Agenda for a meeting of the Waters Governance Board to be held in the Committee Rooms 1 & 2, District Office, 15 Galileo Street, Ngaaruawaahia on **TUESDAY, 5 SEPTEMBER 2023** commencing at **10.00am**.

1. APOLOGIES AND LEAVE OF ABSENCE

2. CONFIRMATION OF STATUS OF AGENDA

3. DISCLOSURES OF INTEREST

The register of interests is no longer included on agendas, however members still have a duty to disclose any interests under this item.

4. CONFIRMATION OF MINUTES

5. ACTIONS REGISTER

6. REPORTS

7. EXCLUSION OF THE PUBLIC

GJ Ion
CHIEF EXECUTIVE

TERMS OF REFERENCE AND DELEGATION

Reports to:	The Council
Chairperson:	Mr David Wright
Membership:	Mr Garth Dibley Mr Gavin Ion (Chief Executive) Ms Rukumoana Schaafhausen Ms Jackie Colliar (Board Intern)
Meeting frequency:	Monthly
Quorum:	A majority of members (excluding the Board Intern)

The Waters Governance Board is a subordinate decision-making body of the Waikato District Council established under Schedule 7 of the Local Government Act 2002.

Purpose and Terms of Reference:

1. To provide governance and oversight of the development and implementation of the Council contract with Watercare Services Limited ('Watercare').
2. To ensure the activity goals are clearly established, and strategies are in place for achieving them.
3. To establish policies for strengthening the performance of the water activity including ensuring management and the contractor are proactively seeking to build the business through innovation, initiative, technology, new products and the development of its business capital.
4. To monitor the performance of management through the Chief Executive.
5. To ensure high standards of health & safety are maintained by management and Watercare and undertaking appropriate due diligence.
6. To decide on whatever steps are necessary to protect the Council's financial position and the ability to meet its debts and other obligations when they fall due, and ensuring that such steps are taken.
7. To ensure the water activity's financial statements are true and fair and otherwise conform to law.
8. To ensure the water activity adheres to high standards of ethics and corporate behavior.
9. To ensure the water activity has appropriate risk management/regulatory compliance policies in place.
10. To look to improve environmental outcomes from this activity.
11. To consider kaitiakitanga as part of decision-making.
12. To monitor and ensure Watercare are meeting their obligations.
13. To report to Council twice yearly on progress with Waters' Management.

14. To provide innovation and ideas that could improve profitability, service levels or environmental outcomes.
15. To hold Watercare to account over the delivery of the operational and capital programmes.
16. To work with Council to agree the overall funding requirements of the business.
17. To undertake any other matters considered relevant by the Board or referred to the Board by the Council.

The Board is delegated the following powers to act:

- Agree the form of the transactional arrangement with Watercare.
- Negotiate with Watercare and recommend to Council the final, or any amended, contract value for waters management.
- Conclude the contract (after Council approval of contract value) and terms and conditions, including any amendments, with Watercare.
- Ensure that transitional contract requirements are met by Watercare and Council.
- Hold Watercare to account for their performance at all levels.
- Monitor and oversee the performance of staff and Watercare in terms of the water activity.
- Consider and ensure improvements or innovation are implemented by Watercare or through the Chief Executive as appropriate.
- Approve changes to the operation of the contract with Watercare.
- Develop strategies to improve contractual performance or to improve business practices.
- Recommend to Council infrastructure strategy and Asset Management Plans for adoption.
- Develop an annual works programme (operating and capital) and submit to council for final approval.
- Approve alterations and transfers within the programme of capital and operational works as prepared for the Long Term Plan and Annual Plan, subject to the overall scope of the programme remaining unchanged and the programme remaining within overall budget.
- Set and ensure Watercare's adherence to health and safety requirements, and wellbeing practices.
- Set and maintain standards of ethics and corporate behavior.
- Consider development opportunities for the Waters' business.
- Define and set levels of service for Waters' management now and in the future.
- Responsible for the financial performance of the contract and operation.
- Approve and/or amend existing or new contracts relating to the delivery of three waters' services and operation unless additional funding by the Council is required or the approval or amendment is inconsistent with Council Policy.

- Recommend to Council any new or additional funding requirements over and above that contained within the Long Term Plan.
- Develop plans to improve the overall resilience of the Waters' networks and allow for growth.
- Consider the impact of growth on the Waters' infrastructure.
- Implement and monitor the risk management framework for the waters' management and activity.
- Approve the annual and half yearly financial statements for the Waters' operation and provide any relevant commentary to the Council.
- Annually review the Board composition, structure and succession and make recommendations to council on these matters.
- Ensure the Waters' business delivered by Watercare provides value for the community in terms of the four wellbeings.
- Determine the approach for resource consent applications for the Waters' business, and monitor progress of those applications on behalf of the Council.
- Review and monitor existing strategic resource consents.
- Ensure that Kaitiakitanga and environmental outcomes are key decision making considerations for the Board.
- Uphold the vision and strategy of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010.

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open

To	**Waters Governance Board**
Report title	**Register of Interests**
Date:	Thursday, 18 August 2023
Report Author:	Elizabeth Saunders – Senior Democracy Advisor
Authorised by:	Gaylene Kanawa – Democracy Manager

1. Executive summary
Whakaraapopototanga matua

A copy of the Register of Interests is attached for the Board's information. The register will be updated following receipt of information during the year.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board receives the Register of Interests for August 2023.

3. Attachments
Ngaa taapirihanga

Register of Interests – Water Governance Board – Updated August 2023

Register of Interests – Waters Governance Board
Updated – August 2023

Ruku Schaafhausen

Companies and Trusts	Kiwi Group Capital Limited, Director AINZ Holdings Limited, Director Te Rau o te Korimako Limited, Director Alvarium Investments (NZ) Limited, Director Contact Energy Limited, Director Kaitiaki Guardian Services Limited, Shareholder & Director AgResearch Limited, Director Miro Trading GP Limited, Director Hautupua GP Limited, Director Te Whata a Tamihana Limited, Director Te Waharoa Investments (GP) Limited, Managing Director Schaafhausen Inc Limited, Shareholder & Director
Community organisations	Equippers Auckland Trust Tindall Foundation - Trustee Princes Trust New Zealand - Trustee
Other appointments	Ministry of Housing and Urban Development Strategic Advisory Committee, Member Department of Internal Affairs External Advisory Committee, Member National Iwi Chairs' Forum Freshwater Iwi Leaders' Group, Chairperson Waikato Endowed Colleges Trust,
Property within the District	Nil
Any other interests	Nil

Garth Dibley

Companies and Trusts	CEO – Wel Networks
Community organisations (membership)	Electricity Networks Association – member E-Charge working group – MfE member
Other appointments	Director of Smartco Infratec NZ Ltd – Chairperson
Property within the District	Yes - Tamahere
Any other interests	Nil

David Wright

Companies and Trusts	Director, David Wright Limited Trustee, Tervuren Trust Chair of Waimea Water Ltd Chair, Solomon Islands Airport Corporation Limited Chair - Haapi Brewing Success Chair – Unrealised Potential Ltd Acting Chief Executive – Central Effluent Development Agency
Community organisations	Chair, Tokelau Renewable Energy Steering Group
Other appointments	Chair, Central Air Ambulance Rescue Limited Chair, Search and Rescue Services Limited
Property within the District	Nil
Any other interests	Nil

Gavin Ion

Companies and Trusts	Trustee and Beneficiary in a family trust
Community organisations	Member Swimming Waikato Technical Panel Chairperson Swimming Waikato Member – Waikato Regional Water Safety Steering Group Member of the Waikato Regional Sports Facility Plan Steering Group Chartered Member of Institute of Directors Member of International City Managers' Association Member of Chartered Accountants of Australia and New Zealand Member of Business Leaders Health & Safety Forum Steering Group RMA Commissioner Member of the Waikato Regional Leadership Group
Other appointments	Chief Executive, Waikato District Council Director, Waikato Local Authority Shared Services Limited Chair, Audit & Risk Committee (Co-Lab)
Property within the District	Nil
Any other interests	Nil

Jackie Colliar

Companies and Trusts	Te Whakakitenga O Waikato Inc Member of Te Arataura WEL Networks – Director Director – NewPower Energy Services Ltd Director – NewPower Energy Ltd Director – Infratec New Zealand Ltd
Community organisations	Nil
Other appointments	Trustee of Taniwha Marae Trustee – Nga Muka Development Trust Waipa District Council – Co-Governance Committee Waikato Regional Council – Co-Governance Committee
Property within the District	Nil
Any other interests	Employee of Hamilton City Council Project Lead for the Subregional Three Waters project on behalf of Future Proof Project Manager of the Hamilton Waikato Metro Wastewater Detailed Business Case Project

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Waters Governance Board**
Report title	**Confirmation of Minutes**
Date:	Thursday, 17 August 2023
Report Author:	Elizabeth Saunders, Senior Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

1. Purpose of the report
Te Take moo te puurongo

To confirm the minutes for a meeting of the Waters Governance Board (WGB) held on Tuesday, 25 July 2023.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the minutes for a meeting of the Waters Governance Board held on Tuesday, 25 July 2023 be confirmed as a true and correct record.

3. Attachments
Ngaa taapirihanga

Attachment 1 – WGB Minutes – Tuesday, 25 July 2023.

MINUTES for a meeting of the Waters Governance Board of the Waikato District Council held in Committee Rooms 1 & 2, District Office, 15 Galileo Street, Ngaruawahia on **TUESDAY, 25 JULY 2023** commencing at **8.30AM**.

Present:

Mr D Wright (Chairperson)
Ms R Schaafhausen
Mr G Dibley
Mr GJ Ion (Chief Executive, Waikato District Council)
Ms J Colliar (Intern)

Attending:

Her Worship the Mayor, Mrs JA Church *(from 8.48am)*
Cr E Patterson
Cr L Thomson – *until 10.24am*
Cr P Thomson
Cr D Whyte

Ms A Diaz (Chief Financial Officer)
Mr K Martin (Waters Manager)
Mr D Sharma (Three Waters Reform Project Manager)
Mr J Baldwin (Waters Engineering Manager)
Mrs J Calambuhay (Management Accountant)
Mr W Gauntlett (Growth & Analytics Manager) - *from 8.44am*

Mr M Telfer (Operations Manager Waikato – Watercare)
Mr J Turner (Watercare) – *from 9.58am*
Mr P Crabb (Watercare) – *from 9.31am*
Mr R Pullar (Watercare) – *from 9.31am*

Ms E Saunders (Democracy Advisor)

APOLOGIES AND LEAVE OF ABSENCE

All members were present.

CONFIRMATION OF STATUS OF AGENDA ITEMS

Resolved: (Mr Wright/Mr Ion)

THAT the agenda for a meeting of the Waters Governance Board Meeting held on Tuesday, 25 July 2023:

a. be confirmed and all items therein be considered in open meeting with the exception of those items detailed at agenda item 7 which shall be discussed with the public excluded.

CARRIED **WGB2307/01**

DISCLOSURES OF INTEREST

It was noted by Ms R Schaafhausen that she would declare a non-financial disclosure of interest in relation to:

- Item 6.2 (Three Waters Reform Project Update) as she is on the Strategic Advisory Committee Member to the Chief Executive Officer of the Department of Internal Affairs (DIA), and
- Item 6.3 (HopuHopu Reservoir Demolition and Site Clearance) as a trustee of the Endowment College

It was noted by Ms J Colliar that she would declare a non-financial disclosure of interest in relation to:

- Item 6.2 (Three Waters Reform Project Update) in regards to the Select Committee submission, and
- Item 6.3 (HopuHopu Reservoir Demolition and Site Clearance) due to the location of the project, and
- Item PEX3.2 (Capital Projects Delivery Update) as a trustee of Nga Muka.

CONFIRMATION OF MINUTES

Resolved: (Ms Schaafhausen/Mr Dibley)

THAT the minutes of a meeting of the Waters Governance Board Meeting held on Wednesday, 14 June 2023 be confirmed as a true and correct record of that meeting.

CARRIED **WGB2307/02**

ACTIONS REGISTER

Agenda Item 5

The Waters Manager spoke to the report which was taken as read and highlighted the following key points:

Key Highlights:

- Retired Assets update – it was noted that land which had retired assets has now either been re-utilised or the structure is no longer there. There is nothing of consequence that the Board need to be aware of.
- It was confirmed that the Department of Conservation (DOC) own the land and the reservoir in Ngaruawahia however a concern was raised in regards to who is looking after the structure of the dam? It sits above a large Council asset (the Water Treatment Plant) so it would be good to have an asset management plan from DOC outlining what their plans are for the reservoir structure.

ACTION: The Waters Manager to go back to the Department of Conservation and request the management plan for the Water Reservoir Structure in the Hakarimata Ranges in Ngaruawahia.

- A Compliance and Abatements update will be provided at the next Board meeting.
- The Raglan Wastewater Treatment Plant Memorandum of Understanding (MOU) update advised that whilst the conversations with the land owner have been fruitful they have also been dragging on quite a bit. It was further confirmed that if an MOU is completed it will be Mr Ion who will sign it on behalf of Council.
- It was noted that Watercare would need to provide further information on both the leak detection update and the District Reservoirs and the Dam Safety Regulations as there was no update for this meeting.

ACTION: Watercare Staff to provide more in-depth information out of cycle by the 4 August 2023 in relation to both the Leak Detection work that is currently being undertaken and the District Reservoirs and the Dam Safety Regulations.

Resolved: (Mr Wright/Mr Ion)

THAT the Waters Governance Board receives the Actions Register to June 2023.

CARRIED **WGB2307/03**

REPORTS

Three Waters Governance Report – July 2023
Agenda Item 6.1

Mr Telfer spoke to the report which was taken as read and further discussion was held.

Key Highlights:

- A loss time injury occurred during this period when an employee (who was not handling chemicals correctly, nor was wearing protective eye-wear) had some splash into their eyes. Treatment was sought at the hospital and the employee had the following day off work.
- Concerns addressed with the staff member who is an experienced operator and knows the regulations and need for safety gear to be worn. Watercare will continue to do follow up reminders to all staff to ensure safety procedures are being followed at all times.
- An extensive discussion followed around Health & Safety procedures in the workplace and what Watercare are doing to ensure incidents like this do not occur in the future. It was confirmed that the staff member did not undertake any drug or alcohol testing as Watercare did not believe it was warranted.
- A brief overview of the End of Year performance results were given and highlights were noted as per the report.
- It was noted that the tour of the northern Wastewater and Water Treatment Plants with Elected Members was a great day and the team were grateful for the opportunity to show their work and what they are currently doing in the project space.

Questions/Discussion:

- Are the goals that have been set for the coming year in line with Key Performance Indicators (KPIs)? It was noted that there are a few goals that staff have that range from individual performance to the delivery of works and the capital programme.
- It was noted that the final approval for the budget is still outstanding as per the report and a brief discussion was held around the issues that were highlighted.
- Concerns around the Capital Works were noted along with the Capital Project budget. It was confirmed that further discussion would take place in the public excluded section of the meeting in the Capital Works item.
- A discussion was held in relation to the budget figures given the carry-forwards into this financial year. It was noted that approval is required to recruit for a Stormwater Planner which is where some of the concerns around Capital Project delivery comes from. The Chief Financial Officer advised to go ahead and progress the recruitment but it was noted that confirmation in writing was required to confirm the budget was there – this has now been given.
- It was asked if some of the costs for recruiting a Stormwater Planner could be done against the Capex Project since a few of those projects are Stormwater related? It was noted that some of the costs of this recruitment can be capitalised but it was noted that the majority of the planning works cannot be capitalised.

- Section 3.1 of the report and the reference to increased dredging was discussed and it was noted that whilst an exact figure on the frequency of dredging that has been done to date there are no plans to change the water intake and it was further noted that increased operational costs are factored into the budget.
- Section 3.3 of the report (Te Kowhai Flooding Mitigation) was raised however it was decided to discuss this item further in public excluded. It was noted further though that there seems to be a lot of missed opportunity between Waikato District Council (WDC) and Hamilton City Council (HCC) to engage on Stormwater and erosion issues in our cross boundary ommunities. It was noted that there was a shared study between WDC and HCC that has stalled but looking to engage further in this space.
- It was noted that there are no Water Treatment Plant services at Te Kowhai, only Wastewater services but further discussion can be done in the Asset Management Plan discussion later in the day. It was noted that an understanding on what the implications would be on Council and Te Kowhai if re-zoning is done without consideration of the services.
- A discussion was held around firefighting shortfalls across the district and whether we are hitting the most at risk parts of the district in the Upgrade programme? It was noted by Mr Telfer that he would probably need to have the planning team attend a meeting to discuss that further but also advised that another Watercare colleague attending the workshop this afternoon could also assist with this.
- An understanding of Councils liability associated with not meeting codes was needed. It was advised that all new developments needed to meet those requirements or meet the requirement of minimum water tanks on site. It was acknowledged however that existing developments did need to be looked at. It was advised that this topic should be in the Asset Management Plan discussion in the afternoon.

<u>Raglan Wastewater Treatment Plant:</u>

- The timeframe for landing on the preferred discharge option has taken a significant amount of time. It was noted that that the Regional Council have also expressed their concerns at the time this has taken but have also been part of the process from the start.
- Is there anything that could be done to expedite the process? The team are working hard with all parties involved but it was noted that we need to decide on a timeframe on when the exercise becomes futile and the need to go back to the community to advise that land discharge is no longer a viable option.
- It was discussed that the timeframe should sit within the six month mark – if nothing has changed at that time then a move to Plan B should begin. It was noted that the monthly meetings held with the Raglan Community were not producing results.
- It was noted that the new systems for Wastewater discharge these days and the new technologies that could be used are really good and maybe it was time to have an honest conversation with the community and be upfront with where we actually are. The community and mana whenua were adamant that discharge into the harbour was not an option but we need to have robust engagement and say that we have gone as far as we can with this option.

- A discussion on the technical capability of the land and what it could handle was had and it was noted that there were still some technical aspects with land discharge to be considered.
- An extensive discussion was held around the risk of all this work being done, the need for this project to be passed through Council and the potential for Council not being in agreement. We need to start having the conversation with the community and look at the possibility of running two parallel options. An update on the Memorandum of Understanding (MOU) would be given in public excluded by the Growth & Analytics Manager.
- It was noted that any alternative option considered does not automatically mean a reduction in costs for this project. There will be costs involved no matter which option is decided upon and this needs to be taken into consideration when passing this project through Council.
- It was noted that mana whenua are part of the conversations and involved in any engagement.

ACTION: The Board request a report for the next Water Governance meeting in relation to the Raglan Wastewater Treatment Plant with a firm recommendation on a preferred outcome or direction. If a firm recommendation cannot be given than a clear direction of where this project is going and clear timeframes as to when this will happen.

Te Kauwhata Wastewater Treatment Plant:

- The long list noted on Page 32 of the report has raised concerns with the Board as it was thought that this process had already been done and we were now at a short list of options.
- It was noted by Mr Telfer that this was in the report just to show the options that Watercare were working with and it was confirmed that we are down to two (2) options.
- A further concern was raised that it appears we have gone from a long list of options to the Water Hub option with nothing to show in between on how we have landed on that option. It was noted that options have been secured but nothing has been landed on as yet.
- An extensive conversation in regards to community engagement with Te Kauwhata took place and how it has been navigated to date. The Waters Manager spoke to this and it was decided that a further paper to the Board was required.

ACTION: Watercare staff to provide the Board with a short list of options for the Te Kauwhata Wastewater Treatment Plant along with an accompanying report that outlines a firm plan of what is going to happen next in this project and moving forward.

Other Items of Discussion:

- A discussion was had in relation to asset management and in particular glass lined water tanks and the strengths and weaknesses of these. It was noted by the Waters Manager that it was his opinion that these are not the right asset for what they are intended as the whole of life consideration was never considered along with the need to empty a tank every five (5) years to service.
- It was noted after a further extensive discussion in relation to that either way all assets need to be managed and since we have them they will be managed accordingly.
- It was noted that there are threads of communications throughout this report and a question was raised regarding:
  i. where is the communication plans and strategies for each project?
  ii. who is running these communications and who is telling those stories of our projects as we go along?
  iii. have we got the right communication experts to tell these stories to our communities?
- It was confirmed that Communications sit with Council and not Watercare but an action has been raised to respond to the questions.

ACTION: Council staff to consider the communications planning for these projects and how best we can use this tool effectively to tell the projects story.

- An extensive discussion was had in relation to Stormwater assets that are Waikato District Councils (WDC) jurisdiction vs Waikato Regional Council (WRC) jurisdiction and how often the two councils meet to discuss any issues? It was confirmed that Stormwater assets that are under WDC control have a scheduled maintenance plan however it was further noted that flooding issues or Stormwater conversations with WDC and WRC are outside the Water Governance Board perview and not for this forum.

- A brief discussion was held in regards to Water Quality complaints in Huntly which was addressed by Mr Telfer.

Resolved: (Ms Schaafhausen/Mr Ion)

THAT the Waters Governance Board receives the Three Waters Governance report for July 2023.

CARRIED **WGB2307/04**

Three Waters Reform Project Update – July 2023
Agenda Item 6.2

The Three Waters Reform Project Manager spoke to the report which was taken and read and highlighted the following key points:

Key Highlights:

- A brief overview of the submission prepared for Waikato District Council was given along with an outline of the 3 options presented.
- It was noted that the Water Governance Board had the support of Waikato Tainui with their submission.
- The Three Waters Reform Project Manager has sought clarity from the Select Committee on the strength of community priority statements relative to Te Mana o Te Wai and the interface between the two statements.
- The threshold for making a community priority statement is for a person to have an interest in a body of water within the proposed entity boundary. The Three Waters Reform Project Manager has asked select committee how a person can demonstrate this interest.
- The Three Waters Reform Project Manager has also noted that the Joint Management Agreement between Waikato Tainui and Council is predicated on Te Mana o Te Awa. The Te Mana o Te Wai statements will, if succeeding Te Mana o Te Awa, need to account for these principles, particularly that Waikato Te Awa is tuupuna to the tribe and is a single, indivisible being, that needs to be considered in its entirety.
- It was noted that transition funding has been extended for a further six months.

Questions/Discussion:

- It was advised by Ms Colliar that she was not aware of the previous conversations with Waikato Tainui but she wanted it noted for the minutes the following statement in the Waikato Tainui submission to the select committee on the amendment bill – clause 40:
    i. *"Waikato Tainui do not support any potential merger, voluntary or otherwise, of the Waikato Water Services Entity in whole or in part with either Bay of Plenty Water Services or the Northland and Auckland Water Services Entity".*
- At the local transition team meeting it was noted in the public forum that Council did indeed have the support of Waikato Tainui so this statement is surprising.
- The dates of each of the submissions from both Waikato Tainui and Waikato District Council are a day apart but Ms Colliar confirmed that a response wasn't required – it was just to be noted for the minutes.

Resolved: (Mr Ion/Mr Wright)

THAT the Waters Governance Board:

a. **receives the Three Waters Reform Waters Project Update report for July 2023; and**

b. **notes that the project management for three waters reform is ongoing.**

CARRIED **WGB2307/05**

Hopuhopu Reservoir Demolition and Site Clearance
Agenda Item 6.3

Mr M Telfer spoke to the report which was taken as read and highlighted the following key points:

Key Highlights:

- It was noted that this is an information only report rather than an approval report.
- It was confirmed that funding for this project will come from the Operational surplus budget and the cost of $288,400 will see the project through to completion.

Questions/Discussion:

- It was confirmed that the old reservoir is located on Council land and the new reservoir is located on Waikato Tainui land.
- The negotiations with Waikato Tainui are to formalise the hand over of the old reservoir site (owned by Council) to Waikato Tainui in exchange for a 100 year lease for the land the new reservoir occupies.

Resolved: (Mr Wright/Mr Dibley)

THAT the Waters Governance Board:

a. **supports the proposed plan to demolish the aged steel reservoir situated at the Waikato-Tainui College for Research and Development in Hopuhopu; and**

b. **strongly recommends that Council negotiations with Waikato Tainui are concluded in good faith to formalise the hand over of the old reservoir site, owned by Council, to Waikato Tainui in exchange for a 100 year lease from Waikato Tainui to Council for the land the new reservoir occupies.**

CARRIED **WGB2307/06**

EXCLUSION OF THE PUBLIC
Agenda Item 7

Resolved: (Mr Wright/Mr Dibley)

THAT the public be excluded from the following parts of the proceedings of this meeting; and

a. **The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:**

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Item PEX 1 Confirmation of Minutes Item number PEX 2 Action Register	Good reason to withhold exists under Section 6 or Section 7 Local Government Official Information and Meetings Act 1987	Section 48(1)(a)
Item PEX 3.1 Waters Financial Results – June 2023		
Item PEX 3.2 Capital Works Programme – June 2023		
Item PEX 3.3 Washer Road Wastewater Pump Station		

b. **This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:**

Item No.	Section	Interest
Item PEX 1 **Confirmation of Minutes** **Item number PEX 2** **Action Register**	**Refer to the previous Public Excluded reason in the agenda for this meeting.**	
Item PEX 3.1 **Waters Financial Results – June 2023**	**7(2)(b)(ii)** **7(2)(h)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.**
Item PEX 3.2 **Capital Works Programme June 2023**	**7(2)(h)** **7(2)(j)**	**To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage.**
Item PEX 3.3 **Washer Road Wastewater Pump Station**	**7(2)(b)(ii)** **7(2)(h)** **7(2)(j)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage.**

CARRIED **WGB2307/07**

The meeting adjourned at 10.24am for morning tea and resumed at 10.47am.

Resolutions WGB2307/08 - WGB2307/14 are contained in the public excluded section of these minutes.

There being no further business the meeting was declared closed at 12.42PM.

Minutes approved and confirmed this day of 2023.

David Wright
CHAIRPERSON

Open – Information only

To	**Waters Governance Board**
Report title	**Actions Register**
Date:	Friday, 25 August 2023
Report Author:	Gavin Ion, Chief Executive

1. Purpose of the report
Te Take moo te puurongo

To update/inform the Waters Governance Board on actions following the Waters Governance Board meeting held on Tuesday, 25 July 2023.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board receives the Actions Register to August 2023.

3. Attachments
Ngaa taapirihanga

Attachment 1 – Action Register

Waters Governance Board
Actions Register

OPEN MEETING

Meeting Date	Action	To Action	When	Status
25/07/2023	The Waters Manager to go back to the Department of Conservation and request the management plan for the old Hakarimata Waterworks Dam in the Hakarimata Ranges in Ngaruawahia.	Keith Martin	Oct 2023	Conversation and email correspondence has been initiated with DOC. Findings to be provided in Oct Meeting.
02/05/2023	Compliance and Abatements WGB to be updated of all compliance actions and activities. Each asset with a noncompliance to be identified and the noncompliance activity highlighted, and the plan taken to rectify. Reporting to be provided quarterly	Mathew Telfer	Sept 2023	Next update to be presented at Sept 2023 WGB Meeting
25/07/23	Watercare Staff to provide more in-depth information out of cycle by the 4th of August 2023 in relation to both the Leak Detection work that is currently being undertaken and the District Reservoirs and the Dam Safety Regulations.	Mathew Telfer	Sept 2023	Paper supplied to Board.
25/07/23	The Board request a report for the next Water Governance meeting in relation to the Raglan Wastewater Treatment Plant with a firm recommendation on a preferred outcome or direction. If a firm recommendation cannot be given than a clear direction of where this project is going and clear timeframes as to when this will happen.	Mathew Telfer/ Richard Puller	Oct 2023	Next update to be presented at Oct 2023 WGB Meeting
25/07/23	Watercare staff to provide the Board with a short List of options for the Te Kauwhata Wastewater Treatment Plant along with an accompanying	Mathew Telfer	Sept 2023	Next update to be presented at Sept 2023 WGB Meeting

Waters Governance Board
Actions Register

Meeting Date	Action	To Action	When	Status
	report that outlines a firm plan of what is going to happen next in this project and moving forward.			
25/07/23	Council staff to consider the communications planning for these projects and how best we can use this tool effectively to tell the projects story.	Keith Martin	Oct 2023	Internal conversations underway. Findings to be provided in Oct Meeting.

Open – Information only

To	**Waters Governance Board**
Report title	**Three Waters Governance Report – August 2023**
Date:	23 August 2023
Report Author:	Keith Martin, Waters Manager
Authorised by:	Gavin Ion, Chief Executive

1. Purpose of the report
Te Take moo te puurongo

To update the Waters Governance Board of the current workstreams, key matters and metrics under the three waters operational and maintenance agreement with Watercare Serviced Ltd.

2. Executive summary
Whakaraapopototanga matua

Please refer to the Highlights and Lowlights summary section in the attached report prepared by Watercare Services Ltd.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board receives the Three Waters Governance Report for August 2023.

4. Attachments
Ngaa taapirihanga

Attachment 1 – Waikato DC Three Waters Governance Report – August 2023

WAIKATO DC

THREE WATERS GOVERNANCE REPORT

AUGUST 2023

Mathew Telfer
Operation Manager
Watercare Waikato
August 2023

1. Highlights and lowlights

- All results were achieved in the first month of the new financial year, excluding Attendance time: for wastewater at 62 min against a target of 60 min.
- The improvements within the Stormwater area are starting to have effects, but there are still challenges in the capital delivery. This is partly due to identifying appropriate works, which the Catchment management plans due in July will support.
- The final approval for the budget is outstanding and has highlighted some issues following staff turnover; the WSL and WDC Finance teams will work closely together in the coming year to ensure all milestones are achieved.
- Plant tours were successfully completed with the Councillors, including Pukekohe WWTP, Meremere and Te Kauwhata WTP and WWTP.
- Our contractor, Allen's United, reported an incident regarding a traffic accident on the road to Te Akau (14/07/23). Details are provided in the production area.
- The variation three plan change hearings were supported by Watercare staff.

2. Health and Safety

2.1. What we've seen this month

- There was no lost Time Injury (LTI) or Restricted Duties Injury (RDI) in July.
- 8 ICare cases were submitted in July, including two site walks.
- A traffic accident was reported (14/07/23) by our contractor Allen's United, on the road to Te Akau. The incident involved a car versus a water tanker. There was no injury to the tanker driver but minor injuries to the car's passenger occupants, who were not wearing seat belts. The tanker air system was severely damaged, and the truck had to be towed from the site. An ambulance (unrelated) was following the tanker and attended the accident; no hospital admission was required. Police attended the accident and were satisfied with the tanker driver's driving and speed, recorded on ERoad as 17km/hr. The initial and final reports were provided to Council. The police declined to supply the police report, but Allens United has requested a copy from the insurers (03/08/23).

- The focus for the month was Working with live traffic.

2.2. Looking ahead and wellbeing

- Next month's focus is on Digging and working in excavations.

2.3. Metrics

- There were no injuries in July.

3. Operations

3.1. Production

- Training has commenced to ensure that we have appropriate numbers of trained staff to cover our activities.
    - Fork Hoist training completed.
    - Dangerous Goods training completed.
    - Approved Chemical Handler part 1 Chlorine connection/disconnection completed.
    - Approved Chemical Handler part 2 theory is planned for September 2023.
    - Breathing Apparatus Training is planned for early August.
- The river raw water quality for Ngaruawahia, Huntly, and Te Kauwhata WTPs has remained unstable during July. Variable rainfall and river flows have affected the water quality. Operators continue to monitor the raw water UVT very closely to identify any changes or trends requiring process changes.
- Meremere WWTP, some process issues have continued with the BNR tank #3 sporadically foaming, causing minor contained overflows. The process is being tuned to eliminate. Kevan Brian has been assisting the wastewater process engineer with process analysis.
- Port Waikato WTP new chlorine contact tank has been brought into service, and the old tank has been demolished. Storm damage to the stream bank repairs have been completed.

- Te Kauwhata WWTP upgrade project is progressing well, with all major components delivered to the site. Fabrication of pipework and walkways is making good progress. The Chemical delivery and dosing area is taking shape, with the old chemical bulk tanks being rearranged or removed to make way for new equipment. (More detail in projects)
- Te Kauwhata WTP new Filter #4 has passed its Acceptance to Service tests and is now available for service. Some software upgrades will be required to allow balanced flow control.

3.2. Networks

- The 15-year meter replacement project commenced in mid-July, earlier than expected, due to contractor availability and availability of parts via Hynds. 20 in-line and 13 Itron meters were replaced in July. The initial focus areas are Te Kauwhata / Rangiriri and Southern Districts.
- The planning and liaison for the demolition of the Hopuhopu reservoir commenced in July. Watercare met on-site with Waikato Tainui and the Tainui College representatives to discuss the approach and arrange appropriate scheduling. The project is to be done in 2 phases – the initial phase being the disconnection of the reservoir from the network and pipework reconfiguration, followed by the actual demolition and reinstatement of the reservoir itself. The pipework reconfiguration is set to take place the first week of August, and the demolition later in the month to cater for the Kingitanga Coronation ceremony in mid-August.
- Jobs of significance – Fortunately, no significant faults occurred on the Water or WW network in July. All jobs received were minor.

3.3. Stormwater

- Stormwater CCTV and line cleaning – despite inclement weather throughout July, Streamline completed CCTV and network cleaning in Raglan. The lines in the Wallis Street / Wairihi Park area were the focus, as this is a pinch point for I&I in the WW network. Silt and debris build-up was present in a large portion of the surveyed SW network, and the heavy cleaning should alleviate SW flow issues and more effectively convey SW in wet weather. The lines surveyed were found to be in good condition with minimal defects; therefore, no remedial works were required.

