From: OfficialInformation@my.ccc.govt.nz
Sent: Friday, 24 September 2021 11:40 am
To: [redacted]
Subject: Fwd: [Ticket: 457174] Fulton Hogan Contract

Christchurch City Council

Dear [redacted]

Thank you for your email, received on 18. August You requested the following information, under the Local Government Official Information and Meetings Act 1987 (LGOIMA):

"I would like a copy of the contract between Fulton Hogan and the CCC for the high street upgrade".

As per your discussion with Lindsay White, the site access is stipulated in Clause 1.4 of the High Street specification (link below). It states:

Construction Disruption Minimisation Plan

At least 10 working days prior to work commencing on site a detailed construction disruption minimization plan shall be submitted to the Engineer for acceptance.

This is to include as a minimum:

- *Management of 24/7 vehicle and pedestrian access to residential, business, etc.*
- *Signage showing which businesses, in particular, are open for business.*
- *Further to clause 5.8 on page B23 construction noise mitigation measure suitable for the adjacent property use.*

Maintaining vehicle access

The Contractor shall liaise with local business owners to ensure his/her work minimizes disruption to local businesses. The Contractor shall maintain access at all times for local businesses to access their properties.

Please also find attached a link below to the following tender documents that form the basis of the commercial contract with Fulton Hogan:

- *Tender document for City Upgrades Contract*
- *High Street Specification*

https://christchurchcitycouncil.sharefile.com/d-sa37abbc5c04c43efb105c2342c4b0b8d

I hope this information assists, however please let me know if you have further questions.

You have the right to ask the Ombudsman to investigate and review our decision. Complaints can be sent by email to info@ombudsman.parliament.nz.

Publication of responses to LGOIMA requests

Please note: our LGOIMA responses may be published on the Christchurch City Council website a month after they have been responded to, with requesters' personal details withheld. If you have any concerns about this please contact the Official Information team on officialinformation@ccc.govt.nz.

Yours sincerely,

Gypsy Stevenson
Graduate Advisor
Official Information Team

Contact us

03 941 8999

Visit a Service Centre

REQUEST FOR PROPOSAL FOR NZS 3910:2013

For the provision of Central City Roading Upgrades

RFP Number:	20873604
Date of issue:	Mon 14/10/19
Closing Date and Time:	Midday Wed 27/11/19
Hardcopy submission of Proposal must be delivered to:	Christchurch City Council Proposal Box (Ground Floor Reception) Civic Offices 53 Hereford Street Christchurch 8011
Electronic submission of Proposal must be uploaded to:	www.gets.govt.nz website
RFP information contact person:	Hannah Smith Hannah.Smith@ccc.govt.nz

Table of Contents

Christchurch City Council

Join us in making Christchurch a city of opportunity for all

Christchurch is New Zealand's second-largest city and the gateway to the South Island.

We are one of the city's largest businesses and the second-largest employer in the South Island, with more than 3,000 staff working in sites across Christchurch and Banks Peninsula.

We provide services and facilities to more than 380,000 residents, plus visitors. From rubbish collection and recycling, to cycle ways, libraries, sports and recreation facilities, events and festivals we do it all – and a lot in between.

Our vision is to make Christchurch a city of opportunity for all – open to new ideas, new people and new ways of doing things – a city where anything is possible.

As one of the largest 'buyers' in the region, our Sustainable Procurement Programme seeks value for money for ratepayers, and also looks to use our spending to advance the social, environmental and economic wellbeing of Christchurch residents.

Alongside the usual procurement goals of value, quality, timeliness, ethical behaviour and fair dealing, we are focused on the principles of sustainability:

- Enhancing the environment
- Fostering local business
- And promoting diversity, acceptance, inclusiveness and access for people of all abilities.

We want to work with like-minded suppliers - businesses with practices that enhance the environment, support the local economy and advance wellbeing in Christchurch.

Tell us how we can work together to help make Christchurch a city where anything is possible.

Section A – Summary Key Details

1. Information and background

The purpose of this RFP is to invite Respondents to submit their Proposals for the Central City Roading Upgrades.

The objective of this RFP process is to obtain sufficiently detailed information from Respondents about their respective organisations and their ability to provide the Contract Works. This enables the Council to select and appoint a Supplier to provide the Contract Works.

To align with our strategic aspirations, by awarding the contract to a Supplier, the Council intends to achieve:

- Value for money for Christchurch ratepayers and the wider community:
    - By a robust and competitive procurement process that complies with NZTA requirements
    - By bundling the work of two separate projects (Hereford Street and Victoria Street) to realise cost savings through economies of scale
- Environmental sustainability:
    - By ensuring the appointed contractor has policies and procedures in place for handling of the environmental risks associated with the contract
    - By seeking the contractor to undertake the work in an environmentally sustainable manner
- Social responsibility:
    - By ensuring the appointed contractor has an acceptable methodology and staff to manage and mitigate the impact on the community during the construction period
    - By ensuring the appointed contractor complies with the requirements of the Health and Safety Act
    - By seeking the contractor to deliver the work in a way that allows business owners to continue their business during the term of the contract and to allow people to access these businesses safely
- Economic benefit:
    - By ensuring through the procurement process that local resources are utilised wherever practicable
- Efficiency and effectiveness in the delivery of the Contract Works:
    - By ensuring the appointed contractor has an acceptable methodology that addresses the needs of the local and wider community, and the project budget
    - By seeking the contractor to deliver the work as quickly as possible and in a way that allows business owners to continue their business during the term of the contract
    - By ensuring the contractor maintains effective communication with business and property owners, and the general public throughout the term of the contract in order to respond to stakeholder needs.

The Council invites Respondents to provide suggestions on how they might work with the Council to minimise costs and/or increase efficiency.

Fulton Hogan were involved in a consultancy capacity with a previous iteration of the designs for the Victoria Street works.

2. Form and Duration of Contract

The draft form of contract is based on NZS 3910:2013 – Conditions of Contract for Building and Civil Engineering Construction (with Special Conditions of Contract) attached to this RFP in **Section E**.

3. Indicative Timeline

Below is an indicative timeline for the RFP process. The Council reserves the right to modify the steps and/or dates at any time, at its sole discretion.

RFP issued	**Mon 14/10/19**
Last date for questions and requests for explanatory notices from Respondents	Wed 20/11/19
RFP Closing Date and Time	**Midday Wed 27/11/19**
Evaluation period commences	November / December 2019
Clarification and confirmation of Proposals	December 2019 / January 2020
Respondents advised of outcome of RFP	February 2020
Indicative Date of Acceptance of Tender	**Thu 13/02/20**

Section B – Tender Documents

The Tender Documents comprise:

Tender Document	Name
RFP	20873604 Central City Roading Upgrades_RFP
Contract	20873604 Central City Roading Upgrades_Contract
Specifications	20873604 Central City Roading Upgrades_Contract Specification
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_D00 to D05
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_D06
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_D07
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_Safety Fence
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_Traffic Signals_Colombo TS101103
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_Traffic Signals_Oxford TS122402
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Drawings_Water Fountain
Drawings	20873604 Central City Roading Upgrades_SP1 Hereford_Lighting_Issue B
Drawings	20873604 Central City Roading Upgrades_SP2 Victoria_Drawings 11-10-19_Tender Issue A
EMP	20873604 Central City Roading Upgrades_SP1 Hereford_EMP
EMP	20873604 Central City Roading Upgrades_SP2 Victoria_EMP
Appendix	20873604 Central City Roading Upgrades_Consents (CCC Global Consents)
Appendix	20873604 Central City Roading Upgrades_SP1 Hereford_Accidental Discovery Protocol
Appendix	20873604 Central City Roading Upgrades_SP1 Hereford_Bore Beam Pothole Details
Appendix	20873604 Central City Roading Upgrades_SP1 Hereford_Pothole Record Sheet
Appendix	20873604 Central City Roading Upgrades_SP1 Hereford_SW_SiD Register
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_10844 Coal Tar Test
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Accidental Discovery Protocol
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Archaeological Authority Conditions
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Archaeological Management Plan
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borehole Report 106 Victoria St
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borehole Report 165 Victoria St
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borehole Report 379 Montreal St
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borehole Report 57 Victoria St
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borehole Report 62 Victoria St
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borelogs Bealey to Kilmore Benkelman Beam
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borelogs Bealey to Kilmore Boreholes
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Borelogs Bealey to Salisbury Kilmore
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Coal Tar Report Kilmore to Bealey
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_DSI Report
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_GPR Survey R350201 S01-S08
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_GPR Tram Track & Concrete Base

Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Pothole for Services
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Pothole for Services 12da
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Pothole for Services Instalment 1
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Potholes for Tram Track Depth
Appendix	20873604 Central City Roading Upgrades_SP2 Victoria_Tree Survey Data
Appendix	20873604 Central City Roading Upgrades_SP1 Hereford_Tree Pit Details
Schedule of Prices	20873604 Central City Roading Upgrades_Schedule of Prices

The scope of the Contract Works

There are two packages of work in the Contract that are separated into two Separable Portions:

- Separable Portion (SP) 1: Hereford Street works
- Separable Portion (SP) 2: Victoria Street works

The contract agreement sets out that the Principal may, in its sole and absolute discretion, instruct an additional works package in relation to roading upgrade works at High Street, Christchurch (High Street Works) as described in the contract agreement.

As described in the Contract, Specifications, Drawings, appendices, Schedule of Prices; the works comprise:

- SP 1 (Hereford Street Works)
  - Provision of all traffic management to complete the works.
  - Pavement renewal from Manchester Street to Cambridge Terrace (inclusive of road pavement, kerb and channel, and footpaths)
  - Street furniture, including raised planters for trees (incorporating seating and LED lighting), barrier fence, cycle stands, rubbish bins, drinking fountain
  - Upgraded signals and phasing changes at Hereford/Colombo and Hereford/Oxford intersections
  - New tram catenary poles and support wiring
  - Ducting for crime cameras
  - Replacement of water main between Colombo Street and Oxford Terrace
  - Street lighting upgrade
  - Localised crack injection, sectional repairs and lid replacement on the stormwater culvert between Oxford and Colombo (north footpath)

- SP 2 (Victoria Street works)
  - Provision of all traffic management to complete the works.
  - Traffic signals upgrade to the intersection of Bealey Avenue and Papanui Road.
  - Traffic signals upgrade to the intersection of Salisbury/Kilmore/Victoria Street.
  - Street lighting upgrade consisting of all new poles and lanterns (works completed by others) contractor to allow working with lighting contractor.
  - Installation of ground cover lighting to landscaped areas (works completed by others) contractor to allow working with lighting contractor.
  - Installation of street length ducting for CCTV, communication and ground cover lighting.
  - Installation of landscaped areas consisting of garden beds, in ground planted and able ground planted street trees.
  - Installation of street furniture.
  - Installation of water reticulation/ irrigation for above ground plated street trees.
  - Full storm water upgrade replacement inclusive of sumps, pipes, stormwater laterals and inter-path drainage.
  - Footpath renewal including, widening in areas with asphalt and firth paving.
  - Full kerb and channel replacement.
  - Road surface renewal inclusive of mid-block raised platforms.
  - Removal of approx. 20m of Tram Tracks located near the Christchurch City Casino.
  - Installation of street and road signage.
  - Installation of road pavement markings.
  - Sub-main renewal, street locations, No 165 to 159 and No 133 to 101.

Section C – Schedule of Conditions to RFP

Clause number references refer to Section D (RFP Conditions)

<table>
<tr><th>Clause</th><th>Description</th><th>Condition</th></tr>
<tr><td>2.6</td><td>Site Visit</td><td>N/A</td></tr>
<tr><td>2.7</td><td>Proposal Validity Period</td><td>120 days</td></tr>
<tr><td>4.1</td><td>Closing Date and Time</td><td>Midday Wed 27/11/19</td></tr>
<tr><td>4.2</td><td>Submission of Proposal (Electronic is preferred)</td><td>Address for submission of electronic Proposal:
Proposals must be uploaded via the www.gets.govt.nz website
OR
Address for submission of hardcopy Proposal:
Christchurch City Council
Proposal Box (Ground Floor Reception)
Civic Offices
53 Hereford Street
Christchurch 8011</td></tr>
<tr><td>4.13</td><td>RFP Information Contact Person</td><td>Hannah Smith
Hannah.Smith@ccc.govt.nz</td></tr>
<tr><td>4.14</td><td>Last date for questions and requests for explanatory notices</td><td>Wed 20/11/19</td></tr>
<tr><td>5.1</td><td>Proposal Evaluation Methodology</td><td>Proposals will be evaluated using the Price Quality Proposal Evaluation Methodology
The Council may, in its sole discretion, not consider further any Proposal which receives a "Fail" on any attribute. A score of less than 60% or less on any weighted attribute will be considered a "Fail".
NON-PRICE ATTRIBUTES
<table>
<tr><td>A. Financial Viability</td><td>Pass / Fail</td></tr>
<tr><td>B. Sustainability</td><td>10.00%</td></tr>
<tr><td>C. Relevant Experience</td><td>10.00%</td></tr>
<tr><td>D. Track Record</td><td>10.00%</td></tr>
<tr><td>E. Relevant Skills</td><td>10.00%</td></tr>
<tr><td>F. Methodology</td><td>40.00%</td></tr>
<tr><td>PRICE ATTRIBUTE</td><td></td></tr>
<tr><td>Price</td><td>20.00%</td></tr>
</table></td></tr>
</table>

Clause	Description	Condition
		Total **100%**
5.2	**Information to be submitted with the Proposal (Electronic is preferred)**	**Electronic Submission:** Uploaded to www.gets.govt.nz website: In the electronic box titled "Non-Price submission" include: 1. Appendix 2 (Form of Proposal) 2. Appendix 3 (Respondent's Response Form and Declaration including all information required in Parts A – C of this Appendix) 3. Appendix 5 (Statement of Departures) 4. Appendix 6 (Health and Safety Declaration) 5. Appendix 7 (Environmental Management Declaration) 6. Appendix 8 (Conflict of Interest Declaration) 7. Appendix 9 (Non Collusive Practices Declaration) In the electronic box titled "Price submission" include: Appendix 4 (Schedule of Prices) in both pdf and Excel format **OR** **Hardcopy Submission:** **Envelope 1** marked "Proposal for 20873604 Central City Roading Upgrades – Non-Price Attributes" including **3** hardcopies as set out below: 1. Appendix 2 (Form of Proposal) 2. Appendix 3 (Respondent's Response Form and Declaration including all information required in Parts A – C of this Appendix) 3. Appendix 5 (Statement of Departures) 4. Appendix 6 (Health and Safety Declaration) 5. Appendix 7 (Environmental Management Declaration) 6. Appendix 8 (Conflict of Interest Declaration) 7. Appendix 9 (Non Collusive Practices Declaration) **Envelope 2** marked "Proposal for 20873604 Central City Roading Upgrades – Price Attribute" including **3** hardcopies as set out below: Appendix 4 (Schedule of Prices) **Envelope 3** (outer envelope) marked "20873604 Central City Roading Upgrades" – insert envelopes 1 and 2 as outlined above.

Clause	Description	Condition
		Each of the above envelopes is to be sealed and placed in a sealed envelope/package to be deposited in the Proposal Box and marked with the following information: 1. Proposal for 20873604 Central City Roading Upgrades 2. Respondent 3. Name of Respondent's contact person 4. Telephone number for contact person 5. Respondent's address 6. Date Proposal submitted
7.10	**Contractor's Bond**	Is a letter from **a bank registered in New Zealand** agreeing to execute a bond in the form, amount and for the period required by the Contract needed? Yes

Section D – RFP Conditions

The General Conditions of this RFP are those set out below and these replace the Conditions of Tendering of NZS 3910:2013.

1. INTERPRETATION

The provisions of Section 1 of NZS 3910:2013 (as amended by any Special Conditions) shall apply to these RFP Conditions.

The following words and expressions are defined as set out below:

Closing Date and Time means the deadline for Proposals to be received as set out **Section C;**

Council means the Christchurch City Council;

Confidential Information means information that (a) is by its nature confidential, (b) is marked as "Confidential" or (c) is provided "In Confidence";

Conflict of Interest means (a) where an actual conflict of interest currently exists, (b) where a conflict of interest is about to happen or could happen or (c) where other people may reasonably think that a person is compromised;

Evaluation Methodology means the methodology set out **Section C;**

GETS means the Council Proposal Portal at www.gets.govt.nz;

RFP means this Request for Proposal process;

RFP Information Contact Person means the person identified in **Section C;**

Schedule of Conditions to RFP means the schedule in **Section C;**

Statement of Departures means the Respondent's statement as detailed in the form set out in **Appendix 6;**

Proposal means the Respondent's submission responding to this RFP process;

Respondent means the person or entity that submits a Proposal in response to this RFP; and

Proposal Validity Period means the period specified in **Section C.**

2. PREPARING A PROPOSAL

Proposal Documents

2.1 Except for the Schedules of Prices which are issued for use in the preparation of Proposals, all other Proposal Documents issued to Respondents for use in the preparation of a Proposal remain the property of the Council.

2.2 Any information provided by the Council to Respondents has been provided to assist Respondents in preparing Proposals. The Council does not represent or warrant the completeness or accuracy of such information. Respondents shall rely on all information at their own risk and are responsible for the interpretation of the information.

Respondents to inform themselves

2.3 Each Respondent shall be deemed to have inspected the Site and its surroundings if applicable, examined the Proposal Documents and any other information supplied in writing. The Respondent shall have undertaken all reasonable and practicable investigations and measurements, familiarised itself with the requirements of all relevant authorities, and have satisfied itself as far as is practicable for an experienced Contractor before submitting a Proposal as to the correctness and sufficiency of its Proposal for the Contract Works and of the prices stated in its Proposal.

2.4 The Proposal price shall allow for all of the Respondent's obligations under the Contract as set out in the Proposal Documents.

2.5 Where specified in **Section C**, a Site visit will be available. Respondents are strongly encouraged to attend the Site visit before submission of Proposals because the Council may provide information to attendees which may not be provided in the Proposal Documents. The Site visit may be required in the presence of the Council's nominated representative. If a Respondent elects not to attend a Site visit, the Council will not be responsible for providing the Respondent with information provided to attendees during the Site visit.

Proposal Validity Period

2.6 The Proposal Validity Period is calculated from the date of closing of Proposals. The parties may agree to extend the Proposal Validity Period. By submitting a Proposal, Respondents will be deemed to be representing that their Proposal remains open for acceptance, and will not be withdrawn, for the duration of the Proposal Validity Period.

3. ALTERNATIVE, TAGGED AND OTHER NON-CONFORMING PROPOSALS

Alternative Proposals

3.1 The Council reserves the right to consider any alternative Proposals which fulfil the Council's requirements. Alternative Proposals shall be submitted as a separate Proposal clearly marked as an “Alternative Proposal”. Respondents may be requested during the Proposal evaluation period to submit additional information to facilitate evaluation of the alternative.

Alternative, Tagged and Other Non-Conforming Proposals

3.2 Proposals submitted subject to tags, conditions or endorsements may be considered as alternative or non-conforming Proposals. In respect of any alternatives, tags, qualifications, endorsements and other non-conformities (collectively "**Departures**"), the Council may at its sole discretion:

(a) evaluate or reject such Proposals;

(b) assign a price to any Departure;

(c) request the Respondent withdraw any Departure without any adjustment to the Proposal price, or

(d) request the Respondent withdraw any Departure with adjustment of the Proposal price provided that the adjustment is for an amount that would have been reasonably expected if the Proposal had been submitted without that Departure.

3.3 All Departures must be outlined in the Statement of Departures in the form contained in **Appendix 5** and submitted with the Proposal before the Closing Date.

3.4 The Council will not be bound by any Departure unless such Departure has:

(a) been outlined in the Statement of Departures in the form contained in **Appendix 5** and included with the Proposal; and

(b) been expressly agreed by the Council and incorporated into the Contract.

3.5 The Council will not consider any proposed amendments not included in the Statement of Departures and Respondents will be bound by the terms of the Contract without amendment.

4. SUBMISSION OF PROPOSALS

4.1 Proposals must be submitted in the manner and by the Closing Date and Time detailed in **Section C**. Each Proposal shall be identified as a Proposal for the particular Contract and addressed as detailed in **Section C**. While every care will be taken to place postal Proposals in the Proposal Box, the Council has no responsibility for failure to do so before the Closing Date and Time.

Required Method for Submitting Proposals

4.2 The Council requires that Proposal responses are submitted in the form stated in **Section C.**

4.3 The Council requires that in the event that Proposals are uploaded to the Proposal Portal, the files submitted are created in MS Office (the Council's software) and are zipped when multiple files are being submitted.

4.4 Where Proposals are electronically submitted, Respondents are allowed to upload a maximum of 50MB per Proposal.

Rules and Guidelines for Electronic Proposal Submissions

4.5 The electronic Proposal Box clock operates in New Zealand Standard Time (NZST).

4.6 Electronic submissions can only be submitted via the electronic file upload facility on www.gets.govt.nz.

4.7 All electronic files are to be clearly named referencing the Respondent's company name and the Council's Proposal title and number reference.

4.8 It is recommended that the Respondents begin the uploading of Proposal files allowing sufficient time for the upload to be **fully** completed before the Proposal Closing Time. This is particularly important if the Respondent is submitting large size files.

4.9 In cases where a Proposal cannot be uploaded by the Closing Date and Time due to GETS system outages or communication link failures beyond the control of the Respondent, the Respondent should notify the RFP Information Contact Person as soon as possible. The Council will consider the circumstances and whether or not to accept a late submission on a case by case basis and at its sole discretion.

4.10 If any of the files submitted are not readable by the Council (such as due to file or data corruption), the Council will consider the circumstances on a case by case basis. The Council may at its sole discretion ask the Respondent to resend a readable version. If this request is made, evidence that there have been no changes to the file content since the Closing Date and Time may be sought from the Respondents.

4.11 If technical support is required relating to the functioning of the website www.gets.govt.nz, the Respondents should contact the GETS Helpdesk during business hours by phoning 0508 438 743 or emailing info@gets.govt.nz.

Communications

4.12 All communication to Respondents from the Council will be via GETS.

4.13 The RFP Information Contact Person is the only person authorised to receive questions, requests for information or other communications by Respondents or related parties regarding this RFP. Any such questions, requests for information or other communications must be submitted via GETS at www.gets.govt.nz and should not be directly sent to the RFP Information Contact Person.

4.14 The RFP Information Contact Person may be contacted via GETS, before the last date for questions and requests for explanatory notices as specified in the indicative timeline in **Section C**. Questions submitted to the forum will only be responded to during business hours.

4.15 The Council shall not be bound by any statement, written or verbal, made by any person including the RFP Information Contact Person unless that statement is subsequently expressly incorporated in writing in the Contract.

4.16 Where the Proposal Documents issued to Respondents are ambiguous or unclear to a Respondent, it may request the issue of an explanatory notice. If an explanatory notice is issued, it shall be communicated via GETS to all Respondents and shall upon issue become part of the Proposal Documents. Requests for information or clarifications that relate solely to the Respondent's Proposal will be provided to the Respondent requesting the information for clarification only.

4.17 In the absence of an explanatory notice, Proposals may be submitted subject to any reasonable interpretation of any ambiguity or uncertainty in the Proposal Documents. Any such interpretation and any assumptions made must be detailed in the Statement of Departures included as **Appendix 5**.

4.18 After the date for submission of Proposals has closed, the RFP Information Contact Person may further communicate with Respondents directly in order to set meeting times, and advise the outcomes of the evaluation process.

Extension of Closing Time and Date

4.19 If a Proposal arrives after the latest date and time required for submissions, it may be considered as invalid. However, the Council reserves the right to accept a late submission or extend the Closing Date and/or Time for the upload of submissions onto GETS at its sole discretion. Any late Proposal received in hardcopy in respect of which the Council chooses not to exercise its discretion shall be returned to the Respondent unopened.

Form of Proposals

4.20 Proposals shall be prepared in the form required by the Proposal Documents. Respondents must respond by providing all the information required including any rates or percentages set out in the Schedule of Prices.

4.21 The Proposal shall be signed by or on behalf of the Respondent.

4.22 The cost of preparing and submitting a Proposal shall be borne by the Respondent.

Errors in the Proposal

4.23 If the Proposal contains any error in extension of unit rates or in summation of items such as to vary the Proposal price, and the Council or its agent becomes aware of the error prior to acceptance of any Proposal, then the Council shall draw the error to the attention of the Respondent whose Proposal contains the error. The Council shall invite the Respondent to confirm that its Proposal remains open for acceptance at the tendered price notwithstanding the error. Unless the Respondent confirms the Proposal remains open for acceptance, it shall be deemed to be withdrawn. However, the Council, at its sole discretion, shall have the right to permit the correction by the Respondent of the error (whether by alteration of the rates/prices or of the tendered price).

4.24 The Council may request any Respondent to clarify and/or adjust aspects of its Proposal, and also reserves the right to negotiate with the preferred Respondent or Respondents with a view to finalising contractual arrangements.

Respondent Warranties

4.25 The Respondent warrants that:

(a) all information provided by the Respondent is complete and accurate; and

(b) the provision of information to the Council, and the use of it by the Council for the evaluation of Proposals and for the negotiation of any resulting contractual agreement, will not breach any third party intellectual property rights.

Form of Contract

4.26 The successful Respondent will execute the Contract in the form set out in **Section E**. By submitting a Proposal, Respondents agree to be bound by the terms of the Contract without further negotiation or amendment unless specifically stated in the Statement of Departures submitted with a Proposal and subsequently agreed by Council.

5. EVALUATION

Evaluation Methodology

5.1 Subject to the provisions of these RFP Conditions, the intended method of evaluation and weightings (where applicable) are as set out in **Section C**.

5.2 Where applicable, each Respondent shall submit with their Proposal full details of the non-price attributes as set out in Appendix 4, Part **C**.

5.3 The Principal reserves the right to depart from the stated methodology, attributes and/or weightings in the evaluation of the Proposals.

Preferred Respondent

5.4 If a Respondent is selected as "preferred Respondent" then such selection does not constitute an acceptance by the Council of the Respondent's Proposal, or imply or create any obligation on the Council to award the Contract to that Respondent.

5.5 The Council may at any time without being liable to the preferred Respondent, cease discussions with any preferred Respondent and not award a Contract to that party.

Reservation of the Council's Rights

5.6 The Council is not bound to accept the lowest priced, or highest scoring, or any Proposal. The Council reserves the right at its sole discretion to:

(a) waive or change the requirements of this RFP process or any associated documents from time to time without prior (or any) notice being given;

(b) waive any non-conformities or other irregularities or informalities in the RFP process;

(c) seek clarification or documents in respect of a Respondent's Proposal;

(d) immediately disqualify any Respondent that does not submit a compliant Proposal;

(e) re-invite Proposals on the same or any alternative basis;

(f) amend or change the evaluation methodology and/or the weighting and/or any criteria;

(g) to accept none or any of the Proposals;

(h) enter into negotiations with one or more Respondents;

(i) request additional Proposals; or

(j) suspend, withdraw or cancel, in whole or in part, the RFP process or withdraw the contract at any time,

without incurring any liability to any Respondent.

6. ACCEPTANCE OF PROPOSAL

No Obligations

6.1 No legal or other obligations shall arise between the Respondent and the Council in relation to the conduct or outcome of the RFP process unless and until that Respondent has received written notification of the acceptance of its Proposal.

6.2 The Council and its agents or advisors will not be liable in contract or tort or in any other way for any direct or indirect damage, loss or cost incurred by any Respondent or other person in respect of the RFP process.

Notification of Acceptance

6.3 The successful Respondent shall be notified in writing by the Council or its agent, that its Proposal has been accepted.

6.4 If no Proposal has been accepted within 90 days after the Closing Date and Time, each Respondent shall be notified in writing by the Council to provide an update on the status of the Proposal.

6.5 Unsuccessful Respondents shall be notified by the Council or its agent of the name of the successful Respondent within 30 Working Days of acceptance of the successful Proposal. The Council shall offer Respondents the opportunity to discuss their unsuccessful Proposal.

6.6 A Contract Award Notice may be published that includes:

(a) the name and address of the successful Respondent;

(b) a description of the Contract Works;

(c) the date the Contract was awarded;

(d) the expected spend under the Contract or the highest and lowest Proposals the Council evaluated to award the Contract; and

(e) the type of procurement process used.

7. GENERAL INFORMATION

The Council to Make Enquiries

7.1 The Council reserves the right to make enquiries regarding the Respondent and to consider relevant information obtained from any source in the evaluation of the Proposal. The Council may verify with any

third party any information included in the Proposal or disclosed to the Council in connection with the Proposal, including carrying out a credit check on the Respondent.

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

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

Ethics

7.3 By submitting a Proposal, Respondents acknowledge that they have not and shall not engage in any practices that gives one party an improper advantage over another, and/or engage in any unfair and unethical practices, in particular any collusion, secret commissions or such other improper practices.

Confidentiality

7.4 The information supplied by the Council (either itself or through its consultants, agents or advisors) in connection with this Proposal, or any contract that arises out of it, is confidential. Respondents 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 Council. Any publicity or media statements also require the Council's prior written consent.

7.5 The Council may, at its discretion, require any Respondent to sign a confidentiality agreement before releasing any Confidential Information to the Respondent. The Respondent agrees to sign the confidentiality agreement, if required to do so.

7.6 The Council is subject to the Local Government Official Information and Meetings Act 1987. Information provided by a Respondent may be required to be disclosed under that Act.

Due Diligence

7.7 As part of the RFP process, the Council, together with its agents, professional advisors and/or consultants, may carry out due diligence investigations of any or all of the parties that submit a Proposal.

7.8 By submitting a Proposal, a Respondent consents to the Council (and its agents, professional advisors and consultants) carrying out all due diligence investigations of the Respondent as may be required by the Council, acting reasonably. The Respondents will promptly provide all information and answer all questions as may be required by the Council, acting reasonably, in carrying out such investigations subject only to:

(a) confidentiality obligations owed to unrelated third parties (which if applicable, must be identified and, if then requested by the Council, the Respondent will take all reasonable steps to have such confidentiality waived to enable disclosure to the Council); or

(b) the rules of any stock exchange on which the Respondent or its parent company is listed (which, if applicable, must be identified).

7.9 By submitting a Proposal, each Respondent expressly acknowledges and agrees that the Council shall not have any obligation to enter into any agreement or arrangement with any Respondent if the Council is not satisfied, in its sole and exclusive discretion, with the outcome of its due diligence investigations regarding that Respondent.

Bank Confirmation of Contractor's Bond

7.10 If required in **Section C**, a letter from a bank registered in New Zealand agreeing to execute a bond in the form, amount, and for the period required by the Contract must be submitted with the Proposal.

Section E – Draft form of Contract

See document '**20873604 Central City Roading Upgrades_Contract**'.

Appendix 1 – Key Information required from Respondents

The checklist below sets out the information that must accompany any Proposal. Please tick to indicate that the documentation is included.

Note: This form is for Respondent's use only and does not need to be returned to the Council with the Proposal.

Document	Included
Appendix 2 - Form of Proposal	☐
Appendix 3 – Respondent's Response Form and Declaration including: • **Part A – Profile of Organisation and Insurances** • **Part B – Referees** • **Part C – Response to the Council's requirements**	☐
Appendix 4 – Schedule of Prices	☐
Appendix 5 - Statement of Departures	☐
Appendix 6 – Health, Safety and Wellbeing Declaration	☐
Appendix 7 – Environmental Management Declaration	☐
Appendix 8 - Conflict of Interest Declaration	☐
Appendix 9 – Non Collusive Practices Declaration	☐
Check form of Proposal submission (electronic or hardcopy) has been adhered to	☐
Check Non-Price and Price Attributes have been submitted separately (if applicable)	☐

Appendix 2 – Form of Proposal

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

Respondent's acknowledgment

1. We, being the Respondent named below, acknowledge and agree:

   (a) to be bound to the terms and conditions detailed in Section D: RFP Conditions;

   (b) to complete and deliver the whole of the Contract Works comprised in the Proposal Documents within the time stated in the Contract;

   (c) to complete and deliver the whole of the Contract Works comprised in the Proposal Documents for the price, and on the conditions, stated in Appendix 4 – Schedule of Prices;

   (d) that we have downloaded and examined the Specifications and any Drawings that have been provided in relation to the RFP and taken those into consideration in the submission of our Proposal;

   (e) that we have downloaded and examined all the Notices to Respondents (referred to as "Addendum in GETS) issued in relation to the RFP by the Council via the Council's Proposal Portal;

   (f) that we have downloaded and examined all the Questions & Answers posted on GETS in relation to the RFP;

   (g) that allowance for the impact of changes from the Notice to Respondents is considered in the Proposal;

   (h) that this Proposal is valid for a period of **120 days** from the date of closing of this RFP;

   (i) that until a Contract is prepared and executed, this Proposal together with the Council's written acceptance shall constitute a binding Contract between us as Contractor and Christchurch City Council;

   (j) that we understand that the Council is not bound to accept the lowest priced, highest scoring or any Proposal received; and

   (k) that we have signed and agree to the requirements stated in Appendix 6 – Health and Safety Declaration and Appendix 7 – Environmental Management Declaration.

2. We understand that no legal or other obligations shall arise between the Respondent and the Council in relation to the conduct or outcome of the RFP process unless and until that Respondent has received written notification of the acceptance of its Proposal.

3. The name of the surety proposed to enter into a bond on the Respondent's behalf is…….. . If required, we confirm that we will be able to provide **a New Zealand registered bank bond** in the event that we are the successful Respondent and understand that no other form of bond will be acceptable.

4. We attach the information required to be submitted with this Proposal (as set out in the Key Information checklist in **Appendix 1**), and confirm that all such information is complete and accurate.

5. We nominate the following person to communicate on our behalf in relation to the RFP process and our Proposal, and to negotiate and bind the Respondent to the Contract:

Name of Respondent:	
Name of contact person:	
Position of contact person:	
Contact person's address:	
Contact person's telephone number:	
Contact person's email address:	
Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	
Date:	

Appendix 3 – Respondent's Response Form and Declaration

Part A - Profile of Organisation and Insurances

Information provided in Part A will not be used to evaluate whether the Respondent has the capability and capacity to provide the Works required.

Respondent's organisational profile	
Full legal name:	
Trading name: (if different)	If applicable
Type of entity (legal status):	Sole trader / partnership / limited liability company / other please specify
Company registration number:	If applicable, registered number for a company
GST registration number:	NZ GST number / if overseas please state
Country of residence:	Insert country where organisation is resident for tax purposes
Physical address for service of notices:	
Postal address:	If different from above
Location of head office	City in New Zealand / if overseas please specify city and country
Name of parent company:	If applicable, provide details of parent company
Consortium or joint venture:	If applicable, include details of: • the basis of the consortium or joint venture agreement, indicating the lead company and any respective liabilities of the members of the consortium or joint venture; and • confirmation that the liability of members of an unincorporated joint venture must be joint and several
Council Interests:	If applicable, provide details of any interest held by a councillor of the Council or a Council employee in the Respondent's business, company or consortium
Website details:	If applicable – www.
Type of business:	Brief description of the type of business the organisation specialises in
Year established:	

Insurances currently held: Respondents must provide a copy of the Certificate of Currency (using the appropriate schedule from the Contract) for each insurance policy the Respondent has listed below:	
Policy 1	
Name of insurers:	
Type/s of insurance held:	Construction/Plant/Public liability/Motor vehicle/Professional indemnity
$ amount & term of insurance held:	Insert the amount and term of cover under the policy
Limitations:	List any limitations which may affect this RFP
Deductibles:	
Policy 2	
Name of insurers:	
Type/s of insurance held:	Construction/Plant/Public liability/Motor vehicle/Professional indemnity
$ amount & term of insurance held:	Insert the amount and term of cover under the policy
Limitations:	List any limitations which may affect this RFP
Deductibles:	
Policy 3	
Name of insurers:	
Type/s of insurance held:	Construction/Plant/Public liability/Motor vehicle/Professional indemnity
$ amount & term of insurance held:	Insert the amount and term of cover under the policy
Limitations:	List any limitations which may affect this RFP
Deductibles:	

Part B - Referees

Please supply the details of three referees. These referees must be work related clients where the Respondent has provided similar works to the Contract Works, and ideally be referees that can provide feedback on the works included as part of the information submitted by Respondent in Part C. Include a summary of the works that have been provided and when.

Referee #1	
Name of organisation:	
Name of referee:	
Relevance of this referee:	State why this referee is relevant to the Contract Works being sought under the RFP.
Address:	
Telephone:	
Email:	
Works provided:	Summarise the nature of the works provided
Dates when provided:	State the dates when the works were provided

Referee #2	
Name of organisation:	
Name of referee:	
Relevance of this referee:	State why this referee is relevant to the Contract Works being sought under the RFP.
Address:	
Telephone:	
Email:	
Works provided:	Summarise the nature of the works provided
Dates when provided:	State the dates when the works were provided

Referee #3	
Name of organisation:	
Name of referee:	
Relevance of this referee:	State why this referee is relevant to the Contract Works being sought under the RFP.
Address:	
Telephone:	
Email:	
Works provided:	Summarise the nature of the works provided
Dates when provided:	State the dates when the works were provided

Part C – Response to the Council's requirements

To evaluate whether each Respondent has the capability and capacity to provide the Contract Works required, each Respondent will need to **answer all questions** in Part C below in full. Each question must be answered independently. The Evaluation Panel will allocate scores for information that is contained within the Proposal in accordance with the required numbering format. Respondents are therefore urged to invest the time and effort required to compile a Proposal that clearly and concisely demonstrates the Respondent's understanding of and ability to successfully deliver the Contract Works.

Respondents are asked to provide information to questions relevant to the delivery of the Contract Works based on the information contained within **Section B – Tender Documents**. Any supporting documentation must be clearly referenced and attached to the Proposal.

Unless otherwise stated in the question, responses to the questions are limited to a total of 1 page, A4, 10-point size font and black text on a white background where possible. Recycled paper is our preference and please avoid using any plastics in your hard copy submissions.

A. Financial Viability (Pass/Fail)

The Council is seeking assurance from Respondents that they have sufficient financial strength to meet their obligations under the Contract.

Question Number	Question
A.1	Provide copy of the Respondent's last audited accounts to establish the Respondent's current financial status and viability. If this information is not available, the Council will accept a letter from the Respondent's Bank or Chartered Accountants. The letter must be on the Bank's/Chartered Accountant's letterhead, be dated within six months of the RFP Closing Date and include the following information as a minimum: • RFP name; • Respondent's name; • Respondent's Price for the Contract Works; • A statement confirming that in his/her opinion the Respondent would, on the appointment of liquidators pursuant to section 241(2)(a) of the Companies Act 1993 be able to pay its present debts on the grounds that the Respondent's present assets will realise more than the Respondent's total present indebtedness; • A statement confirming that in his/her opinion the Respondent can support the Respondent's Price for the Contract Works; and • Chartered Accountant's full name and membership number; or the Bank's contact person and details.
A.2	Provide details to the following questions (where the answer is yes, please provide details): • Are there any significant events, matters or circumstances which may significantly affect the operations of the Respondent's business? • Are there any proceedings, either actual or threatened, against the Respondent, its parent company or any director of the company, or associated entities or have there been any in the past five years? If so, what remedial action has been taken in respect to these proceedings? (include details of any bankruptcy actions or insolvency proceedings) • Are there any de-registration actions against the Respondent's company, its parent or associated entities, or have there been any in the past five years? • Are there any factors which could adversely impact on the financial ability of the Respondent to successfully perform the obligations stated in this RFP?

B. Sustainability (Weighting 7.50%)

<table>
<tr><th>Question Number</th><th>Question</th></tr>
<tr><td>B.1
(5.00%)</td><td>The following table sets out the definitions of the outcomes referred to in this question.
<table>
<tr><th>OUTCOME FOCUS</th><th>DEFINITION</th></tr>
<tr><td>Energy Efficiency</td><td>Energy efficient products and services, including equipment and plant, the design of new and renovated buildings and infrastructure and the construction of new buildings and infrastructure. Energy efficiency of the product Tenderer's and service provider's business operations.</td></tr>
<tr><td>Greenhouse Gas Emission Reduction</td><td>Zero or low greenhouse gas (GHG) emission products and services, including equipment and plant, the design of new and renovated buildings and infrastructure and the construction of new buildings and infrastructure. Zero or low GHG emissions from the product Tenderer's and service provider's business operations.</td></tr>
<tr><td>Solid Waste Reduction</td><td>Low solid waste generation products and services, including equipment and plant, the design of new and renovated buildings and infrastructure and the construction of new buildings and infrastructure.
Low solid waste generation from the product Tenderer's and service provider's business operations.</td></tr>
<tr><td>Water Efficiency</td><td>Reduction of water waste through the measuring of water required for service or works and the amount of water used or delivered</td></tr>
<tr><td>Inclusive Employment and Training</td><td>Actions that support meaningful career development and paid employment opportunities for a diverse workforce.</td></tr>
<tr><td>Community</td><td>Actions that support the community and encourage participation and the involvement of residents and stakeholders and that embrace the principles of the Treaty of Waitangi (Partnership, Participation and Protection).</td></tr>
<tr><td>Living Wage</td><td>A living wage is the income necessary to provide workers and their families with the basic necessities of life (www.livingwage.org.nz)</td></tr>
<tr><td>Local Value</td><td>Support of the local Christchurch economy through job creation for the local people.</td></tr>
<tr><td>Local Economy</td><td>Actions that support the local Christchurch economy through sourcing of locally-made products, inclusion of local SMEs, and the engagement of local social enterprises.</td></tr>
</table></td></tr>
</table>

Question Number	Question

Resilience	Actions that improve the cities and organisations ability to thrive in the face of change, including natural hazards, economic disruptions and technological change.

This set of questions is marked out of ten and then weighted.

OUTCOME FOCUS	Sub Question No.	QUESTION	QUESTION VALUE
Energy Efficiency	1a	Do you have an Energy Efficiency Management Plan for your organisation? *If yes, please include with submission. If no, please go to 1b.*	1.00
	1b	Is your organisation working towards having an Energy Efficiency Management Plan by June 30, 2021? *If yes, please include timeline with your submission*	0.50
Greenhouse Gas Emission Reduction	2a	Do you have a Greenhouse Gas Emission Reduction Plan for your organisation? *If yes, please include with submission. If, no, please go to 2b.*	1.00
	2b	Is your organisation working towards having a Greenhouse Gas Emission Reduction Plan by June 30, 2021? *If yes, please include a timeline with your submission*	0.50
Solid Waste Reduction	3a	Do you have a Solid Waste Reduction Plan for your organisation? *If yes, please include with submission. If no, got to 3b.*	1.00
	3b	Is your organisation working towards having a Solid Waste Reduction Plan by June 30, 2021? *If yes, please include timeline with your submission*	0.50
Water Efficiency	4a	Do you have a Water Use Reduction Plan for your organisation? *If yes, please include with submission. If no, go to 4b.*	1.00
	4b	Is your organisation working towards having a Water Use Reduction Plan by June 30, 2021? *If yes, please include timeline with your submission*	0.50
Inclusive Employment and Training	5	Does your organisation support Christchurch communities through youth employment opportunities, apprenticeships or training? *Please detail the opportunities over the last 12 months or indicate the reason why your organisation does not or is unable to support such opportunities (e.g. small company, mainly operating outside of Christchurch etc.).*	1.00
Community	6a	Do you have a have a Diversity or Equal Employment Opportunity Policy for your organisation? *If yes, please include with submission. If no, go to 6b.*	1.00
	6b	Is your organisation working towards having a plan in place by June 30, 2021? *If yes, please include a timeline with your submission.*	0.50
Living Wage	7a	Does your organisation pay (at a minimum) the "Living Wage", as defined by the Living Wage Movement Aotearoa New Zealand Ltd, to all employees?	1.00

<table>
<tr><th>Question Number</th><th>Question</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td>If yes, please include supporting documentation with submission. If no, go to 7b.</td><td></td></tr>
<tr><td></td><td>7b</td><td>Is your organisation working to adopt this approach by June 30, 2021?
If yes, please include a timeline with your submission.</td><td>0.50</td></tr>
<tr><td>Local Value</td><td>8</td><td>Please indicate your organisation’s total FTE based in New Zealand and the total FTE that is currently or will be based in Christchurch for the contract period you are tendering for.</td><td>1.00</td></tr>
<tr><td>Local Economy</td><td>9</td><td>Does your organisation’s supply chain support the local Christchurch economy through local SME’s, Social Enterprises and not for profit organisations?
If yes, please include a breakdown with submission. If no, please provide brief reasons why this is the case.</td><td>1.00</td></tr>
<tr><td rowspan="2">Resilience</td><td>10a</td><td>Do you have a Business Continuity Plan for your organisation?
If yes, please include with submission. If no, go to 10b.</td><td>1.00</td></tr>
<tr><td>10b</td><td>Is your organisation working towards having a plan in place by June 30, 2021?
If yes, please include a timeline with your submission.</td><td>0.50</td></tr>
</table>
</td></tr>
<tr><td>B.2
(2.50%)</td><td>Describe a proposal to measurably reduce greenhouse gas emissions in delivery of the Contract Works.

Include the following:

• The source of greenhouse gas emission you are proposing to reduce
• Switching from fossil fuels to renewable energy
• The estimated reduction in greenhouse gas emission (measured in CO2-e)
• The assumptions you have made in estimating that reduction

Refer to relevant experience to evidence the efficacy of the proposed methodology.</td></tr>
<tr><td>B.3
(2.50%)</td><td>Describe a proposal to measurably reduce solid waste generation in delivery of the Contract Works.

Include the following:

• The source of solid waste you are proposing to reduce
• The estimated reduction in solid waste (measured in tonnes)
• The assumptions you have made in estimating that reduction

Refer to relevant experience to evidence the efficacy of the proposed methodology.</td></tr>
</table>

C. Relevant Experience (Weighting 10.00%)

This section is used to evaluate the Respondent's previous experience relevant to major inner city roading works similar to the Contract Works.

<table>
<tr><th>Question Number</th><th>Weighting</th><th>Question</th></tr>
<tr><td>C.1</td><td>10.00%</td><td>
Provide two (2) most recent <u>relevant</u> contract examples, within the last five (5) years; to evidence the Respondent's previous experience providing works of a similar nature to the Contract Works under this RFP.

The relevant experience should be in the form set out below with one table provided for each contract. The table must not exceed one A4 page, single sided, 10-point size font per contract following the table below.

<table>
<tr><th>Specific Details</th><th>Description of Relevant Experience</th></tr>
<tr><td>Name & type of works provided</td><td></td></tr>
<tr><td>Client Name
Include the name and telephone number of a contact person.</td><td></td></tr>
<tr><td>Status of Project
Provide detail of when the work was carried out.
The work must be substantially completed or in the case of ongoing maintenance have been in operation for at least 12 months.</td><td></td></tr>
<tr><td>Scale
Provide detail of the value of the contract and whether it was completed within agreed budget (if not, please provide details of why not).</td><td></td></tr>
<tr><td>Relevance to this Contract
Projects that demonstrate the most relevance will include the following elements:
• The Respondent acting as a lead contractor for complex inner city roading/transport works;
• Close management of the critical path and staging of multiple aspects of civil works;
• Comprehensive stakeholder management in busy occupied public spaces including co-ordination with multiple</td><td></td></tr>
</table>
</td></tr>
</table>

Question Number	Weighting	Question		
		stakeholders/user groups (including a high interaction with residents, businesses, asset owners, authorities and Separate Contractors); • Commitment to Safety in Design in design and re-design from changes to specifications etc.; • Provision of reporting, communication and meetings similar to those required by the Contract; • Pro-active approach to environmental compliance • Pro-active approach to traffic management • Pro-active approach to managing contract risks; • Pro-active approach to managing H&S risks; • Work delivered in the context of legislation, codes of practice and local requirements for working in NZ/Christchurch, including Council and other asset owners; and • Knowledge of CCC (or similar authority) as a client, including working knowledge of the CSS and IDS.		
		Subcontractors Provide detail of the key subcontractors in the example, including the volume and value delivered by the subcontractor, the roles of the subcontractor/s and the contract structure used to engage the subcontractor.		

D. Track Record (Weighting 10.00%)

This section is used to evaluate the Respondent's track record of delivering contracts in respect of relevant contract examples.

<table>
<tr><th>Question Number</th><th>Weighting</th><th>Question</th></tr>
<tr><td>D.1</td><td>10.00%</td><td>Provide two (2) most recent relevant contract examples of large complex roading/transport works, within the last five (5) years; to evidence the Respondent's previous experience providing works of a similar nature to the Contract Works under this RFP.

The track record should be in the form set out below with one table provided for each contract. The table must not exceed one A4 page, single sided, 10-point size font per contract:

<table>
<tr><th>Specific Details</th><th>Description of Track Record</th></tr>
<tr><td>Compliance
Provide details of any non-compliance with any applicable laws or standards (including details of any fines, revocation of accreditation, warnings or prosecutions arising from non-compliance) such as Health and Safety, Resource Management Act etc.</td><td></td></tr>
<tr><td>Demonstration of track record
Demonstrate the company's ability to complete on time, to specified outcomes.
Provide average spend per month on each contract example provided and how that was aligned to any budgets, lump sums or targets.
Demonstrate the extent of adherence to agreed programmes or schedules.
Demonstrate the company's ability to pro-actively manage financial contract risk.
Demonstrate the company's ability to provide value-for-money.
Demonstrate the company's ability to develop a sustainable workforce through apprenticeships, training etc.
Demonstrate the company's sustainable supply chain.
Demonstrate the company's sustainable use of resources.</td><td></td></tr>
</table>
</td></tr>
</table>

			Performance Provide details of KPI performance of the contract examples and any other indicators that may express performance in respect of the contract.	
			Quality Provide details of the level of quality achievement of the contract examples including any audit results with the source of those audits e.g. collaborative audit, self-audit, principal audit.	
			Subcontractor/s Provide the track record of proposed key subcontractor/s and their performance KPI's on the named projects. Provide demonstration of fair payment of subcontractors.	

E. Relevant Skills (Weighting 10.00%)

Question Number	Weighting	Question
E.1	**10.00%**	Relevant Skills For the following proposed key personnel: • Contractor's Representative • Stakeholder and Communications Manager (SCM) • Person responsible for supervising the roading works • Person responsible for supervising the storm water works • Person responsible for supervising the bridge construction works • Person responsible for supervising the river diversion works • Person responsible for environmental management Provide the following information (in table format): • Organisation i.e. the Contractor or a subcontracted organisation name • Name • Role & responsibility • Physical location • Whether the key person is site based or office based • Proposed time commitment to the Maintenance Works and/or Ordered Works • Current time commitment to other contracts • Role in each contract example given in the responses to A.1 • How other previous experience not related to the contract examples is relevant to the Contract Works • Technical experience: briefly indicate formal qualification and training relevant to the Contract Works • Management experience: briefly describe length and type of experience relative to the Contract Works Express any proposed time commitment as a percentage apportionment of a 40 hour working week full time equivalent (FTE). CVs may be requested for further clarity of relevant skills. Where the proposed key person is yet to be recruited, indicate this in the as "to be recruited" and set out in the relevant columns of the table what you will be requiring of the recruitment e.g. the technical experience you will require from the role as part of the recruitment process.

F. Methodology (Weighting 40.00%)

This section is used to evaluate the methodologies and procedures proposed to achieve the requirements of the Contract Works. It gives the Respondent an opportunity to demonstrate understanding of the Contract Works and its requirements. The focus is primarily on how the Respondent proposes to deliver that required output.

Question Number	Weighting	Question

F.1	**10.00%**	<u>General Methodology</u>
		
		Describe the construction methodology the Respondent proposes to use for the effective and efficient provision of the Contract Works. Demonstrate how the proposed methodology provides benefit and value to the Council with focus on limiting disruption, effective environmental management and providing programme benefits (as reflected in your Proposal programme).
		
		Include the following information:
		
		• Your sequencing of works by means of succinct staging diagram(s) and commentary to explain the staging and sequencing of events of your proposed methodologies and how these address the key programme constraints of the project
		• Overall strategy to meet or exceed:
		  ○ safety targets
		  ○ quality targets including monitoring and recording
		  ○ environmental targets
		  ○ completion dates, stages and milestones set out in your Proposal programme (include actions that could be undertaken to reduce the expected delivery timeframes from that shown in the Proposal programme)
		• Details of the Respondent's current workload and all outstanding tenders awaiting confirmation at the date of submitting this RFP response, how this impacts on the Respondent's ability to provide the Contract Works and how those impacts are intended to be managed
		
		Refer to relevant experience to evidence the efficacy of the proposed methodology.

F.2	**15.00%**	<u>Proposal Programme</u> The Contract requires a Comprehensive Programme. For the purposes of evaluating your RFQ response: provide a GANTT chart programme of top level activities showing: The programme must include the **critical path** and the following tasks and milestones: • Date of Acceptance of Tender (assume Thu 13/02/20) • Submission of site pre-establishment documents, programme, plans, etc. • Submission of Inspection and Test Plan

Question Number	Weighting	Question
		• Possession of Site date for Separable Portion 1 Hereford Street • Possession of Site date for Separable Portion 2 Victoria Street • Site establishment and setup • Establish traffic control/temporary works • Duration of river diversion • Completion of the stormwater works • Completion of the bridge piling and substructure • Completion of the bridge superstructure • Installation of Orion 66kV power cables • Completion of the pavement works • Completion of the traffic signal works • Completion of the line-marking and green cycle surfacing • Provision of as-builts and other required handover documentation including information for O&M. • Site Restoration • Testing & Commissioning period • The allowance under Specific Condition B3 of the Contract • Duration to go into 10.2.1 (b) for Separable Portion 1 Hereford Street • Duration to go into 10.2.1 (b) for Separable Portion 2 Victoria Street • Due Date for Completion for Separable Portion 1 Hereford Street • Due Date for Completion for Separable Portion 2 Victoria Street • Forecast Practical Completion date Ensure the programme is in accordance with all restrictions and requirements set out in the Contract.
F.3	**5.00%**	<u>Risk & Impact Reduction</u> The table at 'Risk & Impact Reduction' sets out items that could: (1) Increase the Contract Price (2) Delay the Practical Completion (3) Impair the performance of the Contract Works in use (4) Result in a breach of a statutory duty in connection with the Contract Works (5) Materially affect stakeholder relationships (6) Increase the Contractor's total Cost

Question Number	Weighting	Question
		Populate the pale yellow cells with either a "Yes" or "No" to indicate your understanding/interpretation of the risk. Propose how the effects of each risk can be avoided or reduced should the event actually happen. E.g. if the risk of an extreme weather event that affects bridge construction becomes reality, what is proposed to minimise the negative impact on (1) to (6). Add lines to the Risk & Impact Reduction Table for another other risks you consider fit the six bullet points above. Evidence the efficacy of your proposed actions by referring to lessons learnt in previous projects.
E.4	**10.00%**	<u>Contractor's Communications Plan</u> Describe your current understanding of the immediate community including both business and residential community. Propose your expected engagement with the community and which tools will be used to disseminate information including electronic and face to face approaches. Include the following information: • How the greater community who use Hereford Street and Victoria Street will be kept informed of impacts to their day to day activities both as through traffic and business opportunities. • How you propose to support both the business and residential community during the construction process. What steps will be taken from receipt of a complaint and what methods will be used to resolve and limit elevation to client to resolve.

Risk & Impact Reduction Table

This table is to be populated in order to respond to question **E.3**.

Risk Name	Description of event	Increase the Contract Price	Delay the Practical Completion	Impair the performance of the Contract Works in use	Result in a breach of a statutory duty in connection with the Contract Works	Materially affect stakeholder relationships	Increase the Contractor's total Cost	Proposed Action
Ground conditions	Actual ground conditions are such that the Contract is required to be varied.							[Respondent insert]
Significant Traffic Impact	Significant traffic impacts (delays, etc.) for vehicles travelling through the sites temporary traffic management.							[Respondent insert]
Service relocations	Services are located at a depth shallower than on plans and through Contractor's required investigations which leads to a service being required to be moved in undertaking the Contract Works.							[Respondent insert]
Private property damage	Existing private properties are damaged as a result of the Contract Works and requires remediation.							[Respondent insert]
Archaeological Discovery	In-Situ archaeological material is discovered during the construction works.							[Respondent insert]
Subcontractor delay	Subcontractors don't follow the Contractor's procedures causing a delay to Practical Completion.							[Respondent insert]
Contaminated Material Discovery	Contaminated material (coal tar, asbestos, etc.) is discovered during the construction works.							[Respondent insert]
Flood event during construction	A significant rain event occurs during construction causing substantial surface flooding posing a risk of damage to the construction works.							[Respondent insert]
Material supply delays	There is a significant delay in the procurement of construction materials.							[Respondent insert]
[Respondent insert]	[Respondent insert]							[Respondent insert]

Appendix 4 – Schedule of Prices

See Tender Documents set out at Section B.

