Before the Hearings Panel

At Central Hawke's Bay District Council

Under	Schedule 1 of the Resource Management Act 1991
In the matter of	the Proposed Central Hawke's Bay District Plan
Between	**Various**
	Submitters
And	**Central Hawke's Bay District Council**
	Respondent

Council Reply on Sustainable Subdivision and Building chapter –
Hearing Stream 2 – Tiffany Faye Gray

On behalf of Central Hawke's Bay District Council

Date: 6 May 2022

Introduction

1. My full name is Tiffany Faye Gray. I am a Planner for Central Hawke's Bay District Council.

2. I have read the evidence and statement provided by submitters relevant to the Section 42 Report on Sustainable Subdivision and Building.

3. I have prepared this reply statement on behalf of the Central Hawke's Bay District Council (**Council**) in respect of matters raised through Hearing Stream 2, which was heard Wednesday 30 March 2022.

4. Specifically, this reply statement addresses matters raised in the Section 42A Report – Sustainable Subdivision and Building and in the evidence and statements tabled by submitters during the hearing.

5. I am authorised to provide this evidence on behalf of the Council.

Qualifications, Experience and Code of Conduct

6. My qualifications and experience are as set out in Section 1.1 of the relevant Section 42A Report.

7. I can confirm that I am continuing to abide by the Code of Conduct of Expert Witnesses set out in the Environment Court's Practice Note 2014.

Scope of Reply

8. Section 42A report authors have been asked to submit a written reply by close-of-business on 6 May 2022.

9. The topics addressed in this reply include:

    - Policy SSB-P1 amendment requested by Royal Forest and Bird Protection Society NZ (Forest & Bird)

    - Policy SSB-P1 amendment requested by Horticulture New Zealand.

    - Provision of Council's Sustainable Water Management Plan and relevant water bylaws

10. I have followed the structure of the s42A report in this reply as I address the above matters.

11. If I have not addressed a matter in this Reply that was raised by a submitter throughout the hearings process, I have no further reply to add to what I have set out in the Section 42A Report or evidence given at the Hearing.

12. Appendix 1 of this reply contains a list of materials provided by submitters including expert evidence, legal submissions, submitter statements etc. This information is all available on the Proposed District Plan Hearings Portal on the Council website.

SSB-P1

Royal Forest and Bird Protection Society NZ (Forest & Bird) S75.008

13. In my section 42A report – *SSB - Sustainable Subdivision and Building* - there was one outstanding matter that required clarification from a submitter. This is noted in paragraph 5.3.10 in relation to Royal Forest and Bird Protection Society NZ (Forest and Bird) seeking to amend SSB-P1 to refer to promoting 'medium-high density housing with small footprints'. There was uncertainty around whether the submitter meant a physically smaller footprint or that housing should have a smaller environmental footprint/effect.

14. Forest and Bird provided a statement clarifying that the intention was to refer to a smaller physical footprint, on the basis that they consider such houses ultimately have a smaller environmental footprint.

15. In Forest and Bird's submission they requested that SSB-P1 be amended as follows:

> *'To promote subdivision design and building development that optimises efficient resource and energy use and water conservation measures through improved subdivision and building design, including by orientation to the sun,* ***medium-high density housing with small footprints****, domestic onsite water storage and utilising principles of low impact urban design.'*

16. To summarise, the submitter seeks to address the following effects through smaller houses[1] :
    - The use of less materials
    - The consuming of less energy
    - They can be more easily heated
    - They can be put closer together (and put closer to transport routes and shopping centres – thereby requiring less use of personal cars etc)
    - They use up less land
    - They create less stormwater run-off
    - They provide for more land being left as permeable soak for rain

17. Many of these matters are addressed through other means in the PDP, for example, through a combination of standards under the residential zone provisions relating to minimum building setbacks from boundaries, residential density limits, and provision of outdoor living spaces and outdoor service spaces.

18. I note that there is no building coverage standard in the General Residential Zone, however the issue of building coverage standards is being addressed by Janeen Kydd-Smith's right of reply in relation to the section 42a report – *Urban Environment*.

19. The submitter has not provided any evidence in support of their statement.

20. I note that expert evidence by Mr. Liggett for Kāinga Ora states that over time demand has increased for larger homes with four or more bedrooms required to house larger families[2].

21. In the absence of any further evidence in support of the submission, and noting that there may be good reason for larger houses, I do not consider that there is a proper basis for the PDP to actively promote smaller houses.

22. Therefore, I have not changed my position with respect to Forest and Bird's submission point S75.008 and recommend that it be rejected.

Horticulture New Zealand S81.046

23. During the Hearing Stream 2 reporting officer opening statements, the Hearings Panel asked whether I thought that the issue of reverse sensitivity as raised in Horticulture New Zealand's (HortNZ) submission (S81.046) was addressed sufficiently elsewhere in the PDP and thus not required in this part of the Plan.

24. I reiterate that my response to the Panel was that reverse sensitivity is addressed in the subdivision and zoning provisions of the PDP. The issue of reverse sensitivity is also specifically addressed in the Strategic Direction – Rural Land Resource chapter. This chapter outlines that rural lifestyle developments and urban expansion can lead to reverse sensitivity implications and that the objectives and policies are

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[1] Submitter Statement from Forest and Bird, paragraph 4

[2] Submitter Evidence, Brendon Scott Liggett for Kāinga Ora Homes and Communities, paragraph 4.2

anticipated to result in 'maintaining and enhancing rural character and amenity including avoiding reverse sensitivity effects' (RLR-AER5).

25. I also draw the Panel's attention to the statement provided by HortNZ[3] that accepts my recommendation but notes that reverse sensitivity is an important consideration particularly in respect of the subdivision and rural zone chapters.

26. Therefore, it is of my opinion that reverse sensitivity is sufficiently addressed elsewhere in the PDP.

Recommendations for SSB-P1

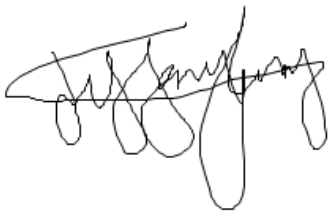
27. Upon review of these two submission points after the adjournment of the hearings for Hearing Stream 2, my position to reject both of these submission points remains unchanged and I recommend that SSB-P1 be retained as notified.

Council's Sustainable Water Management Plan and relevant water bylaws

28. The Panel also asked for the above Council plans and bylaws as specified in paragraphs 6.3.4-6.3.7 in my section 42A report on the Sustainable Subdivision and Building chapter. The links to these are provided as follows:

    - Sustainable Water Management Plan
    - Water Supply Bylaw
    - Stormwater Bylaw
    - Wastewater Bylaw

Date: 6 May 2022



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[3] Submitter Statement – Horticulture New Zealand

APPENDIX 1

List of Materials Provided by Submitters

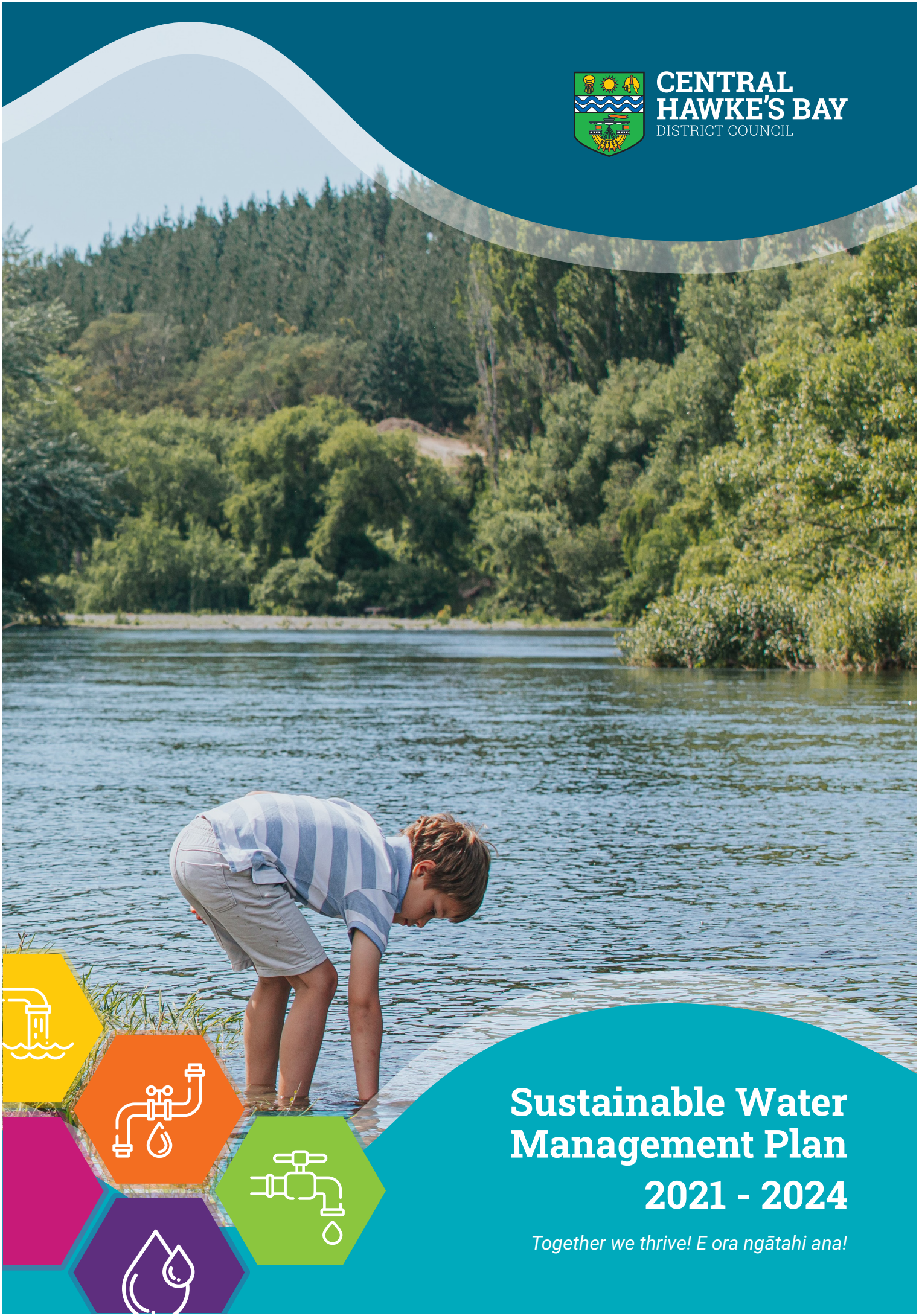
Submitter Evidence

- Submitter Evidence - Kainga Ora Homes and Communities (Brendon Scott Liggett Corporate) [S129,FS23]

Submitter Statements

- Submitter Statement - Royal Forest and Bird Protection Society NZ (Forest & Bird) [S75,FS9]
- Submitter Statement - Horticulture New Zealand [S81, FS17]

CENTRAL HAWKE'S BAY
DISTRICT COUNCIL



Sustainable Water Management Plan 2021 - 2024

Together we thrive! E ora ngātahi ana!

Document Overview

Document Status

Version	Comments	Status	Date
001	First Version	Draft – Awaiting Approval	13-02-2021
002	First workshop with Council	Working Draft	Sept 2020
003		Working Draft	21-09-2020
004	Updated with consents	Working Draft	29-09-2020
005		Working Draft	18-11-2020
006	Workshopped with Council	Working Draft	13-02-2021
007		Final Draft – Awaiting Approval	24-02-2021
008	Minor tweaks		16-03-2021
1.0	Adopted by Council	Approved - Operational	25-02-2021
2.0	Designed version	Approved - Operational	08-04-2021

Document Purpose

The Sustainable Water Management (SWM) Plan (2021) has been developed to demonstrate Council's programme for managing water demand such that the potential effects on the water takes are minimised. The SWM Plan identifies how the Council and the Community will improve water-use efficiency and reduce water loss in operations using a range of techniques that are consistent with industry practice and supports Council's desire to become an efficient user of this valuable resource.

Document Audience

This Policy applies to all Council staff and contractors.

Document Contributors

Contributor	Name and Title	Approval Date
Creator	Daniel Johnson, Water Group Manager - WSP	08-02-2021
Reviewer	Ian Cover, 3 Waters Operations Manager, CHBDC Wayne Termaat, Outcomes Manager, Veolia	15-02-2021
Authoriser	Darren de Klerk, Director Projects and Programmes - CHBDC	16-02-2021
Approver	CHBDC Finance and Infrastructure Committee	25-02-2021

Related References

Documents Informing Asset Management Strategy and Direction

- Water Safety Plans
- Water Supply Bylaws 2018
- DRAFT Water Supply Bylaw 2021
- Organisational Values
- Project THRIVE Documentation
- Infrastructure Strategy 2021
- Long Term Plan 2018-21
- DRAFT Long Term Plan 2021-2031
- Draft District Plan
- Spatial Plan
- Environmental and Sustainability Strategy
- Water Asset Management Plan
- DRAFT 3 Waters Asset Management Plan 2021

Contents

Action Plan

Purpose of this Plan

Hawke's Bay Regional Council (HBRC) require a Water Management Strategy as part of the resource consent which demonstrates how demand for water from the water supply bore will be minimised at times of low flows in the Rivers.

As a requirement of the consents for Johnson Street, Waipawa (WP030817T), Tikokino Road, Waipawa (WP030818T), Meta Street, Takapau (WP140534T) and State Highway 2, Waipukurau (AUTH-113708-03) the Central Hawke's Bay District Council is required to submit a water management strategy to the HBRC.

In response to these requirements, the following Sustainable Water Management (SWM) Plan (2020-2023) has been developed to demonstrate Council's programme for managing water demand such that the potential effects on the water takes are minimised. The SWM Plan identifies how the Council and the Community will improve water-use efficiency and reduce water loss in operations using a range of techniques that are consistent with industry practice and supports Council's desire to become an efficient user of this valuable resource.

Purpose of this Plan

The purpose of our SWM plan is to highlight our activities and those areas where we are promoting water sustainability.

Our approach to water sustainability can be grouped into four key areas/ themes:

- Engaging with our customers
- Ensuring environmental vitality and sustainability through our way of working
- Improving our assets
- Working with our stakeholders.

To ensure we value our most natural resource, water, our focus is on reducing leakage, working with our customers to use water wisely and in a sustainable manner and using the most appropriate ways to store and distribute water to ensure a reliable and consistent supply of water.

We are aware that the effects of water efficiency activities are difficult to measure (even where good demand component measurement is in place); however, we are committed to exploring water efficiency opportunities.

While the SWM Plan has been developed to meet consent conditions, it also serves as a base document for the implementation of Council's long-term strategic direction and District Plan which identifies the sustainable management of natural and physical resources and the social, economic, environmental and cultural well-being of the community

Alignment with Council's strategic framework:

- ***Social and Cultural – A health, safe place to live:*** Risks to public health are identified and appropriately managed
- ***Economic – A place with a thriving economy:*** Central Hawke's Bay District has an efficient and affordable water infrastructure
- ***Environmental – A place that is environmentally responsible:*** Central Hawke's Bay plans and manages water use to minimise the effect on the environment.

Relationship with Other Plans

Introduction

To achieve a holistic and integrated approach to three waters management in the District that is consistent with Council's District Plan, other Policies, Plans, Strategies and Objectives and also reflect the principles of the Te Mana o Te Wai. The following overarching purposes has recently been set for all four water services bylaws (Water Supply, Stormwater, Wastewater and Trade Waste).

The Sustainable Water Demand Management Plan is an enabling tool to support the management of water demand in the district and complements the water supply bylaw whilst link to the plans and purposes below.

1. Integrated Approach

Adopt an integrated and holistic approach to the Three Waters (water supply, wastewater including trade waste and stormwater) that recognises the interconnections between each of the waters and promotes their sustainable use and management.

2. Environmental Responsibilities

Facilitate environmentally responsible practices by raising awareness of how the Three Waters interact and effect the District's natural environment. Additionally, ensure that Council meet its own responsibilities in terms of resource consent requirements set by the Hawke's Bay Regional Council.

3. Sustainable Practices

Encourage and incentivise the community and businesses to adopt practices that lead to the enhancement of the environment and the sustainable management of water resources including water and product stewardship, rainwater harvesting, waste minimisation and cleaner production.

4. Support Sustainable Growth

Support the sustainable provision of three waters infrastructure to enable future growth while minimising impacts on the environment.

5. Achieve Project Thrive Values

Develop and implement Three Water Bylaws to give effect to 'Project Thrive' values in particular trust, honesty, respect, innovation, and valuing people.

6. Te Mana o Te Wai

Recognise the fundamental concept of Te Mana o Te Wai as prescribed under the National Policy Statement for Freshwater Management 2020 and in particular the need to restore and preserve the balance between the water, the wider environment, and the community.

7. Tangata Whenua Status

Recognise the status of tangata whenua as Kaitiaki.

8. Durable Infrastructure

Develops and maintain durable and resilient infrastructure that achieves Council's levels of service in an efficient and cost-effective manner.

Water Supply Schemes

The provision of systems for the extraction, treatment and distribution of water is a function of Council's permitted activities and governed by the Local Government Act 2002 and the Health Act 1956.

There are five potable water supply schemes that are operated and maintained by Council:

- **Waipukurau** – an on-demand scheme servicing the Waipukurau township. Water is sourced from four bores located at the foot of Pukeora Hill (approximately 4 km west of Waipukurau). The bores are hydraulically connected to the Tukituki River. Water is pumped to a reservoir on Pukeora Hill and treated with UV and chlorination. The supply to the reticulation comprises two 'zones. Most connections are supplied in the high-pressure zone, which is serviced by the Pukeora reservoir, with the smaller Mangatara Road tank at the east end of the scheme supplying a small number of houses during high demand (back-feed). Hunter Park reservoir, which is located on top of Hunter Memorial Park, is fed from the Pukeroa reservoir and supplies the low-pressure zone area (central north area of township). There is also a small offtake (Shand booster pump) after the Pukeora reservoir. This supplies some high elevation connections via a gravity supply from the Shand reservoir.
- **Waipawa- Otāne*** – an on-demand scheme servicing the two townships of Waipawa and Otāne. Water is sourced from a bore on Tikokino Road which is pumped to two reservoirs approximately 4.5 km on Abbotsford Road. A second bore located in Johnson Street supplements the supply and pumps into a low-pressure zone of the network. The bores are hydraulically connected to the Waipawa River. Water from the Abbotsford Road reservoir gravitates into the Waipawa township reticulation. A dedicated main from the Abbotsford reservoir also fills the Otāne reservoir which gravity supplies the Otāne township. The Otāne township is also supplied from a second connection to the Waipawa reticulation via a pressure reducing valve. *Supplied from two different bores and treatment plants.
- **Takapau** – an on-demand scheme servicing the Takapau township, with some farm connections being metered. Water is sourced from a deep bore located in Meta Street, treated for manganese and iron removal (ultrafiltration) and chlorinated before being stored in seven tanks. Water is pumped from the tanks to the reticulation, also filling the SH2 (Sydney Street) reservoir on the west side of the network.
- **Pōrangahau-Te Paerahi** – an on-demand scheme servicing the Te Paerahi Beach and Pōrangahau settlements. Water is sourced from a bore located off Beach Road and treated for manganese and iron removal (green sand filtration) and chlorinated (UV and chlorine). Ion exchange has recently been installed to soften the water. Booster pump stations supply the stored treated water to the township and Te Paerahi Beach networks. There is further storage in the Pōrangahau township network in the form of three treated water reservoirs on the hill next to the township.
- **Kairakau** – a scheme servicing the Kairakau domestic properties, public toilets and camping ground. Water is sourced from a spring and a bore. Raw water is chlorinated and then pumped to the network via a series of treated water reservoirs. The campground has its own dedicated reservoir, with a further three supplying the community. Each property has an onsite rainwater collection tank (minimum volume 1,800 L) which is also supplemented by the Council supply.

In addition to the above, there are further water supply activities within the District that Council considers as part of the over-arching approach to sustainable water management:

- **Pourerere Campground** – a Council water supply servicing the Pourerere camping ground, public toilet block and two houses. Water is taken from a spring in Gibraltar Road and supplied via a 20mm diameter pipe.
- **Russell Park / Waipukurau Sports Fields** – Council has a consent to take as use water from the Tukituki River for the purpose of irrigating 17.5ha of sports field at Russell Park in Waipukurau.

Table 1 and Figure 1 provides an overview of the potable water supply schemes serviced by the Council.

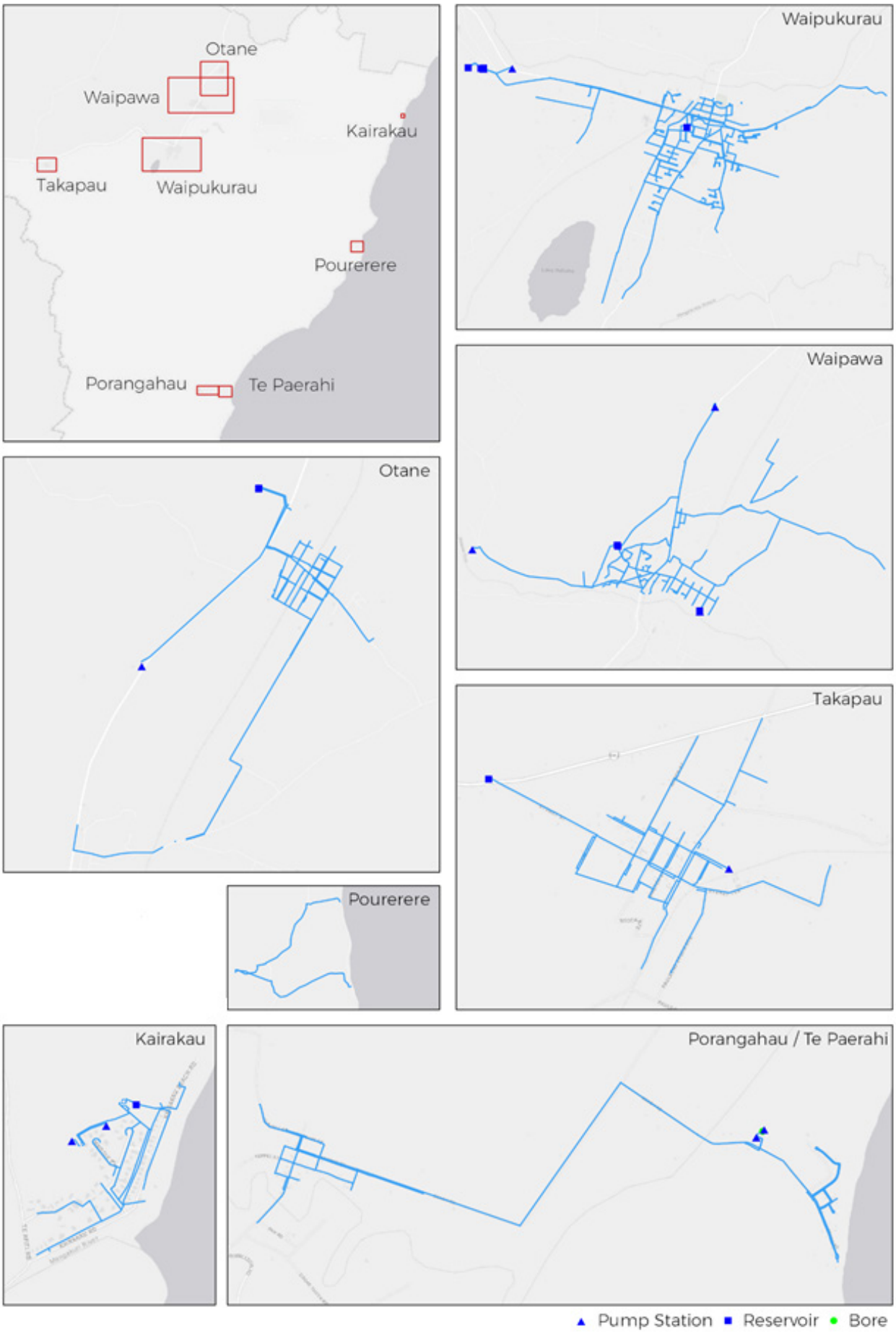


Figure 1: Central Hawkes Bay District Council Water Supply Schemes Overview

Table 1: Potable Water Supply Scheme Overview

Water Supply	Supply Type	Population	No. Connections	Length of Mains (km)	Source	Treatment	Storage	Pump Station
Waipukurau	On-demand	3,666	2,249	79.1	5 bores	UV, Chlorination	Pukeroa Hill - 2,700 m³ Hunter Park - 900 m3 Mangatarata Rd tank 20 m³ Shand Rd - m³	1 no.
Waipawa - Otāne	On-demand	2,355	966 + 326	77	3 bores	UV, Chlorination	Abbotsford Rd - 400 m³ + 700 m³ (treated) Johnson Street – 210cm³ Otāne – 2 x 150 m³ (treated)	
Takapau	On-demand	570	278	16.4	1 bore	UV, Greensand, Ozone	Meta St – 240 m³ SH2 – 230 m³	
Pōrangahau -Te Paerahi	On-demand	160	133 + 110	16.2	1 bore	UV, Greensand, Ion Exchange	Beach Rd - 96 m³ (raw) + 264 m³ (treated) New treated storage – 180 m³	1 no.
Kairakau	On-demand to rainwater tanks	83	84	3.3	1 spring, 1 bore	Chlorination	4 x 25 m³ (raw) 3 x 25m³ + 20m³ (treated)	1 no.

Reticulation

In terms of the reticulation network the water supply schemes have a range of pipe materials and age (0 – 113 years). A high-level assessment of 'age based' condition was undertaken for each water supply as shown in Figure 2.

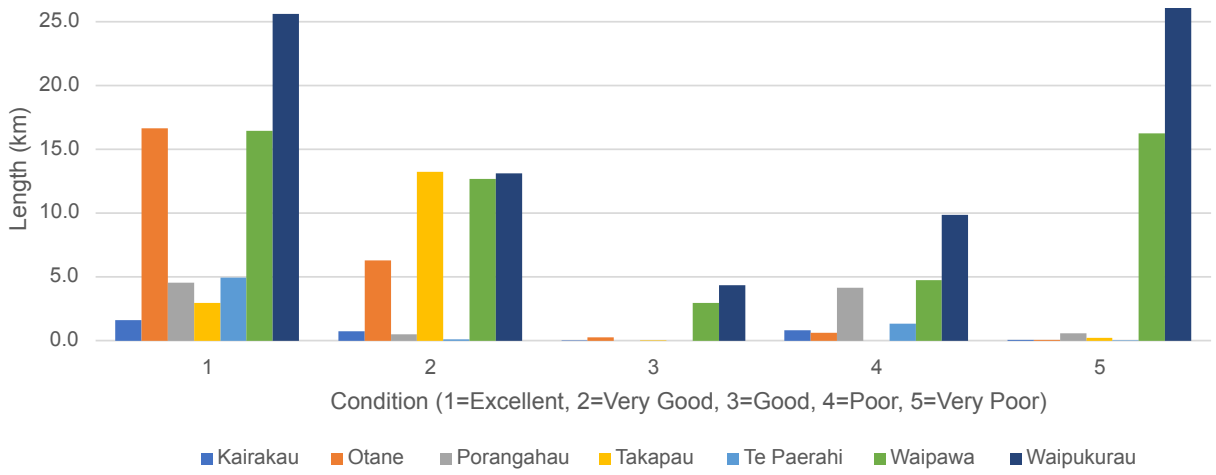


Figure 2: Water Supplies Pipe Age Based Condition

Observations – Pipe Age Based Condition

- Waipukurau (36km, 46%), Waipawa (21 km, 40%) and Pōrangahau (4.7 km, 48%) are estimated to have > 40% of pipes that are assessed as being in poor to very poor condition.
- Pipe condition assessment and development of a strategic renewals programme will enable the Council to prioritise and target pipe renewals as part of an over-arching water loss management strategy (refer 'Leakage' section).