- District-wide outfall investigation(On-progress)
  The outfall investigation is nearing completion, and we expect the consultant to deliver the outcomes by mid-August. However, some outfall assets have not yet been fully assessed due to adverse weather conditions and elevated river levels. Separate assessment periods are required for these assets.
- TeKowahi flooding mitigation(On-progress)
  Babbage Consultants has submitted a draft mitigation report, which is currently under review by WDC/WSL. Upon completion of the review, the final report will be updated by the end of August.
- Comprehensive stormwater monitoring plan (water quality and ecology)-(On-progress)

This month, WSL and the consultant will visit the WRC office to discuss the WDC stormwater monitoring program. The draft plan has already been submitted to WRC for pre-reading before the meeting. After the meeting, we will set the direction and refine the details for further implementation.

- Catchment Planning
  Model development and planning work continues for Ngaruawahia, Te Kauwhata, and Raglan—engagement with WDC in Pokeno and Horotiu.
-
- The draft design has been received for the Hakanoa stream upgrade project, and engagement with the impacted property owners will now progress.
- The stormwater pipe upgrade project on Cambrae Rd has engaged with residents and continued with the design review and engineer's estimate process. The revised design has been received and will be submitted to Regional Council for approval.
- The annual report is being produced and due by 30 September, which includes the need to visit each of the 19 consent discharge locations.
- Port Waikato recovery is ongoing, with continued heavy sediment in areas. A project is needed to address the ongoing sediment build-up in the bank above the shop.

4. Planning and project delivery

4.1. Infrastructure Planning

There are several work packages underway, including.

- The Raglan WW model - Draw-down testing at Nero is required, then the recalibration of the model will then occur. The Raglan WW and WS servicing strategy development continues.
- Huntly Wastewater network model - Consultants have assessed the asset data, and Magflow meter installation at two key pump stations is progressing (one is installed). The regauging flows through the network at specific sites for three months is underway with inspections of sites.
- Assisting WDC staff with Ngaruawahia Structure Planning, SWCMP to support the structure plan is in draft form for review.

- A long-term strategy for Te Kauwhata, Ngaruawahia, Huntly WTP, and the three water treatment plants is underway.
- Investigations for Tuakau, Raglan, and Tamahere Reservoir sites are still underway. A paper to the Water Governance Board for a future meeting is being prepared, covering all upcoming reservoir projects (including Pokeno and Matangi).
- 2nd version of 24-27 LTP was submitted in March to DIA; work continues on scoping and costing some projects. In June, we began developing the storylines to describe project timings and drivers on a township-by-township basis. The stories will support the next stage of the AMP development and are due in September.

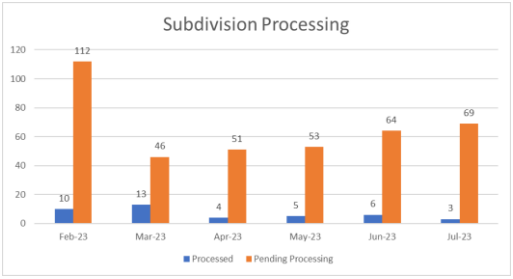
Development and growth

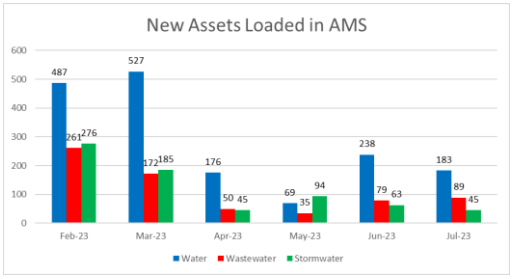
Input into District Plan Appeals on servicing of appeal areas continues.

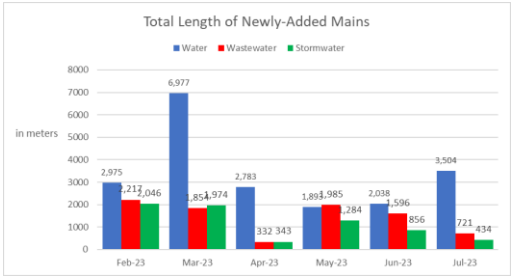
- Discussions with WDC Land Development Engineers and Developer's Engineers on several development sites, including the following:
- Pokeno - Water Servicing of stage 18/19 Hitchens Block
- Tuakau - Bollard Road
- Te Kauwhata - 25 Te Kauwhata Road and Lakeside water supply
- Ngaruawahia - Washer Road and Rangimarie Road
- The feedback to variation three has been completed, and the hearings have been attended.

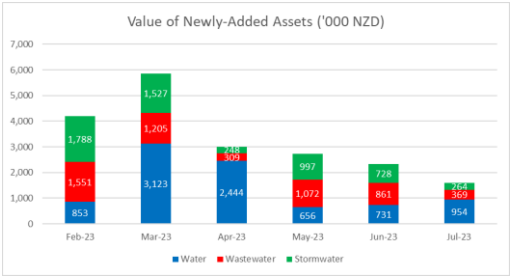
4.2. Asset Management

- This month, 317 three-water assets were added to the database, covering 4.66 km of main lines and a combined value of $1.58m.
- AECOM is currently doing WDC asset revaluation for the 2022/23 financial year and is expected to provide the draft report on the 4th of August. Anomalies with the 2021/22 revaluation have been identified, and we are working through the issue with AECOM and the Council Finance team.
- Collaboration work with NTU/DIA has progressed for field mapping our asset attributes for transitioning into the new asset data standards set by the NTU.









4.3. Project delivery

Water Network Upgrades

- Work to improve the water supply to parts of Raglan is nearing completion, with the installation of brand-new water pipes via horizontal directional drilling.
    - Dedicated fitting crews continue to work hard, installing hydrants & valves, conducting pressure tests, and ensuring proper chlorination, all before connecting the new mains.
    - As we close off certain valves, there will be temporary interruptions to the network to transition from the old mains to the new ones. A letter drop to directly affected properties will ensure everyone is well-informed about the temporary interruptions. We have meticulously planned this switch to minimise any inconvenience.
    - The finish line is in sight, and we can't wait to conclude these water supply upgrades for the Raglan community.

https://www.waikatodistrict.govt.nz/news/article/2023/05/02/water-supply-improvement-project-starts-in-raglan

- Installation of 1600m to upsize and upgrade the existing Rangiriri water supply pipeline on Te Warepu Road is now complete.
    - Innovative installation techniques have been achieved to combat the challenging ground conditions and critical connectivity required to enhance fire-flow service levels for the Rangiriri township.
    - A staged connection approach is required to minimise disruption and to align with the neighbouring reservoir and water network operations.

Taupiri – water main installed via chain trencher

- The Taupiri Water Supply Pipeline and Booster Pump station will replace the aged and undersized supply main within private properties and construct a new booster pump station to support water supply conveyance to Taupiri. By upgrading the supply main from Hopuhopu to Taupiri, we are addressing the growing demand for water supply and ensuring a high level of service for customers affected by rapid growth in the area.
  Significant progress has seen 90% of the pipeline installed via horizontal directional drilling (HDD) and chain trencher technology. The remaining sections will be installed via open-cut and should be delivered well ahead of constructing the booster pumpstation.

- Supporting the continuity of works for our experienced horizontal directional drilling (HDD) supply partners, a commitment to water infrastructure upgrades along State Highway 26, Newstead, has been made.
  - The first is a project to upsize and replaces the existing 150mm and 80mm pipelines with a single larger resilient polyethylene pipeline. This will be installed via HDD within the road corridor, abandoning the existing supply main conveyed via an undersized and ageing supply pipeline through private properties.
  - The second will resolve a 20-year-old ‘temporary disconnection’ which occurred to support neighbouring land development circa 2003, now requiring a 100m pipeline section between two dead-end mains to provide the network link. Construction is forecasted to commence in September.

- Strategically bundled to enhance delivery efficiencies, the final package of the network renewal programme has been awarded.

  This package sees water supply upgrades, extensions, and renewals in the following area:
  - Tuakau Water Supply Upgrades and Extension's second package of works has been meticulously scoped to include local network upgrades, improve missing connectivity and network resilience and enable supply extensions to urban supply zones.
  - In Huntly, a pipeline replacement and upsize of the water main along Riverview Road to address firefighting shortfalls in the western area is proposed.
  - In Pokeno, we have taken on the challenge of a project which sees network extension through a busy road corridor previously avoided due to its demanding environment. This upgrade will extend connectivity to critical water infrastructure on

Pokeno Road, supporting the rapidly expanding Hellenslee growth area. We also look to resolve a network shortfall by establishing a missing reticulation loop on Helenslee Road. Our goal is to complete this loop before the planned roading upgrade.

Te Kauwhata Reservoir Upgrade

- The prestressed wall panels are being placed, propped, and the stitch pours are underway. The in-situ central column and precast cap are in place and secured. The installation of concrete-joint water barriers will follow. Structural inspections are ongoing.

Te Kauwhata – Reservoir 1 – Floor slab main concrete pour

Wastewater Network Upgrades

- Ngāruawāhia Pipeline – The pump station is near completion. Reinstatement of the pipeline's first section across the farm is complete and has progressed down Wallbank Road, a paper road. Construction has slowed during wet weather in challenging ground conditions. The well-pointing dewatering system remains effective.

Ngāruawāhia Pipeline – Construction supported by well-pointing at the second farm crossing

- The POAL WWPS – Sewer connections ready for flows from Horotui are being installed; once complete, the landscaping and fencing will commence. The remainder of the connecting pipelines will be installed within the new road, a project led by Waikato District Council. Construction of the link-up road has commenced.

POAL WWPS – The installation of sewers to receive flow from Horotui is underway, along with the new road formation

- Tuakau to Pokeno pipeline: Project planning is shaping a Servicing Strategy following the workshop and confirmation of industrial flows. The pipeline design will then follow.
- Tuakau Interceptor WWPS: Procurement of the new pumps has commenced, and construction planning is underway

Treatment Plant Upgrades

- Te Kauwhata WWTP Upgrade – The liquid-stream tanks have been installed, and the connecting pipework is being fabricated.
- The first of the two new screens have been delivered, and the installation of the new inlet works has commenced. The air-stream construction is underway, and the electrical planning and switchboard manufacturing are scheduled to follow. The new chemical facility area is also being prepared, and the chemical tank with dosing units is currently being factory fabricated.
- The temporary Ultrafiltration plant remains operational, improving the suspended solids treatment performance ahead of the main plant build. The operation has benefitted from the new discharge pipework.

The new MBR tanks and flow splitter tanks, and the discharge pipework were renewed at the Te Kauwhata WWTP

- Huntly WWTP Upgrade – A planning review is underway to assess the appropriate location and arrangement of the future WWTP Upgrade. In parallel, the concept design of an interim return stream upgrade is also underway.
- Raglan WWTP Upgrade – The Tender is underway, with returns due in August.
- Ngaruawahia WTP Upgrade – The run-to-waste electrical control and automation is underway. The consenting process requires a new de-chlorination system to be installed, operating when the sewer is unable to receive run-to-waste flow; this element completes the project.

5. Compliance

- The monthly reports of all July drinking water quality assurance rules (DWQAR) demonstrated compliance.
- DWQAR Wai Comply audit is currently in progress for the January-March 2023 reporting period, which will be received by 22 August. The April to June reporting period will be completed in September. All information has been provided for the Council auditors.
- Tonkin and Taylor have been engaged for the Source Water Risk Management Plan as part of the WDC Water Safety Plan update.
- The compliance report will be presented at the Board meeting in September.

5.1. Abatement notices

- There are three abatement notices in place at the moment, two in Raglan for a Cambre road stormwater and the wastewater treatment plant. The third is for the Te Kauwhata wastewater treatment plants. Actions are in place to address all notices.

6. Customer, Billing and Tradewaste

- The new due dates and financial years have been set in the Property and Rating system.
- ADR completed Ngaruawahia area readings for invoicing on 1 August 2023. The Huntly area readings were sent to ADR, and they have started reading.
- Tauwhare Marae Blockage
  There have been blockages and issues at the Tauwhare WWTP. A tradewaste educational visit was held at the Marae, a site inspection of the kitchen facilities, and recommendation of any required TW improvements, and a request for us to set up an educational program for new residents. We have created and posted our 'What to flush' educational letters to residents of the Tauwhare area.
- Annual Tradewaste fees
  The customer list was reviewed for the Trade Waste annual fees. The customer list has been sent to Finance team for invoicing. Have requested that Finance and the Information Department forward any returned invoices or queries to us to follow up on any closed businesses or new customers.

7. Strategic resource consents.

- Raglan WWTP:
  In the past month, significant progress has been made in the GIS work for the theoretical private land discharge design on the Mangatawhiri Road site of interest. An e-meeting was conducted with the private landowner, during which concepts were demonstrated. Representatives from the WDC Growth Team were also present, and overall, all parties expressed satisfaction with the concept. The project team is awaiting confirmation of any Memorandum of Understanding (MoU) to proceed with further project phases.
- Additionally, Beca has delivered the groundwater study as a draft. This document is crucial to show that any SDI option will not negatively impact the neighboring areas and the town water supply at the private land (i.e. in the case that this option is determined as the best

practical option). Some Maungatawhiri Road residents have expressed unsupportive feedback due to personal amenity concerns with the private land discharge scenario. This position is understandable, as such an activity would change the status quo. These concerns should be considered when seeking advice from the WGB regarding whether to pursue a private or public land partial land discharge solution.

- Moving forward, the next important step is to advance the treatment upgrade design under the leadership of Project Manager Peter Crabb. A collaborative forum will be established to understand how the treatment and storage capability interact with various discharge scenarios, making it a critical aspect of the project's progress.

Te Kauwhata WWTP:

- Last month's report stressed the need for effective communication and engagement strategies with stakeholders, the community, and tangatawhenua. The overall responsibility for this falls outside the WDC/WSL contract, with the WDC being accountable.
- Richard Bax, the appointed Huntly Consenting Project Manager, has accepted this role, where July meetings have been conducted between Richard and the technical team to coordinate workstreams.

Matangi WWTP:

- An on-site meeting was held alongside Te Iti o Hauaa Marae with Environmental Representatives. The project team will collaborate with the hapuu to sincerely acknowledge and consider any guardian views expressed. Advice received indicates that the next steps will be an internal hapuu discussion with Kaumatua and Trust representatives. The Hapuu understands the long-term goal of fully connecting Matangi to a central plant, with a medium-term consent length sought, proposed upgrades, and the Vision and Strategy obligations for improvement proposed with the application.
- A Matangi treatment plant and network investigation is about to commence. The investigation will focus on the impact of increased flows experienced during wet years, considering the performance and the opportunity & risk associated with the potentially increased load contributed by the school role increase. The next crucial step for engineers is to review plant data.
- Collaboration is underway between Watercare and the Ministry of Education, involving information sharing. The Ministry of Education has advised that implementing a property flow gauge is planned.
- Engineers will explore methodologies like flow smoothing, offset storage, and stormwater analysis to determine a realistic maximum discharge flow suitable for the WWTP/discharge field. Once known, Managerial decision-making will be enabled to determine if greater school flow can be agreed to or if the school will need to pursue an on-site solution further.

8. Key performance indicators

KPI – description	Results	Target 2022/2023
		Water
The extent to which the Council's drinking water supply complies with Part 4 of the drinking water standards (bacteria compliance criteria).	18	18
The extent to which the Council's drinking water supply complies with Part 5 of the drinking water standards (bacteria compliance criteria).	15	15
Attendance for urgent call-outs: from the time that Council receives a notification to the time that service personnel reaches the site.	July - 40 Year to date - 40	≤ 60 mins
Resolution of urgent call-outs: from the time that Council receives a notification to the time that service personnel confirms resolution of the fault or interruption.	July– 102 Year to date - 102	≤ 240 mins
Attendance for non-urgent call-outs: from the time that Council receives a notification to the time that service personnel reaches the site	July – 2 Year to date - 2	≤ 3 days
Resolution of non-urgent call-outs: from the time that Council receives a notification to the time that service personnel confirms resolution of the fault or interruption.	July – 2 Year to date - 2	< 3 days
The total number of complaints related to Water services received by Council (expressed per 1000 connections to the networked reticulation system):	July – 1.32 Year to date Result – 1.26	≤ 22/1000
		Wastewater
The number of dry weather sewage overflows from Council's system (expressed per 1000 sewage connections to that sewage system.) - Non-sensitive receiving environments.	July – 0.08 Year to date Result – 0.08	≤ 2/1000
The number of dry weather sewage overflows from Council's system (expressed per 1000 sewage connections to that sewage system.) - Sensitive receiving environments.	July – 0.0 Year to date Result – 0.0	≤ 2/1000

Attendance time: from the time that Council receives a notification to the time that service personnel reaches the site.	July – 62 Year to date Result – 62	≤ 60 mins
Resolution time: from the time that Council receives a notification to the time that service personnel confirms resolution of the blockage or other fault.	July – 82 Year to date Result – 82	≤ 240 mins
The total number of complaints received by Council about any of the following (expressed per 1000 connections to the sewage system):	July – 0.32 Year to date Result – 0.32	≤ 10/1000
		Stormwater
The number of flooding events that occur in the district per annum	July – 0.0 Year to date Result – 0.0	< 5
The number of stormwater flood/blockage events that affected habitable floors (expressed per 1000 connections):	July– 0.0 Year to date Result – 0.0	< 0.3
The total number of complaints received by Council about the performance of the stormwater system (expressed per 1000 connections):	July – 020 Year to date Result – 0.20	< 1.25
The median response time to attend a flooding event, measured from the time that Council receives notification to the time that service personnel reach per quarter.	July – 0.0 Year to date Result – 0.0	< 8 hours
Level of compliance, number of the following, Abatement, infringement notices, enforcement orders or convictions	2023/24 - 0	0

		Health and Safety
Safety: Lost time injury frequency rate (LTIFR) per million hours worked	2.45	≤ 5
Safety: Total recordable injury frequency rate (TRIFR) per million hours worked	8.9	≤ 20
Safety: 100% of Notifiable (or serious non-notifiable) Events reported to WDC within 2 hours of the occurrence	100%	100%
Safety: 100% of Notifiable Event reports supplied to WDC within 21 business days	100%	100%
Safety – the percentage of complaints resolved within ten working days	100%	95%
Safety- Health and safety Audit programme and action plan completed (6 monthly and then annually)	100%	1
Safety - All site emergency plans to be drilled six-monthly as per drill schedule	100%	> 100%
Safety - Monthly Health and safety meeting held with all workers	1	> 90%
Safety-Critical risk audit to be conducted by HSW BP Bi-monthly	100%	1
Safety -Actions required to be closed within one month	100%	> 90%

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Waters Governance Board**
Report title	**Waters Services Reform Project Update September 2023**
Date:	5 September 2023
Report Author:	Deron Sharma, Three Waters Reform Project Manager
Authorised by:	Gavin Ion, Chief Executive

1. Purpose of the report
Te Take moo te puurongo

To update the Waters Governance Board of current workstreams, activities, and key matters under the Waters Services Reform Project.

2. Executive summary
Whakaraapopototanga matua

2.1 Select Committee Report on Water Services Entities Amendment Bill

The Water Services Entities Amendment Bill (**"the Bill"**) amends the Water Services Entities Act 2022 to reflect the Government's decisions to refocus water services reforms.

The Governance and Administration Select Committee (**"the Committee"**) examined the Bill and recommended, by majority, that it be passed. Thereafter, the House of Representatives considered the Bill for third reading on 15 August 2023, where it was passed. The National and ACT Parties opposed the Committee, offering differing views on the Bill.

2.2 Project Risk Assessment

Kaimahi (staff) have undertaken a risk assessment of the waters reform project to be presented to the Waters Governance Board for review. Twenty-five key risks have been identified.

Kaimahi maintains that focusing on ambiguity pertaining to General Elections will undermine the core objective of project risk management. Compounded with the Council's inability to influence these, a decision was made not to expend significant effort planning for these scenarios until a clear operational environment is established.

2.3 Transition Support Arrangement

The total funding available under the Funding Agreement has increased from $797,000 to $1,196,000, with additional obligations that have been assessed to be of no concern.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board:

a. notes that the project management for waters services reform is ongoing; and

b. accepts the risk register.

4. Discussion
Matapaki

4.1 Select Committee Report on Water Services Entities Amendment Bill

In the Submission to the Bill, the Council proposed three positions to the Committee to consider, select from, and recommend to the House of Representatives. In decreasing order of preference, these were:

(i) Waikato District Council to join the Northland and Auckland Water Services Entity (**"the NAWSE"**).

(ii) Waikato and Bay of Plenty Water Services Entities be combined via an amendment to the Bill.

(iii) Introduce locally led pre-establishment mergers.

Whilst we observe the Committee's reticence regarding these proposals, we present to the Board the following recommendations made by the Committee.

Definitions

The Committee recommends that Community Priority Statements and Te Mana o Te Wai Statements be amended to refer to any body of water that the activities of the water services entities may affect, including freshwater. Previously, the definition of water was drawn from the Resource Management Act (1991) which precluded water enclosed in pipes, tanks, or cisterns. This was deficient and unworkable with the intent of the Affordable Waters Reforms.

Establishment dates

Notwithstanding the NAWSE, the Committee recommends that establishment dates for all other water services entities be set by an Order in Council (**"an Order"**) at the start of a financial quarter from 1 July 2024 to 1 July 2026.

A requirement of the Minister to engage with Council and mana whenua prior to recommending an Order has been stipulated. Moreover, this must be accomplished within six months of the Bill being granted Royal Assent to provide Council with certainty on the establishment period.

Establishment boards

The Committee recommends that the 24-month term of office for the establishment chief executives should also apply to the establishment board to create a default scenario for service continuity from the establishment to the operational period.

Regional Representative Groups

The Committee's recommendation removes the membership minima and maxima for the Regional Representative Groups (**"the RRGs"**) previously set by the Finance and Expenditure Select Committee. This means that each council can have more than one council and mana whenua representative, respectively.

As a model, the Committee has recommended that Auckland Council have four Council representatives and four mana whenua representatives in the composition of the RRGs, whilst the other three councils in the NAWSE would have one Council and one mana whenua representative, each. Whilst the Bill is not clear on this, Kaimahi expect this model to interpose population differences.

Locally Led Mergers

The Committee restricts mergers to entities that share some of their boundaries with at least one other entity in the merger, specifying that geographically shared water bodies would be compliant with this provision.

The Committee envisages that at least 75 percent of the regional representative group present and voting on a voluntary merger must agree to implement a merger, regardless of Ministerial direction.

Retention Payments

We welcome the Committee's recommendation that a one-off staff retention payment should be made to an employee who has accepted an offer of employment from the chief executive of a water services entity.

However, we have assessed that the proposed new clause lacks rigor in applicability. Based on the recommendation, it is possible that staff transferring to a water service entity outside of their employing council's service area may still receive the payment. Furthermore, the Bill does not explain the retention payments to staff under the legislated job guarantee pathway.

Employment Transfer Arrangements

Kaimahi are pleased to see the Committee conducting a detailed analysis of the anomalous transitional arrangement that the staggered establishment would create for Watercare Waikato staff living in the Waikato District and providing services to Council.

The Committee essentially empowers the chief executive of the NAWSE to approve offers of employment to Watercare Waikato kaimahi, which will provide certainty. It is envisaged that these staff will transfer back to the Waikato Water Service Entity on the same conditions of employment once established.

4.2 Project Risk Assessment

Staff have prepared a draft risk register for the Waters Governance Board to consider and provide feedback on **(Attachment A)**. Being centrally driven, most of the risk treatments are outside of Council control which means Council needs to be adaptive to changes in the planned program.

4.3 Transition Support Arrangement

A variation to the initial funding agreement has been signed and returned to the Department of Internal Affairs. Initially, it was announced that extra support for Council to assist with transition activities was planned to be delivered under a separate funding agreement, "Transition Support Package – Tranche 2," with a renewed set of permitted activities to advance the new priorities of the Ministerial reset. However, a variation to the initial funding agreement (**"the variation"**) has been received instead.

Of interest is "Schedule 1: Permitted Funding Activities," which places parameters on the activities the Waters Reform Project Manager can reasonably fund with this pūtea. The permitted funding activities in Schedule 1 of the original funding agreement **(Figure 1)** has been updated in the variation, which will be analyzed below.

SCHEDULE 1: PERMITTED FUNDING ACTIVITIES

Permitted funding activities

• Information gathering exercises relating to transition, including responding to requests for information from the DIA's Three Waters National Transition Unit.
• The supply of information and resource to support council's preparation for transition, including:
  ◦ allocation schedules for the assets, liabilities, workforce and contracts to transfer to Water Services Entities;
  ◦ Water Service Entity asset management plans; and
  ◦ Water Service Entity funding and pricing plans.
• Participation in local transition activity and local transition teams.
• Complying with any additional requirements or processes mandated by the Water Services Entities Bill (once enacted) and supplementary legislation.
• Any other activities that councils reasonably consider necessary to support transition and that give effect to the intent behind this Agreement (as expressed in Item 2 of the Key Details).

Figure 1: Permitted funding activities under the original agreement.

In contrast, we refer the Waters Governance Board to observe the amendments as detailed in clause 5, subsection g, to the variation **(Figure 2),** which mechanically amends Schedule 1.

We note the update in the third bullet point reflecting the enactment of the Water Services Entities Act 2022 and the additional compliance requirements set forth by the Water Services Legislation Bill and the Bill.

A key change to the permitted funding activities is reflected in the fifth bullet point, stipulating the expectation of Council to participate in developing the constitution of the Waikato Water Services Entity.

On balance, kaimahi are confident that the overall intent of the original funding has not been materially modified by the variation. Given Council's fervency to participate in the Water Services Reform, and commitment to-date, kaimahi welcome the additional support to achieve better water service delivery outcomes to create "liveable, thriving, connected communities" for our residents.

(g) **Schedule 1: Permitted Funding Activities** - The list of Permitted Funding Activities is deleted and replaced with the following:

- *Information gathering exercises relating to transition, including responding to requests for information from the DIA's Water Services Reform National Transition Unit.*
- *The supply of information and resource to support the Recipient's preparation for transition, including:*
  - *allocation schedules for the assets, liabilities, workforce and contracts to transfer to Water Services Entities*
  - *Water Service Entity asset management plans; and*
  - *Water Service Entity funding and pricing plans.*
- *Participation in local transition activity and local transition teams.*
- *Complying with any additional requirements or processes mandated by the Water Services Entities Act 2022, the Water Services Legislation Bill (once enacted), the Water Services Entities Amendment Bill (once enacted) and supplementary legislation.*
- *Participation in the process to develop the constitution of the Water Service Entity whose service area the Recipient is located.*
- *Any other activities that the Recipient reasonably consider necessary to support transition and that give effect to the intent behind this Agreement (as expressed in Item 2 of the Key Details).*

Figure 2: Permitted funding activities under the variation.

5. Next steps
Ahu whakamua

5.1 Select Committee Report on Water Services Entities Amendment Bill

The Bill has not been formally granted Royal Assent by the Governor-General; however, this is anticipated to be completed before the Board convenes.

5.2 Project Risk Assessment

Staff will continue to report on the risks to the Waters Governance Board twice yearly or additionally at the appropriate juncture.

5.3 Transition Support Arrangement

It is our understanding that there is a 90-day standdown period before the first instalment of the additional funding becomes available, dating back to the fourth payment under the initial funding agreement, which was made in June 2023.

6. Attachments
Ngaa taapirihanga

Attachment 1 - PR-23172 20230905 Affordable Waters Reform Risk Register

Risk Register 15/02/23

Team / Project Name: Three Waters Reform Transition

Project Number (if applicable)**:** PR-21372

Risk Ref #	Risk Statement			Inherent Risk			Risk Treatment What can we do about each significant risk to either eliminate it or reduce it?		Residual Risk score			Contingency action(s)	Risk Owner	Business Objective	Monitoring/ Reporting	Monitoring timeframe
	Cause *Because of…*	***Risk*** *There might be…*	***Consequence*** *Resulting in …*	Likelihood	Consequence	Factor	*Treatment to Cause*	*Treatment to Consequence*	Likelihood	Consequence	Factor	*If the risk becomes reality…what action(s) will we implement?*	*Who will take responsibility for this risk? (One person!)*	*Which Business objectives are impacted by this risk? (See next sheet)*	*Who will monitor and report on this risk?*	*What is the frequency for monitoring*
15	Transition of capital project delivery, budgets, and staff.	Time critical projects and other, important capital projects delayed due to transitional issues, lack of resourcing, unclear decision-making, and other teething issues with the water service entities.	Delays to CAPEX projects required by Council's communities.	5	5	Extreme	Review from service delivery team on what projects will be impacted by transition. Change in scope of projects, acceleration, or reprioritisation of projects may be required. Ensuring that critical projects are represented in asset management plans, long-term plans, and highlighting the importance of these in executive discussions with the water service entity.	Council has written to the NTU and to Parliament of our wishes to have Watercare continue to deliver the capital programme for five years beyond 1 July 2024, which staff believe to be the best minimization strategy for this risk. 17/7: Accept that there will be inherent transitional issues. Likelihood reduced because there is clarity that Entity A will act as agent for WWatercare LOS arrangements.	3	4	High	Outside of Council control. Council will need to establish a channel of communication with the water service entity.	Waters Manager GM Service Delivery	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
16	The water service entity's programme of works does not align with Council's priorities.	Time critical projects and other, important capital projects delayed due to transitional issues, lack of resourcing, unclear decision-making, and other teething issues with the water service entities.	Delays to CAPEX projects required by Council's communities.	5	5	Extreme	Review from service delivery team on what projects will be impacted by transition. Change in scope of projects, acceleration, or reprioritisation of projects may be required. Ensuring that critical projects are represented in asset management plans, long-term plans, and highlighting the importance of these in executive discussions with the water service entity.	Council has written to the NTU and to Parliament of our wishes to have Watercare continue to deliver the capital programme for five years beyond 1 July 2024, which staff believe to be the best minimization strategy for this risk. 17/7: WDC to deliver Y1-Y2, WSEs take over Y3-10. Can still add projects as line items in LTP/AMP. Although this constrains funding, it does give WDC greater control.	3	3	Moderate	Outside of Council control. Council will need to establish a channel of communication with the water service entity.	Waters Manager GM Service Delivery	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
17	Water Services Legislation Bill stipulates a Monitoring and Guidance process requiring Council to obtain prior approval from the DIA regarding significant decisions.	Council's investments and decisions being overturned by the DIA.	Delays to CAPEX projects required by Council's communities.	5	5	Extreme	ELT oversight over project to aid with reprioritization as required.	Make a case for appeal to the DIA for reconsideration of their decision. 18/8: Best to keep DIA on a no surprises basis, to the extent possible. Achieved through regular reporting of significant decisions and early involvement.	5	4	Extreme	Outside of Council control. To be proactive, Council can undertake an exercise to determine if any in-flight project with major decision making or future milestone can be brought forward for approval before transition.	Waters Reform PM	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
18	Separation of water infrastructure planning and other functions that will continue to reside within Council.	Urban growth, land development, resource consents, and renewals disjointed from water infrastructure planning.	**Threats:** Tier 1 Growth requirements not met meaning housing supply falls short of housing demand in the district. Resource consents not aligned with water service entity activities meaning plants and equipment operate without appropriate authorization. Buildover applications overlooked or improperly processed. Reduced levels of service due to renewals funding gap or incorrectly prioritized maintenace program. **Opportunities:** Water service entity may have the capability and capacity to integrate strategic growth and water infrastructure planning more efficiently.	4	5	Extreme	Ensuring that there is a clear owner of this process or interfacial manager either within Council or within the water service entity. 18/8: Starting the journey to advance this with the stormwater collaboration workshops. Have gone to market for a Three Waters Support Engineer that can assist in progressing strategic issues. Waters Reform PM also operating in this space now so more resource directed overall.	Ensuring that there is a clear owner of this process or interfacial manager either within Council or within the water service entity, ante-, peri-, and post-transition. 18/8: Pre-transition funding solution: transition support package. Post-transition funding solution: no worse off funding.	5	4	Extreme	Council to advocate for its communities and hold the water service entities accountable for their responsibilities to public health and wellbeing.	GM Growth	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
3	The legislation clearly foresees the water service entities having their own governance arrangements.	Council's Waters Governance Board will cease to exist after 1 July 2024.	Council losing a governance oversight arm on the waters operations that serves the district.	5	4	Extreme	Outside of Council control.	The best mitigation is to have an internal risk owner within Council that can consider governance issues from a distance. There is an opportunity for Council to be involved in the Regional Representative Groups which can act as a vehicle for fulfilling governance oversight arrangements.	4	2	Moderate	Allocate an internal risk owner that can act as a conduit or agent for Council to, at least, partially fulfil the waters governance board's functions.	COO	Political & Strategic	Waters Reform PM	6-Monthly Risk Reporting
14	Cross-boundary service provision.	Watercare unable to provide appropriate LOS leading up to transition due to staff movement or changes to business.	Loss of service levels.	4	5	Extreme	Council to stay abreast of status of CCOs in the waters reform program. NTU and relevant entity chief executives are aware of our arrangements.	Ensure that the Watercare O&M contract avoids this. 18/8: WDC has submitted on the WSEAB legislation. Governance & Administration Select Committee has explicitly addressed this and enshrined certainty for Watercare Waikato staff in legislation.	1	5	Low	De-transition and bring back waters inhouse or tranfer to the water service entities before establishment date. 17/7 : WSEAB addresses this: WSL will be absorbed into Entity A and O&M contract novated. Loss of staff outside our control so accept and prepare contingencies e.g. WSL approved to augment stormwater support	Waters Manager	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
20	Assets and liabilities transferred to the water service entities.	Council's credit rating or ability to borrow potentially impacted.	Decreased level of service to communities.	4	5	Extreme	There is funding from the DIA to offset the impacts of this.	There is funding from the DIA to offset the impacts of this.	4	3	High	Council may need to undertake an exercise to assign a dollar amount to this. If the funding provided by the DIA is insufficient to cover these costs, more can be requested, by negotiation.	CFO	Financial	Waters Reform PM	6-Monthly Risk Reporting
1	Change in Parliament	Three waters reform cancelled or significant change in direction	More uncertainty for staff, communities, and Council at a strategic level. Creates more work atop BAU.	4	4	High	Outside of Council control.	WDC adopting an approach not to be reliant on the reform. The three waters operations has been designed continue regardless of reform. 18/8: Delivering Y1-3 of LTP mitigates aspects of this risk, but creates the additional threat of financial constraint.	4	3	High	Continue delivering LOS via Watercare. Communicate to relevant stakeholders. Plan future steps with ELT.	Waters Manager	Political & Strategic	Waters Reform PM	6-Monthly Risk Reporting
8	The water service entities will compete for other Council staff, beyond waters staff, once stood up.	Council may lost other staff from core areas of the business.	Business continuity impacted, IP lost, and key personnel leave projects mid-flight.	4	4	High	Fortify Council's staff retention strategies.	Fortify Council's business continuity strategies	4	3	High	Council will need to prepare for a mass exodus scenario.	P&C Manager	People	Waters Reform PM	6-Monthly Risk Reporting
12	Multiple Government-driven reforms that require input from Iwi and mana whenua without adequate compensation for money, time, or capacity.	Iwi and mana whenua unable or unwilling to meaningfully contribute to the design and planning of the water service entities Iwi and mana whenua have opposing viewpoints or priorities related to wai and/or awa.	Council may suffer reputational damage. Council's activities that require collaboration with mana whenua or iwi impacted due to over-engagement from Government activities. Council may be found in contravention of treaty or JMA obligations due to undermining of Māori rights or interests in wai.	4	4	High	Largely outside of Council control. DIA does have funding buckets to assist with this. Council can redirect iwi representatives to this by increasing awareness. The public website would be a good forum to achieve this. Further training will be given to customer delivery staff to assist customers in accessing this information. 17/7: DIA established iwi collective to assist with this. Council waters team continuing to fortify relationship with WT via JMA, better off funding, and involvement with other significant waters projects.	Transparent messaging from Council. Oversight of waters reform activities across the organization to enable strategic consultation with iwi or mana whenua. 17/7: Have to ensure that we do not forget JMA with Ngati Maniapoto (Waipaa River).	2	3	Moderate	Clear and consistent messaging will be required to customers.	Waters Manager	Compliance Regulatory	Waters Reform PM	6-Monthly Risk Reporting