Having examined the Site and the Proposal Documents for 20873604 Central City Roading Upgrades, we offer to complete and deliver the Contract Works in conformity with these Proposal Documents for the sum/s outlined below excluding Goods and Services Tax or such other sums as may be ascertained in accordance with the Contract.

Appendix 5 – Statement of Departures

Note: This form must accompany each Proposal submitted.

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

Respondent's acknowledgment

Please tick the applicable statement(s) below:

☐ There are no departures from the requirements of the Proposal Documents.

or

☐ There are departures from the requirements of the Proposal Documents.
☐ There are changes proposed to the Council's Contract in **Section E**.
☐ The Proposal is based on certain assumptions.

Please list below all departures from the technical requirements of the RFP and list all assumptions on which your Proposal is based.

Please list any changes you request to the Council's draft Contract in Section E. Under no circumstances will further changes to the Contract terms be considered which are not listed below.

Departures from the technical requirements in the Proposal Documents are described in the below table.

Description of "Technical" (e.g. Specifications, Drawings etc.) Departures	RFP Document reference	Proposal reference

The assumptions on which the Proposal is based are described in the below table.

Assumptions	Proposal reference

The proposed changes to the Council's draft Contract (i.e. changes to the Conditions of Contract) are described in the below table.

Draft Contract Clause Reference	Change proposed	Reason for requesting proposed change

Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	
Date:	

Appendix 6 – Health, Safety and Wellbeing Declaration

Note: This form must accompany each Proposal submitted.

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

Health, Safety and Wellbeing Declaration

IT IS CERTIFIED THAT..... (Respondent) will comply with the following health and safety matters in performance of this Contract.

1. The Respondent must comply with all of the following at all times during the performance of the Contract:

   (a) Government statutes – i.e. Acts and Regulations;

   (b) Council By-laws;

   (c) Approved Codes of Practice;

   (d) Ministry of Business, Innovation and Employment and/or WorkSafe NZ Guidelines;

   (e) HSW AS/NZS Standards (or international standards where AS/NZS are not adequate or applicable)

   (f) Manufacturer's specifications of plant, machinery or equipment used;

   (g) duties of care and responsibilities for all persons conducting a business or undertaking (PCBUs) particularly relating to work involving;

      (i) asbestos or asbestos containing material and/or;

      (ii) hazardous substances; and

      (iii) contaminated land.

   (h) Conditions of the Contract.

2. **In the event the Respondent is shortlisted or preferred**, the Respondent will be required to provide organisational evidence of effective implementation to the Council of the following:

   (a) A health, safety and wellbeing policy for the Respondent's organisation that meets the requirements of the Health and Safety at Work Act 2015;

   (b) An organisational health, safety and wellbeing plan, detailing objectives, commitment to timeframe for completion, roles and responsibilities and shows evidence of monitoring and review ;

   (c) An organisation wide process for keeping up with any changes to health, safety and wellbeing legislation, regulations, standards and industry specific requirements;

   (d) A Hazard and risk framework - reporting, risk assessment, controls, monitoring & review, inclusive of roles and responsibilities inclusive of a commitment to timeframe for completion:

(e) A permit to work process for high risk tasks and/or a process for particular hazardous works and the reporting of such to Worksafe NZ;

(f) A process for the restriction on the number of hours or days a worker can work consecutively and how is that monitored and managed;

(g) Preventative maintenance programme for plant, machinery and equipment including a check and test procedure to ensure that it is fit for purpose;

(h) When using plant, machinery and equipment whether owned or leased, hired, borrowed from others, the organisation's system to ensure that:

(i) All plant and machinery is fitted with safety equipment to the standard levels required;

(ii) Workers who operate that plant or machinery have prior training in its safe use; and

(iii) Workers are fit to use the plant, machinery and equipment and where applicable, have the correct certificates/competencies and/or licences to operate those items.

(i) A process to determine a baseline health status and ongoing monitoring to manage the health and wellbeing of workers;

(j) A process/programme to supervise/monitor new or untrained workers;

(k) A process for communicating Health, Safety & Wellbeing matters with workers including when English is not commonly understood or spoken;

(l) An event reporting, investigation, notification and escalation process;

(m) A process to ensure effective support and return to work strategies following a lost time injury/illness inclusive of mental wellness;

(n) A process to ensure effective/active participation and engagement of all workers;

(o) A process to manage onsite emergency management inclusive of rescue strategies:

(p) The process followed to evaluate, select, communicate with PCBU's and monitor subcontractors in relation to Health, Safety & Wellbeing;

(q) A process inclusive of frequency for HSW monitoring and auditing, to determine effectiveness of the implementation and application of process/systems;

(r) Statistics for the past five years

(i) Number of prosecutions by WorkSafe NZ (or its regulatory predecessors MBIE and the Department of Labour) and any infringement notices, offences and prosecutions, prohibitions & urgent instructions, warnings, advisories, provisional improvement notices (PIN) and site shutdown by WorkSafe NZ or other authority, including for each issue a description of the reason and what steps were taken to address the issue raised;

(ii) Number of serious harm incidents (as defined in Schedule 1 of the Health and Safety in Employment Act 1992) and notifiable events (as defined in Section 25 of the Health and Safety at Work Act 2015) notified to WorkSafe NZ;

(iii) Number of near misses;

(iv) Respondent's lost time injury frequency rate (LTIFR) for each year per 200,000 hours worked; and

(v) Number of health, safety and wellbeing recognitions given.

3. **In the event that the Respondent is successful and is awarded the Contract**, the Respondent must have a Site Specific Safety Plan (SSSP), or sufficient alternative method in place specifically relating to the Site and Contract Works, which has been accepted in writing by a Council Representative, before any Works commence. The SSSP must include the following items but not limited to:

   (a) Brief description of the scope of Works;

   (b) Summary of major activities and types of Works;

   (c) Description of any specialist tasks or procedures including reference to safe work practices and training requirements and how this will be documented. E.g. presence of public, traffic management, notifiable work, emergency management, hazardous substances, identification and removal of asbestos or asbestos containing materials, contaminated land, restricted work;

   (d) List of Respondent's safe work procedures relevant to the Contract;

   (e) Names and positions of personnel with specific health, safety and wellbeing responsibilities and their level of involvement in the Contract and training;

   (f) Name, position and contact details of senior person who will liaise with the Council on health, safety and wellbeing issues and provide monthly reporting;

   (g) Name, position and contact details of the on-Site supervisor of the Works;

   (h) Copies of permits and/or notifiable work notices relevant to the Contract

   (i) Identification of reasonably foreseeable hazards and the associated Risk Register with corresponding control measures, responsibilities, monitoring and review of the management of the risk and continuous improvement. Associated task analysis or methodologies for all risks identified;

   (j) Consider and specify the hierarchy of controls (i.e. eliminate or minimise) of each hazard and risk; and

   (k) Safety equipment applicable to the Works with certifications relevant to AS/NZ Standards;

   The following items will also need to be **attached to the SSSP**:

   (l) Outline of the Contract induction procedures for all workers (including subcontractors) and visitors;

   (m) Details of the register of all workers completing the induction programme, including subcontractors and visitors;

   (n) Site visitor record form;

   (o) Register of workers holding authorisations, permits, competency certificates, licences, first aiders, etc. required for the Works and Contract;

   (p) Overall emergency plan and structure for the Works (including co-ordination, communication and collaboration with others on Site);

   (q) Register of emergency equipment and locations (must be on Site – foreman's Ute is not always on Site);

(r) Procedures for event recording, reporting, notification and investigations for the Works; and

(s) HSW Monitoring assurance programme for the Contract.

4. **In the event that the Respondent is successful and is awarded the Contract**, the Respondent must report, as soon as possible via phone to the Council if the following occur in relation to any works responsible for or undertaken by the Respondent for the Council, and then recorded and reported in writing to Council

(a). Worksafe Infringement Notices; Offences and prosecutions; Prohibitions and urgent instructions, Warnings, advisories, Provisional Improvement Notice (PIN), Site shutdown by WorkSafe NZ or other authority

(b). Notifiable Events as defined in the Health, Safety at Work Act 2015

(c). Event(s) incurring Lost Time Injuries/Illnesses

(d). All other Events (including incidents/ near misses) related to;

i. Medical Treatment Injury/Illness
ii. Electrical works
iii. Hot Work
iv. Confined Space
v. Working at Height
vi. Asbestos
vii. Hazardous Substances
viii. Craneage
ix. Ground Disturbance
x. Excavation
xi. Roading/Transport
xii. Lone Worker
xiii. Abuse, Threat & Assault
xiv. Damage to Property or Asset
xv. Unauthorised Entry
xvi. Reputational risk that may put Council and or the Respondent at risk or bring it into disrepute
xvii. High Risk – non routine work
xviii. Drugs and Alcohol

5. **In the event that the Respondent is successful and is awarded the Contract**, the Respondent is required to submit a monthly KPI report specific to the Contract and Organisational HSW Performance for LTIFR. Monthly reports must include:

Contract Number	Reporting Period: (Month)
Contract Name	Number of Near Misses

Contractor Name	Number of Notifiable Events
LTIFR per 200,000 hours for the Whole Contract Organisation	Number of Investigations
Total hours worked	Number of Toolbox Talks
Number of Lost Time Injuries	Number of Site Inductions
Number of Days lost due to lost time injuries	Number of WorkSafe visits to site
Total Number of Events	Number of HSW Training hours completed
Number of Incidents	Number of infringement notices
Number of Injuries	Number of SSSP/SWMS reviews
Number of Fatalities	Number of shared learnings
Number of WR Illness	Number of self-site assessments
Number of unauthorised entries	Export from Organisational Database monthly register of all events (exclusive of personal name of work involved to ensure privacy
Number of safe observations	
Number of HSW reward and recognitions	
Briefly list achievements and activities Attach relevant HSW photos of activities if available	

6. **In the event that the Respondent is successful and is awarded the Contract**, the Respondent will be required to:

   a. Advise the Council if for any reason the procurement of products, materials, plant and equipment, goods or services are to be purchased or used for the works associated to this contract (if they are asbestos or asbestos containing material).

   b. Ensure the provision of information related to the associated asbestos/ACM risk, safe use of, training and personal protective equipment (PPE) or respiratory protective equipment (RPE). A safety data sheet must also be available. This information must also be kept on site by the Respondent.

   c. Notify the Council immediately if there is a possible/exposure of Asbestos or Asbestos Containing Material to workers, citizens, others and/or contamination of land.

Declaration	Yes	No
I am authorised to provide this information and sign this form.	☐	☐
The information provided in this form is true and correct.	☐	☐
I understand that if the information I have provided is not true and correct, the Council may terminate any future Contract (if the Council has reasonably relied on the accuracy of information provided in this questionnaire), at any time and with immediate effect by written notice.	☐	☐
I agree to actively participate in any HSW review or site assessment requested or carried out by Council.	☐	☐
I agree to provide all required reporting of HSW Events inclusive of Notifiable Events under the Health and Safety at Work Act 2015 or other Authority to Council as agreed.	☐	☐
I agree to abide by the requirements of the Health and Safety at Work Act 2015 and amendments, and any Council induction, site assessments or monitoring including those specifically outlined above.	☐	☐

Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	
Date:	

Appendix 7 – Environmental Management Declaration

Note: This form must accompany each Proposal submitted.

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

IT IS CERTIFIED THAT..... (Respondent) will comply with the following environmental matters in performance of this Contract.

1. The Respondent must comply with all of the following at all times during the performance of the Contract:

   (a) Government statutes – i.e. Acts and Regulations including but not limited to the Resource Management Act 1991, Heritage New Zealand Pouhere Taonga Act 2014, Conservation Act 1987, Wildlife Act 1953, Hazardous Substances and New Organisms Act 1996;

   (b) Council By-laws;

   (c) Industry Codes of Practice;

   (d) Any Resource Consents issued in relation to this Contract;

   (e) AS/NZS Standards (or international standards where AS/NZS are not adequate or applicable) including but not limited to ISO 14001:2004 and ECO Warranty;

   (f) Manufacturer's specifications of materials and equipment used;

   (g) Requirement to record and report to the Council as soon as possible an Environmental Non-Compliance which includes any of the following:

      (i) An abatement notice, infringement, prosecution or regulatory warning letter;

      (ii) A significant environmental hazard or incident, where the environmental damage is irreversible or long term remediation is required (**note:** a hazard has the potential to cause harm, whereas an environmental incident has caused actual harm);

      (iii) Preventable and/or avoidable construction-related wastewater discharge to storm water or waterways;

      (iv) Preventable and/or avoidable minor non-compliances which are on-going and unresolved for more than three months;

      (v) Any activity marked as a Significant by a regulator (such as Environment Canterbury or Christchurch City Council). These can be minor non-compliances which are on-going and unresolved for a significant period of time (> 3 months), or a direct breach of a consent condition with significant environmental effects.
      Note: "preventable and/ or avoidable" means that the activity is preventable through appropriate mitigation measures and/or forward planning actions which have not been employed. Examples include implementation of a TPP, seeking appropriate advice from experts (arborist, heritage advisor), implementing vandalism protection measures.

2. Submit to the Engineer a monthly report specific to the Contract, including:

      (i) Copies of Environmental Audits completed onsite where site crew either undertake the

audit themselves or with a staff representative from Council's Environmental Team, including any corrective actions undertaken and completed by the site crew;

(ii) A Statement of Environmental Compliance with consent, authorities, permits, permitted activities;

(iii) A summary of Environmental Hazards which includes issues that have been identified and reported which have the potential to cause harm to the environment or cause potential harm or nuisance to people;

(iv) A summary of Near Miss Incidents which means a documented event where an environmental incident could have occurred, but did not. Examples include, a pump failure was identified before waste water overflow occurred or a person was stopped from parking under a tree;

(v) A summary of Environmental Incidents which means instances where harm to the receiving environment has occurred including, but not limited to, spills, unmanaged noise and vibration, discharges to air, unauthorised vegetation damage, etc.;

(vi) A summary of any complaints by external stakeholders; and

(vii) Non-compliance matters raised by any regulator.

3. The Respondent must have, and provide evidence of the following items to the Council before the Contract is awarded, if required by the Council:

(a) ECO Warranty, EnviroMark, EnviroStep (or equivalent);

(b) A formal site specific induction process covering the environmental risks identified for the site/project which includes a pre-start meeting;

(c) A completed site specific Environmental Risk Assessment and Management Plan.

Declaration	Yes	No
I am authorised to provide this information and sign this form.	☐	☐
The information provided in this form is true and correct.	☐	☐
I understand that if the information I have provided is not true and correct, the Council may terminate any future Contract (if the Council has reasonably relied on the accuracy of information provided in this declaration), at any time and with immediate effect by written notice.	☐	☐
I agree to abide by the requirements of the relevant legislation, any amendments, and any Council induction, including those specifically outlined above.	☐	☐

Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	

Date:	

Appendix 8 – Conflict of Interest Declaration

Note: This form must accompany each Proposal submitted.

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

CONFLICT OF INTEREST DEFINITION:

A conflict of interest is a situation in which a Respondent could gain (or be seen to gain) an unfair advantage through an association with an individual or organisation. Associations include financial, personal, professional, family-related or community-related relationships.

- An actual conflict of interest is where there already is a conflict;
- A potential conflict of interest is where the conflict is about to happen or could happen; and
- A perceived conflict of interest is where other people might reasonably think there is a conflict

QUESTIONNAIRE:

Note: Each organisation involved in a joint Proposal must submit a *separate* questionnaire and declaration.

	Question	**Response** (Select one answer for each question. Select "potentially" if others could perceive that a conflict exists.)
1	Does any person in the Respondent's organisation have a close friend or relative who they are aware is (or could be) involved in any evaluation or decision-making relating to this procurement process?	[yes] / [no] / [potentially]
2	Has any person in the Respondent's organisation recently offered any special discounts, gifts, trips, hospitality, rewards or favours to any person they are aware is (or could be) involved in any evaluation or decision-making relating to this procurement process? *(e.g. free travel, free samples for personal use)*	[yes] / [no] / [potentially]
3	Is the Respondent aware of any person involved in any evaluation or decision-making relating to this procurement process having a financial interest in the Respondent's organisation? *(e.g. the person is an employee of, or a shareholder in, the Respondent's organisation)*	[yes] / [no] / [potentially]
4	Is the Respondent aware of anything that might give the appearance that any person involved in the evaluation stage or decision-making stage of this procurement process is biased towards or against the Respondent's organisation? *(e.g. the person has used the Respondent's organisation's corporate box)*	[yes] / [no] / [potentially]
5	Is the Respondent aware of any other arrangement it currently has, or clients it currently provides works to that	[yes] / [no] / [potentially]

	may give rise to a conflict with the Contract Works being procured by the Council?	
6	Is there anything else that the Council should know?	[yes] / [no]

If the Respondent answered "**yes**" or "**potentially**" to any of the questions above, please set out the details of the situation below.

Declaration	**Yes**	**No**
I am authorised to provide this information and sign this form.	☐	☐
The information provided in this form is true and correct.	☐	☐
I understand that if the information I have provided is not true and correct, the Council may terminate any future Contract (if the Council has reasonably relied on the accuracy of information provided in this questionnaire), at any time and with immediate effect by written notice.	☐	☐

Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	
Date:	

Appendix 9 – Non Collusive Practices Declaration

Note: This form must accompany each Proposal submitted.

Proposal for:	Central City Roading Upgrades
RFP Number:	20873604

This Declaration requires the Respondent to confirm that:

- its Proposal is a bona fide Proposal, intended to be competitive;
- the price submitted in the Proposal has not been fixed or adjusted under or in accordance with any agreement or arrangement with any other person; and
- the Respondent has not engaged in any communications or discussions with other potential Respondents with the intention to:
    - set the price of goods or services or interfere with how the price of goods or services is set; and
    - substantially lessen competition in a market.

QUESTIONNAIRE:

Note: Each organisation involved in a joint Proposal must submit a *separate* questionnaire and declaration.

	Question	**Response** (Select one answer for each question)
1	Has any person in the Respondent's organisation been involved in any discussions with other potential Respondents in relation to this RFP?	[yes] / [no]
2	Has any person in the Respondent's organisation communicated to a person, other than the Council, the amount or approximate amount of the Proposal (except where the disclosure, in confidence, of the approximate amount of the Proposal was essential to obtain professional advice required for the preparation of the Proposal)?	[yes] / [no]
3	Has any person in the Respondent's organisation entered into any agreement with any other person that he/she shall refrain from submitting a Proposal?	[yes] / [no]
4	Has any person in the Respondent's organisation offered to pay, give or agree to give any sum of money or valuable consideration directly or indirectly to any person for doing, having done, causing or having caused to be done, in relation to any other Proposal any act or thing of the sort described above?	[yes] / [no]

If the Respondent answered "**yes**" to any of the questions above, please set out the details of the situation below.

Declaration	Yes	No
I am authorised to provide this information and sign this form.	☐	☐
The information provided in this form is true and correct.	☐	☐
I understand that if the information I have provided is not true and correct, the Council may terminate any future Contract (if the Council has reasonably relied on the accuracy of information provided in this questionnaire) at any time and with immediate effect by written notice.	☐	☐

Signed by authorised signatory of the Respondent:	
Name and title of authorised signatory:	

Date:	

Christchurch City Council

CONTRACT SPECIFICATIONS

HIGH STREET UPGRADE
(CASHEL STREET – TUAM STREET)

CONTENTS

SECTION 1: GENERAL

1.1 INTRODUCTION / SCOPE OF WORKS

The objective of this project is to provide the network transformation of the central city road network in the city sector, consistent with the multi-modal road user hierarchy and public realm network improvements required by the agreed An Accessible City chapter of the Christchurch Central Recovery Plan.

HIGH ST

Contract work extends from Cashel St to Tuam St

This work involves the construction of kerbs, channels, grated drains, drainage installation (including Stormwater pipes and associated structures), sewer works, landscape features, planting of trees and shrubs, with new road shoulders and carriageway construction and the installation of signage and road marking.

Work also includes installation of tram tracks with a structural foundation which includes straight track, curved track, crossovers and associated welding [Aluminothermic], electrical bonding of the foundation reinforcing, track drainage, in some sections paving is to be constructed between tram tracks.

1.2 EXTENT OF WORKS

(a) Kerbs and channels.
(b) Construction of drainage works.
(c) Construction of AC and paver paths, cycle ways and vehicle crossings.
(d) Removal of Coal Tar contaminated surfacing/metal courses.
(e) Construction of lawns and landscape areas.
(f) Installation of ducting/cabling.
(g) Road shoulder and carriageway reconstruction
(h) Road marking and signage.
(i) Tram Foundation and associated equipment

(j) Traffic control, environmental management, set out of works.
(k) Street furniture and pedestrian features
(l) All other work indicated, described or implied on the drawings or in this Specification, or in any other document so as to render the Contract complete.

All work shall be carried out as specified in the Christchurch City Council's Civil Engineering Construction Standard Specification (CSS) unless specified otherwise.

1.3 CONCURRENT WORK

As per 5.5.3 schedule 1 of the special conditions of contract

Concurrent work associated with the upgrade work :

(i) Connectics to install light and tram poles

(ii) And associated underground cabling and electrical overheads

(iii) Modfication of Spark and Vodafone manholes

(iv) Artworks and Signs

a. Corgis – Corgis are to be removed by others . please liase with Carl Burnett (CCC Urban Park Ranger) Phone 027 581 3324

   Carl will organise the removal and subsequent installation once paving has been completed

b. Phantom Bollards- Are to be retained. If there are issues or clarifications regarding the bollard please liase with Jacob Agnew (Christchurch Regional Manager) Ph 0221 9863041 Ph 03 377 3065

1.4 PUBLIC RELATIONS

Liaison with local residents

The Contractor shall establish and maintain contact with local residents and in particular schools and shops and businesses and inform them of contract activities as the work proceeds on a continuing basis throughout the contract works.

Stakeholder and Communications Manager (SCM)

The Contractor is required to provide a Stakeholder and Communications Manager (SCM) for the duration of the contract.

The Contractor's Stakeholder and Communications Manager shall be responsible for delivering the Contractor's Communications Plan as detailed in the tender documentation. This will include day to day liaison with the local community supported by the Contractor's Project Manager where necessary, building and maintaining relationships with local businesses and stakeholders, be responsible for attendance at public meetings, community events, distributing the start works notices and receiving, recording and actioning enquiries and complaints. They will be responsible for producing communications to share progress externally in conjunction with Council Engagement and Communications staff.

The Stakeholder and Communications Manager will be responsible for actively reporting and escalating (if required) all enquiries and complaints to the Principal via the Project Manager, and informing the Engineer, via the Engineer's representative. Key requirements are that the role requires 80-100% of time utilisation per week to this project with a consistent staff member and experience on infrastructure projects with complex stakeholder environments is required.

Construction Disruption Minimisation Plan

At least 10 working days prior to work commencing on site a detailed construction disruption minimization plan shall be submitted to the Engineer for acceptance.

This is to include as a minimum:

- Management of 24/7 vehicle and pedestrian access to residential, business, etc.
- Signage showing which businesses, in particular, are open for business.
- Further to clause 5.8 on page B23 construction noise mitigation measure suitable for the adjacent property use.

Maintaining vehicle access

The Contractor shall liaise with local business owners to ensure his/her work minimizes disruption to local businesses. The Contractor shall maintain access at all times for local businesses to access their properties.

1.5 ENVIRONMENTAL MANAGEMENT AND COMPLIANCE

Further to clause 5.22, Schedule 1: Special Conditions of Contract, the Contractor shall for the duration of the Contract implement an Environmental Management Plan.

To assist in fulfilling this requirement a draft Environmental Risk Assessment and Management Plan (EMP) has been provided (attached in Appendix 8 of the RFT) for the Contractor to complete, submit for acceptance and implement. This does not preclude the Contractor from adding other known environmental risks together with mitigating measures to the plan.

No works are to commence on site until the site specific Environmental Risk Assessment and Management Plan has been accepted by the Engineer.

The EMP and included Erosion Sediment Control Plan (ESCP) shall be submitted via email to rcmon@ccc.govt.nz, and via email to the CCC Unit Manager Resource Consents, for acceptance at least ten working days prior to construction works commencing and shall be adhered to.

The Archaeology Authority has been left out of the EMP as it is yet to be granted. Expectation is that it will be available by the end of next month (May 2021).

1.6 HEALTH & SAFETY

Further to clause 5.7, NZS 3910:2013 the Contractor shall for duration of the contract operate a Health and Safety Management System which addresses the following, as a minimum:

Hazard identification and assessment of control measures imposed;

- Emergency management;
- Hazard monitoring, including frequency;
- Procedures for management of subcontractors and visitors;
- Procedures for training and supervising staff in relation to safety issues;
- Protection of the public; and
- Contract details of key personnel.

The Contractor shall hold the following health and safety accreditation

- OHSAS 18001 or AS/NZS 4801:2001 (Occupational Health and Safety Management Scheme) or equivalent

Further to clause 5.17, NZS3910:2013 a site specific Health and Safety Management Plan shall be submitted by the Contractor five (5) Days prior to work commencing and the Contractor shall immediately provide a copy of the Contractor's Health and Safety Management Plan if requested. The site specific Health and Safety Management Plan shall provide, as a minimum:

- A description of the works;
- Site related Health and Safety personnel;
- Site induction and safety training;
- Safe work procedures;
- Hazard management;
- Health and Safety inspections;
- Emergency procedures;
- Accident reporting;
- A Risk Register.

No work is to commence on site until the site specific Health and Safety Management Plan has been accepted by the Engineer.

Further to clause 5.7.5, NZS 3910:2013, known hazards in this Contract are:

- Presence of coal tar contaminants
- CHORUS fibre Network
- ENABLE Network
- ORION High Voltage Cables
- ROCKGAS

1.7 QUALITY ASSURANCE SYSTEM

Further to clause 5.18, NZS 3910:2013, the Contractor shall for the duration of the Contract operate a Project Quality System and have a Contract Quality Plan which complies with Part 3 – Quality Assurance of the Infrastructure Design Standard and Clause 5.0, CSS Part 1: General.

1.8 TRAFFIC MANAGEMENT AND TRAFFIC OPERATION REQUIREMENTS

Further to Clause 5.19, NZS 3910:2013 and 6.0, CSS: Part 1: – General, the Contractor shall prepare a formal plan for Temporary Traffic Control for this Contract.

Further to Clause 25.0, CSS: Part 1: - General, the Contractor shall include the provision of temporary bus stops in the plan for Temporary Traffic Control. The Contractor shall notify ECanBusControl@ecan.govt.nz a minimum of two days prior to any bus stop relocation.

The Contractor shall arrange the work to leave **two(2) trafficable** lanes available at all times in the carriageway.

1.9 NOTICE BOARDS AND PUBLIC INFORMATION PLAN

Further to Clause 7.0, CSS: Part 1: – General, the type of work for this contract is **"STREET ENHANCEMENT".**

1.10 SERVICES – UNDERGROUND AND OVERHEAD

Further to Clause 9.0, CSS: Part 1: - General:

At the commencement of the Contract the Contractor shall pothole services where ordered. The Contractor shall accurately record the location and reduced level of each service on the attached **"Potholing of Services Record Sheet"** and forward a copy to the Engineer.

The Contractor shall allow in the proposed programme of work for two working days following completion of potholing for any modifications to the design of the piping to be carried out.

1.11 HOURS OF WORK

Further to Clause 12.0, CSS: Part 1: - General:

The Contractor shall not carry out any work between the hours of 7.00 am to 9.00 am and 4.00 pm to 6.00 pm Monday to Friday unless specifically approved by the Engineer.

The Contractor shall work during the night from 6.00 pm to 7.00 am or to minimise the impact of the work on businesses and members of the public during daylight hours with approval from the Engineer.

1.12 RESOURCE CONSENT CONDITIONS

All works shall conform to the conditions of the Site Specific Consent and Global Consents (attached in Appendix A of the EMP). The Contractor must adhere to the conditions as stated in the Environmental Management Plan (EMP). In particular, and unique to these works;

RMA/2021/460 – Site Specific Heritage Consent:

- The Contractor in conjunction with their conservation architect or heritage advisor shall prepare a heritage Temporary Protection Plan (TPP) which clearly sets out the protection measures to be undertaken to protect the Heritage Triangles, Heritage Building/Facades and Artwork.
  Temporary protection measures to protect the heritage items from potential damage due to impact or vibration during adjoining construction:

i. the item is to be physically protected with plywood over a soft protection barrier against the heritage fabric,
ii. light machinery only is to be used in close proximity to the item,
iii. A spotter is to be used to direct machinery in the vicinity of the item

To assist in fulfilling this requirement a draft Temporary Protection Plan has been provided (attached in Appendix 8 of the RFT) for the Contractors conservation architect or heritage advisor to complete, submit of acceptance and implement in accordance with this consent.

- During the construction process the works within the Heritage Items or Settings as labelled on page 1 of the RMA/2021/460 Approved Consent Plans, are to be monitored by the Contractors conservation architect or heritage advisor in conjunction with the Council's Heritage Team (or nominee).
  The Contractor shall liaise with the Council Heritage Team leader (or nominee) to arrange site visits at key points in the process.

- A digital photographic record of the affected areas of the heritage item and heritage setting is to be undertaken before, during, and after the completion of the works by the Contractors conservation architect or heritage advisor.
  Images must be at least 1440 pixels by 960 pixels for a 4''x 6'' print at a minimum resolution of 240 PPI.

Global Consents applicable to these works include;

- RMA/2019/1580 Global Tree Protection Consent, where works are located within 5m of an existing street tree or park tree or tree within a heritage triangle.
- RMA/2019/2726 Contaminated Land Consent and associated Low Risk Management Plan
- CRC173830 Earthworks over aquifers Consent
- CRC190445 Stormwater Approval
- CRC190369 & CRC190369 Dewatering Consents
- CRC190445 Stormwater Authority

1.13 AS-BUILT RECORDS

Further to clause 5.20, NZS 3910: 2013, As-built Drawings and Operation and Maintenance Manuals (OMM) include Asset (Equipment) Information and Geospatial Information, Asset Owners Manuals (AOM) and other as-built records to the requirements of IDS clause 12.4 - As- built Records.

The Contractor shall provide an electronic copy of as-built records, AOMs and OMMs to the requirements of the IDS clause 12.4 - As-built Records, as part of the completion documentation presented on Practical Completion. The Contractor shall also provide one paper copy of the OMM and the AOM including the as-built drawings.

All electronic manuals shall be supplied in either Microsoft Word .doc or Adobe .pdf format. All drawings shall be supplied as .pdf in addition to .dwg or .dgn files.

Asset (Equipment) data - As-built Physical Attribute Information

Further to IDS clause 12.4.2, 12.4.3 and 12.4.4, as-built pickup for stormwater, wastewater and water supply pipes and pipe-related assets only shall be carried out using the CCC As-Built Guideline (SAG). Asset data shall be delivered electronically using the CCC Survey As-Built Template Spreadsheet (CAT). The SAG and the CAT are available at https://www.ccc.govt.nz/consents-and-licences/construction-requirements/infrastructure-design-standards/as-built-survey-and-data-requirements/

All other assets shall be recorded in accordance with the IDS.

Further to IDS clause 12.4.5 and 12.4.7, approved RAMM contractors can be obtained from www.ccc.govt.nz/consents-and-licences/construction-requirements/approved-contractors/roading-construction/.

Asset data - As-built Geospatial Information:

For all supplied geospatial data the New Zealand Transverse Mercator 2000 (NZTM2000) is the projection to be used.

See more at: http://www.linz.govt.nz/data/geodetic-system/datums-projections-and-heights/projections/new-zealand-transverse-mercator-2000

The geospatial data co-ordinate system to be used is Mt Pleasant 2000.

Name:	**Mount Pleasant 2000**
Abbreviation:	PLEATM2000
Projection type:	Transverse Mercator
Reference ellipsoid:	GRS80
Datum:	NZGD2000
Origin latitude:	43° 35' 26" S
Origin longitude / central meridan:	172° 43' 37" E
False Northing:	800,000 metres North
False Easting:	400,000 metres East
Central meridian scale factor:	1.00000

See more at: http://www.linz.govt.nz/data/geodetic-system/datums-projections-and-heights/projections/nzgd2000-meridional-circuits

1.14 CONTRACTOR PERFORMANCE EVALUATION

A Contractor's Performance evaluation is to be carried out on completion of all the physical works using the Performance Evaluation Score sheet and accompanying guidelines as attached at the rear of this Specification.

The purpose of the evaluation is to provide formal feedback to the Contractor on items that are going well and any areas of the contract that the Engineer feels require attention. A Final contractor Performance Evaluation is to be completed at time of Practical Completion and the contractor is **required** to allow time to meet with the Engineer and council staff to review, agree and sign off the Final Performance Evaluation score for the Contract.

During the course of the Contract it is envisaged that the Engineer may complete either Monthly or Bi monthly interim evaluations of the contractors performance.

Please note that the Final Contractor Performance Evaluation maybe used by Council on future tender evaluations to provide feedback to the Tender Evaluation Team in regards to Non Priced attributes – track record / relevant skills (where applicable). Furthermore, Council reserves the right to consider the evaluations against the Council's Prequalified Roading Contractors lists as part of the accreditation process and ongoing renewal of any accreditation.

(See attached document for the Performance Evaluation Score Sheet and accompanying guidelines).

SECTION 2: ROADING

2.1 GEOTECHNICAL INFORMATION

Further to clause 5.1.6, NZS 3910:2013, available geotechnical information is attached.

2.2 SET OUT

Further to clause 5.8, NZS 3910:2013, the Contractor shall be responsible for setting out the whole of the works. The CCC Technical Services & Design Team shall provide the following information:

(a) Survey control marks (on site);

(b) Level benchmarks (on site);

(c) Coordinates of survey control marks;

(d) Design lip of channel, sump and pipe string level and position will be provided.

(e) Tram Rails [Left and Right] will be provided , from this the structural slab can be set out

An electronic file, detailing the information in (a), (c) (d) and (e) will be provided after tender acceptance.

2.3 ACCEPTANCE CRITERIA FOR THE PAVEMENT, REPAIR STRUCTURE AND/OR TRENCH BACKFILL

Further to Clause 11.4 Basecourse of CSS: Part 6: – Roads, the amended NAASRA Counts for this reconstructed carriageway shall be (excluding intersections, platforms and road humps):

Through streets with Pavement use T6 and T7 (10,000 - 20,000+ vehicles per day)

Average	Maximum
60mm/km	80mm/km

Contractors are reminded of the requirements of Clause 11.7, CSS: Part 6.

Further to Clause 11.6 of CSS: Part 6: - Roads, the method of measurement of acceptance for the pavement, repair structure and trench backfill in this Contract shall be:

By Clegg Hammer

Prior to sealing the basecourse/trench backfill shall, at any point on the pavement/backfill surface, have a minimum Clegg Impact Value of 35 in the carriageway, right of way or commercial crossing or 25 in other areas.

By Nuclear Densometer

Prior to sealing the basecourse/trench backfill shall have a minimum dry density of 2,150 kg/m ^{3} as measured by Nuclear Densometer in backscatter mode.

By Benkelman Beam

Prior to sealing, the pavement shall meet the following deflection criteria, as measured by the Benkelman Beam.

For this Contract the deflection criteria to be used shall be:

95 %ile	Maximum
1.2 mm	1.5 mm

The assumed design information for the pavement in this Contract is as follows:

Assumed subgrade type:	Silty sand
Design CBR :	5 minimum
EDA :	2.75 x 10^5

2.4 COLOURED ROAD SURFACING

Surfacing shall comply with NZTA P33 specifications or as modified below

2.4.1 Surfacing colours shall be (as per AS2700S-2011):

G26 Apple Green *(cycle lanes)*

R13 Signal Red *(road humps, platforms and thresholds)*

All work shall provide a consistent visual appearance throughout the defects liability period. A patch of of the approved material and colour to be provided to the Engineer to e used to check the colour.

2.4.2 Surfacing Product

The surfacings material and substrate shall be produced and applied with an expectation of eight years life with zero or minimum maintenance for epoxy or polyurethane based surfacing or two years life with zero or minimum maintenance for emulsion based surfacing.

Aggregates that will be considered for approval include : calcined bauxite, coloured natural stone and glass.

Product must meet NZTA skid resistance standard TNZ M/20:2003. Aggregates that will be considered for approval include; calcined bauxite, coloured natural stone and glass.

2.4.3 Prior to the removal of the temporary traffic management:

All loose aggregate shall be removed from the surface, the channel, any roadside drainage structures and the shoulder.

During the defects liability period the surface shall be maintained by the Contractor so that no more than;

(a) 150g of loose coloured surfaces' aggregate is left on any 1m2 area of the surface in the first two months of its service life.

(b) 50g of loose coloured surfaces' aggregate left on any 1m2 area of the surface, after two months.

2.4.4 Defects and Repairs

Should the coloured surfaces fail to meet the requirements of this specification and require remedial action, all repairs shall be subjected to a further one year defects liability period from the date of the repair.

2.4.5 Supporting Documentation

The Contractor shall provide the following supporting documentation for the supply and installation of their coloured surface system proposed for use in the contract;

(a) Internationally-Recognised Certification, if available (e.g. Roads and Bridges Agrément Certificate under the British Board of Agrément's Highway Authorities Product Approval Scheme).

(b) Written references from local authorities if certification in accordance with (a) above is not available.

(c) Evidence that the manufacturer, or their New Zealand agent, has agreed to the Contractor's use of their product, and any conditions attached to this.

(d) Quality Assurance documentation.

(e) Health, Safety and Environmental Plan; HSNO Materials Safety Data Sheets (MSDS) which meet the NZ Code of Practice.

(f) Installation Method Statement.

(g) Completed coloured surfacing record sheet (see attached document).

SECTION 3: TRAFFIC SIGNALS SPECIFICATION

3.1 EXTENT OF WORKS

The work covered by this section includes the supply of all labour, plant and materials required for the construction/modification of the traffic signals included in this contract.

The completed installation is to be in accordance with the Standard Specifications as detailed below.

3.2 CONTROLLER SOFTWARE

The controller information sheet (CIS) and signal controller personality will be supplied by the Signal Contractor.

3.3 SCATS COMMUNICATION AND CCTV INSTALLATION

Christchurch City Council has specified network and hardware requirements for the provision of SCATS communications and CCTV installation as set out in Clause 4.4.7 on the CTOC Regional Special Conditions.

The Signal Contractor shall engage the CTOC Network Contractor directly for the supply and installation of the SCATS communication equipment and CCTV equipment.

3.4 STANDARD SPECIFICATION

This Specification shall be read in conjunction with the following Standards, which are deemed to form a part of this Specification.

In the event of this Specification being at variance with any provision of these Standards, the requirements shall take precedence in the following order:

1. This Specification
2. CTOC Regional Special Conditions March 2015, titled "CTOC Regional Special Conditions 2013 Rev1.03".
3. NZTA P43 2014 Specification for Traffic Signals
4. All other Standards.

Reference to any of the following Standards shall include any later amendments or new standards that have been substituted with the one specified:

AS1939: Degrees of protection provided by enclosures for electrical equipment.

AS2144: Traffic Signal Lanterns.

AS2339: Traffic Signals Posts and Attachments.

AS2353: Pedestrian Push Button Assemblies.

AS2979: Traffic Signal Mast Arms.

AS/NZS 1428.4: Design for Access and Mobility Part 4: Tactile Indicators.

AS/NZS 2276.1: Cables for traffic signal installations- Multi core power cables.

AS/NZS 2276.2: Cables for traffic signal installations- Feeder cable for vehicle detectors.

AS/NZS 2276.3: Cables for traffic signal installations- Loop cable for vehicle detectors.

AS/NZS 2312: Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings. Electrical Installations (Australian/ New Zealand Wiring Rules).

AS/NZS 3000: Road Design Series.

AUSTROADS Guide to: Traffic Management Series.

AUSTROADS Guide to: Screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or for screwing to BS 21 pipe threads.

BS 1387: Framework for Colour Co-Ordination for Building Purposes: Colour Matching Fan.

BS 5252:

CTOC Regional Special Conditions March 2015, titled "CTOC Regional Special Conditions 2013 Rev1.03"

Traffic Signal Design Standards (Draft, April 2010).

NZTA P43 2014 Specification for Traffic Signals

New Zealand Addendum - Appendix 2 of the Land Transport Road and Traffic Standards

Information Bulletin No. 11 -June 1990.

NZS 3910:2013 Conditions of Contract for Building and Civil Engineering Construction.

RTS 14 Guidelines for: Facilities for Blind and Vision-Impaired Pedestrians.

Transit New Zealand Research Report No. 5 'Installation and Maintenance of Inductive Detector Loops'.

Transit New Zealand Code of Practice for Temporary Traffic Management (COPTTM).

3.5 SIGNAL CONTRACTOR'S QUALITY PLAN

The signal Sub-Contractor shall submit a Quality Plan to the main Contractor for review and acceptance.

The Quality Plan must include the following items as a minimum:

- The programme of Works
- A list of any signal hardware proposed that varies from those specified, including their
- type, name of manufacturer and supplier.
- Arrangement for the CTOC Commissioning Check (prior to the signals going live).
    - Supply of the signed Traffic Signal Commissioning Form.

3.6 PROGRAMME OF WORKS

The signals section of the Programme of Works shall include the following as a minimum:

1. Start date (for notification to CTOC)
2. Dates of key operational changes (for notification to CTOC)
3. Date for CTOC Commissioning Check prior to going live.
4. (a) Signals to be operational at least 48 hours prior to the check
   (b) CTOC to be notified 7 days prior to Commissioning Check date.

3.7 APPROVED CONTRACTORS

The following Signals Contractors are approved by the Christchurch Transport Operations Centre (CTOC):

1. **Traffic Control System**

   Contact: Simon Powley or Roger Powley

   Phone: (03) 338-2305 Mobile: **Simon 021 31202**7

   Email: simon@trafficcontrolsystems.co.nz | admin@trafficcontrolsystems.co.nz

2. **Fulton Hogan**

   Contact: Andrew McKey (Electrical Manager)

   Phone: (03) 336 5100, **Mobile: 027 6689966**

   Email: andrew.mckey@fultonhogan.com

3. **Downer ITS**

   Contact: Alasdair Gardiner

   Phone: 09 251 0247, **Mobile: 021 710 534**

   Email: Alasdair.gardiner@downer.co.nz

   (Optional – for LED light fittings upgrades only)

4. **Electrix**

   Phone: (03) 381 7477

   Email: info@electrix.co.nz

3.8 PARKING METERS

Parking meters will be removed from the site of the Contractor's operations. It is essential that meters are not subjected to vibration from construction machinery. The Contractor must notify the Engineer at least 5 working days hours in advance of the work being started so that the meters may be removed by others.

SECTION 4: SEWER AND STORMWATER

4.1 SEWER LATERALS

During excavation, a sewer lateral may be found to be discharging continuous clear water indicating infiltration. The Contractor shall at the direction of the Engineer or his Representative extend the video inspection of the lateral past the road boundary as far as practical into the private property to locate and determine the cause of the inflow.

It is anticipated that 5% of laterals will need renewal, and the quantity in the schedule item for laterals is based on this assumption. The Engineer will direct which laterals are to be renewed following inspection.

4.2 DAMAGED SEWERS

Any sewer main or lateral, which is in any way damaged during the Contract works, shall be repaired only by an "Authorised Drainlayer" and inspected by a Council Drainage Contracts Supervisor. A list of Authorised Drainlayers can be found on www.ccc.govt.nz/wastewater/AuthorisedDrainlayers.

4.3 BACKFILLING AND RESTORATION

Backfilling and restoration shall be in accordance with CSS: Part 3: – Utility Drainage/ CSS: Part 4: – Water Supply.

Restoration of carriageway and footpath areas, affected by the Contractor's operations and within legal road, shall comply with the Works Access Permit attached. Restoration of areas outside legal road shall comply with SD 101. Carriageway restoration shall be Type C2. Footpath restoration shall be Type F2.

4.4 SEWER

DESCRIPTION OF WORKS

The work included in this specification is for the renewal of the existing wastewater in the streets of:

a) High Street – approximately 94 meters

b) Lichfield Street – approximately 46 meters

c) Manchester Street – approximately 40 meters

EXTENT OF WORKS

Renewal of existing wastewater main.

Renewal of existing wastewater laterals.

Reconnection of existing pipes to manholes, as required.

Replacement of manholes.

Re-benching in manholes as required.

Removal and disposal of existing manholes and pipes.

Closed Circuit Television (CCTV) inspection upon completion of new wastewater mains and laterals

Closed Circuit Television (CCTV) inspection of existing PVC wastewater laterals

Testing of trench base

Backfill compaction testing in accordance with Clause 24.0.

Pipe pressure testing.

PVC-U compliance testing.

Pipe Ovality test of the wastewater mains after the pipes have been laid.

Trench restoration in carriageway, road markings, footpath, berm and landscape area restoration.

Set out of works.

Temporary pumping, bypass and disposal of existing waste water.

Dewatering and disposal of ground water as required.

Potholing of services as required.

Potholing of laterals.

Quality assurance.

Provision for temporary traffic control.

Night works as required.

Disposal of coal tar contaminated material.

All other work indicated, described or implied on the drawings or in this Specification, or in any other document so as to render the Contract complete.

All work shall be carried out as specified in the Christchurch City Council's Civil Engineering Construction Standard Specification (CSS) unless specified otherwise.

Sediment Control Management and Site Dewatering

The Contractor shall fill out the sediment control section of the Environmental Management Plan.

The Contractor shall provide all dewatering necessary to keep the construction and work areas dry. The Contractor shall design, install, operate and maintain an adequate system for the works. The system shall be of sufficient size and capacity to maintain dry conditions without delays to the construction operations.

Dewatering systems shall be installed by the Contractor to control seepage from any excavated slopes or bottom of excavations, so as to ensure a stable work area at grade and prevent ravelling or sloughing of excavated slopes, and to lower the hydrostatic water level in the ground so that as excavation proceeds, the piezometric heads and groundwater surface are maintained at least 0.3m below all formation surfaces at all times, as measured by piezometers.

The dewatering system shall discharge suitably filtered water to the storm water system. The filtering shall meet the requirements of the Contractors Sediment Management Plan. The concentration of suspended solids in the discharge shall not exceed 100 parts per million.

It remains entirely the Contractor's responsibility to keep all excavations dewatered and to protect existing structures from any damages as a result of the dewatering operation.

The Contractor shall provide a method statement for the dewatering of the site five (5) days prior to start of work. This shall include:

Description of why the proposed dewatering system has been selected;

Proposed set out of any well points;

Details of dewatering and monitoring of groundwater levels and settlement for areas with peat

Details of back-up power supplied in the event of a power failure;

Details on how noise restrictions for the site will be met;

Details of the Sediment Trap Facility proposed

Details of how pumping of sand and sediment will be monitored and controlled to minimise the risk of settlement due to loss of fines.

Dewatering Guideline can be found in the link below:

https://ccc.govt.nz/consents-and-licences/construction-requirements/approved-contractors/authorised-drainlayers/best-practice-guidelines/

No work shall commence on site until the dewatering methodology has been accepted by the Engineer.

A copy of the Environmental Management Plan shall be kept on site by the Contractor at all times.

Removal and Disposal of Asbestos

Contractors must comply with the Health and Safety at Work (Asbestos) Regulations 2016 when handling or removing asbestos pipe from site. Contractors tendering for this work should be aware of this and ensure they maintain and understand their responsibilities under this Act.

Further to CSS: Part 1 Clause 2.0 the Contractor shall follow the most recent version of Management and Removal of Asbestos.

Contractors shall be aware of their responsibility as a PCBU with regards to asbestos removal and shall make themselves familiar with the regulations, and shall note that although insitu AC pipe is at the lower end of the airborne fibre risk matrix, the following is required as a minimum:

A Class 'B' Asbestos Removal Licence Holder to supervise the removal and disposal;

An Asbestos Removal Control Plan as part of the contract pre-start documentation;

WorkSafe notification prior to the AC pipe removal commencing;

The 'wet spray' method should be used during removal;

The removed AC pipe shall be wrapped or bagged in heavy duty polythene and if stored on site prior to disposal shall be placed in a polythene lined and covered container;

The pipe shall be disposed to Kate Valley landfill and should comply with Kate Valley requirements regarding notification.

If Contractors are using a Sub-Contractor for the pipe removal, they should be listed in tender document. They shall confirm the identity of the Asbestos Removal Licence holder in that company.

RESOURCE CONSENT CONDITIONS

All work shall conform to the conditions of any noted or appended resource consents enclosed in the Environmental Management Plan including:

- Dewatering global consents, CRC190368, CRC 190369
- Earthwork over aquifer global consent, CRC 173830
- Construction phase stormwater global consent, CRC 090292.

GEOTECHNICAL INFORMATION

Further to Clause 5.1.6 of NZS 3910:2013, geotechnical data from investigations in the area (with Borelogs) is provided for information purposes as part of the tender documents.

Warranty is neither expressed nor implied that such information will give an accurate and complete picture of the ground conditions throughout the site.

The Contractor shall satisfy themselves as to the precise nature of excavation (soil and subsoil, including the water-table level), dewatering and filling requirements before tendering.

HAZARDS

Further to clause 5.7.5, NZS 3910:2013, no hazards have been identified that are unusual to contracts of this nature. Specific hazards are identified in the Project Risk Register. The main hazards identified include:

Asbestos water mains crossing the trench

Coal tar

High groundwater level

Trench stability

Intercity with pedestrian flows

Tram Tracks

Live services including overhead powerlines

SET OUT

Further to clause 5.8, NZS 3910:2013, the Contractor shall be responsible for setting out the whole of the works. The Christchurch City Council Technical Services & Design can provide levels on Survey Control Benchmarks and Temporary Benchmarks (on site) as required.

SITE SPECIFIC CONSIDERATIONS

A detailed Construction Methodology Plan shall be submitted to the Engineer for approval ten days prior to work commencing. No work shall commence on-site until the Construction Methodology Plan has been accepted by the Engineer.

The Contractor shall draw attention to the specific hazards noted on the Drawings and detail actions to mitigate these hazards in their Specific Site Safety Plan and Construction Methodology Plan.

EXCAVATION

Services

Refer to Clause 9.0, CSS: Part 1: - General.

Trench Base Testing

After excavation, the trench base shall be tested for each pipe length. The target minimum trench base soil strength is 50 kPa for at least 900mm below the foundation layer as determined

by Scala Penetrometer reading of no more than 70mm per blow. The cost for the trench sub-base tests shall be allowed for in the pipe installation rate.

In the case that the target soil strength of 50 kPa is not reached, the Contractor shall:

Continue the same test down to a minimum depth of 1800mm and immediately notify the Engineer of the results;

Provide the two previous test results to the Engineer (if not already in possession);

Take additional tests within the vicinity of the failed test and provide these to the Engineer. These additional tests will provide a more thorough understanding of the impact a soft spot may have on pipe support. The Engineer will then instruct the appropriate action, this may include raft foundations, undercutting and (or) geo-grid bridging.

All manholes shall have 100 kPa safe bearing capacity foundation or 40 mm/blow.

These steps are critical to ensure the structural integrity of the pipeline and manholes.

Soft Ground and Raft Foundation

After excavation of the trench base, the Contractor may encounter material with soil strength less than the required in Clause 0. The Contractor shall inform the Engineer of any such suspected material. The Engineer shall make a decision on the trench and foundation.

Where soil strength less than what is specified in Clause 0 is encountered at the base of the trench, the ground shall be excavated and a soft ground foundation (raft foundation) shall be installed as per CSS Part 3, SD344 Sheet 3 and CSS Part 3 Clause 8.12.3 and as detailed out in the drawing plan DD01. The excavation and the use of a raft foundation shall be directed by the Engineer.

Further to CSS: Part 3 Clause 8.11.3, the rate for the raft foundation shall include excavation, disposal of excavated material off site, supply and installation of raft.

Undercutting and Backfilling of Unsuitable Material

After excavation of the trench base, the Contractor may encounter material which is unsuitable for the placing of the haunching or foundation material.

The Contractor shall inform the Engineer of any suspected unsuitable material. The Engineer shall rule as to whether the material is unsuitable and direct the amount to be excavated below the trench based on the scala test. The Engineer shall decide if the area shall be filled with compacted ballast or CCC GC 65-40 wrapped in geotextile.

PIPE MATERIALS, DIAMETERS AND CLASSES

Pipe Materials

This Contract utilises the following pipe materials:

AS/NZS 1260 PVC-U pipes and fittings for drain waste and vent application.

AS/NZS 5065 - Polyethylene and Polypropylene pipes and fittings for drainage and wastewater applications.

All pipes shall comply with relevant standards regarding quality and manufacture.

Pipe Diameters and Classes

The wastewater pipes to be used are as follows:

Wastewater Main:

DN225 PVC-U, SN16, RRJ

DN150 PVC-U, SN16, RRJ

Wastewater Laterals:

DN110 PVC-U SN16, Restrain

DN100 PVC-U SN16, RRJ

PVC-U COMPLIANCE VERIFICATION AND QUALITY ASSURANCE

The pipe supplier shall operate under a Standard Mark Accreditation, Bureau Veritas Accreditation or approved equivalent. Copies of certificates are required prior to work commencing.

The manufacturer shall make available the Full Manufacture Quality Assurance records and the test results for perusal and review.

Pipe certification of manufacture (form: appended) for new PVC-U pipes shall be approved by the Engineer prior to the work commencing.

PVC WITNESS MARK RECORDS

The Contractors shall photograph the pipes witness and reference mark before the pipe is pushed home in the socket. The Contractor shall also take photographs showing the 25mm gap between the reference mark and witness mark after the pipe has been inserted in the socket. The PVC Witness Mark Memorandum in the link below explains these requirements in more detail.

https://www.ccc.govt.nz/consents-and-licences/construction-requirements/approved-materials-list/design-memos/

INSTALLATION OF WASTEWATER MAIN AND LATERALS

Lateral replacement shall be in accordance with Clause 11, CSS: Part 3: – Utility Drainage. Wastewater laterals shall be replaced from the inspection point (usually just on the private property side of the true boundary) to the main unless it is constructed of flexible materials (such as PVC-U), installed in recent years and is in good condition.

Where no inspection point is found within 1 m inside of the private property boundary, install a new inspection point at approximately 600 mm, but not greater than 1 m, inside the private property boundary.

All laterals shall be replaced by pipe bursting unless directed otherwise by the Engineer. Relaying of wastewater laterals beneath a tree canopy, or within 3m of its trunk, shall be carried out by pipe bursting in accordance to Clause 19.4.1, CCS Part 1.

All existing vertical risers shall be replaced with PVC-U and the exact configuration shall be determined on site in consultation with the Engineer.

Where the lateral's pipe cover is less than 750mm in the carriageway, 600mm in driveways or 500mm in footpath, a concrete protection slab as per SD342/Type E shall be provided.

PRESSURE TEST

Further to Clause 14.0, CSS: Part 3: – Utility Drainage, a pressure test is required. The test pressure shall be 10 kPa (Air test) or 1.2m head (hydrostatic) above the crown of the pipe.

PIPE OVALITY TEST

Further to CSS: Part 3 Clause 14.6, the Contractor shall carry out an ovality test on the wastewater mains in accordance with Clause 6.5 of AS/NZS 2566.2. The test shall be carried out at least seven (7) days after the pipes have been laid. Deformation exceeding the specified amount shall be corrected or the pipe replaced. The cost associated with pipe ovality testing shall be included in the pipe laying rate.

WASTEWATER MANHOLES

All new manholes shall be Circular Precast Manholes as per SD303 with Long Socket Manhole Connectors as per SD341/Sheet 2 unless specified otherwise on the Drawings.

No laterals are to be connected to the first pipe length laid into the long socket connector at manholes, refer to Clause 8.11.5, CSS: Part 3: – Utility Drainage, for further detail.

Where manholes are not being replaced, Contractor shall install new lids and covers in accordance as per SD301 Sheet 1.

BACKFILLING AND RESTORATION

Backfilling and restoration shall be in accordance with CSS: Part 3: – Utility Drainage.

Restoration of the carriageway and footpath areas, affected by the Contractor's operations and within legal road, shall comply with SD 101. Carriageway restoration shall be Type C2, Footpath Type F1 and F3.

The finished carriageway surface shall give a smooth ride with an average NAASRA roughness count no more than 5% worse than prior to works commencing and individual roughness values shall be no more than 10% worse than prior to works commencing. See clause 11.7 of CSS: Part 6: – Roads for further information regarding NAASRA testing.

