

Invitation to tender

Contract 18/029

Rotorua Lakefront Redevelopment - Construction Contract

TENDER REQUIREMENTS

- Tenders close **4.00pm Monday, 1 April 2019**.
- At the Rotorua Lakes Council e-tendering portal - <https://www.tenderlink.com/rdc/>
- Tender enquiries should be entered online at: RLC's Tenderlink portal for this tender at <https://www.tenderlink.com/rdc/> by **4.00pm, Wednesday 27 March 2019**.
- Tender information required:
 - Completed and signed Tender Form
 - Schedule of Pricing
 - Preliminary Programme of Works
 - The supporting information required in Clause 10.2 of the Conditions of Tendering:
 - Completed Schedule of Proposed Sub Contractors
 - Completed Schedule of Tenderer's Current Commitments and Resources
 - Completed Schedule of Key Personnel
 - Completed Schedule of Methodology and Management Systems

OVERVIEW AND SCOPE OF WORKS

Background

1. Rotorua Lakes Council "RLC" are proposing to undertake staged redevelopment of the existing CBD lakefront recreation area. The proposed redevelopment will encompass a world class promenade and boardwalk, improved informal and formal play areas, improved water access, linkage to cycle networks, and provide opportunities for commercial activity.
2. This RFT is for stage 1 and 1a of the development. Stage 1 and 1a works cover the main lakefront promenade, boardwalks over land, terracing, general amenities and planting.
3. Although the design documentation has been defined as stage 1 and 1a, there is flexibility for the contractor to offer methodologies that deliver these stages in an alternative manner. Key aspects the contractor shall need to consider in their methodology are:
 - a. Maximising ongoing public use of the lakefront
 - b. Balanced with completing the works as efficiently as possible
 - c. The ability to deliver/ open up a completed area of works for early public viewing would be advantageous, the contract will contain separable portions.
 - d. Continued public vehicle access to the remaining lakefront playspace.
4. RLC are currently in the process of obtaining resource consent for the works, it is anticipated this will be completed in conjunction with this tender process. Award of the works and commencement will be subject to Resource Consent being obtained.



**ROTORUA
LAKES COUNCIL**
Te kaunihera o ngā roto o Rotorua

**Request for Tender for
Contract No. 18/029**

**Rotorua Lakefront
Redevelopment – Stage 1 & 1a
Construction Contract**

Scope

5. The scope of work is detailed in the attached drawings and specifications. Items of work contained in the project scope include design and build elements, specifically: lawn irrigation, precast and prestressed concrete.
6. A brief overview of the works includes, but is not limited to the following (refer to drawings and specification for full scope of works):
- Demolition of existing waka house and lake.
 - Releveling and earthworks, areas of reclamation and declamation.
 - Construction of board walk on land and bridges over water, lake retaining walls, and terracing.
 - Installation of lighting amenities and park furniture.
 - General landscaping, garden beds, planting, and grassing.

Programme

7. Tender Process
- Issue RFT – 19 February 2019
 - Site Inspection & briefing – 26 February 2019
 - Tenders close – 1 April 2019
 - Target Contract Awarded (subject to resource consent approval) – 7 May 2019
8. The works under the Contract are programmed as follows
- Site Establishment and Setout target date – 22 May 2019
 - Physical works complete – May 2020 (preliminary only, contractors to propose programme).
9. The works shall be constructed in 2 stages, with Stage 1 complete before Stage 1a starting. The delineation between stage 1 and 1a is flexible and can be constructed in a manner that suits the contractor methodology if need be. Some minor over lapping of stage programming will be entertained if this provides efficiency to project costs.

Methodology

10. Current assumption is that sheet piling and dewatering to all lake edge works will be required to comply with likely resource consent conditions. Contractors are required to interrogate all options and put forward a methodology that they are confident will be acceptable to consenting authorities.
11. Contractors should allow to visually separate the immediate work area from the remaining useable lake front.
12. Contractors should note the ongoing works being completed in the neighbouring Wai Arki Spa site to the east of the lakefront. Final levels to this area will have an amount of finalisation as the Spa works progress to ensure a fluent transition between these two sites.

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SECTION A: CONTRACT AGREEMENT

This contract is made on the _____ day of _____, 2019

BETWEEN _____ ("the Contractor")

AND ROTORUA DISTRICT COUNCIL (RDC) a territorial authority under the Local Government Act 2002, and carrying on business under the name of Rotorua Lakes Council (RLC) ("the Principal")

WHEREAS

- A. The Principal has engaged the Contractor to perform the Services in respect of the Project (both as defined in the General Conditions) to be or being carried on by the Principal.
- B. The Agreement sets out the terms and conditions on which the Services shall be supplied.

IT IS AGREED AS FOLLOWS:

- THE Contractor shall construct, complete, deliver and maintain the works described in the Contract Documents.
- THE Principal shall pay the Contractor the sum of _____ (\$ _____), exclusive of GST, or such greater or lesser sum as shall become payable under the Contract Documents at the times and in the manner provided in the Contract Documents.
- EACH party shall carry out and fulfil all other obligations imposed on that party by the Contract Documents.
- THE Contract Documents are this Contract Agreement (Section A) and the following which form part of this Agreement:

SECTION B – Conditions of Tendering

Conditions of Tendering

SECTION C – Pricing and Schedules

Health and Safety

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SECTION F – Project Specifications and Drawings

Project Specification

- Preliminary and General
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- SEG Electrical and Lighting plans and specifications

Additional Documentation:

Notification of Acceptance of Tender

Tender Submission and Supporting Information

Notices to Tenderers

This Contract shall constitute the entire agreement between the parties. This Contract supersedes all prior negotiations, representations, and warranties, except insofar as the same are expressly incorporated herein.

SIGNED BY _____

Authorised Signatory of Contractor

Name and Position

In the presence of:

Signature of Witness

Name of Witness

SIGNED BY _____

Authorised Signatory of Principal

Name and Position

In the presence of:

Signature of Witness

Name of Witness

SECTION B: CONDITIONS OF TENDERING**1.0 Interpretation**

1.1 The provisions of Section 1 of NZS 3910:2013 shall apply to these conditions of tendering.

2.0 Issue of Documents

2.1 Tender Documents issued to prospective tenderers except schedules of quantities for use in the preparation of tenders remain the property of the Principal.

3.0 Tenderers to Inform Themselves

3.1 Each tenderer shall be deemed to have inspected the site, examined the Tender documents and any other information supplied in writing and to be satisfied as far as is practicable for an experienced contractor before tendering as to the correctness and sufficiency of the tender for the Contract Works, and of the prices stated in the tender.

3.2 The tendered price shall, except where otherwise provided, allow for all the Contractor's obligations under the contract as set out in the Tender Documents.

4.0 Site Visit

4.1 The site is open for inspection.

4.2 Tenderers are required to attend a mandatory site meeting at **11:00am on Tuesday, 26 February 2019**, meeting at the RLC Offices followed by Site walk. RLC representative will be Craig McMichael of Veros Property Services.

4.3 To confirm your attendance at this meeting contact Graham Edward at Veros Property Services by email graham@veros.co.nz or telephone on 022 037 2294.

5.0 Ambiguities in Tender Documents

5.1 Where the Tender Documents issued to prospective tenderers are ambiguous or unclear to a tenderer, the tenderer may request the issue of an explanatory notice. If an explanatory notice is issued, it shall be sent to all tenderers and shall upon issue become part of the Tender Documents.

5.2 **Any questions in relation to the Tender Documents shall be conveyed in writing via the forum on the e-tendering portal by 4:00 pm, Wednesday 27 March 2019.**

5.3 In the absence of an explanatory notice, tenders may be submitted subject to any reasonable interpretation of any ambiguity or uncertainty in the Tender Documents, which shall be endorsed on the tender.

5.4 Tenders shall be based on the Tender Documents and will be interpreted as relating to the Tender Documents unless clearly endorsed otherwise. Tenders submitted subject to endorsement will be considered accordingly.

5.5 No unauthorised alteration to the Tender Documents shall be accepted.

6.0 Joint Proposals

6.1 Joint tenders may be submitted, provided they fully meet the Principal's requirements and that one of the joint Tenderers is identified as the single contact point for all communications with the Principal relating to the submission. Parties to an unincorporated joint venture must be jointly and severally liable under the tender and any subsequent contract.

7.0 Confidentiality

7.1 The information supplied by the Council (either themselves or through their contractors or advisors) in connection with this RFT, or any contract(s) that arise(s) out of it, is confidential. Tenderers should not release or disclose any of the information to any other person, (other than their employees or advisors), without the prior written consent of the Principal. Any publicity also requires the Principal's prior written consent.

7.2 Tenderers shall not make or be involved in making any public communication in respect of this RFT at any time to any third party (including but not limited to any section of the media or an elected representative of the Principal).

7.3 The Principal will keep information supplied confidential. However the Principal is subject to the Local Government Official Information and Meetings Act 1987. Information provided by Tenderers may be required to be disclosed under that Act.

8.0 Tagged Tenders

8.1 Tags that may be of long term benefit to the Principal are to be evaluated, solely at the discretion of the Principal, as to their acceptability and cost implication. The tenderer will be requested to remove all unacceptable tags and shall not be allowed to amend the tender price. Refusal to remove tags may result in the tender being rejected. If a tenderer refuses to remove the tag and the tender is not rejected, it may be evaluated and an alternative tender adjusted price determined by the Principal. If the consequence of the tag to the Principal is unacceptable, the tender will be considered to be non-conforming and will be rejected.

9.0 Alternative Tenders

9.1 All tenderers must submit a tender which conforms to the requirements of the tender Specification.

9.2 Council is open to consider all tenders that may provide more cost effective and efficient works or services. To this end all tenders that differ from the specified requirements of this RFT will be considered to be potentially 'conforming' rather than alternative tenders and will be treated and assessed on their respective merits at Council's absolute discretion.

10.0 Submission of Tenders

10.1 **Tenders will close at 4:00pm on Monday, 1 April 2019 and must be uploaded to <https://www.tenderlink.com/rdc/> before the closing time.**

10.2 The Principal may at its sole discretion consider any tender received after the time stipulated, if the circumstances can be shown to be extreme, and beyond the control of the tenderer.

10.3 Tenders shall be uploaded from the Principal's Tenderlink e-portal. **No faxed tenders will be accepted.**

10.4 Tenders shall be in PDF or MS Word format for the Tender Submission and MS Excel for the completed Schedule of Prices.

10.5 Tenders shall be submitted by completing the forms supplied and shall include:

- Completed and signed Tender Form
- Schedule of Prices
- Preliminary Programme of Works
- The following supporting information:
 - Completed Schedule of Proposed Sub Contractors
 - Completed Schedule of Tenderer's Current Commitments and Resources
 - Completed Schedule of Key Personnel
 - Completed Schedule of Methodology and Management Systems
 - Completed Schedule of Local Economic Impact

- 10.6 The tender shall be signed by or on behalf of the tenderer.
- 10.7 The cost of preparing and submitting a tender shall be borne by the tenderer.
- 10.8 The rates included in the Schedule of Prices shall be fully inclusive of all allowances for On-site Overheads and for Off-site Overheads and Profit.
- 10.9 The Tenderer shall include rates and prices for all items of work described. Items against which no rate or price is entered by the Tenderer will not be paid for by the Principal and shall be deemed covered by other rates and prices.
- 10.10 The Principal may request any Tenderer to clarify and/or adjust any aspects of its tender or provide additional information during the tender evaluation process. These requests will require immediate action and must be responded to in writing within two (2) business days or the time specified in the request.

11.0 Errors and Omissions

- 11.1 The Principal is under no obligation to check any tender for errors. Acceptance of a tender that contains errors will not invalidate any contract formed by the acceptance. If the Principal or its advisors discover errors and/or omissions in any tender (this may include price) the Principal may, at its sole and absolute discretion, allow the tenderer to correct such error and/or omission.
- 11.2 If the tendered schedule contains any errors or omissions in extension of unit rates or in summation such as to vary the tendered sum, then the unit rates shall be adjusted by the Engineer after consultation with the Contractor to agree with the tendered sum. The adjusted rates shall then become the contract rates for payment. If agreement cannot be reached as to the adjustments then the tender may be rejected.

12.0 Tender Evaluation

- 12.1 Tenders shall conform and be evaluated in accordance with the Weighted Attributes Tender method of evaluation as described in the Rotorua Lakes Council Procurement Manual.
- 12.2 The tender evaluation process shall be conducted in two stages as follows:
- The first stage shall consist of ranking tenders in ascending order based on prices.
 - The second stage shall consist of determination of tender acceptability when assessed against each of the following six (6) non-price attributes.

12.2.1 Non Priced Attributes Carried Over From REO:

The following non priced attributes are carried over from the REO:

- Relevant Experience
- Track Record
- Resources
- Management Skills

12.2.2 Methodology and Outline Construction Programme:

Tenderers shall describe the methodology proposed to achieve the specified end result within the specified response periods. This methodology should encompass, but not be limited to, the following:

- Construction Methodology
- Site establishment and staging drawings
- Traffic and pedestrian management
- Health and Safety
- Planning and Programming

- Implementation and Supervision
- Communications and Reporting
- Traffic Control
- Quality Assurance Procedures

Please complete the enclosed Schedule of Methodology and Management Systems.

12.2.3 Key Personnel / Technical Skills:

Tenderers shall submit details of the key personnel to be employed on the contract works. These details should indicate each key person's proposed involvement with the project and demonstrate that their experience and skills, in particular technical experience and skills, are compatible with the project.

Nominate all key personnel describing each by name, position, technical skills and length of experience. The nominated personnel shall include:

- Contractor's Representative
- Contract Manager
- Contractor's Site Representative
- Quality Manager
- Safety Supervisor

Please complete the enclosed Schedule of Key Personnel.

12.2.4 Local Economic Impact:

Tenderers shall provide specific details of how your proposal will positively impact the local Rotorua economy in terms of:

- Engagement of staff and subcontractors from within the district
- Procurement of materials or resources from within the district
- Apprenticeships and training opportunities provided within the district.

Please complete the enclosed Schedule of Local Economic Impact.

12.2.5 Financial Viability:

Provide contact for Council to check financial position or financial information to demonstrate that the Participant will have adequate financial resources, robustness and resilience to deliver the Project.

12.2.6 Health and Safety:

12.2.6.1 Provide Contractors Health & Safety performance statistics over the last 3 years and a copy of the Contractors Health & Safety policy.

Council's Safety at Work policy states that Council is committed to managing our work environments to prevent harm to any person. To do this Council will:

- Keep People Safe
- Lead By Example
- Train & Supervise
- Investigate & Learn
- Engage Our People

- Monitor & Improve
- Keep People Healthy
- Promote Wellbeing
- Collaborate
- Maintain a drug and alcohol free workplace

Council has high health and safety expectations for this Project and anticipates that the successful Participant will share similar aspirations.

12.2.6.2 Provide a high level overview of your approach to managing health and safety in the workplace, including:

- An overview of your capacity and capability to ensure the Project is delivered to high standards of health and safety management
- If the Participant is a joint proposal, a description of how you will manage, from a health and safety perspective, the interface between different organisations within the joint proposal
- Your approach to managing the risks specifically associated with this Project, which could include geothermal activity, working at heights.

Tenderers will need to pre-qualify through Council's Health and Safety Pre-qualification Scheme as part of their response to the RFT. The details of this scheme are provided in Section C below

12.3 Evaluation Criteria. The tenders shall be evaluated in accordance with a weighted attribute methodology, determined by the Council. The attributes to be evaluated include, but are not limited to:

▪ Price	(60%)
▪ Non Priced Attributes Carried Over from REOI	(20%)
▪ Methodology & Outline Construction Programme	(10%)
▪ Key Personnel / Technical Skills	(5%)
▪ Local Economic Impact	(5%)
▪ Financial Viability	(Pass/Fail)
▪ Health & Safety Performance	(Pass/Fail)

13.0 Acceptance of Tender

13.1 This request for tender is an invitation to treat only. It shall not be construed as constituting an offer that is capable of acceptance by submitting a tender. The Principal shall not be liable in any way to any Tenderer for non-consideration or non-acceptance of any tender. The lowest or any tender will not necessarily be accepted.

13.2 The Principal reserves the right at its sole discretion to:

- (a) Accept none or any of the tenders
- (b) Accept a tender which is not the lowest or highest scoring or price.
- (c) Negotiate with any Tenderer or Tenderers (to the exclusion of any other Tenderer), at any time during this RFT process and upon any terms and conditions.
- (d) Meet with any Tenderer before and/or after tender close and prior to award of contract.

- (e) Re-advertise for tenders.
- (f) Waive any irregularities or informalities in the tender process.
- (g) Amend the closing date, the acceptance date or any other date in the RFT documents.
- (h) Amend this RFT document, or any associated documents, by the issue of a Notice to Tenderers.
- (i) Suspend or cancel (in whole or in part), this RFT process.

14.0 Canvassing of Council Officers and/or Elected Members of the Council

14.1 Any attempt made by a Tenderer to influence the outcome of the tender process by canvassing, lobbying or otherwise seeking support of Council officers or elected representatives of the Council shall be deemed valid grounds for the exclusion of that tender from the evaluation process.

15.0 Conflict of Interest

15.1 The Principal is mindful of conflict of interest. Any Tenderer who (if an individual) is also a Councillor, or pending Councillor, or an employee, of either Council or (if a company) has a shareholder, officer or employee who is a Councillor, or pending Councillor or an employee of either, may be considered by the Principal to be in a conflicting relationship. The Principal retains the right, in their sole and absolute discretion, to disqualify such Tenderer from submitting a tender or from having any tender evaluated.

16.0 Liability Limitation

16.1 Neither the Principal nor its agents or advisors will be liable in contract, tort or in any other way for any direct or indirect damage, loss or cost incurred by any tenderer or other person in respect of, or as a result of, this RFT process.

17.0 Notification of Acceptance

17.1 The successful tenderer shall be notified of acceptance in writing by the Principal.

17.2 If no tender has been accepted within 1 month after the closing of tenders, each tenderer shall be notified in writing by the Principal whether their tender is or is not still under consideration.

17.3 Unsuccessful tenderers who have submitted bona fide tenders complying with the Tender Documents shall be notified by the Principal of the name and tender price of the successful tenderer and the other tender prices within 10 days of acceptance of the successful tender.

SECTION C: PRICING & SCHEDULES**HEALTH AND SAFETY****Pre-qualification**

Rotorua Lakes Council takes Health and Safety very seriously. As a contractor seeking to work for Rotorua Lakes Council, we would like to advise you of the requirement to prequalify in health and safety through a council prequalification scheme. The scheme was established by Waikato and Bay of Plenty Councils who teamed up to make employing contractors and checking health and safety requirements easier. The streamlined pre-qualification process ensures Councils are using contractors who operate with effective health and safety management systems and are holding current and relevant insurances.

The prequalification process helps Council meet its responsibilities to ensure that contractors, working for or on Council assets and/or supplying services, have effective health and safety systems to prevent harm to people and the environment or damage to property.

Benefits to contractors include:

- An easier system that will enable contractors to be pre-qualified for multiple Councils through the one process
- Improved relationships between contractors and Councils
- Contributing to WorkSafe New Zealand's target of reducing fatal and serious work related injuries by 2020.

The process involves contractors applying for a pre-qualified 'approved' status, using an easy to follow system provided by SHE Software NZ Ltd. To complete the process, an email address is required. Contractors need to complete the questionnaire and submit the application online, providing health and safety documentation to show they understand and comply with the Health and Safety at Work Act 2015 and any associated Regulations. The application will be evaluated by a health and safety professional. Once the evaluator is satisfied with the contractor's health and safety management systems, the contractor will receive a confirmation email advising of their 'approved' status.

Once a contractor is 'pre-qualified,' their status is valid for two years at all participating Councils. Insurance checks will be conducted annually and new certificates requested as existing insurances expire. Councils will not allow you to carry out work for them if you cannot prove you are insured. Site specific safety plans will still be required when physical work is to be carried out and Council representatives will monitor the performance of each contractor.

The pre-qualification process is not a guarantee of work; however, pre-qualification is a mandatory requirement for the successful tenderer of this RFT process. The priority is for medium to high risk physical works contractors to be pre-qualified. Lower risk contractors will be required to be pre-qualified at the discretion of the Council.

Contractors simply need to complete an on-line questionnaire and provide their health and safety documentation to show that they understand and comply with the Health and Safety at Work Act 2015 and any associated Regulations. The portal can be accessed at: [Contractor Prequalification - SHE site](#) and a link is also available on Rotorua Lakes Council's Procurement website, page along with a set of [FAQs](#) which have been developed to answer some expected questions. To view the list of contractors that have been prequalified visit: [database](#)

There is a cost associated with the application process. The fees (to be paid online upon applying) are:

Contractor Size	Number of Insurances	Costs \$ excl. GST
Small (< 5 employees)	Unlimited	280
Medium (5-24 employees)	Unlimited	525

Large (25 + employees)	Unlimited	1025
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As contractors become pre-qualified, their details will be accessible on a database. This will provide visibility to contractors and Council staff to identify who is approved, assisting with the tendering process and Council procurement.

NOTE: Please ensure you have an email address prior to commencing your application as this will be required to complete the process.

TIP: Consider setting up a folder on your desktop to save all evidence required to enable easy uploading into the application.

The scheme has now been made available to all councils throughout New Zealand.

For more information, contact:

Jean Ryan
Business Development Manager
SHE Software
Ph.: 027 807 6001
jean.ryan@shesoftware.com or

Adrienne Thomas
Health & Safety Lead
Rotorua Lakes Council
Ph.: 07 351 8131
adrienne.thomas@rotorualc.nz

Safety in Design

The Tenderer is to consider and account for the requirements of the Health & Safety at Work Act sections 39-43 and ensure that safety in design is robustly incorporated for those that design, manufacture, import, supply, construct, install, operate or demolish a plant or structure. Particular attention is to be given to eliminate health and safety risks (e.g. height work, confined spaces, chemicals, substances) at the design stage.

Similarly, if the Contractor is responsible for any design associated with his working methods he shall obtain similar information from his Subcontractors or advisers and this advice shall be incorporated in the design.

Hazards and Risks

The Principal will indicate, when known, to the Contractor elements of the design of the contract works where hazards or risks may exist or be encountered. This could include a description of anticipated ground conditions, the handling and installation of specialised chemical compounds required for jointing, surface coatings or fillers or similar circumstances where the Principal or his designer have obtained prior knowledge of such elements.

The Principal advises that the following generic hazards may exist or be encountered:

- Trench excavations greater than 1.5 m in depth.
- Unstable ground conditions.
- Overhead and/or underground electric lines, gas lines and data cables.
- Electrical earthing to metal water service connections.
- Geothermal hazards (e.g. hydrogen sulphide, hot pressurised water, muds).
- Members of the public.
- Water in the work area (lake edge works)

Site Specific Safety Plan

The Contractor shall be required to submit to the Engineer and the Principal a comprehensive site-specific health and safety plan to meet the needs of the Health and Safety at Work Act and the Council's requirements. This plan must be submitted no less than 10 working days before the commencement of physical works.

Particular Hazardous Work

The Contractor shall notify the Engineer at least 48 hours prior to commencement of any work undertaken on site that involves Particular Hazardous Work and give the Engineer and Principal evidence of WorkSafe NZ being formally notified. A copy of relevant permits, etc. shall be provided to the Engineer and Principal before such work is done.

Notifiable Events

The Contractor shall immediately notify the Engineer and Principal by phone of his actions in dealing with all matters resulting from Notifiable Events. The Contractor is required to keep a register of all injuries, illnesses and near-misses and make this information available to the Engineer and Principal. Immediate notification to WorkSafe NZ shall be followed by a full written report within 48 hours in accordance with Section 56 of the HSWA.

Safety Inspections and Audits

The Contractor shall allow the Engineer or his representative, or worker of the Principal, access to the work to inspect or audit any aspect of the Contractor's operations relevant to safety and the work environment. The Contractor shall carry out any instructions given by the Engineer or Principal regarding safety and health as a result of this access.

Consultation, Collaboration and Coordination

The Engineer or Principal shall consult, coordinate and collaborate with the Contractor on all safety matters pertaining to the contract and work. The Contractor is to consult, collaborate and coordinate with all other PCBUs involved in the work to help ensure a safe place of work.

Temporary Safety Fencing**a. General**

Temporary safety fencing shall be provided to protect the public against health and safety risks inherent in excavations and construction works in accordance with the contract Site-specific Health and Safety Plan. Temporary fencing (or hoardings) shall be erected around work sites and kept in good order for the duration of the works, after which it shall be removed as part of the disestablishment from the site. This includes any site sheds or on site storage areas.

b. Specifications

NZ Transport Agency – Code of practice for Temporary Traffic Management (CopTTM) 4th edition July 2015

Section B6: Safety Fences
Section B7: Barricades

Note that 1.8 metre mesh panels are the preferred form of site security. Orange security mesh netting is the least preferred form of security fencing, must only be used for short duration work and is to be framed to ensure it does not sag. Do not use steel waratahs to support mesh panels as it poses the risk of electrocution and may damage underground services.

BASIS OF PAYMENT**GENERAL**

The rates to be inserted in the Schedule of Prices by the Tenderer shall be the full inclusive value of the work described under the several items, including all costs and expenses which may be necessary for the construction of the works, together with allowance for all general risks, liabilities and obligations set forth or implied in the documents upon which the Tender shall be based. The rates in the Schedule of Prices shall include full allowance for all on site and off site overheads whether time related or not and profits which the Contractor will require if the quantity of any item in the Schedule of Prices is adjusted. The quoted rates shall include allowance for all materials, plant, reinstatement and other items necessary for the satisfactory completion and maintenance of the whole of the works as required. Where special risks, liabilities and obligations cannot be dealt with as above, then the price thereof shall be separately entered under the heading "Unscheduled Items".

Should the Tenderer be of the opinion that additional items should be added to the Schedule in respect of particular works, then these shall be entered under the heading "Unscheduled Items", with details and prices for each. Failure of a Tenderer to do so will be construed as meaning that no additions are required to the Schedule in respect of items of work not specifically listed.

A price or rate shall be entered against each item in the Schedule, whether quantities are stated or not. Items against which no price is entered shall be considered to be covered by the other rates and prices in the Schedule.

Further to Clause 2.3.4 of the General Conditions, a variation in terms of Clause 9.3 of the General Conditions shall be deemed to exist for all Schedule Items except Provisional Sum Items when the actual quantities completed vary by more than $\pm 20\%$ from a total for each item derived from the Schedule.

Further to Clauses 6.4.4 and 6.4.5 of the General Conditions of Contract and where required by the Contract Documents, payment for work covered up prior to the inspection by the Engineer will be based on the Engineer's assessment of the value of the work.

All costs incurred by the Contractor in complying with all legislation existing at the time of closing of tenders and applicable to the Contract Works are deemed to be incorporated in the tendered rates. If new legislation that affects the contract comes into effect after this date, the Contractor may be asked to price a variation.

Further to Clause 12.1 of the General Conditions of Contract, claims for payment shall be received by the Engineer by the 5th calendar day of the month following. Where the 5th calendar day falls on a weekend or public holiday, the claim shall be received by the Engineer on the first working day thereafter.

NOTE: All payments shall be by Direct Credit. The successful Tenderer shall supply bank account details to Council prior to the first payment being made. **Where a schedule of prices forms part of the document, Contractor is to submit claim on the schedule of prices and NOT RAISE AN INVOICE.**

Claims for payment shall be in the format of the Schedule of Prices or make reference to the appropriate item numbers in the Schedule of Prices.

MEASUREMENT

Metric units shall be used as the basis of measurement throughout the Contract. All drawings, including drawings submitted by the Contractor for the approval of the Engineer shall be dimensioned in the metric system.

All items are measured net in accordance with the drawings and no allowance has been made for waste.

Units of measurement shown in the "unit" column of the Schedule of Prices have been abbreviated as follows:

LS=Lump Sum
 PS=Provisional Sum
 m or lin.m=Linear metre
 m² or sq.m=Square metre
 m³ or cu.m=Cubic metre
 Hr=Hour
 Wk=Week
 ea.=Each
 %=Percentage

Unless specified otherwise, earthworks volumes shall be paid as solid measure, and progress payment may be assessed by either survey or measurement off the construction drawings.

The following clauses are deemed to apply to all Items included in the Schedule of Prices. Payment will only be made for the quantities of work actually completed up to the quantities contained in the accepted programme or increased quantities approved by the Engineer. No payment will be made for any work in excess of this. Items are included in separate sections but basis of payment for each item to be same. Reference is only made to the first item as it appears on the schedule.

SCHEDULE OF PRICES

Please refer to the pricing template provided. Contractors are to use the template as a guide only, contractors shall modify the template as they deem necessary to allow fully for the entire scope of works.

Contractors are also requested to provide a schedule of all key subcontract rates as per the template provided.

Rotorua Lakes Council

Contract No. 18/029

**For: ROTORUA LAKEFRONT REDEVELOPMENT - CONSTRUCTION CONTRACT
 UNDER THE LOCAL GOVERNMENT ACT 2002 AND ITS AMENDMENTS**

TENDER FORM

To Rotorua Lakes Council
 Private Bag 3029
 Rotorua Mail Centre
 ROTORUA 3046

Having inspected the site and examined the Tender documents for the above contract I/we hereby tender to undertake these Contract Works. We acknowledge the various Special Conditions of Contract and confirm that our tender is in accordance with all of those special conditions. Our tender is for the sum of:

_____ (\$ _____) exclusive of
 GST. Attached is a completed Schedule of Prices showing how we have calculated our tender sum.

Except as otherwise specified, this tender includes the supply of all plant and labour, the purchase and procurement of all materials and the performance of all services necessary to construct, complete and maintain the Contract Works described in the drawings and specifications.

Unless and until a formal Agreement is prepared and executed, this Tender, together with written acceptance thereof, shall constitute a binding agreement between us. I/We further understand that no payment will be made until the Contract Agreement is signed by both Parties and, if successful, we will sign without delay.

This tender is open for acceptance by the Principal for a period of 30 days from the closing date for tenders.

I/We acknowledge receipt of Notice to Tenderers Numbers:

Dated this _____ day of _____ 2018.

Name: _____ Signature: _____

Designation: _____

Telephone: _____ Email: _____

For and on behalf of: _____
 (Company Name or Tenderer's Full Name)

Postal Address: _____

Postal Code: _____

SCHEDULE OF PROPOSED SUBCONTRACTORS

It is proposed to employ the following Subcontractors on this contract:

Sub-contractor's Name	Work to be Undertaken	Value of Work

and these names are submitted for approval as required by NZS3910:2013 Clause 4.1.2 of the Conditions of Contract.

With respect to NZS3910:2013 Section 4 of the General Conditions of Contract, all material suppliers are deemed to be Subcontractors.

Tenderer: _____

Signature: _____

Date: _____



SCHEDULE OF TENDERER'S CURRENT COMMITMENTS & RESOURCES

1. Tenderer's Current Work

List current work being carried out by the Tenderer at the date of submitting the attached tender:

Principal	Project Name	Contract Value	Comp Date

2. Outstanding Tenders

List outstanding tenders for which advice of acceptance is awaited at the time of submitting this tender:

Principal	Project Name	Contract Value	Comp Date

3. Resources

Describe the plant, equipment, labour, facilities and intellectual property to be used on the project.

Tenderer: _____

Signature: _____

Date: _____



SCHEDULE OF KEY PERSONNEL

Tenderers shall submit details of the key personnel to be employed on the contract works. These details should indicate each key person's proposed involvement with the project and demonstrate that their experience and skills, in particular technical experience and skills, are compatible with the project.

Nominate all key personnel describing each by name, position, technical skills and length of experience. The nominated personnel shall include:

Position	Name	Company	Technical Skills/Qualifications and Proposed Project Involvement	Length of Experience (yrs)
Contractor's Representative				
Contract Manager				
Contractor's Site Representative				
Quality Manager				
Safety Supervisor/ Health & Safety Management				
Traffic Management				
Environmental Management				
Other				

Health and Safety Management shall also be assessed under the responses within this Schedule.

Tenderer: _____

Signature: _____

Date: _____

SCHEDULE OF METHODOLOGY AND MANAGEMENT SYSTEMS

Methodology	Describe the methodology proposed to achieve the specified end result within the specified response periods
Construction Methodology	
Site Establishment and staging	
Traffic and pedestrian management	
Planning and Programming	
Health & Safety	
Implementation and Supervision	
Communications and Reporting	
Traffic Management	
Quality Assurance Procedures	
Project Management, Systems and Training	

Enclosed with this tender is a preliminary programme confirming the various project milestones and completion within the required contract period.

Tenderer: _____

Signature: _____

Date: _____

SCHEDULE OF LOCAL ECONOMIC IMPACT

Completion of the following table is a requirement of the tender process. However, the detail provided is only assessed in the event that any other conforming proposals are within 5% of the value of the lowest priced conforming proposal. Council reserves the right to further assess the respective proposals in terms of their local economic impact before determining a successful proposal. Participants are encouraged to provide a comprehensive response in terms of this evaluation criterion.

Aspect	Provide specific details of how your proposal will positively impact the local Rotorua economy
Engagement of staff and subcontractors from within the district	
Procurement of materials or resources from within the district	
Apprenticeships, sponsorships and training opportunities provided within the district	

Tenderer: _____

Signature: _____

Date: _____

SECTION D: INSURANCE SCHEDULES

Schedule 8 – Information on Contractor arranged Plant insurance

To Rotorua Lakes Council
Private Bag 3029
Rotorua Mail Centre
ROTORUA 3046

From Click to enter text (Name of insurance company)
Click to enter text (Branch)
Click to enter text (Address)

We confirm having effected Plant insurance for:

Click to enter text (The Contractor)

In respect of Click to enter text (Project title)

Policy wording title is Click to enter text

We advise that special terms, copy attached, have been applied to this policy Select yes or no

The following provisions apply:

- Annual policy
 Project specific policy

Policy expiry date Click to enter a date

8.4 The sums insured are (GST exclusive):

All items of Plant Sum insured \$ Click to enter amount
OR

Valued schedule of construction Plant insured (copy attached)

The policy deductible (GST inclusive) is: \$ Click to enter amount

Policy cover terms included are:

8.2.2 Discretionary cancellation clause Select yes or no

8.2.3(a) Reinstatement provision Select yes or no

8.2.4 Void *ab initio* for non-payment of premium without prior notification Select yes or no

No settlement delay due to exercise of subrogation Select yes or no

We undertake that this policy will not be cancelled or amended by us within the period of insurance without written advice to the insured party which has arranged the insurances.

This insurance issued is subject to the terms and conditions of the policy. We do not warrant that this policy complies with the requirements of NZS 3910:2013.

Insurance Company Stamp Click to enter text Date Click to enter a date

(Or name of insurance broking company confirming cover)

SIGNED BY Click to enter text or paste signature

SIGNATORY TITLE Click to enter text

(Clause numbers refer to NZS 3910:2013 and are for information only.)

Schedule 9 – Information on public liability insurance

To Rotorua Lakes Council
Private Bag 3029
Rotorua Mail Centre
ROTORUA 3046

From Click to enter text (Name of insurance company)
Click to enter text (Branch)
Click to enter text (Address)

We confirm having effected public liability insurance to indemnify the Principal and the Contractor against legal liability to third parties for damage, loss or injury caused by an act or omission of the Contractor arising out of the performance of the Contract Works.

Click to enter text (The Contractor)

Click to enter text (The Principal)

In respect of Click to enter text (Project title)

Policy wording title is Click to enter text

We advise that special terms, copy attached, have been specifically applied to this project Select yes or no

The following provisions apply:

- Annual policy
 Project specific policy

Policy expiry date Click to enter a date

8.5, 8.9

The limit of indemnity (GST exclusive) \$ Click to enter amount

Sub-limit insured for (GST exclusive)

Vibration, removal, or weakening of support \$ Click to enter amount

Forest and Rural Fires Act 1977 \$ Click to enter amount

Underground services \$ Click to enter amount

Deductible (GST inclusive) is \$ Click to enter amount

Deductible for vibration, removal, or weakening of support (GST inclusive) \$ Click to enter amount

Deductible for underground services (GST inclusive) \$ Click to enter amount

The policy also covers liability arising out of:

The ownership/use of Plant not required to be registered for road use Select yes or no

The use of hired Plant Select yes or no

The ownership/use of watercraft over 8 m Select yes or no

The ownership/use of aircraft Select yes or no

The use of explosives Select yes or no

8.2, 8.7

Policy cover terms included are:

Reinstatement provisions	Select yes or no
Number of reinstatements	Click to enter number
Discretionary cancellation clause	Select yes or no
Void <i>ab initio</i> for non-payment of premium without prior notification	Select yes or no
Severally insured	Select yes or no
No settlement delay due to exercise of subrogation	Select yes or no

We undertake that this policy will not be cancelled or amended by us without written advice to the insured party which has arranged the insurances.

This insurance issued is subject to the terms and conditions of the policy. We do not warrant that this policy complies with the requirements of NZS 3910:2013.

Insurance Company Stamp Click to enter text **Date** Click to enter a date

(Or name of insurance broking company confirming cover)

SIGNED BY Click to enter text or paste signature

SIGNATORY TITLE Click to enter text

(Clause numbers refer to NZS 3910:2013 and are for information only.)

Schedule 10 – Information on Contractor arranged motor vehicle insurance

To Rotorua Lakes Council
Private Bag 3029
Rotorua Mail Centre
ROTORUA 3046

:

From Click to enter text (Name of insurance company)
Click to enter text (Branch)
Click to enter text (Address)

We confirm having effected motor fleet insurance for

Click to enter text (The Contractor)

In respect of Click to enter text (Project title)

Policy wording title is Click to enter text

We advise that special terms, copy attached, have been applied to this policy Select yes or no

The following provisions apply:

- Annual policy
- Project specific policy

Policy expiry date Click to enter a date

8.5.2

The limits of liability are (GST exclusive):

Section 2 – Liability Click to enter amount

For any one occurrence arising out of the same event

The policy deductibles are:

Section 2 – Liability (GST inclusive) Click to enter amount

Plus under age penalties

8.2

Policy cover terms included are:

Section 2 Liability automatic reinstatement	Select yes or no
Discretionary cancellation clause	Select yes or no
Void <i>ab initio</i> for non-payment of premium without prior notification	Select yes or no
No settlement delay due to exercise of subrogation	Select yes or no

We undertake that this policy will not be cancelled or amended by us within the period of insurance without written advice to the insured party which has arranged the insurances.

This insurance issued is subject to the terms and conditions of the policy. We do not warrant that this policy complies with the requirements of NZS 3910:2013.

Insurance Company Stamp Click to enter text Date Click to enter a date

(Or name of insurance broking company confirming cover)

SIGNED BY Click to enter text or paste signature

SIGNATORY TITLE Click to enter text

(Clause numbers refer to NZS 3910:2013 and are for information only.)

SECTION E: CONDITIONS OF CONTRACT

1 GENERAL CONDITIONS OF CONTRACT

Except where modified by the Special Conditions of Contract, the Contract shall be governed by the document published by Standards New Zealand and entitled "NZS 3910:2013 Conditions of contract for building and civil engineering".

Copies of this document are available for inspection at the office of the Engineer and may be purchased from Standards New Zealand, Private Bag 2439, Wellington 6020.

2 SCHEDULES TO THE NZS 3910:2013 CONDITIONS OF CONTRACT

NZS 3910:2013 Conditions of contract for building and civil engineering construction

2.1 Schedule 1 – Special Conditions of Contract – Specific Conditions of Contract

Clause in General Conditions	Title and subject matter	Specific condition data
1.	INTERPRETATION	
1.2	Definitions	
	The Principal is:	Rotorua Lakes Council
	of:	1061 Haupapa Street, Rotorua 3046
1.2, 10.2 12.4.4	Separable Portions	
	• Are there any Separable Portions in this Contract?	Yes – Stage 1, stage 1a
	• If yes, the Separable Portions are as follows and as further defined in the Contract:	N/A
2.	THE CONTRACT	
2.1	Type of Contract	
2.1.1	This Contract is a:	
	(a) Lump sum contract governed by 2.2;	<input checked="" type="checkbox"/>
	(b) Measure and value contract governed by 2.3;	<input type="checkbox"/>
	(c) Cost reimbursement contract governed by 2.4.	<input type="checkbox"/>
2.4	Cost reimbursement contract	
2.4.1	Allowance(s) which are to be added to Net Cost in a cost reimbursement contract or for parts of the Contract Works which are required to be carried out on a cost reimbursement basis. (If percentages are shown as zero or nil, allowances for overheads and profit are deemed to be included in Net Cost.)	
	• Allowance for On-site Overheads:	Nil (%)
	• Allowance for Off-site Overheads and Profit:	Nil (%)
2.4.4	Indicative estimates of the Contract Price:	
	Are indicative estimates required?	No

Clause <i>in General Conditions</i>	Title and subject matter	Specific condition data
2.5	Local authority contracts	
2.5.1	Is this Contract a local authority contract to which 2.5.2 applies?	Yes
2.5.3	Is this Contract a contract in a public place to which B1 and B2 of Appendix B apply?	Yes
2.5.4	Is this Contract a road contract to which Appendix B applies?	No
	If yes, the allowance under B3 shall be:	
2.6	Evidence of Contract	
2.6.2	How is the Contract Agreement to be executed?	Three sets of contract documents, signed by an authorised representative of the Principal will be forwarded to the Contractor for signing. Only the Contract Agreement is required to be signed by an authorised representative of the Contractor. The Contractor shall retain one set and return the other two sets to the Principal.
2.7	Documents prepared by the Engineer or Principal	
2.7.1	Copies of the Contract shall be supplied without charge to the Contractor in the following electronic form:	PDF or MS Word/Excel.
3.	BONDS	
3.1	Contractor's Bond	
3.1.1	Is a Contractor's Bond required?	Yes
3.1.2	If yes, the amount of the Contractor's Bond shall be:	10% of Contract Value
3.2	Principal's Bond	
3.2.1	Is a Principal's Bond required?	No
3.2.2	If yes:	
	The amount of the Principal's Bond shall be:	N/A
	The surety for the Principal's Bond shall be:	N/A
4.	SUBCONTRACTS	
4.2	Nominated Subcontractors	
4.2.1	Nominated subcontractors are:	N/A
5.	GENERAL OBLIGATIONS	
5.4	Possession of the Site	
5.4.1	The Contractor shall be given Possession of the Site:	(Select one to apply, (a) or (b))
	(a) 10 Working Days after the Date of Acceptance of Tender	<input type="checkbox"/>
	(b) On the following date: As agreed with the Principal	<input checked="" type="checkbox"/>
5.4.4	Limits on the Contractor's right of entry to adjoining properties are:	Any access to adjoining properties to be arranged by the Contractor with the respective property owner.
5.5	Separate Contractors	
5.5.1	Separate Contractors who may be carrying out work on the Site concurrently with the Contract Works are:	
5.5.2	Are facilities for Separate Contractors required?	No
	If yes, details of facilities required are:	N/A

Clause <i>in General Conditions</i>	Title and subject matter	Specific condition data
5.6	Care of the works and Site	
5.6.6(g)	Further risks specifically excepted are:	Nil
5.10	Programme	
5.10.4	Is the programme required to be a Comprehensive Programme?	Yes
5.10.4(e)	If yes, other requirements for the Comprehensive Programme are:	Critical path shall be shown
5.10.5	The Comprehensive Programme shall use the following software:	MS Project or similar
5.10.6	Updates of the Comprehensive Programme shall be provided at the following intervals:	Monthly – on the last day of the month
5.11	Compliance with laws	
5.11.3	Exceptions to the Principal's obligations to obtain licences under 5.11.3 are:	Nil
5.11.4	Exceptions to the Contractor's obligation to give notices and obtain other licences under 5.11.4 are:	Nil
5.17	Safety plan	
	A Contract-specific safety plan is required to be prepared by the Contractor	Yes
5.18	Quality plan	
	Is a quality plan required to be prepared by the Contractor?	Yes
5.19	Traffic management plan	
	Is a traffic management plan required to be prepared by the Contractor?	Yes
5.20	As-built drawings, manuals, and maintenance records	
5.20.1(a)	Are as-built drawings required to be prepared by the Contractor?	Yes – for underground services and ducts (including existing where they have been relocated), stormwater (pipes, cesspits, outlets and swales) streetlight locations, footpaths, bollards, kerbs, pavement, traffic calming, signs, relocated fences and gates, RAMM data
5.20.1(b)	Are operation and maintenance manuals required to be prepared by the Contractor?	Yes
5.20.1(c)	Are maintenance records required to be prepared or updated by the Contractor?	No
6.	ENGINEER'S POWERS AND RESPONSIBILITIES	
6.1	Appointment of Engineer	
6.1.2	The Engineer is:	
	whose professional qualification is:	
8.	INSURANCE	
8.1	General	
8.1.1	The party identified below shall arrange the following insurances referred to in the following clauses:	
	8.3 and 8.8 Construction	Contractor
	8.8 Existing structure(s) and contents	Principal
	8.4 Plant	Contractor

Clause in General Conditions	Title and subject matter	Specific condition data
	8.5 or 8.9 Public liability	Contractor
	8.5.2 Motor vehicle liability	Contractor
	8.6 Professional indemnity	Contractor
8.1.6	The following forces of nature shall be specifically insured under 8.3, 8.8, or 8.9 as applicable:	
	(a) Landslip:	Yes
	(b) Earthquake:	Yes
	(c) Tsunami:	Yes
	(d) Tornado:	Yes
	(e) Cyclone:	Yes
	(f) Storm:	Yes
	(g) Flood:	Yes
	(h) Lightning strike:	Yes
	(i) Volcanic activity:	Yes
	(j) Hydrothermal activity:	Yes
	(k) Geothermal activity:	Yes
8.3, 8.8	Construction insurance (These items are required to be completed whether the Contractor or the Principal is the insuring party (see 8.1 above))	
8.3.2, 8.8	The following shall have their respective interests noted in the construction insurance policy:	Nil
8.3.3, 8.8	Where construction insurance is required (see 8.1 above), the amount of insurance to be effected for the Contract Works and Materials shall be for not less than the sum of the Contract Price, after the acceptance of the offer, plus the following allowances:	
	(a) An allowance for the Cost of demolition, disposal and preparation for replacement work, equal to:	
	(i) The amount in the right hand column:	(\$)
	(ii) The percentage in the right hand column of the Contract Price adjusted as above:	5% of the Contract Price
	(b) An allowance for professional fees including the Cost of clerks of works and inspectors, equal to:	
	(i) The amount in the right hand column:	(\$)
	(ii) The percentage in the right hand column of the Contract Price adjusted as above:	10% of the Contract Price.
	(c) An allowance for items to be incorporated in the Contract Works, the Cost of which is not included in the Contract Price, equal to:	
	(i) The amount in the right hand column:	(\$)
	(ii) The percentage of the Contract Price adjusted as above, stated in the right hand column:	5% of the Contract Price
	(d) An allowance for an increase in the Contract Price due to Variations equal to:	
	(i) The amount in the right hand column:	\$

Clause in General Conditions	Title and subject matter	Specific condition data
	(ii) The percentage of the Contract Price adjusted as above, stated in the right hand column:	5% of the Contract Price
	(e) An allowance for increased construction Costs due to inflation equal to:	
	(i) The amount in the right hand column:	(\$)
	(ii) The percentage of the Contract Price adjusted as above, stated in the right hand column:	5% of the Contract Price
8.4	Contractor arranged Plant insurance	
	Where Plant is required to be insured (see 8.1 above):	(select one to apply, (a) or (b))
	(a) The Contractor shall insure the following items of Plant on the Site for the amounts stated:	
	(b) The Contractor shall insure each item of Plant on the Site having a current market value of more than:	<input checked="" type="checkbox"/> (\$) 50,000
8.5	Contractor arranged public liability insurance	
8.5.1	Where required (see 8.1 above), public liability insurance shall be effected by the Contractor for an amount not less than:	<input checked="" type="checkbox"/> (\$) 10,000,000 in respect of any one incident
	Such public liability insurance may include sub-limits:	
	• For liability arising out of vibration, weakening or removal of support, of not less than:	(\$) N/A
	• For liability under the Forest and Rural Fires Act 1977, of not less than:	(\$) 2,000,000
8.5.2	Where required (see 8.1 above), motor vehicle third party liability insurance shall be effected for an amount not less than:	(\$) 2,000,000
8.6	Contractor arranged professional indemnity insurance	
8.6.1	Where required (see 8.1 above), professional indemnity insurance for design by the Contractor shall be effected for an amount not less than:	
	• For any one claim:	(\$) 5,000,000
	• And for an amount in the aggregate of:	(\$) Nil
8.6.2	Sub-limits of liability for design of parts of the Contract Works by Subcontractors shall be not be less than: (list specific part(s) of Contract Works and applicable \$ sub-limits for any one claim and for an amount in the aggregate, or state if not require(d))	N/A
8.8	Principal arranged construction insurance (refer also to 8.3)	
	In accordance with 8.7.2, the insurance policy wording title is:	N/A
	In accordance with 8.7.2, the extraordinary exclusions, conditions, warranties or endorsements to the policy are:	N/A
8.8.1	Where the Principal is required to effect construction insurance (see 8.1 above):	
	The lead insurer is:	N/A
	Address of lead insurer:	N/A
	The Nominal Deductibles are:	

Clause in General Conditions	Title and subject matter	Specific condition data
	<ul style="list-style-type: none"> For damage arising out of the Contract Works: 	N/A
	<ul style="list-style-type: none"> For other claims: 	N/A
	<ul style="list-style-type: none"> For natural perils: 	N/A
8.8.2(a)	The existing structures or properties are:	
	<ul style="list-style-type: none"> The replacement value to be insured is: 	(\$ Nil)
	<ul style="list-style-type: none"> The lead insurer is: 	N/A
	<ul style="list-style-type: none"> Address of lead insurer: 	N/A
	The Nominal Deductibles are:	
	<ul style="list-style-type: none"> For damage arising out of the Contract Works: 	\$
	<ul style="list-style-type: none"> For other claims: 	\$
	<ul style="list-style-type: none"> For natural perils: 	\$
8.8.2(b)	Other structures or property in the vicinity are:	N/A
	<ul style="list-style-type: none"> The replacement value to be insured is: 	(\$ Nil)
	<ul style="list-style-type: none"> The lead insurer is: 	N/A
	<ul style="list-style-type: none"> Address of lead insurer: 	N/A
	The Nominal Deductibles are:	
	<ul style="list-style-type: none"> For damage arising out of the Contract Works: 	N/A
	<ul style="list-style-type: none"> For other claims: 	N/A
	<ul style="list-style-type: none"> For natural perils: 	N/A
8.8.2(c)	Contents insurance:	
	<ul style="list-style-type: none"> The replacement value to be insured is: 	(\$ Nil)
	<ul style="list-style-type: none"> The lead insurer is: 	N/A
	<ul style="list-style-type: none"> Address of lead insurer: 	N/A
	The Nominal Deductibles are:	
	<ul style="list-style-type: none"> For damage arising out of the Contract Works: 	N/A
	<ul style="list-style-type: none"> For other claims: 	N/A
	<ul style="list-style-type: none"> For natural perils: 	N/A
8.9	Principal's option to insure public liability	
8.9.1	Where required (see 8.1 above), the Principal shall effect public liability insurance for an amount not less than:	(\$ Nil)
	The lead insurer is:	N/A
	Address of lead insurer:	N/A
	The Nominal Deductible is:	N/A
	In accordance with 8.7.2:	
	<ul style="list-style-type: none"> the policy wording title is: 	N/A
	<ul style="list-style-type: none"> extraordinary exclusions, conditions, warranties, or endorsements to the policy are: 	N/A

Clause in General Conditions	Title and subject matter	Specific condition data
8.9.2	Such public liability insurance may include sub-limits for:	
	<ul style="list-style-type: none"> Liability arising out of vibration, weakening or removal of support: 	(\$ Nil)
	<ul style="list-style-type: none"> Liability under the Forest and Rural Fires Act 1977: 	(\$ Nil)
9.	VARIATIONS	
9.3	Valuation of Variations	
9.3.9	For On-site Overheads:	
	(a) The prices and rates in the Schedule of Prices are inclusive of full allowance for On-site Overheads;	<input checked="" type="checkbox"/>
	(b) The prices and rates in the Schedule of Prices are exclusive of On-site Overheads.	<input type="checkbox"/>
9.3.7, 9.3.9	The allowance for On-site Overheads to be added in accordance with 9.3.9 is:	N/A
	(i) Agreed percentage:	Nil (%)
	(ii) As nominated in the Schedule of Prices;	<input type="checkbox"/>
	(iii) As nominated in the Contractor's tender;	<input type="checkbox"/>
	(iv) A reasonable percentage.	<input checked="" type="checkbox"/>
9.3.10	For Off-site Overheads and Profit:	
	(a) The prices and rates in the Schedule of Prices are inclusive of Off-site Overheads and Profit;	<input checked="" type="checkbox"/>
	(b) The prices and rates in the Schedule of Prices are exclusive of Off-site Overheads and Profit;	<input type="checkbox"/>
9.3.11	For time-related Cost, the Working Day rate in compensation for time-related On-site Overheads and Off-site Overheads and Profit in relation to an extension of time to be applied in accordance with 9.3.11 is:	N/A
	(i) Agreed percentage:	<input type="checkbox"/> Nil (%)
	(ii) As nominated in the Schedule of Prices;	<input type="checkbox"/>
	(iii) As nominated in the Contractor's tender;	<input type="checkbox"/>
	(iv) A reasonable percentage.	<input checked="" type="checkbox"/>
9.3.15	For processing of Variations, the percentage to be paid in accordance with 9.3.15 is:	
	(a) Agreed percentage:	<input checked="" type="checkbox"/> Nil (%)
	(b) As nominated in the Schedule of Prices;	<input type="checkbox"/>
	(c) As nominated in the Contractor's tender;	<input type="checkbox"/>
	(d) The reasonable Cost of processing Variations.	<input type="checkbox"/>
10.	TIME FOR COMPLETION	
10.2	Due Date for Completion	
10.2.1	The periods to be used for calculating the Due Date for Completion are:	

Clause in General Conditions	Title and subject matter	Specific condition data
	(a) For the Contract Works:	tbc
	(b) For any Separable Portions:	N/A
10.4	Practical Completion Certificate	
10.4.5	Prior to the issue of the Practical Completion Certificate:	
	(a) Producer Statements in the form of Schedule 6 are required:	<input type="checkbox"/>
	(c) Producer Statements as set out in the following parts of the Contract are required: tbc	<input checked="" type="checkbox"/>
	(c) Producer Statements are not required:	<input type="checkbox"/>
10.5	Damages for late completion	
10.5.1	Liquidated damages shall be applied as follows:	
	• In respect of the Contract Works	\$1500 (\$ per Working Day) RLC to confirm cost
	• In respect of any Separable Portion(s):	N/A (\$ per Working Day for each Separable Portion)
10.6	Bonus for early completion	
	Is a bonus to be payable?	No
	• If yes, the bonus for the Contract Works is:	
	• If yes, bonuses for any Separable Portion(s) are:	
11.	DEFECTS LIABILITY	
11.1	Defects Notification Period	
	The Defects Notification Period shall be:	
	• For the Contract Works	12 months
	• For any Separable Portion(s):	
11.3	Final Completion Certificate	
11.3.2(a)	Prior to issue of the Final Completion Certificate:	
	(a) Producer Statements in the form of Schedule 6 are required:	<input checked="" type="checkbox"/>
	(b) Producer Statements as set out in the following parts of the Contract are required:	<input type="checkbox"/>
	(c) Producer Statements are not required:	<input type="checkbox"/>
11.3.2(b)	Prior to the issue of the Final Completion Certificate:	
	(a) As-built drawings and operation and maintenance manuals are required:	<input checked="" type="checkbox"/>
	(b) As-built drawings and operation and maintenance manuals are not required:	<input type="checkbox"/>
11.5	Warranties	
11.5.1	(a) No warranties are required:	<input type="checkbox"/>
	(b) The Contractor shall provide warranties as set out in the Contract for the following items of work: footpaths, road surface (new works only), streetlights, wheel stops, new gate	<input checked="" type="checkbox"/>
11.6	Guarantees	

Clause in General Conditions	Title and subject matter	Specific condition data
11.6.1, 11.6.2	(a) No guarantees are required:	<input type="checkbox"/>
	(b) The Contractor shall provide guarantees in the following form:	<input checked="" type="checkbox"/>
12.	PAYMENTS	
12.1	Contractor's payment claims	
12.1.3(b)	Advances for Materials delivered to the Site	
(iii)		
	(a) Advances for Materials delivered to the Site but which have yet to be incorporated in the Contract Works shall not be made:	<input checked="" type="checkbox"/>
	(b) Advances for Materials delivered to the Site but which have yet to be incorporated in the Contract Works shall be made, subject to the following conditions:	N/A
12.1.3(b)	Advances for Temporary Works or Plant	
(iv)		
	(a) Advances for Temporary Works or Plant shall not be made:	<input checked="" type="checkbox"/>
	(b) Advances for Temporary Works or Plant shall be made, subject to the following conditions:	Nil
12.1.3(b)	Advances for Materials not yet on Site	
(iv)		
	(a) Advances for Materials not on Site shall not be made:	<input checked="" type="checkbox"/>
	(b) Advances for Materials not yet on Site shall be made, subject to the following conditions:	Nil
12.3	Retention monies	
12.3.1, 12.3.2	The percentage to be retained from each progress payment and the limit of the total sums retained shall be in accordance with the following:	
	(a) For the Contract Works, a total retention of: <ul style="list-style-type: none"> • 10% on the first \$200,000, and • 5% on the next \$800,000, and • 1.75% on amounts in excess of \$1,000,000, and • With a maximum total retention when aggregated of \$250,000, and • With a defects liability retention of half the total retention. 	<input checked="" type="checkbox"/>
12.3.3	Bond in lieu of retention	N/A
	(a) The Contractor may provide a bond in lieu of retentions:	<input type="checkbox"/>
	(b) The Contractor may not provide a bond in lieu of retentions:	<input checked="" type="checkbox"/>
12.8	Cost fluctuations	
	(a) Cost fluctuations shall not be paid:	<input checked="" type="checkbox"/>
	(b) Cost fluctuations shall be paid in accordance with the amended Appendix A.	<input type="checkbox"/>

Clause in General Conditions	Title and subject matter	Specific condition data
	(c) Cost fluctuations shall be paid in accordance with the method described in	<input type="checkbox"/>
12.13	Goods and services tax	
12.13.2	Payment Schedules provided by the Engineer:	
	(a) Shall not be in the form of a tax invoice;	<input type="checkbox"/>
	(b) Shall be in the form of a buyer created tax invoice and the parties agree not to issue any other tax invoice for items covered by the Payment Schedule.	<input checked="" type="checkbox"/>
13.	DISPUTES	
13.4	Arbitration	
13.4.3	If required, the arbitrator shall be nominated by the following Person:	The Engineer
15.	SERVICE OF NOTICES	
15.1.2	For the purpose of service of written notice:	
	(a) The address of the Principal is:	Rotorua Lakes Council
	Postal address:	Private Bag 3029, Rotorua Mail Centre, Rotorua 3046
	Delivery address:	1061 Haupapa Street, Rotorua
	Mark for the attention of:	Jean-Paul Gaston
	Email address:	jean-paul.gaston@rotorualc.nz
	Other agreed means of electronic communication and address detail:	As mutually agreed by the parties from time to time
	(b) The address of the Contractor is:	Details to be provided subsequent to Contract award
	Postal address:	
	Delivery address:	
	Mark for the attention of:	
	Email address:	
	Other agreed means of electronic communication and address detail:	As mutually agreed by the parties from time to time
	(c) The address of the Engineer is:	tbc
	Postal address:	-
	Delivery address:	-
	Mark for the attention of:	
	Email address:	
	Other agreed means of electronic communication and address detail:	As mutually agreed by the parties from time to time

Schedule 2: Special Conditions of Contract – Other Conditions of Contract (replaces Schedule 2 of NZS 3910:2013)

The General Conditions of Contract, NZS 3910:2013 Conditions of contract for building and civil engineering construction – Fixed term, are amended as set out herein.