Risk Register 15/02/23

Team / Project Name: Three Waters Reform Transition

Project Number (if applicable): PR-21372

Risk Ref #	Risk Statement			Inherent Risk			Risk Treatment What can we do about each significant risk to either eliminate it or reduce it?		Residual Risk score			Contingency action(s)	Risk Owner	Business Objective	Monitoring/ Reporting	Monitoring timeframe
	Cause *Because of…*	*Risk* *There might be…*	*Consequence* *Resulting in …*	Likelihood	Consequence	Factor	*Treatment to Cause*	*Treatment to Consequence*	Likelihood	Consequence	Factor	*If the risk becomes reality…what action(s) will we implement?*	*Who will take responsibility for this risk? (One person!)*	*Which Business objectives are impacted by this risk? (See next sheet)*	*Who will monitor and report on this risk?*	*What is the frequency for monitoring*
19	Water service entity renegotiating contracts and suppliers to capitalize on larger economy scale.	Council loses access to local and/or smaller contractors. Informal arrangements between Council and contractors not captured.	Economic wellbeing of the residents potentially impacted. Council's procurement objectives not met. Loss of local knowledge and years of technical expertise of the network. Levels of service reduced as a result.	4	3	High	Outside of Council control. Council can recommend to the water service entity to maintain certain contracts for business continuity as done for the Watercare Operations and Maintenance Contract. 18/8: DIA have indicated that there is a drive to maintain existing Council contracts, at least in the first few years. This will become an Entity B risk over time.	Transparent communication with contractors.	3	3	Moderate	Outside of Council control.	Waters Manager	Technical	Waters Reform PM	6-Monthly Risk Reporting
21	Overestimation of infrastructure renewal requirements and/or ability for water service entities to fund these due to flawed financial modeling by the DIA.	Large margins of error in funding and pricing plans.	Possibility for significant rates increases due to affordability issues or communities not better off in terms of funding the required investments.	3	4	High	Largely outside of Council control, but Council can provide feedback on these based on funding impact statements once the water service entity's funding and pricing plans are published.	Council has made a submission on the Water Services Legislation Bill to require the water service entities to charge themselves and align the pricing to current Council standards for the first three years of operation.	3	4	High	Council will be legislatively limited in courses of actions.	CFO	Financial	Waters Reform PM	6-Monthly Risk Reporting
2	Public scrutiny and political pressure opposing the reform.	Increased uncertainty or dissension in the community	Community Boards, staff, and Councillors being subject to antagonized customers in public forums. Staff asked to answer questions that Council does not have control over.	4	4	High	Regular updates to public via public forums. Education on the fact that this is Centrally driven and Council is legally obliged to comply under New Zealand's democratic delegations.	Communications plan which creates consistent messaging from top to bottom. Ensuring that front of house and call center staff are educated in the program and understand the delineation of reponsibilities between Council and other agencies.	3	2	Moderate	Utilize communications channels to run education campaigns. Council website will be a critical tool.	Waters Reform PM	Reputation / Image	Waters Reform PM	6-Monthly Risk Reporting
4	Poor communication from Central Government.	Council not fully informed or engaged on the reform.	Ability to plan ahead impacted. Staff having to reprioritize between LTP projects, BAU, and reform. Council's ability to engage with the program requirements impeded.	4	3	High	Proactively engage with the NTU. Obtain signoff from ELT for project and create a communications pool within project workstreams to ensure oversight.	NTU's local establishment teams should be coordinating with Council to alleviate these pressures.	4	2	Moderate	Shared knowledge within Council and via the LTT.	Waters Reform PM	People	Waters Reform PM	6-Monthly Risk Reporting
5	Significant uncertainty on the direction the Government is taking.	Establishment date extended.	Council continues to deliver ancillary water functions.	4	3	High	Outside of Council control.	Clear delineation of responsibilities required. Council will need to be reimbursed for delivering any services via relationship and service level agreements.	4	2	Moderate	Enter into agreement with the water service agreement to establish clear processes and responsibilities.	ELT	People	Waters Reform PM	6-Monthly Risk Reporting
9	Data and digital workstream has not been communicating the data transfer mechanisms.	Council will not be adequately resourced to partake in data migration activities.	Increased workload in short timeframes. Availability of consultants may be limited.	3	4	High	ELT oversight over project to aid with reprioritization as required. 17/7: A customer and digital workstream has been established. There is more communication now that before. However, this workstream still seems ill prepared. Infor is being used as EAM which is the WSL system. This places WDC ahead of the migration curve.	Demand that NTU provide resources to backfill positions.	2	2	Low	Outsource resources from three waters funding or at the cost of NTU's data and digital workstream.	CIO	People	Waters Reform PM	6-Monthly Risk Reporting
24	Development Agreements not captured adequately within transitional arragements.	Development Agreements do not get transitioned to the water service entities for continuation of management i.e. no ownership from water service entity.	Council's social and economic objectives jeopardized. Council finds it difficult to attract businesses to the district due to infrastructure deficits.	3	5	High	Ensuring that there is a clear owner of this process or interfacial manager either within Council or within the water service entity.	Discussions regarding economic development to recognize the impacts of three waters reform. Notify the DIA of future projects via the monitoring and guidance process. Formalize arrangements via agreements or through Council's planning documents so they can be easily novated to the water service entities.	3	3	Moderate	The legislation and process is currently unclear on this matter. If this risk was to eventuate, Council will have to carry out its statutory obligations under the LGA 2002 and hold the water service entity accountable for delivering.	GM Growth	Political & Strategic	Waters Reform PM	6-Monthly Risk Reporting
7	Misinformation and inconsistent messaging leads to public unrest, establishment of C4LD and protests.	Council's position is not aligned with the communities.	Potential for relationship strains with other entities that Council partners with.	3	3	Moderate	Clear and consistent messaging from Council.	Clear and consistent messaging from Council.	3	2	Moderate	Fortify community education. Run more community hui.	Waters Reform PM	Reputation / Image	Waters Reform PM	6-Monthly Risk Reporting
10	Lack of planning on records transfer.	Council will be required to retain records and feed into WSEs on adhoc basis.	Increased workload on records team.	3	3	Moderate	Archives New Zealand dictates certain procedures that need to be undertaken during administrative change.	mand that NTU provide resources to backfill positi	3	2	Moderate	Council needs to ensure that the NTU and DIA are following the documented procedures from Archives NZ.	Waters Reform PM	Compliance Regulatory	Waters Reform PM	6-Monthly Risk Reporting
11	WDC has responsibility to collect payments during the establishment period and five years beyond 1 July 2024.	Water service entities require Council to continue collecting rates.	Threat: Council still seen as the face of three waters from community perspective. Community confusion regarding waters service provider. Opportunity: Community see us a advocates for them to central government and appreciate us more.	3	2	Moderate	Council has made a submission on the Water Services Legislation Bill to require the water service entities to charge themselves and align the pricing to current Council standards for the first three years of operation.	Council will have to comply with these requirements if directed to do so as it is legislated.	3	2	Moderate	Clear and consistent messaging will be required to customers.	CFO	Financial	Waters Reform PM	6-Monthly Risk Reporting
13	Three waters reform is taking many aspects of Council functions and creating a national model e.g. RITS, AMP, Growth Plans.	Council's strategis planning is impacted.	Council's ability to adapt strategic plans for communities and prioritization framework is adversely impacted due to entities' needing to prioritize the competing needs of 22 councils.	3	3	Moderate	Council will need to reevaluate strategic planning process in accordance with the new legislative planning process. Interface with the water service entity will likely be required.	Council will need to establish a channel of communication with the water service entity.	3	3	Moderate	Council will need to work closely with the water service entity to map out what this looks like.	ELT	Political & Strategic	Waters Reform PM	6-Monthly Risk Reporting
22	Changing legislative drivers in the waters reform programme.	New, unforeseen legal obligations on Council.	Increased workloads on Council staff or rates on communities.	3	3	Moderate	Largely outside of Council control, but Council can monitor changes to voice concerns in appropriate forums and remain agile.	Largely outside of Council control, but Council can monitor changes to voice concerns in appropriate forums and remain agile.	3	2	Moderate	Largely outside of Council control, but Council can monitor changes to voice concerns in appropriate forums and remain agile.	CFO Legal Counsel	Compliance Regulatory	Waters Reform PM	6-Monthly Risk Reporting
23	Local Government Act places certain obligations on Council during civil defence emergencies.	New entity may be unprepared for emergency management functions after transition. Uncertainty on water service entity's role in Civil Defence.	Council may be required to undertake these functions with less control, recalling that water is a lifeline utility. Council staff that would otherwise assist with Civil Defence and Emergency Management efforts are transitioned to the water service entities and unavailable to assist in the future.	3	5	High	Council's civil defence emergency management team may be required to prepare for this scenario. To be proactive, Council's incident management team can work with the water service entity to develop a plan of action for these events.	Council's civil defence emergency management team may be required to prepare for this scenario. Training other staff that likely will not transfer to the water service entities. To be proactive, Council's incident management team can work with the water service entity to develop a plan of action for these events.	3	1	Low	Council's civil defence emergency management team may be required to prepare for this scenario. To be proactive, Council's incident management team can work with the water service entity to develop a plan of action for these events.	CDEM Manager	Business Continuity	CDEM Manager Waters Reform PM	6-Monthly Risk Reporting
25	Council has contracts which has touchpoint with waters.	Existing contracts where part of the scope (Water) will be handed over to new entities.	Requiring renegotiation or novation of entire contract to the water service entities.	3	2	Moderate	Council may be required to enter into service level agreements.	Where appropriate, the entire contract should be novated to the water service entities.	3	1	Low	Outside of Council control.	Waters Manager	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting
6	Many Council-owned assets are mixed-use assets administered by different teams.	Other WDC BAU functions are compromised.	Unclear demarcation of departmental jurisdiction to undertake works.	2	2	Low	Request for information from DIA to capture all land areas and assets that are mixed use.	Ensure DIA is clearly delineating responsibilities via the Water Services Legislation Bill.	2	2	Low	Council's internal teams will need to delineate responsibilities.	Waters Manager	Business Continuity	Waters Reform PM	6-Monthly Risk Reporting

Consequence Category / Portfolio	Description	Prompt questions
Business Continuity	Business continuity risks impacting the day to day business function and level of service delivery. These can be from inadequate or failed internal processes, activities and systems (recruitment, training, change management), or from unforeseen external events (such as a natural disaster) that disrupt normal business operations.	What is the risk due to inadequate or failed internal processes, activities and systems (recruitment, training, change programmes, natural disasters?)
People (Zero Harm)	Risks associated with health and safety, or the capacity and capability of staff, elected members or partnerships; the behavioural and/or performance of staff, elected members or partnerships; and supplier confidence. People risks typically result from staff constraints (cannot fill critical open positions), incompetence (employees, partners or suppliers lack the necessary skill & knowledge to do jobs correctly), dishonesty (theft, fraud) or a corporate culture that does not cultivate risk awareness (i.e. lack of regard for Health & safety processes, risk management processes)	Are there risks related to health and safety, capacity and capability of staff, behavioural and or performance issues, supplier delivery confidence
Financial	Risks related to the financial management of WDC and the ability to fund Council activities and operations now, and into the future. Risks related to the management of operational and or project budgets (potential for loss). External economic factors related to changes in the prevailing market conditions that impact on the organisations financial capability.	What is the risk that there is inadequate funding provided for this activity/project (either by Council and/or external funders) and/or that the final activity/project cost is >10% of the budget?
Reputation/Image	Risks related to the impact of organisational actions (business undertakings). Reputational risks typically result when public perception of Council actions and/or Council personnel are deemed to be inappropriate.	What is the risk to Council's reputation / image? Potential for negative media coverage and/or negative experiences/ perceptions of the activity/project by stakeholders and the community?
Compliance Regulatory	Risks related to WDC exposure to liability (legal action, fines, non-compliance against consent conditions, codes etc.)	What is the risk of exposure to liability (legal action, fines, non-compliance against consent conditions)?
Environmental	Potential or actual negative environmental or ecological impacts, regardless of whether these are reversible or irreversible in nature. Risks can arise from; - Natural hazards e.g. landslides - Waste & Refuse, emissions, resource depletion etc. - Emergency/ Disaster management - Growth & Development	What is the risk to the environment (ecology, soil contamination, water quality, noise levels, odour, dust, etc.?)
Political/Strategic	Risks that may impact on the organisations ability to achieve its strategic objectives created by political conditions. This may be due to internal factors (actions of politicians) and or external conditions e.g. events or decisions that could have effect on the achievement of strategic objectives.	What is the risk at the Political and or Corporate level due to possible impact to Council's core business objectives?
Technical (Cyber Security & IT Dependenc	Risks affecting the ability of WDC to complete or have confidence in the function or completion of a task, activity, project, operation. These are quality risks e.g. failure due to lack of technical capability or certainty in; - Existing equipment, tools, technology, software, hardware etc. - Design surety, manufacturing competency, technical performance etc.	Are there risks due to specific critical technologies and or the overall technical complexity of an activity/project (has it been done successfully before? Design and or implementation complexity? Specialised technical skill required? Speed of technology change, etc.)

RISK CONSEQUENCE CATEGORIES

	Business Continuity	People	Financial	Reputation / Image	Compliance Regulatory	Environmental	Political & Strategic	Technical	
Questions	What is the risk due to inadequate or failed internal processes, activities and systems (recruitment, training, change programmes, natural disasters?)	Are there risks related to health and safety, capacity and capability of staff, behavioural and or performance issues, supplier delivery confidence	What is the risk that there is inadequate funding provided for this activity/project (either by Council and/or external funders) and/or that the final activity/project cost is >10% of the budget?	What is the risk to Council's reputation / image? Potential for negative media coverage and/or negative experiences/ perceptions of the activity/project by stakeholders and the community?	What is the risk of exposure to liability (legal action, fines, non-compliance against consent conditions)?	What is the risk to the environment (ecology, soil contamination, water quality, noise levels, odour, dust, etc.?)	What is the risk at the Political and or Corporate level due to possible impact to Council's core business objectives?	Are there risks due to specific critical technologies and or the overall technical complexity of an activity/project (has it been done successfully before? Design and or implementation complexity? Specialised technical skill required? Speed of technology change, etc.)	

Likelihood

Likelihood	Probability	Frequency	Description	Rating
Almost Certain	> 80%	Regular or frequently occurrence	Expected; Almost certain occurrence in the foreseeable future	**5**
Likely	50 - 80%	1 - 5 times per year	Strong probability of occurrence in the foreseeable future / History of frequent occurrence	**4**
Possible	20% - 50%	Once a year	Feasible; a possibility of occurrence / History of casual occurrence	**3**
Unlikely	< 20%	Once every 2 -5 years	Not expected but there is a slight chance of occurrence at some time	**2**
Rare	< 1%	Less than once every 5 years	Highly unlikely but may occur in exceptional circumstances	**1**

Consequences

Descriptor	Business Continuity	People	Financial	Reputation / Image	Compliance Regulatory	Environmental	Political & Strategic	Technical	Rating
Catastrophic	Essential services are unavailable causing customer disruption (> 1 day)	Life threatening injury/fatality (Severity 1) or potential to cause life threatening injury/fatality. Significant or prolonged resourcing deficit (trained/skilled specialist roles).	Financial exposure ≥ $1.5M in any 12 month period	Sustained (in excess of one week) high profile adverse national media campaign or sustained (in excess of 4 weeks) cumulative adverse local media campaign or irreversible loss of community confidence or initiation of government tribunal of inquiry	Breach of policy, process or legislation requiring external investigation and resulting in significant tangible loss through civil or criminal prosecution and or significant damage to reputation.	Significant environmental disaster or natural hazard or unplanned population growth causing wide spread environmental degradation/damage and/or irreversible pollution or long term effects affecting future generations or uncontained, long term serious environmental degradation.	Significant and prolonged political attention with non-achievement of LTP objectives across multiple years.	Significant and prolonged effect to levels of service, business function or resource capacity as the result of malfunction/failure of technology, tools, equipment and or design/manufacturing competency.	**5**
Major	Essential services are unavailable causing customer disruption (< 1 day) or non-essential services are unavailable (<7 days)	A WorkSafe NZ notifiable injury or illness (Severity 2) or potential to cause notifiable illness or injury. Major but short term resourcing deficit (trained/skilled specialist roles).	Financial exposure ≥ $500k but <$1.5M in any 12 month period	High profile adverse national media attention (less than one week) or sustained (in excess of 2 weeks) cumulative adverse local media attention or loss of confidence from significant portion of community sector.	Breach of policy, process or legislation requiring external investigation and resulting in a tangible loss through civil or criminal prosecution and some damage to reputation.	Major but localised environmental degradation/damage/pollution with long term effects or major off site release caused by either a natural disaster or unplanned population growth.	Significant but short term political attention with major impact to timing or deliverables associated with with LTP objectives within one given year.	Major but short term effects to levels of service, business function or resource capacity as the result of malfunction/failure of technology, tools, equipment and or design/manufacturing competency.	**4**
Moderate	Essential services are unavailable causing customer disruption (< 4 hours) or non-essential services are unavailable (<3 days)	Lost time injury (Severity 4). Moderate and short term resourcing deficit (trained/skilled specialist roles).	Financial exposure ≥ $100k but < $500k in any 12 month period	Adverse local media coverage that if repeated over time will adversely affect Council or negatively perceived business practice leading to widespread resident/ratepayer complaints or prolonged unresolved dispute requiring legal oversight	Breach of policy, process or legislation requiring internal investigation including moderate treatment for the purpose of damage control	Moderate localised environmental degradation/damage/pollution at a localised level caused by either a natural disaster or unplanned population growth with medium term effect or off site release contained.	Short term political attention with moderate impact to deliverables associated with LTP objectives.	Moderate short term effects to levels of service, business function or resource capacity as the result of malfunction/failure of technology, tools, equipment and or design/manufacturing competency.	**3**
Minor	Non-essential services maybe impacted causing customer disruption (< 1 day)	Restricted work injury or medical treatment injury or potential for medical treatment is required (Severity 5). Temporary resourcing deficit (trained/skilled specialist roles) <7days.	Financial exposure ≥ $10k but < $100k in any 12 month period	Adverse local media coverage or adverse social media comment or short-term issue leading to localised complaints	Breach of policy, process or legislation requiring internal investigation but requiring only minor treatment for the purpose of damage control.	Minor localised environmental damage/pollution caused by either a natural disaster or unplanned population growth.	Short term political interest with negligible impact to LTP objectives.	Minor effects to day to day business function as the result of malfunction/failure of technology, tools, equipment and or design/manufacturing competency.	**2**
Insignificant	No tangible impact on services to customer but monitoring maybe required.	First aid injury or potential for a person to seek first aid (Severity 6). Temporary resourcing deficit (trained/skilled specialist roles) <1day.	Financial exposure < $10k in any 12 month period.	Minor adverse social media comment/questions but no subsequent public interest or event affecting an individual or small group only	Minor breach of policy or process requiring no investigation and only an approval or variance to prevent any damage control requirement.	Negligible localised environmental damage caused by either a natural disaster or unplanned population growth.	Negligible political interest with no impact on LTP objectives.	Negligible effects to day to day business function as the result of malfunction/failure of technology, tools, equipment and or design/manufacturing competency.	**1**

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open

To	**Waters Governance Board**
Report title	**District Wide Plant Fencing**
Date:	23 August 2023
Report Author:	Mathew Telfer (Operations Manager – Waikato Contract)
Authorised by:	Gavin Ion, Chief Executive

1. Purpose of the report
Te Take moo te puurongo

To seek approval from the Council and Water Governance Board to apply the Watercare fencing standard for water bodies within Council responsibility across the district. This includes wastewater ponds, wetland and water treatment discharge ponds.

2. Executive summary
Whakaraapopototanga matua

In 2019 following a child's drowning at a wastewater treatment plant pond in Gore, concerns were raised concerning the safety and security of waterbodies to accidental drowning, particularly for children. The focus for fencing around water and wastewater treatment facilities has previously been on deliberate unauthorised access, generally for the purposes of property damage or theft.

An audit in late 2021 of fencing in the Waikato district Council sites highlighted a lack of suitable fencing to address both the security and accidental drowning risk. Remedial work was undertaken in May 2022 to address damaged or overgrown fencing.

A Watercare draft 'Organisational physical security standard' was produced in 2022 and is under final review. This review highlighted the original focus of the standard was to address the risk of property damage or theft, not accidental drowning.

Therefore, A change was recommended in the review that all ponds and waterways at water and wastewater treatment plants are appropriately isolated, in line with the standard, from the public to prevent access and significantly reduce the risk of security incidents and accidental drowning.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board:

a. approves all water and wastewater treatment plant ponds and waterways have appropriate fencing installed.

b. approves the initial allocation of $350,000 from Wastewater Treatment Renewals to the fencing project based on the initial quote. Any available capex funding as the year progresses could be allocated to the project.

4. Background
Koorero whaimaarama

In 2019 following the incident of a child drowning at a wastewater treatment plant in Gore, concerns were raised concerning the safety and security of public waterbodies to accidental drowning, in particularly for children. The focus for fencing around water and wastewater treatment facilities has previously been on deliberate unauthorised access normally for the purposes of property damage or theft.

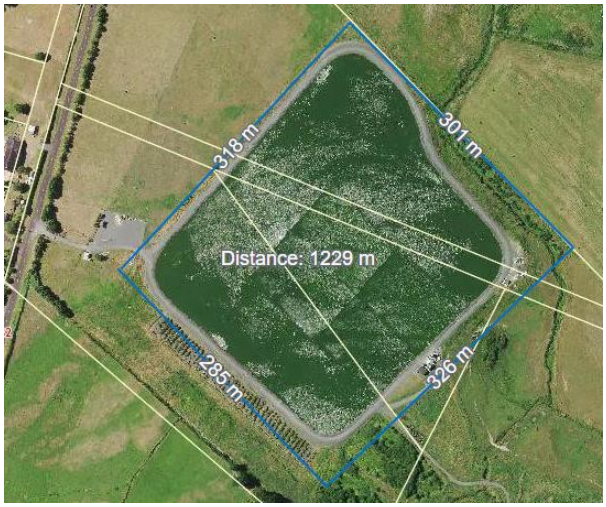
An audit in late 2021 of fencing in the Waikato district Council sites highlighted a lack of suitable fencing to address both the security and accidental drowning risk.

To estimate costs, an initial quote was procured to indicate costs based on Deer fencing with barbed wire.

5. Discussion and analysis
Taataritanga me ngaa tohutohu

The audit in late 2021 highlighted a lack of suitable fencing to address both the security and accidental drowning risk.

The review of the treatment plant's fencing highlighted a range of fencing currently in place, from a front security gate of good quality to poor-quality farm fencing.



Ngaruawahia waste (ponds),

Te Kauwhata wastewater (ponds and wetland),

Huntly waste (ponds and wetland),

Te Kauwhata wastewater (ponds and wetland),

Te Kauwhata Water treatment (discharge ponds)

Raglan waste (ponds and wetland)

The Meremere wastewater treatment

Meremere is unusual due to the recent upgrade, although a review will be required to ensure it meets the new 'proposed' standard.

A Watercare draft 'Organisational physical security standard' was produced in 2022 and is under final review. This review highlighted the focus of the standard was to address the risk detailed above i.e. property damage or theft, but not accidental drowning.

Without a national standard or direction from relevant agencies, the information presented by Graeme Wells of Beca Ltd was considered for inclusion in the revised Watercare Standard expected in September 2023.

Therefore, It is recommended that all ponds and waterways at water and wastewater treatment plants are appropriately isolated from the public to prevent access and significantly reduce the risk of security incidents and accidental drowning.

Fencing options

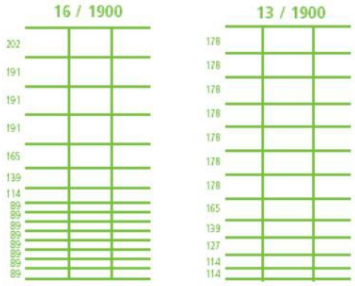
The options considered were included,

- Security gates
- Farm fencing
- Standard deer fencing
- Standard deer fencing with Barbwire top
- Standard deer fencing with Barbwire top and bottom.
- Summit Steel XM19/180 security fencing
- Summit Steel XM19/180 security fencing with Barbwire top.
- Summit Steel XM19/180 security fencing with Barbwire top and bottom.

WaterNZ Presentation

Solutions

- Cyclone 16/1900 HT Tightlock deer fawning netting
- Mesh size 240W x 89H in lower 800mm
- Tensioned bottom wire clipped to netting
- Deer netting accepted by Worksafe in Gore
- Summit Steel 19/1800 XTM fence forged knot MT security netting
- Mesh size 50W x 100H over full height
- Cyclone HT Reverse Twist 1.6 x 100 barbed tension wire top and bottom clipped to netting
- Being adopted by some other Council's
- Gates similar



Based on the criteria of security and preventing access. It is recommended that all water and wastewater ponds and waterways have the Summit Steel XM19/180 security fencing with Cyclone HT reverse twist 1.6 x 100 barbed tensions wire top and bottom clipped to the netting installed with less than 100mm clearance underneath.

5.1 Options
Ngaa koowhiringa

Option 1

The status quo by maintaining the existing fencing around Water and wastewater treatment plants but not aligning the fencing to the proposed Watercare standard. This option accepts the current level of risk of accidental drowning.

OR

Option 2

To align the Waikato District Water and wastewater treatment plants to the Watercare standard and create a project to implement the standard across the district in FY23/24.

Staff recommend option two based on the risk to the public.

5.2 Financial Considerations
Whaiwhakaaro puutea

The current Long-Term Plan (LTP) includes infrastructure investment in water and wastewater treatment plants.

The LTP funding source and financial year commitment is detailed in the table below.

Funding allocated ($M)	23/24	Total
Fencing project	0.350	0.350
Wastewater Treatment Renewal WSL Code: OG0001080	0.916	0.916
Remaining Balance available (+/-)	0.566	0.566

5.3 Legal considerations
Whaiwhakaaro-aa-ture

There are no material legal considerations associated with the recommendations of this report.

5.4 Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

The report and recommendations are consistent with the Council's approach to Health and Safety.

5.5 Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

Te Ture Whaimana is the vision and strategy for the restoration and protection of the Waikato and Waipā Rivers, with principles and directions that underpin the Waikato River Iwi's engagement in the Waikato Regional Council (WRC) Healthy Rivers Wai Ora Plan Change. The Waikato and Waipā Rivers must be protected from further degradation, with outcomes where the Waikato and Waipā Rivers are protected and restored.

The special relationship between River iwi and the Waikato and Waipā Rivers is paramount.

5.6 Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

The matters in this report have no known impact on climate change or resilience for the Council.

5.7 Risks
Tuuraru

While the likelihood of this public health risk occurring is low, the impact would be significant.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.1 Significance
Te Hiranga

The decisions and matters of this specific report are assessed as of low significance in accordance with the Council's Significance and Engagement Policy. However, this report is part of a broader project that may be in future, assessed as of moderate/high significance.

6.2 Engagement
Te Whakatuutakitaki

Highest level of engagement	Inform ✓	Consult ☐	Involve ☐	Collaborate ☐	Empower ☐
Tick the appropriate box/boxes and specify what it involves by providing a brief explanation of the tools which will be used to engage (refer to the project engagement plan if applicable).	Due to the nature of the fencing and the limited impact on the community, this will be communicated to local boards and via the Council Communications team. Waters Governance Board was previously informed of the earlier fencing review and action taken.				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
✓	☐	☐	Internal
✓	☐	☐	Community Boards/Community Committees
☐	✓	☐	Water Governance Board

7. Next steps
Ahu whakamua

The next step will be to complete the full project brief specifying the new standard and water bodies and procure multiple quotes for delivery of the project.

8. Confirmation of statutory compliance
Te Whakatuuturutanga aa-ture

As required by the Local Government Act 2002, staff confirm the following:

The report fits with Council's role and Governance boards Terms of Reference and Delegations.	Confirmed
The report contains sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages (*Section 0)*.	Confirmed
Staff assessment of the level of significance of the issues in the report after consideration of the Council's Significance and Engagement Policy (*Section 6.1)*.	Moderate
The report contains adequate consideration of the views and preferences of affected and interested persons taking account of any proposed or previous community engagement and assessed level of significance (*Section 6.2)*.	Confirmed
The report considers impact on Maaori (*Section 5.5*)	Not applicable
The report and recommendations are consistent with Council's plans and policies (*Section 0)*.	Confirmed
The report and recommendations comply with Council's legal duties and responsibilities (*Section 5.3)*.	Confirmed

9. Attachments
Ngaa taapirihanga

Attachment 1 – Watercare proposed Physical security standard

Attachment 2 – 2020-IPWEA-NZ-Speaker-Graeme Wells - Oxidation ponds

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ORGANISATIONAL PHYSICAL SECURITY STANDARDS

Watercare
An Auckland Council Organisation

Prepared for:	Project NEPTUNE.
In response to:	Contract for Consultancy Services 20-142-BPR.
Prepared by:	ICARAS Consultants.
Reference:	Report: WCAC_001_Org_Physical_Security_Standards_DRAFT.
Additional References:	A: Watercare_001_ PSTA _Dec 2020. B: Watercare Risk Management Framework dated Sept 2018.

Document Information		
Version Release Date:	xxx 2022	
Version Release History:	**0.3**	
Author:	Chris Philp ICARAS Security Consultants	
Approved for submission by:	Alan Foubister Security Manager	
Reviewed by:	xxx	
Approved by:	xxx	
Status:	Draft	
Location:		
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Associated Documents:		

Version Control		
Date	**Changes Made**	**Name**
April 2022	Initial draft	Chris Philp
October 2022	Update after Security and Integrator comments	Chris Philp

ICARAS Security Consultants

TABLE OF CONTENTS

ICARAS Security Consultants

1. INTRODUCTION

1.1. Physical security is intended to protect assets to ensure Watercare is able to continue to deliver lifeline water and wastewater services. This can be achieved by applying physical security control measures to sites and buildings to protect Watercare property, information and people assets.

1.2. The standards contained in this document apply to all staff, contractors and consultants undertaking design, construction or security review work at any Watercare site.

1.3. This document provides guidance on determining the physical security risk profile of Watercare sites and provides the minimum standard for physical security control measures required to mitigate security risks to an acceptable level. These standards should be referenced by project managers and site owners anytime significant works are undertaken on a Watercare site or a new site is being developed.

1.4. While this standards document is intended to be comprehensive, project managers, site owners and other users of this document must consult with the Watercare Security Team to ensure appropriate physical security control measures can be integrated into the project design at the earliest opportunity.

1.5. Everyone in the organisation contributes to security. No amount of investment in physical security will be effective without the right security culture. Implementation of the security controls contained in this document should be accompanied by an education and training program for appropriate staff, contractors and consultants to ensure they understand the purpose of the controls and the correct way to operate them.