ACCEPTANCE CRITERIA FOR THE PAVEMENT, REPAIR STRUCTURE AND/OR TRENCH BACKFILL

Further to Clause 11.6 of CSS: Part 6 – Roads, the method of measurement of acceptance for the pavement, repair structure and trench backfill in this Contract shall be:

By Nuclear Densometer

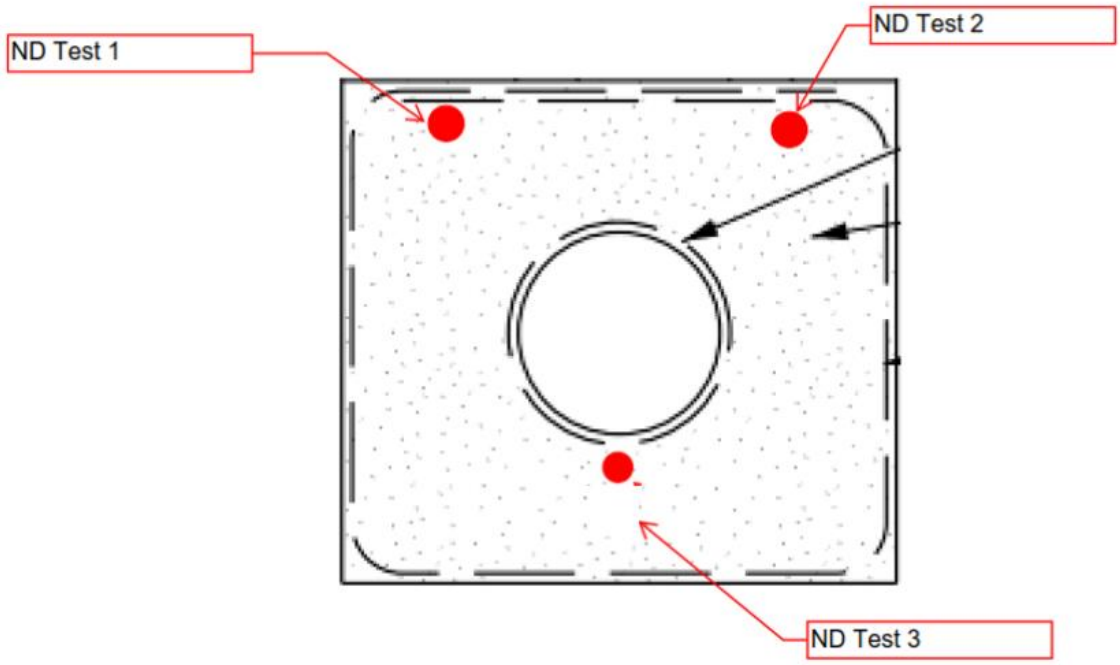
Prior to sealing, the basecourse/trench backfill shall have a minimum dry density of 2,150 kg/m^3, as measured by Nuclear Densometer in backscatter mode.

Further to Clause 15.0 of CSS Part 3 – Utility Drainage, the placement and compaction layers shall not exceed 200mm (compacted) thickness as per the National Code for Utility Operators' Access to Transport Corridors as cited in Clause 29.0 of Part 1 – General.

The trench backfill compaction testing by Nuclear Densometer (full height of trench) shall be undertaken at maximum of 500mm layers at 10m intervals along the trench.

Pipe haunching/surround shall be in accordance to CSS: Part 3 – Utility Drainage, Clause 8.5.

The trench haunching compaction testing by Nuclear Densometer shall be undertaken as per the plan below.



Nuclear Densometer testing can be replaced with Clegg hammer testing (if approved by the Engineer). However, the Clegg hammer needs to be calibrated against Nuclear Densometer. The Clegg hammer shall be done at 10m intervals and the Nuclear Densometer for calibrating the Clegg Hammer shall be undertaken at no more than 50m intervals along the trench. The haunching shall have a minimum dry density of 2,050 Kg/m^3.

The costs associated with all compaction testing shall be included in the pipe laying rate. Schedule rates are for additional tests ordered by the Engineer.

By Benkelman Beam

Prior to sealing, the pavement shall meet the following deflection criteria, as measured by the Benkelman Beam.

For this contract the deflection criteria to be used shall be:

95%ile	Maximum	
1.2 mm	1.5 mm	For traffic loading (heavy vehicles/day) >500

		Manchester Street, Lichfield Street
2.0 mm	2.5 mm	For traffic loading (heavy vehicles/day)<99 High Street

Asphaltic Concrete Surfacing

Further to Clause 17.0 of CSS: Part 6: - Roads:

(a) 5 core sample/s of the asphaltic concrete surfacing shall be taken and tested to confirm compliance with the relevant performance criteria for AC sealing.

(b) The bitumen penetration grade for the CCC AC16 in this contract shall be 80/100.

BYPASS PUMPING

The project will require a number of temporary bypass pumping arrangements to allow waste water to continue to flow whilst the new or existing mains are unavailable. The number, duration and extent of these works shall be at the discretion of the Contractor.

At no times shall there interruption to the waste water service in the project area.

Prior to commencing bypass pumping and sealing the wastewater mains for the works, the Contractor shall obtain permit to work according to CSS Part 1 Clause 31 and shall obtain Engineer's approval that the by-pass pumping installation is fit for purpose.

AS-BUILT DOCUMENTATION (DRAWINGS AND RECORDS)

The Contractor shall provide complete and accurate as built records in accordance with IDS: Part 12 – As Built Records and the supporting Survey As-Built Guideline (SAG).

The Contractor shall provide as-built asset data to Council using the Council As-Built Template (CAT) spreadsheet and include red pen mark-ups of design drawings. Note surveyed X and Y coordinates shall be provided in terms of NZGD2000 Mt Pleasant Projection.

Examples of completed CAT templates and marked up drawings are provided in the link below.

https://www.ccc.govt.nz/consents-and-licences/construction-requirements/infrastructure-design-standards/as-built-survey-and-data-requirements/

CCTV FOOTAGE

The Contractor shall supply CCTV of the completed pipe work as per CSS Clause 14.7 and 14.8.2 and in accordance with the CCC Pipeline CCTV Specification. In addition, CCTV shall be done as each manhole length is completed to ensure defects are remedied before reinstatement takes place.

More information regarding CCC requirements for CCTV pipeline inspections is provided in the link below:

https://ccc.govt.nz/consents-and-licences/construction-requirements/construction-standard-specifications/pipeline-cctv-inspections/

TEMPORARY WORKS

The Contractor shall design and execute all temporary works whether of a special or general nature, required for the Contract Works, and protection and safety of the general public, property or stock.

The Contractor shall submit to the Engineer for review copies of the detailed plans of temporary works, including dewatering details, at least ten working days in advance of construction of such temporary works commencing. The temporary works shall also include, but not be limited to, temporary trench support and a specific methodology showing how trench shields / sheet piles will be removed and haunching and backfill will be adequately compacted.

All temporary works shall be removed at the completion of the respective work unless otherwise approved by the Engineer.

COMPLETION AND CLEAN UP

On completion of the Contract Works (except for maintenance work), the Contractor shall clear away and remove from site all materials and equipment. Included in this requirement is the removal and disposal of off-site stockpiles, site fences, site huts, signs, surplus excavated materials, demolition materials, nails, pieces of timber, empty containers etc. The whole site shall be left clean and ready for immediate occupation and use by the Principal.

All of the area occupied or worked over by the Contractor in execution of this Contract, both within and beyond the area shown as available for the work, shall be reinstated to profile and condition acceptable to the Engineer.

SECTION 5: TRACK WORKS

5.1 GENERAL AND SPECIFIC CONDITIONS

The attention of the Contractor and sub-contractor is drawn to Section 1 of the special conditions which will apply to Track and associated works

Track work includes installation of tram tracks in a structural foundation which includes straight track, curved track,crossovers and associated welding [Aluminothermic], electrical bonding of the foundation reinforcing,track drainage,in some sections paving will be constructed between tram tracks.

5.2 SCOPE

Straight and Curved track has been stored at Kilroran Place,Wigram,Christchurch.

Please liaise with Adele Brown "CCC "Operational Delivery Lead – COFP Facilities Team" to enable access to site. Contact Details are :-

Adele Brown
+64 3 941 5169
+64 27 268 3567

***Ensure all Health and Safety protocols are adhered to when tram rails and associated parts are picked up and delivered to site.**

The work includes delivery to site of tram track parts which consist of:

- Varying radius curves
- Straight track
- Track work including points, crossovers, etc
- Manual swtich

The contractor is to prepare the layout of the tram curved track parts in a suitable open space to confirm CCC current stock will complete the loop as per drawings before the parts are delivered to site.

Refer to drawing CCC -19 -06 for existing rail stock to be shortened

Note: Tram track curves and associated items have been procured by CCC. Refer to Clause 2.3 for breakdown of materials that are stored in Christchurch.

5.3 CCC PROCURED TRAM ITEMS

Tram Track	Detailed information
Ri57a Curved Track	Refer to CCC-19-06 for details
Ri57A Straight Track	Refer to CCC-19-06 for details
Contec Manual Switch	Refer to CCC-19-06 for details

5.4 ELECTRICAL

Refer to Track Electrical Specification (Section 6) for additional information regarding design concepts, bonding cables, reinforcing welding, DPC membrane and connecting to bracket arm pole.

5.5 FOUNDATIONS FOR TRAMWAY POLE

Contractor to supply and install concrete foundations. Locations to be finalised by Engineer.

5.6 Aluminothermic Welding

Track welds to be Aluminothermic welded, refer to RTS3602 Australian Rail Track Corporation Ltd – Engineering Practices Manual Civil Engineering [Issue B, Revision 2 19 April 2007]

Contractor will allow supply of welding kits for each joint.

5.7 Manual Switch

Installation of manual switch, refer to CONTEC CSV34 “Manual Point Setting Mechanism”

5.8 MANUAL SWITCH DETAILS

CSV 34

| Mechanical Point Setting Mechanism |
| Operations Manual |

Mechanical Design with Spring-loaded Toggle System
Trailable
For Standard and Trailable Points
With Roller Locking and Detector System (optional)
With Stop Damping on Both Sides (optional)

CONTEC
TRANSPORTATION SYSTEMS

The manufacturer of this product

CONTEC GmbH
Transportation Systems

has introduced a quality management system.

The quality management system is certified according to the norm DIN EN ISO 9001 – 2008. The proof is confirmed by regular audits.

The present manual is issued by

CONTEC GmbH
Transportation Systems

Oberahrer Strasse
D - 56244 SAINERHOLZ

A. Areas of Application

Urban trains according to the German regulations for tramway, metro and light rail operations (BO Strab)

B. Legend

	Author	Client	Approval	
Date	Refer to the footer			
Name	Markus Wittayer contec			
Positions	QM			-

C. Status of Revisions

Reason	Author	Version	Date	Revisions	Remarks
Basic design	kdbest	1.0	03 - 07	New document	
Basic design	kdbest	1.1	07 - 07	Chapters 1.4.2 and 4.4.2 added (proximity switch)	Four Illustrations (8,9,31 and 32) added
Basic design	MW	1.2	07 - 10	Revision of the document	

1 Indexes

1.1 Table of Contents

1.2 Index of Illustrations

2 General Information

The manual point setting system CSV 34 is designed for the setting of points made of grooved or flat-bottomed rails with a track gauge of 900 mm or more.

The maximum throw is 80 mm.

Mechanical components of modular design are accommodated in a ground box in the track or other fastening systems.

All modular components can be combined with each other.

2.1 Basic Components

Basic module	Basic point machine	CSV 34		
Add-on module	Detector	CSV 34 **P**		
Add-on module	Damper	CSV 34 **D**	CSV 34 P**D**	

On request, the point machine and ground box can be supplied in an insulated version.

In the following, you will be given basic information concerning the installation of the point machine, as well as a maintenance schedule.

Detailed drawings and components lists can be obtained on request or via the website.

2.2 Point Machine CSV 34

The point machine CSV 34 has the following technical properties:

1. Manual setting by a lever recess acting directly on the mechanical unit
2. Non-positive locking of both point tongues
3. Trailable
4. Double spring mechanical setting and locking system
5. Stainless high-grade steel transmission elements with two universal joints each
6. Low-maintenance bearings
7. For standard or automatic return applications
8. Adjustable hydraulic end position dampers – individually adjustable for either operating direction (optional equipment)

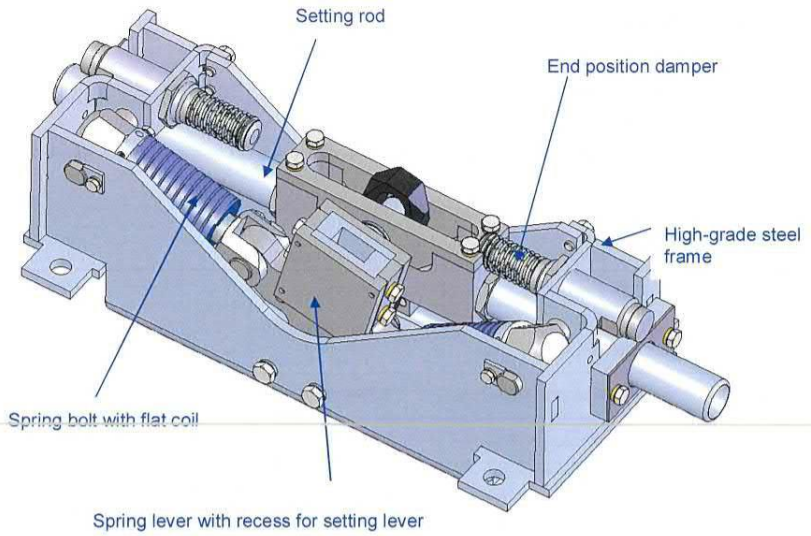


Illustration 1: CSV 34 with End Position Dampers

The point machine must be accommodated in a ground box for installation into track or an equivalent fastening system.

In order to require a minimum of servicing, only high grade equipment is used, which is designed for the severe operating conditions prevailing on railways.

The point machine is clearly structured, simply and efficiently designed. Two flat coils are provided to hold the tongues in their end positions and move them to the chosen end position after trailing.

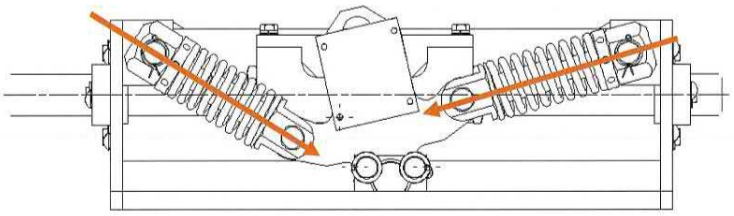


Illustration 2: Sectional View - Toggle System CSV 34

Two flat coils are provided (refer to Illustration 2) to

- move the tongues to the respective end position after trailing
- support manual operation
- retain the tongues securely in the end positions
- move the tongues back to the original position in the case of trailable points

3 different spring strengths allow for varying the retention forces.
The springs can be distinguished by their colour coding (green, blue and red).

2.3 Point Machine CSV 34 D

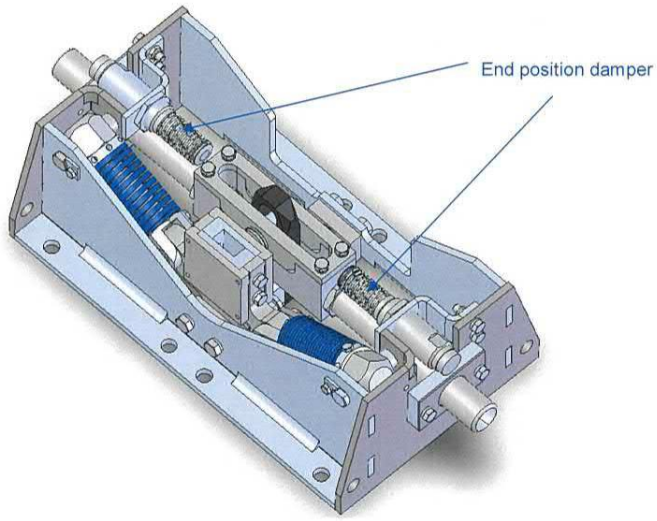


Illustration 3: Graphic Representation of the Version with 2 Dampers

The end position dampers are fixed by fastening plates on the right and the left-hand side of the frame of the point machine.

The dampers are only active when the end position is reached (stop damping) and are continuously and individually adjustable.

The installation of the dampers is optional. The adjustment of the dampers is described in chapter 4.

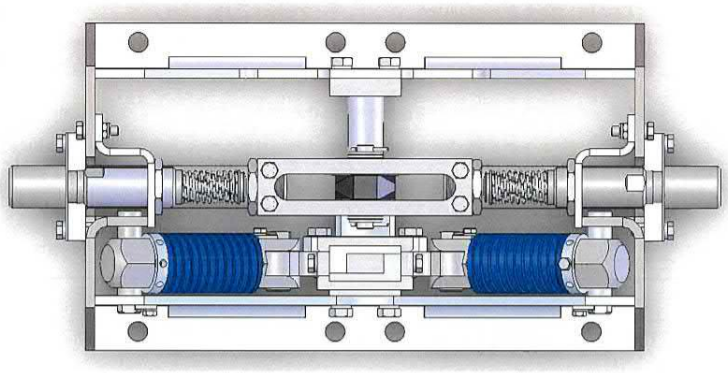


Illustration 4: Graphic Representation of the Version with 2 Dampers (Springs Shown in Blue)

2.4 Point Machine CSV 34 PD

The design of the point machine CSV 34 P is the same as the model CSV 34, except that it is supplemented by the add-on detector module with an electric position indication and dampers.

The position contacts are continuously adjustable to the required throw.

The point machine and the detector module are mounted with bolts on a fastening plate.

For the end position disconnection, mechanical contacts or proximity switches can be used.

2.4.1 Detector System with Mechanical Contacts

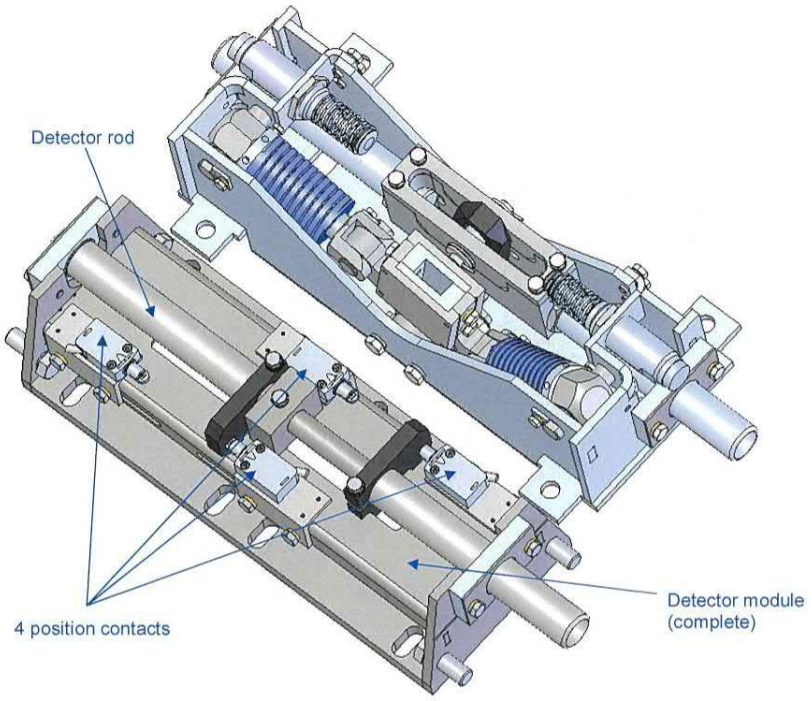


Illustration 5: View of the CSV 34 PD

2.5 Ground Box for Grooved Rail Points

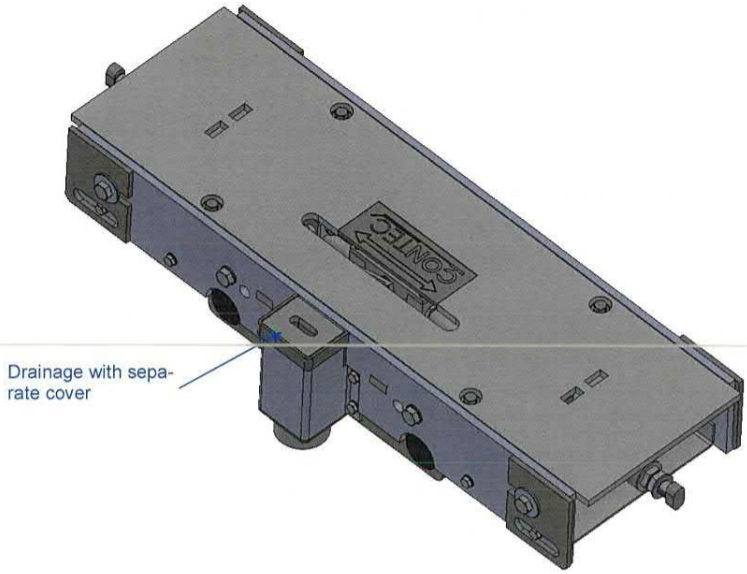


Illustration 6: View of the Ground Box

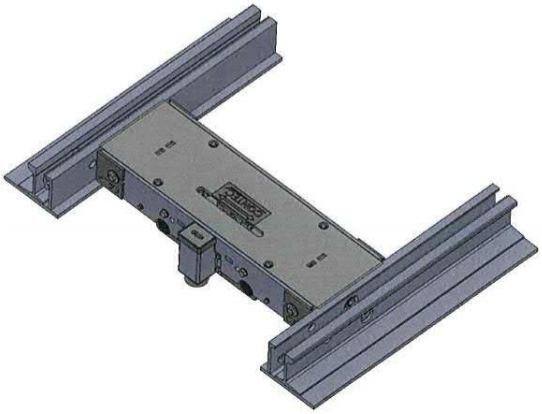


Illustration 7: View of the Ground Box in a Grooved Rail Point

2.6 Fastenings for Flat-bottomed Rail Points

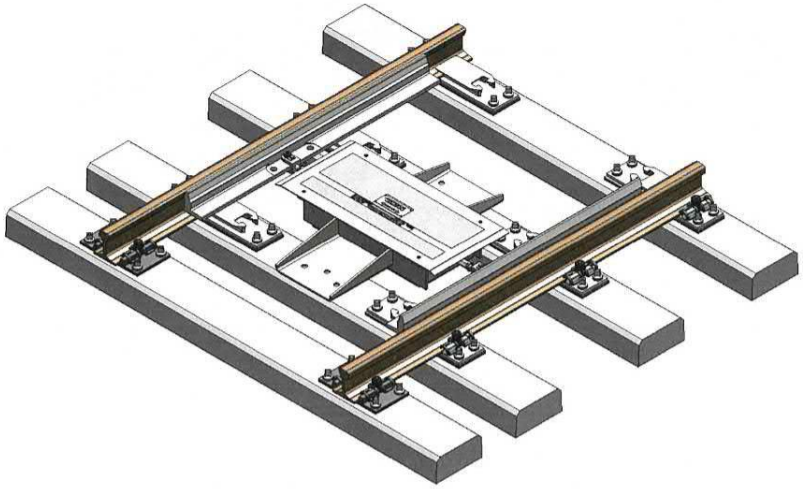


Illustration 8: View of the Sleeper Fastening

2.7 Transmission Elements for Grooved Rail Points

Most of the components of the transmission are made of high-grade steel.

In order to avoid distortion of the transmission elements or the setting rod, the elements are equipped with two universal joints, allowing a certain movement of the tongues in every direction.

One of the universal joints has a right-handed thread, and the other a left-handed thread. The transmission elements are adjusted by turning the lead-screw nut.

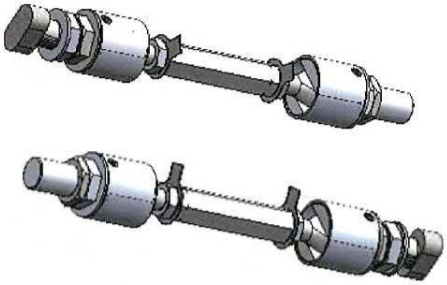


Illustration 9: Transmission Elements for Grooved Rails

2.8 Transmission Elements for Flat-bottomed Rail Points

The tongue attachment for flat-bottomed rail points has fork heads. They are identical for setting and detector rods.

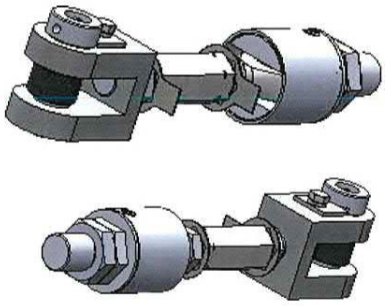


Illustration 10: Transmission Elements for Flat-bottomed Rail Points

3 Maintenance/Inspection/Repair

3.1 General Indications

The point setting system CSV 34 was designed for lowest possible maintenance in mind.

Guides and bearings are provided with ultramodern and wear resistant components. Positive emergency running characteristics guarantee operational reliability even when running dry for a longer period of time.

These maintenance instructions are based on the practical experience gained with the point machine CSV 34, but also with point machines MH 71, which are of similar design.

In order to ensure a safe and trouble-free operation of the point machine, the following instructions and remarks should be strictly observed.

As a basic principle, the valid legal regulations and the provisions specified by the user must be adhered to. The present instructions should be appropriately supplemented in the future.

The recommended inspection intervals are indicative. In practice, the intervals are often shorter. Longer intervals should be agreed on with the manufacturer. The climate and frequency of use are essential when considering extended maintenance intervals.

Furthermore, this operations manual contains detailed information and explanations regarding the necessary measures to be taken. Detailed knowledge about the functioning and the structure of the point machine is provided, which could be of crucial significance when operating the point machines.

The **maintenance and inspection** of the point machine should be performed according to the table overview in chapter 6.

For adjusting works without any self-explanatory contents, descriptions and remarks are to be found in section 4.

3.2 Definitions of Terminology

All of the following remarks and instructions are equally valid for the installation, mounting, adjusting and repair works, as well as for fault seeking.

These maintenance instructions use various warnings, in order to indicate the danger levels.
Such warning notices are also found on the product as plates, stamps, seals or labels.

Symbol	Signal word	Meaning
	Danger	Within the meaning of the this manual and the warning notices on the product itself, this means that death or serious injury will occur if you do not adhere to the safety warnings contained in this manual or placed on the product itself.
	Warning	Within the meaning of the this manual and the warning notices on the product itself, this means that death or serious injury could occur if you do not adhere to the safety warnings contained in this manual or placed on the product itself.
	Caution	Within the meaning of the this manual and the warning notices on the product itself, this means that slight injury or material damage could occur if you do not adhere to the safety warning contained in this manual or placed on the product itself.
	Notice	Within the meaning of this manual, this is important information about the product or the particular part of the documentation that you should particularly pay attention to.

3.2.1 Qualification of the Personnel

A pre-condition for optimum maintenance and repair work is the comprehensive and specific training of the maintenance personnel. Comprehensive knowledge of the functioning and assembly is mandatory.

The required tools and materials are basic necessities for the work to be performed.

A person is qualified if acquainted with the:

- installation,
- construction,
- operation,
- maintenance of the product and
- associated dangers.

Above and beyond this, all persons carrying out assembly, commissioning, operation and maintenance of the product must have the qualifications and experience required for the following basic principles:

- Methods of installation
- Working according to and on the basis of drawings
- Working according to the operating instructions
- Accident prevention instructions and safety rules
- Operation methods and routine operation procedures
- First aid

3.2.2 Safety Instructions

The valid and legally binding regulations of the user must be adhered to.

Regularly instruct the personnel in the currently valid guidelines and stipulations of the general accident prevention regulations and legally binding safety rules.

3.2.3 Sources of Danger

DANGER

Danger to life because of high voltage on the installations.

Adhere to the warning notices in the operating instructions and on the product itself.

Only valid for an application of the point setting system in conjunction with a point detector.

CAUTION

Risk of injury by falling and/or tilting parts. Keep clear of moving parts.

4 Installation

CAUTION

Risk of injury by falling and/or tilting parts. Keep clear of moving parts.

4.1 Installation of the Ground Boxes

- The ground boxes shall be mounted into the point according to the drawing below.

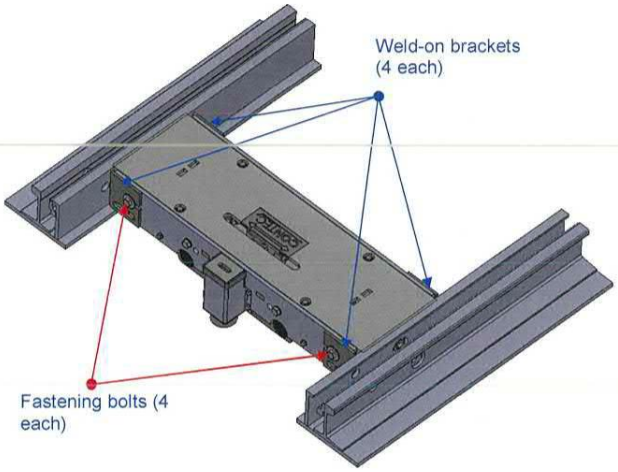


Illustration 11: View of the Ground Box CSV 34

- The front edges of the ground boxes must be oriented **parallel** to the axis of the setting rod of the switch tongue, in accordance with the measure indicated below

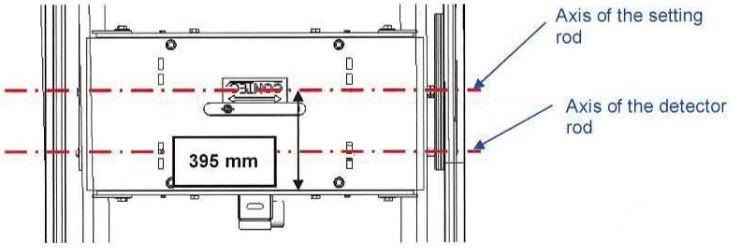


Illustration 12: Ground Box Installation Dimensions

- The dimensions are measured from the front edge of the ground boxes to the setting rod, on both sides of the rails (refer to illustration 18).
- Tighten and align the fastening bracket
- Weld the fastening brackets onto the rail
- Tighten the bolts
- Continue according to section 3.2

4.2 Installation of the Point Machine

- Open the lid of the ground box.
- Pre-mount the fastening angles on the point machine
- Lift the point machine into the ground box. The setting recess has to point in the direction of the tip of the point.
- Align the point machine.
- Use a fastening set to fasten the point machine in the ground box.

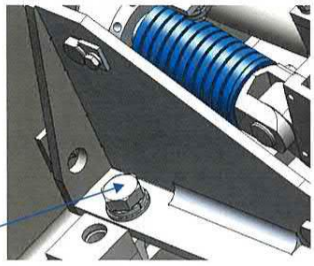


Illustration 13: View

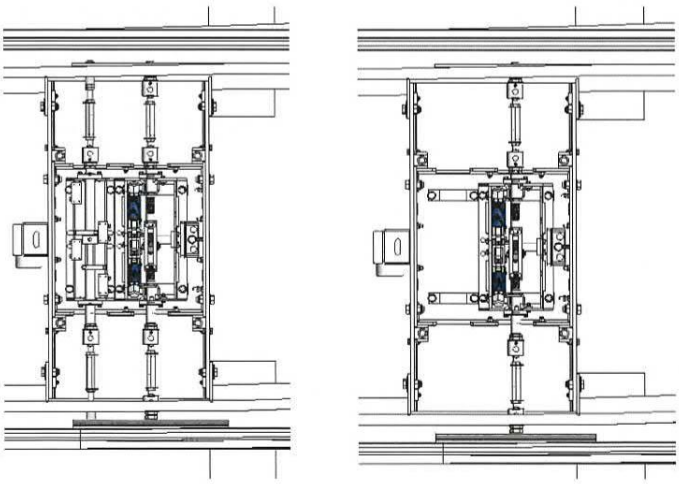


Illustration 14: Installation View of a CSV 34 PD in a Grooved Rail Point (L.H.) /CSV34 D in a Ground Box (R.H.)

4.3 Installation of the Transmission Elements (Grooved Rail Point)

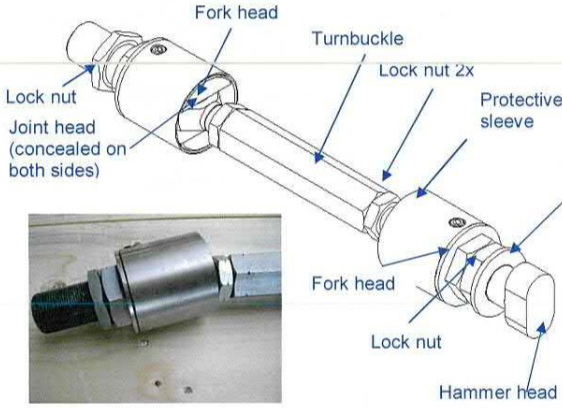
CAUTION

Risk of injury by moving parts.

Perform the installation according to the following illustrations. The transmission elements are delivered pre-assembled and must be partially disassembled for the installation.

The side of the applied switch tongue is mounted first.

4.3.1 Mounting the Setting Rods



1. Undo the protective sleeves – remove the protective sleeves
2. Dismount both bolts
3. Remove the universal joints from the fork heads

Illustration 15: Setting Rods

4. Enter the hammer head bolt with the fork head into the capstan of the rail and draw it up with the hexagon nut
5. Fix the fork head with a lock nut
6. Screw the joint head of the side of the rod into the setting rod and fix it by the lock nut.
7. Insert the turnbuckle with the joint head into the fork head at the hammer bolt, and insert the bolt.
8. Slide both protective sleeves over the turnbuckle (pay attention to the symmetry)
9. Insert the joint head into the fork head of the setting rod and insert the bolt.
10. Slide the sleeves on and secure them.

11. Mount the transmission elements on the opposite side in the same manner. Disassemble the fork head on the side of the rod.
12. Perform the installation as per pt.6
13. Unscrew the detector bolt from the turnbuckle sleeve

4.3.2 Mounting the Detector Rods

14. Adjust the detector bolt to the switch tongue
15. Screw on the turnbuckle sleeve as per pt. 9
16. Adjust the detector rods

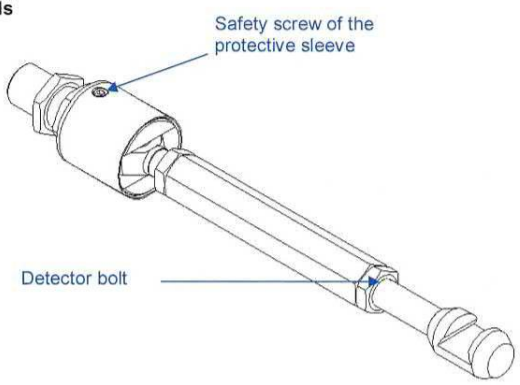


Illustration 16: Detector Rods for Grooved Rails

4.4 Installation of the Transmission Elements (Flat-bottomed Rail Point)

The installation and adjustment is largely identical to the one on grooved rails. However, the switch tongue is fastened by means of fork elements with rounded bolts.

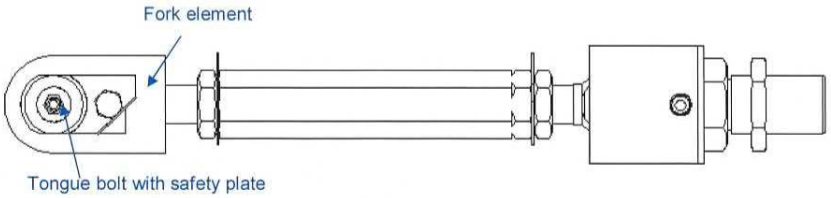


Illustration 17: Rods for Flat-bottomed Rails (View from above)

5 Commissioning

CAUTION

Risk of injury by falling and/or tilting parts. Keep clear of moving parts.

5.1 Readjustment of the Transmission Elements

- Undo the lock nuts of the turnbuckle sleeve — Pay attention to the L.H. and R.H. threads
- To adjust the lead-screw, turn it until the applied switch tongue touches the stock rail
- **IMPORTANT: On all CSV34 for flat-bottomed rails, set the throw to 75 mm!**
- Secure the setting with lock nuts.
- Check the settings by performing several throw operations (valid especially for applications with detectors).
- Check that all the lock nuts are tight.

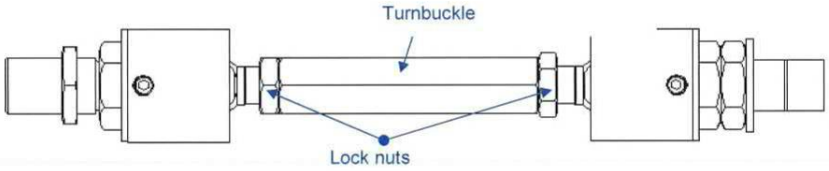


Illustration 18: View of the Transmission Elements

5.2 Setting the Spring Force

- Remove the safety screws.
- By turning the setting nuts clockwise on both sides, the spring force is increased. It is decreased by turning the setting nuts counter-clockwise.
- Check the settings during the throwing operations. When the centre position is exceeded, the point machine should be moved to the opposite end position. Otherwise it should return to the original end position. This movement is slowed down by the dampers, in order to reduce noise levels to a minimum.
- Secure the settings with the safety screw.

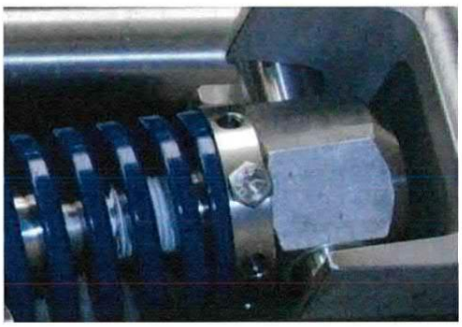


Illustration 19: View of the Spring Setting

5.3 Adjustment of the Damping

The damping cylinders require no maintenance.

They are mounted on either side of the drive frame by means of fixation plates.

- By turning the setting screw, the damping can be adapted to the tension of the tongue and the spring.
- Turning to the right-hand side increases the damping, turning to the left-hand side decreases it.

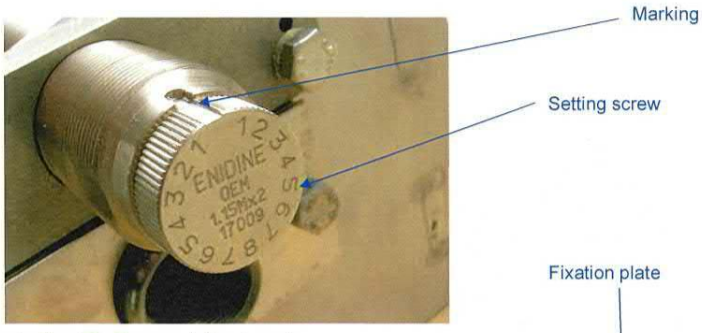


Illustration 20: Damper Adjustment

- The position of the damper can be modified by changing the insertion position (loosening of the lock nut) in the associated fixation plate.
- On trailable points, damping is only required on one side.

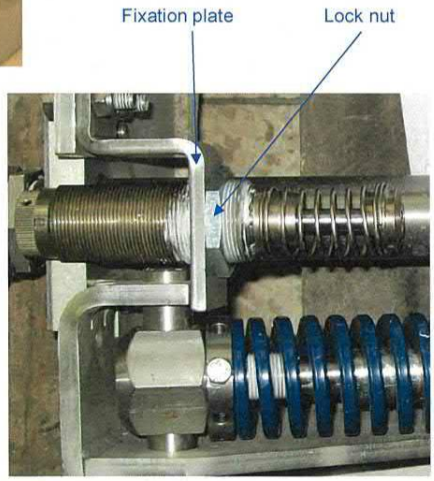


Illustration 21: Installation of the Dampers

5.4 Setting of the Detectors

DANGER

Danger to life because of high voltage on the installations.

5.4.1 Setting of Mechanical Switch Contacts

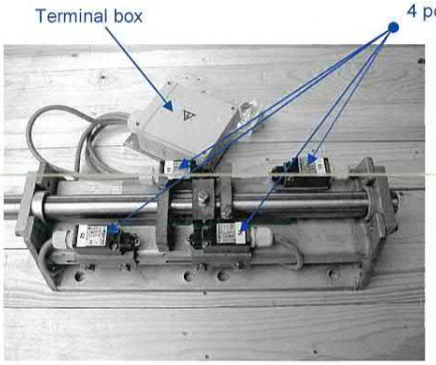


Illustration 22: Complete Detector Module

To adjust the position indication, two end contacts are adjusted for each switch tongue, for the applied and open functions.

For the adjustment, place the drive in one of the end positions.

First, adjust the contact for the applied switch tongue, and then the contact for the open switch tongue.

Perform the same for the opposite side.

To adjust the contacts, undo both fastening bolts of the contact plate and press the contacts onto the pressure plate.

A position indication must be sent.

Re-fasten the contact plate.

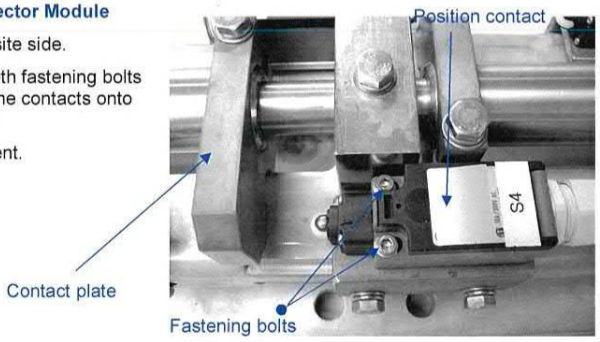


Illustration 23: View of the Contacts

5.5 Automatic return function

The point machine CSV 34 can easily be converted for automatic return applications.

1. Loosen and remove the 4 fastening bolts.
2. Turn the turnable plate with the recess for the bolt vertically upwards.
3. Insert and fasten the 4 bolts.

Should the point machine be used for standard points again, just perform the above actions in reverse order.

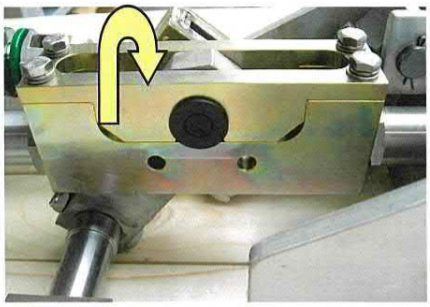


Illustration 24: View of the turnable Plate

For the application of the CSV 34 with lock and detector in automatic return points, consult with Contec.

6 Operation

The point machine CSV34 is operated entirely manually using a throw lever (acting transversally to the track) inserted into the setting recess (pos. 50). With just one stroke, the drive is positioned to the left or to the right-hand side.

The point machine can be used as a standard point or as a trailable point.

7 Maintenance

CAUTION

Risk of injury by falling and/or tilting parts. Keep clear of moving parts.

The point machine CSV 34 has been designed to require a minimum of servicing. CONTEC recommends maintaining the point machine according to the instructions. Shorter intervals are only necessary, if extreme conditions prevail.

The high quality materials and bearing selected enable the highest availability with the least wear.

7.1 Maintenance Schedule

The following listing contains the recommended maintenance intervals. Legal texts or instructions by the operator, or extreme climatic conditions may make adaptations necessary.

Pos.	Activity	Frequency (months)
01	Check the transmission elements for wear – Lubricate the universal joints with a water-resistant lubricant (resin-free and acid-free)	6
02	Check the entire point machine for heavy soiling, corrosion damages and wear	6
03	Check the good functioning of the dampers	6

7.1.1 Lubricating Points

The point machine is lubricated in the factory and at installation on site. During later maintenance work, the point machine is to be lubricated at the points shown in illustration 25.

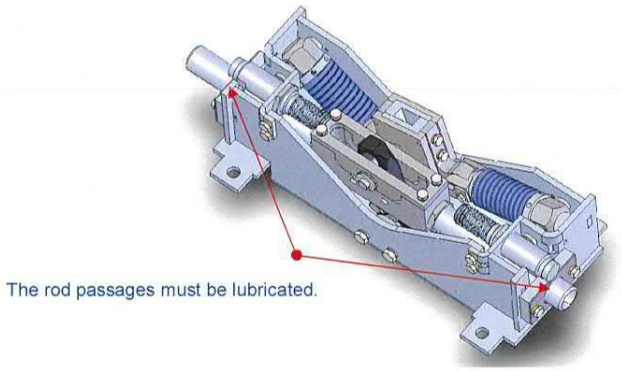


Illustration 25: Point Machine CSV34 (Points to be Lubricated)

DO NOT LUBRICATE
the sliding and tilting bearings
The bearings in the point machine do not require lubrication. Lubricants destroy the sliding layer!

7.1.2 Spare Parts Availability

All spare parts are ready for delivery at the Contec stock within approx. 24 hours after ordering.

7.1.3 Training

A basic training of the maintenance personnel can take place at the Sainerholz plant of CONTEC or directly at the client's premises.

We recommend a maximum group size of 6 participants.

The training consists of a theoretical and a practical part.

8 Technical Data

Retention force	Up to 2.8 kN (take into account the type of springs)
Manual setting force	Approx. 180–240 N
Throw for setting devices in flat-bottomed points	75mm

SECTION 6: TRACK ELECTRICAL

6.1 Design Concepts

The basic design parameters which have evolved from the earlier tramway construction project are as follows:

- Minimise the leakage current from the track system by insulating the concrete foundation. This is achieved by the [placement of two layers of DPC Membrabe wrapped around the concrete foundation. This has two beneficial effects. Firstly, the concrete foundation is kept dry thus improving its electrical insulation properties and secondly, the DPC Membrane forms a low level insulation barrier from the surrounding ground.
- Reduce the rail resistance to as low a practical value by using any reinforcing steel. This is achieved by welding all reinforcing steel and other conducting paths, for example, weld all rail joints where welding is not possible, use rail bonds on unwelded rail joints. Connect the reinforcing system to the rail system at regular intervals using copper bonds. Bond across each construction pour to ensure a continuous connection throughout the length of the track of the reinforcing system.
- Any conductors that need to leave the track must be insulated. It is important to note that the track system must be treated as a separate conductor and must not be connected to the surrounding earth or the electrical MEN system. The rationale behind this is to reduce stray current mitigation.
- Connect the track system to MEN system earth only at the substation. As the substation is already in place this is not an issue but it is important to note for the reasons outline above.
- Insulate bracket arm structures to mitigate electrolysis currents flowing through the pole structure. Electrolysis protection is important to reduce deterioration of the structures. By bonding the bracket arm to the rail system, this is achieved. It also provides a fault return path directly back to the rail system.

6.2 Bonding Cables

Bonding cables shall be 35 square mmcopper insulated cable which is to be installed across the Reidbar couplers, four in total (at construction and also control joints).

At intervals of 5 metres, four bonding cables are to be brought out of the slab and two connected to each rail.

Double bonding of each longitudinal reinforcing onsite is required – this applies to both the retrofit (pre-poured slab) and embedded slab designs.

In conjunction with this, all longitudinal reinforcing bars need to be welded at each overlap point.

Between bottom and top flat bars there should be four (4) earth straps.

From top flap bar there should be a further four (4) cables – two (2) per rail (one (1) on each side of each rail).

At each construction joint, there should be a further four (4) straps joining each set of tracks

6.3 Reinforcing Welding

Each longitudinal length of reinforcing shall be welded at the lap joints and to the bonding connecting bar with a sufficient weld (min 10mm long) to make a good electrical connection.

6.4 DPC Membrane

Two layers of DPC Membrane are to cover the underside of the concrete slab and turned up the sides to within 50mm of finished street level.

6.5 Connections to Bracket Arm Poles

The connections to bracket arm poles are to be 35mm insulated copper conductor and shall be connected to the rail and located into the bracket arm foundation awaiting the pole to be installed at a later date.

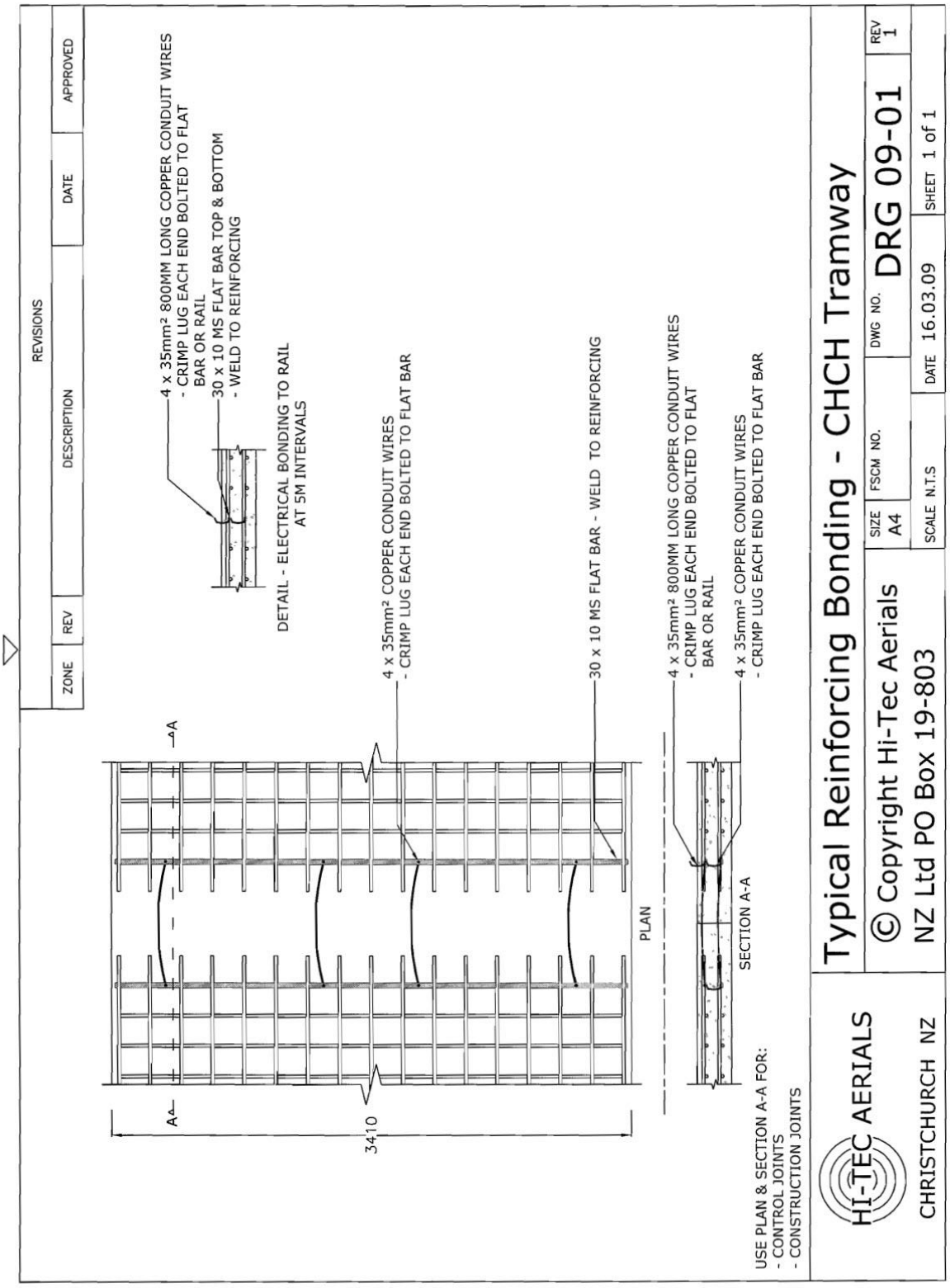
6.6 Flat Bar

Each flat bar (top and bottom layer of reinforcing) is to be welded to each longitudinal bar. Welds must be of good quality to ensure sufficient electrical connection.

6.7 Waterproofing Bolt Connectors

All bonding connectors shall a waterproof application.

6.8 DETAILS AND PHOTOGRAPHY




Cash

SECTION 7: CONCRETE WORK - STANDARD

7.1 GENERAL

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

7.1.2 ABBREVIATIONS AND DEFINITIONS

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

The following abbreviations apply specifically to this section:

MPa Megapascal
CCANZ Concrete NZ (Legacy Documents)

The following definitions apply specifically to this section:

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

7.1.3 DOCUMENTS

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

NZBC B1/AS1 Structure
NZBC B1/VM1 Structure
NZBC E2/AS3 External moisture
AS 1366.3 Rigid cellular plastics for thermal insulation - Rigid cellular polystyrene - Moulded (RC/PS - M)
AS 1478 Chemical admixtures for concrete, mortar and grout - Admixtures for concrete.
AS/NZS 2269.0 Plywood - Structural - Specifications
NZS 3101.1 Concrete structures standard
NZS 3104 Specification for concrete production
NZS 3109 Concrete construction
NZS 3112.1 Methods of test for concrete - Tests relating to fresh concrete
NZS 3114 Specification for concrete surface finishes
NZS 3121 Water and aggregate for concrete
NZS 3122 Specification for Portland and blended cements (General and special purpose)
NZS 3125 Specification for Portland-limestone filler cement
NZS 3604 Timber-framed buildings
NZS 3631 New Zealand timber grading rules
NZS 4229 Concrete masonry buildings not requiring specific engineering design

AS/NZS 4671 Steel reinforcing materials
AS/NZS 4672.1 Steel prestressing materials - General requirements
AS/NZS 4858 Wet area membranes
CCANZ CP 01 Code of practice for weathertight concrete and concrete masonry construction

7.1.4 QUALIFICATIONS (Requirements)

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

Performance

7.1.5 TESTING

Carry out sampling and concrete acceptance tests during construction to NZS 3109.9. **Concrete acceptance tests during construction**. Conduct 7 day strength tests. After a 7 day test result of less than 60% of the specified strength, stop concrete placement until it is shown that the suspect concrete compiles with the specification.

Carry out slump tests, yield tests and air content tests to NZS 3112.1, sections 4, 5 and 9, and evaluate to NZS 3104.2.15. **Control tests and their evaluation**. Make available all test records to the contract administrator on request.

7.1.6 STEEL REINFORCING COMPLIANCE

Steel reinforcing and steel prestressing materials for concrete to AS/NZS 4671 or AS/NZS 4672.1, respectively. Steel to be manufactured in New Zealand, or by an overseas manufacturer holding a current valid NZ S Mark or ACRS certificate for that type of steel. Confirm compliance and provide evidence if requested.
Steel that fails to meet these requirements is not to be used (or ordered) without the contract administrators written approval, further proof and/or testing may be required.

7.1.7 QUALITY ASSURANCE

Carry out the whole of this work to the requirements of NZS 3109.

Quality assurance procedures to include all aspects of concrete construction including;

- Formwork quality
- Reinforcing steel placing
- Cast in items, including the tram tracks
- Concrete quality
- Concrete finishes
- Construction tolerances

Advise the name of the suitably qualified and experienced representative who is responsible for quality control of the concrete work. The representative is to sign a written quality control checklist for each on-site concrete pour. Provide a copy to the construction reviewer in sufficient time for a pre-pour inspection on request.

7.2 PRODUCTS

Materials

7.2.1 CEMENT

Portland cement to NZS 3122.

7.2.2 SAND

To NZS 3121.

7.2.3 COARSE AGGREGATE, NORMAL CONCRETE

To NZS 3121, except as modified by NZS 3104: clause 2.4.3, Coarse aggregate. The total mass of reactive alkali in the concrete mix to not exceed the requirements of section 2 of Concrete NZ, Alkali Aggregate Reaction publication.

7.2.4 WATER

To NZS 3121.

Concrete

7.2.5 NORMAL CONCRETE

Normal concrete up to 50 MPa grade, (and hence covering the specified 40 MPa concrete) is to have a maximum aggregate size of 19mm ready-mixed to NZS 3104. Provide delivery dockets listing mix and despatch details.

Reinforcement

7.2.6 GRADE 500E STEEL (LABELLED HD)

To AS/NZS 4671. Deformed bars by symbol "HD" followed by diameter in millimetres. Minimum yield stress 500MPa

7.2.7 WELDED WIRE FABRIC

Hard drawn steel wire spot welded with correct gauge to AS/NZS 4671 Class E, smooth or deformed and to the spacings and dimensions either specified or shown on the drawings. 500E mesh to AS/NZS 4671 as modified by NZS B1/VM1.

7.2.8 TYING WIRE

Mild drawn steel wire not less than 1.2mm diameter.

7.2.9 SPACERS AND CHAIRS

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

7.2.10 TIMBER BOARDS

Dressing or merchantable grade radiata pine to NZS 3631 for shutter face, to obtain the concrete finish specified.

7.2.11 TIMBER FALSEWORK

No. 2 framing radiata pine or as required to construct the required formwork.