Clause numbers refer to the General Conditions, or additional clause numbers.

1. INTERPRETATION

1.2 Definitions

Add new definitions

Probity Event means:

- (a) where the Principal considers (acting reasonably) that an inducement or reward has been offered or provided to any employee, agent or representative of the Principal by or on behalf of the Contractor in return for showing or not showing favour or disfavour to any person in relation to this contract; or
- (b) committing any offence under any laws creating offences in respect of fraudulent acts; or
- (c) defrauding or attempting to defraud or conspiring to defraud the Principal; or
- (d) an event, matter or thing for which the Contractor is responsible that in the opinion of the Principal (acting reasonably) is or is likely to have a material adverse effect on the reputation of the Principal.

2.THE CONTRACT

2.11 Add new 2.11Accuracy of information

- 1. All information made available by or on behalf of the Principal whether prior to, with or subsequent to, this Contract Agreement is made available on the basis that the Principal makes no representation or warranty, whether express or implied, as to the completeness, correctness or accuracy of such information. The Contractor shall check the completeness and correctness of any such information prior to carrying out the work to which the information relates and undertake all such further investigations as it may consider appropriate.

2.12 Add new 2.12 – Reliance

2.12.1 The Contractor acknowledges that the Principal is relying on the advice, skill and judgement of the Contractor in the construction of the Contract Works.

2.12.2 It is the responsibility of the Contractor to identify, assess, quantify and allow for any risk associated with completing the design and construction of the Contract Works, unless specifically indicated otherwise in the Contract Documents.

3. BONDS**3.1 Contractor's Bond**

- 3.1.6** In 3.1.6(a) and (b) delete "up to Practical Completion" and replace with "up to the date of issue of the Practical Completion Certificate"
- 3.1.9** Delete 3.1.9

4. SUBCONTRACTS**4.1 General****4.1.3 Add to the end of 4.1.3**

and the Contractor shall be responsible for the acts, defaults and neglects of any Subcontractor or Subcontractor's agents, employees or consultants as fully as if they were the acts, defaults and neglects of the Contractor or the Contractor's agents, employees or consultants

4.1.4 Add new 4.1.4

The Contractor must engage the key Subcontractors stated in the Contractor's tender or in the Special Conditions. The Contractor shall not terminate any such engagement or in any other way replace the named Subcontractor without the prior written consent of the Engineer whose consent shall not be unreasonably withheld. Such key Subcontractors shall not be Nominated Subcontractors.

4.1.5 Add new 4.1.5

The Contractor shall, promptly upon execution of any key subcontract named in the Special Conditions, procure from the key Subcontractor a continuity guarantee in favour of the Principal in the form set out in Schedule 17. No payment otherwise due under the Contract shall become payable until the key Subcontractor has executed the continuity guarantee and the Contractor has delivered the continuity guarantee to the Principal.

4.1.6 Add new 4.1.6

Where work is required on the Principal's live water mains, wastewater pipes and storm-water pipes as indicated in the Special Conditions, the Contractor, or Subcontractor who will do the work, shall hold a current approval from the Principal in the appropriate category as defined in the Special Conditions. The Engineer's consent required by 4.1.2 for subcontracting part of the Contract Works will not be required where the Contractor is using an approved Subcontractor for works pursuant to this clause 4.1.6.

5. GENERAL OBLIGATIONS**5.3 Control of employees****5.3.2 Number the existing "5.3.1" and add new 5.3.2:**

The Contractor must employ the key personnel named in the Special Conditions in the positions nominated in the Contractor's tender or in the Special Conditions. The Contractor shall not remove any such key personnel from their stated position without the prior written consent of the Engineer whose consent shall not be unreasonably withheld.

5.7 Protection of Persons and property

Delete 5.7.1 – 5.7.7 and replace with:

- 5.7.1** So far as the Site, Materials and the Contract Works are under the Contractor's management or control, the Contractor shall ensure so far as is reasonably practicable that the Site, Materials and Contract Works, including the means of entering and exiting the Site and anything arising from the Site are without risks to the health and safety of any persons.

- 5.7.2** The Contractor shall ensure so far as is reasonably practicable that the health and safety of any:

- (a) workers involved in carrying out the Contract Works;
- (b) workers whose activities in carrying out work are influenced or directed by the Contractor; and
- (c) other person;

is not put at risk from the carrying out of the Contract Works.

- 5.7.3** The Contractor must have in place and operate throughout the carrying out of the Contract Works:

- (a) ongoing hazard and risk identification and mitigation processes;
- (b) proper procedures for dealing with emergencies that may arise; and
- (c) an effective drug and alcohol policy that applies to its workers, which must provide for a valid random testing programme.

- 5.7.4** The Contractor shall:

- (a) keep a record of all deaths, injuries, illnesses and notifiable incidents which are required by law to be notified ("Notifiable Events") to WorkSafe or the relevant designated regulatory agency under the health and safety legislation ("HSWA Regulator") for at least 5 years from the date on which notice of the relevant event is given to the public authority;
- (b) as soon as possible after becoming aware that a Notifiable Event arising out of the carrying out of the Contract Works has occurred, ensure that the HSWA Regulator is notified of the event; and
- (c) so far as the Site and the Contract Works at which any Notifiable Event has occurred are under the Contractor's management or control, take all reasonable steps to ensure that the Site or the Contract Works where the Notifiable Event occurred is not disturbed until authorised by the HSWA Regulator.

- 5.7.5** Following any Notifiable Event the Contractor shall:

- (a) give to the Principal through the Engineer a copy of any information or notice which the Contractor is required to provide or make to the HSWA Regulator relating to that Notifiable Event;
- (b) provide the Principal through the Engineer a report giving complete details, including results of investigations, into the cause of the Notifiable Event and any recommendations or strategies for prevention of any similar Notifiable Event in the future; and
- (c) provide the Principal with such assistance as may be reasonably necessary to conduct a Notifiable Event, incident or accident investigation.

- 5.7.6** The Contractor must, as soon as possible, notify the Principal through the Engineer of any proceedings and/or enforcement action it is issued with.

- 5.7.7** The Contractor shall provide the Principal with access to the Site in order to review, monitor or audit the Contractor's health and safety procedures and practices as deemed appropriate by the Principal. The Contractor shall participate in any health and safety audits conducted by the Principal or any person appointed by the Principal. The Contractor shall rectify any issues raised in any such audit.

- 5.7.8** The Principal shall notify the Contractor through the Engineer of any safety hazards or risks associated with the Contract Works or the Site, or special safety measures required, of which the Principal or the Engineer are aware, and with which an experienced contractor may not reasonably be expected to be familiar.

- 5.7.9** The Contractor shall provide all watching and provide, erect, maintain and when no longer required remove all barricades, fencing, temporary roadways and footpaths, signs, and lighting necessary for the effective protection of property, for traffic, and for the safety of persons.

- 5.7.10** The Contractor shall, so far as is reasonably practicable, engage with workers (including all workers of the Contractor and Subcontractors and any workers who are likely to be directly affected by the work) involved in carrying out the Contract Works in relation to health and safety matters concerning the Site or the Contract Works. The Contractor shall have procedures in place that provide reasonable opportunities for such workers to participate effectively in improving health and safety in respect of the Site and the Contract Works on an ongoing basis.
- 5.7.11** The Contractor shall so far as is reasonably practicable co-ordinate, consult and cooperate with all other duty-holders in relation to the Contract Works, including the Principal. The Contractor shall facilitate engagement between the Contractor, the Engineer and the Principal (and where requested by the Principal, its designers) in relation to health and safety matters.
- 5.7.12** If during the term of the Contract the Engineer considers the Contractor is:
- not conducting the Contract Works in compliance with the Site-specific safety plan, relevant legislation, applicable codes of practice or standards, or any other requirements for health and safety set out in the Contract, or
 - conducting the Contract Works in such a way as to endanger the health and safety of the Contractor's employees or Subcontractors, or any other person,
- the Engineer may instruct the Contractor to suspend the Contract Works until the Contractor has rectified its failure to comply with its obligations to the satisfaction of the Engineer.
- 5.7.13** The Contractor shall hold health and safety accreditations which have been approved by the Principal and which satisfy any national management system standards stated in the Special Conditions.
- 5.7.14** Without limiting any other provision in the Contract, the Contractor shall comply with the Health and Safety Requirements and shall be responsible for any non-compliance by any Subcontractor with the Health and Safety Requirements.
- 5.7.15** Where required by the Special Conditions, the Contractor shall provide to the Principal through the Engineer a monthly health and safety report, which meets the requirements for monthly health and safety reports set out in the Contract including the information in the Form of Health & Safety Reporting (Schedule 19). The format and content of the monthly health and safety reports shall be detailed in the Contractor's Site-specific health and safety management plan. If Practical Completion occurs within a month of the commencement of the Contract, then the health and safety report shall be provided on Practical Completion.
- 5.7.16** If the Contractor fails to comply with any of the Health and Safety Requirements after having been given reasonable notice to comply, or if the Contractor is issued with an improvement or prohibition notice by Worksafe NZ or the HSWA Regulator and fails to implement suitable remedies promptly, or is prosecuted for a breach of any relevant legislation, such failure or prosecution shall be deemed to be a Contractor default which will entitle the Principal to terminate the Contract or resume possession of the Site, in accordance with 14.2.1(d). Alternatively, where the default is capable of remedy the Engineer may instruct the Contractor to suspend the Contract Works until the Contractor has rectified its failure to comply with its obligations to the satisfaction of the Engineer.
- 5.7.17** The Contractor shall take all reasonable steps to avoid nuisance to prevent damage to property.
- 5.10 Programme**
- 5.10.1 Add to the end of 5.10.1**
The programme shall include a forecast of all anticipated monthly payments, excluding retentions, to be made under the Contract. This forecast shall be updated monthly.
- 5.11 Compliance with laws**
- 5.11.9** In the first line of 5.11.9 delete "Final Completion Certificate" and replace with "Practical Completion Certificate", and in 5.11.9(a) delete "11.3.2" and replace with "10.4.5"

- 5.11.10** In the first line of 5.11.10 delete "date of closing of tenders" and replace with "Date of Acceptance of Tender".

Add the following additional clauses

- 5.11.11** The Contractor shall not do anything or omit to do anything, or use materials, substances or processes which:
- would or is likely to discharge a contaminant into the environment that is not in compliance with any licences applicable to the Contract Works; or would or is likely to cause the total emission of noise from the Site to exceed prescribed boundary noise levels; or that would or is likely to cause any adverse effect on the environment, or
 - is a breach of any duty or obligation of the Contractor under the Resource Management Act 1991 ("RMA"); or
 - does or is likely to give rise to the issue of an abatement notice, enforcement proceedings or an excessive noise direction under the RMA against the Principal, Contractor or Subcontractor.
- 5.11.12** Before a Subcontractor commences work the Contractor shall obtain similar undertakings as those stated in 5.11.11 from that Subcontractor in relation to the subcontract works.
- 5.11.13** The Contractor shall indemnify and keep indemnified the Principal from all costs, damages, fines, penalties, loss and expense incurred or suffered by the Principal in respect of any breach of the RMA directly or indirectly related to a breach by the Contractor of any of the warranties set out in 5.11.11 except that the Contractor's liability shall be reduced proportionately to the extent that the Principal or any person for whose acts or omissions the Principal is as between itself and the Contractor responsible, caused or contributed to that liability.
- 5.11.14** If the Contractor becomes aware that it is or may be in breach, or is likely to be in breach of any of its obligations under 5.11.11 or any Subcontractor is or may be in breach of or is likely to breach the matters set out in the agreement between the Contractor and Subcontractors pursuant to 5.11.12 then the Contractor shall immediately notify the Engineer of such breach or anticipated breach.
- 5.11.15** The Contractor shall hold the environmental accreditations which have been approved by the Principal and which satisfy any national management system standards stated in the Special Conditions.
- 5.13 Underground and above-ground utilities**
- 5.13.3 Add to the end of 5.13.3**
The Contractor shall be alone liable for the costs of repair or replacement of any damage to or loss of underground utilities identified by the Principal or known to the Contractor and aboveground utilities howsoever caused including by the negligence of the Contractor's Subcontractors and the Contractor hereby indemnifies and holds harmless the Principal against all claims made for actual or alleged loss or damage to underground utilities identified by the Principal or known to the Contractor and aboveground utilities.
- 5.17 Safety plan**
- Delete 5.17.1 to 5.17.5 and replace with:**
- 5.17.1** Where required by the Special Conditions, the Contractor shall prior to commencement of the Contract Works on Site:
- undertake a Site-specific risk assessment; and
 - prepare and submit to the Engineer a Site-specific health and safety management plan ("Plan") for the execution of the Contract Works.
- 5.17.2** The Plan shall:

- (a) address the means by which the Contractor intends to meet its obligations under 5.7 and any other requirements for the Plan set out in the Contract; and
- (b) detail how the Contractor will maintain a healthy and safe work environment and ensure legislative and best practice compliance.
- 5.17.3** Within 5 Working Days of receipt of the Plan, or revised Plan, the Engineer shall notify the Contractor in writing whether or not the Plan is accepted. Such acceptance shall not be unreasonably withheld. Where the Engineer does not accept the Plan, the notice shall include the Engineer's reasons, and the Contractor shall submit a revised Plan.
- 5.17.4** The Contractor shall not commence any part of the Contract Works on Site unless the Engineer has accepted the Plan or revised Plan.
- 5.17.5** The Contractor shall comply with the Plan accepted by the Engineer under 5.17.4. Compliance with the Plan shall not relieve the Contractor from any of its duties, obligations, and liabilities under the Contract.
- 5.20 As-built drawings and operation and maintenance manuals**
- 5.20.4 Add new 5.20.4**
Where required by the Special Conditions, the documents and information required to be provided by the Contractor under 5.20 shall be in sufficient detail and in a form appropriate to allow the Principal to accurately update the Principal's records, including Geographical Information System (GIS) records.
- 5.20.5 Add new 5.20.5**
Where draft information comprising as-built drawings, operation and maintenance manuals or producer statements are required at time of Practical Completion then an additional retention amount shall apply until such are supplied in final form and consented to.
- 5.21 Advance Notification**
- 5.21.1(b) Add "or any Separable Portion" to the end of 5.21.1(b).**
- Add the following additional clause:**
- 5.22 Environmental compliance plan**
- 5.22.1** Where required by the Special Conditions, the Contractor shall prepare and submit to the Engineer an environmental compliance plan for execution of the Contract Works.
- 5.22.2** The environmental compliance plan shall address the means by which the Contractor intends to meet its obligations under 5.11 and any other requirements for environmental compliance set out in the Contract or in any licences obtained or to be obtained by the Principal or the Contractor under 5.11.
- 5.22.3** Within 5 Working Days of receipt of the Contractor's environmental compliance plan, or revised environmental compliance plan, the Engineer shall notify the Contractor in writing whether or not the plan is accepted. Such acceptance shall not be unreasonably withheld. Where the Engineer does not accept the plan, the notice shall include the Engineer's reasons, and the Contractor shall submit a revised environmental compliance plan.
- 5.22.4** The Contractor shall not commence any part of the Contract Works unless the Engineer has accepted the environmental compliance plan or revised environmental compliance plan.
- 5.22.5** Compliance with the environmental compliance plan shall not relieve the Contractor from any of its duties, obligations, and liabilities under the Contract.

- 7. INDEMNITY**
- 7.1 Indemnity**
- 7.1.1(a) and (b) Add the words "design (by the Contractor)", before the words "construction of"**
- 8. INSURANCE**
- 8.1 General**
- 8.1.2 Delete 8.1.2 and replace with**
If any insurer makes or attempts to make any material alteration to the terms of any insurance required by this Contract during the currency of the insurance or its renewal, the party first notified by the insurer shall promptly give notice to the other insured parties. Any costs associated with a failure to notify the other insured parties of any such alteration will be the responsibility of the party first notified.
- 8.1.3 Add to end of 8.1.3**
"provided that a copy of the policy has been provided to all insured parties prior to the works commencing."
- 8.2 Contractor arranged insurances – General**
- 8.2.3 Add sub-paragraph (c)**
The insurances are primary to and will respond in priority to any policy of insurance effected by the Principal which covers the same or similar interests.
- 8.2.8 Add to end of 8.2.8**
Nothing in this provision shall limit the liability of the Contractor to the Principal, should the Principal fail for any reason whatsoever to pay any insurance premium under the provisions of this subclause.
- 8.2.9 Add new 8.2.9**
The Contractor shall be responsible for ensuring that Subcontractors maintain public liability insurance to the same extent as is required to be provided by the Contractor.
- 8.5 Contractor arranged public liability insurance**
- 8.5.1** In the fourth line of 8.5.1 after the words "for an amount not less than that stated in the Special Conditions," **add the words "and in the aggregate for products liability,"**
- Add new sub paragraphs to the end of 8.5.1 as follows**
- (d) Products liability insurance;
- (e) Liability for damage to underground services;
- (f) Liability arising from the use of construction machinery, including hired Plant, except when being used as a motor vehicle as defined in the Land Transport Act 1998; and
- (g) Liability for loss or damage to any existing structures, or other structures in the vicinity and the contents of any of them, that are not specifically identified in Schedule 1 under 8.2 (a), (b) and (c).
- 8.5.2 Add to end of 8.5.2:**
The insurance shall be extended to include any vicarious liability of the Principal for loss or damage arising out of the use of the Contractor's motor vehicles in connection with the Contract Works.
- 8.7 Principal arranged insurances – General**

8.7.8 Add new 8.7.8

All claims proceeds under the insurances arranged by the Principal will be payable to the Principal. The Principal will reimburse the Contractor in respect of any progress payment claim approved by the Engineer for reinstatement or repairs to the Contract Works, or any part of the Contract Works, including loss or damage to any Materials.

9. VARIATIONS**9.1 Variations permitted****9.1.1(b) Add to the end of 9.1.1(b)**

"... whether or not any such work omitted is subsequently carried out by a Separate Contractor or by the Principal itself."

9.3 Valuation of Variations**9.3.15 Delete the last sentence of 9.3.15 and replace with**

Where no such percentage is nominated, the Contractor shall not be entitled to the Cost of processing Variations whether or not they proceed.

9.4 Daywork

9.4.3 In the last sentence of 9.4.3 delete "in such case" and replace with "in the case of records signed by the Engineer"

10 TIME FOR COMPLETION**10.3 Extension of time****10.3.1(c) Delete 10.3.1(c) and replace with**

Any strike, lockout or other industrial action except where caused or to the extent contributed to by the Contractor or its Subcontractors;

10.3.1(d) Delete 10.3.1(d) and replace with

Loss or damage to the Contract Works or Materials other than loss or damage caused by any act or omission of the Contractor or of any person for whose acts or omissions the Contractor is as between itself and the Principal responsible;

10.3.1 Add to the end of 10.3.1

No extension of time will be granted unless the delay has affected the critical path of the Contract Works such that Practical Completion cannot be achieved by the Due Date for Completion.

10.3.6 Delete first sentence of 10.3.6 and replace with

The Engineer may where practicable in lieu of granting an extension, taking into account the resources available to the Contractor, require the Contractor to accelerate the rate of working to offset in part or in total any delay in respect of which the extension would otherwise be granted under this 10.3.

10.3.8 Add new 10.3.8

Where there has been a delay to the Contract Works which does not entitle the Contractor to an extension of time pursuant to 10.3.1, the Contractor shall take all reasonable steps to expedite progress.

10.4 Practical Completion Certificate

10.4.5 Add sub paragraph (c) "Anything else required by the Special Conditions".

10.4.7 Add new 10.4.7

Particular works which the Contractor must carry out prior to the issue of the Practical Completion Certificate are as stated in the Special Conditions.

11. DEFECTS LIABILITY**11.3 Final Completion Certificate**

11.3.2 Add sub paragraph (c) "Anything else required by the Special Conditions".

11.5 Warranties

11.5.2 Add ", Schedule 18" after "Schedule 13"

12. PAYMENTS**12.2 Progress Payment Schedules****12.2.8 Add to the end of 12.2.8:**

"... or as otherwise provided in the Special Conditions."

12.3 Retention Monies**12.3.2 Add to the end of 12.3.2(a)**

... less the Engineer's assessment of the value of any Contract Works remaining to be completed other than minor omissions and minor defects under 10.4.1.

12.3.2 Add new sub-paragraph (b) and re-number existing subparagraphs (c) and (d)

(b) By payment, as part of the first progress payment after the Contractor provides all of the information required to be provided under 11.3.2 for the whole of the Contract Works or for the Separable Portion, of one third of the defects liability retention;

12.3.2 In the third line of new subparagraph (c) add the word "remaining" before the words "defects liability retention"

12.5 Final Payment Schedule**12.5.9 Add to end of 12.5.9**

"... or as otherwise provided in the Special Conditions."

12.6 Effect of Final Payment Schedule**12.6.2 Add new 12.6.2**

Notwithstanding the issue of the Final Payment Schedule the Contractor shall remain liable for fulfilment of any obligation of the Contractor under the Contract which then remains unperformed or not properly performed.

12.13 Goods and services tax**12.13.2 Delete 12.13.2 and replace with**

Any payment claim or final payment claim prepared by the Contractor shall not be a GST Invoice. The Principal shall create a buyer created GST Invoice after the Engineer provides Progress Payment Schedules under 12.2 or Final Payment Schedules under 12.5 and the parties agree not to issue any other GST Invoice for items covered by the Payment Schedules.

12.14 Add new 12.14

12.14 Set off

The Principal shall be entitled to set off against any sums that would otherwise be due to the Contractor, whether certified by the Engineer or otherwise, amounts in respect of any claims against the Contractor, including damages for breach of contract by the Contractor.

14. FRUSTRATION AND DEFAULT

14.2 Default by the Contractor

14.2.1 Delete 14.2.1 and replace with

The Principal may at its option after giving notice to the Contractor either terminate the Contract or resume possession of the Site in the event of:

- (a) The Contractor failing to execute the Contract Agreement under 2.6 or to provide the Contractor's Bond under 3.1 where required by the Contract;
- (b) The Contractor assigning or subletting the whole or substantially the whole of the Contract Works without the consent in writing of the Principal;
- (c) A Probity Event;
- (d) The Engineer certifying in writing to the Principal that in his or her opinion the Contractor:
 - (i) has abandoned the Contract;
 - (ii) is in substantial breach of the Contract;
 - (iii) has failed to commence the Contract Works in accordance with 10.1.2; or
 - (iv) is persistently, flagrantly or wilfully neglecting to carry out its obligations under the Contract; or
- (e) The Engineer certifying in writing to the Principal that in his or her opinion the Contractor is in breach of any of its obligations under 5.7 or 5.17,

and the Contractor's default under (a), (b), (d) or (e) has not been remedied to the satisfaction of the Engineer within 10 Working Days of receiving the notice.

PROJECT DRAWINGS & SPECIFICATIONS

1. Preliminary and General
2. Tonkin & Taylor - Engineering
3. Isthmus – Landscaping
4. SEG – Electrical Engineering

APPENDICES, ADDITIONAL DOCUMENTATION

DRAFT

**Rotorua Lakes Council
LAKEFRONT REDEVELOPMENT:
STAGE 1 & 1A**

**PRELIMINARY AND GENERAL
SPECIFICATION**

VERSION	ISSUE DATE	DISTRIBUTION	NOTES
V1.0	14.02.19	Tender Issue	

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Preliminary & General

1.0 GENERAL CLAUSES

The whole of the following Preliminary and General clauses shall be read in conjunction with and apply to all documents forming part of the Contract.

2.0 PROJECT PARTICULARS

2.1 THE CONTRACT WORKS

Rotorua Lakes Council "RLC" are proposing to undertake staged redevelopment of the existing CBD lakefront recreation area. The proposed redevelopment will encompass a world class promenade and boardwalk, improved informal and formal play areas, improved water access, linkage to cycle networks, and provide opportunities for commercial activity.

Stage 1 and 1a of the development. Stage 1 and 1a works cover the main lakefront promenade, boardwalks over land, terracing, general amenities and planting.

2.1.2 ADJACENT BUILDINGS

These include the following:

Nil.

2.2 CONTRACT INTENT

The Form of Agreement shall be NZS 3910:2003 as modified in the tender documentation.

2.3 DESIGN INTENT

It is a fundamental requirement of the Principal that the Contractor accepts and constructs the Contract Works in accordance with the design provided to the Contractor by the Principal (or as otherwise provided for under the contract).

The design intent is as shown and contained in the following documents (all of which form part of the Contract Documents):

- the Drawings (provided separately)
- the Specifications & Reports (provided separately)
- the Preliminary and General Specification;
- the Resource Consent, including all conditions (yet to be granted);

and includes the incorporation into the Contract Works of all structures, improvements and things which are:

- (i) incidentally necessary;

- (ii) required to make the Contract Works and each element fit and suitable for the purposes for which they are intended to be put, and if no intention is expressed or apparent, so as to be fit and suitable for the purposes for which they are customarily put;
- (iii) required by any New Zealand industry standard (and if no relevant New Zealand standard the Australian standard) applicable to the Contract Works;
- (iv) required by the legislative requirements applying to the Site, the Contract Works or the Contract Documents; and
- (v) in accordance with good building practice.

3.0 SITE INFORMATION

3.1 LOCATION

The site is located at Lakefront Drive, Rotorua.

3.2 CONTRACTOR'S ESTABLISHMENT AREA

The location and area is to be agreed with the contractor. This to be of such a design to permit deliveries and access for emergency vehicles, any access to neighbouring sites. The contractor is to allow for any and all design and consents from Tauranga City Council. Tenderers should allow to undertake any repairs to same and maintain the area in good order throughout the duration of the works and return it to the same state as it was found. All service utility connections (e.g. power, telephone/data/ water and drainage) are the responsibility of the tenderer. Full details of proposed contractor establishment area are to be submitted to the engineer for approval.

Contractor parking will be permitted on the site as space allows. No parking in the directly adjoining public space shall be allowed.

3.3 SITE ACCESS

The movement of Contractor's vehicles on the site and within the Contract Works areas shall be included in the Contractor's Traffic Management Plan and will be agreed with the Engineer before commencing work.

3.4 HOURS OF WORK

- 3.4.1 The Contractor is to allow within the contract for working all hours as may be deemed necessary to complete the contract within the contract period. The Contractor must, however comply with Council Regulations, By-laws and Resource Consent requirements in respect of carrying out construction works, and have due regard for neighbouring residents, their rights and safety issues. The Contractor may therefore have to adjust resource as an alternative to working extended hours in order to achieve the construction programme.

Where the Contractor wishes to work outside the normal working hours Monday to Saturday or on public holidays the contractor must submit a request to the Engineer. The request must be submitted 48 hours before commencing the proposed work. Approval to work extended hours will not unreasonably be withheld.

- 3.4.2 The Engineer and other Consultants inspection staff will generally only be available for communication to undertake their duties between 0800 hrs and 1700 hrs on Monday to Friday (excluding Public Holidays). There will be no full time onsite attendance by technical consultants. The Contractor shall programme all

inspections and approval requirements to suit this general availability and provide advance warning of inspections or attendance required onsite.

3.5 TEMPORARY SERVICES

The contractor is to inspect existing services available on site and arrange for any and all additional temporary services (power, water etc) required for the duration of the project for both site accommodation and Services for the Works including payment of all fee and power supply costs.

On completion disconnect temporary services and clear away all traces and make good all works back to original condition or as described in the contract documents.

All power charges will be paid direct by the Contractor.

3.6 SITE ESTABLISHMENT PLAN AND MANAGEMENT

The Contractor must:

- (a) within 10 days of the Date of Acceptance of Tender submit for the approval of the Engineer a comprehensive Site Establishment Plan; and
- (b) within 20 days of the Date of Acceptance of Tender submit for the approval of the Engineer, a comprehensive Site Management Plan.

3.7 DISRUPTION

- 3.7.1 For all work that may disrupt the function of the neighbouring occupants (e.g. vibration, noise, services alterations, fire protection etc) the contractor must complete and forward a disruption notice request to the Engineers rep at least 72 (working) hours prior to the work being undertaken.

4.0 SITE REQUIREMENTS

4.1 SURVEY

Any required survey control points to be completed by the contractor.

4.2 NUISANCE AND NOISE CONTROL

The Contractor is to recognise that the works are being carried out in the vicinity to neighbouring and operating buildings.

All reasonable precautions are to be taken to prevent damage and nuisance from water, smoke, vehicles, dust, rubbish and any other causes resulting from the Works.

The lighting of fires is not permitted on site.

Radios and Audio Players are not permitted on site.

The Contractor, Subcontractor or Suppliers are not permitted to bring animals onto the site.

4.3 CARPARKING

Parking for Contractor vehicles is not permitted on the remaining Lakefront parking areas. Any vehicles contravening these restrictions may be towed away at the Principal's discretion and the vehicle owners cost

4.4 DESIGN OF TEMPORARY WORKS

The Contractor shall be responsible for the design and submit to the Engineer two copies of the detailed plans of Temporary Works at least two Weeks in advance of construction of such Temporary Works commencing.

Any comment that the Engineer may, or may not, make upon these plans shall in no way relieve the Contractor of any of the Contractor's responsibilities under the Contract Documents. Before submission to the Engineer, the Contractor's proposals for all these Temporary Works and erection methods shall have been checked by a Registered Engineer who has proven experience in the design of works of this nature, and who is expressly engaged by the Contractor for the purpose of making such checks.

With the Contractor's plans, the Contractor shall submit to the Engineer a certificate signed by a Registered Engineer to the effect that the calculations of all structural elements as designed by the Contractor for use as Temporary Works and all erection methods have been thoroughly checked by this Registered Engineer and that the details and arrangements for carrying out the works as proposed by the Contractor are satisfactory and safe for the purpose.

In addition, the Registered Engineer who checked the Temporary Works on behalf of the Contractor, shall make visits to the Site at sufficiently frequent intervals to be satisfied that the work is being carried out in accordance with the plans as checked and certified by the Registered Engineer, and shall report satisfaction in writing to the Engineer after each such visit. All Costs associated with this design, its check, and the checking Registered Engineer's Site visits shall be met by the Contractor.

Allow to maintain, alter, adapt and move temporary works and services as necessary. Clear away any no longer required and make good.

4.5 KEEP ACCESS OPEN

The Contractor shall ensure that access, including vehicular access and access to locations by the Fire Service, and other emergency services, is maintained at all times to properties affected by the Contract Works. Maintain all public access routes adjacent to Construction Site Boundary Fences and Hoardings. Ensure they are kept clean and sufficiently illuminated

4.6 ARCHAEOLOGICAL REQUIREMENTS

It is not expected any find of archaeological interest would be uncovered. However, should an artifact be uncovered during the works the Contractor is to notify the Project Manager immediately and stop all works in the immediate area of the find.

4.7 TREES

No trees are to be removed on site unless stated in the design documentation. The Contract should note there are trees of significance in the works are, if in any doubt ask before removal. Replacement trees will be at the contractors expense.

4.8 SEDIMENT CONTROL REQUIREMENTS

The Contractor is to implement sediment and run off controls as required to completed the scope of works to the satisfaction of the Council. The Contractor is required to design, supply, install, and operate these measures during the contract period, including the wheel washing facility for vehicles leaving the site.

5.0 STATUTORY / GENERAL OBLIGATIONS

5.1 BUILDING CONSENT AND RESOURCE CONSENT

5.1.1 Resource Consent: Resource Consent for the Project is yet to be obtained. Once obtained this will be supplied to the Contractor, the Contractor is to make all allowances to complete the works in accordance with consent conditions.

5.1.2 Building Consent: Building Consent is required for portions of the Contract Works. This will be obtained by the Principal. The Contractor will be responsible for the preparation, submission and obtaining of the Certificates of Public Use and Code Compliance Certificate including payment of any fees associated with such.

The Contractor will comply in all respects with the general and particular requirements of the Building Act 2004.

The Contractor will be responsible for obtaining Building Consents and approvals required for any temporary works or proprietary systems used within the construction works.

5.1.3 The Principal will uplift the Building Consents and provide the required documents to the Contractor who shall keep these on site for the duration of the Contract and then return them to the Principal in good condition.

5.2 INSPECTIONS AND NOTICES

The Contractor shall confirm with the Territorial Authority the inspection requirements needed to ensure compliance with the New Zealand Building Code. Throughout the contract the Contractor shall allow for and make all arrangements for the required inspections to be carried out to ensure compliance in line with the Contractors program.

The Contractor shall obtain from the authorities and network utility operators all other permits, authorisations and approvals which relate to the carrying out of the Contract Works. The Contractor shall pay all fees and levies in respect of same including re-inspections.

5.3 LOCAL BODY FEES AND CHARGES

The Contractor shall give all usual notices to the Authorities and arrange at its cost for the connection, inspection and testing of electrical, plumbing and drainage work and other utilities to applicable services of Authorities.

The Contractor shall prepare documentation and lodge an application for, Certificate of Public Use and a Code Compliance Certificate at a time prior to Practical Completion of each stage and allow a period advised by the Authority for processing and issue by Practical Completion.

5.4 TRAFFIC MANAGEMENT

The contractor shall prepare and submit a Traffic Management Plan to the Engineer for approval by the Principal.

All operations necessary for the execution of the Contract Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or with the condition of or access to, or use of, public or private highways, roads, bridges, public places, or footpaths. The Contractor shall make good at his own Cost all damage or injury arising out of his operations under the contract and shall save harmless or indemnify the Principal from and against all claims arising out of or in relation to any such matters.

The Contractor shall take all sufficient precautions for the general safety of the public, pedestrian, and vehicle traffic, Subcontractors and employees, and in particular shall:

- (a) be responsible for traffic control during the course of the execution of the Contract Works and shall comply with the Principal's and any interested authorities requirements as to traffic control;
- (b) take all reasonable precautions to prevent accidents while undertaking the Contract Works by erecting hoardings, fences, barriers, signs, devices to cause traffic to slow down, and ensure adequate lighting at all times;
- (c) where there is any excavation, or other place dangerous to persons passing along or through the Site, to fill in or enclose the same; and
- (d) whenever the public safety requires, enclose the Contract Works by a hoarding or fence to the satisfaction of any relevant authority. Adequate warning signs and barricades shall be maintained to warn and protect pedestrians and traffic. Temporary speed restriction signs in accordance with Current Traffic Regulations shall be erected. During darkness all warning signs and all barricades, plant or other obstructions on the roadway and footpaths shall be rendered visible by warning lights. As soon as the need for signs, barricades or similar devices ceases, they shall be removed forthwith.

(e) During the progress of the works the Contractor shall keep all streets and footpaths affected by the contract clean and as clear from obstruction as possible, and shall at all times keep all fire hydrants, service boxes and valves in an accessible and immediately operable condition and keep indicators clearly visible in correct positions.

The Contractor shall be solely responsible for the protection of all access ways and any footpath, road, adjacent property, plant and equipment from damage that may be caused by the Contractor in the execution of the Works and shall be responsible for the making good of any such damage to the satisfaction of the Local Authority and the Engineer at no cost to the Principal.

6.0 MATERIALS AND WORKMANSHIP

6.1 MATERIALS SOURCING

The Principals preference is for the contractor to generally source materials from local (New Zealand or Australian) suppliers and manufacturers provided they meet the required quality standards and are cost effective, able to be supplied within the program durations and have suitable technical support.

The Contractor is to allow all costs of investigating procurement options for procuring Australian or New Zealand manufactured materials.

Tenders for trade packages and provisional sums are to include the country of origin for major components and materials, and details of the location of final manufacture (where appropriate). The contractor shall take this information into account when evaluating tenders and making recommendations to the owner.

6.2 STANDARDS

All Materials shall be new, unless otherwise specified, and in accordance with the requirements of the Specifications. Where a particular Standard is not called for in the Specifications, Materials and workmanship shall comply with the Building Act, the relevant New Zealand Standards (NZS) or NZS/AS, Australian Standards (AS), or British Standards (BS) where appropriate NZS do not exist. Reference to any Standard in the Specifications shall include any amendment to or substitution for the referenced Standard.

The Engineer reserves the right to reject any work or materials which do not meet the requirements of the Contract Documents. The Contractor shall be liable to rectify such items to the Engineers satisfaction at no extra cost or time.

All materials and products shall be handled, stored, and installed or fixed in accordance with the manufacturers or suppliers latest recommendations in the absence of any other instructions. Where there is conflict with the specification the Contractor shall seek direction from the Engineer. The materials are to be in new condition when incorporated into the work. Ensure that all installers are familiar with the required substrate conditions and the manufacturers or suppliers specified preparation, fixing and finishing techniques.

6.3 ALTERNATIVES

No alternative Materials to those specified shall be used without the written approval of the Engineer whose decision shall be final. No additional payment or extension of time will be authorised as a consequence of the Contractor using approved alternative Materials.

Where an item is mentioned by a trade name or other specific reference, it shall be deemed to mean the type of item so mentioned, or any other equivalent thereto in quality, finish, durability and serviceability for the purpose intended. The quoting of a trade name shall not be construed as any desire to restrict the use of a competitors' Materials, and the Contractor is at liberty to offer for the Engineer's approval any Materials considered by the Contractor to be of equivalent quality. Approval or otherwise of offered alternatives shall be at the Engineer's discretion. No warranty is expressed or implied that Materials specified are regularly stocked by merchants.

The Contractor is encouraged to submit alternative proprietary materials and fittings to the Engineer for approval where it is considered there may be an advantage in either specification, finish or cost.

The Contractors submission shall reflect the costs of any additional design, testing, or scheduling, necessary for the Engineer to reach a decision.

Where the Contractor requests that alternative materials, equipment or detailed be used to those specified or indicated on the drawings the Contractor shall be responsible for the costs required for the consultants to carry out additional design, testing, or scheduling.

When alternatives are submitted, allowance shall be made for any work that may also affect other Subcontractors.

No additional payments will be made for claims arising as a consequence of using alternative components, unless by prior agreement with the Engineer.

6.4 SAMPLES

Where sample approval is specified, submit samples, prepare sample panels, and construct prototypes for review as to appearance, form and conformance with the drawings and specification. Submit all information required to assist the review process, including technical data manufacturers literature, independent appraisals and producer statements.

Timing for the provision and review of samples, sample panels and prototypes to be included in the Contract programme. Allow a minimum of 10 working days for each review. The Contractor shall arrange for samples to be submitted as early as possible and allow adequate time for alternatives to be sourced and offered for consideration. The programme for submission of samples and prototypes is covered under section. 18.5 of this specification.

Obtain the Engineer's approval prior to incorporating such Materials in the Contract Works. Samples of approved Materials shall be retained on Site for comparison with those built into the Contract Works. Remove from site any rejected samples.

6.5 ORDERS

As soon as a Contract is let the Contractor shall consider the timing and the critical lead-in times for placing orders for the materials and elements required for the construction and completion of the work.

In the event of materials that have been ordered not being available in time to fit in with the construction programme, a list of alternative but equivalent materials proposed as replacement shall be submitted to the Engineer for approval and direction. The Contractor shall be responsible for identifying the availability of materials and offering of alternatives in a timely manner, which allows for review and approval by the Engineer in order to satisfy the construction programme.

6.6 SURFACE FINISHES

Should any trade consider that any surface of construction by another trade is in an unsatisfactory condition to ensure a proper finish for their work thereon, the trade shall report to the Contractor and the Contractor shall confirm that and such work shall not proceed until the necessary improvements have been made. Failing such notice, the trade concerned will not be relieved of the responsibility for a poor finish due to such unsatisfactory conditions. Ensure substrate conditions are within the manufacturers or suppliers stated guidelines, both before and during the installation of any material, product or system.

6.7 PROPRIETARY COMPONENTS

Where proprietary components are specified or shown on the Drawings, or submitted as alternatives, the Contractor shall allow for all design, drawings and other related charges incurred. This shall include design and drawings for approval, Building Consent and construction.

6.8 TRADEMARKS

All articles fixed in exposed positions other than plant rooms shall be supplied without any maker's name, sign or symbols embossed, engraved, cast or painted on. The approval of the Engineer shall be obtained to the design of essential lettering such as operating instructions for equipment etc.

6.9 SEPARATE CONTRACTORS

The Contractor shall ascertain from each Separate Contractor and supplier all particulars relating to his work, with regard to order of its execution and builders work items required for the work before it is put in

hand, as no claims will be allowed for extra cost of dismantling work already executed in consequence of any neglect by the Contractor to ascertain these particulars beforehand.

- (a) Concurrently with the Contract Works the Principal may, through its Separate Contractors be carrying out other work on or about the Site or in the immediate environs of the Site;
- (b) The Contractor must as directed by the Engineer accommodate the requirements of the Separate Contractors and co-ordinate and programme its own activities with the activities of the Separate Contractors.

6.10 ORDERING OF MATERIALS

The Contractor shall within one Month of the Date of Acceptance of Tender, provide to the Engineer the delivery schedule for proprietary supply items materials and components not readily available ex-stock and items requiring manufacture or fabrication off Site. This schedule is to give the date of ordering and quoted delivery period and is to be submitted to the Engineer in an agreed format. This schedule is to be updated periodically as appropriate.

It is the Contractor's responsibility to obtain all necessary licenses for imported materials and to place all orders to ensure their delivery to suit the time programme for the contract.

6.11 QUALITY ASSURANCE

The Contractor shall implement a Site Inspection reporting form for all consultant visits.

The Contractor shall implement a Non Conformance reporting and close out form for consultants.

The Contractor shall allow to proactively manage quality to achieve the required standards. To this end sample areas and specific finishes are to be offered up as new trades commence for the Engineer to confirm the quality of these finished items of work are acceptable.

The Contractor shall prepare and update a Quality Plan as new sub-trades are engaged. The Quality Plan shall demonstrate compliance with the requirements of the Contract Documents. The Quality Plan shall be submitted to the Engineer for approval two weeks prior to commencing work on Site. Such plan shall identify, primarily, the 'Inspection and Test Plans' (ITPs) covering the checks, inspections and tests to be carried out by or on behalf of the Contractor, in order to ensure proper performance in the carrying out of the Contract Works. Compliance with the Quality Plan shall not relieve the Contractor of any of its duties, obligations or responsibilities under the Contract Documents.

Where requested by the Engineer, the Contractor shall provide a statement of the method proposed to be used for the Construction of any part of the Contract Works.

The Contractor shall submit the proposed method statements to the Engineer, and to allow 2 weeks for review, 1 week for re-submission of any amendments required and 1 week for further review.

The method statements shall include such drawings, specifications and calculations as the Engineer may require.

The submission of method statements shall not relieve the Contractor of contractual obligations or responsibilities.

Details of all procedures and compliance certificates shall be submitted to the Engineer for information before each stage of the Contract Works is commenced. When any document is issued to the Engineer, relevant signed quality statements shall accompany it. The Engineer shall be entitled to audit any aspect of the system and require corrective action to be taken.

Failure to comply with these requirements may result in the Engineer delaying payments due until the Engineer is satisfied the Contractor has fulfilled its obligations under this section.

The contractor shall provide a schedule of all tests required by the Specifications and shall progressively obtain sign off of these from the respective design consultants. This schedule will be provided in the contractors monthly reports.

7.0 SUBCONTRACTS

7.1 CO-ORDINATION

The Contractor shall take responsibility for all aspects of the onsite coordination of main contract and subcontract works. The Contractor shall allow all costs associated in taking the lead role for this aspect of the works.

7.2 ATTENDANCE

7.2.1 The Contractor shall allow for attendance upon all Subcontractors and Authorities where concerned with the work, as necessary, to enable satisfactory completion of the Contract. The Contractor shall ensure that all Subcontractors have access to all up-to-date contract documentation and shall be responsible for all site organization and discipline.

7.2.2 The Contractor shall allow to set out, form all holes, chases, building in, making good and cutting away for all trades.

7.2.3 The Contractor shall provide as necessary all general scaffolding and falsework required for the efficient execution of the Contract Works. Placement and erection shall comply with relevant statutory requirements and codes of practice. The Contractor shall give reasonable notice prior to removal of access scaffold to allow the project consultants the opportunity to carry out any inspections required.

7.2.4 The Contractor shall provide Subcontractor Facilities and general attendance including but not limited to:

- Scaffolding, craning and hoisting provisions
- connection points for water, compressed air, telephone and power
- lighting suitable for carrying out respective works including finishing trades
- use of mess rooms, sanitary accommodation and welfare facilities on site
- space for storage of subcontract materials
- space for the siting of subcontractor's accommodation
- removal of rubbish
- safety provisions on the site

7.2.5 The Contractor shall ensure that Subcontractors and trades people examine the drawings and specifications covering the work of other subcontractors and trades which may affect the performance of their own work. Ensure that Subcontractors and operatives examine the work of others, upon which the quality of their work depends, and that they report in writing to the Contractor any deficiencies which may adversely affect their work.

8.0 TEMPORARY WORKS / SECURITY

8.1 SIGNAGE

The Principal will permit only warning and directional signs to be erected on the site with the exception of the "Project description" sign. Other sign is by approval only.

The "Project Description" sign is to be provided and installed by the Contractor, the cost of which shall be in his tendered price, and shall display:

- Project Name
- Principals Name and Logos
- Consultants Names
- Contractors Name

The size shall be at least 2.4 x 3.6m and the lettering shall be carried out by a professional signwriter. Layout of the sign will be provided by the Principal. The contractor is to submit final designs for the project description sign to the engineer for review prior to manufacture

The Contractor shall allow for the supply, relocation and removal of all temporary signage.

No advertising or promotional signs shall be erected on the site or attached to fences or hoardings without the consent of the Engineer.

8.2 TEMPORARY ACCOMMODATION

The Contractor shall provide and allow for in the contract price suitable temporary accommodation for its own staff and for that of all Subcontractors. The siting of temporary buildings, skips, lock ups, and areas to be used for storage of materials, removal of materials, parking of vehicles and temporary accommodation for sheds etc, shall be within the designated construction area

The Contractor is to note that he shall provide temporary toilets within the site establishment area for the duration of the contract. These are to be located so as not to be visible from the street or be screened.

The Contractor shall be responsible for cleaning these facilities regularly and shall be responsible for maintaining them in a sanitary condition and providing any consumables required for the duration of the Contract Period at their cost.

The Contractor shall provide temporary telephone facilities and email / internet facilities for the efficient management of the Contract Works and shall allow in its Contract Price for all costs relating to the installation, maintenance, use and removal of such. The Principal will not provide any telephone lines to the Contractor. The Contractor is to install for his use equipment for external e-mailing (e.g. Modems or routers) for communication with the Principal, Design Team and Engineer.

Email will be used in preference to other forms of written communication.

8.3 EXCAVATION SUPPORT

The Contractor shall, at his own expense, supply and install all sheet piling, shoring, strutting or any other means required or necessary for the adequate and safe support of the sides of all excavations including cut batters. Such supports shall be maintained until they are no longer required.

8.4 HOARDINGS, GANTRIES, LIGHTING & GATES

8.4.1 The Contractor shall provide and maintain all temporary hoardings, gantries, fan protection, footpaths, guardrails, lighting and gates for protecting the public and others, for the proper execution of the works and for meeting the requirements of any local or other Authority.

The Contractor shall submit to the Engineer for approval the locations and design of all hoardings, gantries and lighting.

8.4.2 External Hoardings /Fencing

The Contractor shall allow for site fencing as appropriate to protect the staff and public. Hoardings shall be of a suitable material and finish. Hoarding panels shall be securely fastened to prevent the removal of panels outside of the designated entry points. Where temporary acoustic hoardings are required between public/patient occupied areas and the Contract Works in progress, the Contractor shall ensure that the Engineer approves the proposed construction details.

The Contractor is to allow to maintain all hoarding and site fencing in good order keeping surfaces clean and free of graffiti, unauthorised posters and the like including re-decoration as may be required from time to time.

8.4.3 The Contractor shall allow for the staged erection, removal and modification / alteration to any temporary works provided as necessitated by the physical site constraints and the construction methodology adopted

8.4.5 The Contractor shall be responsible for obtaining all territorial Local Authority approvals and consents for the provision of hoardings, tunnels and other temporary structures. The Contractor shall be responsible for paying all fees and associated charges in connection with obtaining the necessary consents.

8.5 TEMPORARY LIGHTING & SERVICES

As part of any temporary works / structure that defines the public spaces the Contractor shall allow to provide sufficient lighting including emergency lighting where appropriate to maintain lighting levels which comply with the Building Code.

8.6 TEMPORARY PROTECTION

The Contractor shall provide and allow for in the contract price, to install and maintain all temporary measures necessary to protected completed areas of the works prior to hand over to the Principal.

8.7 SECURITY

The Contractor is responsible for security of the site from the date that the areas are handed over to the Contractor to Practical Completion.

The Contractor shall be wholly responsible for the proper and adequate safeguarding of the Contract works and of fixed and unfixed materials on the site during both the working and non-working hours, throughout the contract.

The Contractor shall at all times maintain site security to the approval of the Principal, and ensure security of the area considered vulnerable due to the works and / or due to the need to carry out works outside normal working hours.

The Contractor shall at all times comply with the Principal's security requirements.

8.8 IDENTIFICATION

The Contractor is to provide a suitable quantity of workwear for all staff and Subcontractors involved in the works for the purpose of identification and security on site. Workwear is to be suitable for the type of work or trade and may be part of total outfit. Identification tags on their own will not be acceptable. Workwear is to be worn at all times. Workmen without suitable workwear will not be allowed on the site. All site personnel must be easily identifiable as part of a group on site.

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8.9 PROTECTIVE CLOTHING FOR SITE TOURS (to be confirmed)

The Contractor shall provide and allow for in his price the following for use by RLC visitors for the purpose of viewing the incomplete works.

- 10 new construction hard hats
- 10 pair of new safety boots
- 10 High Viz Vests

9.0 PROTECTION

9.1 The Contractor must take all necessary precautions to protect and maintain surface finishes and completed work from damage, marking or disfigurements during the progress of the works. In the event of such damage, the Contractor shall, repair, replace or make good the damaged part of the work to the satisfaction of the Engineer.

9.2 The Contractor shall be responsible for the weather tightness and the security of the Principal's property where this may be affected by his operations, and shall take all necessary steps to this end.

Should the Contractor fail to take whatever steps may be necessary to ensure the weather tightness and security of the Principal's property, the Engineer shall be entitled to deduct from money due or becoming due to the Contractor the value of all such losses he may sustain which are attributable to such failure on the Contractor's part.

The Principal reserves the right to engage others to make good security and weather tightness where these have been adversely affected by the Contractor and where the Contractor has failed to take immediate effective remedial works to the Principal's approval. Costs arising from the Principal having engaged others to carry out this work shall be recovered by the Principal from money due or becoming due to the Contractor.

9.3 The Contractor shall acquaint himself with the site and protect all existing property, services and utilities. Any damage incurred shall be reinstated at the Contractors cost.

9.4 All operations necessary for the execution of the Contract Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or with the condition of or access to, or use of, public or private highways, roads, bridges, public places, or footpaths. The Contractor shall make good at his own cost all damage or injury arising out of his operations under the contract and shall save harmless or indemnify the Principal from and against all claims arising out of or in relation to any such matters.

9.5 The Contractor shall take all necessary precautions for the general safety of the public, pedestrian, and vehicle traffic, sub contractors and employees.

9.6 The Contractor shall have a written Health & Safety in Employment Policy which has been approved by the Principal and which satisfies both Department of Labour and/or occupational Health and Safety standards.

9.7 The Contractor acknowledges to the Principal that the Contractor has the responsibility for the health and safety of all persons in and about the Site involved in or in any way affected by the execution of the Works.

9.8 The Contractor will take primary responsibility to ensure that all necessary co-ordination and communication with the Principal and any other contractors engaged by the Principal takes place.

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9.9 The Contractor shall indemnify the Principal against all costs, damages, fines, penalties, losses, and expense incurred or suffered by the Principal for any breach by the Contractor of these health and safety requirements.

10.0 CLEANING OF SITE

10.1 The Contractor shall progressively remove rubbish from the site. Access ways are to be kept clear of debris and free from obstructions at all times.

10.2 At least weekly during the contract the Contractor shall clean up the site to the reasonable satisfaction of the Engineer. Rubbish is to be removed from site so as to not accumulate and become unsightly or hazardous. Where these conditions are not met the Engineer shall arrange such cleaning and removal as is necessary the cost of which will be charged to the Contractor.

10.3 Disposal of volatile fluid wastes shall be carried out offsite in a safe manner complying with Territorial Authority requirements.

10.4 On completion the Contractor shall allow for the removal of all rubbish caused by the operation of every trade. Clean all surfaces and remedy any defects.

10.6 DIRT, DROPPINGS, DUST

10.6.1 The Contractor shall be responsible for all dirt and droppings which may be deposited on public or private thoroughfares from vehicles servicing the Site, and shall remove same to the satisfaction of the appropriate authorities and the Principal.