1.6. This Standard should be read in conjunction with the following Watercare documents:

- Watercare Security Policy
- Watercare CCTV Policy
- Watercare Risk Management Framework
- Watercare Architectural Guidelines (DP-12)
- Watercare Material Supply Standard

1.7. Other relevant and useful legislation, policies and standards are listed in Annex A.

2. METHODOLOGY

2.1. This section provides an overview of the methodologies and concepts that are relevant to this standard.

REVIEW

2.2. Threats constantly evolve and change, along with the technology underpinning security control measures. The Watercare Security Manager should review this policy annually, or whenever there is a significant change in the security environment, to ensure the security controls and standards remain fit for purpose.

2.3. Security threats and risks may differ greatly from site to site. Site managers should review site-specific threat and risk assessments at least every three years, or whenever there is a significant change in the security environment.

THREAT AND RISK

2.4. To ensure appropriate and proportionate physical security measures are implemented, a good understanding of threat and risk is required.

2.5. Threat identifies an action or event that leads to a negative outcome, who or what perpetrates that action or event and the likelihood of that action or event occurring. For example, a threat may relate to the potential theft of tools from a storage shed on a site by petty criminals. The likelihood of this occurring will be site specific and may depend on factors such as the local crime rate.

2.6. Risk takes into account the impact or consequences that would result from the threat action or event occurring. For example, if the tools were low value and used only for routine maintenance, the impact of them being stolen might be low. However, if the tools were critical in ensuring the operation of the site function and difficult to replace, the impact of them being stolen might be very high.

2.7. The relationship between threat and risk is shown in Figure 1.

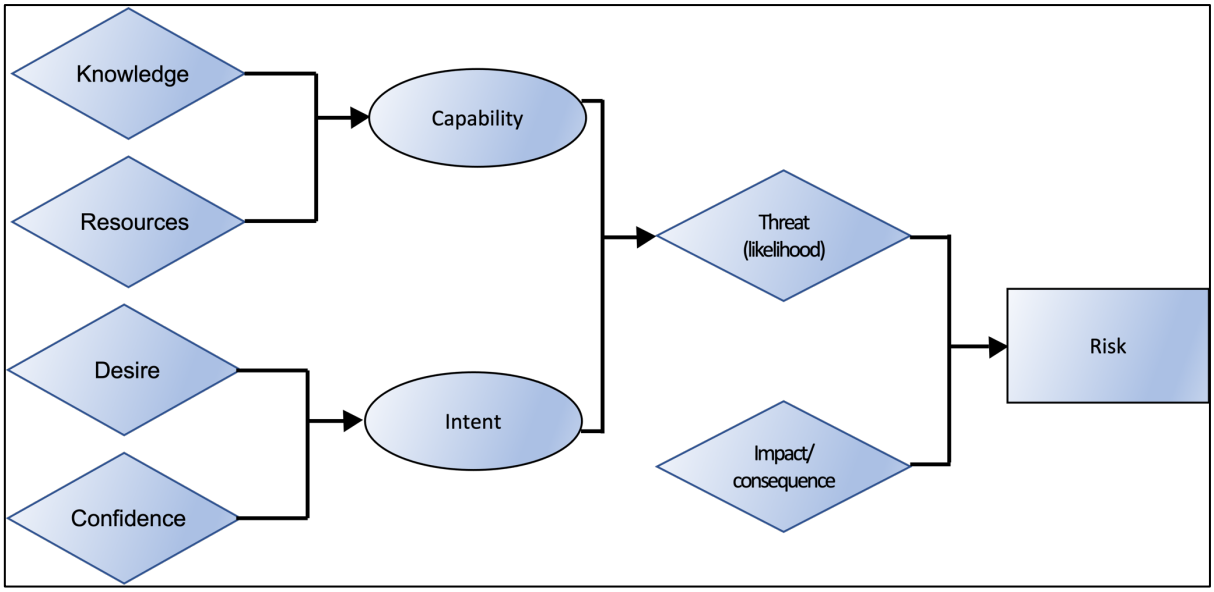


Figure 1 – Threat and risk relationship.

2.8. A high level description of the assessed threat types and actors faced by Watercare, as a Critical National Infrastructure (CNI) provider, are provided in Table 1 below. The current assessed threat levels are contained in Annex B. It is important to note that threat assessments are a snapshot in time and change as the threat environment changes. Not only do threat levels change, but new threat vectors may develop. Both the threat types and actors, along with the threat levels, should be constantly monitored and reviewed, both at an organisational and site level.

TERRORISM	A terrorist is someone who is willing to threaten or use violence in pursuit of political or ideological aims. The threat of terrorism can come from both international or domestic individuals or groups, and can include extremists across the spectrum of religious, identify, issues-motivated or other motivations.

DISRUPTIVE ACTIVITY	Protestors, activists or issues-motivated groups are those who campaign to bring about political or social change and are willing to take physical action in support of their cause which may cause disruption to Watercare activities or operations.
	Fixated or Acutely Disaffected Persons (ADP) are individuals who have an obsessional pre-occupation with a person, place or cause which is pursued to an irrational degree, which may cause disruption to Watercare activities or operations.
SABOTAGE / UNAUTHORISED DISCLOSURE OF INFORMATION	An insider is a person who has legitimate access to a Watercare site, who use their legitimate access to target areas they are not authorised to access, use information for unauthorised purposes or cause damage to Watercare assets. Insiders can include staff, contractors and authorised visitors.
	Hostile intelligence activity includes foreign government sponsored and commercial/industrial espionage, targeting Watercare information or assets.
	Investigative journalist and other media outlets may publicly disclose Watercare proprietary information through their publications.
GENERAL CRIME	The threat of violence, theft and vandalism may come from a variety of threat actors, including petty/opportunistic or motivated criminals.
	Organised criminal activity is generally well planned and resourced. It will usually be motivated by financial gain, either directly (e.g. cash or high-value assets) or indirectly (e.g. chemicals useful in the manufacture of illegal drugs).
ECONOMIC CRIME	Cybercrime is any criminal activity that takes places via the internet. Generally this will be conducted by criminal groups motivated by financial gain, but could also include actors targeting control or other communications systems aiming to disrupt Watercare activities or operations.

Table 1 – Description of threat type and actors.

2.9. Identifying instances of how these threats could occur and assessing the impact or consequences of this results in a set of risks. Further details on risk assessment can be found in the Watercare Risk Management Framework policy document. The most significant risks faced by Watercare relevant to the physical security of sites are listed in Table 2, with further detail provided in Annex C. It should be noted that these are general risks across the Watercare portfolio and site-specific risk ratings may vary across different sites.

RISK TYPE	Theft							Vandalism				Contamination of fresh water Release of wastewater				Intentional harm	
BUSINESS IMPACT	Financial loss			Reputational damage or disruption to operations		Loss of information		Reputational damage		Disruption to operations		Reputational damage		Detrimental health effects		Harm to staff or other site occupants	
THREAT ACTOR	Petty criminal	Motivated criminal	Insider	Petty criminal	Motivated criminal	Motivated criminal	Insider	Petty criminal	Activist/terrorist	Petty criminal	Activist/terrorist	Petty criminal	Activist/terrorist	Petty criminal	Activist/terrorist	Petty /Motivated Criminals	ADP
Water Treatment Plant	High	Med	Low	Med	Low	Low	Med	High	Low	Med	Med	Med	Med	Low	Low	Low	Med
Wastewater Treatment Plant	High	Med	Low	Med	Low	Low	Med	High	Low	Med	Med	Low	Low	Low	Low	Low	Med
Office or Laboratory	Med	Med	Low	Low	Low	Med	Med	Med	Low	Low	Med	N/A	N/A	N/A	N/A	Low	Med
Maintenance Depot	High	Med	Med	Low	Med	Low	Low	Med	Low	Low	Med	N/A	N/A	N/A	N/A	Low	Low
Pump Stations	Low	Med	Low	Low	Low	N/A	N/A	Med	Med	Med	Med	Low	Med	Low	Med	N/A	N/A
Headworks	Med	Med	Low	Low	Low	N/A	N/A	Low	Low	Med	Med	Low	Low	Low	Low	N/A	N/A

Table 2 – Matrix of baseline risks.

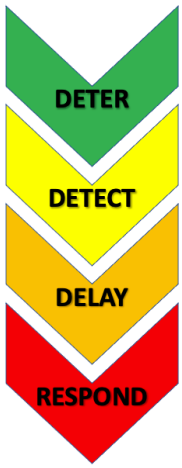
2.10. Once the risks have been identified, they can be either tolerated, terminated, treated or transferred. Termination or transfer of security risk is generally not an option for a CNI organisation. A security risk may be tolerated if the assessed rating is very low or if the cost of mitigation is disproportionate to the risk rating. Physical security measures are intended to mitigate security risks, so this standard only considers the treatment stream of risk management.

2.11. Mitigating a risk can reduce the likelihood of a threat action or event occurring, reduce the impact or consequence if the threat action or event were to occur, or both.

DETER, DETECT, DELAY, RESPOND

2.12. Physical security measures can mitigate risks through one or more of deterring, detecting, delaying, or responding to threat actions:

- **Deter.** The aim of deterrence is to stop or displace an intrusion before it has taken place. This is the primary goal of the whole protective security system
- **Detect.** The ability to detect an intrusion allows for the verification that something is happening to understand the nature of the event and initiate a response to it.
- **Delay.** Measures that are put in place to delay, or slow down, the intrusion, increase the likelihood that the intruder is unable to reach their target before being apprehended.
- **Respond.** The response to the intrusion should ensure that the incident is stopped or, as a minimum, cannot progress any further. Also, post-incident response can provide information that reduces the risk of the incident occurring again.



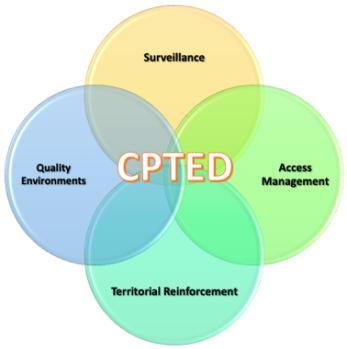
2.13. It is important to understand what domains a security measure operates within to determine how effectively it will mitigate a specific risk, if at all. For example, a CCTV camera will deter but not delay an intruder, a mechanical lock will delay but not detect an intruder, an IDS will detect and instigate a response but not delay an intruder.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

2.14. CPTED provides a framework for incorporating crime prevention within quality urban design by focusing on reducing the opportunity to commit crime, therefore lessening the motivation to offend.

2.15. There are four key overlapping CPTED principles:

- **Surveillance** – people are present and can see what is going on.
- **Access management** – methods are used to attract people and vehicles to some places and restrict them from others.
- **Territorial reinforcement** – clear boundaries encourage community 'ownership' of the space.
- **Quality environments** – good quality, well maintained places attract people and support surveillance.[1]



[1] https://www.justice.govt.nz/assets/Documents/Publications/cpted-part-1.pdf

2.16. The natural and built environment can help or hinder physical security. While the origins of CPTED are in urban design, there are elements that are applicable to Watercare sites. For example, perimeter vegetation can provide privacy and block the view of attractive assets from outside the perimeter (deter), however, it can also provide natural cover for a potential intruder enabling their actions to go unseen.

SECURITY IN DEPTH

2.17. 'Security-in-Depth' involves layering multiple security measures to make unauthorised access difficult. These measures should complement and support one another. A visual representation of this is shown in Figure 2.

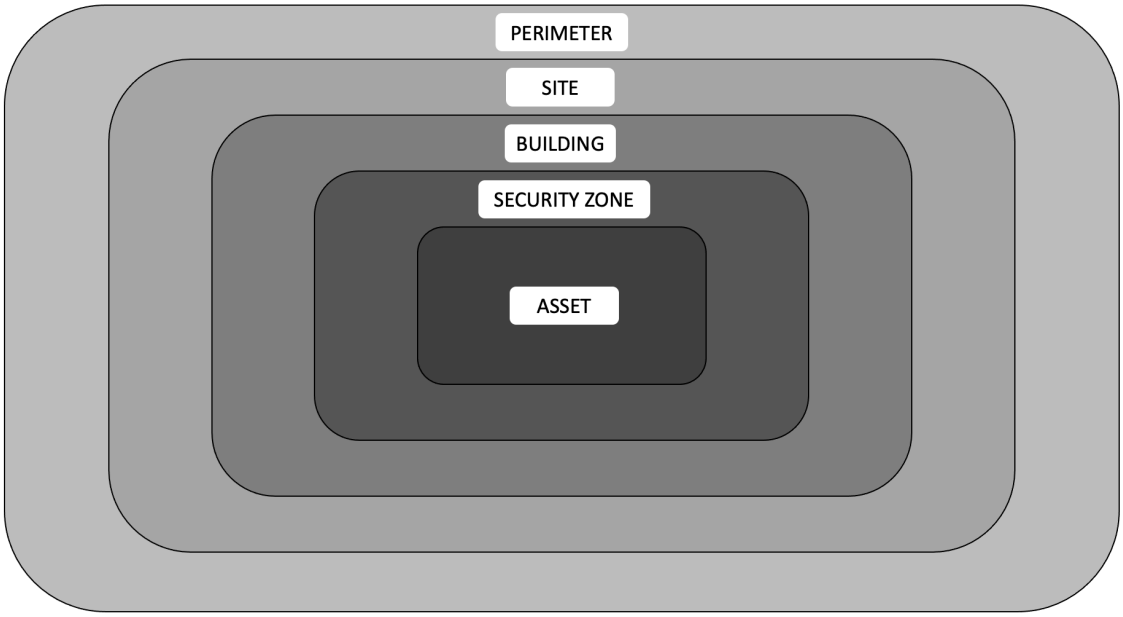


Figure 2 – Layered approach to physical security.

2.18. Each individual layer represents a set of security controls or obstacles that any threat or attacker would need to breach in order to compromise the asset(s), with the layers operating cumulatively towards the total effective protection. Layers of security controls also provide redundancy, reducing the risk of compromise should a single layer fail.

PSR SECURITY ZONES

2.19. The New Zealand Government Protective Security Requirements (PSR) Framework promotes the use of security zoning as a way to identify areas of a site that require different security profiles and control measures. Security zoning is most effective when an organisation is clear about what it is trying to protect and why protecting it is important. The PSR guide to Business Impact Levels (BILs)[2] provides a useful conceptual framework to support this, and a Watercare-specific BIL table is provided in Annex D. Table 3 contains descriptions of each of the PSR Security Zones relevant to Watercare.

[2] https://www.protectivesecurity.govt.nz/governance/business-impact-levels/

ZONE	DESCRIPTION
Zone Four **(Secure Area)**	A security area with the highest level of security controls - strict control of visitors and employees on a 'Need to Access' basis, with additional security mechanisms [i.e., access card and PIN, or access card and key]. It provides access controls to information and physical assets the loss of which would result in a business impact up to catastrophic.
Zone Three **(Restricted Access Area)**	A security area with high security controls, strict control of visitors on a 'Need to Access' basis, and controlled staff access. It provides access controls to information and physical assets, the loss of which would result in a business impact up to extreme. It also provides protection of people.
Zone Two **(Controlled Access Area)**	Areas which have unrestricted access to staff and restricted (escorted) visitor/public access. A low security area which provides access controls to information and physical assets, the loss of which would result in a business impact up to very high. It also provides some protection to people.
Zone One **(Publicly Accessible/Unsecured Area)**	Publicly accessible/unsecured areas including out-of-office working arrangements. It provides limited access controls to information and physical assets, the loss of which would result in a business impact of low to medium. It also provides limited protection to people.

Table 3 – PSR Security Zone descriptions.

2.20. Security zoning enables proportionate mitigation measures to be applied and provides consistency in the application of mitigation measures across areas of similar impact.

2.21. Table 4 contains a list of areas that should be classified into each Security Zone.

ZONE	AREA DESCRIPTION	EXAMPLES
Zone 4 **(Secure Area)**	• Operationally critical areas. • Areas containing sensitive information, communications or security infrastructure. • Areas containing hazardous or sensitive assets. • Areas housing high value assets attractive for theft.	• Operationally critical plant rooms. • Communications/server rooms. • Bulk store of hazards chemicals, direct access to high voltage. • High value asset stores. • Biohazard laboratories.

Zone 3 **(Restricted Access Area)**	• All buildings or areas that contain equipment operationally necessary for the functioning of the site (either directly or indirectly). In practice, this is generally the bulk of the site operational areas.	• Control rooms. • Laboratories. • Water or wastewater treatment areas. • Water or wastewater pumping/transportation areas. • Areas containing electrical or mechanical equipment for site functions
Zone 2 **(Controlled Access Area)**	• Areas that are not publicly accessible but do not contain accessible assets or information requiring heightened security measures.	• Office and general staff areas. • The general site area within a security perimeter fence. • Zone 1 areas of buildings that are secured at the end of the day. • All other areas not publicly accessible or zoned higher.
Zone 1 **(Publicly Accessible Area)**	• Areas accessible to the public.	• Reception areas (during working hours). • Areas of site not contained within a security fence.

Table 4 – Security Zone areas.

PHYSICAL SECURITY LIFECYCLE

2.22. Like most operational areas of a business, physical security is not set-and-forget. The lifecycle of physical security can be broken down into five steps:

- **Assess:** Understand the physical security requirements for the site by undertaking a threat and risk analysis, considering any site-specific risks as appropriate. Ascertain any constraints that may impact on the physical security controls that can be implemented and determine the acceptable risk tolerance level for the site.
- **Design:** Determine what physical security controls are required to provide pragmatic and proportionate mitigation of the identified risks. Design the deployment of those controls to complement each other and provide layered security-in-depth protection to the site.
- **Implement:** Install the controls at the site in accordance with the risk-informed design.
- **Validate:** Ensure the installed controls are operating as intended and that they are providing appropriate mitigations to the identified risks.
- **Review:** Regularly review the threat environment and the associated risks to ensure the installed controls remain effective. Where gaps are identified, undertake the lifecycle process again to enhance the physical security of the site and ensure the controls provide appropriate protection.

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3. SITE SPECIFIC PHYSICAL SECURITY CONTROLS

3.1. Every Watercare site is different, so a one-size fits all approach to physical security controls is not appropriate. Follow the process in this section to determine what specific controls are required at a given site. The Watercare Security Team can provide assistance through any stage of this process as required.

SITE-SPECIFIC RISK ASSESSMENT

3.2. Assess the site-specific risk profile, including the appropriate levels for the baseline risks and any site-specific risks not covered by the baseline risks. Factors to consider include:

- **Site type/function** – The criticality of the site and the size of the population it serves will influence the impact aspect of operations risks. Valuable/attractive assets at the site may influence the likelihood aspect of theft related risks.
- **Site staffing** – Sites that are occupied 24/7 may be at a reduced risk of theft or vandalism but may be at an increased risk of intentional harm to staff. Sites that are normally unstaffed may be at a higher risk of theft or vandalism, but a much reduced risk of intentional harm to staff.
- **Site location and environment** – Visibility from public areas and high traffic areas afford a level of natural surveillance and may reduce the risk of theft and vandalism. While remote sites may be at a reduced risk of opportunistic theft and vandalism, this may be offset by the potential for criminals to operate undetected.
- **Local crime statistics** – Areas with high crime rates will generally provide a heightened level for crime-related risks. The types of crime in the local area can also influence the risk levels, for instance areas with high rates of assaults may present an increased risk of intentional physical harm to site staff, particularly at night.
- **Previous security incidents on-site or at nearby/similar sites** – While history cannot predict the future, understanding previous security incidents at the site, or at nearby or similar sites, can provide valuable insight into the likely risk areas in the future.

3.3. Insight into the factors above can be gained through consultation with stakeholders, staff, Police and the local community, along with the review of security incident records.

3.4. Guidelines to assist in setting appropriate levels are contained in Annex E.

PHYSICAL SECURITY MEASURES REQUIRED.

3.5. Physical security control measures can be applied across two categories:

- **Baseline risks:** Determine the physical security measures required to mitigate the baseline risks. Table 5 provides the starting point, with further details in Section 4 and Annex E.
- **Site-specific risks:** Determine any additional physical security measures required to mitigate any additional site-specific risks identified. This may just involve increasing one or more security measures above the reference level standard identified from the baseline risks.

3.6. A set of baseline controls for pump stations, intended to be used as a starting point for routine pump station build projects, is enclosed as Annex F. Should any deviations from this baseline be required, and for any other site type, the security team must be consulted.

SECURITY MEASURE	Water Treatment Plant	Wastewater Treatment Plant	Office Laboratory	Maintenance Depot	Pump Stations	Headworks
Security Culture and Training	✓	✓	✓	✓	✓	✓
Security Communication	✓	✓	✓	✓	✓	✓
Signage	✓	✓	✓	✓	✓	✓
Perimeter fence & access points	High	High	High Med	High	High Med Low	High Med Low
Site appearance and maintenance	✓	✓	✓	✓	✓	✓
Fresh water and wet well doors and hatches	✓				✓	✓
Unhoused operational assets	✓	✓	?	✓		✓
Reception area	Med	Med	High	Med		
Zone 4	✓	✓	?	?		
Zone 3	✓	✓	✓	✓	✓	✓
Zone 2	✓	✓	✓	✓	✓	✓
Security lighting	High	High	High Med	High	High Med Low	High Med Low
CCTV	High	High	High Med	High	High Med Low	High Med Low
IDS	✓	✓	✓	✓	✓	✓
EACS	✓	✓	✓	✓	✓	✓
SSP	✓	✓	✓	✓	✓	✓
Security Communications Network	✓	✓	✓	✓	✓	✓
Electronic Security Cabinets	✓	✓	✓	✓	✓	✓
Security Cabling	✓	✓	✓	✓	✓	✓

Table 5 – Security controls by site type.

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4. PHYSICAL SECURITY STANDARDS

SPECIFIC LANGUAGE FOR COMPLIANCE

4.1. The standards in this document use specific language to determine the level of compliance required.

4.2. *Must:* Controls listed as ***must*** or ***must not*** indicate compliance is mandatory. Use of these controls may be reviewed if the control is demonstrably not relevant. Non-compliance must be supported by an assessment of the residual risk which must be accepted by the Watercare Security Manager.

4.3. *Should:* Controls listed as ***should*** or ***should not*** indicate compliance is considered recommended best practice. These controls should be implemented unless a valid reason exists to deviate. Non-compliance must be supported by an assessment of the residual risk which must be documented and accepted by the site manager.

4.4. *Consider:* Controls listed as ***consider*** are suggestions that may improve the overall security posture of the site. It is recommended these controls are considered in conjunction with the site risk assessment with implementation at the project manager or site manager's discretion.

4.5. *OR:* ***OR*** denotes an alternative or alternatives to the listed standard.

BEYOND THE PERIMETER

4.6. The area beyond the perimeter where protective security measures can be projected includes both the physical area around a site outside of the security perimeter as well as publicly accessible information such as the Watercare website.

SECURITY CULTURE AND TRAINING

DESCRIPTION	Everyone in the organisation contributes to security. No amount of investment in physical security will be effective without the right security culture, which includes all users being familiar with the security controls in place.
STANDARD: ALL SITES	All staff, contractors and consultants ***must*** undertake training on the purpose and operation of security control measures (e.g. IDS) employed at sites where they have unescorted access.
	All staff, contractors and consultants ***should*** undertake general security awareness training on the purpose and operation of security control measures (e.g. IDS) employed at sites where they have unescorted access.

SECURITY COMMUNICATION

DESCRIPTION	Information which can be obtained without breaching the site or building perimeter can indicate the presence of valuable assets or provide information useful in bypassing or defeating security control measures. Conversely, it can also imply that security is taken seriously and the control measures in place are effective.
STANDARD: ALL SITES	The Watercare website, and the websites of any Watercare contractors or partners, ***must not*** contain information that can be used to degrade, bypass or defeat site security control measures.
	The Watercare website ***should*** contain information that implies the security of the site is taken seriously and there are effective security control measures in place.
	Signage visible from the perimeter or beyond the perimeter, such as site maps or hazard boards, ***should not*** indicate the presence or location of critical, sensitive, high value or attractive items or areas.

SIGNAGE

DESCRIPTION	Security signs inform the area beyond the perimeter fence (or gate or door, as appropriate) is not a public space and only authorised persons should enter. They also inform of the potential consequences should an unauthorised person enter. Security signs potentially deter unwanted activity by increasing the perceived risk of consequences from criminal activity. Signs also inform of the presence of CCTV cameras where these are installed. Appropriate CCTV signage is an important component of complying with the Privacy Act 2020.
STANDARD: ALL SITES	Restricted access signs, including CCTV warning signs as appropriate, ***must*** be displayed at all access points and at other appropriate points around the site perimeter.
	Signs ***must*** state the area beyond the fence/gate/door is a restricted place and indicate the consequences of unauthorised access.[3]
	There ***should*** also be signs clearly marking where visitors should enter the site and how they gain access (e.g. with an intercom at the gate), along with the path to where they need to sign in.

[3] Standard design security signage is available from the Watercare Security Team.

PERIMETER

4.7. The perimeter is the demarcation between public and private space. In most cases, where public access to the site is not desirable, the perimeter also forms the first layer of security to protect the assets contained within the site.

PERIMETER FENCING

DESCRIPTION	Security fencing is designed to deter, delay and detect unauthorised access to a site. At a minimum, perimeter fencing marks the site boundary to deter or discourage unnecessary access, utilising the CPTED principal of territorial reinforcement. In most cases, perimeter fencing is intended to provide a sufficient physical barrier to delay or deny unauthorised site access.
HIGH SECURITY FENCE	A high security fence should deter all but the most determined intruder from attempting to gain access to the site and provides an alert to monitoring staff if an attempt to defeat the fence is made. High security perimeter fence should be used to protect water and wastewater treatment plants, pump stations in remote or high crime areas and other sites that contain high value or hazardous assets.
STANDARD:	The perimeter fence ***must*** be chain link with steel poles, including top and bottom rails ***OR*** concrete ***OR*** concrete block ***OR*** steel palisade.
	It ***must*** be a minimum of 1.8 m high and topped with three strands of barbed wire and flat coils of razor wire ***OR*** a minimum of 2.2 m high topped with steel spikes.
	It ***must*** incorporate VigilFence sensors ***OR*** be backed with zoned monitored pulse electric fence[4].
	Building exterior walls can form some, or all, of a site perimeter, but care ***must*** be taken to avoid potential climbing aids.
	Anti-climb measures (barbed/razor wire) ***should*** be used on single storied buildings where climbing could provide site access.
	A zone of 3 m (ideal) or 1.5 m (where appropriate) on either side of perimeter fence ***must*** be kept clear of vegetation or structures that could be used as climbing aids or surveillance blind spots.
MEDIUM SECURITY FENCE	A medium security fence should mark the site boundary and require a medium level of effort to circumvent. It will deter an undetermined intruder but will provide minimum delay to a motivated intruder. Medium security fence can be used on the wider perimeter of water or wastewater treatment plants where an inner high security fence is in place around operational areas. It can also be used at pump stations or other sites

[4] ***Consider*** de-energising or applying low voltage to the electric fence when the site is occupied.

	where there is a low risk of vandalism and all operational plant or valuable/hazardous assets are within a secure building structure.
STANDARD:	The perimeter fence ***must*** be chain link ***OR*** wooden/steel palisade ***OR*** wire panel trellis ***OR*** equivalent.
	It ***must*** be a minimum of 1.5 m high.
	Anti-climb measures are not required.
LOW SECURITY FENCE	A low security fence provides boundary marking with little deterrent effect. It should be used only on pump stations in low crime areas where the risk of vandalism is very low and all assets are contained within a secure building structure, and where general public pedestrian access to the site is acceptable.
STANDARD:	The perimeter fence ***should*** be a low wooden post fence ***OR*** wire stock fence ***OR*** equivalent.
NO SECURITY FENCE	No security fence should only be used where land ownership or similar considerations dictate a fence cannot be installed. This should only be applied to pump stations in low crime areas where the risk of vandalism is very low and all assets are contained within a secure building structure, and where general public pedestrian access to the site is acceptable.
STANDARD:	No Fence

PERIMETER ACCESS POINTS

DESCRIPTION	Perimeter access points provide authorised vehicle and pedestrian access to the site. It is important that access do not introduce weakness or vulnerabilities in the wider site perimeter security.
STANDARD: ALL SITES	Perimeter access points ***must*** provide at least the same level of security protection as the remaining perimeter security measures that contain them.
	The number of access points in a site perimeter ***should*** be kept to a minimum with consideration to operational and potential evacuation requirements.
	Vehicle and pedestrian access gates ***must*** be constructed to the same or higher standard as the fence that contains them.
	Also refer to the Security Lighting, CCTV and EACS standards.

STANDARD: HIGH SECURITY VEHICLE ACCESS POINTS	High security vehicle access points ***must*** be used where a high security fence is in place.
	Primary vehicle access points for sites that are normally occupied or regularly visited ***must*** be a motorised sliding gate.
	The gate ***must*** be integrated into the EACS and secured with a magnetic lock, with swipe in and out.
	Entry after-hours ***should*** require dual authentication.
	Motorised swing gates ***should*** only be used where installing a sliding gate is not possible.
	Gate opening times ***should*** be set to the minimum required for a vehicle to safety pass through to reduce the risk of tailgating.
	Space ***should*** be available on either side of the gate to allow a vehicle to stop and wait for the gate to close before moving on.
	Primary access points for sites that are not normally occupied or regularly visited, and other access points that are not regularly used, ***should*** be a manual swing or sliding gate secured with a padlock.
STANDARD: HIGH SECURITY PEDESTRIAN ACCESS POINTS	High security pedestrian access points ***must*** be used where a high security fence is in place.
	Access points that are regularly used by pedestrians ***must*** be a manual single leaf swing gate with an automatic closer (preferred) or a motorised single leaf swing gate.
	The gate ***must*** be integrated into the EACS and secured with a magnetic lock, with swipe in and out.
	Entry after-hours ***should*** require dual authentication.
	Motorised gate opening times ***should*** be set to the minimum required for a person to safety pass through to reduce the risk of tailgating.
	Signs warning of tailgating ***should*** be displayed on both entry and exit.
	Access points that are not regularly used ***should*** be a manual swing gate secured with a padlock.
STANDARD: MEDIUM SECURITY VEHICLE ACCESS POINTS	Medium security vehicle access points ***must*** be used where a medium security fence is in place.
	Vehicle access points ***must*** be manual swing or sliding gates secured with a padlock.

STANDARD: MEDIUM SECURITY PEDESTRIAN ACCESS POINTS	Medium security vehicle access points ***must*** be used where a medium security fence is in place.
	Pedestrian access points ***must*** be manual swing gates secured with a padlock.
STANDARD: LOW SECURITY VEHICLE ACCESS POINTS	Low security vehicle access points ***should*** be used where a low security fence is in place.
	Even when no fence is in place, a low security vehicle access point ***should*** be installed to prevent unauthorised vehicle access to the site.
	The vehicle access point ***should*** have a stock gate ***OR*** steel pole barrier arm ***OR*** equivalent secured with a padlock.
STANDARD: LOW SECURITY PEDESTRIAN ACCESS POINTS	Low security pedestrian access points ***should*** be used where a low security fence is in place.
	The pedestrian access point ***should*** be a gap in the fence of sufficient size to allow a pedestrian (or bicycle, pushchair or wheelchair as appropriate) to pass through.

SITE (INCLUDING RESERVOIRS)

4.8. The site includes all areas within the perimeter or boundary, including carparks, roads, and open storage areas, along with the grounds and vegetation.

SITE APPEARANCE AND MAINTENANCE

DESCRIPTION	A site that appears tidy and well maintained provides a projection of control and order as well as encouraging a sense of community pride and ownership, which acts as a deterrent to criminal activity.
STANDARD: ALL SITES	All sites ***should*** be configured to reduce the opportunities for vandalism (for instance graffiti) by avoiding solid fencing where possible (concrete, wooden pale) and using building styles that deter graffiti.
	The site ***should*** be regularly maintained to give an impression of control, order and a sense of care and ownership.

FRESH WATER AND WET WELL DOORS AND HATCHES

DESCRIPTION	Doors and inspection hatches, or other means that allow direct access to drinking water, potentially provide the ability to contaminate the water supply. In the worst case, the introduction of contamination to the drinking water supply may result in adverse health effects on customers. Even if there is no associated health risk, contamination risks reputational damage to Watercare and a loss of confidence in the water supply. Likewise, access to raw sewage introduces biohazard risks.
STANDARD: ALL SITES	All access points that provide access to drinking water (e.g. reservoir inspection hatches) or raw sewage (e.g. doors to wet wells) ***must*** be fitted with sensors (e.g. reed switch) that provide an alert to the Nerve Centre when they are opened.
	All access points ***must*** be physically secured. The minimum is a non-standard fitting (such as a Crox bolt).
	Access points that are publicly accessible ***must*** be secured with a mechanical lock, with preference given to keyed locks in doors or a steel bar laid over the centre of the hatch cover secured in place with a padlock.

UNHOUSED OPERATIONAL ASSETS

DESCRIPTION	Assets within the site that are operationally important or critical, that would otherwise be stored in or classified as Zone 3 or 4 (see PSR Security Zones below), but are not contained within a building or other structure. This may include unhoused water sources, valves, generators or control equipment.
STANDARD: ALL SITES	Important or critical assets ***should*** be contained within an appropriate building or structure whenever possible.
	Unhoused operational assets ***must*** have additional security control measures in place commensurate with their operational criticality.
	An additional layer of high security perimeter fence ***should*** be employed to prevent access to unhoused operational assets.

BUILDINGS

4.9. Buildings can be loosely categorised into two types – operational and storage/other. Operational buildings include those that contain operational plant, office and other staff working areas, and areas that contain maintenance or other functions critical to the operation of the site. Storage/other areas include sheds, storage and other areas not critical to the operation of the site.