7.2.12 RELEASE AGENT

A release agent that will not stain or adhere to the concrete, contaminate reinforcing steel or construction joints, or have a detrimental effect on any finished surface or applied finishes.

7.3 EXECUTION

7.3.1 HANDLE AND STORE

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

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

Fix formwork

7.3.2 LOADINGS

Design and construct formwork and falsework in accordance with sound engineering principles to withstand the worst combination of:

- dead loads of formwork, reinforcement, concrete and precast elements such as floor planks
- construction loads including dynamic effects of placing, compacting and construction traffic
- wind and snow loads

7.3.3 PROVIDE ALL FORMWORK

Provide all formwork necessary to support and confine the concrete and shape it to the required dimensions. Fabricate in a manner permitting its easy removal without damage to the concrete.

Provide a 20mm x 20mm chamfer to all corners unless detailed otherwise. Protect corners from damage during and after stripping.

Keep absorbent formwork wet before concrete is placed. Clean formwork by waterblasting.

7.3.4 FALSEWORK

Carry strutting down to a construction sufficiently strong and stable to afford the required support without permissible stress or deflections being exceeded. Prop through to other floors if the construction load on a particular suspended floor exceeds the design load.

7.3.5 ACCURACY

Unless stated otherwise on the drawings permissible deviations from established lines, grades, dimensions and cambers to remain within the tolerances laid down in NZS 3109: table 5.1, **Tolerances for precast components** and table 5.2, **Tolerances for in situ construction**.

7.3.6 TOLERANCES OF CONCRETE SURFACE FINISHES

Unless stated otherwise on the drawings, permissible abrupt, offset and gradual deviations for the specified surface finish to remain within the tolerances laid down in NZS 3114: table 3, **Tolerances for abrupt deviations or offsets and gradual deviations**.

7.3.7 EXPOSED CONCRETE

Formwork linings and surface finishes as nominated for both fair face and concealed or exposed surfaces. Unless detailed, obtain written confirmation of the type and pattern of all joints.

7.3.8 JOINTS IN FORMS

Construct joints to prevent loss of grout between joints in form linings, as well as between forms and completed work. Column forms to have full height linings so that no horizontal joints occur on exposed faces.

7.3.9 CAMBERS

Cambers shown on the drawings or specified, relate to the concrete immediately before formwork is struck. Unless otherwise shown on drawings, construct forms to achieve the following:

- maximum deflection of face materials between strutting: 1/240th of span, but no exceeding 6mm.
- maximum deflection of beams: 1/900th of span
- maximum deflection of cantilevers supporting construction loads: 1/300th of cantilever length.

7.3.10 STRIKING FORMWORK

Ensure the safe removal of all or any part of the formwork. Remove without shock, vibration or damage to the concrete and in such a manner as to take the imposed stresses gradually to NZS 3109.5.4. Stripping times to NZS 3109 table 5.3.

Install reinforcing

7.3.11 CUT AND BEND

Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3101.1, 8 and NZS 3109: 3.3 **Hooks and bends**. Minimum radii of reinforcement bends to NZS 3101.1, 8 and NZS 3109: table 3.1, **Minimum radii of reinforcement bends**. Do not rebend grade 500E bars. Where rebending is necessary for grade 300E bars, use a purpose built tool, proper preparation and preheating.

7.3.12 ADJUSTMENTS

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

7.3.13 TOLERANCES, BENDING

To NZS 3109, 3.9, Tolerances for reinforcement.

7.3.14 SECURE REINFORCEMENT

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

7.3.15 LAPPED SPLICES

Length of laps where not dimensioned on the drawings in accordance with the SELECTIONS. Provide laps only where indicated on the drawings. Tie all lapping bars to each other. Plain bars lapped splices must be hooked
Wire mesh laps to NZS 3101.1, lap one mesh square plus 50mm minimum (do not count bar extension beyond the outermost wire).

7.3.16 REINFORCEMENT COVER TO NZS 3101.1

Minimum cover to all reinforcing bars, stirrups, ties and spirals, as shown on drawings. Where cover is not shown on drawings provide minimum cover to NZS 3101.1, table 3.6, **Minimum required cover for a specified intended life of 50 years**. Sub-soil cover to NZS 3101.1, to suit soil and groundwater conditions. Fix chairs for top reinforcement in slabs at 1.0 metre centres or to ensure adequate support. Cover tolerances to NZS 3109, 3.9, Tolerances for reinforcement.

7.3.17 CASTING IN

Build in all element as shown on the drawings, prior to pouring the concrete.

7.3.18 CONSTRUCTION JOINTS

Locate and construct as shown on the drawings or in accordance with the drawings.

Place concrete

7.3.19 PRE-PLACEMENT INSPECTION

Do not place concrete until all excavations, boxing and reinforcing have been inspected and passed by CCC representative

7.3.20 UNFAVOURABLE CONDITIONS

Do not place concrete in high winds or other unfavourable conditions. Refer to NZS 3109: 7.2 Unfavourable conditions, for when concrete may not be placed. Remove and make good concrete damaged by frost, dry and wet conditions.

7.3.21 PROTECT CONCRETE WORK

Protect formwork, reinforcement, "build in" items and fresh concrete from damage, as the pour is placed, making good any damage if it occurs.

7.3.22 TRANSPORT CONCRETE

Transport concrete from agitator to final placement as quickly as possible using means that avoid segregation.

7.3.23 PLACE CONCRETE

Place concrete in layers not more than 500mm deep, compacted and vibrated. Do not place fresh concrete against the preceding layer after more than 45 minutes, or such lesser time as required by the circumstances, to NZS 3109: clause 7.4, Handling and placing.

7.3.24 COMPACT CONCRETE

To NZS 3109: clause 7.6, **Compaction**. Compact by vibration of the concrete to expel entrapped air and until settlement of the concrete is visibly evident over all areas of the surface. Maintain vibration until settlement ceases and coarse aggregate at the surface is embedded. Do not continue vibration beyond reaching this condition.

7.3.25 VIBRATORS

Use sufficient immersion vibrators, with one spare for emergency, to ensure that vibration is achieved throughout the entire volume of each layer of concrete, and until complete compaction is reached, to NZS 3109: clause 7.6, **Compaction**.

Finishing

7.3.26 SCREED THE SURFACE

Screed the concrete surface by straight edge or vibrating screed immediately after compaction and to tolerances in NZS 3109: table 5.2, Tolerances for in situ construction.

7.3.27 SURFACE FINISHES

To NZS 3114, 105, **Specification of finishes**, for off the form finishes and to NZS 3114, Part 3, **Floors, exterior pavements, and inverts**, for slabs and pavements. Refer SELECTIONS.

7.3.28 SAW CUTS

Cut slabs where indicated on the drawings and as required to control shrinkage cracking. Carry out cutting as soon as possible, without causing tear-out of aggregate and before shrinkage cracking has occurred, generally within 24 hours of pouring. Where saw cuts are to be made, cut out 100mm of every second wire of the mesh for a length of 50mm each side of the saw cut position. Saw cuts: 40mm deep

Curing

7.3.29 CURING PERIOD

Cure all concrete of normal cement type and mixing proportions for a minimum of 7 days. Keep time between placing of concrete and the start of curing to an absolute minimum. Ensure curing is continuous.

7.3.30 CURING METHOD

Notify the curing method to be used for this work. Select from the following methods;

- Ponding
- Sprinkling
- Wet coverings
- Plastic sheet
- Curing compound

7.3.31 KEEP ABSORBENT FORMWORK MOIST

Keep formwork left in place continuously moist by sprinkling with water over the curing period. Continue sprinkling the exposed surface if the formwork is removed before the end of the curing period.

7.3.32 SECURE COVERINGS

When covering with sheet materials, ensure that edges are well secured throughout the specified curing period, to prevent draughts passing over the surfaces of the concrete.

7.3.33 COLD WEATHER

Do not use coverings employing water at times of freezing weather.

Protect

7.3.34 PROTECT PLASTIC CONCRETE

Protect plastic concrete from indentation and surface marking.

7.3.35 PROTECT HARDENED CONCRETE

Protect surfaces of stripped concrete from damage especially at arrises.

7.3.36 PROTECT EXPOSED SURFACES

Protect from rust marks and other surface disfigurements.

7.3.37 DEFECTS

Reject concrete with structural defects. Immediately after stripping formwork, identify all defects and obtain direction. Do not carry out any repair work until directed and then only in accordance with the direction. Repair defects by cutting out, making good and replacing, or otherwise as directed.

7.3.38 SURFACE DEFECTS

Make good surface defects immediately after forms are stripped. Make good hollows or bony areas with 1:2 mortar or plaster, finished to the same tolerances as the parent concrete. Fill any tie rod holes with 1:2 mortar.

Completion

7.3.39 CLEAN OUT

Clean out saw cuts. Fill with cement grout where the floor will be covered with carpet or vinyl.

7.3.40 REMOVE

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

7.4. SELECTIONS

7.4.1 REINFORCEMENT LAPS

Where reinforcement laps are not shown on the drawings, lap as follows:

Bar Diameter		Grade 500E deformed
10mm		600mm
12mm		600mm
16mm		1000mm

7.4.2 SURFACE FINISHES FLOOR SLABS

Surface finish class to NZS 3114: table 2, Classes of floor, exterior pavement and invert finishes.

Finish class	Location
U5	Upper Surface

SECTION 8: STEELWORK

8.1 GENERAL AND SPECIAL CONDITIONS

The attention of the Contractor and Sub-Contractor is drawn to the Preliminary and General Clauses of this Specification as all clauses in the Preliminary and General Section and the Special Conditions of Contract are equally binding on this trade section.

8.2 SCOPE OF THE WORK

The work comprises the fabrication, priming or zinc metal spraying. painting and erection of all steelwork detailed or specified including all tie rods. weld plates, unispan and bleacher support angles. holding down bolts, etc

8.3 RELATED DOCUMENTS

In this section of the Specification the Contractor shall comply with the requirements of the relevant Reference Documents as listed in The New Zealand Building Code Handbook,

In addition, the Contractor shall comply with the requirements of all documents called up by those Reference Documents.

In all cases the latest revision, at the date of tendering. of the Reference Documents and all other documents called up shall apply to this Contract. This appties to any Reference Documents superseded by a document not referenced.

8.4 MATERIALS

All steels shall be mild steel of approved origin and conforming to NZS 3401 and relevant Standards.

The Contractor shall ascertain at the time of tendering whether the steel sizes detailed on the drawings will be available for the project. Any tender based on substitute sizes must be accompanied by a statement listing the substitutions. Substitute sizes will be permitted only with the approval of the Engineer. Extra cost of substitute sizes required will be borne by the Contractor.

8.5 BOLTS & FIXINGS

Unless specified othenrvise all bolts and nuts shall be Grade 8.8 complying with AS 1252 and shall be installed in accordance with AS 4100.

Grade 4.6 bolts shall comply with AS 1111.

The surface finish of bolts, nuts and washers shall match that of the components being connected.

Holes for bolts shall be drilled, punched or computer gas/laser cut in accordance with NZS 3404. Holes shall not be manually gas cut. Steelwork with manually gas cut holes will be rejected.

Holes for bolts shall be formed not more than 2 mm oversize unless shown otherwise.

At least one washer shall be provided under the rotating component of each bolt assembly, and shall be not less than twice the nominal bolt size in diameter. Where necessary, washers for bolts shall be tapered or otherwise suitably shaped to give bolt heads or butts satisfactory bearing.

The threaded portion of each bolt shalt project through the nut when tightened up by at least one clear run of thread.

Bolted connections shall be snug tightened unless notated on the drawings with the suffic /TB or /TF which shall be fully tensioned in accordance with NZS 3404 clause 15.2.5, using the 'part-turn method of tensioning' or load indicating washers, subject to the Engineers approval. When using the part-turn method, location marks shall be permanent and clearly identifiable for subsequent inspection. Ensure that all finishes are clear of the faying (contact) surfaces between all piles of the joint unless by the express permission of the Engineer or alternatively if the appropriate testing of slip factors has been undertaken in accordance with Appendix K of NZS 3404.

Tensioning of fully tensioned joints shall proceed from the stiffest point, typically the centre, towards the outer edges of the joint, to ensure that all bolts carry an equal proportion of the load.

SECTION 9: LANDSCAPE

9.1 GENERAL

All works to be carried out in accordance with CCC CSS Part 1-7 unless specified otherwise.

Contractor to verify the location of all services prior to commencement of work.

Set out of landscape works shall be contractors' responsibility.

CCC Representative for the landscape works is CCC Landscape Architect, Joss Mahoney whose contact details are:

Jocelyn Mahoney – 03 941 6311

Jocelyn.mahoney@ccc.govt.nz

Landscape Contractor shall be a member of the Registered Master Lanscapers Association and/or hold a relevant horticultural qualifications and proven experience with similar projects.

9.2 HOLD POINTS

The following hold pints to be included into the contractors Inspection Test Plan (ITP):

- Pre-start meeting shall be held to discuss particular aspects of the landscape contract works on site.
- Notify CCC Representative (person to be confirmed) and CCC Landscape Architect, Jocelyn Mahoney on 03 941 6311 or jocelyn.mahoney@ccc.govt.nz seven (7) days prior to arranging visit.

Plant Bed Preparation and Planting

- CCC Representative to approve plant bed excavation prior to backfilling. Notify CCC Representative one week prior to inspection.
- CCC Representative to approve soil mix (Intelligro tree pit mix) and consolidated soil in plant beds prior to planting.
- Plant set out/layout shall be the responsibility of the contractor and approved prior to planting by CCC Landscape Architect.

Trees

- Tree pit setout shall be the responsibility of the contractor. Notify CCC Representative one week prior to exacavtion to arrange site meeting to approve set out of tree pits prior to excavation.
- All tree pit excavations shall be inspected prior to back filling to allow appropriate services protection where needed and drainage inspection. Notify CCC Representative one week prior to inspection.
- CCC Representative to approve the tree pit mix prior to backfilling/placement.
- Tree set out shall be the responsibility of the contractor. Notify CCC Nursery one week prior to pick up of trees from nursery. Contact Carl Waghorn on 03 941 6667, CCC Harewood Nursery, 239 Gardeners Road, Harewood.

Establishment

Contractor to provide to the CCC Representative monthly establishment reports within five (5) days after the end of each month for the duration of the maintenance period (24 months).

9.3 TREE AND PLANT SUPPLY

Uplift and plant in prepared tree pits as per planting plans.

Care to be taken transporting trees to the site. Any new trees damaged during transportation are the responsibility of the contractor and any remedial work needed to be carried out by a qualified arborist will be at the contractor's expense.

Trees are to be checked by CCC Landscape Architect before planting. Contact Joss Mahoney on 03 941 6311.

9.4 EXISTING TREES

All existing trees and shrubs that are retained within the vicinity of the works (including on private properties) are expected to be protected from site changes and construction related damage using on-site tree protection measures during the works as outline in CSS Part 1:19.0 Protection of natural assets and habitats.

A suitably experienced and qualified arborist (supervising arborist) is expected to be engaged by the contractor carrying out the construction works to ensure that appropriate tree protection compliance occurs during the works.

Tree protection supervision and pruning wok must be carried out by a suitably experienced and qualified arborist to accepted modern arboricultural standards.

Existing trees to be retained and any excavation near existing roots to be undertaken using an air spade with a suitably qualified “Stand over Arborist” present. Notify CCC representative.

All existing trees to be removed (including tree root balls) shall be disposed of off-site.

9.5 PLANT BED PREPARATION (excluding heritage triangle beds)

Remove unsuitable material and dispose off-site. Retain existing trees and planting as indicated on plans and hand-dig minimal exacavtion around existing trees by removing asphalt layer and carefully loosening soild before adding new soil mix without increasing soil depth against tree trunk.

Excavate all other plant beds to 600mm below ground level as per CSS SD721 and dispose off-site.

Loosen subgrade 200mm below then add 100mm layer of drainage gravel 20-40mm washed greywacke stones, supply and spread Intelligro tree pit mix, 400mm consolidated depth to plant beds and tree pit gardens, except for triangle beds.

9.6 HERITAGE

Triangle Beds

Do not excavate existing soil in these areas.

Add to existing soil in heritage triangle beds 100mm depth of soil conditioner.

9.7 PLANTING OF TREES, SHRUBS AND GROUNDCOVERS

Uplift from CCC Harewood Nursery and plant in prepared beds and tree pits to planting plans.

All planting to be undertaken in accordance with this specification, CSS and best horticultural practice to ensure successful establishment.

Plants shall not be left prior to planting for a long period of time unattended and without appropriate levels of moisture.

9.8 TREE STAKING

Newly planted specimen trees shall be supported by stakes complying with SD702 unless specified. Stakes to be stained ‘Pit Black’.

9.9 TREE ROOT BARRIER

Root barrier to be installed maximum 300mm off the nearest underground service to allow maximum growth root for the tree. Root barrier shall be supplied and installed in accordance with SD704. Root barriers are not to be installed on every side of the tree pit.

9.10 MULCH

i. Planting beds located along Cashel Street to have 100mm depth 'Premium grade bark mulch' as per CSS Part 1:36.0.
Contractor to supply a sample of Premium grade bark mulch to CCC Representative for approval prior to purchase and placement.

ii. Tree pits (small square) along High Street between Cashel and Lichfield to have 100mm depth 'Premium grade bark mulch' as per CSS Part 1:36.0.
Contractor to supply a sample of Premium grade bark mulch to CCC Representative for approval prior to purchase and placement.

iii. Larger gardens along High Street to have 50mm layer Teddington Chip (20-40mm washed angular chip) over Terralana wool mulch mat (450gsm).
Chip to finish 20mm below top of garden bed edge.
Contractor to supply a sample of Teddington Chip to CCC Representative for approval prior to purchase and placement.

iv. Heritage triangle gardens are not to have a mulch layer.

9.11 ESTABLISHMENT

24 months establishment for new trees, shrubs and groundcover including Heritage Triangle gardens, plants and any existing plants affected by the contract works as per CSS Part 7 14.0 including temporary traffic management and all works and materials.

Trees and planting to be watered a minimum of once per week between 1 October and 1 April and/or more frequently on an as needs basis for successful plant health and survival. Outside these dates, watering shall be undertaken on an as needs basis also.

9.12 NEW STREET FURNITURE

Seating

- Disposal of existing concrete seating at the intersection of Lichfield Street / High Street. Refer to Sheets R02 and R03.
- Supply and install "E-series benches" by the Walkspace Company [1.8m with back and two arm rests plus 1.8m without back and arm rests]. Seats to be installed in concrete foundataion as per detail on Sheet R02. Contact Bevan Thomas on 021 342 345 or bevan@walkspace.co.nz
- Supply and install small and large triangle seats manufactured by Logic Street Scene, phone George Field 0508 456 442 / 021 703 408. Seats to be installed in concrete foundation as per detail.

Cycle Stands

- Supply and install cycle stands. Refer to details on R19. Contractor to allow sufficient lead in time for fabrication and delivery.

Bollard

- Supply and install self-righting "stainless Steel" Bollard. Refer to details on Sheet R19. Contact Cameron Woods, phone 03 341 1316 or cameron@maxwood.co.nz

Bins

- Uplift and install "Clean Cubes 120 Litre" open aperture compacting. To be installed on foundation – refer to on Sheet R19. Contact Total Waste Solutions, 81 Lower Styx Road, phone 03 385 6972.

9.13 NEW PAVING AREAS (Reference CSS Part 6 10.00)

All concrete paving shall be 80mm depth Firth pavers (in the footpath and road carriageway). Refer to drawings and schedule of prices for specific paver type/ size (Piazza, Holland, and Holland Set), location, surface finish and pattern. Set out shall be the responsibility of the contractor and approved by CCC representative. Supply and laying of paving to include joint sand and all labour and materials required.

Contact **Mark Swanson** - Masonry Sales Representative (Christchurch), Firth on +64 3 359 3857 (DDI) or +64 27 538 3014 (Mobile) Mark.Swanson@firth.co.nz

Refer to drawing details for specific laying patterns and edge treatment where the paving adjoins asphalt, plant beds, rain gardens and tree pits.

RESOURCE CONSENT CRC173830

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Christchurch City Council
A LAND USE CONSENT (S9):	To excavate land and deposit material over aquifer systems.
COMMENCEMENT DATE:	21 Feb 2017
EXPIRY DATE:	21 Feb 2052
LOCATION:	various locations within the Christchurch District

SUBJECT TO THE FOLLOWING CONDITIONS:

Limits

1 The use of land over aquifer systems but outside of the bed and margins of a river or lake shall be limited to the excavation and deposition of material, for the purpose of installing new, or replacing or repairing existing wastewater, stormwater, land drainage, water, road, cycleway, and footpath infrastructure. The 'Aquifer Systems' are shown on Plan CRC173830A attached to and forming part of this consent.

Advice Notes:

a. Excavations of land under a certain volume or depth, or at a certain setback from a surface waterbody may not contravene a rule in a regional plan.

b. At the time of granting of this resource consent, the deposition of virgin quarry or river sourced aggregate (i.e. clean material) into land at less than 5 m below ground level did not contravene a rule in a regional plan, as such this resource consent may not be required to authorise the deposition activity.

c. Works in the bed and margins of a river for installing new, or replacing or repairing existing infrastructure may be authorised by CRC146620 or any subsequent replacement of this consent.

d. Refer to the advice notes at end of this consent document for a list of rivers in Christchurch City that are over an aquifer.

2 This resource consent excludes excavations of land and deposition of material for the following specific infrastructure associated with that specified in Condition 1:

a. New stormwater management basins; and

b. New wastewater treatment ponds or wetlands.

3 This consent shall not be exercised in conjunction with, resource consent CRC122121 with respect to repairs of earthquake damaged infrastructure, and resource consent CRC173250 for major cycleway construction in Christchurch City.

4 Imported material deposited into land shall only be aggregate (or processed aggregate) sourced from a local virgin quarry or river.

Prior to Commencement of Works

5 At least one month prior to the commencement of any project infrastructure works utilising this resource consent, the following information shall be provided to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance:

a. The location of the work sites;

b. The depth and likely volumes of excavations;

c. The expected start date and duration of the works;

d. Whether the work site has been identified as a contaminated, or potentially contaminated piece of land, and the action steps taken to mitigate any adverse effects on human health or the environment that may arise from the disturbance of contaminated soil and/or materials;

Advice Note: This may include submitting the management plan prepared to support a National Environmental Standard (NES) resource consent application or one required to comply with a granted NES resource consent.

e. Whether the works are likely to require additional resource consent(s) due to other ancillary activities not being permitted by a rule in a regional plan, or proposed regional plan, or authorised by an existing resource consent for activities including:

i. Works within the beds and margins of rivers;

ii. Dewatering of the excavations and associated discharges; and

iii. Construction-phase stormwater discharges.

6 Prior to commencement of excavations, an assessment shall be undertaken with respect to the risk of encountering artesian aquifer ground conditions. This shall include but not be limited to the following:

a. A suitably qualified and experienced hydrogeologist shall be consulted where excavations are within the Risk Zones 1 and 2 identified in Plan CRC173830B, which is attached to, and forms part of this consent, and the depths of excavations are greater than that specified below.

Zone	**Depth** (metres below ground level)
Risk Zone 1	2.0
Risk Zone 2	5.0

b. Unless detailed site investigations at the location of a given project reviewed by a suitably qualified and experienced hydrogeologist has determined no risk of artesian aquifer interception, a plan shall be prepared for, minimising artesian inflows and responding to high artesian inflow conditions.

c. The plan shall be submitted to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance 10 working days prior to works commencing.

d. All records and documentation associated with the assessment of artesian aquifer interception under Condition on 14(b) that did not require a plan to be prepared and submitted for a given project shall be kept and copies shall be provided to the Canterbury Regional Council on request.

7 Prior to the works described in Conditions (1) of this consent, all personnel working on the site shall be made aware of, and have access to the contents of this resource consent and all associated plans and procedures.

Construction Management

8 All practicable measures shall be taken to minimise sediment from excavations entering any surface waterbody or the reticulated stormwater system or land drainage network. Mitigation measures shall include but not be limited to:

a. Installing filter bunds around stormwater drains and other erosion and sediment controls as required;

b. The management of stockpiled soils during the construction phase;

c. Not stockpiling large volumes of gravels used to backfill the road reserve;

d. Progressively backfilling open excavations as soon as practicable;

e. Stabilising and re-grassing or sealing all disturbed areas as soon as practicable following completion of the works;

f. Replanting remaining parts of sites within 30 metres of a river that were previously vegetated to a similar or better state with either grass, or naturally occurring indigenous species appropriate for the location where practicable;

g. Checking erosion and sediment control measures daily and repairing and maintaining where necessary; and

h. Sweeping all road areas within the project area when required until the site is stabilised.

9 All erosion and sediment control measures are constructed and maintained in accordance with the, Environment Canterbury Erosion and Sediment Control Guidelines (Report R06/23, February 2007), and any amendments or any replacements to that document.

10 Where excavation of soils occurs for a work site that has been identified as a contaminated, or potentially contaminated piece of land, the following procedures shall be undertaken:

a. As far as practicable stormwater ingress into the excavated area shall be prevented; and

b. In the event excavated soils are to be temporarily stockpiled onsite, the excavated soils shall be placed on an impermeable liner and protected from wind and rain erosion.

Hazardous Substance Management

11 Refuelling of machinery and vehicles shall not occur within 10 metres of any excavation undertaken in accordance with Condition (1) of this consent, unless a drip tray is positioned under the fill point in order to intercept any spill from the nozzle.

12 Fuel shall be stored securely overnight or removed from site overnight.

13 All practicable measures shall be taken to avoid spills of fuel or any other hazardous substances within the site. In the event of a spill of fuel or any other hazardous substance, the following shall be undertaken:

a. The spill shall be cleaned up as soon as practicable, and measures taken to prevent a recurrence.

b. The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed within 24 hours of a spill event entering an open excavation or nearby surface water body and the following information provided:

i. The date, time, location and estimated volume of the spill;
The cause of the spill;

ii. The type of hazardous substance(s) spilled;

iii. Clean up procedures undertaken;

iv. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;

v. An assessment of any potential effects of the spill; and

vi. Measures to be undertaken to prevent a recurrence.

14 Spill management measures and equipment shall be retained on site at all times to contain, manage, and remove spilled hazardous substances and contaminated material. These measures shall include but not be limited to:

a. Retaining a spill kit onsite that is capable of absorbing the quantity of oil and petroleum products that may be spilled on site at any one time; and

b. Preparation of a written spill response plan to all persons undertaking activities authorised by this consent. A copy of this response plan shall be kept on site at all times.

Unexpected Contamination Discovery

15 In the event that unexpected contaminated soil or material is detected in land by sight, odour or acute illness during the works:

a. All works within five metres of the potentially contaminated soil or material in land shall cease immediately; and

b. The measures detailed in the Unexpected Contamination Discovery Procedure, which is attached to, and forms part of this consent, shall be followed.

Advice Note: Expected contamination in soils / land is that already identified by a preliminary or detailed site investigation and in most cases the disturbance of soils in this 'piece of land' will be authorised by a NES resource consent.

16 The Canterbury Regional Council, Attention: Environmental Science & Hazards Manager, shall be notified within 24 hours of the discovery of potentially contaminated soil as described in Condition (15). All records and documentation associated with the discovery, remediation, and any material disposal shall be kept and copies shall be provided to the Canterbury Regional Council on request.

Unexpected Artesian Aquifer Interception

17 In the event of an accidental interception or unanticipated levels of artesian flows, all practicable measures shall be undertaken to remedy or mitigate any change in aquifer pressure, water quality or temperature. This shall include, but not be limited to:

a. The contractor shall immediately cease all works within the immediate area of excavation that caused the interception of the artesian flows;

b. The contractor shall determine whether the flow constant or increasing, and document the artesian flows. Determine if the turbidity is constant or increasing. Determine if the flow is confined to the well-point/ pumping well or excavation;

c. The contractor shall notify the site engineer and/or other appropriate personnel determine emergency measures required to arrest the artesian flow. Emergency measures shall include, but not be limited to:

    i. The installation of a layer of impermeable material to the extent required to reform a capping layer over the aquifer to prevent the upward movement of groundwater through the confining layer; or

    ii. Inserting a vertical pipe in the aquifer interception point (if practicable) and provide for a secure seal against the pipe to enable the stabilisation of the artesian flow in the pipe, and to determine the above ground water level to assess any further measures.

d. The temporary artesian flow beyond the excavation shall be controlled and mitigated with appropriate ESC measures;

e. The Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance shall be notified as soon as practicable but no later than two working days after the interception; and

f. Upon remediation and arresting of flow from the aquifer interception, the design of the infrastructure shall be reconsidered and, if required, revised.

18 There shall be no seepage of artesian flows from an aquifer beneath the excavated and backfilled areas following the completion of the remedial works outlined in condition (15(b)). If seepage does occur, further remedial actions shall be taken to cease or minimise the seepage of artesian flows to the satisfaction of the Canterbury Regional Council, Regional Leader – Monitoring and Compliance.

Administration

19 The Canterbury Regional Council may, once per year, on any of the last five days of May or October, serve notice of its intention to review the conditions of this consent for the purposes of:

a. Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or

b. Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

20 The lapsing date of this consent for the purpose of Section 125 of the Resource Management Act 1991 shall be 31 March 2022.

Other Advice Notes:

- Works carried out under this consent within, or in close proximity to any archaeological site are also required to comply with the provisions of the Heritage New Zealand Pouhere Taonga Act 2014.
- In the event of any accidental disturbance of Koiwi Tangata (human bones) or taonga (treasured artefacts), the following protocol shall be followed:
    - Advise the Christchurch City Council Archaeologist, of the disturbance;
    - Advise the relevant Runanga, or their representative, and Heritage New Zealand Pouhere Taonga of the disturbance; and
    - Cease earthmoving operations in the affected area until an area has been marked off around the site, and Kaumatua and archaeologists have given approval for the earthmoving to recommence.
- Works carried out under this consent may be subject to the provisions of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.
- This resource consent does not authorise any works in the coastal marine area, the beds and margins of rivers, or any associated discharges into land or to water (e.g. construction-phase stormwater discharges, or sediment mobilised through works in or adjacent to a river or drain, or site dewatering, or stormwater discharges from any newly formed impervious surfaces). These activities need to be expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if

there is one), or a resource consent for such activities (e.g. a global regional resource consent held by the Christchurch City Council).

- An authorisation may also be required from the Christchurch City Council under the Water Supply, Wastewater and Stormwater Bylaw 2014 for any crossing of, and works within Council's reticulated water supply, wastewater and stormwater and drainage systems.

- Works carried out under this consent within a Statutory Acknowledgement Areas, a Silent File areas and/or within any other culturally significant areas (e.g. within 50 m of a wetland or an identified spring, etc.) are also required to comply with any agreement in place between the Christchurch City Council and Ngai Tahu and/or local Runanga. A list of culturally significant areas can be found on Canterbury Maps.

- This resource consent does not provide land owner access or permission to carry out works on private land.

- The following listed waterways in Christchurch City that are over an aquifer are considered to meet the definition of a river under the Resource Management Act 1991 (primary source CCC Channels GIS Shapefile):

Avon River	Hoon Hay Valley Stream	Pyne Gould Stream
Addingtons Brook	Glenstrae Stream	Regents Park Stream *
Bells Creek	Ilam Stream	Riccarton Main Drain
Baxter Creek	Jacksons Creek	Shirley Stream
Bowis Drain *	Kainga Stream	Smacks Creek
Cavendish Stream	Kaikanui Creek	St Albans Creek
Cashmere Stream	Kaputone Creek	Styx River
Cross Stream *	Kate Sheppard Stream	Taylors Stream
Curletts Stream	Knights Stream	Thorrington Creek
Dudley Creek	Nottingham Stream	Truscotts Stream Branch *
East Stream	Otukaikino Creek	Wilsons Drain Branch *
Frees Creek	Okeover Stream	Waimakariri River
Halswell River	Prestons Creek	Waimari Stream
Haytons Stream	Papanui Creek	Wairarapa Stream
Heathcote / Opawaho River	Paparua Stream	Wai-iti Stream
Hewlings Stream	Primrose Hill Stream	

***Modified Watercourse

Issued at Christchurch on 21 February 2017

Canterbury Regional Council

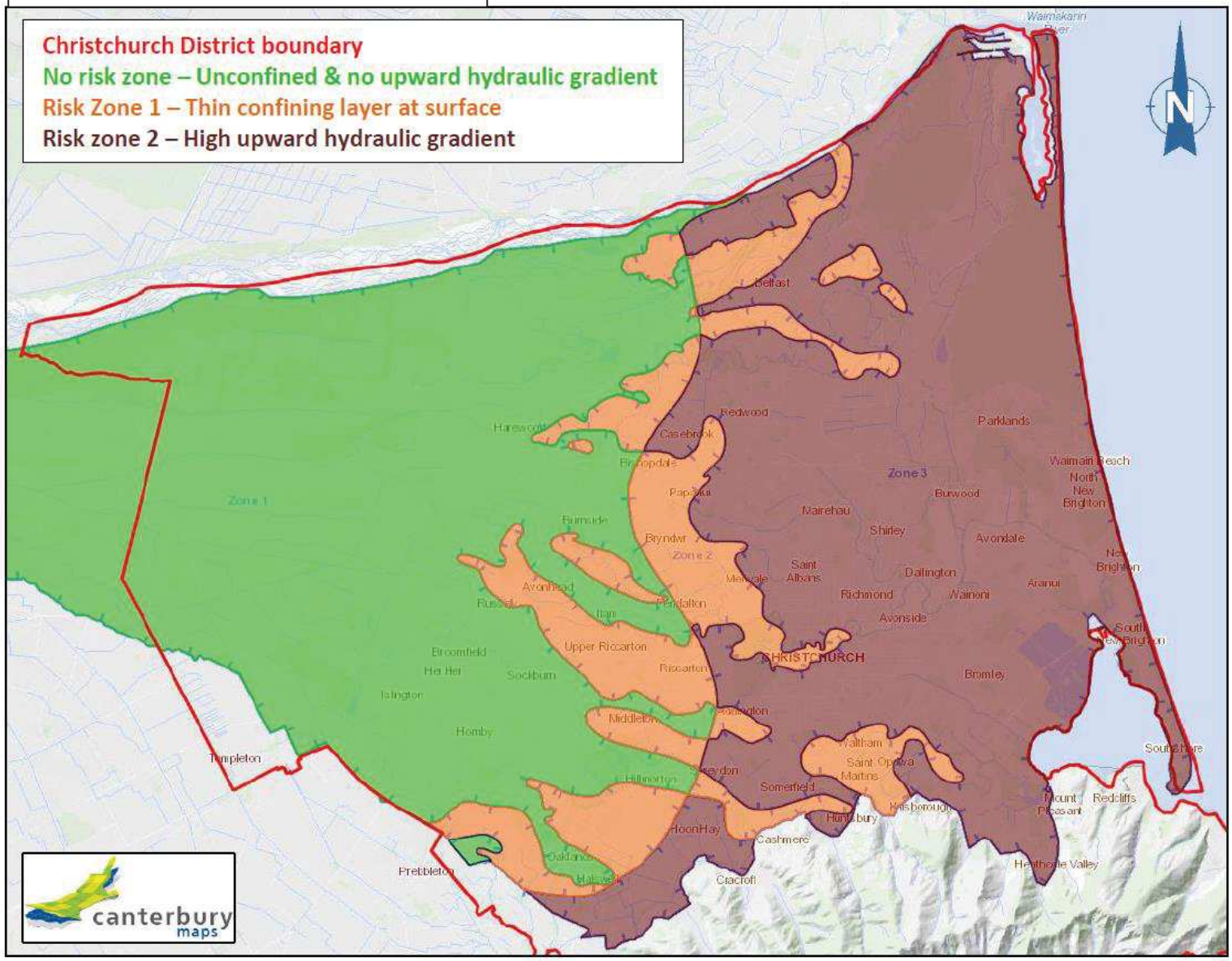
PLAN CRC173830A

Legend

- CCC Boundary
- Aquifer Systems

0 2 4 8 km

Plan CRC173830B



RESOURCE CONSENT CRC190368

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Christchurch City Council
A WATER PERMIT (S14):	To take and use groundwater for site dewatering purposes.
COMMENCEMENT DATE:	28 Aug 2018
EXPIRY DATE:	08 Mar 2022
LOCATION:	Various Locations, Christchurch

SUBJECT TO THE FOLLOWING CONDITIONS:

1 Water may be taken for site dewatering purposes from generally within the area marked on the attached plan CRC190368, which forms part of this consent.

Advice Note. *The damming and diversion of surface water in a waterbody and subsequent discharge of that surface water may be authorised by CRC100748.1 and CRC100749 or any subsequent replacement of these consents.*

2 Water taken shall be discharged in accordance with consent CRC190369.

3 The Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance, shall be informed at least five working days before dewatering commences at each site. The notification shall advise of the location of the take, the expected start date and duration and shall identify the contamination risk zone(s) for each site.

4 The consent holder shall take all practical measures to avoid land subsidence on private property and land subsidence adversely affecting any structures not owned by the consent holder. Measures may include, but will not be limited to, installing cut-off sheet piling. The dewatering operation shall cease or be modified if there is evidence of land-subsidence on private property or land subsidence affecting structures not owned by the consent holder beginning to occur.

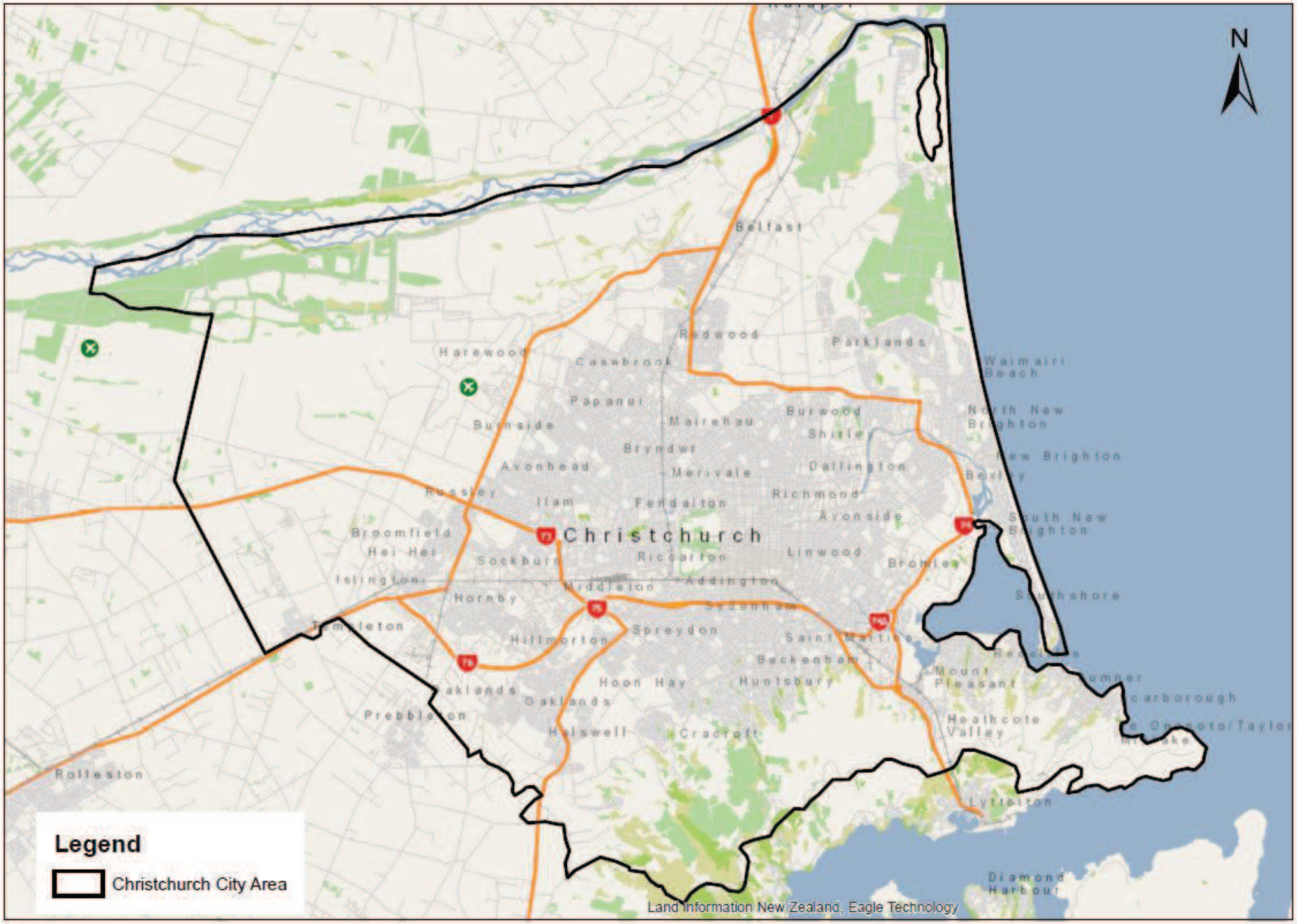
5 Where dewatering occurs within 200m of Travis Swamp, Riccarton Bush or Horseshoe Lake, the consent holder shall monitor shallow groundwater levels at the edge of the wetland at the closest point to the dewatering area at least once daily and record the measurements in a log book. The log book shall be provided to the Canterbury Regional Council, Attention: Regional Leader – Compliance and Monitoring on request. If a drawdown of more than 0.1 metres occurs at the wetland edge, mitigation measures shall be carried out to reduce the drawdown to less than 0.1 metres. Mitigation measures may include, but shall not be limited to discharging dewatering water into the wetland in accordance with consent CRC190369, reducing the rate of dewatering or sheet piling.

6 The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.

Issued at Christchurch on 28 August 2018

Canterbury Regional Council

Plan CRC190368



VERSION NOV 2009

FOR OFFICE USE ONLY

Flowmeter, Datalogger
Installation and Commissioning

TO: Environment Canterbury
C/o Water Metering Team
200 Tuam Street
PO Box 345
Christchurch 8140

Ph: 03 353 9007
Email: water.metering@ecan.govt.nz

Consent Holder: _____

Consent number: CRC _____ Well/SWAP number(s): _____

Installation date: _____

Flowmeter details:

Make: _____ Meter size: _____ (mm diameter)

Model: _____ Pulse output: ☐Yes/☐No

Serial number: _____ Volume per Pulse _____ **m³/puls**

(Start) Meter Reading Volume: _____ **m³** (*state units if different*)

Datalogger details: Installed ☐Yes/☐No

Make: _____

Model: _____ Serial number: _____

Telemetry installed for compliance: ☐Yes/☐No Data hosted by: _____

Installation details:

Pipe internal/external diameter: _____mm Pipe Wall Thickness _____mm

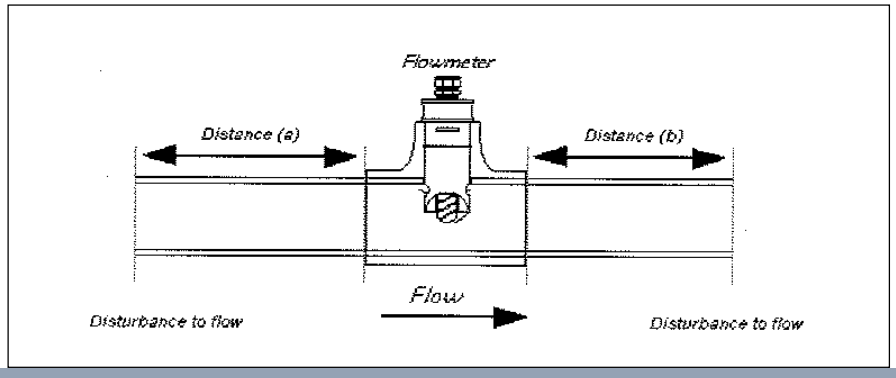
Pipe material: ☐*Ductile Iron,* ☐*Mild Steel,* ☐*PVC,* ☐*Polyethelene,* ☐*Aluminium,* ☐*other* :_____

Distance of straight, unobstructed pipe **upstream** of flowmeter (distance (a) in Figure 1): _____ mm

Distance of straight, unobstructed pipe **downstream** of flowmeter (distance (b) in Figure 1): _____ mm

Is there a straight unobstructed accessible pipe in the system of at least 15 diameters length to verify the flow with a clamp-on flow meter? ☐Yes/☐No Location in system: _____

Figure 1: Installation diagram - Please mark any disturbances upstream of the flowmeter e.g. pipe size reduction, gate valves, pipe bends. Refer to Figure 2 for an example of a good installation.



***Insertion meters only*:**

Insertion depth: _____ K-factor: _____

***Ultrasonic meters only*:**

Transducer size: _____ Transducer spacing: _____

Transducer mounting: V or Z (Please circle, V = Reflect, Z = Direct)

Accuracy details:

Do you have a WET calibration certificate? ☐**Yes/**☐**No** (*If yes, then please submit the certificate*.)

Has the meter been checked against a portable flowmeter? ☐**Yes/**☐**No** (*If yes please fill in water meter verification form*)

Certification:

I/we certify that the above flowmeter and datalogger have been installed in accordance with Environment Canterbury's requirements.

☐ That a wet calibration certificate from the manufacturer is attached to this form

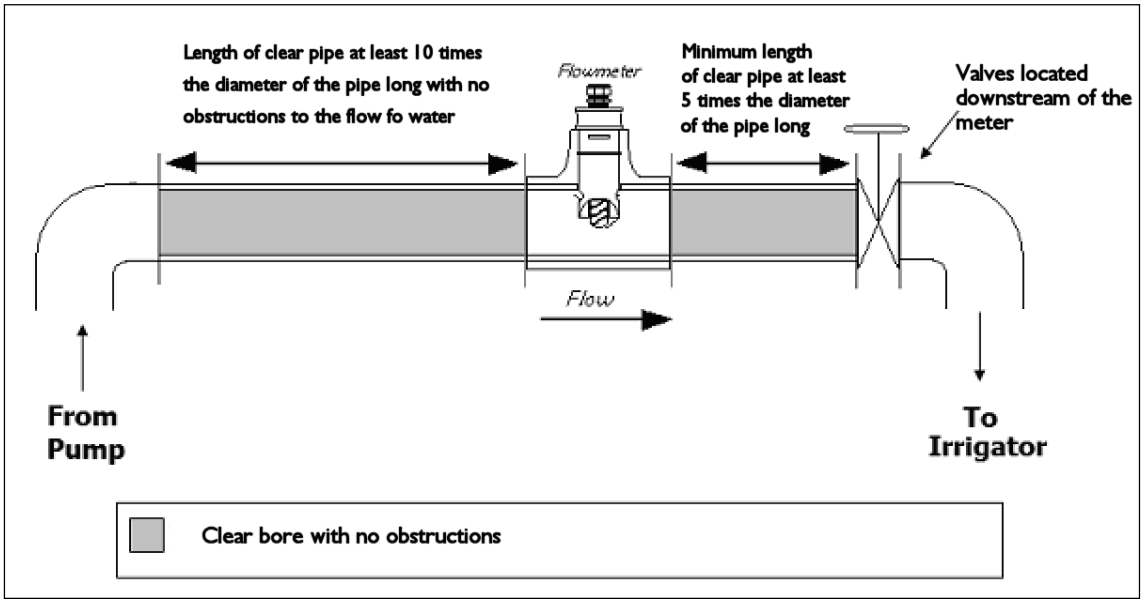
☐ That a water meter verification form is attached to this form.

☐ That a picture of the installation is attached to this form.

Installed by: _____ Signed: (by installer) _____

Company: _____ Date: _____

Figure 2: An example of an Ideal installation of a flowmeter, including obstructions in pipework.



Version May 2017

Flowmeter/Water Measuring Device Verification Form

FOR OFFICE USE ONLY

TO: Environment Canterbury
C/o Water Metering Team
200 Tuam Street
PO Box 345
Christchurch 8140

Ph: 03 353 9007
Email: water.metering@ecan.govt.nz

Consent Holder: _____

Consent number: _____ Well/SWAP number(s): _____

Flowmeter Installation date: _____ Verification date: _____

Flowmeter/Water Measuring Device details: *(if not already provided on installation and commissioning form)*

Make: _____ Meter size: _____ (mm diameter)

Model: _____ Pulse output: ☐Yes ☐ No

Serial number: _____ Volume per Pulse _____ **m³/puls**

Meter Reading Volume: _____**m³** (*state units if different*)

Datalogger details: Installed ☐Yes/☐No

Make: _____

Model: _____ Serial number: _____

Telemetry installed for compliance: ☐Yes/☐NoData hosted by: _____

***Insertion meters only*:**

Encountered K-factor in the flow meter :_____ Correct ☐Yes ☐No

***Ultrasonic meters only*:**

Transducer size encountered: _____ Transducer spacing: _____

Transducer mounting: _____ V or Z (Please circle, V = Reflect, Z = Direct) Correct ☐Yes ☐No

Verification details:

Is a clamp-on water meter used for verification: ☐Yes ☐No *(if no describe the method used) e.g. reservoir/time calculation, volumetric etc)*

Verification flow meter brand and type: _____

Verification flow meter serial number: _____

Last calibration date of the flow meter used for verification: _____

(*Calibration certificates needs to be send in (once) after every (yearly) calibration to ECan*)

Verification parameters:

Used parameters for verification: Pipe diameter: _____mm Pipe Wall Thickness _____mm

Pipe material: ☐***Ductile Iron,*** ☐***Mild Steel,*** ☐***PVC,*** ☐***Polyethelene,*** ☐***Aluminium,*** ☐***other*** : _____

Location in system where the clamp-on was attached: _____

Measured flows:

Undertake three separate observations and record and average the results in the table below.

Verification flows should be taken at or around the consented flow rate and/or the flow rate the well is usually pumped at.

If flows don't verify within 5% a second clamp-on location can/should be attempted.

	Location 1 Observation 1	Location 1 Observation 2	Location 1 Observation 3	Location 2 Observation 1	Location 2 Observation 2	Location 2 Observation 3	**Average**
installed meter flow: L/s							
verification flow meter: L/s							
% Difference							

Certification:

☐ I/we certify that the above flowmeter/water measuring device has been verified and the measured flow is within 5% of the verification meter.

OR (circle one)

☐ I/we have found that the installed flowmeter/water measuring device deviates more then 5% **above/below** the verified flow.

Recommend remedial action:

_____

Verified by: _____ Signed (by verifyer):_____

Verifiers Certificate No *: _____ Date: _____

Company: _____

* Each verifier will be registered by the manufacturer/supplier on having attended a verifier course for their equipment. ECan will keep a list of the approved verifiers and certificate numbers.

26 September 2018

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Customer Services
P. 03 353 9007 or 0800 324 636
200 Tuam Street
PO Box 345
Christchurch 8140
E. ecinfo@ecan.govt.nz
www.ecan.govt.nz

Christchurch City Council
Attn To: Heather Holder-Lunn
PO Box 73014
Orchard Road
Christchurch 8154

Dear Heather

Correction to Resource Consent Decision

Record Number: CRC190369
Applicant Name: Christchurch City Council
Activity Description: To discharge water and contaminants to water.

It has come to our attention that there was an error in the above consent. As such, please destroy the document currently in your possession and replace it with the enclosed corrected decision documents.

Error identified

Condition 1 references resource consent CRC190369 (discharge permit), when it should instead reference resource consent CRC190368 (take of dewatering water).

Condition 1 currently reads:

The discharge shall be only dewatering water, bore development and clarity testing and pressure testing water and contaminants taken in accordance with consent CRC190369.

Advice notes:

a. Bore development excludes well pointing device or other structure used to temporarily lower the groundwater table for the purposes of dewatering.
b. The damming and diversion of surface water in a waterbody and subsequent discharge of that surface water may be authorised by CRC100748.1 and CRC100749 or any subsequent replacements of these consents.

Condition 1 has been amended to read:

The discharge shall be only dewatering water, bore development and clarity testing and pressure testing water and contaminants taken in accordance with consent CRC190368.

Advice notes:

a. Bore development excludes well pointing device or other structure used to temporarily lower the groundwater table for the purposes of dewatering.

b. The damming and diversion of surface water in a waterbody and subsequent discharge of that surface water may be authorised by CRC100748.1 and CRC100749 or any subsequent replacements of these consents.

Queries

For all queries please contact our Customer Services Section quoting your CRC number above.

Yours sincerely

Nickie Pepper
Consents Assistant

cc:
Opus International Consultants Ltd, Christchurch
Attn To: Brent Hamilton
PO Box 1482
Christchurch 8140

RESOURCE CONSENT CRC190369

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Christchurch City Council
A DISCHARGE PERMIT (S15):	To discharge water and contaminants to water.
COMMENCEMENT DATE:	31 Aug 2018
EXPIRY DATE:	08 Mar 2022
LOCATION:	Various Locations, Christchurch

SUBJECT TO THE FOLLOWING CONDITIONS:

LIMITS

1 The discharge shall be only dewatering water, bore development and clarity testing and pressure testing water and contaminants taken in accordance with consent CRC190368.

Advice notes:

a. Bore development excludes well pointing device or other structure used to temporarily lower the groundwater table for the purposes of dewatering.

b. The damming and diversion of surface water in a waterbody and subsequent discharge of that surface water may be authorised by CRC100748.1 and CRC100749 or any subsequent replacements of these consents.

2 The discharge shall be to land where it may enter surface water or surface waterbodies, either directly or via the Christchurch City Council (CCC) stormwater network.

3 The discharge for each project shall be in accordance with the Dewatering Procedure, attached to and forming part of this consent, for the applicable Contamination Risk Zone identified for the site.

PRIOR TO COMMENCING THE DISCHARGE

4 Prior to the commencement of the discharges, assessment and reporting shall be undertaken with respect to the risk of encountering contaminated soil and groundwater conditions, to determine the Contamination Risk Zone (low or high) that is applicable for each project as detailed in the Dewatering Procedure. The assessment shall:

a. Utilise at least the Canterbury Regional Councils (CRC) Listed Land Use Register (LLUR) and CCC GIS Layer, and related CCC property files and CRC and CCC databases to support the assessment of the project site and any migration risk from an adjacent site;

b. Have a suitably qualified and experienced person (SQEP) further assess the risk to soils and groundwater should a:

    i. Listed hazardous activities or industries (HAIL) be confirmed on the project site; and/or

    ii. HAIL GS – Landfill and/or those HAILs that include the storage of bulk liquid hazardous substances be confirmed on land adjacent to the project site and where there is potential for a groundwater plume to be present;

    iii. Any detailed site investigations required to support a risk assessment shall be undertaken by a SQEP.

c. Provide recommendations for dewatering treatment and monitoring applicable to the risk.

Advice notes:

a. Low risk: No evidence of a HAIL activity is identified

b. High risk: HAIL activity is identified and confirmed on the works site, or HAIL categories that have bulk hazardous liquids or a landfill that are adjacent to the site. HAIL A10 activities are not considered High Risk, but discharges over them to land should be considered;

c. A SQEP is defined as a person with a relevant tertiary qualification and at least 10 years' experience in contaminated land matters, including the identification and assessment of contaminated soils and groundwater.

5 The Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance shall be notified at least five working days before each discharge occurs and the notification shall advise of the location of the discharge point(s), the expected start date and duration, and shall identify the contamination risk zone(s) determined by a SQEP for the site.

6 If the dewatering methodology is pumping water directly from the trench, the consent holder shall advise the Office of the relevant Rūnanga and Mahaanui Kurataiao Limited at least ten working days prior to commencing the work. If dewatering via pumping from a trench needs to occur and is unplanned, the consent holder shall advise the Office of the relevant Rūnanga and Mahaanui Kurataiao Limited as soon as practicable. The advice shall include the matters listed in condition 3.

7 The consent holder, and all persons exercising this consent, shall:

a. Ensure that all personnel undertaking activities authorised by this consent are made aware of, and have access to, the contents of this consent document and the Contractor's Environmental Risk Assessment and Management Plan prior to the commencement of the works; and

b. Have particular regard to any advice provided in response to condition (4) regarding practical measures for avoidance of adverse effects on sites of significance to Tangata Whenua.

ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT PLAN

8 An Environmental Risk Assessment and Management Plan (EMP) shall be produced by the relevant head contractor and accepted by the consent holder prior to works commencing.

The EMP shall include, by not be limited to, details on the following:

a. Contact details for the Contractor;

b. The Dewatering Procedures for the relevant Contaminant Risk Zone; and

c. Mitigation steps to address actual and potential adverse effects on sites of significance to Tangata Whenua and cultural values.

The most up to date Contractor's EMP approved by the consent holder for any project shall be provided to the Canterbury Regional Council, Attention: Regional Leader Monitoring and Compliance on request.

