LO

SCALE as shown

REV	DATE	BY	REVISION NOTES
C	26/06/25	LO	For Construction - minor changes
B	18/06/25	LO	For Construction
A	28/04/25	MS	For Information