RECEPTION AREAS

DESCRIPTION	Reception areas are where there is regular interaction with members of the public. They present a heightened risk of harm to staff from aggressive or violent issues motivated or acutely disaffected persons. As such, additional security controls are required to ensure the safety of staff, contractors and other members of the public.
STANDARD: ALL SITES	The staff side of the reception desk ***must not*** be freely accessible from the public space.
	Any doors between the public and staff sides of the desk ***must*** be access controlled.
	All areas of reception and the public approach ***must*** be visible by reception staff, using CCTV and monitors if required.
HIGH RISK SITES	High risk sites are those that regularly deal with members of the public or where members of the public have uncontrolled access to the reception area
STANDARD:	Reception desks ***must*** be designed to make it difficult to climb over while maintaining a welcoming posture. Measures to achieve this ***should*** include the height of the desk, width of the counter and physical barriers on and/or above the counter.
	Loose items ***must not*** be available on the desk that could be used as a projectile or weapon.
	Items such as monitors ***must*** be fixed to the desk or another structure.
	Keyboards, mice and other peripheries ***should*** be out of reach from the public side.
	Staff ***must*** have a safe retreat route to a secure area that can be utilised in the event of an incident in the reception area.
	A duress alarm system ***should*** be implemented which alerts other site staff and the Nerve Centre when triggered, with a fixed (preferred) or mobile activation switch under the reception desk (preferred) or otherwise easily accessible by reception staff.
	A CCTV camera or cameras ***must*** be in place that is able to identify individuals on the public side of the reception desk.
MEDIUM AND LOW RISK SITES	Medium and low risk sites are those that do not regularly deal with members of the public or where members of the public do not have uncontrolled access to the reception area, such as when site staff must

	provide access through a gate or door before the reception area can be accessed.
STANDARD:	Reception desks ***should*** be designed to make it difficult to climb over while maintaining a welcoming posture. Measures to achieve this ***should*** include the height of the desk, width of the counter and physical barriers on and/or above the counter.
	Loose items ***should not*** be available on the desk that could be used as a projectile or weapon.
	Items such as monitors ***should*** be fixed to the desk or other structure.
	Keyboards, mice and other peripheries ***should*** be out of reach from the public side.
	Staff ***should*** have a safe retreat route to a secure area that can be utilised in the event of an incident in the reception area.
	Consider implementing a duress alarm system which alerts other site staff and the Nerve Centre when triggered, with a fixed (preferred) or mobile activation switch under the reception desk (preferred) or otherwise easily accessible by reception staff.
	Consider installing a CCTV camera or cameras in place that is able to identify individuals on the public side of the reception desk.

PSR SECURITY ZONES

	ZONE 4	ZONE 3	ZONE 2
DESCRIPTION	A security area with the highest level of security controls - strict control of visitors and employees on a 'need-to-access' basis, with additional security mechanisms (e.g. access card and PIN, or access card and key). It provides access controls to information and physical assets the loss of which would result in a business impact up to catastrophic.	Areas which are restricted to staff with a valid need-to-access. Visitors must be escorted or closely controlled. A high security area which provides access controls to information and physical assets, the loss of which would result in a business impact up to extreme. It also provides protection to people.	Areas which have unrestricted access to staff and restricted (escorted) visitor/public access. A low security area which provides access controls to information and physical assets, the loss of which would result in a business impact up to very high. It also provides some protection to people.

	ZONE 4	ZONE 3	ZONE 2
AREAS	Communications/ server rooms. Operationally critical and/or hazardous/sensitive areas (e.g. bulk store of hazards chemicals, direct access to high voltage). Areas housing high value assets attractive for theft (e.g. high value asset stores).	All buildings or areas that contain equipment operationally necessary for the functioning of the site (either directly or indirectly) should be classified as Zone 3 areas (e.g. control rooms, laboratories, water or wastewater treatment areas, water or wastewater pumping/ transportation areas, areas containing electrical or mechanical equipment for site functions). Generally all areas other than Zone 4 areas, staff office and amenity areas or public areas.	All other areas not publicly accessible or zoned higher normally encompassing office and general staff areas. In general, the area within a secure site perimeter fence will be considered Zone 2 and publicly accessible (Zone 1) areas of buildings revert to Zone 2 when the building is secured at the end of the day.
BOUNDARY CONSTRUCTION	Zone 4 areas ***must*** be constructed to resist intrusion.	Zone 3 areas ***should*** be constructed to resist intrusion.	
	Internal walls and ceilings ***must*** be “slab-to-slab”		
	Walls ***should*** be lined with 18 mm plywood in addition to plasterboard, or with equivalent intrusion resistant materials.	Walls ***should*** be constructed to a high quality commercial standard and maintained to that level.	Walls ***should*** be constructed to a normal commercial standard and maintained to that level.
	Windows (both internal and external) ***should*** be avoided where possible.	External windows ***should*** be avoided where possible.	
	External windows ***must*** have steel security bars or grills installed.	External windows ***should*** have steel security bars or grills installed.	

	ZONE 4	ZONE 3	ZONE 2
	External windows ***must*** have privacy film installed.	External windows ***should*** have privacy film installed.	External windows where the public could oversee work environment ***should*** have privacy film installed.
	Any opening window ***must*** be permanently fixed closed.	Any opening window ***should*** be permanently fixed closed or fitted with a window stay and keyed window lock.	Externally opening windows ***must*** have window stays and ***should*** have keyed window locks.
	Windows at high risk of vandalism, such as those immediately accessible to public spaces, ***should*** be laminated glass or have anti-shatter film applied.		
	Internal windows ***should*** have steel security bars or grills installed along with privacy film.		
DOORS	Access point doors ***must*** be resistant to intrusion and be fitted with heavy duty two or three stage automatic door closers.		Access point doors ***should*** be normal commercial standard fitted with heavy duty two or three stage automatic door closers.
	Access doors from internal lower security zones areas ***must*** be minimum 38 mm solid core wooden doors (or equivalent) hung on three or four evenly spaced fixed/captured pin hinges in steel (preferred) or solid wood frames.		
	External doors ***must*** be steel lined minimum 38 mm solid core wooden doors (or equivalent) hung on three or four evenly spaced fixed/captured pin hinges in a steel (preferred) or solid wood frame,	External doors ***must*** be minimum 38 mm solid core wooden doors (or equivalent) hung on three or four evenly spaced fixed/captured pin hinges in steel (preferred) or solid wood frames.	

	ZONE 4	ZONE 3	ZONE 2
	Doors ***must*** be outwards opening unless they are required to be inwards opening for fire escape/evacuation purposes.		Doors ***should*** be outwards opening unless they are required to be inwards opening for fire escape/evacuation purposes.
	External outward opening doors ***must*** be fitted with three evenly spaced hinge bolts.	External outward opening doors ***should*** be fitted with three evenly spaced hinge bolts.	
	Fire escape/evacuation paths ***must*** avoid passing through Zone 4 areas whenever possible.	Fire escape/evacuation paths ***should*** avoid passing through Zone 3 areas whenever possible.	
LOCKS AND ACCESS CONTROL	Zone 4 perimeter access points ***must*** be integrated into the site EACS using electronic mortice or magnetic locks.	Perimeter access points ***should*** be integrated into the site EACS using electronic mortice or magnetic locks.	
	Dual authentication (swipe and PIN) ***must*** be required for entry with swipe to exit.	Dual authentication (swipe and PIN) ***should*** be required for entry with swipe to exit.	Dual authentication (swipe and PIN) ***should*** be required for entry outside normal operating hours.
	Access ***must*** only be provided to staff and contractors on a strict need-to-access basis.		Access ***should*** only be provided to staff and contractors on a need-to-access basis.
	Door-open-too-long alarms ***must*** be enabled with local audible alarms, along with alerts at the Nerve Centre after-hours.	Door-open-too-long alarms ***should*** be enabled with local audible alarms, along with alerts at the Nerve Centre after-hours.	***Consider*** enabling door-open-too-long alarms with local audible alarms, along with alerts at the Nerve Centre after-hours.

	ZONE 4	ZONE 3	ZONE 2
	Forced door and emergency door release ***must*** be enabled with local audible alarms and trigger alerts at the Nerve Centre at all times.	Forced door and emergency door release ***should*** be enabled with local audible alarms and trigger alerts at the Nerve Centre at all times.	
	Zone 4 areas ***must*** be secured with mechanical deadbolt locks after-hours using a restricted profile key within the Watercare key management system.	External Zone 3 access points ***must*** be secured with mechanical deadbolt or padlocks after-hours using a restricted profile key within the Watercare key management system.	External Zone 2 access points ***should*** be secured with mechanical deadbolt or padlocks after-hours using a restricted profile key within the Watercare key management system.
	The primary leaf of two-leaf doors ***must*** meet the requirements above with the secondary leaf being mechanically locked any time it is not in use using flush and/or door bolts. Secondary leaf mechanical locks ***must not*** be accessible without access first being granted through the primary leaf.		
IDS	Zone 4 areas ***must*** be protected by an Intruder Detection System (IDS).	Zone 2 and 3 areas ***should*** be protected by an Intruder Detection System (IDS).	
	Full area volumetric movement sensors ***should*** be installed.		***Consider*** installing full area volumetric movement sensors.
	Zone 4 areas ***must*** be armed anytime they are not occupied.	Zone 3 areas ***must*** be armed outside normal hours of operation.	Zone 2 areas ***should*** be armed outside normal hours of operation.
	The IDS panel for the zone ***must*** be within a Zone 4 area and covered by IDS sensors.	The IDS panel for the zone ***must*** be within a Zone 3 or 4 area and covered by IDS sensors.	The IDS panel for the zone ***must*** be within a Zone 2, 3 or 4 area and covered by IDS sensors.
	Zone 4 areas ***should*** be on a dedicated IDS zone.	A timed auto-arm ***should*** be used as a backup in the event staff forget to manually arm the	***Consider*** using a timed auto-arm process.

	ZONE 4	ZONE 3	ZONE 2
		area but ***must not*** be used as the default arming process.	
CCTV	Access points to Zone 4 areas ***should*** have CCTV coverage.	***Consider*** CCTV coverage of access points to Zone 3 areas.	***Consider*** CCTV coverage of external access points to Zone 2 areas.

GENERAL

SECURITY LIGHTING

DESCRIPTION	Security lighting provides an additional layer of protection for people and assets during times of darkness and should provide sufficient illumination over an area to ensure anyone moving in or around it can be seen. Effective security lighting can deter as well as detect unwanted activity, along with reducing the risk of harm by enabling visibility and situational awareness, particularly around access points. Note that the standard below is the minimum required for security purposes. Additional lighting may be required for Health and Safety purposes.
STANDARD: ALL SITES	Security lighting ***must*** compliment CCTV cameras where applicable.
	Where possible, security lighting ***should*** be located within the site perimeter and at a sufficient height to reduce the risk of vandalism.
	Motion activated LED lights ***should*** be used where possible to reduce energy consumption and light pollution to neighbouring properties. Where motion activation is not practical or appropriate, timed switches ***should*** be used, or manually switched if this is the only practical option
STANDARD: HIGH RISK SITES	Security lighting ***must*** fully illuminate all perimeter access points and approaches, and all areas of the perimeter easily accessible to the public.
	Security lighting ***should*** illuminate all areas of perimeter.
	Areas containing critical plant, high value items or items attractive for theft that are accessible (not within a building) ***must*** be illuminated by security lighting.
	General security lighting ***should*** illuminate the full site.

	Operational building access points ***must*** be illuminated by security lighting.
	The full perimeter of operational buildings ***should*** be illuminated.
	Access points of other buildings that might be used during the hours of darkness ***must*** be illuminated.
STANDARD: MEDIUM RISK SITES	Security lighting ***must*** fully illuminate the primary perimeter access points and approaches which may be used after hours.
	Security lights ***should*** illuminate areas of the perimeter easily accessible to the public.
	Security lighting ***should*** provide general illumination to the full site.
	Operational building access points that might be used during the hours of darkness ***must*** be illuminated by security lighting.
	Consider illuminating the full perimeter of operational buildings.
STANDARD: LOW RISK SITES	Security lighting ***should*** fully illuminate primary perimeter access points and approaches which may be used after hours, however, may not be required if general site and surrounding lighting provides sufficient illumination.
	Consider security lighting that provides general illumination the full site.
	Any building access point that may be used during the hours of darkness ***should*** be illuminated.

CCTV

DESCRIPTION	CCTV cameras and signage deters criminal activity by increasing the perceived risk of being seen. Recorded CCTV footage aids in post-incidence response (e.g. investigation). CCTV only provides detect and immediate response capability if it is viewed in real time, either by an operator monitoring a camera feed, or being prompted to view footage through smart analytical software or other alerts (e.g. fence sensor or IDS alarm). CCTV cameras can be categorised into the following capability groups: **Observe.** This enables movements to be observed, the number of persons involved and other activities. **Detect.** This provides sufficient detail to detect activity within the camera's field of view, establish the activities or circumstances of an event such as the movement and activities of persons or vehicles.

	Recognise. This provides sufficient detail to identify a known person or establish the colour, make and model of a vehicle. **Identify.** The picture quality and detail is sufficient to enable the identity of an individual to be confirmed, or allow a vehicle license place to be read without enhancement.
STANDARD: ALL SITES	CCTV systems ***must*** always be installed and used in accordance with the Watercare CCTV policy and the Privacy Act 2020.
	Appropriate CCTV signage ***must*** be displayed at any site where CCTV is in operation.
	Areas identified as containing valuable items or items attractive for theft by authorised users (staff and contractors) ***should*** have appropriate CCTV coverage.
	Access points to Zone 4 areas ***should*** be covered (*identify*).
STANDARD: HIGH RISK SITES	High risk sites ***must*** have CCTV camera coverage of perimeter access points that are regularly used (*identify*).
	All access points ***should*** be covered (*recognise*).
	Perimeter areas presenting a high risk of unauthorised access ***should*** be covered, such as areas that are easily accessible but not easily seen from general public spaces (*detect*).
	Where VigilFence is installed, Pan/Tilt/Zoom cameras ***should*** be used to provide coverage of perimeter fence zones that can be used in response to an alarm (*identify*).
	Areas containing critical plant, high value items or items attractive for theft that are accessible (not within a building) ***must*** be covered by CCTV cameras (*recognise*).
	Operational building access points ***must*** be covered (*identify*).
	Operational building points vulnerable to unauthorised access (e.g. accessible windows) ***should*** be covered (*recognise*).
	Consider coverage of the full perimeter of operational buildings (*detect*).
	Other building access points ***should*** be covered (*recognise*).
STANDARD: MEDIUM RISK SITES	Medium risk sites ***should*** have CCTV coverage of access points that are regularly used (*identify*).
	Medium risk sites ***should*** have CCTV coverage of perimeter areas presenting a high risk of unauthorised access, such as areas that are easily accessible but not easily seen from general public spaces (*detect*).

	Consider coverage of the wider site to provide general situational awareness (*observe*).
	Operational building access points and points vulnerable to unauthorised access (e.g. accessible windows) ***should*** be covered (*recognise*).
STANDARD: LOW RISK SITES	Low risk sites are unlikely to require CCTV.

IDS

DESCRIPTION	An Intruder Detection System (IDS) detects unauthorised access to a building or other area. When triggered, a local alarm sounds along with an alert being raised at the monitoring centre. This provides an element of deterrence and enables an appropriate response to be actioned.
STANDARD: ALL SITES	The IDS ***must*** monitor all perimeter access points to the protected area through both volumetric movement sensors (PIR) and break surface door sensors (reed switch).
	All IDS panels, keypads and sensors (PIRs, reed switches) ***must*** have tamper switches installed.
	Tamper switches ***must*** be configured to the system zone and require an administrator access to disable or bypass.
	Tamper switches ***must*** provide an alert at the monitoring centre when triggered, even when the IDS zone is unarmed.
	The IDS control panel ***should*** be located in the most secure area of the site.
	The keypad to arm and disarm an IDS zone ***must*** be covered by the zone IDS sensors.
	The IDS ***must*** require two-factor authentication (swipe and PIN) to disarm.
	The IDS ***should*** require two-factor authentication (swipe and PIN) to arm.
	The IDS ***must*** be monitored 24/7.
	The IDS ***should*** be monitored by the Nerve Centre.
	Also refer to the PSR Security Zone standards.

EACS

DESCRIPTION	An Electronic Access Control System (EACS) enables access to integrated doors and gates to be electronically controlled and centrally administered. Access for any user can be granted or removed electronically without the requirement to change keys or combinations. It delays and detects unauthorised access attempts. Those with access, along with all access attempts (successful and unsuccessful) can be centrally audited.
STANDARD: ALL SITES	All EACS card readers, keypads and locking devices (magnetic and mortice locks) ***must*** have tamper switches installed.
	Tamper switches ***should*** be monitored by the Nerve Centre.
	EACS door locks ***must*** fail safe on the internal/secure side of the door.
	EACS door locks ***should*** fail secure on the external/insecure side of the door.
	EACS gate locks ***must*** have a manual override on the internal/secure side of the gate to enable emergency exit in the event of power loss.
	EACS gate lock manual overrides ***must not*** be accessible from the external/insecure side of the gate.
	Also refer to the PSR Security Zone standards.

SSP

DESCRIPTION	A Site Security Plan (SSP) documents site-specific security information, for example information on the IDS and CCTV systems, key management and auditing processes, visitor and contractor management protocols, emergency procedures and review processes.
STANDARD: ALL SITES	All sites ***must*** have a SSP.
	SSPs ***should*** be informed by, and complimentary to, the wider suite of Watercare security documentation.
	A site-specific threat assessment and security risk register ***should*** be included in the SSP.
	The SSP ***must*** include processes to respond to a heightened threat environment, including changes to physical security measures that may need to be implemented in the event of a pending or in-progress security incident. An example of a basic Alert Level system is included in Annex F.

	The SSP ***should*** include lockdown processes and procedures, including clear guidance on when a lockdown should be activated and who has the authority to authorise it.
	The response to heightened threat environments and lockdowns ***should*** be regularly reviewed and exercised to ensure they remain fit for purpose and staff are aware of the processes.
	SSPs ***must*** be reviewed at least annually to ensure they remain fit for purpose.

SECURITY COMMUNICATIONS NETWORK

DESCRIPTION	Remote monitoring of the electronic security systems, such as IDS, EACS and CCTV, require a network over which critical information can be communicated. The preferred method to achieve this is using the Watercare corporate network infrastructure as a transport medium.
STANDARD: ALL SITES	All sites ***must*** have security communications network connectivity.
	Sites ***should*** have a connection to the Watercare corporate network infrastructure as the preferred transport medium for security communications.
	Remote viewing of CCTV footage requires significantly more network bandwidth than basic security system monitoring alone. Sites with CCTV ***must*** consider bandwidth when provisioning network connectivity.
	Watercare Digital ***must*** be consulted when planning and implementing security communications into the corporate network to ensure current network standards are met.

ELECTRONIC SECURITY CABINETS

DESCRIPTION	Electronic security systems, such as IDS, EACS and CCTV, require control infrastructure. This normally contained within a wall-mounted cabinet inside a building on site. Larger sites with multiple buildings may require several security cabinets. Security cabinets generally require a dedicated single 240V/10A mains power outlet.
STANDARD: ALL SITES	All sites ***must*** have provision for a wall-mounted security cabinet with an associated mains power outlet.
	The security cabinet ***must*** be in an area protected by an IDS.
	The security cabinet ***should*** be located in the most secure area of the site, for instance a server or communications room.

	The security cabinet power ***should*** be connected to the site Uninterrupted Power Supply (UPS) and/or backup power, if available.
	The Watercare preferred security integrator ***must*** be consulted on security cabinet and power requirements during the design phase of significant site development or new builds.

SECURITY CABLING

DESCRIPTION	Cabling for electronic security systems, such as IDS, EACS and CCTV, needs to be installed in such a way as to reduce the risk of tampering, degradation and failure, or electrical interference.
STANDARD: ALL SITES	All security cables ***must*** be supported (e.g. catenary wire, cable trays or conduit).
	Security cables ***must*** be separated from mains power cable by at least 300 mm.
	The corrosive nature of the environment in operational areas ***must*** be recognised with the installation of security cables (e.g. through the use of stainless steel fittings).

ANNEX A – USEFUL REFERENCES

1. A list of relevant and useful legislation, policies and standards are listed below.

NATIONAL LEGISLATION AND POLICY

- Health and Safety at Work Act (2015)
- Privacy Act (2020)
- Building Act (2004)
- The New Zealand Building Code
- Protective Security Requirements (PSR) framework
- New Zealand Information Security Manual (NZISM)

STANDARDS, HANDBOOKS AND GUIDES

- ISO 31000:2018 Risk management – Guidelines
- HB167:2006 Security Risk Management Handbook
- AS 1725.1-2010 Chain link fabric fencing, Part 1: Security fences and gates — General requirements
- AS/NZS 2201.1:2007 Intruder alarm systems – Client's premises – Design, installation, commissioning and maintenance
- AS 4145.2:2008 Locksets and hardware for doors and windows – Mechanical locksets for doors and windows in buildings
- AS/NZS IEC 60839-11-1:2019 Electronic access control systems
- IES G-1-16 Guide for Security Lighting for People, Property and Critical Infrastructure

ANNEX B – CURRENT THREAT ASSESSMENT

1. The current assessed threats faced by Watercare are shown in Table 1, with the threat level definitions in shown in Table 7. These threats and levels are based on a threat assessment completed in 2020.[5] Note that these are high-level, organisational-wide threats and site-specific threat levels may vary.

THREATS		THREAT LEVEL
Terrorism	International extremists	**MEDIUM**
	Domestic extremists	**MEDIUM**
Disruptive activity	Protestors, activists or issue motivated groups	**MEDIUM**
	Fixated or acutely disaffected persons	**MEDIUM**
Sabotage / unauthorised disclosure of information	Insiders	**MEDIUM**
	Hostile intelligence activity	**VERY LOW**
	Media / investigative journalism	**LOW**
General crime	Violence, theft and vandalism	**HIGH**
	Organised criminal activity	**LOW**
Economic crime	Cybercrime	**HIGH**

Table 6 – Watercare threat levels

THREAT LEVEL	DEFINITION
Extreme	A security incident impacting Watercare, its assets, information or personnel, is expected.
High	A security incident impacting Watercare, its assets, information or personnel, is assessed as highly likely.
Medium	A security incident impacting Watercare, its assets, information or personnel, is assessed as feasible and could well occur.
Low	A security incident impacting Watercare, its assets, information or personnel, is assessed as a realistic possibility.
Very Low	A security incident impacting Watercare, its assets, information or personnel, is assessed as unlikely.

Table 7 – Threat level definitions.

[5] Watercare_001_PSTA_2020.

ANNEX C – BASELINE RISKS

1. Descriptions of terms used in the table of baseline risks (Table 2) are listed below.

RISK TYPE

Theft	The unlawful removal of property assets.
Vandalism	Damage to property assets, including buildings, plant, machinery and tools.
Contamination of water	The introduction of contaminants to the fresh drinking water supply after treatment, resulting in contaminated water being delivered to customers. Contamination levels may range from undetectable with no adverse health effects (but may cause reputational damage) through to contaminated water causing customers to get severely ill.
Release of wastewater	The unintended or unplanned release of untreated or partially treated wastewater into the local environment, which could include suburban areas or waterways.
Intentional harm	Violent or aggression behaviour towards a person causing bodily harm.

BUSINESS IMPACT

Financial loss	Watercare incurring unexpected additional costs, most likely through a requirement to repair or replace stolen, damaged or destroyed property.
Reputational damage	The reputation of Watercare being reduced in the eyes of stakeholders and/or customers, including a loss in confidence in Watercare's ability to providing lifeline utilities. See also the Watercare Risk Management Framework.
Disruption to operations	A reduction in the ability of Watercare to provide water or wastewater services. See also the Watercare Risk Management Framework.
Loss of information	Theft or destruction of sensitive Watercare information, including commercially, operationally or personally sensitive information, either belonging to Watercare or belonging to a third party and provided to Watercare with an expectation of privacy.
Harm to staff or other site occupants	Bodily harm to Watercare staff, contractors, customers or members of the public on Watercare property.

THREAT ACTOR

Petty criminal	A person using low sophistication, or no, tools in minimally planned or opportunistic criminal activity. Examples may include bored youths graffitiing a building or intoxicated persons stealing unsecured tools.
Motivated criminal	A person using moderately sophisticated tools and techniques, able to defeat basic security measures in potentially planned criminal activity. Examples may include a criminal gang targeting a Watercare site to steal valuable items such as computer equipment, with the ability to defeat perimeter fencing, force low-security doors and disguise their identity from CCTV cameras.
Insider	A person who has legitimate access to a Watercare site, including staff, contractors and authorised visitors. Insiders include those who use their legitimate access to target areas they are not authorised to access. Examples may include a maintenance contractor stealing items from a store they regularly access for their duties, or a front office staff member tailgating another staff member through an access controlled door into an operational area they are not authorised to enter.
Activist	Someone who campaigns to bring about political or social change. In the context of this standard, an activist is someone who's campaign brings them into disagreement with Watercare and they take physical action in support of their cause. Examples may include protest activity at a Watercare site that blocks access points, denying Watercare staff, contractors and visitors access to the site.
Terrorist	Someone who is willing to threaten or use violence in pursuit of political or ideological aims. Examples may include someone introducing contamination into the drinking water supply with the aim of causing mass casualties or widespread panic, or someone who uses an explosive device to seriously disrupt Watercare operations with the aim of denying people lifeline utilities.
ADP	Fixated or Acutely Disaffected Persons are individuals who have an obsessional pre-occupation with a person, place or cause which is pursued to an irrational degree. Examples may include customers who become aggressive or violent as they have an issue with the cost of Watercare services, or a neighbour annoyed with the smell from a malfunctioning wastewater pump station who takes that frustration out on Watercare maintenance staff.

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ANNEX D – WATERCARE-SPECIFIC BUSINESS IMPACT LEVELS

1. Table 8 contains a description of the PSR Business Impact Levels (BIL), tailored for specific relevance to Watercare.

LOW	MEDIUM	HIGH	VERY HIGH	EXTREME	CATASTROPHIC
Could be expected to impact Watercare operations by:	Could be expected to impede Watercare operations by:	Could be expected to affect Watercare operations by:	Could be expected to harm Watercare operations by:	Could be expected to have a major impact on Watercare operations by:	Could be expected to have a severe impact on Watercare operations by:
• Causing degradation in organisational capability to an extent and duration that, while Watercare can perform its primary functions, the effectiveness of the functions is noticeably, though temporarily, reduced. • Potentially adversely affecting a person's privacy. • Resulting in minor damages to Watercare assets. • Resulting in minor financial loss to Watercare that can be accommodated within existing budgets.	• Resulting in damage to Watercare assets. • Resulting in moderate (up to $1m) financial loss to Watercare. • Resulting in minor, localised, adverse media coverage. • Resulting in an internal investigation or inquiry. • Resulting in some credibility issues within internal and inter-agency stakeholders. • Resulting in minor harm to staff and/or members of the public.	• Causing a moderate degradation in, or loss of, organisational capability to an extent that the Watercare cannot perform one or more of its primary functions for an extended period. • Resulting in major damage to Watercare assets. • Resulting in major financial loss (up to $5 million). • Resulting in adverse national media coverage. • Significantly impacting on stakeholder relationships. • Potentially harming some lives, though lives are unlikely to be lost.	• Causing a severe degradation in, or loss of, organisational capability to an extent that Watercare cannot perform some primary functions on an ongoing basis. • Resulting in significant disruption to Watercare lifeline services. • Resulting in significant financial loss (up to $10 million). • Sustained adverse national and international media coverage. • Resulting in moderate environmental consequences.	• Causing a loss of organisational capability to an extent and duration that Watercare cannot perform any of its functions. • Resulting in severe financial loss (over $10 million). • Resulting in serious harm to staff or the public, including loss of life. • Resulting in major environmental costs.	• Leading directly to widespread loss of life. • Causing severe long term damage to significant Watercare infrastructure. • Leading to a long term and severe effect on the national economy. • Having extreme and irreversible environmental costs.

Table 8 - Watercare-specific BILs.

ANNEX E – GUIDANCE ON SETTING RISK LEVELS

1. The process to evaluate risk levels is explained in the Watercare Risk Management Framework, but is summarised below in the context of physical security risks. It should be noted that the high, medium and low ratings used in this standard are designed to inform the level of physical security control measures required for a site and are not directly comparable to the rating contained in the Watercare Framework.

2. Risk consists of likelihood and consequence, with the risk rating the combination of these factors. Likelihood ratings, with examples, are shown in Table 9. Consequence ratings, with examples, are shown in Table 10. The resultant Physical Security Risk Rating is shown in Table 11, with red representing high risk, orange representing medium risk and green representing low risk. To determine what security controls are applicable, risk ratings should be determined in the absence of controls. If desired, the process can then be repeated after the application of controls to determine a residual risk rating.

LIKELIHOOD RATING	DESCRIPTION	EXAMPLE
Very Low (1)	May occur on very rare occasions, but is not expected to occur.	Contamination of the fresh water supply causing a degradation in water quality caused by an issues motivated person or organisation.
Low (2)	Occurs, or is expected to occur, rarely.	Intentional harm to a staff member causing non-minor injuries. May occur once every couple of years.
Medium (3)	Occurs, or is expected to occurs, occasionally.	Theft of expensive machinery or valuable materials, may occur once or twice a year.
High (4)	Occurs, or is expected to occur, frequently.	Vandalism to a site in a high crime area, may occur monthly.
Very High (5)	Occurs, or is expected to occur, very frequently.	Graffiti on fences that reappears within days of being cleaned.

Table 9 – Likelihood ratings.

CONSEQUENCE RATING	DESCRIPTION	EXAMPLES[6]
Very Low (1)	Minimal impact	Unplanned loss of supply/service for less than 10 customers for more than 24 hours. Unconfirmed non-notifiable illness without a clear link to the water supply or wastewater discharges. Single community complaint to Watercare.

[6] Consequence rating examples taken directly from the Watercare Risk Management Framework, Sept 2018.

Low (2)	Minor impact.	Unplanned loss of supply/service for 10 to 100 customers for more than 24 hours Single person with non-notifiable illness with confirmed links to the water supply or wastewater discharges Complaints to regulators by interest groups.
Medium (3)	Moderate impact.	Unplanned loss of supply/service for 100 to 1,000 customers for more than 24 hours Multiple people suffer non-notifiable illness with a confirmed link to the water supply or wastewater discharges. One adverse local media/social media article highlighting community concern coupled with complaints to regulators by interest groups.
High (4)	Major impact.	Unplanned loss of supply/service for 500 to 1,000 customers for more than 24 hours Single person suffers notifiable illness with a confirmed link to the water supply or wastewater discharges. Continuing adverse local/social media coverage for less than a week expressing community concern coupled with pressure by political or other interest groups.
Very High (5)	Significant impact.	Unplanned loss of supply/service for 1,000 to 5,000 customers for more than 24 hours Multiple people suffer notifiable / serious disease with a confirmed link to the water supply or wastewater discharges. Continuing adverse local/social media coverage over weeks expressing significant community concern coupled with continuing pressure by political or other interest groups.

Table 10 – Consequence ratings.

LIKELIHOOD	***VH***	5	10	15	20	25
	H	4	8	12	16	20
	M	3	6	9	12	15
	L	2	4	6	8	10
	VL	1	2	3	4	5
		VL	***L***	***M***	***H***	***VH***
		CONSEQUENCE				
Risk rating:		**High**		**Medium**	**Low**	

Table 11 – Physical Security Risk Rating.

ANNEX F – EXAMPLE ALERT LEVEL SYSTEM

1. An alert level system enables the security posture of a site to adapt to a changing threat environment. It should be underpinned by standard operating procedures that explain what actions are to be taken or measures put in place for each alert level, the procedure for raising or lowering the alert level, the authority to raise or lower an alert level and a process for ensuring all staff know what the alert level is and what they have to do in response.
2. Table 12 contains an example of a very basic alert level system for a site, based on the threat levels in Annex B.

ALERT LEVEL	DEFINITION	EXAMPLE EVENTS	EXAMPLE ACTIONS/MEASURES
Extreme	A security incident impacting Watercare, its assets, information or personnel, is expected or is occurring. This alert level imposes significant business impact and cannot be maintained for any length of time.	Protest activity that is expected to become violent is planned or is occurring at a Watercare site. There is an active shooter alert or incident at a Watercare site. There is a terrorism threat directed to a specific Watercare site.	No visitors or on site. Only operationally essential staff on site. Full time security presence on site. No deliveries accepted. All access points mechanically locked with security presence, positive ID required for entry. Police regularly updated, with a presence on site as required.
High	A security incident impacting Watercare, its assets, information or personnel, is assessed as highly likely. This alert level imposes moderate business impact and can be maintained for a number of hours.	Protest activity that has the potential to become violent is planned at a Watercare site. An armed or violent criminal offender is being actively pursued by Police near a Watercare site.	No visitors or non-essential contractors on site. Staff work from home where possible. Increased frequency of security patrols, consider 24/7 security presence on site.

		A suspicious package or mail item is delivered. There is assessed to be a terrorism threat specific to NZ CNI or a non-specific water utility site.	EACS set to require dual authentication for all external access points. Only operationally essential deliveries accepted. Police advised and updated as required.
Medium	A security incident impacting Watercare, its assets, information or personnel, is assessed as a feasible and could well. This alert level imposes moderate inconvenience and some business impact, and can be maintained for a number of days.	Protest activity at a Watercare site is planned. Violence is possible not expected. A spike in criminal activity is reported around the site area. The national terrorism threat level is increased, but no specific threat is known.	No non-essential visitors or contractors on site. Staff work from home where possible. Increased frequency of security patrols. Increased screening of deliveries.
Low	A security incident impacting Watercare, its assets, information or personnel, is assessed as a realistic possibility. This alert level potentially imposes some minor inconvenience and business impact, and can be maintained for long periods.	Heightened community tension but no specific threat to Watercare sites or assets is known.	Security awareness communication to staff is increased. Baseline security control measures are reviewed more regularly and adjusted as necessary.
Very Low	A security incident impacting Watercare, its assets, information or personnel, is assessed as unlikely. This alert level can be maintained indefinitely.	Business as usual.	Normal baseline security control measures are in place.