Storage – Resilience

The optimal volume of treated water storage for a water supply usually comprises a balance between considering resilience (climate change, planned and unplanned interruptions), water quality and demand. Generally, more than one day of storage at peak day demand could be considered the minimum required to help mitigate the effect of any supply interruption and allow Council time to initiate a response (e.g. repairs, conserve water communication). A general assessment of the CHBDC water supplies against current peak day and average day demand is shown in Table 2 .

Table 2: Water Supply Treated Water Storage No. Days for Peak Day and Average Day Demand

Water Supply	Treated Water (m3)	Peak day demand (m3/day)	No. hours storage	Average day demand (m3/day)	No. hours storage
Waipukurau	3,600	6,480	13 hours	4,277	20 hours
Waipawa- Otāne	1,600	3,513	10 hours	1,872	9 hours
Takapau	470	686	14 hours	378	13 hours
Pōrangahau-Te Paerahi	464	399	16 hours	151	42 hours
Kairakau	95	42	54 hours	24	95 hours

Observations – Treated Water Storage

- All the water supplies, except for Kairakau, have less than one day of storage a current peak day demand.
- Further assessment of storage is required that considers resilience scenarios and considers the impact of future demand.

Pressure

Council has a legal requirement to ensure that an adequate and continuous supply of water is provided at a pressure that enough for user activities and firefighting purposes. Figure 4 show the maximum pressure contours predicted by the current hydraulic models for Waipukurau and Waipawa- Otāne. Generally, pressures vary from 75m down to 20m in Waipukurau, with the lower pressures evident in the low-level area supplied by the Hunter Park Reservoir. There are higher pressures in excess of 90m evidenced in the Waipawa- Otāne water supply with pressures in the Waipawa network being dictated by the pumping required to supply the Abbotsford Reservoir. The Otāne network is already fed through a PRV on the incoming main from Waipawa.

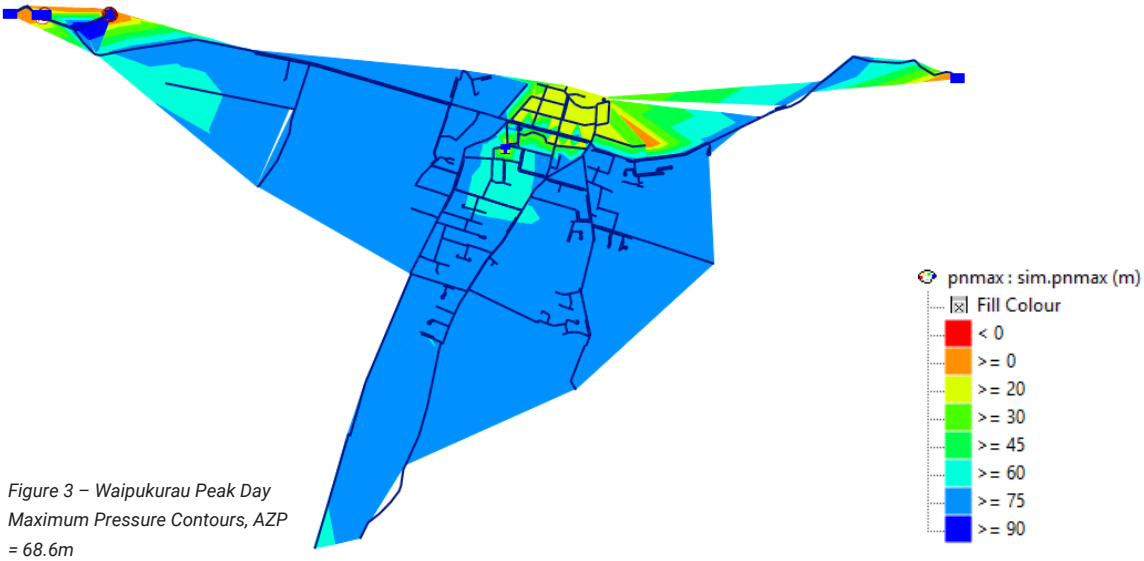


Figure 3 – Waipukurau Peak Day Maximum Pressure Contours, AZP = 68.6m

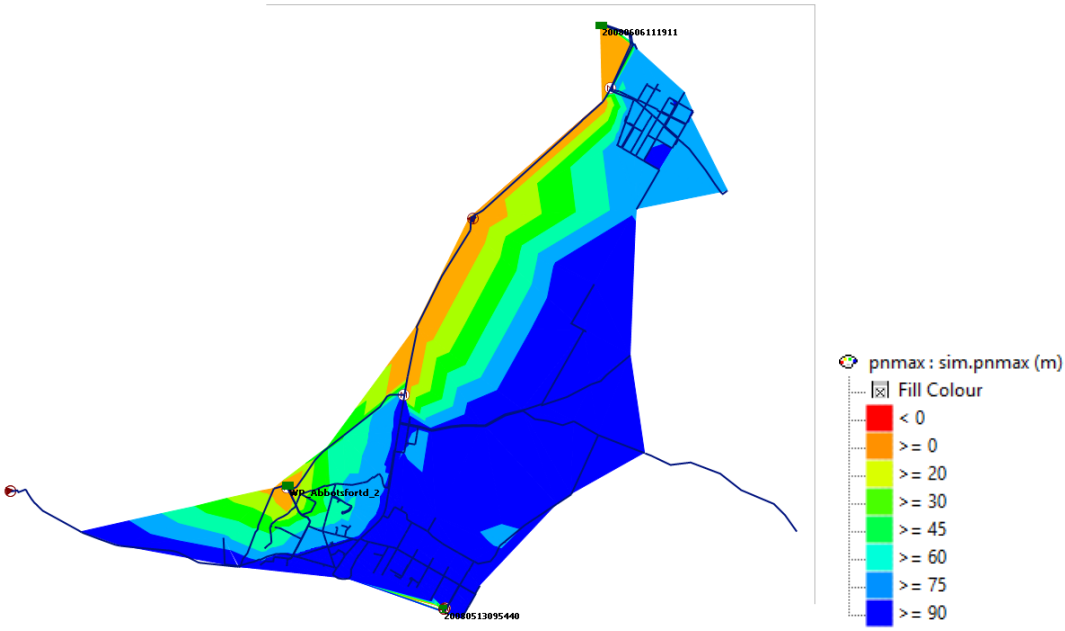


Figure 4: Waipawa- Otāne Peak Day Maximum Pressure Contours, AZP = 62.5 m

In terms of the Takapau water supply pressures are dictated by the WTP pump station operating to the Sydney Street reservoir on the west side of the network. The pressures in the network vary depending on whether the WTP pump station is operating. The head difference between the pump station and reservoir is approximately 18m, which suggests network pressures are already low.

Pressure reduction (management) is a key component of an over-arching water loss management strategy in terms of 'squeezing the box' (refer 'Leakage' section). Council investigated the opportunity to implement a form of pressure reduction for the low-level zone in the Waipukurau water supply as part of an overall firefighting capacity assessment (Waipukurau Detailed Modelling Outpus, WSP, July 2016). The assessment with the hydraulic model determined that using a Pressure Reducing Valve (PRV) was feasible but could potentially add a risk in terms of achieving fire flow during the event of a fire if the valve was not set up operate correctly.

Observations – Pressure

- There may be further opportunity for pressure reduction as part of an over-arching leakage reduction strategy in the Waipukurau and Waipawa- Otāne water supplies. However, this may be limited by the need to maintain fire fighting capacity.
- Pressure reduction in the other water supplies is unlikely to be feasible.

Consents and Regulative Requirements

Consents

This section is to confirm the requirements which the Council water supplies must be operated under, particularly during river low flows and peak water use. The consents set out the water take and restriction limits on when this can be taken.

Water Supply System	Source Number	Consent Number (Hyperlink)	Max. Consented Take	Restriction Limits	Expiry Date
Waipukurau	Well No.s 15107 5617, 5676, 16892, 16893 (SH2)	AUTH-113708-03	All Wells and / or a Cumulative rate of 100 litres per second. 60,480m³ 7-day period 3,144,960 m3 in 12-month period	Tukituki River Level 1: 3,000 L/s @ Taipairu Rd Level 2: 2,300 L/s @ Tapairu Rd	31-May-2028
Waipawa- Otāne	Well No. 2402 (Johnson St)	WP030817T	35 litres per second 21,168m³ 7-day period	Waipawa River Level 1: 3,700 L/s @ SH2 Level 2: 2,300 L/s @ SH2	31-May-2028
	Well No.s 5618 , 5619, (Tikokino Rd)	WP030818T	55 litres per second 33,264m³ 7-day period	Waipawa River Level 1: 3,700 L/s @ SH2 Level 2: 2,300 L/s @ SH2	31-May-2028
Takapau	Well No. 1762 (Meta St)	WP140534T	19.0 litres per second 31,600 m³ per 28-day period 410,800 m3 in 12-month period	N/A	31-May-2035
Pōrangahau -Te Paerahi	Well No. 4993 (Beach Rd)	WP090150T	10.2 litres per second 6,169m³ per 7-day period	N/A	31-May-2034
Kairakau	Well No. 3130 (Brodie Pl)	WP090153T (Bore)	1 Litre per second 605m³ per 7-day period	N/A	31-May-2029
	Spring (Brodie Pl)	WP090166T (Spring)	0.7 Litres per second 420m³ per 7-day period	N/A	31-May-2029
Pourerere Campground	Spring	WP010510T	0.25 Litres per second	N/A	31-May-2022
Waipukurau Sports Fields	Well No. 1461 (Russell Park)	AUTH-125279-01	6 Litres per second 7,120 m3 per 28-day period Not exceeding 173 m3/day if flow at Tapairu Rd and Red Bridge measuring sites are below low flow triggers levels	Tukituki River 2,300 L/s @ Tapairu Rd 4,300 L/s @ Red Bridge	31-May-2039*

Table 3: Water Supply Permits – Current

Water Supply, Consent & River	Monitoring Site	Flow Triggers	Required
Waipukurau WP030775T Tukituki River	Taipairu Rd #23207	1) at or < 3,000 L/s implement public education as per WMS 2) at or < 2,300 L/s = implement demand mang & water conservation as per WMS	Purpose of Water Management Strategy (WMS): a) statement of purpose b) commitment to demand management and water conservation measures during low flows in Tuktuki River. c) confirm bylaws for non-compliance of water use restrictions or water use directions. d) when HBRC advise flow is at or below 2,300 L/s – implement demand management and water conservation measures as set out in the WMS e) when HBRC advise flow is at or below 3,000 L/s – implement public education as set out in the WMS f) document water conservation measures as part of annual monitoring report g) within 5yrs. of consent issue a report including up to date population projections
Waipawa – Otāne WP0308 Waipawa River	SH2 #23211	1) at or < 3,700 L/s implement public education as per WMS 2) at or < 2,300 L/s = implement demand mang & water conservation as per WMS	Purpose of Water Management Strategy (WMS): a) statement of purpose b) commitment to demand management and water conservation measures during low flows in Waipawa River. c) confirm bylaws for non-compliance of water use restrictions or water use directions. d) confirm public education programme to communicate the need for efficient water use at times of low flow during the Waipawa River. d) when HBRC advise flow is at or below 2,300 L/s – implement demand management and water conservation measures as set out in the WMS e) when HBRC advise flow is at or below 3,700 L/s – implement public education as set out in the WMS e) document water conservation measures as part of annual monitoring report f) within 5yrs. of consent issue a report including up to date population projections
Takapau WP140534T Tukipo River	1 - Red Bridge #23201 2 - Tapairu Rd #23207 3 - Ashcott Rd #23213 up to 30 June 1 - Red Bridge #23201 2 - Tapairu Rd #23207 3 - Ashcott Rd #23213 from 1 July 2023	1) at or < 4,300 L/s 2) at or < 2,300 L/s 3) at or < 1,043 L/s 1) at or < 5,200 L/s 2) at or < 2,500 L/s 3) at or < 1,043 L/s	Develop and implement a Water Conservation and Demand Management Strategy (WDCMS) to include, but not limited to the following: Purpose of strategy - Commitment to the implementation of a range of demand management and water conservation measures to minimise consumption at times of low flows and which may include water use restrictions, water use direction, pressure management and reduction, leak detection, metering and education A detailed explanation of how the WDCMS will be implemented. Ensure that the WCDMS is implemented when the low flow triggers are reached and continue to be implemented until flow return to be in excess of the trigger limits.

Climate Change

WSP have undertaken a review of how climate change may affect demand, or impact and limit supply for the Waipukurau Second Water Supply Project (Demand Analysis and Future Supply Security, WSP, February 2020). In terms of climate changes, the following observations and comments were made:

- In the Hawke's Bay Region, it is projected that, compared to 1995 data, temperatures are likely to be between 0.7˚C to 1.1˚C warmer by 2040 and 0.7˚C to 3.1˚C warmer by 2090 (MfE 2018).
- Changes in rainfall will vary across the district, however at present downscaled models are not refined enough to directly attribute projected changes to specific catchments. The seasonal distribution of rainfall is projected to change the most; with winter rainfall projected to decrease by up to 13% in Napier by 2090. Summer and autumn rainfall, however, are expected to increase (MfE 2018).
- According to the most recent projections (MfE 2018), the frequency of extreme rainfall days is not expected to increase in the Hawke's Bay District as a result of climate change.

The main impacts of climate change on the water supplies will be:

- Demand for residential irrigation during periods of drought is likely to increase due to increasing soil moisture deficits. A theoretical assessment (WSP, 2020) indicates the increase in demand associated with climate change could be about 460m³/day. The degree to which this additional demand occurs will depend on the effectiveness of our water management strategies and the community's future attitude to water use.
- Changes in river flows and hydrology - while increases in rainfall volume are projected over summer periods, some models suggest that this increase will come from more extreme, less frequent events. This will lead to flashier rivers flows, with higher suspended sediment loads, interspersed by longer periods of drought and lower river levels. For example analysis estimates that the Tukituki River (refer Figure 5) mean flow may decrease by up to 2% by 2090 with median flows decreasing by 8% by 2040 and 13% by 2090 (WSP,2020). This will likely increase the average number of days where flows fall below the current consented limit of 2,300 L/s, which will increase the duration of time CHBDC must implement after conservation and demand management measures. Subsequently community supplies reliant on water from primary sources (i.e. rivers and streams) will be affected.

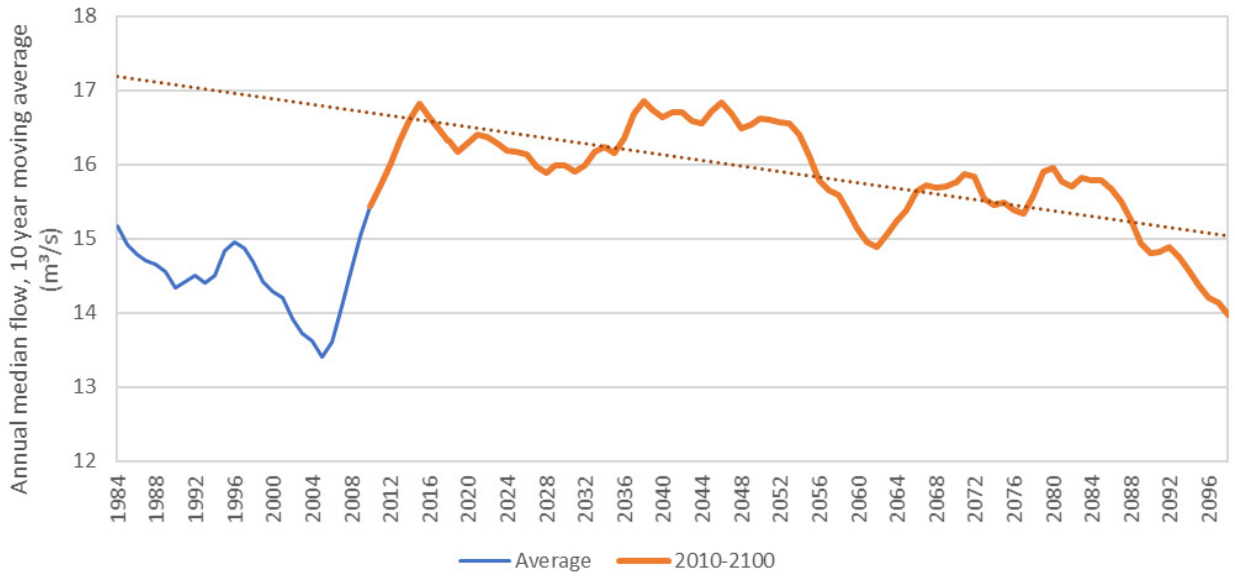


Figure 5: Trend in Tukituki River at Tapairu flow record (10 year moving average of annual median

Observations – Consents and Impact of Climate Change

- Drier and longer summers means there is likely to be longer periods of restrictions required across the district as demand increases and river flows decrease
- Restrictions may need to be put in place if more extreme storm events result in increased degradation of raw water quality over time which cannot be treated by the current water treatment plants.
- Effective communication (and escalation) of conservation of water and increasing user awareness will play an important role in managing demand.
- The focus on water consumption and management may increase with enforcement of greater restrictions on takes and river flows.

Demand: Current and Future

Water Demand & Availability

Historic Water Demand

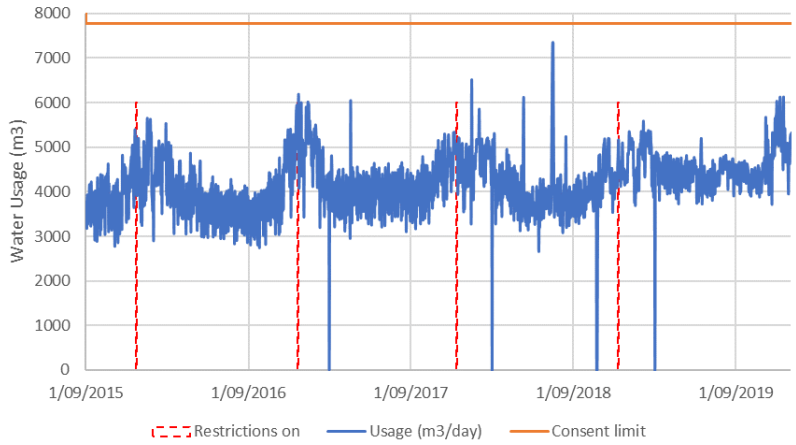
Table 5 presents the historical peak day and average day source demand recorded for the water supplies based on daily volume totals. Kairakau demand has been assessed using monthly volume totals. Peak day demands have been identified in **red**.

7 Year	Waipukurau		Waipawa - Otāne		Takapau		Pōrangahau – Te Paerahi		Kairakau
	Peak Day	Average Day	Peak Day	Average Day	Peak Day	Average Day	Peak Day	Average Day	Monthly Average
2015-16	5,647	3,944	3,268	1,967	**686**	417	283	131	-
2016-17	6,172	4,151	2,972	1,728	586	369	323	145	-
2017-18	**6,480**	4,224	3,214	1,808	640	364	252	146	**42**
2018-19	5,588	4,397	2,693	1,888	678	356	**399**	172	35
2019-20*	6,130	4,671	**3,513**	1,968	613	381	271	159	32+
*2019-20 is for period 1 September to 31 December 2019, +2019-20 is for period September to December 2019.									

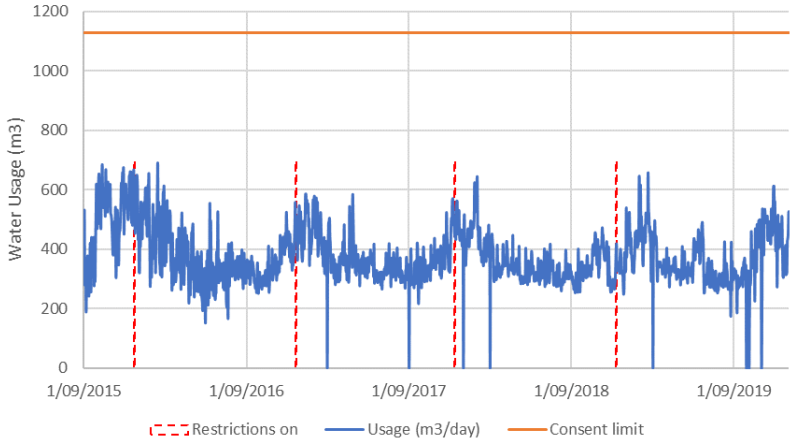
Table 5: Historical Peak Day and Average Day Demand (m3/day)

The following graphs show the historical trend for the five water supplies. These are based on daily totals recorded at the source, except for Kairakau which is based on monthly totals.

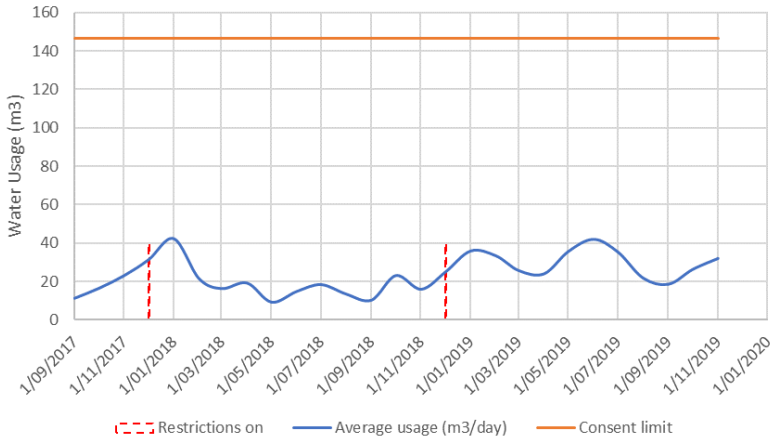
Waipukurau Daily Water Usage, September 2015 - January 2020



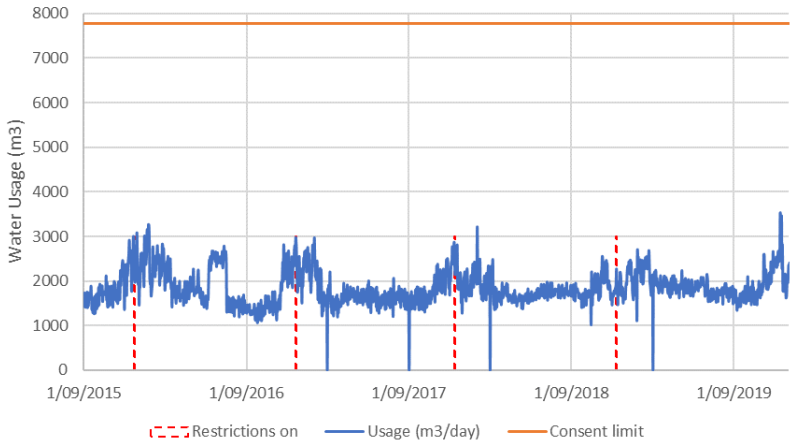
Takapau Source Daily Water Usage, September 2015 - January 2020



Kairakau Source Average Daily Water Usage, September 2017 -November 2019



Waipawa/ Otāne Daily Water Usage, September 2015 - January 2020



Pōrangahau Source Daily Water Usage, September 2015 - January 2020

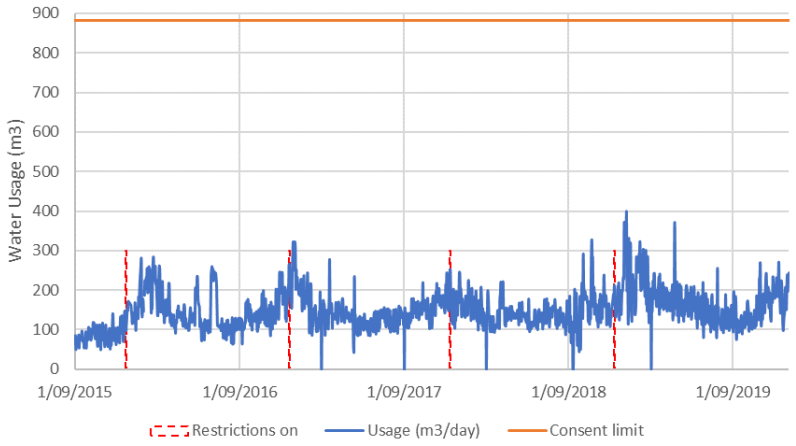


Figure 6: Historical Demand Profiles, Restriction on and Consented Volumes

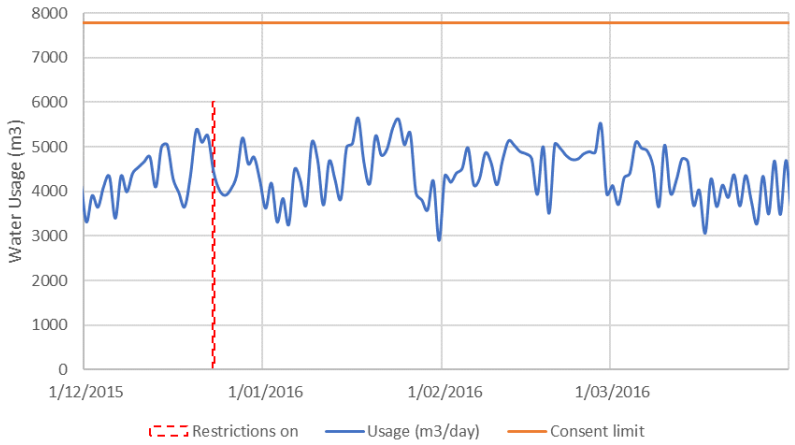
Observations – Demand and Availability

- Peak day usage occurs around the December – January period, coinciding with the Christmas and school holiday periods.
- The estimated peak day demands for the water supplies have not accounted for reservoir turnover.