11.0 DOCUMENTATION

11.1 WORK SHOWN AND MENTIONED

This Specification and the attached drawings show the extent of the work, but there is no warranty, expressed or implied, that it shows each and every detail or item. Should any material, work or structural member appear to be inadequately described, yet obviously necessary for the neat, strong and satisfactory completion of the work, the Contractor shall include and allow for the same.

11.2 FIGURED DIMENSIONS

The Contractor shall be responsible for verifying all dimensions by checking against actual site measurements before producing shop drawings, ordering materials or fabricating and installing components. This also applies to subcontractors' measurements of as-built dimensions to enable them to fabricate accurately. Any discrepancies shall be reported to the Engineer prior to producing, ordering, fabricating or installing.

11.3 ACCEPTANCE, APPROVALS AND SHOP DRAWINGS

11.3.1 All acceptances by the Engineer shall be limited to procedural acceptances only. Approval of Drawings, samples, prototypes, workmanship, methods or other matters will not in respect of the works be deemed to waive or prejudicially affect any right of the Principal or diminish in any way the Contractor's responsibilities, or widen the incidence of responsibility in respect of the work or contract in any way or to derogate from or affect any other requirements.

11.3.2 The Contractor shall prepare such shop drawings and construction drawings as are outlined under the respective trade sections of the specifications or are necessary or specifically requested by the Engineer, and if necessary shall revise and re-submit them.

11.3.3 All shop and construction drawings shall be submitted in sufficient time to allow for comment and for the Contractor to make any necessary modifications before fabrication or construction is begun. Generally the Engineer will require 10 working days to review and comment on drawings.

Shop drawing review indicates only that the supplied interpretation of the design concept has been reviewed without the need for further modification, other than the corrections indicated by the reviewer.

Review of shop Drawings does not relieve the Contractor of responsibility for the correctness of the shop Drawings, Site dimensions, the overall design, or for ensuring the work is performed in compliance with the Contract Documents. Nor does it 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.

Reviewed Drawings which contain comments or notations indicating where the shop Drawings are at variance with the Contract Documents to be modified and resubmitted to the Engineer for re-review and final approval.

11.3.4 The Contractor shall check all shop drawings of Subcontractor's work and ensure that such drawings are submitted to the Engineer in ample time to allow for processing and re-submission if necessary, without causing any delay in delivery of the same to the Principal.

11.3.5 The Specification and drawings to be adopted by the Principal will show the extent of the work but there is no warranty, expressed or implied that they show each and every detail or item. Should any material, work or structural member appear to be inadequately described yet obviously necessary for the neat, strong and satisfactory completion of the work, the Contractor shall include and allow for the same.

11.4 DOCUMENTS

The Specifications and drawings are divided into various sections for convenience and reference only. No claims will be admitted in respect of work not specifically mentioned in a particular section but which is provided for, expressed or implied elsewhere in the Specifications or the Drawings.

11.5 CONTRACTOR REVIEW OF DESIGN DOCUMENTATION

The Contractor shall provide the required resource to review the "For Construction" documentation well in advance of commencing the trade packages to identify information which is either missing or requires further clarification. The objective of this work is to allow design documentation issues to be raised at the earliest opportunity and have them resolved well in advance of this information required onsite for construction purposes.

12.0 FIRE PROTECTION

12.1 FIRES

12.2.1 Lighting of fires on site is prohibited.

12.2 HAZARDOUS ACTIVITIES

12.2.2 The Contractor shall take care to manage hazardous activities. Without limiting the Contractor's obligations the following should be considered a minimum for the management of potentially hazardous activities.

12.2.3 Hazardous activities are defined as those that could lead to the creation of an ignition source and also those where the execution of the activity itself can cause the outbreak of fire (eg. Welding and other forms of "Hot Work"). This type of activity must therefore be controlled by means of ensuring that there are safe working procedures in place, the work environment is free of loose fuel and a work area where the surrounding items are protected from plant or apparatus that could cause an ignition. The Contractor shall allow to implement a "Hot Work" procedures plan and to complete all training and instruction to ensure site wide compliance with the provisions of the plan.

12.2.4 The Engineer has the power to halt any hazardous activity which is being carried out without due regard for the potential Fire Hazard. Any costs or delay while the potential risk is eliminated shall be the responsibility of the Contractor.

12.2.5 The issue of a Hot Work Permit or the Engineer's approval of any method statement does not remove or reduce the Contractor's total responsibility to comply with all relevant acts and regulations covering hazardous activities.

12.3 FIRE FIGHTING EQUIPMENT

12.3.1 The Contractor is to provide and maintain fire extinguishers at suitable locations building at all times.

12.3.2 Where a Hazardous Activity which may cause ignition of flammable material is planned, the Contractor shall be responsible for a fire extinguisher in good working order to be available at the work area.

12.3.3 The Contractor is to plan and implement an excavation strategy.

13.0 CONTRACTOR'S SITE MANAGEMENT

13.1 GENERAL

The Contractor shall establish a team of skilled, appropriate qualified and experienced managers, and professional engineers to control implementation of the contract. The team shall be organised in a recognised project structure suited to the constraints, requirements and staging of the execution of the Contract Works. The structure shall be shown in the form of an organisation chart to be accepted by the Principal, and shall form part of the Contractor's quality assurance plan applicable to the management and control of the contract. Included in this plan shall be a concise description of the authority and responsibility of each position and its relationship to other positions on the chart. The contract organisation shall be based on the concept of a dedicated, locally based Contractor's Project Manager who is the single formal contact point for the Engineer and the Principal on all aspects of the project including without limitation all contractual, safety, technical, programming, management, quality assurance and commercial issues.

Should the Contractor wish to substitute staff for those previously introduced and approved the approval and agreement of the Principal should be obtained firstly, such approval not to be unreasonably withheld.

13.2 PARTICULAR PERSONNEL REQUIREMENTS

- (a) **Project Manager**
The Project Manager shall be competent, fully qualified and suitably experienced in the design and construction of a similar development. The Project Manager shall be responsible for the

coordination of all aspects of the Contract Works and shall act on the Contractor's behalf in the giving and accepting of all notices to and from the Engineer, and shall have the authority to commit the Contractor

- (b) **Site Manager**
The full-time Site Manager shall be suitably experienced in on-site construction and management of significant sized projects
- (c) **Cost Control Manager**
The Cost Control Manager shall be responsible for all pricing, estimating, scheduling and tendering obligations required under the contract.
- (d) **Quality Assurance Manager**
The Quality Assurance Manager shall be responsible for the setting up and the implementation of a quality system and quality plan for this contract.
- (e) **Project Engineers / Site Supervisors**
Project Engineers / Supervisors shall be experienced in their respective disciplines. The Project Engineers / Supervisors shall be responsible for the construction coordination of their work discipline.
- (g) **Safety Officer**
The Safety Officer shall be responsible for the coordination of safety on the Site.

The Contractor may offer a management team with the above responsibilities reallocated between the personnel where this better suits the Contractor's organisation structure. The personnel offered shall be available for interview by the Engineer, if requested, before appointment.

13.3 HEALTH AND SAFETY

The Contractor is to recognize that RLC require Contractors to take a proactive approach to the management of Health & Safety in order to provide Health & Safety procedures and processes that exceed the industry norm. The objective is to provide a safe working environment for those directly involved in the project and public who maybe exposed to Health & Safety risks resulting from construction activity.

The Contractor shall:

- Provide and maintain a safe working environment.
- The Contractor shall, under the requirements of the Health and Safety in Employment Act 1992 and amendments, undertake Site induction for the purposes of outlining the Principal's and Contractor's responsibilities and systems that are in place to implement the Act. Induct every contractor employee, subcontractors and regular site visitors to the safety rules and procedures for the site.
- The Contractor Site Induction shall include:
 - Hazard management
 - Identification of Hazards
 - Controlling Hazards
 - Reporting accidents
 - Training and supervision
 - Responsibilities to the Public
 - Security
 - Fire calls/Emergency
 - Key Contacts
 - House keeping

- Identification badges
- Sign-in/out
- RCD protection to portable mains powered equipment
- Ensure that all staff and visitors on/or visiting site, both direct employees and Subcontractors carry a 'Site Safe' passport at all times
- Manage Health and Safety responsibilities of all contractor employees and subcontractors.
- Comply with all requirements of the Health and Safety in Employment Act 1992 and the Health and Safety in Employment Regulations 1995 taking all necessary steps to assist the Principal to comply with the provisions of the Act.
- Advise the Engineer immediately of any obligations under the Act not being fulfilled by any party. The Contractor shall take no action that would in any way prevent the Principals compliance with the Act
- 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
- Supply and maintain safety equipment for the job.
- Establish safe working methods for the job.
- Comply with the Principal's health and safety policies and procedures and any additional safety requirements specified during the contract.
- Notify Principal's Health and Safety Representative of any hazardous substances being brought on site.
- Notify Principals Health and Safety Representative prior to commencing any notifiable work in order to obtain a permit for that work.
- Report all accidents, incidents and near hits to the Engineer and Principals Health and Safety Representative immediately by phone and in writing within 24hours notify all serious harm accidents to The Department of Labour immediately and in writing within 7 days.
- Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm. Provide a copy of any report to the Engineer, 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.
- Ensure that all people working for the contractor are fully trained in the work to be undertaken or are closely supervised by someone who is.
- Identify any significant hazards and implement appropriate mitigation measures in accordance with Health and Safety plan
- On the direction of the Engineer or Principal, 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.
- Keep the working area tidy and clean.
- Submit a Health and Safety Management plan for the job prior to the start of work. 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
 - Safety procedures to eliminate, isolate or minimise construction hazards.
 - The equipment to be used to minimise the hazards
 - The maintenance of a register of hazards 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.
- Ensure that any plant and equipment brought onto site is suitable for the intended use and has current certificates and inspections.
- Ensure that any employees of the contractor, subcontractor, or if an individual, the contractor is fully conversant with emergency procedures, safety rules and procedures, and hazards.

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- Ensure that all contractor employees comply with the Principal's smoking policy.

14.0 COMMISSIONING

The Contractor shall liaise and co-operate fully with the Principals design team to complete any commissioning requirements.

15.0 OPERATING AND MAINTENANCE MANUALS

15.1 OPERATIONS AND MAINTENANCE MANUALS

At Practical Completion of the entire Contract (the Works) the Contractor shall submit a final draft of completed O&M manuals plus the manual required to manage the building. Such manuals shall be to the approval of the Engineer in terms of both contents and format, and as such shall be received prior to the Engineer issuing the certificate of Practical Completion.

The Contractor is to provide completed Operation and Maintenance Manuals to the Principals Authorised Person prior to Completion or the date nominated in the approved Commissioning and Handover Plan. This is a condition precedent to payment for any Completion Amounts due under the Contract.

The following trades (as a minimum but not limited to – subject to the discretion of the engineer) require operating and maintenance manuals :

- Electrical Services
- Plumbing Services

HANDOVER OF ASSET, MAINTENANCE AND OPERATIONS DATA

The Contractor is to advise the Principal and or the Authorised Person when the Operations and Maintenance data is complete and accurately reflects the works.

The Contractor is to complete the draft Operations and Maintenance Manuals 28 days in advance of Handover of the Works or parts thereof or in accord with the approved Commissioning and Handover Plan whichever is the earlier date.

Should the Principal and or the Authorised Person identify any errors or omissions in the submitted data then within the time period stated in the approved Commissioning and Handover Plan or the issued Defect Notice the Contractor is required to rectify any items and to pay all such costs that may be incurred to update the final data.

COMPLIANCE WITH LAWS, STANDARDS AND SPECIFICATIONS

The Contractor shall check and verify that all data and attached files and documents that form the completed Operations and Maintenance Manuals comply with the relevant Laws, Standards, Codes and Specifications applicable to the works to enable the proper operation and maintenance by the Principal and or its appointed agents of the completed works.

WORK-AS-EXECUTED DRAWINGS

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The Contractor is to provide to the Principal work-as-executed drawings in electronic formats for Subcontract and Supplier packages showing the completed works as constructed for that stage or portion of the works. Formats are to be PDF and CAD or other format as approved by the Principal.

Ensure the content, accuracy and level of detail of work-as-executed drawings are equivalent to those in the detail design drawings used for construction and are sufficient to describe and to ensure the efficient operation of the assets created under the Contract. Where required to describe the Works, include digital photographs of specific aspects of the Works in work-as-executed drawings or operations and maintenance manuals.

Include in work-as-executed drawings a survey drawing indicating the position of the Works relative to a primary Survey grid. Certify survey drawings using a Registered Surveyor where required by the Principal. All work as executed and as-built documentation must be in accord with the Specification.

As Built Information will be necessary from at least, but not limited to the following trades (but not limited to):

- Drainage
- Electrical
- Security
- Telecom/Data
- Structural/ Site works

HARD COPY FORMAT

The Contractor is to provide Hard Copy versions of O&M Manuals only if specified in the approved Commissioning and Handover Plan or other contract document.

Where any conflict occurs with any other part of the contract and or specifications in reference to provision of Hard Copy Operation and Maintenance Manuals the Principal in the interests of compliance with Green Building Policy will accept the same number of electronic copies of O&M Manuals in lieu of the number of Hard Copy Manuals nominated.

17.0 MEETINGS

17.1 SITE MEETING

Project Site Meetings will be organized and run by the Project Manager. The Contractor's representative at meetings must be capable of making all necessary decisions on behalf of the Contractor. Meetings will be as required but generally weekly or fortnightly. Meeting minutes will be prepared and distributed by the Engineer's representative, unless otherwise directed by the Engineer. The Contractor shall allow to provide a report for each site meeting.

17.2 PROJECT CONTROL GROUP

The Contractor may be required to attend the PCG meeting periodically to discuss construction related matters. The Contractor shall allow to provide monthly PCG reports.

18.0 SITE RECORDS / REPORTING / COMMUNICATION

18.1 RECORDS

The Contractor shall maintain a site diary and shall complete daily the key events, weather, areas worked, major items delivered, manning levels. The Contractor shall provide this diary to the Engineer immediately on request.

18.2 MONTHLY REPORTS

With each Progress Claim the Contractor shall provide the Engineer with a monthly report in such form and containing such matters as the Engineer requires from time to time and which, shall include, without limitation:

- A written report on the progress of the Contract Works including but not limited to photographs of the Contract Works being actively progressed.
- A copy of the project construction programme identifying the status of each activity.
- A description of any matters which currently have a positive or adverse effect on the execution of the Contract Works.
- A summary of inspections, testing and any non conformance identified and their status.
- A Health & Safety report covering site safety inspections, incidents / accidents recorded, and follow up actions.
- Particulars of the preventative and remedial action which has been, is being or may be taken in respect of the terms referred to in sub-paragraph (c).
- A report on the status of all Variations.
- A summary of all claims made by the Contractor and their status.
- Details of any other matters affecting or likely to affect the progress and cost of the Contract Works.
- A forecast of final cost for the contract works.

18.3 SITE VISIT REGISTER

The Contractor shall maintain a site visit register and record all visits by consultants, including date, name, areas inspected, comments. This shall be provided to the Engineer on request.

18.4 NON COMPLIANCE REGISTER

The Contractor shall provide and maintain a non compliance register for use by the consultants to record a non compliance. For each non compliance, a form shall record name and company of consultant, date and time, item identification and location, status (critical / non critical), details, criteria for acceptance, date closed.

18.5 CONTRACT PROGRAMME

18.5.1 Contract Master Programme

The Contractor shall, on acceptance of the Contract, prepare the Contract Master Programme, within 10 Working Days of being requested produce and submit to the Engineer (in both hard copy and electronic file) for his review, a comprehensive bar chart or network programme which identifies the critical path, showing all trade start and finishing times in identifiable sections and sequences to complete the Contract Works by the Due Dates for Completion. The Contract Programme shall also incorporate and integrate sufficient cost information to enable construction progress and linked cash flow to be monitored throughout the construction period. The Contractor shall provide information on his resources as requested by the Engineer.

The Contract Programme shall incorporate:

1. Due Dates for Completion
2. Key Dates
3. Approval Durations
4. Work for all trades
5. Shop Drawing Production and submission dates

6. Procurement
7. Commissioning
8. Handovers
9. Training

The Contractor must update the Contract Programme at least every month, and submit the updated Contract Programme (in both hard copy and electronic file) with every second claim for progress payment. The Contract Programme shall be submitted using Microsoft Project or other software approved by the Engineer.

18.5.2 Short Term Programmes

The Contractor shall, at monthly intervals, prepare and submit detailed short term programmes compatible with the provisions of the Contract Master Programme, but to an additional level of detail on a daily timescale and covering a period of three months. Generally, durations for on Site activities should not exceed 10 working days and preceding and succeeding activities for each shall be identified.

The short term programmes shall reflect actual progress on Site and consequent impact on the provisions of the Master Programme but shall maintain completion targets established by the Master Programme. The short term programmes shall identify any corrective actions necessary to bring any delayed work back on programme.

The first short term programme will be prepared within four weeks of the Contract Works start date.

18.5.3 Programme Constraints

The Contractor shall identify in the Contract Master Programme dates by which any particular information, material, Plant or equipment need to be supplied or arranged by the Principal or the Engineer and shall identify any constraints which may be imposed on the programme by supply of such information or items.

18.5.4 Expediting

If, in the opinion of the Engineer, the rate of progress of the contract becomes a concern in that it is considered that the date of Practical Completion of the Contract Works or any Separable Portion will not be achieved, the Engineer shall notify the Contractor and require that all necessary steps be taken to ensure completion on time. Within 5 working days of such notice the Contractor shall advise the Engineer of the proposed course of action. The Contractor's notice shall include a fully resourced expediting programme detailing how progress of the Contract Works will be brought back on programme.

18.6 CONTRACT ADMINISTRATION

18.6.1 Request For Information (RFI)

The Contractor shall implement a RFI system that shall be issued to the Engineer. The RFI will record the nature of the request, date issued, name of the person generating the request and the urgency of the request. The Contractor shall allow a period of 10 business days for a response however every endeavour shall be made to reduce this period depending on the complexity of the issue concerned. The Contractor is to acknowledge that in some cases there will be an iterative process to resolve issues where coordination with consultants is required.

Responses will be issued on an Instruction by the Engineer. Copies of responses may be issued directly by Consultants and Architects to the Contractor but will be for information only until issued by the Engineer.

The Contractor shall maintain the RFI register and identify the priority of any urgent items such that the design team can concentrate on those requiring prompt action. The Contractor shall issue the register on a weekly basis or more frequently if the priority of items changes.

The Contractor shall also proactively manage the RFI process and as such where ever practical discuss an issue with the relevant Design Consultant prior to preparing an RFI and if possible record the advice and resolution agreed with the Consultant on the RFI, the objective being to reduce the response time for communications and clarifications.

18.6.2 Instructions

All instructions from the Engineer will be in writing on a standard form. In extreme circumstances urgent instructions may be given verbally and followed up in writing as soon as practical.

19.0 PRINCIPAL TRAINING AND INSTRUCTION

The Contractor shall prepare a comprehensive commissioning and training plan which will include but not be limited to:

- Induction of the facilities and site features to the necessary RLC staff

20.0 COMPLETION

a. CLEANING

Clean and wash down all external surfaces to remove dirt, debris and marking. Clean and polish all proprietary items. The Contractor shall provide a schedule of recommended cleaning materials and methods obtained from the material supplier and submit to the Engineer

If this is deemed to be unsatisfactory then the appropriate cleaning will be undertaken by a specialist in this field at no cost to the Principal. The Engineers decision will be final in this regard

c. TEMPORARY MARKINGS

Remove all temporary markings, coverings, labels and protective wrappings unless instructed otherwise.

d. DAMAGE

Replace any material or component damaged during the works to standard of and integral with the original.

e. PAINTED SURFACES

Touch up minor faults, carefully matching colour, and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.

21.0 DEFECTS MANAGEMENT

21.1 INTRODUCTION

Conditions of Practical Completion: Due to the nature of the facility it is required that all snags be rectified prior to Practical Completion. The Contractor shall allow in their master programme time to rectify all snags prior to issue of Certificate for Public Use / Practical Completion and prior to completion date. The Engineer has the right to halt practical completion to the satisfaction it meets the Principals standards that occupancy can take place.

There are two separate processes:

- (1) Prior to Practical Completion and Occupancy
- (2) Post Occupancy

21.2 PRE-PRACTICAL COMPLETION DEFECTS PROCESS

Prior to requesting Practical Completion, the Contractor shall implement and carry out his own quality and completion inspections. Items identified are to be rectified prior to consultants commencing their own checks.

The Contractor shall prepare a programme for final inspection by the Consultants such that this process can be carried out progressively utilizing reasonable Consultant resource through this period.

The Consultants will prepare lists of items which require action by the Contractor. These items shall be substantially actioned during the 20 day Code Compliance Period required by the Local Authority with the works being coordinated and planned to accommodate Staff orientation, Sterile Cleaning and stocking prior to the Public Opening.

The objective is to have all defects substantially completed prior to Handover.

The Contractor is to inspect and sign off each defect as it is progressively completed. The Consultant will inspect when all items on the list are signed off by the Contractor, and when both have signed all items, then to sign off schedule of lists.

ROTORUA LAKEFRONT DEVELOPMENT

LANDSCAPE WORKS

TENDER

18.02.19

Designed: IGL
 Drawn by: TM, MC & ZB
 Checked by: TM & GB

GENERAL NOTES

- All work shall be performed in conformance with all applicable local codes and ordinances.
- All civil and structural engineering by Tonkin + Taylor.
- Drawings and notations are supplied for design intent purpose and are not intended for construction unless noted otherwise. All technical specification by Landscape Architect or Engineer.
- Required clarification of any discrepancy identified in the drawings or between the drawings and condition on site before construction. Landscape Architect or the Contractor should provide revised working drawings based on the Landscape Architect's suggestion and approval from Landscape Architect prior to commencement of work.
- Dimensions are taken from axis or face of building, face of kerb or wall or property line unless noted otherwise.
- Detail plans supersede general arrangement plans, details supersede detail plans, and notations supersede dimensions, except where noted otherwise.
- Contractor shall provide positive drainage and ensure that no ponding of water occurs. Slope to follow description below unless otherwise indicated. Pavement: min 2.5% slope to drainage, max 1% slope to drainage. Soft landscaping: 0.5 slope to area drain.
- All shop drawings and prototypes are to be approved by the Landscape Architect. Pavement samples to be provided as per specification. Landscape Architect will select final finishes from samples provided.
- All material samples to be approved by the Landscape Architect.
- All paint materials to be approved by the Landscape Architect.
- All material sample panels and plant material mock-up installations to be approved by the Landscape Architect.
- Precast moulds to be inspected and approved prior to pouring concrete. First precast element to be inspected and approved prior to remaining pours.

GENERAL PAVING NOTES

- Upgrade to Civil Engineer's specification.
- Surface finishes and colour selections are as per Landscape Architects Drawings.
- All cuts to be laid in accordance with the specification.
- All cuts to be diamond saw cuts to accurate fit.
- All finishes to be to agreed samples.
- All natural stone (that surface ply) to have water based sealant applied with multi finish. Refer to specification. Sealant sample to be approved by Landscape Architect.

STEELWORK NOTES

- All dimensions horizontal only. Contractor to site measure and measure all components and ensure accurate fit between bolts, spacers, joints and the like.
- All welds to be full beam fillet welds, all haugh or sharp edges or protrusions to be buffed smooth.
- No site welds permitted unless with prior written approval.
- All metal work to be approved by the Engineer after fabrication.
- All steel to be stainless steel 316 unless otherwise noted on drawings.

FURNITURE NOTES

- Supplier to provide shop drawings for approval prior to fabrication.
- All sizes, dimensions to be checked by supplier for accuracy.

IN-SITU CONCRETE NOTES

- Refer to specification for samples. Concrete finishes within drawings set are for pricing purposes only. Finishes to be selected from onsite samples. All samples to be provided by Contractor for landscape architects approval prior to works commencing.
- Form all concrete joints/finishes within 24 hours joint spacing not to exceed 5m centres. Sawcuts to the depth of concrete. Form joints in concrete to reflect joints in paving. No unapproved cutting will be permitted.
- Allow a minimum of 7 day cure of concrete base prior to trafficking.
- All edges to soft landscaping are 45 per the details, unless otherwise noted.
- All concrete to be 25MPa unless otherwise noted on drawings.
- Concrete edge beam saw cuts are to be calculated a 3m centres for pricing. All edge beam saw cuts are to be set out on site by landscape architect prior to being cut.

TIMBER NOTES

- All timber in contact with the ground to be H5 treated pine radiata, unless otherwise stated on drawings or in notes.
- All timber to be well seasoned No 1 Grade and free of knots and splits.
- All staples, nails, bolts and fixings to be hot dipped galvanneal unless otherwise specified on drawing.
- Timber treatment shall comply with the current requirements of the timber preservation council. All timber shall be branded with the appropriate woodmark.
- All galvanneal bolts to be well greased before installation.
- Timber for seats to be kiln dried hardwood timber and FSC approved, refer to specifications for species selections. Clear seal finish graffiti guard to be applied. Refer to specification.
- All timber for seats, tables, light poles, boardwalks, decking and other hardware to have 5mm radius to all edges, unless otherwise stated on drawings.

SERVICES NOTES

- All service locations to be confirmed at the start of works by the contractor. Discrepancies to be brought to the attention of the Landscape Architect before works can continue.
- Refer to Civil Engineer's plans for service re-locations.
- Paving to be accurately jointed against service covers. Joints to be non-5mm. Make up paving shall not be accepted.
- Finished levels of all service covers are to be true (at all corners) with the adjacent finished level.
- All service lids in hardwood to be mill rib. Grade into service cover according to surrounding paving.
- Any lifting between transition from paving to service cover shall be rejected.
- Where possible align cover to match the paving alignment.
- Where covers can not be rotated, notify the Landscape Architect for direction.
- Use vehicle loading service covers to all handland areas.
- The landscape Architect is to be notified of any service clashes with their pits. Landscape Architect to provide direction before work continues.
- Additional saw cuts to be provided where paving is likely to crack. All cuts to be approved by Landscape Architect.

TREE RT & PLANTING NOTES

GENERAL NOTES

- Planting area to be excavated and cleaned of all contaminated materials such as diesel, cement, weeds and the like, which could be detrimental to the health of the existing tree roots or soil health before approved imported topsoil is placed.
- Tree stakes to be as per planting plan, planting schedule and as per specification.
- Fertiliser to be as per specification.
- Topsoil to be placed in lightly compacted layers of no more than 250mm depth.
- Tree stake timber sizing to match radial of specific trees.
- Mulch and soil conditions to be measured as lightly compacted and settled depth in place.
- Bark or gravel mulch to tree and garden areas as per details and specifications.
- Spread mulch evenly away from stem stems and roots.
- Soilgrate below all trees, planting and grass to be robed to 500mm deep to allow for drainage.

PLANT SUPPLY

- Trees to conform to requirements indicated on planting schedule.
- Trees to be healthy specimens.
- Trees to be planted within 3 days of delivery. Minimum handling preferred.
- Tree selection to be approved by Landscape Architect by way of nursery inspection. Contractor to arrange nursery visit 1 month prior to any trees or planting being delivered to site.

STAKES & TIES - Trees Smaller than 10000

- Trees to be staked with 1no bamboo stake and 2no timber stakes with ties as per the details.
- Install stakes & ties to a consistent spacing, orientation and height.
- Install all stakes vertically, without splitting or crushing top.

MAINTENANCE

- Stakes & ties to be maintained during maintenance period.
- Remove supports except where necessary for unstable or needy trees.
- Pruning to be carried out to promote good growth and form, crown lifting to appropriate height is required to prevent climbing of lines.
- Dead or damaged branches to be removed.
- Mulch/mulch at 100mm min depth and top where necessary. Keep mulch away from trunk at all times.

RETAINED AND PROTECTED NOTES

- Trees specified in the drawings as to be retained and protected are to be fenced during construction works to prevent accidental damage.
- All elements, labeled as retained on drawings, are to be protected throughout works.
- Refer to plans for items that are required to be removed and handed back to council for storage.

NOTE:

- Notes applicable for all drawings including plans, sections, details and schedules.
- To be read in conjunction with Project Specification.
- Drainage Services, Civil & Structural aspects refer to Engineers drawings.
- Lighting & Electrical refer to Electrical Engineers drawings.

F Tender MC TM 18.02.19
 E 10%/Notified Design MC TM 14.12.18
 D Draft Detailed Design MC TM 30.11.18
 C Draft Detailed Design MC TM 15.11.18
 B Draft Detailed Design MC TM 19.10.18
 A Draft Detailed Design MC TM 28.09.18
 No. Revision By Date

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Client
Rotorua Lakes Council

Job Name
**Rotorua Lakefront
 Development**

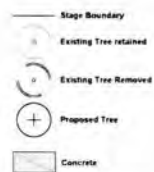
Scale Drawing Title
AS SHOWN AS SHOWN
Notes

Job No Drawing Number Revision
4010 1_0_100 F

Issued For
Tender

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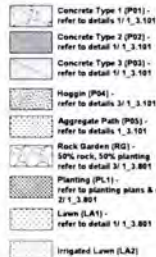
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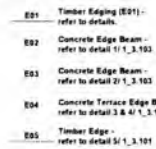
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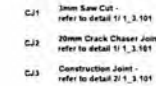
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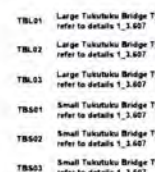
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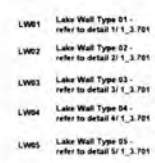
CONTROL & CONSTRUCTION JOINT KEY



TUKUTUKU BRIDGE KEY



LAKE WALL KEY



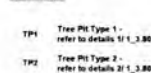
BOARDWALK MODULE KEY



PLANTING KEY



TREE PIT KEY



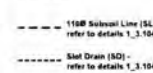
CONCRETE WALL SEAT KEY



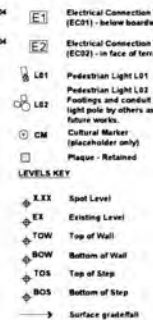
FURNITURE & EQUIPMENT KEY



FEATURE KEY



LEVELS KEY



WALL & BRIDGE FOOTINGS KEY



P	Tender	MC TM 18 02 19
E	100% Detailed Design	MC TM 18 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18

No. Revision By: CKL Date

Isthmus
 Roturua Lakes Council
 Job Name: Roturua Lakefront Development
 Drawing Title: Overall Key Plan
 Scale: AS BROWN, AS BROWN, AS1
 Job No: 4010
 Drawing Number: 1_0.200
 Revision: F
 Issued For: Tender
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PAVING, EDGE & WALL SCHEDULE

CODE	MATERIAL / PRODUCT	SIZE (W x L x THK) (mm)	COLOR / CODE	FINISH / DEPTH / EXPOSURE	LOCATION	SUPPLIER	REMARKS
PAVING							
P01	INSITU CONCRETE PAVING		Light Grey/Blue Oxide (156, 172, 184) with limestone, Pebble and Shell Mix to match Stevensons Jacks Mix	FINISH: Honed to 150-Grit	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
P02	INSITU CONCRETE PAVING			HORIZONTAL FINISH: Pole Rolled VERTICAL FINISH: Medium Depth Bush Hammered	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
P03	INSITU CONCRETE PAVING		2% Black Oxide	FINISH: Acid Washed	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
P04	HODGIN			FINISH: Compacted to create firm surface	REFER TO PLANS		Landscape architect will accept only specified materials or approved equivalent. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
P05	COMPACTED AGGREGATE			FINISH: To match existing path	REFER TO PLANS		Landscape architect will accept only specified materials or approved equivalent.
EDGE MATERIAL & PRECAST							
E01	HARDWOOD TIMBER EDGE	140 x 19mm	Plain Hardwood Decking Timber	Checked	REFER TO PLANS		Landscape architect will accept only specified materials or approved equivalent.
E02	CONCRETE EDGE BEAM	200 X VARIES X 200	OXIDE Peter Fall 518 (or approved equivalent) (172, 184)	FINISH: Light Sandblast Saw cuts are to be calculated a 3m centres for pricing. Final cuts to be set out on site by landscape architect prior to being cut.	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
E03	CONCRETE EDGE BEAM	200 X VARIES X 300	OXIDE Peter Fall 518 (or approved equivalent) (172, 184)	FINISH: Light Sandblast Saw cuts are to be calculated a 3m centres for pricing. Final cuts to be set out on site by landscape architect prior to being cut.	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
E04	TERRACE CONCRETE EDGE BEAM	200 X VARIES X 300		HORIZONTAL FINISH: Light Sandblast VERTICAL FINISH: Medium Depth Bush Hammered	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
E05	HARDWOOD TIMBER EDGE	140 x 19mm	Plain Hardwood Decking Timber	Checked	REFER TO PLANS		Landscape architect will accept only specified materials or approved equivalent.
E06	PRECAST CONCRETE BOARDWALK, LAKE WALL, BOARDWALK EDGE AND EDGE BEAM TIE-INS		18mm Atlas supplied white lime cr. ch. white sand Peter Fall Super White Plus (cement and oxide)	FINISH: Acid Washed, F6	Boardwalk types B01 and B03		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes. Allow for precast edge specials where Tukutuku decking cuts through. Raked edge to drop to allow for decking 3mm gap from decking timber to raked edge.
E07	PRECAST CONCRETE PILES ON TUKUTUKU BRIDGES		To match E06	FINISH: To match E06	Tukutuku types TB, and TB5		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
E08	INSITU CONCRETE EDGE BEAM	175 X VARIES X 295	18mm Atlas supplied white lime cr. ch. white sand Peter Fall Super White Plus (cement and oxide)	FINISH: Acid Washed, F6	Boardwalk types B02, B04 and B05		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
WALLS							
LW01	CONCRETE LAKE WALL TYPE 1		EX F6 - VERTICAL EX U3 - HORIZONTAL	FINISH: Acid Washed	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
LW02 LW03 LW04	CONCRETE LAKE WALLS TYPE 2, 3 AND 4		EX F6 - VERTICAL EX U3 - HORIZONTAL	FINISH: Acid Washed	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
LW05	CONCRETE LAKE WALL TYPE 5		EX F6 - VERTICAL EX U3 - HORIZONTAL	FINISH: Acid Washed	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.
WS01	CONCRETE WALL SEAT		EX F6 - VERTICAL OXIDE 4% Black oxide (color to match P02)	HORIZONTAL FINISH: Light Sandblast VERTICAL FINISH: Medium Depth Bush Hammered	REFER TO PLANS		Colours and Finishes provided are for pricing purposes only. Contractor is to allow for sampling process as per specifications for the selection of final finishes.

P	Tender	MC TM 18 02 19
E	100% Detailed Design	MC TM 18 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18

No. Revision By: CKL Date

Isthmus
 Roturua Lakes Council
 Job Name: Roturua Lakefront Development
 Drawing Title: Paving, Edge & Wall Schedule
 Scale: AS BROWN, AS BROWN, AS1
 Job No: 4010
 Drawing Number: 1_0.301
 Revision: F
 Issued For: Tender
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BOARDWALK FURNITURE & FIXTURE SCHEDULE

CODE	MATERIAL / PRODUCT	COLOR / TYPE	FINISH / MOUNTING / QUANTITY	LOCATION	SUPPLIER	REMARKS
TIMBER BOARDWALKS AND BRIDGES						
B01 - B05	TIMBER BOARDWALK	Hardwood Timber Tonga All hardwood Timber to be FSC certified or similar. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.	All timbers to have 5mm rounded chamfer along all exposed edges.	REFER TO PLANS		Timber type selected for structural properties and to support maintenance vehicles on boardwalk. Alternative will need to be checked for strength and may be rejected based on suitability.
TB.01 TB.02 TB.03	LARGE TUKUTUKU BRIDGES	Hardwood Timber Tonga All hardwood Timber to be FSC certified or similar. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.	All timbers to have 5mm rounded chamfer along all exposed edges.	REFER TO PLANS		Timber type selected for structural properties and to support firing details. Alternative will need to be checked for strength and may be rejected based on suitability.
TB01 TB02 TB03	SMALL TUKUTUKU BRIDGES	Hardwood Timber Tonga All hardwood Timber to be FSC certified or similar. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.	All timbers to have 5mm rounded chamfer along all exposed edges.	REFER TO PLANS		Timber type selected for structural properties and to support firing details. Alternative will need to be checked for strength and may be rejected based on suitability.
Small Tukutuku Bridge Butterfly Joint Detail	SMALL TUKUTUKU BRIDGES	Hardwood Timber Totara All hardwood Timber to be FSC certified or similar. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.	All cut edge with flush joint finish to decking timbers.	REFER TO PLANS		Fixed and glued from behind. No visible fixings.
FURNITURE						
B51 - B52	BENCH SHEET AND SEAT WITH BACK REST	Bespoke timber and steel seat as per details. Hardwood timber to match boardwalk.	Steel to be painted dark grey. Switch samples to be provided to landscape architect for approval.	REFER TO PLANS	Bespoke	
S1	SUN LOUNGER	Bespoke timber and steel seat as per details. Hardwood timber to match boardwalk.	Steel to be painted dark grey. Switch samples to be provided to landscape architect for approval.	REFER TO PLANS	Bespoke	
PT	PICNIC TABLE	Bespoke timber and steel seat and table as per details. Hardwood timber to match boardwalk.	Steel to be painted dark grey. Switch samples to be provided to landscape architect for approval.	REFER TO PLANS	Bespoke	
BN	BN	Reuse existing bins from site.		REFER TO PLANS		
BO	BOLLARD	Bespoke timber bollard. Refer to details. Hardwood timber to match boardwalk.	Steel to be painted dark grey. Switch samples to be provided to landscape architect for approval.	REFER TO PLANS	Bespoke	
FIXTURE						
SD	SLOT DRAIN	Load Class Type D Aco Minikassak slot drain with SS headlife grate painted black. To align outside of footpath.	Black headlife grate.	REFER TO PLANS	Aco	
L01	PEDESTRIAN LIGHT	Bespoke steel and timber light pole as per details. Timber Tonga All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.	Light pole steel to be painted dark grey. Switch samples to be provided to landscape architect for approval.	REFER TO PLANS	Bespoke	Paint system to be durable and suitable for geothermal environment.
L02	PEDESTRIAN LIGHT	Bespoke steel and timber light pole as per details. Fixings and electrical conduit to be installed as part of stage 1 and 1a works and buried below ground surface. Light poles and luminaires to be provided at future stage by others.	Fixings and electrical conduit only. Poles and luminaires by others within future stage by others.	REFER TO PLANS	Bespoke	
CM	Plaqueholder only. No works required.					
RG	Rock garden feature rocks	Locally sourced pancake style rock to approved sample. Size to vary between 250 - 750mm.	Natural / Jagged finish.	REFER TO PLANS	TBC	To mound throughout garden as per details and sections. Allow for selective piling to create sample and fill as per Landscape Architects direction on site.
LAKI RIP RAP	Lake wall rip rap feature rocks	Locally sourced pancake style rock to approved sample. Size to vary between 750-2000mm. To be placed against existing ground with approved geotextile.	Natural / Jagged finish.	REFER TO PLANS	TBC	To mound against lake wall and feature into lake. Allow for selective piling of large rock and fill as per Landscape Architects direction on site.
EC01 EC02	ELECTRICAL CONNECTION TYPE 1 & 2	Hidden below boardwalk outside edge decking. Product and connection as per lighting engineers specifications.	TBC	REFER TO PLANS	TBC	

F Tender MC TM 18.02.19
E 100% Detailed Design MC TM 14.12.18
D Draft Detailed Design MC TM 30.11.18
R Draft Detailed Design MC TM 15.11.18
A Draft Detailed Design MC TM 18.10.18
No. Revision By Chk Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN Boardwalk, Furniture & Fixture Schedule
AS SHOWN
Job No Drawing Number Revision
4010 1_0_302 F

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Tender
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SAMPLES SCHEDULE SHEET 1

CODE	MATERIAL / PRODUCT	COLOR / CODE	FINISH / DEPTH / EXPOSURE	LOCATION	SUPPLIER	REMARKS
PAVING SAMPLES						
P801	INSITU CONCRETE PAVING	Peter Felt 156 Oxide with 80g/m ² Limestone, Pebble and Shell Mix to match Stevenson's Jacks Mix	FINISH: Honed to 150 Grit		Peter Felt Oxide	
P802	INSITU CONCRETE PAVING	Peter Felt 172 Oxide with 80g/m ² Limestone, Pebble and Shell Mix to match Stevenson's Jacks Mix	FINISH: Honed to 150 Grit		Peter Felt Oxide	
P803	INSITU CONCRETE PAVING	Peter Felt 184 Oxide with 80g/m ² Limestone, Pebble and Shell Mix to match Stevenson's Jacks Mix	FINISH: Honed to 150 Grit		Peter Felt Oxide	
P804	INSITU CONCRETE PAVING/TERRACES	35% 10mm limestone chip, 65% 10mm Greywacke Chip No oxide	Horizontal surface: Pipe rolled with a 100mm pipe along the terrace (downward weight required to avoid ripple) Vertical surface: Medium depth bush hammered			
P805	INSITU CONCRETE PAVING/TERRACES	35% 10mm limestone chip, 65% 10mm Greywacke Chip No oxide	Horizontal surface: Pipe rolled with a 100mm pipe along the terrace (downward weight required to avoid ripple) Vertical surface: Heavy depth bush hammered			
P806	INSITU CONCRETE PAVING	2% Black Oxide with 10mm Greywacke Chip	FINISH: Light acid wash			
P807	INSITU CONCRETE PAVING	4% Black Oxide with 10mm Greywacke Chip	FINISH: Light acid wash			
P808	INSITU CONCRETE PAVING	6% Black Oxide with 10mm Greywacke Chip	FINISH: Light acid wash			
P812	INSITU CONCRETE PAVING	Peter Felt 172 Oxide with Stevenson's Te Oheneh Mix	FINISH: Medium exposed		Peter Felt Oxide	
P813	INSITU CONCRETE PAVING	Peter Felt 172 Oxide with Stevenson's Te Oheneh Mix	FINISH: Honed to 150 Grit		Peter Felt Oxide	
P814	INSITU CONCRETE PAVING	4% black oxide with Stevenson's Awarukui Mix	FINISH: Medium exposed			
P815	INSITU CONCRETE PAVING	4% black oxide with Stevenson's Awarukui Mix	FINISH: Honed to 150 Grit			
P816	AGGREGATE PAVING - HOGGIN	35% 1.5 to 3.75mm finer grade Limestone chip, 20% AP 7 Scotts (Grey), 25% Pumice 5mm aggregate	FINISH: Compacted			Compacted sample to be left exposed to the weather for a 1hr period of 3 months to ensure durability
P817	AGGREGATE PAVING	Cement stabilised Gap 7 - To match existing aggregate path that is being retained	FINISH: To match existing			
EDGE BEAM SAMPLES						
E801	INSITU CONCRETE PAVING	Peter Felt 518 Oxide with 50% Stevenson's Hawkes Bay Mix and 50% 10mm Greywacke Chip	FINISH: Light sandblast to all visible faces		Peter Felt Oxide	Sample to be formed to match edge beam design, refer to details.
E802	INSITU CONCRETE PAVING	Peter Felt 172 Oxide with 50% Stevenson's Hawkes Bay Mix and 50% 10mm Greywacke Chip	FINISH: Light sandblast to all visible faces		Peter Felt Oxide	Sample to be formed to match edge beam design, refer to details.
E803	INSITU CONCRETE PAVING	Peter Felt 184 Oxide with 50% Stevenson's Hawkes Bay Mix and 50% 10mm Greywacke Chip	FINISH: Light sandblast to all visible faces		Peter Felt Oxide	Sample to be formed to match edge beam design, refer to details.
E804	INSITU CONCRETE	10mm Greywacke Chip. No oxide	Horizontal surface: Light sandblast Vertical surface: Medium depth bush hammered			Sample to be formed to match edge beam design, refer to details.
E805	INSITU CONCRETE	10mm Greywacke Chip. No oxide	Horizontal surface: Light sandblast Vertical surface: Heavy depth bush hammered			Sample to be formed to match edge beam design, refer to details.
E806	INSITU CONCRETE					

NOTE:
1. Notes applicable for all drawings including plans, sections, details and schedules.
2. To be read in conjunction with Project Specification.
3. All concrete samples are to be sealed as per specifications to determine final finish surface colour and quality.

A Tender MC TM 18.02.19
No. Revision By Chk Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN Samples Schedule Sheet 1
AS SHOWN
Job No Drawing Number Revision
4010 1_0_303 A

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SAMPLES SCHEDULE SHEET 2

CODE	MATERIAL / PRODUCT	COLOR / CODE	FINISH / DEPTH EXPOSURE	SUPPLIER	REMARKS
WALL SAMPLES					
WS01	INSITU CONCRETE SEAT WALL	10mm Greywacke Chip No oxide	Horizontal surface: Light Sandblast Vertical surface: Medium depth bush hammered		Sample to be formed to match seat wall design, refer to details
WS02	INSITU CONCRETE SEAT WALL	10mm Greywacke Chip No oxide	Horizontal surface: Light Sandblast Vertical surface: Heavy depth bush hammered		Sample to be formed to match seat wall design, refer to details
WS03	INSITU CONCRETE LAKE WALL	10mm Greywacke Chip No oxide	FINISH: L3 & F6, light acid wash		Sample to be formed to match lake wall facade, refer to details
BOARDWALK AND BRIDGE CONCRETE SAMPLES					
BS01	PRECAST CONCRETE BOARDWALK DECKING	19mm Atlas supplied white lime slip, white sand, Peter Fall super white plus oxide	FINISH: F6, acid wash	Peter Fall Oxide	Full size boardwalk prototype to be created to confirm finish and quality
BS02	PRECAST CONCRETE BOARDWALK RILE	19mm Atlas supplied white lime slip, white sand, Peter Fall super white plus oxide	FINISH: F6, acid wash	Peter Fall Oxide	Full size boardwalk prototype to be created to confirm finish and quality
BS03	PRECAST CONCRETE BOARDWALK LAKE WALL EDGE	19mm Atlas supplied white lime slip, white sand, Peter Fall super white plus oxide	FINISH: F6, acid wash	Peter Fall Oxide	Full size boardwalk prototype to be created to confirm finish and quality
BS04	PRECAST TUKUTUKU BRIDGE (LARGE) PILE	19mm Atlas supplied white lime slip, white sand, Peter Fall super white plus oxide	FINISH: F6, acid wash	Peter Fall Oxide	Full size boardwalk prototype to be created to confirm finish and quality
BS05	PRECAST TUKUTUKU BRIDGE (SMALL) PILE	19mm Atlas supplied white lime slip, white sand, Peter Fall super white plus oxide	FINISH: F6, acid wash	Peter Fall Oxide	Full size boardwalk prototype to be created to confirm finish and quality
PAVILION SAMPLES					
PA01	STONE FINISH	Sample of each stone finish required. Selections are: • Honed • Bush Hammer • Heavy split face • CNC machined 3d texture form	To be coordinated between supplier and Landscape architect		Samples to be approved prior to ordering stone
PA02	STONE FIXING MATERIAL	Sample of each stone fixing product required. Selections are: • Grout • Mortar • Silicone	As per specifications		

- NOTE:**
- Notes applicable for all drawings including plans, sections, details and schedules
 - To be read in conjunction with Project Specification
 - All concrete samples are to be sealed as per specifications to determine final finish surface colour and quality

A Tender MC TM 18 02 19
 No Revision By Chk Date



Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN Samples Schedule Sheet 2

Job No Drawing Number Revision
4010 1_0_304 A

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Code	Material Name	Common Name	Area (m ²)	Qty	Length (m)	Volume (m ³)	Price per m ³	Plant Number	Comments
PLANT MESH									
MS 01	Galvanneal mesh	100	18	100	18.00	1.80	1.00	30	
MS 02	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 03	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	To be planted in shade with groupings
MS 04	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 05	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 06	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 07	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 08	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 09	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 10	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 11	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 12	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 13	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 14	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 15	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 16	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 17	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 18	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 19	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 20	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 21	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 22	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 23	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 24	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 25	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 26	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 27	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 28	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 29	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 30	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 31	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 32	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 33	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 34	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 35	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 36	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 37	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 38	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 39	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 40	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 41	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 42	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 44	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 45	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 47	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 49	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 50	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 51	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 52	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 53	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 54	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 57	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 71	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 72	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 73	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 74	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 75	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 76	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 77	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
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MS 91	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 92	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 93	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 94	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 95	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 96	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 97	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 98	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 99	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 100	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
PLANTING MATERIALS REQUIRED - TOTAL PLANTING			18	100	18.00	1.80	1.00	18	
MS 101	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
Total Plant Number			673						
PLANTING MATERIALS REQUIRED - TOTAL PLANTING									
MS 102	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 103	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 104	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 105	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 106	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 107	Aluminium mesh	100	17	100	17.00	1.70	1.00	17	
MS 108	Aluminium mesh	100							

Key	Scientific Name	Common Name	Area (m ²)	Bag Size	Spacing (m)	% coverage	Plants per m ²	Plant Number	Comments
PLANT SPECIES									
Ag 10	<i>Apocynum androsaemifolium</i>	Cioi	56.3	P93	1.00	15.0%	1.00	57	
Ba 10	<i>Bambusa nana</i>	Machaena articulata	75.8	P93	1.50	20.0%	0.44	34	To be planted in shade with groupings
Bt 10	<i>Bambusa nana</i>	Kukoi	56.3	P93	2.00	15.0%	0.25	14	
Ca 10	<i>Carex acutostachya</i>	Curry Grass/Kauahau	30.3	P93	1.00	8.0%	1.00	30	
Cy 10	<i>Cyperus tenuifolius</i>	Giant Umbrella Sedge	75.8	P93	1.00	20.0%	1.00	76	
Ho 10	<i>Heliconia angustata</i>	Heliconia	56.4	P93	1.00	12.0%	1.00	54	
Pa 10	<i>Polystichum richardii</i>	Pheasant	19.0	P93	0.50	5.0%	4.00	76	To be planted in shade with groupings
PLANT SPECIES									
Ag 10	<i>Apocynum androsaemifolium</i>	Cioi	88.4	P93	1.00	12.5%	1.00	88	
Bt 10	<i>Bambusa nana</i>	Kukoi	75.7	P93	2.00	10.0%	0.25	18	To be planted in shade with groupings
Ca 10	<i>Carex acutostachya</i>	Curry Grass	88.4	P93	1.00	12.5%	1.00	88	
Cy 10	<i>Cyperus tenuifolius</i>	Heavenly	56.6	P93	1.00	8.0%	1.00	57	Groundcover to be planted to edges
Co 10	<i>Coprosma angustata</i>	Tasmanian	56.6	P93	1.50	8.0%	0.44	25	Groundcover to be planted to edges
Co 10	<i>Coprosma flagellifera</i>	Coprosma	75.7	P93	1.50	10.0%	0.44	31	
Do 10	<i>Dodonaea viscidiflora</i>	Ragwort	21.2	P93	0.50	1.0%	4.00	85	To be planted or shade with groupings
Ma 10	<i>Metrosideros excelsa</i>	Queensland Kanuka	108.7	P93	1.50	23.0%	0.44	75	Groundcover to be planted at the front
Ma 10	<i>Metrosideros excelsa</i>	Pohutukawa	21.2	P93	1.00	1.0%	1.00	21	Groundcover to be planted to edges
Pa 10	<i>Polystichum minus</i>	Rack Daisy	7.3	P93	0.40	1.0%	6.25	44	Groundcover to be planted in rockage den
Ph 10	<i>Phormium tenax</i>	Flax	56.6	P93	1.00	8.0%	1.00	57	Plant towards the back in groups of three
								Total Plant Number	941
TREE SPECIES									
Al 10	<i>Alnus cordata</i>	Italian Alder	NA	P8150	NA	NA	NA	1	Refer to planting plan for locations
Ho 10	<i>Heliconia angustata</i>	Purple Wister	NA	P8150	NA	NA	NA	7	Refer to planting plan for locations
Ma 10	<i>Metrosideros excelsa</i>	Kanuka	NA	P8150	NA	NA	NA	13	Refer to planting plan for locations
Ma 10	<i>Metrosideros excelsa</i>	Kanuka	NA	P8150	NA	NA	NA	17	Refer to planting plan for locations
Ma 10	<i>Metrosideros excelsa</i>	Pohutukawa	NA	P8150	NA	NA	NA	1	Refer to planting plan for locations
So 10	<i>Sophora australis</i>	Kowhai	NA	P8150	NA	NA	NA	1	Refer to planting plan for locations
So 10	<i>Sophora australis</i>	Large leaved Kowhai	NA	P8150	NA	NA	NA	4	Refer to planting plan for locations
								Total Tree Number	44

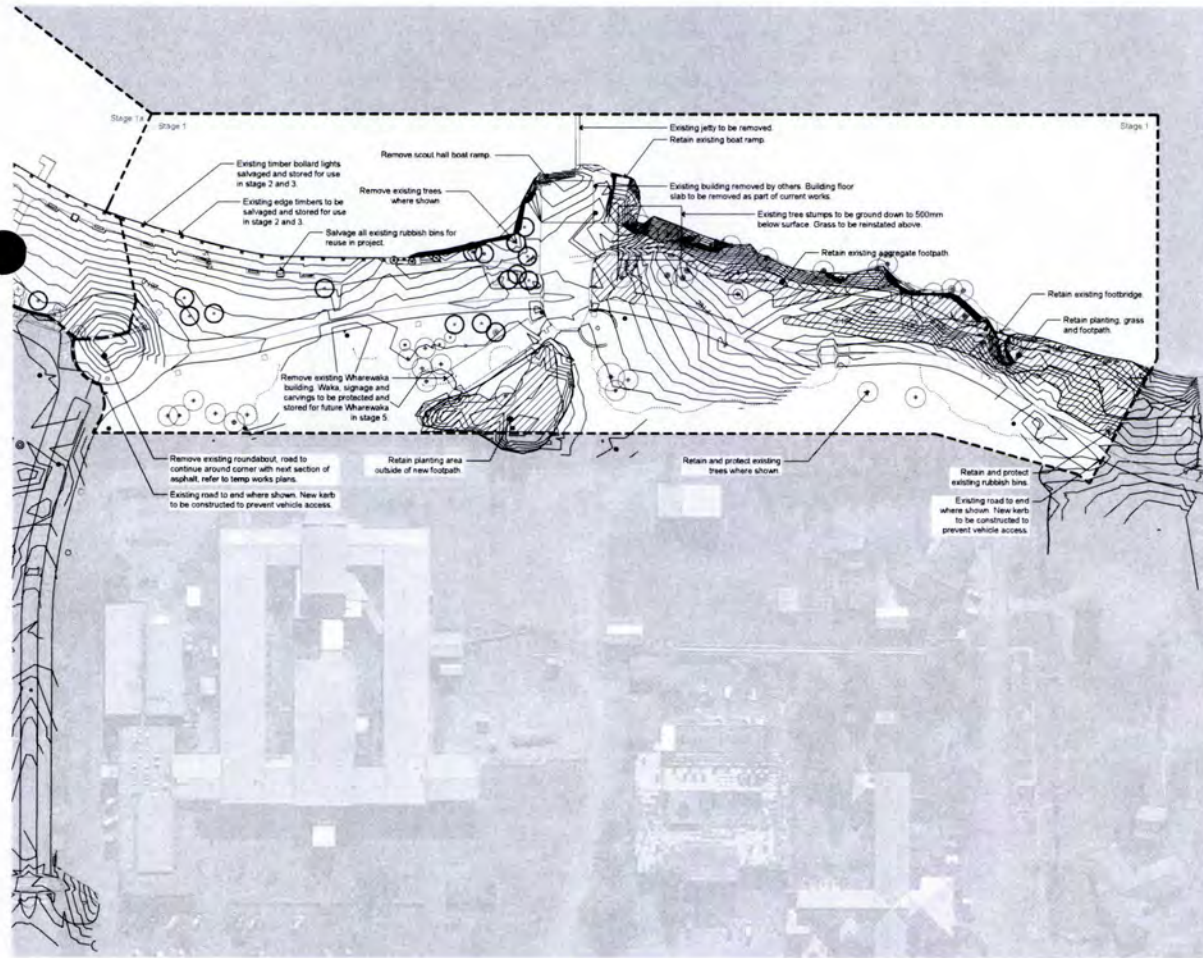
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E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18
No.	Revision	By Csk Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
Stage 1a Planting Schedule
 Job No Drawing Number Revision
4010 1a_0.401 F
 Issued For
Tender
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Stage Boundary

Existing Tree retained
 Existing Tree Removed

Notes:

Handstand
 All existing roads, footpaths and base material are to be removed unless otherwise noted on the drawings.

