

27 May 2026

[REDACTED]
[REDACTED]

Kia ora [REDACTED]

Official information Request: Citycare contract

I am writing to you in response to your request received 17 April for information regarding the recently announced contract with Citycare for provision of waters operational services.

We acknowledge and apologise for the delay in providing our response to your LGOIMA request. Additional time was required to engage with the other party regarding the proposed release of contractual information and to ensure appropriate consideration was given to that process. We appreciate your patience while this work was undertaken.

We have assessed your request under the Local Government Official Information and Meetings Act 1987 (LGOIMA). I have received information to provide the following responses:

1). Did the SWDC hold a competitive tender for provision of the services before selection of Citycare? How many companies responded to the council's tender documents?

A two-stage open market approach with a Registration of Interest (RoI) followed by a competitive Request for Proposal (RfP) was completed before selection of CityCare Water. Nine companies responded to the RoI. Three companies were selected to provide detailed responses to SWDC's RfP.

2). When did the SWDC sign its contract with Citycare? (We note that the media release refers to news of the contract being "shared" with the public and this implies the contract has been in place for some time ahead of today and 1 July.)

The Contract was signed on 13 April 2026.

3). Mayor Wilde, in the release, states that the contract will "guarantee" that South Wairarapa will have safe drinking water and compliant WW services: Does the contract formally state such a guarantee by Citycare to the SWDC? If Citycare does not deliver on this guarantee, will Citycare pay penalties to the council?

The contract between Council and Citycare is attached in response to your request.

The contract document sets out the agreed service obligations, performance framework, and contractual remedies between the parties.

Council has not created separate commentary or analysis addressing whether the agreement constitutes a "guarantee" in the terms described in the media release, or separately responding to the specific questions raised in your request.

To the extent your request seeks interpretation, analysis, or legal characterisation of the agreement beyond the information contained in the contract itself, that information is not held by Council and this part of the request is refused under section 17(g) of the Local Government Official Information and Meetings Act 1987.

4). Please can we receive the contract in digital form for public review and understanding, as would be consistent with the absolute importance of these services to the people of Sout Wairarapa?

The contract between Council and Citycare is attached. Certain information within the contract has been redacted under section 7 of the Local Government Official Information and Meetings Act 1987.

Information has been withheld under:

section 7(2)(a), to protect the privacy of natural persons; and

section 7(2)(b)(ii), to protect information where release would be likely unreasonably to prejudice the commercial position of the supplier.

In making these decisions, Council has considered the public interest considerations under section 7(1) of the Act.

5). Does the SWDC understand that Citycare's management and staff will themselves carry out the work to deliver the services specified in the contract at, or will Citycare outsource some or all of the work to subcontractors (ie the Wellington Water model)?

The contract between Council and Citycare is attached.

To the extent your request seeks Council's interpretation, assumptions, or understanding regarding how Citycare may choose to operationally deliver services under the agreement, including the potential use of subcontractors, Council does not hold separate recorded information responding to that question. This part of the request is therefore refused under section 17(g) of the Local Government Official Information and Meetings Act 1987.

The contract itself sets out the relevant contractual arrangements between the parties, including any provisions relating to service delivery and subcontracting.

6). The media release expressed SWDC confidence in the "track record" of Citycare: Does the council acknowledge the failings by Citycare which contributed to serious water contamination and human health risks experienced by Martinborough in February 2019? The failings were identified in the council-commissioned Lutra report of April 2019. Is the council confident that Citycare has adopted all the findings and learnings in the Lutra report?

Council notes that the matters referred to in your request were considered in the independently commissioned Lutra report dated April 2019, together with subsequent lessons learned reporting arising from the Martinborough water contamination event. Those reports set out the relevant findings, observations, and recommendations.

A copy of the lessons learned report is provided with this response.

To the extent your request seeks further current commentary, evaluative opinion, assurance, or confirmation from Council regarding Citycare's adoption or implementation of all findings and learnings identified in those reports, Council does not hold separate recorded information

responding to that question. This part of the request is therefore refused under section 17(g) of the Local Government Official Information and Meetings Act 1987.

7). The media release quotes a Citycare manager talking about a “collaborative partnership” with SWDC: Does Citycare recognise itself as a service provider accountable to the mayor and councillors of South Wairarapa (and through these representatives, to all the people of the district, or is there a legal partnership arrangement in place whereby Citycare co-owns assets with the council? What is the “partnership” to which Citycare refers?

Council does not hold any legal partnership arrangement with Citycare involving co-ownership of Council assets.

The contractual arrangements between Council and Citycare are set out in the contract provided with this response.

To the extent your request seeks interpretation or commentary regarding the terminology “collaborative partnership” used in a media release, including Citycare’s intended meaning or broader characterisation of the relationship between the parties, Council does not hold separate recorded information responding to that question. This part of the request is therefore refused under section 17(g) of the Local Government Official Information and Meetings Act 1987.

Please note that it is our policy to proactively release our responses to official information requests where possible. If this request is selected it will be published at <https://swdc.govt.nz/lgoima-proactive-release/>, with your personal information removed.

You have a right to request a review by the Ombudsman on this response. Further information about this process can be found on <https://www.ombudsman.parliament.nz/what-ombudsman-can-help/complaints-about-government-agencies/how-make-complaint> or email info@ombudsman.parliament.nz

Nāku noa, nā

A handwritten signature in blue ink, appearing to read 'James O'Connor', with a stylized flourish at the end.

James O'Connor
Group Manager, Infrastructure & Community Operations

CONTRACT AGREEMENT

CONTRACT TITLE 3 Waters Operations, Maintenance and Asset Renewal (Contract Title)

CONTRACT NUMBER C-1281 (Number)

FOR South Wairarapa District Council (Insert brief description of the Contract Works)

THIS AGREEMENT is made on 13/04/2026

BETWEEN City Care Water (Insert company number if applicable) ('The Contractor')

AND South Wairarapa District Council (Insert company number if applicable) ('The Principal')

IT IS AGREED as follows:

1. The Contractor shall carry out the obligations imposed on the Contractor by the Contract.
2. The Principal shall pay the Contractor the sum of \$ [Click or tap here to enter text.](#)
or such greater or lesser sum as shall become payable under the Contract together with goods and services tax at the times and in the manner provided in the Contract.
3. Each party agrees to the terms and conditions as set out in the Contract.
4. The Contract comprises the following documents:
(Delete any if not applicable)
 - (a) This Contract Agreement;
 - (b) The notification of acceptance of tender or award of Contract;
 - (c) The following post-tender documents (Identify any agreed post-tender documents to be included, for example correspondence or minutes or pre-award meetings dealing with tender tags, and so on):
[Click or tap here to enter text.](#)
 - (d) Schedule 1: Special Conditions of Contract – Specific Conditions of Contract (Parts A and B);
 - (e) Schedule 2: Special Conditions of Contract – Other Conditions of Contract
 - (f) The General Conditions of Contract NZS 3917:2025 (including other Schedules);
 - (g) The Principal's Requirements (including Contract Agreement Annexure 1 – List of Principal's Requirements);
 - (h) The Schedule of Prices;
 - (i) The Contractor's tender;

(j) Notices to tenderers (*Give details with dates*);

[Click or tap here to enter text.](#)

(k) The Schedule to Conditions of Tendering;

(l) The Conditions of Tendering; and

(m) The following additional documents (*Identify any additional documents to be included*):

[Appendix 1 – SCARDA](#)

[Appendix 2 – KRA and KPI's](#)

[Appendix 3 –](#) [REDACTED]

5. The documents comprising the Contract shall be taken as mutually explanatory but in the case of ambiguity or conflict the priority of documents shall be as listed in clause 4 above, with each document prevailing over a document lower in the list.
6. This Contract shall constitute the entire agreement between the parties. This Contract supersedes all prior negotiations, representations, and warranties, except insofar as the same are expressly incorporated herein.
7. The Contract may be executed in counterparts and by electronic signature, and provided that each party has executed a counterpart, the counterparts together shall constitute a binding and enforceable agreement between the parties. A party may transmit an electronic copy of the Contract by email (or other electronic means) to the other party.

SIGNED BY (Authorised Signatory of Contractor)

NAME OF SIGNATORY

SIGNED BY [REDACTED] (Authorised Signatory of Principal)

NAME OF SIGNATORY [Janice Smith CEO](#)

(j) Notices to tenderers (*Give details with dates*);

[Click or tap here to enter text.](#)

(k) The Schedule to Conditions of Tendering;

(l) The Conditions of Tendering; and

(m) The following additional documents (*Identify any additional documents to be included*):

[Appendix 1 – SCARDA](#)

[Appendix 2 – KRA and KPI's](#)

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6. This Contract shall constitute the entire agreement between the parties. This Contract supersedes all prior negotiations, representations, and warranties, except insofar as the same are expressly incorporated herein.
7. The Contract may be executed in counterparts and by electronic signature, and provided that each party has executed a counterpart, the counterparts together shall constitute a binding and enforceable agreement between the parties. A party may transmit an electronic copy of the Contract by email (or other electronic means) to the other party.

SIGNED BY [REDACTED] *(Authorised Signatory of Contractor)*

NAME OF SIGNATORY [REDACTED], Acting Chief Executive - Citycare Water, on behalf of City Care Ltd

SIGNED BY _____ *(Authorised Signatory of Principal)*

NAME OF SIGNATORY [Janice Smith CEO](#)

Schedule 1 (Part A) – Special Conditions of Contract

– Specific Conditions of Contract

Contract Title:	3 Waters Operations, Maintenance and Asset Renewal
Contract Number:	
Contract For:	3 Waters Operations, Maintenance and Asset Renewal

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
1. INTERPRETATION		
1.2	Definitions	
	The Contractor's Representative is:	
	of:	
	The Principal is:	South Wairarapa District Council
	of:	19 Kitchener Street, Martinborough, 5711
	The Principal's Representative is:	
	of:	19 Kitchener Street, Martinborough, 5711
1.2, 10.2	Separable Portions	
	Are there any Separable Portions in this Contract?	No
	If yes, the Separable Portions are as follows and as further defined in the Contract:	Click or tap here to enter text.
1.2, 2.5	Target Price	
	The Target Price is:	Not applicable
2. THE CONTRACT		
2.1	Type of Contract Price	
2.1.1	The Contract Price is:	<i>(Select one or more to apply (i), (ii), (iii) or (iv))</i>
	(i) Lump sum governed by 2.2	☐
	(ii) Measure and value governed by 2.3	☐
	(iii) Cost reimbursement governed by 2.4	☒
	(iv) Target Price governed by 2.5	☐
2.2.4	Is this a lump-sum contract in which the Schedule of Prices is a full schedule of quantities and 2.2.4 applies?	No

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
2.4	Cost-reimbursement Contract Price	
2.4.1	Allowance(s) which are to be added to Net Cost in a cost-reimbursement Contract Price or for parts of the Contract Works which are required to be carried out on a cost-reimbursement basis: <i>(If percentages are shown as zero or nil, allowances for Preliminary & General and Margin are deemed to be included in Net Cost.)</i>	
	• Allowance for Preliminary & General:	
	• Allowance for Margin:	
2.4.4	Indicative estimates of the Contract Price:	
	Are indicative estimates required?	Yes
2.5	Target Contract Price	
2.5.1	Where 2.5.1 applies:	
	The Principal's and Contractor's share of any saving shall be the following percentage of the saving (as defined in 2.5.1(a)):	Principal's share of savings N/A (%) Contractor's share of savings N/A (%)
	The Principal's and Contractor's share of any overrun shall be the following percentage of the overrun (as defined in 2.5.1(b)):	Principal's share of overrun N/A (%) Contractor's share overrun N/A (%)
	The Contractor's share of any overrun shall be capped at the following:	\$ N/A
2.5.2	Clauses providing for Variations or adjustments to the Contract Price that will not apply to vary or adjust the Target Price:	☐ The following: N/A <i>(List clauses providing matters that will be treated as Variations, or other clauses providing for adjustments to the Contract Price, that will not apply to adjust the Target Price)</i>
2.6	Local authority contracts	
2.6.1	Is this Contract a local authority contract to which 2.6.1 applies?	Yes
2.7	Evidence of Contract	
2.7.2	How is the Contract Agreement to be executed?	<i>(select one to apply, (i) or (ii))</i>
	(i) As stated in 2.7.2	☒
	(ii) In accordance with the following other requirements:	☐ Click or tap here to enter text.

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
2.7.4	Electronic format and hard copies	
	Is an electronic copy required?	Yes
	If an electronic copy of the Contract is required, a copy of the Contract shall be supplied without charge to the Contractor in the following electronic format:	PDF
	Are hard copies required?	Yes
	If hard copies of the Contract are required, copies of the Contract shall be provided to the Contractor as follows:	(Select (i), (ii) or (iii), delete where not applicable) ☒ (ii) Hard copies, insert quantity below 1 (one)
2.8	Documents prepared or provided by the Contract Administrator or Principal	
2.8.1	Copies of the documents referred to in 2.8.1 shall be supplied without charge to the Contractor in the following electronic format:	PDF and Excel, as appropriate
	Are hard copy sets also required? If 'yes' how many copies?	Yes (If yes) 1 (one) hard copies
2.9	Documents prepared or provided by the Contractor	
2.9.2	Copies of documents referred to in 2.9.2 shall be supplied without charge to each of the Contract Administrator and Independent Certifier in the following electronic format:	PDF and Excel, as appropriate
	Are hard copy sets also required? If 'yes' how many copies?	No (If yes) Add hard copies
3	BONDS	
3.1	Contractor's Bond	
3.1.1	Is a Contractor's Bond required?	Yes
3.1.3	If yes, the amount of the Contractor's Bond shall be:	\$ [REDACTED]
3.2	Principal's Bond	
3.2.1	Is a Principal's Bond required?	No
3.2.3	If yes:	
	• The amount of the Principal's Bond shall be:	\$ N/A
	• The surety for the Principal's Bond shall be:	N/A
4	SUBCONTRACTS	
4.2	Nominated Subcontractors	
4.2.1	The Principal nominates the following Subcontractors:	N/A

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
5 GENERAL OBLIGATIONS		
5.2	Design responsibilities	
5.2.1	The Contractor is responsible for the design of those parts of the Contract Works:	
	(i) As set out in the following list:	
	(ii) Where a design obligation on the Contractor is set out in the following parts of the Contract:	
5.2.2	(iii) As otherwise required by the Principal's Requirements	☐
	The Principal is responsible for the following parts of the design of the Temporary Works:	N/A
5.5	Occupancy of the Site	
5.5.1	Occupancy of the Site is subject to compliance with the following preconditions:	☒ The Contractor's and Principal's obligations under 8.2.5 and 8.7.5 ☐ Click or tap here to enter text.
5.5.4	Limits on the Contractor's right of entry to adjoining properties are:	Access to adjoining property or property owned by third parties is to be arranged by the Contractor with the respective property owner, subject always to clause 5.5.4.
5.6	Separate Contractors	
5.6.1	Separate Contractors who may be carrying out work on the Site concurrently with the Contract Works are:	Separate contractors may be permitted by the Principal to carry out work on the Site concurrently with the Contractor from time to time.
5.6.2	Are facilities for Separate Contractors required?	No
	If yes, details of facilities required are:	N/A
5.7	Care of the Contract Works and Site	
5.7.6(f)	Further risks specifically excepted are:	None
5.10	Management Plans	
	The following Management Plans are required:	Select yes or no for each Management Plan
	Asset management plan:	Yes
	• If yes, requirements for the asset management plan are stated in:	As set out in the Principal's Requirements
	Traffic management plan:	Yes
	• If yes, requirements for the traffic management plan are stated in:	As set out in the Principal's Requirements

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
	Environmental management plan: If yes, requirements for the environmental management plan are stated in:	Yes As set out in the Principal's Requirements
	Quality management plan: If yes, requirements for the quality management plan are stated in:	Yes As set out in the Principal's Requirements
	Sustainability management plan: If yes, requirements for the sustainability management plan are stated in:	No Click or tap here to enter text.
	Other/s If other/s, requirements for the other management plan/s are:	Yes 
5.13 Programme		
5.13.1	Programmes are to be prepared at intervals of:	Prior to 10 Working Days of the Commencement of the Contract the Principal and the Contractor will agree the Programmes for the Contract Works.
5.13.2	Each revision shall be prepared in detail for the following period following the programme revision date:	
5.14 Compliance with laws and Consents		
5.14.2	Exceptions to the Principal's obligation to obtain Consents for the carrying out of the Contract Works and the use of the Contract Works when carried out under 5.14.2 are:	
5.14.3	Exceptions to the Contractor's obligation to give notices and obtain Consents under 5.14.3 are:	
5.14.7	Prior to the issue of the Certificate on Expiry:	(select one to apply (i), (ii), or (iii))
	(i) The following Producer Statements are required	(select as appropriate) ☐ PS1 – Design; ☐ PS2 – Design Review; ☐ PS3 – Construction; and ☐ PS4 – Construction Review
	(ii) Producer Statements as set out in the following parts of the Contract are required:	☒ 
	(iii) Producer Statements are not required	☐
5.19 Supply by Principal		
5.19.1	Principal-supplied items are:	Click or tap here to enter text.

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
5.20	Completion Records	
5.20.1(a)	Are Completion Records to be prepared by the Contractor?	Yes <i>As set out in the Principal's Requirements</i>
5.20.1(a)(iii)	Other information required in Completion Records	
5.20.1(b)	Are maintenance records to be prepared by the Contractor?	Yes <i>As set out in the Principal's Requirements</i>
5.20.3(b)	Number of sets of Completion Records required:	Two
5.22	Reporting	
5.22.1	Are reports required, and if so how frequently?	Yes Monthly, as set out in the Principal's Requirements
	If yes, what matters are to be covered in the report(s)?	<i>As set out in the Principal's Requirements</i>
	If yes, in what form should the report be provided?	In the form specified in the Principal's Requirements, or as otherwise agreed in writing between the parties from time to time
6	CONTRACT ADMINISTRATION	
6.1	Appointment of Contract Administrator and Independent Certifier	
6.1.2	The Contract Administrator is:	
	The Independent Certifier is:	
7	INDEMNITY AND LIABILITY LIMIT	
7.2	Contractor's liability limit	
	Is this a contract to which 7.2 applies?	Yes
7.2.1	Subject to 7.2.2 and 7.2.3, the maximum aggregate liability of the Contractor to the Principal under or in connection with the Contract is:	<i>(If 7.2 is 'yes', select one to apply (i), (ii) or (iii))</i>
	(i) The percentage in the right-hand column of the Contract Price:	☐ Click or tap here to enter text.
	(ii) 100% of the Contract Price:	☐
	(iii) The amount in the right-hand column:	☒ \$ 

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8	INSURANCE – Refer to Schedule 1 (Part B – Insurances) – Special Conditions of Contract – Specific Conditions of Contract	
9	VARIATIONS AND CONTRACT PRICE ADJUSTMENTS	
9.3	Valuation of Variations	
9.3.8, 9.3.10	For Preliminary & General:	<i>(select one to apply, (i) or (ii))</i>
	(i) The prices and rates in the Schedule of Prices are inclusive of full allowance for Preliminary & General	☐
	(ii) The prices and rates in the Schedule of Prices are exclusive of Preliminary & General	☒
	Where (ii) above or 9.3.8 applies to the valuation of Variations, the allowance for Preliminary & General to be added in accordance with 9.3.10 is:	<i>(if (ii) is selected above, select one to apply, A., B., C., or D.)</i>
	A. Agreed percentage:	☐ Click or tap here to enter text. (%)
	B. As nominated in the Schedule of Prices	☒
	C. As nominated in the Contractor's tender	☐
	D. A reasonable percentage	☐
9.3.8, 9.3.11	For Margin:	<i>(select one to apply, (i) or (ii))</i>
9.3.15	(i) The prices and rates in the Schedule of Prices are inclusive of full allowance for Margin	☐
	(ii) The prices and rates in the Schedule of Prices are exclusive of Margin	☒
	Where (ii) above or 9.3.8 applies to the valuation of Variations, the allowance for Margin to be added in accordance with 9.3.11 is:	<i>(if (ii) is selected above, select one to apply, A., B., C., or D.)</i>
	A. Agreed percentage:	☐ Click or tap here to enter text. (%)
	B. As nominated in the Schedule of Prices	☒
	C. As nominated in the Contractor's tender	☐
	D. A reasonable percentage	☐
	For processing of Variations, the amount to be paid in accordance with 9.3.15 is:	<i>(select one to apply, (i), (ii), (iii), or (iv))</i>
	(i) Agreed percentage:	☒ 0 (%)
	(ii) Percentage nominated in the Schedule of Prices	☐
	(iii) Percentage nominated in the Contractor's tender	☐

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
	(iv) Reasonable compensation	☐
9.6	Cost fluctuations	
9.6.1	Appendix A shall apply unless option (i) or (ii) is selected as an alternative:	<i>(select one to apply, (i) or (ii))</i>
	(i) Cost fluctuations shall not be paid	☐
	(ii) Cost fluctuations shall be paid in accordance with the method described in:	☒ Appendix A
10	CONTRACT WORKS PERIOD	
10.1	Commencement	
10.1.1	The Date of Commencement:	
	(i) For the Contract Works:	1 July 2026, except in relation to Transition Services which will be provided at the time and in the manner set out in the Principal's Requirements.
	(ii) For any Separable Portions:	N/A
10.2	Date of Expiry	
10.2.1	The Date of Expiry:	
	(i) For the Contract Works:	30 June 2030
	(ii) For any Separable Portions:	N/A
10.2.2	Extensions to the Date of Expiry:	
	(i) Period of extension:	N/A
	(ii) Maximum extension following which 10.2.2 to 10.2.4 shall not apply:	N/A
11	DEFECTS LIABILITY	
11.4	Final Completion Certificate	
11.4.2(a)	Before the issue of the Final Completion Certificate:	<i>(select one to apply, (i), (ii), or (iii))</i>
	(i) The following Producer Statements are required:	<i>(select as appropriate)</i> ☐ PS1 – Design; ☐ PS2 – Design Review; ☐ PS3 – Construction; and ☐ PS4 – Construction Review
	(ii) Producer Statements as set out in the following parts of the Contract are required:	☐ Click or tap here to enter text.
	(iii) Producer Statements are not required	☒
11.4.2(b)	Before issue of the Final Completion Certificate:	<i>(select one to apply, (i), (ii))</i>

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
11.4.2(c)	(i) All Completion Records are required	☒
	(ii) All Completion Records are not required	☐
	Before issue of the Final Completion Certificate:	<i>(select one to apply, (i), (ii))</i>
	(i) Outstanding maintenance records are required	☒
	(ii) Outstanding maintenance records are not required	☐
11.6 Warranties and guarantees		
11.6.1	Warranties	<i>(select one to apply, (i) or (ii))</i>
	(i) No warranties are required	☐
	(ii) The Contractor shall provide warranties for the following items of work:	☒ 
11.6.2	Warranties and guarantees shall be provided:	<i>(select one to apply, (i) or (ii))</i>
	(i) Before the issue of the Certificate on Expiry	☐
	(ii) At another time:	☐ Click or tap here to enter text.
11.6.1, 11.6.3	Guarantees	<i>(select one to apply, (i) or (ii))</i>
	(i) No guarantees are required	☒
	(ii) The Contractor shall provide the following guarantees in the following form(s):	☐ Click or tap here to enter text.
12 PAYMENTS		
12.1	Contractor's payment claims	
12.1.3(b)(iii)	Advances for Materials delivered to the Site	<i>(select one to apply, (i) or (ii))</i>
	(i) Advances for Materials delivered to the Site but which have yet to be incorporated in the Contract Works shall not be made	☒
	(ii) Advances for Materials delivered to the Site but which have yet to be incorporated in the Contract Works shall be made, subject to the following conditions:	☐ Click or tap here to enter text.
12.1.3(b)(iv)	Advances for Temporary Works or Plant	<i>(select one to apply, (i) or (ii))</i>
	(i) Advances for Temporary Works or Plant shall not be made	☒
	(ii) Advances for Temporary Works or Plant shall be made, subject to the following conditions:	☐ Click or tap here to enter text.

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
12.1.3(b)(iv)	Advances for Materials not yet on Site	<i>(select one to apply, (i) or (ii))</i>
	(i) Advances for Materials not yet on Site shall not be made	☒
	(ii) Advances for Materials not yet on Site shall be made, subject to the following conditions:	☐ Click or tap here to enter text.
12.3	Retention monies	
12.3.1, 12.3.3	Retentions shall or shall not apply as follows:	<i>(select one to apply, (a) or (b))</i>
	(a) Retentions shall not apply	☒
	(b) Retentions shall apply as follows:	☐ <i>(select one to apply, (i) or (ii))</i>
	(i) The percentage of each payment certified by the Independent Certifier in the right-hand column: With a maximum retention of:	☐ Click or tap here to enter text. (%) (\$) Click or tap here to enter text.
	(ii) The retentions formula in the right-hand column:	☐ Click or tap here to enter text.
12.3.6	Bond in lieu of retentions	<i>(select one to apply, (i) or (ii))</i>
	(i) The Contractor may provide a bond in lieu of retentions	☐
	The time within which the Contractor shall provide the bond in lieu of retention is:	<i>(if (i) is selected, select one to apply, A. or B.)</i>
	A. Within 2 Months of the Date of Acceptance of Tender	☐
	B. Within the time stated:	☐ Click or tap here to enter text.
	(ii) The Contractor may not provide a bond in lieu of retentions	☐
12.8	Goods and services tax	
12.8.2	Taxable supply information shall be provided by:	<i>(select one to apply, (i) or (ii))</i>
	(i) The Principal In the form of Payment Schedules provided by the Independent Certifier containing buyer-created taxable supply information	☐
	(ii) The Contractor	☒
12.9	Performance payments	
12.9.1	Performance payments:	<i>(select one to apply, (i) or (ii))</i>
	(i) Performance payments shall not apply	☒
	(ii) Performance payments shall apply, and the performance indicators and performance payments are contained in the following parts of the Contract:	☐ Click or tap here to enter text.

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
12.10	Liquidated damages	
12.10.1	Liquidated damages:	<i>(select one to apply, (i) or (ii))</i>
	(i) Liquidated damages shall not apply	☒
	(ii) Liquidated damages shall apply, and the obligations to which the liquidated damages shall apply and the amounts of the liquidated damages are contained in the following parts of the Contract:	☐ Click or tap here to enter text.
13	DISPUTES	
13.3	Arbitration	
13.3.3	If required, the arbitrator shall be nominated by the following Person:	The Independent Certifier
15	SERVICE OF NOTICES	
15.1.2	For the purpose of service of written notice:	
	(i) The Principal's address is:	
	Postal address:	PO Box 6, Martinborough, 5741
	Delivery address:	19 Kitchener Street, Martinborough, 5954
	Mark for the attention of:	
	Email address:	 @SWDC.govt.nz
	Other agreed means of electronic communication and address detail:	N/A
	(ii) The Contractor's address is:	
	Postal address:	PO Box 1408, Christchurch, 8140
	Delivery address:	50 Hazeldean Road, Christchurch, 8140
	Mark for the attention of:	
	Email address:	 @Citycarewater.co.nz
	Other agreed means of electronic communication and address detail:	N/A
	(iii) The Independent Certifier's address is:	
	Postal address:	
	Delivery address:	
	Mark for the attention of:	
	Email address:	
	Other agreed means of electronic communication and address detail:	N/A

Clause <i>In General Conditions</i>	Title and subject matter	Specific condition data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
	(iv) The Contract Administrator's address is:	
	Postal address:	[REDACTED]
	Delivery address:	[REDACTED]
	Mark for the attention of:	[REDACTED]
	Email address:	[REDACTED]@swdc.govt.nz
	Other agreed means of electronic communication and address detail:	N/A

Schedule 1 (Part B – Insurances) – Special Conditions of Contract

– Specific Conditions of Contract

Contract Title:	3 Waters Operations, Maintenance and Asset Renewal
Contract Number:	C-1281
Contract For:	3 Waters Operations, Maintenance and Asset Renewal

Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8. INSURANCE		
8.1	General	
8.1.1	The party identified below shall arrange the following insurances referred to in the following clauses:	
	8.3 or 8.8 Construction	Principal
	8.9 Existing property	Principal
	8.4 Plant	Contractor
	8.5 or 8.10 Public liability	Contractor
	8.5.2 Motor vehicle liability	Contractor
	8.6 Professional indemnity	Contractor
8.1.6	The following forces of nature shall be specifically insured under 8.3, 8.8, or 8.9 as applicable:	
	(i) Landslip:	Yes
	(ii) Earthquake:	Yes
	(iii) Tsunami:	Yes
	(iv) Tornado:	Yes
	(v) Cyclone:	Yes
	(vi) Storm:	Yes
	(vii) Flood:	Yes
	(viii) Lightning strike:	Yes
	(ix) Volcanic activity:	Yes
	(x) Hydrothermal activity:	Yes
	(xi) Geothermal activity:	Yes

Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8.3, 8.8	Construction insurance <i>(These items are required to be completed whether the Contractor or the Principal is the insuring party (see 8.1 above))</i>	
8.3.2, 8.8	The following shall be insured under the construction insurance policy:	N/A
8.3.3, 8.8	Where construction insurance is required (see 8.1 above), the amount of insurance to be effected for the Contract Works and Materials shall be for not less than the sum of the Contract Price, after the acceptance of the tender or other offer, plus the following allowances:	
	(i) An allowance for the Cost of demolition, disposal and preparation for replacement work, equal to:	<i>(select one to apply, A. or B.)</i>
	A. The amount in the right-hand column:	☐ \$ Click or tap here to enter text.
	B. The percentage in the right-hand column of the Contract Price:	☒ ■ (%)
	(ii) An allowance for professional fees including the Cost of clerks of works and inspectors, equal to:	<i>(select one to apply, A. or B.)</i>
	A. The amount in the right-hand column:	☐ \$ Click or tap here to enter text.
	B. The percentage in the right-hand column of the Contract Price adjusted as above:	☒ ■ (%)
	(iii) An allowance for items to be incorporated in the Contract Works, the Cost of which is not included in the Contract Price, equal to:	<i>(select one to apply, A. or B.)</i>
	A. The amount in the right-hand column:	☒ \$ ■
	B. The percentage of the Contract Price adjusted as above, stated in the right-hand column:	☐ Click or tap here to enter text. (%)
	(iv) An allowance for an increase in the Contract Price due to Variations equal to:	<i>(select one to apply, A. or B.)</i>
	A. The amount in the right-hand column:	☐ \$ Click or tap here to enter text.
	B. The percentage of the Contract Price adjusted as above, stated in the right-hand column:	☒ ■ (%)
	(v) An allowance for increased construction Costs due to inflation equal to:	<i>(select one to apply, A. or B.)</i>
	A. The amount in the right-hand column:	☐ \$ Click or tap here to enter text.
	B. The percentage of the Contract Price adjusted as above, stated in the right-hand column:	☒ ■ (%)

Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8.4	Contractor-arranged Plant insurance	
	Where Plant is required to be insured (see 8.1 above):	<i>(select one to apply, (i) or (ii))</i>
	(i) The Contractor shall insure the following items of Plant on the Site for the amounts stated:	☐ Click or tap here to enter text.
	(ii) The Contractor shall insure each item of Plant on the Site having a current market value of more than:	☒ \$ [REDACTED]
8.5	Contractor-arranged public liability insurance	
8.5.1	Where required (see 8.1 above), public liability insurance shall be effected by the Contractor for an amount not less than:	\$ [REDACTED]
	Such public liability insurance may include a sub-limit for liability arising out of vibration, weakening or removal of support, of not less than:	N/A
8.5.2	Where required (see 8.1 above), motor vehicle third-party liability insurance shall be effected for an amount not less than:	\$ [REDACTED]
8.6	Contractor-arranged professional indemnity insurance	
8.6.1	Where required (see 8.1 above), professional indemnity insurance for design by the Contractor shall be effected for an amount not less than:	
	• For any one claim:	\$ [REDACTED]
	• And for an amount in the aggregate of:	\$ [REDACTED]
8.6.2	Sub-limits of liability for design of parts of the Contract Works by Subcontractors shall be not less than:	<i>(list specific part(s) of Contract Works and applicable \$ sub-limits for any one claim and for an amount in the aggregate, or state if not required)</i> [REDACTED]
8.8	Principal-arranged construction insurance <i>(refer also to 8.3)</i>	
	In accordance with 8.7.2, the insurance policy wording title is:	Material Damage & Business Interruption
	In accordance with 8.7.2, the extraordinary exclusions, conditions, warranties or endorsements to the policy are:	[REDACTED]

Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8.8.1	Where the Principal is required to effect construction insurance (see 8.1 above):	
	The lead insurer is:	QBE Insurance (Australia) Limited
	Address of lead insurer:	QBE Centre Level 21, 125 Queen Street Auckland 1010
	The Nominal Deductibles are:	
	For damage arising out of the Contract Works:	\$ [REDACTED] per event
	For other claims:	\$ [REDACTED] per event for Landslip or Subsidence \$ [REDACTED] per event for Unoccupied Building Warranty \$ [REDACTED] per event for Fluvial and/or Pluvial Flood
	For natural perils:	5% of the sum insured subject to a minimum of [REDACTED]
8.9	Principal-arranged existing property insurance	
	In accordance with 8.7.2, the insurance policy wording title is:	Material Damage & Business Interruption
	In accordance with 8.7.2, the extraordinary exclusions, conditions, warranties or endorsements to the policy are:	

Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8.9.1	Where the Principal is required to effect existing property insurance (see 8.1 above):	Wairarapa Region including Featherston, Greytown and Martinborough
8.9.1(a)	The existing structure or property is:	All above ground water and wastewater treatment assets and all reservoirs
	• The replacement value to be insured is:	\$ [REDACTED]
	• The lead insurer is:	QBE Insurance (Australia) Limited
	• Address of lead insurer:	QBE Centre Level 21, 125 Queen Street Auckland 1010
	The Nominal Deductibles are:	
	• For damage arising out of the Contract Works:	\$ [REDACTED]
	• For other claims:	\$ [REDACTED] per event for Landslip or Subsidence \$ [REDACTED] per event for Unoccupied Building Warranty \$ [REDACTED] per event for Fluvial and/or Pluvial Flood
	• For natural perils:	5% of the sum insured subject to a minimum of [REDACTED]
8.9.1(b)	Other structures or property in the vicinity are:	
	• The replacement value to be insured is:	\$ N/A
	• The lead insurer is:	N/A
	• Address of lead insurer:	N/A
	The Nominal Deductibles are:	
	• For damage arising out of the Contract Works:	N/A
	• For other claims:	N/A
	• For natural perils:	N/A

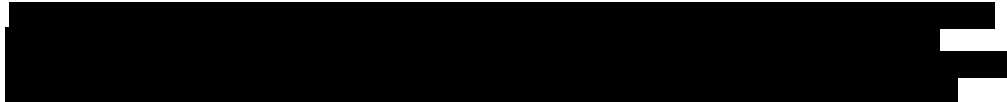
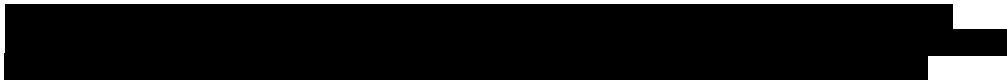
Clause <i>In General Conditions</i>	Title and subject matter	Specific Conditions data <i>(Expand cells if required or add a reference to further detail provided in Schedule 2.)</i>
8.9.1(c)	Contents insurance:	
	• The replacement value to be insured is:	\$ N/A
	• The lead insurer is:	N/A
	• Address of lead insurer:	N/A
	The Nominal Deductibles are:	
	• For damage arising out of the Contract Works:	N/A
	• For other claims:	N/A
	• For natural perils:	N/A
8.10	Principal's option to insure public liability	
8.10.1	Where required (see 8.1 above), the Principal shall effect public liability insurance for an amount not less than:	\$ N/A
	• The lead insurer is:	N/A
	• Address of lead insurer:	N/A
	The Nominal Deductible is:	
	In accordance with 8.7.2, the policy wording title is:	N/A
	• Extraordinary exclusions, conditions, warranties, or endorsements to the policy are:	N/A
8.10.2	Such public liability insurance may include a sub-limit liability arising out of vibration, weakening or removal of support of not less than:	N/A

Schedule 2 – Special Conditions of Contract – Other Conditions of Contract

(Include here other Special Conditions that modify the General Conditions.)

Clause	Title and subject matter
1	Interpretation
1.2	<i>Add the following definitions:</i> Asset or Assets means the water supply, wastewater and stormwater network infrastructure within the Site, which is owned by the Principal, as at the Date of Commencement, and which is to be maintained, operated and managed under the Contract. The extent of the Principal's Assets may be amended by Variation. Contract Area means the area in which the Sites are situated, and the Contract Works are to be performed, as set out in the Principal's Requirements. Contract Year means each year during the Contract term commencing on 1 July and ending on 30 June. HSWA Regulator means WorkSafe, or any successor organisation appointed as the regulator under the Health and Safety at Work Act. Good Industry Practice means the standards, practices, methods and procedures, conforming to law and to the degree of skill, care, diligence, prudence and foresight which would reasonably be expected from a skilled, qualified and experienced contractor engaged in the same type of undertaking as the Contract Works and under the same or similar circumstances. Living Wage means the living wage published from time to time and publicly available on the Living Wage Aotearoa New Zealand website, which as at the date of this Contract is \$28.95 per hour. Notifiable Event means a notifiable event as defined in the Health and Safety at Work Act occurring in connection with the Contract Works. Renewal Works means those Contract Works, instructed from time to time by the Principal to be carried out under the Contract, that are of a capital nature, or construction work. Renewal Works will be instructed and carried out by way of [a Variation] and may contain terms and conditions that add to or vary the Conditions of Contract. Transition Period means the period between the date on which this Contract is executed by the parties and the Date of Commencement. Transition Services means the services to be performed by the Contractor during the Transition Period to ensure that the Contractor can perform the Contract Works from the Date of Commencement as set out in the Specifications. <i>Other definitions may be required once the Principal's Requirements are in final form</i>
2.7	Evidence of Contract
2.7.1	Replace clause 2.7.1 with the words <i>not used</i> .
2.7.2(a)	Amend clause 2.7.2(a) by replacing the word <i>quadruplicate</i> with <i>duplicate</i> .
2.7.2(c)	Amend clause 2.7.2(c) by replacing the word <i>quadruplicate</i> with <i>duplicate</i> and the words <i>all four copies</i> with the words <i>both copies</i> .
2.7.2(d)	Amend clause 2.7.2(d) by replacing the word <i>quadruplicate</i> with <i>duplicate</i> .
2.7.2(e)	Replace clause 2.7.2 (e) with the following: <i>One fully executed copy of these documents shall be provided to the Contractor and one copy shall be retained by the Principal.</i>
2.10	Assignment
2.10.1	Replace clause 2.10.1 with the following: <i>The Principal may assign the whole or any part of the Contract without the prior written approval of the Contractor if the assignment is to an entity established to provide 3 waters services in the Contract Area. In all other cases, the Principal may only assign the whole or any part of the Contract with the prior written approval of the Contractor, whose approval shall</i>

	<i>not be unreasonably withheld or delayed. The Contractor may only assign the whole or any part of the Contract with the prior written approval of the Principal, whose approval shall not be unreasonably withheld or delayed.</i>
5.1	General responsibilities
5.1.1	Replace the words <i>good industry practice</i> with the words Good Industry Practice.
5.2	[REDACTED]
[REDACTED]	[REDACTED]
5.4	Control of employees
5.4.1	Renumber the paragraph immediately under the heading for clause 5.4 as clause 5.4.1
[REDACTED]	[REDACTED]
5.5	Occupancy of Site
5.5.4	Replace clause 5.5.4 with the following: <i>Where the Contractor is required to access property owned by a third party to undertake Contract Works:</i> (a) <i>the Contractor will use reasonable commercial endeavours to arrange access with the property owner at the times and in the manner reasonably necessary to undertake the Contract Works (provided that nothing in this clause requires the Contractor to pay any amount to the third-party for access to that third-party's property or otherwise incur costs);</i> (b) <i>where a third-party refuses to provide such access to the Contractor, the Contractor shall notify the Contract Administrator as soon as practicable and the Principal shall take such steps at its cost as is reasonably necessary to procure access for the Contractor to undertake the Contract Works; and</i> (c) <i>until such time access is obtained, the Contract Administrator shall suspend the relevant part of the Contract Works by notice in writing under clause 6.8, and the Contractor shall not be penalised for any inability or delay in performing the relevant part of the Contract Works.</i>
5.8	Protection of Persons and Property
5.8.7	Add new clause 5.8.7 as follows:

	<i>Without limiting 5.8.3, the Contractor will:</i> (a) <i>as soon as practicable after becoming aware of a Notifiable Event, notify the Principal of the Notifiable Event, and keep the Principal reasonably informed of the steps taken in relation to that Notifiable Event;</i> (b) <i>promptly provide the Principal of any enforcement action taken by the HSWA Regulator in connection with any part of the Contract Works and keep the Principal reasonably informed of the steps taken (whether by the Contractor or the HSWA Regulator) in relation to that enforcement action.</i>
5.14	Compliance with laws and Consents
5.14.1	Add a sentence to the end of 5.14.1 as follows: <i>The Principal will provide the Contractor with a copy of the Consents that apply to the Contract Works prior to the Date of Commencement and any renewed or replacement Consents as soon as practicable after the renewed or replacement Consent has been granted.</i>
	     
5.23	Add new section <i>Performance framework</i>
5.23.1	Add new clause 5.23.1 as follows: <i>In performing the Contract Works, the Contractor shall meet or exceed the applicable Key Result Areas (KRAs) and the Key Performance Indicators (KPIs) set out in appendix 2. The Contractor's performance against the KRAs and the KPIs will be measured as set out in appendix 2.</i>
5.24	Add new section <i>Transition Services</i>
5.24.1	Add new clause 5.24.1 as follows: <i>The Contractor shall perform the Transition Services set out in the Principal's Requirements during the Transition Period and shall be entitled to recover its Costs on a Cost reimbursement basis and in accordance with the Schedule of Prices (Appendix 4) and otherwise, as if the Transition Services were Contract Works being performed under the Contract after the Date of Commencement for the Contract Works.</i>
6.1	Contract administration
6.1.2	Delete the second sentence in 6.1.2.
6.1.3(c)	Delete the last sentence in 6.1.3(c).
6.3	Instructions and decisions
6.3.8	Add new clause 6.3.8 as follows:



**SOUTH WAIRARAPA
DISTRICT COUNCIL**

Kia Reretahi Tātau

Principal's Requirements for Contract C-1281

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Glossary

Term	Definition
CAR	Corridor Access Request
CCTV	Closed Circuit Television
Principal	South Wairarapa District Council
Customer Services	Principal's Customer Service Unit that receives calls from the public and redirect them as appropriate or issue an SR
CAR	Corridor Access Request
CSD	Customer Service Desk
DIA	Department of Internal Affairs
DWQAR	Drinking Water Quality Assurance Rules 2022
DWSNZ	Drinking Water Standards for New Zealand
Emergency works	Taking immediate action when the consequence of no action may include: • Damage to property • Threat to life • Health risk or hazard • Severe impact on water dependent customers • High volume of water loss • Significant inconvenience to the public • Loss of supply / service to customers.
FAC	Free Available Chlorine
HSQE	Health, safety, quality and environment
KPI	Key Performance Indicator
KRA	Key Result Area
LWDW	Local Water Done Well
M&E	Mechanical and Electrical
MagiQ	Request For Service Reporting Tool
NTC	Notice to Contractor
NTCA	Notice to Contract Administrator
NZS4404:2010	NZS 4404:2010 (Land Development and Subdivision Infrastructure), including standard drawings
NZUAG	New Zealand Utilities Advisory Group
O & M Manual	Operations and Maintenance Manual
P&G	Preliminaries and General costs
Preventative Maintenance	Completing the regular and routine inspection and maintenance of equipment and Assets, including supplying and applying all consumables, in order to keep the Asset running, performing as intended, and to the extent possible, prevent any costly unplanned downtime from unexpected failure.

Term	Definition
QMP	Quality Management Plan
Reactive works	Completing unplanned maintenance/repairs or asset replacement required to ensure compliance with the service requirements i.e. returning assets to standard operating conditions after poor performance or break-down
Response Time	Has the meaning given to that term in section 3.8.4
SOP	Standard Operating Procedure
SR	Service Request from Principal's Service Request System database
Service Request Form (Response Report)	Record in Principal's Asset Information System that holds information about a maintenance/operational job done against a specific asset
Three Waters	Holistic term for Water, Wastewater, Stormwater
Water Services	Term to include Water, Wastewater, Stormwater services
WSP	Water Safety Plan
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

1 Extent of Contract Works

This Contract relates specifically to the operations and Preventative Maintenance of the Principal's Three Waters reticulation networks, facilities, treatment plants, pump stations and reservoirs.

Outcomes that the Principal is seeking to achieve through this contract are:

- Safe drinking water.
- Resilient and reliable services.
- Compliant discharges.
- Acceptable aesthetics of drinking water including taste, odour and colour.
- Value for money to the ratepayer.
- Improved asset information.
- High levels of customer satisfaction.
- Environmental sustainability through appropriate work practices.
- Prompt reinstatement of services following events.

In providing the services the Contractor is expected to make a material contribution to the achievement of these outcomes.

1.1 Philosophy of service

The Principal is seeking a collaborative partnership for the delivery of its Water Services.

In line with this approach, open discussion between the Contract Administrator, Principal or/and the Principal's Representatives and the Contractor's Representatives will be encouraged, thereby helping to ensure any problems can be overcome with a minimum of delay, to the benefit of the Contractor, Contract Administrator and the community.

The overarching philosophy of the water services contract is to balance the work programmes against service levels within the Principal's budget expectations. By working together (with Principal and other service providers) and sharing responsibilities, the costs of operations, maintenance and renewals can be optimised to reduce the overall costs without compromising public safety, legislative requirements or service levels, identifying and managing risks before they become a problem.

The Contractor will be expected to work alongside the Principal's staff to proactively schedule and manage planned operation and maintenance works as well as managing and delivering minor capital works projects according to an agreed delivery programme.

KRAs will be used to identify areas where aspects of the relationships can be improved by actions of either party in order to lift overall performance and effectiveness. Performance of the Contractor will be measured to ensure achievement of a level of service to the Principal and its customers' satisfaction. The agreed KPIs outlines what is considered to be a level of service that would need to be met in the performance of this contract to achieve these outcomes.

1.2 Our Mission and Vision

The Principal is proud to serve and support this fabulous part of New Zealand with its true ‘mountains to the sea’ experience. South Wairarapa encompasses the three rural towns of Featherston, Greytown and Martinborough, each with their own charm and attributes.

We have a vast area of rural hinterland home to many more small communities, edged by the Remutaka/Tararua Ranges and cradled by kilometers of rugged coastline. Our vision is ‘the best of country living with the community at the heart of everything we do’ and we are working hard to achieve this.

We believe that the Principal should be part of the community it serves and therefore welcome feedback from residents and visitors alike regarding our district and the Principal’s services.

The purpose of the Principal is to enable democratic local decision-making and action by, and on behalf of, communities and to meet the current and future needs of communities for good quality local infrastructure, local public services and performance of regulatory functions in a way that is most cost-effective for households and businesses.

1.3 Assets

In South Wairarapa District, there are presently four public water supply systems serving Featherston and Greytown, Martinborough and Pirinoa and approximately 4,215 serviced and 251 serviceable water connections.

The tables below provide an overview of the Assets included in the Principal’s water, wastewater and stormwater facilities and networks.

Table 1: Assets

	Facilities	Networks	None of, but may be built and added to scope in contract term
Water	Bores/Intakes/Head-works	Gravity mains	
	Raw water mains	Service connections	Booster pump stations
	Treatment plants	Flow meters	Bulk water supply points
	Reservoirs/Tanks	Valves	
	Rising mains	Hydrants	
Wastewater	Pump stations	Water races	
	Rising mains	Gravity mains	Septage facility
	Treatment plants	Manholes	Outfalls
	Discharge structures		Wetlands
Stormwater	Gravity mains		
	Open drains/Channels		
	Inlet/outlet structures		

Three main sources supply water to the urban populations of Featherston, Greytown and Martinborough. The Principal owns a number of structures and components supplying water as shown below.

Table 2: Water Supply Assets by Class

Water Supply Asset Class	Quantity
Pipes	161,602 m
Valves	1,041
Hydrants	609
Reservoirs	11
Treatment plants	5

In South Wairarapa district, there are presently four wastewater systems, serving the urban areas of Featherston, Martinborough, Greytown and Lake Ferry. This includes servicing approximately 4,365 serviced pans and 286 properties that are serviceable. The breakdown by asset class is summarised in the table below.

Table 3: Wastewater Supply Assets by Class

Wastewater Supply Asset Class	Quantity
Pipes	81,651 m
Pump stations	15
Treatment plants	5

Access to the Principal's GIS maps showing the extent of water, wastewater and stormwater services are available through the Principal's public GIS viewer.

<https://gis.mstn.govt.nz/WairarapaMaps/>

Indicative quantities are given in the table below (inclusive of reticulation networks):

Table 4: Water Services Assets

Asset type	Asset type	Units	Quantity
Water Supply	Pipes	m	161,602
	Valves	each	1,041
	Hydrant	each	609
	Reservoirs	each	11
	Treatment Plant	each	5
Wastewater	Pipes	m	81,651

Asset type	Asset type	Units	Quantity
Stormwater	Pump Station	each	15
	Treatment Plant	each	4
	Pipes	m	17,925
	Channels	m	20,151

Table 5: Waters network

Community/ Scheme	Resident Population	Water		Sewerage		Stormwater*
		Treatment	Network	Treatment	Network	Network
Featherston	2500	Y**	Y	Y	Y	N
Greytown	1800	Y**	Y	Y	Y	Y*
Lake Ferry	50	N	N	Y	Y***	N
Martinborough	1200	Y	Y	Y	Y	N
Pirinoa	40	Y	Y	N	N	N
Longwood Race	N/A	N	Y	N	N	Y*
Moroa Race	N/A	N	Y	N	N	N

* There are no stormwater networks recognized under the Dept of Internal Affairs definition. However the Moroa Water race passes through Greytown and receives stormwater.

** The Waiohine WTP near Greytown mostly serves Featherston. The Memorial Park WTP in Greytown serves Greytown only.

*** The Lake Ferry scheme includes on-site septic tanks for treatment. Pumping out and inspecting the private septic tanks when required, and maintaining the pumped septic tanks and level switches, is required.

The Contractor should be aware that many schemes are affected by increases in demand over summer due to weather and visitors and this should be factored into work programmes and priced appropriately.

1.4 Essential services

The Contract Work to be performed under this Contract is deemed to be an *essential service* for the purposes of the Employment Relations Act 2000.

1.5 Local Water Done Well

LWDW is the Government's plan to address New Zealand's water infrastructure challenges. It recognises the importance of local decision making and flexibility for communities and Councils to determine how their water services will be delivered in the future whilst ensuring a strong emphasis on meeting economic, environmental and water quality regulatory requirements.

Key components of LWDW are:

- Fit-for-purpose service delivery models and financing tools

- Ensuring water services are financially sustainable
- Introducing greater central government oversight, economic and quality regulation.

The term of this contract will likely extend beyond the establishment of a new entity to manage Three Waters on the Principal's behalf. It is the intention that this contract would be novated to the new entity.

In the event of any change to delivery of the Water Services as a result of legislative and regulatory mandates and / or LWDW which may materially affect the Water Services and/or the Contractor's rights under this Contract, the Principal shall work with the Contractor to ensure that the Contractor's rights under this Contract remain unaffected.

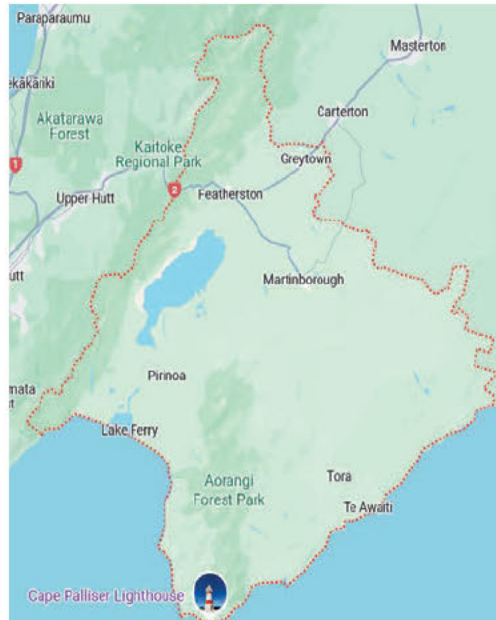
1.5.1 Transition services

Without limiting section 1.3, the Contract Works also include the following Transition Services:

- contract implementation and transition:
 - preparing account set up plan and programme;
 - agree the form of Site-Specific Safety Plan;
 - agreeing a health and safety plan with the Principal;
 - agreeing a relationship management plan including meetings and reporting requirements;
 - agreeing the performance framework (**KPI and KRA**);
 - agreeing branding; and
 - agree detailed pricing models and responsibilities (and who pays for what) including establishing and agreeing how the Contractor's Net Cost, Margin, and P&G are set by the Contractor.
- develop an Implementation Plan to achieve a smooth transition and continuity of work programmes from the date of commencement.
 - planned maintenance schedules;
 - Forward Works Programme and align to the Principal's approved budgets;
 - induction training for key personnel;
 - placement of Insurances required by the Contract;
 - confirmation of Subcontractors and suppliers;
 - establishing and trialing compatible IT protocols;
 - establishment of offices, yards and inventories/stockpiles;
 - agreeing of key personnel;
 - conformation of pricing models;
 - agreeing after hours work protocols, rosters and contacts; and
 - developing and submitting to the Contract Administrator a Traffic Management Plan and a QMP that must be implemented from commencement of the Contract Works (other than Contract Works that are Transition Services).
- Transfer of information from the Principal's previous Three Waters contractor from its system (Maximo). The Principal acknowledges and agrees that the Contractor will not be responsible for the accuracy of the data received from the Principal's previous contractor and if and to the extent that the information received is materially inaccurate, or inaccurate in a material way in relation to the Assets or any particular Asset, the Contractor will be entitled to a Variation.

- The map below shows the geographic extent of the Contract Area covered under this Contract, noting that the Scope of Services is restricted to the settlements of Greytown, Featherston, Martinborough, Pirinoa and Lake Ferry and the water race systems:

Figure 1



1.5.2 Scope of Contractor's Responsibilities

Table 6: Outline of Contractor responsibilities

#	Contractor's Responsibilities	Comments
Asset Management		
1	Manage Asset Data Base (Assetfinda) and including as-build drawings database and location data	
2	Customer management Attend to SRs (including afterhours) Disputes management Obtain CAR's Corridor Access Customer notifications Water permits - including bulk water takes Critical customer care	Principal to maintain CSD and after-hours call centre. Principal to use social media and local newspapers for public notifications

#	Contractor's Responsibilities	Comments
3	GIS Mapping	Contractor to use best endeavors to keep GIS Mapping systems up to date with current data. Principal to own, Data, Information and Analytics
4		
Emergency Management		
5	Civil Defence Planning Emergency Response Significant rainfall event	Stands up roles in civil emergency Work with emergency management team First responder Principal as lifelines roles Principal is primary contact for FENZ - when required to boost pressure Contractor would have operational knowledge of how to do.
Contract Management		
6	General Contract Management: - meetings - relationship - reporting - ad hoc attendance at the Principal's meetings and CE meetings manage sub-contractors including H&S	
Regulatory Compliance Audit advice		
7	Records management & Reporting - Statutory Reporting to Greater Wellington Regional Council / Taumata Arowai / Department of Internal Affairs	Contractor to assist Principal to meet its reporting obligations.

#	Contractor's Responsibilities	Comments
8	Water Supply Demand Management (administering water restrictions)	Contractor would provide assistance and base information Principal to manage public comms

Service Delivery

9	Network Maintenance (including out of working hours response to service requests and leak detection)	
10		
11		
14		

#	Contractor's Responsibilities	Comments
12	Network Operation maintenance and Planning - Service Delivery - including supplying materials, monitoring and responding to control systems including SCADA Reactive Renewals	Jointly develop planned maintenance programme Emergency matters will require Principal and Contractor input – Contractor to have a supporting role to assist Principal to consider options and make decisions
13	Water Races - operation and maintenance	Landowners to maintain. Contractor does some minor maintenance as ambassador for the Principal.
14	WTP Operation and maintenance - including monitoring and responding to control systems including SCADA	
15	WWTP Operation and maintenance - including monitoring and responding to control systems including SCADA	

In respect of the Principal's Assets within the Contract Area as more particularly set out in the Schedule of Prices and these Requirements. The Contract Works may also include capex works to renew and/or replace Assets from time to time.

The Contractor is required to prepare and submit to the Contract Administrator its proposed programme for Preventative Maintenance in accordance with the terms of the Contract. Once approved, no further instruction from the Contract Administrator is required for the Contractor to undertake Preventative Maintenance. Unprogrammed or Reactive works and capex work will be instructed by the Contract Administrator from time to time. The Contractor may undertake Emergency Work at any time, provided that the Contractor notifies the Contract Administrator as soon as practicable after commencing the Emergency Work.

The Contractor will perform the Contract Works on a 24 hour/7 day per week basis for Emergency Work and otherwise during normal business hours for operations, Preventative Maintenance and Reactive work.

1.5.3 Scope of Principal's responsibilities with Contractor's Input

Table 7: Outline Principal's Responsibilities

#	Principal's Responsibilities	Comments
	Asset Management	
16	Asset Management Planning and Investment - Capital programme investment planning/ modelling, project design, procurement and delivery	Contractor to supply data and input
15		

#	Principal's Responsibilities	Comments
18	Community and Stakeholder engagement - including iwi	Contractor to supply data
19	Growth Planning	Contractor to supply data
20	Modelling	Contractor to supply data
21	Network Operation and Planning - Asset Manager - Asset Management Plan, Maintenance and management	Decision Maker Longer term solutions With day-to-day input from delivery team
22	Technical Advice	Provided by in-house or consultant if required Contractor consulted if required
23	Third party damage	Provided by in-house or consultant if required Contractor consulted if required

#	Principal's Responsibilities	Comments
24	Water Services Act Obligations & Management Water Safety Plan Source Water Risk Management Plan Backflow Prevention	The Principal is responsible for ensuring that the Contractor has all necessary information, approvals, and resources required to meet its obligations under the Water Services Act. This includes providing timely access to capital upgrades, Asset improvements, or operational changes that are required for the Contractor to Operate and maintain Assets in accordance Consent conditions the Water Services Act.
25	Land development Pre-application advice Resource consent application advice Engineering Approval for three water infrastructure New connections Inspections and advice on 223/224s	Will need updates 5 Yearly ▪ Contractor to supply data ▪ Contractor to support decision maker ▪ Contractor accepts the Asset coming on-stream ▪ Principal considers capacity effects on the network and plant with Contractor's input.
Capital Projects		
26	Capital Programme Delivery ▪ Design ▪ Procurement and tendering ▪ Contract management	▪ Principal to manage these projects ▪ Contractor to supply data
27	Capital Renewal Programme Delivery: ▪ Design ▪ Procurement and tendering ▪ Contract Management	▪ Principal to manage these projects
Communications		
28	Community Education	▪ Part of Principals comms plan ▪ Data driven - capacity and demand ▪ Includes water resilience

#	Principal's Responsibilities	Comments
29	LGOIMA responses	Principal supported by Contractor supplying data
30	Water Services Bylaws - monitoring of appropriateness and effectiveness	- Contractor to provide assistance and base information - Principal to monitor bylaws
Data/Systems		
31	Operational Technology / Control Systems / SCADA/Data	- SCADA is Abbey Systems, will revert back to Principal. - Principal owned hardware - Principal in-house IT support - SLA with AFI for automation support.
Financial Planning		
32	Input into LTP, AP	Contractor to supply data
Other		
33	Dams Safety assurance/ compliance Engagement with regulator preparing safety plans / emergency management	
34	Power Contracts	
35	Property management	- Sub Leases for gliding club, farmer who leases in Martinborough and Grey town and Featherston (mows and crops on land disposal field) - Mowing grass, weed spraying, - Land Access leases for SCADA
36	Trade Waste management - Manage grease traps and other trade waste	
Regulatory Compliance, Audit		
37	Resource consent management - engineering approvals for 3 Waters Infrastructure	
38	Resource consent renewal and management (reporting)	Principal
39	Strategic and policy advice - bylaw management	Principal
Service Delivery		
40	Meter reading	Principal

#	Principal's Responsibilities	Comments
41	Septic tank management in Lake Ferry	- Principal to manage the acceptance of septic waste tanks Effluent goes into WWTP - the Principal manages the pump-outs as required Hotel and campground have own pumping stations

The Contract is a cost reimbursement Contract. The Contractor shall be reimbursed for its Net Costs to perform the Contract Works in accordance with the rates set out in the Schedule of Prices, plus an allowance for Margin and an allowance for P&G.

Except for Margin and P&G, the rates in the Schedule of Prices are fully inclusive of all costs and expenses which may be necessary to complete the relevant item of Contract Work and unless expressly stated otherwise (whether generally or in relation to any item of Contract Work) include allowances for all labour, materials, plant, reinstatement and any other items necessary for satisfactory completion and maintenance of the Contract Works.

Where the Schedule of Prices provides for cost reimbursement on a measure and value basis, the Contractor will be paid for the measured amounts of work done at the rates specified in the Schedule of Prices plus an allowance for Margin and an allowance for P&G.