DISCHARGE METHOD AND LIMITS

9 a. The discharge shall not cause erosion of the bed or banks of the surface waterway.

b. The discharge shall only occur over erosion protection or via an established stormwater outfall pipe. Erosion protection measures shall be inspected and maintained by the Contractor at least once per week. A record of the inspections shall be kept in a log book and provided to the Canterbury Regional Council on request.

10 No discharge shall occur if water within the receiving waterway, at or downstream of the discharge point, has overtopped the banks and is flooding adjacent land. The discharge may recommence once these floodwaters have receded and the flow in the waterway is completely contained within the river channel.

11 All dewatering water shall pass through at least one sediment removal device prior to discharge in accordance with the methodology in the accepted EMP.

12 a. Prior to the use of any water treatment chemicals the Dewatering section of the EMP shall be amended to include

i. Bench testing requirements to determine the optimal dosing rates of treatment chemicals;

ii. Specific design details of the flocculation or water treatment system;

iii. A monitoring, maintenance (including post-storm) and contingency programme (including a record sheet);

iv. Spill response procedure; and

v. The procedure for the storage of chemicals on-site and transportation of chemicals.

b. The updated EMP shall be provided to the Canterbury Regional Council Attention: Regional Leader Monitoring and Compliance

c. Any further amendments to the Dewatering section of the EMP shall be provided to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance, in writing prior to implementation.

Advice notes:

a. Sediment removal devices and water chemical use guidance can be found in the Erosion and Sediment Control Toolbox for Canterbury (2017) which can be accessed at http://esccanterbury.co.nz

b. The contractor should consider the broad range of options available when choosing water treatment chemicals (flocculants/coagulants) that are appropriate for local conditions.

13 a. The concentration of total suspended solids in all the discharges leaving the site shall not exceed 100g/m3;

b. The discharge of aquifer testing and bore development water from one bore at a time shall not exceed 200g/m3 for the first 24 hours only. Thereafter, it must comply with Condition (13)(a);

c. The discharge may only exceed the limit specified in Condition (13)(a) if all practicable measures to reduce the suspended sediments in the discharge have been undertaken and the written agreement of the Canterbury Regional Council, Regional Leader – Monitoring and Compliance has been obtained.

14 When required by the Dewatering Procedure, the oil water separator shall be designed and sized to remove floatable hydrocarbons and achieve a discharge concentration not exceeding 5 milligrams of total petroleum hydrocarbon per litre of water.

MONITORING

15 For the purposes of Conditions (15) to (19) and the Dewatering Procedure which forms part of this consent, a suitably qualified Environmental Specialist is defined as a person with a relevant tertiary qualification and at least two years experience in contaminated land matters, including the identification and assessment of contaminated soil and groundwater.

16 A sample of dewatering water shall be taken in the first 24 hours of dewatering at each location where the consent is being exercised. The samples shall be taken at the end of the treatment train, before the discharge leaves the site and mixes within the receiving environment. The samples shall be analysed for total suspended solids and any other contaminants that the SQEP considered and reported are likely to be present in the discharge.

17 Analysis of samples taken in accordance with Condition (16) or taken at the discretion of the Environmental Specialist in accordance with the Dewatering Procedure, shall be undertaken using the most appropriate method by a laboratory that is certified for that method of analysis by an accreditation authority such as International Accreditation NZ (IANZ).

18 The results of the analyses undertaken in accordance with condition (16), along with the name(s) of the person(s) who collected the samples, the location, and the date and time of sampling shall be provided to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance ecinfo@ecan.govt.nz and the Christchurch City Council at environmentteam@ccc.govt.nz, within one month of receiving the results.

19 The discharge shall be observed for contaminants in accordance with the Dewatering Procedure for the applicable Contamination Risk Zone.

20 Where site visits are undertaken by an Environmental Specialist, in accordance with the Dewatering Procedure, a record of the visit shall be kept. These records, including any sampling results or photographs, shall be submitted in writing to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance, and the Office of the relevant Rūnanga at the completion of works.

ADMINISTRATION

21 The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of:

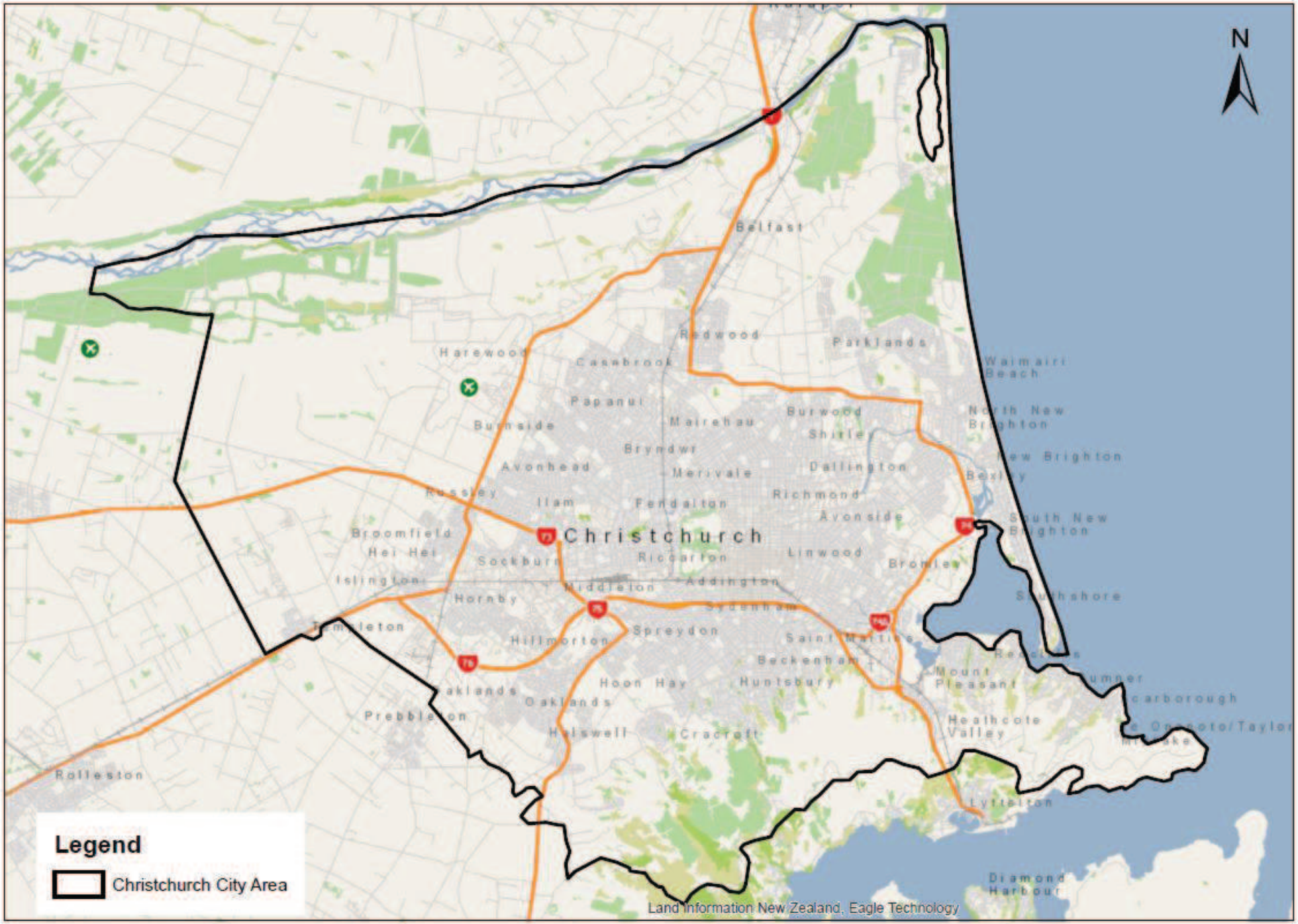
a. Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or

b. Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

Issued at Christchurch on 26 September 2018

Canterbury Regional Council

Plan CRC190369



CRC190369 DEWATERING PROCEDURE

In the following Dewatering Procedures:

- A Suitably Qualified and Experienced Person (SQEP) is defined as a person with a relevant tertiary qualification and at least ten years experience in contaminated land matters, including the identification and assessment of contaminated soil and groundwater
- A suitably qualified Environmental Specialist is defined as a person with a relevant tertiary qualification and at least two years experience in contaminated land matters, including the identification and assessment of contaminated soil and groundwater.

High Risk: Dewatering Procedure

Contractors need to be aware that groundwater and soils within high risk areas have a high risk of containing contaminants. Some of these contaminants may be visible or be odorous but many may not be discernible at all. Therefore, all dewatering water is to be treated as contaminated. For this zone a SQEP is required to have undertaken a risk assessment and likely a Detailed Site Investigation (DSI) prior to works occurring. Recommendations, relevant to the risk, for dewatering treatment and monitoring may have been specified by the SQEP in addition to this dewatering procedure for the high risk area.

To reduce the level of contaminants in the discharge, a combination of a sediment removal system and an oil water separator is to be installed, as well as any additional requirements recommended by the SQEP. In addition to this, the Contractor will need to observe the discharge water every two hours to check if any unusual odours, colours or any other factor suggest that there are contaminates in the discharge. A suitably qualified Environmental Specialist will visit the site as required to assess the discharge, and this person shall also be called if the 2-hourly visual inspection indicates contaminants are in the discharge.

To effect these mitigation measures, the following procedures shall be followed in the high risk zone:

- Notify the nominated Environmental Specialist of the dewatering at least one day (or as early as possible) prior to works commencing in the high-risk area .
- Set up sediment removal and other treatment systems as required by the environmental risk and management plan.
- Identify alternative discharge points, such as sewer manholes, in case they are required.
- Connect the appropriately sized oil water separator to the downstream end of the
- sediment removal system.
- Locate the discharge point in a manner that complies with the Construction Management Plan (prepared by others) and allows for visual observation of the
- discharge.
- Commence dewatering and observe the water quality in the trench as well as within the sediment removal system, the oil water separator and at the discharge point.
- The Environmental Specialist to observe the dewatering within the first 24 hours of dewatering commencing, and to collect a sample and analyse for total suspended solids and any other contaminants that the SQEP considered and reported likely to be in the discharge. The Environmental Specialist may direct additional mitigation measures as required.
- Contractor to repeat the visual inspections of the dewatering quality every 2 hours
- whilst on site to check for oily sheens, discolouration or unusual odours.

- Contractor to maintain the system in accordance with manufacturers specifications and keep records of any incidences or observed contamination. This information shall be provided to the Environmental Specialist.
- Upon exit from the high risk area, the oil water separator may be disconnected paying careful
- attention to not spilling any collected hydrocarbons. These shall be decanted and removed offsite to a licensed liquid waste disposal facility.
- All collected sediment to be disposed to a facility licensed to receive contaminated material.

Low Risk: Dewatering Procedure

Whilst there is a low risk of contaminants being in the ground and groundwater in these areas , there is still a chance that contaminants may be present in some instances. Some of these contaminants may be visible or be odorous but many may not be discernible at all.

To reduce the level of contaminants in the discharge, sediment removal is the primary method of treatment. Whilst not expected in this zone, if an oily sheen or floating contaminants are noted in the dewatering discharge an oil water separator may need to be installed. To identify the need for this, the Contractor will need to observe the discharge water every two hours to check if any unusual odours, oily sheens, colours or any other factor suggest that there are contaminates in the discharge. A suitably qualified Environmental Specialist shall be contacted to visit the site if the Contractor identifies any contaminants in the discharge.

To effect these mitigation measures, the following procedures shall be followed in the low risk area:

- Set up sediment removal systems as required by the construction management plan.
- Identify alternative discharge points, such as sewer manholes, in case they are
- required.
- Locate the discharge point in a manner that complies with the Construction
- Management Plan and allows for visual observation of the discharge.
- Commence dewatering and observe the water quality in the trench as wells as within the sediment removal system and at the discharge point.
- Contractor to repeat the visual inspections of the dewatering quality every 2 hours
- whilst on site to check for oily sheens, discolouration or unusual odours.
- Contractor to call the Environmental Specialist to assess the discharge (visually and olfactory test) if they observe unusual odours, colours or sheens. The Environmental Specialist may direct the Contractor to discharge to sewer, connect an oil water separator or put in place additional mitigation measures as required. The Environmental Specialist may collect samples to confirm their assessment.
- Contractor to maintain the system in accordance with manufacturers specifications and keep records of any incidences or observed contamination. This information shall be provided to the Environmental Specialist.
- Upon exit from the low risk area, the oil water separator may be disconnected (if used) paying careful attention to not spilling any collected hydrocarbons. These shall be decanted and removed offsite to a licensed liquid waste disposal facility.
- All collected sediment to be disposed of to a facility licensed to receive contaminated material.

Resource Management Act 1991

Christchurch City Council

Report / Decision on a Resource Consent Application

(Sections 95A, 95B and 104 /104B)

Application Number:	**RMA/2019/2727**
Applicant:	Christchurch City Council
Site Detail:	Any Council or Crown owned land and any land covered by the Transport Zone, within the Christchurch City Territorial Authority Boundaries
Legal Description:	N/a
Zoning:	Any zone within the Christchurch District Plan
Overlays and map notations:	Any overlay within the Christchurch District Plan
Activity Status:	Discretionary
Application:	Global land use consent under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-SC) for the disturbance of soil on Hazardous Activity and Industries List (HAIL) sites where providing for projects within Council-controlled land, road corridors, parks and reserves

Proposed activity and description of sites

Global land use consent under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-SC) is sought for the disturbance of soil on Hazardous Activity and Industries List (HAIL) sites where providing for projects within Council-controlled land, road corridors, parks and reserves.

Resource consent is only sought under the NES-SC and therefore the consent scope is specific to the NES-SC only. The application does not seek resource consent for activities/earthworks that may be required by projects and that do not comply with rules of the Christchurch District Plan.

The applicant has provided a description of the proposal and a site description in Section 1 *Introduction*, Section 3 *Proposed Works* and Section 4 *Site Description* of the report entitled, '*Global Consent – NES Soil Contamination*', dated November 2019 and prepared by Jonathan Clease of Planz Consultants Limited (hereon referred to as the applicant's AEE). A suite of conditions of consent as listed in Section 7 of the applicant's AEE is offered as part of the application.

In summary, the soil disturbance sought to be covered by this consent is to provide for the following works:

1. Soil disturbance associated with the repair, maintenance, and construction of roads where located within legal road reserves (including unformed legal roads);
2. Soil disturbance associated with the repair, maintenance, and construction of:

    - Council-controlled network utilities and infrastructure, including stormwater basins, swales, and related structures;
    - Community, park, and amenity facilities;
    - Works and recreation facilities within open space parks and recreation reserves;

3. Soil disturbance within waterway margins (excluding dredging);
4. Soil disturbance associated with the repair and maintenance of former landfills;
5. Soil disturbance within cemeteries.

The soil disturbance sought to be covered by this consent is subject to the following limitations:

1. The consent is sought only for works undertaken by the Council or Council-engaged contractors and is not intended to be used by third parties;
2. Geographically limited to works located within Council or Crown owned or managed land, including land covered by the Transport Zone (i.e. Council or State Highway road corridors);
3. The consent does not cover proposals to change the use of land or for subdivision;
4. The consent does not cover soil disturbance associated with the establishment of

residential units.

The application is to cover land that is described as a 'piece of land' under subclause (7) of the NES-SC, being:

a) an activity or industry described in the HAIL is being undertaken on it:

b) an activity or industry described in the HAIL has been undertaken on it:

c) it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it.

This application is to cover land that is subject to the above clauses in that the land currently has or has previously had HAIL activities occurring on it. This consent also covers land where there is no known history of HAIL activities, yet when works occur, potential contamination is uncovered. A process is proposed in this consent (and offered conditions) for determining when this consent needs to be used i.e. when works are to occur to land where there is a contamination risk.

The use of the global consent is to be managed internally by Council's Environmental Staff. Council asset teams/ project managers wishing to make use of the global consent will first need to have their project screened by the process established by the Environmental Team. The screening process is attached as Appendix 2 of the applicant's AEE and will be located on the Council's internal internet HUB. The applicant has provided a summary of the steps involved in giving effect to the resource consent for any given project under Section 8.4 *Proposed Process* and 8.5 *Site Management Plans*, of the applicant's AEE.

Activity status

Christchurch District Plan

As a global resource consent, the application covers sites within any zone within the Christchurch District Plan.

However, resource consent is only sought under the NES-SC and therefore the consent scope is specific to the NES-SC only. The application does not seek resource consent for activities/earthworks that may be required by projects and that do not comply with provisions of the Christchurch District Plan.

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

The NES-SC controls soil disturbance on land where an activity on the HAIL is being carried out, has been carried out, or is more likely than not to have been carried out.

The application is for a global consent which is intended to apply to sites identified as HAIL land and therefore the provisions of the NES-SC apply.

The proposal requires consent as a discretionary activity under the following provision of the NES:

Activity status regulation	Regulation not met	Reason	Matters of control or discretion	Notification clause
Regulation 11 Discretionary activities	Regulation 8(3) Disturbing soil	A Detailed Site Investigation ('DSI') has not been undertaken for the subject land, and therefore the controlled or restricted discretionary consenting pathways under Clauses 9 and 10 are not available.	N/A	No clause

Written approvals

No written approvals have been provided with the application.

NOTIFICATION ASSESSMENT

Adverse effects on the environment and affected persons [Sections 95A, 95B, 95E(3) and 95D]

When assessing whether adverse effects on the **environment** will be, or are likely to be, more than minor, any effects on the owners and occupiers of the application site and adjacent properties must be disregarded (section 95D(a)). The assessment of **affected persons** under section 95E includes persons on adjacent properties as well as those within the wider environment.

As a discretionary activity, assessment of this proposal is unrestricted and all actual and potential effects must be considered. The application seeks global consent in relation to the NES-SC. Therefore, I have only considered the potential adverse effects on the environment and persons related to potential contamination issues and the effect on human health, as all other impacts of the project are either anticipated by the Christchurch District Plan, or an additional resource consent will be applied for to authorise works that also require resource consent under the Christchurch District Plan.

It is relevant to consider the purpose of the NES-SC is to ensure that land affected by contaminants in soil is assessed before it is developed, and if necessary the land is remediated or managed as part of any future project. Any matters that fall beyond the effects related to the above are not matters relevant to this application. Any non-human health related effects generated by earthworks, such as impact on amenity, ecological, or cultural effects will be managed through separate District Plan suite of earthworks provisions and any additional resource consent, should a District Plan rule be triggered by any individual project. Nuisance effects are likewise managed through the Canterbury Air Regional Plan. Water based effects are also managed primarily through the provisions of the relevant Canterbury Regional Plans.

Adverse Effects on the Environment

The applicant has provided an assessment of effects on the environment in Section 8 of the applicant's AEE. The assessment outlines the scope of the application and the process to be undertaken where a Council project seeks to utilise the global consent where it involves the disturbance of soil on a HAIL site and is within the scope of this application.

The assessment addresses the use of SMP's ensure that risks to human health are managed in a way consistent with the project risks posed and are in keeping with the outcomes sought through the NES-SC regulations. The assessment also addresses nuisance and sediment management noting that the primary sources of nuisance that can arise from earthworks relate to construction-phase noise, dust, and sediment runoff. The applicant's offered conditions and associated SMP's are proposed to provide a package of responses to mitigate these potential effects from the perspective of managing effects on human health, albeit that the SMP's will also mitigate non-relevant effects such as effects on amenity and general earthworks nuisance.

The assessment of effects provided by the applicant is considered accurate and is adopted for the purpose of this report. Specialist Input has been provided by Council's Senior Environmental Health Officer, Ms Isobel Stout, with respect to the assessment and management of contaminated soils to protect human health and Council's Planning Engineer, Ms Sheryl Keenan, with respect to related stormwater matters. The assessment of these specialists are addressed below.

Environmental Health

Ms Stout has considered the application from an environmental health perspective.

Ms Stout outlines that from her point of the view the proposal, including the offered conditions of consent, is appropriate. Ms Stout notes that this proposal as with other 'global' consents Council have handled over the years, is yet another refinement of an idea that began with the SCIRT application, being the global resource consent RMA92020520 approved for the disturbance of soil on HAIL sites associated with the re-build of Christchurch's ground level and below ground level infrastructure.

Ms Stout is referring to the proposal which is to have in place a series of steps and systems whereby the consent holder can confirm that the project is managed correctly in terms of both compliance with the NES-SC and a driver towards improving best practice and consistency with respect to the assessment and management of contaminants in soil to protect human health.

Ms Stout outlines that as the exact location and details of any project are not known at this time, the approach has been to broadly categorise the likely risks, exclude those activities or situations known to be likely high risk

and then apply a suitable level of control to the remainder, advising that a triage process has always been part of the landscape for a global consent and in this version the screening has become much more refined and includes an in-house check.

Ms Stout notes that another aspect of the consent is the setting up of the internal systems (to be established by Council as the consent holder) needed to give effect to the consent for each individual project, however notes that such a process is something outside the scope of the resource consent.

Ms Stout concludes that this refined proposal offers a considerable step forward in terms of Council work related to the NES-SC, and the assessment and management of contaminants in soil, being conducted in a consistent and compliant manner.

I accept Ms Stout's expert advice on this proposal in relation to environmental health issues. Ms Stout has confirmed that she is satisfied with the approach that the applicant proposes to take with regard to dealing with any contaminants during any required soil disturbances covered by the scope of this application, and considers the proposed process to be appropriate.

Relying on the above, it can be concluded that the potential adverse effects on human health and the environment of disturbing any contaminated soils covered by the scope of this application will be appropriately avoided, remedied or mitigated to be less than minor.

Stormwater Matters

The applicant advises that individual projects will either need to be undertaken in compliance with the scope and conditions associated with existing regional global consents held by Council, or any new project-specific regional consents will be needed.

Ms Keenan advises that the Council need to be aware of discharges entering the Council network regardless of consenting matters, including in particular where these are significant flows (dewatering, bore development etc). Ms Keenan advises that an advice note covers the stormwater aspects of this proposal adequately, outlining that it is simply a reminder to the consent holder that this is another process outside the NES consent.

Ms Keenan recommends an advice note is added which states that, '*Prior to the commencement of any portion of works involving discharge of dewatering water (or similar non-stormwater discharge) to the Council's stormwater or wastewater network, approval for the flows to enter the network will be required from the relevant Asset Planning Team, Three Waters and Waste Christchurch City Council*'. The advice note is accepted.

Noting that the applicant will be required to obtain any required regional council consents relating to the discharge of stormwater, the advice of Ms Keenan is accepted and relied on to conclude that any adverse effects related to stormwater matters related to this application will be less than minor.

Adverse Effects on Persons

The findings of the assessment of effects on the environment above are directly relevant to the adverse effects of the proposed activity on persons as the effects to be considered are those related to potential contamination issues and the effect on human health. As outlined above, I accept the assessment of effects submitted by the applicant as noted above, and relying on the input of Council specialists, Ms Stout and Ms Keenan, I consider that with the imposition of recommended conditions, (which have been offered and/or accepted by the applicant) any adverse effects on persons with respect to effects on human health associated with the disturbance of soil on HAIL sites will be appropriately avoided, remedied or mitigated to levels that are less than minor.

Under Section 95E(1) a person is not deemed affected by an activity if the adverse effects on them are less than minor. Thus I do not consider any persons to be adversely affected by this proposal.

Summary of Effects on the Environment and Persons

I accept the assessment of effects submitted by the applicant as noted above, and relying on the input of Council specialists, Ms Stout and Ms Keenan, I consider that with the imposition of recommended conditions, (which have been offered and/or accepted by the applicant) any adverse effects on human health associated with the disturbance of soil on HAIL sites will be appropriately avoided, remedied or mitigated to levels that are less than minor.

Under Section 95E(1) a person is not deemed affected by an activity if the adverse effects on them are less than minor. Thus I do not consider any persons to be adversely affected by this proposal, nor will there be any adverse effects on the wider environment that cannot be avoided, remedied or mitigated to be less than minor.

Notification tests [Sections 95A and 95B]

Sections 95A and 95B set out the steps that must be followed to determine whether public notification or limited notification of an application is required.

PUBLIC NOTIFICATION TESTS – Section 95A	
Step 1: Mandatory notification – section 95A(3)	
➢ Has the applicant requested that the application be publicly notified?	**No**
➢ Is public notification required under s95C (following a request for further information or commissioning of report)?	**No**
➢ Is the application made jointly with an application to exchange reserve land?	**No**
Step 2: If not required by Step 1, notification is precluded if any of these apply – section 95A(5)	
➢ Does a rule or NES preclude public notification for all aspects of the application?	**No**
➢ Is the application a controlled activity?	**No**
➢ Is the application a restricted discretionary or discretionary activity for a subdivision?	**No**
➢ Is the application a restricted discretionary or discretionary activity for residential activity on land that, under the District Plan, is intended to be used solely or principally for residential purposes?	**No**
➢ Is the application a boundary activity (other than a controlled activity)?	**No**
Step 3: Notification required in certain circumstances if not precluded by Step 2 – section 95A(8)	
➢ Does a rule or NES require public notification?	**No**
➢ Will the activity have, or is it likely to have, adverse effects on the environment that are more than minor?	**No**
Step 4: Relevant to all applications that don't already require notification – section 95A(9)	
➢ Do special circumstances exist that warrant the application being publicly notified?	**No**

In accordance with the provisions of section 95A, the application must not be publicly notified.

LIMITED NOTIFICATION TESTS – Section 95B	
Step 1: Certain affected groups/persons must be notified – sections 95B(2) and (3)	
➢ Are there any affected protected customary rights groups or customary marine title groups?	**No**
➢ If the activity will be on, adjacent to, or might affect land subject to a statutory acknowledgement - is there an affected person in this regard?	**No**
Step 2: If not required by Step 1, notification is precluded if any of the following apply – section 95B(6)	
➢ Does a rule or NES preclude limited notification for all aspects of the application?	**No**
➢ Is this a land use consent application for a controlled activity?	**No**
Step 3: Notification of other persons if not precluded by Step 2 – sections 95B(7) and (8)	
➢ Are there any affected persons under s95E, i.e. persons on whom the effects are minor or more than minor, and who have not given written approval (discussed above)?	**No**
Step 4: Relevant to all applications – section 95B(10)	
➢ Do special circumstances exist that warrant notification to any other persons not identified above?	**No**

In accordance with the provisions of section 95B, the application must not be limited notified.

Recovery Plans and Regeneration Plans

Section 60 of the Greater Christchurch Regeneration Act 2016 requires that decisions and recommendations on resource consent applications are not inconsistent with Recovery Plans and Regeneration Plans.

I am satisfied that processing this application on a non-notified basis will not be inconsistent with any Recovery Plans or Regeneration Plans.

Notification recommendation

That, for the reasons outlined above, the application be processed on a **non-notified** basis pursuant to sections 95A and 95B of the Resource Management Act 1991.

Reported and recommended by: Hanna Afifi, Consultant Planner **Date:** 18 December 2019

Reviewed by: Sean Ward, Principal Advisor, Resource Consents **Date:** 18 December 2019

Notification decision

That the above recommendation be accepted for the reasons outlined in the report.

Commissioner

Name: David Mountfort

Signature: D.L. Mountfort

Date: 23 January 2020

SECTION 104 ASSESSMENT

Actual and potential effects on the environment [Section 104(1)(a)]

The adverse effects on the environment are assessed in the preceding section 95 discussion, and that assessment is equally applicable here.

In addition, I agree with the applicant's AEE that the proposal will have the following positive effects:

- The earthworks associated with Council projects in parks and road corridors are integral to the provision of network infrastructure, playing fields, cycle and walkways, and community and recreational facilities. These positive effects of earthworks are readily acknowledged in the Plan's objectives and policies which are discussed below. The proposed suite of conditions and associated SMPs likewise mean that sites with a history of potential contamination are tested, managed, and remediated in a consistent manner. The suite of conditions means that knowledge regarding levels of contamination will be improved and over time sites will be remediated or have their contamination managed such that potential health risks are reduced.

Overall, I consider that the effects on the environment are able to be avoided, remedied or mitigated through compliance with recommended conditions such that they will be less than minor and acceptable.

Relevant objectives, policies, rules and other provisions of the Plan [Section 104(1)(b)(vi)]

Regard must be had to the relevant objectives and policies in the Christchurch District Plan.

The applicant has provided an assessment of the relevant provisions in Section 9 *Objectives and Policies* of the applicant's AEE. Relevant provisions are contained in Chapter 3.3 (Strategic Objectives) and Chapter 4.2.2 (Contaminated Land). As the scope of the application includes projects within Council-controlled land, road

corridors, parks and reserves, the applicant has also considered relevant objectives and policies in Chapters 7.2 (Transport), 8.2 (Earthworks), 11.2 Utilities and 18.2 (Open Space).

The applicant outlines that the policy framework relating to contaminated soil is explicit that earthworks need to be undertaken in a way that appropriately manages risks to human health. The applicant concludes that the application is considered to be consistent with the policy framework of the District Plan on the basis that the application seeks to provide for the earthworks associated with the ongoing repair, use and development of network infrastructure, roading, and community facilities, whilst carrying forward a well-established set of conditions for managing adverse effects on human health to achieve a positive overall outcome for the community.

The applicant's assessment of relevant objectives and policies is considered accurate and is adopted for the purpose of this report.

Overall, the proposal is consistent with the relevant objectives and policies of the Christchurch District Plan.

Relevant provisions of a National Environmental Standard, National Policy Statement, Regional Plan, Regional Policy Statement or Coastal Policy Statement [Section 104(1)(b)]

The National Environmental Standard for managing contaminants in soil to protect human health is relevant to this application and is discussed above.

The District Plan gives effect to the higher order documents referred to in s104(1)(b), including the Regional Policy Statement and Regional Plans. As such, there is no need to specifically address them in this report.

Part 2 of the Resource Management Act [Section 104(1)]

Taking guidance from the most recent case law[1], the District Plan is considered to be the mechanism by which the purpose and principles of the Act are given effect to in the Christchurch District. It was competently prepared through an independent hearing and decision-making process in a manner that appropriately reflects the provisions of sections 5-8 of the Act.

Accordingly no further assessment against Part 2 is considered necessary.

Section 104(3)(d) notification consideration

Section 104(3)(d) states that consent must not be granted if an application should have been notified and was not. No matters have arisen in the assessment of this application which would indicate that the application ought to have been notified.

Recovery Plans and Regeneration Plans

Granting consent to this proposal will not be inconsistent with any Recovery Plans or Regeneration Plans.

Section 104 Recommendation

That, for the above reasons, the application **be granted** pursuant to Sections 104, 104B, 108 and 108AA of the Resource Management Act 1991, subject to the following conditions:

1. The development shall proceed in accordance with the information and plans submitted with the application. The Approved Consent Document has been entered into Council records as RMA/2019/2727 (94 pages).

2. This resource consent shall only be exercised by Council or where they are the principal or client representative on the contract for any works covered under this resource consent.

3. This resource consent shall only be exercised for works undertaken within the Christchurch City Territorial Authority Boundaries and on land that is under Council's ownership or control.

[1] R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316

4. The works approved under this resource consent are limited to soil disturbance associated with construction, replacement, or repair of Council-controlled or maintained:
   (i) Roads within road reserves;
   (ii) Network utilities and infrastructure, including stormwater basins;
   (iii) Sports fields and recreational facilities located in Council-controlled or maintained parks or recreation reserves;
   (iv) Community facilities;
   (v) Waterway banks and margins (including dredging);
   (vi) Former landfills, and;
   (vii) Cemeteries;

5. This resource consent does not provide for works that constitute a change of land use or a subdivision activity under the NES-SC or soil disturbance associated with the establishment of residential units.

N/B. The following conditions apply to each individual project covered by this resource consent

6. Prior to exercising the consent, the consent holder shall provide the following information for certification to the Council's Team Leader Environmental Compliance (Email rcmon@ccc.govt.nz), or nominee, as per the Risk Screen Process document (Pages 28-32 of the Approved Consent Document):

   (i) Information about the project from the Project Team that confirms the proposed works are within the scope of the consent.

   (ii) Information from the Project Team on the project risk confirming the risk rating.

   (iii) Confirmation of the name and employer of the Contaminated Land Specialist (as defined in the Site Management Plan (SMP)) to be used on the project.

7. No works shall commence on site until the consent holder receives confirmation from the Council's Team Leader Environmental Compliance, or nominee, of the project contamination risk and SMP (or if a high risk category, the requirement to produce a site specific SMP) to be used.

8. At least 10 working days prior to the works commencing on site the consent holder shall submit a site specific Erosion and Sediment Control Plan (ESCP) to the Team Leader Environmental Compliance, or nominee, (Email rcmon@ccc.govt.nz) for acceptance covering all earthworks associated with the project. The ESCP shall be designed by a suitably qualified person and a design certificate (template available on request from CCC) supplied with the ESCP. The performance criteria for the ESCP, unless directed otherwise by the Subdivision Engineering section of Council, will be based on Environment Canterbury's Erosion and Sediment Control Toolbox for Canterbury (ESCT) (http://esccanterbury.co.nz/).

   The ESCP shall include (but is not limited to):

   (a) A map showing the location of all works including any areas of protection of natural assets and habitats (if applicable);
   (b) Detailed plans showing the location of sediment and dust control measures, on-site catchment boundaries and sources of runoff;
   (c) Area(s) of contamination and location(s) where contaminated material will be stockpiled;
   (d) Detailed description and plans showing any stormwater and/or dewatering treatment system and discharge point;
   (e) Drawings and specifications of designated sediment and dust control measures;
   (f) A programme of works including a proposed timeframe and completion date;
   (g) Installation of devices until the site is stabilised (e.g. grassed); and
   (h) Inspection and maintenance schedules for the sediment and dust control measures.

   Unless approved as part of a separate ECan resource consent for stormwater discharge or excavation/filling the ESCP will require acceptance by the Council's Team Leader Environmental Compliance, or nominee, as meeting the requirements of this condition, prior to any work commencing on site. Once accepted, the ESCP will thereafter form part of the Approved Consent Document and all works shall be undertaken in accordance with the ESCP.

9. Works confirmed to be low risk under Condition 6 shall be undertaken in accordance with the, 'Contaminated Soils Management Plans – User Guide' and 'Contaminated Soil Management Plan – Low Risk Projects' (SMP), prepared by Enviser, dated October 2019 (Pages 33-66 of the Approved Consent Document), or any revised version accepted by the Council's Team Leader, Environmental Compliance, or nominee under Condition 13. Any reporting required as part of the SMP shall be provided to the Council's Team Leader, Environmental Compliance, or nominee within 21 days of the completion of the project (Email rcmon@ccc.govt.nz).

10. Works confirmed to be medium risk under Condition 6 shall be undertaken in accordance with the Contaminated Soils Management Plans – User Guide' and 'Contaminated Soil Management Plan – Medium Risk Projects' (SMP), prepared by Envisor, dated October 2019 (Pages 33-44 and 67-94 of the Approved Consent Document), or any revised version accepted by the Team Leader Environmental Compliance, or nominee under Condition 13. Any reporting required as part of the SMP shall be provided to the Council's Team Leader, Environmental Compliance, or nominee within 21 days of the completion of the project (Email rcmon@ccc.govt.nz).

11. Works confirmed to be high risk under Condition 6 shall be undertaken in accordance with a SMP prepared by or under the supervision of a Suitably Qualified and Experienced Practitioner (SQEP). The SMP shall include as a minimum:

    i. Risk assessment, analysis and recommendations for treatment that are consistent with the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.

    ii. Procedures and mitigation methods to ensure that contaminated soil is excavated, handled and disposed of appropriately.

    iii. The consideration of stormwater and dewatering discharges, and the requirements of the Council's consents for these discharges.

    iv. Internal project monitoring methods to be undertaken by the SQEP, or Environmental Specialist under the supervision of a SQEP.

    v. Procedures for sampling and record keeping.

    vi. Reporting to the Council's Team Leader, Environmental Compliance, or nominee, within 21 days of the completion of the project (Email rcmon@ccc.govt.nz).

12. At least 10 working days prior to the works confirmed to be high risk under Condition 6 being undertaken the consent holder shall submit an SMP prepared under Condition 11 to the Team Leader Environmental Compliance, or nominee (Email rcmon@ccc.govt.nz) for certification that it provides for the requirements listed under Condition 11. Council shall provide the certification within 5 working days of receiving the SMP. No works shall commence on site until the consent holder receives the certification.

13. The SMPs required under Conditions 9-12, and the associated Users Guide, may be amended from time to time by a SQEP providing that any amendments shall:

    i. Not result in the level of environmental protection being decreased, and;
    ii. Be made to improve the effectiveness of the SMP;
    iii. Be submitted by the consent holder to the Team Leader Environmental Compliance, or nominee (Email rcmon@ccc.govt.nz) at least 10 working days prior to the works being undertaken, for certification that the SMP achieves 13 (i) and (ii) above. Council shall provide certification within 5 working days of receiving the SMP. No works shall commence until site until the consent holder receives the certification.

14. Any soils removed from the site during the course of the activity shall be disposed of to a facility authorised to accept the material. The consent holder shall provide evidence of soil disposal to an authorised facility such as weighbridge receipts or waste manifest should be submitted to the Christchurch City Council's Environmental Compliance Team, or nominee (Email rcmon@ccc.govt.nz) within two months of the completion of works.

15. The consent holder, and all persons exercising this consent, shall ensure that all personnel undertaking activities authorised by this consent are made aware of, and have access to, the contents of this consent document and the relevant SMP and User's Guide required under Conditions 9-12 prior to the commencement of the works.

16. A copy of the relevant SMP and Users Guide required under Conditions 9-12 shall be kept on site at all times.

17. Pursuant to Section 128 of the Resource Management Act 1991, the Council may review conditions by serving notice on the consent holder within a period of one month of any 12 month period following the date of this decision;

    (a) In order to deal with any adverse effects on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or

    (b) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

Advice Notes:

- The Council will require payment of its administrative charges in relation to monitoring of conditions, as authorised by the provisions of section 36 of the Resource Management Act 1991. The current monitoring charges are:

  (i) A monitoring programme administration fee of $102.00 to cover the cost of setting up the monitoring programme; and

  (ii) A monitoring fee of $175.50 for the first monitoring inspection to ensure compliance with the conditions of this consent;

  (iii) Time charged at an hourly rate if more than one inspection, certification of conditions, or additional monitoring activities (including those relating to non-compliance with conditions), are required.

  The monitoring programme administration fee and initial inspection fee / inspection fees will be charged to the applicant with the consent processing costs. Any additional monitoring time will be invoiced to the consent holder when the monitoring is carried out, at the hourly rate specified in the applicable Annual Plan Schedule of Fees and Charges.

- Sites may be an archaeological sites as defined and protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Archaeological sites are defined in the HNZPTA as any place in New Zealand where there is physical evidence of pre-1900 occupation, regardless whether the site is known or not, recorded in the NZAA Site Recording Scheme or not, or listed with Heritage New Zealand or the local council. Authority from Heritage New Zealand is required for any work that affects or may affect an archaeological site. Please contact the Heritage New Zealand regional archaeologist on 03 363 1880 or archaeologistcw@heritage.org.nz before commencing work on the land.

- It is unlawful for any person to destroy, damage, or modify the whole or any part of an archaeological site without the prior authority of the Heritage New Zealand Pouhere Taonga. This is the case regardless of the legal status of the land on which the site is located, whether the activity is permitted under the District or Regional Plan or whether a resource or building consent has been granted. The HNZPTA provides for substantial penalties for unauthorised damage or destruction.

- Refer also to the Accidental Discovery Protocol (ADP) set out in Appendix 3 of the Mahaanui Iwi Management Plan (IMP).

- Prior to the commencement of any portion of works involving discharge of dewatering water (or similar non-stormwater discharge) to the Council's stormwater or wastewater network, approval for the flows to enter the network will be required from the relevant Asset Planning Team, Three Waters and Waste Christchurch City Council.

- For works involving the discharge of stormwater, confirmation shall be sought from Council's Asset Planning Team, Three Waters and Waste, in advance of works commencing that such discharges are

authorised under existing CCC held discharge consents. Where such discharges are not authorised, a separate consent may be required from the Canterbury Regional Council.

- This resource consent relates to planning matters in relation to the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 only. This resource consent does not give approval under any District or Regional Plan. A separate resource consent will be required for any activities that are not permitted under any applicable District or Regional Plan.

- A Wildlife Authority from the Department of Conservation may be required earthworks that disturb the habitat of lizards and geckos within Christchurch. All these species are absolutely protected under the Wildlife Act.

Reported and recommended by: Hanna Afifi, Consultant Planer **Date:** 18 December 2019

Reviewed by: Sean Ward, Principal Advisor, Resource Consents **Date:** 18 December 2019

Section 104 Decision

That the above recommendation be accepted for the reasons outlined in the report.

☑ I have viewed the application and plans.

☑ I have read the report and accept the conclusions and recommendation.

Commissioner

Name: David Mountfort

Signature: D.L. Mountfort

Date: 23 January 2020

enviser

Enviser Ref:1044
October 2019

CONTAMINATED SOIL MANAGEMENT PLANS

USERS GUIDE

Christchurch City Council

Table of Contents

1 Introduction

Enviser Ltd is pleased to present this Users Guide for the disturbance, excavation and handling of potentially contaminated soil during works undertaken by the Christchurch City Council (CCC) under its Global NES (soil) consent.

As part of undertaking its day-to-day functions, the CCC regularly undertakes works which involve the disturbance, excavation and handling of soils. In some instances, the soils to be disturbed may be contaminated due to past land use. The presence of contaminants in the soil could lead to effects on surrounding ecologies (aquatic and terrestrial), workers and the general public. The NES (soil)[1] requires consent for certain works that disturb contaminated, or potentially contaminated ground.

To ensure effects are managed during disturbance of these soils, the CCC is implementing consistent site management practices across its projects where contaminated, or potentially contaminated land exists. The implementation of these measures is required by the NES (soil) consent the CCC holds.

The goals of the site management system are to ensure consistent and effective site management is implemented across all project types and sites and to create a system which fits within existing CCC project process to allow easy integration, rapid uptake and high levels of compliance.

This document sets out how this site management system will be implemented and what measures need to be in place during site works.

2 Purpose

This users' guide sets out the scope and coverage of the global NES (soil) consent and how to implement the system on your job, specifically how to:

- Determine if a project needs to work under CCC's global NES (soil) consent
- Assign a risk level to each project, which determines which Site Management Plan (SMP) will apply
- Set consistent standards for site investigations (desktop and intrusive) and preparation of bespoke SMP's
- Integrate the above within CCC's existing workflow processes

3 Global NES (soil) scope and coverage

3.1 Scope

The global NES (soil) consent covers the disturbance of potentially and actually contaminated soil by the CCC, or their agents. This includes disturbance of soil associated with removal of underground fuel systems or their components.

It does not authorise the earthworks under the general earthwork's rules in the City Plan. Separate consents may be needed if these rules are breached (i.e. volume, depth of excavation etc).

If dewatering is required, adherence to Resource Consents CRC190368 and CRC190369 will be required.

The global NES (soil) consent **does not authorise the subdivision or change in land use under the NES (soil) regulations**.

[1] Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

3.2 Geographical area

The NES (soil) global consent applies within CCC's jurisdiction, which broadly encompasses Christchurch City and Banks Peninsula as shown in Figure 1.

The types of land within the CCC jurisdiction that the global NES (soil) consent authorises soil disturbance on are:

- Community land
- State Highways
- Areas of private land covered by easements in favour of CCC.

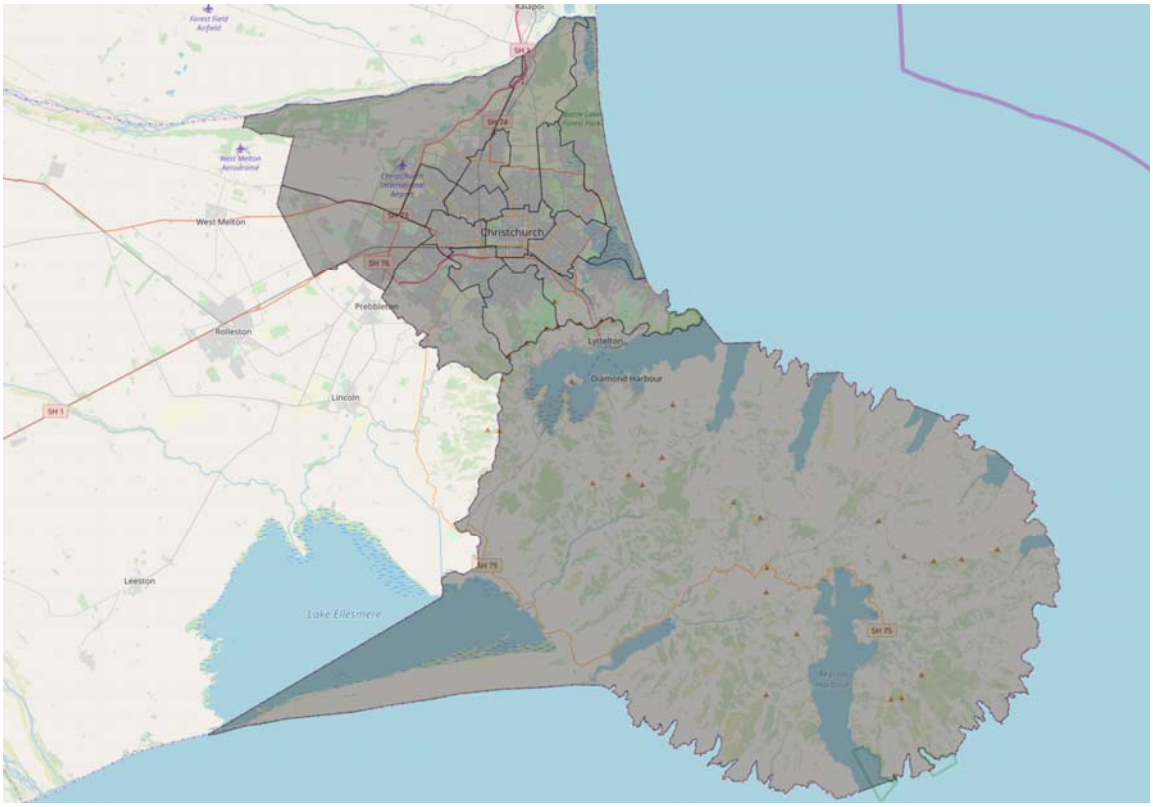
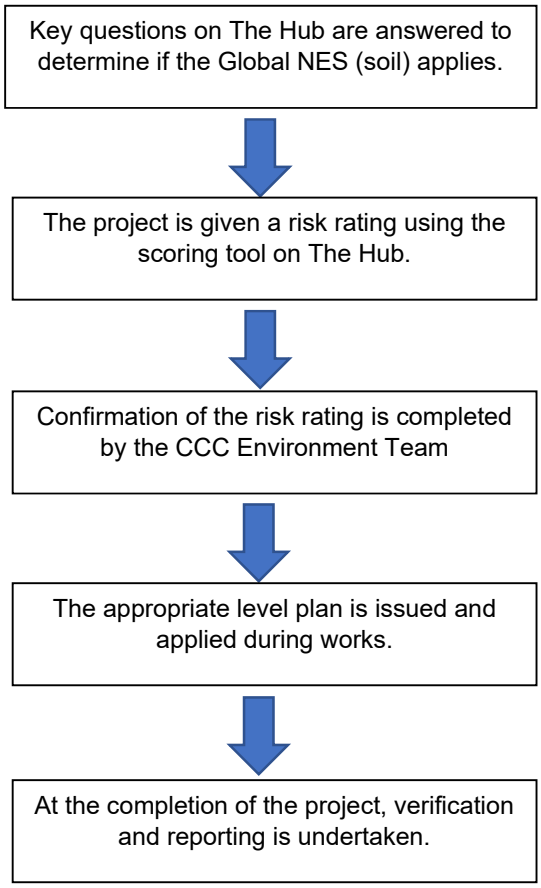


Figure 1 CCC district boundary area (shaded grey)

3.3 Process of applying the Global Consent

An overview of the process of applying the Global NES (soil) consent is shown below and described in more detail in Section 4.



3.4 Potential for ground contamination

Canterbury has many industrial and commercial sites that have historically hazardous land uses. The Ministry for the Environment (MfE) have put together a Hazardous Activities and Industries List (HAIL)[2] which provides a list of the potential types of contaminating industries and activities that have occurred in New Zealand.

To assist with identifying, collecting and managing information relating to the use, storage and disposal of hazardous substances, a land use database, the Listed Land Use Register (LLUR) has been created by Environment Canterbury (ECAN). The LLUR is a useful starting point for identifying areas that may have contaminated soil, however the database is not comprehensive, and care needs to be taken during site investigation to identify potentially contaminated soil. It should be assumed that all industrial and commercially zoned areas are potentially contaminated until proven otherwise.

3.5 Anticipated works

The CCC undertakes a wide range of construction and maintenance activities as part of its business as usual work programme. Excavation and ground disturbance e.g. the removal of topsoil, road cover

[2] Ministry for the Environment Hazardous Activities and Industries List October 2011

and turf, are required for many of these projects, and the ground could be contaminated or potentially contaminated.

The following indicates, but is not an exhaustive list, the types of works this system is intended to cover:

- Three waters infrastructure repair, maintenance, upgrades and installation
- Park and recreation area creation, maintenance and upgrades
- Above ground infrastructure and building construction and associated foundations and civil works
- Installation, repair and upgrades of roading, footpaths, cycleways and associated infrastructure
- Social housing construction, upgrades and maintenance
- Maintenance and management of closed landfills
- Maintenance and management of surface waterways and open drainage network

4 Risk screening

The nature of work the CCC undertakes across its functions varies significantly in scale and nature; from constructing small walking paths through to large infrastructure projects. Similarly, the type of ground contamination can vary significantly across the sites the CCC works on.

The risk screening system was developed to consider both the:

- key components of the site works which may influence the potential effects of disturbing contaminated land
- the potential nature and scale of ground contamination on the site and surrounding site conditions

This risk screening tool generates a **project risk**, not a site risk.

Additionally, the risk screening tool provides an auditable record of available information at the time the risk was assessed and documents why a certain SMP was applied.

At the initiation of the project, it is important to first determine if the Global NES (soil) consent is applicable to the project. The project proponent must answer some preliminary questions on the Hub to determine this. If the Global NES (soil) is applicable, the proponent is then directed to the risk screening tool to continue the process.

The risk screening tool requires input from the project proponent and CCC environmental staff in two principal steps:

- Step 1 - Project Proponent: Project specific data (i.e. earthworks volumes, excavation depths, duration of works, site location etc) as well as limited site contamination characteristics is to be filled out by the project proponent (i.e. project manager). This generates a preliminary risk screening score which will enable prioritising of staff time for later steps.
- Step 2 - CCC environmental staff receive the data (as an email prompt or notification) and populate the remaining form fields pertaining to known ground contamination information on the project area. This will largely comprise information about the site's history and HAIL activities as well as any reports or investigations the CCC has (or has access to). This step provides guidance on assigning risk scores, but also allows the experienced CCC environmental person to exercise their judgement in determining the final project risk category.

The assignable risk categories are:

- **Low** – Risks are judged to be low and typical construction management will manage the majority of risks and only limited additional controls are needed. Apply the low risk generic Site Management Plan

- **Medium** – Risks are judged to be medium and specific controls are needed to ensure the disturbance of contaminated land does not result in adverse effects. These controls are relatively standard and experienced contractors will be used to implementing theses. Oversight of the works by a Contaminated Land Specialist (CLS) is required.
- **High** – The risks are relatively high or unable to be sufficiently defined. Site specific information is required, or specialised control measures are required. A CLS must review the site and project details, decide if site investigations are warranted and prepare a site specific SMP.
- Step 3 - Following the assignation of a risk category by the CCC environmental staff, an email prompt (or similar notification) will be returned to the project proponent with an attached copy of an SMP (if the classification is for low or medium risk sites) or instructions for the need for a bespoke SMP (for high risk sites).

Copies of the low and medium risk SMPs are provided in **Appendices A** and **B**.

5 Standards for site investigations and bespoke SMPs

To ensure standardisation across all investigations and reporting undertaken on behalf of the CCC, the following sections have been derived to provide the expected standards for site investigations (preliminary and detailed), the preparation of Remedial Action Plans (RAP), Site Validation Reports (SVR) and Site Management Plans (SMP) as required.

The standards have been based on current best practice guidelines in New Zealand as described by the Ministry for the Environment in the:

- *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE, Revised 2011).*
- *Contaminated Land Management Guidelines No.2 – Hierarchy and Application of Guidelines Values (MfE, Revised 2011)*
- *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE, Revised 2016).*
- *National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (MfE 2012)*

The investigation and reporting requirements are outlined in more detail below. All completed reports and plans must be submitted to CCC environmental staff by the project proponent on completion of each task for review and inclusion in the CCC's document library.

5.1 Preliminary Site Investigations (PSI)

The main objective of the PSI is to provide background information about the site which will assist with determining if any historical contamination of the soil is likely to be encountered during the site works. The PSI comprises a desktop study and a Phase One site inspection.

If the desktop study identifies the site is potentially contaminated with petroleum hydrocarbon, the NES requires that any activities associated with removing or replacing underground fuel storage systems be conducted in accordance with:

Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (Revised 2011) (MfE, 2011)

The Phase One site inspection involves visiting the site and making observations on current land use, neighbouring land use, the presence or absence of ecological receptors, visible signs of contamination etc. during this investigation, surface sampling of soil, observed contamination (e.g. hydrocarbon stained soil), field readings of soil vapours in drains or trenches.

Section 2.1 of the *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE 2011).*
Section 2.2 of the *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE 2016).*

5.2 Detailed Site Investigations (DSI)

A DSI may be required to confirm or qualify the findings of the PSI. DSI's involve the collection of field data including the intrusive sampling of soil and water followed by laboratory analysis to identify contaminants of concern and their concentrations. The following guideline sections provide best practice that should be followed for the sampling and analysis of soils on sites where contaminants are present or suspected.

Section 2.2 of the *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE 2011).*
Section 2.3 and Section 5 of *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE 2016).*

5.2.1 Sampling Plan

It is essential that the appropriate and adequate sampling of potentially contaminated or contaminated soil on CCC sites is undertaken to allow accurate characterisation of the risks.

A sampling and analysis plan that describes the soil sampling strategy before conducting field work should be completed. This plan allows representative information to be collected during the DSI. Suggested sampling methodologies and processes are outlined in more detail in:

Section 4 of *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE 2016).*

It is essential that if sampling is required (medium and high risk categories), the CLS selects an adequate number and location of samples. A systematic sampling pattern may not be appropriate and thought by the CLS needs to be given to the layout of the site and the contamination targets.

It is recommended the CLS review available construction drawings to define a correct sampling pattern or consider geotechnical constraints when determining the appropriate sample depth.

5.2.2 Composite Sampling

Compositing can be cost-effective where analysis costs are large relative to sampling costs. However, its use should be considered with caution because of the potential for high concentrations in one of the sub-samples to be masked by low concentrations of the other sub-samples. Composite sampling should be avoided where possible.

5.2.3 Characterising Groundwater

Characterisation of water quality is not covered under the MfE's Contaminated Land Management Guidelines, however consideration to this aspect must be given as part of the site investigation. The characterisation of water quality at the site is an important aspect for:

- Developing the conceptual site model for the site, and

- Determining water quality prior to any dewatering activities that are required as part of site works.

It is recommended that the quality of the groundwater be characterised by:

- Looking at available information on the bores around the work site. These bores may have water quality information associated with them or they may be able to be sampled to provide information
- Excavating a test pit to collect groundwater samples
- Collecting any surface water samples or making observations about the quality of surface water e.g. noting a hydrocarbon sheen

Laboratory testing of the samples should be undertaken, and the results compared to the determinants listed in Tables 2.2, 2.3 and 2.5 of the standard.

Tables 2.2, 2.3 and 2.5 of the Drinking-Water Standards for New Zealand 2005 (Revised 2018)

If is it determined that dewatering is required as part of the site works, water from the site must be discharged in accordance with the CCC global dewatering consent, resource consents CRC190368 and CRC190369.

5.3 Remedial Action Plan (RAP)

If the site has been identified as requiring remediation or management, a RAP should be prepared. The plan should outline a systematic and clear process which details the remedial work to be undertaken and what the remediation criteria are. The plan also needs to include information on the dates, quantities, sampling, excavation and disposal locations of the contaminated material. More details on RAPs are outlined in:

Section 2.3 of the *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE 2011).*

5.4 Site Validation Report (SVR)

At the completion of remediation activities, site validation needs to be completed. The purpose of the SVR is to demonstrate what the contaminants of concern and their concentrations are remaining in the soil and groundwater at the site. The SVR also reports on whether these concentrations meet the remediation criteria set out in the RAP. More detail on SVR's can be found in:

Section 2.4 of the *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE 2011).*
Section 2.4 of the *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE 2016).*

5.5 Bespoke Site Management Plan (SMP)

If a project has been categorised as high risk, a bespoke SMP for the site is required. This classification may be based on the physical risks of the project e.g. deep excavation in a former landfill or it may be that there is insufficient evidence to appropriately characterise the site.