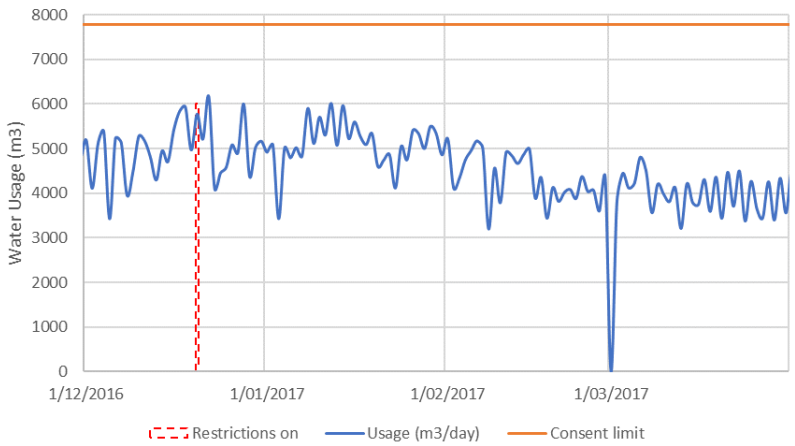
In terms of the impact of restrictions on demand a comparison of Waipukurau water supply over the December to March period for years 2015-2018 shows. Restrictions were put in place on the following dates:

- 23 December 2015
- 20 December 2016
- 11 December 2017
- 10 December 2018

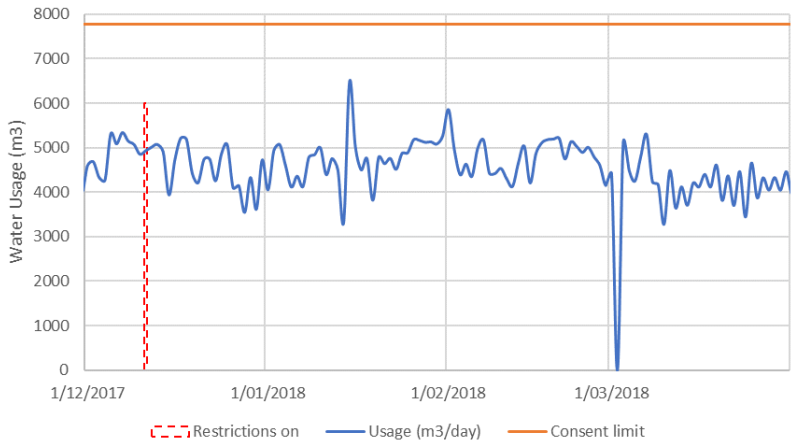
Waipukurau December 2015 Demand - Restrictions On



Waipukurau December 2016 Demand - Restrictions On



Waipukurau December 2017 Demand - Restrictions On



Waipukurau December 2018 Demand - Restrictions On

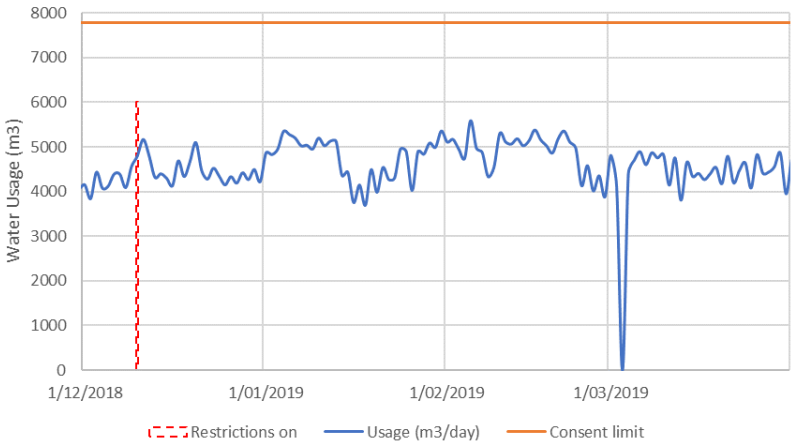


Figure 7: Comparison of Waipukurau Demand and Impact of Restrictions

Observations – Restrictions

- Generally, there is a lag in demand decreasing. This could be attributed to the time for the conserve water messaging to be received and implemented by customers.
- Demand does appear to decrease for a period before flattening out / increasing.
- Overall it is difficult to determine how effective water restriction measures are currently.

Water Availability (Consents) vs Demand (Current & Future)

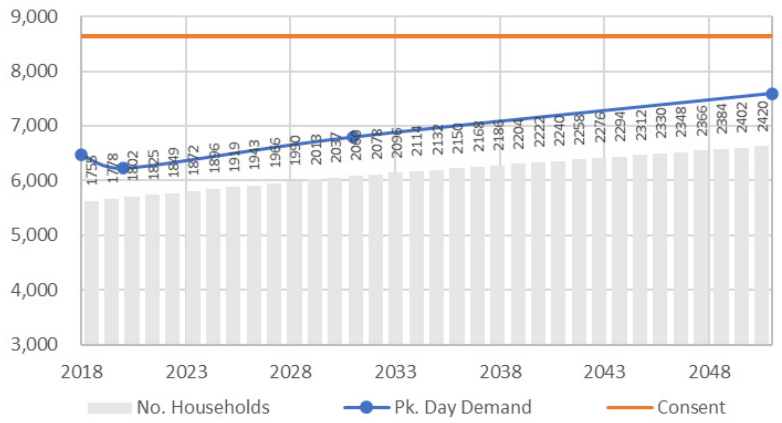
A review of future peak day demand has been undertaken using the 2020/21 'medium' growth projections for number of households for townships and the district proposed for the 2021 Long Term Plan.

Year	Waipukurau	Waipawa - Otāne	Takapau	Pōrangahau – Te Paerahi	Kairakau
2015-16	5,647	3,268	686	283	-
2016-17	6,172	2,972	586	323	-
2017-18	6,480	3,214	640	252	42
2018-19	5,588	2,693	658	399	36
2019-20*	6,480	3,513	613	271	32
Current consented maximum take (m³/day)	8,640	7,776	1,128	881	146
Current peak day (m³/day)	6,480	3,513	686	399	42
*2019-20 is for period 1 September to 31 December 2019, +2019-20 is for period September to December 2019					

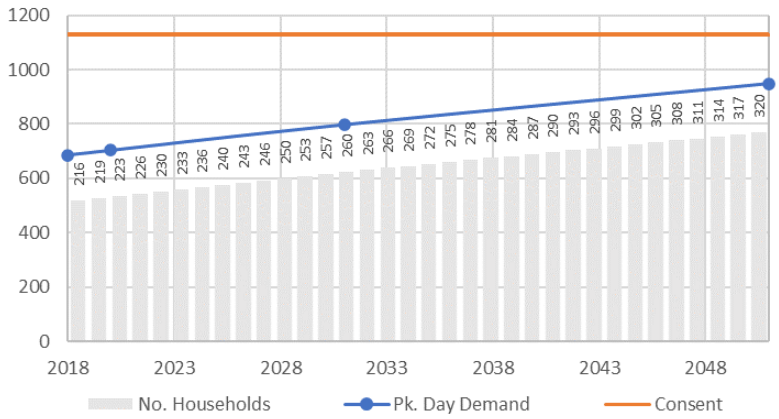
Table 6: Historical Peak Day and Average Day Demand (m³/day)

A review of future peak day demand has been undertaken using the 2020/21 'medium' growth projections for number of households for townships and the district proposed for the 2021 Long Term Plan (refer Figure 8).

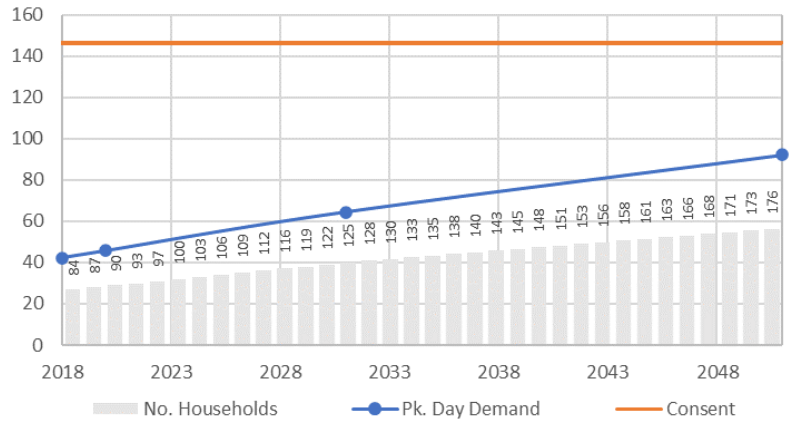
Waipukurau - Projected Peak Day vs Consented Volume (m³/day)



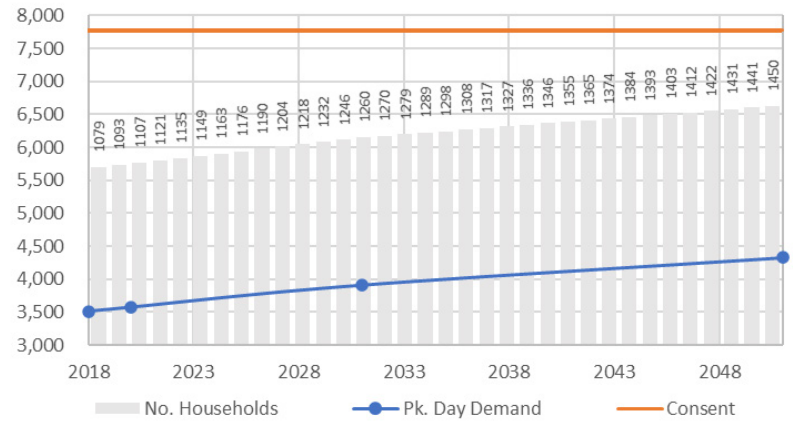
Takapau - Projected Peak Day vs Consented Volume (m³/day)



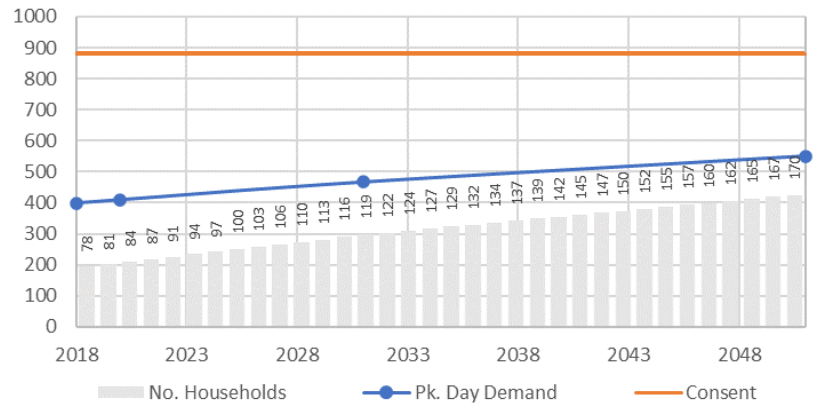
Kaiakau - Projected Peak Day vs Consented Volume (m³/day)



Waipawa/ Otāne - Projected Peak Day vs Consented Volume (m³/day)



Pōrangahau/Te Paeahi - Projected Peak Day vs Consented Volume (m³/day)



Projected Household Growth 2020-2055

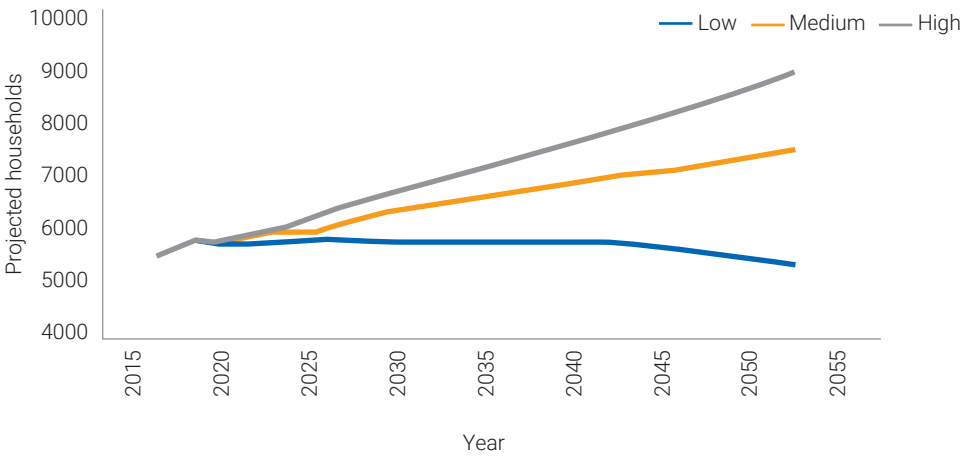


Figure 8: Projected Future Demand & No. Households vs Consented Volume

Observations – Water Availability

- The projected growth forecasts and equivalent increase in the water demand for the water supplies indicates that there is still enough headroom in terms of consented volumes for the existing sources and estimated future peak day demand in 2051.
- This assessment has not considered additional commercial / industrial growth or tourism. Future projections and demand forecasting should be aimed at understanding what the likely trends will be in relation to these growth areas.

Leakage

As the water supply system ages, there is a tendency for a natural rate of rise of Real Losses (leakage) through new leaks and bursts, some of which will not be reported to the Council. This tendency is controlled and managed by some combination of the four primary components of Real Losses Management shown by the arrows in Figure 9.

- Pressure management
- Speed and quality of repairs
- Active leakage control
- Pipeline asset management

The International Water Association (IWA) Water Loss Task Force (WLTF) have examined the relationships between pressure, burst frequency and background losses and developed a theory regarding water loss management which they describe as 'squeezing the box'. This theory is demonstrated by Figure 9 The 'Squeezing the box' approach is now widely used internationally to demonstrate the essential principles for effective management of Real Losses. The volume of Current Annual Real Losses (CARL) from a distribution system is represented by the large box. The CARL volume exhibits a continual trend to increase as new leaks and bursts occur, and the distribution system deteriorates with age, but it can be constrained and reduced by an appropriate combination of pressure management, speed and quality of repairs, active leakage control (to locate unreported leaks and bursts), and pipeline and assets management.

Real losses cannot be eliminated totally. The lowest technically achievable annual volume of real losses for well-maintained and well-managed systems is known as unavoidable annual real losses (UARL).

Using the four methods of leakage management real losses can be controlled, but (at the current operating pressure) cannot be reduced any further than the UARL. However, although the UARL represents the minimum level of real losses that could technically be reached, for most utilities it will not be economic to reduce real losses to this level. There will be some intermediate economic level of real losses which it is appropriate for a utility to achieve.

The best practice performance indicator for the technical efficiency of Real Losses is the Infrastructure Leakage Index (ILI). This is the non-dimensional ratio of CARL divided by UARL. In order to calculate the ILI a water supplier needs to know and have confidence in significant range of data and parameters:

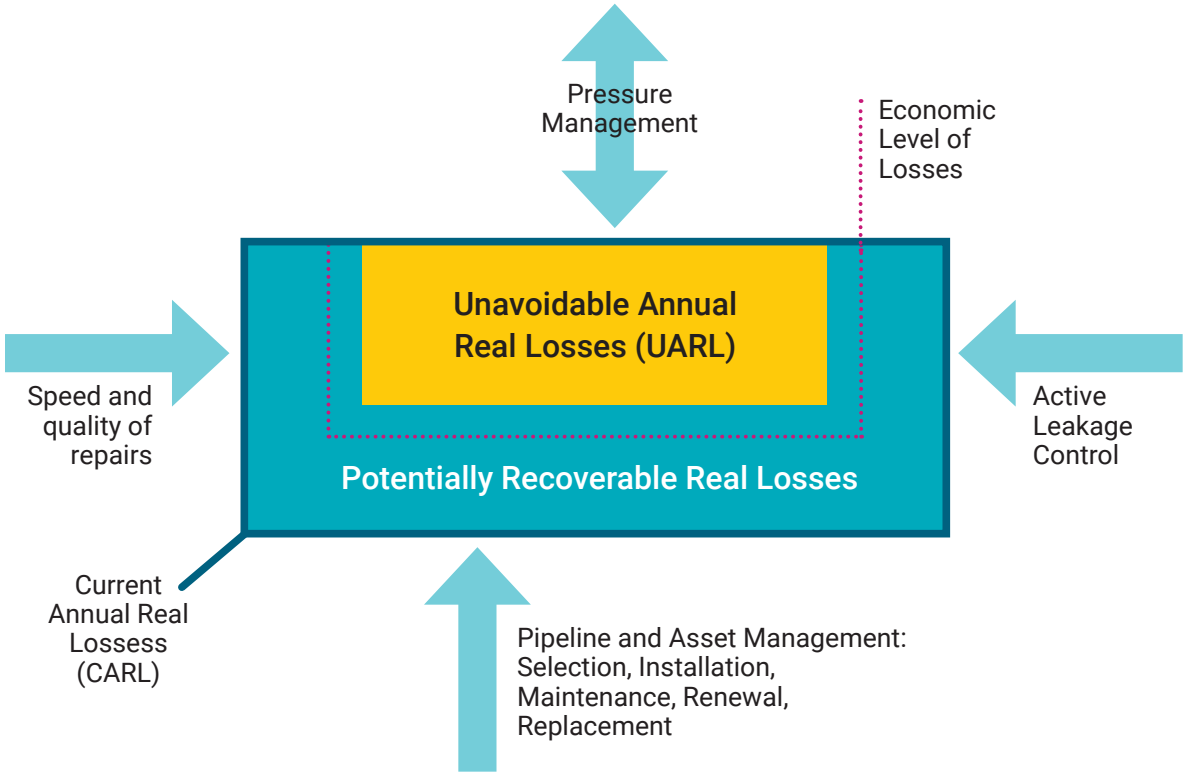


Figure 9: The 4 Components Approach to Management of Real Losses

- Water balance – standard components of demand for a top down water balance that requires leakage, minimum night flow estimates, demand types and equivalent volumes for metered / non-metered and residential / non-residential customers
- Network data – pipe length (by type and material), number of billed properties, number of service connections, service connections by material type, average zonal pressure (AZP), average zonal night pressure (AZNP)
- Burst data – reported bursts and unreported bursts (number and type of reported bursts, typical run times categorised by type), including cost and frequency of ALC for unreported bursts, burst flow rates, natural rate of rise of bursts

As an alternative the Snapshot ILI was developed by the IWA Water Loss Group to assist water authorities to target zones for Active Leakage Control (ALC) interventions. The snapshot ILI is a function of the night leakage rate (MNF – legitimate use) divided by the UARL, it provides a simpler approach for targeting ALC across water supplies. Figure 10 shows the components required to calculate the snapshot ILI.

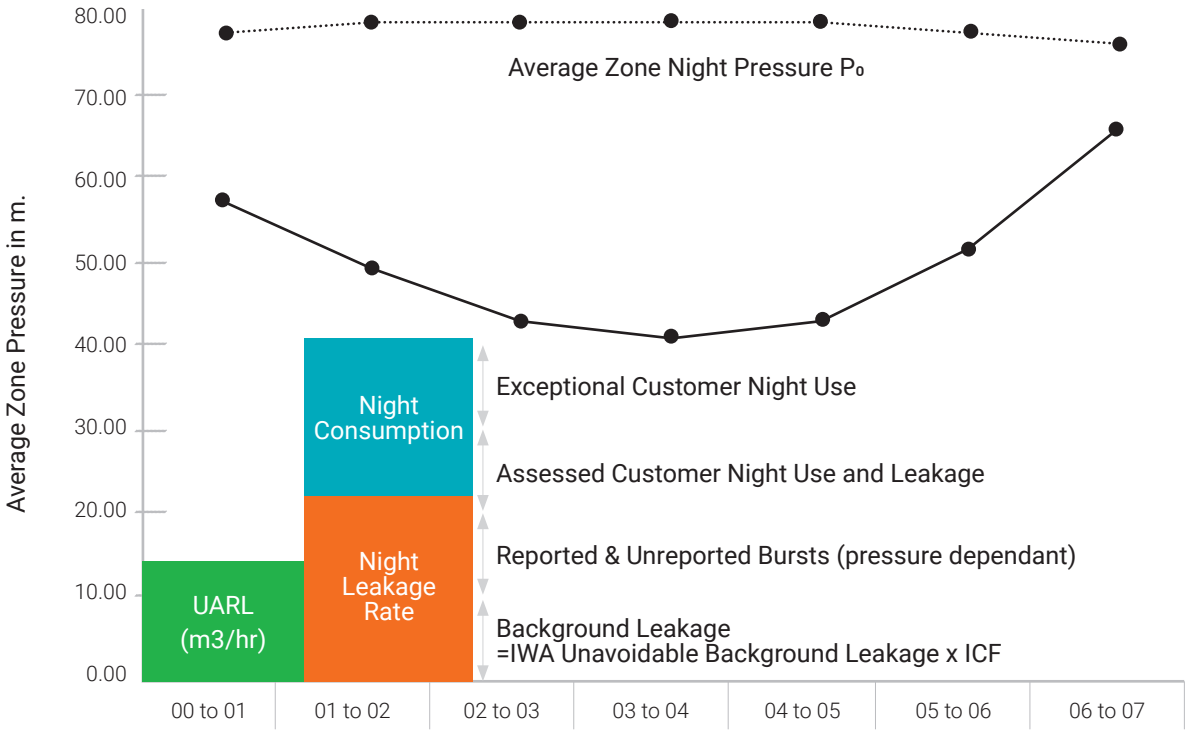


Figure 10: Snapshot ILI

The ILI can be used to categorise performance in real losses into one of four bands, as shown in Table 7. MNF calculations are reliant on estimating the legitimate night usage in order to define the level of leakage.

Band	ILI Range	Guideline Description
A	<2	Further loss reduction may be uneconomic unless there are shortages; careful analysis needed to identify cost-effective improvement
B	2 to < 4	Potential for further improvements; consider pressure management, better active leakage control practices, and better network maintenance
C	4 to < 8	Poor leakage record; tolerable only if water is plentiful and cheap; even then, analyse level and nature of leakage and intensify leakage reduction efforts
D	8 or more	Very inefficient use of resources; leakage reduction programs imperative and high priority

Table 7: World Bank Institute Bands for Leakage Management in Developed Countries

The snapshot ILI is particularly useful where it is not easy to calculate the CARL and annual ILI such as:

- Where residential properties and some non-residential properties are unmetered, resulting in significant uncertainties with the assessment of CARL; and
- Where continuous MNF data is unavailable.

A review of the availability and quality of data for the CHBDC water supplies has identified that the snapshot ILI approach is the current best approach for leakage benchmarking purposes. Table 8: Snapshot ILI Parameters presents the input parameters required to deliver the ILI and estimated / assumed values.

Water Supply	Waipukurau	Waipawa - Otāne	Takapau	Pōrangahau - Te Paerahi	Kairakau
System Input - AD	4,277	1,872	378	151	24
System Input - PD	6,130	3,770	686	399	42
Total Length of mains (km)	79.1	77.0	16.4	16.2	3.3
Total number of connections	2,173	1,254	272	243	84
AZP (m)	64	65	18	40	17
AZNP (m)	65.7	66.0	18.4	40.8	17.3
Min Night Flow (m^3/hr)	72.0	41.8	5.4	4.9	1.7
Including Unavoidable Annual Real Losses (UARL) (m^3/hr)	10.8	7.8	0.5	1.0	0.2
Legitimate Usage - 4L/conn/hr (m^3/hr)	8.7	10.0	2.2	1.9	0.7
Total Leakage Rate (m^3/hr)	63.3	31.7	3.3	2.9	1.0
Average Day Use (L/conn/day)	1,269	886	1,102	333	**-2**
Average Day Use (L/person/day) *assume occupancy rate of 2.8	453	316	394	119	-
Peak Day Use (L/conn/day)	2,122	2,399	2,234	1,354	212
Total Leakage (L/prop/day)	699.2	607.2	288.0	288.0	288.0

Table 8: Snapshot ILI Parameters

It should be noted that the negative average day use for the Kairakau water supply is due to all customers having rainwater tanks which are supplemented by the Council's water supply. The estimated ILI and predicted band for the CHBDC water supplies is presented in Table 9.

Water Supply	Snapshot ILI	Band	Confidence	Key Assumptions and Data Limitations
Waipukurau	6.7	C	Average	System input based on average day demand from 5 years of historical daily totals. No. of connections obtained from 2018 AMP figures. Length of mains based on GIS. MNF obtained from hydraulic model.
Waipawa- Otāne	5.3	C	Average	System input based on average day demand from 5 years of historical daily totals. No. of connections obtained from 2018 AMP figures. Length of mains based on GIS. MNF obtained from hydraulic model.
Takapau	11.6	D	Low	System input based on average day demand from 5 years of historical daily totals, of which for 1-year restrictions were in place. No. of connections obtained from 2018 AMP figures. Length of mains based on GIS. MNF estimated based on similar NZ water supplies using a 'per connection' approach. AZP derived from average static head estimate using approximate elevations at pump station / reservoir and across water supply.
Pōrangahau -Te Paerahi	5.0	C	Low	System input based on average day demand from 5 years of historical daily totals, of which 1-year restrictions were in place. No. of connections obtained from 2018 AMP figures. Length of mains based on GIS. MNF estimated based on similar NZ water supplies using a 'per connection' approach. AZP derived from average static head estimate using approximate elevations at pump station / reservoir and across water supply.
Kairakau	10.2	D	Low	System input based on monthly totals from 2 years of historical data, both of which restrictions were in place. System input based on average day demand from 3 years of historical daily totals. No. of connections obtained from 2018 AMP figures. Length of mains based on GIS. MNF estimated based on similar NZ water supplies using a 'per connection' approach. AZP derived from average static head estimate using approximate elevations at pump station / reservoir and across water supply.

Table 9: Estimated ILI for CHBDC Water Supplies

Observations - Leakage

- The snapshot ILI estimates indicate that there is opportunity for Council to implement strategic leakage management and active leakage control across all the water supplies.
- At the same time Council should focus on improving the overall understanding and confidence in the key parameters that underpin successful leakage management – data improvement areas include billing information, number and type of customers, metered and non-metered customers.

New Zealand Benchmarking

The Infrastructure leakage index is a non-dimensional performance indicator used for comparing the operational management of real water losses. It is the ratio of Current Annual Real Losses to Unavailable Annual Real Losses.

Figure 11 shows the Average daily residential water use (Litres/person/day). Bars are colour coded according to the proportion of the network that has residential water metering.

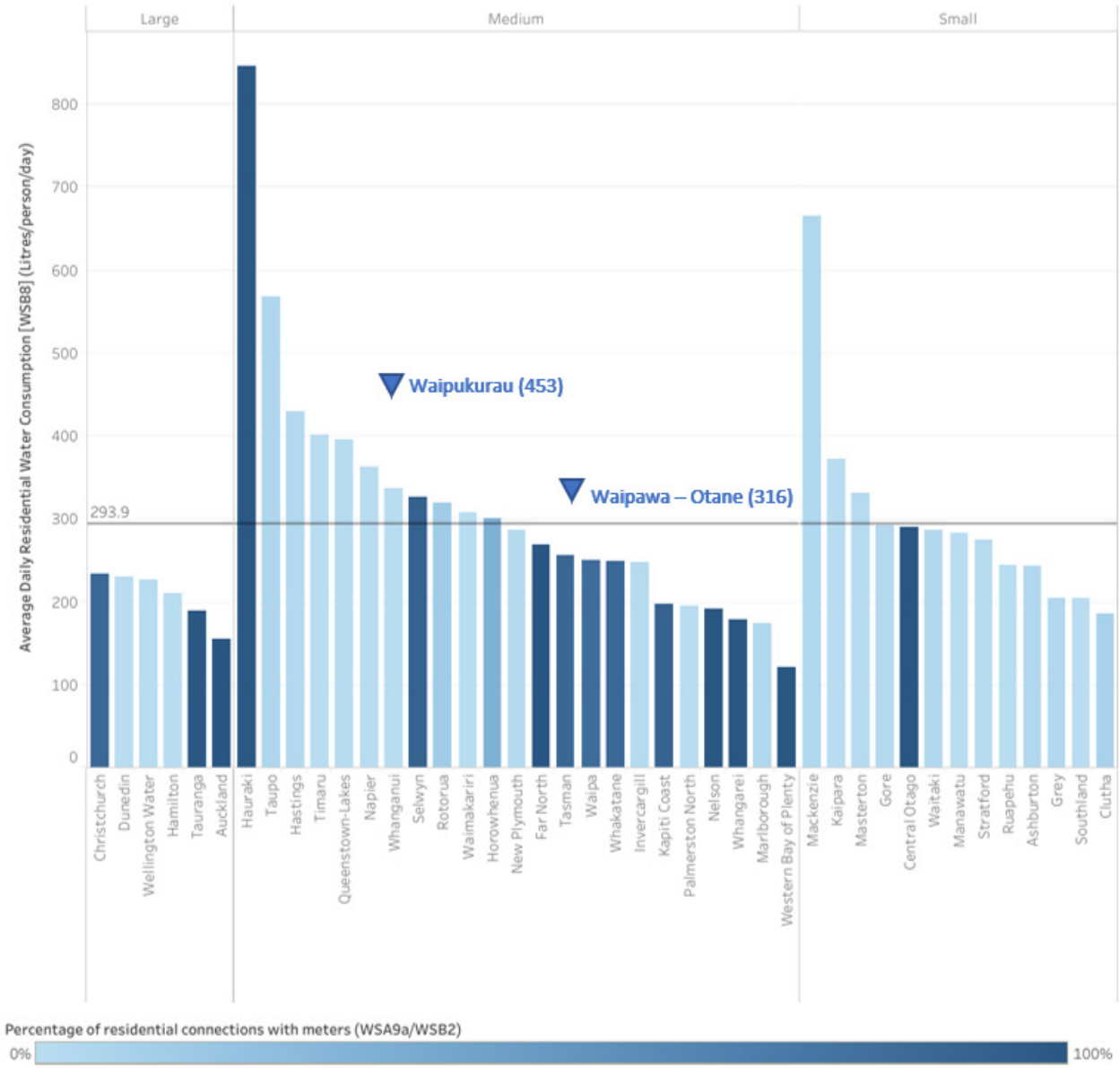


Figure 11: Average Daily Residential Demand (Litres/person/day)

Figure 12 shows the Infrastructure Leakage Index (sourced Water New Zealand – Residential Water Efficiency) Figures shown on bars, have been colour scaled based on levels of residential metering, as this affects the accuracy of water loss calculations.