Items in the Schedule of Prices against which no price is entered shall be deemed to be covered by other rates and prices in the Schedule of Prices.

All rates specified in the Schedule of Prices are exclusive of GST and GST is payable on the rates specified at the same time and in the same manner as the supply to which the GST relates.

The Principal has a fixed budget, and the capex work will only be undertaken to the extent the budget allows and then only on specific contractual arrangements being agreed between the Contractor and the Principal in respect of any particular works.

1.6 Value Cap on reactive works

Except in the event of Emergency Works, any reactive Contract Works that are expected to have a value of more than \$10,000 plus GST per task and/or a \$50,000 plus GST in aggregate in a calendar month, must be approved by the Contract Administrator prior to the Contractor commencing the relevant work.

1.7 Provisional Items

The contract will include a component of unscheduled work which shall be treated as Provisional Items, for which Provisional Sums have been included in the Schedule of Prices. Pursuant to clause 9.8 such works shall only be undertaken on the Instruction of the Contract Administrator.

The inclusion of any Provisional Item in the Schedule of Prices does not confer on the Contractor the right to perform the work to which the item relates nor to have the work performed by a subcontractor.

1.8 Dayworks

For the purposes of clause 9.4 of the Contract, the Schedule of Prices must contain a rate for Daywork. The Contractor shall be entitled to review its rates for Daywork on an annual basis.

The Contractor shall keep an accurate record of all work completed on a Dayworks basis, and Daywork records shall be made available to the Contract Administrator on request.

1.9 Labour rates

Where the rates for Daywork include daily or hourly rates for labour, the rates shall be inclusive of all allowances paid to the relevant employees for holiday pay, and include any supervision costs, travelling time, transport and the supply and use of small tools.

The hours of labour for Dayworks will be determined from the time the labour departs for the site, to execute the particular item of work, until the time of departure from the Site, but excluding meal breaks, rest period, downtime and travelling time. Only the time that labour is directly engaged in work will be claimable. Any supervision time by a supervisor also engaged in the work will be claimable and paid for at the applicable labour rate for that level of supervisor.

Where no rate is provided for a particular type of labour in the Schedule of Prices, the rates shall be agreed with the Contract Administrator.

The cost of small tools and plant (such as drills, chainsaws, levels, concrete vibrators, pumps, water blasters, root cutters, drain rods, etc) normally used on water services works shall be included in the Dayworks labour rates.

1.10 Materials

The Contractor shall be entitled to be paid the Net Cost for Materials, plus an allowance for Profit and an allowance for P&G on Materials. The allowance for P&G is to cover store-keeping, handling in stores, clerical work and Contractor's overheads.

The Net Cost of materials shall be the actual cost to the Contractor of the Materials inclusive of all trade discounts and freight or other costs to deliver the Materials to the Site or the Contractors Store.

The Contractor is responsible for maintaining day-to-day operational compliance with the Water Services Act obligations and management, and for ensuring the efficient use of Materials in performing the Contract Works.

1.11 Plant and Equipment

The Contractor shall be paid the hourly rate specified for Plant in the Schedule of Prices, plus an allowance for Margin and an allowance for P&G. Otherwise, the hourly rates quoted for Plant in the Schedule of Prices shall include transport to and from the Site and all consumables including fuel and lubrication, and maintenance costs.

Hourly rates for Plant will only be paid while Plant is actually working and unless expressly agreed otherwise, the Contractor may not claim for standby or downtime.

If, in the opinion of the Contract Administrator, the use of specialist tools and equipment is necessary for the execution of any work to be carried out on a Dayworks basis, the rate for the specialist tools and equipment shall be agreed with the Contract Administrator.

1.12 Rates for Subcontractors

Rates specified in the Schedule of Prices for subcontractors engaged by the Contractor will be inclusive of allowances for Margin and P&G.

1.13 Monthly Claims

The Contractor shall submit payment claims in accordance with Section 12 of the General Conditions of Contract monthly in arrears for work completed in the previous month and be certified as complete by the Contractor's Quality Manager.

Work shall not be considered complete, and no payment claim may be submitted for that work unless all reporting, as-built, or other required information for that work has been received by the Contract Administrator. However, nothing in this provision prevents the Contractor submitting progress payment claims for work in progress where progress payments have been agreed between the Contractor and the Contract Administrator.

Where the Principal (acting reasonably) disputes the amount claimed in any payment claim, the Principal may require the Contractor to provide access to the Contractor's systems to the Independent Certifier, to enable the Independent Certifier to verify the accuracy of any payment claim.

1.14 Third Party Damage

When the Contractor is repairing damage caused by third parties, the Contractor shall use reasonable commercial endeavours to obtain information as to the cause of the damage and the identity of the party who caused the damage. The Contractor shall provide a report to the Contract Administrator with photos of third-party damage and repairs required to support the Contractor's payment claim.

2 Confidentiality

The Principal may request that the Contractor provide the Principal with information to enable the Principal to verify the Contractor's:

- staff costs, including reimbursement, training, leave and accrued leave costs,
- process on how Materials suppliers will be selected to ensure the most cost-effective/value outcome on Materials for the Principal, and
- payment claims for reimbursement for acquisition of any required hardware and/or software.

The Principal may also require the Contractor to provide access to the Contractor's systems to the Independent Certifier to verify the accuracy of any payment claim as contemplated under section 1.13 above.

The Principal agrees to:

- keep all such information, and any other information relating to the tender and the Contractor's pricing information (**Confidential Information**) strictly confidential and only use it for the purpose for which it was made available, and not for any other purpose; and
- only disclose the information to those of its personnel who have a need to know, or to its professional advisers who owe it a duty of confidentiality on terms no less stringent than those imposed on the Principal by this section.

Where the Principal is legally bound to disclose Confidential Information, the Principal shall advise the Contractor of the requirement to disclose the Confidential Information, and the extent to which it intends to disclose the Confidential Information and provide the Contractor with an opportunity to comment on the obligation to disclose and the extent of the disclosure, and to seek interlocutory or other relief against the proposed disclosure.

The Principal will procure that the Independent Certifier enters into a confidentiality undertaking for the benefit of the Contractor on terms that are at least as stringent as this section.

3 Preliminaries and General

3.1 Meetings

The Principal, Contractor and Contract Administrator will meet in accordance with the following schedule.

Table 1: Contract Meeting Schedule

Meeting	Detail
Quarterly Governance Partnership meetings	High level review of the contract: Performance Are we meeting our KRAs? Innovation and new initiatives that can improve delivery Attendees to include senior management with others as appropriate.
Monthly management meetings	Review Contract Works programme, progress and performance, including the Monthly Report. Discuss issues or potential improvements under the Contract. Monthly meetings will be attended by the Contract Administrator (Water Services and Operations Team Leader), Contractor's Representative, and any other person the parties consider appropriate.

Fortnightly O&M meetings	Focus on progress against programme / compliance / issues Attended by the Contract Administrator, Operations Team Leader and Treatment Plant Engineer, Contractor's Representative and senior operational team and others as appropriate.
Operational meetings	Other meetings held as and when required to discuss particular aspects of the works / Contract.
Annual Programming meeting	To develop the annual programme of works (minor capex) Attended by Contract Administrator, Contractor's Representatives and any other person the parties consider appropriate.

The meetings will be held at a location advised by the Contract Administrator. The Contract Administrator will prepare an agenda and arrange to take and circulate the minutes of each meeting.

Additional meetings will be held as requested by the Contract Administrator or the Contractor to assist with the day-to-day operation of the schemes or specific maintenance issues.

3.2 Reporting

The Contractor shall provide the following reports at the time indicated in table 9.

The reports shall be concise, relevant and meaningful. Reports shall be accurate and contain as a minimum, the detail specified in table 9 below and otherwise be in the form agreed between the Contractor and the Contract Administrator.

Table 9: Reporting Requirements

Report	Detail	Timeline
Transition Report	The Contractor shall provide an initial report which details the Contractor's proposals to establish suitable resources prior to the starting date of this Contract. This report shall include but is not limited to details of the Contractor's: • Base and depots • Key personnel to be involved in the Contract Works • Communications and other systems • Resources and specialist equipment The report shall include an explanation to demonstrate how the Contractor will: • achieve Contract goals & objectives • transfer data to the Principal's systems	Within two weeks of Contract being awarded

Report	Detail	Timeline
	• achieve reporting requirements • Access and use SCADA (“view only” data) • Provide notices under the Contract. and the Contractor’s expectations of the Contract Administrator and/or Independent Certifier (to the extent not already stated in the Contract) and the format and content of the meetings proposed in table 8.	
Site visit records	A record of all Site inspections and audits	To be available upon request from the Contract Administrator
Service Request Forms	A completed Service Request form for Reactive work on any Asset, including for faults identified by the Contractor and requiring repair as Preventative Maintenance. The minimum information to be included in a completed Service Request is: • Location diagram with asset number • Cause of fault • Photos • Details of contact with customer (if any) • Updated asset information as appropriate	To be submitted upon final completion of the works with interim updates as appropriate for staged works.
Monthly Report	The Contractor shall submit a monthly report to the Contract Administrator containing the following information from the preceding month: • Summary of health & safety, quality & environment performance against the relevant plans • Summary of customer feedback • summary of the Contractor’s performance against KPIs, KRAs, Response Times, these Requirements, and preventative maintenance programme and actions to address any non-compliance or shortcomings • Summary measurement of monthly performance and • High level overview of month’s operations and any key issues identified and response or recommendation to those issues (including any re-work) • High level review of progress against capex programme • Minor capex programme for the next three months • Review any high risk NTE’s & NTC’s	5th working day of each calendar month (for the immediately preceding calendar month)

Report	Detail	Timeline
	• SCADA alarms report including alarms received, and the cause, response and action taken • details of treatment chemicals supplied to each plant for the month and a cumulative total for the year • Highlights of any innovation, training, staff movements • Supporting information, such as the Contractor's specific job data shall be made available upon request.	
Monthly Payment claim	All claims shall be consistent with the pricing model and shall include details of: • All work completed to date, including sub-contractors and Reactive work carried out in the previous month • Sufficient evidence to support claims, including lump sum items • detailed breakdown against all key activities with all personnel resource listed with hours, and plant and materials detailed. • %s should be clearly identified. • Financial summary including: ○ Annual contract value ○ Annual budget and variations approved ○ Value of work completed to date ○ Value of work certified to date ○ Value of outstanding work ○ Value of work in progress ○ Projected monthly expenditure Breakdown of all lump sum items (if any)). Claims for payment will not be processed unless the specified reporting requirements, including provision of as- built information (if required), have been completed. Therefore, a failure to report as specified will constitute an incomplete claim. Incomplete claims can and will NOT be processed.	5th working day of the month
Two weekly reports	The Contractor shall prepare a 2-weekly report to inform the 2-weekly meetings addressing, as a minimum: • health and safety summary with issues / new hazards identified • overview of previous 2 weeks' operations and any key issues identified and response to those issues (including any re-work) • Minor capex and planned maintenance programme for the following 2 weeks, including any planned shutdowns • Water safety issues	24hrs prior to 2-weekly meeting

Report	Detail	Timeline
	• Status of Service Requests • Summary report of any wastewater overflows • Details of any unplanned/unbudgeted expenditure	
Wastewater overflows	Incident Report to include • Date and location of overflow • Estimate of volume of overflow and receiving environment • Overflow details (including cause, prevention, clean- up)	Within 24 hours of the overflow occurring
Incident report	Report to include • Date and location of incident • Incident summary including cause and resolution • Parties involved • Timeline of events and actions taken • Follow up actions • Prevention measures	Within 24 hours of the incident occurring or as agreed with the Contract Administrator on a case-by-case basis
Handover report	Handover report to be provided at end of contract as anticipated in section 3.10.1.	Within one month of completion of contract.
Annual Report	Annual Report shall be submitted to the Contract Administrator recording as a minimum: • Any agreed revisions of the QMP • Contractor's staff training programme	31 July each year

Report	Detail	Timeline
	An annual summary for the immediately preceding year of: • all health and safety matters arising under the Contract • Contract Works completed during the year • Any Asset validations completed during the year • Any calibrations on Assets completed during the year • stock levels of Materials and consumables at the end of the year • work outstanding, including incomplete work, observations/rolling list and re-work • annual performance against KPIs, KRAs, Response Times • a summary of any incident reports • Review of communication procedures	
Site Specific Safety Plan review	Annual review of the Site Specific Safety Plan.	31 July each year
QMP review	Formal reviews of the QMP at no less than 12 monthly intervals, together with an amended copy of the Plan (if any changes were made) to the Contract Administrator, and a report listing the amendments made, by 31 July each year. The review will address in particular those areas where the Contractor has not complied with the performance criteria of the Contract Documents.	31 July each year

3.3 Communications

3.3.1 Generally

Within the first month of the Contract the Contractor and the Principal shall agree and document the communication procedures that shall apply to this Contract. The communication procedures shall be reviewed at least annually by the Contractor and any improvements or changes to the communication procedures shall be requested by the Contractor as part of its annual report.

3.3.2 Between the Principal and Contractor

The Principal and the Contractor agree that open, effective and efficient communication between staff of the Principal and the Contractor is essential to the success of the Contract.

The lines of communication between the Principal and the Contractor shall be the most appropriate to maximise efficiency while maintaining openness and ensuring key personnel are informed of issues and decisions to do with the operation and management of the Contract.

The Contract Administrator and the Contractor's Representative will deal with the management of the Contract on a day to day basis. Any issues that cannot be resolved will be escalated to the independent Certifier in accordance with the Contract.

With other Contractors / Service Provider

The Contractor will coordinate with other contractors and service providers engaged by the Principal to deliver Water Services to the community. Other contractors and service providers may include:

- Capital works contractors
- Grounds and irrigation fields contractor
- Sampling and monitoring service provider
- Mechanical service providers.

3.3.3 Field communications

The Contractor shall be available twenty-four (24) hours seven (7) days a week to ensure that it can receive urgent communications under the Contract and attend Emergency Work promptly.

Communications with General Public

The Contractor may be required to notify members of the public of upcoming works and/or to seek access to the private property to perform Contract Works from time to time. In communicating with the public, the Contractor may:

- Advise the public of work being undertaken
- Notify the public of water shutdowns
- Advise the public to contact the Principal,

But must not:

- Speculate as to what has caused a problem
- Make disparaging statements about the Principal or its Assets
- Give an opinion on the condition or management of the Principal's Assets or
- Provide operational information that the Principal has not already made public.

Any enquiries from the public shall be directed to the Contractor Administrator.

3.3.4 Statements to the Media

The Contractor shall not make statements to the media, regarding policy or contractual matters. All queries from these media shall be directed to the Contract Administrator.

The Principal will acknowledge good performance by the Contractor in its statements to the public and the media and agrees that the Contractor may reflect the same in its corporate communications.



3.4 Quality Assurance and Environmental Management

3.4.1 General

The Contractor shall ensure all aspects of the Contract Works provided by it or its subcontractors under the Contract are under the control of an ISO9001 certified quality management system or equivalent.

The Contractor shall provide all supervision required at all levels, for the completion of the Contract Works in accordance with the Requirements and Good Industry Practice.

3.4.2 Quality Management Plan

The Contractor must prepare a QMP that details the processes, quality assurance measures and reporting to be used by the Contractor in performing the Contract Works and reflecting Good Industry Practice and environmental best practice.

The Contractor will review and (if appropriate) update the QMP on an annual basis prior to 31 July each year of the Contract term (including the first year of the Contract term). The QMP (subject to section 3.4.5) and any changes to the QMP must be submitted to the Contract Administrator for approval and acceptance. The Contract Administrator may (acting reasonably) provide the Contractor with feedback on the QMP and the Contractor (also acting reasonably) will take that feedback into consideration and make such amendments to QMP as it considers necessary or appropriate to reflect that feedback. The Contractor must at all times perform the Contract Works in accordance with QMP.

The QMP must identify all critical aspects of the Contract Works and establish procedures for:

- routine inspections including checklists and reporting of faults.
- planning (including resourcing), programming and delivery and management of specified works.
- self-monitoring and audit of the Contractor's own work standards and identifying and rectifying non-compliances.
- gathering and recording as-built details and submitting to the Principal
- identifying and mitigating risks.
- validating and calibrating monitoring and disinfection equipment
- A Hygiene Code of Practice including but not limited to:
 - Personal hygiene
 - Disinfection during repairs
 - Repair risk assessment
 - Procedures to minimise risk/records of risk assessment
 - Procedures to minimise the entry of contamination into the water supply
- managing and monitoring sub-contractors
- Personal training and development.

and include:

- a schedule of proposed chemical products and associated contingency plans for spillage
- a contingency plan for maintaining standards of service in the event of staff, subcontractor, vehicle or other resource deficiencies or unplanned interruptions to the Contract Works (e.g. weather),

- a copy of the Contractor's quality and environmental policies.

The Contract Administrator may from time to time (but not more than once in any 12-month period) undertake a formal audit of the Contractor's QMP. The Contractor shall be given a minimum of 24 hours' notice of any such audits.

Nothing in the Contractor's QMP shall take precedence over any requirement of the Contract nor does the QMP or any approval of the QMP by the Contract Administrator or relieve the Contractor of any of its obligations under the Contract.

3.4.3 Environmental Management

The Principal has obligations under the Resource Management Act 1991 (and its amendments) to ensure that the Contractor undertakes all work in an environmentally responsible manner.

The Principal will provide copies of its Consents that may impact on the Contractor carrying out their obligations under this Contract (refer to section 4.4 for a list of current Consents).

The Contractor shall include, as part of their QMP, an Environmental Management Plan that sets out the Contractor's environmental policies, the environmental obligations and practices that must be followed. The Environmental Management Plan shall be reviewed and (if necessary) updated at the same time and in the same manner as the QMP.

The Environmental Management Plan shall address the steps the Contractor will take to prevent and mitigate the effects of its activities on the environment, including:

- control of runoff from earthworks, channels, berms, flumes, etc. in accordance with Good Industry Practice and Consents;
- control noise and dust control from Contract Works;
- disposal of waste material arising from Contract Works;
- methods to prevent spillage of wastewater onto the roadway outside the immediate vicinity of the Contract Works;
- Protection of waterways from oil / fuel spillage and leakage during Contract Works; and
- Wash down of concrete mixing and delivery trucks.

3.4.4 Setting Out and Survey Control

The Contractor shall engage an experienced Surveyor using appropriate industry (**Survey**) standards or a Registered Surveyor for all survey, as built and setting out requirements, as appropriate. The Contractor shall provide the Contract Administrator with sufficient documentation that confirms that the works have been set out in accordance with the Contract and the QMP.

3.4.5 As-Built – Quality Assurance

Where the Contractor is required to provide as-built documentation and the Contractor was not responsible for the design of the relevant Contract Works, the Contractor will provide the Principal with an estimate of its Costs to prepare the as-built documents for the relevant Contract Works. The Principal will promptly confirm in writing whether or not it wishes to proceed and have the Contractor prepare as-built documents. For clarity, where the Principal has not requested or approved the likely Cost of the as-built documentation in accordance with this

section, the Contractor is not required to provide as-built documentation, unless it has designed the works.

Requirements to be agreed between the Contractor and Principal Administrator

Including but not limited to:

- The Contractor is responsible for all survey and recording requirements
- The as-built records must be signed and dated by the Contractor
- The Contractor shall provide the Contract Administrator with sufficient documentation (including where appropriate, photographs) to demonstrate that the as-built information meets these Requirements and the QMP
- The survey co-ordinates shall be plotted to the scale of the construction drawings so the plot can be overlaid to ensure correctness
- The accuracy of the dimensions recorded shall not exceed $\pm 100\text{mm}$ Horizontally and $\pm 10\text{mm}$ Vertically from the Site datum

An as-built inventory for work performed shall be prepared and submitted to the Principal in suitable electronic form (preferably Microsoft), listing each individual Asset for which as-builts have been provided under the Contract. The as-built inventory shall be prepared in sufficient detail to enable the Principal to locate, operate, maintain, adjust and reassemble the Assets provided under the Contract.

Health and Safety

3.4.6 General

The Contractor and the Principal are committed to a high standard of health and safety practice and compliance with the Health and Safety at Work Act 2015.

The Contractor, and subcontractors engaged by the Contractor on the Contract Works must have a valid external safety accreditation, either:

- SiteWise (green or gold),
- Totika (Performing or Developing) or
- Prequal (Impac)

with a score of 75% or greater on the Contractor's health and safety systems assessment in either framework.

The Contractor shall be responsible for the health and safety of all employees, subcontractors and visitors at the Sites and other places of work under the Contract. The Contractor shall proactively undertake hazard identification to always facilitate the provision of a safe working environment and conduct health and safety inductions for all personnel who participate in the provision of Contract Works under the Contract.

The Contractor shall provide the Contract Administrator with a copy of any report which the Contractor is required to make to a public authority on any incident or accident in connection with the Contract Works that results in serious harm to any person.

3.4.7 Site Specific Safety Plan

The Contractor shall prepare a Site-Specific Safety Plan and submit the Site-Specific Safety Plan to the Contract Administrator for approval before commencing the Contract Work (other than Transition Services).

The Contractor shall review and if appropriate amend the Site-Specific Safety Plan at least annually and where amended, provide a copy of the amended Site-Specific Safety Plan to the Contract Administrator on or before 31 July every year during the term of the Contract. The Contractor shall ensure that all personnel undertaking Contract Work are adequately informed of any amendments made to the Site-Specific Safety Plan.

The Site-Specific Safety Plan shall detail the way in which the Contractor will meet its obligations under the Health and Safety at Work Act 2015 and shall include:

- The Contractor's health and safety policy, including management accountabilities for health and safety at work
- Procedures for dealing with emergencies that may arise while employees are at work
- Procedures for identifying hazards, assessing and managing risks arising from the hazard, and for implementing appropriate control measures and monitoring their continued effectiveness
- Induction of staff and sub-contractors
- Procedures for monitoring health and safety performance
- Procedures for monitoring the health of employees where they are exposed to health hazards at work
- Procedures for monitoring the welfare of employees
- Procedures for recording and investigation of work injuries and subsequent revision of the hazard assessments and risk avoidance or control measures
- Procedures for training in the proper use of work equipment and plant and substances
- Procedures for inspection and maintenance of mobile plant, machinery, equipment, tools etc.
- Procedures for managing and risk
 - In confined space entry
 - For lone and isolated workers
 - In excavation and trenching
 - When working at heights
 - When working with hazardous substances and materials.
 - When working in and above water
- Provision of protective equipment that is appropriate to the risks employees and others may be exposed to while at work
- Safety management practices and accountabilities
- Safety personnel, including safety manager, identifying responsibilities and contact details
- Procedure for supervision of employees and sub-contractors,
- the Contractors requirements for testing, inoculation and stand-down times following illness, and
- Such other health and safety management proposals as the Contractor considers appropriate or as may be required by law.

Nothing in the Site-Specific Plan shall take precedence over any requirement of the Contract and no approval of the Site-Specific Safety Plan by the Contract Administrator relieves the Contractor of any of its obligations under the Contract.

3.4.8 Working on water and wastewater networks

3.4.8.1 *Health and Communicable Water Borne Diseases*

The Contractor acknowledges that it is essential for public health and the health and well-being of the Contractor's personnel and subcontractors that special attention is given to diseases that are communicable by water, including:

These include:

- Giardia
- Cryptosporidium
- Cholera
- Shigella
- Hepatitis A
- Hepatitis B
- Polio
- Typhoid
- Tetanus
- Leptospirosis

The Contractor shall be responsible for all Costs associated with appropriate immunisation of the Contractor's personnel and all other Costs associated with working on water supply Assets in connection with the prevention of the spread of communicable water borne disease (other than immunisation Costs for Secondees).

The Contractor shall:

- take all practicable steps to ensure that the public health of the community is not put at risk through unhygienic work practices or cross contamination, including implementing work practices to eliminate or (where elimination is not possible) minimise the risk of cross contamination, and
- ensure that its personnel and all subcontractors engaged in the Contract Works are aware:
 - o of the risks of transmission of water borne disease and take all practicable steps to prevent being infected or spreading contamination through contact with wastewater
 - o that a high standard of personal hygiene and health is always required. Episodes of gastrointestinal illness shall preclude individual involvement in the works.

The Contract Administrator may require the Contractor to provide reasonable evidence of testing of personnel and subcontractors following any stand-down due to illness and reserves the right to prevent any person from working on the water supply if it is suspected that the person is still infected with a potentially infectious disease.

3.4.8.2 *Hygiene and Cross-Contamination Risk*

The Contractor shall prepare and submit to the Contract Administrator for approval a hygiene code of practice that meets all the requirements of the DWQAR. The Contractor shall carry out regular detailed hygiene inspections and audits of its personnel and practices to ensure the code is being applied and followed. Records of the Contractor's inspections and audits shall be made available to the Principal as part of the Contractor's monthly report.

A hygiene code of practice that meets the requirements of the DWQAR must be submitted to the Principal for review. The Contractor shall carry out regular detailed hygiene inspections

and audits of the code being applied and followed. The inspections and audits shall be recorded, and the records made available to the Contract Administrator as part of the monthly report.

3.4.9 Safety audits and inspections

The Contractor shall carry out regular safety inspections and audits of its personnel and performance to ensure the Site-Specific Safety Plan is being applied and followed.

Records of the Contractor's inspections and audits shall be made available to the Principal as part of the Contractor's monthly report.

An annual health and safety joint observation, inspection and audit will be carried out by Contractor and the Contract Administrator. In addition, the Contract Administrator may without notice carry out spot audits on any aspect of the Contract Works at any time during the Contract term for the purposes of reviewing the Contractor's practices against and adherence to the Site-Specific Safety Plan. In carrying out the observation, inspection and audits contemplated by this section, the Contract Administrator will follow all reasonable health and safety directions of the Contractor, including attending any Site inductions required by the Contractor/

Where, in the opinion of the Contract Administrator (acting reasonably), the Contractor is:

- a) not conducting the work in compliance Site Specific Safety Plan or, relevant legislation; or
- b) conducting the work in such a way as to endanger the health and safety of Contractors' employees or subcontractors, the Principal's employees or the public

the Contract Administrator may suspend all or any part of the Contract Works under 6.8.1 until the Contractor has remedied the failure to the satisfaction of the Contract Administrator.

3.4.10 Health and safety reporting

The Contractor shall include in its monthly report a summary of the following health and safety information from the immediately preceding month:

- Number of new hazards/risks identified and those that have been reviewed
- information about, and reasonable supporting evidence of any health and safety training conducted
- Number of events (injuries, near misses and incidents) reported and key investigation findings:
 - Date and location of incident
 - Details of incident – what happened?
 - Injury details
 - Incident consequences

Any serious or WorkSafe notifiable incidents shall be reported as soon as practicable to the Contract Administrator following the incident.

3.4.11 Personal safety equipment

The Contractor shall ensure that personnel and (where appropriate) the staff of its subcontractors are:

- a) provided with and use appropriate, fit for purpose, protective clothing and equipment that is compliant with relevant Australian/ New Zealand Standards; and
- b) provided with appropriate training and fit testing in how to use, maintain, replace and store protective clothing and equipment

The Contractor shall periodically audit work practices to verify that protective clothing and equipment is being used, maintained, replaced, and stored appropriately.

3.4.12 Specific Activities Requirements

3.4.12.1 *Working in Confined Spaces*

All work involving confined spaces must be undertaken in accordance with AS 2865.2009 Confined Spaces.

For the purposes of this Contract, confined space has the same meaning given to that term in AS2865:2009.

Without limiting the requirements of AS2865.2009, the Contractor shall take all practicable steps to ensure that:

- a) suitable devices are available for emergency recovery of individuals and equipment. All harness and lifeline equipment is fit for purpose and kept in a clean and undamaged state. All ventilation and atmospheric testing equipment is fit for purpose and regularly tested against industry related standards, and
- b) individuals entering a confined space wear all appropriate protective clothing and equipment. All personal protective equipment and clothing conforms to the relevant AS/NZ standard and specifically all respiratory protective equipment must be used in accordance with AS/NZS 1715:2009 (including the requirement for individual fit testing).

3.4.12.2 *Working in Excavations*

All work involving excavations must be undertaken in accordance with the WorkSafe NZ Good Practice Guidelines for Excavation Safety (2016).

Excavations greater than or equal to 1.5m deep are notifiable works and are particularly hazardous and must be shored unless the face is cut back to a safe slope and the material in the face will remain stable under all anticipated conditions of work and weather.

All shoring must be designed in accordance with sound engineering practice, materials used must be suitable and of sound quality with all shoring must be placed in a proper and workmanlike manner.

3.4.12.3 *Fencing of Excavations*

All work involving excavations, including fencing of excavations, must be undertaken in accordance with the WorkSafe NZ Good Practice Guidelines for Excavation Safety (2016).

Excavations where the public may have or may gain access must be fenced to avoid danger to people and must be properly maintained until the excavation is completed or when there is no longer any danger. Amber flashing warning lights are to be fitted where fences are positioned in the carriageways at night.

Where during construction, an excavation is likely to collect or retain water of such depth as will constitute a hazard to children or persons in the vicinity, the excavation must be covered or fenced off during times when the Contractor is not present on Site.

3.4.12.4 Working at Height

All activities involving working at height shall be undertaken in accordance with the Ministry of Business, Innovation & Employment Best Practice Guidelines for Working at Height in New Zealand (modified July 2019) which provides practical advice in relation to working at height. While this guidance has not been updated to reflect all current work health and safety legislation it still contains relevant information.

A risk assessment shall be carried out for all work at height. It is essential that the risks are clearly identified and that the necessary risk control measures are put in place prior to work being undertaken (e.g. equipment, training, appropriate precautions and systems of work).

3.4.12.5 Hazardous Substances

All Hazardous substances need to be managed in accordance with the Health and Safety at Work (Hazardous Substances) Regulations 2017.

A register of hazardous substances that are used, handled and stored onsite or in vehicles, must be available along with copies of the current safety data sheets.

The Contractor shall maintain all necessary location compliance certificates, stationary container certificates, process container certificates, and certified handler certification as and where required.

3.4.12.6 Asbestos

Any work involving asbestos (including asbestos pipe and materials) shall be undertaken in accordance with the Health and Safety at Work (Asbestos) Regulations 2016 and current WorkSafe NZ's guidelines.

Most asbestos cement pipes that the Contractor will encounter (buried water and wastewater pipes) will generally be considered 'non-friable'. However, non-friable asbestos can become friable with age, chemical treatment, abrasion etc.