In this instance, the CLS must review the site and project details, decide if investigations are warranted and prepare a site specific SMP.

At a minimum, the bespoke SMP should include:

- A description of roles and responsibilities.
- A description of the type(s) of contamination expected.
- A comprehensive description of the specific risks associated with the project.
- A description of controls (e.g. for handling soil, stockpiling, dust, stormwater and sediment, dewatering and odour.
- Sampling methodology.
- Specific controls (e.g. for asbestos, coal tar or other relevant contaminants).
- Methodology for disposal of contaminated water and soil.
- A description of general and specific hazard management.
- Verification and reporting.

The SMP must be reviewed and approved by the CCC environmental team before being implemented at the site.

More information on what is required as part of an SMP is outlined in:

Section 2.5 of the *Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (MfE 2011).*

6 Integration into Existing CCC Workflows

This User's Guide and the supporting Contaminated Soil Management Plans (Low and Medium Risk Projects) are to be integrated into the CCC's online database 'The Hub'.

This User's Guide is a living document and needs to be updated periodically to reflect changes in CCC workflows and systems.

Amendments and updates to the document and the HUB are recommended as projects are put into action and the workflow process is refined.

7 Applicability Statement

Enviser Ltd has prepared this report for Christchurch City Council in accordance with the agreed scope. No other party, aside from for the use on this project, may rely on this report, or any conclusions or opinions within it, for any purpose without the express written permission of Enviser Ltd.

The opinions and conclusions within this report are based on the information that was viewed during preparation of the report.

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CONTAMINATED SOIL MANAGEMENT PLAN

LOW RISK PROJECTS

Christchurch City Council

Contents

1 Introduction

This contaminated soil management plan (CSMP) has been prepared in accordance with national guidelines and standards for carrying out ground contamination investigations in New Zealand. This includes compliance with the general format described in the Ministry for the Environment (MfE) Contaminated Land Management Guideline No.1 Reporting on Contaminated Sites in New Zealand[1] and the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health[2].

1.1 When you need this plan

This plan is for projects that have been given a 'low risk' classification. This low risk rating is a combination of the type of work being undertaken and the nature, extent and scale of potential contamination on the work site. Although the risk is relatively low, there is still risks present, and staff and contractors working at these sites should be aware of what this means for them, the public and the environment.

1.2 What this plan does

The purpose of this plan is to provide enough information so that contractors working on site can:

- Manage potential adverse environmental effects during works such as dust, runoff and tracked soil,
- Monitor the works to ensure appropriate disposal; and
- Protect the health and safety of workers and the surrounding population during the period of works.

1.3 Distribution and review

This CSMP is a controlled document and Christchurch City Council (CCC) is responsible for updating it as required. Only the CCC, in conjunction with a Contaminated Land Specialist (CLS) can amend the document.

1.4 Why is contamination important?

Some contaminants can cause a variety of adverse health effects. Health effects may be acute (immediately felt) or chronic (felt in the long-term). Acute effects generally occur when exposed to high levels of contamination. Chronic effects occur over time as a result of a long-term exposure to contaminants, sometimes at relatively low levels. As construction workers regularly work with soil, or on sites with exposed soil, they are at risk of being exposed to contaminants regularly during their day-to-day work.

[1] Ministry for the Environment (MfE) Contaminated Land Management Guideline No.1 *Reporting on Contaminated Sites in New Zealand* (2011)
[2] Ministry for the Environment (MfE) National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2012)

Workers can be exposed to contaminants via inhalation (by nose and mouth), ingestion (mouth) or by absorption through the skin. Appropriate work methods and PPE can minimise or prevent this exposure.

In addition to health effects, uncontrolled release of contaminants by wind, surface water, groundwater or inappropriate handling of soil or water during disposal can have a significant impact on the environment and members of the public living, working or occupying surrounding sites.

On projects classified as 'low risk', the risk to humans and the environment is judged to be minimal, however procedures are required to make sure the risks are managed. This plan sets out what these procedures are and how to put them in place.

1.5 How to keep the site and environment safe

The following are important things you need to keep the site safe during excavation or investigation:

- **Site Hazard Board** - have one visible at the site entry which explains what contamination may be present and the associated hazard.
- **Personal Protective Equipment (PPE)** - make sure you have PPE available on site that is relevant to the type of contamination that may be present. Make sure all staff know when and how to use it. Look at Section 5 for more detail.
- **Earthworks Controls** – put the correct controls in place prior to starting the works. Look at Section 3 for more information on this.
- **Security** – make sure the site is secure. This includes preventing unauthorised access when work is not happening.
- **Contaminated Land Specialist (CLS)** – have one available to identify contamination and advise on management, mitigation measures and soil removal. See Section 2.1 for more information on what a CLS is.
- **Extra Controls** – if you come across low levels of asbestos during excavation, extra controls will need to be put in place to keep things safe. More information about asbestos is in Section 3.11.

There is a useful checklist in Appendix A which covers what your responsibilities are.

1.6 Have you done things correctly?

To make sure you have put in place the appropriate controls and managed the site correctly, verification procedures are required. These check compliance with the relevant resource consent and contaminated land management guidelines. The CLS and the Contractor should work together to fill in a Works Verification Form found in Appendix B. This form will be submitted to the Project Manager at the conclusion of the work.

2 Who does what?

2.1 Roles and responsibilities

Contractors/Site Staff are responsible for:

- Ensuring a current CSMP is available to site staff carrying out the works,
- Ensuring site staff have been trained in the CSMP and understand what needs to be done,
- Implementing the correct management procedures and health and safety requirements,

- Monitoring and maintaining any controls to ensure they remain effective,
- Communicating with the CLS; and
- Notifying contaminated land related incidents to the Project Manager in a timely manner.

The Project Manager/CCC Project Representative is responsible for:

- Making sure that the work has been categorised into the correct level,
- Providing an appropriate CSMP,
- Auditing the works to ensure they are being carried out in accordance with the correct procedures and resource consent conditions,
- Making sure all Contractors/Site staff are aware of, and comply with, the relevant health and safety procedures,
- Providing information to Team Leader Environmental Compliance at the CCC.

Contaminated Land Specialist (CLS):

A CLS is a person who can provide technical expertise, overseeing the identification and disposal of contaminated soil. A CLS needs to meet the following criteria:

The Contaminated Land Specialist shall be a person who is qualified to undertake a detailed site investigation and who should have at least tertiary education in environmental science, engineering or a related field and 2+ years of professional experience in environmental investigations and risk assessments.

In the event that contaminated material is suspected or found, it is the role of the CLS to investigate the material and advise on any health and safety precautions and appropriate excavation and disposal.

2.2 How much training do you need and what can you do?

The training needed and decision making roles are outlined below:

	Site Staff (e.g. excavator operators, site construction staff)	**Contaminated Land Specialist**	**Asbestos Specialist**
What training do you need?	15 minute toolbox about the CSMP	Degree qualified and 2+ years relevant experience	Certified asbestos assessor or suitably qualified health and safety consultant[3]
What is your role?	Day to day site inspections during works, report suspicious looking soil/ground conditions	Decisions on the investigation, appropriate excavation and disposal of soil. Advising on health and safety requirements and additional mitigation methods.	Provide advice on removal and disposal of asbestos

[3]As described in WorkSafe New Zealand – Approved Code of Practice – *Management and Removal of Asbestos* (November 2016) and *Health and Safety at Work* (Asbestos – Prescribed Relevant Courses) Safe Work Instrument (2017)

2.3 Reporting for consent compliance

To comply with resource consent conditions, a site completion report is required to be submitted to the CCC Consent Compliance Team and to Environment Canterbury (ECan). To support this reporting, the following information must be provided by the Contractors/Site Staff for each job:

1. Records of all contaminated land inspections undertaken during the job,
2. Any contaminated land reports or testing undertaken to comply with this CSMP. The report needs to include information on the location, depth and extent of contamination, photos and any soil validation undertaken,
3. Details of any incidents relating to contamination e.g. fuels spills, encountering asbestos, health and safety incidents. An appropriate form can be found in Appendix C,
4. A completed Works Verification Form (Appendix B); and
5. If soil is disposed offsite, evidence of that disposal (i.e. weighbridge dockets, receipts etc).

3 Controls

This section describes what controls need to be put in place during your work. These controls are appropriate for the amount and type of contaminants expected on low risk sites.

If you see anything that suggests the soil is contaminated (see Section 3.2), you must contact the CLS, as additional controls may be needed.

It is important that the contaminated soil is identified, handled and disposed of correctly to minimise risks to health and safety and the surrounding environment.

3.1 How to inspect the ground

All site staff should be on the lookout for signs of contamination, particularly when working in new areas of the site or undertaking excavation activities. If anything unusual is identified while working, or you are unsure of what to do, get in touch with your CLS, who will advise on how to move forward.

3.2 What does contamination look like?

A range of contaminants may be present on the site. Some types of contamination you can see or smell, but many you cannot. If you experience any of the following it is likely that contaminants are present:

- A hydrocarbon odour (smells like petrol, diesel, kerosene or similar),
- Other abnormal odours not usually associated with soil,
- Discoloured soil (e.g. areas of soil with dark staining, mottled appearance, abnormal or unnatural colouration),
- Soil containing rubbish or building debris (e.g. plastics, metals, brick, timber) indicating the ground has been filled; or
- An oily substance or rainbow sheen on the surface of the soil or on the surface of water in the excavation.

Examples of what you might come across are shown below.

A rainbow sheen on the surface of water.

Areas of dark staining and unnatural colouration in a shallow excavation.

Discoloured soil and water in the base of an excavation.

Unexpected building rubble in an excavation.

If you see any of these or other unusual signs, look at the rest of Section 3 for what to do, and contact a CLS to inspect the excavation and provide advice on how to move forward.

3.3 How to handle soil

The following instructions are for soil that is assumed to have low level contamination.

- Where possible, excavated soil, which is being removed offsite, should be placed directly into trucks.
- Trucks need to be loaded in an area where any spills can be contained.
- If you must stockpile the soil, follow the instructions in Section 3.4.
- Have a method to prevent soil being tracked off site. This could be a wheel wash, area to dry brush the wheels or a rumble strip/construction entrance.
- Get a permit/approval from the disposal facility before trucking the soil there (this is the Contractor's responsibility). Information on where to send the soil is in Section 4.1.

- Have a tracking document (e.g. driver's log sheet) signed onsite to track how much soil is being trucked away; and
- Keep the weighbridge dockets for each truckload to provide to the Project Manager.

3.4 Stockpiling

At times, you may have to stockpile soil at your worksite. The duration needs to be kept to a minimum and the stockpile needs to be managed in the following ways:

- Locate the stockpiles away from surface water, site boundaries and areas where water may pool or run through during rainfall (i.e. kerb and channel). It may be necessary to divert 'clean' water around the stockpile.

To stop sediment laden runoff, encircle the stockpile with either:

- An earth bund (minimum height 0.3m)
- Hay bales lined with geotextile or plastic sheeting
- Silt fences
- Filter socks

Keep stockpile heights less than 1.5m. If a higher stockpile is required, approval needs to be sought from the Project Manager.

Compact the surface of the stockpile with an excavator bucket to prevent erosion and minimise dust.

If the stockpile needs to remain for longer than a week, it may need to be covered to prevent erosion and dust. Seek advice from your CLS in this situation.

The stockpile needs to be secured so it cannot be accessed by unauthorised people, either within the site boundary or with a specific fence. Ensure any resource consent conditions relating to the location and management of the stockpile are adhered to.

An example of some stockpile controls are shown below.

Haybales and a geotextile liner around a soil stockpile.

An impermeable cover on a stockpile.

	
A silt fence around the base of a soil stockpile.	A hay bund around a stockpile.

3.5 Dust

Dust generated during earthworks causes a nuisance and is not good for human health or the environment, particularly if it contains contaminants. To reduce the chance of dust leaving the worksite, the following controls need to be put in place:

1. Avoid work which causes dust in windy conditions.
2. Limit the amount of open excavations or disturbed ground as much as you can. You should not open more ground than you can keep damp or cover with geotextile.
3. Cover stockpiles or keep them damp, including during non-working times.
4. Reduce vehicle speeds on site.
5. For large or longer-term sites, you may want to create haul roads with a granular running surface (which may require a geotextile underlay for stability).
6. Minimise drop heights when loading soil onto trucks.
7. Dampen the soil with water – but not too much. Using too much water can cause runoff, soggy soil or surface ponding.

3.6 Stormwater and sediment

Rainwater can mix with contaminated soil and become contaminated itself. Contaminated runoff and sediment can then wash offsite onto someone else's land or into streams or the sea via the stormwater network. The key areas for focus are:

- Preventing clean rainwater from contacting contaminated material.
- Controlling sediment from going down sumps/stormwater inlets.
- Controlling sediment from moving or being tracked to uncontaminated areas of the worksite.
- Controlling sediment from moving or being tracked offsite.

All earthworks sites require a site-specific Erosion and Sediment Control Plan (ESCP) that achieves the outcomes of the CCC Environmental Management Plan (EMP), in particular the sections relating to contamination, erosion and sediment control.

The purpose of an ESCP is to identify the specific erosion and sediment issues associated with the site, describe the specific controls that will be used, and allow for monitoring during site works.

A typical ESC would normally include information on:

- The extent of the disturbed area,
- The location of waterways and inlets that need protection,
- What control measures will be put in place for the site boundary, stockpiles and excavations,
- How to separate clean and dirty water,
- How monitoring will be undertaken; and
- A drawing showing the locations of proposed stockpiles and the proposed control tools.

The ESCP should be submitted to the Project Manager for review at least 2 weeks before the start of the project.

3.7 Have you uncovered something strange?

You may come across unexpected items buried in the ground during your excavation. Some of these items may cause ground contamination e.g. old underground storage tanks and associated pipelines, sumps or drums that contain chemical or waste.

If you come across any of the above, stop works in the area, cover the area if possible (especially if it is raining) and get help from your CLS who will advise on how to move forward.

3.8 Cross contamination

To avoid transferring contaminated soils to other locations, all machinery and equipment should be cleaned before moving it to another site. This could be achieved by dry brushing or using a pressure washer. If using water, make sure you control the runoff in accordance with Section 3.6.

3.9 Imported cleanfill

Soil and cleanfill material that is coming to site needs to be suitable for the site use and environment. The following table explains what needs to happen to the cleanfill before arriving at site.

Virgin quarry material or certified cleanfill	**Uncertified cleanfill**
Use straight away.	Fill should be tested at the source prior to trucking to site.
	Sampled at a rate of 1 sample every 500m^3.
	Needs to be tested for metals, hydrocarbons and any other identified contaminants by your CLS.
	Results must be suitable for the land use criteria and for the relevant ecological receptors in the area.

3.10 Does the soil at the site need to be sampled?

You may need to sample the soil, either while it is still in the ground, or from a stockpile generated during site works. All soil sampling needs to be undertaken by a CLS in accordance with the NES Regulations 2012[4] and the MfE Contaminated Land Management Guidelines No.5[5]. Soil samples need to be collected in the following way:

- The soils need to be described using the NZ Geotechnical Society "Guidelines for the classification and field description of soils and rocks for engineering purposes".
- Soil needs to be collected and put into 300mL glass jars using freshly gloved hands or a stainless-steel trowel.
- Any equipment used to collect the soils needs to be decontaminated using clean water and Decon 90 (a phosphate free detergent) or similar.
- Samples need to be shipped immediately in a chilled container to an IANZ accredited laboratory under Chain of Custody documentation.
- The CLS will decide what the appropriate testing is. This should be based on the site history, reason for the sampling and any observations made by site staff.
- Any evidence of asbestos will require testing for asbestos content in the soil.
- All results should be compared to the NES Regulations (2012) soil contaminant standards with respect to protection of human health and the relevant ecological receptors for the local area.

3.11 Coal Tar

Coal tar is a by-product of the gasworks industry, commonly used as a sealant and road metal binder prior to the 1970's. It is typically a dark brown/black colour with a strong and distinctive hydrocarbon/naphthalene odour. It is typically used with a blue/grey angular aggregate. There is the potential to come across this product during excavation works, particularly in roads, roadside verges and footpaths. Coal tar contains very high concentrations of polycyclic aromatic hydrocarbons (PAH's) and can pose a risk to human and ecological receptors. Some people are sensitive to the odours and can experience headaches, even at low levels of exposure.

An example of aggregate bound by coal tar in a road surface.

If coal tar is found during site works, the contractor should notify the CLS and follow the procedures below:

[4] Ministry for the Environment (MfE) National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2012)
[5] Ministry for the Environment, 2004: Contaminated Land Management Guideline No.5 – *Site Investigation and Sampling*, revised 2011

- All workers on site must wear P2 dust masks and hand protection.
- Work should stop if conditions are windy and dust cannot be controlled.
- If odours become offensive, particularly in surrounding public areas, the exposed coal tar should be covered with soil to prevent further odour generation.
- All coal tar contaminated material is to be treated in accordance with the CCC Construction Standard Specification[6] and either be:
  - loaded directly onto trucks, covered and transported to an approved facility. Disposal receipts are to be provided to the CLS and Project Manager.
  - encapsulated in Bidim A29 (or equivalent) fabric within the excavation.
- Stockpiling of material containing coal tar should be avoided, but if it is unavoidable, follow the procedures outlined in Section 3.4.
- Any groundwater encountered during the excavation should be controlled following the measures outlined in Section 4.2.
- All PPE, in particular dust masks and hand protection used to handle coal tar contamination is to be disposed of at the conclusion of the site works.

3.12 Asbestos

There is the potential during excavation to come across asbestos cement (ACM) in building materials or as free fibres. There are specific procedures to deal with asbestos and these are detailed in WorkSafe New Zealand – Approved Code of Practice – *Management and Removal of Asbestos* (November 2016). When carrying out earthworks, it is important to know how to identify asbestos so the correct procedures can be followed. Asbestos cement products come in many forms, most common are:

- Cement boards or tiles, characterised by a flat, thin white-grey board with visible threads/fibres on a broken edge.
- Super 6 roofing – white grey roofing material with a broad corrugation (larger than colorsteel).
- Vinyl floorboards or sheet vinyl floor coverings.
- Loose fill insulation (mainly in residential environments).
- Textured ceiling panels and tiles, typically stippled.
- ACM downpipes, vent pipes, capping, gutters and door mouldings – often characterised by brown spiky fibres on a broken edge.

Illustrated examples of what you may come across are shown below.

[6] *Christchurch City Council Construction Standard Specification Part 1:2017* Section 17.4.1

	
Textured ceiling tiles containing asbestos	Asbestos insulated pipework
	
Super 6 roofing corrugations containing asbestos	Loose fill asbestos insulation

If suspected asbestos is found during site works, the Contractor/Site Staff should notify the Project Manager and seek advice from the CLS prior to proceeding.

4 How to safely dispose

4.1 Disposal of contaminated soil

All soils or hydro excavated material from site shall be assumed to be contaminated until the results of the sampling undertaken as described in Section 3.10 prove otherwise. Contaminated soils should be stockpiled separately from known uncontaminated soils to reduce disposal costs.

Results of laboratory testing will dictate where the soil can be disposed, broad guidelines are as follows:

- **Cleanfill Facility**– if the levels of contaminants are less than background,
- **Managed Fill Facility** – levels above background but generally below residential,

- **Texco Remediation or Kate Valley** – if the levels exceed the Burwood Landfill acceptance criteria,
- **Asbestos Facility**- if asbestos is present in the soil, it must be disposed of at a licensed facility with the prior approval of the operator.

4.2 Disposal of water

Groundwater and ponded surface water cannot be put in the stormwater, sewer or wastewater system without approval from CCC's engineers. Approval is unlikely unless the sediment can be mostly removed and the quality of the water is known. Some hydro excavated material may be able to be disposed of at Burwood Landfill.

4.3 Disposal of uncontaminated soil

Uncontaminated soil that has been tested as per Section 3.10 can be transported to a cleanfill facility for disposal or reused at site. Seek approval form the cleanfill operator before commencing loading of trucks. Keep all weighbridge dockets for proof of disposal and make sure the loading of trucks and transportation should be undertaken as per the procedures in Section 3.

4.4 Onsite management

During site works, it is important to appropriately manage, record and report the movement of contaminated soil.

Seek advice from a CLS to determine if contaminated soil can be reused the site e.g. if soil is to be reused to create an earthen bund. The CLS will provide guidance on appropriate use of the soil at the site.

Recording of the planned or unplanned movement of contaminated soil at the site needs to be documented to protect those working on the site in the future. It is the role of the project manager to provide this information to the CCC at the completion of the project so the LLUR can be appropriately updated.

5 How to keep healthy and safe

This section contains suggested **additional measures** to the standard health and safety requirements during site works that will help reduce the risk to site workers.

The following information should be used as a guide for developing site-specific safety documentation. It is still the obligation of the Contractor to fully assess the risks posed by ground contamination, develop appropriate work methods and apply the appropriate PPE.

5.1 Setting up the site

Before ground works start, the following minimum requirements should be put in place:

- Where possible, the site should be fenced with 1.8m secure fencing to prevent unauthorised access. Appropriate warning signs e.g. "*Restricted Entry*", "*Danger Open Excavations*" should be visible on the fencing.
- Signage should also include environmental hazards (i.e. asbestos).

- Set up any required environmental control measures (i.e. erosion and sediment controls) prior to starting site works.
- Health and safety inductions and daily prestart meeting should be held and specifically cover the environmental risks and this plan.
- Wash facilities, PPE stores and first aid points should be provided.

5.2 General safety requirements

Anyone working at or visiting the site will need to undergo a site-specific safety induction before beginning work or visiting the site. This is important so everyone is aware of the risks and hazards associated with contaminated soil at the site, safe working procedures, safety equipment and the action plan in case of an emergency.

The Contractor needs to appoint an Environmental Safety Officer (ESO) for the duration of the works who will make sure health and safety procedures are followed and potential hazards are controlled.

Anyone working or visiting the site must follow the general safety procedures:

- All incidents need to be reported to the ESO.
- Workers need to be made aware of potential site hazards so control measures can be put in place.
- Everyone should avoid unnecessary contact with site soils and asbestos containing materials.
- Everyone should wear the correct PPE as outlined in Section 5.
- A first aid kit and fire extinguisher should be available at all times.
- Wash facilities as described in Section 5.1 should be available.

5.3 Hazard management

Although works undertaken on the site are unlikely to contain significantly contaminated soil, precautionary health and safety measures by site workers and visitors should still be taken. These include:

- Wearing clothes that cover arms and legs when involved in works where soil contact is likely (i.e. manual excavation, working in trenches etc),
- Wearing P2 dust masks in dusty conditions; and
- Having good hygiene practices e.g. washing hands before eating, drinking, smoking or using the toilet.

If signs of contamination are observed, site works must be stopped until additional health and safety measures are put in place. Seek advice from a suitably qualified H&S advisor or the CLS prior to proceeding.

The Contractor should regularly review any new areas of work, assess the hazards and determine if they are related to ground contamination. If they are, new health and safety procedures should be put in place with the help of the CLS and all site staff advised.

5.4 Emergency procedures

Before work starts, the ESO must develop an Emergency Response Plan (ERP) and make sure everyone on site is familiar with what to do in an environmental emergency. The plan should be tested onsite to make sure the correct equipment is available. At minimum, the plan should explain:

The Assembly Point.

The location of the nearest telephone.

The location of the nearest first aid kit and fire extinguisher.

Local medical emergency numbers (and example is below).

Emergency	111
Project Manager	Job specific
Contaminated Land Specialist	Job specific
Local Medical Centre	Job specific
Worksafe NZ	0800 030 040

The ESO must be notified immediately of any environmental related injury or accident occurring at the site. If serious harm occurs, WorkSafe NZ must be notified immediately.

6 How to finish the job

6.1 Information required

Working with the CLS, the Contractor must complete a Works Verification Form (Appendix B) at the conclusion of the earthworks. The form must be submitted to the Project Manager within one calendar month of completing the works and includes items such as:

- Confirmation the soil disturbance works are complete,
- Whether or not contaminated material was found,
- Confirmation the works were completed following the CSMP procedures,
- Any variations that occurred during the works,
- Information on any environmental incidents,
- Results of laboratory testing; and
- Confirmation of where the clean and contaminated soils were disposed of.

Documents that need to be attached to the Works Verification Form:

- Copies of weighbridge summaries and disposal location for the disposed of soil,
- Records of visitors to site,
- Details of any complaints,
- Details of any incidents relating to contamination and how they were resolved; and
- Details of the onsite movement of soil for updating the LLUR.

6.2 Validation sampling

Validation sampling will be determined on a case-by-case basis by the Project Manager in conjunction with the CLS. Any validation sampling results will be attached to the Works Verification Form.

7 Applicability statement

Enviser Ltd has prepared this report for Christchurch City Council (CCC) in accordance with the agreed scope. No other party, aside from those agents authorised by the CCC, may rely on this report, or any conclusions or opinions within it, for any purpose without the express written permission of Enviser Ltd.

The opinions and conclusions within this report are based on the information that was viewed during preparation of the report.

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Appendices

Appendix A – Contractor/Site Worker Checklist

Before Siteworks Begin		
1	Find a CLS, discuss the proposed work with them and provide them with a copy of the CSMP.	**Check** √
2	Set up the required site safety controls e.g. fencing, hazards board, wash facilities, PPE store.	
3	Put environmental control measures in place e.g. silt fences at site boundary, wheel wash and stormwater inlet protection.	
4	Arrange permits for soil disposal and water discharge (if required).	
5	Complete training as per the CSMP with all site staff and the CLS.	
During Siteworks		
6	Ongoing monitoring of the site by Contractors and CLS as detailed in the CSMP.	
7	Any unexpected contamination or environmental incident, advise the Project Manager immediately.	
8	Maintain erosion and sediment control as per the site specific ESCP.	
9	Complete testing of soil as advised by the CLS.	
10	Record all material being exported from and imported to site.	
	End of Siteworks	
11	Complete a Works Verification Form.	
12	Make sure any other resource consent conditions have been met.	

Appendix B – Works Verification Form

Site Name and Location:			
Dates of Sitework:			
Job Description:			
Was contaminated soil or water identified?			
What volume of material was exported?	Cleanfill:	Where to:	
	Landfill:	Where to:	
Was material imported?	Volume:	Where from:	
Any laboratory testing results?	Yes:	No:	Attach results to this form.
Form completed by:		Date:	
Project Manager:		Signed:	
Contaminated Land Specialist:		Signed:	

Appendix C – Incident and Monitoring Reporting Forms

In the event of an incident:

- Stop work in the immediate area of the contamination incident and isolate the area e.g. using cones, tape, barriers.
- Immediately advise the Site Manager who must advise the CLS and Project Manager.
- Implement the contaminated soil Health and Safety procedures as per the CSMP.
- Implement environmental controls as per the CSMP e.g. sediment, water, dust controls.
- Update the Hazard Board.
- Implement additional controls as per the CSMP and on advice from the CLS.
- Make sure monitoring and disposal records are kept, including the form below.

Incident Reporting Form

1	Isolate the area of contamination.	Describe area:	Describe containment:
2	Arrange disposal of the contaminated material offsite.	Volume:	Location:
3	Apply any additional controls as per the CSMP and on advice from the CLS.	Details:	
4	Monitor soil/water/air as advised by the CLS.	Use the **Monitoring Reporting Form** and attach.	
5	Notify CCC and ECan as required.	CCC:	ECan:
6	Describe the incident resolution and actions taken.		
Form completed by:			Date:
Project Manager:			Signed:
Contaminated Land Specialist:			Signed:

Monitoring Reporting Form

This form can be used for monitoring of soil, water and air throughout the project. Attach any laboratory testing results to this document at the conclusion of the siteworks.

Date and Time:	Location Monitored:	Parameter Monitored? e.g. soil, water, air	Results:	Observations:	Recorded By:

Resource Management Act 1991

Christchurch City Council

Report / Decision on Change or Cancellation of Condition(s)

(Section 127)

s127 Application Number: **RMA/2019/1850**
Original application number: RMA/2018/2857
Applicant: Christchurch City Council
Site address: Various (Global Consent)
Activity Status: Discretionary activity

Description of Application: Change of conditions pursuant to Section 127

Introduction

The applicant is seeking to vary the conditions of an existing global resource consent (RMA/2018/2857), for works affecting significant and other trees within the Christchurch City Territorial Boundary. The consent is only for works undertaken by the Council, Council-controlled organisations, or network utility and infrastructure providers working on Council-commissioned projects. The works may occur within road reserves, parks, and public open spaces, waterway margins, and on private land.

Consent is now sought to include earthworks within 5m of and pruning of indigenous vegetation located within waterway setbacks and within sites of ecological significance (SES). This requires changes to conditions 1, 4, 5 and 9. The removal of indigenous vegetation is not sought. Some minor amendments to condition 9 are also proposed to clarify the process in respect of tree management plans.

The agreed recommended amendments to conditions to facilitate these changes are as follows:

1. The development shall proceed in accordance with the information submitted with the application. The approved Consent Documentation has been entered into Council records as RMA/2018/2857 (39 pages) **except as amended by RMA/2019/1850 in respect of earthworks and pruning of indigenous vegetation.**
2. At the date that this consent is granted, existing consent RMA92019127 is to be surrendered.
3. All approved Christchurch City Council or network utility contractors shall be made aware of these resource consent conditions and copies of the resource consent and these conditions shall be available for reference on each work site.
4. This consent is for works affecting protected vegetation within the CCC boundary, where 'protected vegetation' for the purpose of this consent is defined as:
    a. Significant trees listed in the Christchurch District Plan, Appendix 9.4.7.1 and Appendix 9.4.7.2;
    b. Trees located within road corridors over 6m high and in parks and public open spaces over 10m high;
    c. Trees located within a Character Area Overlay identified on the Planning Maps;
    d. Trees of a species listed in 9.4.4.1.1 P6 and P12;
    e. Exotic trees **and Indigenous vegetation** located within Sites of Ecological Significance identified in Schedule A of Appendix 9.1.6.1;
    f. Exotic trees **and Indigenous vegetation** located within Water Body setbacks as specified in Chapter 6.6;
    g. Trees protected pursuant to a resource or subdivision consent.

Pruning

5. All pruning to a tree **or indigenous vegetation** located in a road corridor, park, public open space, or listed in Appendix 9.4.7.2 of the District Plan is to be undertaken by, or under the supervision of, a works arborist employed or contracted by the Council or a network utility operator.

6. This consent does not include the pruning of any significant tree listed in Appendix 9.4.7.1 that is identified as having exceptional values and that is subject to rule 9.4.4.1.4 (D1). All pruning works to trees listed in Appendix 9.4.7.1 of the District Plan shall not commence until a written specification of the pruning works has been approved by a Christchurch City Council Arborist. The pruning works are to be undertaken in accordance with the approved written specification. The works are to be undertaken by, or under the supervision of, a works arborist.

7. Any pruning of a significant tree in Appendix 9.4.7.1 of the District Plan, where that tree is located on private land, will require that landowners are notified at least 5 working days before works are to be undertaken. Where private property access is required to undertake the pruning, work shall not proceed without the landowner's permission to enter their property.

Works or earthworks adjacent to trees

8. Any works within the dripline of a significant tree in Appendix 9.4.7.1 (indicated in the diagram in Condition 9 below), where the works are located on private land, will require that landowners are notified at least 5 working days before works are to be undertaken. Work shall not proceed without the landowner's permission to enter their property.

9. **(a)** All works and excavations, including street and infrastructure excavation, within the dripline distances (indicated in the diagram below) of a significant tree in Appendix 9.4.7.1 or within 5m of a significant tree in Appendix 9.4.7.2 or a tree **or indigenous vegetation** located in a road corridor, park, or public open space, shall be carried out in accordance with ~~a~~**an** ~~endorsed~~ Tree Management Plan prepared in accordance with the Council Construction Standard Specifications document. ~~The works are to be undertaken by, or under the supervision of, a works arborist.~~

   (b) At least 5 working days prior to any works commencing under 9(a) the Tree Management Plan shall be submitted to the Council's arborist for approval.

   (c) The works are to be undertaken by, or under the supervision of, a works arborist employed or contracted by the Council or a network utility operator.

Statutory Considerations

Section 127 of the Resource Management Act 1991 states:

"127. Change or cancellation of consent condition on application by consent holder

(1) The holder of a resource consent may apply to the consent authority for a change or cancellation of a condition of a consent, subject to the following:
- *(a) the holder of a subdivision consent must apply under this section for a change or cancellation of the consent before the deposit of the survey plan (and must apply under section 221 for a variation or cancellation of a consent notice after the deposit of the survey plan); and*
- *(b) No holder of any consent may apply for a change or cancellation of a condition on the duration of the consent.*

(2) Repealed

(3) Sections 88 to 121 apply, with all necessary modifications, as if -
- *(a) the application were an application for a resource consent for a discretionary activity; and*
- *(b) the references to a resource consent and to the activity were references only to the change or cancellation of a condition and the effects of the change or cancellation respectively.*

(4) For the purposes of determining who is adversely affected by the change or cancellation, the local authority must consider, in particular, every person who -
- *(a) made a submission on the original application; and*
- *(b) may be affected by the change or cancellation.*

Type of Application

The first consideration that is required is whether the application can be treated as one for a change of conditions or whether it will result in a fundamentally different activity or one having materially different adverse effects, such that it should be treated as a new application. The original consent relates to significant and other trees and is limited in terms of the works permitted, the process for those works and who may carry out those works. This

consent seeks to provide for pruning and earthworks in proximity to indigenous vegetation but subject to the same set of parameters. For this reason in my opinion this application can be considered as a variation to the original resource consent as the nature of the activity will not fundamentally change and the adverse effects will not be materially different from those associated with the original consent.

Written approvals [Sections 95D(e), 95E(3)(a) and 104(3)(a)(ii)]

No written approvals have been provided with the application.

Actual and potential effects on the environment [Section 95A and Section 104(1)]

Pursuant to Section 127(3) the application must be assessed as a discretionary activity. As such, the Council's assessment is unrestricted and all actual and potential effects of this proposal must be considered. In my opinion the effects on the environment associated with the proposed change/cancellation of conditions relate to effects on indigenous vegetation.

Chapter 9.1 of the Plan controls indigenous vegetation clearance within SES. Importantly this consent does not seek clearance of indigenous vegetation, noting that this is already expressly excluded from the existing consent under condition 19. Earthworks in proximity to indigenous vegetation is to be subject to a Tree Management Plan approved by the Councils arborist and pruning is only to be carried out by a works arborist. This is consistent with the existing conditions for earthworks and pruning for significant and other trees. I am satisfied that the works in relation to indigenous vegetation will be appropriately and consistently managed in accordance with best arboricultural practice to ensure the health of the vegetation is maintained. The changes in relation to the process for tree management plans provides clarity for those carrying out the works authorised under this consent. For these reasons I am satisfied that any effect on the health of indigenous vegetation will be appropriately avoided or mitigated and will be less than minor. No persons are considered to be affected by the changes sought noting that the conditions requiring prior permission for works on private land remain in place.

Notification assessment [Sections 95A and 95B]

Sections 95A and 95B set out the steps that must be followed to determine whether public notified or limited notification of an application is required.

Public notification

Step 1. The application does not meet any of the criteria for mandatory notification in section 95A(2).

Step 2. The application does not meet any of the criteria in section 95(A)(5)(b) precluding public notification.

Step 3. There are no rules or NES requiring notification, and any adverse effects on the environment will be no more than minor (section 95A(8)).

Step 4. There are no special circumstances that warrant public notification (section 95A(9).

In accordance with the provisions of section 95A, the application must not be publicly notified.

Limited notification assessment

Step 1. There are no affected groups or persons in relation to customary rights, customary marine titles or statutory acknowledgements as outlined in section 95B(2) and (3).

Step 2. There are no rules or NES preventing limited notification, and the application is not for a controlled activity land use consent under the District Plan (section 95B(6)).

Step 3. As discussed above, no persons are considered to be affected under section 95E (sections 95B(7) and (8)).

Step 4. There are no special circumstances that warrant notification to any other persons (section 95B(10)).

In accordance with the provisions of section 95B, the application must not be limited notified.

Recovery Plans and Regeneration Plans

Section 60(2) of the Greater Christchurch Regeneration Act 2016 requires that decisions and recommendation on resource consent applications are not inconsistent with Recovery Plans and Regeneration Plans.

There are no Recovery Plans or Regeneration Plans relevant to this application.

Other Section 104 matters

The application is:

- Consistent with the relevant objectives and policies in the District Plan in relation to protection of indigenous vegetation under Chapter 9.1.2.
- Able to be granted consent without notification, pursuant to Section 104(3)(d).

For completeness, I note that the District Plan gives effect to Part 2 of the Act and the higher order planning documents referred to in s104(1)(b). The Plan was competently prepared and appropriately reflects the higher order provisions, so they do not need to be specifically addressed in this report[1].

Recommendations

That, for the reasons outlined above:

A. The application be processed on a **non-notified** basis in accordance with Sections 95A and 95B of the Resource Management Act 1991.

B. The application **be granted** pursuant to Section 127 of the Resource Management Act 1991.

The conditions of consent shall now read as follows:

1. The development shall proceed in accordance with the information submitted with the application. The approved Consent Documentation has been entered into Council records as RMA/2018/2857 (39 pages) **except as amended by RMA/2019/1850 in respect of earthworks and pruning of indigenous vegetation.**
2. At the date that this consent is granted, existing consent RMA92019127 is to be surrendered.
3. All approved Christchurch City Council or network utility contractors shall be made aware of these resource consent conditions and copies of the resource consent and these conditions shall be available for reference on each work site.
4. This consent is for works affecting protected vegetation within the CCC boundary, where 'protected vegetation' for the purpose of this consent is defined as:
    a. Significant trees listed in the Christchurch District Plan, Appendix 9.4.7.1 and Appendix 9.4.7.2;
    b. Trees located within road corridors over 6m high and in parks and public open spaces over 10m high;
    c. Trees located within a Character Area Overlay identified on the Planning Maps;
    d. Trees of a species listed in 9.4.4.1.1 P6 and P12;
    e. Exotic trees **and Indigenous vegetation** located within Sites of Ecological Significance identified in Schedule A of Appendix 9.1.6.1;
    f. Exotic trees **and Indigenous vegetation** located within Water Body setbacks as specified in Chapter 6.6;
    g. Trees protected pursuant to a resource or subdivision consent.

[1] R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316

Pruning

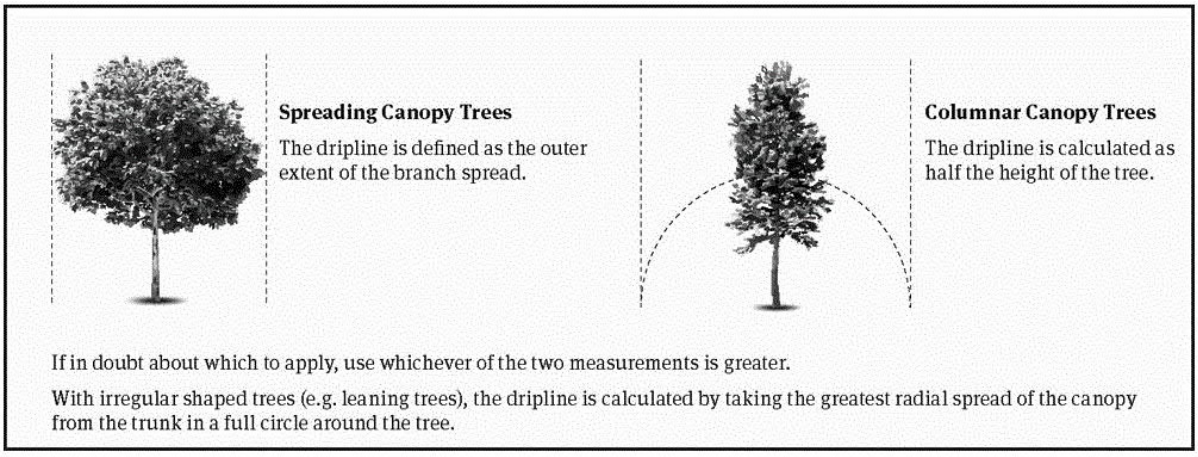
5. All pruning to a tree **or indigenous vegetation** located in a road corridor, park, public open space, or listed in Appendix 9.4.7.2 of the District Plan is to be undertaken by, or under the supervision of, a works arborist employed or contracted by the Council or a network utility operator.
6. This consent does not include the pruning of any significant tree listed in Appendix 9.4.7.1 that is identified as having exceptional values and that is subject to rule 9.4.4.1.4 (D1). All pruning works to trees listed in Appendix 9.4.7.1 of the District Plan shall not commence until a written specification of the pruning works has been approved by a Christchurch City Council Arborist. The pruning works are to be undertaken in accordance with the approved written specification. The works are to be undertaken by, or under the supervision of, a works arborist.
7. Any pruning of a significant tree in Appendix 9.4.7.1 of the District Plan, where that tree is located on private land, will require that landowners are notified at least 5 working days before works are to be undertaken. Where private property access is required to undertake the pruning, work shall not proceed without the landowner's permission to enter their property.

Works or earthworks adjacent to trees

8. Any works within the dripline of a significant tree in Appendix 9.4.7.1 (indicated in the diagram in Condition 9 below), where the works are located on private land, will require that landowners are notified at least 5 working days before works are to be undertaken. Work shall not proceed without the landowner's permission to enter their property.
9. **(a)** All works and excavations, including street and infrastructure excavation, within the dripline distances (indicated in the diagram below) of a significant tree in Appendix 9.4.7.1 or within 5m of a significant tree in Appendix 9.4.7.2 or a tree **or indigenous vegetation** located in a road corridor, park, or public open space, shall be carried out in accordance with ~~an endorsed~~ a Tree Management Plan prepared in accordance with the Council Construction Standard Specifications document. ~~The works are to be undertaken by, or under the supervision of, a works arborist.~~

   (b) At least 5 working days prior to any works commencing under 9(a) the Tree Management Plan shall be submitted to the Council's arborist for approval.

   (c) The works are to be undertaken by, or under the supervision of, a works arborist employed or contracted by the Council or a network utility operator.



Tree Removals

10. This consent does not include the removal of any significant tree listed in Appendix 9.4.7.1, in Appendix 2 to this consent, or the removal of any indigenous vegetation located within Sites of Ecological Significance (Schedule A of Appendix 9.1.6.1 or Appendix 9.1.6.6) or within water body setbacks (as specified in Chapter 6.6).
11. The removal of significant trees listed in Appendix 9.4.7.2 or trees located within road corridors, parks, or public open spaces may only occur where:

a) a report setting out the tree condition, reasons for removal, and any replacement planting has been prepared. This report is to be endorsed by a Christchurch City Council arborist;

b) A report assessing the landscape and amenity effects of the proposed removal with reference to District Plan matters of discretion under 9.4.6 (f, g, h, and n) has been prepared. This report is to be endorsed by a Christchurch City Council Landscape Architect.

12. Where a tree has been removed, wherever practicable a replacement tree shall be planted and established to the standards set out in the Council Construction Standard Specifications document. The replacement tree shall be located in an appropriate nearby location and be of the same or a complementary species.

Advice Notes:

1) The lapse date of the consent remains unchanged, i.e. 20 December 2023. The consent will lapse on this date unless it is given effect to before then.

2) For the purposes of this consent, a 'works arborist' is a person who:

c) By possession of a recognised arboricultural degree, diploma or certificate and on the job experience, is familiar with the tasks, equipment and hazards involved in arboricultural operations; and

d) Has demonstrated competency to a Level 4 NZQA Certificate in Horticulture Services (Arboriculture) standard (or be of an equivalent arboricultural standard). is in possession of a recognised arboriculture degree, diploma or certificate, and on-the-job experience, is familiar with the equipment and hazards involved in arboriculture operations, has demonstrated proficiency in inspecting, analysing and treating hazardous trees, and has demonstrated the ability to perform the tasks involved. Written confirmation of acceptance of an arborist as being suitably qualified shall be obtained from a Christchurch City Council Arborist.

3) The removal of trees in road corridors, parks, and public open spaces may also be subject to Community Board or Council Head of Department approval (under delegation).

4) Works affecting trees within the State Highway road corridor, within Central City road corridors are permitted and therefore do not need to rely on this consent. Works to exotic trees within road corridors, parks, and public open spaces located outside the urban areas of the City and Banks Peninsula (shown in figures 1 and 2 below) are likewise permitted and do not need to rely on this consent.

Figure 1. Urban Area of Christchurch

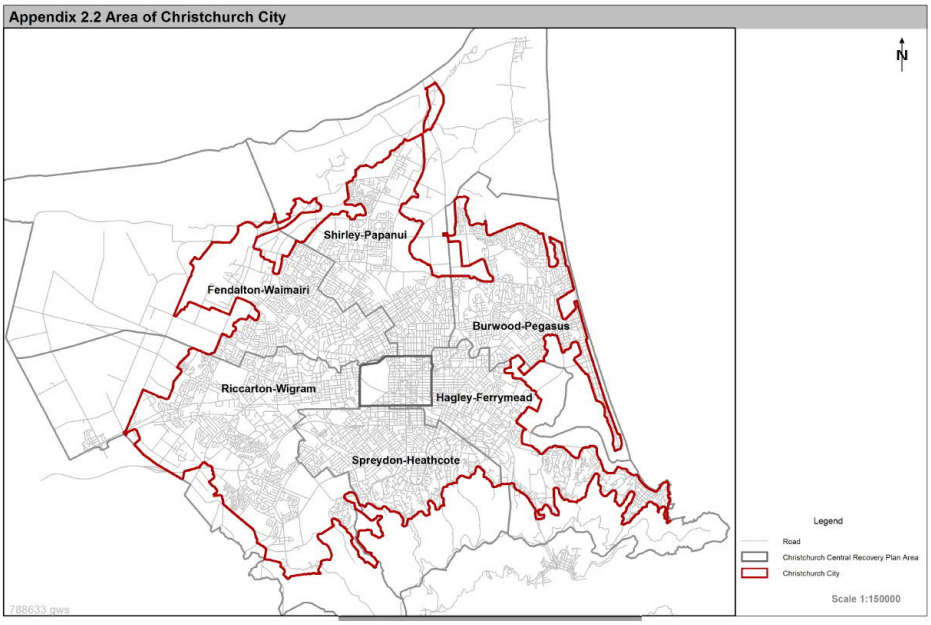
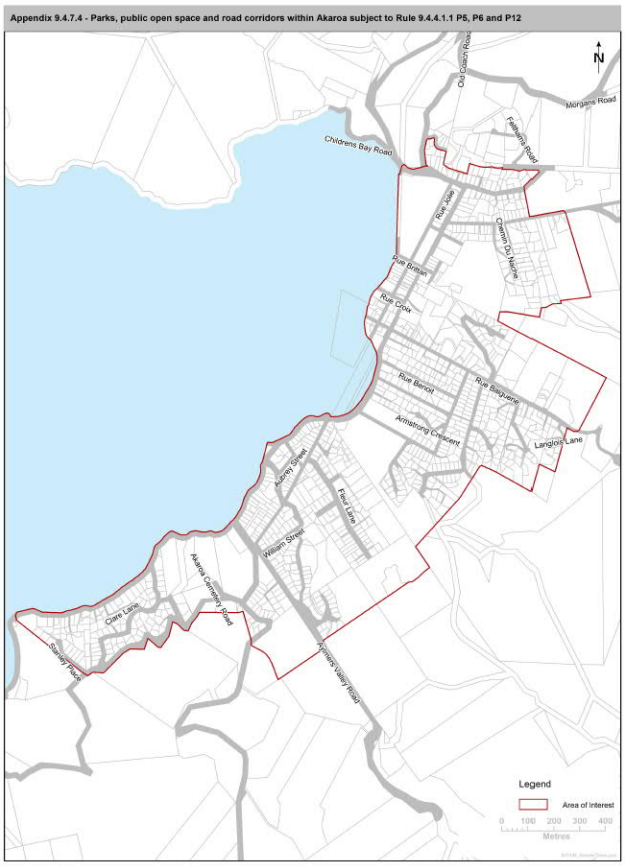


Figure 2. Urban area of Akaroa



Reported and recommended by: Mal Nash, Planning Team Leader **Date:** 24 September 2019

Decision

That the above recommendations be adopted for the reasons outlined in the report.

Commissioner:

Name: Ken Lawn

Signature:

Date: 25 September 2019

Resource Management Act 1991

Christchurch City Council

Report / Decision on a Resource Consent Application

(Sections 95A, 95B and 104 / 104C)

Application number:	**RMA/2021/460**
Applicant:	Christchurch City Council
Site address:	High Street Road Corridor, 189F, 192F, 211F, 215F and 220F High Street and 153 Manchester Street
Legal description:	Sec 1 SO 18957, Secs 1, 2 SO 20104, Sec 1 SO 18375, Secs 1, 2 SO 18678, Res Reserve District Canterbury
Zone:	Transport, Open Space Community Parks, Commercial Central City Business
Overlays and map notations:	Heritage Item/Setting, Flood Management Area, Liquefaction Management Area, Central City Active Frontage and Veranda, Category 1 Higher Noise Level Entertainment and Hospitality Precinct, Category 2 Higher Noise Level Entertainment and Hospitality Precinct, Central City Core, Central City Inner, Central City Frame Overlay, Central City Innovation Precinct, Central City Building Height 28m Overlay
Activity status:	Restricted discretionary
Application:	High Street renewals

Proposed activity

The application seeks consent for the renewal works proposed for High Street as part of the Central Business Districts renewals programme. Consent is required for earthworks and for works within heritage settings. The proposal is described in further detail in Section 3.0 of the application.

Earthworks proposed are:

- 189F High Street: excavation to 0.3m, no fill above ground level, 50m^3;
- 192F High Street: excavation to 0.3m, no fill above ground level, 3m^3;
- 215F High Street: excavation to 0.3m, no fill above ground level, 3.6m^3;
- 211F High Street: excavation to 0.3m, 0.4m fill above ground level, 130m^3; and
- 153 Manchester Street: excavation to 0.3m, 0.4m fill above ground level, 240.6m^3.

Relevant heritage and other items include:

Heritage Triangle	Heritage Building/Facade	Artwork
1. 220F High Street	a. 225 High Street	i. Bailer
2. 192F High Street (Rock Wall + Palm Trees)	b. 201-203 High Street	ii. Phils
3. 215F/211F High Street (Rock Wall + Palm Trees)	c. 158 High Street	iii. Corgis (x3)
4. 189F High Street (Rock Wall + Palm Trees)	d. 189 Tuam Street	
	e. 181 High Street	

Description of site and existing environment

The application site and surrounding environment are described in Section 3.1 of the application. I adopt the applicant's description.

Activity status

The site comprises a number of zones and overlays and for the purposes of assessment I have broken these down below:

- High Street Road Corridor: Transport Zone, Central City Building Height 28m Overlay, Central City Active Frontage and Veranda, Category 1 Higher Noise Level Entertainment and Hospitality Precinct, Central City Core, Central City Innovation Precinct, Flood Management Area, Liquefaction Management Area, Heritage Items 1279, 266, 1362, 1282, 283, 275, and 1282.

- 189F High Street: Open Space Community Parks Zone, Category 2 Higher Noise Level Entertainment and Hospitality Precinct, Central City Innovation Precinct, Central City Core, Flood Management Area, Liquefaction Management Area, Heritage Item 1282.

- 192F High Street and 153 Manchester Street: Open Space Community Parks Zone, Commercial Central City Business Zone, Central City Building Height 28m Overlay, Category 1 Higher Noise Level Entertainment and Hospitality Precinct, Central City Innovation Precinct, Central City Core, Flood Management Area, Liquefaction Management Area, Heritage Item 1362.

- 211F and 215F High Street: Open Space Community Parks Zone, Central City Active Frontage and Veranda, Category 1 Higher Noise Level Entertainment and Hospitality Precinct, Central City Frame Overlay, Central City Innovation Precinct, Central City Inner, Flood Management Area, Liquefaction Management Area, Heritage Item 1281.

- 220F High Street: Open Space Community Parks Zone, Central City Active Frontage and Veranda, Category 1 Higher Noise Level Entertainment and Hospitality Precinct, Central City Core, Central City Inner, Liquefaction Management Area, Heritage Item 1279.

The proposal requires resource consent as follows:

Activity status rule	Standard not met	Reason	Matters of control or discretion	Notification clause
5.4.1.5 RD2	5.4.1.5 P13 and P14	Earthworks exceed the standards at P13 (0.6m excavation / 0.3m fill above ground / $10m^3$ fill above ground / $25m^3$ total) and P14 (0.6m excavation / 0.3m fill above ground / $20m^3$ fill above ground / $50m^3$ total) .	As at RD2	No clause
8.9.2.3 RD1	8.9.2.1 P1	Earthworks are proposed within 5m of heritage items.	8.9.4	Shall not be publicly notified.
9.3.4.1.3 RD1	9.3.4.1.1 P8, P13 or 9.3.4.1.2 C3	Heritage items are proposed to be altered.	9.3.6.1	No clause
9.3.4.1.3 RD3	9.3.4.1.1 P9	New features or structures are proposed within an open space heritage item.	9.3.6.1	No clause

For completeness I note that:
- The exemption at 8.9.3(a)(vi) and (xii) are applicable.
- RMA/2019/1850 applies in relation to works within 5m of trees in reserves/parks.

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

RMA/2019/2727 applies in relation to these works. Council's Environmental Health team has accepted that the consent is appropriate for use in this instance, as set out at page 8 of the application.

Written approvals [Sections 95D, 95E(3)(a) and 104(3)(a)(ii)]

No written approvals have been provided with the application.

NOTIFICATION ASSESSMENT

Adverse effects on the environment and affected persons [Sections 95A, 95B, 95E(3) and 95D]

As a restricted discretionary activity, assessment of the effects of this proposal is limited to the matters of discretion for the rules breached, and any relevant Recovery Plan or Regeneration Plan. The relevant matters are set out in the table above. I have received technical advice from the following Council staff:

- William Field, Senior Urban Designer;
- Amanda Ohs, Senior Heritage Advisor;
- Sheryl Keenan, Planning Engineer; and
- Peter Megarry, Subdivision Engineer.

The applicant has volunteered a number of conditions. These form part of the application and can be taken into account in assessing the effects of the proposed activity. The information received in response to Council's s92 request also forms part of the application.

I have had regard to all of the above in the assessment below.

Flood management
The advice of Ms Keenan is that there would not be any flooding or surface drainage effects arising. Further, neither Ms Keenan nor Mr Megarry advise of any issues with timing, location, scale, nature or method of the works. I accept and rely on that advice and therefore conclude that effects would be less than minor.

Earthworks
The advice of Mr Megarry is that the proposal is acceptable subject to conditions. Those have been volunteered as above. I accept and rely on that advice and therefore conclude that effects would be less than minor.

Heritage and design
Ms Ohs has provided an assessment with respect to effects on heritage, the bulk of which is set out below. I note that Ms Ohs concludes that effects would not be more than minor subject to conditions. These conditions have been incorporated into those at the end of this report (and which have been agreed by the applicant).