Landscape
 Trees and plantings are to be removed where shown on drawings. Where significant trees are not shown on drawings as either retained or removed the contractor is to consult the landscape architect for direction.

Services
 Consult T-T drawings for direction on all services.

Lake Wall
 Salvage existing lake wall timber and store for use in later stages.

Salvaged Materials
 All salvaged materials are to be stored at council approved location. Salvage all existing furniture, light poles and signage and give back to council. Salvage all memorial plaques for reuse.

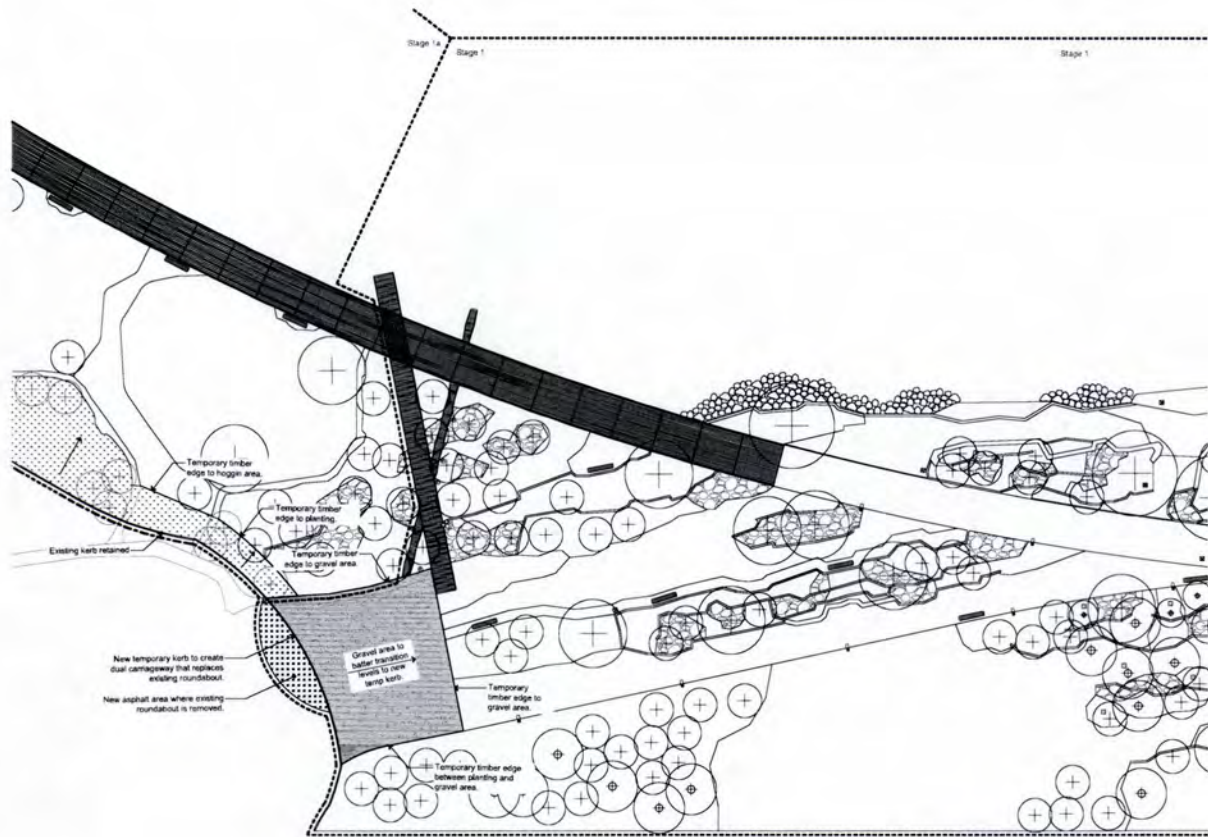
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E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18
No.	Revision	By Csk Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
Stage 1 Demolition Plan
 Job No Drawing Number Revision
4010 1_1.000 F
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- Stage Boundary
- Asphalt
- Gravel
- Lawn Batter
- Existing Kerb retained
- New Kerb
- Temporary Timber Edge

C Tender TM 18 02 18
 B 100% Detailed Design TM 14 12 18
 A Draft Detailed Design TM 30 11 18

No. Revision By Chk Date

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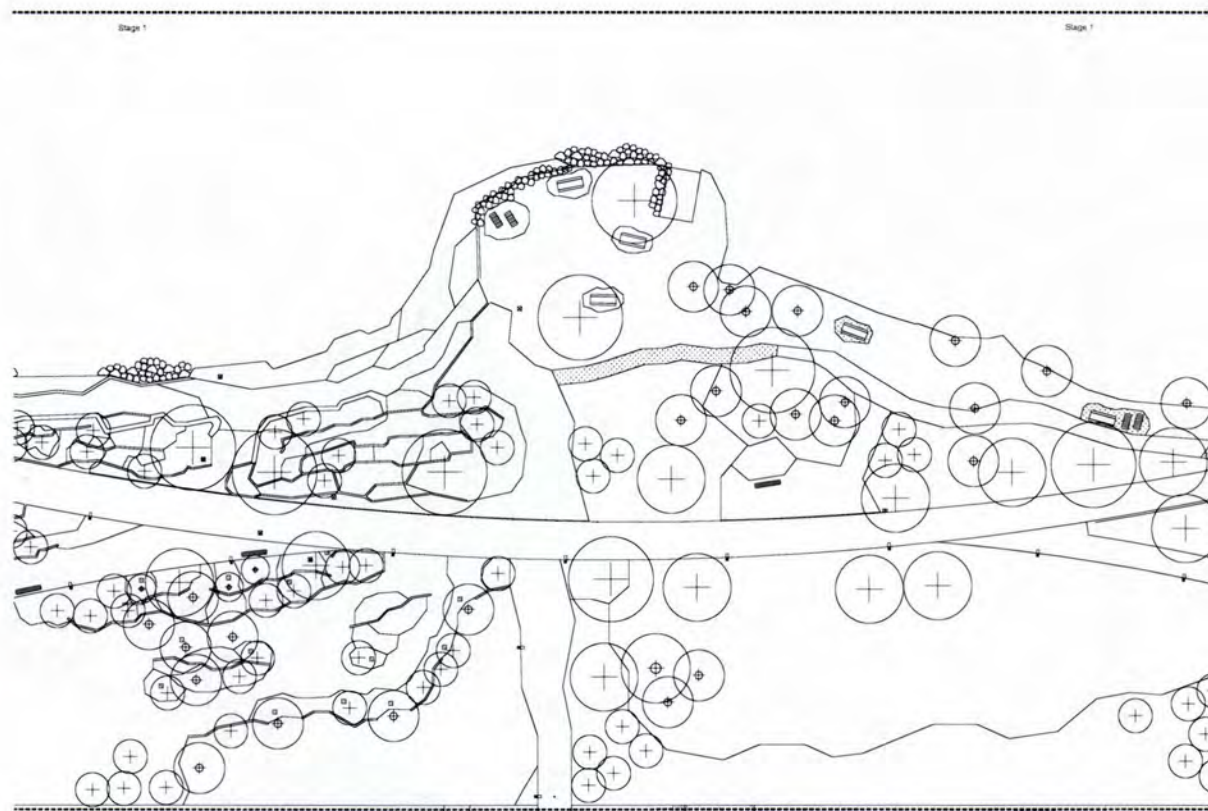
Job Name
Rotorua Lakefront Development

Scale Drawing Title
 1:200 Stage 1 Temporary Works Plan - Sheet 1

Job No Drawing Number Revision
 4010 1_1.001 C

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- Stage Boundary
- Asphalt
- Gravel
- Lawn Batter
- Existing Kerb retained
- New Kerb
- Temporary Timber Edge

C Tender TM 18 02 18
 B 100% Detailed Design TM 14 12 18
 A Draft Detailed Design TM 30 11 18

No. Revision By Chk Date

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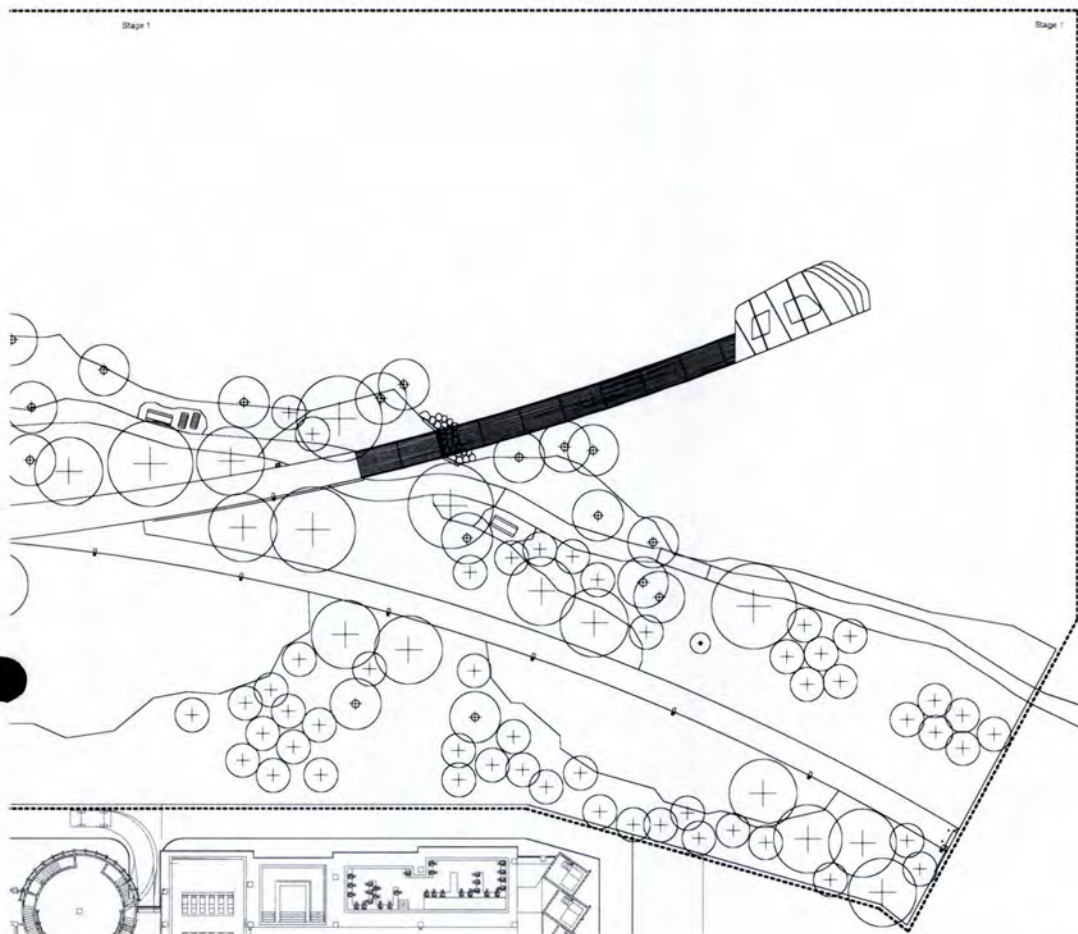
Job Name
Rotorua Lakefront Development

Scale Drawing Title
 1:200 Stage 1 Temporary Works Plan - Sheet 2

Job No Drawing Number Revision
 4010 1_1.002 C

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Scale: 1:200
 Date: 14/12/18
 Job No: 4010
 North: A

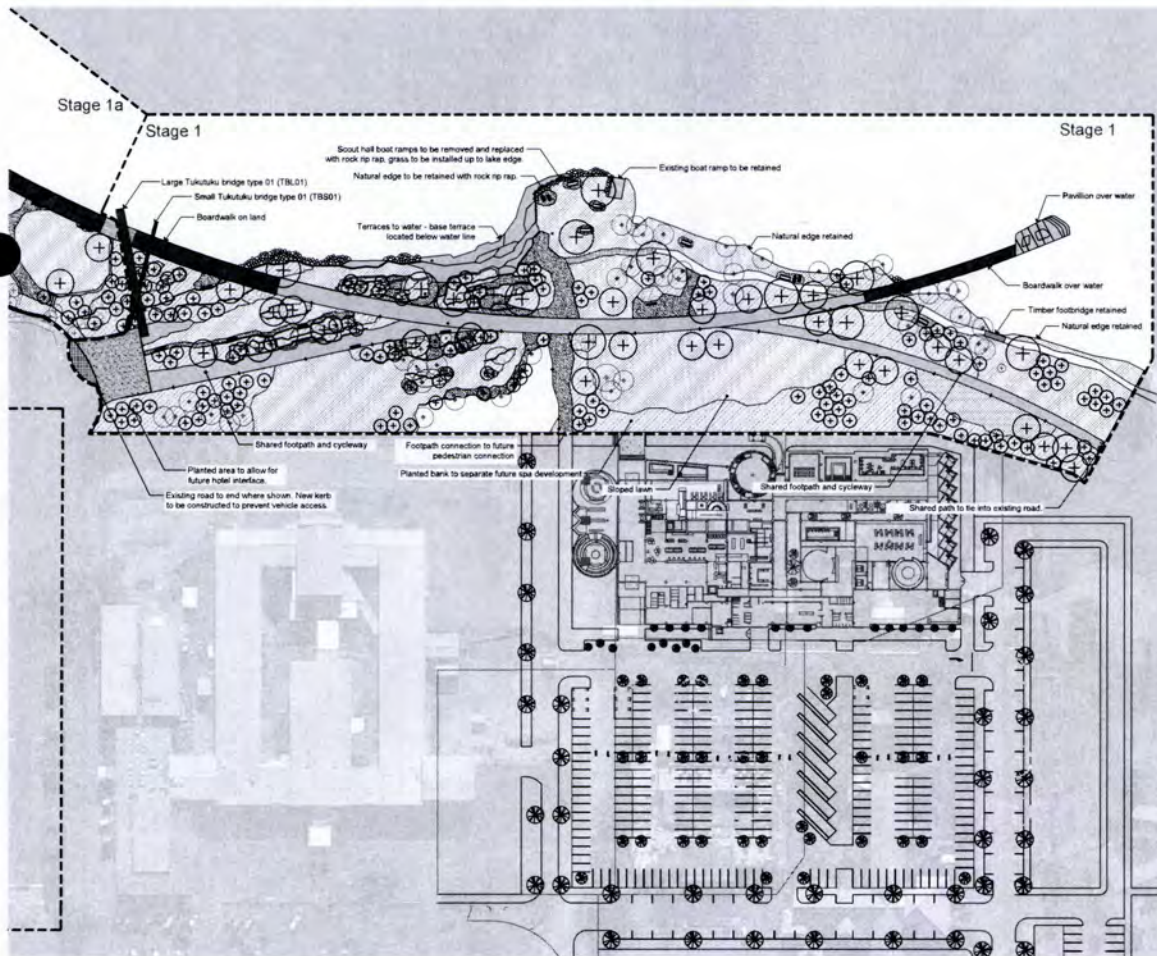
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 Drawing Number: 1_1.003
 Revision: C
 Issued For: Tender

Isthmus.
 Client: Rotorua Lakes Council
 Job Name: Rotorua Lakefront Development

No. Revision: By: Chk: Date:

C: Tender TM 18.02.19
 B: 100% Detailed Design TM 14.12.18
 A: Draft Detailed Design TM 30.11.18

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Scale: 1:200
 Date: 14/12/18
 Job No: 4010
 North: A

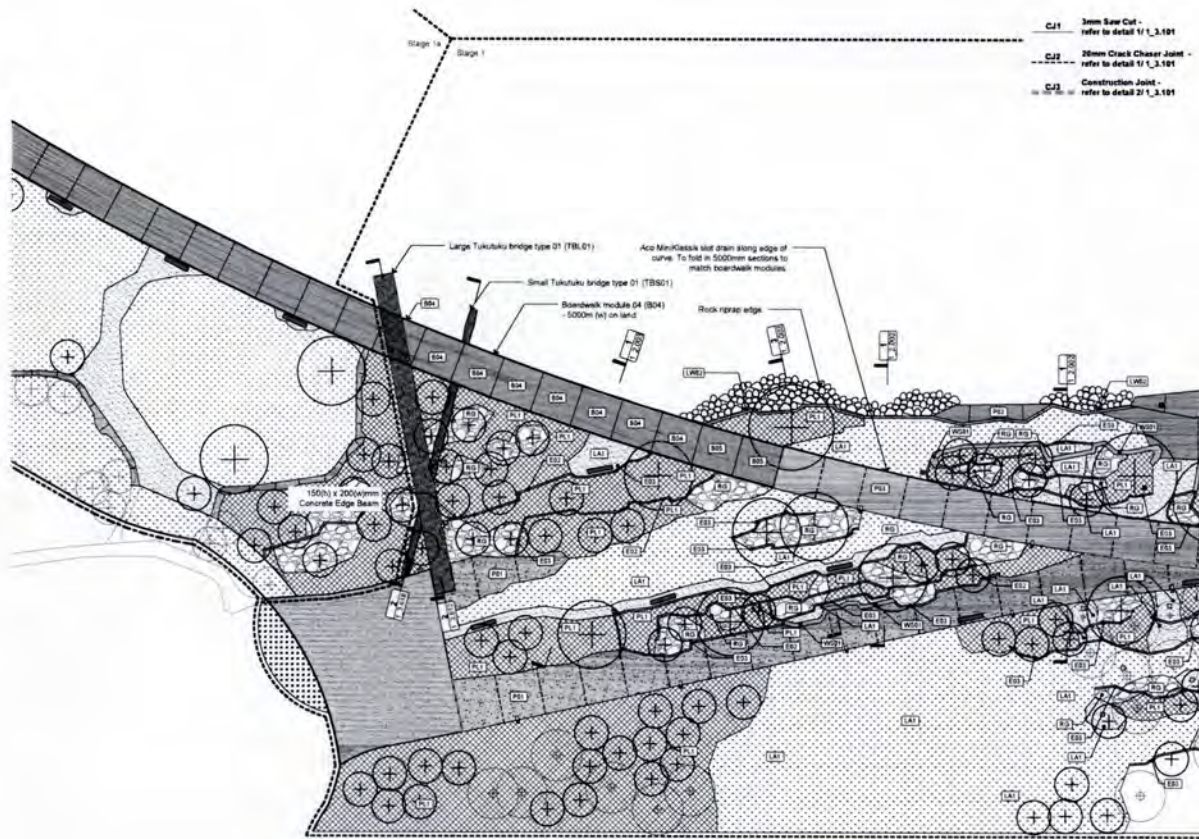
Drawing Title: Stage 1 General Arrangement
 Drawing Number: 1_1.100
 Revision: F
 Issued For: Tender

Isthmus.
 Client: Rotorua Lakes Council
 Job Name: Rotorua Lakefront Development

No. Revision: By: Chk: Date:

F: Tender MC 18.02.19
 D: 100% Detailed Design MC 14.12.18
 C: Draft Detailed Design MC 30.11.18
 B: Draft Detailed Design MC 15.11.18
 A: Draft Detailed Design MC 19.10.18
 A: Draft Detailed Design MC 18.09.18

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- CJ1 3mm Saw Cut - refer to detail 1/1_3_101
- CJ2 20mm Crack Chaser Joint - refer to detail 1/1_3_101
- CJ3 Construction Joint - refer to detail 2/1_3_101

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete Type 1 (P01) - refer to detail 1/1_3_101
- Concrete Type 2 (P02) - refer to detail 1/1_3_101
- Concrete Type 3 (P03) - refer to detail 1/1_3_101
- Hoggin (P04) - refer to details 2/1_3_101
- Aggregate Path (P05) - refer to details 1/1_3_101
- Rock Garden (P06) - 50% rock, 50% planting refer to detail 2/1_3_101
- Planting (PL1) - refer to planting plans & detail 2/1_3_101
- Lawn (L01) - refer to detail 1/1_3_101
- Irrigated Lawn (L02)
- E82 - E85 Concrete Edge Type - Refer to Details 1_3_101 - 1_3_102
- LW01 - Lake Wall Type - refer to details 1_3_701
- TBL01 - 03 Tukukuku Bridge Type - TBS01 - 03 refer to details 1_3_407
- Boardwalk Modules - 3000mm boardwalk refer to details 1_3_508 - 1_3_515
- Boardwalk Modules - 5000mm boardwalk refer to details 1_3_508 - 1_3_515
- WS01 Concrete Wall Seat - refer to details 1_3_702

Tender	MC TM 18.02.19
Draft Detailed Design	MC TM 14.12.18
Draft Detailed Design	MC TM 30.11.18
Draft Detailed Design	MC TM 15.11.18
Draft Detailed Design	MC TM 19.10.18
Draft Detailed Design	MC TM 28.09.18

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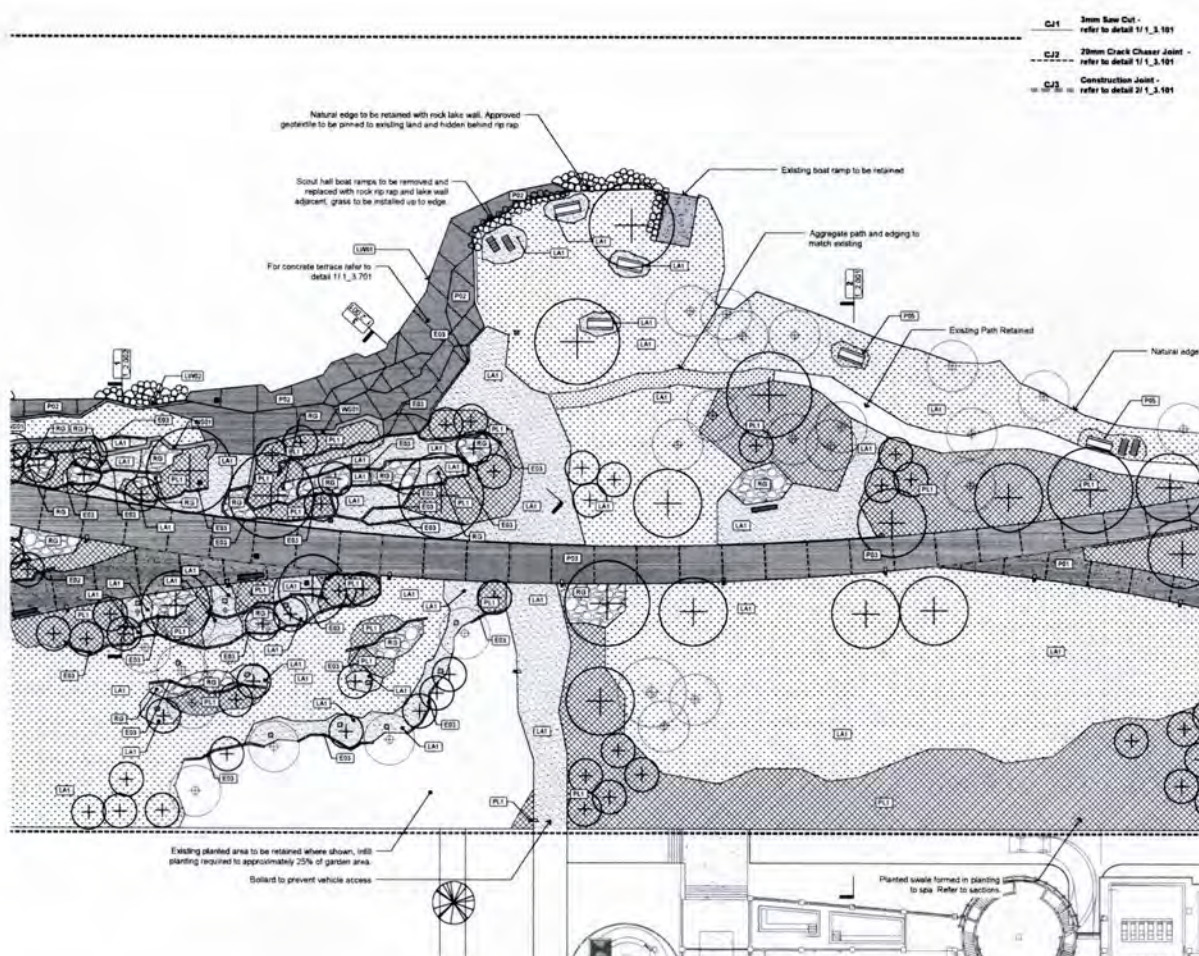
Job Name
Rotorua Lakefront Development

Scale: 1:200 Drawing Title: Stage 1 Surface Finishes - Sheet 1

Job No: 4010 Drawing Number: 1_1_101 Revision: F

North: A Issued For: Tender

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- CJ1 3mm Saw Cut - refer to detail 1/1_3_101
- CJ2 20mm Crack Chaser Joint - refer to detail 1/1_3_101
- CJ3 Construction Joint - refer to detail 2/1_3_101

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete Type 1 (P01) - refer to detail 1/1_3_101
- Concrete Type 2 (P02) - refer to detail 1/1_3_101
- Concrete Type 3 (P03) - refer to detail 1/1_3_101
- Hoggin (P04) - refer to details 2/1_3_101
- Aggregate Path (P05) - refer to details 1_3_101
- Rock Garden (P06) - 50% rock, 50% planting refer to detail 2/1_3_101
- Planting (PL1) - refer to planting plans & detail 2/1_3_101
- Lawn (L01) - refer to detail 1/1_3_101
- Irrigated Lawn (L02)
- E82 - E85 Concrete Edge Type - Refer to Details 1_3_101 - 1_3_102
- LW01 - Lake Wall Type - refer to details 1_3_701
- TBL01 - 03 Tukukuku Bridge Type - TBS01 - 03 refer to details 1_3_407
- Boardwalk Modules - 3000mm boardwalk refer to details 1_3_508 - 1_3_515
- Boardwalk Modules - 5000mm boardwalk refer to details 1_3_508 - 1_3_515
- WS01 Concrete Wall Seat - refer to details 1_3_702

F Tender	MC TM 18.02.19
Draft Detailed Design	MC TM 18.12.18
Draft Detailed Design	MC TM 30.11.18
Draft Detailed Design	MC TM 15.11.18
Draft Detailed Design	MC TM 19.10.18
Draft Detailed Design	MC TM 28.09.18

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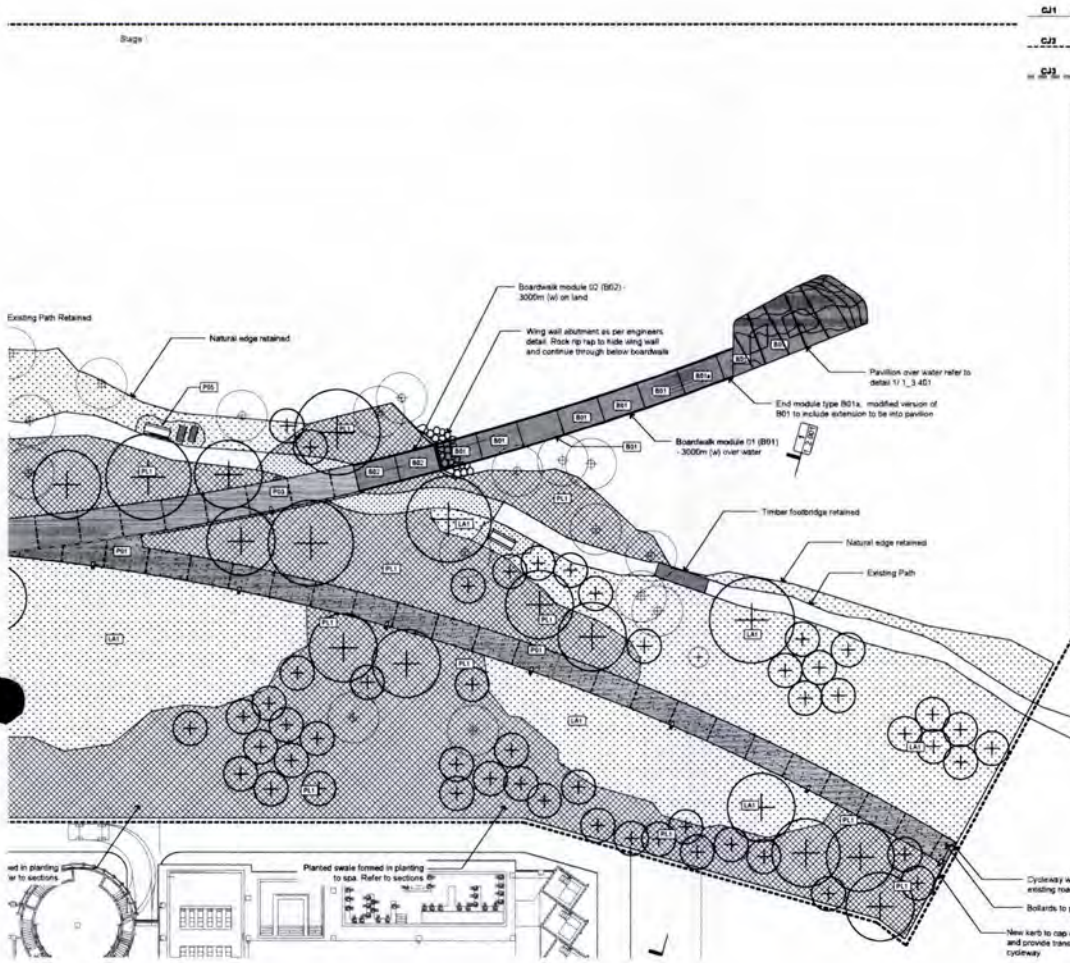
Job Name
Rotorua Lakefront Development

Scale: 1:200 Drawing Title: Stage 2 Surface Finishes - Sheet 1

Job No: 4010 Drawing Number: 1_1_102 Revision: F

North: A Issued For: Tender

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- CJ1 3mm Saw Cut - refer to detail 1_1_3.101
 - CJ2 20mm Crack Chaser Joint - refer to detail 1_1_3.101
 - CJ3 Construction Joint - refer to detail 1_1_3.101
- Stage Boundary
 - Existing Tree retained
 - Proposed Tree
 - Concrete Type 1 (P01) - refer to detail 1_1_3.101
 - Concrete Type 2 (P02) - refer to detail 1_1_3.101
 - Concrete Type 3 (P03) - refer to detail 1_1_3.101
 - Hoggin (P04)
 - Aggregate Path (P05) - refer to details 1_3.101
 - Rock Garden (RG) - 50% rock, 50% planting refer to detail 1_3.801
 - Planting (PL1) - refer to planting plans & detail 1_1_3.801
 - Lawn (LA1) - refer to detail 1_1_3.801
 - Irrigated Lawn (LA2)
 - E02 - E05 Concrete Edge Type - Refer to Detail 1_3.101 - 1_3.102
 - LW01 - LW05 Lake Wall Type - refer to details 1_3.701
 - TB01 - TB05 Tutukuku Bridge Type - refer to details 1_3.607
 - Boardwalk Modules - 3000mm boardwalk refer to details 1_3.508 - 1_3.515
 - Boardwalk Modules - 5000mm boardwalk refer to details 1_3.508 - 1_3.515
 - Concrete Wall Seat - refer to details 1_3.702

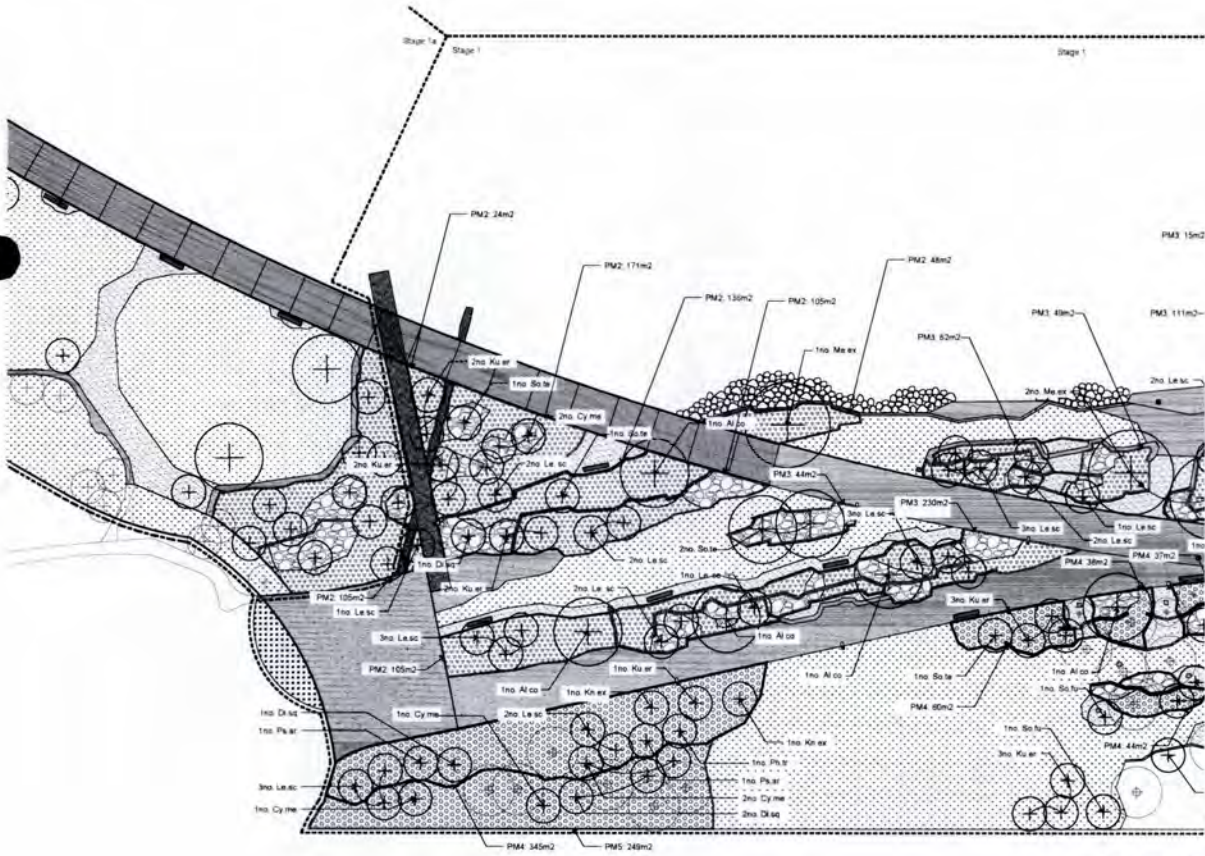
No.	Revision	By	Chk	Date
F	Tender	MC	TM	18.02.18
D	100% Detailed Design	MC	TM	18.12.18
C	Draft Detailed Design	MC	TM	30.11.18
B	Draft Detailed Design	MC	TM	15.11.18
A	Draft Detailed Design	MC	TM	19.10.18
		MC	TM	18.09.18

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Job Name
Rotorua Lakefront Development

Scale	Drawing Title
L75%	Stage 1
1:400	Surface Finishes - Sheet 3
Job No	Drawing Number
4010	1_1.103
North	Revision
A	F
	Issued For
	Tender



- Stage Boundary
 - Existing Tree retained
 - Proposed Tree
 - Concrete
 - Hoggin (P04)
 - Aggregate Path (P05) - to match existing
 - Lawn (LA1)
 - Irrigated Lawn (LA2)
 - TP1 - TP2 Tree Pit Type - refer to details 1_3.803 & 1_3.804
 - Rock Garden (RG) - 50% rock, 50% planting refer to detail 1_3.801
 - Gravel Mulch (GM)
 - Bark Mulch (BM)
- Planting Mixes**
- PM01
 - PM02
 - PM03
 - PM04
 - PM05

No.	Revision	By	Chk	Date
F	Tender	MC	TM	18.02.18
D	100% Detailed Design	MC	TM	18.12.18
C	Draft Detailed Design	MC	TM	30.11.18
B	Draft Detailed Design	MC	TM	15.11.18
A	Draft Detailed Design	MC	TM	19.10.18
		MC	TM	18.09.18

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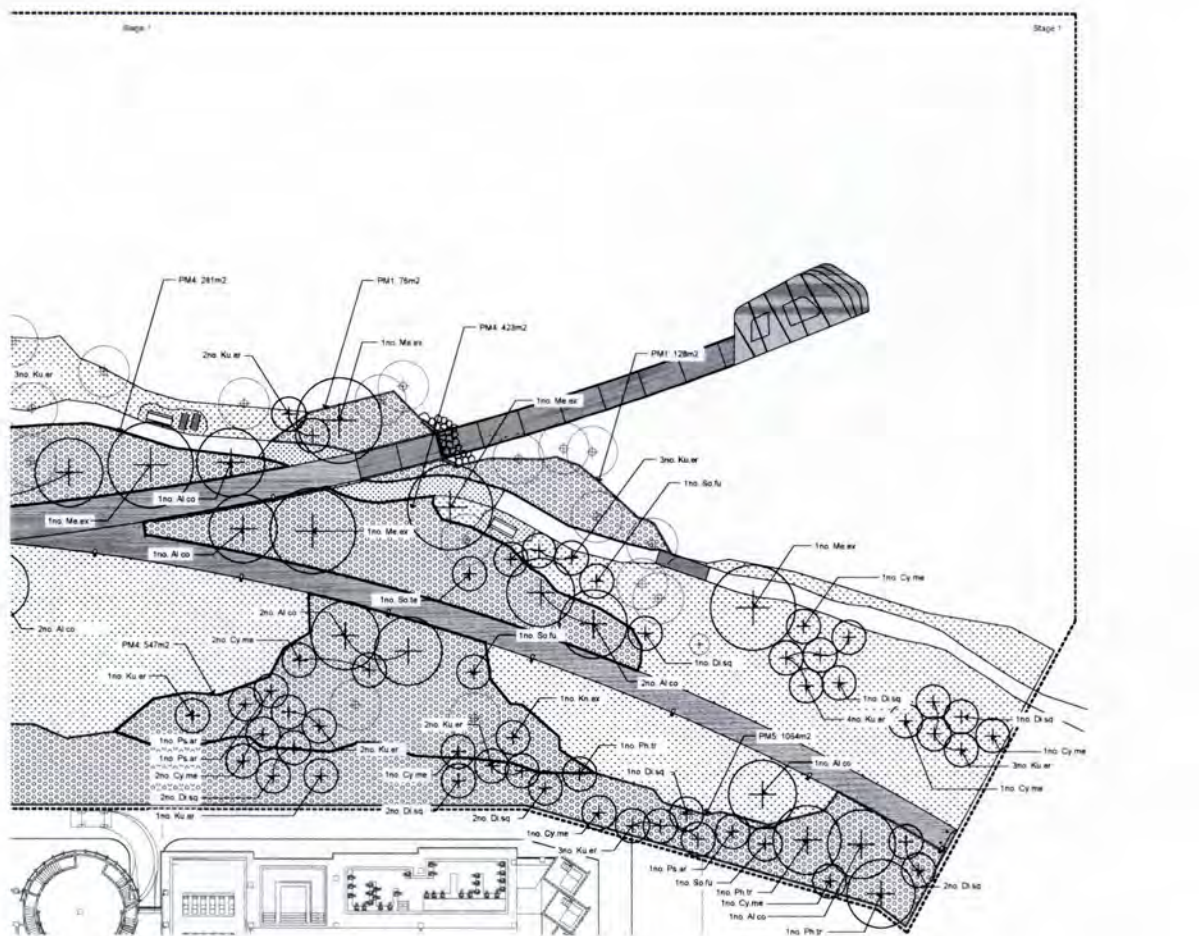
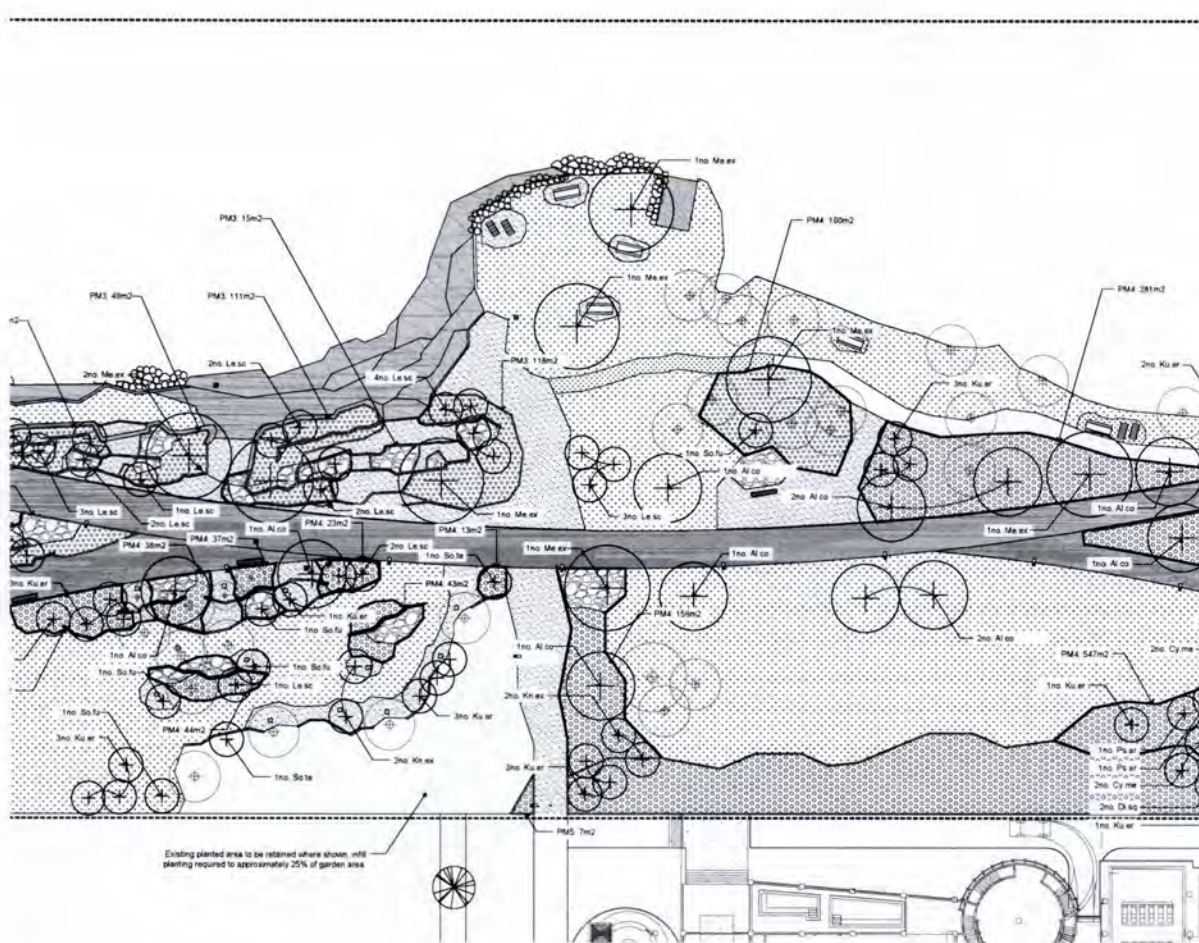
Client
Rotorua Lakes Council

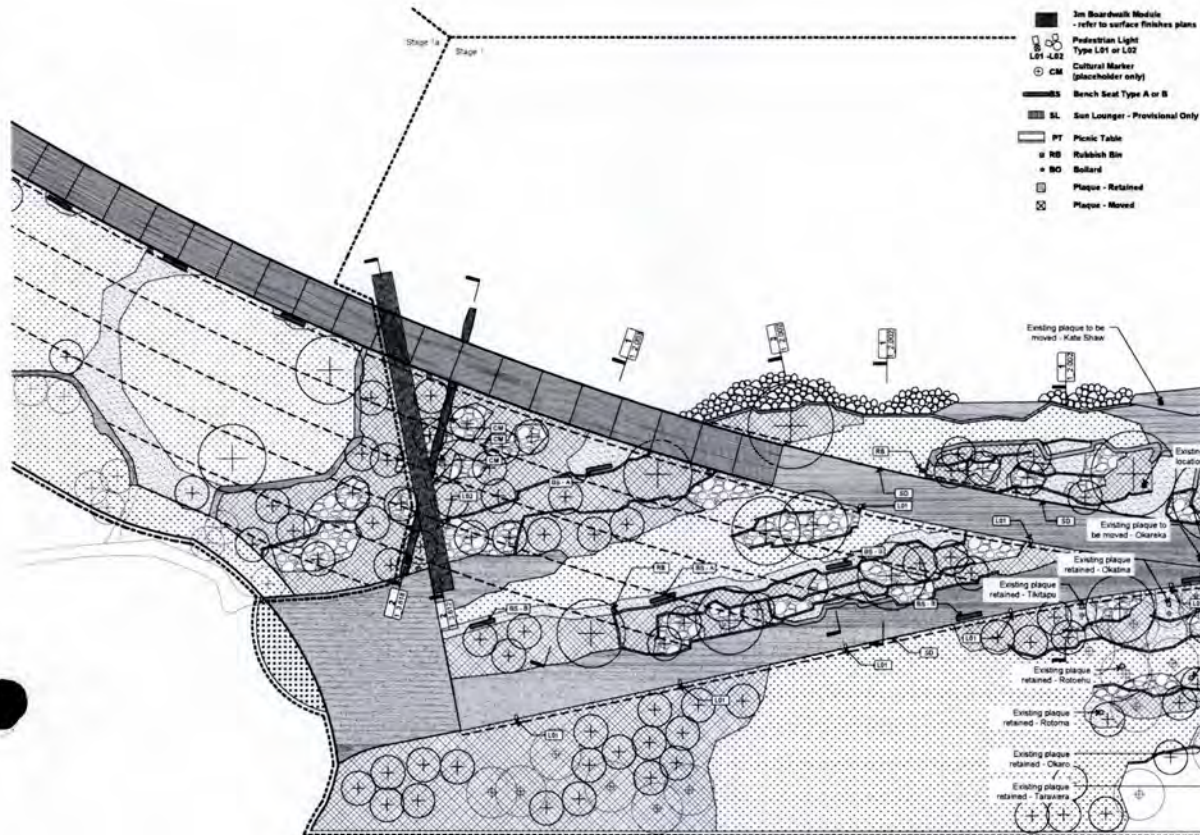
Job Name
Rotorua Lakefront Development

Scale	Drawing Title
L75%	Stage 1
1:400	Planting Plan - Sheet 1
Job No	Drawing Number
4010	1_1.201
North	Revision
A	F
	Issued For
	Tender

Existing planted area to be planting required to approve

Drawn upon, verify dimensions of site before construction. Isthmus Group Limited 2018. COPYRIGHT ISTMUS GROUP LIMITED



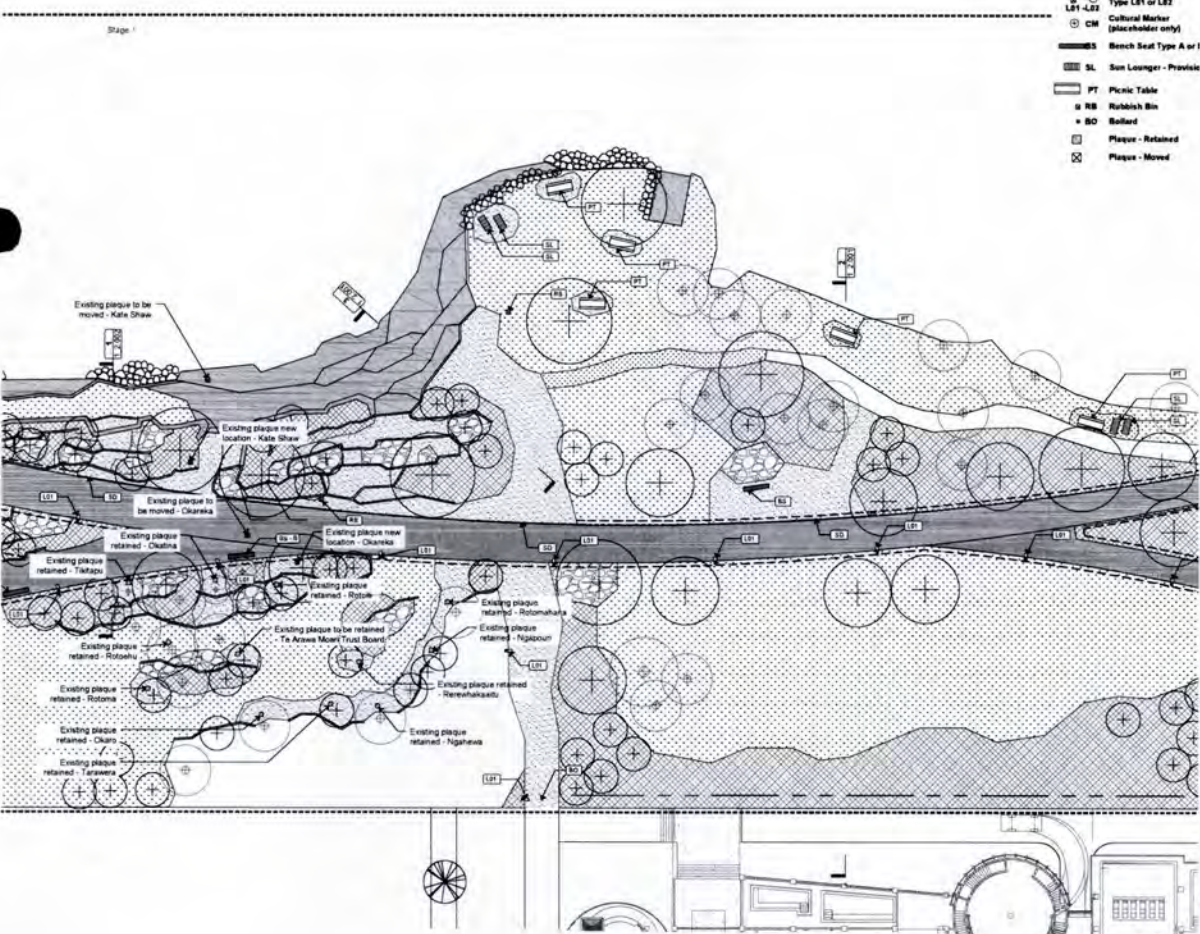


- 3m Boardwalk Module - refer to surface finishes plans
- Pedestrian Light Type L01 or L02
- Cultural Marker (placeholder only)
- CM
- Bench Seat Type A or B
- SL Sun Lounger - Provisional Only
- PT Picnic Table
- RB Rubbish Bin
- BO Bollard
- Plaque - Retained
- Plaque - Moved

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete
- Hoggin (P04)
- Aggregate Path (P05) - to match existing
- Rock Garden (R02) - 50% rock, 50% planting
- Planting (PL1) - refer to planting plans
- Lawn (LA1)
- Irrigated Lawn (LA2)
- Water Tidy Box (WTB)
- Electrical Connection Type 1 (EC1) - below boardwalk decking
- Electrical Connection Type 2 (EC2) - in face of terrace wall
- 1100 Subsoil Line (SL) - refer to details 1_3_104
- Silt Drain (SD) - refer to details 1_3_104
- Timber Edge (E01) - refer to details
- Timber Edge (E05) - refer to detail S1_3_101
- 3m Boardwalk Module - refer to surface finishes plans

F	Tender	MC TM 18 02 18
D	30% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 18 10 18
A	Draft Detailed Design	MC TM 28 09 18

Isthmus.
 Client: Rotorua Lakes Council
 Job Name: Rotorua Lakefront Development
 Drawing Title: Stage 1 FF&E - Sheet 1
 Drawing Number: 1_1_301
 Revision: F
 Issued For: Tender

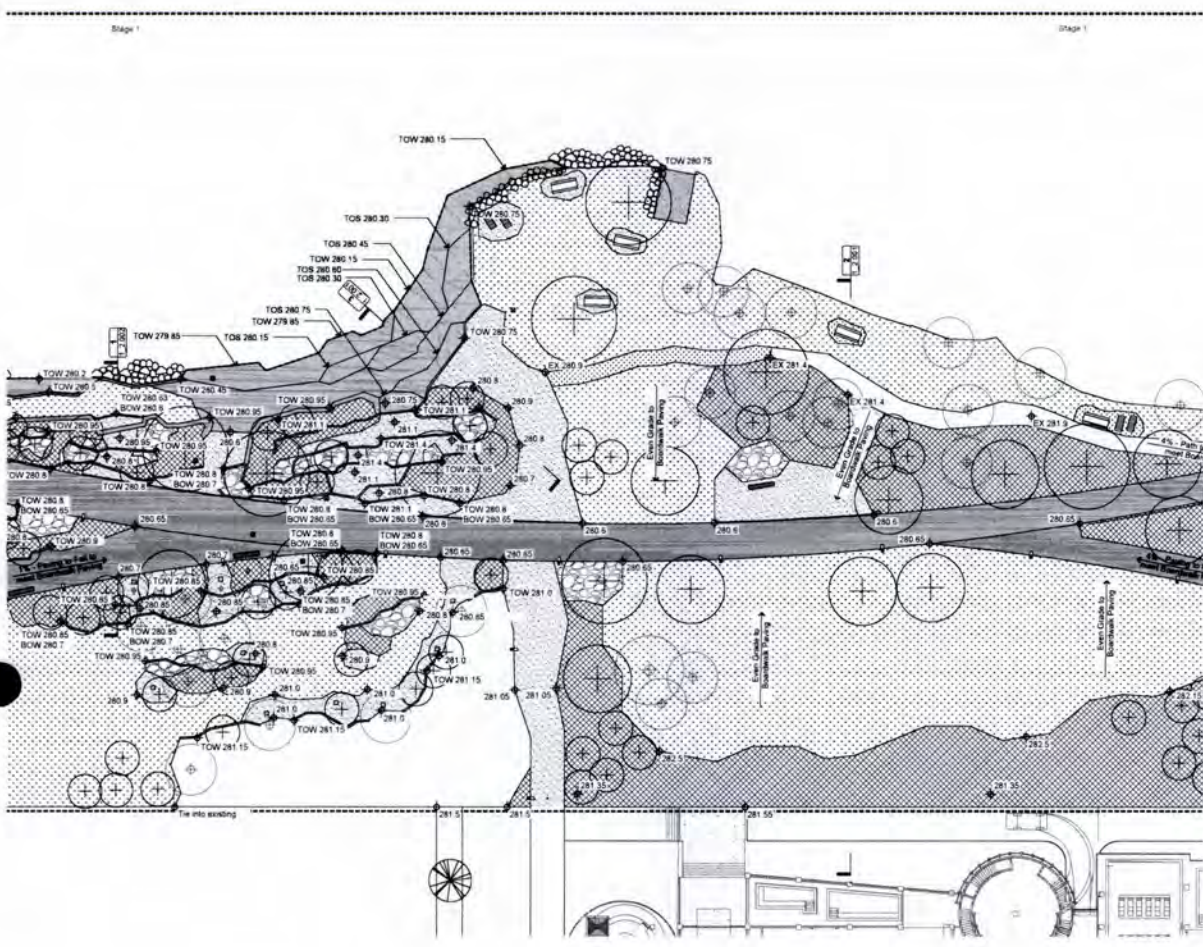


- Pedestrian Light Type L01 or L02
- Cultural Marker (placeholder only)
- CM
- Bench Seat Type A or B
- SL Sun Lounger - Provisional
- PT Picnic Table
- RB Rubbish Bin
- BO Bollard
- Plaque - Retained
- Plaque - Moved

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete
- Hoggin (P04)
- Aggregate Path (P05) - to match existing
- Rock Garden (R02) - 50% rock, 50% planting
- Planting (PL1) - refer to planting plans
- Lawn (LA1)
- Irrigated Lawn (LA2)
- Water Tidy Box (WTB)
- Electrical Connection Type 1 (EC1) - below boardwalk decking
- Electrical Connection Type 2 (EC2) - in face of terrace wall
- 1100 Subsoil Line (SL) - refer to details 1_3_104
- Silt Drain (SD) - refer to details 1_3_104
- Timber Edge (E01) - refer to details
- Timber Edge (E05) - refer to detail S1_3_101
- 3m Boardwalk Module - refer to surface finishes plans

F	Tender	MC TM 18 02 18
D	30% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 18 10 18
A	Draft Detailed Design	MC TM 28 09 18

Isthmus.
 Client: Rotorua Lakes Council
 Job Name: Rotorua Lakefront Development
 Drawing Title: Stage 1 FF&E - Sheet 2
 Drawing Number: 1_1_302
 Revision: F
 Issued For: Tender