Work Safe New Zealand requirements for working with asbestos are available on-line (<https://worksafe.govt.nz/topic-and-industry/asbestos>) and include:

- Asbestos to be removed by a licenced asbestos removalist
- Identification of friable and non-friable asbestos
- PPE precautions that must be followed
- Work methods that must be followed
- Methods to minimise the spread of asbestos fibres
- Containment, removal and disposal of asbestos

3.5 Traffic Management

The Contractor will apply the New Zealand Guide to Temporary Traffic Management risk-based approach to help deliver more efficient and effective temporary traffic management while keeping workers and road users safe, improving value for money and minimising disruption to people's journeys. Risk should be linked to the classification of the road under the New Zealand One Network Road Classification (**ONRC**) Framework.

These classifications are available from the Principal's roading team, Ruamahanga Roads, for the Principal's road network. This classification system is based on the function of the road and traffic volume.

The Contractor will also comply with the National Code of Practice for Utilities Access to Transport Corridors. This code of practice requires a CAR to be obtained where work is undertaken in the road reserve.

The Principal supports the use of generic traffic management plans (**TMPs**) where appropriate, including for rapid response events. The Contractor shall submit generic TMPs to Ruamahanga Roads for the various traffic situations that the Contractor expects to encounter while performing the Contract Works. Approved generic TMPs are valid for 12 months, and the Contractor is required to prepare and submit for approval generic TMPs on an annual basis. The Contractor shall also prepare and submit Site specific TMPs as required, detailing proposed traffic, cyclist and pedestrian control methods for the relevant Site.

The Contractor shall take all reasonable steps to reduce to a minimum the inconvenience caused to motorists, pedestrians and nearby businesses and residents. In the case of Contract Work affecting main and arterial roads during peak traffic periods, specific TMPs are to be submitted to the Contract Administrator for approval prior to work commencing. The Contractor shall provide and maintain all traffic management devices and equipment, as required and shall keep emergency services informed of any restriction to any roads.

The Contractor's appointed Traffic Management Supervisor for each Site shall be available within an hour at all times.

The Contractor shall be responsible for any public notification required under any TMP or any part of a TMP.

3.6 Asset Data Requirements

The Principal uses Asset Finder as its Asset Management Information System, and it needs to be updated. This is programmed for implementation by July 2026. The Contractor is expected to provide full co-operation during the implementation of the new Asset Management Information System. This will include mobile data collection enabling electronic information flow from the Principal to the Contractor and vice versa.

The Contractor will require a system compatible with the Principal's systems.

The Principal acknowledges that the Contractor is relying on the information in AssetFinder and information provided by the Principal's previous 3-waters contractor, including in relation to the extent and state of the Principal's Assets. Accordingly, if and to the extent that the information in those records is materially inaccurate, or inaccurate in a material way in relation any particular Asset, and as a result, the Contractor's Costs to perform the Contract are affected in a more than minor way, the Contractor will be entitled to a Variation.

3.6.1 Data Collection and Accuracy

The Contractor will collect and provide data to store in the Principal's Asset management system for all Preventative Maintenance and Reactive works. It is intended that this will be used for:

- Keeping Asset registers and Asset maintenance history up to date;

- Keeping track of failures for failure trend analysis and to assist in identifying renewal needs;
- Monitoring Contractor performance against the Response Times;
- Retrieving information on Asset condition and performance;
- Development of future capital works programme;
- Analysis for strategic planning; and
- Asset valuation.

All data from the Contractor is to be supplied electronically in a format that can be directly entered into Principal's asset management systems. The Contractor shall check and verify this data for errors before supplying it to the Principal. Data errors found after supply will result in the full data set being returned to the Contractor for correction and resubmission.

Except where the Contractor and the Contract Administrator have agreed that work in progress is to be invoiced on a progress payment basis, Contract Work will not be considered complete for payment until all required data has been transferred to, and accepted by, the Principal.

Where the Asset Register is found to be significantly inaccurate as identified through inspection or assessment, the Contractor shall notify the Contract Administrator. The Contractor will be entitled to a Variation if and to the extent that the inaccuracy increases the Contractor's Costs to perform the Contract in more than a minor way.

Location/Positional Data

Table 10: Asset location data situations

Asset situation	Activity required
New assets:	All new Assets constructed as part of a Capital Works Project is to be position surveyed (location and depth) to +/-1%.
Existing assets:	Location/position of existing assets should be verified when undertaking operation and maintenance related Contract Works activities. Deviations are to be recorded and (subject to section 3.4.5) as-built information supplied in electronic format to the Principal. Identify the asset by: Asset ID (if existing asset) Location: distance to boundaries where available (+/- 1%)
Abandoned assets:	Identify the asset by: Asset ID. Location: either by position survey (for Capital Works Projects) or measurement of the limits of the abandoned section of the pipe (for operation and maintenance related Contract Works) (+/- 1%) And tag as either "Abandoned" or "Abandoned, cleaned and capped" and a comment to indicate whether the surface features have been removed from site or abandoned in place.

Removed assets	Identify the asset by:
	Asset ID
	Tag as either “Removed to waste”, “Removed and relocated”, “Removed to storage”
	and if removed to storage indicate where stored
Found assets:	(Subject to section 3.4.5) as-built information is required for any assets found that do not already exist in the Principal’s Asset management systems

3.6.2 Ownership of data

All information directly relating to this Contract that covers as-built data, condition of Asset, work performed on Assets, Response Times, standard forms, plans, information provided by the Principal to the Contractor, and information and processes developed under this Contract delivered (not retrospectively having to provide records that were not collected at the time of performing the Contract Works) remains the property of Principal and shall not be withheld from Principal on request.

On termination or completion of this Contract the Contractor must return all plans, information, data, as-builts, and standard forms to the Contract Administrator. All equipment, vehicles, Materials and consumables supplied or purchased by the Principal during the Contract term shall remain the property of the Principal.

If the Contractor does not return all plans, information, data, as-builts, and standard forms to Contract Administrator and the Principal may obtain that information at the cost of the Contractor.

3.7 Emergency Response Management

The Contractor is expected to be suitably trained in emergency response. The Principal will invite the Contractor, and the Contractor is expected to participate in Emergency response training opportunities with the Principal’s personnel.

The Contract Administrator will advise the Contractor when a Civil Defence emergency or other emergency applies and the Contractor shall follow all reasonable Instructions issued by the Contract Administrator. An emergency response takes precedence over all other Contract Works. The Contract Administrator will advise the Contractor when the emergency is over.

During an emergency event, the Contractor’s priorities are to:

- Protect life and public health and safety
- Prevent, avoid and mitigate damage to private property and the Sites
- Restore service as soon as practicable, and
- Remedy any damage to the Principal’s Assets as soon as practicable.

The Contractor shall provide sufficient after-hours duty personnel to attend to the emergency response. The Contractor shall nominate an Emergency Works Co-ordinator who shall be contactable at all times during the emergency and be responsible for coordinating the Contractor’s

response and liaising with the Principal during the emergency event. The Emergency Works Co-ordinator may be event specific rather than an Emergency Works Co-ordinator appointed for the Contract generally. The Principal may require the Emergency Works Co-ordinator to be based at the Principal's offices during the Emergency.

Emergency work Instructed by the Contract Administrator will be paid for on a Dayworks basis.

3.7.1 Emergency Plan

The Contractor shall prepare and maintain an Emergency Plan detailing potential emergency situation (fire, chemical spills, work site accidents and the like) and procedures for personnel to follow in the event of an emergency.

The Emergency Plan will include as a minimum:

- A summary detailing the purpose of the plan and its relationship to the Principal's emergency response documents
- A list of foreseeable emergencies that could affect some or all the Sites tabulated in a risk register indicating the likely probability and impact of the emergency and how it will be resourced
- the locations of Emergency equipment (fire extinguishers, first aid kits and the like)
- An 'easy to follow' flow chart for each emergency aimed at reducing the impact of each type of event. Links and or interfaces with the Principal's relevant emergency procedures or contingency plans shall be indicated on each flow diagram. All flow diagrams shall be developed on a software platform agreed with the Principal
- Details of any specialist resources required in the response and where these are located, such as emergency generators in the event of an extended power failure and from where these can be sourced
- Contact details for all key personnel required in the emergency response
- Communication protocols between the Principal and Contractor and any Third Parties

3.7.2 Civil Defence Emergencies

In the event of a Civil Defence emergency in the Contract Area or elsewhere the Contract Administrator may direct the Contractor to provide labour for emergency/civil defence work.

In the event of a Civil Defence emergency the Contractor shall:

- Use all reasonable endeavours to provide sufficient plant and personnel on site to enable the Emergency Work to be undertaken
- Advise the Contract Administrator immediately if unable to either commission sufficient resources or undertake the Emergency Work
- Co-operate with the appropriate authorities i.e. Police, Civil Defence, in performing the Emergency Work
- Carry out Emergency Work immediately if such work is essential to ensure the health and safety of the community or to protect the environment.
- Prioritise Emergency Work to reduce the risk to the community and environment to acceptable levels, and

- Advise the Contract Administrator immediately of any situation where the emergency is likely to continue and affect the health and safety of the community and the environment.

The Contractor in assisting with any Emergency situation in the Contact Area, shall advise and continue to inform the Contract Administrator throughout the emergency of the impact any re-deployment of personnel may have on this Contract.

The Principal shall have regard to the impact of any emergency on the Contractors' resources when evaluating the Contractors Performance under this Contract.

3.7.3 Suspension of Work in Emergencies

If the Contract Administrator (acting reasonably) decides that the Contract Works cannot or should not continue during an emergency the Contract Administrator may instruct the Contractor to suspend all or any part of the Contract Work under 6.8. The Instruction from the Contract Administrator may be by any means of efficient communication and will be followed as soon as practicable by notice in writing.

Except for any continuing responsibility for work already completed, the Contractor shall have no responsibility for the Contract Works or the Principal's Assets during the period of suspension. After the suspension is lifted the Contractor will have no responsibility for Contract Works carried out during the period of suspension.

The Contract Administrator may end the period of suspension (whether due to an emergency or otherwise) by giving three (3) days' notice in writing and the Contractor shall, at the expiry of the period of notice, continue with the Contract Works.

The Contractor shall be entitled to a Variation in accordance with 6.8.3, but the Contractor shall take all reasonable steps to minimise its Costs arising from the emergency.

3.7.4 After the event

The Contractor shall attend any debrief meetings that it is invited to attend by the Principal and or Civil Defence. The key purpose of these meetings will be to identify learnings and areas for improvement, and to review the Principal's Infrastructure Strategy (2021-2051). The Infrastructure Strategy identifies the natural events that would create risks to three waters and roading infrastructure and services, the implications, mitigations, and response.

3.8 Customer Service Requests

The Contractor is required to supply an after-hours roster (**Roster**) to the Contract Administrator for each calendar month during the Contract Term, including contact details for the relevant on-call personnel.

The Contractor's after-hours roster will be provided to Customer Services.

3.8.1 Requests for Service

The Principal is responsible for managing enquires and requests from members of the public and/or the Principal's personnel in relation to the Assets during the Principal's usual office hours of 8.30am – 4pm. Customer Services will raise SRs in response to calls/requests from public, or the Principal's personnel in the Principal's system.

If a member of the public contacts the Contractor directly with a request for service, the Contractor shall direct them to Customer Services. If the work is considered an emergency (refer Section 5.10 below), the Contractor shall respond immediately and advise the Contract Administrator accordingly.

SRs may also be raised by the Contractor as issues are identified during Preventative Maintenance, or Reactive works. Planned Preventative Maintenance and Reactive works are also to be logged onto the SR system if not part of the current planned maintenance cycle (e.g. a service valve is known to be failing and will require renewal in 1-2 years).

SRs will be emailed to the Contractor to action with a phone call direct to the Contractor for urgent requests. On completion the SR is returned to Contractor's administration team for processing and completion of the SR in the Principal's systems.

If no fault is found in respect of a SR relating to a request for service from a member of the public, Customer Services will make every effort to contact the caller to advise them that no fault was found. Further direction shall be sought from the Contract Administrator if required.

If for any reason a SR will not be completed within the appropriate Response Time having regard to the nature of the SR, the Contractor shall notify the Contract Administrator. The Contractor shall update the work management system prior to the expiry of the appropriate Response Time and include notes explaining the delay and the expected completion time/date.

All work required to complete the SR must be completed, including any reinstatement and (subject to section 3.4.5) all Asset as-built information must have been supplied to the Contract Administrator prior to an SR being 'closed'.

3.8.2 Call outs

The Contractor shall provide afterhours call-out service on a 24 hours, 7 days a week/ 365 days per year basis (**Call-Out Service**). Personnel carrying out the Call-Out Service shall during their rostered hours (as specified in the roster):

- Be able to be contacted at all times by Customer Services or the Principal's After-Hours call center service provider
- Have transport readily available
- Be appropriately qualified and capable of carrying out urgent work
- Have sufficient equipment available to rectify the majority of problems that may occur; and
- Endeavour to meet the response times specified.

The Contractor shall ensure that sufficient personnel are rostered on so that if for safety reasons more than one person must attend the call-out, there are sufficient personnel available to do so.

3.8.3 After Hours

The Principal contracts an after-hours call centre service outside of the Principal's usual office hours. The after-hours call centre will be provided with a copy of the Roster and will notify the

Contractor's rostered after-hours personnel of (urgent and Emergency only) enquiries and complaints by phone, followed up by email.

The Contractor's personnel must verify the seriousness of the notified issue based on the Response Categories in section 3.8.4 below. Once the situation has been assessed on site by the Contractor, if the situation is going to affect more residents than the original caller then the after-hours call centre should be notified of the details and extent of the problem and its impact. The SR system should be updated in real time or as soon as reasonably possible by the Contractor.

3.8.4 Response times

The response categories and the Response Time for each response category are set out in table 11 below. The Contractor shall respond to the relevant event within the Response Time for the category.

Table 11: Service Request Response times

Response to a fault or an unplanned interruption to the network.			
All of the response times are based on a 24hr day, 7 day week.			
Response Category	Description	RESPONSE TIME	
		On-site	Re-solved
Urgent Water	A complete loss of supply of drinking water. Any leak on a $\geq 100\text{mm}$ main or associated hydrant, valves water leaking/running and water conservation restriction in place or lid missing which is a safety issue	$\leq 1\text{hr}$	$\leq 6\text{hr}$
Non-Urgent Water	There is still a supply of drinking water, leak on Rider main, Lateral, hydrant, valves water leaking/running and no water conservation restriction in place, toby fault, meter replacement	$\leq 24\text{hr}$	$\leq 5\text{ days}$
Urgent Wastewater	Wastewater overflow (pump stations) Major system events e.g. serious alarms	$\leq 2\text{hr}$	$\leq 8\text{hr}$
Non-urgent Wastewater	All other services requests	$\leq 2\text{ days}$	$\leq 5\text{ days}$
Stormwater Flooding event	Any overflow that enters a habitable floor	$\leq 3\text{ hours}$	N/A

Onsite Response time

- Onsite Response Time is calculated from the time that the Principal receives notification of the event to the time that the Contractor's personnel reach the site. This means the time taken, from issue of the Service Request, to be mobilised on site with the

necessary expertise and ability to assess the needs, minimise the danger or impact and proceed with the repairs.

Resolved Response Time

- Resolved Response Time is calculated from the that the Principal receives notification of the event to the time the Contractor's personnel confirm the fault or interruption has been resolved. This means the point at which the service to the customer is returned to normal operation (i.e., water supply 'back on' to the customer following repair of a water burst or water leak, wastewater system back freely flowing following a break / overflow, stormwater system back freely flowing following an overflow / blockage).

If the Contractor attends an incident on site and identifies that it is different from what has been reported, the Contractor will update the work management system. If the work required is beyond the scope of the Contract, the Contractor shall immediately report this to the Contract Administrator.

All Contract Works originating from a Variation shall have an agreed Response Time and/or Resolved (complete) Response Time as set out in the relevant Variation.

The Principal uses three main categories in Water Conservation:

Green	Orange	Red
Use water wisely	Conserve water	Restrict water use

During Orange and Red status there will be an increased expectation to respond to water leaks, on an urgent basis, irrespective of their urgent/nonurgent classification.

3.9 Programme Management

The Principal acknowledges the Contractor needs to have the ability to programme the Contract Works to ensure even workload.

While Reactive works must be completed within defined time constraints, Preventative Maintenance and capex works/renewals shall be programmed and implemented within the following constraints:

- All other obligations under the Contract must be met or able to be met.
- The work is included in the programme of work planned for the next three months and submitted with the relevant monthly report(s).
- Progress against agreed programmes shall be reported in the monthly reports including any actions or steps the Contractor proposes to take to get work programmes back on schedule if required and priorities that may change preventative maintenance identified.

The over-riding priority is the continuity of Water Services. Work may need to be re-prioritised, accelerated or deferred to ensure this continuity is provided.

3.9.1 Programme development

The Contractor shall complete Preventative Maintenance and inspections of the Assets, identify the location of Assets and the extent of maintenance needs.

The Contractor shall develop programmes for Preventative Maintenance and inspections which:

- Drive compliance
- Promote efficient and cost-effective practices through inspection and Preventative Maintenance tasks
- Recognise Principal's budgetary constraints
- Identify and prioritise scheduled maintenance items
- Use proactive and innovative cost-effective treatments
- Reduce customer inconvenience
- Is effectively implemented

3.10 End of Contract Works

3.10.1 Hand-over Report

Not less than three months prior to the Date of Expiry of the Contract the Contractor shall provide the Contract Administrator a hand-over report. The hand-over report must set out the plan for the return of the Assets to the Principal at the Date of Expiry and shall include:

- a plan to transition any Seconded staff back to the Principal
- the training of the Principal's or the replacement operator's personnel
- condition assessment of all material Assets in the form agreed with the Contract Administrator, and
- a copy of all Asset and operational data, and records / manuals relevant to the future operation of Assets.
- The hand-over report may also include a plan to transition any of the Contractor's personnel that the Contractor and the Principal and (as appropriate) the relevant personnel have agreed will transfer to the Principal.

3.10.2 Consumables and Materials

The Contractor shall transfer to the Principal on the Date of Expiry:

- all critical spares, Materials and consumables already paid for by the Principal
- all security keys, codes and other access information for the Principal's Assets and the Sites
- any Materials, spares, consumables (including chemicals), and the like which the Principal has agreed to purchase. These will be purchased at Cost, plus an allowance for Margin, and
- any Consents, permits, licenses, or authorisations relating to the maintenance of the Assets held by the Contractor.

3.10.3 Clearance of Sites

On or before the Date of Expiry, the Contractor shall remove all surplus Plant, Materials, temporary structures and Temporary Works which do not form part of the Assets or Sites and which are not owned by the Principal (or which the Principal has not agreed to purchase) and shall leave the Sites in a tidy and safe condition, suitable for continued operations and with the Contractor's defects liability rectification obligations fulfilled.

4 General Specification

4.1 Legislation and Rules

The Contractor shall be familiar with the features, equipment and operating requirements of all Assets and the Sites and shall maintain the Assets and the Sites in accordance with Good Industry Practice and all applicable laws and standards, including those set out in table 12 below.

As part of LWDW, it is anticipated that National Engineering Design Standards, a mandatory set of national engineering design standards for water services network infrastructure will be introduced during the term of this Contract. Any associated impacts on this Contract will be addressed at that time as a Variation.

Table 12: Legislation, Regulations, Standards, Bylaws and Guides

Legislation
Biosecurity Act 1993
Building Act 2004
Civil Defence Emergency Management Act 2002
Construction Contracts Act 2015
Hazardous Substances and New Organisms Act 1996
Employment Relations Act 2000
Electricity Act 1992
Fire Service Act 1975
Gas Act 1992
Health Act 1956 and Amendments
Health and Safety at Work Act 2015
Heritage New Zealand Pouhere Taonga Act 2014
Land Drainage Act 1908
Local Government Act 2002
Plumbers, Gasfitters and Drainlayers Act 2006
Public Works Act 1981
Resource Management Act 1991
Utilities Access Act 2010
Water Services Act 2021
Regulations
Construction Contracts Regulations 2003
Health and Safety at Work (Asbestos) Regulations 2016
Health and Safety in Employment Regulations 1995
Bylaws
Wairarapa Consolidated Bylaw, including Water, Wastewater and Stormwater Sections

Standards	
Pipelaying/Construction	
NZS 4522:2010	Underground fire hydrants
AS/NZS 1260: 2017	PVC-U pipes and fittings for drain, waste and vent applications
AS/NZS 1477: 2017	PVC pipes and fittings for pressure applications
AS/NZS 1254: 2010 A3	PVC-U pipes and fittings for stormwater and surface water applications: Amendment 3
AS 1579: 2001	Arc –welded steel pipes and fittings for water and wastewater
Legislation	
AS 1646: 2007	Elastomeric seals for waterworks purposes
AS 1741: 1991	Vitrified clay pipes and fittings with flexible joints - sewer quality
AS/NZS 2032: 2006	Installation of PVC pipe systems
AS/NZS 2033:2024	Design and installation of polyolefin pipe systems
AS/NZS 2280: 2020	Ductile iron pipes and fittings
AS/NZS 2566.1: 1998	Buried flexible pipelines - Part 1: Structural design
AS/NZS 2566.2: 2002	Buried flexible pipelines - Installation
AS/NZS 2638.2: 2011	Gate valves for waterworks purposes – Part 2: resilient seated
Standards	
TBC	Wairarapa Combined District Engineering Standard
AS/NZS 4058: 2007	Precast concrete pipes (pressure & non pressure)
NZS 3104: 2021	Specification for concrete production
NZS 3109: 1997	Concrete construction
NZS 3114: 1987	Specification for concrete surface finishes
AS/NZS 3500.1: 2021	Plumbing and Drainage, Part 1: Water services
AS/NZS 4020: 2018	Testing of products for use in contact with drinking water
AS 4060: 1992	Loads on buried vitrified clay pipes
AS/NZS 4087: 2011	Metallic flanges for waterworks purposes
AS/NZS 4129: 2020	Fittings for polyethylene (PE) pipes for pressure applications
AS/NZS 4130: 2018	Polyethylene (PE) pipes for pressure applications
AS/NZS 4131: 2010	Polyethylene (PE) compounds for pressure pipes and fittings
AS/NZS 4158: 2003	Thermal-bonded polymeric coatings on valves and fittings for water industry purposes
AS/NZS 2041.4: 2010	Buried corrugated metal structures - Helically formed sinusoidal pipes
NZS 4442: 1988	Welded steel pipes and fittings for water, sewage and medium pressure gas
AS/NZS 4765: 2017	Modified PVC (PVC-M) pipes for pressure applications
NZS 7601: 1978	Specification for Polyethylene Pipe (Type 3) for cold water services
NZS 7602: 1977	Specification for Polyethylene Pipe (Type 5) for cold water services

NZS 7610: 1991	Blue Polyethylene Pipes up to nominal size 63 for below ground use for potable water
Other	
NZS 3917:2013	Conditions of contract for building and civil engineering - Fixed term
NZS 4224: 1983	Code of Practice for the measurement of Civil Engineering Quantities
NZS 4402: 1988	Methods of testing soils for civil engineering purposes
NZS 4431: 1989	Code of Practice for earth fill for residential development
DWSNZ	Water Services (Drinking Water Standards for New Zealand) Regulations 2022
WSA 02:1999 & WSA 03:2002	Water Service Association – Water Supply Code of Australia
Safety/Measurement	
SNZS HB 2002: 2003	Code of Practice for Working in the Road
CoPTTM	Code of practice for temporary traffic management (CoPTTM: Part 8 of the Traffic Control Devices manual (TCD Manual))
Legislation	
	Safe working in a confined space
NZS 6801: 2008	Acoustics – Measurement of environmental sound
NZS 6803: 1999	Acoustics – Construction noise
AS/NZS 4602:1999	High visibility safety garments
AS/NZS 1906: 2017	Retroreflective materials and devices for road traffic control purposes
AS/NZS 2845.1: 2022	Water supply – Backflow prevention devices, Part 1: Materials, design and performance requirements
Roading	
NZTA M01:2022	Specification for bitumen
NZTA M04: 2024	Specification for basecourse aggregates
Standards	
NZTA M10:2020	Specification for dense graded asphaltic concrete
NZTA M12-S: 2022	Specification for the design, manufacture, installation and maintenance of raised pavement markers
Manuals, Guides and Permits	
SNZ PAS 4509: 2008	New Zealand Fire Service Fire Fighting Water Supplies Code of Practice
NZTA	Traffic Control Devices Manual
NZUAG CoP	National Code of Practice for Utilities' Access to the Transport Corridor
Water NZ	Boundary Backflow Prevention for Drinking Water Suppliers Code of Practice, 2019

NZWWA	Visual Assessment Manual of Utility Assets 2008
NZWWA	Pipe Inspection Manual (3 rd Edition) 2006
Water NZ	National Asbestos Cement Pressure Pipe Manual 2017
Water NZ	National Guidelines for Occupational Health and Safety in the NZ Water Industry 2017

4.2 Water Safety Plans

The Principal has Water Safety Plans (**WSP**) for its water schemes. WSPs are required to ensure the safety of drinking water through a risk assessment and management process, from the intake to the consumer. WSP's are regularly updated, and it is anticipated that the Contractor, with its knowledge of the systems, will assist the Principal, as Instructed by the Contract Administrator, in those updates.

Each WSP includes critical control points and improvement items. The Contractor shall collaboratively work with Principal to ensure the WSP, associated critical control points and improvement items are implemented and managed to ensure ongoing security and supply of high-quality drinking water in compliance with the regulatory framework.

4.3 O & M Manual

The Principal has O&M Manuals in place for water and wastewater treatment plants and booster / pump stations (but not wastewater pump stations).

The Contractor is expected to be familiar with and comply with the requirements of the O&M Manuals at all times.

It is anticipated that the Contractor, with their knowledge of the facilities and their technical expertise, will assist the Principal, as Instructed by the Contract Administrator, in developing, reviewing and updating O&M Manuals as appropriate.

No wastewater pump stations have manuals.

Table 13: Treatment Plant O&M Manuals

System	Site	Document Date
	Water	
Featherston – Greytown	Waiohine WTP	
Greytown	Memorial Park WTP	
Martinborough	Ruamahunga WTP	
Pirinoa	Pirinoa WTP	
	Wastewater	
Featherston	Featherston WWTP	
Greytown	Greytown WWTP	
Martinborough	Martinborough WWTP	
Lake Ferry	Lake Ferry WWTP	

4.4 Consents

The Contractor is to be aware of and comply with their obligations under the Consents, copies of which will be supplied by the Principal.

The Principal shall be solely responsible for the renewal and/or obtainment of replacement Consents. The Contractor shall provide such information as may be reasonably required by the Principal to support its compliance with the Consents and/or to assist it to apply for renewal and/or replacement Consents.

4.4.1 Water Supply Resource Consents

Consent reference ID	Permit type	Details	Expiry Date	Compliance Status
21379	Water permit	Moroa water race	4/13/2025	Compliant Renewal application in progress
21586	Discharge permit	Moroa water race	4/13/2025	Compliant Renewal application in progress
21587	Land use consent	Moroa water race	4/13/2025	Compliant Renewal application in progress
21593	Water permit	Longwood water race	4/13/2025	Compliant
21594	Discharge permit	Longwood water race	4/13/2025	Compliant
21595	Land use consent	Longwood water race	4/13/2025	Compliant
24618	Water permit	Pirinoa rural water supply	9/30/2025	Compliant
31362	Water permit	Featherston emergency water supply	9/30/2030	Compliant
31364	Water permit	Featherston emergency water supply	9/30/2030	Compliant
31366	Water permit	Martinborough emergency water supply	9/30/2030	Compliant
31689	Water permit	Greytown-Featherston water treatment plant	9/28/2037	Compliant
31690	Water permit	Martinborough water treatment plant	11/27/2037	Compliant
36429	Water permit	Greytown-Featherston water treatment plant	9/30/2037	Compliant

4.4.2 Wastewater Resource Consents

Consent reference ID	Permit type	Details	Expiry Date	Compliance Status
TBC	Discharge permit	Featherston WWTP	8/10/2030	Compliant
TBC	Discharge permit	Featherston WWTP	8/10/2030	Compliant
26633	Discharge permit	Greytown WWTP	3/15/2051	Moderate non-compliance
TBC	Discharge permit	Featherston WWTP	8/10/2030	Compliant
30785	Discharge permit	Lake Ferry WWTP	9/30/2025	Minor non-compliance Renewal application in progress
30786	Discharge permit	Lake Ferry WWTP	9/30/2025	Compliant Renewal application in progress
30787	Discharge permit	Lake Ferry WWTP	9/30/2025	Compliant Renewal application in progress
31707	Discharge permit	Martinborough WWTP	3/15/2051	Moderate non-compliance
32044	Discharge permit	Martinborough WWTP	3/15/2051	Moderate non-compliance
32045	Discharge permit	Martinborough WWTP	3/15/2051	Compliant
33045	Discharge permit	Martinborough WWTP	3/15/2051	Compliant
33180	Discharge permit	Greytown WWTP	3/15/2051	Major Non-Compliance
33181	Discharge permit	Greytown WWTP	3/15/2051	Compliant
33182	Discharge permit	Greytown WWTP	3/15/2051	Compliant

4.4.3 Stormwater Resource Consents

Consent reference ID	Permit type	Details	Expiry Date	Compliance Status
34189	Water permit	Moroa water race	4/13/2025	Minor Non-Compliance Renewal application in progress
34190	Water permit	Longwood water race	4/13/2030	Compliant

TBC	Global stormwater consent	SWDC Stormwater Networks	2030	Compliant
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4.5 Contractor Standard Operating Procedures

It is expected that the Contractor shall have Standard Operating Procedures (**SOPs**) for all routine operations and Maintenance activities and that these shall represent Good Industry Practice.

The Contractor shall submit all SOPs to the Contract Administrator for approval prior to commencement of the Contract Works (other than Transition Services).

Contract Works shall be undertaken in accordance with those SOPs unless the Contractor is Instructed otherwise.

If and to the extent there is any inconsistency between the Contractor's SOP and the O&M Manuals, WSP's and Consents, then unless expressly Instructed otherwise, the provisions in the O&M Manuals, WSP's and Consents will prevail to the extent of the inconsistency.

4.6 Resources

4.6.1 Key Personnel

The Contractor acknowledges that under s69 of the Water Services Act 2021, all work on a drinking water supply or wastewater network must:

- be undertaken by a person with the prescribed skills, qualifications and experience or
- be supervised by a person with prescribed skills, qualifications and experience.