Table 12 – Example alert level system.

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ANNEX F – PUMP STATION BASELINE CONTROLS

1. A set of baseline controls for pump stations, intended to be used as a starting point for routine pump station build projects, is detailed in the table below. Should any deviations from this baseline be required, and for any other site type, the security team must be consulted.
2. This annex contains only basic control information and should be read in conjunction with the main standards descriptions in Section 4.

SECURITY CULTURE AND TRAINING	All staff, contractors and consultants ***must*** undertake training on the purpose and operation of security control measures (e.g. IDS) employed at sites where they have unescorted access.
SECURITY COMMUNICATION	Signage visible from the perimeter or beyond the perimeter, such as site maps or hazard boards, ***should not*** indicate the presence or location of critical, sensitive, high value or attractive items or areas.
SIGNAGE	Restricted access signs, including CCTV warning signs as appropriate, ***must*** be displayed at all access points and at other appropriate points around the site perimeter.
	Signs ***must*** state the area beyond the fence/gate/door is a restricted place and indicate the consequences of unauthorised access.[7]
PERIMETER FENCING	The perimeter fence ***must*** be chain link with steel poles, including top and bottom rails ***OR*** concrete ***OR*** concrete block ***OR*** steel palisade.
	It ***must*** be a minimum of 1.8 m high and topped with three strands of barbed wire and flat coils of razor wire ***OR*** a minimum of 2.2 m high topped with steel spikes.
	It ***must*** incorporate VigilFence sensors ***OR*** be backed with zoned monitored pulse electric fence[8].
	Building exterior walls can form some, or all, of a site perimeter, but care ***must*** be taken to avoid potential climbing aids.
	Anti-climb measures (barbed/razor wire) ***should*** be used on single storied buildings where climbing could provide site access.
	A zone of 3 m (ideal) or 1.5 m (where appropriate) on either side of perimeter fence ***must*** be kept clear of vegetation or structures that could be used as climbing aids or surveillance blind spots.

[7] Standard design security signage is available from the Watercare Security Team.
[8] ***Consider*** de-energising or applying low voltage to the electric fence when the site is occupied.

SITE ACCESS POINTS	Perimeter access points ***must*** provide at least the same level of security protection as the remaining perimeter security measures that contain them.
	The number of access points in a site perimeter ***should*** be kept to a minimum with consideration to operational and potential evacuation requirements.
	Vehicle and pedestrian access gates ***must*** be constructed to the same or higher standard as the fence that contains them.
	Primary access points ***should*** be a manual swing or sliding gate secured with a padlock.
SITE APPEARANCE AND MAINTENANCE	All sites ***should*** be configured to reduce the opportunities for vandalism (for instance graffiti) by avoiding solid fencing where possible (concrete, wooden pale) and using building styles that deter graffiti.
	The site ***should*** be regularly maintained to give an impression of control, order and a sense of care and ownership.
FRESH WATER AND WET WELL DOORS AND HATCHES	All access points that provide access to drinking water (e.g. reservoir inspection hatches) or raw sewage (e.g. doors to wet wells) ***must*** be fitted with sensors (e.g. reed switch) that provide an alert to the Nerve Centre when they are opened.
	All access points ***must*** be physically secured. The minimum is a non-standard fitting (such as a Crox bolt).
	Access points that are publicly accessible ***must*** be secured with a mechanical lock, with preference given to keyed locks in doors or a steel bar laid over the centre of the hatch cover secured in place with a padlock.
BUILDING BOUNDARY CONSTRUCTION	Pump station buildings ***should*** be constructed to resist intrusion.
	Walls ***should*** be constructed to a high-quality commercial standard and maintained to that level.
	External windows ***should*** be avoided where possible.
	External windows ***should*** have steel security bars or grills installed.
	External windows ***should*** have privacy film installed.
	Any opening window ***should*** be permanently fixed closed or fitted with a window stay and keyed window lock.

	Windows at high risk of vandalism, such as those immediately accessible to public spaces, ***should*** be laminated glass or have anti-shatter film applied.
DOORS	External doors ***must*** be resistant to intrusion and be fitted with heavy duty two or three stage automatic door closers.
	External doors ***must*** be minimum 38 mm solid core wooden doors (or equivalent) hung on three or four evenly spaced fixed/captured pin hinges in steel (preferred) or solid wood frames.
	Doors ***must*** be outwards opening unless they are required to be inwards opening for fire escape/evacuation purposes.
	External outward opening doors ***should*** be fitted with three evenly spaced hinge bolts.
LOCKS AND ACCESS CONTROL	Perimeter access points ***should*** be integrated into the site EACS using electronic mortice or magnetic locks.
	Dual authentication (swipe and PIN) ***should*** be required for entry with swipe to exit.
	Access ***must*** only be provided to staff and contractors on a strict need-to-access basis.
	Door-open-too-long alarms ***should*** be enabled with local audible alarms, along with alerts at the Nerve Centre.
	Forced door and emergency door release ***should*** be enabled with local audible alarms and trigger alerts at the Nerve Centre.
	External pump station access points ***must*** be secured with mechanical deadbolt or padlocks after-hours using a restricted profile key within the Watercare key management system.
	The primary leaf of two-leaf doors ***must*** meet the requirements above with the secondary leaf being mechanically locked any time it is not in use using flush and/or door bolts. Secondary leaf mechanical locks ***must not*** be accessible without access first being granted through the primary leaf.
	Roller doors ***must*** be secured internally with tower bolts or similar and secured with a padlock.
CCTV	***Consider*** CCTV coverage of access points to pump stations.
SECURITY LIGHTING	Security lighting ***must*** compliment CCTV cameras where applicable.

	Where possible, security lighting ***should*** be located within the site perimeter and at a sufficient height to reduce the risk of vandalism.
	Motion activated LED lights ***should*** be used where possible to reduce energy consumption and light pollution to neighbouring properties. Where motion activation is not practical or appropriate, timed switches ***should*** be used, or manually switched if this is the only practical option
	Security lighting ***must*** fully illuminate the primary perimeter access points and approaches which may be used after hours.
	Security lights ***should*** illuminate areas of the perimeter easily accessible to the public.
	Security lighting ***should*** provide general illumination to the full site.
	Building access points that might be used during the hours of darkness ***must*** be illuminated by security lighting.
	Consider illuminating the full perimeter of buildings.
IDS	Pump station buildings ***must*** be protected by an Intruder Detection System (IDS).
	Pump station buildings ***must*** be armed when unoccupied.
	The IDS ***must*** monitor all external doors to the building, including roller doors, through both volumetric movement sensors (PIR) and break surface door sensors (reed switch).
	Full area volumetric movement sensors ***should*** be installed.
	All IDS panels, keypads and sensors (PIRs, reed switches) ***must*** have tamper switches installed.
	Tamper switches ***must*** be configured to the system zone and require an administrator access to disable or bypass.
	Tamper switches ***must*** provide an alert at the monitoring centre when triggered, even when the IDS zone is unarmed.
	The IDS panel for the building ***must*** be within the building and covered by IDS sensors.
	The IDS control panel ***should*** be located in the most secure area of the building.
	The keypad to arm and disarm an IDS zone ***must*** be covered by the zone IDS sensors.
	The IDS ***must*** require two-factor authentication (swipe and PIN) to disarm.

	The IDS ***should*** require two-factor authentication (swipe and PIN) to arm.
	The IDS ***must*** be monitored 24/7.
	The IDS ***should*** be monitored by the Nerve Centre.
EACS	All EACS card readers, keypads and locking devices (magnetic and mortice locks) ***must*** have tamper switches installed.
	Tamper switches ***should*** be monitored by the Nerve Centre.
	EACS door locks ***must*** fail safe on the internal/secure side of the door.
	EACS door locks ***should*** fail secure on the external/insecure side of the door.
SSP	All sites ***must*** have a SSP.
	SSPs ***should*** be informed by, and complimentary to, the wider suite of Watercare security documentation.
	A site-specific threat assessment and security risk register ***should*** be included in the SSP.
	The SSP ***must*** include processes to respond to a heightened threat environment, including changes to physical security measures that may need to be implemented in the event of a pending or in-progress security incident. An example of a basic Alert Level system is included in Annex F.
	SSPs ***must*** be reviewed at least annually to ensure they remain fit for purpose.
SECURITY COMMUNICATIONS NETWORK	All sites ***must*** have security communications network connectivity.
	Sites ***should*** have a connection to the Watercare corporate network infrastructure as the preferred transport medium for security communications.
	Remote viewing of CCTV footage requires significantly more network bandwidth than basic security system monitoring alone. Sites with CCTV ***must*** consider bandwidth when provisioning network connectivity.
	Watercare Digital ***must*** be consulted when planning and implementing security communications into the corporate network to ensure current network standards are met.

ELECTRONIC SECURITY CABINETS	All sites ***must*** have provision for a wall-mounted security cabinet with an associated mains power outlet.
	The security cabinet ***must*** be in an area protected by an IDS.
	The security cabinet ***should*** be located in the most secure area of the site.
	The security cabinet power ***should*** be connected to the site Uninterrupted Power Supply (UPS) and/or backup power, if available.
	The Watercare preferred security integrator ***must*** be consulted on security cabinet and power requirements during the design phase of significant site developments or new builds.
SECURITY CABLING	All security cables ***must*** be supported (e.g. catenary wire, cable trays or conduit).
	Security cables ***must*** be separated from mains power cable by at least 300 mm.
	The corrosive nature of the environment in operational areas ***must*** be recognised with the installation of security cables (e.g. through the use of stainless steel fittings).

How Many Deaths Does it Take?

Graeme Wells

Beca Ltd

Oxidation, Effluent and Water Storage Ponds

But how Many Deaths Does it Take?

What is the magnetic force that attracts?

- Being inquisitive
- Splashing water
- Decoy ducks
- Still waters
- Stone skimming
- Model boats
- Dog walking

- Short-cut route
- Photography
- Bird watching
- Adjacent to tracks
- Swimming
- Wind surfing
- Work

All unaware of the invisible dangers!

- Seven pre-schoolers
- A teenager trapped in a water storage Pond
- Two workers who lost their balance on a pontoon
- A farmer who slipped into a PE lined oxidation pond
- A tanker driver who slipped into a steep-sided concrete-lined pond
- Seven who drowned when their tractors/quad bikes went into ponds

Access

The most at risk being pre-schoolers it would appear

- They can't read / understand signs
- They can't swim
- They don't know that they need to save themselves
- They can't climb up slippery batter slopes
- Unlikely to recognise any egress options
- Their cries for help are less likely to be heard

How did they get access?

By climbing

Ladder Gate

Large Mesh Netting

Going through gaps

Squeezing between wires

Crawling under the bottom

Stock-proof fence not necessarily child or small animal-proof

They were at work

Fence Standards

- Ponds are not swimming pools
- There are no standards for pond fencing

What Guidelines exist?

- Water NZ 2017 (Oxidation Ponds)
  - In many cases the “front entrance” to ponds is security fenced, with the “back door” being normal 7 or 8 wire stock fence.
  - Deer fencing can provide additional security

IPENZ Practice Note 21 – 2017 (Farm Ponds)

- At very least a secure 5-wire fence with an electric fence hot-wire. In some locations, a higher fence such as deer fencing will be appropriate.

Worksafe 2017 (Farm Ponds)

- Fence the pond and put up warning signs

Dairy NZ

- All ponds should be fenced off with a netting fence
- Warning signs can be used to keep people out

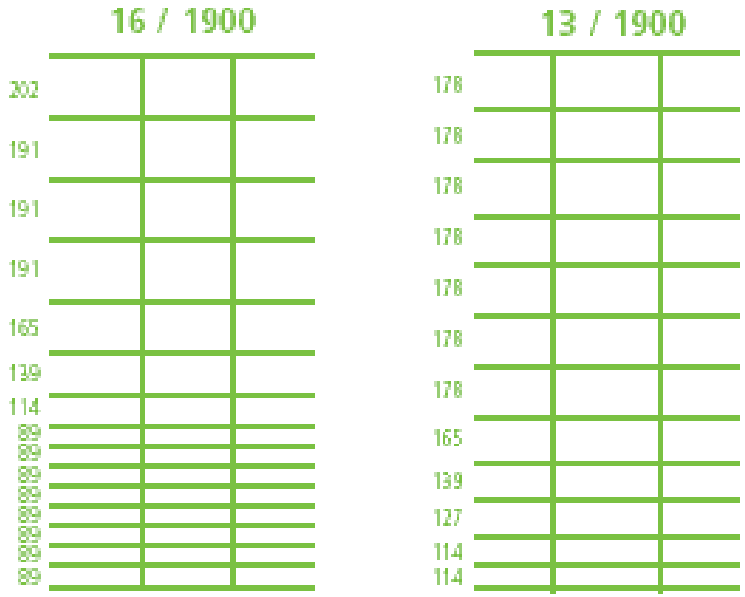
These guidelines have little substance and how effective have they been in the prevention of death?

What might Best Industry Practice look like?

- 1800 mm high
- 100 mm max line-wire spacing in lower portion
- 100mm maximum stay-wire spacing
- Barbed tension wire top and bottom clipped to netting
- Install with less than 100 mm clearance beneath

Solutions

- Cyclone 16/1900 HT Tightlock deer fawning netting
- Mesh size 240W x 89H in lower 800mm
- Tensioned bottom wire clipped to netting
- Deer netting accepted by Worksafe in Gore



- Summit Steel 19/1800 XTM fence forged knot MT security netting
- Mesh size 50W x 100H over full height
- Cyclone HT Reverse Twist 1.6 x 100 barbed tension wire top and bottom clipped to netting
- Being adopted by some other Council's
- Gates similar

Once in the pond, what is the means of Egress?

Are there any?

Slippery Batter Slopes (sludge and biomass)

Steep Batter Slopes

PE batter Slopes

Floating pontoons

Sludge layer in invert

- How do you get out?
- How can rescuers assist?

What Egress Guidelines are there?

- Water NZ 2017 (Oxidation Ponds)
  - Silent
- IPENZ Practice Note 21-2017 (Farm Ponds)
  - Working around water requires a minimum of two people with one always available for support and rescue.
- Worksafe 2017 (Farm Ponds)
  - Ponds with synthetic liners should have exit devices (and) …. have rescue lines and a lifebuoy close to the pond.
- Dairy NZ (Farm Ponds)
  - Ponds should have at least one permanent….means of escape in case a person falls in.
  - You can have a lifebuoy available in the area too
  - Pontoons should have anchor points to improve stability

Egress Solution – Sheet Lined Ponds

- PE Ladder

Viking Geoladder

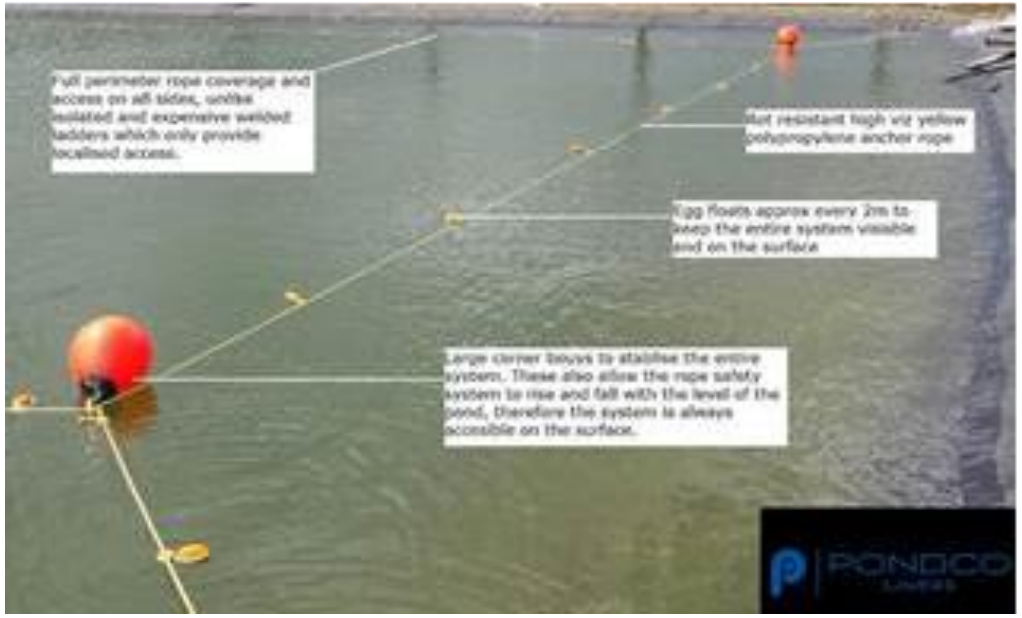
AEL Hi-vis Safety Ladder

Egress Solution – Earth / Stone / Concrete Batters

- Tyre Ladders

- Spacing / Location
- At each corner of pond, Worksafe precedent minima (Gore DC)
- At inlets and outlets
- At sampling/monitoring locations
- At maintenance locations, eg pumps, aerators
- Maximum spacing between ladders 50m recommended, based on water safety and marine guidelines

Egress Assistance – Float and Buoy Line (Recommended by Dairy NZ)

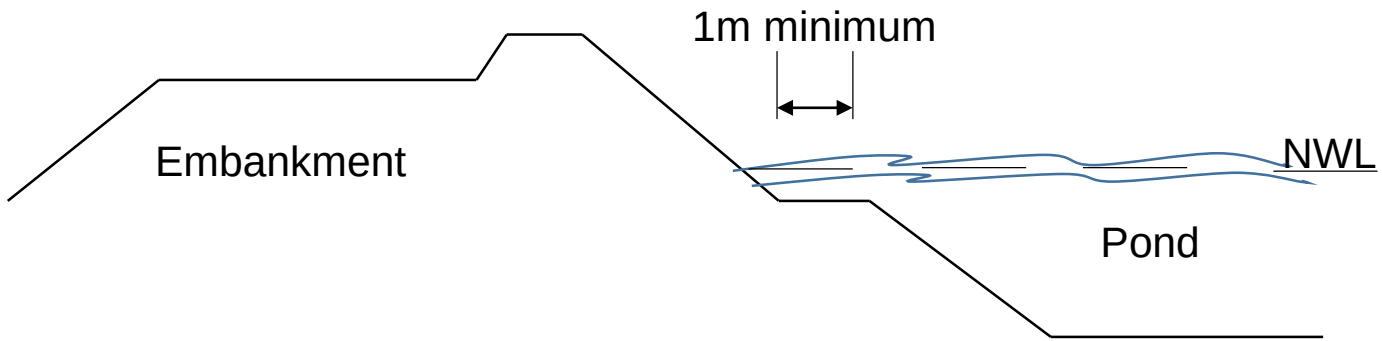


Pondco Liners

Courtesy of Dairy NZ – https://www.dairynz.co.nz/effluent/effluent-storage/effluent-pond-safety/

What else can you do to assist self rescue?

- Incorporate a bench in the batter at 300mm below normal water level to swim on to. This can also be useful for maintenance access.



Employee Safety at Ponds

- Is Grazing separated from ponds?
- Access/Security Control Procedures
- Working Alone Procedures
- Make sure all workers can swim
- What tasks require two person attendance?
- Monitoring Procedures
- Maintenance Procedures
- Safety Equipment

Some Batter SiD Items

- Slope
  - Safety vs earthworks volumes
- Profile
  - Bench 300 below NWL
  - Maintenance access
- Finish
  - Grass / stones / concrete
- Embankment vehicle access
  - Width
  - Location
  - Not a transit route
  - Mound on top edge of crest pond-side

Some Access/Egress SiD Items

- Access control and details
- Landscaping that discourages access
- Grazing controls
- Access procedures
- Maintenance procedures
- Egress provisions and locations

May the lives of those who have drowned in ponds not been in vain

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Waters Governance Board**
Report title	**Three Waters Compliance Update**
Date:	14 August 2023
Report Author:	Marieka van der Lee, Water Quality Scientist Waikato District
Authorised by:	Gavin Ion, Chief Executive - Waikato District Council

1. Purpose of the report
Te Take moo te puurongo

This report informs the Water Governance Board of the current compliance status within the Waikato District.

2. Executive summary
Whakaraapopototanga matua

The Water Quality Scientist leads the compliance monitoring and reporting requirements for the WDC drinking water supplies, water and wastewater treatment plant resource consents, and provides technical support to the Production, Networks, Infrastructure and Customer Care teams. This enables those teams to meet their public health and environmental compliance obligations.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board receives the Three Waters Compliance Update report.

4. Background
Koorero whaimaarama

The below tables set out:

- The compliance status for each wastewater treatment plant discharge consent, each water treatment plant water take consent and backwash discharge consent (limited to those that have monitoring and reporting requirements), and
- Each drinking water supply's Drinking Water Standards (DWSNZ) compliance status for this compliance year to date.
- Summary comments on the Drinking Water Quality Assurance Rule (DWQAR) compliance.

Notes for the below Resource consent tables:

- The tables do not include the numerous consent conditions that Waikato Regional Council (WRC) considered fully compliant.
- The tables do not include non-compliances identified in WRC audit reports that have been fully resolved.
- The tables do not include non-compliances identified in WRC audit reports with future due dates and planned actions.
- Not all non-compliances require corrective actions (WRC may consider the circumstances and not require a corrective action but still issue a non-compliance).
- Operations and Management plan reviews, and updates are underway but are being undertaken on a risk-based approach and to account for planned WWTP upgrade timeframes.
- All non-compliances are followed up with either short- or medium-term solutions or proposed long-term solutions.
- The WRC Compliance Rating Systems are set out in Appendix 1.

Notes for the belowDWSNZ/ DWQAR table:

- *January-March and April-May 2023 compliance status presented under section 2 and 3 below is based on an internal review of the monitoring data/results.*
- The external Wai Comply DWQAR audit for Jan-Mar 2023 period has been completed, we are waiting to receive the Findings Statement Report.
- The Wai Comply DWQAR Apr-Jun 2023 audit reports have been submitted for review.

Notes for the below DWQAR Compliance comments table:

- Comments are general for supplies/zones.

1. Water Balance table

The Non-rev figures were 25% (2020/21) 27% (2021/22) and now 24% (2022/23)

The total leakage has reduced from 23% (2021) 21% (2022) and 19% (2023), which is a positive result.

We will investigate installing magflow meters at the demarcation point between production and networks to improve the accuracy of this data.

The Litres per day we 180L (2020/21) 190L (2021/22) and 156L (2022/23) which is another positive result.

Summary of Water Balance Results

Area	System Input (Production) m3	Billed Metered Consumption m3	Water Hydrant Billed m3	Billed Unmetered Consumption m3 *1	Unbilled metered/faulty Consumption m3 *4	Authorised unbilled Consumption m3 *2	Apparent Losses m3 * 3	Real Losses	Current Annual Real Losses l/conn/d or m3/km/d *6	Non revenue Water (%)	Total Leakage (%)	Res Cons. using top10 for comm (l/cap/d)
Tuakau *8	471,315	402,052			5,036	2,357	24,816	42,090	#N/A	15%	13%	146
Pokeno *8	476,862	386,022	9,640		9,832	12,024	24,070	54,746	#N/A	19%	12%	156
Raglan	598,029	364,551	3,646	241	5,436	6,636	24,208	202,393	263	39%	36%	153
Huntly	1,249,398	761,781	3,231	1,686	11,671	9,478	50,583	425,870	360	39%	37%	201
Mid Waikato	611,015	458,830			12,310	3,055	29,052	120,078	141	25%	22%	117
Central District	833,082	811,208	5,195	5,300	57,393	9,360	48,891	-41,677	-31	2%	-7%	193
Southern & Western District	723,596	565,761			98,000	3,618	35,524	0	0	22%	8%	116
Te Akau *5	1,496	843			799	7	57	589	Not Calculated due to very small size of system	44%	-10%	6
Onewhero	2,024	1,497			80	10	0	517		26%	22%	30
Port Waikato	13,067	5,360			160	65	399	7,243		59%	57%	0
Combined Systems	4,979,883	3,757,905	21,712	7,227	200,717	46,611	237,599	811,848		24%	19%	156

*1 Water use of the calcaulated litres/connection/day (Cell R39) used for these unmetered connections has been assumed.

*2 The recommended default value of 0.5% of Water Supplied has been included in the volume of Unbilled Authorised Consumption in the ten water balances to allow for maintenance use (such as network flushing) and for Fire Service use.

*3 Apparent Losses: Customer meter under-registration = 5.0% of Billed Metered Consumption by Registered Customers and Unauthorised Consumption = 1% of Water Supplied - Increased due % due to incrased break/leaks from drilling works

*4 Consumption based on number of meters connected (faulty) multiplied by 219 litres per year

*5 Te Akau system input (Production) m3 is the total volume of tankered water subtracted from Raglan

*6 Note that for Mid Waikato and Southern& Western Districts, the CARL are expressed in m3/km/day due to density of connections being less than 20 connections/km main.

*7 System input volume for southern & Western District was taken from the WDC provided data and was for the period July 2022-June 2023.

*8 System input volume for Tuakau and Pokeno were provided by Watercare Auckland and was fro the period July 2022-June 2023 respectively.

*9 The Huntly and Central District areas are combined with supplimental supply from Huntly supplying the Central Districts catchment. The combined figures are 24% Non-rev and 20% Total leakage. Meter will be installed to accurately allocate production.

2. Site Compliance Status from Waikato Regional Council Audits

Site:	Consent type:	Consent number:	Last assessed by WRC:	Site Compliance Status:	Letter of Direction (LoD)/ Formal Warning (FW)/Abatement Notice (AN)	Comments
Meremere wastewater treatment plant	Discharge to water	AUTH142286.01.01	December 2022	Low Risk Non-Compliance		Non-compliances relate to: • Odour Management Plan and Liaison group meetings- these issues have been addressed and actioned.
Raglan wastewater treatment plant	Discharge to water	AUTH971390.01.01	January 2023	Moderate Non-compliance	AN	Non-compliances relate to: • Continuing non-compliance for Total Suspended Solids. • Flow meter calibration certificate • Faecal coliform limit exceedance
Huntly wastewater treatment plant	Discharge to water	AUTH119647.01.02	February 2023	Low Risk Non-Compliance	LoD	Non-compliances relate to: • Increasing non-compliances for Ammoniacal Nitrogen and Total Suspended Solids. • Consented discharge limit exceedances • Inflow and Infiltration Management Plan • Diffuser survey
Te Kauwhata wastewater treatment plant	Discharge to water	AUTH117991.01.01	October 2022	Significant Non-Compliance	FW	Non-compliances relate to: • Continuing non-compliance for cBOD5, Total Kjeldahl Nitrogen, Total Nitrogen, Total Phosphorus, Total Suspended Solids, TN Load and TP Load.

Site:	Consent type:	Consent number:	Last assessed by WRC:	Site Compliance Status:	Letter of Direction (LoD)/ Formal Warning (FW)/Abatement Notice (AN)	Comments
Te Kowhai wastewater treatment plant	Discharge to land	AUTH116151.01.01	March 2023	Low Risk Non-Compliance		Non-compliances relate to: • Discharge volume. • Currently non-compliant against cBOD5, NH4N and TSS.
Tauwhare wastewater treatment plant	Discharge to land	AUTH121024.01.01	June 2021	High level of Compliance		2021-22 audit to be completed by WRC.
Maramarua wastewater treatment plant	Discharge to land	AUTH132607.01.01	February 2022	Low Risk Non-Compliance		audit to be completed by WRC. • Discharge flow limit exceedances were noted during the period. • Networks/Infrastructure team working towards the Inflow and Infiltration Management Plan
Ngaaruawaahi a wastewater treatment plant	Discharge to water	AUTH119642.01.02.	March 2023	Moderate Non-Compliance	LoD	Non-compliances relate to: • Continuing non-compliance for Ammoniacal Nitrogen and Total Nitrogen.
Matangi wastewater treatment plant	Discharge to land	AUTH105551.01.02	June 2023	Moderate Non-Compliance		2022-2023 audit report from WRC – Discharge exceedences. Consent is expired, revisions on discharge quantity should be investigated in new application.
Te Akau water treatment plant	Water take	AUTH110226.01.01	August 2021	Full Compliance		2021-22 audit to be completed by WRC.

Site:	Consent type:	Consent number:	Last assessed by WRC:	Site Compliance Status:	Letter of Direction (LoD)/ Formal Warning (FW)/Abatement Notice (AN)	Comments
Port Waikato water treatment plant	Water take	AUTH136297.01.01	September 2022	Low Risk Non-Compliance		Non-compliances relate to: • Demonstration of compliance with 7-day rolling average- this audit action has been resolved by adding the 7-day rolling average to the Water Outlook report.
Port Waikato water treatment plant	Discharge backwash water	AUTH136297.03.01	September 2022	Moderate Non-Compliance		Non-compliances relate to: • Total aluminium discharge limit exceedance • Actions has been taken by ceasing the backwash discharge since November 2022 and further investigation into the Total Aluminium exceedances. • Actions were communicated to the WRC and monitoring results forwarded highlighting Total Aluminium results in the upstream exceeding the consented limits. • Further communication with the WRC in progress with a request to amend the consent condition to better reflect compliance when the stream levels are high in total aluminium.
Huntly/Ngaaruawaahia water treatment plants	Water take	AUTH136806	August 2021	Full Compliance		2021-22 audit to be completed by WRC.

Site:	Consent type:	Consent number:	Last assessed by WRC:	Site Compliance Status:	Letter of Direction (LoD)/ Formal Warning (FW)/Abatement Notice (AN)	Comments
Huntly water treatment plant	Discharge backwash water	AUTH105035	August 2021	Not Assessed		This consent is not in use
Ngaaruawaahia water treatment plant	Discharge backwash water	AUTH108157.01.01	September 2022	Moderate Non-Compliance	LoD	Non-compliances relate to: • Total Aluminium and Suspended solids consent limit exceedances • The backwash discharge from the WTP will be connected to the wastewater network- this work is in progress.
Raglan water treatment plant	Water take	AUTH118341.01.01	August 2021	Low Risk Non-Compliance		2021-22 audit to be completed by WRC
Onewhero water treatment plant	N/a	N/a	N/a	N/a		Water take is within permitted activity limits and doesn't require a resource consent.
Te Kauwhata water treatment plant	Discharge backwash water	AUTH113133	March 2022	Low risk non-compliance		2021-2022 audit to be completed by WRC

3. Drinking Water Quality Assurance Rule (DWQAR) Compliance January-March 2023

Supply	Type	Drinking Water Quality Assurance Rule 2022 Compliance Status January 2023-March 2023	Comment on Drinking Water Standards Compliance
Huntly	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Ngaaruawaahia	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant*	*Low FAC levels were noted in some of the monitoring samples during February 2023, however reactive flushing was completed to improve FAC results and after flush FAC results demonstrated compliance.
Raglan	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Te Kauwhata	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Te Akau	Supply	Zone DWQAR D1 rule: Compliant	Nil.
Port Waikato	Supply	WTP DWQAR T2 rule: Compliant Zone DWQAR D2 rule: Compliant	Nil.
Onewhero	Supply	WTP DWQAR T1 rule: Compliant Zone DWQAR D1 rule: Compliant	Nil.
Southern Districts, Waikato DC	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
Tuakau	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
Pokeno	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
North Western Dist, Waikato DC	Distribution only	Zone DWQAR D1 rule: Compliant	Nil.
Western District, Waikato DC	Distribution only	Zone DWQAR D2 rule: Compliant	Nil.

4. Drinking Water Quality Assurance Rule (DWQAR) Compliance April-June 2023

Supply	Type	Drinking Water Quality Assurance Rule 2022 Compliance Status January 2023-March 2023	Comment on Drinking Water Standards Compliance
Huntly	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Ngaaruawaahia	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant*	Nil.
Raglan	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Te Kauwhata	Supply	WTP DWQAR T3 rule: Compliant Zone DWQAR D3 rule: Compliant	Nil.
Te Akau	Supply	Zone DWQAR D1 rule: Compliant	Nil.
Port Waikato	Supply	WTP DWQAR T2 rule: Compliant Zone DWQAR D2 rule: Compliant	Nil.
Onewhero	Supply	WTP DWQAR T1 rule: Compliant Zone DWQAR D1 rule: Compliant	Nil.
Southern Districts, Waikato DC	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
Tuakau	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
Pokeno	Distribution only	Zone DWQAR D3 rule: Compliant	Nil.
North Western Dist, Waikato DC	Distribution only	Zone DWQAR D1 rule: Compliant	Nil.
Western District, Waikato DC	Distribution only	Zone DWQAR D2 rule: Compliant	Nil.

5. Drinking Water Quality Assurance Rules (DWQAR) Compliance comments.

Supply	Type	Comment on Quality Assurance rules
Huntly	Supply	• Supply connection between Huntly and Ngāruawāhia means both supplies are now registered as combined under the Taumata Arowai (TA) rules and water safety plans updated accordingly. • Continuous monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform -Hinekorako for the monthly reporting. • Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Ngaaruawaahia	Supply	• Supply connection between Huntly and Ngāruawāhia means both supplies now registered as combined under the Taumata Arowai rules and water safety plans updated accordingly. • Continuous monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform -Hinekorako for the monthly reporting. • Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Raglan	Supply	• Raglan drinking water supply may be subject to a fluoridation direction under the Health (Fluoridation of Drinking Water) Amendment Act 2021 due to having a reasonable population size and not currently being fluoridated. • Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Continuous monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform -Hinekorako for the monthly reporting. • Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023.