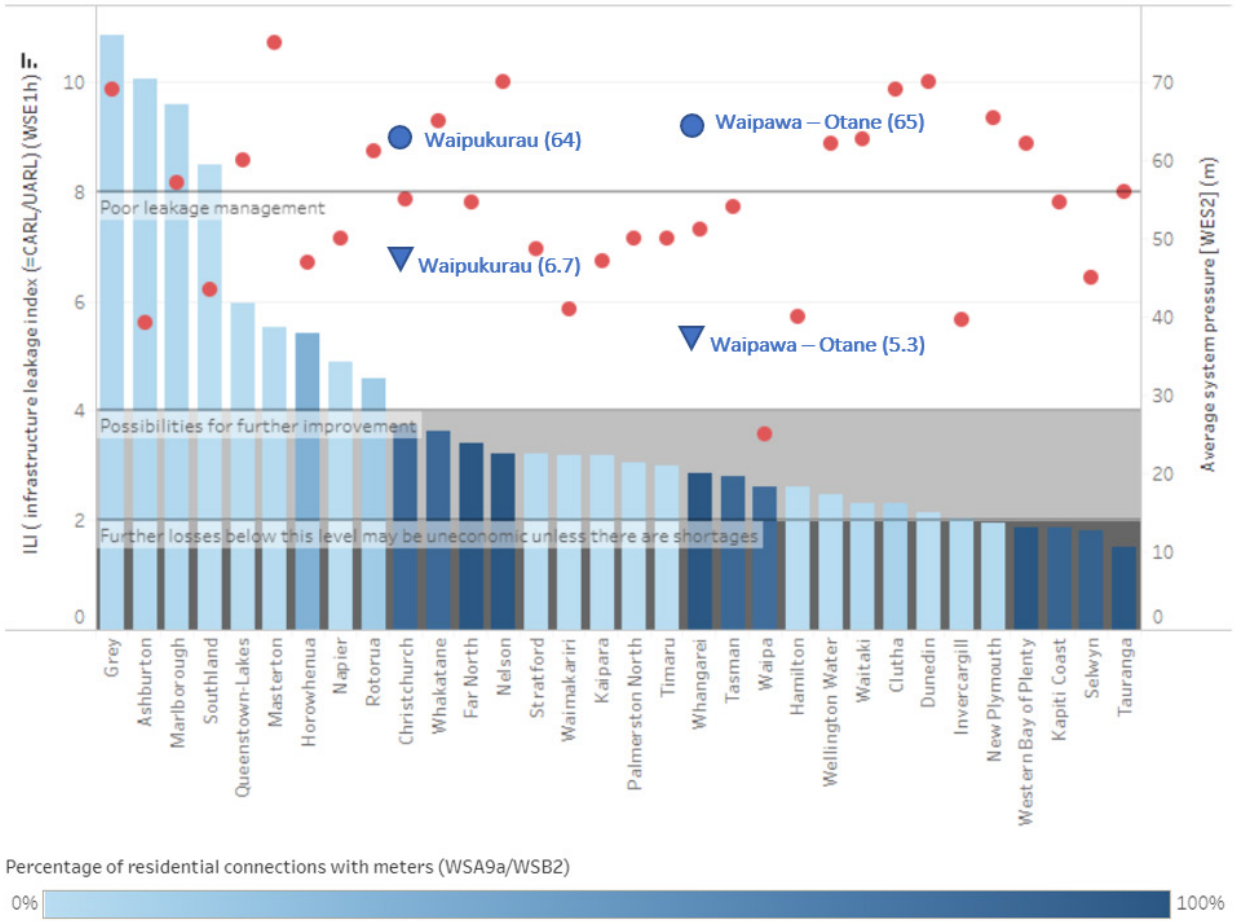


Figure 12: ILI FY2019 (Average system pressure, in m head, represented by red dots)

Average daily residential water use (Litres/person/day). Bars are colour coded according to the proportion of the network that has residential water metering.

Observations – Benchmarking

- Water consumption and leakage rates vary considerably throughout New Zealand. Those supplies with residential metering typically have the lowest average daily residential usage and ILI, which clearly highlights the benefits of residential customer metering.
- The benefits from pressure management are unclear from the data provided, however the use of other metrics such as burst frequency (number of mains breaks) will likely provide a more informative measure with benefits such as a reduction in breaks, and a reduction in demand and water loss.
- Tauranga and Nelson City Councils have seen a reduction in residential consumption to <200 L/per/d with the rollout of universal metering city wide, compared to Waipukurau (453 L/per/d) and Waipawa – Otāne (316 L/per/d) which demonstrates the potential for significant reduction in demand.
- Target measures for residential consumption and water loss should be set based on achievable targets that can be reduced through the implementation of the plan. At this time, it is recommended that New Zealand TLAs are continued to be benchmarked against.

Current Approach

Current Sustainable Management Practices

Engagement and Public Education

In 2016 Council implemented a new consultation and engagement activity called Project Thrive. The aim of Project Thrive was to increase visibility of Council's strategic direction and aspirations for the District to the community, and thereby support decisions on investment into infrastructure.

One of the key focus areas in this engagement for Council was elevating the importance of water for the future of the District. Council has continued to invest in raising the profile of investment decisions in three waters infrastructure through their #bigwaterstory, which included seeking feedback from the community on support for the capital works delivery programme.

#the BIG Water Story

#bigwaterstory will continue to be an important tool for Council as part of establishing further improvement measures, undertaking investigations and implementing demand management strategies to underpin the future approach to sustainable water management in the District:

- Incorporating 'smart growth' into the objectives for the management of the water supplies.
- Developing clear 'road maps' for water activities so that both communities and Council are clear on the priorities and directions.
- Ensuring 'planning for tomorrow' is considered as part of 'future-proofing' and undertaking 'environmentally responsible' decision making.

Council also undertakes a public education programme focused at a school level throughout the District. Year 3 through to Year 8 children participate in a water awareness programme in the classroom and are provided with water education and water conservation information brochures.

Observations – Engagement

Council have set up a responsive and collaborative engagement tool through Thrive and the #Big Water Story. These activities are already seeing the benefits of an elevated and transparent messaging to the community on why certain decisions are being made for the water supplies. It is recommended that the improvements and action plan identified in this Plan are presented to the community using the Thrive and #bigwaterstory engagement platforms so that the community can understand why it is important for Council to continue to invest in infrastructure and sustainable management activities for the water supplies.

Plans and Policies

Council has several plans and policies that include provisions for the promotion of sustainable water management practices. These include the District Plan, Water Services Bylaw, Long Term Plan, Environmental and Sustainability Strategy and the Engineering Code of Practice.

As well as seeking to ensure that future development is appropriately accommodated for, the District Plan's intention is to underpin the Resource Management Act requirements by encouraging sustainable water management of the district's sources. For example:

- The resource consents relating to Council's taking of water are considered as part of district wide matters and activities.
- Part C Section 6 of the draft 2019 District Plan sets out the use of water efficient landscaping / planting and water saving devices for developments.
- Part D Section 15 of the draft 2019 District Plan outlines that Council is required to manage the effect of the operation, maintenance and upgrading / development of the water supplies on the environment, whilst balancing the social, cultural and economic wellbeing of the communities.

Council's Water Bylaw 2018 is made under the authority of the Local Government Act 2002, and Council can:

- Erect, construct, and maintain any public work, which in the opinion of the Council may be necessary or beneficial to the District
- Consult with communities
- Complete assessments of water services within the District
- May make bylaws with regards to water services within the District.

In terms of demand management 708.7.3 of the Water Bylaw currently states that "The customer shall comply with any restrictions which may be required by Council to manage high seasonal or other demands. Such restrictions shall be advised by public notice. Even when such restrictions apply Council shall take all practicable steps to ensure that an adequate supply for domestic purposes is provided to each point of supply".

In terms of emergency restrictions 708.7.4 of the Water Bylaw currently states that "During an emergency Council may restrict or prohibit the use of water for any specified purpose, for any specified period, and for any or all of its customers. Such restrictions shall be advised by public notice. Council may enact penalties over and above those contained in these conditions to enforce these restrictions. The decision to make and lift restrictions, and to enact additional penalties, shall be made by Council or any officer authorised to exercise the authority of Council".

In terms of flow meter installation 708.12 .1 of the Water Bylaw currently states that "Meters for on demand supplies, and restrictors for restricted flow supplies, shall be supplied, installed and maintained by Council, and shall remain the property of Council. Where on demand supplies are not universally metered, Council where it considers water use is unusually high, reserves the right to fit a meter at the customer's cost, and charge accordingly".

Observations – Policies and Plans

The current source capacity versus demand assessments in this Plan indicate that there is capacity between consented water volumes and forecasted growth projections for the water supplies. However, it is likely as consents come up for renewal that further conditions could be imposed as a result of increased scrutiny on the impact of climate change on local river flows, the need for sustainable water management practices to be implemented and freshwater management objectives. A review is needed on how best to integrate demand management targets (e.g. leakage reduction, per property consumption, customer metering) into Council's policies such as the District Plan and Long-Term Plan with further support via the water bylaw. By building in some achievable targets over the next 10 years this would help offset any constraints that come from the reduction in consented take volumes and allow the District's economy to continue to grow.

Conserve Water Measures

Historically Council have had to put in sustainable water measures (restrictions) due to river levels falling below the trigger levels for demand management to apply.

Restrictions are set at four levels as detailed in Table 10:

Sustainable Water Measure Detail	Levels
LEVEL 1 – PLEASE CONSERVE WATER AT ALL TIMES	LEVEL 1 CONSERVATION
LEVEL 2 – SPRINKLERS AND HOSES ON ALTERNATIVE DAYS	LEVEL 2 SPRINKLERS AND HOSES ON ALTERNATE DAYS

- Even numbered houses on even days of the month
  (i.e. if you live at number 10, you may use a sprinkler or hose on the 2nd, 4th, 6th... of the month)
- Odd numbered houses on odd days of the month
  (i.e. if you live at number 11, you may use a sprinkler or hose on the 1st, 3rd, 5th... of the month)

Watering gardens:

- Odds and evens apply (odd numbered houses on odd days of the month and even numbered houses on even days)
- Sprinklers can only be used for 1 hour, before 9am and after 5pm
- Hoses fitted with a trigger nozzle can be used before 10am and after 4pm and cannot be left running unattended
- Watering cans and buckets permitted
- Washing of vehicles and/or buildings
- Washing of vehicles and/or buildings permitted only with a hose fitted with a trigger nozzle
- Swimming pools - permitted to top up swimming pool or spa
- Hard surfaces - no hosing of hard surfaces as part of general cleaning. Spot cleaning permitted for health, safety or emergency reasons only

LEVEL 3 - WATERING GARDENS	LEVEL 3 HAND HELD HOSES ONLY ON ALTERNATE DAYS

- Odds and evens apply (odd numbered houses on odd days of the month and even numbered houses on even days)
- Sprinklers are not permitted at any time.
- Hoses fitted with a trigger nozzle can be used before 10am and after 4pm and cannot be left running unattended
- Watering cans and buckets permitted
- Washing of vehicles and/or buildings
- Washing of vehicles and/or buildings permitted only with a bucket and sponge, or at a commercial carwash

Swimming pools - permitted to top up a pool or spa using a hose fitted with a trigger-nozzle, watering can or bucket for a maximum of 15 minutes per day

Hard surfaces - no hosing of hard surfaces as part of general cleaning. Spot cleaning permitted for health, safety or emergency reasons only

LEVEL 4 - NO OUTDOOR USE, EXCEPT IN THE CASE OF AN EMERGENCY	LEVEL 4 TOTAL OUTDOOR WATER BAN

Table 10: Current Council Sustainable Water Measures

Mandating Rainwater Tanks

Currently properties in the Kairakau water supply have 1,800 L rainwater tanks installed which are supplemented by the Council water supply reticulation.

Rain water tanks will provide relief to the potable water network in times of peak demand, and allow people to continue watering their gardens when and if water restrictions are imposed. In addition, there is also a benefit from the retention of rain water in terms of reducing the amount of water entering the stormwater network during rainfall events (refer Stormwater Bylaw relating to storm water retention devices).

In terms of the benefits of rainwater tanks in the District as a means of supporting sustainable water use practices and reducing demand on the consented water sources the following comments / observations are made:

- If a secondary objective of the rainwater tanks is to provide attenuation of stormwater, rain tanks can be useful.
- In terms of compliance with Drinking Water Stands New Zealand and provision of a potable water supply, rainwater tanks should either be used for non-potable purposes (e.g. garden irrigation) and on a separate piped system, or if used for drinking water fitted with a compliant potable treatment device. For existing houses this could be cost-prohibitive, for new builds this may be reasonable.

Expansion of Water Meters

Our water is precious, and a range of tools are needed to manage its use. Meters are a valuable tool by which Council can measure how much water is being used; identify unaccountable water loss, provide information to users on how much water they are using; indicate to Council how it can plan for water use in the future.

Councils existing bylaw provides for the installation of meters to manage high users only. Council wish, to expand the ability to meter where required for other water management criteria such as demand management, information capture, loss management etc. The proposed 2021 bylaw does not mandate the installation of meters on any property at any time but provides Council with the ability to where necessary.

Resilience

Council are implementing a programme of infrastructure projects for the Waipukurau and Waipawa water supply schemes to:

- Enhance the resilience of the water supply through connecting the supplies
- Ensure the supply can reliably meet demand and levels of service
- Improve the ability to service growth

A key project to improve the resilience of Waipukurau and Waipawa, is the link project whereby the Waipawa borefield may feed a central reservoir that feeds the Waipukurau town in addition to its existing supply. This project in the first instance may in cases of emergency turn around and feed the Waipawa community. Longer term plans will be to have the supplies feeding in both directions.

Reservoir Replacement

There is a significant portion of assets that have already exceeded their theoretical useful lives. Included the two reservoirs in Waipukurau situated on Pukeora Hill, and at Pukekaihou (Hunter Park), and the two reservoirs supplying Waipawa on Abbottsford Road, Waipawa.

The reservoirs are scheduled for replacement in the following years of the 2021-2031 Long Term Plan;

Pukeora Reservoir (2023) – Year 3

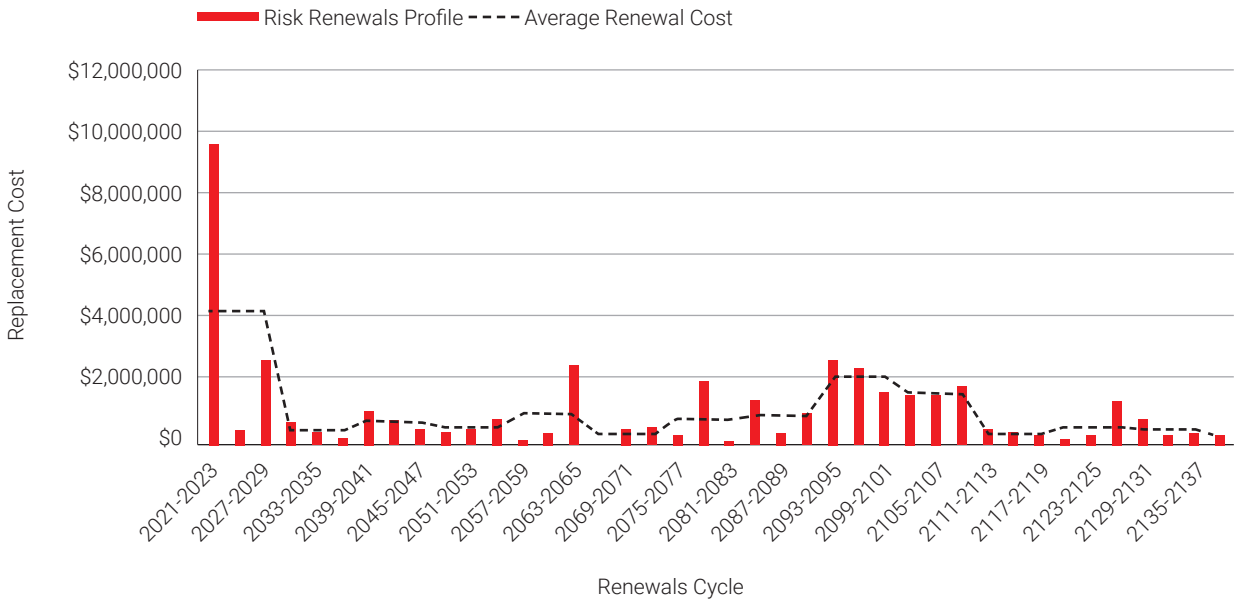
Pukekaihou (Hunter Park) Reservoir (2025) – Year 5

Abbottsford x 2 Reservoir (2024-2025) – Year 4 and 5

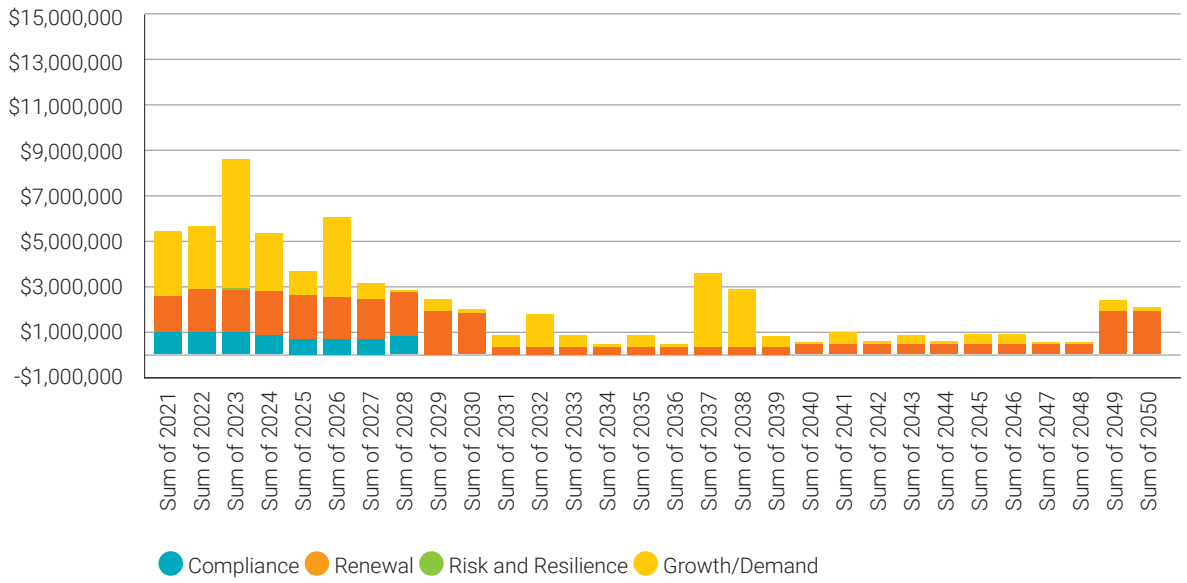
Renewals

There is a significant portion of assets that have already exceeded their theoretical useful lives and this is represented in the large spike in costs for the first period of the draft Long Term Plan 2021. Budgets are presented in three year periods. The dotted line provides the renewal budget average of three of these periods (i.e. nine years).

Renewal Budget Average



Water Supply CAPEX

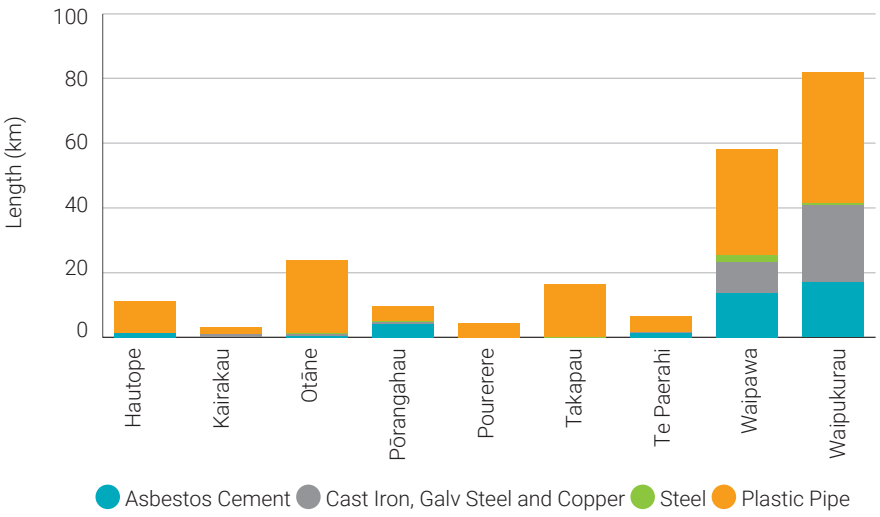


The adopted renewal budget determines the rate that pipes are renewed and therefore the time period for addressing pipes with a very high failure risk.

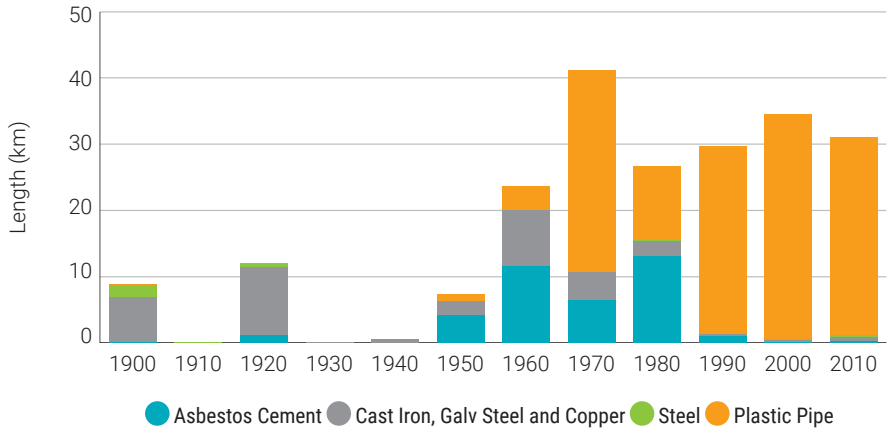
Pipes that are candidates for renewal are selected as part of the following process:

- Assign a renewal priority to each pipe in the database using risk scores
- Map the location of high and very high risk pipes across the district
- Determine discrete projects to cost effectively address the high risk pipes in each location, taking into account:
  - Opportunistic renewal of pipes in the vicinity
  - Interaction with Council's road surfacing programme
  - Interaction with growth and demand or level of service drivers

Drinking Water Reticulation Length by Community



Drinking Water Reticulation Length by Install Decade



Previous Water Management and Conservation Strategy (2012)

Council's current Water Management and Conservation Strategy (June 2012) identified CHBDC's requirement under the resource consents for Waipukurau and Waipawa water supplies to have a water management strategy.

The purpose of the 2012 Water Management and Conservation Strategy were:

- To demonstrate the financial efficiencies that could be made from conserving water through lower operating costs, reduction / deferring of capital costs and efficiencies and economies through shared water use responsibility by consumers.
- To provide linkage of the Water Activity to the social, cultural, economic and environmental community outcomes for the District, and thereby feed into the 2012-2022 LTP with the aim of supporting Council's demand management target areas.
- To recognise that there were statutory mechanisms in place, such as the Water Services Bylaw, that can enable a stronger regulatory approach to be employed by Council where necessary to manage consumer demand and water supply activities.

The 2012 Strategy also detailed Council's current approach to demand management activities:

- **Integrated Planning** – promoting water management and a more sustainable approach to water management through ensuring development is appropriately designed and engineered, and consistent standards are adopted. This included consideration of appropriate network upgrades to accommodate future pressure management.
- **Environment** – consideration of the predicted impact of future climate trends in the District. Rainwater harvesting was raised as an option for further investigation as part of the District Plan review.
- **Demand Management** – the use of restrictions to manage water use during high periods of demand, and the need for all customers to comply with the restrictions.
- **Asset Management / Reticulation Renewals** - $462,213 was budgeted for in the 2011/2012 Annual Plan for Council to continue to maintain a proactive maintenance and renewal programme, with priorities given to areas of network where evidence of high leakage is observed.
- **Targeted Growth** – at the time of writing the 2012 Strategy, Council had capped the amount of growth around the outer extents of the water supply networks due to limited capacity and low pressure. Instead growth was encouraged in the central township areas where there is more capacity. It was noted that if water management is successful in reducing demand that the cap could be reviewed in the future.
- **Zone Management** – an increase in the number of zones in the water supplies was proposed to aid Council's management of water usage, leakage and other operations and maintenance issues.
- **Leak Repairs** – an overview of Council's maintenance contract is provided with Council aiming to respond to and repair significant leaks within the CBD within six hours. Lower priority leaks have a response time of up to seven days. For leaks on private properties Council visits or contacts property owners with a request to repair the leak within seven days. It was noted that private leakage is known to be an issue particularly with lifestyle and farm properties where pipes and troughs are poorly installed and maintained. Council's bylaws enforced to ensure leaks are repaired.
- **Leak Detection Policy** - Council monitor the reticulation and stormwater drains on a regular basis to identify water leaks. Leakage detection is also undertaken with a focus on trunk main leakage, critical mains and vulnerable areas.
- **Water Metering** – extra-ordinary customers are metered (>300m³ per household per year) and charged for consumption over 300m³ per year (meters read quarterly). Meters are read monthly for consumers with trade waste accounts and larger water consumers.
- **Ordinary Water User Policy** – under this policy, Council can install a water meter and charge accordingly if a domestic property is using a volume of water that is more than what is deemed reasonable. An extra-ordinary user is any user that is not considered to be a standard domestic property using a typical volume of water, which may be subject to specific conditions and limitations.
- **Extra-ordinary Water Users** - It was noted that over the 10-year cycle of the current LTP, Council have a meter installation programme for unmetered commercial properties if the water usage is deemed to warrant a meter being fitted (e.g. consumption is > 300m³ per year). Further conditions and definitions on what are deemed an extra-ordinary water user are also in place (e.g. domestic swimming pools or spas in excess of 10m³). All new extra-ordinary connections are automatically metered.
- **Metering Tariff and Trade Waste** – standard water use and water meter tariffs are in place. It was noted that the application of trade waste charges was an important tool to encourage water use efficiencies by large users.