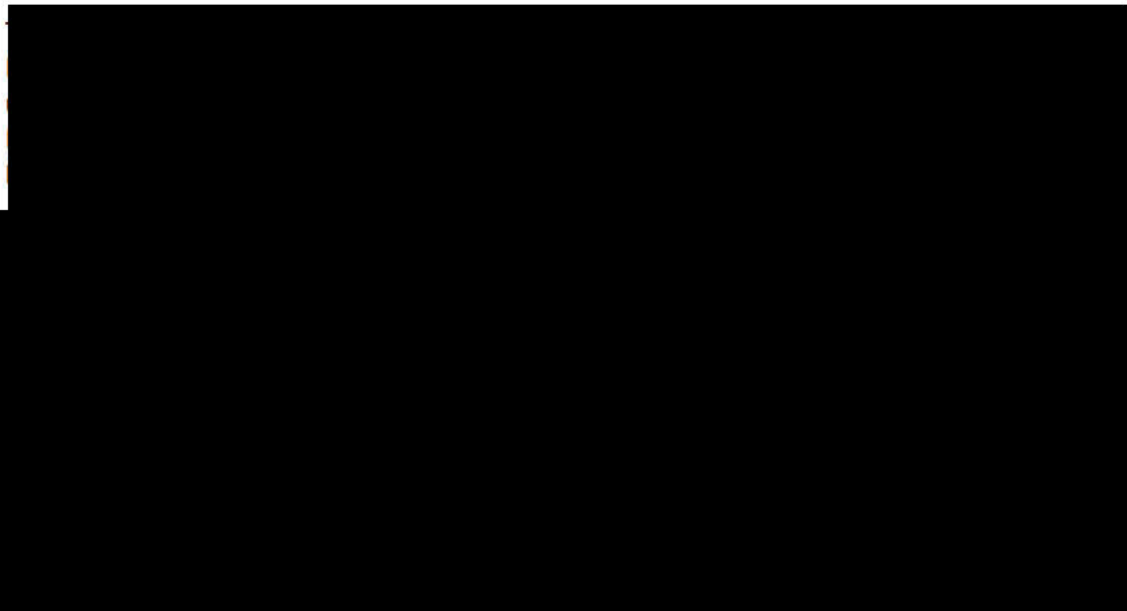
The parties acknowledge that usually, it would be the Contractor's sole responsibility to ensure that it had suitably qualified, trained and skilled personnel who demonstrate competence in their assigned duties engaged in the Contract Works. However, it is the Principal's preference to second its own employees to the Contractor for the purposes of the Contract Works, and accordingly, that there are joint responsibilities in relation to the personnel (including Key Personnel) who will be engaged in the performance of the Contract Works.

Table 18 below sets out the personnel by role, name and by employer, that the parties consider to be the Key Personnel for the purposes of this Contract.

Table 13: Key Personnel

Personnel	Requirements
Contract Manager	Responsible for the overall management of the contract works.
Contractor's Representative	The Contractor's Representative shall be committed to the Contract and shall be responsible for day-to-day management of the Contract. They shall be the main contact with the Contract Administrator.
Quality Manager	Responsible for the preparation, implementation, management, operation and field auditing of the accepted QMP

Plant operators	Responsible for the operation and maintenance of the treatment facilities, including source (water supply), treatment plants and storage (water supply).
Health & Safety Manager	Responsible for the preparation, implementation, management, operation and field auditing of the accepted Health and safety Plan and the TMPs



A single person may fulfil more than one of the above roles, but the Quality Manager shall not be the same person as the Contractor's Representative or the Contract Manager.

Both the Quality Manager and the Safety Manager are expected to visit work Sites to evaluate and audit the implementation and operation of the requirements of the QMP, Site Specific Safety Plan and TMPs and to make and keep written records of Site inspections for the purposes of the Contractor's reporting requirements.

4.6.2 Operators and Labour

The Contractor shall equip all personnel engaged in the Contract Works with the necessary training, tools, equipment, vehicles, protective clothing and safety gear.

The Contractor shall assess the need for, provide and keep records of training for all personnel engaged in Contract Works, operations and maintenance activities.

It is the Contractor's responsibility to ensure that its personnel are trained, undergoing training or programmed to undergo training, at the Contractor's cost, to nationally recognised standards for water and wastewater treatment and other skills required to carry out the Contract Works. Evidence of relevant qualifications shall be provided to the Contract Administrator at his or her reasonable request.

4.6.2.1 Water Treatment Plant Operators

The Parties shall provide skilled personnel for the operation and maintenance of the wastewater treatment activities, including treatment plants and discharge and shall ensure that:

- #### 4.6.2.2 Wastewater Treatment Plant Operators

- At least 1 operator to hold a 'National Diploma in Wastewater Treatment – Level 5'
- All other plant operators to hold a 'National Certificate in Wastewater Treatment – Level 4'.

[illegible]



4.6.3 Conduct

The Parties shall ensure that their respective personnel engaged in the Contract Works are always presentable to a high standard of dress consistent with high end service delivery and behave at all times in kind and courteous manner when dealing with customers, demonstrating a high commitment to customer service.

The Contractor shall ensure that any subcontractors engaged in performing any part of the Contract Works are always presentable to a high standard of dress consistent with high end service delivery and behave at all times in a kind and courteous manner when dealing with customers, demonstrating a high commitment to customer service.

4.6.4 Plant and equipment

The Contractor will provide and maintain in good and reliable order and condition, all Plant and equipment necessary to perform the Contract Works. The Plant and equipment must be suitable for the size and task it is performing.

Plant used by the Contractor for the Contract Works shall not exceed any restriction as to weight, size, or other matter imposed by applicable traffic regulations and shall have required certification with evidence provided to the Contract Administrator as requested.

4.7 Hours of works

This contract provides critical services to communities, there will be times when the contractor is expected to perform work outside standard hours of work to ensure continuity of services and to protect the environment.

The following hours of work are provided as a guideline in consideration of the community and to limit construction noise.

- Unless otherwise Instructed or approved, the hours of work for programmed activities shall be 6:00am to 6:00pm on Monday to Friday and 6:00am to 12:00pm on Saturdays, provided there is sufficient daylight and visibility to ensure the safety of workers and the public.
- No work shall be carried out on Sundays or public holidays other than Emergency Work or work necessary to make or keep the site safe and services compliant. The Contract Administrator's approval is required for work being carried out outside these limits.
- During the period of any public holiday and the period 20 December to 8 January inclusive, no heavy plant shall work within the carriageway except:
 - With the express approval of the Contract Administrator, or
 - Emergency Works.

4.8 Service Shutdowns

4.8.1 Unplanned

The Contractor may initiate a service shutdown of the water supply, wastewater and storm-water systems in an emergency. In such cases, immediate advice shall be given to the Contract Administrator and Customer Services (or after-hours services where appropriate).

Where practical, all reasonable endeavours shall be made to notify the affected properties of any unplanned shutdown.

4.8.2 Planned

Where service shutdowns are required, to enable programmed or planned Contract Works to be completed the Contractor shall liaise with the Contract Administrator to ensure:

- the service shutdown is programmed with minimal impact on the continued service delivery of water and wastewater services;
- appropriate advanced communication with potential affected customers can be made (e.g. conserve water during treatment or storage shutdown).

All affected consumers shall be notified in an agreed format at least 72 hours before the shutdown. The Principal will advertise the planned shutdown through social media channels and the local newspaper.

4.8.3 SCADA/Telemetry Response

The Principal owns a SCADA system that serves the majority of the water and wastewater facilities.

Management, operation and maintenance, repairs and reconfiguration of the telemetry system are excluded under this contract.

The Contractor is responsible for monitoring the system and shall provide a 24/7 response service for all facilities connected to the telemetry system. Alarms will be paged directly to the Contractor's personnel. The Contractor is then responsible for acknowledging, and responding to the alarm, rectifying the cause of the alarm and monitoring the situation until the fault has been reset e.g. no longer high wet well or no longer low reservoir.

The Principal is responsible for the proper functioning of the SCADA system and will promptly attend to and rectify faults with the SCADA system. The Contractor shall report to the Contract Administrator as soon as practicable any failures or malfunctions of the system.

Where telemetry failure occurs the Contractor will to the extent possible, operate the affected telemetry based systems manually.

4.9 Materials

4.9.1 General

The Contractor shall be responsible for the provision of all Materials including chemicals, and consumables required for the Contract Works and operation of the Principal's water and wastewater Assets.

All Materials shall comply with the standards given in NZS 4404:2010 (Land Development and Subdivision Infrastructure), with reference to SWDC Addendum to NZS4404 [Link].

The Materials shall be stored and handled in accordance with the manufacturer or supplier's recommendations and in accordance with Good Industry Practice whether or not they are on Site. Particular regard shall be given to the storage of hazardous materials.

4.9.2 Critical Spares

The Contractor shall maintain a stock of critical spares to enable Response Times to be met. The list of critical spares shall be agreed between the Contract Administrator and Contractor and reviewed on an annual basis.

All critical spares shall be paid for and owned by the Principal and shall be handed back to the Principal at the expiry of the Contract.

4.9.3 Proposed Substitutions

The Contractor may propose a substitution for any Materials specified in the Contract if specified Materials are not available, or if substitute Materials are brought to the attention of and are considered by the Contract Administrator to be equivalent or superior to those specified or can be demonstrated to provide better value for money.

The Contractor shall notify the Contract Administrator of any proposed substitution of specified Materials and shall seek approval before proceeding with the Materials.

As a minimum, the information provided to the Contract Administrator shall include:

- Product identification and comparison with the specified Material
- Manufacturer's details
- Current manufacturer's product information including relevant standards; and
- A summary of all or any quality, cost and/or time implications of the proposed substitution

Except where a specified Material is not available and a substitute has been assessed as suitable, the Contract Administrator is not obliged to accept any substitutions.

4.10 Protection of Existing Services

The Contractor shall be responsible for locating and protecting all existing services including but not limited to survey marks, telephone, power, gas, fibre, water supply, wastewater, stormwater and any rectifying any damage to these caused by the Contractor during the Contract Works.

4.11 Cultural Objects/Archaeological Artefacts

The Contractor shall follow the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 in the event that archaeological artefacts are suspected as having been discovered. In the event that koiwi (human remains), taonga (treasure) or other artefact material is discovered in any area of the Site, the Contract Administrator shall be notified immediately, and he or she will ensure that a Heritage New Zealand Representative is informed. Contract Works around the point of discovery shall stop to allow site investigation by the Contract Administrator, Council Officers, Iwi Representatives and Heritage New Zealand Representatives. The

Contract Administrator will then consult with Heritage New Zealand Representatives, Iwi Representatives and advisors on appropriate steps if necessary to allow recovery of the artefacts prior to work resuming.

The Contractor shall submit an Accidental Discovery Protocol to the Contract Administrator, and gain approval prior to the commencement of any excavation.

4.12 Works within road reserve

The Contractor shall carry out all the works in a manner which will permit the safe passage of vehicular and pedestrian traffic in accordance with an approved TMP (refer Section 3.5).

Where possible, the Contractor shall always maintain at least half the width of the roadway open and passable to all traffic. Interference to all traffic movements shall be minimised consistent with the nature of the work being undertaken.

The Contractor is not required to seek individual CARs from the Principal for the Contract Works but is required to notify each CAR event via the SR system to Principal's roading staff.

Contract Works involving interruption to traffic on a State Highway will require a TMP to be submitted to NZTA Waka Kotahi or their agents for their approval. The Contractor is responsible for arranging this.

4.13 Maintaining access to properties

The Contractor shall ensure that pedestrian and suitable vehicular access is maintained at all times to all properties bordering the Contract Works. Arrangements to the contrary made with individual owners or users of the property shall be notified to and approved by the Contract Administrator.

Access to commercial properties shall be maintained unless essential work is being carried out at the entrance. The Contractor shall advise the owner/user of the duration of the disruption to the access at least 24 hours in advance.

The Contractor shall provide safe and suitable alternative pedestrian access through and/or around the work area.

4.14 Access onto the Site and Private Properties

It may be necessary for the Contractor to enter private property in order to complete the Contract Works. Access through private property will require the consent of the owner.

In the course of performing the Contract Works, the Contractor shall gather, prepare and maintain a list of all private property and property owners whose property may need to be accessed to complete the Contract Works. Where possible, the list shall include contact names and mobile phone contact numbers.

The Principal will provide the Contractor with a copy of any access arrangements, easements or other permissions it holds in relation to access to private property.

The Contractor shall notify all property owners/occupiers of the intention of enter private property at least 24 hours prior to entering the property during programmed works.

Where commercial/industrial properties are affected, notification by the Contractor shall be one week in advance of the proposed work.

On completion of the Contract Works, the Contractor shall leave the Site in the same or better condition as when first entered on.

During Emergency Works, the Contractor is warranted by the Principal to enter private property without written consent from the property owner.

4.15 Property Damage Resulting from Networks Faults

If property damage occurs as a result of a network fault (for example a pipe blockage leading to sewer overflow into a dwelling) the Contractor will treat the network fault as Emergency Work.

In addition to completing the Emergency Work the Contractor shall:

- Immediately notify the Contract Administrator of the incident
- As these incidents often result in public liability insurance claims the Contractor shall not discuss, or speculate in any way, on the cause of the fault or property damage with the affected party, or media.

4.16 Disposal of Materials

The Contractor will ensure that all waste, surplus and excavated materials, or debris and deleterious matter, are disposed of in a satisfactory and acceptable manner in accordance with all relevant statutory requirements, including the Resource Management Act.

Waste material shall be disposed of to the Martinborough Landfill (277 Lake Ferry Road, Martinborough 5781) at the Principal's cost unless otherwise Instructed by the Contract Administrator.

Blockage material/debris from the network may be disposed of to the screening bins at the local WWTP or as Instructed by the Contract Administrator.

All contaminated material must be removed in trucks or carrying equipment that is sealed and able to hold wastewater without leakage in order to protect public health.

The Contractor's Schedule of Prices allow for transport of waste to the approved dump site. If the Contract Administrator Instructs the Contractor to use a different dump site, the Contractor will be entitled to a Variation.

Sludge removal from treatment plants is carried out under a separate contract and does not form part of this Contract.

Temporary Facilities

The Contractor shall make such arrangements as may be reasonably necessary for the temporary supplies of water and power for the Site for the purpose of enabling the Contractor to carry out the Contract Works

Water will be available from the Principal's mains, subject to the Contractor providing evidence of suitable and approved backflow prevention devices on the filling equipment/tank prior to any filling taking place or on the fire hydrant upstand equipment.

The Schedule of Prices shall allow for all Costs in connection with such temporary facilities and for the removal of, and restoration of the Site on completion of the Works.

The Contractor shall obtain permission from the landowner and Contract Administrator to establish site buildings and storage areas.

The Principal will permit no signs to be erected on the Site, except warning and directional signs and those required by the Health and Safety at Work Act 2015.

4.17 Approved Contractors

Specific works, carried out within the Contract area, are permitted to be carried out by Approved Contractors only including:

- New connections to public water services
- New connections to public sewer systems
- New connections to public stormwater systems
- Installation of new water or drainage reticulation to be taken over by the Principal e.g. part of a subdivision

By virtue of the award of this Contract, the Contractor is an Approved Contractor. The Contractor may withdraw from this list by notifying the Contract Administrator in writing.

As an Approved Contractor the Contractor will compete with other local approved contractors for capital projects. The Contractor will have first right of refusal for a portion of the annual minor capital works. The extent and value of this portion will be at the Contract Administrator's discretion.

4.18 Work on Third Parties' Sites

When the Contractor is completing Contract Works on a third party's site, such as work on a pump station or storage tank not on Principal-owned land, the Contractor is responsible for ensuring that all requirements are met. The Contractor shall not assume that the third-party has met or organised health and safety and traffic management requirements.

4.19 Power and Telecommunications Charges at Facilities

Power and telecommunications charges for facilities, treatment plants and pump stations shall be paid for by the Principal as part of an overall contract for energy supply for all Principal's installations.

The Contractor is required to use reasonable commercial endeavours to minimise the demand charge component of those facilities through efficient management of the Assets. The Contractor shall apply a sustainable approach to energy use and implement methods that optimise energy use and scheme requirements.

All charges to the Contractor's telephone communication systems including receipt of SCADA telemetry alarms and view only data access shall be paid by the Contractor.

4.20 Contract Works Maintenance Period

The Contractor warrants the workmanship in the Contract Works and Materials (but not consumables) used under this Contract for a period of 12 months from the date the relevant Contract Works were done in accordance with the following provisions.

Surface reinstatement shall be maintained for 24 months.

Any faults, defects or failures on work carried out in under this Contract that become apparent or are found within the warranty period for each individual job shall be repaired (or reinstated as otherwise Instructed by the Contract Administrator) at the Contractor's Cost.

4.21 Notifiable Events

The Contractor must notify the Contract Administrator as soon as practicable on becoming aware that a Notifiable Event (as defined in table 15. below) has occurred. The purpose of the notification is to provide for collaboration between the Contractor and the Principal to gather information, make decisions, and determine the actions that need to be taken.

Table 15: Notifiable events

Event	Action upon event occurring
Universal	
Site accident	Immediately notify Contract Administrator and Worksafe NZ. Provide a full and comprehensive written report within 24 hours
Near miss	Notify the Contract Administrator and Principal and provide a summarised written report within 48 hours
Failure to meet work response time for urgent work	Advise Contract Administrator as soon as practicable (but within 24 hours)
Property damage resulting from network faults	Immediately notify Contract Administrator
Identification of unexpected services	Notify relevant underground service authority
Trenching greater than 1.5 m deep	Notify Worksafe NZ as "Notifiable Work" and simultaneously notify the Contract Administrator
Site conditions require a change in repair or pipe laying methods	Notify Contract Administrator for approval of alternative method
Intention to excavate in State Highway	Notify NZTA for Approval
Discrepancy between Principal's records and in-ground infrastructure	Notify Contract Administrator for assessment
Water	
Contamination during repair	Immediately notify Contract Administrator verbally to assess sterilisation requirements and temporary water supply if necessary
Work on Strategic/Critical mains say 150mm dia. and greater pipe	Immediately notify Contract Administrator verbally of any repair on large diameter pipes to allow inspection of the site/asset during repair
Sluice valve clockwise closing	Notify Contract Administrator of any sluice valves (greater than 50mm) that are clockwise closing.
Backflow prevention - High/medium hazard identified on private property	Notify the Contract Administrator immediately of the identified onsite hazard and risks.

Treatment/Disinfection failure	Notify the Contract Administrator immediately
Low treated water reservoir levels	Notify the Contract Administrator immediately
Wastewater/Stormwater	
Contractor suspects pipe structural damage during blockage clearance	Notify Contract Administrator for assessment of situation and determination of further action required, if any.
Pump station overflow	Notify the Contract Administrator immediately
Unplanned discharge	Notify the Contract Administrator immediately
Planned Notifiable Events	
Establishment for the execution of small capital works	Notify Contract Administrator with adequate time to attend site (not less than 24hrs notice)
Pipe testing of small capital works	Notify Contract Administrator with adequate time to attend site and witness test (not less than 24hrs notice)

5 Technical Specification - Water Supply

5.1 Network overview

The networks covered by this contract include:

Table 16: Water Supply Networks

Water Supply	Featherston	Greytown	Martinborough	Pirinoa
Treatment Plant Name	Wai-ohine	Memorial Park	Ruamahanga and Manganese Reduction Plant	Pirinoa
Source	Bore x 4	Bore x 1	Bore x 3	Bore x 1
Treatment	UV, NaOH, Cl ₂	UV, NaOCl	UV, Cl ₂ , Filtration,	H ₂ O ₂ , Filtration, UV, Cl ₂
Storage (m ³)	8000	0	800	50
Number of Storage Tanks	4	0	4	2
Booster Pump Stations	0	0	0	0
Reticulation (m)	54,317	62,125	45,160	2,200
Valves	184	220	193	12
Hydrants	184	218	207	0

The Principal has no reliable record of the number of backflow preventers and pressure regulating valves.

5.2 Scope of works

Preventative Maintenance is work required for the complete operation and maintenance of the water supply networks within the contract area, to ensure delivery of water as specified.

This shall include, but is not limited to:

- Planning, programming and undertaking of Preventative Maintenance tasks of the water, wastewater and stormwater networks to deliver cost-effective practices and provide value for money
- Routine / audit inspections of the facilities in accordance with best appropriate practice for the complexity of the facility.
- Routine / audit inspections of the water, wastewater and stormwater networks in accordance with the agreed programme.
- Operation Maintenance of treatment plants and application of chemicals and consumables in accordance with the relevant O & M Manual and the Contractor's SOPs.

- Operation, maintenance and monitoring of booster / pump stations
- Identifying repairs to treatment and pump equipment,
- Cleaning and maintenance of reservoirs,
- Monitoring of telemetry and responding to alarms,
- Inspection and maintenance of intakes,
- Supply and storage of all treatment chemicals and reporting as specified.
- Annual inspections of rising mains
- Reactive works as required/ directed by the Contract Administrator.
- Response to call outs as directed.

Detailed information on all the water supply systems in the contract area is held and is available for inspection at SWDC's Martinborough office.

5.3 Routine/Preventive Works (Reticulation)

5.3.1 Overview

The preventative maintenance tasks for the water supply reticulation includes but is not limited to:

- General observation of water assets and reporting of any issues during routine works and inspections
- Exercise/inspect valves/meters/fire hydrants
- Annual inspection and certification of listed backflow prevention devices
- Mains flushing

Note: Blue cats eyes and road markings are to be completed under the roading contract.

5.3.2 Hydrant testing

All fire hydrants are to be tested on a five-yearly cycle to ensure they are functioning as required.

An annual programme of testing is to be agreed with the Contract Administrator. The Contractor shall:

Confirm location of hydrants

Exercise hydrants to ensure they are functioning correctly and that they close completely

- Confirm pressure is within relevant guidelines
- Identify malfunctioning hydrants
- Reinstating the marker
- Clear hydrant boxes of any debris to ensure frost plug has required function clearance

The Contractor shall record the date, and any faults or problems identified at the hydrant with a report of findings submitted to the Contract Administrator.

5.3.3 Valve inspection and exercising

All valves are to be inspected on a five-year cycle.

An annual inspection programme is to be agreed with the Contract Administrator. The purpose of the inspections is to:

- Confirm location of valves / verify as-built data
- Exercise the valves to ensure they are functioning correctly and that they close completely
- Identify malfunctioning valves
- Painting the service cover and road markings
- Clear valve boxes of any debris.

The Contractor shall record the date and any faults or problems identified at the valve with a report of findings submitted to the Contract Administrator.

5.3.4 Pressure Reducing Valves

Pressure Reducing Valves (**PRV's**) are designed to control pressure in the water supply network to comply with Principal's requirements.

The Contractor shall inspect annually and maintain all PRV stations located on water mains in the contract area. The PRV's shall be cleaned, pits dewatered, exercised and the PRV adjusted to the required operating pressures.

The PRV testing programme shall be carried out during the period of low water use in each relevant area. During high demand times the Contractor shall audit PRV performance to ensure and monitor that service levels are at agreed levels.

5.3.5 Backflow preventer testing

All backflow preventers installed at the Principal owned properties e.g. wastewater pump stations, are to be tested annually by a registered Independent Qualified Person.

The testing procedure shall be in accordance with AS/NZS 2845.3:2020.

If the Contractor finds that any backflow preventers are missing from high or medium risk sites, the Contract Administrator shall be notified immediately.

5.3.6 Mains flushing

The 6-monthly flushing programme shall be developed by the Contract Administrator and the Contractor and will focus on key points within the network such as low points and dead-end mains.

Flushing shall be of sufficient duration and extent to ensure that maximum velocities are established and microbiological and/or aesthetically complying water is available at the point of flushing prior to recommencement of service. The Contractor shall liaise with the local Fire and Emergency NZ (FENZ) service in individual water supply areas to coordinate authorised Hydrant Use.

Water shall be conveyed to a Stormwater drain to minimise damage to properties from flushing. The Contractor shall not perform mains flushing during water restrictions, unless approved by the Contract Administrator.

The Contractor shall record the date, any faults or problems identified at the fire hydrant, including whether the water flow was clear or dirty, flush duration and any maintenance required. Upon completion the Contractor shall return completed flushing schedules to the Contract Administrator.

5.3.7 Mains inspections

Water mains, as identified in the Maintenance schedules shall be visually inspected on an annual basis. This shall include:

- Falling / gravity mains

Inspection record sheets shall clearly identify the location and size of the main, its depth, associated fittings and shall include a general condition of the main with any recommended maintenance works.

When requested by the Contract Administrator, the Contractor shall carry out additional inspections of specific mains.

5.3.8 Restricted installations

The Contractor shall inspect and maintain customer installations at the frequency shown in Appendix 6 Reticulation Schedule – Maintenance Schedule and as specified below:

- Restrictors and fittings, tanks and above-ground pipework to and including the ball-cock shall be inspected for defects.
- Restrictors and fittings shall be checked (including checks of actual flow compared to authorised flow and pressures) and replaced where necessary to provide the authorised flow or where there is a need to change the restrictor size because of changing circumstances on the scheme.
- If a restrictor is found to be missing during the inspection it shall be replaced.
- Illegal pipe connections or tampered restrictors shall be identified, and the Contract Administrator notified accordingly as below.

A report on each inspection shall be completed and forwarded to the Contract Administrator.

Where tampered restrictors are identified the Contractor shall:

- Measure and record flow, operating and static pressure from tampered components
- Record all relevant information, property, allowable allocation, time and date, situation and circumstances
- Take photos of the tampered components
- Record statements from the current owner/occupier if present
- Remove the tampered restrictor, bag and seal for safekeeping
- Replace the restrictor and seal
- Measure and record flow, operating and static pressure
- Advise the Contract Administrator immediately

5.3.9 Watermain Condition Samples

All sections of watermain DN100 and greater removed during repairs and renewals shall be provided to the Contract Administrator for condition inspection purposes.

The sample shall be cut with clean faces to a practical length, generally no longer than 0.5m. The sample shall be cut appropriately to show the cause of failure such as the pinhole or crack.

The sample shall be stored in a clear plastic bag and sealed. Note that asbestos cement pipes may be included in these samples and all health and safety precautions must be followed. All samples shall be labelled to clearly show and record the:

- Service Request number
- Date sample taken
- Location pipe sample removed from
- Top of the pipe clearly marked

The sample shall be held by the Contractor for delivery or uplifting by the Contract Administrator monthly.

The sample shall be delivered to the Alexandra Wastewater Treatment Plant or dispatched as directed by the Contract Administrator.

5.4 Reactive works

5.4.1 Overview

All network repairs including pipes, connections, valves, hydrants and fittings are to be completed in accordance with NZS4404:2010 unless otherwise specified, using proprietary materials specifically manufactured for that purpose.

The Contractor shall submit Standard Operating Procedures for approval, outlining repair methods to be used including associated disinfection.

Where the watermain must be shutdown to affect the repair, the Contractor shall follow the shutdown procedure as outlined Section 7.9.

The Contractor shall follow the sterilisation / disinfection procedures outlined in NZS4404:2010.

A temporary repair may need to be effected to return supply to customers within the specified response time.

A temporary repair may also need to be effected where the Contractor believes it may be beneficial to the Principal's proactive management approach to review the method of treatment (i.e. a watermain that has repeatedly broken may be replaced rather than allow further breaks).

5.4.2 Repair toby/manifold

The Contractor shall replace/repair 20-25mm tobys / manifolds as directed by the Contract Administrator by replacing or repairing any of the following:

Non return valve	Handle
Diaphragm	Washer
Seals	Fitting both side of the manifold

The decision-making process shall generally follow the diagram below:

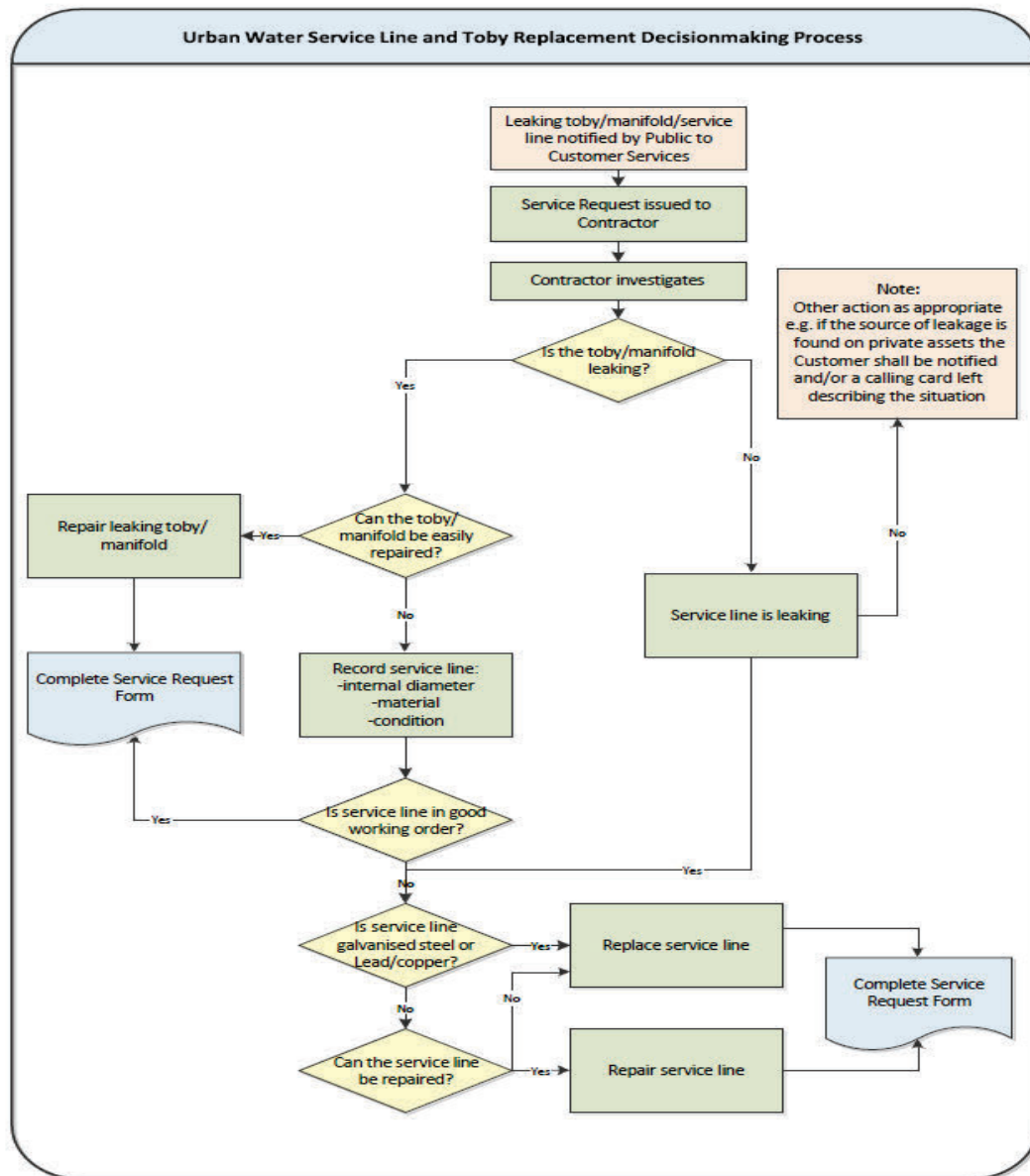


Figure 2: Service line / Toby Replacement Decision-Making Process

5.4.3 Water Meters

The Contractor shall replace/repair meters as directed by the Contract Administrator.