Supply	Type	Comment on Quality Assurance rules
		• Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Te Kauwhata	Supply	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Continuous monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the monthly reporting. • Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Te Akau	Supply	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the 6-monthly reporting. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Port Waikato	Supply	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Plant and Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the quarterly reporting. • Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Onewhero	Supply	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the 6-monthly reporting.

Supply	Type	Comment on Quality Assurance rules
		• Source Water Risk Management Plan (SWRMP) and Catchment Risk Assessment (CRA) – consultants (Tokin n Taylor) have been engaged to undertake the SWRMP and CRA across the WDC supplies with an expected completion by November 2023. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Southern Districts, Waikato DC	Distribution only	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the monthly reporting. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Tuakau	Distribution only	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the monthly reporting. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
Pokeno	Distribution only	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the monthly reporting. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.
North Western Dist, Waikato DC	Distribution only	• Updated Drinking Water Safety Plan (DWSP) has been submitted to TA in November 2022. • Zone monitoring reports has been set up in Water Outlook and are linked to the Taumata Arowai reporting platform - Hinekorako for the 6-monthly reporting. • Laboratory monitoring schedules has been reviewed and updated to demonstrate compliance against the DWQAR. • Significant increases in laboratory testing and distribution monitoring.

6. Discussion
Matapaki

- Successful completion of the Te Kowhai RiverCare project for pre-planting and planting milestones as a part of the Te Kowhai WWTP consent conditions.
- Matangi WWTP New Consent Application – Project Management have had onsite meetings with Hapū in January where next steps to advance korero and understand cultural assessment of long-term wastewater solutions were disscussed. Beca consultant experts have been engaged for studies into the enhanced trend of high flow rates during wet years resulting in consent exceedances. Collaborative disscussions with MoE and Beca regarding system growth for greater school flow with the addition of new classrooms in the future.
- The Watercare laboratory are moving to a new analysis methodology for E.coli and total coliforms analysis for potable water samples later this month using MI Agar rather than Colilert-18. This will result in efficiencies from the Lab side of things with no additional cost. The new methodology is IANZ accredited.
- Water Outlook reports for the Drinking Water Quality Assurance Rules have been updated and are now linked to the Taumata Arowai reporting platform-Hinekorako for the monthly, quarterly and yearly reporting.
- Wai Comply conducted the DWQAR audit for Jan-Mar 2023 period which has been completed, we are waiting to receive the Findings statement Report.
- The Wai Comply Apr-Jun 2023 reports have already been submitted for audit.
- All WDC Water Safety Plans were updated and submitted to Taumata Arowai in November 2022. Watercare is engaging Tonkin and Taylor consultants to review the Source Water Risk Management Plans (SWRMP) and Catcment Risk Assessments (CRA) in 2023.
- WDC received an abatement notice against the Raglan WWTP discharge consent for the 2021-22 audit period. A response letter was submitted to WRC detailing the audit actions for the Raglan WWTP- Council has approved funding for a new plant capable of both land and harbour-based discharge and, therefore, not limiting the options for the new discharge consent when that is granted. An estimation of the timeframe for the construction of the new plant was also provided to WRC.
- Letter of Direction received for the Huntly and Ngaruawahia WWTP discharge consents for the 2021-22 audit period, mainly due to the ongoing non-compliance with the nitrogen and suspended solids consented limit exceedances. An audit response letter was provided to the WRC detailing the actions taken to improve compliance in the short term (including the flow and load survey/analysis) and the timeframes around the plant upgrades.
- Ngaaruawaahia WTP received a formal warning for the backwash discharge consent. Non-compliances with the total aluminium and suspended solid consented limits.

Work in progress with the connection of the discharge tank to the wastewater network, which would resolve this issue.

7. Attachments
Ngaa taapirihanga

Attachment 1 –Regional Council Resource Consent Compliance Rating System

APPENDIX 1 Regional Council Resource Consent Compliance Rating System

July 2021- onwards:

Compliance Status	Compliance Grade
	Not Assessed
	Full Compliance Full compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
	Low Risk Non-Compliance Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
	Moderate Non-Compliance Non-compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.
	Significant Non-Compliance Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.

Prior to July 2021:

Compliance status for individual consents and the entire site	
Compliance Status	Description
Not assessed	Monitoring has not been undertaken at this site during the current financial year
Significant non-compliance	There has been a high priority non-compliance; and/or there have been several medium priority non-compliances.
Partial compliance	There has been a medium priority non-compliance; and/or there have been several low priority non-compliances.
High level of compliance	There has been a low priority non-compliance; and/or there have been several minor technical non-compliances.
Full compliance	All conditions that include limits or other direct controls on adverse effects have been complied with. A small number of minor technical non-compliances may have occurred.

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Waters Governance Board**
Report title	**Proposed new Water Supply Bylaw 2023**
Date:	5 September 2023
Report Author:	Hannah Beaven, Principal Corporate Planner Keith Martin, Waters Manager
Authorised by:	Megan May, Acting General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To advise the Waters Governance Board of the development of a proposed new Water Supply Bylaw, subject to approval from Council/Policy and Regulatory Committee (the Committee).

2. Executive summary
Whakaraapopototanga matua

Council's Water Supply Bylaw 2014 (Attachment 1) has rules for managing Council's water supply system. Advice has been received which indicates that, due to the timing of the review of the Bylaw in 2021, it is unenforceable.

A new Water Supply Bylaw is proposed to be developed, subject to approval from Council /the Board. It is expected that the new Bylaw would be very similar to the current version, with some relatively minor amendments and the new Water Supply Bylaw would be adopted in approximately six months.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Waters Governance Board receives the Proposed New Water Supply Bylaw report.

4. Background
Koorero whaimaarama

Council's Water Supply Bylaw 2014 includes rules for managing Council's water supply system. Staff received advice which has indicated that, due to the timing of the review of the 2014 Bylaw in 2021, it is unenforceable. Therefore, Council currently has no regulatory tools to manage our Water Supply System.

Staff are now seeking to rectify this issue by drafting and adopting a new Water Supply Bylaw.

A valid Water Supply Bylaw is necessary to:

- Ensure safe drinking water and security;
- Allow a mechanism for charging for water use;
- Support the installation of backflow prevention, water meters and restrictors;
- Limit supply when required;
- Refuse connection in the case of limited network availability, capacity or pressure;
- Ensure leaks on the customer side remain customer responsibility rather than Council's;
- Ensure appropriate control mechanisms are in place when required;
- Allow Council to undertake enforcement action when necessary.

The consequences of not having a valid Bylaw include:

- Council is not able to decline a connection to the water supply system on building consent applications in the case of limit network availability, capacity or pressure.
- While Council can still install water meters and where necessary, the installation of restrictors on trickle supply feeds, the Bylaw enables Council to enforce this requirement when people tamper with them.
- Council may have difficulty confirming that water leaks on the customer side of the toby are the customers responsibility, and that Council is not responsible for the water consumed beyond the toby.
- Council not been able to enforce other rules to ensure ongoing operation of the water supply system including rules regarding trickle feed.

It is expected that the changes to the Water Supply Bylaw 2014 would be relatively minor and the entire review could be completed within the next six months.

5. Next steps
Ahu whakamua

A Council workshop is planned for mid-September 2023 to seek feedback from Council on the new proposed Bylaw, and any desired changes.

Subject to Council approval, it is planned the Policy and Regulatory Committee will agree for a new proposed Bylaw to be issued for public consultation on 3 October 2023. Consultation is planned for Thursday 5 October to Monday 6 November 2023.

Hearings and deliberations are scheduled for November, with adoption of a new Bylaw by Council planned for 18 December 2023.

6. Attachments
Ngaa taapirihanga

Attachment 1 – Current Water Supply Bylaw 2014

Waikato District Council
Water Supply Bylaw 2014

The Waikato District Council, in exercise of its powers and authorities conferred on it under the Local Government Act 2002 and the Health Act 1956 and their respective amendments, and all other relevant powers, makes the following bylaw.

1. Short Title, Commencement and Application

1.1 The bylaw shall be known as the "Waikato District Council Water Supply Bylaw 2014".

1.2 The bylaw shall apply to the Waikato District.

1.3 The bylaw shall come into force on 1 October 2014.

2. Scope

This bylaw shall apply to the Waikato District (within the boundaries of the Waikato District pursuant to the Local Government Act 2002 and any land, building, work, or property under the control of the Council, although situated beyond the Council's district pursuant to the Health Act 1956.

3. Purpose

3.1 The purposes of this bylaw are:

(a) Promoting the efficient use of water and protect against waste or misuse of water from the water supply system;

(b) Protecting the water supply and water supply system from pollution and contamination;

(c) Managing and protecting from damage, misuse, or loss of land, structures and infrastructure associated with the water supply system; and

(d) Preventing the unauthorised use of land, structures or infrastructure associated with the water supply system.

4. Compliance with Other Acts and Codes

4.1 This Bylaw is made under the authority of the Local Government Act 2002 for the supply of water to its customers in its capacity as a Water Supply Authority. The supply and sale of water by the Council is subject to:

(a) Statutory Acts and Regulations

(i) Building Act 2004.

(ii) Fire and Emergency Act 2017.

(iii) Health Act 1956.

(iv) Local Government (Rating) Act 2002.

(v) Local Government Act 2002.

(vi) Resource Management Act 1991.

(b) Relevant Codes and Standards, including:

(i) Drinking Water Standards for New Zealand 2005 (revised 2008).

(ii) OIML R49: Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements; Part 2: Test methods and Part 3: Test report format.

(iii) SNZ PAS 4509: 2008 New Zealand Fire Service Fire Fighting Water Supplies Code of Practice.

(iv) NZS 4503:2005 Hand operated fire-fighting equipment.

(v) NZS 4517:2010 Fire sprinkler systems for houses.

(vi) NZS 4515:2009 Fire sprinkler systems for life safety in sleeping occupancies (up to 2000 square meters).

(vii) NZS 4541:2020 Automatic fire sprinkler systems.

(viii) Backflow Prevention for Drinking Water Suppliers Code of Practice 2006, Water New Zealand.

(ix) Water Meter Code of Practice 2003, Water New Zealand.

(x) Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007.

(xi) Waikato Regional Infrastructure Technical Specification.

5. Interpretation

5.1 When interpreting this Bylaw, use the definitions set out in clause 7 unless the context requires otherwise. Where reference is made in this Bylaw to any repealed enactment, such reference should be taken as a reference to its replacement.

5.2 For the purpose of this Bylaw, the word 'shall' refers to requirements that are mandatory for compliance with this Bylaw, while the word 'should' refers to practices that are advised or recommended.

6. Definitions

6.1 For the purposes of this Bylaw, unless inconsistent with the context, the following definitions apply:

Advisory Note	A note which further explains a bylaw clause but does not form part of the bylaw.
Air Gap	A vertical air gap between the outlet of the water supply fitting which fills a storage tank, and the highest overflow water level of that storage tank.
Approved	Approved in writing by the Council, either by an authorised officer of the Council or by resolution of the Council.
Authorised Agent	Any person authorised or appointed by the Council to do anything in respect of the water supply system.
Authorised Officer	Any officer of the Council or other person authorised under the Local Government Act 2002 and authorised by the Council to administer and enforce its Bylaws.
Auxiliary Supply	A water supply, other than the Council's system, on or available to a Customer system. These auxiliary supplies may include water from another provider's public potable water supply or any natural source(s) such as a well, spring, river, stream, or "used waters" or "industrial fluids."
Backflow	The unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system.
Backflow Device	Backflow device or air gap that is designed to prevent the return of flow into the Councils water supply system. These devices can include non-return valves, reduce pressure zone devices, and double check valves.
Boundary	Legal boundary of the site, or in the case of more than one premise on a site, it is defined by the notional boundary of a complying unit site area.

Catchment	An area of land which drains to a waterbody from where a public water supply is drawn.
Commercial Use	The use of land and buildings for the display, offering, provision, sale or hire of goods, equipment or services and includes shops, markets, showrooms, restaurants, cafes, takeaway food bars, professional, commercial and administration offices, service stations, motor vehicle sales, visitor accommodation, the sale of liquor and parking areas associated with any of the above. *Advisory note: Commercial components of retirement villages will be metered and classified as commercial activity.*
Connection	The valve, meter and associated fittings installed and maintained by the Council on the service pipe or at the point of supply.
Council	The Waikato District Council and includes any officer authorised to exercise the authority of the Council.
Customer	A person who has obtained the right to use or direct the manner of use of water supplied by the Council to any premises.
Detector Check Valve	A check (non-return) valve which has a positive closing pressure and a metered bypass to measure flows typically associated with leakage or unauthorised use of a dedicated fire supply.
Domestic Use	Water taken and used for the purpose of providing for individual household use and for human drinking and sanitation needs and excludes any commercial or industrial use.
Development contribution	As defined in the Local Government Act 2002 and the relevant Waikato District Council Development Contributions Policy.
District	The Waikato District.
Extraordinary Supply	A category of on demand supply used for extraordinary use including all purposes for which water is supplied, other than an ordinary supply, and which may be subject to specific conditions and limitations.
Extraordinary Use	Any use of water which is outside of ordinary use and which may be subject to specific conditions and limitations including but not limited to water alerts and emergency provisions. This applies to the following water users: (a) Residential properties with –spas, swimming pools or collapsible pools in excess of 6 cubic metres capacity; (b) Residential properties with fixed garden irrigation systems;

(c) Commercial or business premises (including home-based commercial activities);

(d) Industrial premises.

(e) Any properties at which agricultural, horticultural or viticultural land use is occurring;

(f) Lifestyle blocks (rural supplies);

(g) Fire protection systems other than sprinkler systems installed to comply with NZS 4517;

(h) Outside of Waikato District customers (supply to, or within another local authority);

(i) Temporary suppliers;

(j) Any other property found by Council to be using water above 15m^3/day (a consent from the Waikato Regional Council is required);

(k) Water carriers;

(l) Any other auxiliary supply.

Fees and Charges — The fees and charges for water supply set by the Council.

Fire Main Supply — A category of supply from pipework installed for the purpose of fire protection only.

Individual Customer Agreement — An agreement between the Council and a water user that outlines both parties' rights and responsibilities for the supply and use of water.

Industrial Activity — Any industrial activity and includes:

(a) All types of processing, manufacturing, bulk storage, warehousing, service and repair activities.

(b) Laboratories and research facilities.

Level of Service — The measurable performance standards on the basis of which the Council undertakes to supply water to its Customers.

NZS — New Zealand Standard.

On Demand Supply	A supply which is available on demand direct from the point of supply, subject to the agreed level of service.
On Demand Water Supply Area	An area serviced by a Council owned reticulated water supply system as defined in Schedule 3: Water Supply Area Maps, that is intended to supply water to Customers via on demand supplies with firefighting capability.
Ordinary Supply	A category of on demand supply used solely for domestic purposes, excluding any identified extraordinary water use.
Owner	The person or entity having legal ownership of the premises receiving a supply of water from the Council.
Occupier	The person or legal entity having a legal right to occupy, use all or part of the premises receiving a supply of water from the Council that includes a tenant, lessee, licensee, manager, foreperson or any other person acting in the general management of any premises.
Permit	A permit or written authority issued by an authorised officer.
Person	An individual, corporation sole, or a body of persons whether corporate or otherwise.
Point of Supply	The point on the water pipe leading from the water main to the premises, which marks the boundary of responsibility between the Customer and the Council.
Potable Water	Water that does not contain or exhibit any determinants to any extent that exceeds the maximum acceptable values (other than aesthetic guideline values) specified in the New Zealand Drinking Water Standards applicable at the time.
Premises	The physical location to which a water supply is provided and includes: (a) a property or allotment which is held in a separate certificate of title or for which a separate certificate of title may be issued, and in respect of which a building consent has been or may be issued; (b) a building or part of a building which has been defined as an individual unit by a cross-lease, unit title or company lease; (c) an individual unit in a building where units are separately leased; or

(d) land held in public ownership (e.g. reserve) for a particular purpose.

Allotment means the same as defined in the Land Transfer Act 1952.

Property A property or allotment which is held under separate certificate of title and a separate rating unit and showing on the Rating Information Database

Prescribed charges Charges applicable at the time of connection may include:

(a) Payment to the Council for the cost of the physical works required to provide the connection.

(b) A development contribution determined in accordance with the Local Government Act 2002.

(c) A financial contribution determined in accordance with the Resource Management Act 1991.

(d) Bacteriological and chemical testing as per the Drinking Water Standards for New Zealand to ensure connection is safe.

(e) Individual agreement charges.

Public Notice A notice published in:

(a) One or more daily newspapers circulated in the region or district of the Council;

(b) One or more other newspapers that have at least an equivalent circulation in that region or district to the daily newspapers circulating in that region or district; or

(c) Includes any other public notice that the Council thinks desirable in the circumstances.

Restricted Flow Supply A type of water supply connection where a small flow is supplied through a flow control device, and storage is provided by the Customer to cater for demand fluctuations.

Restrictor A flow control device installed within the connection to control the flow rate of water to a Customer's premises.

Restricted Water Supply Area An area serviced by a Council owned reticulated water supply system outside on demand areas and defined in Schedule 3: Water Supply Area Maps Water is supplied through a flow control device and customers are required to provide onsite

storage to cater for demand fluctuations.

Service Pipe	The section of water pipe between a water main and the point of supply.
Service Valve	The valve at the Customer end of the service pipe used to control and/or isolate the supply.
Storage Tank	Any tank having a free water surface in which water supplied by the Council is stored for use.
Supply Pipe	The section of pipe between the point of supply and the Customer's premises through which water is conveyed to the premises.
Water Alert Level	Classification system used for applying water conservation restrictions.
Water Carrier	Any individual drinking-water carrier or company registered with the Ministry of Health as a recognised carrier of drinking-water.
Water Supply System	All those components of the water supply network between the point of abstraction from the natural environment and the point of supply. This includes but is not limited to: (a) catchments, wells, infiltration galleries, intake structures, open raw water storage ponds/lakes/reservoirs, falling and rising mains, treatment plants, treated water reservoirs, trunk mains, service mains, rider mains, pump stations and pumps, valves, hydrants, scour lines, service pipes, boundary assemblies, meters, backflow prevention devices and tobies.
Water Unit	The basis of measurement for water supply as determined by the Council. One unit is equal to one cubic metre.

7. Protection of Water Supply System

7.1 Water Supply System

7.1.1 Access and connection to System

(a) No person other than the Council and its authorised agents shall have access to any part of the water supply system, unless with prior approval.

(b) Except as set out in Clause 7.1.2 (Fire Hydrants), no person shall make any connection or interfere with any part of the water supply system, unless with prior approval.

(c) Where the water supply system becomes contaminated due to unauthorised access, the Council may recover cost of remediation of contamination.

(d) Any person causing damage which occurs to a Council water supply system during unauthorised access shall be liable for the cost of repair and any other costs the Council incurs as a result for the incident.

7.1.2 Fire Hydrants

(a) No person may take water from a fire hydrant unless that person is:

(i) is taking the water for the purposes of firefighting and is a fire and emergency personnel – as defined in the Fire and Emergency New Zealand Act; or

(ii) is Council or its authorised agents; or

(iii) Is a current permit holder, being those persons who, after having submitted an application to the Council are subsequently approved to draw water from designated tanker filling points or a fire hydrant, and the taking of water is in accordance with any conditions attached to that approval.

(b) Any person using a fire hydrant in breach of subclause (a) must immediately remove the standpipe when requested to do so by Council or their agent.

(c) Any person using a fire hydrant pursuant to subclause (a) (3) is liable to Council for any damage or loss caused to the fire hydrant or the water supply network as a result of that use.

(d) Without prejudice to other remedies available, the Council may seize and impound any equipment used by an offender to gain access to, or draw water from a fire hydrant, and assess and recover the value of water drawn without authorisation and any other associated costs.

(e) Permit holders shall only use approved blue coloured metered standpipes and have two non-return valves to draw water from fire hydrants.

7.1.3 Working around Buried Services

(a) No person shall carry out any excavation without first reviewing the Council's records of the location of its buried services to establish whether or not Council services are located in the vicinity of the proposed works. The Council may charge a fee for the provision of this information and does not guarantee the accuracy or completeness of such information.

(b) Where appropriate the Council may in its absolute discretion mark out to within ±0.5m on the ground the location of its services, and nominate in writing any restrictions on the work it considers necessary to protect the integrity of the water supply system. The Council shall charge for this service.

(c) All excavations within the road reserve is subject to the permit process of the appropriate road controlling authority.

(d) The Council may require the independent supervision of works which may be in the vicinity of its buried services.

(e) Every person excavating or working around the Council's buried water supply services shall take due care to ensure that the services are not damaged and that bedding and backfill is reinstated in accordance with the appropriate Council specification.

(f) Any damage which occurs to the Council services shall be reported to the Council immediately. The person causing the damage shall be liable for the cost of repair and any other costs the Council incurs as a result of the damage.

Advisory note: All excavation and trenching work carried out within the road corridor must be carried out in accordance with the National Code of Practice for Utility Operators' Access to the Transport Corridor.

7.2 Protection of Water Sources

7.2.1 Catchment Classes

Surface water and groundwater catchment areas from which untreated water is drawn for the purposes of water supply may be designated by Council as:

(a) Controlled;

(b) Restricted; or

(c) Open.

These catchments are also subject to National Environmental Standards for Sources of Human Drinking Water.

7.2.2 Controlled Catchments

(a) No person shall enter Controlled Catchments except those specifically authorised or permitted in writing by the Council.

(b) Every person on any Controlled Catchment Area or land held by the Council as a water reserve will, upon demand, produce any such permit for inspection.

(c) The Council may, at any time, by notice in writing, revoke or suspend any such permit for such time as may be stated in such notice.

(d) No permit issued by Council may be transferred. Every person shall, upon the request of an authorised officer of the Council, immediately leave the controlled catchment area or land held by the Council as a water reserve.

(e) No person shall obstruct or hinder any duly appointed officer of the Council in the exercise of any powers vested in that officer under this bylaw.

7.2.3 Restricted Catchments

(a) Certain activities are permitted within Restricted Catchment areas, such activities being limited to:

(i) Tramping;

(ii) Hunting;

(iii) Trapping;

(iv) Shooting; or

(v) Fishing

(b) No person may camp overnight in a Restricted Catchment area.

(c) Every person shall, upon the request of an authorised officer of the Council, immediately leave the Restricted Catchment area.

7.2.4 Open Catchments

In open catchment areas whether designated or not, there will generally be no restriction on activities other than the provisions of the Regional or the District Plan and the National Environmental Standards.

7.2.5 Spillages and Adverse Events

(a) In the event of a spillage, or any event which may compromise potable water or the water supply system, the person responsible for the event shall advise the Council immediately. This requirement shall be in addition to those other notification procedures which are required for other authorities.

(b) Where the owner or occupier of a premise allows or permits any item or items on the premises that may potentially contaminate or leach into the water supply and to accumulate on the premises contained within the catchment, the Council may request the owner or occupier to contain and remove the item or items using a Council approved method and location.

(c) If the item(s) are not removed within the period specified, the Council or its authorised agents may remove the items and recover the costs from the Customer associated with containment, removal and disposal.

8. CONDITIONS OF SUPPLY

8.1 Connection, Disconnection and other works

(a) No person shall, without Council's approval:

(i) connect to the water supply network;

(ii) disconnect from the water supply network;

(iii) carry out any other works on, or in relation to, the water supply network;

(iv) tamper with any, access point, valve on, or otherwise with the water supply network.

(b) Any person wishing to connect to or disconnect from the water supply network, or to otherwise carry out works on such a network or change level of service or end use of water supplied or supply changes or increase supply, must make a written application for approval to Council on the prescribed form, and must provide with that application all information relating to the application as is specified by Council.

(c) Council may grant approval to such connection, disconnection or other works, as the case may be, and may impose conditions which must be complied with in the exercise of the approval.

The Council may require a Customer to enter into an individual Customer agreement and supply a Water Conservation and Demand Management Plan based on the Customer's water demand requirements.

(d) Without limiting subclause (c), a condition imposed under that subclause may require that the connection, disconnection or works comply with any relevant code of practice.

(e) Council may refuse an application for approval to connect or disconnect to a network where:

(i) the applicant has not paid fees or charges associated with the connection (including development contributions) within 20 working day that have been required by Council to continue with installation, or has refused to provide such information relating to the application as has been specified by Council; or

(ii) Council has a documented record of the applicant's non-compliance with this bylaw or any previous water supply bylaw, codes of practice, or approvals granted under such bylaws or codes of practice; or

(iii) in Councils reasonable opinion, there is insufficient capacity in the network to accommodate the connection; or

(iv) in Council's reasonable opinion, the connection could compromise its ability to maintain levels of service in relation to the water supply including volume and/or pressure required for firefighting; or

(v) the connection is outside the area currently served by the water supply, regardless of its proximity to any specific component of the water supply; or

(vi) in Council's reasonable opinion, refusal is necessary to protect the water supply network, the health and safety of any person, or the environment.

8.2 Change of Use

(a) An application shall be submitted to the Council for approval if a Customer seeks:

(i) a change in the level of service; or

(ii) end use of water supplied to the premises;

(iii) a change in supply from ordinary to extraordinary (see clause 8.5) or vice versa; or

(iv) a physical change of location or size.

(b) Any application under this clause 8.2 shall be treated as a new application for the purposes of clause 8.1 of this Bylaw.

8.3 Point of Supply

8.3.1 Ownership and Responsibility for Maintenance

(a) The Council shall own and maintain the service pipe and fittings up to the point of supply. The Customer shall maintain the supply pipe and fittings beyond the point of supply.

Advisory Note: The Council gives no guarantee regarding the serviceability of the valve located on the service pipe. Where there is no Customer stopcock, or where maintenance is required between the service valve and the Customer stopcock, the Customer may use the service valve to isolate the supply. However the Council reserves the right to charge for maintenance of this valve if damaged by such Customer use.

(b) The Customer shall maintain the area in and around the point of supply by keeping it free of soil, growth, or other matter or obstruction which prevents, or is likely to prevent, convenient access to the point of supply.

(c) Unless otherwise specified in this Bylaw, change of ownership (between Council and Customer), of water supply pipes and fittings occurs at the point of supply.

8.3.2 Location

(a) For each individual property there shall be only one point of supply, unless otherwise approved in writing by the Council. A point of supply shall be located in the position as shown in Schedule 1. Where fences, walls or other permanent structures make it difficult to locate it at the required position, the point of supply shall be located as close as possible to the required position indicated in Schedule 1. The location of the point of supply in any position other than the required position shall require specific approval from Council. Any new point of supply shall be located outside the boundary of the premises in the position approved by the Council.

(b) Existing points of supply may be located either inside or outside the property boundary. The Council may relocate the point of supply when deemed appropriate or on request from the Customer. The relocation of the point of supply, pipework and fittings from the new point of supply to the existing Customer supply pipe shall be the responsibility of the Council for six months from the time of relocation.

8.3.3 Multiple Ownership of Premises

Where the premises are held in multiple ownership, the point of supply shall be as follows:

(a) In respect of company ownership for a company share/block scheme (Body Corporate), the point of supply shall be located as shown in Schedule 1 or as or as close as possible where fences, walls, or other permanent structures make it difficult to locate it at the required position, unless otherwise approved. Other positions shall require specific approval from Council.

(b) For Leasehold/Tenancy in Common Scheme (Cross Lease), Strata Title, Unit Title and any other form of multiple ownership, each Customer shall have an individual supply with the point of supply determined by agreement with the Council. In specific cases other arrangements may be acceptable, subject to the Council's approval.

(c) Where a bulk meter feeds multiple units, a unit title must be nominated by the company or body corporate (whichever is relevant) to hold the bulk meter for payment purposes.

8.4 Access to, and about the Point of Supply

8.4.1 Rights of Access

(a) Where the point of supply is on private property the Customer shall allow the Council access to the point of supply between 7.30am and 6.00pm on any day for:

(i) Meter reading without notice being given.

(ii) Checking, testing and maintenance work, with notice being given when possible.

(b) For works required outside the above hours (such as for night-time leak detection), the Council shall give provide notice to the Customer.

(c) If, after giving reasonable notice, an authorised agent is prevented from accessing the point of supply at any of the above times and a return visit is required, a fee may be charged in accordance with the fees and charges. Where the point of supply is on private property the Customer shall allow the Council access to the point of supply between 7.30am and 6.00pm on any day for:

(d) In accordance with section 173 of the Local Government Act 2002, where there is an emergency, the Council shall enter the property without notice and the Customer shall allow the Council unobstructed access to, and about the point of supply at any hour.

8.5 Types of Water Supply

8.5.1 General

Water supplies shall be classified as either 'on demand' or 'restricted flow' and the use of water from the supply shall be either 'ordinary' or 'extraordinary'.

8.5.2 On Demand Supply

(a) All premises situated within the on demand water supply area shall be entitled to an ordinary supply of water subject to:

(i) Any restrictions on water use made by the Council under clause 8.8.1 of this Bylaw;

(ii) Payment of the appropriate charges in respect of supply to that premises;

(iii) Any other charges or costs associated with subdivisional development; and

(iv) Any other relevant conditions in section 8 of this bylaw.

(b) Any premises which are located within the on-demand water supply area but do not connect to the public water supply may still be charged an availability charge in accordance with Council's fees and charges.

(c) The Council shall be under no obligation to provide an extraordinary supply of water (see also the provisions of clause 8.8.1 of the Bylaw).

(d) The Council shall charge customers for the provision of the on-demand supply by either:

(i) A targeted rate based on rating unit; or

(ii) The volume passing through a meter per cubic metre; or

(iii) Both (i) and (ii) – These charges are as set by the Council.

(e) For premises which use a fire protection system complying with NZS 4517, in order for that use to be classified as ordinary, the Customer shall comply with the conditions set under clause 8.8.

8.5.3 Restricted Flow Supply

(a) Restricted flow supply shall be available to premises in restricted supply areas under special conditions set by the Council. Customers receiving a restricted flow supply shall make provision for onsite water storage of a minimum volume of $22m^3$ or equivalent of at least 48 hours of average water use where this is greater than $22m^3$.

(b) This may include for the purposes of:

(i) Rural supply within district.

(ii) Water demand management (including for drought, misuse and non-remedy of water leaks).

(iii) Properties subject to restriction under section 69ZH (Duty to provide information to territorial authority) of Health Act 1956.

(c) The water supply shall be restricted so as to deliver $1.8m^3$ per day or the agreed number of water units at a steady flow rate through a water meter.

(d) The Council shall charge for the restricted supply by:

(i) A targeted rate based on rating unit; or

(ii) The volume passing through a meter per m^3; or

(iii) Both (i) and (ii) – These charges are as set by the Council.

(e) All restricted supply storage tanks must include a suitable, testable backflow prevention device located at the boundary of the property.

(f) Properties identified without flow restrictors in restricted supply areas may be given twelve weeks written notice to install onsite water storage of a minimum volume of 22 cubic metres or the equivalent of at least 48 hours of average water use where this is greater than 22 cubic metres. After this period Council shall install the appropriately sized flow restrictor.

(i) Any property owner who receives written notice may make a written application within 10 working days of receiving such notice for an exemption.

(ii) Matters which will be taken into account when assessing an application for exemption include (but are not limited to):

- Location of the property;
- The basis on which the exemption is claimed;
- Any other matter which the Council deems relevant.

(g) Owners are allowed to transfer water allocations subject to following conditions:

(i) The initial property retains a 1.8 cubic metre allocation;

(ii) The transfer has to take place within the same water supply;

(iii) The new property to which water allocation is transferred or sold has to be located at a place where the Council is able to supply the allocation without further upgrading or extension works;

(iv) If upgrading or extension works are required then the Customer transferring the allocation has to pay up-front for the full cost of the upgrading or extension works; and

(v) The Customer transferring the allocation has to pay for the connection cost to the new property and a transfer fee.

(h) Council allows property owners to apply for disconnection from the restricted water supply. No refund either in part or whole of any development contribution will be made. Such an application must state the alternative water source the consumer will rely on. Council charges those property owners a disconnection fee to recover costs of effecting the disconnection. Should the owner wish to reconnect to a Council water scheme, reconnection fees will be charged.

Advisory Note: The Council gives no guarantee regarding the serviceability of the valve located on the service pipe. Where there is no (Owner) stopcock or where maintenance is required between the service valve and the (Owner) stopcock, the (Owner) may use the service valve to isolate the supply in an emergency. However, Council reserves the right to charge for maintenance of this valve if it is damaged by the (Owner) during use for this purpose.

8.6 Meters and Flow Restrictors

All water connections in Waikato District shall be metered.

8.6.1 Installation of meters

(a) Meters for on demand supplies, and restrictors for restricted flow supplies shall be supplied, installed and maintained by the Council, and shall remain the property of the Council.

(b) The Council may fit a meter to any connection on any Premises at any time for the purposes of determining water consumption.

(c) Where a premises is supplied with an on demand water supply and is not metered, the Council reserves the right to fit a meter at the Customers cost and charge accordingly.

8.6.2 Location

Meters and restrictors shall be located in a position where they are readily accessible for reading and maintenance, and if practicable immediately on the Council side of the point of supply.

8.6.3 Accuracy

(a) Meters shall be tested as and when required by the Council.

(b) The flow restrictors shall be accurate to within ±10% of their rated capacity.