- **Hydrant Usage** – Council use hydrants to carry out mains flushing which is important for keeping water mains clear of debris build up. Mandatory testing of hydrants is also required by Council. Where possible these activities are programmed to avoid summer and drought periods. The NZ Fire Service are also given access to fire hydrants for training and testing purposes. Council has two dedicated and full metered water tanker filling points which are accessed via hydrants by authorised users. These dedicated filling points help to reduce excessive use and wastage of water from indiscriminate hydrant use.
- **Council Water Use** – irrigation of Council's parks and reserves requires significant water use. Council is working to put in place more efficient irrigation practices to manage the impact of irrigation during peak water usage periods and the load on treatment plants. Where practical drought resistant grasses on sports fields and plants that require minimal watering are used.
- **Water Conservation and Public Education Programme** – refer to section 'Engagement and Public Education'
- **Water Supply Bylaw** – refer to section 'Plans and Policies'.

Strategic Objectives

The Sustainable Water Management Plan will provide the means to deliver change in how we think of and value water, resulting in efficient use of water throughout community.

The SWM Plan needs to be aligned to Our Communities Strategic Outcomes, namely:

ENVIRONMENTALLY RESPONSIBLE - He Whaaro nui ki te taiao		
	Central Hawke's Bay is home to a unique and beautiful landscape. We celebrate and work together to enhance our local natural wonders and resources.	The management of the 3 waters systems meets growth needs to best serve the community while ensuring the effective us of the limited water resource and protecting the natural environment.
DURABLE INFRASTRUCTURE - He hanganga mauroa		
	We aim to provide sound and innovative facilities and services that meet the needs of our communities today. Our infrastructure is fit for purpose and future proofs our thriving district for tomorrow.	The provision of a 3 waters system in the most cost effective and sustainable way by using the latest technologies and looking for outside the square opportunities and of a quality and quantity that meets the consumers demands, while ensuring any risk to Public health is eliminated.
CONNECTED CITIZENS - He Kirirarau whau hononga		
	Our citizens can connect easily with each other and with those outside of our District. We all have access to everything Central Hawke's Bay has to offer and enjoy these great things together.	By delivering 3 water services outcomes in a way that protects and enhances the uniqueness of the Central Hawke's Bays identity.
PROSPEROUS DISTRICT - He rohe tonui		
	Our is a thriving District that is attractive to businesses. Central Hawke's Bay is enriched by the households and whanau that are actively engaged in, and contribute to our thriving District.	The provision of 3 waters to the consumer will help promote and ensure a thriving community.
Proud District - He rohe poho kererū		
	Central Hawke's Bay is proud of its identity and place in our region and nation. We hold our head high on the national and international stage, celebrating our unique landscape from the sea to the mountains.	By delivering 3 water services outcomes in a way that protects and enhances the uniqueness of the Central Hawke's Bays identity.

By 2025 we aim to:

- Reduce residential consumption by 10%
- Maintain less than 1.80m3 average consumption of drinking water per day per water connection
- Reduce water loss by 20% / Target ILI < 4 within 5 years
- Implement and deliver the renewals campaign as set out in the Long term Plan and Asset Management Plans
- Regular, concise and clear education programmes run regularly to promote this plan

By 2035 we aim to:

- Reduced residential consumption by 20% through universal metering and volumetric charging
- Maintain less than 1.50m3 average consumption of drinking water per day per water connection
- Reduced and maintained water loss to ILI <2 within 10 years
- Reduce water loss by 40% / Target ILI < 3 within 10 years

How do we get there?

This section describes our plans to deliver a sustainable water management plan. Many of these activities will lead towards more aspirational long-term objectives and the Plan should be updated on a cyclical basis to create a rolling three year plan that stretches us to achieve the aspirational targets.

Our approach to water efficiency can be grouped into three key areas as listed below and detailed in the follow section:

- Engaging with our customers
- Improving our assets
- Working with our stakeholders

For each key activity listed the expected outcome is defined with a priority action to determine the appropriate timing. Three categories have been assigned;

Immediate within the next 1-3 years

Investigate within 3-6 years,

Future 6+ years.

Action Plan

This section details the options that are identified as 'immediate' actions and include those actions we are already doing or will provide the greatest benefit to save large water volumes of water in the short term.

Key Area	Key Activity	Expected Outcome	Action
Engaging with our Customers	Residential education and awareness campaigns	Customers value water and are aware of the benefits of saving water through reducing their own use	Immediate
	Non-residential customer education and awareness campaigns	Work with customers to demonstrate how water can be saved through efficient practices and benefits such as financial incentives.	Immediate
	Review and update water restrictions policy to reduce irrigation / outdoor use	Seasonal policy to implement 'Sustainable Water Use Measures' which the community embraces	Immediate
	Large water consumers water efficiency review and option for savings	Target water savings within non-residential users	Investigate
	School education programme	A water-wise educational programme for schools to educate future water users about why and how to reduce our water demand	Investigate
	Working in partnership with relevant organisations (Regional Council, Water NZ) either with joint campaigns and/ or on-line promotions Finding innovative ways to engage with our customers in water efficiency	Our engagement programme will appear integrated and customers demonstrate satisfaction with the information and support they are receiving	Investigate
	Universal metering and volumetric charging - Potable water and wastewater	Informed understanding of water use behaviour to support water resource planning and meeting consenting requirements Frequent reading and billing Fair pricing scheme across the district (e.g. peak pricing, block tariff)	Investigate
	Use of rainwater tanks to substitute water demand during peak demand	Determine if rainwater tanks are beneficial to support potable water use and/or outdoor use for existing customers and new builds	Investigate
	Planting restrictions to ensure only native plants that are appropriate for the local climate are used in new developments / replacement	Water efficient landscaping policy and incentives to support new developments and replacement	Investigate

Improving our Assets	Identify 'champions' for Sustainable Water Management (SWM) within Council and define their role of promoting SWM within the community and within the Region.	Specific roles to be defined and assigned to lead and promote sustainable water management within Council and the wider community Set financial operational budget for SWM	Immediate
	Implement a bulk meter management system to ensure accuracy of measurement and reporting (Telemetry System)	Improve our understanding and analysis of demand	Immediate
	Develop a Non-Revenue Water Strategy to reduce leakage levels	Proactive leakage detection programme to reduce leakage, reduce burst frequency, and to provide continuous minimum night flow reporting	Immediate
	Establishment of District Metered Areas (DMA) or Pressure Management Areas (PMA) to provide	To monitor demand and leakage in manageable areas for informed decision making as part of the wider SWM plan	Immediate
	Data audit of existing customer metering	To account for legitimate usage and improve our understanding of water consumption by user category	Immediate
	Develop Standard Operating Procedures (SoPs) to capture fault data (breaks, complaints), flushing / repairs, etc..	To minimise and account for legitimate water usage when operating the network To capture performance data for informed decision making e.g. pipe breaks	Immediate
	Targeted renewals / rehabilitation programme to reduce leakage and burst frequency	Effective renewals programme resulting in a reduction in number of pipe breaks	Investigate
	Review water use within treatment processes and operational e.g. recycled effluent at WWTP	Demonstrate sustainable use of resources including water within water and wastewater treatment processes	Investigate
	Investigate alternative sources and provide cost benefit analysis e.g. greywater	Alternative water resources to reduce demand	Future
Working with our Stakeholders	Develop a policy to ensure sustainable water use within the Council facilities and operations e.g. Park irrigation use	Water efficient buildings and recycling of potable water in operational use	Immediate
	Use of water efficient fixtures for key stakeholders such as Education and Kāinga Ora (Homes and Communities)	A programme to implement cost-effective water saving measures in schools, public buildings, community housing etc.	Immediate
	Provide incentives for developers to adopt water efficiency measures in new and refurbished housing and be fully engaged with the community	Engaged with private developers and housing associations to identify the most practical and appropriate specification for maximising practical water efficient new housing.	Investigate
	Drive the implementation of water efficiency policy and standards in development plans including those relating to new-building specification	New build legislation to ensure new homes or businesses are designed to meet low per capita consumption	Future
	Planting restrictions to ensure only native plants that are appropriate conditions	Promote water efficient landscaping	Future

Plan Implementation

A work-stream approach has been adopted to deliver 'The Plan'.

The output will be consolidated into our Water Asset Management Plans which over time will inform the development of this document from an initial statement of strategic intent to a fully mature business approved Plan.

To implement the SWM Plan include requires making changes to our existing assets and practices; enhancing existing practices or delivering new activities. Regular reviews will monitor the success of each work-stream as presented in Figure 13 and the resulting impact on our demand assessment and predicted savings.

The individual projects identified as part of the Action Plan are presented in Figure 13 based on the proposed timing of each initiative grouped by work-stream. Council intend to review the plan on a three-yearly cycle and will assess the timing and need for individual projects based on the success of pilots, trails and the available funding to support implementation.

The options that are identified as 'immediate' actions which includes those which Council are already doing or will provide the greatest benefit to save large water volumes of water in the short term are presented in Appendix A.

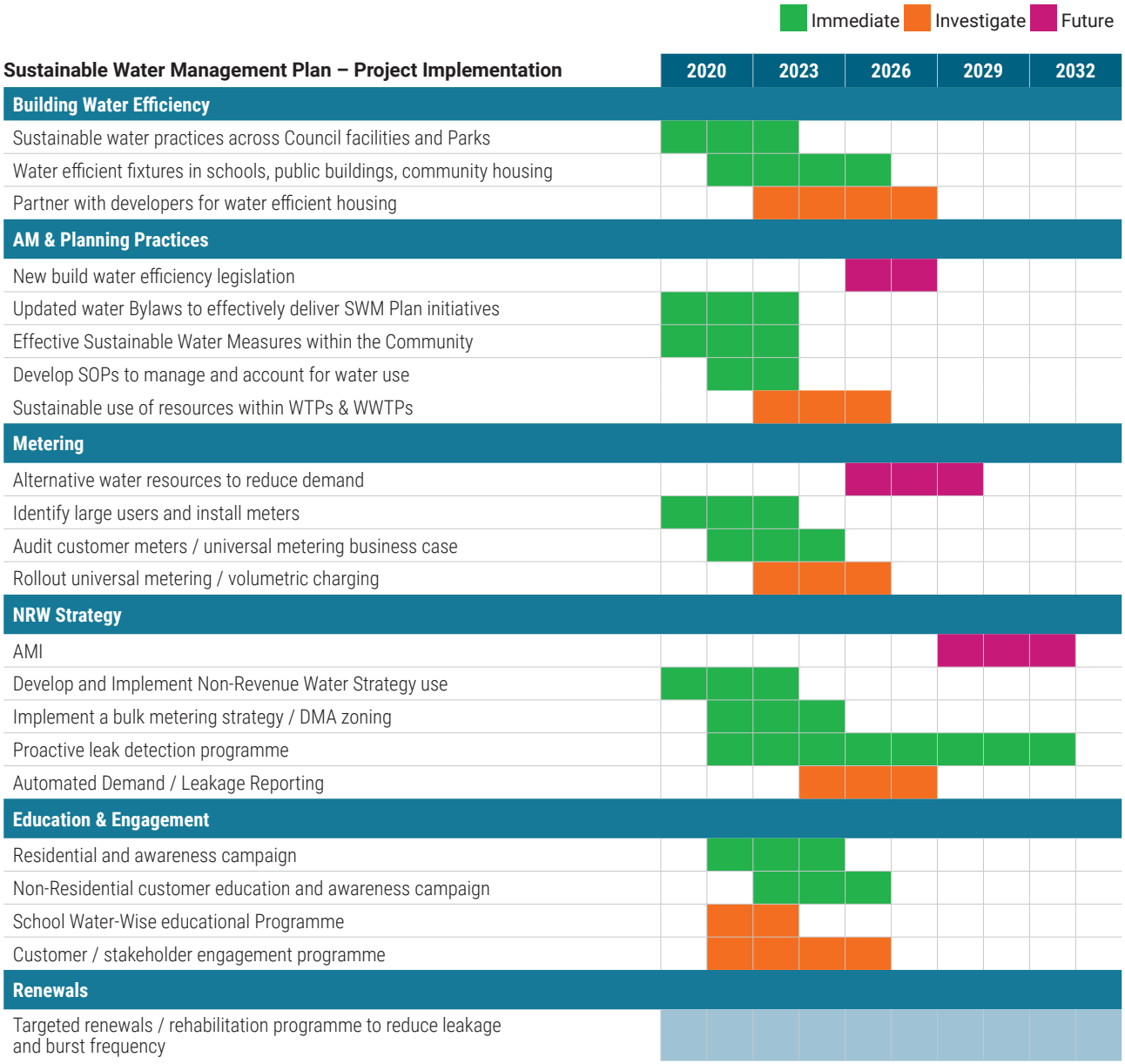


Figure 13: Sustainable Water Management Plan – Implementation Project Timeline

Ownership – Roles and Responsibilities

Ownership of the SWM Plan will need to be assigned along with champions to lead the various work-streams. Defining ownership to individuals or departments within Council will drive progress and bring success.

Roles and responsibilities are required for implementation, ongoing monitoring, analysis and reporting for individual projects / work-streams.

It is recommended that an overall team or individual is assigned responsible for Council to own and deliver the plan. This will include responsibility for proving updates Council and its stakeholders on progress, levels of success and next steps.

Measure of Success

The process of monitoring and evaluation is important and will be used to refine SWM strategies in the longer term to ensure cost-beneficial options are being implemented and savings are being achieved.

Establishing targets to measure progress will be essential with detailed assessment and pilot programmes to determine the benefits against implementation and maintenance costs. Results will support future updates to the plan and the rollout of successful practices across the district.

There is uncertainty in calculating the demand for water from customers. Key uncertainties will arise from the influence of climatic variations, economic impacts, estimates of population and the lag between implementation of water efficiency measures and when they take effect. The reporting of performance will take account of these uncertainties by inclusion of a tolerance band around targets and these will continue to be refined in future updates for inclusion in performance assessments.

Council will measure and report on the performance of options on a regular basis such as quarterly or as appropriate. For each option key performance indicators (KPIs) will be developed at the start of the project, including; water saving and cost information, with other relevant objectives. This information will support the development of the cost benefit analysis and future updates to the plan.

Plan Review

The SWM Plan is the start of a journey for Council, its stakeholders and its customers. It involves changes to behaviour, new technologies and different management practices. Councils proposes to review this plan on a three-yearly cycle in line with the Asset Management Plans and as part of Councils continuous improvement process.

The review will focus on:

- Progress of implementing sustainable water management initiatives
- Effectiveness of implemented initiatives to meet targets
- Status of pilots and investigations into other potential options
- Identifying additional options/ funding that may need to be implemented to meet future targets

The review of this Plan will enable Council to identify the water sustainable management measures that will ensure customers save water in the most cost-effective manner.

Risks and Mitigation

Several risks to the Plan have been identified but we will mitigate these risks, where at all practicable.

- Failure to engage customers with our water efficiency message and in trials/ pilots – work with the region and industry partners like Water New Zealand to help us meet customer expectations.
- Lack of legislative support/ no appetite from external stakeholders/ conflicting views on how to proceed – fully engage with external stakeholders from the start of the process.
- Changing customers' behavioural legacy – ensure we engage fully with the customer and invest in market research/ focus groups to understand the barriers to water efficiency.
- Longevity of the effects of water efficiency has not been proven – through the water efficiency trial, we will be creating a local regional case.
- Effects of reported reduced consumption not seen at water source – careful analysis of results including distribution Input data, per capita consumption monitor data and other operational activity to allow us to interpret the effects of water efficiency on Distribution Input.
- In terms of measurement of national campaign activities, these are very difficult to quantify. Other factors may also be influencing demand such as leakage improvement work in the area. By developing customer awareness, we proactively take steps to inform our customers in how they can use water sustainable which will hopefully in turn influence their water usage behaviours and will be seen, over time, a reduce in per capita consumption.
- Climate change has the potential to introduce substantial strategic risk and uncertainty. This could lead to significant capital expenditure if results are fully incorporated into schemes. However, where possible new strategic assets must be future proofed as far as is reasonably practicable.

Appendix A – Three Year Action Plan

A1: Engaging with our Customers

Activity	Expected Outcome	Building Blocks	Ownership / Year	Budget $
Review and update water restrictions policy to reduce irrigation / outdoor use	Seasonal policy to implement 'Sustainable Water Use Measures' which the community embraces	• Review current water restrictions and develop 'sustainable water measures' that can be easily adopted and understood by customers • Promote 'seasonal' sustainable water measures within the community to emphasise the importance of how we use water and the impact small changes can make • Monitor daily usage (per person) vs targets with daily updates across local news / Council website (front page) – make it engaging and interesting • Assess the effectiveness of seasonal water use measures and engage with the community of the effectiveness	Council 2020	$15,000

Residential education and awareness campaign	Customers value water and are aware of the benefits of saving water through reducing their own use
	To provide a better understanding of how customer behaviour responds to metering versus other water efficiency measures
		• Review our current water efficiency material and how we can make it more accessible to the community i.e. social media.
		• Campaign to promote simple tips on how we can all use water wisely in and around our homes and gardens to save water, save energy and money off energy bills, whilst benefiting the environment
		• Seasonal promotions to highlight the importance, Labour day, Christmas/New Year and Easter
		• Establish a water efficiency trial to understand how our customers use water and what drives them to water efficiency behaviours;
		  • Metering – How providing customers with their consumption data changes behaviour and demand
		  • Education – how education and customer information influences customer demand
		  • Devices – how the use of water efficiency devices/ appliances influence customer demand
			Council 2020-23	$15,000 per annum
				Efficiency Trial -$35,000

Non-residential customer education and awareness campaign	Work with customers to demonstrate how water can be saved through efficient practices and benefits such as financial incentives.	• Work with non-residential customers to provide water sustainable measures	Council 2020-23	$60,000

A2: Improving our Assets

Activity	Expected Outcome	Building Blocks	Ownership / Year	Budget $
Identify 'champions' for Sustainable Water Management (SWM) within Council and define their role of promoting SWM within the community and within the Region.	Specific roles to be defined and assigned to lead and promote sustainable water management within Council and the wider community	• Define role and responsibility, level of commitment to implement and manage SWM plan • Raise the profile and priority of the SWM Plan across Council departments to achieve the objectives of the plan • Promote Council as a leading example of water efficiency • Identify future opportunities for water efficiency within Council	Council / 2020-23	TBC

Implement a bulk meter management system to ensure accuracy of measurement and reporting (Telemetry System)	Improve our understanding and analysis of demand
	• Ensure there is confidence in the flow data observed at existing bulk meter locations
	• Identify where there are clear data discrepancies which may require a meter to be replaced or further investigation; and
	• Identify new locations where bulk meters should be installed to provide greater confidence in the network performance
		• Review bulk meter data and develop bulk meter improvement plan to improve meter accuracy and allow a water demand balance to be developed, this will comprise:
		  • Identifying meter location, type, condition/ age, status
		  • Review of historical flow/pressure data
		  • Develop and implement an improvement plan for the installation of new bulk meters and replacement of existing meters as part of Asset Management Plan
		  • Review telemetry system and reporting tools for suitability to integrate with other systems and provide dynamic reports i.e. daily demand /leakage summary
		  • Update / replace telemetry system and establish operational reports
		  • Develop meter specification / tender / install new bulk meters and commission
			Council & Industry Partner / 2021-23	$250,000 – estimate (subject to number of meters and communication requirements)

Develop a Non-Revenue Water Strategy to reduce leakage levels	Proactive leakage detection programme to reduce leakage, reduce burst frequency, and to provide continuous minimum night flow reporting	NRW (Water Loss) is dependent on the accuracy and availability of the source data used in the water balance calculation, therefore improving the source data is key to improving confidence, targeting and reducing leakage levels. • Establish leakage targets / base rates across water supplies / DMAs for intervention • Leakage reporting / systems to track leakage levels, natural rate of rise (NRR) • Burst frequency – unreported / unreported bursts • Establish Active leakage control process • Resources – roles / responsibilities / partners	Council & Industry Partner / 2021+	$100,000 (2021) $45,000 (2022-23) (excl repairs)
Establishment of District Metered Areas (DMA) or Pressure Management Areas (PMA) to provide	To monitor demand and leakage in manageable areas for informed decision making as part of the wider SWM plan	The focus will be on the establishment of Zones or District Metered Areas (DMA) that will allow consumption and leakage to be measured in manageable areas for informed decision making as part of the wider water resource management. • Define objectives and concept design • Proof of Concept and DMA Rollout • PRV detailed design and commissioning • DMA maintenance - Training and support • DMA System reporting - leakage monitoring and reporting (daily, monthly, annual, DIA)	Council / Industry Partners 2021-23	TBC

Data audit of existing customer metering	To account for legitimate usage and improve our understanding of water consumption by user category	• Analyse and Validate existing data / billing to determine a single source of truth whilst identifying inconsistencies • Review and align with Council stakeholders (3 Waters, Business Information Systems, Finance and Customer Services) a run list for field audit of meters. This will include all water supplies both domestic and non-domestic • Desktop and field audit of meters against a run list. This may involve auditing most connections to identify customer meter location, type, condition, status, etc... • Cleanse existing data stores with single source of truth • Produce a project completion report based on the audit of meters • Provide an installation programme for new customers (missing) / replace non-working meters – focus initially on non-residential customers, high residential users i.e. properties with swimming pools • Update asset management / finance systems	Council / Industry Partners 2021-22	$150,000
Develop Standard Operating Procedures (SoPs) to capture fault data (breaks, complaints), flushing / repairs, etc..	To minimise and account for legitimate water usage when operating the network To capture performance data for informed decision making e.g. pipe breaks	• Define a list of practices / actions that are carried out to manage the network and assess performance. Identify gaps to be updated • Review and update existing SoPs with respect to water use / efficiency • Develop new SoPs as required • Review Council systems ability to capture performance data and provide reporting	Council / Veolia / Industry Partner	$60,000

A3: Working with our Stakeholders

Activity	Expected Outcome	Building Blocks	Ownership / Year	Budget $
Develop a policy to ensure sustainable water use within the Council facilities and operations e.g. Park irrigation use	Water efficient buildings and recycling of potable water in operational use	• Data review and audit of water use within Council facilities, identify high usage and opportunities to reduce or use of re • Carry out audits to identify water re-use practices at WTPs and WWTPs • Install sub-metering during upgrades to help identify leaks or water wastage within processes • Develop KPIs for continuous monitoring for reporting	Council / Veolia 2020-1	25,000 - initial scoping/audit TBC – Audits
Use of water efficient fixtures for key stakeholders such as Education and Kāinga Ora (Homes and Communities)	A programme to implement cost-effective water saving measures in schools, public buildings, community housing etc.	• Identify and work with organisations to develop a water sustainable approach to water use • Develop an assessment tool to identify water saving opportunities for different building use • Confirm number and types of buildings to be audited • Carry out pilot study and install water saving devices • Report benefits / savings and prioritise plan for rollout across district • Present benefits and identify future opportunities for new buildings / technology partners	Council / Stakeholder Partners	TBC

CENTRAL HAWKE'S BAY DISTRICT COUNCIL

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CENTRAL HAWKE'S BAY
DISTRICT COUNCIL

CENTRAL HAWKE'S BAY
DISTRICT COUNCIL

PART 07

Water Supply BYLAW

Superseding CHBDC: Part 07: 2018

May 13 2021

Together we Thrive! E ora ngātahi ana!

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INTRODUCTION

Overarching Purpose

To achieve a holistic and integrated approach to three waters management in the District that is consistent with Council's District Plan, other Policies, Plans, Strategies and Objectives and also reflect the principles of the Te Mana o Te Wai, the following overarching purposes have been set for all four water services bylaws (Water Supply, Stormwater, Wastewater and Trade Waste)

1. **Meet Legislation Requirements**
   Proactively meet all Council's statutory requirements relating to the provision of three waters services.
2. **Integrated Approach**
   Adopt an integrated and holistic approach, ki uta ki tai, to the Three Waters (water supply, wastewater including trade waste and Stormwater) that recognises the interconnections between each of the waters and promotes their sustainable management.
3. **Environmental Responsibilities**
   Facilitate environmentally responsible practices by raising awareness of how the three waters interact and effect the District's natural Environment. Additionally, ensure that Council meet its own responsibilities in terms of resource consent requirements set by the Hawke's Bay Regional Council.
4. **Sustainable Practices**
   Encourage and incentivise the community and businesses to adopt practices that lead to the enhancement of the Environment and the sustainable management of water resources including water and product stewardship, rainwater harvesting, waste minimisation and Cleaner Production.
5. **Support Sustainable Growth**
   Support the sustainable provision of three waters infrastructure to enable future growth while minimising or eliminating impacts on the Environment.
6. **Achieve Project Thrive Values**
   Develop and implement the Three Waters Bylaws to give effect to 'Project Thrive' values in particular trust, honesty, respect, innovation, and valuing people.
7. **Te Mana o te Wai**
   Recognise the fundamental concept of Te Mana o Te Wai as prescribed under the National Policy Statement for Freshwater Management 2020 and in particular the need to restore and preserve the balance between the water, the wider Environment, and the community.
8. **Tangata Whenua Status**
   Recognise the status of tangata whenua status as Kaitiaki.
9. **Durable Infrastructure**
   Develop and maintain durable and resilient infrastructure that achieves Council's levels of service in an efficient and cost-effective manner.
10. **Safety and Health**
    Ensure the protection, safety and health of Council staff and the community when using or operating the water supply system, and the wastewater and stormwater networks.
11. **Obligations**
    Define the obligations of residential Occupiers and businesses including trade waste Occupiers and the public at large in relation to the Council's water supply, wastewater and stormwater networks.
12. **Discharge Controls**
    Regulate wastewater and stormwater discharges, including trade waste, and hazardous substances, into the wastewater and stormwater networks.
13. **Equitable Costs**

Provide a system for the equitable share of Council's water services costs between trade waste dischargers, other businesses, and domestic customers.

OBJECTIVES

Further to the Overarching Purpose the specific objectives for this part of the Bylaw are as follows:

(a) Enable the Council to manage and provide public water supply services;
(b) Protect the public water supply network from damage, misuse, and interference;
(c) Protect the environment and the health and safety of the people using the public water supply;
(d) Ensure the efficient use of water and improve water resilience during periods of water shortage/restrictions.
(e) To align with the wider sustainable water demand management plan.

CONTEXT

Communities expect safe and reliable water supply for their health and prosperity. Council has a responsibility to ensure that its water services, infrastructure and water taonga are managed in a manner that supports the wellbeing of current and future generations.

Water supplies are currently provided through seven public water supply systems located at Otane (supplied from Waipawa), Waipawa, Waipukurau, Takapau, Porangahau, Te Paerahi and Kairakau.

Sustaining current levels of supply to the District's customers will become increasingly challenging over the years ahead. To ensure that community needs are meet, Council have developed a Sustainable Water Management Plan. The plan identifies how the Council and the Community will improve water-use efficiency and reduce water loss in operations using a range of techniques that are consistent with industry practice and supports Council's desire to become an efficient user of this valuable resource.