The Contractor shall ensure that the serial number of the meter corresponds with the serial number on the repair sheet before commencing any repair work. All meters shall be fitted with a tamper tag (security seal).

The meter shall be positioned equally within the meter box to allow easy replacement of the meter and components in the future.

The Contractor shall advise the Contract Administrator of any meters installed in situations where maintenance and reading is not able to be carried out easily. The Contract Administrator will programme the meter for relocation if appropriate.

5.4.4 Reactive Meter Replacement

During periodic meter reads some water meters are found to be faulty i.e. no longer recording volumetric use or no longer able to view a correct reading. These meters shall be replaced on instruction from the Contract Administrator.

5.4.5 Fire Hydrants

Fire hydrants shall be repaired by re-washing or re-packing as appropriate.

Where replacement is required, fire Hydrants shall be constructed of Ductile Iron in accordance with NZS 4522:2010 - Underground fire hydrants and have a Polymeric Coating to AS/NZS 4158:2003, resilient seated stopper, and no exposed fasteners.

The hydrants shall be the standard medium pattern screw down type in accordance with NZS 4404:2010.

All risers are to be precast concrete.

All hydrants shall be installed in accordance with NZS 4404:2010 and Addendum.

5.4.6 Water valves

Sluice valves shall be resilient seating to AS/NZS 2638.2:2011A1 cast iron anti-clockwise closing, dezincification resistant or approved equivalent complete with spindle caps. Other valves shall comply with BS 5163-1:2004. Valves shall be constructed complete with cast iron surface boxes painted white, in accordance with NZS 4404:2010.

All risers are to be precast concrete.

Valves are generally to be gate valves when sized from 25 to 50mm (commonly called peet valves) and clockwise closing. Valves over 50mm will generally be sluice valves and close anti-clockwise. The Contractor shall notify of any sluice valves found to not be anti-clockwise closing.

Valve packing material shall be manufacturer's approved. The Contractor shall check the correct packing sizes available for the valve prior to closing down any water main.

Measurement and cutting of the packing shall be carried out strictly in accordance with the manufacturer's directions.

All bolts removed shall be replaced with new stainless steel bolts.

Where hand wheels are missing or broken on gate valves, the Contractor shall provide new cast aluminum wheels, enamel painted and installed complete with new brass lock nut and washer. PVC or Polythene handles are acceptable subject to the approval of the Contract Administrator.

5.4.7 Data loggers

Data loggers, electronic devices that record information such as pressure or flows over time, are installed at various locations throughout the networks. Upon instruction from the Contract Administrator the Contractor shall collect data loggers from their point of installation (generally fire hydrants or meters) and deliver to Council's offices for downloading of data.

Data loggers shall be reinstated as directed by the Contract Administrator.

5.4.8 Installation of Backflow Preventers

In accordance with the Water Services Act, the Health Act and the Building Act, backflow preventers are required on all connections where, in the event of a pressure loss in the system, water other than wholesome drinking water may be drawn back into the public mains.

Backflow preventers are installed on the customer's side of the point of supply and appropriate to the level of contamination risk. All high and medium risk backflow preventers must be installed with isolating valves and be fully testable.

5.4.9 Pipe repairs

All water supply pipe breaks and leaks shall be repaired within the specified Response Time. The Contractor is expected to exercise best practice in determining:

- Whether to repair the leak or replace a short length of pipe when a connection leaks.
- Whether to replace an entire connection.

Details of all leaks including whether the leak was on a main or service, asset id, physical position of leak along a main or at points of connection for laterals, an assessment of pipeline condition while carrying out the repair, the diameter and material type of the pipe repaired and type of repair shall be reported to the Contract Administrator.

Whilst carrying out repairs to mains the surrounding mains shall be inspected visually for their current condition and any works required reported to the Contract Administrator.

If the Contractor believes a full length of pipe/ lateral requires replacement or there have been 2 repairs on the same pipe/ lateral, that are not within 500mm or on the same location on the pipe/ lateral, the Contract Administrator shall be notified and the necessary course of action to repair the leaking pipe/ lateral agreed. If there are multiple leaks on a pipe / lateral that are within 500mm or in the same patch as a previous repair, the Contract Administrator shall be notified which will likely result with a site visit and the necessary course of action to repair the leaking pipe/ lateral agreed.

All repairs shall be completed with new pipe or as agreed with the Contract Administrator.

Where the watermain must be shutdown to affect the repair, the Contractor shall follow the shutdown procedure outlined in this Specification.

The Contractor shall allow for disinfection of all repairs and the removal of grit/debris by flushing, to be completed in accordance with approved Standard Operating Procedures.

All pipe repairs shall be performed in accordance with the contractor's Hygiene Procedures Protocol to ensure the water quality is maintained through the appropriate risk assessment, mitigation measures. Records shall be kept of repairs and associated risk assessments to enable the Principal to fulfil its regulatory compliance requirements.

5.4.10 Connections

5.4.10.1 Water Service Connections

Connections are to be completed in accordance with NZS4404:2010 (and Addendum) unless otherwise specified.

Urban supplies - The Principal responsibility terminates at the point of connection on the downstream side of the manifold meter installation.

Rural supplies - The Principal's responsibility terminates at last fitting on the water meter.

New service pipes for domestic and commercial properties shall be Polyethylene with an OD of 25mm (minimum) unless otherwise directed with minimum pressure rating of PN12

All galvanised steel, copper or lead service lines shall be replaced in full when identified during other maintenance works and notified to the Contract Administrator unless the street is on the 3 year renewal schedule, in this case the Contract Administrator should be notified and an approach agreed.

All pipes shall be joined using proprietary plastic couplers in accordance with the manufacturer's printed instructions. Agricultural type fittings shall not be used.

Each service connection to an urban principal main shall be by means of an approved fitting.

If no preferred position is given by the Contract Administrator for non-restricted urban systems, the tapping band shall be located on the front boundary so as to provide the shortest connection to the point specified by the property owner or within one metre of the side boundary if no point is specified. In the case of rear lots, on the house side of and clear of the driveway.

The connection shall terminate with an approved manifold with dual check backflow preventer, isolating valve, water meter, manifold box located 300mm on the road side of the boundary, where practicable. Water meters shall be fitted with a tamper tag (security seal).

The Contractor shall not proceed with new connections without the approval of the Contract Administrator. No cutting of sealed roads will be permitted except with the specific approval of the Contract Administrator.

The position of service connections to restricted systems shall be determined by the Contractor unless instructed specifically by the Contract Administrator. Connections shall terminate at the ballcock in the customer's tank or at the customer's side of the restrictor where it is installed at the property boundary.

5.4.10.2 Non-standard connections

Non-standard connections shall include:

- Unmetered fire sprinkler connections
- Large metered connections >25mm
- Connections for new subdivisions
- Connections for replacement water mains

The Contractor shall assess and provide a quotation for the work involved for each non-standard connection which shall be submitted to the Contract Administrator for approval prior to undertaking the works.

5.4.10.3 Illegal Pipe Connections

Where illegal connections are identified the Contractor shall:

- Report the illegal connection immediately to the Contract Administrator
- Measure and record flow, operating and static pressure from illegal connection
- Record all relevant information, property, allowable allocation, time and date, situation and circumstances
- Take photos of the illegal connection
- Record statements from the current owner/occupier if present
- Document all of the above

The Contractor shall not remove the illegal connection unless by specific instruction from the Contract Administrator. 24 hours' notice is required to be given to the customer prior to removal of an illegal connection.

Under normal circumstances The Principal shall be responsible for giving the property owner / occupier 24 hours' notice prior to instruction being issued to the Contractor for the removal and resolution of illegal connections.

5.4.10.4 Locating water services

At times the Contractor may be expected to locate (typically) rural water services. Locating of water services shall include but are not limited to:

- Using existing available plans
- Physical inspection of the identified area
- Locating visible assets such as valves, tobies and tanks
- Locating waterpipes by divining or potholing
- GPS of repair markers, valves and pipes
- Appropriate on site marking of located water pipes with fluorescent paint
- Attaching rural water main markers to fences

5.4.11 Shutdowns and Disruptions to supply

5.4.11.1 Schools

The Water Services Act 2021 requires schools to provide safe drinking water on their site. Therefore, no planned shutdown of schools shall occur during normal school hours. Where an emergency shutdown is unavoidable the Contractor shall liaise with the school and the Contract Administrator to minimise the impact of the water shutdown.

5.4.11.2 Firefighting

Several supplies provide water for firefighting ranging from direct from mains fire hydrants in urban areas to fire storage tanks in rural areas. Shut-downs compromise the availability of firefighting water, and it is necessary that the Fire and Emergency New Zealand (FENZ) are notified of any shut-down that:

- Isolates the supply to any fire hydrant on an on-demand supply
- Substantially impacts on the capacity of a network such that volumes available at any fire hydrant on an on-demand supply are substantially compromised
- Isolates a fire storage tank on a restricted supply.

5.4.11.3 Impact on Water Treatment

Ultraviolet irradiation is utilised as a treatment process on all of the drinking water supplies:

The Contractor shall be notified of any future changes to existing treatment processes.

In accordance with the DWQAR the flow through the ultraviolet equipment is required to be less than the manufacturers design flow. If valves are opened too quickly during start up, flows generated will exceed the design flows and subsequently fail the requirements of the DWQAR.

The Contractor shall liaise with the Contract Administrator when re-commissioning any main directly influencing the discharge from a water treatment plant equipped with UV and such mains shall be identified in the shut-down plan.

5.4.11.4 Shutdown procedure

The following procedure applies to all urban water shutdowns.

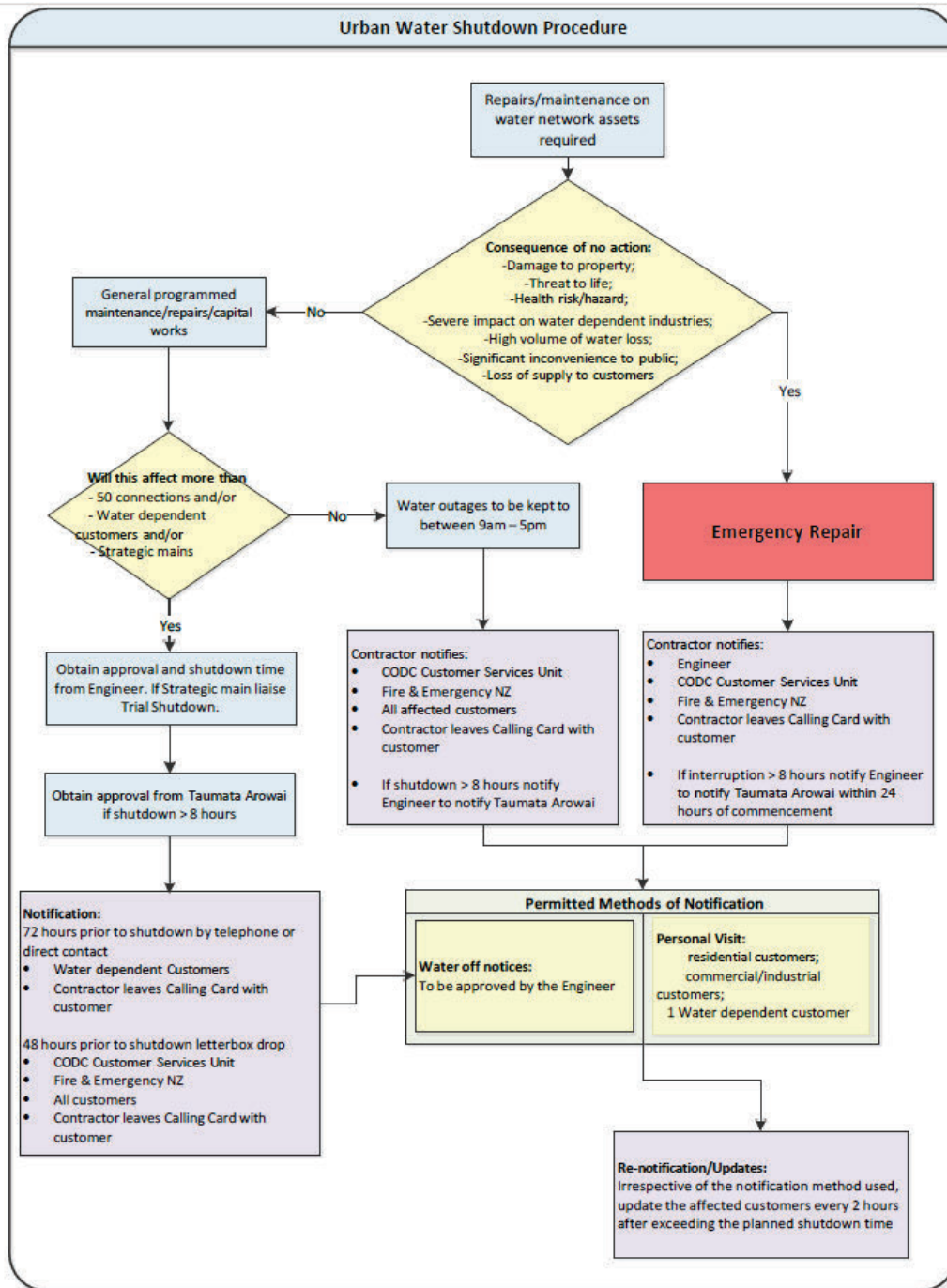


Figure 3: Urban Water Shutdown Procedure

5.4.12 Planned shutdowns

If any of the Contractor's work involves disruption to or unavailability of a service or could affect properties and the public at large (more than 30 minutes for urban supplies and 8 hours for rural supplies), affected properties and businesses shall be notified and an alternative service shall be supplied during the period of disruption where feasible.

All planned shutdowns should be carefully planned to minimise disruption to consumers. Planned shutdowns should not be undertaken during peak water demand periods, on public holidays or where significant inconvenience will result except with the specific agreement of affected customers.

The Contractor shall give the Contract Administrator 72 hours' notice of all pre-scheduled work requiring a water shutdown lasting more than 30 minutes.

Prior to a planned shutdown the Contractor shall:

- notify the Principal Customer Services of the extent and proposed duration of the interruption.
- advise Fire and Emergency NZ (FENZ) of the water supply interruption when multiple streets are affected that could impact their firefighting capacity.
- provide the affected customer(s) a minimum 72 hours' notice

5.4.13 Unplanned Shutdowns

In the event of an unplanned water shut-down, such as through a power outage, best efforts shall be made by the Contractor (such as door-knocking and social media) to notify consumers that the water service will be interrupted. In such cases, immediate advice shall be given to the Contract Administrator and the Principal's customer service staff and the consequences of the action set out. Particular regard is to be given to water-dependent customers and dialysis patients.

Unscheduled shutdowns that occur outside normal working hours shall be immediately notified to the after-hours service centre.

Where disruption may occur for longer than 30 minutes or over several days the Contractor shall notify affected commercial and industrial properties in person.

Any shutdown, planned or unplanned, exceeding 8 hours require notification to Taumata Arowai. The contractor shall communicate with the Engineer to ensure the Principal is in compliance with the Water Services Act.

5.4.14 Priority Customers

A list of the Principal's priority customers, as at the date of this agreement, is contained in Appendix 8: Priority Customers. The Principal may update the priority water users at any time by written notification to the Contractor.

There are several persons in the District connected to dialysis machines which require a continuous flow of water at all times. The Principal shall inform the Contractor with the details of any known dialysis patients on a confidential basis.

Water dependent customers, schools, hospitals, dialysis patients and other priority customers shall be consulted prior to planned shutdowns and the Contractor shall consider their special needs when planning shutdowns.

If it is necessary to shutdown the flow of water to any of the listed properties, the Contractor shall provide at least 72 hours' notice to the Contract Administrator and the property owner.

5.4.15 Disruption to Consumer Supply

When a consumer is reported to the Contractor as having suffered a significant disruption to supply (e.g. no water, low pressure etc.) the Contractor shall investigate the cause, commence repairs within 2 hours and restore the service within 6 hours of receiving the report. If the Contractor cannot restore the service due to reasons beyond his control, the problem should be immediately reported to the Contract Administrator.

5.5 Abandoned Pipes and Fittings

The Principal seeks the most cost-effective approach to replacement of pipes and fittings for its customers, including re-use of materials where appropriate.

All abandoned valves, fittings and watermains which can be re-used or reconditioned shall remain the property of The Principal. Any items required to be removed, and which can be re-used or reconditioned i.e. valves, fire hydrants, water meters, surface boxes etc. shall be returned to the Contractor's yard within ten working days of removal. Any damage done to these fittings etc. by any careless action of the Contractor shall be made good at the Contractor's expense.

Where manifolds and meters are abandoned, a final meter read is required for each abandoned meter, documented and submitted to the Contract Administrator.

Where a fitting has been removed or a pipe has been cut, any resulting hole in the abandoned pipe shall be effectively plugged so as to prevent the ingress of backfill material and to prevent water from passing through the pipe.

As-builts shall show all abandonments.

Abandoned pipes shall not be used for or attached to permanent thrust blocks for the replacement main.

Where a fire hydrant has been removed all surplus fire hydrant markings shall be permanently removed by physical removal or over-sealing as approved by the Contract Administrator.

5.6 Bulk Water Supply and Fire Hydrants

The taking of water from a fire hydrant through the use of a hydrant standpipe is no longer approved practice under the Drinking Water Quality Assurance Rules, except by Fire and Emergency Services NZ, the drinking water supplier or authorised contractors.

Bulk water supply points are located at strategic locations throughout the district. Contact Customer Services for details.

5.7 Water Supply Disinfection

Disinfection of new mains shall be done in accordance with requirements and process detailed in NZS 4404: 2010 or approved Standard Operating Procedures and meet requirements of the DWQAR.

Disinfection when making repairs and commissioning assets back into service within the network requires a risk assessment.

Before the work is completed the Contractor will complete a risk assessment to determine the risk of contamination in the network and identify the procedures that will be applied to minimise that risk.

As each section of work is completed, the Contractor is to provide the Contract Administrator with accurate and complete disinfection and flushing records. The report is to include location, length of main flushed and disinfected, including but not limited to FAC levels before and after disinfection.

The Contractor shall ensure that at all times the requirements of the drinking water standards, rules and aesthetic values are met.

5.8 Routine Operations And Maintenance

Water supply facilities will be operated and maintained in general accordance with the relevant O & M Manual and the Contractor's accepted Standard Operating Procedures.

Table 17: Water Treatment Network - Preventative Maintenance

Facility		Preventative Maintenance
Supply In-takes		The Contractor shall regularly attend and inspect water intakes at an appropriate frequency to ensure the necessary flow of water and shall promptly attend to all operational or maintenance requirements. Where high river levels or dirty water conditions threaten the quality or security of the water supply, the Contractor shall take such action as is necessary to protect the supply. Specific requirements, where relevant, are noted later in this document
Treatment Plants		The Contractor shall regularly attend and inspect all the treatment plants at a frequency to ensure the necessary treatment and supply of water and shall promptly attend to all operational or maintenance requirements. The treatment plants shall be operated and maintained such that optimal reservoir levels are maintained without overflowing the storage reservoirs. Routine testing shall be done at the minimum frequency required under the regulatory framework. The Contractor to arrange work with M&E service providers, subject to approval from the Contract Administrator
Pumping stations & Rising mains		The Contractor shall regularly attend and inspect all the booster pumps, bore and surface water pumping systems to ensure the necessary supply of water and shall attend to any operational or maintenance requirements as specified in the manufacturer's instructions. This shall include the periodic checking of pumps and preventative maintenance.

Facility	Preventative Maintenance
	Rising mains shall be inspected annually. The Contractor to arrange work with M&E service providers, subject to approval from the Contract Administrator
Small plant and fittings	The Contractor shall regularly inspect all small items of plant and shall promptly attend to all operational or maintenance requirements. The Contractor to arrange work with M&E service providers, subject to approval from the Contract Administrator
Electronic and Instrumentation equipment	The Contractor shall regularly inspect and calibrate/verify (using approved subcontractors if necessary) all dosing, electronic and control equipment and shall promptly attend to all operational or maintenance requirements. The Contractor to arrange work with M&E service providers, subject to approval from the Contract Administrator
Electrical Switchgear and panels	The Contractor shall regularly inspect and verify (using approved subcontractors if necessary) all electrical switchgear and panels and shall promptly attend to all operational or maintenance requirements The Contractor to arrange work with M&E service providers, subject to approval from the Contract Administrator
Inspection and Cleaning of Reservoirs	The reservoirs shall be inspected for leaks externally with each visit. Any leaks detected shall be reported immediately to the Contract Administrator and repaired by the Contractor. The repair of minor leaks shall be Preventative Maintenance, but major repairs shall be a Variation and only be carried out when instructed by the Contract Administrator. A major leak is where there is visible running water on the outer surface of the reservoir. Reservoir cleaning shall be carried out as ordered by the Contract Administrator and shall be undertaken as dayworks or as an agreed Variation

5.9 Mains Inspections

Water mains shall be visually inspected on an annual basis. This shall include:

- Intake mains
- Rising mains
- Reservoir overflow pipes

Inspection record sheets shall clearly identify the location and size of the main, its depth, associated fittings and shall include a general condition of the main with any recommended maintenance works.

When requested by the Contract Administrator, the Contractor shall carry out additional inspections of specific mains.

6 Technical Specification – Wastewater

6.1 Network overview

The networks covered by this contract include:

Table 18: Wastewater Scheme Details

Water Supply	Featherston	Greytown	Martinborough	Lake Ferry
Treatment Plant Name	Featherston	Greytown	Martinborough	Lake Ferry
Treatment	Oxidation Ponds, UV	Oxidation Ponds, UV, Irrigation	Oxidation Ponds, UV, Irrigation	On-site septic tanks, Recirculating cloth filter package plant, UV, Irrigation or Wetland
Pump Stations	2	10	0	3
Reticulation (km)	23,693	29,160	25,125	3,673
Man-holes	TBC	TBC	TBC	TBC

Table 2: Wastewater Pump Stations

System	Site	Number of Pumps
Featherston – 2 pump stations	Donald Street	3
	Ataahua Place	1
Greytown – 10 pump stations	Bey Lane	1
	Arbor Place	1
	Cotterville Crescent	1
	Garrity Lane	1
	Farley Avenue	1
	Westwood Avenue	1
	Oates Place	1
	James Kidd Place	1
	Orchard Road	1
	Reading Street	1
Lake Ferry – 3 pump stations	South End (PS1)	2
	Public Toilets	1
	North End (PS2)	1

This data is indicative only and will need to be confirmed by an on-site inspection for each network.

6.2 Scope of works

The Contractor shall supply all labour, plant and materials necessary to maintain the wastewater systems within the District as specified.

In general, Contract Work activities relating to the wastewater systems includes but is not limited to:

- Planning, programming and undertaking of preventative / routine maintenance tasks to deliver cost-effective practices and provide value for money
- Inspecting the network in accordance with the Maintenance Schedule included in Appendix 5: Wastewater Reticulation – Maintenance Schedule
- Preventative Maintenance and Reactive works of reticulation networks including pipes and manholes
- Repairs of damaged wastewater pipes and manholes
- Clearing blocked wastewater pipelines
- Inspection, maintenance and operation of wastewater treatment plants including screens, trickling filters, centrifuge, oxidation ponds, wetlands, imhoff tanks, UV systems, disposal systems and associated works and surrounds
- Inspection, maintenance and operation of wastewater pumping stations and rising mains
- Renewals and minor capital works as directed by the Contract Administrator
- Emergency maintenance work.

6.2.1 Sewer Cleaning

Sewers should be cleaned annually.

For a limited set of trouble spots in Featherston and Greytown, this should also be cleaned over summer.

6.2.2 Routine manhole inspections

All manholes shall be inspected on a five yearly cycle. An annual inspection programme shall be agreed with the Contract Administrator.

Manhole record sheets shall clearly identify the manhole number, size of barrel, diameter of inlet and outlet pipes, depth, evidence of surcharging, and general condition of the manhole including the lid.

At the completion of each manhole inspection the Contractor is to ensure that the lid is replaced and fits securely in the manhole ring.

When requested by the Contract Administrator, the Contractor shall carry out additional inspections of specific manholes.

6.3 Reactive works

All network repairs and replacements including pipes, connections, manholes and fittings are to be completed in accordance with NZS4404:2010 (and Addendum) unless otherwise specified, using proprietary materials specifically manufactured for that purpose.

The Contractor shall submit Standard Operating Procedures for agreement, outlining repair methods to be used.

The Contractor shall ensure due care is taken to avoid spillages as a result of repairs to the sewer network. Containment measures shall be employed to ensure wastewater is contained and cleaned up during maintenance works and that adequate containment is available on trucks that may be used to transport waste from blockages and other works.

The Contractor shall contact the Contract Administrator immediately if containment cannot be achieved.

Accordingly, the Contractor shall undertake remedial works entirely at the Contractor's cost to address any spills on roads, private or public property associated with maintenance works.

6.3.1 Mains Repairs

All wastewater pipe breaks and leaks shall be repaired within the specified Response Time.

All wastewater overflows from broken pipes, or any other cause, shall be contained where possible. The Contractor shall clean up the area onto which the overflow has occurred, and the ground shall be disinfected and reinstated.

All repairs, where a section of pipe is to be replaced, shall be notified to the Contract Administrator to allow the Contract Administrator to inspect the site during the repair.

Whilst carrying out repairs to wastewater mains the surrounding mains shall be inspected visually for their current condition and any works required reported to the Contract Administrator.

6.3.2 Manhole Repairs

Manhole maintenance or repairs required in respect of a work request shall be completed within the specified Response Times and in accordance with NZS4404: 2010.

As required, the Contractor shall adjust existing manhole covers so that the frame and lid is flush with the surrounding surface level. No timber packing shall be used when setting the new manhole cover level. The surface around the manhole cover shall be reinstated to match the existing surface. Where the existing frame or lid is found to be cracked or broken, the frame and /or lid shall be replaced.

The lids and frames shall be installed in accordance with best appropriate practice and NZS4404: 2010. All components shall be installed in accordance with manufacturer's instructions.

6.3.3 Clearing Overflow And Blockages

Overflows present a significant risk to public health and shall take priority when attending to blockage works. In all instances isolating the public from, removing spilt wastewater and contamination, and disinfecting the general area, shall be the priority actions undertaken by the Contractor.

Any wastewater overflow shall be attended and cleared within the specified Response Times and in general accordance with the diagram below:

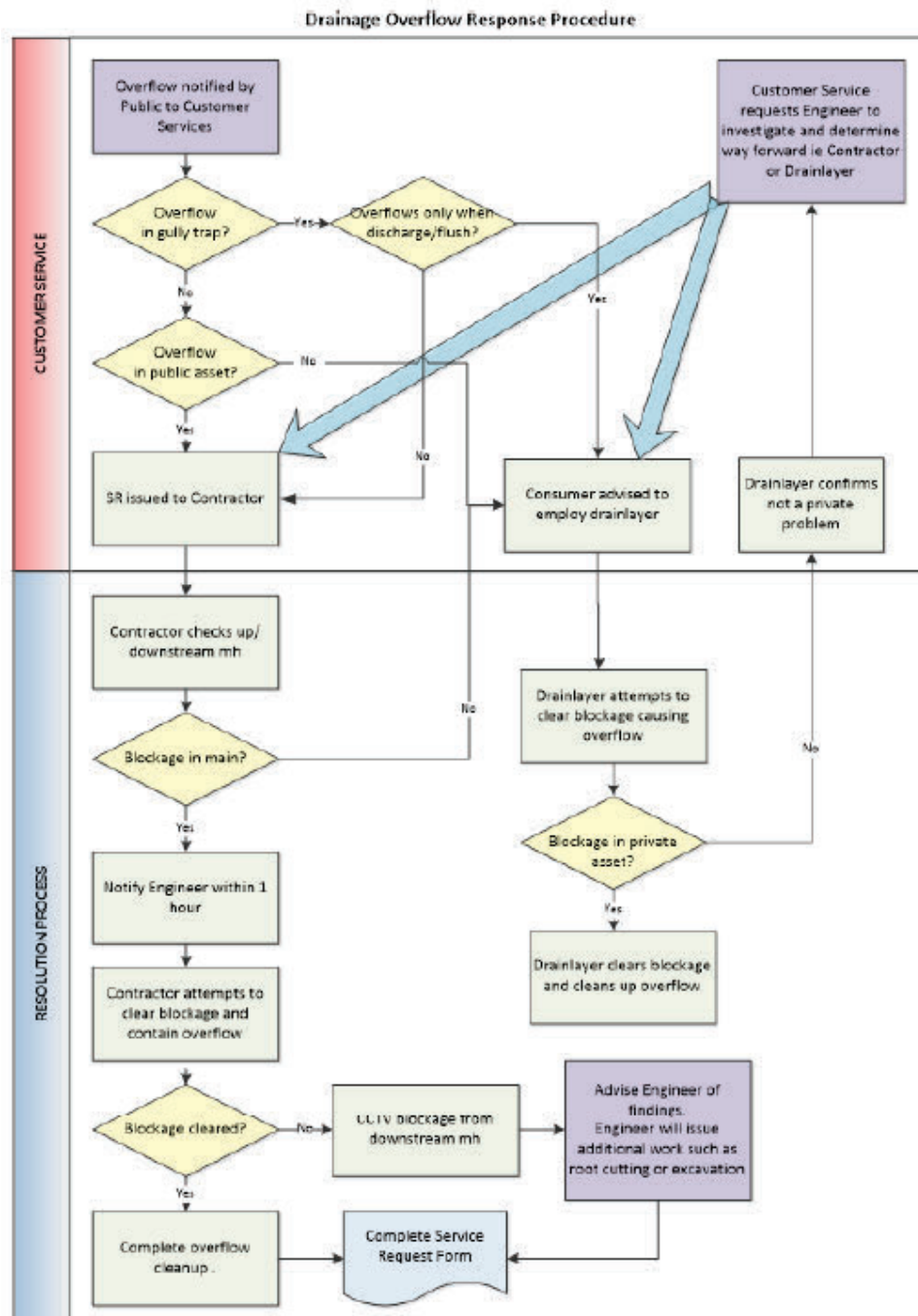


Figure 4: Drainage Overflow Response Procedure

All wastewater overflows from manholes, blockages or any other cause, shall be contained where possible. The Contractor shall clean up the area onto which the overflow has occurred, and the ground shall be disinfected and reinstated as soon as possible.

Overflows are a higher priority than the blockage, therefore the Contractor will first eliminate or manage the overflow prior to clearing the blockage.

Where sewer overflows or overland flows enter piped stormwater systems, open stormwater drains or streams the sewer flow must be contained as soon as is possible and practical.

The pipe system or open drain/waterway must then be thoroughly cleaned and disinfected, and if necessary flushed to aid cleansing.