(c) Any Customer who disputes the accuracy of a meter or restrictor may apply to the Council for it to be tested provided that the testing is not requested within six months of any previous test. If the test shows the meter is accurate, the Customer shall pay a fee in accordance with the Council's fees and charges. A copy of independent certification of the test result shall be made available to the Customer on request.

(d) Restrictors shall be tested by measuring the quantity of water that flows through the restrictor within a period of not less than one hour, at the expected minimum operating pressure.

8.6.4 Adjustment

(a) If a test is carried out and the meter is found to register a consumption which is different to the quantity of water which has actually passed through the meter, the Council shall make an adjustment in accordance with the results shown by such tests, backdated for a period determined by the Council but not exceeding 12 months, and the Customer shall pay a greater or lesser amount according to the adjustment.

(b) Where a meter is under-reading by more than 20% or has stopped, the Council reserves the right to charge for the amount of water assessed as having been used over the past billing period, taking into account any seasonal variations in water demand, and charge the customer accordingly.

(c) Where a meter is over-reading, the Council shall make appropriate adjustments to the Customer's account, based on a period of similar use and backdated to when it is agreed the over-reading is likely to have occurred.

8.6.5 Estimating Consumption

(a) Where a meter is damaged, ceases to register, has been removed or where the seal or dial of the meter is broken, or the meter has otherwise been interfered with, the Council shall estimate the consumption for the period since the previous reading of such meter, (based on the average of the previous four billing periods charged to the Customer) and the Customer shall be liable for the amount estimated.

(b) If the average of the previous four billing periods would be an unreasonable estimate of the consumption (due to seasonal or other causes), the Council may consider other evidence for the purpose of arriving at a reasonable estimate, and the Customer shall pay according to such an estimate.

(c) Where the Customer is a non-profit organisation, and the meter indicates a significant increase in consumption, and it is established that the increase is caused by a previously unknown leak, the Council may estimate consumption as provided for in clause 8.6.5 (a) providing that the Customer repairs the leak as soon as is practicable.

(d) Where an unauthorised connection has been made to the Council's water supply system, the Council will estimate the consumption for the period from when the connection was made, using the uniform charge for water on a pro rata basis. Where a meter has been installed without approval, and such meter complies with Council's standards for meters and installation, the full consumption registered on the meter shall be payable by the current occupier of the premises. Payment of the estimated charge does not preclude Council from taking any other enforcement action available to it.

8.6.6 Incorrect Accounts

(a) Where a situation occurs, other than as described in clause 8.6.5, and the recorded consumption does not accurately represent the actual consumption on a property, the account shall be adjusted using the best information available to the Council. Such situations include, but are not limited to, misreading of the meter, errors in data processing, meters assigned to the wrong account, and unauthorised water supplies.

(b) Where an adjustment is required in favour of the Council or the Customer, the adjustment shall not be backdated more than 12 months from the date the error was detected.

8.6.7 Leaks

(a) It is the Customer's responsibility to detect and fix all leaks from taps and pipes, stop overflows from cisterns, hot water cylinder exhausts or stock troughs. If a leak is visible from fixtures and is not repaired, no leak relief remission will be available.

(b) Relief may be available, at Council's discretion for leaks which are undetected.

(c) Any Customer wishing to apply for relief must make such application in writing in accordance with Council's Water Leak Remission Policy.

8.7 Levels of Service and Continuity of Supply

(a) Although Council shall make all endeavors to provide water in accordance with the level of service set out in Schedule 2, due to practical and physical limitations, the Council cannot guarantee an uninterrupted or constant supply of water in all circumstances, or the continuous maintenance of any particular water pressure.

(b) Where planned permanent or temporary works will affect an existing supply, the Council shall inform or give notice to all Customers who, in the opinion of Council, are likely to be substantially affected.

(c) If a Customer has a particular requirement for an uninterrupted level of service (flow, pressure, or quality), it shall be the responsibility of that Customer to provide any storage, back-up facilities, or equipment necessary to provide that level of service.

8.8 Demand Management

(a) Where required by rules in a District Plan, owners must maintain devices that have been installed for the purposes of water demand management and in accordance with an associated integrated catchment management plan.

8.8.1 Water Alert and Emergency Restrictions

(a) In circumstances where natural hazards (such as floods, droughts or earthquakes) or accidents result in disruptions to the supply of water, Council may declare a water alert level or an emergency for the purposes of the supply of water and shall be exempt from the levels of service requirements.

(b) During a water alert and/or emergency the Council may restrict or prohibit the use of water for any specified purpose or period, and for any or all of its Customers. Such restrictions shall be advised by public notice. The Customer shall comply with any restrictions imposed by Council, until such time as Council advises the restrictions are no longer in place

(c) The Council may after serving notice and taking all practicable steps to contact a Customer, restrict and or meter the supply to reduce unnecessary and unauthorised water use and wastage where it deems necessary.

8.8.2 Maintenance and Repair

(a) In circumstances where a scheduled maintenance shutdown of the supply is required, Council shall make all practicable attempts to notify Customers prior to any work commencing. Where Council is unable to notify the Customer, or immediate action is required, the Council may restrict the supply without notice, subject to its obligations under the Health Act 1956.

(b) Where a Customer has assets restricting the maintenance of a Council water supply system, the Council shall not be responsible for damage caused to the asset in order to maintain the Council water supply system.

(c) If Council must carry out repairs or maintenance to privately owned supply pipes and/or water assets, the costs of such repairs or maintenance may be recovered from the Customer responsible for the pipes and/or assets.

8.9 Liability

The Council shall not be liable for any loss, damage or inconvenience incurred by a Customer (or any person using the supply) because of a reduced level of service of, or interruptions to the water supply.

8.10 Fire Protection Connection

8.10.1 Connection Application

An application to install a connection for fire protection purposes must be made, in writing, to the Council. Council may impose any conditions it determines are appropriate.

8.10.2 Design of Fire Protection Systems

As part of the application to install a connection for fire protection purposes, the Customer shall demonstrate to the Council that the available supply is adequate for the intended purpose. It shall also be the Customers responsibility to monitor the supply to ensure it continues to be adequate for the intended purpose.

Advisory Note: For further information on fire safety water sprinkler or storage requirements refer to the SNZ PAS 4509: 2008 New Zealand Fire Service Fire Fighting Water Supplies Code of Practice. Customers may also wish to consult with the New Zealand Fire Service Fire and Emergency New Zealand about suitable measures to provide firefighting protection for their properties.

8.10.3 Fire Protection Connection Metering

(a) Where a fire connection has been installed (or located) so that it is likely or possible that water may be drawn from it by any person for purposes other than firefighting, the Council may charge for the usage.

(b) Where the supply of water to any premises is metered, fire hose reels shall be connected only to the metered supply, not to the fire protection system. The water supply to fire hose reels shall comply with the requirements of NZS 4503:2005 Hand operated fire-fighting equipment.

(c) Water used for the purpose of extinguishing fires shall be supplied free of charge. Where the fire protection connection is metered, and water has been used for firefighting purposes, the Council shall estimate the quantity of water used, and credit to the Customer's account an amount based on such an estimate.

(d) Ongoing Testing and Monitoring Owners intending to test fire protection systems in a manner that requires a draw-off of water must obtain the approval of the Council beforehand. Water used for routine flushing and flow testing does not constitute waste, but the quantity of water used may be assessed and charged for by the Council.

8.11 Backflow Prevention

8.11.1 Customer Responsibility

In accordance with the Health Act 1956, the Building Act 2004 and clause G12 Water Supplies of the Building Regulations 1992, it is the Customer's responsibility to take all necessary measures on the Customer's side of the point of supply to prevent water which has been drawn from the Council's water supply from returning to that supply. All necessary measures shall include:

(a) Backflow prevention either by providing an adequate air gap, or the use of an appropriate backflow prevention device; and/or

(b) The provision for the exclusion of any cross-connection between the Council water supply and:
   (i) Any other water supply (potable or non-potable)

   (ii) Any other water source

   (iii) Any storage tank

   (iv) Any other pipe, fixture or equipment containing chemicals, liquids, gases, or other non-potable substances.

Advisory Note: Fire protection systems that include appropriate backflow prevention measures would generally not require additional backflow prevention, except in cases where the system is supplied by a non-potable source or a storage tank or fire pump that operates at a pressure in excess of the Council's normal minimum operating pressure

Advisory Note: The type of back flow prevention device to be used is dependent on the risk to the water supply posed by the Customer.

8.11.2 Unmanaged Risk

Where a Customer is unable to demonstrate that the risk of backflow is adequately managed or fails to take all necessary measures as required in clause 8.11.1 of the Bylaw, the Council may undertake the required works and fit a backflow prevention device on the Council side of the point of supply. In accordance with section 186 of the Local Government Act 2002, Council may recover such costs as a debt from the Customer.

Council will undertake a periodic surveying of existing connections to determine integrity and suitability of the backflow prevention device installed from each point of supply.

Advisory Note: Testable backflow prevention devices, require annual testing by a qualified or Council approved contractor. A test report shall be submitted to the Council for the Customer owned devices.

8.12 Council Equipment and Inspection

8.12.1 Care of Water Supply System

The Customer of the premises shall not damage or tamper with any part of the water supply system, including but not limited to pipe-work, valves, meters, restrictors, chambers, and backflow prevention devices. Should any damage occur which requires repairs, the Council reserves the right to recover the cost of such damage and/or repairs as a debt from the Customer.

8.12.2 Inspection

In accordance with section 182 of the Local Government Act 2002, the Customer shall allow the Council or its agents, with or without equipment, access to any area of the premises for the purposes of determining compliance with this Bylaw.

8.13 Plumbing System

8.13.1 The Customer's plumbing system shall be designed, installed and maintained, both in its component parts and its entirety, to ensure it complies with the Regional Infrastructure Specifications (RITS), Building Act 2004 and the New Zealand Building Code and is compatible with the water supply service as listed in Schedule 2.

8.13.2 Quick-closing valves, pumps, hydraulically driven equipment or any other equipment which may cause pressure surges or fluctuations to be transmitted within the water supply system, or compromise the ability of the Council to maintain its stated levels of service, shall not be used on any piping beyond the point of supply. In special circumstances such equipment may be approved by the Council at its discretion. A gate valve shall not be used to control the water supply flow to the premises.

8.14 Prevention of Water Loss and Waste

8.14.1 The Customer shall not allow water to run to waste from any pipe, tap, or other fitting, nor allow the condition of the plumbing within the premises to deteriorate to the point where leakage or wastage occurs.

8.14.2 Water is provided by the Council for consumption purposes only. The Customer shall not use water or water pressure directly from the supply for driving lifts, machinery, educators, generators, or any other similar device, unless specifically approved by the Council.

8.14.3 The Customer shall not use water for a single pass cooling system or to dilute trade waste prior to disposal, unless specifically approved by the Council.

8.14.4 Where a Customer ignores advice from the Council to repair an on-going leak, the Council may after serving notice, repair the leak and charge the Customer all associated cost as provided in the Local Government Act 2002.

Advisory Note: The Waikato District Plan sets out water saving measures required for water supply connections.

8.15 Payment

8.15.1 The Customer shall be liable to pay for the supply of water and related services in accordance with the Council's rates, fees and charges prevailing at the time.

8.15.2 The Council may recover unpaid water rates in respect of the supply of water as prescribed in the Local Government (Rating) Act 2002 from the owner of a premises, the occupier of a premises, or both.

8.16 Transfer of Rights and Responsibilities

8.16.1 The Customer shall not transfer to any other party the rights and responsibilities set out in this bylaw.

8.17 Change of Ownership

8.17.1 In the event of a premises changing ownership the new owner will be recorded as the customer at those premises from the date of notification. Where the premises are metered, the outgoing Customer shall give the Council ten working days' notice to arrange a final meter reading.

8.17.2 The Council reserves the right to reassess the conditions of supply when a change of ownership occurs.

8.17.3 The owner of the premises at the time of the consumption is responsible for any water charges.

8.18 Disconnection at the Customer's Request

The Customer shall give 10 working days notice in writing to the Council of a requirement for disconnection of the supply. Disconnection shall be at the Customer's cost.

9. BREACHES

9.1 Breaches of conditions of supply

9.1.1 The following are deemed to be breaches of the conditions to supply water.

(a) An incorrect application for supply which fundamentally affects the conditions of supply;

(b) Failure to meet any obligations placed on the Customer under all Codes and Standards specified in clause 5 of this Bylaw;

(c) An act or omission including but not limited to any of the following:

(i) Any tampering or interference with Council equipment/assets, either directly or indirectly;

(ii) Failure to pay the appropriate charges by the due date;

(iii) Frustration of the Council's ability to adequately and effectively carry out its obligations;

(iv) Failure to repair a leak, or in any way willfully allowing water to run to waste, or to be misused;

(v) The fitting of quick-closing valves, pumps, or any other equipment which may cause pressure surges or fluctuations to be transmitted within the water supply system, or compromise the ability of the Council to maintain its stated levels of service (subject to clause 8.5 of this Bylaw);

(vi) Failure to prevent backflow;

(vii) Failure to maintain, inspect backflow;

(viii) Using water or water pressure directly from supply for driving lifts, machinery, educators, generators, or any other similar device, unless specifically approved by the Council;

(ix) Using water for a single pass cooling or heating system, or to dilute trade waste prior to disposal, unless specifically approved;

(x) Extending by hose or any other pipe a private water supply beyond that Customer's property;

(xi) Providing water drawn from the Council supply to any other party without approval of the Council;

(xii) Unauthorised removal of flow restrictors.

(d) Every person commits a breach of this Bylaw and commits an offence who:

(i) Does permits or allows anything to be done, which is contrary to this bylaw;

(ii) Fails to do or perform any act, or thing, that he or she is required to do by this Bylaw, within the time and in the manner required by the Bylaw, or any part of it;

(iii) Commits any breach of the terms and conditions of this Bylaw;

(iv) Does anything prohibited by this Bylaw;

(v) Fails to comply with any notice given under this Bylaw or any part of it or any condition that is part of any notice granted by the Council;

(vi) Where required, fails to obtain written approval or having obtained written approval fails to abide by the conditions (if any);

(vii) Obstructs or hinders any authorised officer in the performance of any duty or in exercising any power conferred by this bylaw;

(viii) Tampers or interferes with any part of the Council owned water supply system without a permit;

(ix) Withdraws water from a fire hydrant without authorisation from the Council for any other purpose than fire protection;

(x) Fails to comply with water use restriction or prohibitions introduced by the Council for any specific purpose;

(xi) Fails to meet any obligations placed on the Customer through any permit conditions;

(xii) Fails to meet any obligations placed on Customer through an individual Customer agreement;

(xiii) Other than the Council or its authorised agents, who accesses the water supply system without a valid permit breaches this bylaw.

9.1.2 In the event of a breach of any provision of this bylaw, the Council shall serve notice on the Customer advising the nature of the breach, the steps to be taken, and required timeframe to remedy the breach to the satisfaction of the Council beyond timeframe indicated. If the Customer persists with the breach the Council reserves the right to:

(a) Reduce the flow rate of water to the Customer without notice. Reinstatement of full supply shall be re-established only after the Customer completes payment of the appropriate fee and remedy of the breach to the satisfaction of the Council.

(b) Install a water meter. The Customer will also be charged for the ongoing supply of water as per Council's fees and charges for water supply as determined by Council from time to time.

(c) For extraordinary supply – disconnect the water supply for all purposes other than domestic water use.

(d) If the breach is such that the Council is required to disconnect the supply for health or safety reasons, disconnection may occur immediately and without further notice to the Customer.

9.2 Interference with equipment

Any tampering or interfering with Council equipment, either directly or indirectly, shall constitute a breach of this Bylaw.

10. Offences and Penalties

10.1 A person who fails to comply with the requirements of this Bylaw commits a breach of this Bylaw and is liable to a penalty under the Local Government Act 2002 or under the Health Act 1956.

11. Schedules

The following schedules can be amended through a Council resolution.

Schedule 1: Examples showing Single/Manifold Connection

Schedule 2: Table 1 Compatibility Features

Schedule 3: Water Supply Area Maps

12. General

12.1 Any notice, order or other document which is required by this bylaw to be served or given or sent to any person shall be deemed to have been duly served given or sent if delivered to such person or left at his or her residence or workplace or posted to such person at his or her last known address.

12.2 Any resolution of the Council may be amended, rescinded or reinstated by a further resolution of the Council.

This bylaw was made pursuant to a resolution passed by the Waikato District Council on 8 September 2014.

THE COMMON SEAL of WAIKATO DISTRICT COUNCIL was hereto affixed in the presence of:

Mayor

Chief Executive

THE WAIKATO DISTRICT COUNCIL THE COMMON SEAL OF

This bylaw was reviewed and amended on 20 September 2021 A further review will occur on or before 20 September 2028.

Activity	Key Date	Council Resolution
Bylaw made	01 October 2014	
Bylaw reviewed	20 September 2021	
Next review due date	20 September 2028	

Schedule 1: Examples showing Single/Manifold Connection

Example 1 – With Street Frontage

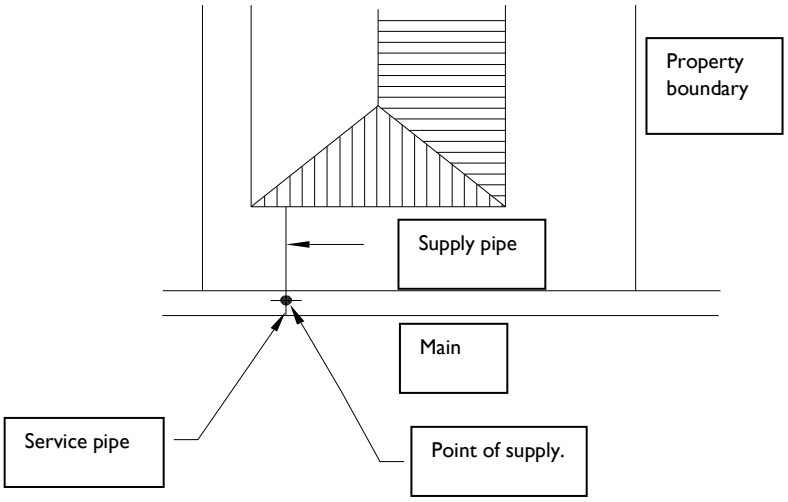


Figure 1: Point of supply outside property boundary

Example 2 – Rear lots on right of way (up to 2 customers)

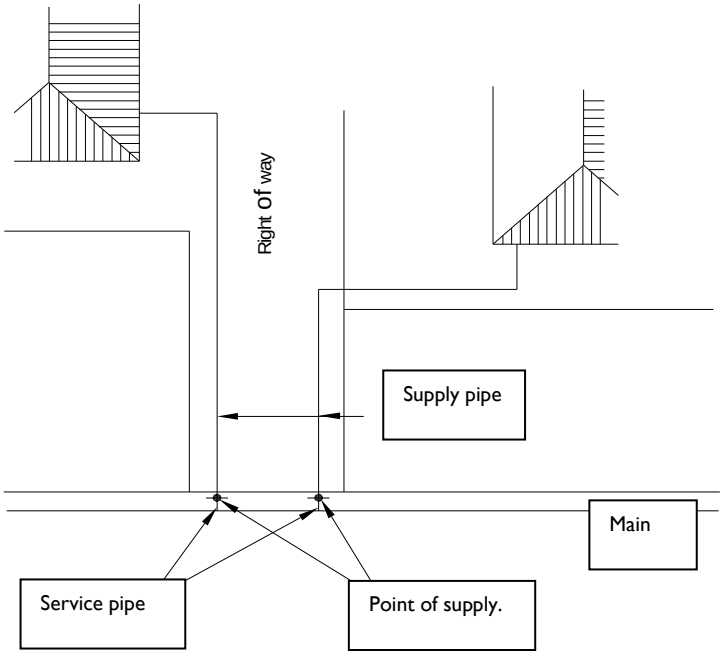


Figure 2: Point of supply outside property boundary

Example 3 – Rear lots on right of way (3 or more customers)

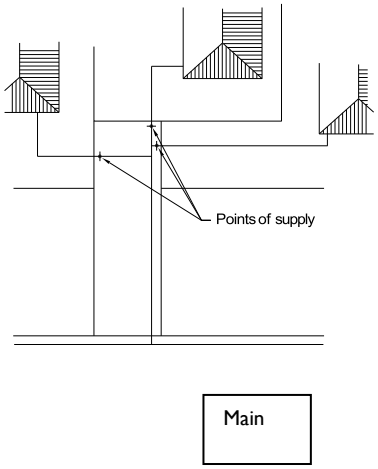


Figure 3: Point of supply outside property boundary

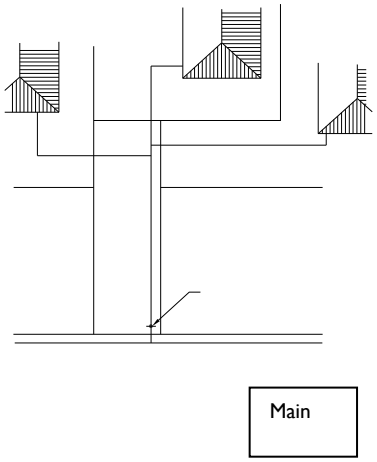


Figure 4: Common point of supply

Example 4 – Industrial, commercial, domestic fire and service connections (including schools)

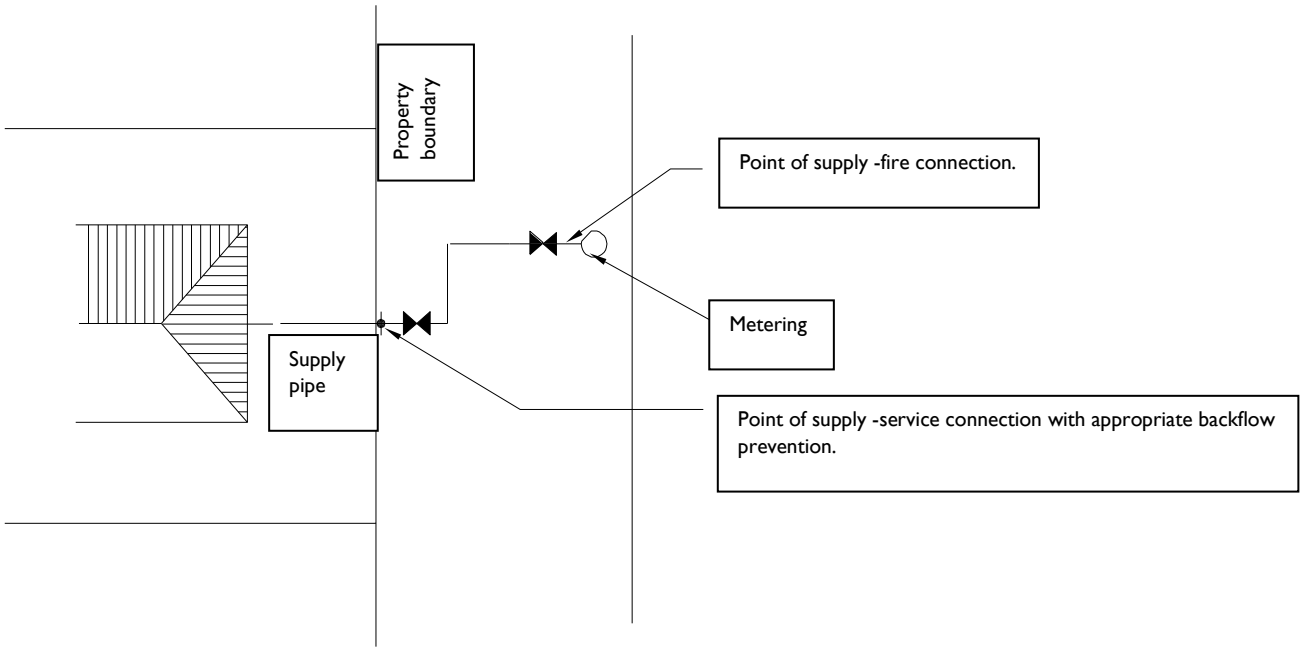


Figure 5: Combined fire and service connection

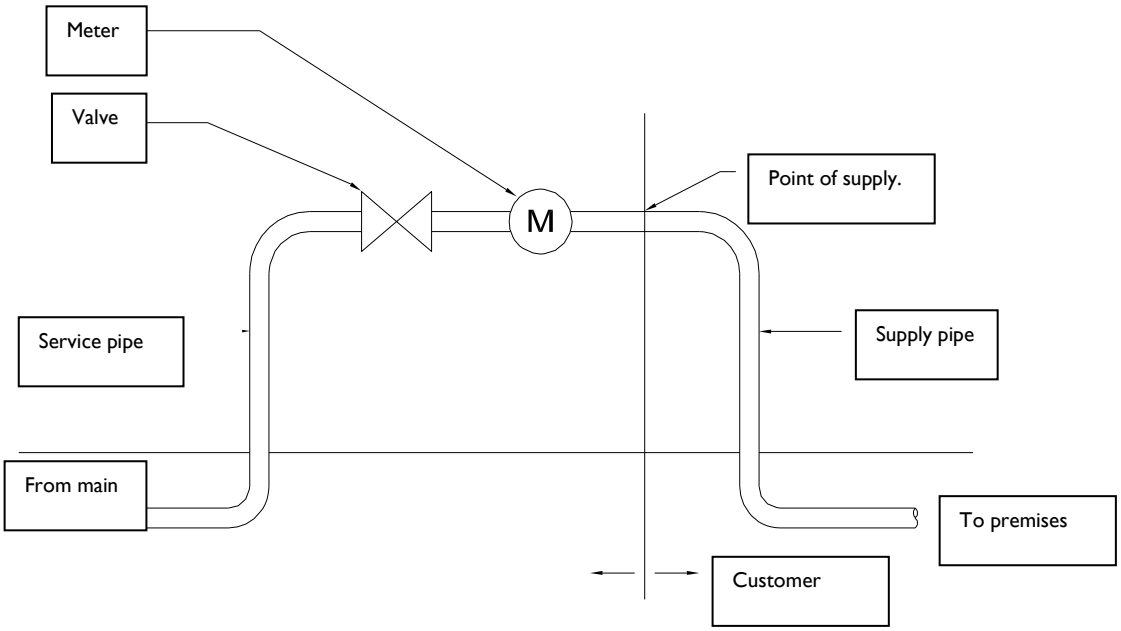


Figure 6: Domestic metered supply

Note:

(1) Point of supply is tail piece of boundary box, meter, or service valve regardless of property boundary.

(2) The New Zealand Building Code may require the Customer to install additional backflow prevention devices within the site, which will remain the responsibility of the Customer.

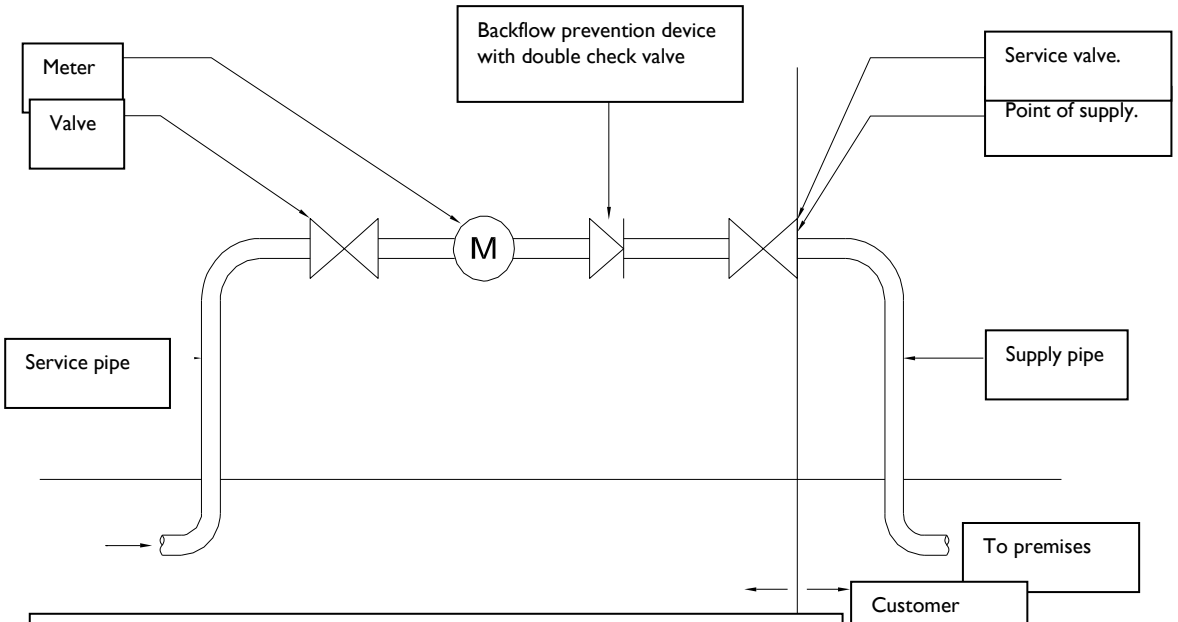


Figure 7: Metered supply with backflow prevention device owned by Council.

Note:

(1) Point of supply is tail piece of boundary box, meter, or service valve regardless of property boundary.

(2) The New Zealand Building Code may require the Customer to install additional backflow prevention devices within the site, which will remain the responsibility of the Customer.

Schedule 2: Table 1 Compatibility Features

Specific features of the Council supply which need to be taken into account are contained in Table 1 below.

Table 1 - Compatibility features

Feature	**Value**
Maximum pressure	100 metres head (1,000 kPa)
Minimum pressure*	10 metres head (100 kPa)
Normal operating pressure	20-30 metres head (200 - 300 kPa)
Free available chlorine	Up to 1.5 g/m^3

*Minimum pressure refers to on demand water supplies only

Schedule 3: Water Supply Area Maps

Pokeno

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=dd694266-ac2c-4047-bc42-00b2e749cde9

Raglan, Te Akau, Western Districts & Onewhero

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=946cba20-a57b-4301-98b3-d6fe17c6c7f0

Ngaaruawaahia, Taupiri & Hopuhopu

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=6cdcd6e4-1c45-4afe-860b-71f89510fd3a

Huntly

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=97e3bf90-a4db-4644-8011-3798b8f6390c

Southern Districts

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Te Kauwhata and Surrounds

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=9701c6e9-0592-47b6-8835-62711a5725d4

Tuakau and Port Waikato

https://enterprise.mapimage.net/IntraMaps21B/?project=Waikato&module=Utilities&configId=4773e32d-66d0-4755-a825-a9313c15040d&startToken=95517b65-23d5-4201-87a5-5943ec3e1912

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open

To	**Waters Governance Board**
Report title	**Exclusion of the Public**
Date:	Thursday, 24 August 2023
Report Author:	Elizabeth Saunders, Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

1. Staff recommendations
Tuutohu-aa-kaimahi

THAT the public be excluded from the following parts of the proceedings of this meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Item PEX 1 **Confirmation of Minutes** **Item number PEX 2** **Action Register**	**Good reason to withhold exists under Section 6 or Section 7 Local Government Official Information and Meetings Act 1987**	**Section 48(1)(a)**
Item PEX 3.1 **Te Kauwhata Wastewater Treatment Plant Discharge Resource Consent Renewal Update**		
Item PEX 3.2 **Waikato Waters Contract Financial Report – July 2023**		

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Item PEX 3.3 **Bulk Water Supply Pipeline Extension – Pookeno Road**	**Good reason to withhold exists under Section 6 or Section 7 Local Government Official Information and Meetings Act 1987**	**Section 48(1)(a)**
Item PEX 3.4 **Capital Delivery Programme Overview**		
Item PEX 3.5 **Scada Telemetry Upgrade Project**		
Item PEX 3.6 **Ngaaruawaahia WWPS Upgrades and Flow Diversion**		
Item PEX 3.7 **Matangi Reservoir Site Acquisition**		
Item PEX 3.8 **Wastewater demands and constraints for Pookeno & Tuakau**		

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

Item No.	Section	Interest
Item PEX 1 **Confirmation of Minutes** **Item number PEX 2** **Action Register**	**Refer to the previous Public Excluded reason in the agenda for this meeting.**	

Item No.	Section	Interest
Item PEX 3.1 **Te Kauwhata Wastewater Treatment Plant Discharge Resource Consent Renewal Update**	**7(2)(b)(ii)** **7(2)(h)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.**
Item PEX 3.2 **Waikato Waters Contract Financial Report – July 2023**	**7(2)(h)** **7(2)(j)**	**To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage**
Item PEX 3.3 **Bulk Water Supply Pipeline Extension – Pookeno Road**	**7(2)(b)(ii)** **7(2)(h)** **7(2)(j)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage**
Item PEX 3.4 **Capital Delivery Programme Overview**	**7(2)(h)** **7(2)(i)**	**To enable commercial activities to be carried out without prejudice or disadvantage.** **To enable negotiations to carry on without prejudice or disadvantage.**
Item PEX 3.5 **Scada Telemetry Upgrade Project**	**7(2)(b)(ii)** **7(2)(h)** **7(2)(j)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage**

Item No.	Section	Interest
Item PEX 3.6 Ngaaruawaahia WWPS Upgrades and Flow Diversion	**7(2)(b)(ii)** **7(2)(h)** **7(2)(j)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage**
Item PEX 3.7 Matangi Reservoir Site Acquisition	**7(2)(b)(ii)** **7(2)(h)** **7(2)(j)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To prevent use of the information for improper gain or advantage**
Item PEX 3.8 Wastewater demands and constraints for Pookeno & Tuakau	**7(2)(b)(ii)** **7(2)(h)** **7(2)(g)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position.** **To enable commercial activities to be carried out without prejudice or disadvantage.** **To maintain legal professional privilege.**

2. Attachments

There are no attachments for this report.