Stage Boundary

- Existing Tree retained
- Proposed Tree
- Concrete
- Huggin (PG4)
- Aggregate Path (P05) - to match existing
- Rock Garden (RG) - 50% rock, 50% planting
- Planting (PL1) refer to planting plans
- Lawn (LA1)
- Irrigated Lawn (LA2)
- 3m Boardwalk Module - refer to surface finishes plans
- 3m Boardwalk Module - refer to surface finishes plans
- Spot Level
- Existing Level
- Top of Wall
- Bottom of Wall
- Top of Step
- Bottom of Step
- Surface gradient

F	Tender	MC TM 18.02.19
E	100% Detailed Design	MC TM 14.12.18
D	Draft Detailed Design	MC TM 30.11.18
C	Draft Detailed Design	MC TM 15.11.18
B	Draft Detailed Design	MC TM 19.10.18
A	Draft Detailed Design	MC TM 28.09.18

No. Revision By Chk. Date

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Client
Rotorua Lakes Council

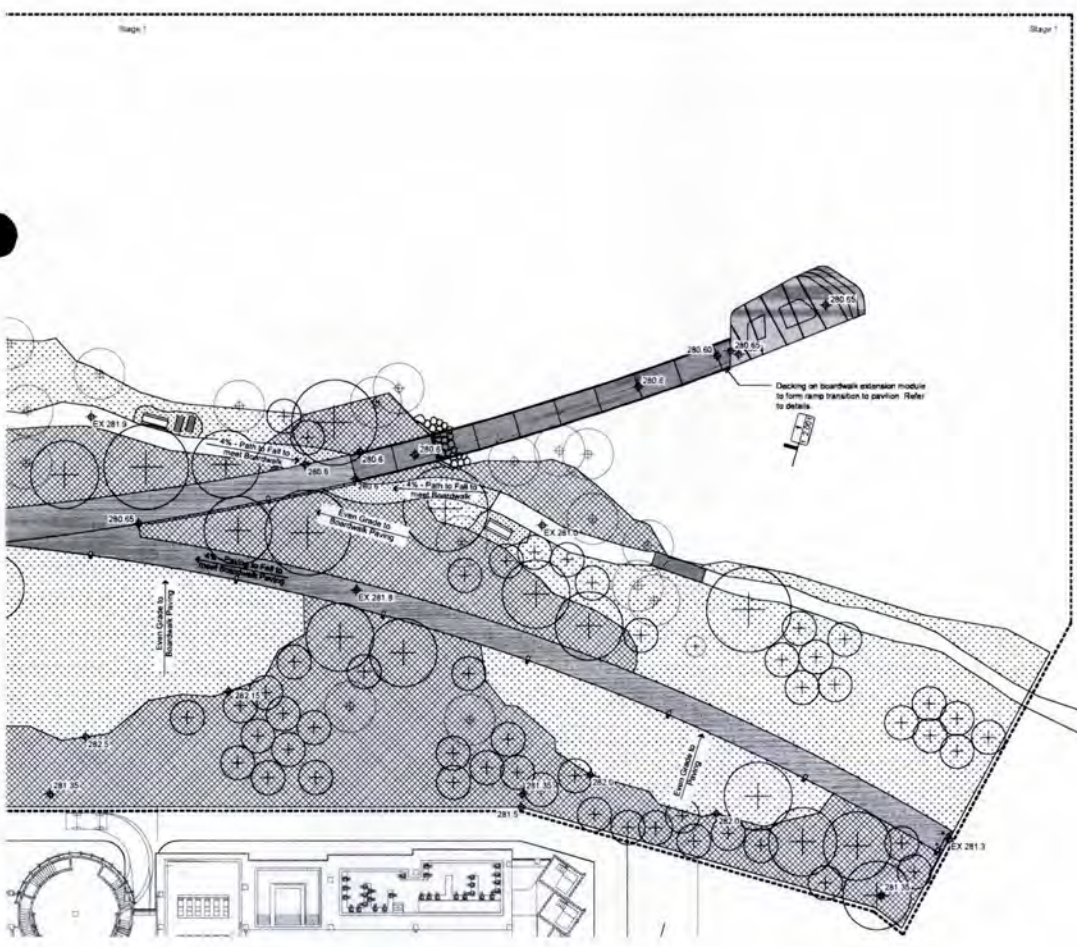
Job Name
Rotorua Lakefront Development

Scale Drawing Title
 1:100 Stage 1
 1:100 Levels Plan - Sheet 2

Job No Drawing Number Revision
 4010 1_1402 F

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 A Tender

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Stage Boundary

- Existing Tree retained
- Proposed Tree
- Concrete
- Huggin (PG4)
- Aggregate Path (P05) - to match existing
- Rock Garden (RG) - 50% rock, 50% planting
- Planting (PL1) refer to planting plans
- Lawn (LA1)
- Irrigated Lawn (LA2)
- 3m Boardwalk Module - refer to surface finishes plans
- 3m Boardwalk Module - refer to surface finishes plans
- Spot Level
- Existing Level
- Top of Wall
- Bottom of Wall
- Top of Step
- Bottom of Step
- Surface gradient

F	Tender	MC TM 18.02.19
E	100% Detailed Design	MC TM 14.12.18
D	Draft Detailed Design	MC TM 30.11.18
C	Draft Detailed Design	MC TM 15.11.18
B	Draft Detailed Design	MC TM 19.10.18
A	Draft Detailed Design	MC TM 28.09.18

No. Revision By Chk. Date

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Client
Rotorua Lakes Council

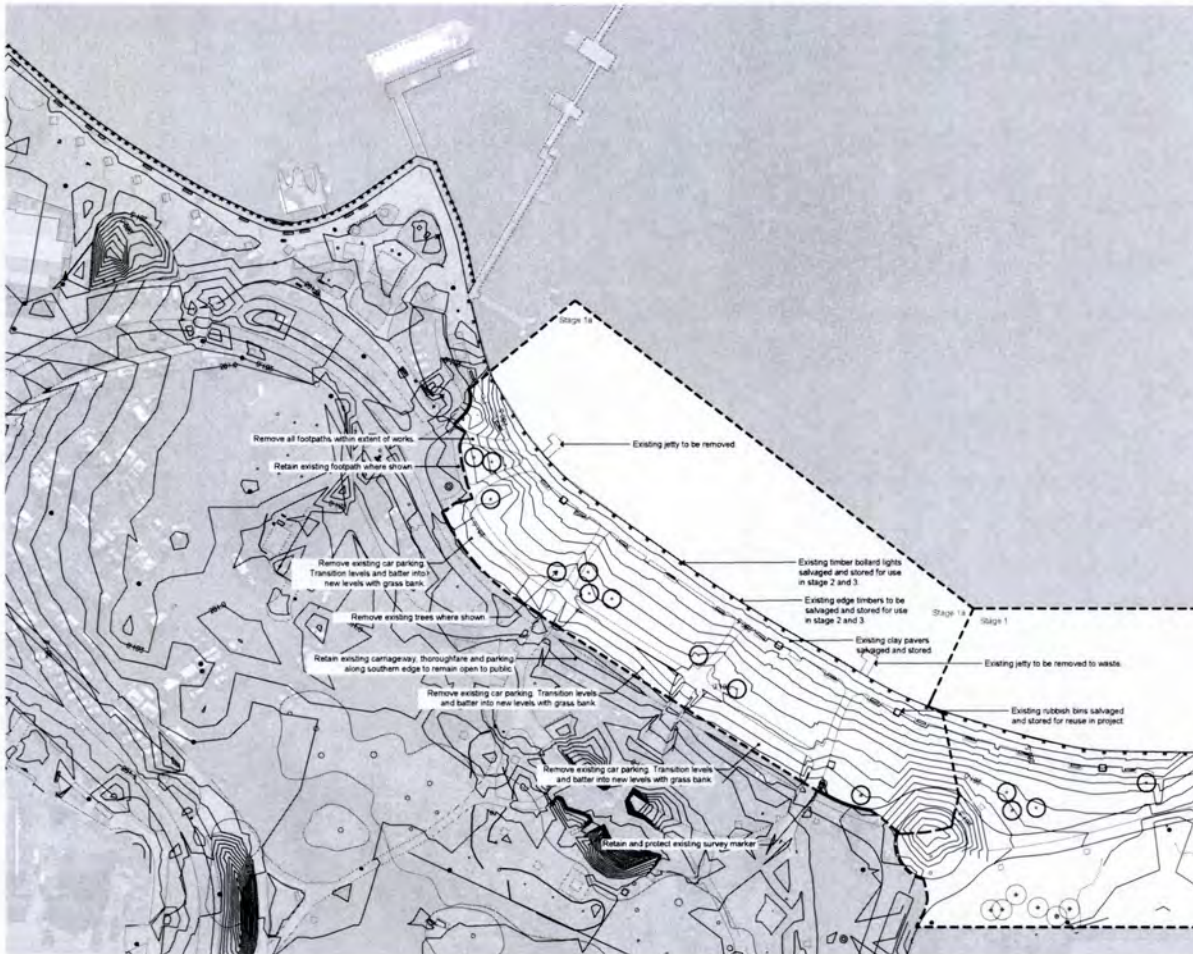
Job Name
Rotorua Lakefront Development

Scale Drawing Title
 1:100 Stage 1
 1:100 Levels Plan - Sheet 3

Job No Drawing Number Revision
 4010 1_1403 F

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Stage Boundary

Existing Tree retained
Existing Tree Removed

Notes:

Handbook
All existing roads, footpaths and base material are to be removed unless otherwise noted on the drawings.

Landscape
Trees and plantings are to be removed where shown on drawings. Where significant trees are not shown on drawings as either retained or removed the contractor is to consult the landscape architect for direction.

Services
Consult T+T drawings for direction on all services.

Lake Wall
Salvage existing lake wall timber and store for use in later stages.

Salvaged Materials
All salvaged materials are to be stored at council approved location. Salvage all existing furniture, light poles and signage and give back to council. Salvage all memorial plaques for reuse.

F	Tender	MC TM 18.02.19
D	Draft Detailed Design	MC TM 14.12.18
C	Draft Detailed Design	MC TM 30.11.18
B	Draft Detailed Design	MC TM 15.11.18
A	Draft Detailed Design	MC TM 19.10.18
	Draft Detailed Design	MC TM 28.09.18

No. Revision By Chk Date

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Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale
1:500

Drawing Title
Stage 1a Demolition Plan

Job No
4010

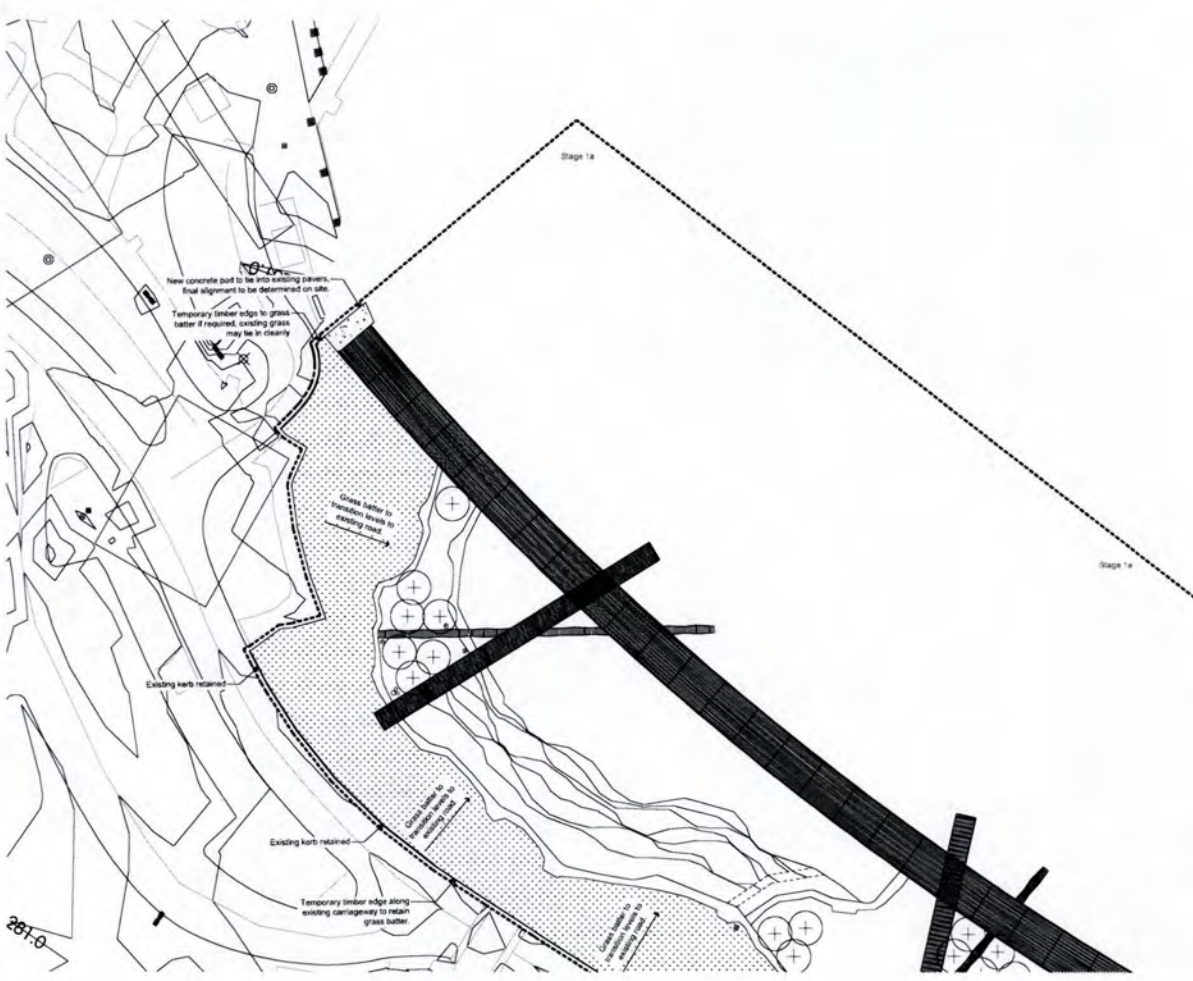
Drawing Number
1a_1.000

Revision
F

North
A

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Tender

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Stage Boundary

Asphalt
Gravel
Lawn Batter
Existing Kerb retained
New Kerb
Temporary Timber Edge

C	Tender	TM TM 18.02.19
B	100% Detailed Design	TM TM 14.12.18
A	Draft Detailed Design	TM TM 30.11.18

No. Revision By Chk Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale
1:500

Drawing Title
Stage 1a Temporary Works Plan - Sheet 1

Job No
4010

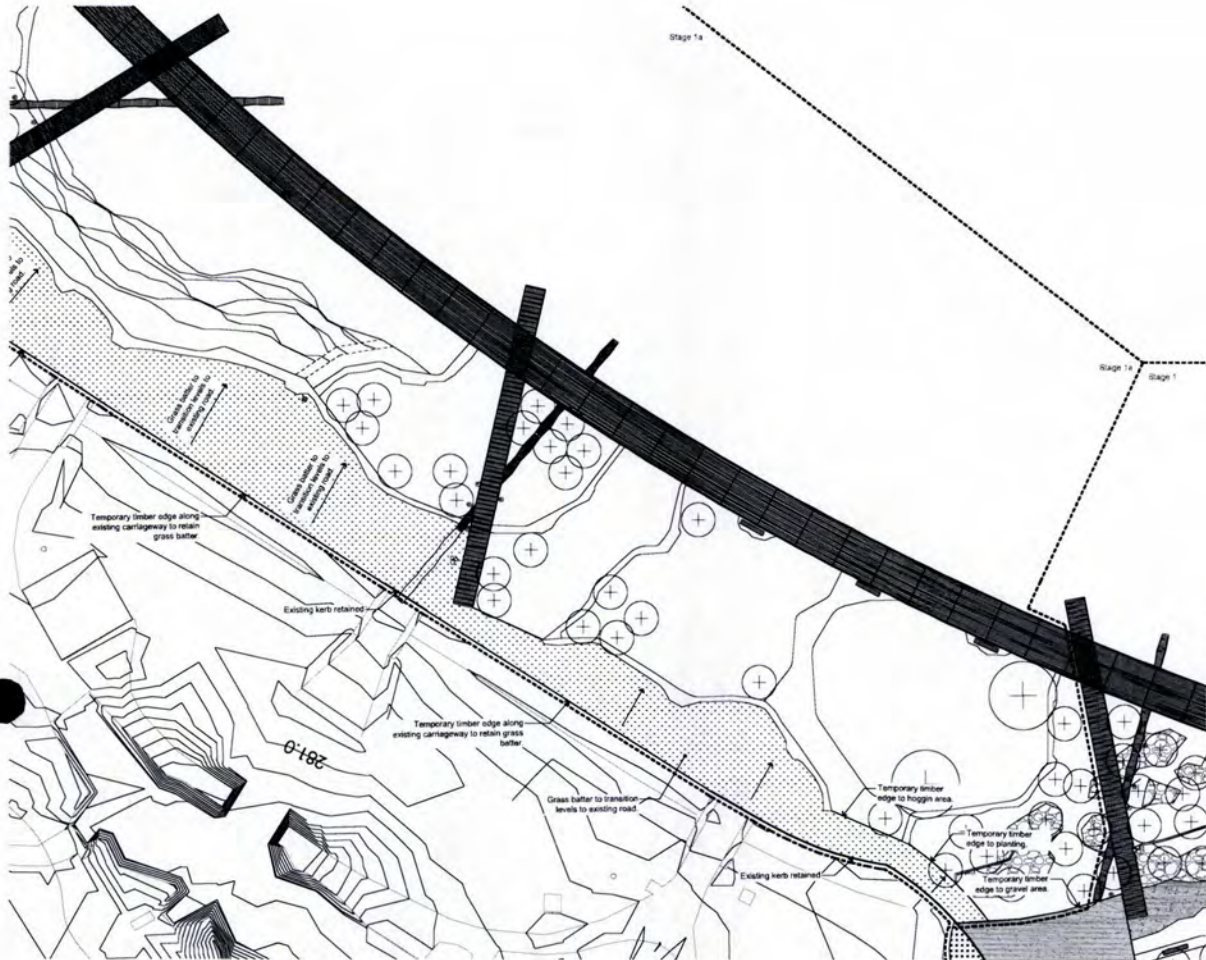
Drawing Number
1a_1.001

Revision
C

North
A

Issued For
Tender

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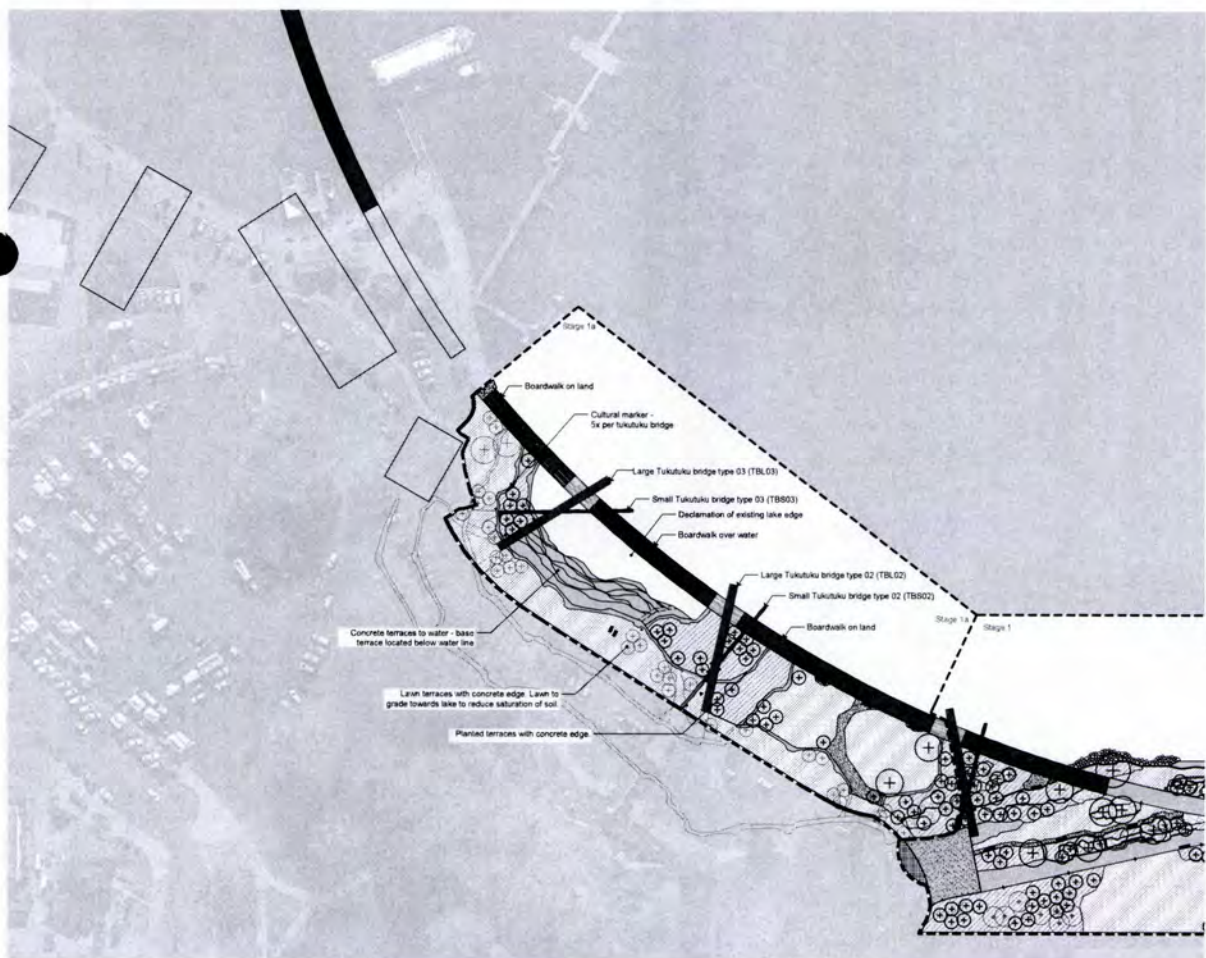
Stage Boundary
 Asphalt
 Gravel
 Lawn Better
 Existing Kerb retained
 New Kerb
 Temporary Timber Edge

C	Tender	TM	18.02.18
B	100% Detailed Design	TM	14.12.18
A	Draft Detailed Design	TM	30.11.18

No. Revision By Chk Date

Isthmus.
 Client
Rotorua Lakes Council
 Job Name
Rotorua Lakefront Development
 Drawing Title
Stage 1a Temporary Works Plan - Sheet 2
 Scale
 1:100
 Job No
 4010
 Drawing Number
 1a_1.002
 Revision
 C
 Issued For
 Tender

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Stage Boundary
 Existing Tree retained
 Proposed Tree
 Concrete
 Hoggin (P04)
 Aggregate Path (P05) - to match existing
 Rock Garden (R0) - 50% rock, 50% planting
 Planting (PL1) - refer to planting plans
 Lawn (LA1)
 Irrigated Lawn (LA2)

TBLG1 - 03 Tukutuku Bridge Type - refer to details 1_3.607
 TBS01 - 03 Tukutuku Bridge Type - refer to details 1_3.607

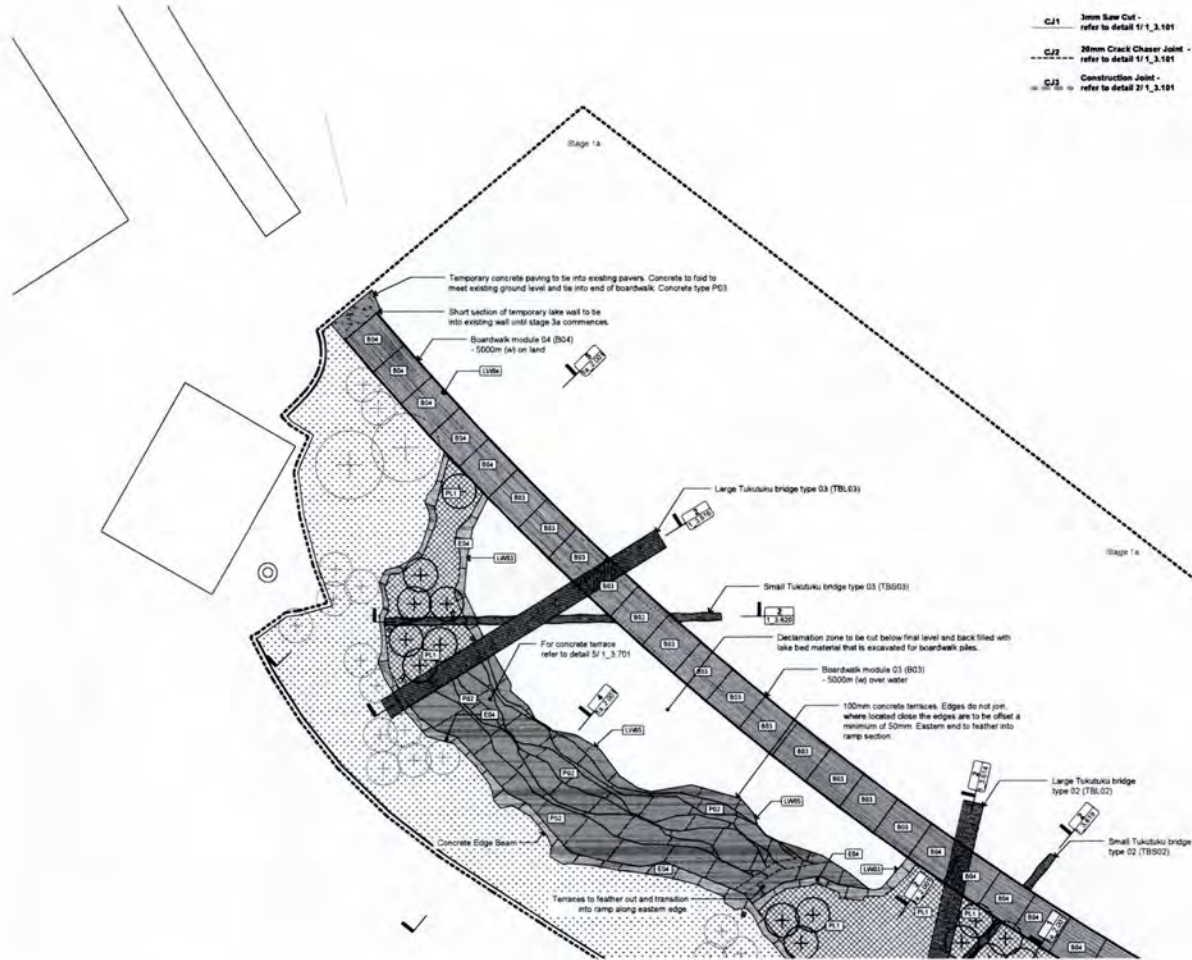
Cultural Marker (placeholder only)
 Bench Seat
 Sun Lounger - Provisional Only
 Picnic Table
 Rubbish Bin
 Pedestrian Light
 Bollard

F	Tender	MC	18.02.19
D	100% Detailed Design	MC	14.12.18
C	Draft Detailed Design	MC	15.11.18
B	Draft Detailed Design	MC	19.05.18
A	Draft Detailed Design	MC	25.09.18

No. Revision By Chk Date

Isthmus.
 Client
Rotorua Lakes Council
 Job Name
Rotorua Lakefront Development
 Drawing Title
Stage 1a General Arrangement
 Scale
 1:100
 Job No
 4010
 Drawing Number
 1a_1.100
 Revision
 F
 Issued For
 Tender

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- CJ1 3mm Saw Cut - refer to detail 1/1_3.101
- CJ2 20mm Crack Chaser Joint - refer to detail 1/1_3.101
- CJ3 Construction Joint - refer to detail 2/1_3.101

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete Type 1 (P01) - refer to detail 1/1_3.101
- Concrete Type 2 (P02) - refer to detail 1/1_3.101
- Concrete Type 3 (P03) - refer to detail 1/1_3.101
- Hoggin (P04) - refer to details 1/1_3.101
- Aggregate Path (P05) - refer to details 1/1_3.101
- Rock Garden (RG) - 80% rock, 20% planting refer to detail 1/1_3.101
- Planting (PL1) - refer to planting plans & detail 2/1_3.101
- Lawn (LA1) - refer to detail 1/1_3.101
- Irrigated Lawn (LA2)
- E02 - E05 Concrete Edge Type - Refer to Details 1_3.101 - 1_3.102
- LW01 - Lake Wall Type - refer to details 1_3.101
- TBL01 - 03 Tukutuku Bridge Type - refer to details 1_3.107
- Boardwalk Modules - 3000mm boardwalk refer to details 1_3.508 - 1_3.515
- Boardwalk Modules - 5000mm boardwalk refer to details 1_3.508 - 1_3.515
- WS01 Concrete Wall Seat - refer to details 1_3.702

F Tender MC TM 18.02.19
 E 100% Detailed Design MC TM 14.12.18
 D Draft Detailed Design MC TM 30.11.18
 C Draft Detailed Design MC TM 15.11.18
 B Draft Detailed Design MC TM 19.10.18
 A Draft Detailed Design MC TM 28.09.18
 No. Revision By Chk Date

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 Rotoua Lakes Council

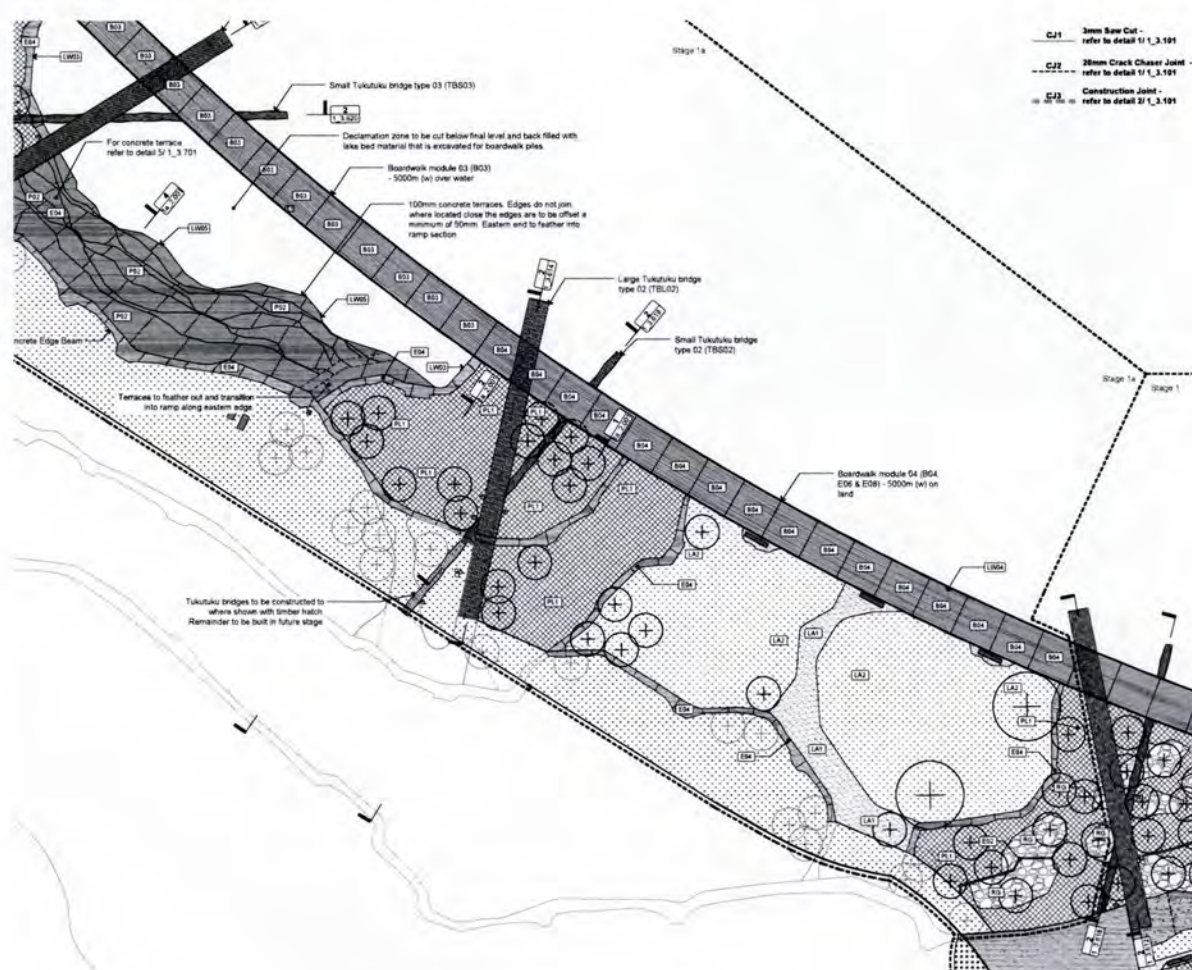
Job Name
Rotoua Lakefront Development

Scale Drawing Title
1:200 Stage 1a
Surface Finishes - Sheet 1

Job No Drawing Number Revision
4010 1a_1.101 F

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- CJ1 3mm Saw Cut - refer to detail 1/1_3.101
- CJ2 20mm Crack Chaser Joint - refer to detail 1/1_3.101
- CJ3 Construction Joint - refer to detail 2/1_3.101

- Stage Boundary
- Existing Tree retained
- Proposed Tree
- Concrete Type 1 (P01) - refer to detail 1/1_3.101
- Concrete Type 2 (P02) - refer to detail 1/1_3.101
- Concrete Type 3 (P03) - refer to detail 1/1_3.101
- Hoggin (P04) - refer to details 1/1_3.101
- Aggregate Path (P05) - refer to details 1/1_3.101
- Rock Garden (RG) - 80% rock, 20% planting refer to detail 1/1_3.101
- Planting (PL1) - refer to planting plans & detail 2/1_3.101
- Lawn (LA1) - refer to detail 1/1_3.101
- Irrigated Lawn (LA2)
- E02 - E05 Concrete Edge Type - Refer to Details 1_3.101 - 1_3.102
- LW01 - Lake Wall Type - refer to details 1_3.101
- TBL01 - 03 Tukutuku Bridge Type - refer to details 1_3.107
- Boardwalk Modules - 3000mm boardwalk refer to details 1_3.508 - 1_3.515
- Boardwalk Modules - 5000mm boardwalk refer to details 1_3.508 - 1_3.515
- WS01 Concrete Wall Seat - refer to details 1_3.702

F Tender MC TM 18.02.19
 E 100% Detailed Design MC TM 14.12.18
 D Draft Detailed Design MC TM 30.11.18
 C Draft Detailed Design MC TM 15.11.18
 B Draft Detailed Design MC TM 19.10.18
 A Draft Detailed Design MC TM 28.09.18
 No. Revision By Chk Date

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 Rotoua Lakes Council

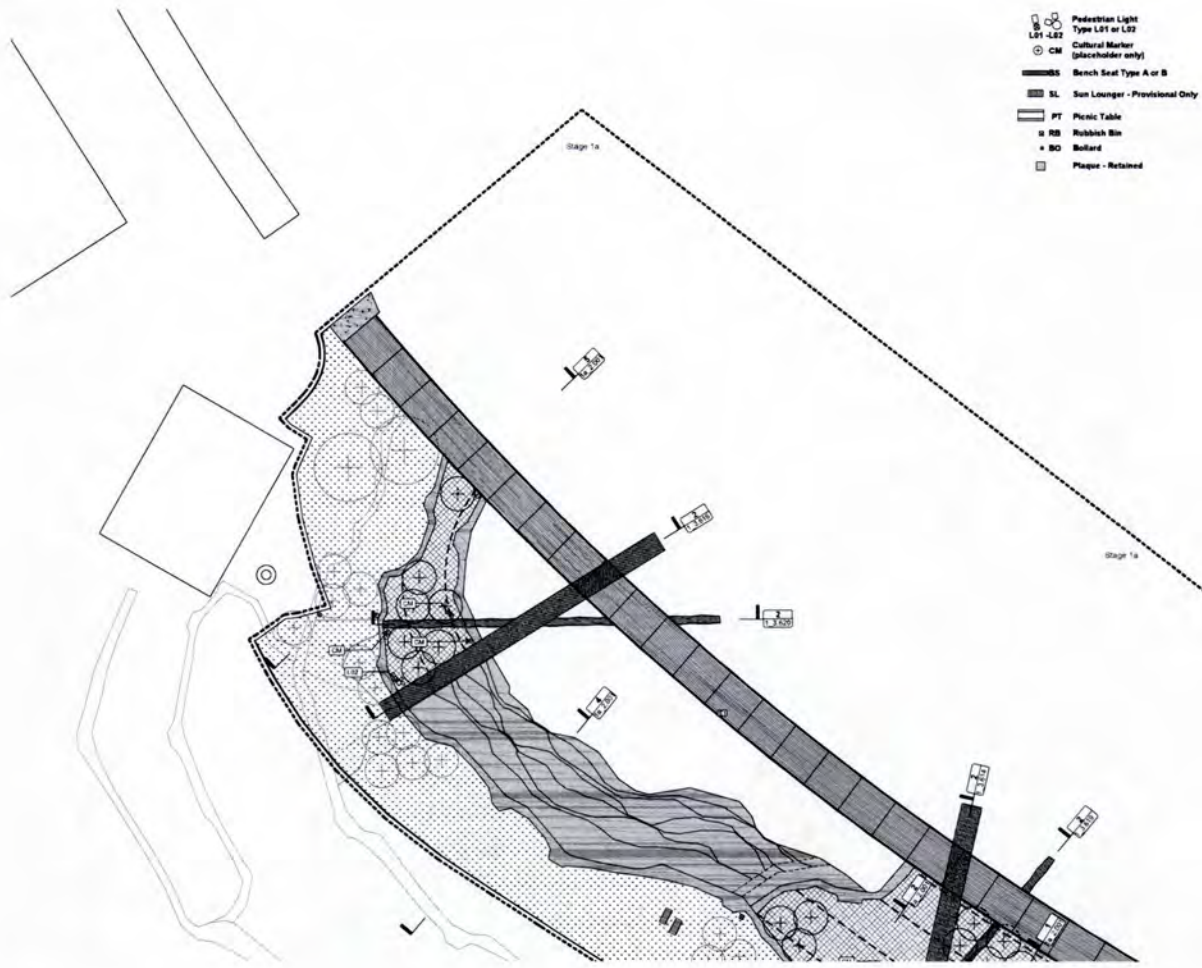
Job Name
Rotoua Lakefront Development

Scale Drawing Title
1:200 Stage 1a
Surface Finishes - Sheet 2

Job No Drawing Number Revision
4010 1a_1.102 F

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- Pedestrian Light
Type L01 or L02
 - Cultural Marker
(placeholder only)
 - Bench Seat Type A or B
 - SL Sun Lounger - Provisional Only
 - PT Picnic Table
 - RB Rubbish Bin
 - BO Bollard
 - Plaque - Retained
- Stage Boundary
 - Existing Tree retained
 - Proposed Tree
 - Concrete
 - Hoggins (P04)
 - Aggregate Path (P05) -
to match existing
 - Rock Garden (RG) -
50% rock, 50% planting
 - Planting (PL1) -
refer to planting plans
 - Lawn (LA1)
 - Irrigated Lawn (LA2)
- Water Trough (WTB)
 - Electrical Connection Type 1
(EC01) - below boardwalk decking
 - Electrical Connection Type 2
(EC02) - in face of terrace wall
 - 1100 Subsoil Line (SL) -
refer to details 1_3_104
 - Silt Drain (SD) -
refer to details 1_3_104
 - Timber Edge (ET1) -
refer to details
 - Timber Edge (ET2) -
refer to detail 1_3_101
 - 3m Boardwalk Module
- refer to surface finishes plans
 - 3m Boardwalk Module
- refer to surface finishes plans

F	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18

By Chk Date

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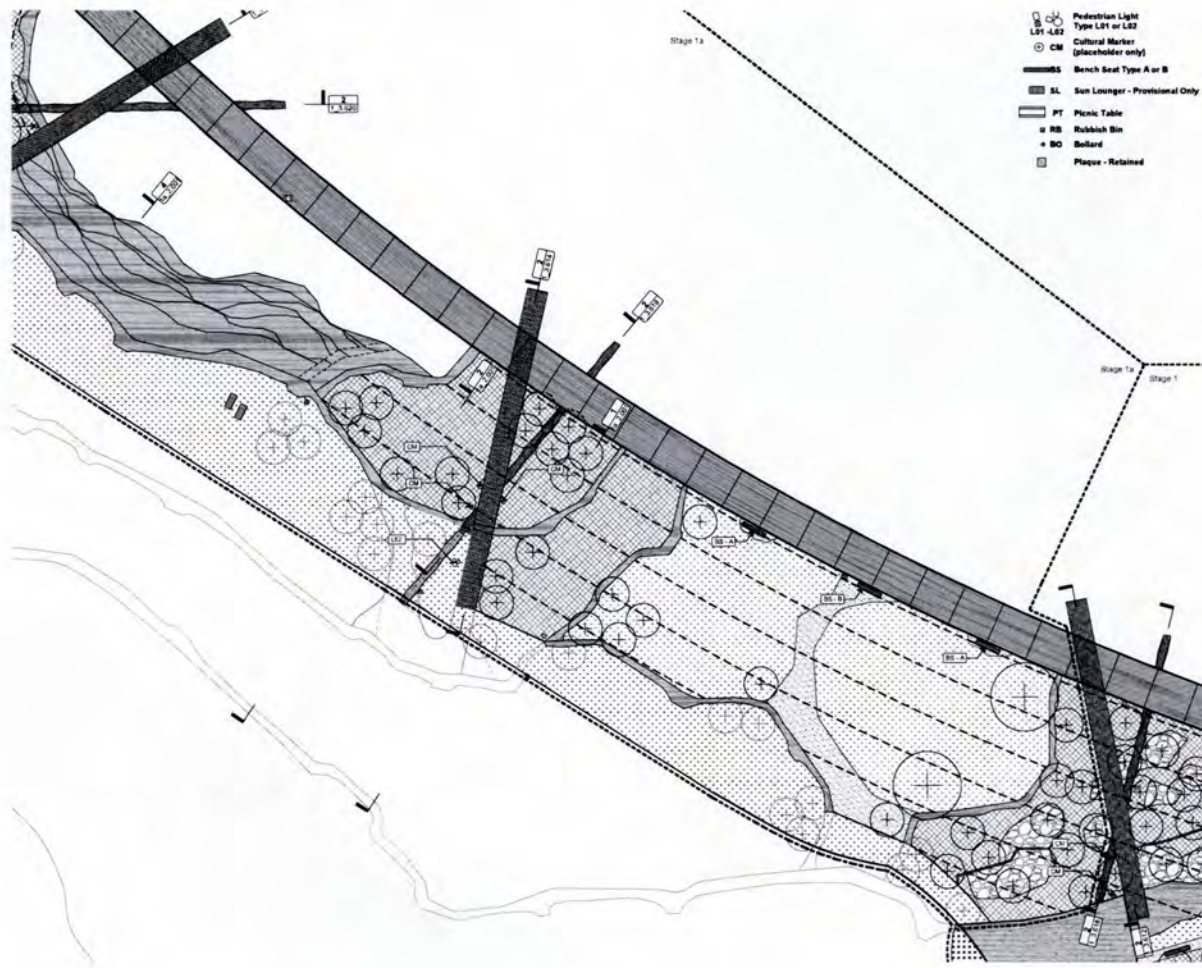
Job Name
Rotorua Lakefront Development

Scale Drawing Title
Stage 1a
FF&E - Sheet 1

Job No Drawing Number Revision
4010 1a_1.301 F

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- Pedestrian Light
Type L01 or L02
 - Cultural Marker
(placeholder only)
 - Bench Seat Type A or B
 - SL Sun Lounger - Provisional Only
 - PT Picnic Table
 - RB Rubbish Bin
 - BO Bollard
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to match existing
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(EC01) - below boardwalk decking
 - Electrical Connection Type 2
(EC02) - in face of terrace wall
 - 1100 Subsoil Line (SL) -
refer to details 1_3_104
 - Silt Drain (SD) -
refer to details 1_3_104
 - Timber Edge (ET1) -
refer to details
 - Timber Edge (ET2) -
refer to detail 1_3_101
 - 3m Boardwalk Module
- refer to surface finishes plans
 - 3m Boardwalk Module
- refer to surface finishes plans

F	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18

By Chk Date

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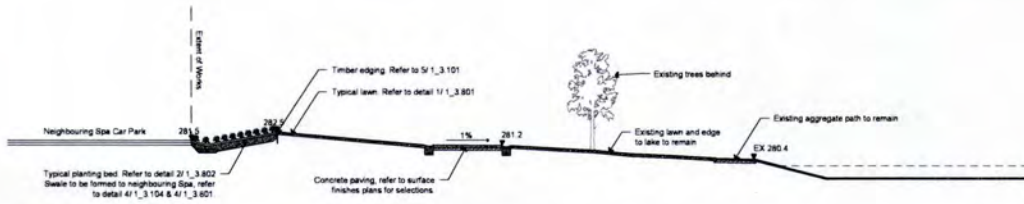
Job Name
Rotorua Lakefront Development

Scale Drawing Title
Stage 1a
FF&E - Sheet 2

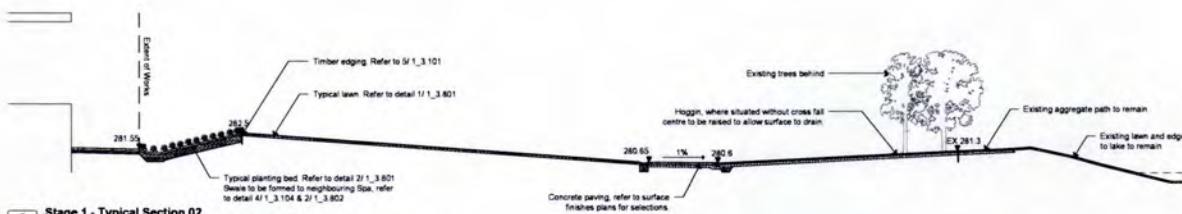
Job No Drawing Number Revision
4010 1a_1.302 F

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1 Stage 1 - Typical Section 01
Scale: 1:100 A1 | 1:200 A3



2 Stage 1 - Typical Section 02
Scale: 1:100 A1 | 1:200 A3



3 Stage 1 - Typical Section 03
Scale: 1:50 A1 | 1:100 A3

No.	Revision	By	Chk	Date
F	Tender			MC TM 18.02.19
E	100% Detailed Design			MC TM 14.12.18
D	Draft Detailed Design			MC TM 30.11.18
C	Draft Detailed Design			MC TM 15.11.18
B	Draft Detailed Design			MC TM 19.10.18
A	Draft Detailed Design			TM TM 28.09.18

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale
 AS 8:50000
 AS 8:50000

Drawing Title
Stage 1 Typical Sections - Sheet 1

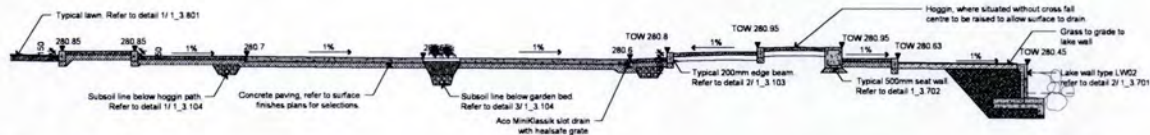
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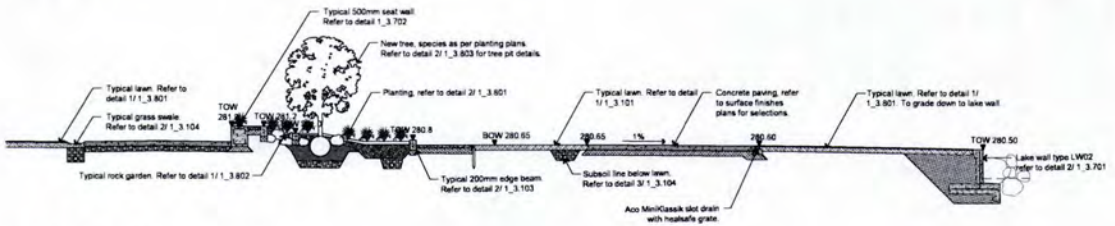
Revision
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Tender

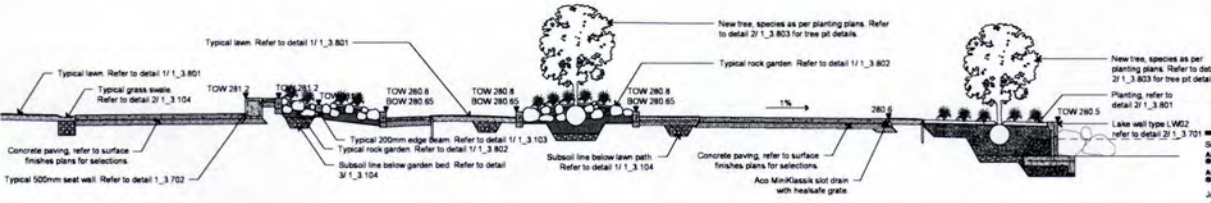
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1 Stage 1 - Typical Section 04
Scale: 1:50 A1 | 1:100 A3



2 Stage 1 - Typical Section 05
Scale: 1:50 A1 | 1:100 A3



3 Stage 1 - Typical Section 06
Scale: 1:50 A1 | 1:100 A3

No.	Revision	By	Chk	Date
F	Tender			MC TM 18.02.19
E	100% Detailed Design			MC TM 14.12.18
D	Draft Detailed Design			MC TM 30.11.18
C	Draft Detailed Design			MC TM 15.11.18
B	Draft Detailed Design			MC TM 19.10.18
A	Draft Detailed Design			TM TM 28.09.18

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale
 AS 8:50000
 AS 8:50000

Drawing Title
Stage 1 Typical Sections - Sheet 2

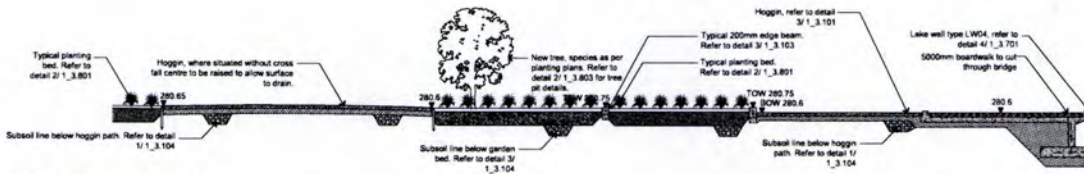
Job No
 4010

Drawing Number
 1_2.002

Revision
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Issued For
Tender

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1 Stage 1 - Typical Section 07
Scale: 1:500 @ A1 | 1:100 @ A3

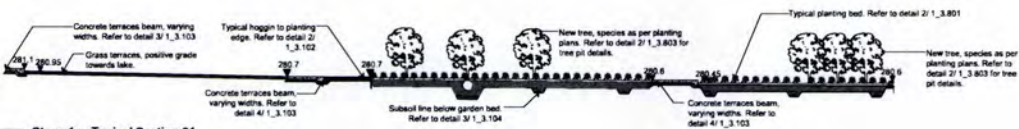
F	Tender	MC TM 18 02 19
E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 18 10 18
A	Draft Detailed Design	TM TM 28 08 18
No.	Revision	By Chk Date

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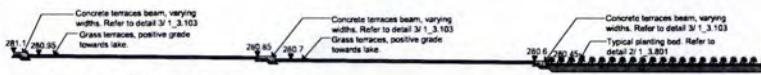
Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	Stage 1 Typical Sections - Sheet 3
Job No	Drawing Number
4010	1_2_003
	Revision
	F
	Issued For
	Tender
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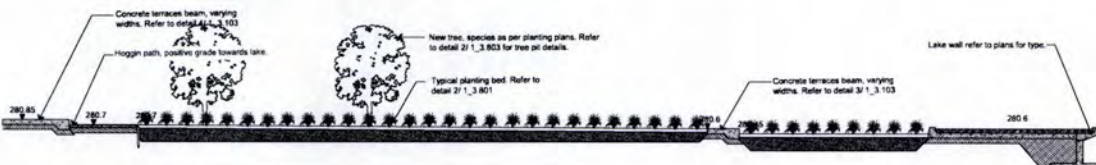
1 Stage 1a - Typical Section 01
Scale: 1:100 @ A1 | 1:200 @ A3



2 Stage 1a - Typical Section 02
Scale: 1:100 @ A1 | 1:200 @ A3



3 Stage 1a - Typical Section 04
Scale: 1:500 @ A1 | 1:100 @ A3



4 Stage 1a - Typical Section 05
Scale: 1:500 @ A1 | 1:100 @ A3

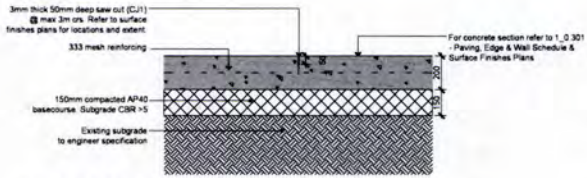
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E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 18 10 18
A	Draft Detailed Design	TM TM 28 08 18
No.	Revision	By Chk Date

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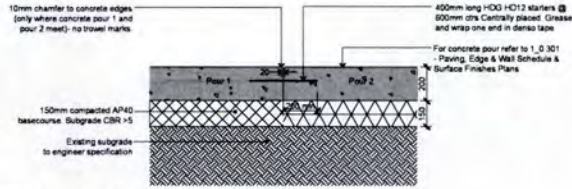
Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

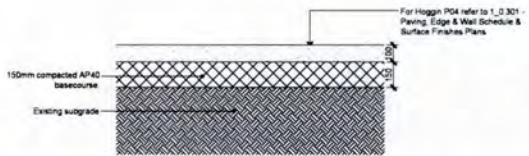
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AS SHOWN	Stage 1a Typical Sections - Sheet 1
Job No	Drawing Number
4010	1a_2_001
	Revision
	F
	Issued For
	Tender
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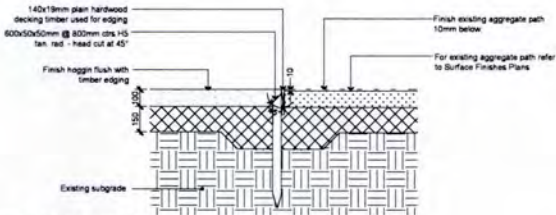
1 Typical In-situ Concrete Paving Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



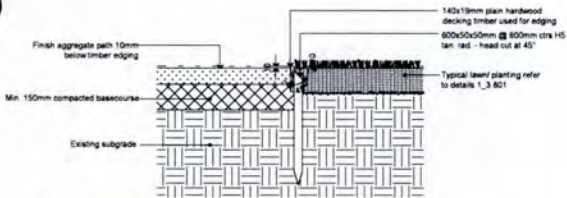
2 Construction Joint (CJ3) - Concrete Pour 1/ Concrete Pour 2 Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



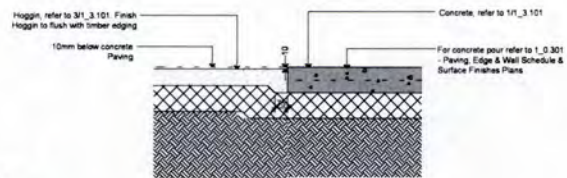
3 Typical Hoggin (PO4) Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



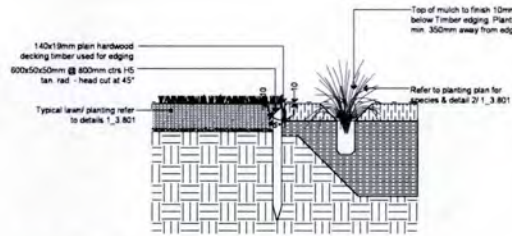
4 Typical Hoggin Timber Edging (E01) Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



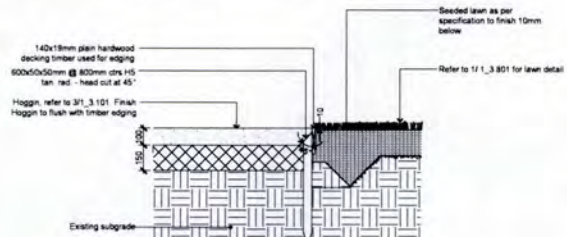
5 Typical Aggregate Path Timber Edging (E05) Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



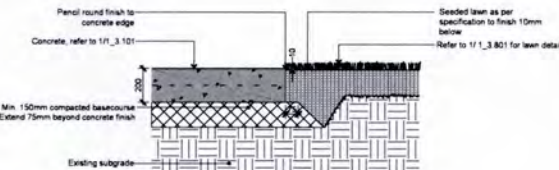
1 Typical Hoggin / Concrete Paving Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



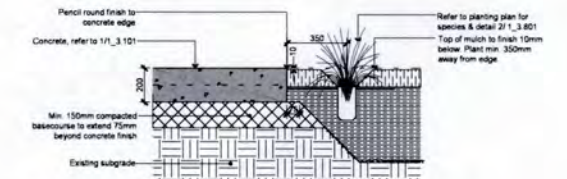
2 Typical Lawn / Garden Timber Edging (E05) Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



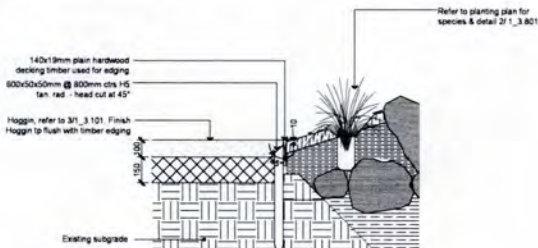
3 Typical Hoggin / Lawn Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



4 Typical Concrete / Lawn Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



5 Typical Concrete / Garden Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3



6 Typical Hoggin / Rock Garden Interface Detail
 Scale: 1:10 @ A1 | 1:20 @ A3

Notes

Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.