Sewer overflows must be reported to the Contract Administrator within one hour of identifying the overflow.

The Contractor shall provide a written report to the Contract Administrator the following working day (and include in monthly reporting) which shall include (in addition to normal SR and Response Report completion):

- Location of Overflow
- Date of Overflow
- Estimate of Volume of Overflow
- Receiving Environment
- Overflow Details (including cause, prevention, clean-up)
- Notifications to the Principal and others

6.3.3.1 Blockages

Any wastewater blockage shall be attended and cleared within the specified Response Time using the most cost-effective method, typically by jetting or rodding. The Contractor shall record the causes of blockages and their location within the work request record.

Roots shall be removed from mains by use of manual devices or by pressure water cutting of roots with prior approval of the Contract Administrator.

All contaminated liquids shall be disposed of at the closest Wastewater Treatment Plant or as otherwise agreed with the Contract Administrator.

The Contractor shall at all times endeavour to eliminate or minimise overflows prior to clearing blockages. The Contractor shall endeavour to have a sucker truck available to collect wastewater from an upstream point to eliminate further overflows downstream.

Water blasting of wastewater mains shall be limited to an appropriate pressure to avoid damaging the integrity of the pipe structure. Water blasting equipment shall be standalone equipment with tanks where possible. A sucker truck may be required to collect wastewater to eliminate further overflows.

The Contractor shall collect all cleaned debris from the downstream manhole, clean up the site and dispose of all debris in an appropriate manner. Any connection made to the water supply for jetting purposes shall be protected by a backflow preventer.

Where there have been two blockages on the same line within 24 months, a CCTV inspection may be required, as directed by the Contract Administrator. The contractor will document the necessary arrangements to ensure that this can occur.

6.3.4 Connections

Wairarapa Consolidated Bylaw which defines the responsibilities of sewer lateral pipes that connect houses to the main wastewater system.

6.3.4.1 *New Connections*

Where new house or commercial connections to existing wastewater mains are requisitioned by the Contract Administrator, the connection shall be made in accordance with NZS4404:2010 (and Addendum) unless otherwise specified. Work shall be completed within the specified Response Time or as directed by the Contract Administrator.

As-built drawings to be submitted. The Contract Administrator may justifiably withhold payments until asset information including as built information have been received and accepted by the Contract Administrator.

The Contractor shall include the number of new house connections completed in the Monthly report. The report shall include copies of the amended as built drawings including the new connections.

6.3.4.2 *Existing Connections*

The Contractor shall locate existing house connections and mark with a stake when required by the Contract Administrator.

6.3.5 Locating wastewater assets

At times the Contractor may be expected to locate wastewater assets. Locating of wastewater assets shall include but are not limited to:

- Using existing available plans
- Physical inspection of the identified area
- Locating and GPS of wastewater assets
- Appropriate on site marking of located assets with fluorescent paint

6.3.6 Mains Jetting/Cleaning

The Contractor shall carry out wastewater mains jetting / cleaning as directed by the Contract Administrator, such as in response to an overflow or blockage.

6.3.7 CCTV Inspections

As directed by or agreed with the Contract Administrator, the Contractor shall complete CCTV inspections of the mains.

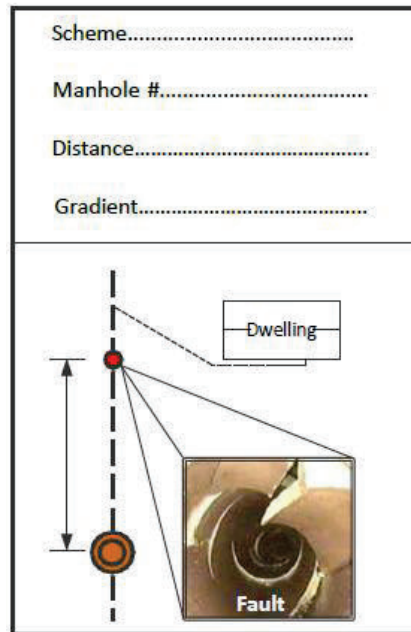
This may include:

- Conditions assessments
- Investigations, for example where there have been multiple blockages in 24 months.
- As directed for repairs

CCTV reports, including video footage shall be provided to the Contract Administrator, to an agreed format, within a week of completion of the inspections. The CCTV report associated with this inspection shall contain as a minimum, the basic information shown on the diagram below.

The report should also include:

- Date and Time of when the footage was recorded.
- Location: The specific location of the inspections.
- Outline of findings from the assessment e.g. pipe breaks, blockages etc



6.4 Treatment Plants

Treatment plant operation and maintenance shall be carried out in accordance with the respective Operation and Maintenance Manuals, the Contractor's SOP's and in accordance with the conditions of applicable Consents.

Treatment plants, including plant and equipment, shall be regularly inspected to ensure compliance with the requirements of this contract and to ensure they are operational at all times

Specifically:

- The Contractor shall regularly inspect items of plant including electric motors and pumps, portable compressors and back wash pumps as well as valves and fittings. The Contractor shall promptly attend to all operational and maintenance requirements.
- Treatment plants shall be operated and maintained such that odour is reasonably minimised,
- All ancillary equipment such as aerators and step screens shall be checked and maintained and appropriate intervals as agreed with the Principal.

The Contractor shall arrange for and coordinate the removal of the bagged septic waste from treatment plants (or any other wastewater handling facility) and its disposal at a licenced waste disposal site.

All operating and maintenance records, including test results and equipment maintenance shall be made available to the Contract Administrator upon request.

The Monthly Report shall include any observations regarding the need for preventative maintenance for equipment, buildings or any other feature at any particular facility.

The Contractor shall inform the Contract Administrator immediately of

- any test results or situations which are abnormal in comparison with normal plant operation,
- any discharge of untreated effluent and
- all breakdowns and faults which may affect the performance of any treatment plant.

6.5 Routine operations and maintenance – Treatment Plants

Preventative Maintenance comprises the operation and maintenance of the wastewater schemes within the Contract Area in general accordance with the relevant O & M Manual and in accordance with the applicable Consents and Good Industry Practice.

This shall include, but is not limited to, the operation of treatment plants, oxidation ponds and wetlands, DO testing, outfall inspection and repairs, monitoring of telemetry, recording of routine compliance-based information in a visual format, responding to alarms, cleaning of oxidation ponds, reporting and all other work as specified.

6.6 Treatment Plant Discharge Pipes and Outfalls

The treatment plant discharge pipes and outfalls, including diffusers where applicable, shall be operated and maintained at all times to ensure they comply in all respects with statutory requirements including discharge permits and that the discharge pipes and outfalls are kept clear and free of any restricting materials.

The outfalls and diffuser structures shall be inspected annually to record and report the condition of all pipes, including pipes under water, but not pipes underground, protective equipment and diffusers, and any maintenance work required.

Maintenance work shall be instructed by the Contract Administrator and shall be completed within the specified Response Time, unless the fault will cause effluent to contravene statutory or water right discharge permit provisions, in which case repairs shall be commenced immediately.

6.7 Oxidation Ponds Maintenance

The Contractor shall inspect each oxidation pond at least once a week or as otherwise scheduled in the Operation & Maintenance Manuals.

Operation of the oxidation ponds shall be in accordance with standard oxidation pond operation procedure and any resource consent conditions where applicable.

Preventative Maintenance shall include:

- Pond inlets and outlets and all associated screens are to be kept clear of debris
- Measure and record dissolved oxygen levels in the treated effluent on a weekly basis or as otherwise scheduled in the Inspection Schedule. Results will be made available to the Contract Administrator on request.
- Wave bands shall be maintained free of weeds by approved mechanical or chemical means and any damage or erosion shall be promptly repaired.

- All drainage facilities and culverts shall be kept in operating order.
- Where aeration is provided, the Contractor shall ensure it is operated and maintained so as to maintain the efficient operation of the pond and control of odours.

6.8 Wetland Maintenance

Three-monthly Preventative Maintenance of wetlands shall include:

- Inlets and outlets shall be maintained clear of vegetation and pipework to allow operation as designed.
- Vegetation around wetlands, including on bunds, access tracks, and stormwater drains shall be maintained to a maximum of 300mm high and free of noxious or undesirable vegetation.
- Wetland inlet chamber and distribution pipework shall be maintained clean and clear to allow operation as designed.
- Removal of non-treatment plant growth from wetland cells as it occurs.
- Appropriate action to keep the roots of the wetland plants covered by water, if necessary, by adjustment of weir levels.
- Plants replaced as necessary, and embankments maintained.

6.9 Disposal of objectionable material

The Contractor shall remove screenings and floatables from inlet screens, treatment equipment and oxidation ponds at the required frequency to avoid blockage of screens and aeration equipment and offensive odours occurring.

The floatables shall be removed from oxidation ponds as and when required.

All offensive materials shall be hygienically disposed of on-site to screening bins for disposal at the Martinborough transfer station as appropriate at the Principal's cost (only landfill disposal costs).

Wastewater biosolids shall be disposed of at a suitable location to be agreed with the Contract Administrator.

6.10 Routine operations and maintenance – Pump Stations

The operation and maintenance of all pump stations shall be in accordance with the respective Operation and Maintenance Manuals and the Contractor's SOPs.

Pump stations, including plant and equipment, shall be regularly inspected to ensure compliance with the requirements of this Contract and to ensure pump stations are operational at all times.

Specifically:

- The pump stations shall be operated and maintained clear and free of any restricting materials at all times.
- Pumps shall be test run on each visit to check that they are running satisfactorily and clear of any blockages. Any malfunction of the pumps shall be rectified immediately if possible.

- The Contractor shall promptly attend to all operational and maintenance requirements identified through inspections, in response to alarms or as directed by the Contract Administrator or Principal.
- Defects shall be repaired immediately and/or reported to the Contract Administrator.

Annually, as an extension to the planned activities in accordance with the Operation and Maintenance Manuals, each station shall be pumped down, and all fittings and equipment cleaned, checked for corrosion and repaired, replaced or repainted as necessary.

At least once per year, the performance of all pumps shall be checked as follows:

- Pumps to be lifted and inspected / tested.
- Submersible wastewater pumps - flow rate draw down test which shall take into account inflow to the pump well during the test.
- Surface mounted centrifugal pumps - shut off head pressure test. Care shall be taken to run the pump against a closed valve for no longer than 5-10 sec to avoid overheating.
- Other pumps - these shall be flow or pressure tested to the Contract Administrator's approval.

The Contractor shall regularly change duties between pumps, that is rotate duty and standby functions between pumps, on a cycle of no longer than a month. If this is not possible due to a pump or pumps being unserviceable, this shall be reported to the Contract Administrator.

6.11 Pump Station Overflows

Overflows present a significant risk to public health and shall take priority when attending to malfunctions that may cause an overflow. In all instances isolating the public from, removing spilt wastewater and contamination, and disinfecting the general area, shall be the priority actions undertaken by the Contractor.

If the alarm system indicates that an overflow may occur, immediate action shall be taken to contain the overflow. After an overflow the Contractor shall clean up the area.

Where the cause of the overflow is due to a blockage in the reticulation, the Contractor is to notify the relevant Contractor and the Contract Administrator immediately.

Where applicable, Appendix 9: Pump lift escalation procedure shall be followed.

Where sewer overflows or overland flows enter piped stormwater systems, open stormwater drains or streams the sewer flow must be contained as soon as is possible and practical.

The pipe system or open drain/waterway must then be thoroughly cleaned and disinfected, and if necessary flushed to aid cleansing.

All such overflows and the cause thereof shall be reported to the Contract Administrator within one hour of discovery or as soon as practicable thereafter. An incident report is required for all overflows where the overflow may result in a discharge to water either directly or through the stormwater network which shall include (in addition to normal SR and Response Report completion):

- Location of Overflow
- Date of Overflow

- Estimate of Volume of Overflow
- Receiving Environment
- Overflow Details (including cause, prevention, clean-up)
- Notifications to the Contract Manager and others

6.12 Rising Mains Inspections

Rising mains shall be inspected on an annual basis.

Inspection record sheets shall clearly identify the location and size of the main, its depth, associated fittings and shall include a general condition of the main with any recommended maintenance works.

When requested by the Contract Administrator, the Contractor shall carry out additional inspections of specific mains.

7 Technical Specification – Stormwater

7.1 Network Overview

The networks covered by this contract include:

Table 20: Stormwater Scheme Details

Stormwater (excluding water races)	Unit of measure	Quantity
Pipes	m	17,925
Channels	m	20,151
Moroa Water Race (excluding sections in Grey-town)	m	~120,000
Longwood Water Race	m	~30,000

This data is indicative only and will need to be confirmed by an on-site inspection for each network.

7.2 Scope of works

Contract Work activities relating to the stormwater systems include:

- Planning and programming the Contract Works
- Inspecting the networks in accordance with the Maintenance Schedule
- Inspection of manholes and pipelines and flushing, to an agreed programme, as required
- Repairs to damaged stormwater pipes and manholes
- Clearing of blocked stormwater pipelines
- Renewals and minor capital works as directed by the Contract Administrator
- Emergency maintenance work

7.3 Exclusions

Routine channel inspections and maintenance works are undertaken under a separate contract.

This contract does not include the maintenance of rural stormwater control systems, open roadside drains (except where stated otherwise), kerb and channel and sumps and their leads to the main within urban areas. This work is carried out under separate contract.

7.4 Routine/Preventative works

7.4.1 Inspections

Routine inspections shall be undertaken in accordance with the Inspection Schedule.

The Contractor shall inspect stormwater assets before and after storm events to identify faults and damage that require immediate attention by the Contractor, and which must be reported to the Contract Administrator.

The focus shall be on those systems prone to blockage.

7.4.2 Routine Manhole Inspections

All manholes shall be inspected on a five yearly cycle. An annual inspection programme shall be agreed with the Contract Administrator.

Manhole record sheets shall clearly identify the manhole number, size of barrel, diameter of inlet and outlet pipes, depth, evidence of surcharging, and general condition of the manhole including the lid.

At the completion of each manhole inspection the Contractor is to ensure that the lid is replaced and fits securely in the manhole ring.

When requested by the Contract Administrator, the Contractor shall carry out additional inspections of specific manholes.

7.5 Reactive works

All network repairs including pipes, connections and manholes are to be completed in accordance with NZS4404:2010 unless otherwise specified, using proprietary materials specifically manufactured for that purpose.

The Contractor shall submit Standard Operating Procedures for approval, outlining repair methods to be used.

7.5.1 Mains repairs

All repairs, where a section of pipe is to be replaced, shall be notified to the Contract Administrator to allow the Contract Administrator to inspect the site during the repair.

Whilst carrying out repairs to stormwater mains the surrounding mains shall be inspected visually for their current condition and any works required reported to the Contract Administrator.

7.5.2 Manholes

The Contractor shall adjust existing manhole covers so that the frame and lid is flush with the surrounding surface level. No timber packing shall be used when setting the new manhole cover level. The surface around the manhole cover shall be reinstated to match the existing surface. Where the existing frame or lid is found to be cracked or broken, the frame and /or lid shall be replaced.

The lids and frames shall be installed in accordance with best appropriate practice and NZS4404:2010 (and SWDC Addendum). All components shall be installed in accordance with manufacturer's instructions.

7.5.3 Clearing Blockages

All blockages and obstructions that affect the operation of the stormwater systems shall be removed within the Response Time using the most cost-effective method. The Contractor shall record the causes of blockages and their location within the work request record.

Water blasting of stormwater mains shall be limited to an appropriate pressure to avoid damaging the integrity of the pipe structure. Water blasting equipment shall be standalone equipment with tanks where possible.

The Contractor shall collect all cleaned debris from the downstream manhole, clean up the site and dispose of all debris in an appropriate manner. Any connection made to the water supply for jetting purposes shall be protected by a backflow preventer.

Roots shall be removed from mains by use of manual devices or by pressure water cutting of roots with prior approval of the Contract Administrator.

All blockage material/debris shall be disposed of at the Martinborough transfer station at the Principal's cost (landfill disposal costs) or as otherwise agreed with the Contract Administrator.

7.5.4 Stormwater connections

7.5.4.1 *New Connections*

Where new house or commercial connections to existing stormwater mains are requisitioned by the Contract Administrator, the connection shall be made in accordance with NZS4404:2010 (and Addendum) unless otherwise specified. Work shall be completed within the specified Response Time or as directed by the Contract Administrator.

As-built drawings to be submitted. The Contract Administrator may justifiably withhold payments until asset information including as built information have been received and accepted by the Contract Administrator.

The Contractor shall include the number of new house connections completed in the Monthly report. The report shall include copies of the amended as built drawings including the new connections.

7.5.4.2 *Existing House Connections*

The Contractor shall locate existing house connections and mark with a stake when required by the Contract Administrator.

7.5.5 Locating stormwater assets

At times the Contractor may be expected to locate stormwater assets. Locating of stormwater assets shall include but are not limited to:

- Using existing available plans
- Physical inspection of the identified area
- Locating and GPS of stormwater assets
- Appropriate on site marking of located assets with fluorescent paint

7.5.6 Mains Jetting/Cleaning

The Contractor shall carry out stormwater mains jetting / cleaning as directed by the Contract Administrator, such as in response to an overflow or blockage.

7.5.7 CCTV Inspection

As directed by or agreed with the Contract Administrator, the Contractor shall complete CCTV inspections of the mains.

This may include:

- Conditions assessments
- Investigations, for example where there have been multiple blockages in 24 months.
- As directed for repairs

CCTV reports, including video footage shall be provided to the Contract Administrator, to an agreed format, within a week of completion of the inspections.

The CCTV report associated with this inspection shall contain as a minimum, the basic information shown on the diagram below.

The report should also include:

- Date and Time of when the footage was recorded.
- Location: The specific location of the inspections.
- Outline of findings from the assessment e.g. pipe breaks, blockages etc

Scheme.....
Manhole #.....
Distance.....
Gradient.....

8 Performance

8.1 Overview

The goal of the Contract is to deliver quality Water Services to the Contract Area in the South Wairarapa district.

The success of the Contract will be assessed via the KRAs and KPIs.

KRAs are non-technical indicators of relationship health for a collaborative partnering arrangement.

Performance against the KPIs, as reported in the Contractor's monthly report, will be reviewed monthly against performance targets.

8.2 KRAs

To promote a continuous focus on the importance of the relationship between the Principal and the Contractor, the performance of the Contractor and the Management Team is to be regularly monitored to identify areas where aspects of the relationship can be improved by actions of either party in order to lift overall performance and effectiveness.

Set out below are KRAs important to maximise the benefits from the collaborative partnering relationship. Performance against these KRAs is to be reviewed jointly and improvement actions agreed.

Table 21: Key Result Areas

KRA	Descriptors	Focus / Measure
Positive relationships	• Commitment to the collaborative approach, both with the Principal and other service providers • Building and maintaining a collaborative culture • Easy and open communications • Consensus decisions • Early sharing of information and issues – no surprises • Mutual respect and support • Leadership and guidance to Management Team • Clear delegations • Resolving disputes	Effectiveness of integrated team
Health and safety	• Health and safety and welfare of Contractor and Principal • Welfare in emergency response and Civil Defence events	Always Safe outcomes
Service delivery	• Focus on customers ○ Positive feedback from public, councilors and Council staff ○ Timely and quality response to customers correspondence • Minimal disruption to service	Commitment and delivery

	• Delivery on time • Realistic programmes / planned works to programme • Priorities reviewed and recommended	
Quality standards	• QA in place and implemented • Environmental impacts minimised ○ Current environmental plans for spillages and leaks ○ Prompt reporting of incidents and remedial measures	Quality and environmental consciousness
Reporting and communications	• Appropriate and accurate claims • Planned work on track within approved budgets - 'No-surprises'	Owner certainty and best value
Efficiency and innovation	• Core focus on adding value and saving cost in programmes • Moving from reactive to a proactive approach • Continuous improvement	Suggestions (both parties) for innovation - optimising Asset whole of life costs and improving work practices
Sustainable Outcomes	Identifies pragmatic initiatives to achieve sustainable outcomes for the benefits of the South Wairarapa community	Enables better environmental, economic and social outcomes

KRAs will be continually monitored and reviewed on a bi-annual basis with the purpose of identifying areas of concern and areas for improvement. KRAs will be measured using a traffic light system with documented findings being a collective view.

 Less than 50% of KRAs are being met, actions to rectify non-compliance to be identified and implemented	 Less than 75% of KRAs are being met, some concerns, areas of improvement to be identified and implemented	 KRAs consistently met, no areas of concern
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8.3 KPIs

The assessment of performance levels forms an integral part of this Contract. The KPIs are measures of the levels of service required to be provided by the Contractor, in particular customer service, health and safety and environmental compliance.

The KPIs for this Contract will be agreed upon during the implementation phase and recorded in writing by agreement between the parties.

The Contract Administrator will use the KPIs as a guide to determine the overall performance of the Contractor of its obligations under the Contract.

Performance of the Contractor against the KPIs will be a consideration when deciding to award any Contract extensions.

8.3.1 KPI measurement

The KPIs will be assessed over the whole of each applicable performance period, generally monthly.

The Contractor shall provide evidence with their monthly report that KPIs have been met. Determination of whether the KPIs have been met will be made by the Contract Administrator. The Contract Administrator may form that view either by relying on the Contractor's report, or by carrying out its own assessment.

Monthly Management meetings shall consider all aspects of the Contractor's performance and a review of performance against the KPIs will be part of this meeting. These meetings will also consider the Contractor's performance against the KPIs.

8.4 Performance Targets

Performance targets will be reviewed collectively within the first three months of this Contract and then annually.

8.5 Performance Evaluation

The Contractor's performance will be evaluated monthly and will be used as a factor in determining any contract extensions and in the allocation of capital works not included as of right under the Contract.

The Contract Administrator and Contractor will, subject to the agreed performance criteria and KPIs, determine areas of poor performance or non-compliance and will identify any specific actions to address non-compliance and / or to improve performance.





8.7 Appeals

Upon receiving the Contractor's performance report, the Contract Administrator will assess the level of performance on a monthly basis and advise the Contractor.

If the Contractor does not agree with the assessment, it shall advise the Contract Administrator within 5 days of the date of that notice of the reasons for disagreement. If the Contract Administrator concurs with the grounds of the Contractor's submission, the level of performance will be reassessed, and this reassessment will be final and binding on the parties, but for manifest error.

8.7.1 Contract Extension

The performance evaluations will be used as a basis for determining whether the Contract will be extended or not.

The Principal can renew the Contract for an addition one (1) year by giving the Contractor three months' notice prior to the Expiry Date on the same terms as this Contract.

The Contractor reserves the right to charge the principal an increased fee from the most recent Schedule of Prices, this increase needs to be agreed between the Principal and Contractor.

8.7.1.1 Holding Over Period

The Principal can require the Contractor to continue to perform the Contract Works beyond the Final Expiry Date of this Contract without the Contractors express written consent, such continued use shall be deemed a Holding Over Period.

During this period:

1. The terms and conditions including the Schedule of Prices of this Contract will continue to apply on a month-to-month basis, unless otherwise agreed in writing by the Principal and Contractor.
2. The Contractor reserves the right to charge the Principal an increased fee from the most recent Schedule of Prices, this increase needs to be agreed between the Principal and Contractor.
3. Either party may terminate the Holding Over Period by providing 3 months' written notice to the other party.
4. The Contractor may suspend or terminate performing the Contract Works if the Principal does not agree to a new contractual term or fails to make timely payments.
5. Nothing in this clause shall construed as granting the Principal a right to continue to have the Contract Works performed by the Contractor beyond the Holding Over Period without a renewed Contract.

8.7.2 Contract Administrator 's Audits

Upon receipt of the monthly claim the Contract Administrator will undertake an audit of the claimed work to:

- Verify that the work claimed for has been done,
- Verify that Contract and technical standards have been satisfied
- Verify that the Contractor is maintaining appropriate records.

The Contract Administrator may audit, or engage third parties to audit, the performance of the Contractor's obligations under the Contract at any time without notice to the Contractor. The Contractor will provide reasonable assistance requested by a member of the Contract Administrator 's staff, or a third party engaged for this purpose by the Contract Administrator, in checking the Contractor's compliance with any of its obligations under this Contract.

8.7.3 Repeated Failure To Comply

The Contractor shall carry out the Contract Works within the Response Times.

Repeated failure to meet the Response Times shall initiate the following procedures:

- Contract Administrator shall advise the Contractor in writing that failure to carry out certain Contract Works within the required Response Time has placed the Contractor in breach of Contract.
- Where the Contract Work remains unperformed, the Contract Administrator may immediately arrange for the work to be carried out by other means that it deems appropriate. The cost of undertaking such work shall be deducted from the Contract price.

Where the Contractor's performance is consistently poor, the Contractor may be seen to be in default and the Contract may be terminated.

Circumstances may arise wherein there are justifiable explanations for non-compliance (e.g. adverse events) which will be subject to approval by the Contract Administrator.

8.7.4 Excess Supervision Costs

The Contractor will be liable for costs incurred by the Contract Administrator and the Principal as a consequence of non-complying work.

In the event of such circumstances arising, the Contract Administrator will prepare a detailed summary of the amounts being claimed as accruing to excess supervision costs and forward copies to both the Contractor and the Principal. The amounts so claimed will then be deducted from the Contractor's monthly claim in the following month.

9 Appendices

9.1 Appendix 1: SCADA sites

The Principal is based on radio telemetry unit (RTU) and control held in Abbey Systems installed by AD Riley. This system is being migrated to Wairarapa-based machines, but the function below will not change.

	SCADA System
Powerlink SCADA Master/Backup	
Architecture	South Wairarapa DC SCADA system runs on a VMWare. It has got both Master and Standby Master (backup).
Powerlink SCADA software version	Powerlink v3.8.0
Nodes	Master, Standby Master, Local Op @Featherston WTP
	Parameter
OPC, Qty	Yes
Datalogging (Storing Compliance data in the RTU itself)	Yes
eMail	Yes
eFTP incl CSV import	Yes
ODBC/SQL	No
IP RTUs	10
Cellular Gateway VM	1
<u>Master Protocols at Master list:</u>	
RTU Protocols, list:	Modbus Master, Modbus Slave, Modbus TCP, AB DF-1
Qty RTU addresses	Total-100, Active Physical RTU Sites - 25
Qty Progs	Total-750, Current configured programs - 321
Qty Alarm Gps	16 Alarm groups
Qty Quick Reports	54 Automated reports configured on the System
Qty Users	14 Users configured to receive Alarms
Database/Historian	
Main Database	Aveva Orchestra
Graphical User Interface	
Main GUI	Aspex Software. Aspex is running on the Master, Standby Master. SWDC also used Abbey Securelink Client remote access via Aspex (6 ASClient users)
Alarm System	
Powerlink Alarms Notification?	Yes

SCADA System	
Communications Network	
Architecture	Abbey Cellular VM Gateway and Abbey IP
Comms Protocol	Abbey Cellular and Abbey IP protocol
No of Comms channels & rtus on each channel	All RTU sites on TCP except 2 sites on Cellular
External radios	Not 100% sure, but 4RF SR+ if used , and 2 sites uses Telit cellular modems
RTUs	
RTU model	Abbey Topcat, Swampfox SF1 and SF3 RTUs. SF1 comes with 1 IO card and SF3 comes with 3 IO cards
External Radio model if used	May be 4RF SR+
Remote Progs for control	Yes, but varies across sites
Data Logging, Is it being used?	Yes
Remote Access	
Abbey Securelink (Qty of licences)	6 (1x SWDC, 3x City Care, 2x Fulton Hogan)
Software Support Contract in place	Yes

RTU Site ID	Name of RTU Site	IP Address	Additional PLC on sites
*001	Waiohine WTP	10.71.1.20	Yes - UV , Bore PLCs communicating with Abbey Swampfox RTU on Modbus TCP link
*010	Morrisons Hill BS	10.71.0.20	
*040	Martinboro WTP/MRP	10.71.40.20	Micro820 communicating with Abbey Swampfox RTU on Modbus serial link
*041	Martinborough Ponds	10.71.41.20	Wecon HMI communicating with Abbey Swampfox RTU on Modbus Serial link
*042	Greytown WWTP	10.71.42.20	Allen Bradley PLC on site communicating with Abbey Swampfox RTU on DF1 driver
*043	Greytown Bore	Cellular RTU Site	Micro820 communicating with Abbey Swampfox RTU on Modbus serial link
*044	Humphries St Valve	10.71.44.20	

RTU Site ID	Name of RTU Site	IP Address	Additional PLC on sites
*045	Martinborough Res	10.65.45.20	
*046	Boarbush Reservoir	10.71.46.20	
*049	Tararua Junc. WWPS	10.71.49.20	
*050	Ataahua Pl WWPS	10.71.50.20	
*051	Orchard Rd WWPS	10.71.51.20	
*052	Oates Place WWPS	10.65.152.20	
*053	Pirinoa WTP	10.71.53.20	Micro820 communicating with Abbey Swampfox RTU on Modbus serial link
*054	Farley Ave WWPS	10.65.54.20	
*057	Reading St WWPS	10.65.57.20	
*059	Lake Ferry New WWTP	10.71.59.20	Redlion HMI communicating with Abbey Swampfox RTU on Modbus Slave driver
*060	Featherston WWTP	10.65.60.20	
*061	Donald St WWPS	10.65.61.20	
*062	Lake Ferry 1 WWPS	10.71.62.20	
*063	Lake Ferry 2 WWPS	Cellular RTU Site	
*065	Westwood Ave WWPS	10.65.65.20	
*066	Arbor Place WWPS	10.65.66.20	
*067	Garrity Ln WWPS	10.65.67.20	
*068	Kuratawhiti WWPS	10.65.68.20	

9.2 Appendix 2: KRA and KPI's

See spreadsheet

9.3 Appendix 3: [REDACTED]

[REDACTED]

9.4 Appendix 4: [REDACTED]

[REDACTED]

Martinborough Water Incidents – Lessons Learned

Date: 29 August 2019

Version: 1.0 FINAL

Purpose of this document

The purpose of this document is to capture the lessons learned from the Martinborough boil water incidents in February and April this year. This document is intended as a valuable tool to help avoid water contamination incidents and improve the response of Council officers to any kind of similar event in the future. The document includes not only what went wrong but also what went well; for this reason, there is not always a corrective action.

Lessons learned approach

The Lessons Learned are drawn from a range of different inputs including the Havelock North Inquiry, Lutra Technical Report, Regional Public Health Compliance Report and feedback from Martinborough residents, business community and council staff.

Feedback from Martinborough businesses was gathered from a meeting held with the Martinborough Business Association on 11 March and from the community at a meeting held on 8 April.

A chronological approach has been taken to document the lessons as they arose in the lead up and during the boil water incidents, although for the purposes of this report, the two incidents have been reviewed together.

The lessons learned from the Lutra Technical Report are based on the six principles of safe drinking water (Government Inquiry into the Havelock North Drinking Water, 2017). See Appendix 1 for more information.