The provisions in the Water Bylaw play a key role in ensuring water is used wisely and in a sustainable manner.

PART 07 – WATER SUPPLY

1. TITLE

This bylaw shall be known as the Central Hawke's Bay District Council Water Supply Bylaw [2021].

2. COMMENCEMENT

This Bylaw shall come into force on the 13 May 2021.

3. REPEAL

This Bylaw supersedes and repeals the Central Hawke's Bay District Council Water Supply Bylaw 2018.

4. APPLICATION OF BYLAW

This Bylaw shall apply to the Central Hawke's Bay District.

5. DEFINITIONS

Reference should be made to Part 1 Introductory Bylaw and to the legislation referred to under Referenced Documents, for any other definitions not included in this Part.

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

Approved or Approval	Approved in writing by the Council either by resolution of Council or by any Authorised Officer of Council.
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.
Backflow	A flow of water or other liquid / contaminants in reverse direction to the normal supply flow.
Backflow Preventor (BFP)	A backflow prevention device is used to protect potable water supplies from contamination or pollution due to backflow.
Council	Central Hawke's Bay District Council or any officer authorised by Council or delegated to act on its behalf.
Customer	A person who uses or has obtained the right to use or direct the manner of use of water supplied by 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 on a dedicated fire supply).
Extraordinary Supply	A category of on-demand supply, including all purposes for which water is supplied other than ordinary supply and which may be subject to specific conditions and limitations.
Fees and Charges	The list of items, terms, and prices for services associated with the supply of water as adopted by Council in accordance with the Local Government Act 2002 and the Local Government (Rating) Act 2002.

Fire Protection System	A pumping system designed to supply a sufficient flow of water to extinguish a fire, for example, a sprinkler.
Level of Service	The measurable performance standards on which Council undertakes to supply water to its customers.
On-Demand Supply	A supply which is available on demand directly from the point of supply, subject to the agreed level of service.
Out of Area Supply	Premises that are not within an Urban Water Supply Area but are within practical distance for supply from the Council Water Supply System.
Ordinary Supply	A category of on-demand supply used solely for domestic purposes.
Person	The Crown, a corporation sole, and also a body of persons, whether corporate or unincorporate.
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 Council irrespective of property boundaries.
Premises	Either: a) A property or allotment which is held under a separate record of title or for which a separate record of title may be issued and in respect to which a building consent has been or may be issued; or b) A building or part of a building that has been defined as an individual unit by a cross-lease, unit title or company lease and for which a record of title is available; or c) Land held in public ownership (e.g. reserve) for a particular purpose. d) individual units in buildings which are separately leased or separately occupied.
Pressure Reducing Valve (PRV)	A hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure
Public Notice	As defined in section 5 of the Local Government Act 2002.
Record of Title	A record of title created under section 12 under the Land Transfer Act 2017.
Restrictor	Flow restrictors limit the amount of water that is let out of the tap or shower, they reduce the amount of water needed for things such as showering or washing the dishes and act as a conservation tool.
Rain Water Tank	A storage tank that has the dual purpose of retaining water by temporarily storing stormwater runoff during a rainfall event that can then be re-used for, for example, hose taps. The water tank is used to collect and store rain water runoff, typically from rooftops via pipes.
Service Valve (Toby)	The valve at the customer end of the service pipe.
Storage Tank	Any tank having a free water surface.
Supply Pipe	The section of pipe between the point of supply and the customer's Premises through which water is conveyed to the Premises.
Urban Water Supply Area	An area formally designated by Council and serviced by a reticulated water supply system with firefighting capability, intended to supply water to customers via on-demand supplies.
Water Supply System	All components of the water supply network between the point of abstraction from the natural environment to the point of supply. This

includes, but is not limited to: wells, infiltration galleries, intake structures, open raw water storage ponds / lakes, falling 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 An allocation of water on a restricted flow supply.

6. CONDITIONS OF SUPPLY

6.1. TYPES OF SUPPLY

Water supplied to a Customer may be classified by the Council as either 'on-demand', 'restricted flow', or 'out of area', except that water supplies at Kairakau shall be as DESCRIBED in Section 6.1.4, and at Pourerere shall be as described in Section 6.1.5. The use of water from on-demand supply may be classified by the Council as either 'ordinary' or 'extraordinary'.

6.1.1. ON-DEMAND SUPPLY

6.1.1.1. For on-demand supplies, there are two types of supply defined as:

(a) Ordinary Supply

The supply of water to a Customer which is used solely for domestic purposes in a dwelling / house (which may include use in a fire sprinkler system for NZS 4517) is an ordinary supply. Domestic purposes includes the use of a hose for:

(i) washing down a car, boat, or similar;
(ii) garden watering by hand;
(iii) garden watering by a portable sprinkler subject to any restrictions that may have been imposed;

NOTE - For use from a fire protection system to NZS 4517 to be classified as an ordinary use, the Customer should comply with the conditions set under Section 6.1.1.

(b) Extraordinary Supply

Water supplied for extraordinary use includes:

(i) Premises greater than 4,000 m2 in area;
(ii) domestic spa or swimming pool in excess of 10 m3 capacity,
(iii) fixed garden irrigation systems;
(iv) commercial, business and industrial uses;
(v) agricultural, horticultural and viticultural uses, including stock watering;
(vi) lifestyle blocks (peri-urban or small rural-residential uses), including stock watering;
(vii) fire protection systems other than sprinkler systems installed to comply with NZS 4517;
(viii) out of district (supply to, or within another local authority);
(ix) temporary supply.

An Extraordinary Supply will normally be metered and may be subject to specific conditions and limitations.

6.1.1.2. Where water supply is classified as 'on-demand', every Premises shall be entitled to an Ordinary Supply of water subject to:

(i) the premises being within an area served by an urban water supply area;
(ii) the exclusion of its use for garden watering or any other specified use under any water restrictions made by Council from time to time;

(iii) payment of the appropriate charges in respect of that premise;
(iv) any other charges or costs associated with sub-divisional development; and
(v) any other relevant conditions of this Bylaw.

6.1.1.3. Council is under no obligation to provide an Extraordinary Supply of water as defined by this Bylaw.

6.1.2. RESTRICTED FLOW SUPPLY

6.1.2.1. Restricted flow supply shall be available to Premises within a designated area only, or under special conditions set by Council.

6.1.2.2. The water supply shall be restricted so as to deliver a specified number of water units at a steady flow rate.

6.1.2.3. Council may charge for the restricted flow supply based on either:

(a) the volume passing through a meter; or
(b) the agreed number of water units.

6.1.3. OUT OF AREA SUPPLY

6.1.3.1. An agreement for supply must be entered into for each Out of Area connection. The following conditions will be included in or addressed in any agreement:

(a) The volume of water Council can supply;
(b) Supply will be through a meter and will include the appropriate backflow prevention devices;
(c) Flow may be restricted by a Council supplied or approved flow restrictor;
(d) Supply may be to an on-site water tank of a minimum volume of 30,000 litres;

6.1.3.2. The applicant must provide a report on the assessment of the best ways to efficiently manage the water supplied, including; use of rainwater to supplement supply and the collection and use of greywater for onsite irrigation needs, and including its effects on wastewater disposal;

(a) The applicant must carry out any changes or improvements resulting from this assessment before a water connection will be installed.

6.1.3.3. In considering whether to provide a connection, Council will assess the effect the supply of water will have on existing and future water customers. The supply will be classed as an Extraordinary Use.

6.1.4. SUPPLY AT KAIRAKAU

6.1.4.1. Water will only be supplied at Kairakau from Council's supply through a connection to an on-site water storage tank at each Premises. This supply may be used as an "on-demand" supply for "ordinary use".

6.1.4.2. The water storage tank shall be of minimum volume of 1,800 litres. The supply pipe from the point of supply must be connected to the water tank and include a ball cock or similar device in the tank to prevent overflow of the water in the tank. No connections shall be taken off the supply pipe, and all plumbing on the Premises must be fed from the water tank.

6.1.5. SUPPLY AT POURERERE

6.1.5.1. Water supplied at Pourerere shall be for the camping ground at the southern end of the beach, the public toilet block in the middle of the beach, and three other premises adjacent to the camping ground. Any additional connections to this system shall be by specific agreement with Council and be used as directed by Council.

6.2. CHANGE OF OWNERSHIP

6.2.1. In the event of a Premises changing ownership, the Council will automatically record the new owner as being the Customer at that Premises. Where a premises is metered, the outgoing Customer will give the Council seven working days' notice to arrange a final reading.

6.3. CONNECTION AND DISCONNECTION

6.3.1.1. No person may, without Council's approval:

(a) connect to the water supply network;
(b) install a dedicated fire protection connection;
(c) disconnect from the water supply network;
(d) carry out any other works on, or in relation to, the water supply network;
(e) open any manhole, chamber, access point, or valve on, or otherwise tamper with, the water supply network.

6.3.1.2. Any person wishing to connect or disconnect from the water supply network, or to otherwise carry out work, must make a written application using the relevant Council form accompanied by the prescribed charges. The applicant shall provide all the details required by Council. Charges applicable at the time of connection may include a payment to Council or an approved contractor for the cost of the physical works required to provide the connection.

6.3.1.3. 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.

6.3.1.4. Without limiting the above, a condition imposed may require that the connection, disconnection or works comply with any relevant code of practice or standard.

6.3.1.5. Council may refuse the application and notify the applicant of the decision giving the reasons for refusal.

6.3.1.6. For the agreed level of service to the applicant, Council should determine the sizes of all pipes, fittings and any other equipment, up to the point of supply. Council shall supply and install the service pipe up to the point of supply at the applicant's cost, or may allow the supply and installation of the service pipe to be carried out by approved contractors.

6.3.1.7. The applicant must have written evidence of authority to act on behalf of the owner of the property for which supply is sought (should they not be one and the same).

6.3.1.8. An approved application for supply which has not been actioned within six (6) months of the date of application will lapse, unless a time extension has been approved. Any refund of fees or charges shall be at the discretion of Council.

6.3.2. DISCONNECTION AT THE CUSTOMER'S REQUEST

6.3.2.1. A Customer must give no less than twenty (20) working days' notice in writing to Council of the requirement for disconnection of the supply. Disconnection shall be at the Customer's cost.

6.3.3. CHANGE OF USE

6.3.3.1. Where a Customer seeks a change in the end use or level of service of water supplied to Premises, and / or the supply changes from an ordinary to an Extraordinary Supply or vice versa, a new application for supply shall be submitted by the Customer.

6.4. STORAGE TANKS

6.4.1. RURAL AND / OR INDIVIDUAL ON-SITE WATER STORAGE

6.4.1.1. Water storage for water supply to individual Premises which are not connected to Council water supply shall include at least one water storage tank of at least 30,000 litres capacity.

NOTE: there is no requirement for rural premises to provide onsite water storage for firefighting purposes.

6.4.2. URBAN WATER SUPPLY AREAS

6.4.2.1. Within Urban Water Supply Areas, new domestic dwellings built after the approval of this Bylaw must provide a Rain Water Tank with a minimum capacity of 3000 litres.

6.4.2.2. Rain Water Tanks shall be installed in accordance with Section 4.3.6.8 of NZS4404.

Also see requirements in clause 9.2.2 of the Stormwater Bylaw for a stormwater management device.

6.5. FIRE PROTECTION SYSTEMS

6.5.1. DESIGN

6.5.1.1. It is the Customer's responsibility to ascertain in discussion with Council and monitor whether the supply available is adequate for the intended purpose.

6.5.2. FIRE HOSE REELS

6.5.2.1. Where the supply of water to any Premises is metered, fire hose reels shall be connected only to the metered supply, not to a fire protection system. The water supply to fire hose reels shall comply with the requirements of NZS 4503

6.5.3. ONGOING TESTING AND MONITORING

6.5.3.1. Customers intending to test fire protection systems in a manner that requires a draw-off of water shall obtain the approval of Council beforehand. Water used for routine flushing and flow testing does not constitute waste for the purpose of clause 4.1, but the quantity of water used may be assessed and charged for by Council.

6.6. POINT OF SUPPLY

6.6.1. RESPONSIBILITY FOR MAINTENANCE

6.6.1.1. The Customer shall own, maintain and repair the supply pipe and any associated fittings on the Customer's side of the point of supply, irrespective of property boundaries.

6.6.2. PLUMBING SYSTEM

6.6.2.1. 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 Council to maintain its stated levels of service, shall not be used on any piping on the Customer's side of the point of supply. In special circumstances such equipment may be approved by Council.

6.6.3. **SINGLE OWNERSHIP**

6.6.3.1. For individual Customers the Point of Supply shall be located as shown in Appendix A, Figures 1, 2 or 3 (or as close as possible to these locations where fences, walls, or other permanent structures make it difficult to locate it at the required position). Other positions shall require specific approval.

6.6.3.2. For each individual Customer there shall be only one point of supply, unless otherwise approved.

6.6.3.3. The typical layout of pipe fittings at a point of supply is shown in Appendix A, Figures 4 and 5.

6.6.3.4. The supply pipe shall be wholly contained within the Premises.

6.6.3.5. No connections shall be made beyond the point of supply to supply other Premises.

6.6.3.6. Council gives no guarantee of 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, Council may charge for maintenance or repair of this valve if damaged by such customer use.

6.6.4. **MULTIPLE OWNERSHIP**

6.6.4.1. The point of supply for the different forms of multiple ownership of Premises and / or land shall be:

(a) for a Company Share / Block Scheme (Body Corporate) - as for single ownership;

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

6.6.4.2. For a multiple ownership supply which was in existence prior to the effect of this Bylaw, the point of supply shall be the arrangement existing at that time, or as determined by agreement with Council for any individual case.

6.7. ACCESS TO AND ABOUT POINT OF SUPPLY

6.7.1. **RIGHT OF ACCESS**

6.7.1.1. Where the point of supply is on private property, the Customer shall allow Council access to, and about the point of supply between 7.30 am and 6 pm on any day for:

(a) meter reading without notice; or
(b) checking, testing and maintenance work, with notice being given whenever possible.

6.7.1.2. Outside these hours (such as for night-time leak detection) Council shall give notice to the Customer.

6.7.1.3. Where access is not made available for any of the times notified and a return visit is required by Council, the actual cost of reading the meter will be charged.

6.7.1.4. Under emergency conditions the Customer shall allow Council free access to, and about the point of supply at any hour.

6.7.2. **MAINTENANCE OF ACCESS**

6.7.2.1. The Customer shall maintain the area in and around the point of supply keeping it free of soil, growth, or other matter or obstruction which prevents, or is likely to prevent convenient access. Council may charge for work required to access and maintain access to the point of supply.

6.8. TRANSFER OF RIGHTS AND RESPONSIBILITIES

6.8.1. The Customer may not transfer to any other person the rights and responsibilities they hold and as set out in this Bylaw.

6.8.2. A supply pipe shall serve only one Customer and shall not extend by hose or any other pipe beyond that Customer's property.

6.8.3. In particular and not in limitation of the above, any water which the Customer draws from Council supply shall not be provided to any other party without approval of Council.

7. METERS AND FLOW RESTRICTORS

7.1. INSTALLATION AND CHARGES

7.1.1. This bylaw expands Council's ability to meter water usage for high users or to align with water sustainability outcomes. The Council may:–

(a) install water meters or other measuring devices for that purpose;
(b) and charge the consumer according to the quantity of water consumed. The Council may prescribe charges to be made in respect of water consumption, by resolution, and may prescribe different charges for different classes of consumer.

7.1.2. Meters for water supplies, and restrictors for restricted flow supplies, will be supplied, installed and maintained by Council, and will remain the property of Council and will be installed in the location required by the Council.

7.1.3. Where on-demand supplies are not universally metered, the Council may fit a meter at the Customer's cost, and charge accordingly where it considers water use is unusually high.

7.1.4. 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.

7.1.5. 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, Council shall estimate the quantity of water so used, and credit to the Customer's account an amount based on such an estimate.

7.2. CHANGE OF OWNERSHIP

7.2.1. In the event of a Premises changing ownership, Council shall record the new owner as being the Customer at that Premises. Where a Premises is metered, the outgoing Customer shall give Council five (5) working days' notice to arrange a final meter reading.

7.3. ESTIMATING CONSUMPTION

7.3.1. Should any meter be out of repair, be removed, or cease to register, 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). The customer shall pay according to such an estimate.

7.3.2. Provided that when, by reason of a large variation of consumption due to seasonal or other causes, the average of the previous four billing periods would be an unreasonable estimate of the consumption, Council may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the customer shall pay according to such an estimate.

7.3.3. The customer shall be liable for the cost of water which passes through the meter regardless of whether this is used or is the result of leakage. Council may estimate consumption as above, providing that the customer repairs the leak with due diligence.

7.3.4. Where the seal or dial of a meter is broken, Council may declare the reading void and estimate consumption as described above.

7.4. INCORRECT ACCOUNTS

7.4.1. Where a situation occurs, other than as provided for in Section 7.3, where the recorded consumption does not accurately represent the actual consumption on a property, the account shall be adjusted using the best information available to 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 supplies.

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

7.5. FIRE PROTECTION CONNECTION METERING

7.5.1. Where the supply of water to any Premises is metered, Council may allow the supply of water for the purposes of firefighting to bypass the meter, provided that:

(a) the drawing of water is possible only in connection with the sounding of an automatic fire alarm or the automatic notification of the fire brigade; or
(b) a Council approved detector check valve has been fitted on the meter bypass.

7.5.2. Any unmetered connection provided to supply water to a fire protection system shall not be used for any purpose other than firefighting and testing the fire protection system, unless the fire protection system is installed in accordance with NZS 4517.

7.5.3. Council may require the supply to be metered where a fire connection has been installed or located so that it is possible that water may be drawn from it by any person for purposes other than firefighting.

8. CONTINUITY OF SUPPLY

8.1. NO GUARANTEE OF UNINTERRUPTED SUPPLY

8.1.1. The Council does not guarantee an uninterrupted or constant supply of water in all circumstances, or the continuous maintenance of any particular quality or pressure.

8.1.2. Where works of a permanent or temporary nature are planned which will affect an existing connected supply, Council shall inform or give notice to all known Customers likely to be substantially affected.

8.1.3. Wherever practical, Council shall make every reasonable attempt to notify the connected Customer of a scheduled maintenance shutdown of the supply before the work commences. Where

immediate action is required and notification is not practical, Council may shut down the supply without notice.

8.1.4. No allowance or compensation will be made or allowed on account of the water being shut off.

8.2. RESTRICTING USE OF WATER

8.2.1. Where the Council considers that its ability to maintain an adequate supply of drinking water is or may be at risk because of drought, emergency or for any other reason, it may restrict the use of water supplied to any Premises including to domestic swimming pools. Any such restriction may apply to all of the District or one or more parts of the District.

8.2.2. The Council will give such public notice as is reasonable in the circumstances of any restriction on water.

8.2.3. No person may use water contrary to a restriction made under this clause.

8.2.4. Even when restrictions apply, Council will take all practicable steps to ensure that an adequate supply for domestic purposes is provided to each Point of Supply.

9. APPROPRIATE USE AND PREVENTION OF WASTE

9.1. PREVENTION OF WASTE

9.1.1. The Customer may not knowingly allow –

(a) water to run to waste from any pipe, tap, or other fitting;
(b) leaks to continue unchecked or unrepaired or allow unattended operation of hoses;
(c) the condition of the plumbing within premises to deteriorate to the point where leakage or wastage occurs or where contamination of water supply occurs or is likely to occur.

9.1.2. For clarity, automated sprinkler systems and equivalent, are not considered to be an unattended operation of hoses, in so far as the Customer has programmed that system and knows the expected water use as a result of the operation of that system.

9.1.3. Council provides water for consumptive use not as an energy source. 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.

9.1.4. The customer shall not use water for a single pass cooling system or to dilute trade waste prior to disposal, unless specifically approved.

9.1.5. Where the Council serves a notice on a Customer requiring action to be taken to repair an identified leak and specifies that the action required is urgent, and the Customer fails to take such action within the required time period, the Council may, in accordance with section 186 of the Local Government Act 2002, repair the leak and charge the customer all associated costs of doing so from the owner of a Premises, the occupier, or both.

9.2. LEAKS

9.2.1. It is the Customer's responsibility to detect and fix all leaks on the Customer's side of the Point of Supply.

10. BACKFLOW PREVENTION

10.1. CUSTOMER RESPONSIBILITY

10.1.1. The Customer must take all reasonable steps on the Customer's side of the point of supply to prevent water which has been drawn from Council's water supply from returning to that supply.

10.1.1.1. Reasonable steps include:

(a) backflow prevention; either by providing an adequate air gap, or by the use of an appropriate backflow prevention device; and
(b) the prohibition of any cross-connection between Council's water supply and
  (i) any other water supply (potable or non-potable), or
  (ii) any other water source, or
  (iii) any storage tank, or
  (iv) domestic swimming pool, or
  (v) any other pipe, fixture or equipment containing chemicals, liquids, gases, or other non-potable substances.

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 Council's normal minimum operating pressure.

10.2. UNMANAGED RISK

10.2.1. Notwithstanding Customer responsibilities, Council may fit a backflow prevention device on the Council side of the point of supply if it considers it is desirable or necessary to do so.

11. SUPPLY SYSTEM

11.1. ACCESS TO SYSTEM

11.1.1. No person, other than Council and its authorised agents, may make any connection to, or otherwise interfere with, any part of the water supply system without the written approval of the Council.

11.2. FIRE HYDRANTS

11.2.1. The right to gain access to, and draw water from, fire hydrants is restricted to:

a) The Council or its agents specifically authorised to do so;
b) Fire and Emergency New Zealand personnel; and

11.2.2. Without prejudice to other remedies available, the Council may remove and hold any equipment used by an offender to gain access to, or draw water from, a fire hydrant.

11.3. DEDICATED FILLING POINTS

11.3.1. No person may abstract water from dedicated filling points unless they hold a current permit from the Council. A permit issued by the Council may set such conditions and charges as the Council sees fit.

11.3.2. The Council may restrict or prohibit supply from filling points at its discretion, depending on prevailing conditions.

12. PROTECTION OF SUPPLY AND PROTECTION OF SOURCE WATER

12.1. CATCHMENT CLASSES

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

a) Controlled;
b) Restricted; or
c) Open

12.1.2. **CONTROLLED CATCHMENTS**

12.1.2.1. The following conditions apply to controlled catchments:

(a) Entry

(i) No person may enter a controlled catchment, or any area held by the Council as a water reserve, unless specifically authorised or permitted in writing by Council.

(ii) Within such areas, unless provided for by Council, no person may:

a. camp;
b. allow livestock to enter or stray;
c. bathe or wash anything;
d. deposit any dirt, rubbish, or foul material of any kind;
e. defecate or spit.

(b) Permits

(i) Entry permits to controlled catchments may forbid, regulate or control the following activities (non-exhaustive):

a. hunting, trapping, shooting, or fishing;
b. lighting or maintaining any fire;
c. taking of any animal;
d. damaging or, destroying or interfering with any property, any trees, shrubs, or other existing cover, or interference with any property;
e. carrying of any firearm or weapon of any kind, or any trap or any fishing gear which may be used for the hunting or catching of birds, fish or animals;
f. use of any pesticide or toxic substance for any purpose whatsoever.

12.1.2.2. A person may be required to present a medical clearance before an entry permit is issued.

12.1.2.3. An authorisation or permit may be revoked or suspended by Council at any time, by notice in writing delivered to the holder.

12.1.2.4. A permit may not be transferred to another person.

(c) Permits to be Presented

(i) No person to whom any permit has been issued shall enter or leave any controlled catchment area or land held by Council as a water reserve without notifying an Authorised Officer of their intention of entering or leaving such an area and must present the Council permit for inspection if requested to do so

12.1.3. **RESTRICTED CATCHMENTS**

12.1.3.1. Catchment areas which are designated as restricted may allow for certain activities as determined by the Council but shall have restrictions as for controlled catchments for other activities. Those unrestricted activities may include:

(a) tramping;

(b) hunting;

(c) trapping;

(d) shooting;

(e) fishing.

12.1.4. **OPEN CATCHMENTS**

12.1.4.1. Open catchment areas, whether designated or not, will generally have no restrictions on activities, other than any provisions of the Regional or District Plan and any applicable National Environmental Standards.

12.2. SPILLAGES AND ADVERSE EVENTS

12.2.1. Any person within any catchment who becomes aware of a spillage, or any other event which may compromise the water supply, must advise Council as soon as practicable. This requirement shall be in addition to any other obligation to notify other authorities of the spillage.

12.3. WORKS NEAR WATER SUPPLY NETWORK

12.3.1. **WORKING AROUND BURIED SERVICES**

12.3.1.1. Council will keep accurate permanent records ('as-builts') of the location of its buried services. This information shall be available for inspection at no cost to Customers. Costs may be charged to provide copies of this information.

12.3.1.2. No person may carry out restricted works except in accordance with an approval granted by Council, and any conditions attached to that approval.

12.3.1.3. Every person carrying out restricted works must, before commencing the works:

(a) notify Council of their intention in writing at least five (5) working days prior.
(b) obtain written approval from Council for the works, which may include conditions Council considers necessary to protect its network.

12.3.1.4. For the purposes of this clause, restricted works are works which will or are likely to damage, or adversely affect the operation of, the water supply network or the wastewater network.

12.3.1.5. Restricted works are works of the following type which are carried out closer than the specified distance to the asset type set out in the following table:

Type of works	Type of water supply network asset	Specified distance from asset
General Excavation	pipes 300mm in diameter and greater, including connected manholes and structures	10 metres
	pipes less than 300mm in diameter, including connected manholes and structures	2 metres
Piling	pipes 300mm in diameter and more, including connected manholes and structures	10 metres
	pipes less than 300mm in diameter, including connected manholes and structures	2 metres
Blasting	pipes 300mm in diameter and more, including connected manholes and structures	15 metres
	pipes less than 300mm in diameter, including connected manholes and structures	15 metres

12.3.1.6. Council must, where appropriate, mark out to within ±0.5 m the location of its services. Council may charge for these services.

12.3.1.7. Subject to approval, a building developer may meet the cost of diverting the public water pipe (including any ancillary structures) in accordance with Council standards.

12.3.2. RESTRICTIONS ON BUILDING WORK

12.3.2.1. No building may be built over a public rising main, trunk main or other pipes, or closer than the greater of:

Type of works	Type of water supply network asset	Specified distance from asset
Building work	public rising main or trunk main	Over or closer than the greater of • 1.5 metres from the centre of any main, or • the depth of the centre line of the main, plus the diameter of the main, plus 0.2 metres from the centre of that main.
	Other Public Water Pipes whether on public or private land	Over or closer than the greater of • 1.5 metres from the centre of any public water pipe, or • the depth of the centreline of the water pipe, plus the diameter of the water pipe, plus 0.2 metres from the centre of that water pipe.

12.3.3. LOADING OR MATERIAL OVER PUBLIC WATER PIPES

12.3.3.1. No person may cause the crushing load imposed on a public water pipe to exceed that which would arise from the soil overburden plus a HN-HO-72 wheel or axle load (as defined by NZ Transport Agency Bridge Manual).

12.3.3.2. No person may place any additional material over or near a public water pipe without approval.

12.3.3.3. Service openings and other ancillary structures shall not be obstructed in any way unless approved. Removal of any obstructing material or adjustment of the structures shall be at the property owner's expense.