> *I have considered the proposal in terms of the Matters of Discretion at 9.3.6.1.*
>
> *The removal of asphalt up to the stone triangle walls will be positive in terms of the long term conservation of the heritage fabric. Replacement in pavers set in a sand base will allow better movement of water away from the heritage fabric.*
>
> *The earthworks are not in excess of what is required in order to execute the works – the main impact is the potential risk of physical damage or vibration. A Temporary protection plan has been included in the application, and I consider that this provides robust measures and methodology for protection of the walls and trees during the removal of the light poles and the adjacent landscaping and paving works. A condition is proposed in order to ensure all aspects of protection are covered.*
>
> *As well as adding a new layer of visible mana whenua heritage values, the triangle motifs in the paving design draw attention to the historical triangle reserves and reflect the shape of the stone planters.*
>
> *The most significant change proposed to the triangles is the cessation of use of traditional bedding plants and the practice of seasonally changing planting schemes in two of the stone triangles. The proposed replacement in a permanent planting scheme using native plants reflects mana whenua values. European values associated with the historical bedding displays are continued through the formal planting scheme and the use of bold coloured plants. The permanent plantings will change in colour and texture in the changing seasons which will reflect the variety and change over time that the traditional bedding plantings provided. The request for more information provided assurance that the native plants will be well maintained in order to retain the formal design values, and avoid damage to the heritage fabric from the root growth. A maintenance plan is required as a condition of consent to ensure the heritage values of the planting is maintained. Some of the plants are woody shrubs and there is potential for their roots to grow into any cracks in the planters. A condition has been required in order to reduce this risk. There is a long history of the planting of native plants for beautification schemes by Europeans, such as by the Christchurch Beautifying Association. The planting is reversible – and could be removed and replaced at a future date is required.*
>
> *The new triangle seating introduces brightly coloured, bold shapes into the settings of the stone triangles. This forms more of a contrast than a complementary design element, however in my opinion the mix of different shades of grey pavers immediately next to the stone triangles provides a more sympathetic transition or buffer between the heritage item and the new landscaping.*
>
> *The design proposed for the Cashel Street triangle without any rock walled planter will reflect the boundaries and shape of the triangle reserve in the perimeter paving. The triangles in the design of the planters and seating and paving will also highlight that this is also a triangle reserve, and it will more obviously be linked with the other triangle reserves.*

New street trees are proposed, some of which are to be located in front of heritage buildings. Prior to the earthquakes, there were ongoing issues with street trees obscuring heritage façades, and growing too close to heritage buildings in High Street. Post the earthquakes, heritage buildings in the central city are now quite rare. Despite the link of the tree type to European heritage and the choice of a compact upright Oak, it is preferred that no new trees be planted in front of heritage buildings. There are plenty of opportunities for tree planting in front of vacant or newly developed sites. Ideally any trees should be planted as far as possible a distance away from the front of facades.

The trees in the triangle plots are part of the scheduled heritage item. Tree protection plans are required by the Draft Environmental Risk Assessment and Management Plan which forms part of the consent application. The submission and approval of the Final Environmental Risk Assessment and Management Plan is a required condition of consent.

Levels along the western face of the heritage planter at 189F High Street are proposed to be lowered by approximately 50-70mm. This will slightly increase the presence of the wall along this face. The strip of newly exposed face may need to be carefully cleaned to remove residue from the old paving. A condition requiring inspection and consideration of an appropriate method of cleaning is required to address this.

In my opinion the effects on heritage values and fabric are not more than minor.

In addition to the above, I have obtained advice from Mr Field, with respect to design. He has advised that the proposal is acceptable subject to conditions relating to:

- Submission and approval of a maintenance plan (including covering of irrigation and cleaning of the western face of the heritage planter at 189F High Street;
- Submission and approval of a completed heritage temporary protection plan (TPP) with respect to the protected items (including the *Trachycarpus fortunei* - Chusan Palms); and
- All paving area adjoining the heritage planters all have honed smooth finishes.

Noting that those conditions have been volunteered, I accept and rely on that advice, noting that while I agree with the conclusion of Ms Ohs that effects would not be more than minor, I consider it is the role of the reporting planner to have regard to technical advice and conclude with respect to extent of effects.

There appear to be two concerns raised by Ms Ohs not entirely resolvable through conditions:

- *Some of the plants are woody shrubs and there is potential for their roots to grow into any cracks in the planters. A condition has been required in order to reduce this risk.*
- *New street trees are proposed, some of which are to be located in front of heritage buildings… it is preferred that no new trees be planted in front of heritage buildings.*

The applicant has subsequently advised that new street trees will still be planted in front of heritage buildings as originally proposed. While such is not optimal, I consider effects would fall to any particular party nor to the wider environment to a notifiable extent (i.e. more than minor).

Overall, and having regard to the above advice and agreed conditions, it is my view that effects would be less than minor.

Conclusion

Overall, I consider that any adverse effects on the wider environment will be less than minor and that there will be no affected persons.

Notification tests [Sections 95A and 95B]

Sections 95A and 95B set out the steps that must be followed to determine whether public notification or limited notification of an application is required.

PUBLIC NOTIFICATION TESTS – Section 95A	
Step 1: Mandatory notification – section 95A(3)	
➢ Has the applicant requested that the application be publicly notified?	**No**
➢ Is public notification required under s95C (following a request for further information or commissioning of report)?	**No**
➢ Is the application made jointly with an application to exchange reserve land?	**No**
Step 2: If not required by Step 1, notification is precluded if any of these apply – section 95A(5)	
➢ Does a rule or NES preclude public notification for all aspects of the application?	**No**

➢ Is the application a controlled activity?	**No**
➢ Is the application a boundary activity?	**No**
Step 3: Notification required in certain circumstances if not precluded by Step 2 – section 95A(8)	
➢ Does a rule or NES require public notification?	**No**
➢ Will the activity have, or is it likely to have, adverse effects on the environment that are more than minor (discussed above)?	**No**
Step 4: Relevant to all applications that don't already require notification – section 95A(9)	
➢ Do special circumstances exist that warrant the application being publicly notified?	**No**

In accordance with the provisions of section 95A, the application **must not be publicly notified.**

LIMITED NOTIFICATION TESTS – Section 95B	
Step 1: Certain affected groups/persons must be notified – sections 95B(2) and (3)	
➢ Are there any affected protected customary rights groups or customary marine title groups?	**No**
➢ If the activity will be on, adjacent to, or might affect land subject to a statutory acknowledgement - is Te Rūnanga o Ngāi Tahu an affected person in this regard?	**No**
Step 2: If not required by Step 1, notification is precluded if any of the following apply – section 95B(6)	
➢ Does a rule or NES preclude limited notification for all aspects of the application?	**No**
➢ Is this a land use consent application for a controlled activity?	**No**
Step 3: Notification of other persons if not precluded by Step 2 – sections 95B(7) and (8)	
➢ Are there any affected persons under s95E, i.e. persons on whom the effects are minor or more than minor, and who have not given written approval (discussed above)?	**No**
Step 4: Relevant to all applications – section 95B(10)	
➢ Do special circumstances exist that warrant notification to any other persons not identified above?	**No**

In accordance with the provisions of section 95B, the application **must not be limited notified**.

Recovery Plans and Regeneration Plans

I am satisfied that processing this application on the above basis will not be inconsistent with any Recovery Plans or Regeneration Plans.

Notification recommendation

That, for the reasons outlined above, the application be processed on a **non-notified** basis pursuant to sections 95A and 95B of the Resource Management Act 1991.

Reported and recommended by: Andrew Long **Date:** 16 April 2021

Commissioner's Note

I have read the above planning report, I have read some of the extensive application documentation supplied, and I have studied the plans.

The application seeks resource consent for some aspects of the High Street renewal works (earthworks, including within 5m of heritage items, alteration of heritage items, and new features/structures within open space heritage items). The application has received considered reviews from flood management, earthworks engineering, urban design, and heritage experts within the Council. All those reviews, with the exception of one matter referred to below, have received positive reviews, including recommendation for specific conditions. I accept and adopt those reviews.

The heritage review is largely positive. It does comment on the replacement of the use of bedding plants in the triangle gardens with native species and the addition of new layers of visible mana whenua heritage values.

The main reservation of the heritage review is the placement of new street trees in front of heritage buildings. The review describes past issues with street trees obscuring heritage facades, of which fewer now remain. The heritage review would prefer that no street trees are paced in front of heritage facades. The Applicant (Christchurch City Council) has considered that matter, and has determined that it wants to retain the street trees as proposed. While expressing that this outcome is not optimal, the reporting planner has not recommended any change to that position, and has concluded that any effects would be less than minor. Having considered this issue (trees or no trees in front of heritage facades), I have decided that this is a matter that should be resolved within the Council, and is not a matter on which I should rule on through a resource consent process.

I am satisfied that any effects on the wider environment will be minor, and that there are no affected persons who should be limited notified.

Notification decision

That the above recommendation be accepted for the reasons outlined in the report.

Commissioner:

Name: Ken Lawn

Signature: 

Date: 17 April 2021

SECTION 104 ASSESSMENT

Actual and potential effects on the environment [Section 104(1)(a)]

The adverse effects on the environment are assessed in the preceding section 95 discussion, and that assessment is equally applicable here.

Relevant objectives, policies, rules and other provisions of the Plan [Section 104(1)(b)(vi)]

Regard must be had to the relevant objectives and policies in the Christchurch District Plan. Chapters 5 (Natural hazards), 8 (Subdivision, development and earthworks), and 9 (Natural and cultural heritage) contain relevant objectives and policies. They seek, in particular:

- That new development is avoided where the risk is unacceptable and appropriately managed elsewhere:
- That new development does not transfer risk to other properties;
- That people and property are protected during and after earthworks, including in relation to nuisance effects, land stability, and design; and
- The overall contribution of historic heritage to the Christchurch District's character and identity is maintained through the protection and conservation of significant historic heritage.

Having regard to the assessment of effects above, and in my opinion, the application is consistent with the relevant objectives and policies.

Relevant provisions of a National Environmental Standard, National Policy Statement, Regional Plan, Regional Policy Statement or Coastal Policy Statement [Section 104(1)(b)]

The District Plan gives effect to the relevant higher order documents referred to in s104(1)(b), including the Regional Policy Statement and Regional Plans. As such, there is no need to specifically address them in this report.

Part 2 of the Resource Management Act [Section 104(1)]

Taking guidance from the most recent case law[1], the District Plan is considered to be the mechanism by which the purpose and principles of the Act are given effect to in the Christchurch District. It was competently prepared through an independent hearing and decision-making process in a manner that appropriately reflects the provisions of sections 5-8 of the Act. Accordingly no further assessment against Part 2 is considered necessary.

Section 104(3)(d) notification consideration

Section 104(3)(d) states that consent must not be granted if an application should have been notified and was not. No matters have arisen in the assessment of this application which would indicate that the application ought to have been notified.

Recovery Plans and Regeneration Plans

Granting consent to this application will not be inconsistent with any Recovery Plans or Regeneration Plans.

Section 104 Recommendation

That, for the above reasons, the application **be granted** pursuant to Sections 104, 104C, 108 and 108AA of the Resource Management Act 1991, subject to the following condition/s:

General Conditions

1. The development shall proceed in accordance with the information and plans submitted with the application, including correspondence dated 6 April 2021. The Approved Consent Plans has been entered into Council records as RMA/2021/460 (16 pages).

2. The consent holder, and all persons exercising this resource consent, shall ensure that all personnel undertaking works in connection with this consent are made aware of the consent conditions, and the approved consent plans during the induction process and for the duration of the works. A copy of these documents shall remain on site at all times.

Environmental Management Plan

3. The consent holder shall prepare an EMP which clearly sets out the measures to be undertaken to comply with the conditions of this consent. The EMP shall be submitted via email to rcmon@ccc.govt.nz, and via email to the Unit Manager Resource Consents, at least ten working days prior to construction works commencing and shall be adhered to by the consent holder. The EMP shall include but not be limited to:
    a. A map showing the location of all works;
    b. A site specific Erosion and Sediment Control Plan (ESCP), prepared by a suitably qualified and experienced professional, which follows the best practice principles, techniques, inspections and monitoring for erosion and sediment control contained in Environment Canterbury's Erosion and Sediment Control Toolbox for Canterbury http://esccanterbury.co.nz/.
        i. Run-off must be controlled to prevent sediment laden water flowing, or earth slipping, onto neighbouring properties, legal road (including kerb and channel), or into a river, stream, drain or wetland. Sediment, earth or debris must not fall or collect on land beyond the site or enter the Council's stormwater system.
        ii. total suspended solid (TSS) content shall be no greater than 50mg/L
        iii. All disturbed surfaces shall be adequately topsoiled and vegetated or otherwise stabilised as soon as possible to limit sediment mobilisation.
    c. A Traffic Management Plan (TMP) which must be prepared by a suitably qualified person and submitted for acceptance prior to the commencement of earthworks.
        i. The TMP shall identify the nature and extent of temporary traffic management and how all road users will be managed by the use of temporary traffic management measures. It shall also identify the provision of on-site parking for construction staff. Activities on any public road should be planned so as to cause as little disruption, peak traffic safety delay or inconvenience to road users as possible without compromising safety. The TMP must comply with the Waka Kotahi

[1] *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316

NZTA Code of Practice for Temporary Traffic Management (CoPTTM) and the relevant Road Controlling Authority's Local Operating Procedures.

ii. The TMP shall be submitted to the relevant Road Controlling Authority through the web portal www.myworksites.co.nz). To submit a TMP a Corridor Access Request (CAR) must also be submitted. A copy of the accepted TMP and CAR shall be supplied.

4. No earthworks shall commence until the ESCP has been implemented on site. The ESCP measures shall be maintained over the period of the construction phase, until the site is stabilised (i.e. no longer producing dust or water-borne sediment). The ESCP shall be improved if initial and/or standard measures are found to be inadequate.

5. Roads to and from the site, and the site entrance and exit, must remain tidy and free of dust and dirt at all times.

6. All loading and unloading of trucks with excavation or fill material shall be carried out within the subject site.

7. Any surplus or unsuitable material from the project works shall be removed from site and disposed at a facility authorised to receive such material.

8. The consent holder must notify Christchurch City Council no less than three working days prior to works commencing, (via email to rcmon@ccc.govt.nz) of the earthworks start date and the name and contact details of the site supervisor.

Heritage Protection

9. The consent holder in conjunction with their conservation architect or heritage advisor shall prepare a heritage Temporary Protection Plan (TPP) which clearly sets out the protection measures to be undertaken to protect the following Heritage Triangles, Heritage Building/Facades and Artwork:

Heritage Triangle	Heritage Building/Facade	Artwork
1. 220F High Street	a. 225 High Street	i. Bailer
2. 192F High Street (Rock Wall + Palm Trees)	b. 201-203 High Street	ii. Phils
3. 215F/211F High Street (Rock Wall + Palm Trees)	c. 158 High Street	iii. Corgis (x3)
4. 189F High Street (Rock Wall + Palm Trees)	d. 189 Tuam Street	
	e. 181 High Street	

The TPP shall be submitted via email to the Council Heritage Team leader (or nominee), at least ten working days prior to construction works commencing and shall be adhered to by the consent holder. The TPP shall include but not be limited to:

a. Temporary protection measures to protect the heritage items from potential damage due to impact or vibration during adjoining construction:
   i. the item is to be physically protected with plywood over a soft protection barrier against the heritage fabric,
   ii. light machinery only is to be used in close proximity to the item,
   iii. A spotter is to be used to direct machinery in the vicinity of the item
b. A construction programme identifying key milestones for monitoring site visits;
   i. The construction programme will need to be continually updated to reflect any changes as the work proceed.
c. The methodology for any necessary cleaning, or removal of asphalt residue from newly exposed stone facings.

10. During the construction process the works within the Heritage Items or Settings as labelled on page 1 of the RMA/2021/460 Approved Consent Plans, are to be monitored by the consent holder's conservation architect or heritage advisor in conjunction with the Council's Heritage Team (or nominee). The consent holder shall liaise with the Council Heritage Team leader (or nominee) to arrange site visits at key points in the process.

11. A digital photographic record of the affected areas of the heritage item and heritage setting is to be undertaken before, during, and after the completion of the works.
    a. The record must be lodged with the Council's Heritage Team for their records within three months of the completion of the work.
    b. Images must be at least 1440 pixels by 960 pixels for a 4"x 6" print at a minimum resolution of 240 PPI.

12. If the woody shrubs are planted closer than 1 meter to the rock walls, after removal of the soil and prior to planting, the condition of the stone walls is to be assessed by an appropriately qualified person to identify any cracks in the mortar which roots could penetrate and potentially damage. This information along with

methodology for any necessary repair is to be submitted by email to the Council Heritage Team leader (or nominee).

Post Construction

13. A Maintenance Plan is prepared for the 'Manchester St Triangle' and 'Lichfield St Triangle' to ensure the design integrity is maintained over time, that low plant heights are maintained consistent with the bedding plant traditions of the planters and that the irrigation system is regularly checked for leaks and excess flow. The maintenance plan should also address cleaning and the maintenance of planters. This plan is to be submitted to the Council Heritage Team leader (or nominee) within 3 months of the completion of the planting works

Advice Notes:

- In order to provide a complimentary distinction between the natural rough stone of the planters and the new highly patterned street surfaces, it is recommended that all paving areas adjoining the heritage planters all have honed smooth finishes.
- The Council will require payment of its administrative charges in relation to monitoring of conditions, as authorised by the provisions of section 36 of the Resource Management Act 1991. The current monitoring charges are:

  (i) A monitoring programme administration fee of $102.00 to cover the cost of setting up the monitoring programme; and

  (ii) A monitoring fee of $175.50 for the first monitoring inspection to ensure compliance with the conditions of this consent; and

  (iii) Time charged at an hourly rate if more than one inspection, or additional monitoring activities (including those relating to non-compliance with conditions), are required.

  The monitoring programme administration fee and initial inspection fee / documentation fee / inspection fees will be charged to the applicant with the consent processing costs. Any additional monitoring time will be invoiced to the consent holder when the monitoring is carried out, at the hourly rate specified in the applicable Annual Plan Schedule of Fees and Charges.

- This resource consent has been processed under the Resource Management Act 1991 and relates to District planning matters only. You will also need to comply with the requirements of the Building Act 2004 and any other legislative requirements (including but not limited to Environment Canterbury Regional Plans, health licence, liquor licence, archaeological authority, certificate of title restrictions such as covenants, consent notices, encumbrances, right of way or easement restrictions, landowner approval where required). For more information about the building consent process please contact our Duty Building Consent Officer (phone 941 8999) or go to our website https://ccc.govt.nz/consents-and-licences/

- Dust emissions shall be appropriately managed within the boundary of the property in compliance with the *Regional Air Plan*.

- The applicant should not commence or should cease work on a given area if the works proposed in that area change from those in the approved consent document. Any variation should be discussed with the Christchurch City Council's Heritage Team Leader or nominee, who in consultation with Council's Resource Consents Unit will determine an appropriate consenting response. Five working days should be allowed for this process. Failure to discuss changes with the Council's Heritage Team or a Resource Consents Planner may constitute a breach of the conditions of this consent. Amended plans and information showing these changes, including any associated changes to the Temporary Protection Plan, may be required to be submitted to the Heritage Team Leader, Christchurch City Council (or nominee) for certification prior to work on that area commencing or resuming.

- Information being submitted in relation to conditions of this consent is to be sent by email to: rcmon@ccc.govt.nz. The current nominated Heritage team contact for this consent is Amanda Ohs, ph. 9418292 or email: amanda.ohs@ccc.govt.nz, or heritage@ccc.govt.nz.

- The intention of the photographic record condition is to maintain a record of the works with a focus on the areas undergoing change rather than individual elements. The same camera positions should be used for all photo sets before, during and after the works to enable comparison. Photographs should be of printable quality, at least 1440 pixels by 960 pixels for a 4"x 6" print at a minimum resolution of 240 PPI. They should be labelled with the position on site or in relation to the site, date and photographer's name, and

submitted as individual image files, with a plan showing photograph locations. Photos should be submitted to the Council's nominated Heritage team contact electronically, either by email (noting that Council's email data transfer limit is 20MB per email), or via a file transfer website such as wetransfer.com or dropbox.com to rcmon@ccc.govt.nz.

- All work should be undertaken with consideration of the conservation principles contained within the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value (ICOMOS New Zealand Charter 2010).

- There may be archaeology on this site as protected under the Heritage New Zealand Pouhere Taonga Act 2014. Archaeological sites are defined in the Act as any place where there is physical evidence of pre-1900 occupation, regardless of whether the site is known or recorded or not. Authority from Heritage New Zealand Pouhere Taonga is required for any work that affects or may affect an archaeological site. **Please contact the HNZPT regional archaeologist: archaeologistcw@heritage.org.nz or 03 363 1880 before commencing any work on the land.** For more information visit http://archaeology.nz

- Except where an archaeological authority has been obtained from Heritage New Zealand Pouhere Taonga, should any archaeological material or sites be discovered during the course of work on the site, work in that area of the site shall stop immediately and the appropriate agencies, including Heritage New Zealand Pouhere Taonga and the Mana Whenua, shall be contacted immediately. This is in accordance with the Accidental Discovery Protocol set out in Appendix 3 of the Mahaanui Iwi Management Plan: http://mkt.co.nz/mahaanui-iwi-management-plan/
-

Reported and recommended by: Andrew Long **Date:** 16 April 2021

Section 104 Decision

That the above recommendation be accepted for the reasons outlined in the report.

☑ I have viewed the application and plans.

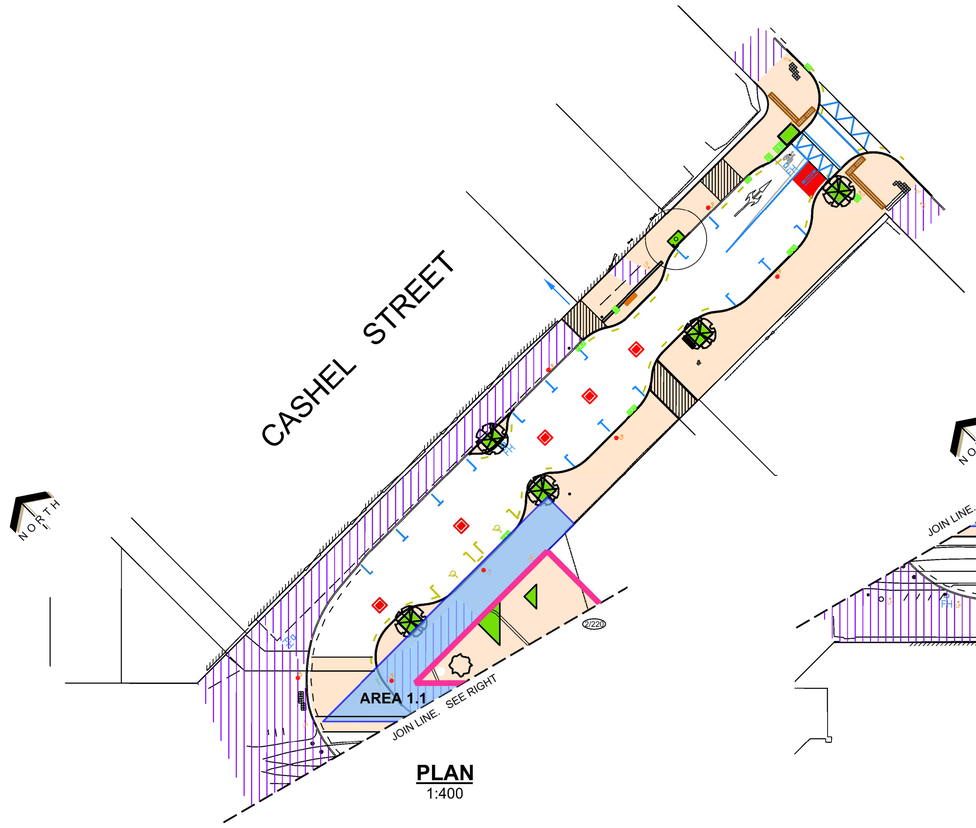
☑ I have read the report and accept the conclusions and recommendation.

Commissioner:

Name: Ken Lawn

Signature: 

Date: 19 April 2021



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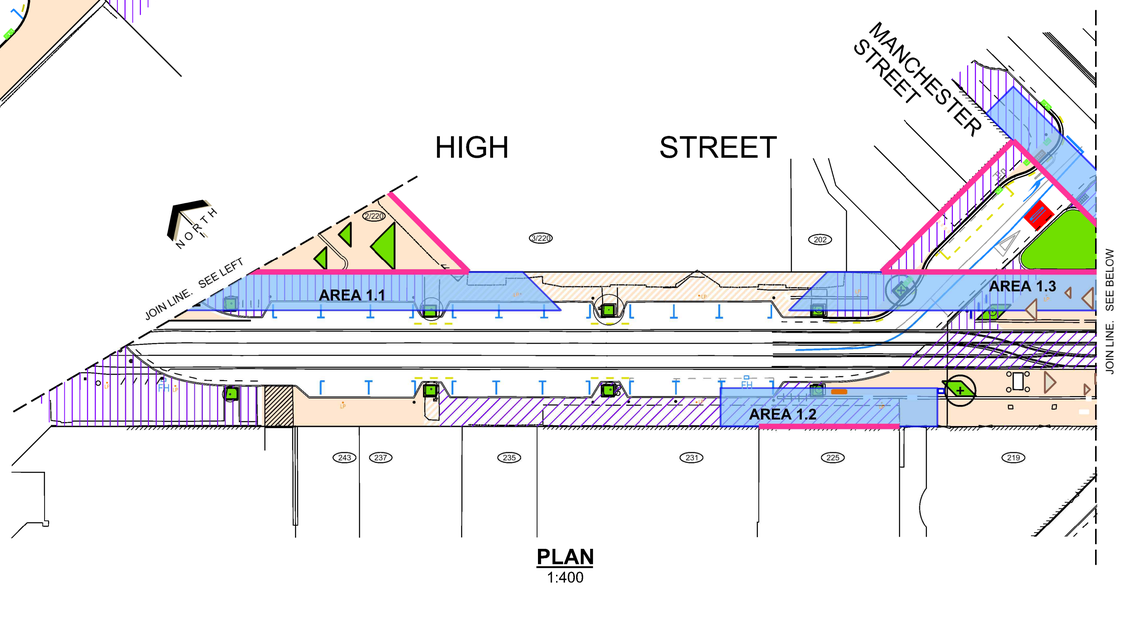

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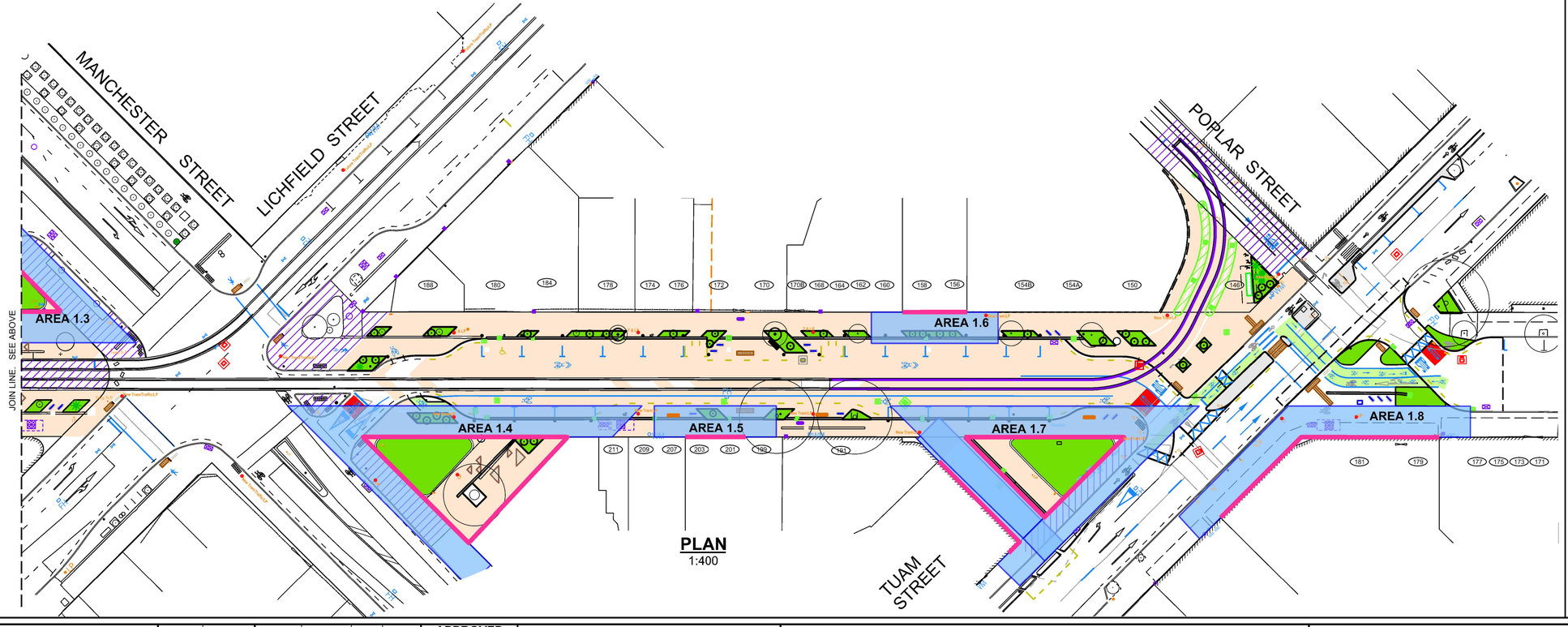

PLAN
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KEY

- 5m Set Backs CDP 8.9.2.1 P1/RD1
- Heritage Item CDP 9.3.4.1.3 RD1
- Existing Paving to be Retained
- Existing Paving to be Repaired / Replaced
- New Paving
- New Garden
- New Seating
- Cycle Stands
- Bollards
- Light Pole (New)
- Tram Pole
- Tactile Pavers: Warning
- Tactile Pavers: Directional

ISSUE	AMENDMENTS	SIGNED	DATE
A	TO BE PRICED		24/11/2020

Christchurch City Council
TECHNICAL SERVICES & DESIGN

DATUM	C.D.D.		NAME	SIGNED	DATE
BENCH MK.	July 2019 Network	DESIGNED	C.A. Dickson		8/2020
RL	-	DES. REVIEW	P. Perelini		11/2020
SURVEY	-	DRAWN	J.E. Powick		8/2020
SURVEY LB	-	DRW. CHECK	-		-
		FILE LOCATION			
DRAIN. REF.		S:\Data\DGN\#Roading\rd3700\rd376901.dgn			
SAP WBS	732/00133	PRINTED ON 4/02/2021 BY powickj			

APPROVED
FOR TENDER

DATE	SIGNED
-	

FOR CONSTRUCTION

DATE	SIGNED
-	

CONSULTANT

CONSULTANT PROJECT REF.

CONSULTANT FILE REF.

PROJECT TITLE
HIGH STREET
CASHEL STREET - TUAM STREET

DRAWING TITLE
CONSENT PLAN

DOCUMENT NUMBER

ORIGINAL SHEET SIZE: A1

CAD DRAWING FILE REF.: RD376901.dgn

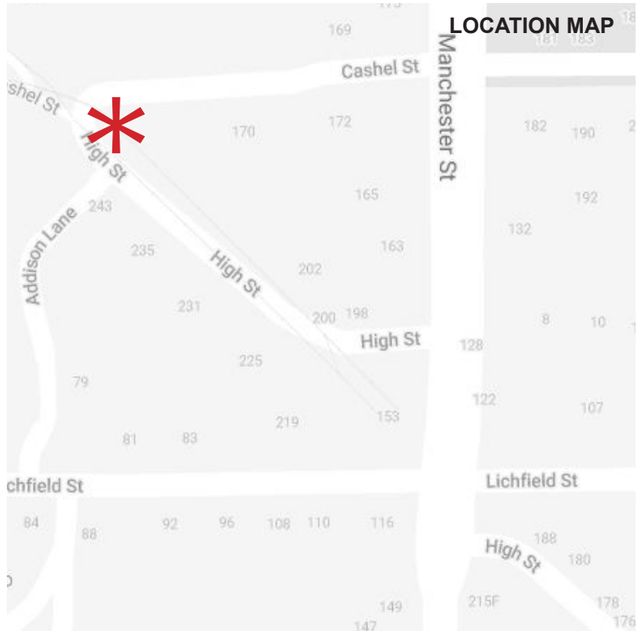
TSD PROJECT FILE NUMBER: CP502910

SCALES: 1:400

SHEET: R25 OF 24

HIGH STREET UPGRADES | PLANTING PLAN

LOCATION MAP



NOTES

Contractors to verify all dimensions on site prior to commencing work;

Contractors are responsible for confirming the location of all underground services on site prior to commencing work;

Figured dimensions to be taken in preference to scaled dimensions.

PLAN NOTES

PROJECT

High Street Upgrades
Planting Concept - Cashel St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED: 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:200 @ A3
Drawing No: 001

CONSULTANTS

Debbie Tikao
Mapihi Martin-Paul
Anna Phillips

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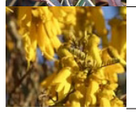
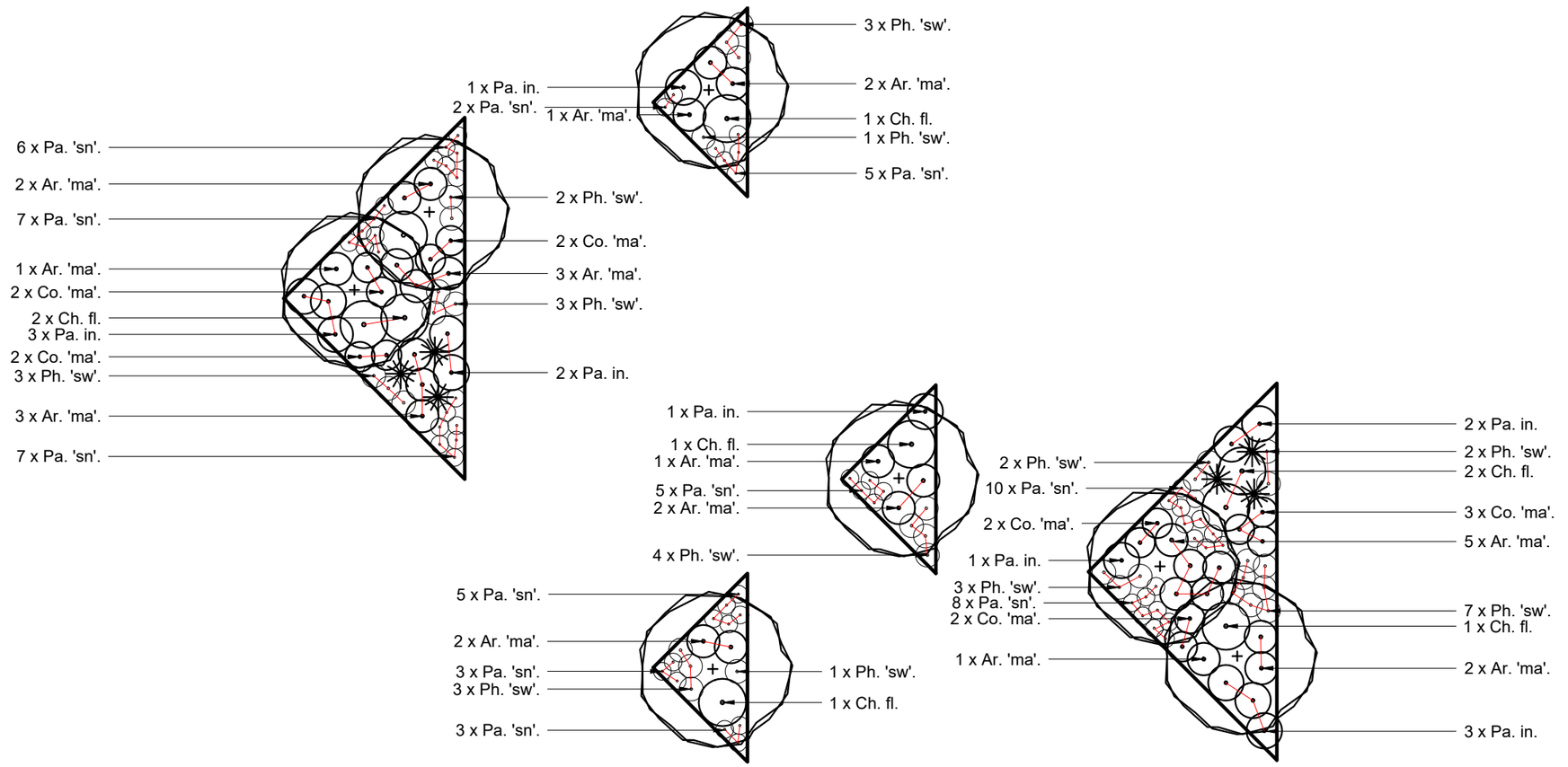
CARING FOR THE PEOPLE TIAKI TAKATA MATAPOPORE TIAKI WHENUA CARING FOR THE LAND

HIGH STREET UPGRADES | PLANTING PLAN

	Code	Botanical Name	Māori / Common Name	Spacing	Quantity
	Ar. ‘ma’.	*Arthropodium ‘Matapouri Bay’*	Renga Renga / Rock Lilly	Varies	25
	Ch. fl.	*Chionochloa flavicans*	Dwarf Toe Toe	Varies	8
	Co. ‘ma’.	*Coprosma ‘Mangatangi’*	Coprosma Cultivar	300mm min.	13
	Pa. in.	*Pachystegia insignis*	Marlborough Rock Daisy	Varies	13
	Pa. ‘sn’.	*Parahebe ‘Snowcap’*	Snow Cap	200mm	61
	Ph. ‘sw’.	*Phormium ‘Sweet Mist’*	Dwarf Flax	Varies	34
		*Pseudopanax crassifolius*	Horoeka / Lancewood	Varies	6
		*Sophora microphylla*	Kōwhai	Varies	7



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PLAN NOTES

PROJECT

High Street Upgrades
Planting Plan - Cashel St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED: 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:100 @ A3
Drawing No: 002

CONSULTANTS

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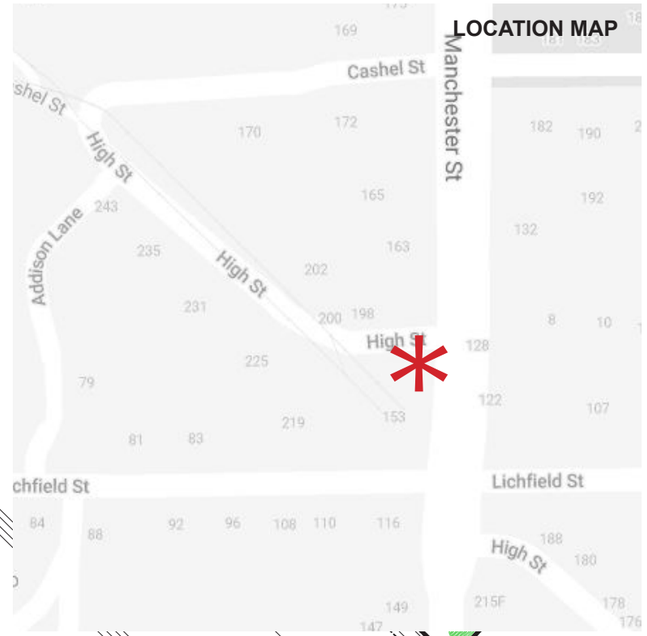
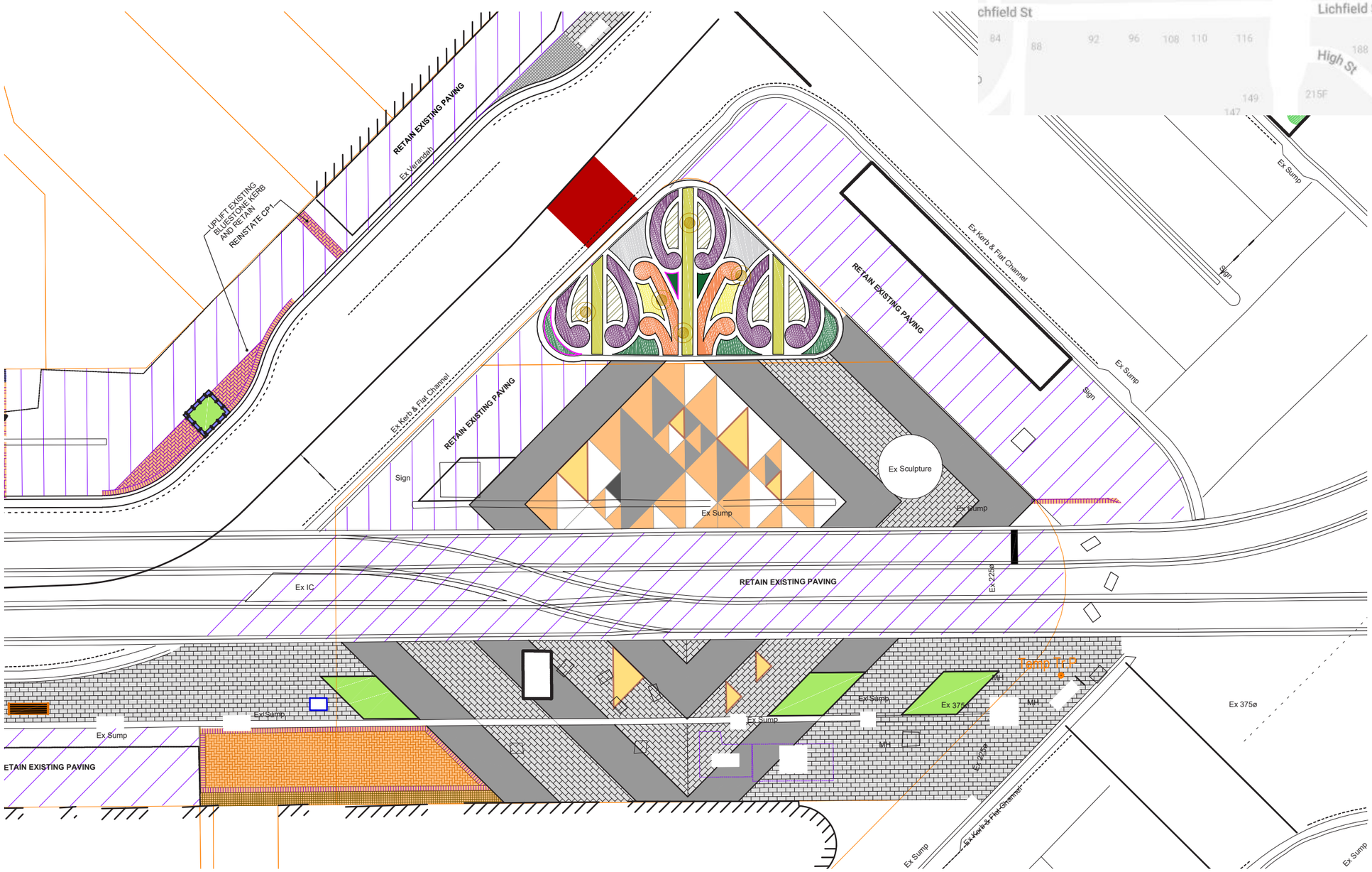
CARING FOR THE PEOPLE TIAKI TAKATA
MATAPOPORE
TIAKI WHENUA CARING FOR THE LAND

HIGH STREET UPGRADES | PLANTING PLAN

LOCATION MAP





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PLAN NOTES

PROJECT

High Street Upgrades
Planting Concept - Manchester St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED: 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:200 @ A3
Drawing No: 003

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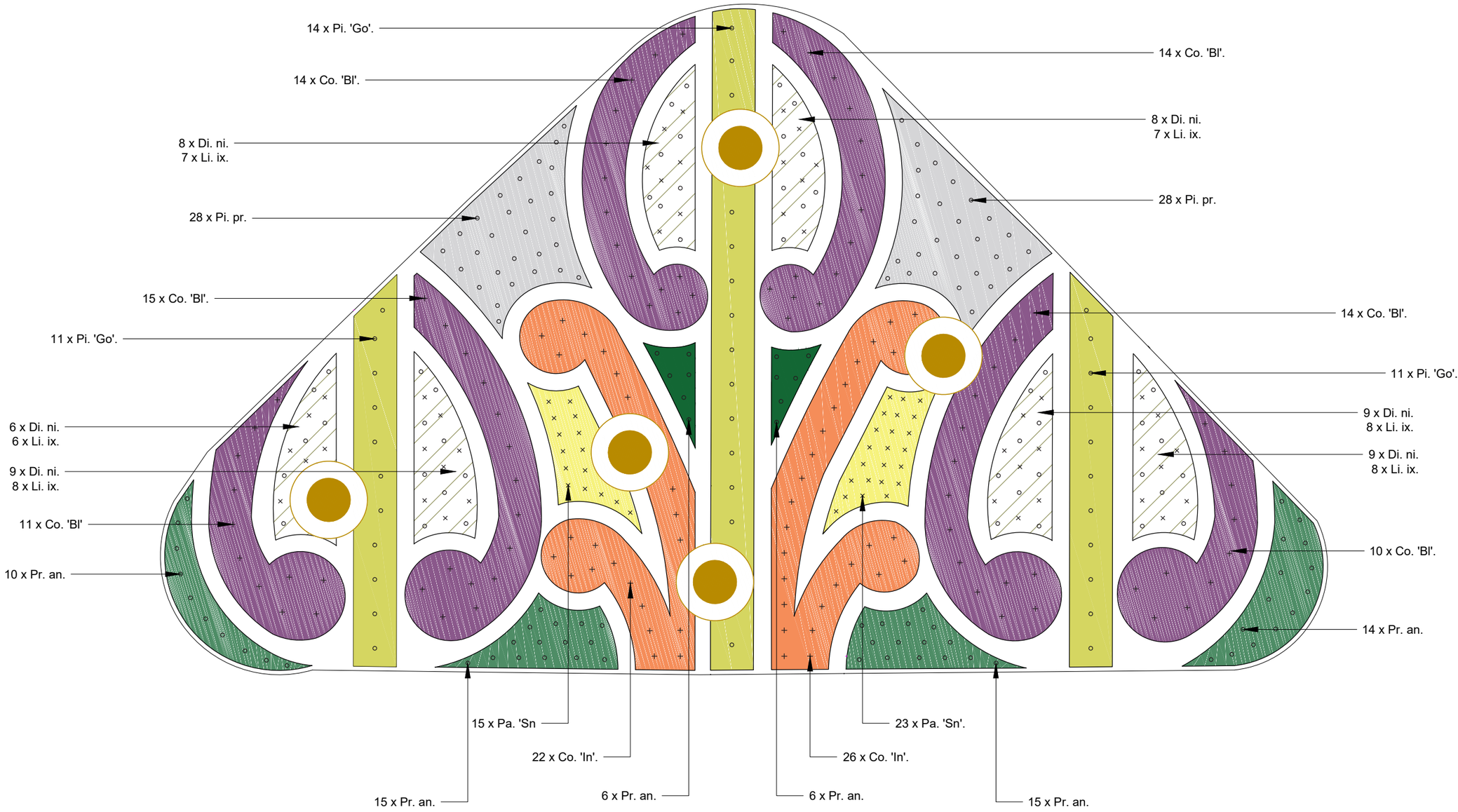
CARING FOR THE PEOPLE TIAKI TAKATA MATAPOPORE TIAKI WHENUA CARING FOR THE LAND

HIGH STREET UPGRADES | PLANTING PLAN



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PLAN NOTES

PROJECT

High Street Upgrades
Planting Plan - Manchester St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:50 @ A3
Drawing No: 004

CONSULTANTS

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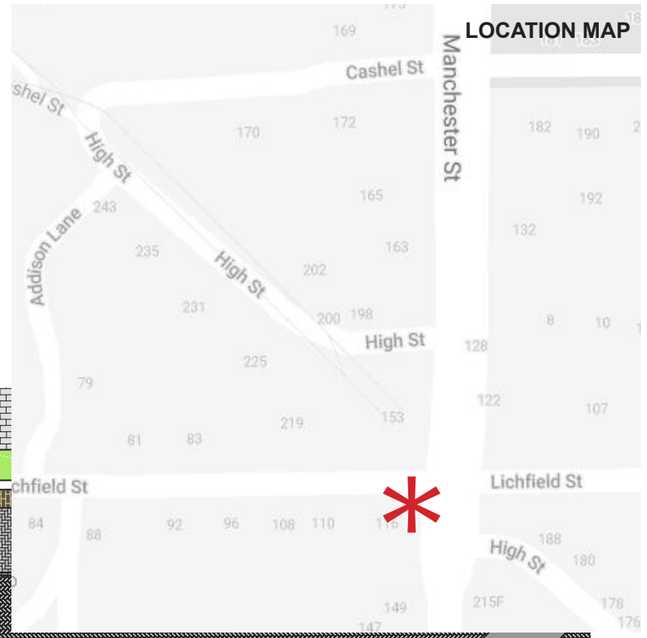
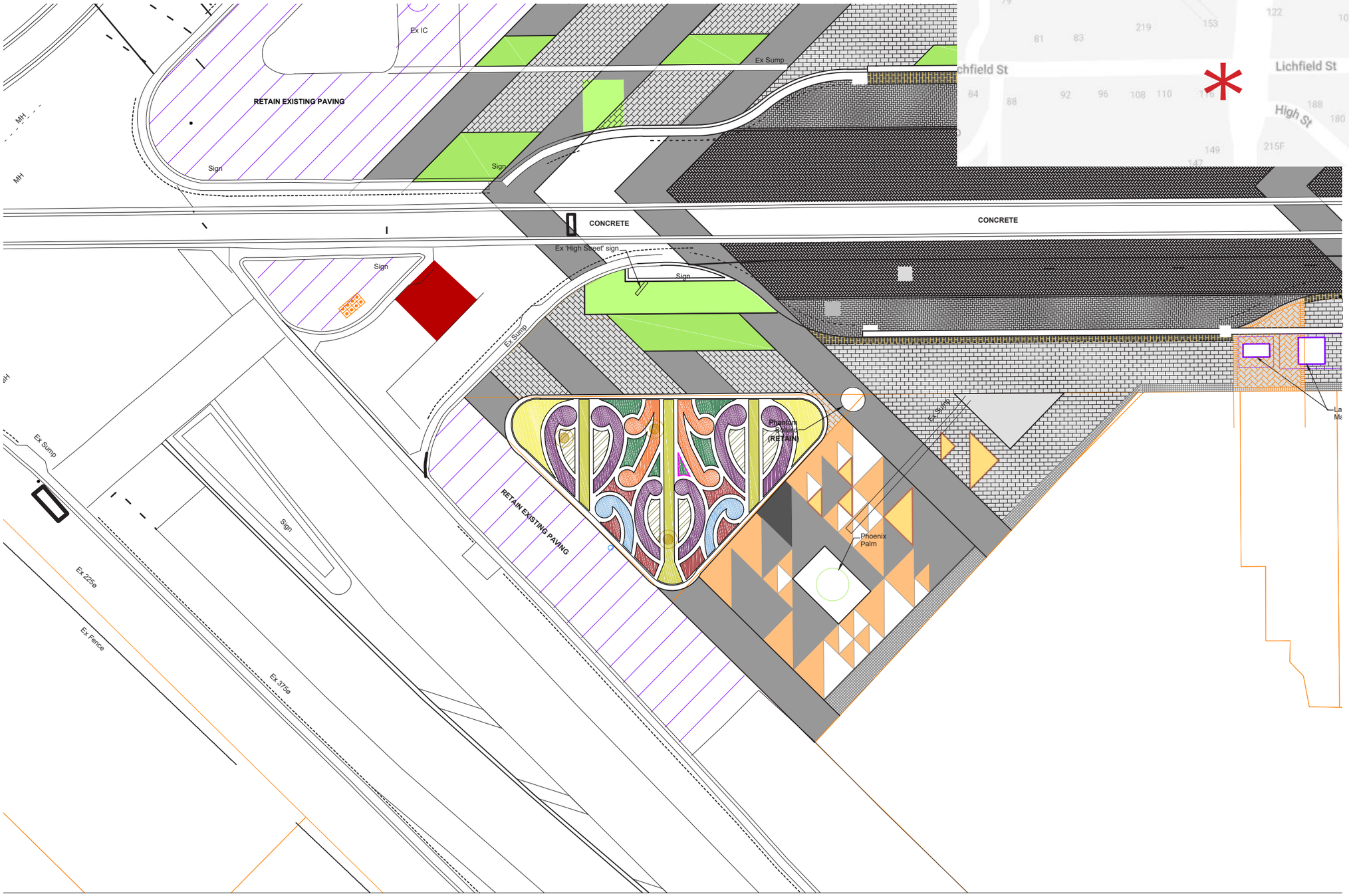
CARING FOR THE PEOPLE TIAKI TAKATA MATAPOPORE TIAKI WHENUA CARING FOR THE LAND

HIGH STREET UPGRADES | PLANTING PLAN

Christchurch City Council
Page 6 of 16
RMA/2021/460
Approved Resource Consent Document
19/04/2021 Long, Andrew





NOTES

Contractors to verify all dimensions on site prior to commencing work;

Contractors are responsible for confirming the location of all underground services on site prior to commencing work;

Figured dimensions to be taken in preference to scaled dimensions.