All structural elements and footings are to be reviewed and approved by the engineer prior to construction.

Steel
 All steel to be stainless steel unless otherwise noted on drawings.

Welding
 All weld fittings to be full beam welds.

Finings
 All finings to be stainless steel.

Finishing
 All softworks to finish min 10mm below paving surfaces.

Timber
 All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

F	Tender	MC TM 18.02.18
E	100% Detailed Design	MC TM 14.12.18
D	Draft Detailed Design	MC TM 30.11.18
C	Draft Detailed Design	MC TM 15.11.18
B	Draft Detailed Design	MC TM 19.10.18
A	Draft Detailed Design	MC TM 28.08.18
No.	Revision	By Ckx Date

Isthmus.

Client

Rotorua Lakes Council

Job Name

Rotorua Lakefront Development

Scale AS SHOWN AS SHOWN @ A1

Drawing Title
Typical Paving Details

Job No 4010 Drawing Number 1_3_101 Revision F

Issued For
Tender

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Notes

Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.

All structural elements and footings are to be reviewed and approved by the engineer prior to construction.

Steel
 All steel to be stainless steel unless otherwise noted on drawings.

Welding
 All weld fittings to be full beam welds.

Finings
 All finings to be stainless steel.

Finishing
 All softworks to finish min 10mm below paving surfaces.

Timber
 All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

F	Tender	MC TM 18.02.18
E	100% Detailed Design	MC TM 14.12.18
D	Draft Detailed Design	MC TM 30.11.18
C	Draft Detailed Design	MC TM 15.11.18
B	Draft Detailed Design	MC TM 19.10.18
A	Draft Detailed Design	MC TM 28.08.18
No.	Revision	By Ckx Date

Isthmus.

Client

Rotorua Lakes Council

Job Name

Rotorua Lakefront Development

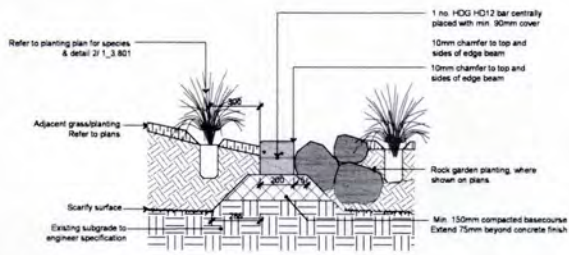
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Drawing Title
Typical Interface Details

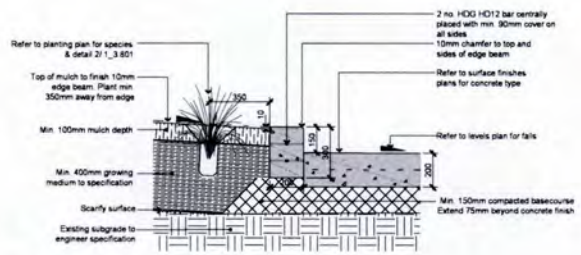
Job No 4010 Drawing Number 1_3_102 Revision F

Issued For
Tender

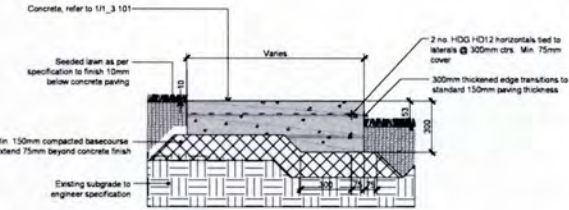
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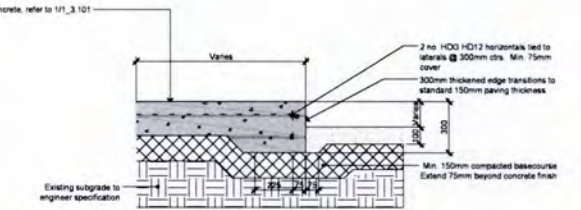
1 Typical 200 x 200mm Concrete Edge Beam (E02) Detail
Scale: 1:5 @ A1 | 1:10 @ A3



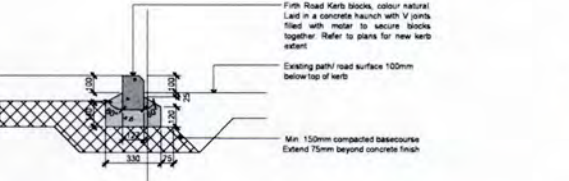
2 Typical 200 x 300mm Concrete Edge Beam (E03) Detail
Scale: 1:5 @ A1 | 1:10 @ A3



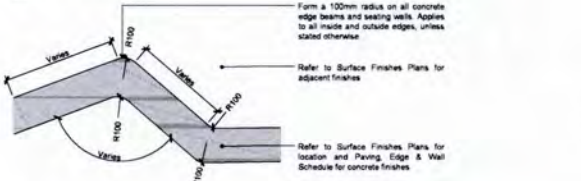
3 Typical Concrete Terrace Edge Beam (E04) To Lawn Detail
Scale: 1:5 @ A1 | 1:10 @ A3



4 Typical Concrete Terrace Edge Beam (E04) To Hoggin Detail
Scale: 1:5 @ A1 | 1:10 @ A3



5 Typical Road Kerb Detail
Scale: 1:10 @ A1 | 1:20 @ A3

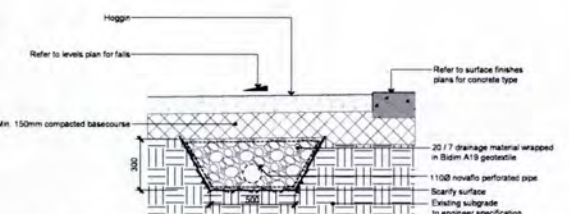


6 Typical Concrete Edge Beam - Radius Detail
Scale: 1:10 @ A1 | 1:20 @ A3

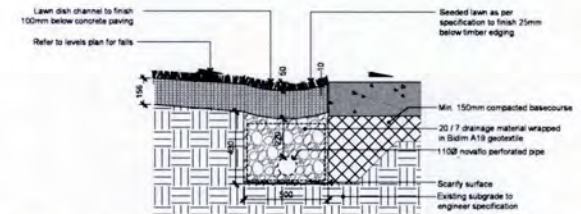
Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction.
Steel:
All steel to be stainless steel unless otherwise noted on drawings.
Welding:
All weld fittings to be full seam welds.
Fixings:
All fixings to be stainless steel.
Finishing:
All surfaces to finish min. 10mm below paving surfaces.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Saw Cuts:
Concrete edge beam saw cuts are to be calculated a 3m centres for pricing. All edge beam saw cuts are to be set out on site by landscape architect prior to being cut.

F	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 19 10 18
Na	Revision	MC TM 28 09 18
	By	Chk
	Date	

Isthmus
Rotoqua Lakes Council
Client
Rotoqua Lakefront Development
Job Name
Scale
Drawing Title
Typical Concrete Edge Details
Scale: 1:5 @ A1 | 1:10 @ A3
Job No. 4010
Drawing Number 1_3_103
Revision F
Issued For
Tender
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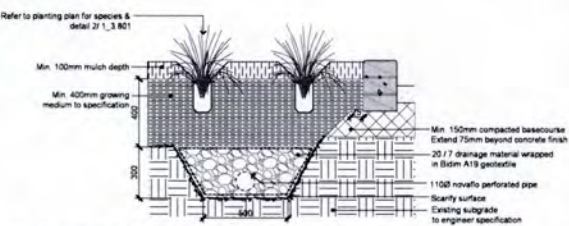
1 Typical Hoggin / Concrete to Subsoil Drain Interface Detail
Scale: 1:10 @ A1 | 1:20 @ A3



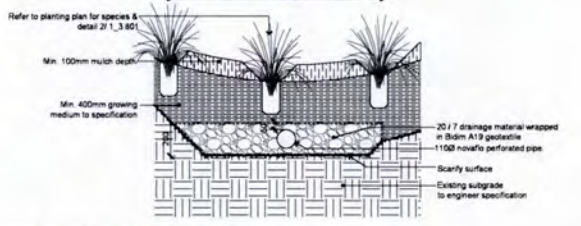
2 Typical Lawn / Concrete to Subsoil Drain Interface Detail
Scale: 1:10 @ A1 | 1:20 @ A3

Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction.
Steel:
All steel to be stainless steel unless otherwise noted on drawings.
Welding:
All weld fittings to be full seam welds.
Fixings:
All fixings to be stainless steel.
Finishing:
All surfaces to finish min. 10mm below paving surfaces.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Drainage:
Slot drain to have positive internal fall. Refer to civil engineers drawings for drainage connections.

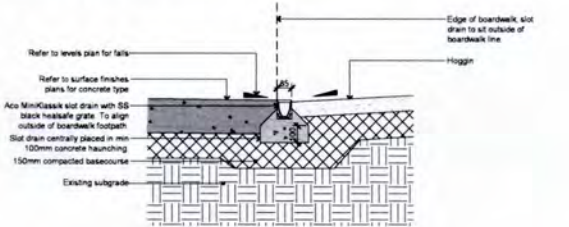
F	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 19 10 18
Na	Revision	MC TM 28 09 18
	By	Chk
	Date	



3 Typical Planting Subsoil Drain Detail
Scale: 1:10 @ A1 | 1:20 @ A3

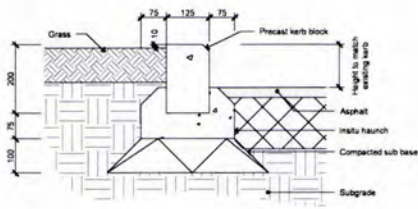


4 Typical Garden Swale Drainage Detail
Scale: 1:10 @ A1 | 1:20 @ A3

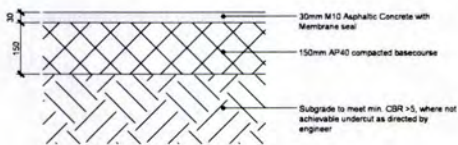


5 Typical Slot Drain to Hoggin Detail
Scale: 1:10 @ A1 | 1:20 @ A3

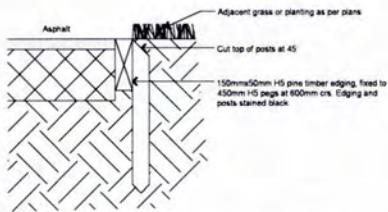
Isthmus
Rotoqua Lakes Council
Client
Rotoqua Lakefront Development
Job Name
Scale
Drawing Title
Typical Drainage Details
Scale: 1:10 @ A1 | 1:20 @ A3
Job No. 4010
Drawing Number 1_3_104
Revision F
Issued For
Tender
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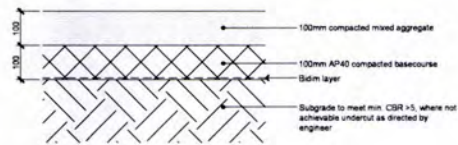
1 Temporary Kerb Detail
Scale: 1:10 @ A1 | 1:20 @ A3



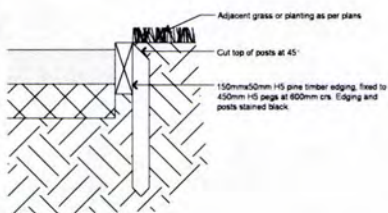
2 Temporary Asphalt Detail
Scale: 1:10 @ A1 | 1:20 @ A3



3 Temporary Timber Edge - From Asphalt to Grass/Planting
Scale: 1:10 @ A1 | 1:20 @ A3



4 Temporary Gravel Detail
Scale: 1:10 @ A1 | 1:20 @ A3



5 Temporary Timber Edge - From Gravel to Grass/Planting
Scale: 1:10 @ A1 | 1:20 @ A3

Notes
Refer to drawing 1.0.100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction.
Flings: All flings to be stainless steel.
Finishing: All surfaces to finish min. 10mm below paving surfaces.
Timber: All treated timber to be stained black prior being installed. Stain to penetrate 150mm below ground surface level.
Precast Kerbs: All precast kerbs to be Firth Road Kerb or approved equivalent.

C Tender MC TM 18.02.19
S 100% Detailed Design MC TM 14.12.18
A Draft Detailed Design TM TM 30.11.18
No. Revision By Ckx Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
Typical Temporary Works Details
Job No. Drawing Number Revision
4010 1_3.105 C

Issued For
Tender

For the full suite of drawings on this project please refer to drawing 1.0.100
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Notes
Refer to drawing 1.0.100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PS1 by others prior to fabrication.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction.
Steel: All Steel to be stainless steel unless otherwise noted on drawings.
Welding: All weld flings to be full seam welds.
Flings: All flings to be stainless steel unless otherwise noted. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.
Timber: All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Finishing: Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

B Tender ZB GB 18.02.19
A 100% Detailed Design ZB GB 14.12.18
No. Revision By Ckx Date

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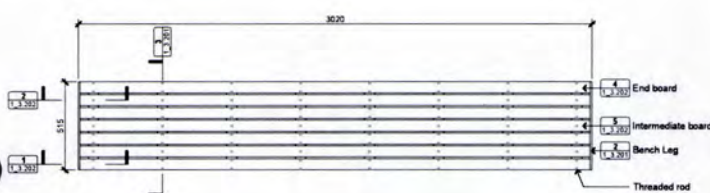
Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

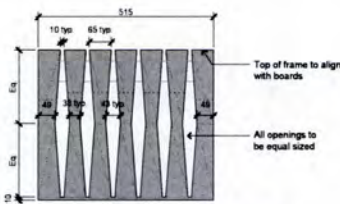
Scale Drawing Title
Typical Bench, Type A
Job No. Drawing Number Revision
4010 1_3.201 B

Issued For
Tender

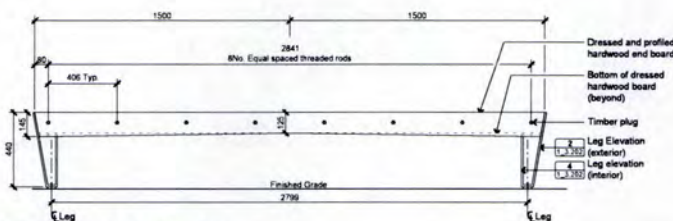
For the full suite of drawings on this project please refer to drawing 1.0.100
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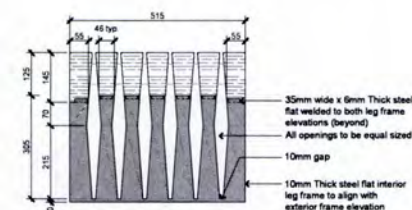
1 Typical Bench, Type A - Plan
Scale: 1:10 @ A1 | 1:20 @ A3



2 Typical Bench, Type A - Leg Elevation (Exterior)
Scale: 1:5 @ A1 | 1:10 @ A3



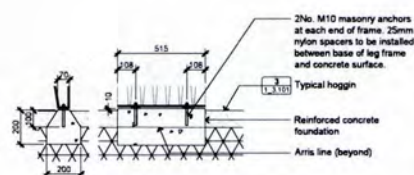
3 Typical Bench, Type A - Front Elevation
Scale: 1:10 @ A1 | 1:20 @ A3



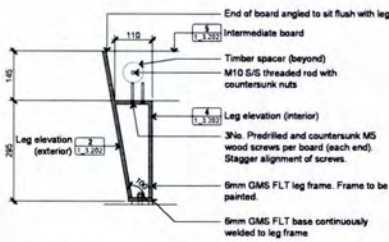
4 Typical Bench, Type A - Leg Elevation (Interior)
Scale: 1:5 @ A1 | 1:10 @ A3



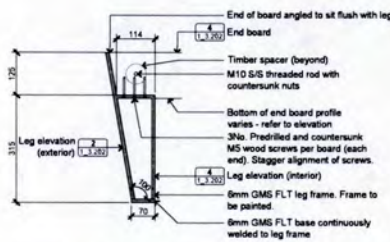
5 Typical Bench, Type A - Perspective
Scale: NTS



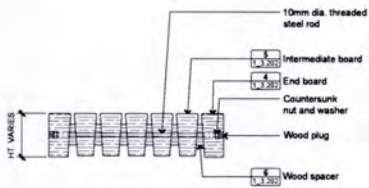
6 Typical Bench - Recessed Foundation at Hoggin
Scale: 1:10 @ A1 | 1:20 @ A3



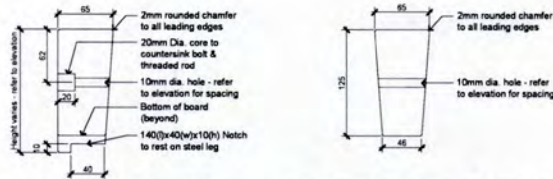
1 Typical Bench, Type A - Section Through End Board at Leg
Scale: 1:5 @ A1 | 1:10 @ A3



2 Typical Bench, Type A - Section Through Intermediate Board at Leg
Scale: 1:5 @ A1 | 1:10 @ A3

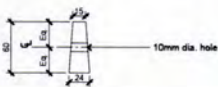


3 Typical Bench, Type A - Section at Intermediate Threaded Rods
Scale: 1:5 @ A1 | 1:10 @ A3



4 Typical Bench - End Board Profile
Scale: 1:3 @ A1 | 1:4 @ A3

5 Typical Bench - Intermediate Board Profile
Scale: 1:2 @ A1 | 1:4 @ A3



6 Typical Bench - Timber Spacer Profile
Scale: 1:3 @ A1 | 1:4 @ A3

Notes:
Refer to drawing 1_G 100 for all general paving, furniture, timber and painting notes.
All structural elements and fixings are to be reviewed and approved by the engineer prior to construction. Light pole design and fixings require a PSI by others prior to fabrication.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction.
Steel
All Steel to be stainless steel unless otherwise noted on drawings.
Welding
All weld fixings to be full seam welds.
Fixings
All fixings to be stainless steel unless noted otherwise. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Finishing
Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

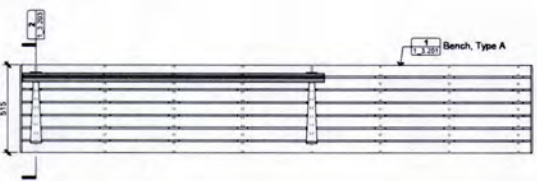
B Tender	29 GB 18.02.19
A 100%Detailed Design	29 GB 14.12.18
No. Revision	By Chk Date

Isthmus
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Drawing Title
Typical Bench Type A
Scale
AS SHOWN
AS SHOWN
Job No.
4010
Drawing Number
1_3_203
Revision
B
Issued For
Tender
As per table, verify dimensions on site before construction. THE COPYRIGHT © ISTHMUS GROUP LIMITED

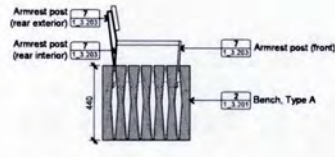
Notes:
Refer to drawing 1_G 100 for all general paving, furniture, timber and painting notes.
All structural elements and fixings are to be reviewed and approved by the engineer prior to construction. Light pole design and fixings require a PSI by others prior to fabrication.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction.
Steel
All Steel to be stainless steel unless otherwise noted on drawings.
Welding
All weld fixings to be full seam welds.
Fixings
All fixings to be stainless steel unless noted otherwise. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Finishing
Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

B Tender	29 GB 18.02.19
A 100%Detailed Design	29 GB 14.12.18
No. Revision	By Chk Date

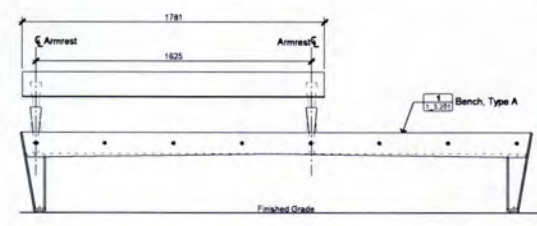
Isthmus
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Drawing Title
Typical Bench Type B
Scale
AS SHOWN
AS SHOWN
Job No.
4010
Drawing Number
1_3_203
Revision
B
Issued For
Tender
As per table, verify dimensions on site before construction. THE COPYRIGHT © ISTHMUS GROUP LIMITED



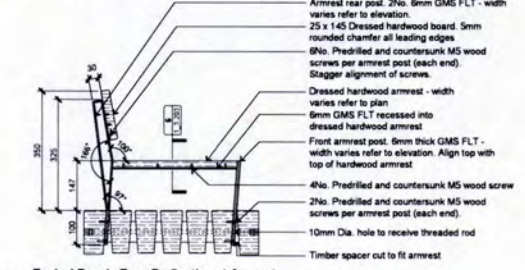
1 Typical Bench, Type B - Plan
Scale: 1:10 @ A1 | 1:20 @ A3



2 Typical Bench, Type B - Elevation
Scale: 1:10 @ A1 | 1:20 @ A3



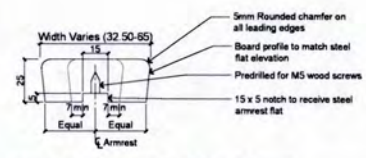
3 Typical Bench, Type B - Front Elevation
Scale: 1:10 @ A1 | 1:20 @ A3



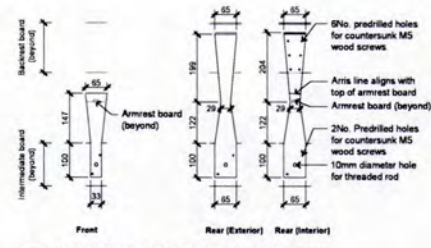
4 Typical Bench, Type B - Section at Armrest
Scale: 1:5 @ A1 | 1:10 @ A3



5 Typical Bench, Type B - Perspective
Scale: NTS



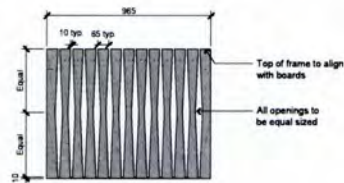
6 Typical Bench, Type B - Section at Armrest
Scale: 1:1 @ A1 | 1:2 @ A3



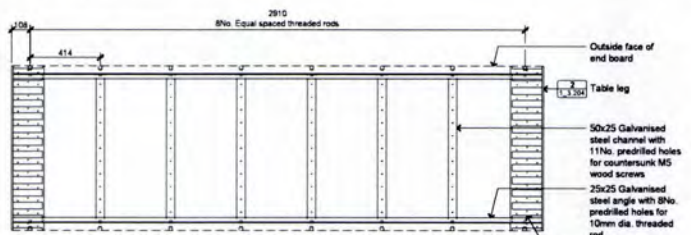
7 Typical Bench, Type B - Armrest Post Elevations
Scale: 1:5 @ A1 | 1:10 @ A3



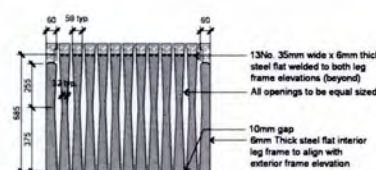
1 Typical Table - Plan
Scale: 1:10 @ A1 | 1:20 @ A3



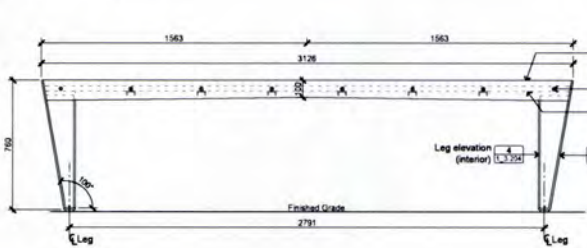
2 Typical Table - Leg Elevation (Exterior)
Scale: 1:10 @ A1 | 1:20 @ A3



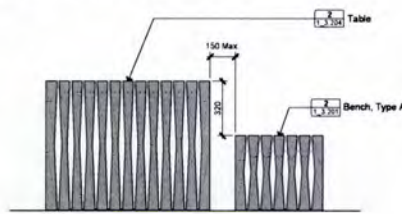
3 Typical Table - Framing Plan
Scale: 1:10 @ A1 | 1:20 @ A3



4 Typical Table - Leg Elevation (Interior)
Scale: 1:10 @ A1 | 1:20 @ A3



5 Typical Table - Front Elevation
Scale: 1:10 @ A1 | 1:20 @ A3



6 Typical Table and Bench Spacing
Scale: 1:10 @ A1 | 1:20 @ A3

Notes

Refer to drawing 1_0100 for all general paving, furniture, timber and planting notes.

All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PSI by others prior to fabrication.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction.

Steel

All Steel to be stainless steel unless otherwise noted on drawings.

Welding

All weld fittings to be full seam welds.

Finings

All fittings to be stainless steel unless noted otherwise. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.

Timber

All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Finishing

Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

B Tender 29 GS 18.02.19
A 100% Detailed Design 29 GS 14.12.18
No. Revision By CAK Date

Isthmus.
Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

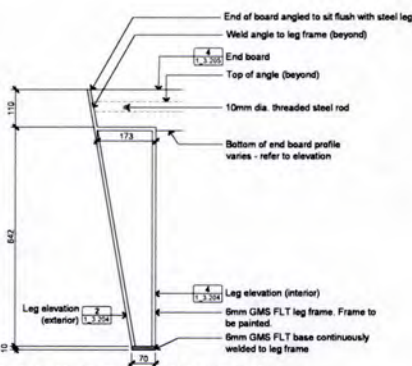
Drawing Title
Typical Table

Scale
A3 shown

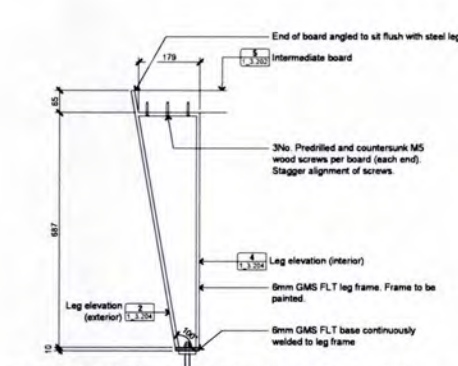
Job No. Drawing Number Revision
4010 1_3.204 B

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7 Typical Table - Section Through End Board at Leg
Scale: 1:5 @ A1 | 1:10 @ A3



8 Typical Bench, Type A - Section Through Intermediate Board at Leg
Scale: 1:5 @ A1 | 1:10 @ A3

Notes

Refer to drawing 1_0100 for all general paving, furniture, timber and planting notes.

All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PSI by others prior to fabrication.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction.

Steel

All Steel to be stainless steel unless otherwise noted on drawings.

Welding

All weld fittings to be full seam welds.

Finings

All fittings to be stainless steel unless noted otherwise. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.

Timber

All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Finishing

Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

B Tender 29 GS 18.02.19
A 100% Detailed Design 29 GS 14.12.18
No. Revision By CAK Date

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

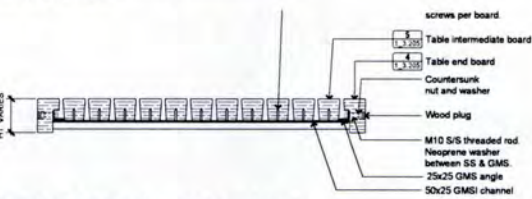
Drawing Title
Typical Table

Scale
A3 shown

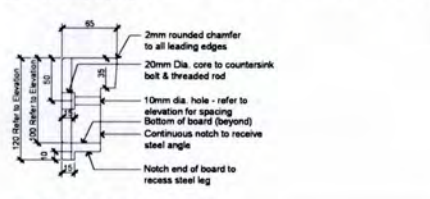
Job No. Drawing Number Revision
4010 1_3.204 B

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Tender

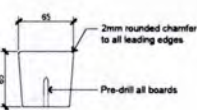
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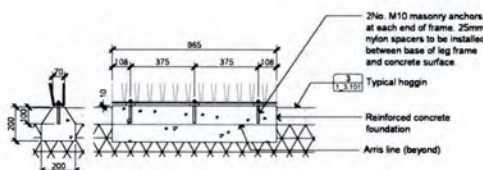
9 Typical Table - Section at Intermediate Threaded Rods
Scale: 1:5 @ A1 | 1:10 @ A3



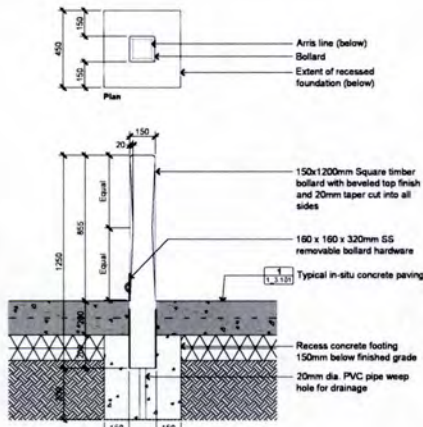
10 Typical Table - End Board Profile
Scale: 1:2 @ A1 | 1:4 @ A3



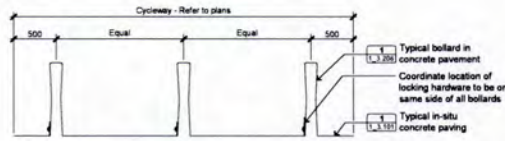
11 Typical Table - Intermediate Board Profile
Scale: 1:2 @ A1 | 1:4 @ A3



12 Typical Table - Recessed Foundation at Hoggin
Scale: 1:10 @ A1 | 1:20 @ A3



1 Typical Bollard - In Concrete Pavement
Scale: 1:10 @ A1 | 1:20 @ A3

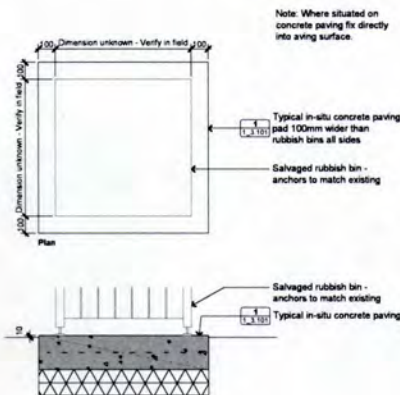


2 Bollards at Cycleway Path Arrangement
Scale: 1:30 @ A1 | 1:45 @ A3

Notes
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PST by others prior to fabrication.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction.
Steel
All Steel to be stainless steel unless otherwise noted on drawings.
Welding
All weld fittings to be full seam welds.
Fittings
All fittings to be stainless steel unless noted otherwise. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Finishing
Steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.



3 Bollard - Perspective
Scale: NTS



4 Salvaged Rubbish Bin - Foundation
Scale: 1:10 @ A1 | 1:20 @ A3



5 Salvaged Rubbish Bins - Photo
Scale: NTS

B Tender 23 GB 18.02.19
A 100% Detailed Design 23 GB 14.12.18
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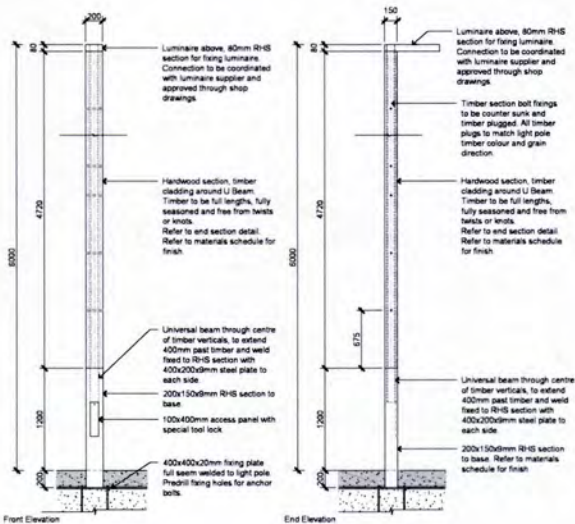
Job Name
Rotorua Lakefront Development

Scale Drawing Title
A3 SHOWN Site Furnishings
A4 SHOWN
B1

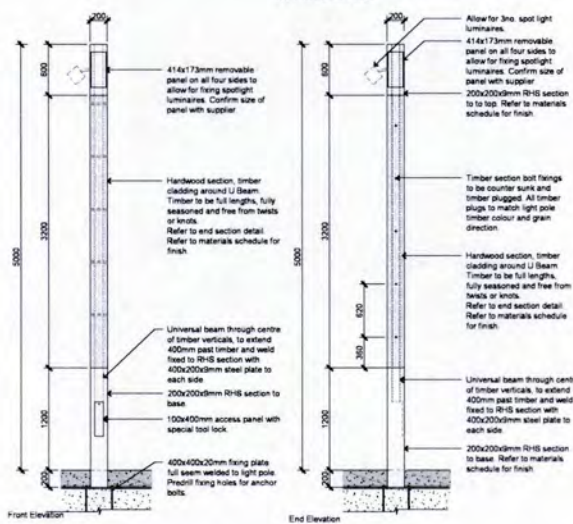
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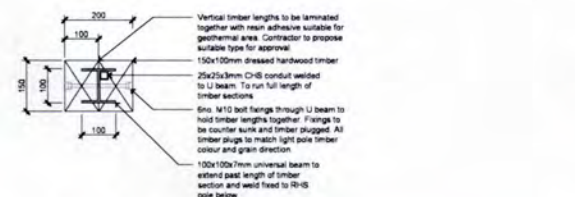


1 Typical L01 Light Pole - Elevations
Scale: 1:20 @ A1 | 1:40 @ A3

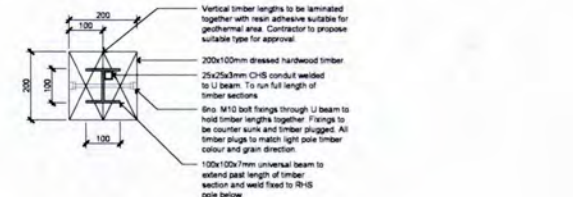


2 Typical L02 Light Pole - Elevations
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PST by others prior to fabrication.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction.
Steel
All Steel to be stainless steel unless otherwise noted on drawings.
Welding
All weld fittings to be full seam welds.
Fittings
All fittings to be stainless steel. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.
Adhesives
All laminated timber is required to be glued with product appropriate to the local geothermal environment, product to be selected to prevent delaminating over time. Product sheet is to be sent to Landscape architect for approval.
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Finishing
Light pole steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.



3 Typical L01 Light Pole - Section
Scale: 1:50 @ A1 | 1:100 @ A3



4 Typical L01 Light Pole - Section
Scale: 1:50 @ A1 | 1:100 @ A3

F Tender TM GB 18.02.19
E Draft Detailed Design MC TM 14.12.18
D Draft Detailed Design MC TM 30.11.18
C Draft Detailed Design MC TM 15.11.18
B Draft Detailed Design MC TM 19.10.18
A Draft Detailed Design MC TM 28.09.18
No. Revision By Chk Date

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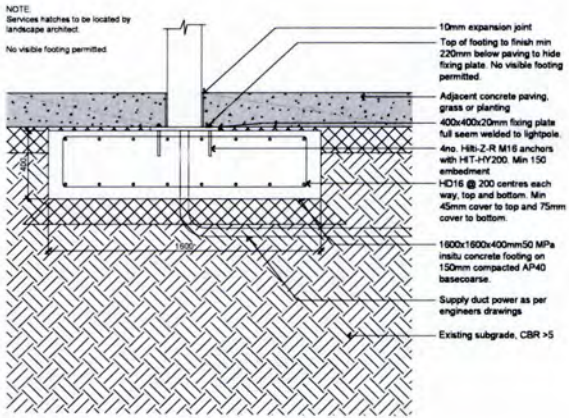
Job Name
Rotorua Lakefront Development

Scale Drawing Title
A3 SHOWN Lighting Details
A4 SHOWN Sheet 1
B1

Job No Drawing Number Revision
4010 1_3.301 F

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1 Typical L01 and L02 Light Pole - Footing Detail
Scale: 1:100 @ A1 | 1:150 @ A3

Notes

Refer to drawing 1_3_100 for all general paving, furniture, timber and planting notes.

All structural elements and footings are to be reviewed and approved by the engineer prior to construction. Light pole design and footings require a PSI by others prior to fabrication.

All dimensions, levels and grades are to be confirmed on site prior to construction.

Shop drawings are required and are to be reviewed by landscape architect prior to construction.

Steel
All steel to be stainless steel unless otherwise noted on drawings.

Welding
All steel fixings to be full seam welds.

Finings
All fixings to be stainless steel. Any connections between SS and HDG are to have a rubber or nylon spacer to prevent corrosion.

Adhesives
All laminated timber is required to be glued with product appropriate to the local geothermal environment, product to be selected to prevent delaminating over time. Product sheet to be sent to Landscape architect for approval.

Timber
All hardwood timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timber to have 5mm rounded chamfer along all exposed edges.

Finishing
Light pole steel to be painted, refer to finishes schedule for colour selection. Paint to be suitable for geothermal environment.

C	Tender	MC TM 18 02 19
B	100% Detailed Design	MC TM 14 12 18
A	Draw Detailed Design	MC TM 30 11 18
No.	Revision	By C/A Date

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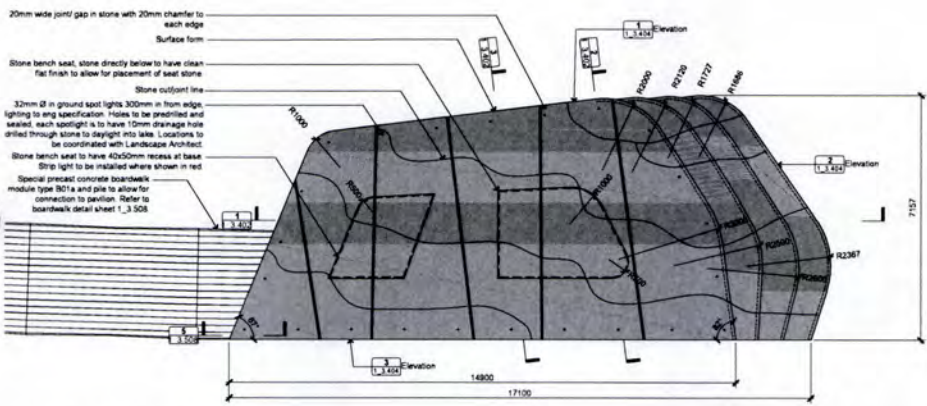
Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN Lighting Details
S/A Sheet 2

Job No. Drawing Number Revision
4010 1_3_302 C

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1 Stage 1 - Pavilion - Stone Finish Plan
Scale: 1:50 @ A1 | 1:100 @ A3

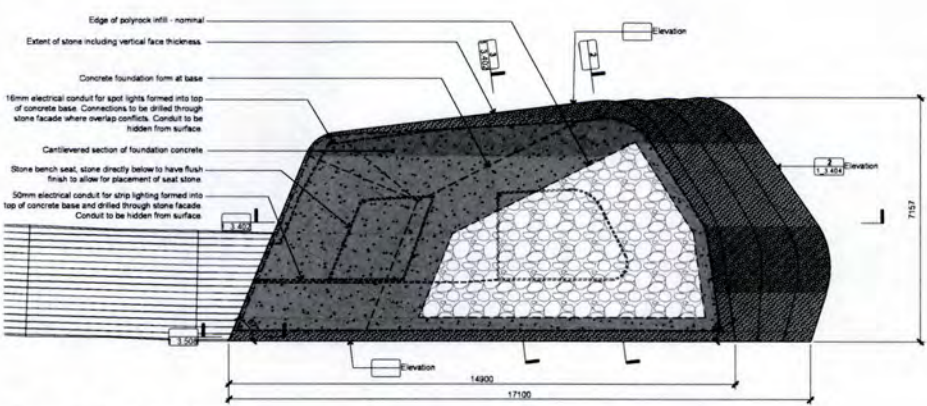
Notes

Refer to drawing 1_3_100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings, Isthmus drawings are for form and finish only. Where structural detail conflicts with engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Photoshops to follow shop drawings and be reviewed again prior to fabrication of remaining modules.



1 Stage 1 - Pavilion - Foundation Plan
Scale: 1:50 @ A1 | 1:100 @ A3

B	Tender	TM OS 18 02 19
A	100% Detailed Design	MC OS 14 12 18
No.	Revision	By C/A Date

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Client
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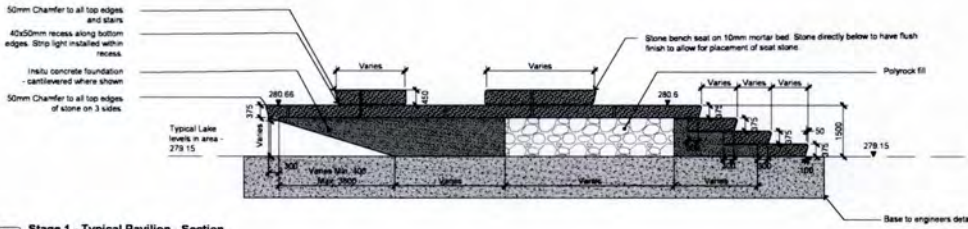
Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN Pavilion Plans
S/A

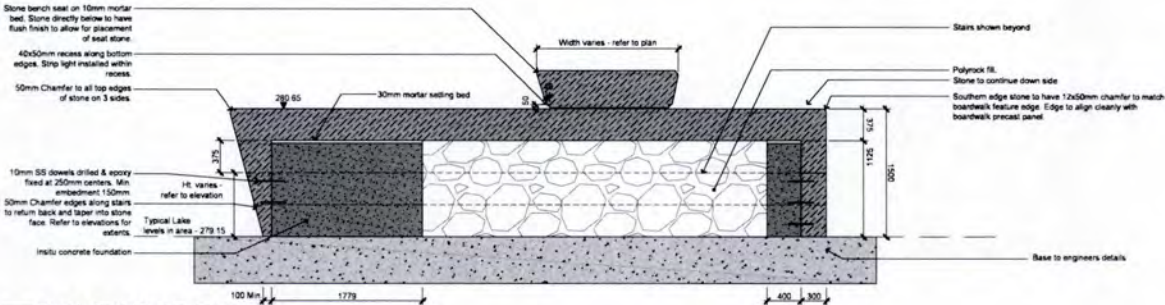
Job No. Drawing Number Revision
4010 1_3_401 B

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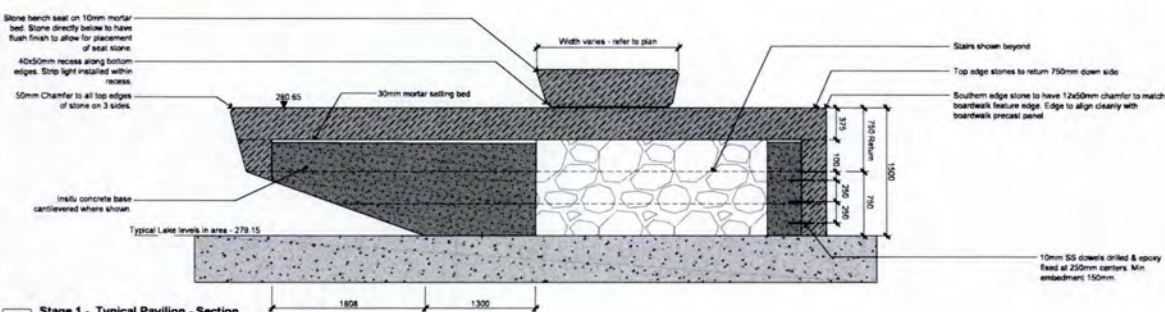
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1 Stage 1 - Typical Pavilion - Section
Scale: 1:50 @ A1 | 1:100 @ A3



2 Stage 1 - Typical Pavilion - Section
Scale: 1:20 @ A1 | 1:40 @ A3



3 Stage 1 - Typical Pavilion - Section
Scale: 1:20 @ A1 | 1:40 @ A3

Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

B Tender: TM GB 18.02.19
A 100% Detailed Design: MC GB 14.12.18
No. Revision: By Chk Date

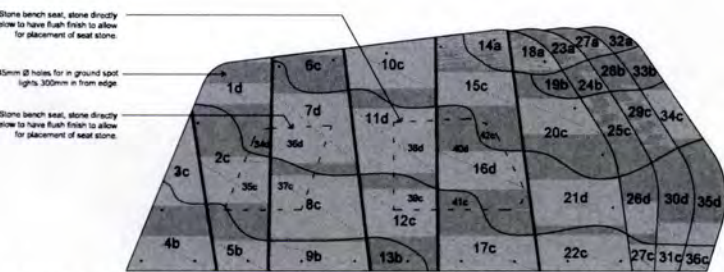
Isthmus.
Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Drawing Title: Pavilion Details
Scale: AS SHOWN
Job No: 4010
Drawing Number: 1_3_402
Revision: B
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Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
Dimension provided for purposes pricing only and not for construction.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Concrete surface finish types:
a. None
b. Bush Hammer
c. Hewn split face
d. CNC machined 3d textureform
Surface finish types to be applied to both horizontal and vertical faces of stone.

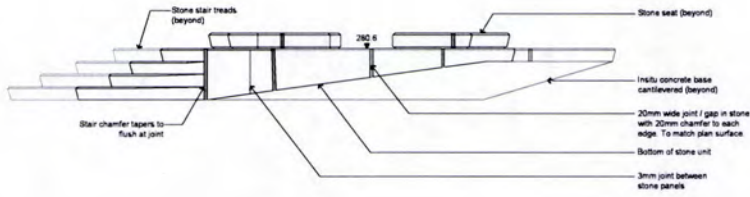


1 Stage 1 - Pavilion - Stone Cutting Plan
Scale: 1:50 @ A1 | 1:100 @ A3

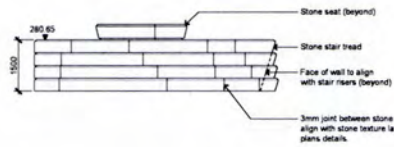
B Tender: MC GB 18.02.19
A 100% Detailed Design: MC GB 14.12.18
No. Revision: By Chk Date

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Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Drawing Title: Pavilion Stone Cutting Plan
Scale: AS SHOWN
Job No: 4010
Drawing Number: 1_3_403
Revision: B
Issued For: Tender

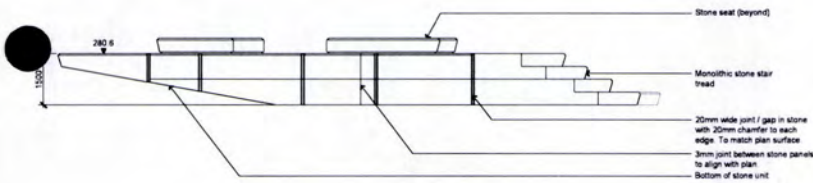
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1 Stage 1 - Pavilion - Elevation
Scale: 1:50 @ A1 | 1:100 @ A3



2 Stage 1 - Pavilion - Elevation
Scale: 1:50 @ A1 | 1:100 @ A3



3 Stage 1 - Pavilion - Elevation
Scale: 1:50 @ A1 | 1:100 @ A3

B Tender MC 08 18 02 19
A 100% Detailed Design MC 08 14 12 18
No. Revision By Ck Date

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Client
Rotorua Lakes Council

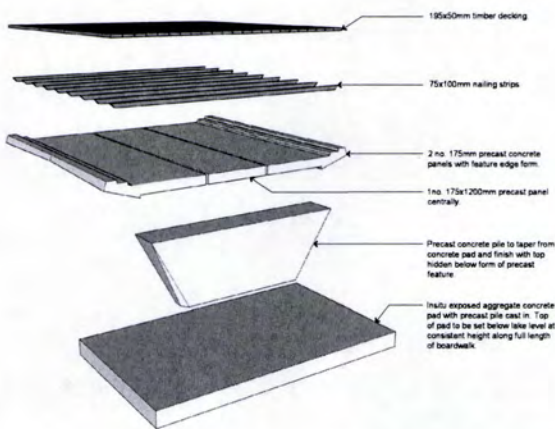
Job Name
Rotorua Lakefront Development

Scale Drawing Title
AS SHOWN 1:50 Pavilion Elevations

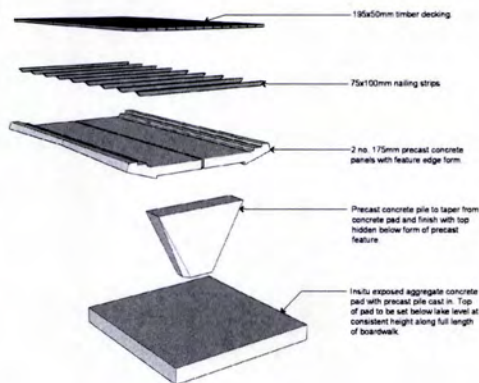
Job No. Drawing Number Revision
4010 1_3.404 B

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1 Typical 5000mm Boardwalk Detail - Exploded Axonometric
Not To Scale



2 Typical 3000mm Boardwalk Detail - Exploded Axonometric
Not To Scale

E Tender MC TM 18 02 19
D 100% Detailed Design MC TM 14 12 18
C Draft Detailed Design MC TM 30 11 18
B Draft Detailed Design MC TM 15 11 18
A Draft Detailed Design TM TM 13 10 18
No. Revision By Ck Date

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Client
Rotorua Lakes Council

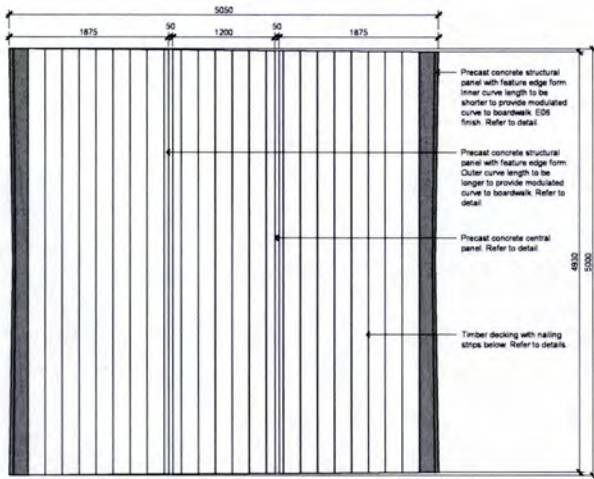
Job Name
Rotorua Lakefront Development

Scale Drawing Title
1:50 Boardwalk Details - Exploded Axonometric

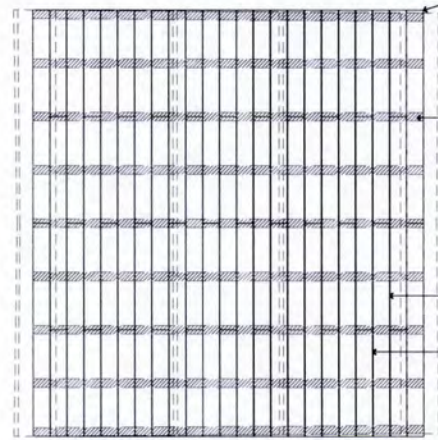
Job No. Drawing Number Revision
4010 1_3.501 E

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1 Typical 5000mm Wide Boardwalk (B03) Detail - Layout Plan
Scale: 1:20 @ A1 | 1:40 @ A3



2 Typical 5000mm Wide Boardwalk Detail - Decking Plan
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_3.100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts with engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fixings
All fixings to be stainless steel.

Decking to be fixed with hidden fixings, outer edge where fixed directly to precast unit are to have 2no. SS M10 decking screw fixings to each nailing strip. Screws to be counter sunk by 10mm. Refer to details 31_3.503 & 41_3.503

Timber
All Handwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam fixings are to be type E06 finish. Refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge. Driver boxes to be hidden below timber decking.

No.	Revision	By	Chk	Date
E	Tender	MC	TM	18.02.19
D	100% Detailed Design	MC	TM	14.12.18
C	Draft Detailed Design	MC	TM	30.11.18
B	Draft Detailed Design	MC	TM	15.11.18
A	Draft Detailed Design	TM	TM	19.10.18

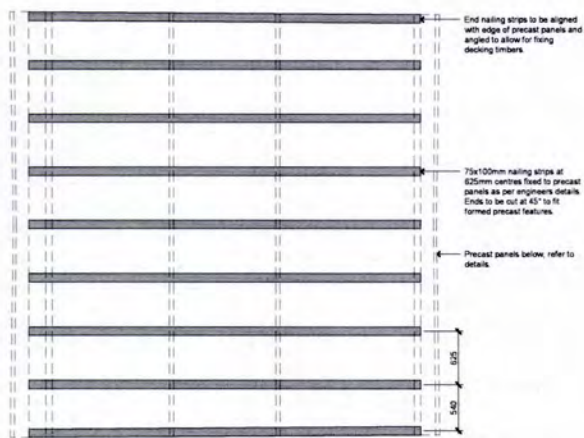
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Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	5000mm Boardwalk Details
Job No	Drawing Number
4010	1_3.502
	Revision
	E
	Issued For
	Tender

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1 Typical 5000mm Wide Boardwalk Detail - Nailing Strip Plan
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_3.100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts with engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fixings
All fixings to be stainless steel.

Decking to be fixed with hidden fixings, outer edge where fixed directly to precast unit are to have 2no. SS M10 decking screw fixings to each nailing strip. Screws to be counter sunk by 10mm. Refer to details 31_3.503 & 41_3.503

Timber
All Handwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam fixings are to be type E06 finish. Refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge. Driver boxes to be hidden below timber decking.