13. FEES AND CHARGES

13.1.1. The Customer shall be liable to pay for the supply of water and related services in accordance with Council fees and charges and / or rating requirements prevailing at the time.

13.1.2. The Council may prescribe in its Schedule of Fees and Charges the fees and charges payable to the Council for approvals, inspections, meter readings, and other matters provided for in this Bylaw.

13.1.3. Customers and permit holders shall be responsible to pay all fees and charges associated with connection and disconnection of their Premises to the public water supply network, and any other fees and charges set by the Council.

14. BREACHES AND OFFENCES

14.1.1. Every person who breaches this Bylaw, or breaches the conditions of any approval or permit granted under this Bylaw or fails to comply with a notice served under this bylaw commits an offence and is liable upon conviction to a fine as provided for under the Local Government Act 2002,. Without prejudice to any of the provisions of this Bylaw, Council may pursue any legal remedies available to it pursuant to the provisions of the Local Government Act 2002 or any other act or regulation applicable to the supply of water.

14.1.2. In addition to any legal penalties arising from any breach, offence, or dispute Council may seek to recover all costs arising from and associated with any such breach, offence or dispute.

14.1.3. In the event of a breach of the conditions to supply water, Council shall serve notice on the customer advising the nature of the breach and the steps to be taken to remedy it. If, after one (1) week, the customer persists in the breach, Council reserves the right to reduce the flow rate of water in accordance with section 193 of the Local Government Act 2002. In such an event the full service of the supply shall be re-established only after payment of the appropriate fee and remedy of the breach to the satisfaction of Council.

14.1.4. In addition, if the breach is such that Council is required to disconnect the supply for health or safety considerations, such disconnection should be carried out forthwith.

14.2. INTERFERENCE WITH EQUIPMENT

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

14.2.2. Without prejudice to its other rights and remedies, Council shall be entitled to estimate (in accordance with Section 7.3) and charge for the additional water consumption not recorded or allowed to pass where a meter or restrictor has been tampered with, and recover any costs incurred.

14.3. REMEDIAL WORKS

14.3.1. The Council may:

(a) remove or alter any work or thing that is, or has been, constructed in breach of this bylaw; and
(b) recover the costs of removal or alteration from the person who committed the breach.

15. BYLAW APPROVAL DATE

The Common Seal of the Central Hawke's Bay District Council was attached, under Resolution *(Reference - Part 07 Water Supply Bylaw: [2021])* passed at a meeting of the Central Hawke's Bay District Council held on 13 May 2021 and will come into force 13 May 2021.

Appendix A

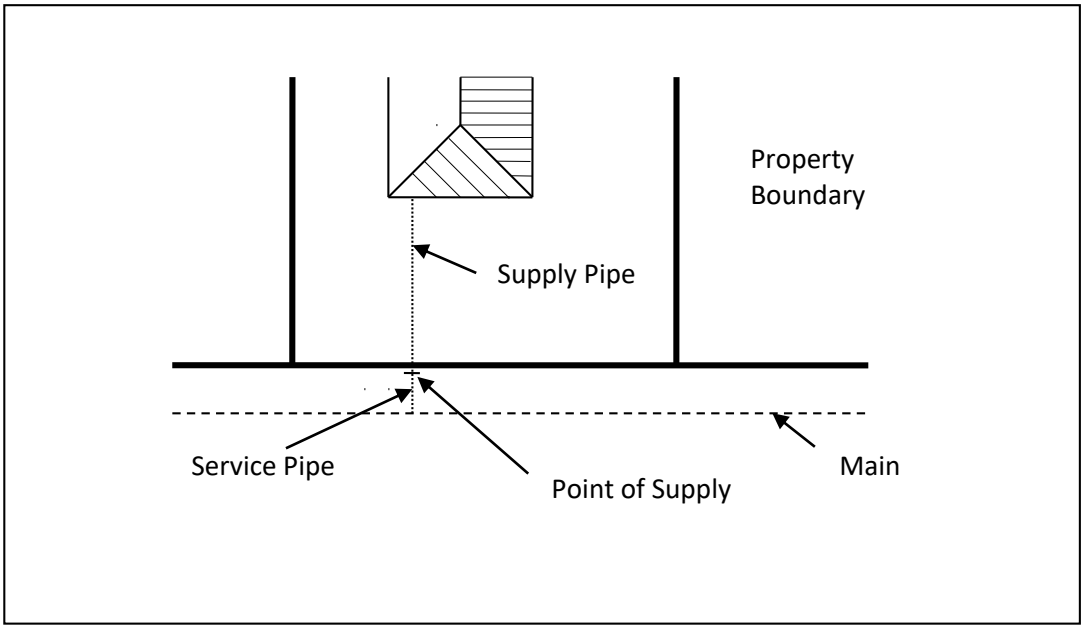


Figure 1 - Point of Supply Location - Individual Customers

Note : Point of Supply is the tail piece of the boundary box, meter, or service valve regardless of property boundary.

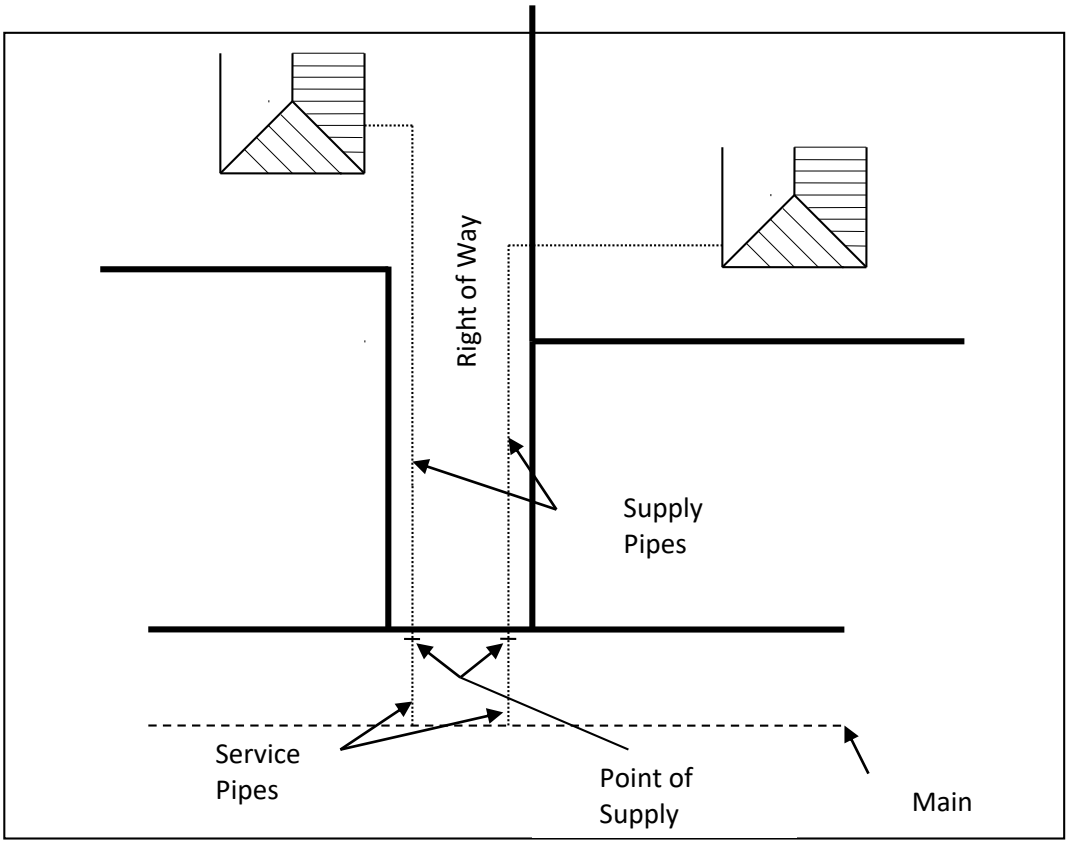
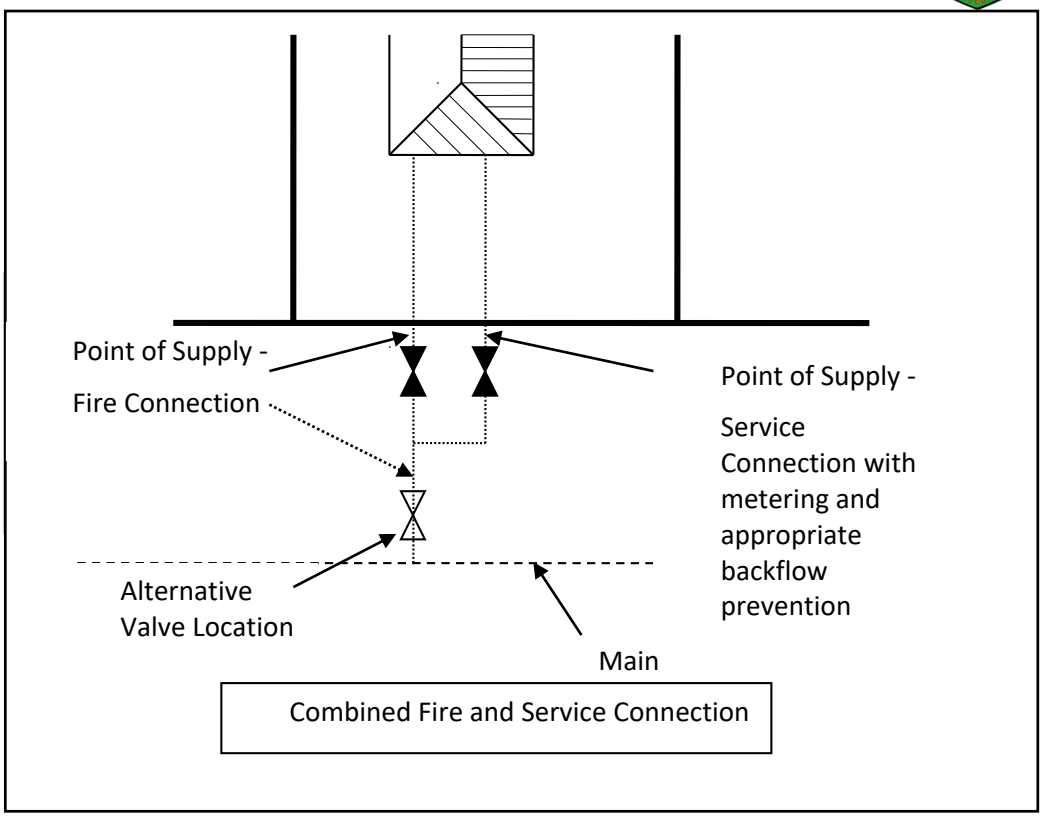


Figure 2 - Point of Supply Location - Rear Lots

Note : Point of Supply is the tail piece of the boundary box, meter, or service valve regardless of property boundary.



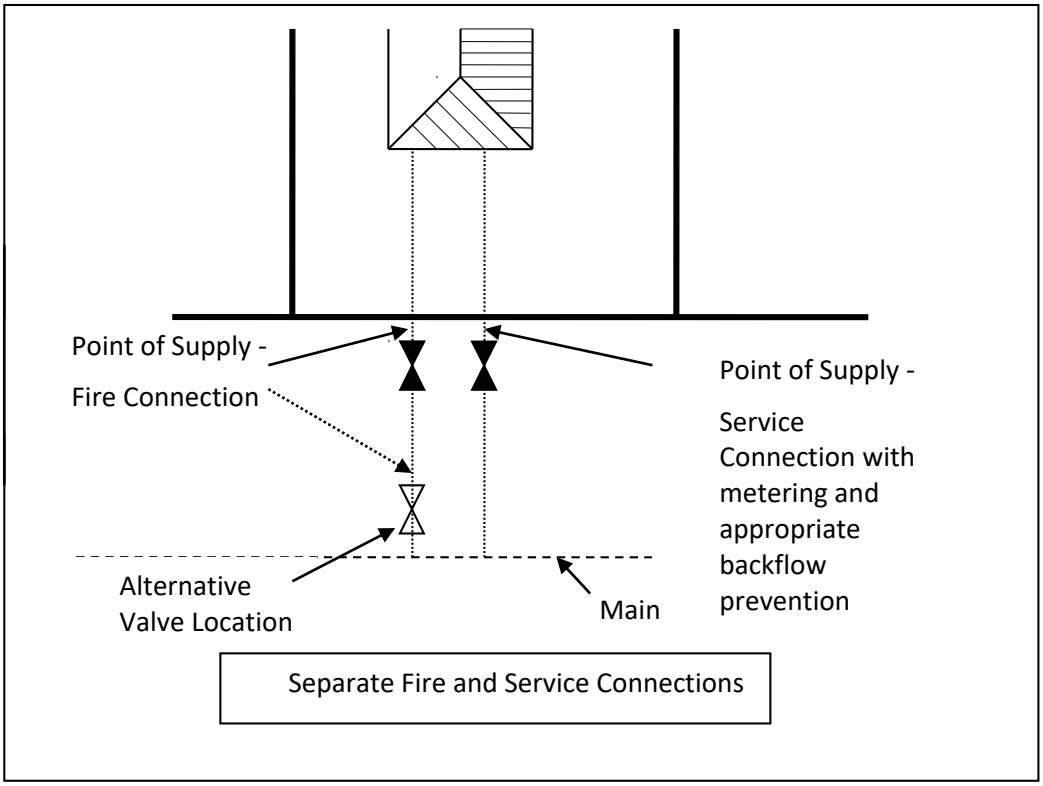
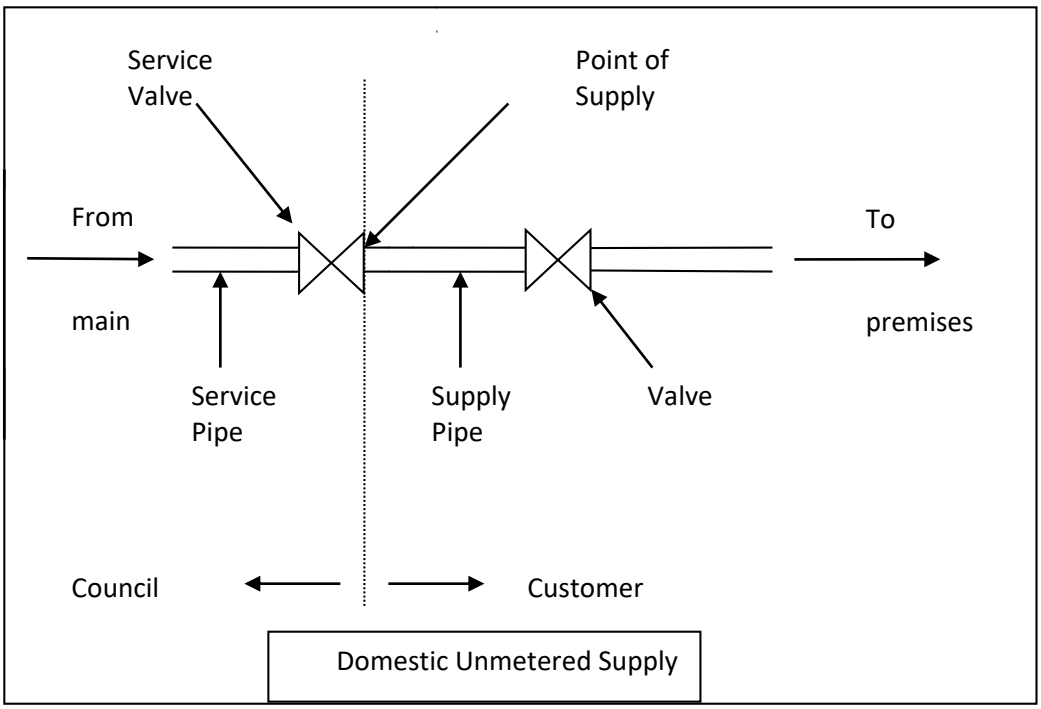


Figure 3 - Point of Supply Locations - Industrial, Commercial, Domestic Fire and Service Connections (including Schools)

Note : Point of Supply is the tail piece of the boundary box, meter, or service valve regardless of property boundary.



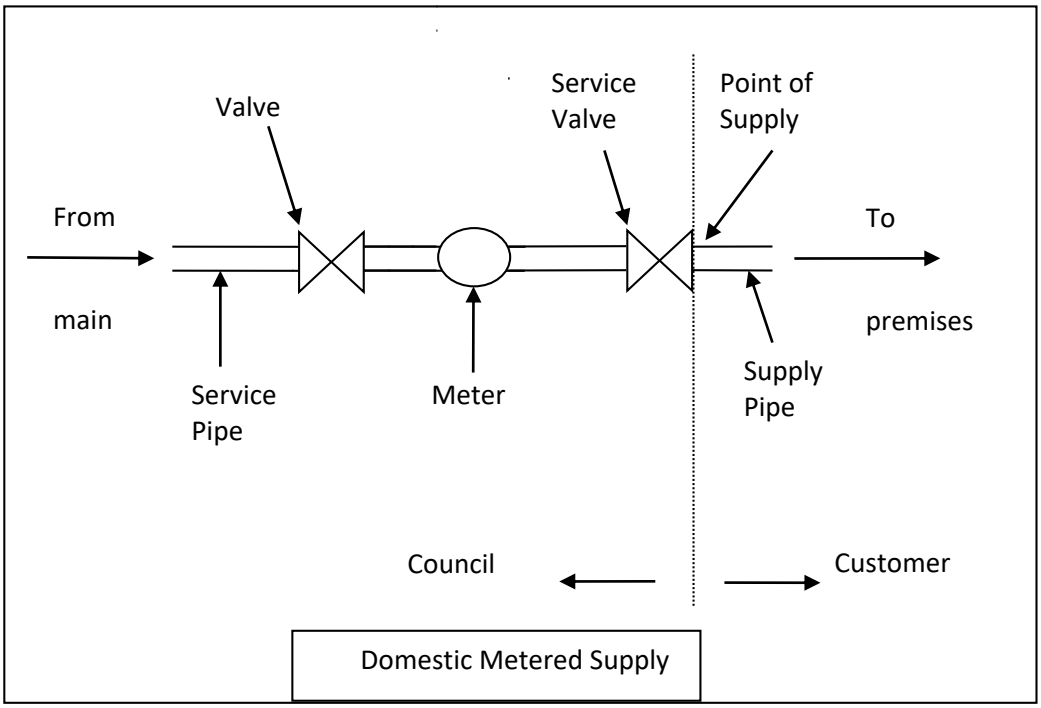
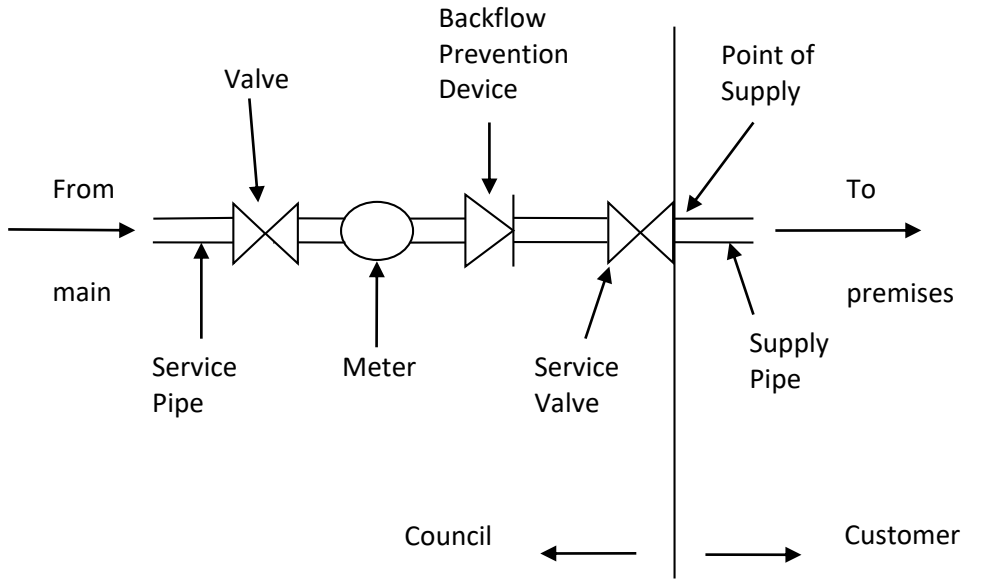
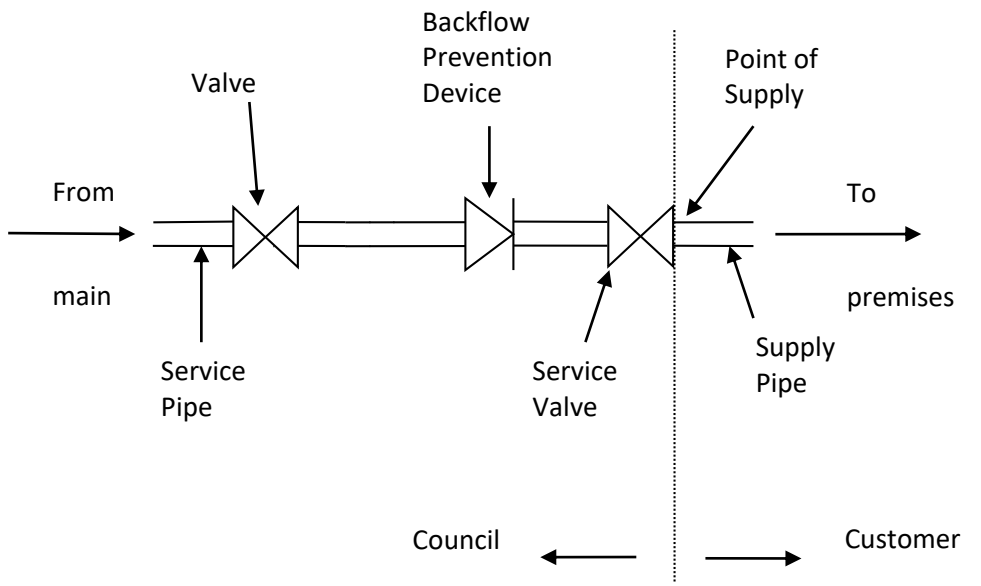


Figure 4 - Typical Layouts at Point of Supply

Note: *Point of Supply is the tail piece of the boundary box, meter, or service valve regardless of property boundary.*



Metered Supply with Backflow Prevention Device owned by Council



Unmetered Supply with Backflow Prevention Device owned by Council

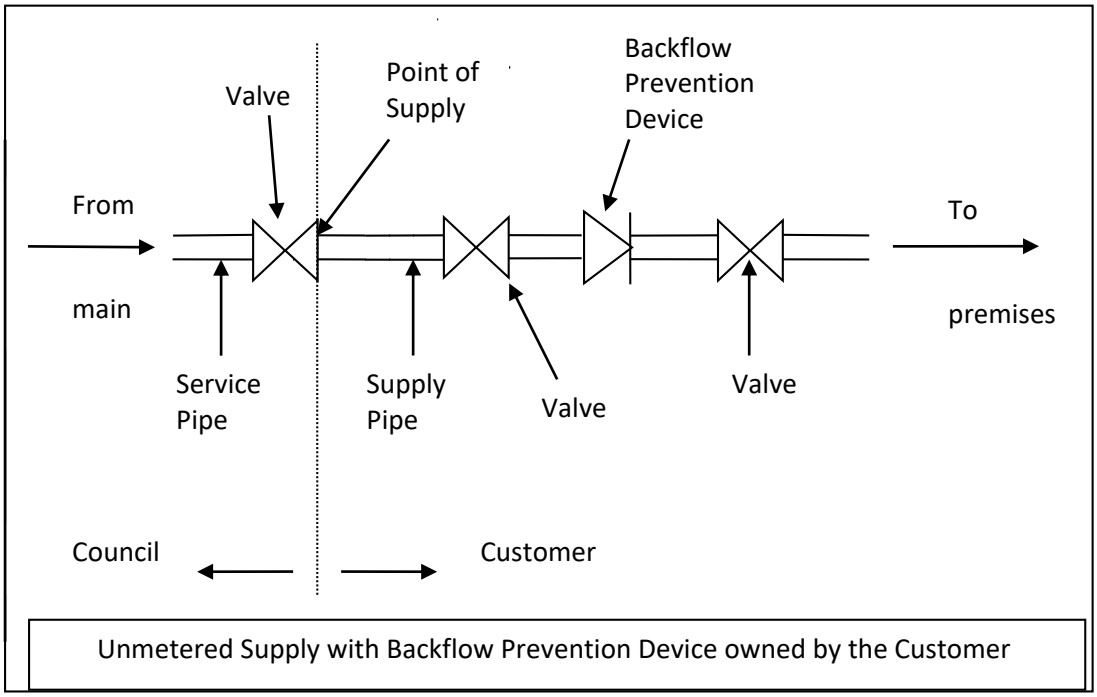


Figure 5 - Typical Layouts at Point of Supply including Backflow Prevention Devices

Note:

(1) Point of supply is the tail piece of the 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.