PLAN NOTES

PROJECT

High Street Upgrades
Planting Concept - Lichfield St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED: 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:200 @ A3
Drawing No: 005

CONSULTANTS

Debbie Tikao
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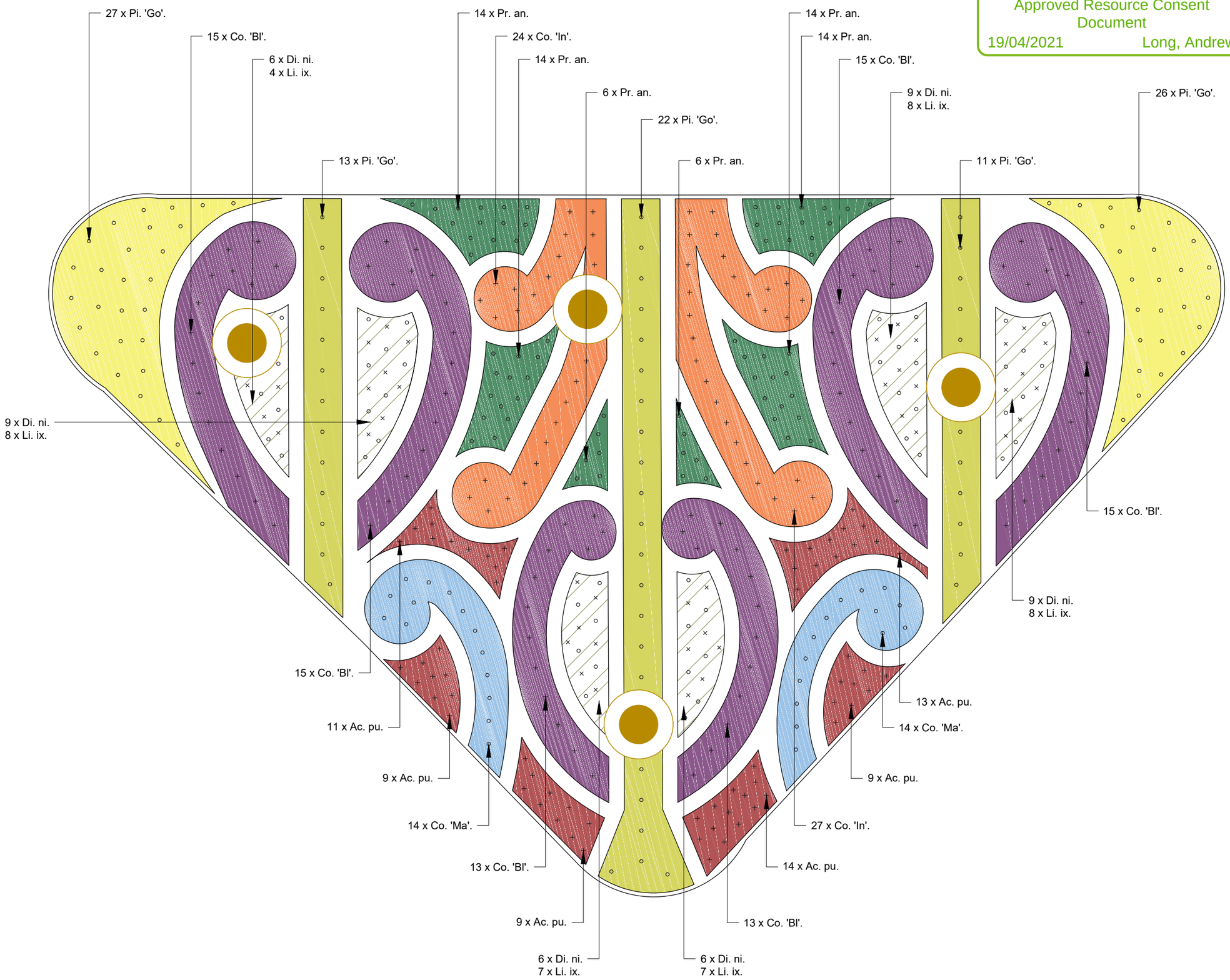
CARING FOR THE PEOPLE TIAKI TAKATA MATAPOPORE TIAKI WHENUA CARING FOR THE LAND

HIGH STREET UPGRADES | PLANTING PLAN



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PLAN NOTES

PROJECT

High Street Upgrades
Planting Plan - Lichfield St Triangle

CLIENT

Christchurch City Council
Location: High Street, Central City

ISSUED: 04.02.2021

Design: DTi
Drawn: APh
Check: MMa

Scale: 1:50 @ A3
Drawing No: 006

CONSULTANTS

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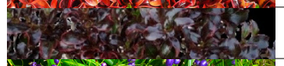
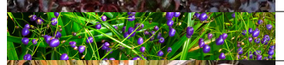
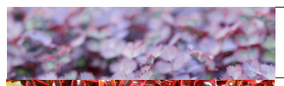
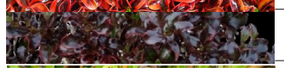
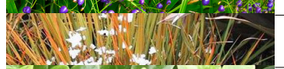
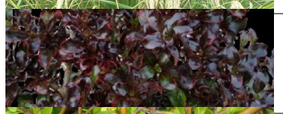
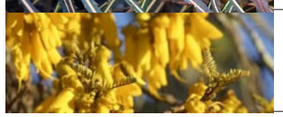
CARING FOR THE PEOPLE TIAKI TAKATA MATAPOPORE TIAKI WHENUA CARING FOR THE LAND

MANCHESTER STREET

	Code	Botanical Name	Māori / Common Name	Spacing	Quantity
	*Co. 'In'.*	*Coprosma 'Inferno'*	Coprosma Cultivar	300mm	48
	*Co. 'Bl'.*	*Coprosma 'Black Velvet'*	Coprosma Cultivar	400mm min.	78
	*Di. ni.*	*Dianella nigra*	Turutu	300mm	49
	*Li. ix.*	*Libertia ixiodes*	Mikoikoi / NZ Iris	300mm	45
	*Pi. 'Go'.*	*Pittosporum 'Golf Ball'*	Pittosporum Cultivar	400mm	36
	*Pr. an.*	*Pratia angulata*	Panakenake	300mm	54
	*Pi. pr.*	*Pimelia prostrata*	Mikimiki / NZ Daphne	300mm	56
	*Pa. 'Sn'.*	*Parahebe 'Snowcap'*	Snow Cap	200mm	38

LICHFIELD STREET

	Code	Botanical Name	Māori / Common Name	Spacing	Quantity
	*Ac. pu.*	*Acaena purpurea*	Purple Bidibid	300mm	65
	*Co. 'In'.*	*Coprosma 'Inferno'*	Coprosma Cultivar	300mm	51
	*Co. 'Bl'.*	*Coprosma 'Black Velvet'*	Coprosma Cultivar	400mm min.	86
	*Co. 'Ma'.*	*Coprosma 'Mangatangi'*	Coprosma Cultivar	300mm min.	28
	*Di. ni.*	*Dianella nigra*	Turutu	300mm	45
	*Li. ix.*	*Libertia ixiodes*	Mikoikoi / NZ Iris	300mm	42
	*Pi. 'Go'.*	*Pittosporum 'Golf Ball'*	Pittosporum Cultivar	400mm	99
	*Pr. an.*	*Pratia angulata*	Panakenake	300mm	68

	Code	Botanical Name	Māori / Common Name	Description	Spacing	Height and Width	Quantity
	*Ac. pu.*	*Acaena purpurea*	Purple Bidibid	Easy growing groundcover that forms a dense carpet of deep purple, fern like, leaves; evergreen and hardy.	300mm	Groundcover	65
	*Ar. 'Ma'.*	*Arthropodium 'Matapouri Bay'*	Renga Renga / Rock Lilly	Broad leaved shrub with large flower heads; mid-summer flowering with masses of long stemmed, star shaped flowers; grows in sun or shade, hardy.	Varies	600mm (H) x 600mm (W)	25
	*Ch. fl.*	*Chionochloa flavicans*	Dwarf Toe Toe	Striking tussock with flowing green foliage and weeping flower heads in summer; evergreen, hardy to cold an exposure.	Varies	1000mm (H) x 1000mm (W)	8
	*Co. 'Bl'.*	*Coprosma 'Black Velvet'*	Coprosma Cultivar	Favoured for their year round foliage of small, glossy, dark burgundy leaves; very compact and easy care shrub.	400mm min.	Clip to 400mm (H) x 500mm (W)	164
	*Co. 'Ma'.*	*Coprosma 'Mangatangi'*	Coprosma Cultivar	Compact divaricating shrub with lime green foliage; slow growing and maintain tight mound form.	300mm min.	Clip to 400mm (H) x 500mm (W)	41
	*Co. 'In'.*	*Coprosma 'Inferno'*	Coprosma Cultivar	Outstanding, bright foliage of rich orange, red and pink that deepen to a deep red in winter; likes full sun or part shade.	300mm	Clip to 400mm (H) x 500mm (W)	99
	*Di. ni.*	*Dianella nigra*	Turutu	Highly attractive, flax like plant with purple or white berries on long stems in summer. Tolerant to dry and sun.	300mm	500mm (H) x 500mm (W)	94
	*Li. ix.*	*Libertia ixiodes*	Mikoikoi / NZ Iris	Upright, grass like plant with yellow-tinged green leaves; white flowers in spring followed by bright yellow seed pods; tolerates wide range of conditions.	200mm	300mm (H) x 1000mm (W)	87
	Pa. in.	*Pachystegia insignis*	Marlborough Rock Daisy	Small, spreading shrub with large, leathery leaves that are olive green in colour with furry undersides; large, white daisies appear in spring.	Varies	500mm (H) x 800mm (W)	13
	*Pa. 'Sn'.*	*Parahebe 'Snowcap'*	Snow Cap	Compact, low growing shrub smothered in miniature white blooms from summer to autumn; evergreen, very hardy.	200mm	250mm (H) x 500mm (W)	99
	*Pi. 'Sn'.*	*Pittosporum 'Golf Ball'*	Pittosporum Cultivar	Compact, miniature Pittosporum with vibrant green foliage; maintains a tight, compact, rounded form.	400mm	Clip to 400mm (H) x 500mm (W)	135
	*Pi. pr.*	*Pimelia prostrata*	Mikimiki / NZ Daphne	Prostrate, evergreen ground cover; grey/silver foliage with small, fragrant white flowers from spring to autumn.	300mm	100mm (H) x 1000mm (W)	56
	*Ph. 'Sw'.*	*Phormium 'Sweet Mist'*	Dwarf Flax	Ultra compact flax with bronze, upright leaves; tolerates full sun to shade, evergreen, hardy.	Varies	400mm (H) x 400mm (W)	34
	*Pr. an.*	*Pratia angulata*	Panakenake	Native, white flowering groundcover; thrives in damp shady areas but tolerant of sun; red berries in autumn.	300mm	Groundcover	122
		*Pseudopanax crassifolius*	Horoeka / Lancewood	Stunning tree with straight, clean trunk when mature; long, upright juvenile phase; attractive to birds and bees.	Varies	2m (H) x 0.5m (W)	6
		*Sophora microphylla*	Kōwhai	Small tree with fern like foliage; flowers profusely from September to November; nectar attractive to birds; semi-deciduous.	Varies	5m (H) x 2.5m (W)	7

PLAN

1:100

PAVING KEY

Code	Description
AC	ASPHALTIC CONCRETE
PP1	PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 90° HERRINGBONE PATTERN
PP2	PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 HEADER STRIP
PP3	PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 STRETCHER BOND FINISH
HP1	HOLLAND PAVERS 'BLACKSANDS' 100% HAMMERED FINISH 200 x 100 x 80 45° HERRINGBONE PATTERN
HP2	HOLLAND PAVERS 'SILVER' (100% HONED FINISH) 200 x 100 x 80 45° HERRINGBONE PATTERN
HP3	HOLLAND PAVERS HEADER STRIP 'SILVER' (100% HONED FINISH) 200 x 100 x 80 SOLDIER COURSE PATTERN
HP4	HOLLAND PAVERS 'BLACKSANDS' PLAIN FINISH 200 x 100 x 80 45° HERRINGBONE PATTERN
	EXISTING PAVING TO REMAIN
HP5	HOLLAND PAVERS 'MID GREY' (100% HONED FINISH) 200 x 100 x 80 90° HERRINGBONE PATTERN
HP6	HOLLAND PAVERS 'MID GREY' (100% HAMMERED FINISH) 200 x 100 x 80 SOLDIER COURSE PATTERN
HP7	HOLLAND PAVERS 'TERRACOTTA' (100% HONED FINISH) 200 x 100 x 80 45° HERRINGBONE PATTERN
HP8	HOLLAND PAVERS 'TERRACOTTA' (100% HAMMERED FINISH) 200 x 100 x 80 45° HERRINGBONE PATTERN
HS1	HOLLAND 'SETT' PAVERS 'SILVER' (1/3 HAMMERED, 2/3 HONED) IN RANDOM MIX 200 x 100 x 80 GRID PATTERN
HS2	HOLLAND 'SETT' PAVERS 'SILVER' (100% HAMMERED FINISH) 200 x 100 x 80 GRID PATTERN
HS3	HOLLAND 'SETT' PAVERS 'BLACK SANDS' (1/3 HAMMERED 2/3 HONED) 200 x 100 x 80 GRID PATTERN
CP1	HOLLAND NUBRIK CLAY PAVER 'AUTUMN GOLD' 230 x 115 x 65 45° HERRINGBONE PATTERN
CP2	HOLLAND NUBRIK CLAY PAVER 'AUTUMN GOLD' 230 x 115 x 65 HEADER STRIP
DEL	DELINEATOR STRIP - BASALT DARK GREY (PITCHED/HAND POINTED FINISH) 300 x 150 X 80mm
KS1	TIMARU BLUESTONE (PITCHED TOP FINISH) 400 x 200 x 80 KERB - FLUSH WITH PAVING
ARO	AROMOANA PATTERN (REFER TO DETAIL SHEET R18)

STREET FURNITURE

- 1800mm x 514mm SEAT E SERIES (WITHOUT BACK)
- 1800mm x 514mm SEAT E SERIES (WITH BACK) SEE DETAIL P/R28
- R.BIN — RUBBISH BIN SEE DETAIL R/R27
- GRATED DRAIN
- CYCLE STAND SEE DETAILS M/R28 N/R28

NOTES

1. PATTERN OF PAVERS ARE INDICATIVE ONLY. ALL PAVERS TO BE WHOLE UNITS WHERE POSSIBLE.
2. NO HEADER STRIPS AROUND PAVING AREA, UNLESS INDICATED.
3. CONTRACTOR TO ENGAGE QUALIFIED ARBORIST DURING WORK AROUND EXISTING TREES. PAVING AROUND EXISTING TREES TO BE CONFIRMED ON SITE BY LANDSCAPE ARCHITECT OR ARBORIST.

ISSUE	AMENDMENTS	SIGNED	DATE
A	TO BE PRICED		24/11/2020

Christchurch City Council
TECHNICAL SERVICES & DESIGN

			NAME	SIGNED	DATE
DATUM	C.D.D.	DESIGNED	J Mahoney		-
BENCH MK.	-	DES. REVIEW	-		-
RL	-	DRAWN	V Inwood		-
SURVEY	-	DRW. CHECK	-		-
SURVEY LB	-	FILE LOCATION	S:\Data\Dgn\V8\Roading\rd3700\RD376901.dgn		
DRAIN. REF.		PRINTED ON 25/02/2021 BY powickj			
SAP WBS					

APPROVED — FOR TENDER: DATE / SIGNED; FOR CONSTRUCTION: DATE / SIGNED

CONSULTANT
CONSULTANT PROJECT REF.
CONSULTANT FILE REF.

PROJECT TITLE: HIGH STREET

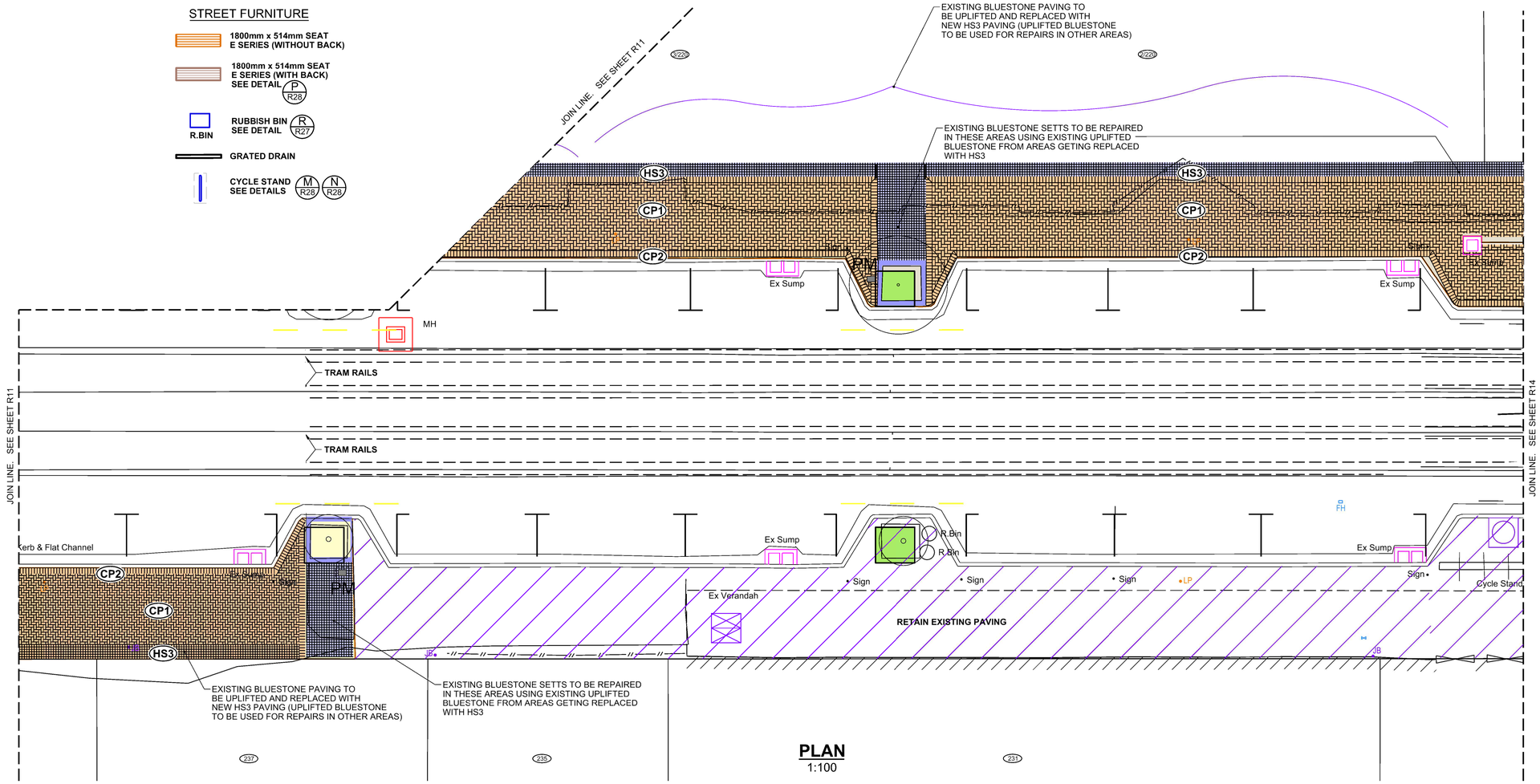
DRAWING TITLE: PAVING AND STREET FURNITURE

DOCUMENT NUMBER
CAD DRAWING FILE REF.: RD375901
TSD PROJECT FILE NUMBER: CP502910
ORIGINAL SHEET SIZE: A1
SCALES: 1:100
SHEET: R11 OF 24

HIGH STREET

STREET FURNITURE

- 1800mm x 514mm SEAT E SERIES (WITHOUT BACK)
- 1800mm x 514mm SEAT E SERIES (WITH BACK) SEE DETAIL P R28
- R.BIN RUBBISH BIN SEE DETAIL R R27
- GRATED DRAIN
- CYCLE STAND SEE DETAILS M R28 N R28



PLAN
1:100

PAVING KEY

- AC — ASPHALTIC CONCRETE
- PP1 — PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 90° HERRINGBONE PATTERN
- PP2 — PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 HEADER STRIP
- PP3 — PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 STRETCHER BOND FINISH
- EXISTING PAVING TO REMAIN
- HP1 — HOLLAND PAVERS 'BLACKSANDS' 100% HAMMERED FINISH 200 x 100 x 80 45° HERRINGBONE PATTERN
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- DEL — DELINEATOR STRIP - BASALT DARK GREY (PITCHED/HAND POINTED FINISH) 300 x 150 X 80mm
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- ARO — AROMOANA PATTERN (REFER TO DETAIL SHEET R18)

NOTES

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2. NO HEADER STRIPS AROUND PAVING AREA, UNLESS INDICATED.
3. CONTRACTOR TO ENGAGE QUALIFIED ARBORIST DURING WORK AROUND EXISTING TREES. PAVING AROUND EXISTING TREES TO BE CONFIRMED ON SITE BY LANDSCAPE ARCHITECT OR ARBORIST.

ISSUE	AMENDMENTS	SIGNED	DATE
A	TO BE PRICED		24/11/2020

Christchurch City Council
TECHNICAL SERVICES & DESIGN

DATUM	C.D.D.		NAME	SIGNED	DATE
BENCH MK.	-	DESIGNED	J Mahoney		-
RL	-	DES. REVIEW	-		-
SURVEY	-	DRAWN	V Inwood		-
SURVEY LB	-	DRW. CHECK	-		-
		FILE LOCATION			
DRAIN. REF.		S:\Data\Dgn\V8\Roading\rd3700\RD376901.dgn			
SAP WBS		PRINTED ON 25/02/2021 BY powickj			

APPROVED

FOR TENDER	
DATE	SIGNED
-	
FOR CONSTRUCTION	
DATE	SIGNED
-	

CONSULTANT
CONSULTANT PROJECT REF.
CONSULTANT FILE REF.

PROJECT TITLE: **HIGH STREET**

DRAWING TITLE: **PAVING AND STREET FURNITURE**

DOCUMENT NUMBER
CAD DRAWING FILE REF. RD376901
TSD PROJECT FILE NUMBER CP502910
ORIGINAL SHEET SIZE A1
SCALES 1:100
SHEET R13 OF 24


PAVING KEY
AC ASPHALTIC CONCRETE
PP1 PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 90° HERRINGBONE PATTERN
PP2 PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 HEADER STRIP
PP3 PIAZZA CONCRETE PAVER 'SILVER' (100% HONED FINISH) 400 x 200 x 80 STRETCHER BOND FINISH
EXISTING PAVING TO REMAIN
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HIGH STREET
MANCESTER STREET
LICHFIELD STREET
RETAIN EXISTING PAVING
UPLIFT EXISTING BLUESTONE KERB AND RETAIN REINSTATE CP1
EXISTING BLUESTONE SETTS TO BE REPAIRED IN THESE AREAS USING EXISTING UPLIFTED BLUESTONE FROM AREAS GETING REPLACED WITH HS3
JOIN LINE. SEE SHEET R13
M 15.570 (no change)
Ex Sculpture
Temp Tr.P
New Tram/Traffic/LP
Ex Kerb & Flat Channel
Ex Sump
Ex IC
Ex Path
Ex Verandah
Ex 375ø
Ex 225ø
R.Bin
MH
STREET FURNITURE
1800mm x 514mm SEAT E SERIES (WITHOUT BACK)
1800mm x 514mm SEAT E SERIES (WITH BACK) SEE DETAIL P R28
RUBBISH BIN SEE DETAIL R R27
R.BIN
GRATED DRAIN
CYCLE STAND SEE DETAILS
TRIANGLE SEAT (LARGE)
TRIANGLE SEAT (SMALL)
PLAN
1:100
A TO BE PRICED 24/11/2020
ISSUE AMENDMENTS SIGNED DATE

NOTES

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Christchurch City Council
TECHNICAL SERVICES & DESIGN

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RL	-	DES. REVIEW	-		-
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SURVEY LB	-	DRW. CHECK	-		-
DRAIN. REF.		FILE LOCATION	S:\Data\Dgn\V8\Roading\rd3700\RD376901.dgn		
SAP WBS		PRINTED ON	25/02/2021 BY powickj		

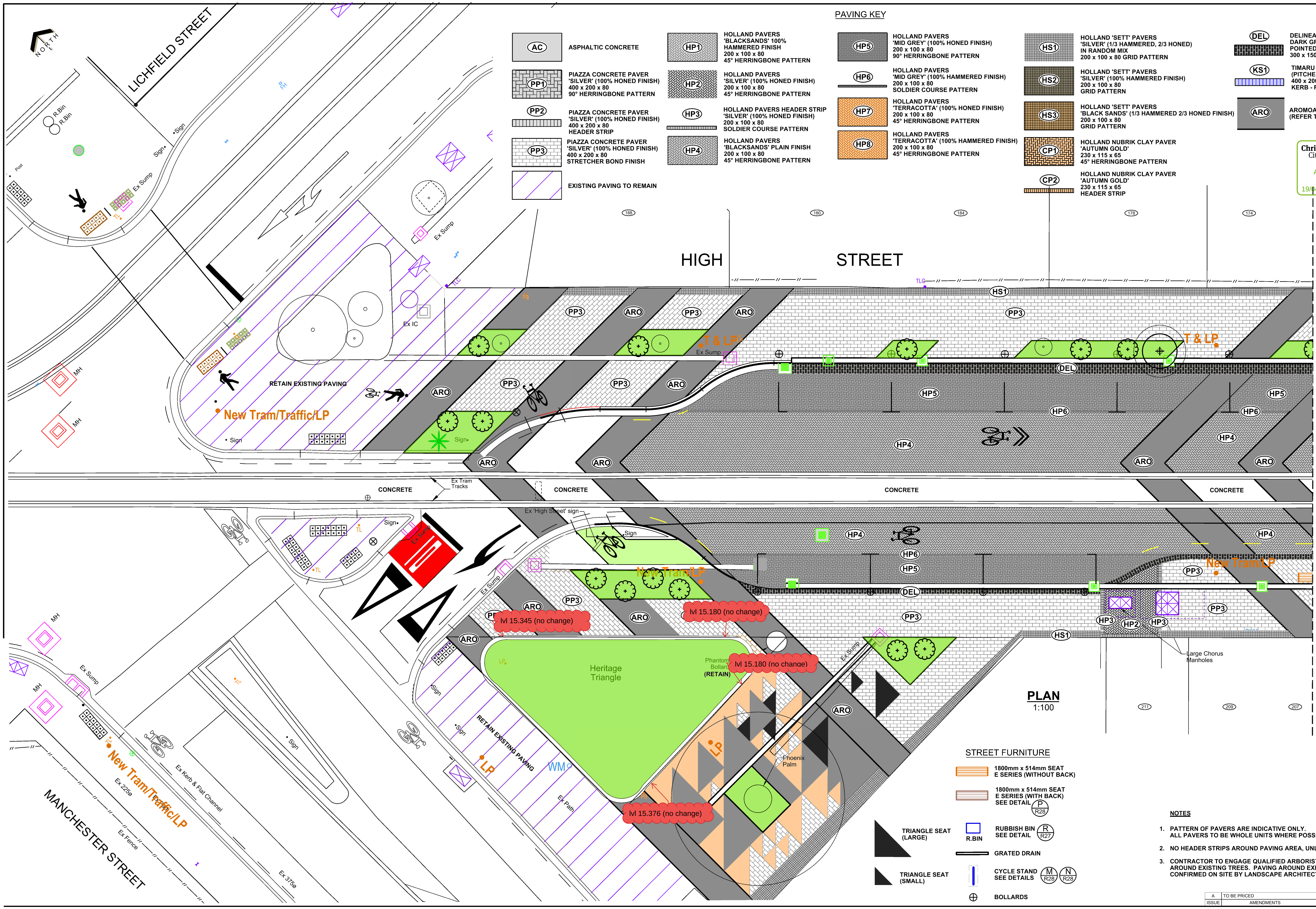
APPROVED
FOR TENDER — DATE / SIGNED
FOR CONSTRUCTION — DATE / SIGNED

CONSULTANT
CONSULTANT PROJECT REF. — CONSULTANT FILE REF.

PROJECT TITLE
HIGH STREET

DRAWING TITLE
PAVING AND STREET FURNITURE

DOCUMENT NUMBER
ORIGINAL SHEET SIZE: A1
SCALES: 1:100
CAD DRAWING FILE REF.: RD376901
TSD PROJECT FILE NUMBER: CP502910
SHEET: R14 OF 24



PAVING KEY

Code	Description
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ARO	AROMOANA PATTERN (REFER TO DETAIL SHEET R18)

Christchurch City Council
Page 13 of 16
RMA/2021/460
Approved Resource Consent Document
19/04/2021 Long, Andrew

STREET FURNITURE

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- 1800mm x 514mm SEAT E SERIES (WITH BACK) SEE DETAIL P R28
- TRIANGLE SEAT (LARGE)
- TRIANGLE SEAT (SMALL)
- R.BIN — RUBBISH BIN SEE DETAIL R R27
- GRATED DRAIN
- CYCLE STAND SEE DETAILS M R28 N R28
- BOLLARDS

NOTES

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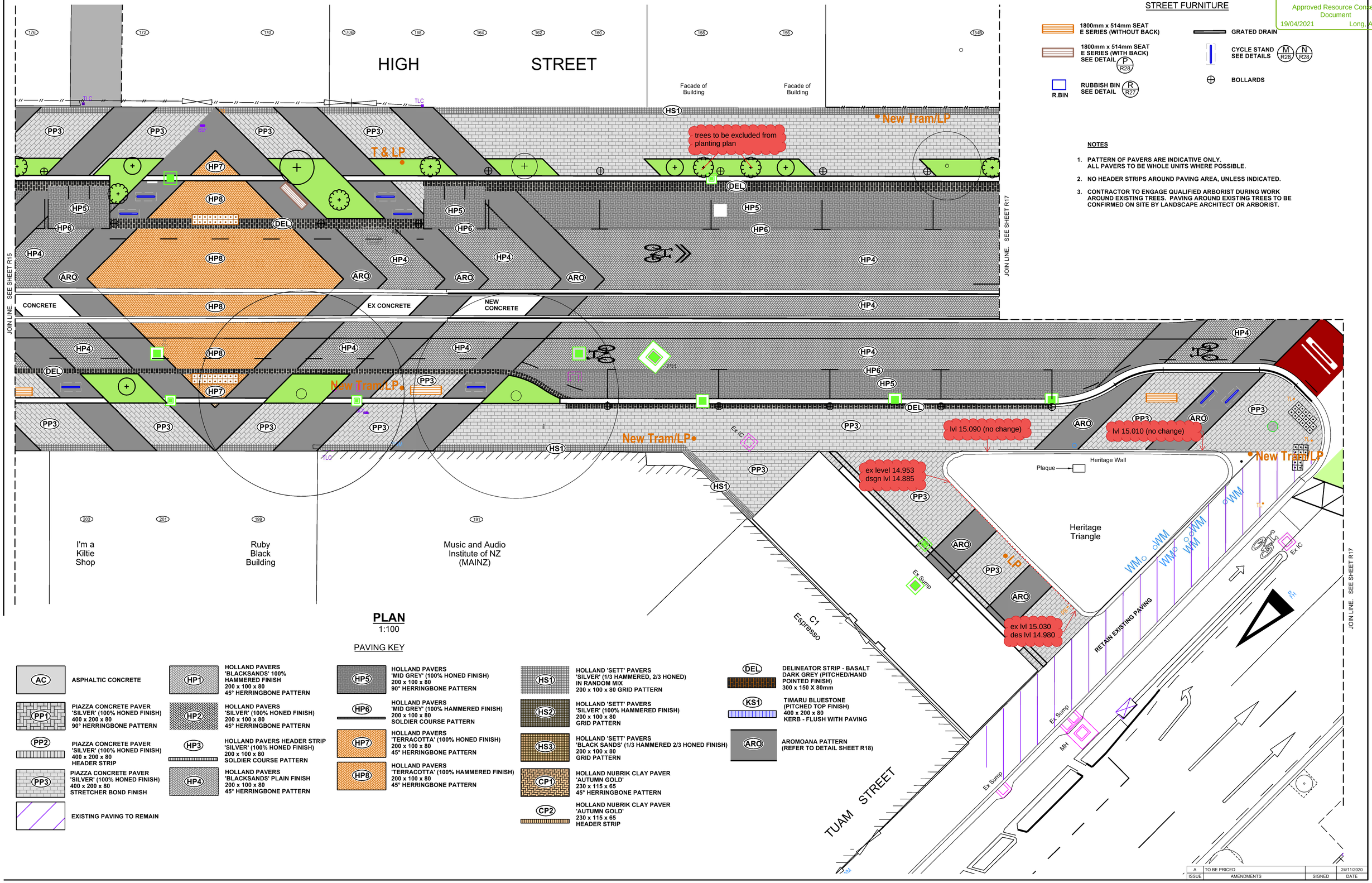
DRAWING TITLE: **PAVING AND STREET FURNITURE**

DOCUMENT NUMBER
CAD DRAWING FILE REF. RD376901
TSD PROJECT FILE NUMBER CP502910
ORIGINAL SHEET SIZE A1
SCALES 1:100
SHEET R15 OF 24



PLAN
1:100

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PROJECT TITLE: HIGH STREET

DRAWING TITLE: PAVING AND STREET FURNITURE

DOCUMENT NUMBER
CAD DRAWING FILE REF. RD376901
TSD PROJECT FILE NUMBER CP502910
ORIGINAL SHEET SIZE A1
SCALES 1:100
SHEET R16 OF 24

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HIGH STREET

POPLAR STREET

TUAM STREET

Vodafone Building

REINSTATE PAVING

RETAIN EXISTING PAVING

50mm X 150mm BATTEN

RELOCATED CORGIS (BY OTHERS)

'Wood for the Tree' sculpture

Phantom Bollard

New Tram/LP

Ex Tram Track

Ex Sump

Ex Kerb & Flat Channel

Ex Verandah

Sign

Cycle Stands

Ex I/C

MH

Post

Ex 600mm

JOIN LINE. SEE SHEET R16

JOIN LINE. SEE SHEET R16

LP

Ex Kerb & Flat Channel

HIGH STREET

PLAN
1:100

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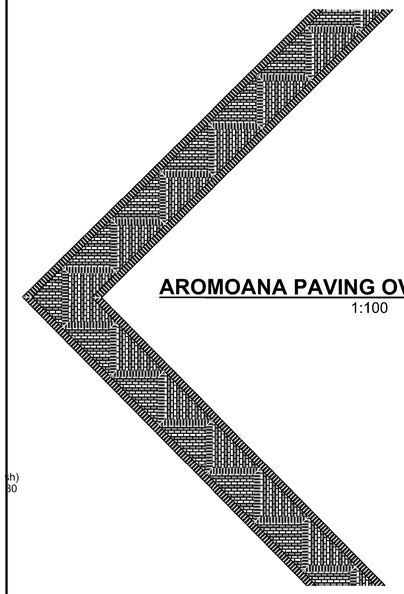
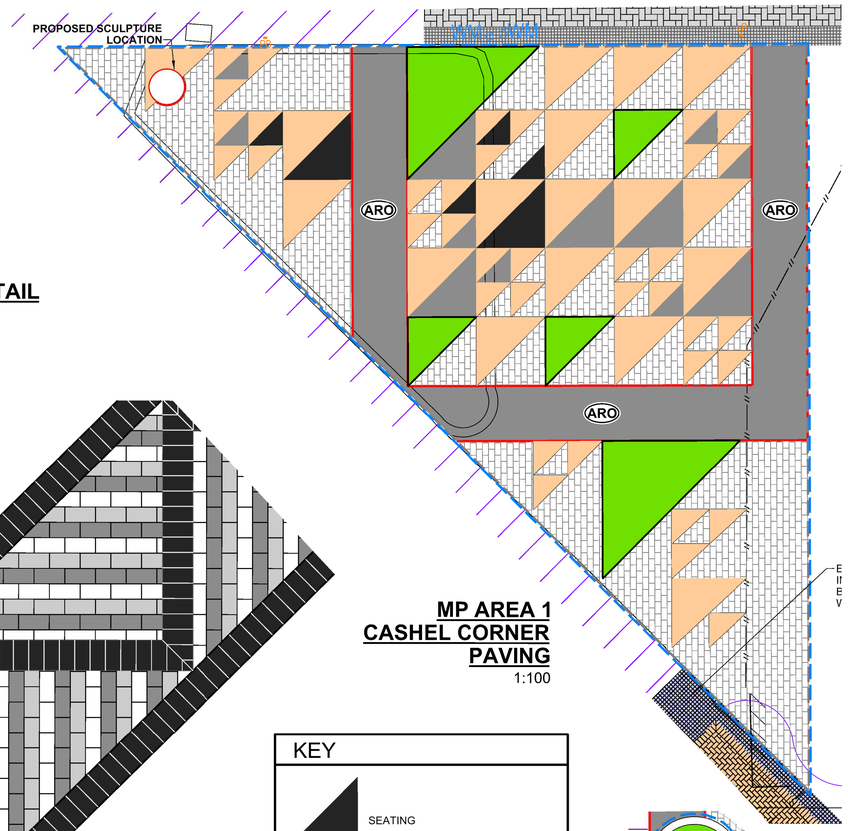


AROMOANA PAVING OVERVIEW DETAIL
1:100



MP AREA 1 CASHEL CORNER PAVING
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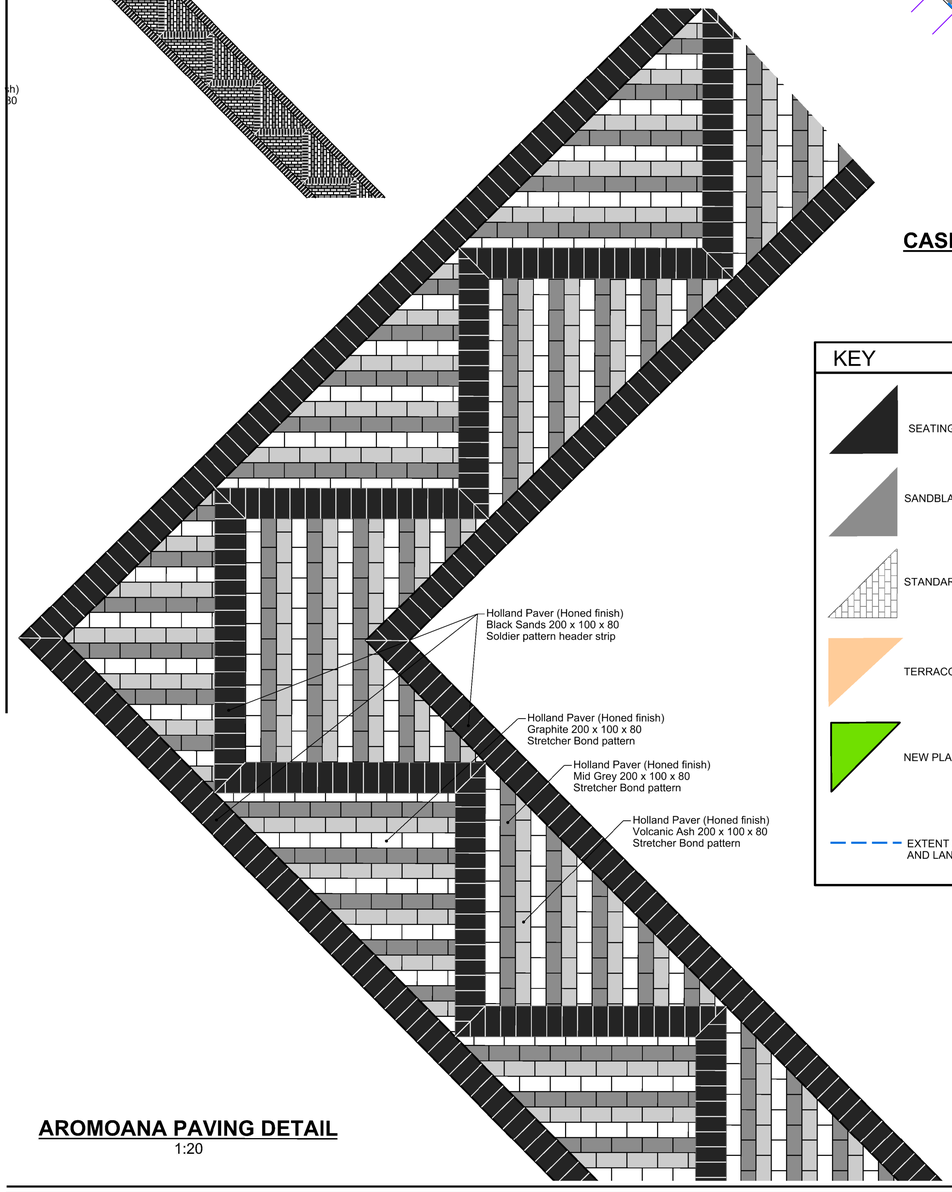
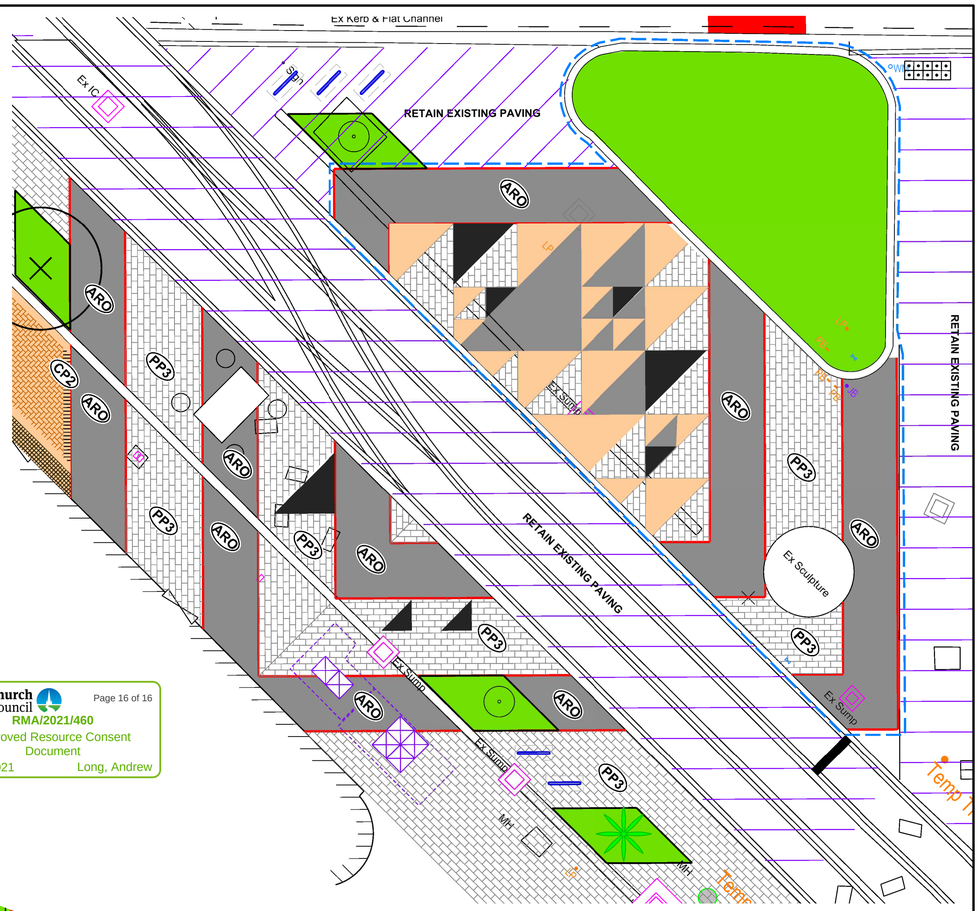


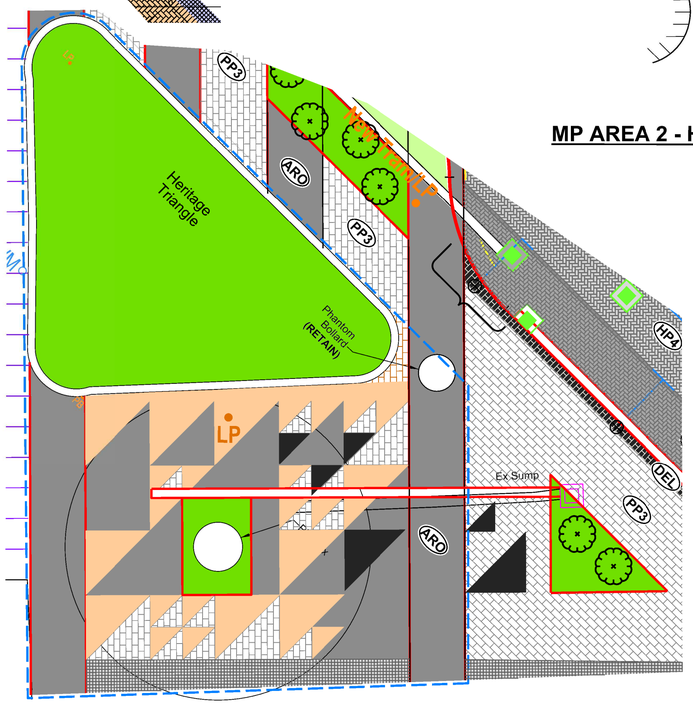
AROMOANA PAVING DETAIL
1:20

KEY

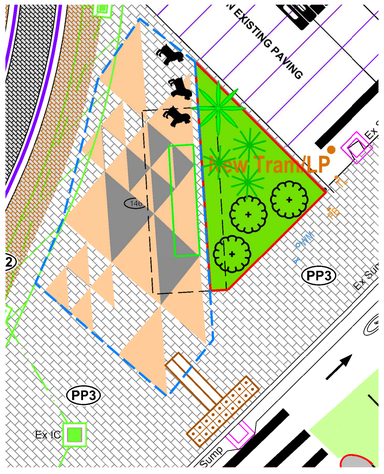
- SEATING
- SANDBLAST MAORI DESIGN
- STANDARD STREET PAVING
- TERRACOTTA PAVERS
- NEW PLANTING
- EXTENT OF MATAPOPORE PAVING AND LANDSCAPE DETAILS



MP AREA 2 - HIGH STREET - MANCHESTER STREET CORNER PAVING
1:100



MP AREA 3 - EXCELSIOR CORNER PAVING
1:100



MP AREA 4 - TRAM STOP PAVING AT POPLAR STREET
1:100

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Page 16 of 16
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TSD PROJECT FILE NUMBER: CP502910
SCALES: 1:100
SHEET: R18 OF 24

TEMPORARY
PROTECTION PLAN

Heritage Items & Artworks: High Street Upgrade

2/5/2021

1. Scope of Protection Works

Christchurch City Council has the primary responsibility for protecting Christchurch's and the Peninsula's heritage on behalf of its residents. The following items require protection during the construction phase works to upgrade High Street.

Heritage Triangle	Heritage Building/Facade	Artwork
1. 220F High Street	a. 225 High Street	i. Bailer
2. 192F High Street (rock wall + palm trees)	b. 201-203 High Street	ii. Phils
3. 215F/211F High Street (rock wall + palm trees)	c. 158 High Street	iii. Corgis (x3)
4. 189F High Street (rock wall + palm trees)	d. 189 Tuam Street	
	e. 181 High Street	

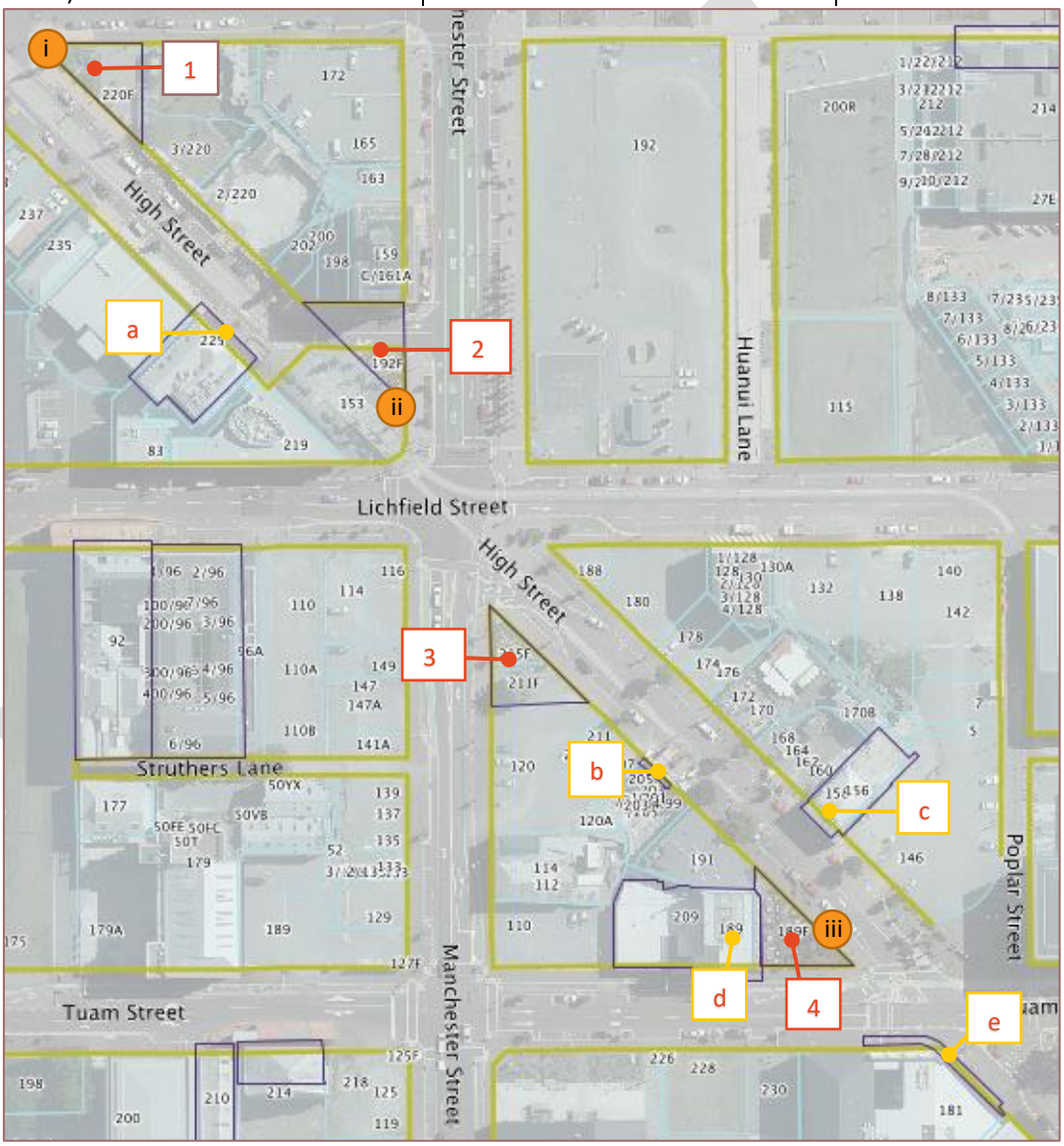

FIGURE 1: HERITAGE FABRIC, LOCATIONS PROTECTED BY THIS PLAN

2. Contacts

Role	Name	Contact Details
Project Manager	Neil Gillon / Lindsay White	027 406 6478 / 027 406 6468

Conservation Architect/ Heritage Advisor		
CCC Heritage Advisor	Amanda Ohs	941 8292
Consent Monitoring Officer	TBC	
Parks Buildings & Heritage Asset Engineer	Maria Adamski	941 5103
Urban Park Ranger	Carl Burnett	027 581 3324

3. Schedule of Works

a. A construction programme identifying key milestones for monitoring site visits;

i. The construction programme will need to be continually updated to reflect any changes as the work proceed.

4. Activity

4.1. Documentation and Recording

Potential Risk	Mitigating Measures

Loss or damage to heritage fabric.	• A photographic survey is to be completed by the conservation architect/ heritage advisor overseen by the Project Manager, prior to work commencing and upon completion.
	  ○ Images must be at least 1440 pixels by 960 pixels for a 4''x 6'' print at a minimum resolution of 240 PPI.
	• The following Heritage fabric is to remain instu and be protected from the works:
	  ○ Triangle garden bed rock walls and their foundations
	  ○ Palm trees
	  ○ Building Facades and their foundations
	• Any unexpected discoveries, works must follow the associated Environmental Management Plan (EMP) requirements.
	• Any damage to a heritage fabric or artwork is to be reported to:
	  • Private property – Heritage Advisor and Project Manager
	  • Council property – Heritage Advisor, Parks Buildings & Heritage Asset Engineer, and Project Manager
	  • Artwork – Parks Buildings & Heritage Asset Engineer, Project Manager, and Artist
	  ○ Do not attempt to repair damage. The repair/treatment to be agreed with contact persons above.
	  ○ Photographs of the damage must be immediately taken
	  ○ Any bits that are dislodged from the heritage item must be securely stored

4.2. Communication

Potential Risk	Mitigating Measures
Heritage fabric either known or discovered may be at risk if intentions and subsequent actions are not discussed and decided upon by the	• Initiate a 'Heritage Site' briefing to all contractors and staff, consultants and work related visitors. • Hold a pre-construction site meeting prior to work commencing and then regular two weekly construction meetings on site where heritage related issues are discussed and recorded.

contractor, client and heritage consultants	• During the construction process the works within the Heritage Items or Settings as labelled on page 1 of the RMA/2021/460 Approved Consent Plans, are to be monitored by the consent holder's conservation architect or heritage advisor in conjunction with the Council's Heritage Team (or nominee). • The consent holder shall liaise with the Council Heritage Team leader (or nominee) to arrange site visits at key points in the process • Establish communication procedures for issues arising between site meetings.

4.3. Security

Potential Risk	Mitigating Measures
Out of hours construction sites are potential targets to damage and subsequent loss of heritage fabric.	• The Main Contractor is to complete the associated Environmental Management Plan (EMP) and have an up-to-date version on site at all times. • Ensure the work site and any work materials, tools or vehicles are secure at all times. • The security and safety of scaffolding, hoists, plant and equipment and the security fenced contractor's work and storage area is the contractor's responsibility. • Liaise with property owners of the Heritage building facades to ensure their current security is maintained. • Report to Protect Manager on security and take appropriate action as situations require. • Any heritage fabric or artwork that is removed from the sites is to be kept secure and protected • No heritage fabric is to be disposed of without approval

4.4. Significant Planting

Potential Risk	Mitigating Measures
The garden bed within the rock wall surrounds are currently planted and are located within public reserves. All existing palm trees are to be retained and protected (2, 3, 4). Street lights with street names on them are to be removed and not replaced (2, 3, 4) Old palm stump removal from High-Manchester Triangle bed (3).	• See associated Environmental Management Plan (EMP) for tree protection requirements of the Chusan Palm Trees (2, 3, 4) and Phoenix Palm (3). • New planting within the Triangle garden beds rock walls are to be established by hand. • Minimise use of stonework as a step up onto the garden bed • Tools not to be leant or stored against/on stone work <u>The light pole removals</u>: • The light poles must be excavated by hand to the below the existing landscape level approximately 400mm depth to enable a cut at least 300mm below soil level (for safety of garden maintenance workers) ○ Soil dug from around the light pole base to be stored away from stonework • Ply/additional protection material must be place on the inside of the garden to prior to cutting the poles • Removal of the entire pole by lifting can only occur if the full pole is dug out by hand. Ensuring the lifting of the pole does not have any foundations that extend under the wall. • The poles must be supported to ensure they do not fall or swing. • If a crane or cherry picker is required, the platform of the machinery must not enter the 1m exclusion zone and any cables must not come within 1m above the height of the wall.

4.5. Mechanical machinery and vehicles

Potential Risk	Mitigating Measures

The use of excavators, concrete cutters, jack hammers, compactors, hoists and trucks may be required which all can damage heritage buildings, structures and landscaping.
 	
Removal of existing seals/paving and placement of new paving up to the facades of heritage items. (a, 2, 3, b, c, d, 4)
 	
New landscaping areas are to be installed within the Heritage item (1, 3)
 	
New street planting areas to be installed in proximity to heritage items (a, 2, 3, b, c, e)
 	
Street lights with street names on them are to be removed and not replaced (2, 3, 4)
	• Take care to manoeuvre mechanical machinery and vehicles around the triangle garden rock walls, and building facades.
	• Where operating plant and machinery in proximity to heritage rock walls and building façades, maintain a minimum distance of 1m.
	  ○ Place warratahs with string of flags around the beds to warn machinery to maintain a distance (machinery exclusion zone)
	  ○ Physically protected with plywood over a soft protection barrier against the heritage fabric
	  ○ light machinery only is to be used in close proximity to the item
	• No mechanical machinery or vehicles should be placed on or within the rock walls/garden beds.
	• Earthworks within the rock walls/garden beds shall be done by hand.
	• All work next to rock walls and building facades are to be undertaken by hand and working from the outside in towards the heritage item
	• Avoid damage to adjacent buildings and structures, street trees and existing paving that is to remain.
	• Notify Project Manager and Heritage Advisor if seal is attached to heritage fabric to agree method of removal
	
	The light pole removals:
	• The light poles must be excavated by hand to the below the existing landscape level approximately 400mm depth to enable a cut at least 300mm below soil level (for safety of garden maintenance workers)
	  ○ Soil dug from around the light pole base to be stored away from stonework
	• Ply/additional protection material must be place on the inside of the garden (between the pole and the rock wall) to prior to cutting the poles
	• Removal of the entire pole by lifting can only occur if the full pole is dug out by hand. Ensuring the lifting of the pole does not have any foundations that extend under the wall.
	• The poles must be supported to ensure they do not fall or swing.
	  ○ If a crane or cherry picker is required, the platform of the machinery must not enter the 1m exclusion zone and any cables must not come within 1m above the height of the wall.

4.6. Dust and debris

Potential Risk	Mitigating Measures
Heritage fabric (rock walls and building facades) may be at risk of damage due to the proximity of the building to the contractor's work area.	• See associated Environmental Management Plan (EMP) for Dust, Erosion and Sediment Control requirements. • If walls and building facades are to be washed down on completion to remove dust use water at less than 300 PSI, this is tap pressure. No waterblasting.

4.7. Protection of fabric

Potential Risk	Mitigating Measures
There is risk to significant instu heritage fabric from damage caused during	• Provide protection to instu fabric wherever possible before any works commence within 5m of the heritage fabric. • Protection measures shall remain in place until works within heritage fabrics area are completed and stabilised.

deconstruction and construction work. Excavation of existing seal with paving laid next to three heritage buildings Excavation of existing seal and laying of pavers next to Triangles rock walls Street lights with street names on them are to be removed and not replaced (2, 3, 4) Artwork to be temporary removed and placed (i, iii) Paving to be placed at the base of the Nucleus artwork (ii) Utilities and street furniture removed in proximity to the rock wall (4)	• Method of removal of seal next to heritage buildings and planters to be by hand contractor to provide method to remove. No metal tools to come in contact with heritage fabric, remove starting from outside moving towards heritage fabric • Paving reinstatement levels to be at existing or lower if it means revealing heritage fabric that has been built up over in the past. • If the final paving level is lower than previous seal and there are tar seal marks on building facade or rock work consult with heritage team as to treatment • Photos required after seal removal and on completion. • Check reinstatement method of paving detail compactors not to operate next to rock walls or facades, building entrances - hand compacted. • Separation layer between fabric and any solid base - if solid rather than sand base used - that is nothing to be attached to heritage fabric • levels to all away from the building for water to shed • Fixing into the walls or facades is not permitted without prior approval from the Project Manager, Council Heritage Advisor and associated property owner. • No supplies, tools or equipment is to be leant up against any heritage fabric Rock Walls: • The triangle garden beds rock walls are to be protected (tops and external faces) ○ Place warratahs with string of flags around the beds to warn machinery to maintain a distance ○ Place ply covering over rock walls when working by hand within the 1m machinery exclusion zone • The rock walls are to be protected from excavations and construction works required for new planting, paving, utilities, and transport items/structures. • Pavers are to fit around the rock walls/building facades, the heritage items shall not be altered. • Any stone that becomes loose or dislodged to be photographed before removing, securely stored and treatment agreed with heritage team Artwork: • Corgis (iii): ○ to be removed before main works are to commence in accordance with Urban Park Ranger ○ Condition of artworks to be recorded by a conservator prior to removal • The Bailer (i) ○ procedures (TBC by CCC project manager/landscape architect) ○ Clean strops to be used for lifting any artwork ○ Condition of artworks to be recorded by a conservator prior to removal • Nucleus (ii) ○ additional protection methods TBC ○ All work around the base of artworks to be done by hand

4.8. Monitoring and Instructions

Potential Risk	Mitigating Measures

There is a risk that the work will proceed undocumented or without prior agreement resulting in damage and/or loss to heritage fabric.	• Work is only to be conducted in accordance with the associated Resource Consent and under monitoring or agreement of the Council Heritage Advisor, the Consent Monitoring Officer and in consultation with the Project Manager. • The Council Heritage Advisor and the Project Manager are to undertake regular inspections to suit the work and at milestones. • All instructions to the main contractor shall be issued by the Project Manager. The main contractor will not act on instructions unless with authorisation from the Project Manager.