No.	Revision	By	Chk	Date
E	Tender	MC	TM	18.02.19
D	100% Detailed Design	MC	TM	14.12.18
C	Draft Detailed Design	MC	TM	30.11.18
B	Draft Detailed Design	MC	TM	15.11.18
A	Draft Detailed Design	TM	TM	19.10.18

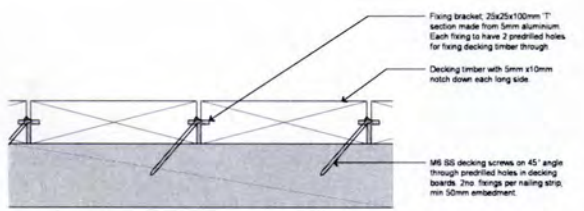
Isthmus

Client
Rotorua Lakes Council

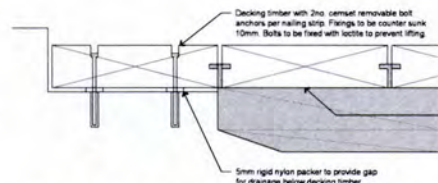
Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	5000mm Boardwalk Details
Job No	Drawing Number
4010	1_3.503
	Revision
	E
	Issued For
	Tender

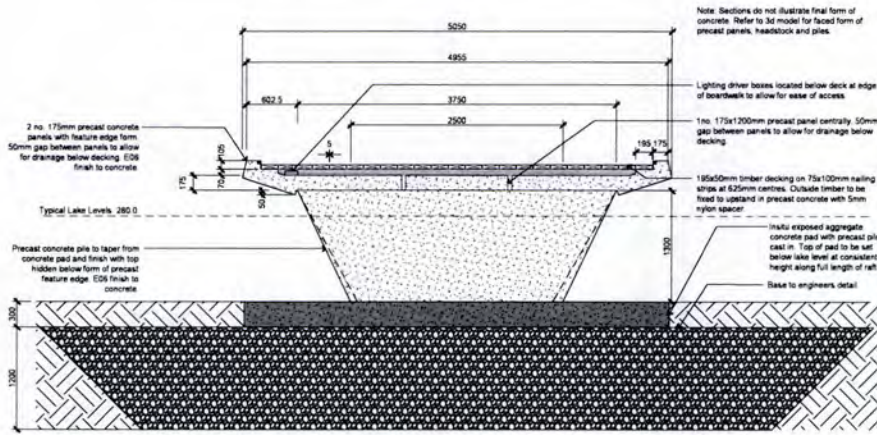
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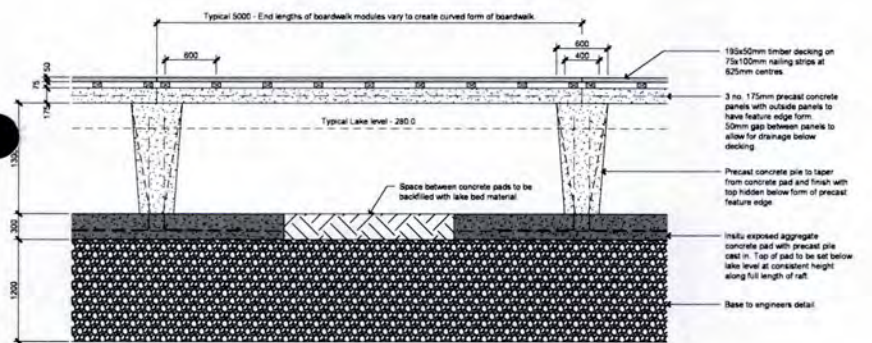
2 Typical 5000mm Boardwalk Central Decking Fixings - Detail
Scale: 1:20 @ A1 | 1:40 @ A3



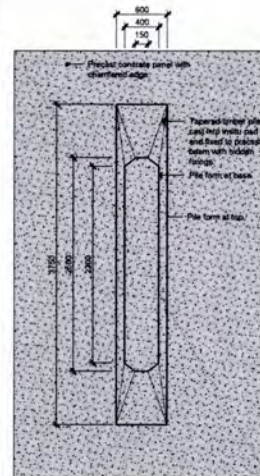
3 Typical 5000mm Boardwalk Edge Decking Fixings - Detail
Scale: 1:20 @ A1 | 1:40 @ A3



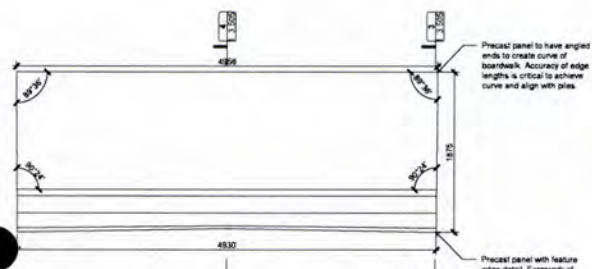
1 Typical 5000mm Boardwalk (B03) Detail - Cross Section
Scale: 1:20 @ A1 | 1:40 @ A3



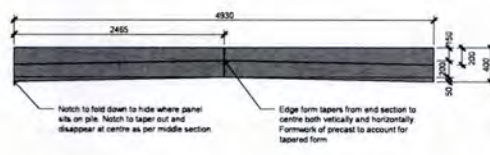
2 Typical 5000mm Boardwalk (B03) Detail - Long Section
Scale: 1:20 @ A1 | 1:40 @ A3



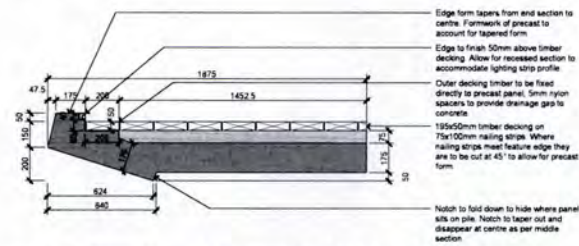
3 Typical 5000mm Boardwalk Detail - Pile Plan
Scale: 1:20 @ A1 | 1:40 @ A3



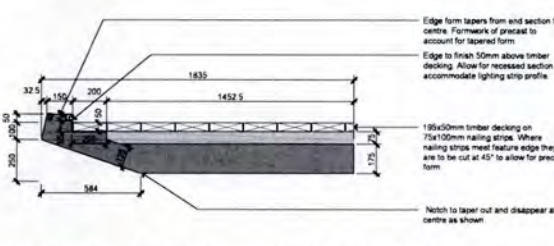
1 Typical 5000mm Boardwalk (B03) Precast Inner Curve Edge Detail - Plan
Scale: 1:20 @ A1 | 1:40 @ A3



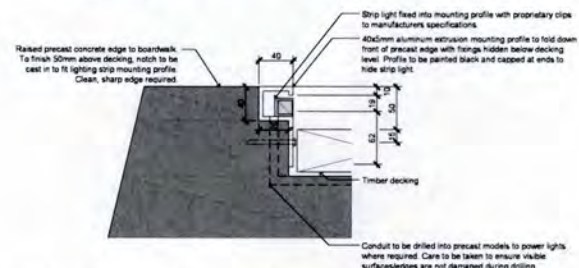
2 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - Elevation
Scale: 1:20 @ A1 | 1:40 @ A3



3 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - End Section
Scale: 1:20 @ A1 | 1:40 @ A3



4 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - Middle Section
Scale: 1:20 @ A1 | 1:40 @ A3



5 Boardwalk Strip Light Mounting Profile - Detail
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fittings
All fittings to be stainless steel.
Timber
All hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete
All boardwalk precast concrete and edge beam to be cast in situ to be type E06 finish, refer to finishes schedule for selections.

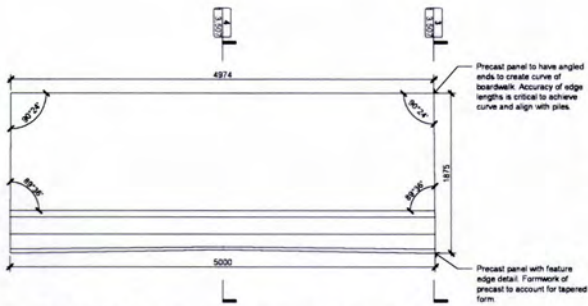
No.	Revision	By	Check	Date
E	Tender			MC TM 18 02 19
D	100% Detailed Design			MC TM 14 12 18
C	Draft Detailed Design			MC TM 30 11 18
B	Draft Detailed Design			MC TM 15 11 18
A	Draft Detailed Design			TM TM 18 10 18

Isthmus.
Rotorua Lakes Council
Client
Job Name
Rotorua Lakefront Development
Drawing Title
5000mm Boardwalk Details
Scale
AS SHOWN
Job No
4010
Drawing Number
1_3.504
Revision
E
Issued For
Tender
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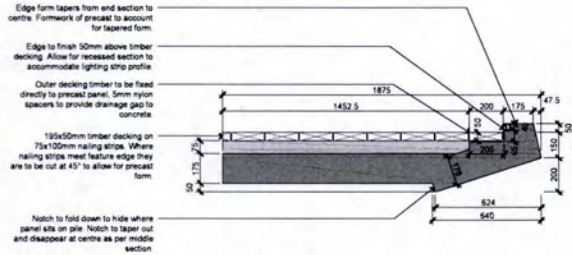
Notes
Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
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Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fittings
All fittings to be stainless steel.
Timber
All hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete
All boardwalk precast concrete and edge beam to be cast in situ to be type E06 finish, refer to finishes schedule for selections.
Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast concrete edge. Driver boxes to be hidden below timber decking.

No.	Revision	By	Check	Date
E	Tender			MC TM 18 02 19
D	100% Detailed Design			MC TM 14 12 18
C	Draft Detailed Design			MC TM 30 11 18
B	Draft Detailed Design			MC TM 15 11 18
A	Draft Detailed Design			TM TM 19 10 18

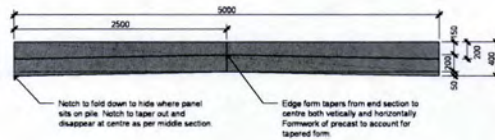
Isthmus.
Rotorua Lakes Council
Client
Job Name
Rotorua Lakefront Development
Drawing Title
5000mm Boardwalk Outer Curve Edge Details
Scale
AS SHOWN
Job No
4010
Drawing Number
1_3.505
Revision
E
Issued For
Tender
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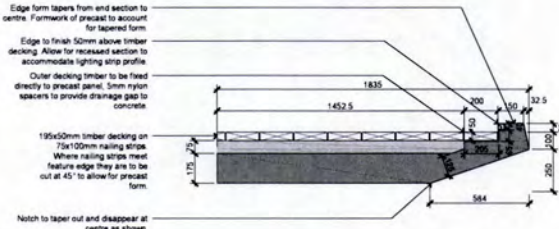
1 Typical 5000mm Boardwalk (B03) Precast Outer Curve Edge Detail - Plan
Scale: 1:200 @ A1 | 1:400 @ A3



3 Typical 5000mm Boardwalk Precast Outer Curve Edge Detail - End Section
Scale: 1:100 @ A1 | 1:200 @ A3



2 Typical 5000mm Boardwalk Precast Outer Curve Edge Detail - Elevation
Scale: 1:200 @ A1 | 1:400 @ A3



4 Typical 5000mm Boardwalk Precast Outer Curve Edge Detail - Middle Section
Scale: 1:100 @ A1 | 1:200 @ A3

Notes

Refer to drawing 1_0_100 for all general, paving, furniture, timber and planting notes.

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All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fixings
All fixings to be stainless steel.

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam to be type E06 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge, driver boxes to be hidden below timber decking.

No.	Revision	By	Chk	Date

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AEC 28 308 9442 | WTN 24 489 9332 www.isthmus.co.nz

Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale Drawing Title
5000mm Boardwalk Inner Curve Edge Details

Job No. Drawing Number Revision
4010 1_3_506 E

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Tender

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Notes

Refer to drawing 1_0_100 for all general, paving, furniture, timber and planting notes.

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All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fixings
All fixings to be stainless steel.

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam to be type E06 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge, driver boxes to be hidden below timber decking.

No.	Revision	By	Chk	Date

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AEC 28 308 9442 | WTN 24 489 9332 www.isthmus.co.nz

Client
Rotorua Lakes Council

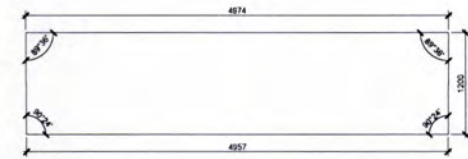
Job Name
Rotorua Lakefront Development

Scale Drawing Title
5000mm Boardwalk Central Panel Details

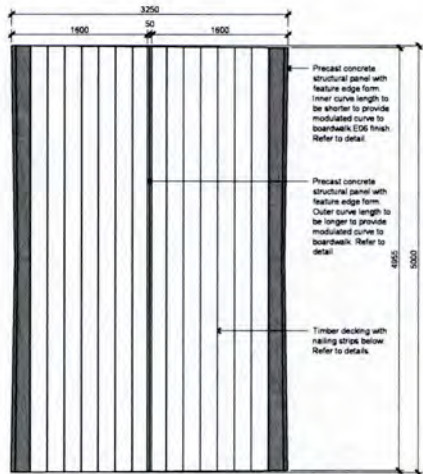
Job No. Drawing Number Revision
4010 1_3_507 E

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Tender

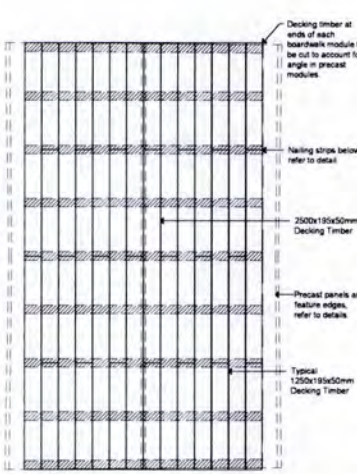
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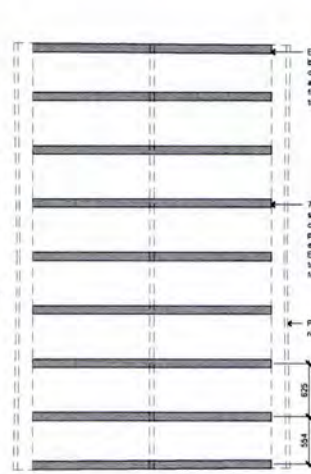
1 Typical 5000mm Boardwalk (B03) Precast Central Panel Detail - Plan
Scale: 1:200 @ A1 | 1:400 @ A3



1 Typical 3000mm Wide Boardwalk (B01) Detail - Layout Plan
Scale: 1:20 @ A1 | 1:40 @ A3

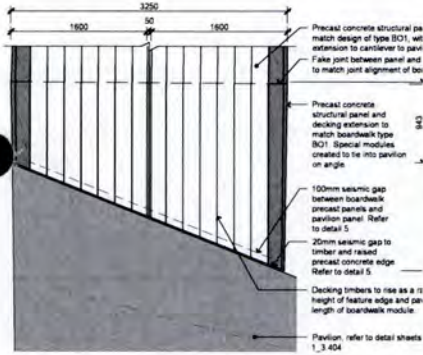


2 Typical 3000mm Wide Boardwalk Detail - Decking Plan
Scale: 1:20 @ A1 | 1:40 @ A3

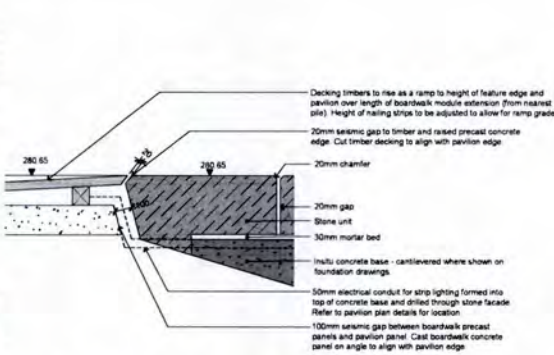


3 Typical 3000mm Wide Boardwalk Detail - Nailing Strip Plan
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_S 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings, Isthmus drawings are for form and finish only. Where structural details conflict, site engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fixings:
All fixings to be stainless steel.
Decking to be fixed with hidden fixings, outer edge where fixed directly to precast unit are to have zinc BS 8410 decking screws. Screws to be counter sunk by 10mm. Refer to details 31_3_503 & 41_3_503.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
All boardwalk precast concrete and edge beam fixings are to be type E06 finish, refer to finishes schedule for selections.
Lighting:
Strip lighting mounting profile to be allowed for with recessed notch in precast feature.



4 Typical 3000mm Wide Boardwalk (B01a) Detail - Layout Plan
Scale: 1:20 @ A1 | 1:40 @ A3



5 Stage 1 - Boardwalk to Pavilion Transition - Detail
Scale: 1:10 @ A1 | 1:20 @ A3

E Tender MC TM 18.02.19
D 100% Detailed Design MC TM 14.12.18
C Draft Detailed Design MC TM 30.11.18
B Draft Detailed Design MC TM 15.11.18
A Draft Detailed Design MC TM 19.10.18
No. Revision By CAK Date

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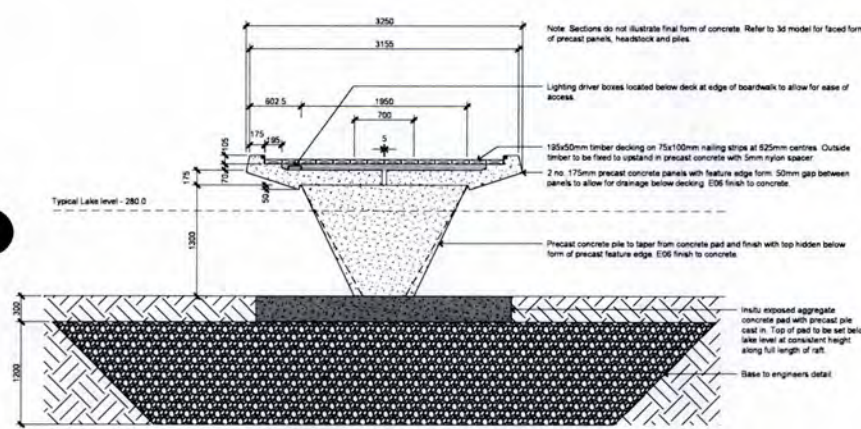
Job Name
Rotorua Lakefront Development

Scale Drawing Title
3000mm Boardwalk Details

Job No Drawing Number Revision
4010 1_3.508 E

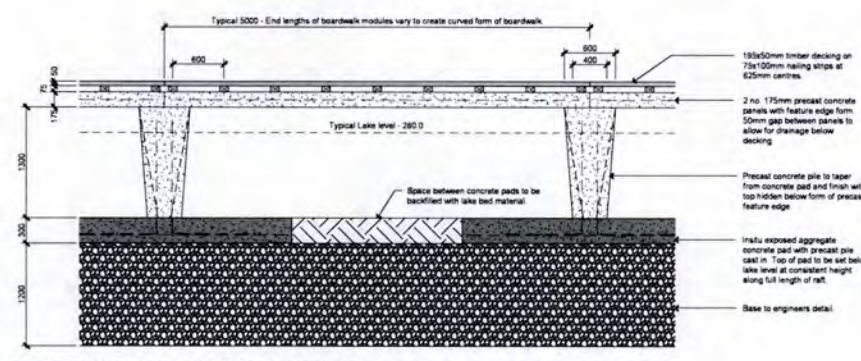
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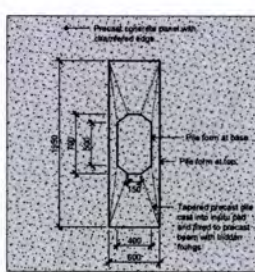


1 Typical 3000mm Boardwalk (B01) Detail - Cross Section
Scale: 1:20 @ A1 | 1:40 @ A3

Notes
Refer to drawing 1_S 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings, Isthmus drawings are for form and finish only. Where structural details conflict, site engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fixings:
All fixings to be stainless steel.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
All boardwalk precast concrete and edge beam fixings are to be type E06 finish, refer to finishes schedule for selections.



2 Typical 3000mm Boardwalk (B01) Detail - Long Section
Scale: 1:20 @ A1 | 1:40 @ A3



3 Typical 3000mm Boardwalk Detail - Pile Plan
Scale: 1:20 @ A1 | 1:40 @ A3

E Tender MC TM 18.02.19
D 100% Detailed Design MC TM 14.12.18
C Draft Detailed Design MC TM 30.11.18
B Draft Detailed Design MC TM 15.11.18
A Draft Detailed Design MC TM 19.10.18
No. Revision By CAK Date

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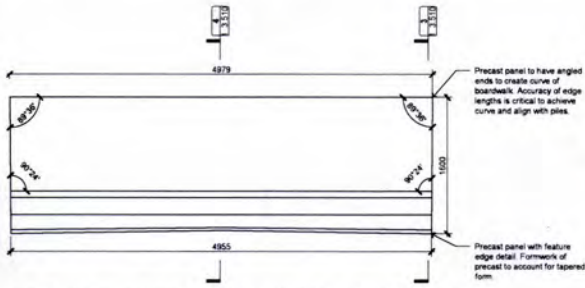
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Scale Drawing Title
3000mm Boardwalk Details

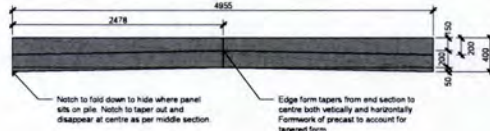
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4010 1_3.509 E

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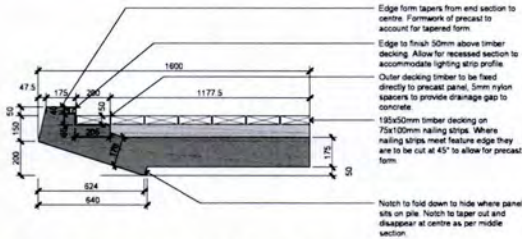
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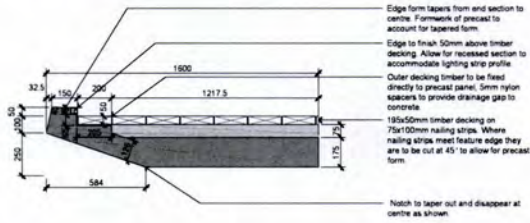
1 Typical 3000mm Boardwalk (B01) Precast Inner Curve Edge Detail - Plan
Scale: 1:30 @ A1 | 1:45 @ A3



2 Typical 3000mm Boardwalk Precast Inner Curve Edge Detail - Elevation
Scale: 1:30 @ A1 | 1:45 @ A3



3 Typical 3000mm Boardwalk Precast Inner Curve Edge Detail - End Section
Scale: 1:30 @ A1 | 1:45 @ A3



4 Typical 3000mm Boardwalk Precast Inner Curve Edge Detail - Middle Section
Scale: 1:30 @ A1 | 1:45 @ A3

Notes

Refer to drawing 1_0100 for all general paving, furniture, timber and planting notes

All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fittings
All fittings to be stainless steel

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam (as req) are to be type E08 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge, inner boxes to be hidden below timber decking.

E	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 18 10 18
No.	Revision	By Chk Date

Isthmus
Rotorua Lakes Council

Client
Rotorua Lakefront Development

Job Name
Rotorua Lakefront Development

Scale
3000mm Boardwalk
Outer Curve Edge Details

Drawing Title
3000mm Boardwalk
Outer Curve Edge Details

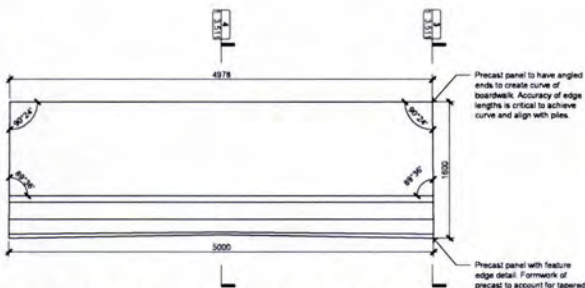
Job No
4010

Drawing Number
1_3_510

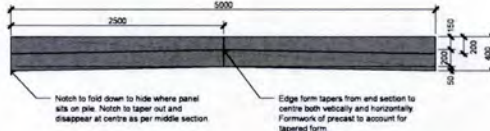
Revision
E

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Tender

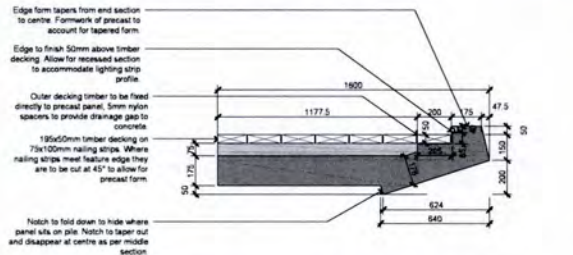
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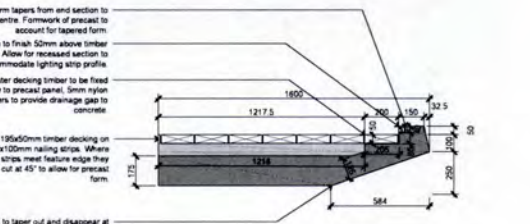
1 Typical 3000mm Boardwalk (B01) Precast Outer Curve Edge Detail - Plan
Scale: 1:30 @ A1 | 1:45 @ A3



2 Typical 3000mm Boardwalk Precast Outer Curve Edge Detail - Elevation
Scale: 1:30 @ A1 | 1:45 @ A3



3 Typical 3000mm Boardwalk Precast Outer Curve Edge Detail - End Section
Scale: 1:30 @ A1 | 1:45 @ A3



4 Typical 3000mm Boardwalk Precast Outer Curve Edge Detail - Middle Section
Scale: 1:30 @ A1 | 1:45 @ A3

Notes

Refer to drawing 1_0100 for all general paving, furniture, timber and planting notes

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Fittings
All fittings to be stainless steel

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam (as req) are to be type E08 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in precast feature edge, inner boxes to be hidden below timber decking.

E	Tender	MC TM 18 02 19
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 18 10 18
No.	Revision	By Chk Date

Isthmus
Rotorua Lakes Council

Client
Rotorua Lakefront Development

Job Name
Rotorua Lakefront Development

Scale
3000mm Boardwalk
Inner Curve Edge Details

Drawing Title
3000mm Boardwalk
Inner Curve Edge Details

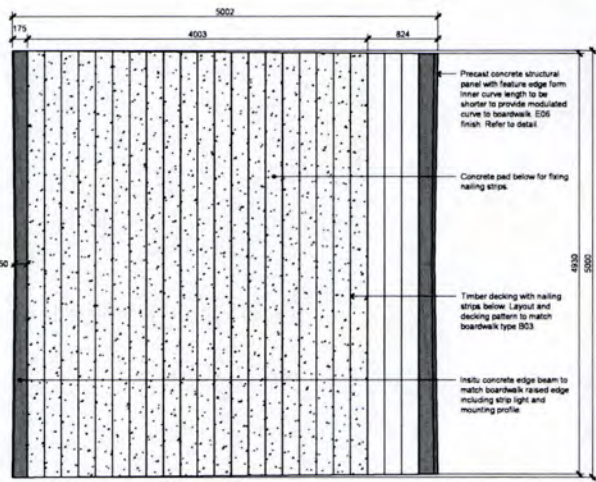
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Drawing Number
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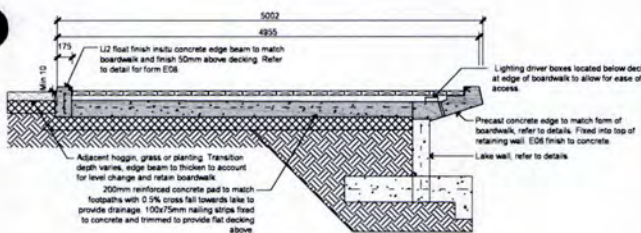
Revision
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Issued For
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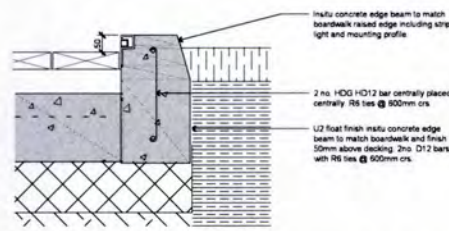
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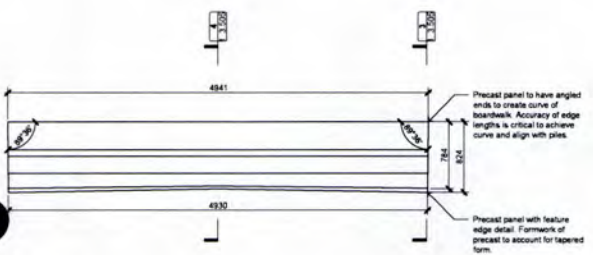
1 Typical 5000mm Wide Boardwalk on Land (B04) Detail - Layout Plan
Scale: 1:20 @ A1 | 1:40 @ A3



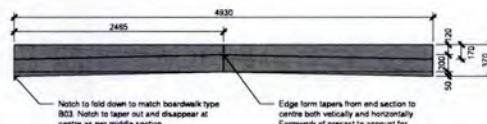
2 Typical 5000mm Wide Boardwalk on Land (B04) Detail - Section
Scale: 1:20 @ A1 | 1:40 @ A3



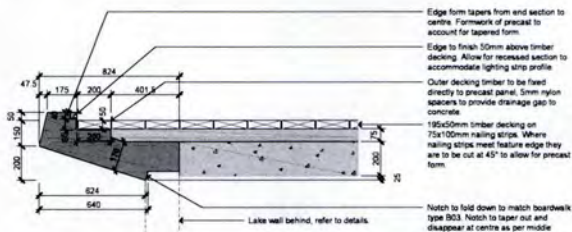
3 Typical 5000mm Boardwalk In situ (E08) Inner Curve Edge Detail - End Section
Scale: 1:10 @ A1 | 1:20 @ A3



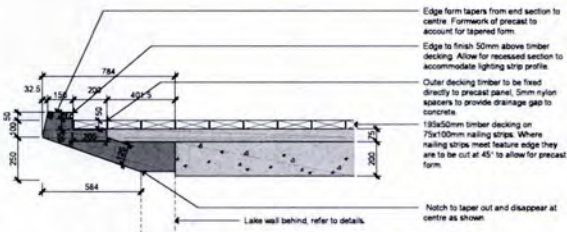
1 Typical 5000mm Boardwalk (B03) Precast Inner Curve Edge Detail - Plan
Scale: 1:20 @ A1 | 1:40 @ A3



2 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - Elevation
Scale: 1:20 @ A1 | 1:40 @ A3



3 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - End Section
Scale: 1:10 @ A1 | 1:20 @ A3



4 Typical 5000mm Boardwalk Precast Inner Curve Edge Detail - Middle Section
Scale: 1:10 @ A1 | 1:20 @ A3

Notes

Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings, Isthmus drawings are for form and finish only. Where structural details conflict, arise engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Photographs to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Firings
All firings to be stainless steel.

Decking to be fixed with hidden firings, outer edge where fixed directly to precast unit are to have 2no. S6 M10 decking screw firings to each nailing strip. Screws to be counter sunk by 10mm. Refer to details 3_1_303 & 4_1_3_303.

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam to be in situ to be type E08 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in feature edges, driver boxes to be hidden below timber decking.

C Tender MC TM 18 02 19
B 100% Detailed Design MC TM 14 12 18
A Draft Detailed Design TM TM 30 11 18
No. Revision By Chk Date

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Client
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Job Name
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Scale Drawing Title
1:20 5000mm Boardwalk on Land B04 Details
Job No. Drawing Number Revision
4010 1_3_512 C

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Notes

Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings, Isthmus drawings are for form and finish only. Where structural details conflict, arise engineers details take precedence.

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Shop drawings are required and are to be reviewed by landscape architect prior to construction. Photographs to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Firings
All firings to be stainless steel.

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
All boardwalk precast concrete and edge beam to be in situ to be type E08 finish, refer to finishes schedule for selections.

Lighting
Strip lighting mounting profile to be allowed for with recessed notch in feature edges, driver boxes to be hidden below timber decking.

C Tender MC TM 18 02 19
B 100% Detailed Design MC TM 14 12 18
A Draft Detailed Design TM TM 30 11 18
No. Revision By Chk Date

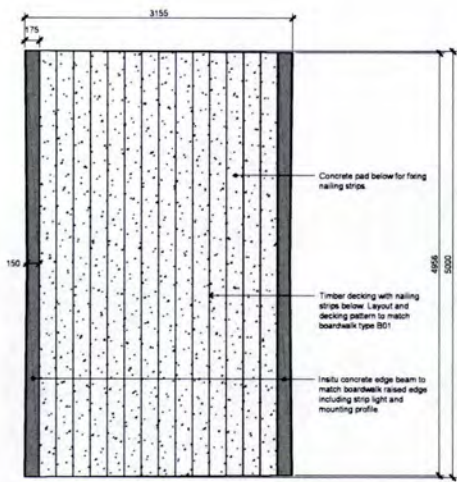
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Client
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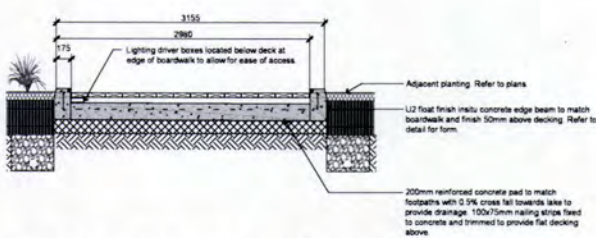
Job Name
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Scale Drawing Title
1:20 5000mm Boardwalk on Land B04 Inner Curve Edge Details
Job No. Drawing Number Revision
4010 1_3_513 C

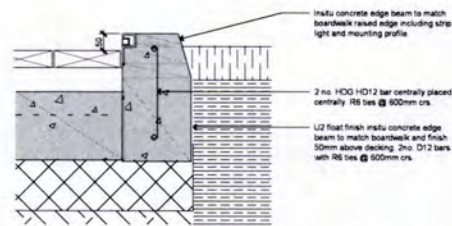
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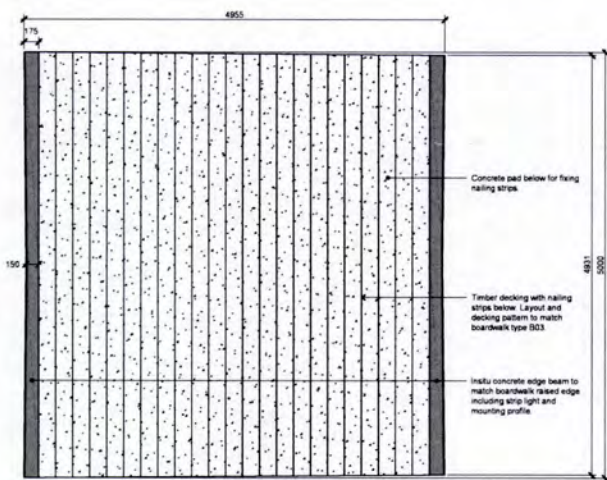
1 Typical 3000mm Wide Boardwalk (B02) Detail - Layout Plan
Scale: 1:30 @ A1 | 1:40 @ A3



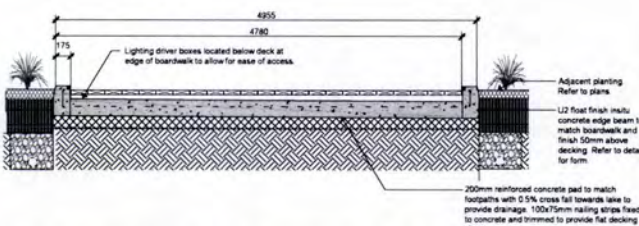
2 Typical 3000mm Wide Boardwalk on Land (B02) Detail - Section
Scale: 1:30 @ A1 | 1:40 @ A3



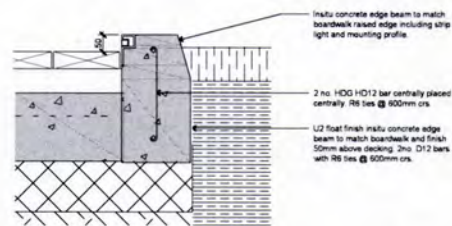
3 Typical 5000mm Boardwalk Insitu (E08) Inner Curve Edge Detail - End Section
Scale: 1:10 @ A1 | 1:30 @ A3



1 Typical 5000mm Wide Boardwalk (B05) Detail - Layout Plan
Scale: 1:30 @ A1 | 1:40 @ A3



2 Typical 5000mm Wide Boardwalk on Land (B05) Flush Transition - Section
Scale: 1:30 @ A1 | 1:40 @ A3



3 Typical 5000mm Boardwalk Insitu (E08) Inner Curve Edge Detail - End Section
Scale: 1:10 @ A1 | 1:30 @ A3

Notes:
Refer to drawing 1_G 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Steel:
All steel to be stainless steel unless otherwise noted on drawings.
Welding:
All weld fittings to be full seam welds.
Fittings:
All fittings to be stainless steel.
Decking to be fixed with hidden fittings, outer edge where fixed directly to precast unit are to have 2 no. SS M10 decking screw fittings to each nailing strip. Screws to be counter sunk by 10mm. Refer to details S1_3_503 & 41_3_503.
Timber:
All hardwood timber to be FSC certified unless otherwise labelled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
All boardwalk precast concrete and edge beam to be type E08 finish, refer to finishes schedule for selections.
Lighting:
Strip lighting mounting profile to be allowed.

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B 100% Detailed Design MC TM 14.12.18
A Draft Detailed Design TM TM 30.11.18
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Scale Drawing Title
3000mm Boardwalk on Land B02 Details

Job No Drawing Number Revision
4010 1_3_514 C

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Notes:
Refer to drawing 1_G 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Steel:
All steel to be stainless steel unless otherwise noted on drawings.
Welding:
All weld fittings to be full seam welds.
Fittings:
All fittings to be stainless steel.
Decking to be fixed with hidden fittings, outer edge where fixed directly to precast unit are to have 2 no. SS M10 decking screw fittings to each nailing strip. Screws to be counter sunk by 10mm. Refer to details S1_3_503 & 41_3_503.
Timber:
All hardwood timber to be FSC certified unless otherwise labelled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
All boardwalk precast concrete and edge beam to be type E08 finish, refer to finishes schedule for selections.
Lighting:
Strip lighting mounting profile to be allowed.

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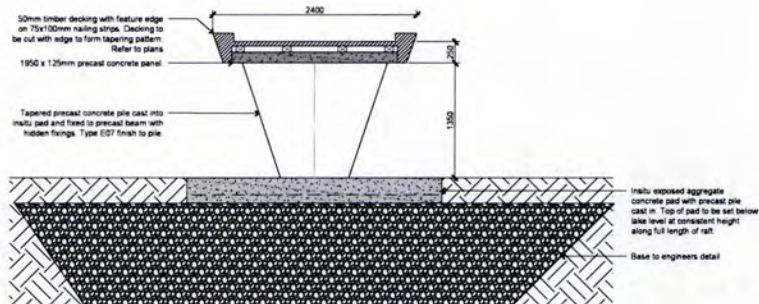
Job Name
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Scale Drawing Title
5000mm Boardwalk on Land B05 Details

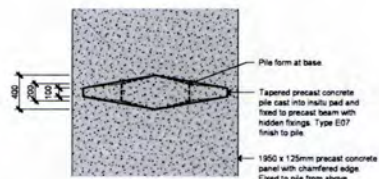
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1 Typical 2400mm Tukutuku Bridge (TBL01 - TBL03) Detail - Cross Section
Scale: 1:20 @ A1 | 1:40 @ A3



2 Typical 2400mm Tukutuku Bridge Detail - Pile Plan
Scale: 1:20 @ A1 | 1:40 @ A3

Notes

Refer to drawing 1_0.100 for all general paving, furniture, timber and planting notes.

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All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fittings

All fittings to be stainless steel.

All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.

Timber

All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete

Type E07 finish to all concrete piles. Refer to finishes schedule for selections.

E	Tender	TM	TM	18.02.18
D	100% Detailed Design	TM	TM	14.12.18
C	Draft Detailed Design	TM	TM	30.11.18
B	Draft Detailed Design	MC	TM	15.11.18
A	Draft Detailed Design	TM	TM	19.10.18
No.	Revision	By	CHK	Date

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Client
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Job Name
Rotorua Lakefront Development

Scale	Drawing Title
A1	Typical 2400mm Tukutuku Bridge Details
Job No	Drawing Number
4010	1_3.601
Revision	E
Issued For	Tender

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Notes

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All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fittings

All fittings to be stainless steel.

All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.

Timber

All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

C	Tender	TM	TM	18.02.18
B	100% Detailed Design	TM	TM	14.12.18
A	Draft Detailed Design	TM	TM	30.11.18
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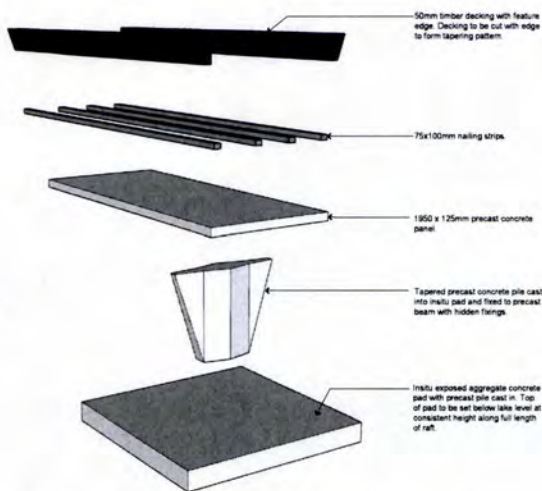
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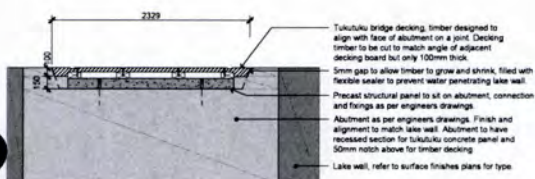
Job Name
Rotorua Lakefront Development

Scale	Drawing Title
A1	Typical 2400mm Tukutuku Bridge Details
Job No	Drawing Number
4010	1_3.602
Revision	C
Issued For	Tender

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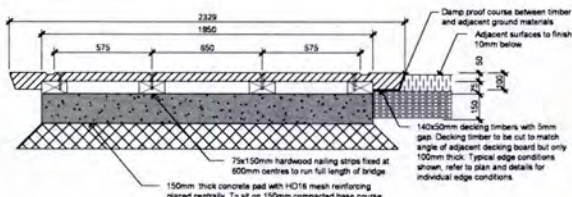


3 Typical 2400mm Tukutuku Bridge Detail (TBL01 - TBL03) - Exploded Axonometric
Not To Scale



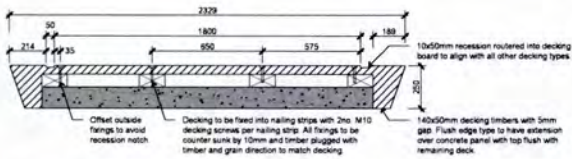
1 Stage 1a - Tukutuku Type 3 (TBL03) Bridge to Lakewall - Connection Detail
Scale: 1:20 @ A1 | 1:40 @ A3

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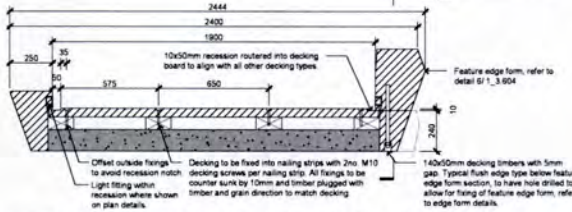
1 Typical 2400mm Tukutuku Bridge - Bridge On Land Section
Scale: 1:10 @ A1 | 1:20 @ A3

Note: refer to plan detail for edge types and location. Types differ on each end of decking timber for some modules, combinations of details here will be required.

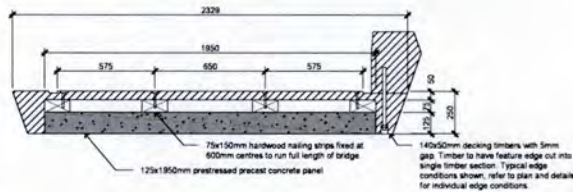


3 Typical 2400mm Tukutuku Bridge Profile - Flush Edge Section
Scale: 1:10 @ A1 | 1:20 @ A3

Note: refer to plan detail for edge types and location. Types differ on each end of decking timber for some modules, combinations of details here will be required.

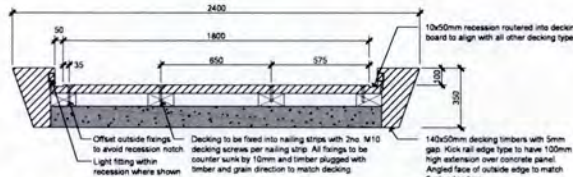


5 Typical 2400mm Tukutuku Bridge Profile - Feature Edge Form Section
Scale: 1:10 @ A1 | 1:20 @ A3



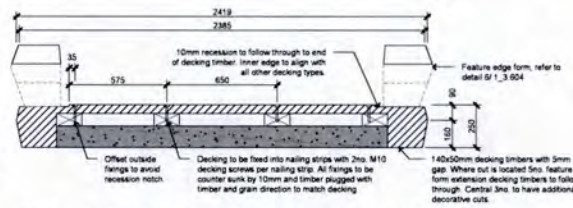
2 Typical 2400mm Tukutuku Bridge - Bridge Build Up Section
Scale: 1:10 @ A1 | 1:20 @ A3

Note: refer to plan detail for edge types and location. Types differ on each end of decking timber for some modules, combinations of details here will be required.

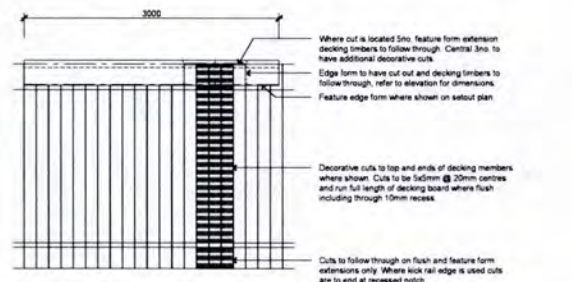


4 Typical 2400mm Tukutuku Bridge Profile - Typical Kick Rail Edge Section
Scale: 1:10 @ A1 | 1:20 @ A3

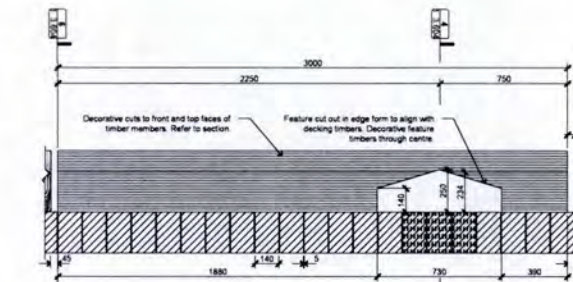
Note: refer to plan detail for edge types and location. Types differ on each end of decking timber for some modules, combinations of details here will be required.



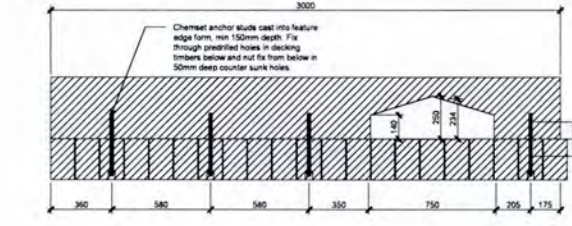
6 Typical 2400mm Tukutuku Bridge Profile - Feature Edge Form Extension Section
Scale: 1:10 @ A1 | 1:20 @ A3



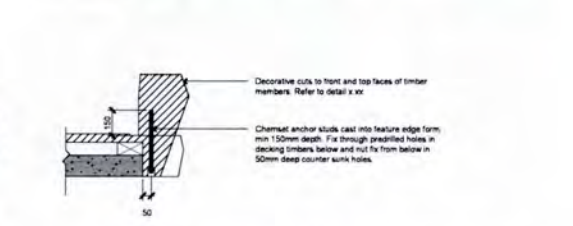
1 Typical 2400mm Tukutuku Bridge Feature Edge Form - Plan
Scale: 1:20 @ A1 | 1:40 @ A3



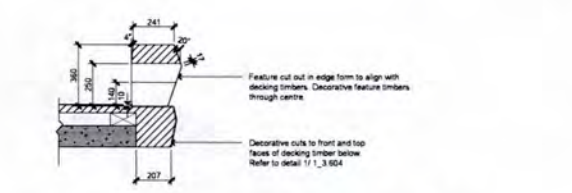
2 Typical 2400mm Tukutuku Bridge Feature Edge Form - Elevation
Scale: 1:10 @ A1 | 1:20 @ A3



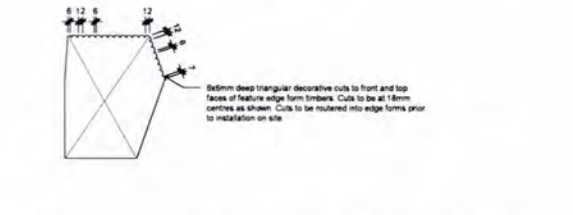
3 Typical 2400mm Tukutuku Bridge Feature Edge Form - Long Section
Scale: 1:10 @ A1 | 1:20 @ A3



4 Typical 2400mm Tukutuku Bridge Feature Edge Form - Typical Cross Section
Scale: 1:10 @ A1 | 1:20 @ A3



5 Typical 2400mm Tukutuku Bridge Feature Edge Form - Gap Cross Section
Scale: 1:10 @ A1 | 1:20 @ A3



6 Typical 2400mm Tukutuku Bridge Feature Edge Form - Decorative Cut Detail
Scale: 1:5 @ A1 | 1:10 @ A3

Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
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All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fittings:
All fittings to be stainless steel.
All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned to 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.

C Tender	TM TM 18 02 19
S 100% Detailed Design	TM TM 14 12 18
A Draft Detailed Design	TM TM 30 11 18
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Job Name
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Scale
Drawing Title
Typical 2400mm Tukutuku Bridge Details

Job No
Drawing Number
4010_1_3_603

Revision
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Notes:
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All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts with engineers details, take precedence.
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Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fittings:
All fittings to be stainless steel.
All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned to 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
Type E37 finish to all concrete piles. Refer to finishes schedule for selections.

C Tender	TM TM 18 02 19
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A Draft Detailed Design	TM TM 30 11 18
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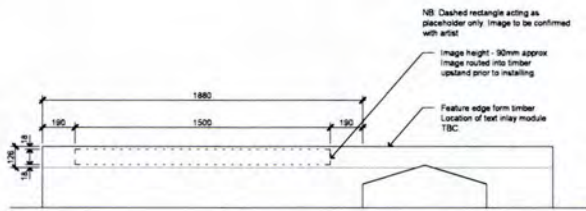
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Typical 2400mm Tukutuku Bridge Details

Job No
Drawing Number
4010_1_3_604

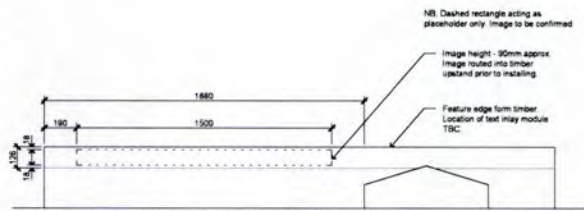
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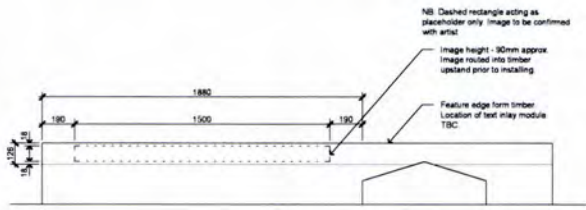
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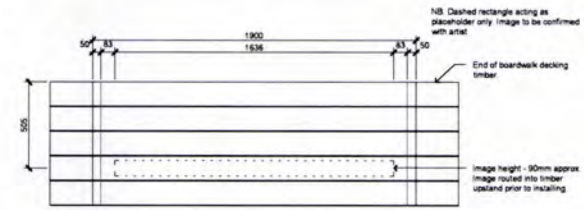
1 2400mm Tukutuku Bridge (TBL01) Image Inlay - Elevation
Scale: 1:100 A1 | 1:200 A3



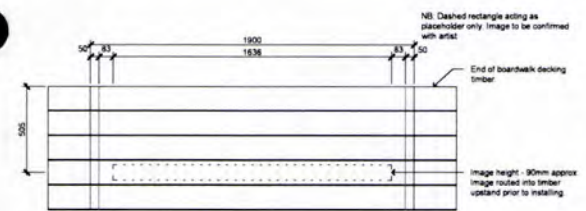
2 2400mm Tukutuku Bridge (TBL02) Image Inlay - Elevation
Scale: 1:100 A1 | 1:200 A3



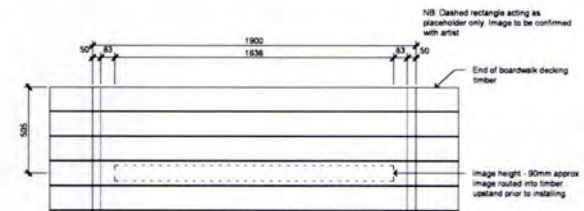
3 2400mm Tukutuku Bridge (TBL03) Image Inlay - Elevation
Scale: 1:100 A1 | 1:200 A3



4 2400mm Tukutuku Bridge (TBL01) Image Inlay - Plan
Scale: 1:100 A1 | 1:200 A3



5 2400mm Tukutuku Bridge (TBL02) Image Inlay - Plan
Scale: 1:100 A1 | 1:200 A3



6 2400mm Tukutuku Bridge (TBL03) Image Inlay - Plan
Scale: 1:100 A1 | 1:200 A3

Notes
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Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fixings
All fixings to be stainless steel
All fixings on decking timbers to be timber plugged with timber and grain direction to match decking
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete
Type ED7 finish to all concrete piles. Refer to finishes schedule for selections.

B Tender MC CB 18.02.19
A 100% Detailed Design MC CB 14.12.18
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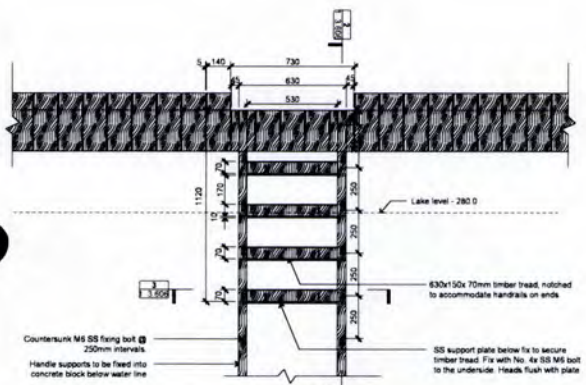
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Job Name
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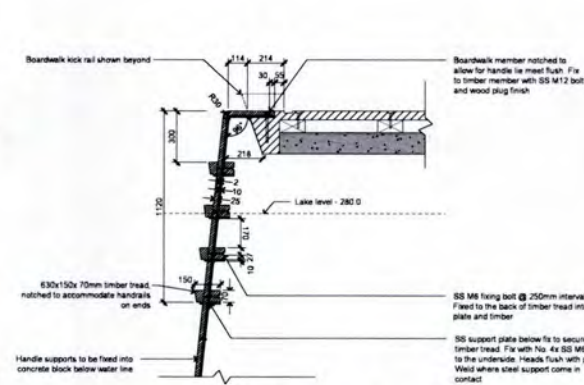
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1:100 2400mm Tukutuku Bridge Image Inlay Details
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4010 1_3.605 B

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1 Typical Tukutuku Bridge Access Ladder Detail - Elevation
Scale: 1:100 A1 | 1:200 A3



2 Typical Tukutuku Bridge Access Ladder Detail - Section
Scale: 1:100 A1 | 1:200 A3

Notes
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Fixings
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All fixings on timbers to be timber plugged with timber and grain direction to match decking
Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.