Background – what happened in brief

Further background information is available at www.swdc.govt.nz/Martinborough-town-water-situation

January 2019

- Late afternoon on 30 January, routine testing carried out at various sites around the water system showed a positive result for low levels of E. coli at Martinborough School, all other samples were clear.
- Within half an hour, Regional Public Health was contacted to discuss the course of action.
- In consultation with Regional Public Health, the school was advised to use an alternative water source as a precaution.
- Further samples were taken from around the system and sent for testing, and follow-up results received on 10am 31 January showed all the results were clear. This was communicated to the school and in a Facebook response.

February-April 2019

- Continued testing showed a second low, positive result at a different site that required further testing.
- In conjunction with Regional Public Health, a Boil Water Notice was issued at approximately 3pm 1 Feb, the day before the Martinborough Fair.
- Investigations into the probable cause identified a malfunction in the UV disinfection system following a power cut as the likely cause.
- The UV disinfection system was fixed so it was working as per the manufacturer's specifications.
- Working with advice from Wellington Water, the town water supply network was systematically checked for potential sources of contamination, and any identified risk points were addressed.
- Flushing of the water supply using water compliant with drinking water standards was completed on 17 February. Subsequent testing of the water for three days following the flush received clear results for E. coli and the boil water notice was lifted on 21 February.
- Throughout the incident, there was ongoing monitoring of illness reporting (particularly gastro-intestinal complaints) in the community and any reports of potential clusters of illness. Regional Public Health and Wairarapa DHB reported no increase in illness levels above the usual levels for the time of year.
- After the boil water notice was lifted, Council increased water sampling and testing, both in terms of the number and frequency of sites, in addition to the online monitoring of the data from the UV disinfection system.
- On 11 March, a meeting for Martinborough businesses was held in collaboration with the Martinborough Business Association for the Council to listen to and understand their specific challenges during the incident and how we can work together to be more prepared for any similar event in the future.
- On 8 April a public meeting was held in the Martinborough Town Hall to answer questions from the public and listen to feedback. A panel with representatives from SWDC, Regional Public Health, Lutra, Wellington Water answered questions from the floor. Approximately 80 people attended including Councillors and the Mayor.

April 2019

- On 9 April, preliminary positive results were received for the indicator organism E. coli for two routine water samples taken the day before, one from the reservoir area and the other from Shooting Butts Rd; all other samples taken around the system came back clear of E. coli.
- In consultation with Regional Public Health, a boil water notice was issued at approximately 6pm on 9 April.
- The boil water notice was communicated by letter drop, loud speaker announcements, electronic and corflute message signs, print and radio media, ratepayer email list, the Martinborough Business Association, Lions and sports clubs.
- Wharekaka Rest Home, Martinborough School, kindergartens, day cares and medical centre also received direct communication.
- The water network near the sites where the positive samples were taken was chlorinated on the night of 9 April.
- On 10 April, emergency water bladders were installed to provide alternative, safe water sources at Wharekaka Rest Home, the Square, Rugby Club, Waihinga Centre, Martinborough School and Martinborough Golf Club.
- On 10 April, Council, Lutra, Wellington Water and Regional Public Health started daily incident management meetings via teleconference. Where necessary these meetings were held over weekends as well as on week days.

Martinborough Water Incidents – Lessons Learned

- On 11 April, the UV disinfection system was ruled out as the cause of contamination in this incident. A systematic risk assessment of the whole network continued, with investigations focusing at the reservoir and on backflow mechanisms to private properties.
- Midday 11 April, results for the second water samples taken before chlorination on the evening of 9 April confirmed the presence of E. coli in the reservoir area, but all other samples taken around the town were clear.
- On 24 April, Councillors approved temporary chlorination of the town's water supply to take place on 13 May, pending further investigation and collaboration with vineyard and brewery owners
- From 24 April to 13 May, Council worked with vineyard and brewery owners to ensure they could make the necessary arrangements so their products would not be adversely affected by the upcoming chlorination.
- From 6 May to 11 May, the town's water network was scoured and flushed, a different zone each day, to remove any built up manganese in the biofilm and sediment in the pipes in preparation for chlorination. Letter drops and advertising in local newspapers and on Council website and facebook page alerted residents to the day their area would be flushed and the times they were likely to be without running water while the flushing was completed.
- On 17 May, after three days of clear water testing, and with approval from Regional Public Health, the Boil Water Notice was lifted.
- Throughout the incident, there was ongoing monitoring of illness reporting (particularly gastro-intestinal complaints) in the community and any reports of potential clusters of illness. Regional Public Health and Wairarapa DHB reported no increase in illness levels above the usual levels for the time of year.

Lessons and corrective actions

1. Lessons learned in the overall management/set-up of the water supply network

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
1.1	There needs to be a review of the importance of drinking water supply within the Council and our contractor organisations	Lutra technical report, Corrective action 1.1	a) Review the findings of the Havelock North Stage 1 and Stage 2 Reports. b) Ensure all staff and contractors involved with the supply of drinking water understand their personal responsibility for the health of the public. c) Ensure that the contracts with suppliers and contractors are set up for 24/7 support. d) Ensure that all staff are adequately trained to	a) Operators are now aware of the summary and it is part of on-going operator training. b) See above c) Operators have that authority, and it will be part of on-going operator training. A standard operating procedure for an emergency has also been developed. d) Operators are aware of this and it will be part of on-going operator training.

Martinborough Water Incidents – Lessons Learned

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
			perform their duties including calibrations.	
1.2	There needs to be a multi-barrier treatment process and protection against contamination of the reticulation system.	Lutra technical report, Corrective action 3.1	Chlorination	- The water supply from the bore with the lowest manganese levels is being chlorinated (since 13 May). This is a temporary arrangement as the bore is unlikely to supply enough water to the town over the summer period. - Plans are underway to install a manganese removal plant to enable water from all bores to be chlorinated. (Chlorination of water with manganese content can result in discoloured/brown water). - Community engagement on this is also underway.
1.3	A systematic assessment of risks throughout the drinking water system needs to be carried out	Lutra technical report, Corrective action 6.1	The risk assessment needs to: - Identify source risks, treatment risks and reticulation risks. - Identify mitigation measures for each risk. - Monitor the performance of each barrier.	- The Water Safety Plan has been updated, including a risk assessment to address these points (see Appendix 2) - Monitoring will form part of the permanent chlorination solution.
1.4	Plant documentation needs to be current and relevant	Lutra technical report, Corrective action 1.2	a) Ensure the process schematics (P&IDs) are available and current. b) Ensure the functional description describing plant operation is available and current. c) Provide a detailed operations manual that details the plant functionality, troubleshooting and standard operating procedures for the operators. d) Provide a schedule of maintenance checks, verifications and calibrations for the whole plant.	a) There is a Process and instrumentation diagram (P&ID), this is being updated as part of the permanent solution for Martinborough water supply. b) This is being updated as part of the permanent solution for Martinborough water supply. c) There is a current Operation and Maintenance (O&M) manual. This was kept at the Waiohine Water Treatment Plant, a copy has now been provided for the MBA site. d) This schedule has been developed as part of the Infrastructure Data software system .

Martinborough Water Incidents – Lessons Learned

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
1.5	Compliance data must be analysed correctly (by a system that has been through adequate quality assurance) and presented in a way that is easily understood	Lutra technical report, Corrective action 1.3	Use an independent compliance reporting system to report compliance.	A software programme “Infrastructure Data” was purchased in April 2019 and is now being used to monitor compliance.
1.6	Operators, supervisors, and managers need to be sufficiently trained to understand the importance of change on a treatment plant	Lutra technical report, Corrective action 4.1	There needs to be training on: - What constitutes a change - What action to take in the event of a change. - Authority of operators to respond to a change. - Understanding the change cannot compromise drinking water safety.	Standard Operating Procedures are being updated to define ‘what constitutes a change’ - Operators are now aware of this and it is part of on-going operator training. - See above - Operators have that authority, and it will be part of on-going operator training. - Operators are aware of this and it will be part of on-going operator training.
1.7	Review the water quality and water source	Community	Water safety plan updated - Review of trends - At least annual analysis of raw water - Review land changes	- Water safety plan updated - Water source being reviewed as part of the permanent water supply solution

2. Lessons learned in the day-to-day operation of the water supply network

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
2.1	Operators, supervisors and managers must understand their drinking water supply and understand the importance of each critical element	Lutra technical report, Corrective action 5.1	They need to understand: - Understanding critical instruments and their function in the water supply. - Understanding how the plant will respond to upset conditions (e.g. resumption of power after a power cut). - Eliminate the ability to by-pass the UV treatment process. - Understanding that a positive <i>E.coli</i> means the water is	- Operators are aware of this and passed their assessments at the end of March 2019. It will also be part of on-going operator training. The water safety plan has been updated. - Operators are aware of this and this will be part of on-going operator training. - This has been actioned and bypass risk minimised. - This is now known by operators and will be part of on-going operator training.

Martinborough Water Incidents – Lessons Learned

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
			contaminated with faecal matter.	
2.2	Replace existing outdated control system with a modern programmable logic controller (PLC) and SCADA system	Lutra technical report, Corrective action 1.4	a) Any failure will lead to a plant shutdown and the inability to deliver unsafe drinking water. b) Ensure that as-built documentation is accurate such that troubleshooting problems is not constrained because of lack of information.	a) The SCADA system will be part of the upgrade for the permanent solution for Martinborough water supply. b) Will be part of the upgrade for the permanent solution for Martinborough water supply.
2.3	Ensure that calibrations and verifications are carried out and recorded in accordance with the standards	Lutra technical report, Corrective action 1.5	a) Calibration and verifications are carried out by DWA approved personnel. b) Equipment required for calibrations and verifications is available. c) Calibration and verification records are available for inspection. d) Staff are competent and authorised to carry out calibrations.	a) This is part of on-going training. Note that the operators passed the assessment on 28 March 2019. b) All equipment has been reviewed, provided and calibrated. c) These were available at the Waiohine plant, and a copy will now be available at the Martinborough plant. The new program will also make it available online for contractor managers. d) This is part of on-going training. Note that the operators passed the assessment on 28 th March 2019.

3. Lessons learned in issuing the boil water notices and during the notice periods

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
3.1	Communication should have gone to the whole community at the first sign of an issue	Community/ Businesses	Review NZDW standards protocol on issuing BWN after the confirmed result	The BWN in April was issued on a preliminary result to the whole community due to the proximity of the previous incident.
3.2	Set up emergency management team and CIMS structure as a first priority	Staff	Develop emergency management plans for different scenarios	An EMT was used daily throughout the second BWN period. Updated emergency management plans being updated for review as part of the Wellington Water change-over from 1 October 2019.
3.3	Look to utilise the skills of staff around the organisation	Staff	Identify council staff with the skills to help and the roles they can take in an emergency situation	To be incorporated as part of the emergency management plan.
3.4	Date and time communication updates, including the original BWN	Staff	N/A	Documented here for future reference
3.5	Identify all stakeholders impacted and interested in the issue and their communication needs	Staff	Develop stakeholder checklist for quick reference in a future emergency	To be incorporated as part of the emergency management plan.
3.6	Have contingency plans in place if key staff are not at work and not available when an emergency occurs, as well as if the emergency response continues over several days	Staff	Keep media lists and other key contacts in a shared folder for anyone to access Key staff need back-up A staff shift roster might be required for an ongoing response	To be incorporated as part of the emergency management plan.
3.7	Use all channels of communication available to get the message out	Staff/ community	Use all broadcast media channels – radio, newswires, newspapers Door-to-door when required Answer all media queries Emergency Mobile Alert when the threshold is reached	Documented here for future reference

Martinborough Water Incidents – Lessons Learned

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
			Portable electronic traffic signs Corflute signs Ratepayer email database Group and organisation email lists (see 3.9 below)	
3.8	The community needs to receive regular, plain English updates on the situation, giving a date/time for the next communication	Staff/ Community	N/A	Documented here for future reference
3.9	Know who you can call on to help with door-to-door maildrops	Staff	Have contact details for community groups (including out of hours) • Staff volunteers • Fire service • Police • Sports/youth groups • Lions Club etc.	Work in progress
3.10	Use non-internet-based communication channels, and don't just rely on website and Facebook	Community	Consider developing text database and emergency text system for the District Develop a list of contact details for organisations and groups who can help get the message out	Text and email systems are being investigated Work in progress
3.11	Give special consideration to the elderly and vulnerable	Community	Remind people to check on their neighbours Keep vulnerable persons register up-to-date Give priority to the needs of medical centres, rest homes, schools and kindergartens	Documented here for future reference
3.12	The emergency water bladders can give the water a rubbery taste	Community	Feedback given to Wellington Water	Documented here for future reference

4. Lessons learned around trying to find the source of contamination

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
4.1	Initiate a systematic risk based approach to find the source	Staff	A full assessment from source to tap was undertaken Develop procedure for incident response in Water safety plan ID software tracks sample results for better analysis	Update emergency response plan Water Safety Plan updated Ongoing testing around network.
4.2	Don't assume there is only one source of contamination	Staff	ID software tracks sample results for better analysis A full assessment from source to tap was undertaken Backflow prevention device and policy amended	Ongoing testing around network.

5. Lessons learned around the flushing of/outages of the water supply network

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
5.1	Avoid water outages on the weekend if at all possible	Businesses	Noted	Incorporated into existing processes
5.2	Better to carry out town flushing in the daylight for H&S reasons and to assist with location of water valves and tobies	Staff	Noted	Documented here for future reference
5.3	Maintain an accurate map of where the valves and tobies are located	Staff	This is updated in Geospatial Information System	Ongoing verification and maintenance
5.4	Valves need to be confirmed as being in working order on a regular basis	Businesses/Staff	Review the maintenance schedule of the water pipe network	Current contract requires an annual test of all valves at the time of painting.

6. Lessons learned in lifting the boil water notices

ID#	Lesson	Source	Recommended corrective action(s)	Status of corrective action
6.1	Use the same channels of communication to notify the BWN has been lifted as those used to notify it.	Staff	N/A	Documented here for future reference
6.2	Keep a record of where all the posters and signs are so they can be removed/replaced with a lifting notice.	Staff	N/A	Documented here for future reference
6.3	Hold a community meeting as soon as possible after any event to debrief and get feedback	Staff	N/A	Documented here for future reference

Appendices

Appendix 1: Correctives actions recommended by Lutra and SWDC response

After the February incident, the Council commissioned a report by Lutra, an expert water consultancy, entitled 'Technical Report: Martinborough Water Treatment Plant – Incident Review'. This was an independent report and, as such, SWDC, and other agencies involved in the incident, did not influence its content other than to offer factual corrections to information such as dates, times etc.

This Report describes the incident, identifies potential intervention points that could have helped prevent the incident, and makes recommendations for the future to prevent a repeat incident.

In evaluating the events and actions taken by the Council before and during the February incident, the six principles for safe drinking water, outlined in the Government Inquiry into Havelock North Drinking Water, 2017, were used as a benchmark.

Below shows the corrective actions set out in Lutra's Technical Report with the Council's response. The full Lutra report is available on our website at www.swdc.govt.nz/Martinborough-town-water-situation.

1.1 Principle 1 – A high standard of care must be embraced

Unsafe drinking water can cause illness, injury or death on a large-scale. All those involved in supplying drinking water (from operators to politically elected representatives) must therefore embrace a high standard of care akin to that applied in the fields of medicine and aviation where the consequences of a failure are similarly detrimental to public health and safety. Vigilance, diligence and competence are minimum requirements and complacency has no place.

Correctives actions	SWDC Response
SWDC should review the importance of drinking water supply within their organisation and those of their contractors specifically:	
• Review the findings of the Havelock North Stage 1 and Stage 2 Reports. • Ensure all staff and contractors involved with the supply of drinking water understand their personal responsibility for the health of the public. • Ensure that the contracts with suppliers and contractors are set up for 24/7 support. • Ensure that all staff are adequately trained to perform their duties including calibrations.	• The reports were reviewed by SWDC. The reports have been discussed with the contractors and will continue to with Wellington water and any new operators. • Is part of on-going training. • This is already part of contract, and will continue to form an important part of this. • Is part of on-going training. The operators passed the assessment on 28th March.
Ensure that the plant documentation is current and relevant, specifically:	

Correctives actions	SWDC Response
• Ensure the process schematics (P&IDs) are available and current. • Ensure the functional description describing plant operation is available and current. • Provide a detailed operations manual that details the plant functionality, troubleshooting and standard operating procedures for the operators. • Provide a schedule of maintenance checks, verifications and calibrations for the whole plant.	• There is a P&ID, this will be updated as part of the permanent solution for Martinborough water supply. • There is a basic description that will be updated as part of the permanent solution for Martinborough water supply. • There is a current O&M but this is kept at the Waiohine Water Treatment Plant, a copy is available at the site. • This schedule is being developed as part of the Infrastructure Data system that has been purchased.
Ensure compliance data is analysed correctly (by a system that has been through adequate quality assurance) and presented in a way that is easily understood, specifically:	
• Use an independent compliance reporting system to report compliance.	• A programme Infrastructure Data system has been purchased and is being implemented.
Replace existing outdated control system with a modern Programmable Logic Controller (PLC) and SCADA ¹ system, specifically:	
• Any failure will lead to a plant shutdown and the inability to deliver unsafe drinking water. • Ensure that as-built documentation is accurate such that troubleshooting problems is not constrained because of lack of information.	• This is planned to be part of the upgrade for the permanent solution for Martinborough water supply. • This is planned to be part of the upgrade for the permanent solution for Martinborough water supply.
Ensure that calibrations and verifications are carried out and recorded in accordance with the standards, specifically:	
• Calibration and verifications are carried out by DWA² approved personnel. • Equipment required for calibrations and verifications is available. • Calibration and verification records are available for inspection. • Staff are competent and authorised to carry out calibrations.	• Is part of on-going training, though the operators passed the assessment on 28th March. • All equipment has been reviewed and provided. • Is part of on-going training, though the operators passed the assessment on 28th March. • Is part of on-going training, though the operators passed the assessment on 28th March.

Figure 1. Actions – Principle 1

Source: Lutra, SWDC – 2019

1.2 Principle 2 – Protection of the source water is of paramount importance

Protection of the source of drinking water provides the first, and most significant, barrier against drinking water contamination and illness. It is of paramount importance that risks to sources of drinking water are understood, managed and addressed appropriately. However, as pathogenic microorganisms are found everywhere, complete protection is impossible and further barriers against contamination are vital.

¹ Supervisory Control And Data Acquisition

² Drinking Water Assessor

Correctives actions	SWDC Response
SWDC should perform a catchment risk assessment and source protection zone study to develop a better understanding of the source risk.	SWDC already has a catchment risk assessment produced by consultants Opus, unfortunately this was not requested prior to the production of the report.

Figure 2. Actions – Principle 2

Source: Lutra, SWDC – 2019

1.3 Principle 3 – Maintain multiple barriers against contamination

Any drinking water system must have, and continuously maintain, robust multiple barriers against contamination appropriate to the level of potential contamination. This is because no single barrier is effective against all sources of contamination and any barrier can fail at any time. Barriers with appropriate capabilities are needed at each of the following levels: source protection; effective treatment; secure distribution; effective monitoring; and effective responses to adverse signals. A 'source to tap' approach is required.

Correctives actions	SWDC Response
Chlorination of the supply is essential to provide a robust multi-barrier treatment process and to protect against contamination of the reticulation system. It is noted that dissolved iron and manganese levels in the source water will cause aesthetic issues when chlorine is added to the water. To avoid these an iron and manganese removal process will need to be installed at the water treatment plant.	The temporary chlorination of Martinborough Water supply provides the multiple barrier approach. A multiple barrier approach is planned and will be part of the upgrade for the permanent solution for Martinborough water supply.

Figure 3. Actions – Principle 3

Source: Lutra, SWDC – 2019

1.4 Principle 4 – Change precedes contamination

Contamination is almost always preceded by some kind of change and change must never be ignored. Sudden or extreme changes in water quality, flow or environmental conditions (for example, heavy rainfall, flooding, earthquakes) should arouse particular suspicion that drinking water might become contaminated. Change of any kind (for example, personnel, governance, equipment) should be monitored and responded to with due diligence.

Correctives actions	SWDC Response
Ensure operators, supervisors, and managers are sufficiently trained to understand the importance of change on a treatment plant, specifically:	
• What constitutes a change. • What action to take in the event of a change. • Authority of operators to respond to a change. • Understanding the change cannot compromise drinking water safety.	• Is part of on-going operator training in conjunction with Wellington Water • Operators have that authority, but it is part of on-going operator training in conjunction with Wellington Water • Part of on-going operator training in conjunction with Wellington Water

Figure 4. Actions – Principle 4

Source: Lutra, SWDC – 2019

1.5 Principle 5 – Suppliers must own the safety of drinking water

Drinking water suppliers must maintain a personal sense of responsibility and dedication to providing consumers with safe water. Knowledgeable, experienced, committed and responsive personnel provide the best assurance of safe drinking water. The personnel, and drinking water supply system, must be able to respond quickly and effectively to adverse monitoring signals. This requires commitment from the highest level of the organisation and accountability by all those with responsibility for drinking water.

Correctives actions	SWDC Response
Operators, supervisors and managers must understand their drinking water supply and understand the importance of each critical element, specifically:	
• Understanding critical instruments and their function in the water supply. • Understanding how the plant will respond to upset conditions (e.g. resumption of power after a power cut). • Eliminate the ability to by-pass the UV treatment process. • Understanding that a positive <i>E. coli</i> means the water is contaminated with faecal matter.	• This is part of on-going operator training in conjunction with Wellington Water. The water safety plan has been updated in July 2019. • This is part of on-going operator training in conjunction with Wellington Water. • This has been actioned and bypass risk minimised. This will also be addressed in permanent solution. • This is part of on-going operator training in conjunction with Wellington Water.

Figure 5. Actions – Principle 5

Source: Lutra, SWDC – 2019

1.6 Principle 6 – Apply a preventative risk management approach

A preventive risk management approach provides the best protection against waterborne illness. Once contamination is detected, contaminated water may already have been consumed and illness may already have occurred. Accordingly, the focus must always be on preventing contamination. This requires systematic assessment of risks throughout a drinking water supply from source to tap; identification of ways these risks can be managed; and control measures implemented to ensure that management is occurring properly. Adequate monitoring of the performance of each barrier is essential. Each supplier's risk management approach should be recorded in a living WSP which is utilised on a day to day basis.

Correctives actions	SWDC Response
Undertake a systematic assessment of risks throughout the drinking water system, specifically:	
• Identify source risks, treatment risks and reticulation risks. • Identify mitigation measures for each risk. • Monitor the performance of each barrier.	• The water safety plan has been updated in July. • The water safety plan has been updated in July. • The water safety plan has been updated in July and the monitoring will form part of the permanent solution.

Figure 6. Actions – Principle 6

Source: Lutra, SWDC – 2019

Appendix 2 - Water Safety Plan Extract

A Water Safety Plan is a legal requirement as part of the New Zealand Drinking Water Standards. The Plan describes the water network and identifies critical control points, risks, and planned improvements to mitigate the risks.

The below is an extract from the Water Safety Plan. The complete Plan is available on request.

1.7 Barriers to contamination

Process performance criteria at the operational monitoring point:		Correction if performance criteria are not met:
GROUND WATER SOURCE - BORES		
Bore or bore pump failure may result in a loss of source water for the supply. Infiltration of surface water into the bores can compromise water quality. <u>Controls:</u> Maintaining the integrity of bore heads, restricting activities in the immediate area, exclusion of stock from bore-head area. Monitoring land use in catchment. Monitoring of bore levels and turbidity.		
Target:	• Turbidity < 1.0 NTU • Flow < 20L/s from each bore	• Operator to check and adjust flows from each bore based on weather conditions / demand. Check UVT and raw water quality
Action Limits:	• Turbidity: >0.9 NTU • UV transmittance equals 90% minimum value for 3 min	• SCADA Shuts down bore pumps. Alarm raised • Duty Operator to respond to alarm on-site or dial-in to SCADA system
Critical Limits:	• Turbidity > 1.0 NTU (>3min) • Flow exceeds 253m³/h for 3 min • transmittance is less 89% for 3 min	• SCADA shuts plant down. Alarm raised • Duty Operator to respond to alarm and attend site
UV DISINFECTION		
Failure of the reactors results in a lack of control of microorganisms. <u>Controls:</u> Monthly validation of the UVI sensors to ensure accurate and adequate UV dose, servicing and maintenance as per manufacturers specifications. Monitoring of water quality such as turbidity and UVT.		
Target:	• UV dose: <45mJ/cm² at < 222 m³/h • Turbidity < 1.0 NTU	• Operator to check UV feed operating normally and adjust flows from each bores based on weather conditions/ demand. Perform reactor sensor and lamp checks during routine checking procedures. Check UVT and raw water quality
Action Limits:	• UV dose: <45mJ/cm² at 222m³/h • Turbidity: >0.9 NTU • UV flow equals the maximum flow rate 230m³/h for 3 min • UV transmittance equals 90% minimum value for 3 min • UV Controller Alarm (instant)	• SCADA Shuts down bore pumps. Alarm raised • Duty Operator to respond to alarm on-site or dial-in to SCADA system
Critical Limits:	• UV dose: <45 mJ/cm² at 160m³/h, or <66 mJ/cm² at 230m³/h • Turbidity > 1.0 NTU (>3min) • UV unit alarm is active • Flow exceeds 253m³/h for 3 min • transmittance is less 89% for 3 min	• SCADA shuts plant down. Alarm raised • Duty Operator to respond to alarm and attend site
CHLORINATION DISINFECTION		

Martinborough Water Incidents – Lessons Learned

Process performance criteria at the operational monitoring point:		Correction if performance criteria are not met:
Failure will result in a lack of bacterial and viral control. Over-dosing may exceed chemical MAV. Under-dosing may cause a risk of backflow contamination and loss of residual disinfection. <u>Controls:</u> Online monitoring of chlorine levels. Monthly calibrations of dosing control equipment. Daily verification of readings.		
Target:	• FAC³: 0.5 to 0.8 mg/L • pH: 7 to 7.5 • Turbidity < 1.0 NTU	• Operator to monitor chlorine residuals at the end of the distribution zones and adjust the chlorine dosing systems
Action Limits:	• FAC: < 0.4 mg/L (> 15 m) > 1.2 mg/L (> 1 h) • pH: > 7.8 (> 1 h) • Turbidity: >0.9 NTU	• SCADA shuts plant down. Alarm raised • Duty Operator to respond by adjusting dosing to within targets • Duty Operator to notify Operations Manager
Critical Limits:	• FAC: < 0.3 mg/L (> 10 m) > 1.8 mg/L (> 1 h) • pH: > 8.0 (> 15 m) • Turbidity: >1 NTU (3 min)	• Duty Operator to notify Operations Manager • Operations Manager to notify Assets and Operations Manager and DHB if inadequately disinfected water needs to be supplied or has been supplied • For any of these thresholds excluding high chlorine, the duty operator needs to immediately action: • Isolate the supply and run off storage until rectified • Determine where the water has travelled to using the flow timetable in the emergency response plan and scour at appropriate places until 0.4 FAC residual exists • For high chlorine residuals, immediately rectify dosing control
DISTRIBUTION ZONE		
Possible access point for contamination due to backflow. <u>Controls:</u> Daily monitoring of chlorine levels and turbidity. Backflow prevention policy.		
TREATED WATER STORAGE		
Possible access point for contamination <u>Controls:</u> Weekly sanitary inspection of structure and surrounding area. Controlled access. Monitoring of chlorine residual levels.		

Figure 7. Process performance and correction if needed - WSP

Source: SWDC – 2019

³ Free Available Chlorine

1.8 Improvement of the Martinborough drinking water supply

Priority	Risk level	Water Supply area	Proposed works	Intended completion date
1	Moderate	Treatment Plant	Installation of Chlorination system at existing treatment site Continuation of temporary chlorination	May 2019
2	Moderate	New York Street West	Construction of a new Treatment building for manganese removal to allow permanent chlorination	2019
3	Medium	New York Street West	Transfer UV Disinfection process and chlorination system to new treatment building	Under review
4	Moderate	Treated Water Storage Reservoirs	Installation of Chlorine Monitor and dose control to maintain Chlorine Residual levels	Under review
5	Moderate	Reticulation	Prepare and implement a council water supply backflow prevention policy which includes preparation of a register of all backflow protection devices and a database of annual testing	Started 2019 – On Going
6	Moderate	Other	Review options for emergency power supplies	2020

Figure 8. Proposed improvements - WSP

Source: SWDC – 2019

1.9 Contingency Plan

Type of Event	Required Contingency Action
Severe turbidity of source water and high turbidity in distribution zone. <u>Indicators:</u> Highly turbid water leaving the treatment plant or complaints from consumers.	Cease abstraction while source is turbid and supply from treated water storage Identify which bore turbid water is coming from and abstract water from one of the other bores Check chlorine dosing level increase if residual levels are below 0.5 mg/l within reticulation network. Monitor storage level Monitor source water turbidity If storage is low and water with low turbidity cannot be supplied, advise DWA and issue BWN while problem is resolved. Keep customers informed and advise once regular supply is restored
E. coli transgression in water in distribution zone <u>Indicators:</u> E. coli transgression reported following routine monitoring.	Follow transgression response procedure in DWSNZ Advise DWA Commence daily E. coli testing at the Water Treatment Plant Sample in distribution system Check chlorine dosing level increase if residual levels are below 0.4m g/l within reticulation network Investigate cause, inspect plant and source Take remedial action Continue to sample for E. coli until 3 consecutive samples are free of E. coli. If E. coli is found in repeat samples consult with DWA, intensify remedial action, increase disinfection, consider 'Boil Water' notice, consider alternative supply

Martinborough Water Incidents – Lessons Learned

Type of Event	Required Contingency Action
Severe microbiological contamination of source water <u>Indicators:</u> A contamination event near to the bore-heads may be observed by or reported SWDC staff. May also be indicated by reported illness among consumers or positive <i>E. coli</i> monitoring results.	Issue BWN Advise DWA Inspect bore-heads and area around bores to identify source of contamination and rectify problem as quickly as possible Implement chlorination / Super chlorination Consider provision of emergency treatment or alternative water supply (e.g. tankers) Disinfect contaminated reservoir and flush mains Keep customers informed and advise once regular supply is restored
Chemical contamination of source water <u>Indicators:</u> A contamination event near to the bore-heads may be observed by or reported to SWDC staff. May also be indicated by reported water quality concerns from consumers (taste, odour, colour) or illness among consumers.	Advise DWA Assess situation and advise customers regarding use/treatment/disposal of contaminated water Arrange emergency water supply (tankers) if necessary Inspect bore-heads and area around bores to identify source of contamination and rectify problem as quickly as possible Flush contaminated reservoir and mains Keep customers informed and advise once regular supply is restored

Figure 9. Contingency Plan - WSP

Source: SWDC – 2019