C Tender MC CB 18.02.19
B 100% Detailed Design MC CB 14.12.18
A Draft Detailed Design MC CB 30.11.18
No. Revision By C/A Date

Isthmus.
Architects

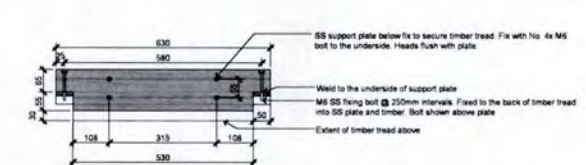
Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

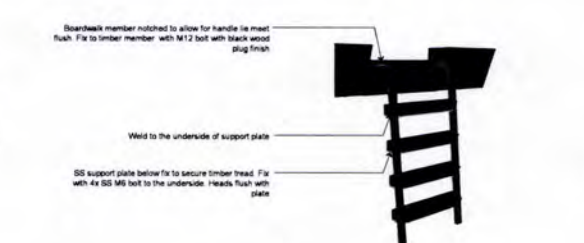
Scale Drawing Title
1:100 Typical Access Ladder Details
AS SHOWN Job No. Revision
4010 1_3.606 C

Issued For
Tender

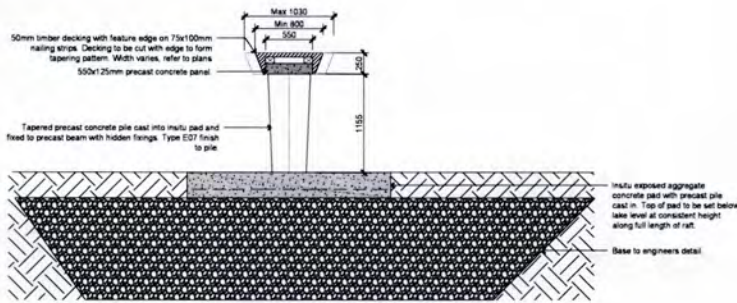
By the name Isthmus Group Limited
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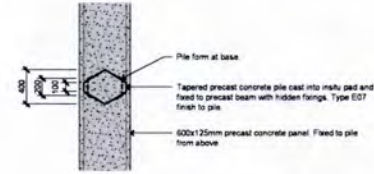
3 Typical Tukutuku Bridge Access Ladder Support Plate Fixing Detail - Plan
Scale: 1:50 A1 | 1:100 A3



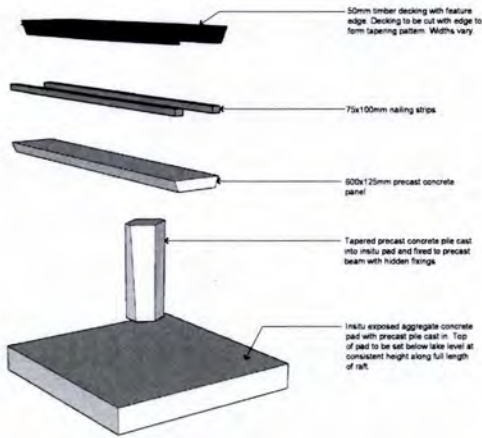
4 Typical Tukutuku Bridge Access Ladder - Perspective
Scale: N.T.S



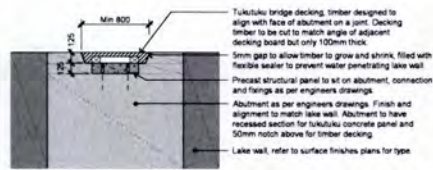
3 Typical 800 - 1050mm Tukutuku Bridge (TBS01 - TBS03) Detail - Cross Section
Scale: 1:20@ A1 | 1:40@A3



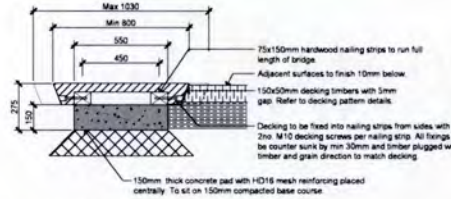
4 Typical 800 - 1050mm Tukutuku Bridge Detail - Pile Plan
Scale: 1:20@ A1 | 1:40@A3



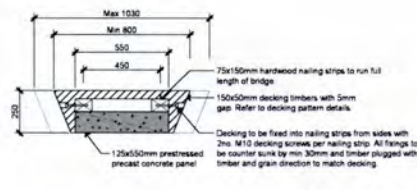
3 Typical 800 - 1050mm Tukutuku Bridge (TBS01 - TBS03) Detail - Exploded Axonometric
Not To Scale



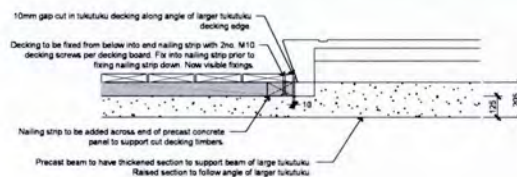
1 Tukutuku Type 3 (TBS03) Bridge to Lakewall - Connection Detail
Scale: 1:20@ A1 | 1:40@A3



2 Typical 1200mm Tukutuku Bridge - Bridge On Land Section
Scale: 1:10@ A1 | 1:20@A3



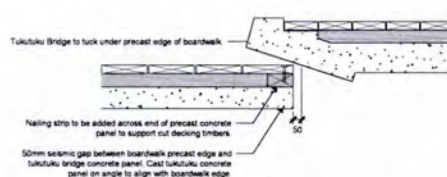
3 Typical 1200mm Tukutuku Bridge - Bridge Build Up Section
Scale: 1:10@ A1 | 1:20@A3



4 Typical 1200mm Tukutuku Bridge to Larger Tukutuku 2400mm Transition- Detail
Scale: 1:10@ A1 | 1:20@A3



5 Typical 1200mm Tukutuku Bridge to Larger Tukutuku Flush Transition- Detail
Scale: 1:10@ A1 | 1:20@A3



6 Typical Tukutuku Bridge to Boardwalk - Seismic Connection Detail
Scale: 1:10@ A1 | 1:20@A3

Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
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Fittings:
All fittings to be stainless steel.
All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.
Concrete:
Type ED7 finish to all concrete piles. Refer to finishes schedule for selections.

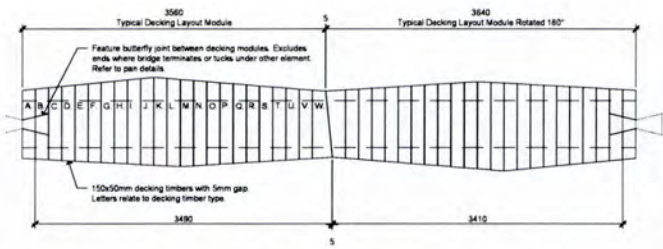
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D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	TM 18 10 18
No.	Revision	By Chk Date

Isthmus.
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Scale
Drawing Title
Typical 800-1050mm Tukutuku Bridge Details
Drawing Number
4010
Revision
1_3.607
Issued For
Tender
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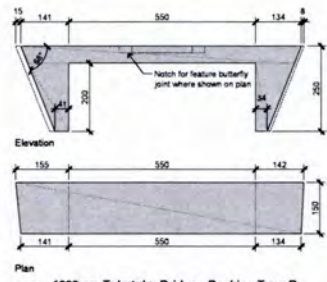
Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
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All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.
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All timbers to have 5mm rounded chamfer along all exposed edges.

C	Tender	TM 18 02 18
B	100% Detailed Design	TM 14 12 18
A	Draft Detailed Design	TM 30 11 18
No.	Revision	By Chk Date

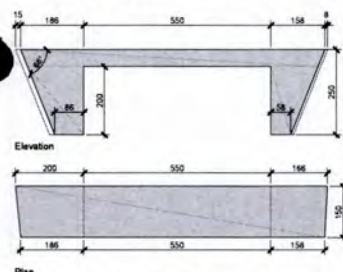
Isthmus.
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Scale
Drawing Title
Typical 800-1050mm Tukutuku Bridge Details
Drawing Number
4010
Revision
1_3.608
Issued For
Tender
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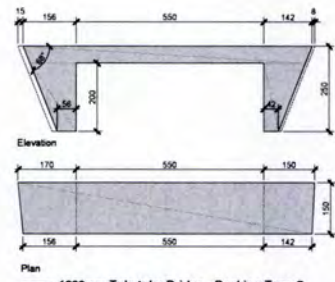
1 1200mm Tukutuku Bridge - Typical Decking Module Layout Detail
Scale: 1:3 @ A1 | 1:10 @ A3



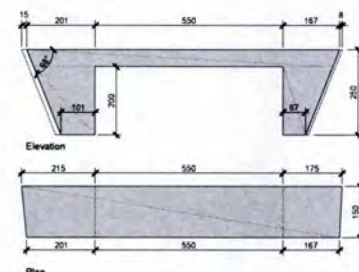
3 1200mm Tukutuku Bridge - Decking Type B
Scale: 1:3 @ A1 | 1:10 @ A3



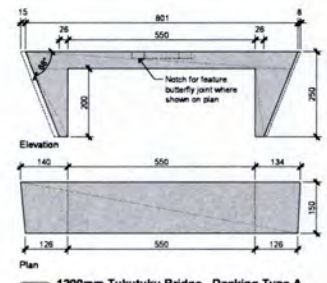
6 1200mm Tukutuku Bridge - Decking Type E
Scale: 1:3 @ A1 | 1:10 @ A3



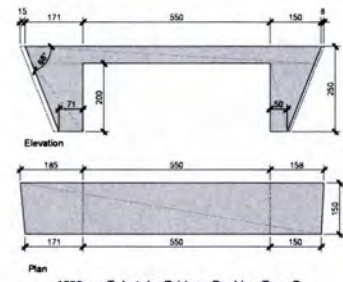
4 1200mm Tukutuku Bridge - Decking Type C
Scale: 1:3 @ A1 | 1:10 @ A3



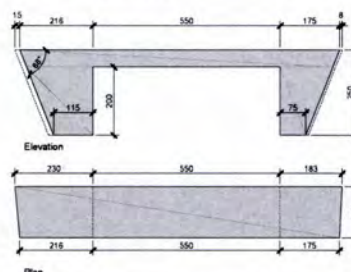
7 1200mm Tukutuku Bridge - Decking Type F
Scale: 1:3 @ A1 | 1:10 @ A3



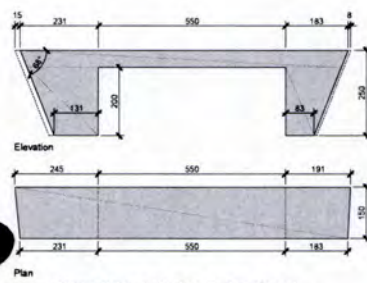
2 1200mm Tukutuku Bridge - Decking Type A
Scale: 1:3 @ A1 | 1:10 @ A3



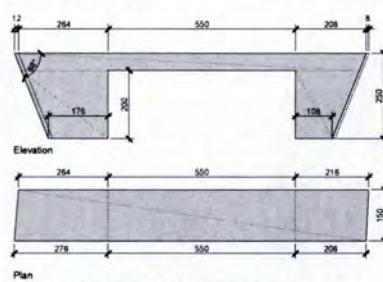
5 1200mm Tukutuku Bridge - Decking Type D
Scale: 1:3 @ A1 | 1:10 @ A3



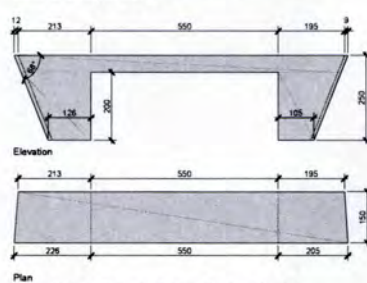
8 1200mm Tukutuku Bridge - Decking Type G
Scale: 1:3 @ A1 | 1:10 @ A3



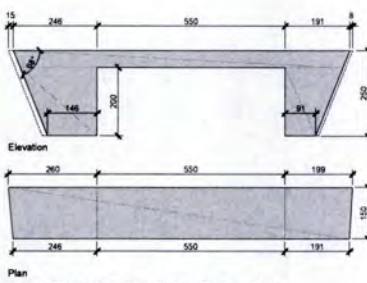
1 1200mm Tukutuku Bridge - Decking Type H
Scale: 1:3 @ A1 | 1:10 @ A3



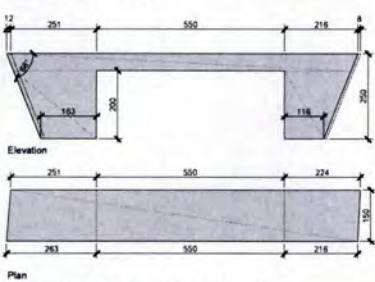
4 1200mm Tukutuku Bridge - Decking Type K
Scale: 1:3 @ A1 | 1:10 @ A3



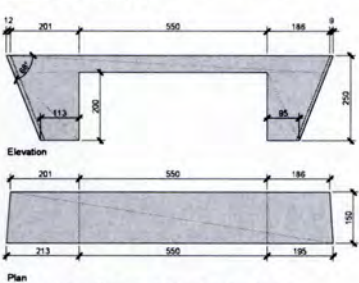
7 1200mm Tukutuku Bridge - Decking Type O
Scale: 1:3 @ A1 | 1:10 @ A3



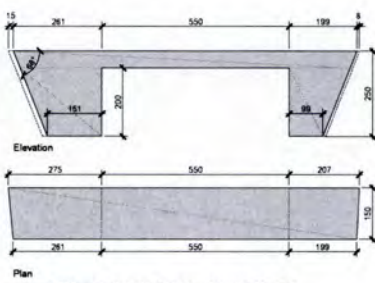
2 1200mm Tukutuku Bridge - Decking Type I
Scale: 1:3 @ A1 | 1:10 @ A3



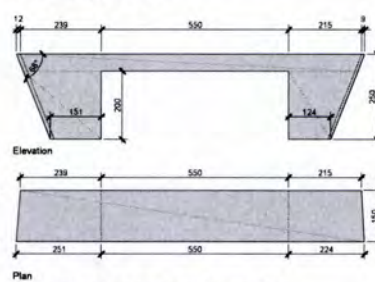
5 1200mm Tukutuku Bridge - Decking Type L
Scale: 1:3 @ A1 | 1:10 @ A3



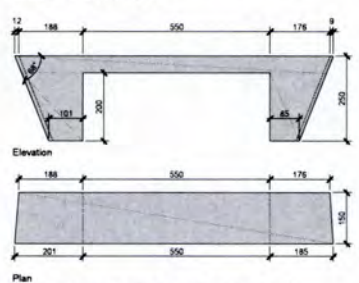
8 1200mm Tukutuku Bridge - Decking Type P
Scale: 1:3 @ A1 | 1:10 @ A3



3 1200mm Tukutuku Bridge - Decking Type J
Scale: 1:3 @ A1 | 1:10 @ A3



6 1200mm Tukutuku Bridge - Decking Type M
Scale: 1:3 @ A1 | 1:10 @ A3



9 1200mm Tukutuku Bridge - Decking Type Q
Scale: 1:3 @ A1 | 1:10 @ A3

Notes
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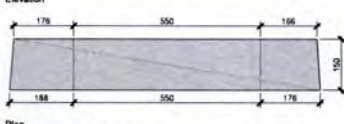
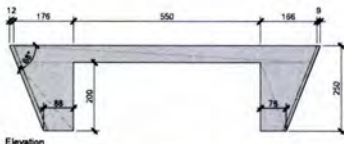
C	Tender	TM TM 18.02.19
B	100% Detailed Design	TM TM 14.12.18
A	Draft Detailed Design	TM TM 30.11.18
No.	Revision	By CkK Date

Isthmus.
Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Scale: 1:3 @ A1 | 1:10 @ A3
Drawing Title: Typical 800-1050mm Tukutuku Bridge Details
Drawing Number: 4010
Revision: 1_3.609
C
Issued For: Tender
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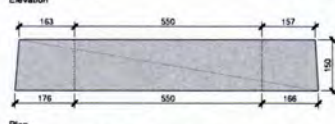
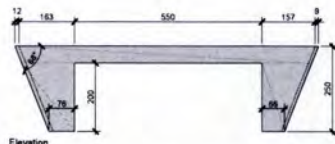
Notes
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C	Tender	TM TM 18.02.19
B	100% Detailed Design	TM TM 14.12.18
A	Draft Detailed Design	TM TM 30.11.18
No.	Revision	By CkK Date

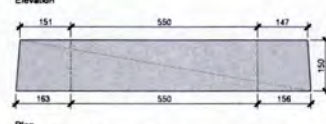
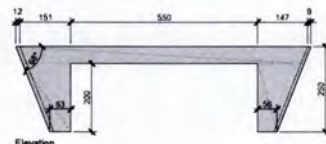
Isthmus.
Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Scale: 1:3 @ A1 | 1:10 @ A3
Drawing Title: Typical 800-1050mm Tukutuku Bridge Details
Drawing Number: 4010
Revision: 1_3.610
C
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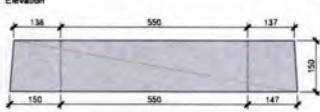
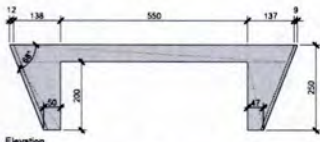
1 1200mm Tukutuku Bridge - Decking Type R
Scale: 1:5 @ A1 | 1:10 @A3



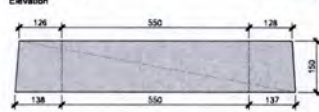
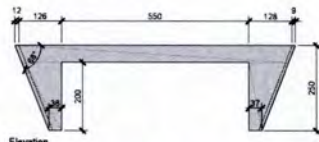
2 1200mm Tukutuku Bridge - Decking Type S
Scale: 1:5 @ A1 | 1:10 @A3



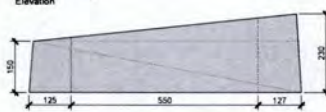
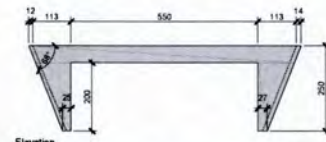
3 1200mm Tukutuku Bridge - Decking Type T
Scale: 1:5 @ A1 | 1:10 @A3



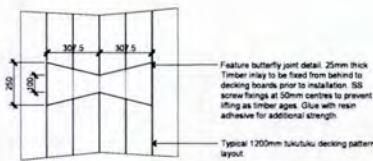
4 1200mm Tukutuku Bridge - Decking Type U
Scale: 1:5 @ A1 | 1:10 @A3



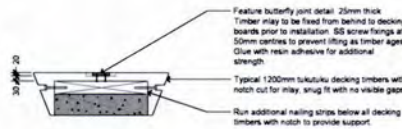
5 1200mm Tukutuku Bridge - Decking Type V
Scale: 1:5 @ A1 | 1:10 @A3



6 1200mm Tukutuku Bridge - Decking Type W
Scale: 1:5 @ A1 | 1:10 @A3



7 1200mm Tukutuku Bridge Feature Butterfly Joint - Plan
Scale: 1:10 @ A1 | 1:20 @A3

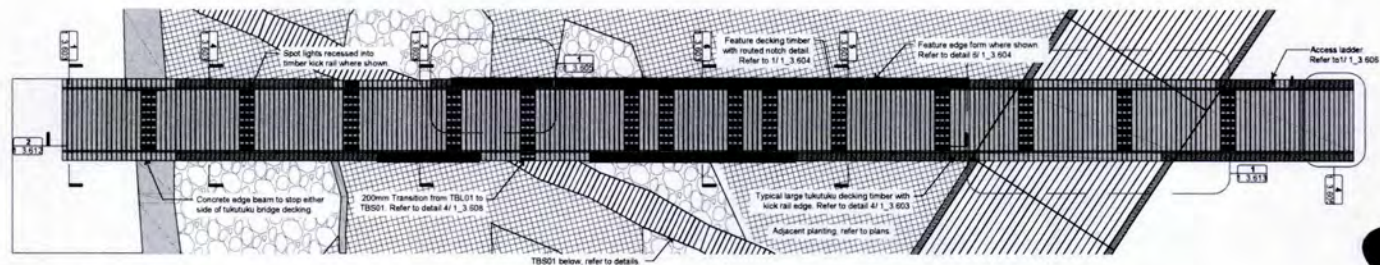


8 1200mm Tukutuku Bridge Feature Butterfly Joint - Detail
Scale: 1:10 @ A1 | 1:20 @A3

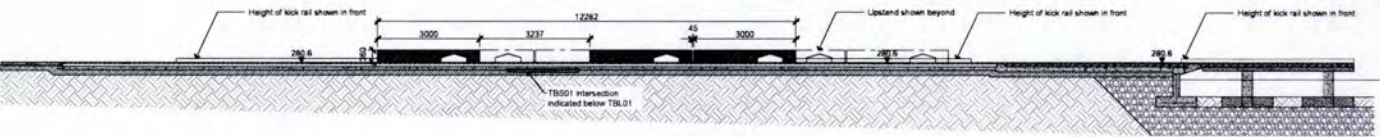
Notes:
Refer to drawing L_3 100 for all general, paving, furniture, timber and planting notes.
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C Tender TM TM 18.02.19
B 100% Detailed Design MC TM 14.12.18
A Draft Detailed Design MC TM 30.11.18
No. Revision By Chk Date

Isthmus
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Scale
AS SHOWN Drawing Title
AS SHOWN **Typical 800-1050mm Tukutuku Bridge Details**
Job No. **4010** Drawing Number **1_3_611** Revision **C**
Issued For
Tender
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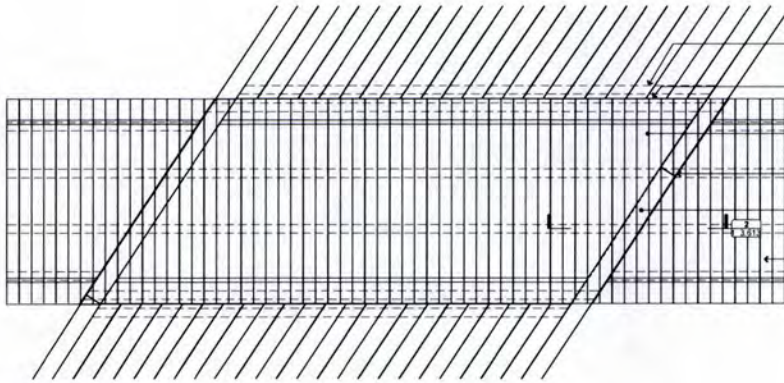
1 Stage 1 - Typical 2400mm Tukutuku Type Bridge 1 (TBL01) - Plan
Scale: 1:50 @ A1 | 1:100 @A3



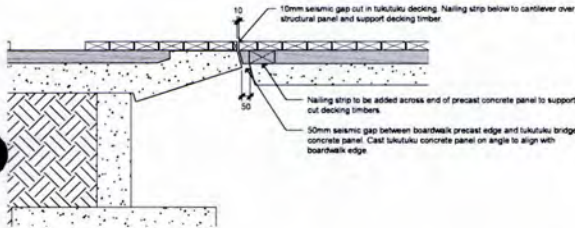
2 Stage 1 - Typical 2400mm Tukutuku Bridge Type 1 (TBL01) - Seat Upstand Section
Scale: 1:50 @ A1 | 1:100 @A3

D Tender MC TM 18.02.19
C 100% Detailed Design MC TM 14.12.18
B Draft Detailed Design MC TM 30.11.18
A Draft Detailed Design MC TM 15.11.18
No. Revision By Chk Date

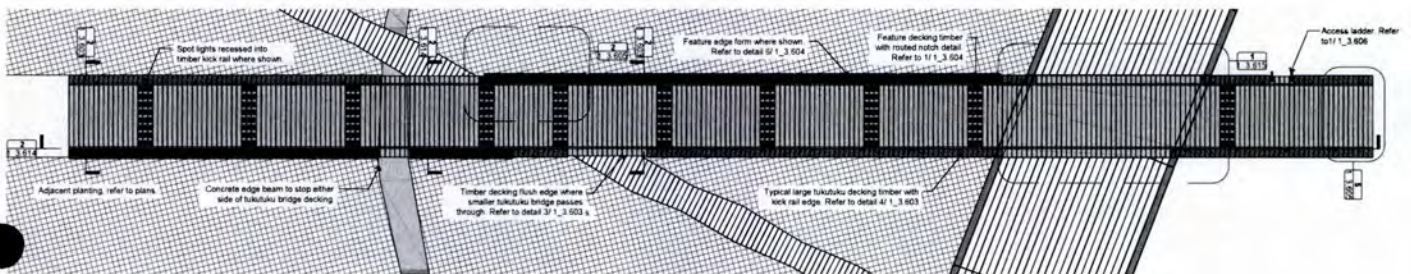
Isthmus
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development
Scale
AS SHOWN Drawing Title
AS SHOWN **Tukutuku Bridge TBL01 Details**
Job No. **4010** Drawing Number **1_3_612** Revision **D**
Issued For
Tender
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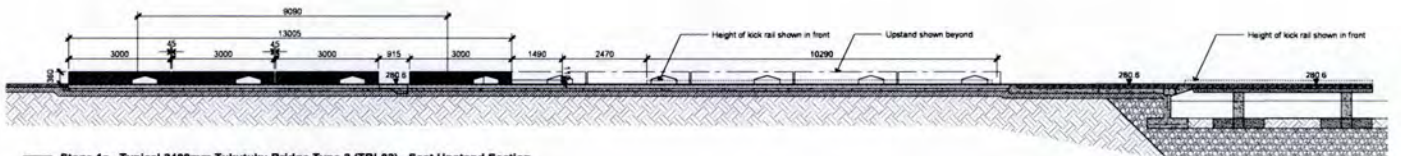
1 Stage 1 - Tukutuku Type 1 (TBL01) Bridge to Boardwalk - Decking Plan
Scale: 1:300 A1 | 1:400 A3



2 Stage 1 & 1a - Typical Tukutuku Type 1 & 2 Bridge to Boardwalk - Seismic Connection Detail
Scale: 1:150 A1 | 1:200 A3



1 Stage 1a - Typical 2400mm Tukutuku Bridge Type 2 (TBL02) - Plan
Scale: 1:500 A1 | 1:1000 A3



2 Stage 1a - Typical 2400mm Tukutuku Bridge Type 2 (TBL02) - Seat Upstand Section
Scale: 1:500 A1 | 1:1000 A3

Notes:
Refer to drawing 1_3_100 for all general, paving, furniture, timber and planting notes
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Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping
All timbers to have 5mm rounded chamfer along all exposed edges
Concrete
Type E28 finish to all concrete piles. Refer to finishes schedule for selections.
Precast Panels
Allow for precast edge specials where tukutuku decking cuts through. Raised edge to drop to allow for decking. 5mm gap from decking timber to raised edge

C	Tender	MC TM 18.02.19
B	100% Detailed Design	MC TM 14.12.18
A	Draft Detailed Design	MC TM 30.11.18
No.	Revision	By C/AK Date

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Scale	Drawing Title
AS SHOWN AS SHOWN BY	Tukutuku Bridge TBL01 Details
Job No.	Drawing Number
4010	1_3.613
	Revision
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D	Tender	MC TM 18.02.19
C	100% Detailed Design	MC TM 14.12.18
B	Draft Detailed Design	MC TM 30.11.18
A	Draft Detailed Design	MC TM 15.11.18
No.	Revision	By C/AK Date

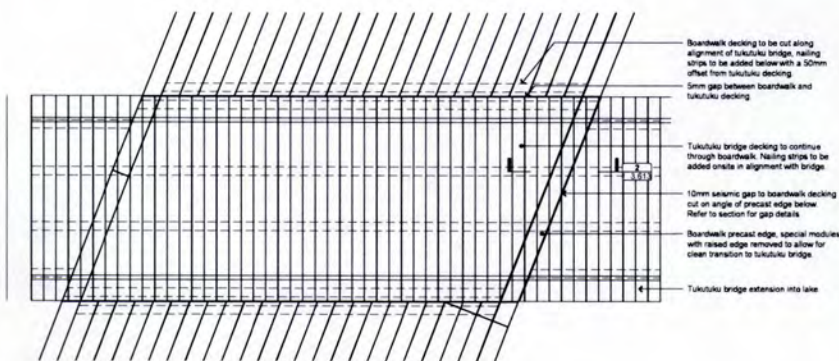
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Client
Rotorua Lakes Council

Job Name
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Scale	Drawing Title
AS SHOWN AS SHOWN BY	Tukutuku Bridge TBL02 Details
Job No.	Drawing Number
4010	1_3.614
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1 Stage 1a - Tukutuku Type 2 (TBL02) Bridge to Boardwalk - Decking Plan
Scale: 1:50 @ A1 | 1:40 @ A3

Notes

Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.

All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts with engineers details take precedence.

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Fittings

All fittings to be stainless steel.

All fittings on decking timbers to be timber plugged with timber and grain direction to match decking.

Timber

All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete

Type E05 finish to all concrete piles. Refer to finishes schedule for selections.

Precast Panels

Allow for precast edge specials where tukutuku decking cuts through. Raised edge to drop to allow for decking. 5mm gap from decking timber to raised edge.

D	Tender	MC TM 18 02 19
C	100% Detailed Design	MC TM 14 12 18
B	Draft Detailed Design	MC TM 30 11 18
A	Draft Detailed Design	MC TM 15 11 18
No.	Revision	By Chk Date

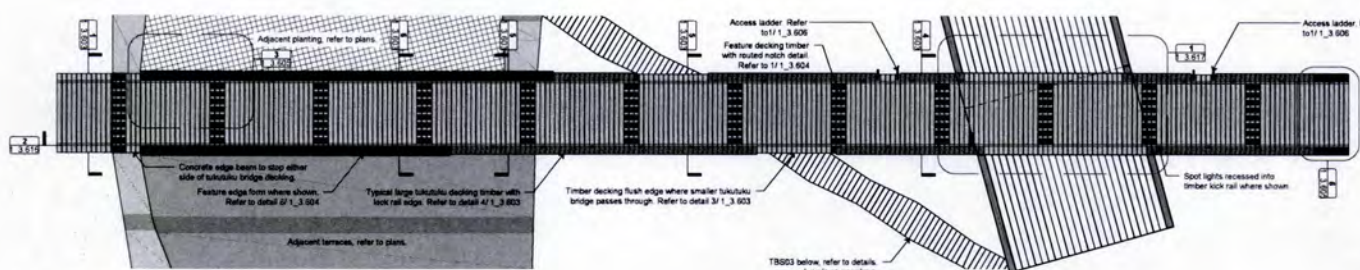
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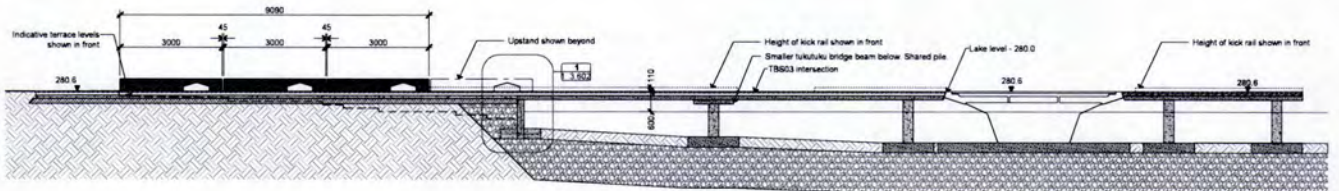
Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	Tukutuku Bridge
AS SHOWN	TBL02 Details
Job No	Drawing Number
4010	1_3_615
	Revision
	D

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1 Stage 1a - Typical 2400mm Tukutuku Type 3 (TBL03) Bridge - Plan
Scale: 1:50 @ A1 | 1:40 @ A3



2 Stage 1a - Typical 2400mm Tukutuku Type Bridge (TBL03) - Seat Upstand Section
Scale: 1:50 @ A1 | 1:40 @ A3

D	Tender	MC TM 18 02 19
C	100% Detailed Design	MC TM 14 12 18
B	Draft Detailed Design	MC TM 30 11 18
A	Draft Detailed Design	MC TM 15 11 18
No.	Revision	By Chk Date

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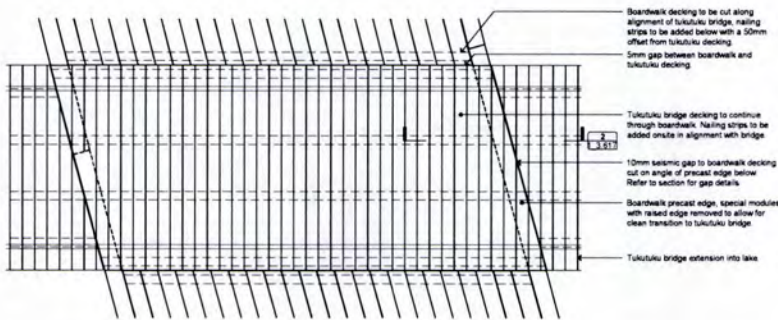
Client
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Job Name
Rotorua Lakefront Development

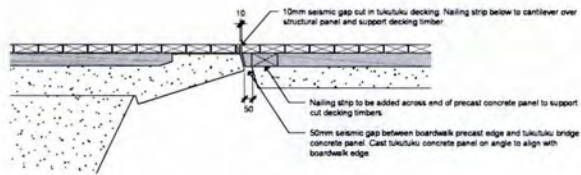
Scale	Drawing Title
AS SHOWN	Tukutuku Bridge
AS SHOWN	TBL03 Details
Job No	Drawing Number
4010	1_3_616
	Revision
	D

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1 Stage 1a - Tukutuku Type 3 (TBL03) Bridge to Boardwalk - Decking Plan
Scale: 1:200 A1 (1:400@A3)



2 Stage 1a - Tukutuku Type 3 Bridge to Boardwalk - Seismic Connection Detail
Scale: 1:100 A1 (1:200@A3)

All dimensions, levels and grades are to be confirmed on site prior to fabrication.

Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.

Finings
All finings to be stainless steel.

All finings on decking timbers to be timber plugged with timber and grain direction to match decking.

Timber
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.

All timbers to have 5mm rounded chamfer along all exposed edges.

Concrete
Type 006 finish to all concrete piles. Refer to finishes schedule for selections.

Precast Panels
Allow for precast edge specials where tukutuku decking cuts through. Raised edge to drop to allow for decking. 5mm gap from decking timber to raised edge.

C	Tender	MC TM 18.02.19
B	100% Detailed Design	MC TM 14.12.18
A	Draft Detailed Design	MC TM 30.11.18
No.	Revision	By C/AK Date

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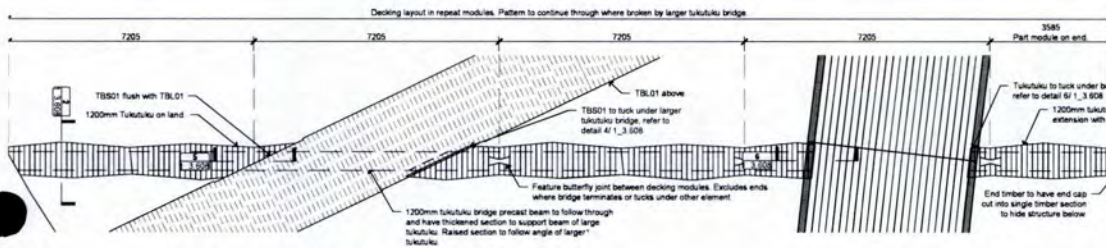
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Job Name
Rotorua Lakefront Development

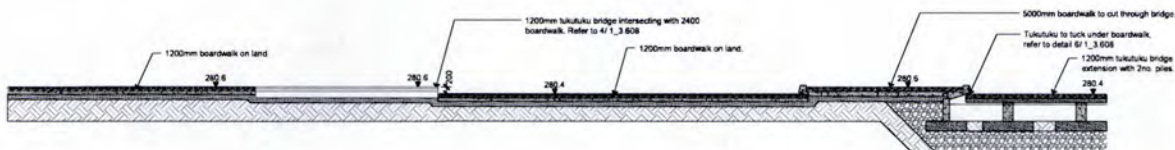
Scale	Drawing Title
AS SHOWN	Tukutuku Bridge
AS SHOWN	TBL03 Details
Job No.	Drawing Number
4010	1_3.617
	Revision
	C

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1 Stage 1a - 1200mm Tukutuku Type 1 (TBS01) Bridge - Plan
Scale: 1:500 A1 (1:1000@A3) north



2 Stage 1a - 1200mm Tukutuku Type 1 (TBS01) Bridge - Section
Scale: 1:500 A1 (1:1000@A3)

C	Tender	MC TM 18.02.19
B	100% Detailed Design	MC TM 14.12.18
A	Draft Detailed Design	MC TM 30.11.18
No.	Revision	By C/AK Date

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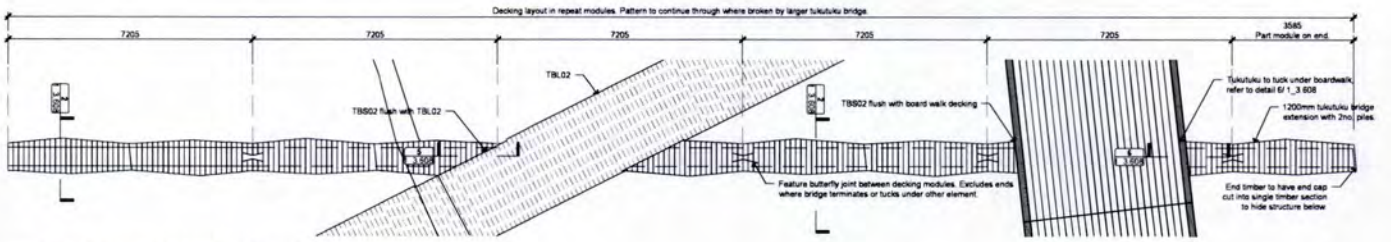
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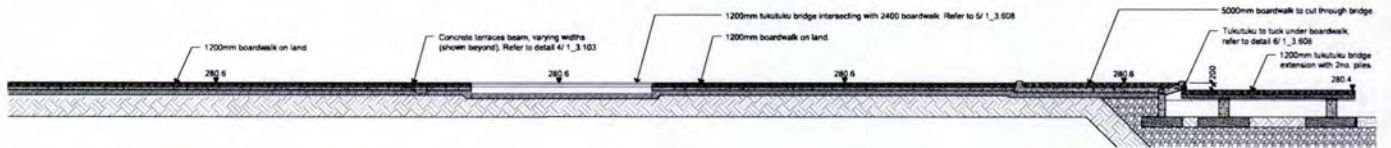
Scale	Drawing Title
AS SHOWN	Tukutuku Bridge
AS SHOWN	TBS01 Details
Job No.	Drawing Number
4010	1_3.618
	Revision
	C

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1 Stage 1a - 1200mm Tukutuku Type 2 (TBS02) Bridge - Plan
Scale: 1:50@ A1 | 1:100@A3 north



2 Stage 1a - 1200mm Tukutuku Type 2 (TBS02) Bridge - Section
Scale: 1:50@ A1 | 1:100@A3

C	Tender	MC TM 18.02.18
B	100% Detailed Design	MC TM 14.12.18
A	Draft Detailed Design	MC TM 30.11.18
No.	Revision	By Chk Date

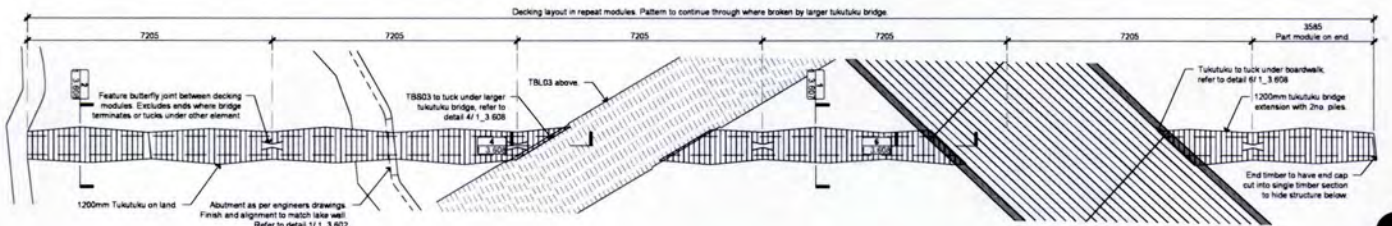
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Rotorua Lakes Council

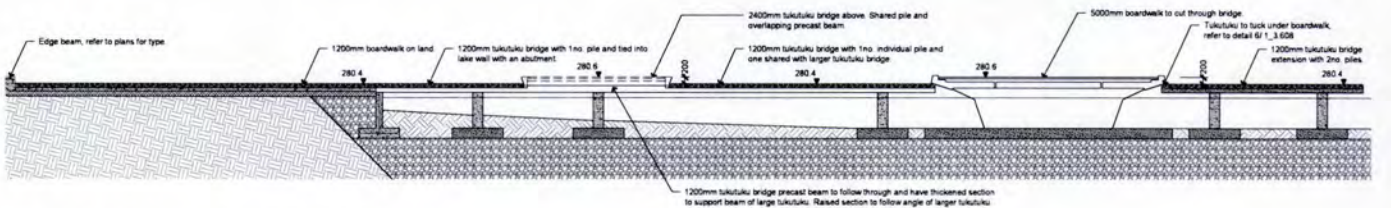
Job Name
Rotorua Lakefront
Development

Scale	Drawing Title
AS SHOWN	Tukutuku Bridge
AS SHOWN	TBS02 Details
Job No	Drawing Number
4010	1_3.619
Issued For	Revision
	C

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1 Stage 1a - 1200mm Tukutuku Type 3 (TBS03) Bridge - Plan
Scale: 1:50@ A1 | 1:100@A3 north



2 Stage 1a - 1200mm Tukutuku Type 3 (TBS03) Bridge - Section
Scale: 1:50@ A1 | 1:100@A3

C	Tender	MC TM 18.02.18
B	100% Detailed Design	MC TM 14.12.18
A	Draft Detailed Design	MC TM 30.11.18
No.	Revision	By Chk Date

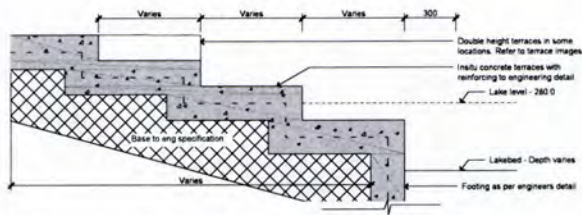
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Rotorua Lakes Council

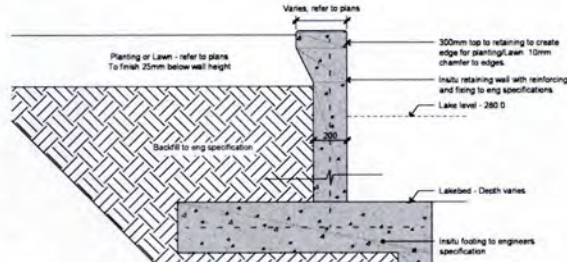
Job Name
Rotorua Lakefront
Development

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AS SHOWN	Tukutuku Bridge
AS SHOWN	TBS03 Details
Job No	Drawing Number
4010	1_3.620
Issued For	Revision
	C

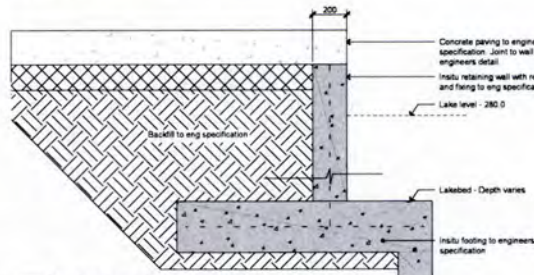
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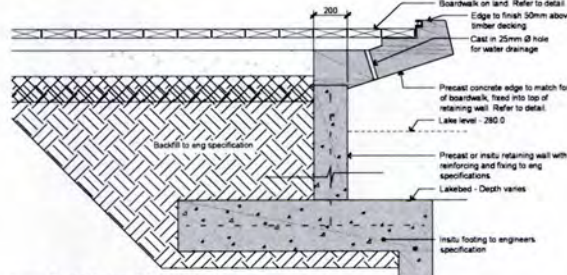
1 Typical Lakewall Type LW01 - Section
Scale: 1:10 @ A1 | 1:20 @ A3



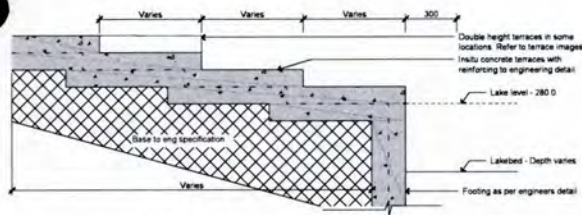
2 Typical Lakewall Type LW02 - Section
Scale: 1:10 @ A1 | 1:20 @ A3



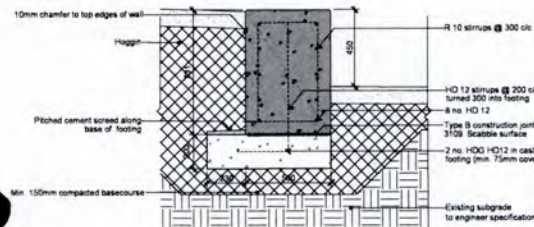
3 Typical Lakewall Type LW03 - Section
Scale: 1:10 @ A1 | 1:20 @ A3



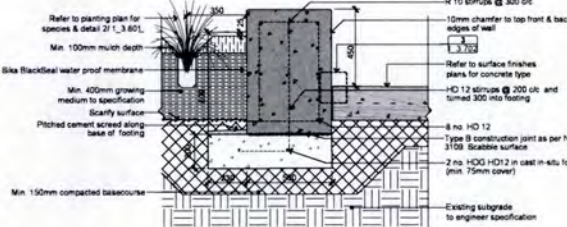
4 Typical Lakewall Type LW04 - Section
Scale: 1:10 @ A1 | 1:20 @ A3



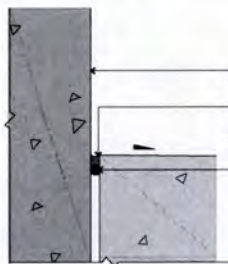
5 Typical Lakewall Type LW05 - Section
Scale: 1:10 @ A1 | 1:20 @ A3



1 Typical 500mm Concrete Wall Seat (WS01) / Hoggin Detail
Scale: 1:10 @ A1 | 1:20 @ A3



2 Typical 500mm Concrete Wall Seat (WS01) / Garden Detail
Scale: 1:10 @ A1 | 1:20 @ A3



3 Typical Wall / Concrete Paving Interface Detail
Scale: 1:10 @ A1 | 1:20 @ A3

Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fixings:
All fixings to be stainless steel.
All fixings on decking timbers to be timber plugged with timber and grain direction to match decking.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.

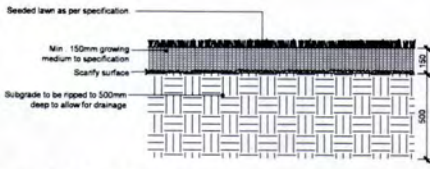
F	Tender	MC TM 18 02 18
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 18 10 18
		MC TM 28 09 18
No. Revision	By	Chk Date

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Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Scale: AS SHOWN
Drawing Title: Typical Lake Wall Details
Job No: 4010
Drawing Number: 1_3_701
Revision: F
Issued For: Tender
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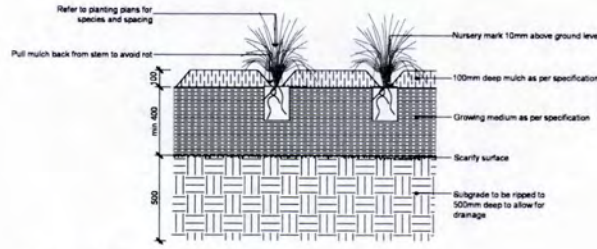
Notes:
Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
All structural elements are as per engineers drawings. Isthmus drawings are for form and finish only. Where structural detail conflicts arise engineers details take precedence.
All dimensions, levels and grades are to be confirmed on site prior to fabrication.
Shop drawings are required and are to be reviewed by landscape architect prior to construction. Prototypes to follow shop drawings and be reviewed again prior to fabrication of remaining modules.
Fixings:
All fixings to be stainless steel.
All fixings on decking timbers to be timber plugged with timber and grain direction to match decking.
Timber:
All Hardwood Timber to be FSC certified unless otherwise labeled. All timber to be fully seasoned No. 1 grade, free from splitting, knots, cupping or warping.
All timbers to have 5mm rounded chamfer along all exposed edges.

F	Tender	MC TM 18 02 18
D	100% Detailed Design	MC TM 14 12 18
C	Draft Detailed Design	MC TM 30 11 18
B	Draft Detailed Design	MC TM 15 11 18
A	Draft Detailed Design	MC TM 18 10 18
		MC TM 28 09 18
No. Revision	By	Chk Date

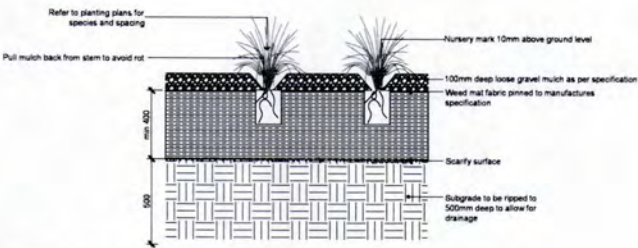
Isthmus.
Client: Rotorua Lakes Council
Job Name: Rotorua Lakefront Development
Scale: AS SHOWN
Drawing Title: Typical 500mm Concrete Wall Seat Details
Job No: 4010
Drawing Number: 1_3_702
Revision: F
Issued For: Tender
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1 Typical Lawn - Lawn Detail
Scale: 1:10 @ A1 | 1:20 @ A3



2 Typical Planting - Garden Bed Detail
Scale: 1:10 @ A1 | 1:20 @ A3



3 Typical Planting - Gravel Mulch Garden Bed Detail
Scale: 1:10 @ A1 | 1:20 @ A3

Notes:
Refer to drawing 1_0_100 for all general paving, furniture, timber and planting notes.
Tree pits to be excavated and cleaned of all contaminated materials such as oil, diesel, cement, weeds and the like, which could be deleterious to the health of the new tree roots or soil health before topsoil is placed.
All topsoil for trees and planting to be imported. Refer to specification for mix selections.
Subgrade below all trees, planting and grass to be ripped to 500mm deep to allow for drainage.
Mulch type varies throughout design, refer to plans for selections.

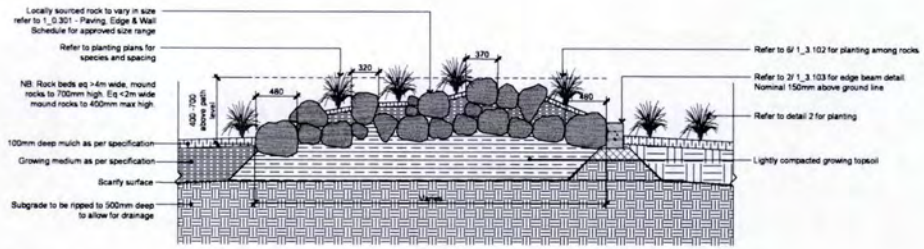
F	Tender	MC TM 18 02 18
E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18
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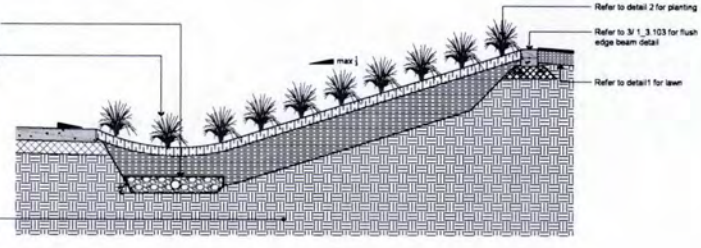
Scale	Drawing Title
AS SHOWN	Softscape Details
Job No	Drawing Number
4010	1_3_801
	Revision
	F
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	Tender

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1 Typical Planting - Rock Garden Detail
Scale: 1:20 @ A1 | 1:40 @ A3

Notes:
Refer to drawing 1_3_100 for all general paving, furniture, timber and planting notes.
Tree pits to be excavated and cleaned of all contaminated materials such as oil, diesel, cement, weeds and the like, which could be deleterious to the health of the new tree roots or soil health before topsoil is placed.
All topsoil for trees and planting to be imported. Refer to specification for mix selections.
Subgrade below all trees, planting and grass to be ripped to 500mm deep to allow for drainage.
Mulch type varies throughout design, refer to plans for selections.



2 Typical Planting - Spa to Swale Detail
Scale: 1:20 @ A1 | 1:40 @ A3

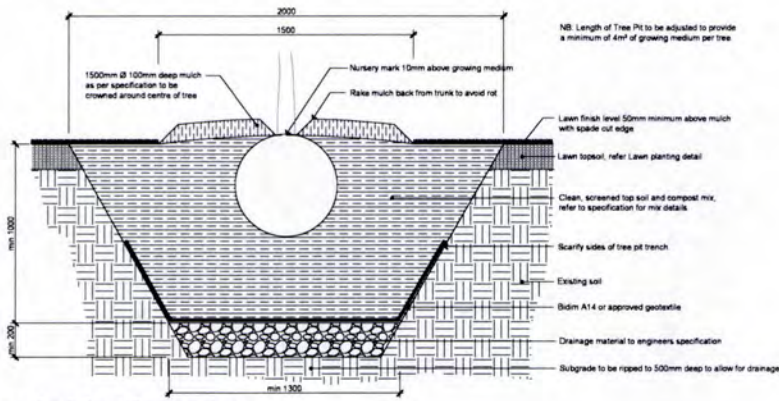
F	Tender	MC TM 18 02 18
E	100% Detailed Design	MC TM 14 12 18
D	Draft Detailed Design	MC TM 30 11 18
C	Draft Detailed Design	MC TM 15 11 18
B	Draft Detailed Design	MC TM 19 10 18
A	Draft Detailed Design	MC TM 28 09 18
No.	Revision	By Chk Date

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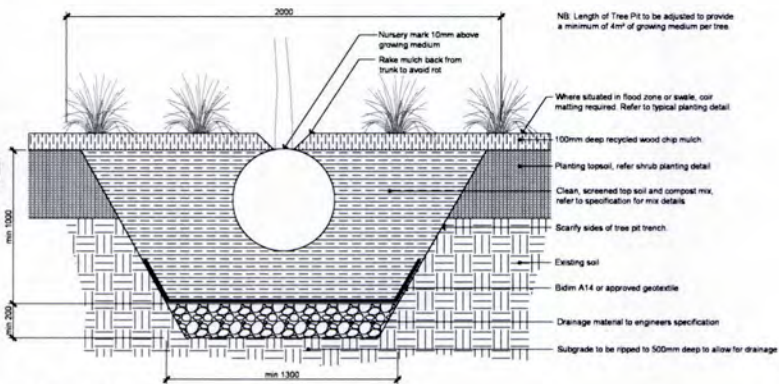
Client
Rotorua Lakes Council
Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	Softscape Details
Job No	Drawing Number
4010	1_3_802
	Revision
	F
	Issued For
	Tender

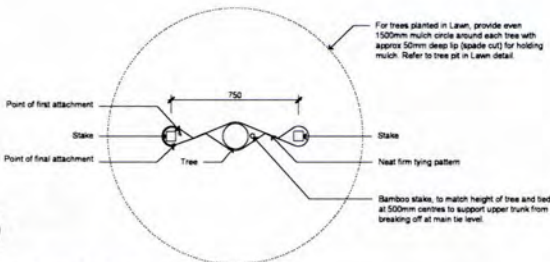
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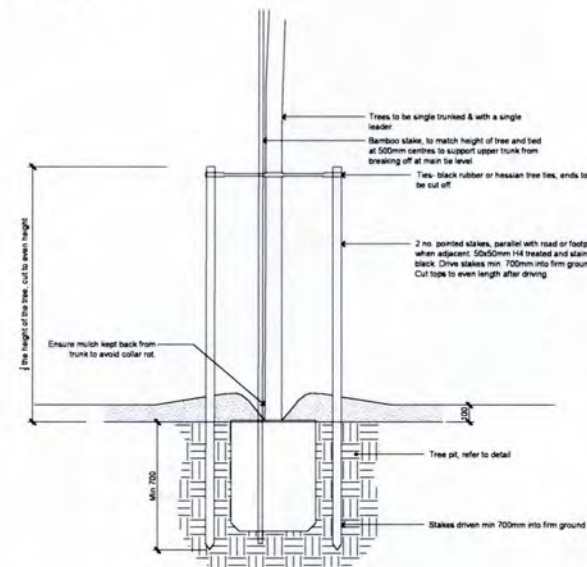
1 Tree Pit Type 1 - Tree in Lawn Section
Scale: 1:100 A1 | 1:200 A3



2 Tree Pit Type 2 - Tree in Garden Section
Scale: 1:100 A1 | 1:200 A3



1 Typical Tree Staking - Plan
Scale: 1:100 A1 | 1:200 A3



2 Typical Tree Staking - Section
Scale: 1:100 A1 | 1:200 A3

Notes.

Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
Tree pits to be excavated and cleaned of all contaminated materials such as oil, diesel, cement, weeds and the like, which could be deleterious to the health of the new tree roots or soil health before topsoil is placed.

All topsoil for trees and planting to be imported. Refer to specification for mix selections.

Length of Tree Pit to be adjusted to provide a minimum of 4m² of growing medium per tree.

Details assume subsoil drainage is not required due to free draining soil. This is to be confirmed by engineer prior to construction.

Subgrade below all trees, planting and grass to be ripped to 500mm deep to allow for drainage.

No.	Revision	By	CHK	Date
F	Tender			MC TM 18.02.19
E	100% Detailed Design			MC TM 14.12.18
D	Draft Detailed Design			MC TM 30.11.18
C	Draft Detailed Design			MC TM 15.11.18
B	Draft Detailed Design			MC TM 19.10.18
A	Draft Detailed Design			TM TM 28.09.18

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Scale	Drawing Title
AS SHOWN	Typical Tree Pit Details
BY	
Job No	Drawing Number
4010	1_3.803
	Revision
	F

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Notes.

Refer to drawing 1_0 100 for all general paving, furniture, timber and planting notes.
Tree pits to be excavated and cleaned of all contaminated materials such as oil, diesel, cement, weeds and the like, which could be deleterious to the health of the new tree roots or soil health before topsoil is placed.

All topsoil for trees and planting to be imported. Refer to specification for mix selections.

Subgrade below all trees, planting and grass to be ripped to 500mm deep to allow for drainage.

Mulch type varies throughout design, refer to plans for selections.

No.	Revision	By	CHK	Date
F	Tender			MC TM 18.02.19
E	100% Detailed Design			MC TM 14.12.18
D	Draft Detailed Design			MC TM 30.11.18
C	Draft Detailed Design			MC TM 15.11.18
B	Draft Detailed Design			MC TM 19.10.18
A	Draft Detailed Design			TM TM 28.09.18

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Client
Rotorua Lakes Council

Job Name
Rotorua Lakefront Development

Scale	Drawing Title
AS SHOWN	Typical Tree Stake Details
BY	
Job No	Drawing Number
4010	1_3.804
	Revision
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