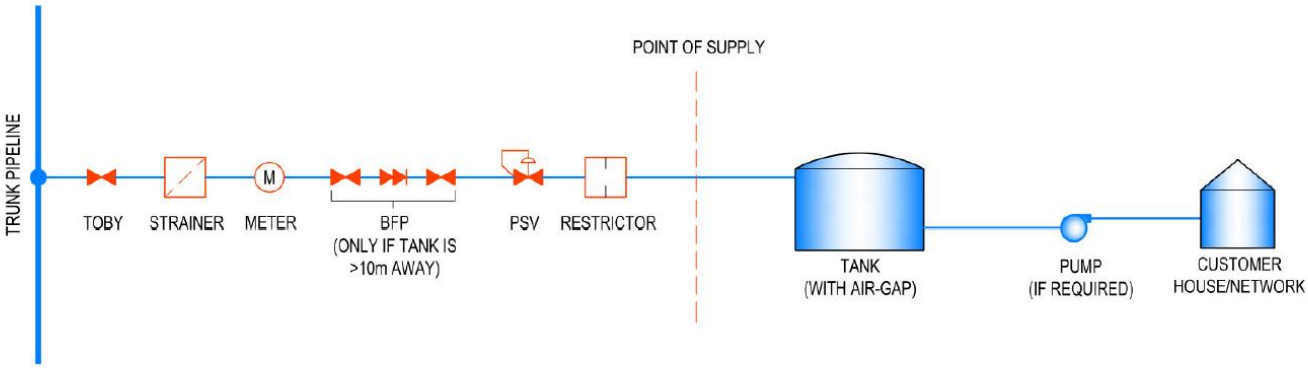
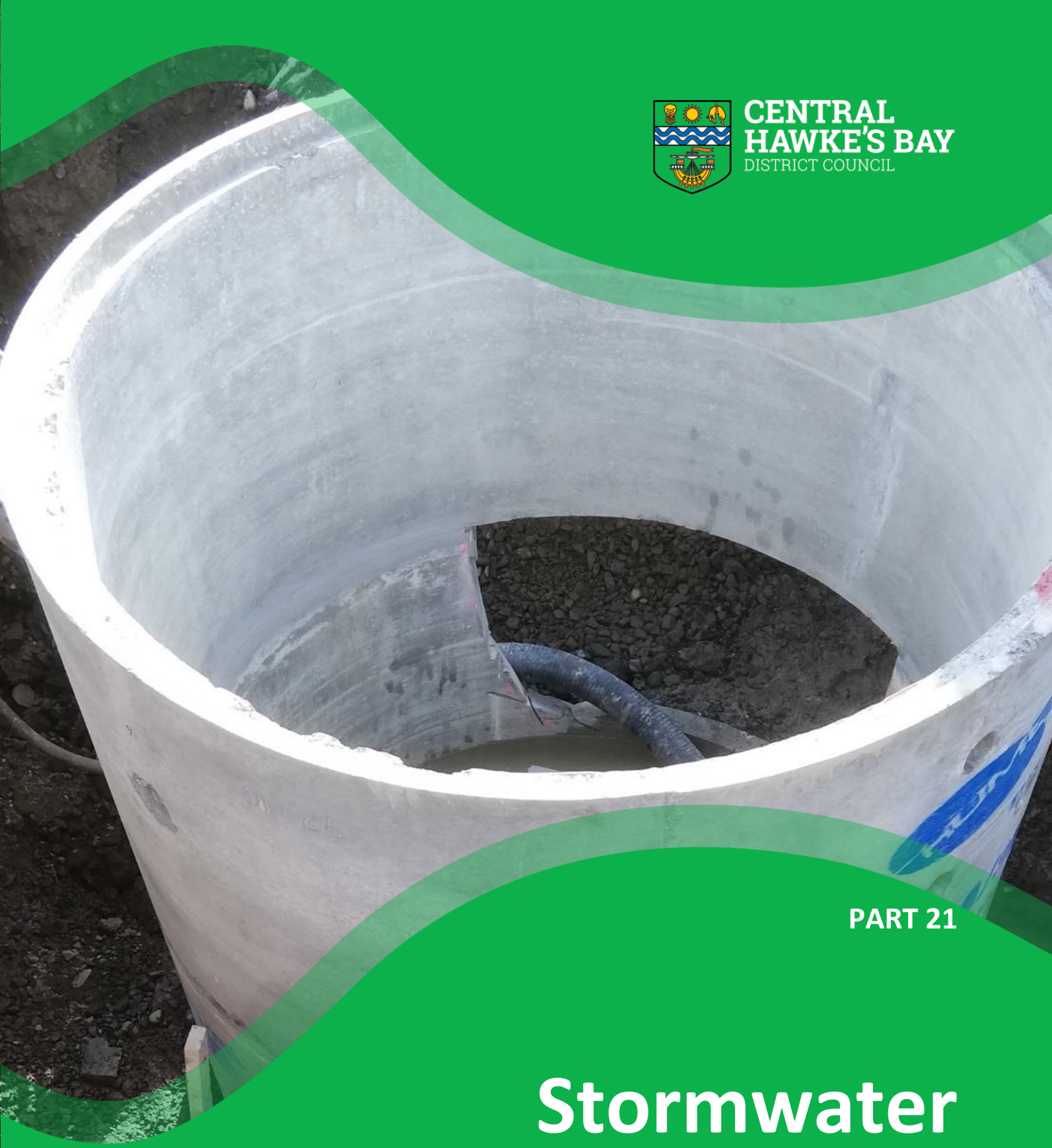


Figure 6 - Typical Layouts of proposed extraordinary user / out of area connection – document for Waipawa/ Waipukurau Second supply Link project.

Note:

(1) If the tank is distant from the pipeline (say >10m), a separate backflow preventor is also required to eliminate the risk from connections being made between the connection point and the tank.

(2) The proposed point of supply is prior to the tank. This will require CHBDC to maintain the components upstream of this point.



CENTRAL HAWKE'S BAY DISTRICT COUNCIL

PART 21

Stormwater BYLAW

Superseding CHBDC: Part 21: 2018

13 May 2021

Together we Thrive! E ora ngātahi ana!

CENTRAL HAWKE'S BAY DISTRICT COUNCIL

TABLE OF CONTENTS

INTRODUCTION

Overarching Purpose

To achieve a holistic and integrated approach to three waters management in the District that is consistent with Council's District Plan, other Policies, Plans, Strategies and Objectives and also reflect the principles of the Te Mana o Te Wai. The following overarching purposes have been set for all four water services bylaws (Water Supply, Stormwater, Wastewater and Trade Waste)

1. **Meet Legislation Requirements**
   Proactively meet all Council's statutory requirements relating to the provision of three waters services.
2. **Integrated Approach**
   Adopt an integrated and holistic approach, ki uta ki tai, to the Three Waters (water supply, wastewater including trade waste and Stormwater) that recognises the interconnections between each of the waters and promotes their sustainable management.
3. **Environmental Responsibilities**
   Facilitate environmentally responsible practices by raising awareness of how the three waters interact and effect the District's natural Environment. Additionally, ensure that Council meet its own responsibilities in terms of resource consent requirements set by the Hawke's Bay Regional Council.
4. **Sustainable Practices**
   Encourage and incentivise the community and businesses to adopt practices that lead to the enhancement of the Environment and the sustainable management of water resources including water and product stewardship, rainwater harvesting, waste minimisation and Cleaner Production.
5. **Support Sustainable Growth**
   Support the sustainable provision of three waters infrastructure to enable future growth while minimising or eliminating impacts on the Environment.
6. **Achieve Project Thrive Values**
   Develop and implement the Three Waters Bylaws to give effect to 'Project Thrive' values in particular trust, honesty, respect, innovation, and valuing people.
7. **Te Mana o te Wai**
   Recognise the fundamental concept of Te Mana o te Wai as prescribed under the National Policy Statement for Freshwater Management 2020 and in particular the need to restore and preserve the balance between the water, the wider Environment, and the community.
8. **Tangata Whenua Status**
   Recognise the status of tangata whenua status as Kaitiaki.
9. **Durable Infrastructure**
   Develop and maintain durable and resilient infrastructure that achieves Council's levels of service in an efficient and cost-effective manner.
10. **Safety and Health**
    Ensure the protection, safety and health of Council staff and the community when using or operating the water supply system, and the wastewater and stormwater networks.
11. **Obligations**
    Define the obligations of residential Occupiers and businesses including trade waste Occupiers and the public at large in relation to the Council's water supply, wastewater and stormwater networks.
12. **Discharge Controls**
    Regulate wastewater and stormwater discharges, including trade waste, and hazardous substances, into the wastewater and stormwater networks.
13. **Equitable Costs**
    Provide a system for the equitable share of Council's water services costs between trade waste dischargers, other businesses, and domestic customers.

OBJECTIVES

Further to the Overarching Purpose the specific objectives for this part of the Bylaw are as follows:

a) Avoid, or minimise and control the discharge of Contaminants into the Public Stormwater Drainage Network.

b) Avoid, or minimise the effects of discharges from the Public Stormwater Drainage Network on the downstream receiving Environment. The effects might include:

   i. The effects of Contaminants within the discharge.

   ii. The effects of increased peak flow rates, especially in extreme events.

   iii. The increase in volumes of discharge, particularly in more regular events.

c) Manage the Public Stormwater Drainage Network, and the land, structures and infrastructure associated with that network, so as to protect the public from Nuisance and promote and maintain public health and safety.

d) Enable the Council to meet relevant objectives, policies, standards and resource consents for discharges from the Public Stormwater Drainage Network to the receiving Environment.

e) Protect the land, structures and natural features that make up the Public Stormwater Drainage Network.

f) Prevent the unauthorised discharge of Stormwater into the Public Stormwater Drainage Network and ensure that Private Stormwater Drainage Systems are not causing a Nuisance or harm to the Council's networks infrastructure.

g) Define the obligations of the Council, installers, Occupiers and the public in matters related to the discharge of Stormwater and management of the Public Stormwater Drainage Network and the administration of equitable costs and charges.

CONTEXT

Stormwater is discharged within the District by public and Private Stormwater Drainage Systems (e.g. open Watercourses and pipes), and ground soakage. This Bylaw controls the management and discharge of Stormwater from public and private systems.

Council has responsibility for maintaining a limited number of drains, as shown in Council's policy documents. Watercourses passing through or serving private land are generally considered private. The management and maintenance of private drains are the responsibility of the Owner of the land they serve, and each section of a private Watercourse (including a privately piped Watercourse) is generally the responsibility of the Owner of the land it passes through.

The Central Hawke's Bay District Plan contains rules for use of land subject to flooding. These rules must be complied with (or a resource consent must be obtained if they are not complied with) for any activity or development in a Flood Risk Area.

Consent may also be required from the Hawke's Bay Regional Council for any work in or near a Watercourse or for the discharge of Stormwater to ground or to a Watercourse. Advice should be sought if in doubt.

PART 21 - STORMWATER

1. TITLE

This Bylaw shall be known as the Central Hawke's Bay District Council Stormwater Bylaw 2021.

2. COMMENCEMENT

This Bylaw shall come into force on the 13 May 2021.

3. REPEAL

From the day this Bylaw comes into force, any previous Stormwater bylaw or parts of any Stormwater bylaw and their amendments in force in the Central Hawke's Bay District shall be repealed.

4. APPLICATION OF BYLAW

This Bylaw shall apply to the Central Hawke's Bay District.

5. DEFINITIONS

Reference should be made to Part 1 Introductory Bylaw and to the legislation referred to under Referenced Documents, for any other definitions not included in this Part.

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

Annual Exceedance Probability (AEP)	The probability that an event (rainfall or runoff) will be equalled or exceeded in any one year: (a) 1% AEP storm corresponds to what would sometimes be known as a 1 in 100-year return period storm. (b) 2% AEP storm corresponds to what would sometimes be known as a 1 in 50-year return period storm. (c) 10% storm AEP corresponds to a what would sometimes be known as 1 in 10-year return period storm.
Approved or Approval	Approved in writing by the Council either by resolution of Council or by any Authorised Officer of Council.
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.
Best Practicable Option	The same meaning as in the Resource Management Act 1991
Catchment	The area of land within which Stormwater flows (whether by gravity, pumping, piping, or otherwise) to a given point.
Catchment Management Plan	A plan prepared by or for Council for the understanding, controlling and management of Stormwater and Stormwater related hazards or effects within a Catchment, for consenting purposes.
Cleaner Production	A plan prepared by or for Council for the understanding, controlling and management of Stormwater and Stormwater related hazards or effects within a Catchment, for consenting purposes.
Contaminants	The same meaning as in the Resource Management Act 1991.
Council	Central Hawke's Bay District Council or any officer authorised by Council or delegated to act on its behalf.
Customer	A person who uses or has obtained the right to use or direct the manner of use of water supplied by Council to any Premises.
Development	In relation to any land means altering the Stormwater runoff characteristics of that land including by Stormwater drainage works, building works, subdivision or changes of use.

Environment	The same meaning as in the Resource Management Act 1991.
Ephemeral Flows	Short lived flows of Stormwater across land or in depressions, during rainfall events.
Fees and Charges	The list of items, terms, and prices for services associated with the supply of water as adopted by Council in accordance with the Local Government Act 2002 and the Local Government (Rating) Act 2002.
Flood Plain	A low-lying area, normally adjacent to a Catchment's main Watercourses, which is expected or predicted to flood in a storm event. This is usually in the context of a 1% AEP event.
Flood Risk Area	An area which may be at risk of flooding in a 1% AEP or lesser storm, taking into account the consequence of blockage especially at culverts.
Hazardous Substance	Hazardous substances as defined by the Hazardous Substances and New Organisms Act 1996.
Level of Service	The measurable performance standards on which Council undertakes to supply water to its customers.
Nuisance	The same meaning as Section 29 of the Health Act 1956 and includes a Person, thing, or circumstance causing distress, annoyance or unreasonable interference with the peace, comfort or convenience of another Person In this bylaw this includes but is not limited to: (a) danger to life; or (b) danger to public health; or (c) flooding of any building floor or sub-floor, or public roadway; or (d) damage to property; or (e) damage to the Stormwater network; or (f) erosion or subsidence of land; or (g) long or short term adverse effects on the Environment; (h) adverse loss of riparian vegetation; or (i) wastewater overflow to land or water; or (j) anything that causes a breach of any Stormwater discharge consent condition binding the Council, (including an accumulation of chemicals causing a breach).
Occupier	The Person who occupies the Premises. This may be the Owner of the Premises, a lessee, squatter or any other Person on or using the Premises.
Overland Flow Path	Any secondary flow path illustrated in a Catchment Management Plan or the overland route taken by any concentration of, or significant sheet flow of, Stormwater on its way to a Flood Plain or second Stormwater drainage network.
Owner	The Person who owns the Premises.
Person	The Crown, a corporation sole, and also a body of persons, whether corporate or unincorporate.
Point of Discharge	The point where the Stormwater discharges leading from the Premises connect into the Public Stormwater Drainage Network, which marks the boundary of responsibility between the Owner and Council, irrespective of property boundaries.
Premises	Either: a) a property or allotment which is held under a separate record of title certificate of title or for which a separate record of title may be issued and in respect to which a building consent has been or may be issued; or b) a building that has been defined as an individual unit by a cross-lease, unit title or company lease and for which a record of title is available; or

	c) land held in public ownership (e.g. reserve) for a particular purpose. d) individual units in buildings which are separately leased or separately occupied.
Pre-treatment	Any processing of Stormwater that is designed to reduce any detrimental characteristics of Stormwater before discharge to the Stormwater Drainage Network.
Private Stormwater Drainage System	Any component of the Stormwater network that drains water from Premises on private land to a receiving Environment or up to the point of service connection with the Public Stormwater Drainage Network and includes pipes, gutters, downpipes, catchpits, swales, subsoil drains, stormwater treatment devices, and any stormwater management device or redundant stormwater system.
Public Notice	As defined in section 5 of the Local Government Act 2002.
Public Stormwater Drainage Network	Includes: (a) any pipe, drain, drainage channel, land drainage work or treatment facility, vested in or under the control of the Council, which serves more than one freehold lot; (b) all drains, drainage channels, land drainage works or treatment facilities within legal road reserve or other public places; (c) any drain, drainage channel, land drainage work or treatment facility over which the Council has exercised control for a period of 20 years or longer; and (d) any drain, drainage channel, land drainage work or treatment facility declared to be a public drain under section 462 of the Local Government Act 1974.
Rain Water Tank	A storage tank that has the dual purpose of detaining water by temporarily storing stormwater runoff during a rainfall event that can then be re-used for, for example, hose taps. The water tank is used to collect and store rain water runoff, typically from rooftops via pipes.
Record of Title	A record of title created under section 12 under the Land Transfer Act 2017.
Registered Drainlayer	A trades Person certified by the Plumbers, Gasfitters, and Drainlayer's Board under the Plumbers, Gasfitters, and Drainlayer's Act 1976 and regulations, and holding such other certifications as the Council may require from time to time.
Roading Authority	A territorial authority or NZ Transport Agency.
Storage Tank	Any tank having a free water surface.
Stormwater	Surface water run-off resulting from rainfall.
Stormwater Detention Area	Areas as shown on Council's stormwater maps that are serviced by Council's Public Stormwater Drainage Networks. From time to time it will be necessary for Council to adjust the boundaries and rules affecting the Stormwater Areas.
Stormwater Detention Device	Any device such as holding tank or pond designed to detain stormwater on the Premises and limit its outflow from the Premises into the stormwater drainage network.
Stormwater Drainage Network	A set of facilities and devices, either natural or man-made, which, in relation to stormwater, are used to convey run off, or reduce the risk of flooding, or to improve water quality. This includes but is not limited to open drains and Watercourses, inlet structures, pipes and other conduits, manholes, chambers, traps, outlet structures, pumping stations, treatment structures and devices. The Stormwater Drainage Network may be either a public or private network.
Stormwater Drainage Policies	The policies contained in Council's District Plan and any other relevant Council documentation.
Stormwater Drainage Protection Plan	A plan which relates to a specific site and/or activity being carried out on the site and addresses the specific stormwater management approach for that site and/or activity.
Stormwater Management Device	A device or facility used to reduce stormwater runoff volume, flow and/or contaminant loads prior to discharge. Including, but not limited to:

- rain gardens
- porous paving
- infiltration trenches
- sand filters
- settlement traps, tanks and ponds
- green roofs
- wetlands
- ponds
- rainwater tanks
- proprietary devices
- Stormwater Detention and/or Retention Device

Stormwater Retention Device	Any device such as holding tank or pond designed to retain stormwater on the Premises and limit the volume of outflow from the Premises into the stormwater drainage network. It may also be used to encourage on-site rainwater 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.
Watercourse	The meaning given in Section 2 of the Land Drainage Act 1908, which includes all rivers, streams, creeks, culverts and channels through which stormwater commonly flows, whether continuously or not. Watercourses passing through private land are generally considered private and are the responsibility of the Owner of the land they pass through. This also includes for piped water courses. **Note:** *For the avoidance of doubt, a Watercourse includes any Watercourse or drainage network over private or public land.*

6. PROTECTION OF PUBLIC STORMWATER DRAINAGE NETWORKS, PERSONNEL AND THE ENVIRONMENT

6.1. PROTECTION OF NETWORK AND THE ENVIRONMENT

6.1.1 No Person may:

(a) allow any material, Hazardous Substances, wastewater (including trade waste), chemical (including chlorine and detergents), rubbish, litter, hydrocarbons (from leaking vehicles or other sources) or other substance that causes or is likely to cause a Nuisance, directly or indirectly, into the Public Stormwater Drainage Network unless it has first passed through an appropriate and Approved Pre-Treatment device, or is otherwise Approved by the Council; or

(b) deposit or permit any material, Hazardous Substance, chemical, rubbish, litter or other substance, likely to cause a Nuisance upon entering the Public Stormwater Drainage Network, to be located so that it is likely to enter the public stormwater drainage network (directly or indirectly) in any storm event; or

(c) obstruct, divert, alter or interfere with any Watercourse, Overland Flow Path, or Flood Plain identified by Council in a manner that adversely affects or may affect the efficiency and safety of the Stormwater Drainage Network; or

(d) discharge Stormwater into the Public Stormwater Drainage Network with characteristics that would exceed those allowed for or would result in adverse environmental effects that may lead to non-compliance with Council's operative stormwater discharge consents obtained from the Hawke's Bay Regional Council; or

(e) do anything that damages or is likely to cause damage to any Public Stormwater Drainage Network.

Note: *Without limiting the scope of these provisions, but for the avoidance of doubt, swimming or spa pool water arising from emptying or backwashing may not be discharged into the stormwater network. Disposal of such water is to the Wastewater Drainage Network as provided for in Council's Wastewater Bylaw.*

In reference to Council's operative stormwater discharge consents that commenced on 1st November 2017 and expire on 31 May 2037 general Condition 3, relating to the Resource Management Act Section 107 matters apply. That

condition takes into account the effects in the receiving water after reasonable mixing as per the provisions in the consents and covers discharge characteristics including:

- *Conspicuous oil or grease films, scums or foams, or floatable or suspended material;*
- *Any conspicuous change in the colour or visual clarity;*
- *Any emission of objectionable odour;*
- *The rendering of fresh water unsuitable for consumption by farm animals;*
- *Any significant adverse effects on aquatic life.*

Stormwater discharges from Premises which at any time are likely to have the characteristics listed above will be managed through the preparation and Approval of Stormwater Drainage Protection Plans (refer Clause 7).

6.2. RESTRICTIONS WITHOUT PRIOR APPROVAL OF COUNCIL

6.2.1 No Person may, without the prior written consent of Council:

(a) erect any barrier within the Stormwater Drainage Network; or
(b) stop, obstruct, alter, interfere with or divert any stormwater drain, or any part of the Public Stormwater Drainage Network; or
(c) erect any defence against water in any stormwater drain, Flood Plain, Flood Risk Area or Overland Flow Path; or
(d) carry out any of the above so as to adversely affect land or buildings including other land and buildings on other land; or
(e) remove vegetation from within any stormwater drain or any part of the Public Stormwater Drainage Network; or
(f) impede the free flow of water in an open stormwater drain, within a distance of at least three (3) metres from the nearest margin of that stormwater drain, with the exception of Approved vehicle crossings.

6.3. STORAGE OF HAZARDOUS SUBSTANCES

6.3.1 No Person may store raw material, or products or waste containing corrosive, toxic, biocidal, radioactive, flammable, or explosive materials, or any other Hazardous Substance or material which, when mixed with Stormwater in the Public Stormwater Drainage Network, may:

(a) generate toxic, flammable, explosive or corrosive materials in hazardous quantities,
(b) damage the Public Stormwater Drainage Network,
(c) damage the Environment or adversely affect the health and safety of Council staff and the public in a manner or location such that there is a more than minor risk of that material entering the Public Stormwater Drainage Network.

6.4. WORKING AROUND BURIED SERVICES

6.4.1 Any person proposing to carry out excavation work must view the as-built information held by Council to establish whether Council services are located in the vicinity.

6.4.2 At least five (5) working days' notice in writing must be given to Council of an intention to excavate in the vicinity of its services.

6.4.3 Any Person causing damage or disruption to the Stormwater Drainage Network is liable for the cost of repairs and any other costs incurred as a result of the damage or disruption.

6.4.4 No Person may make any connection to, or otherwise interfere with, any part of the Stormwater Drainage Network except with the written approval of Council.

6.4.5 Any damage or disruption to the Stormwater Drainage Network must be reported to the Council immediately.

6.4.6 No Person may undertake any excavation work within the distance specified within the table below for of any part of the Stormwater Drainage Network, except with the prior written approval of the Council.

6.4.7 When granting approval for excavation work near the Stormwater Drainage Network, the Council may impose such conditions as it considers necessary.

Type of Works	Type of Council Water Supply, Wastewater or Stormwater asset	Specified distance from asset
General excavation	pipes 300mm in diameter and greater, including connected manholes and structures	10 metres
	pipes less than 300mm in diameter, including connected manholes and structures	2 metres
Piling	pipes 300mm in diameter and more, including connected manholes and structures	10 metres
	pipes less than 300 mm in diameter, including connected manholes and structures	2 metres
Blasting	pipes 300mm diameter and more, including connected manholes and structures	15 metres
	pipes less than 300mm in diameter, including connected manholes and structures	15 metres

Note: *Excavation within roadways is also subject to the permit process of the appropriate Roading Authority.*

6.5. LOADING OR STORAGE OF MATERIAL OVER PUBLIC STORMWATER PIPES

6.5.1 No person may cause the crushing load imposed on a public stormwater pipe to exceed that which would arise from the soil overburden plus a HN-HO-72 wheel or axle load (as defined by the New Zealand Transport Agency (Waka Kotahi) Bridge Manual).No person may cover or obscure a public stormwater pipe, manhole, catchpit or other ancillary structure without the prior approval of the Council.

6.5.3 Removal of any covering or obstructing material or adjustment of the structures will be at the property owner's expense.

7. STORMWATER DRAINAGE PROTECTION PLANS

7.1. REQUIREMENT FOR A STORMWATER DRAINAGE PROTECTION PLAN

7.1.1 The Council may require the Owner or Occupier of a premise to submit to the Council for Approval a Stormwater Drainage Protection Plan for that Premises where, in the opinion of the Council:

(a) the Premises generates trade waste containing Contaminants and there is a reasonable probability that accidents or other events may take place where Contaminants could enter the Public Stormwater Drainage Network and have the potential to breach the provisions of this Bylaw; or

(b) for any reason the Council considers there is a reasonable probability of a Contaminant discharge entering the Public Stormwater Drainage Network from that Premises that could cause a breach the provisions of this Bylaw; or

(c) there are Ephemeral Flow Paths present within the Premises that have the potential to breach the provisions of this Bylaw in terms of contaminant discharges to the Public Stormwater Drainage Network.

7.1.2 The Owner or Occupier of the Premises must provide a Stormwater Drainage Protection Plan to Council for review and Approval within three (3) months of a request from the Council.

7.2. CONTENTS OF A STORMWATER DRAINAGE PROTECTION PLAN

7.2.1 Any Stormwater Drainage Protection Plan required to be submitted to the Council by Clause 7.1 must be in accordance with the Stormwater Drainage Protection Plans CHBDC guidance document and include:

(a) A suitably scaled drawing showing the site layout, boundaries, all private stormwater and wastewater drainage including the point or points of connection to the Public Stormwater Drainage Network or discharge from the site, relevant buildings and outdoor spaces (including their use);

(b) A site assessment identifying all actual and potential sources of Stormwater Contamination;

(c) Methods in place to prevent contamination of the Public Stormwater Drainage Network and the Stormwater receiving Environment;
(d) Methods and timeframes proposed to control contamination of the Public Stormwater Drainage Network and the Stormwater receiving Environment;
(e) A description of the maintenance procedures in place and proposed;
(f) Spill prevention and spill response procedures;
(g) Cleaner production, pollution prevention, application of innovative solutions and waste minimisation procedures to be adopted including comment on whether the proposed procedures are considered to be a Best Practicable Option and/or innovative solution.
(h) Stormwater Management Devices and Stormwater Detention Devices used to reduce stormwater runoff volume, flow and/or contaminant loads prior to discharge;
(i) A comment on how the Stormwater Drainage Protection Plan meets the Overarching Purpose and intentions of this Bylaw;
(j) Other matters that Council may decide are required in respect to other features of the site in question.

7.3. APPROVAL OF A STORMWATER DRAINAGE PROTECTION PLAN

7.3.1 The Council must approve a Stormwater Drainage Protection Plan if it is satisfied that the measures contained in the Stormwater Drainage Protection Plan are adequate to prevent adversely affecting the health and safety of Council staff, or its agents, and the public, as well as preventing damage to the network and the receiving Environment.

7.4. COMPLIANCE WITH A STORMWATER DRAINAGE PROTECTION PLAN

7.4.1 If a Stormwater Drainage Protection Plan has been Approved by the Council, the Owner and Occupier must comply with all provisions, including any timeframes specified in the Stormwater Drainage Protection Plan.

7.4.2 If any existing Premises discharges Contaminants to the Public Stormwater Drainage Network in a manner that may cause damage to the network, the receiving environment or adversely affect the health and safety of Council staff or its agents and the public, the Occupier must advise the Council immediately and follow such notification up in writing as soon as practically possible and undertake all practical means to stop the discharge as soon as is possible.

7.5. REVIEW OR UPDATE OF A STORMWATER DRAINAGE PROTECTION PLAN

7.5.1 The Council may require that any Stormwater Drainage Protection Plan be revised to the satisfaction of the Council at any time where, in the opinion of the Council, there have been significant changes in the facilities or operational procedures present at the Premises which have the potential to affect the ability of the Premises to comply with this bylaw.

7.5.2 An Owner or Occupier of a Premises subject to an Approved Stormwater Drainage Protection Plan may, at any time submit to the Council a request to update the Stormwater Drainage Protection Plan to remedy this and submit to Council for their consideration.

8. SITE DEVELOPMENT AND SITE MANAGEMENT

8.1. PROPOSED WORKS

8.1.1 No Person shall carry out stormwater works without:

(a) prior written Approval from Council, and
(b) a building consent and/or resource consent as required.

8.1.2 Every application to carry out stormwater works shall include drawings and specifications for the proposed works. The drawings shall show, to the satisfaction of Council, the proposed works and their effects on the subject site and surrounding land.

8.1.3 All proposed stormwater works shall be designed, constructed and operated:

(a) so that Stormwater discharges from a Premises are in compliance with any relevant Council Catchment Management Plan and/or Council's discharge consent issued by Hawke's Bay Regional Council under the Resource Management Act 1991, including its recommendations or conditions for the area concerned; and
(b) in compliance with Council's standards for corresponding public drainage works where they serve or may serve land or buildings in different Ownership; and
(c) in compliance with Council's Stormwater Drainage Policies; and

(d) to minimise sediment discharge to any Stormwater Drainage Network; and
(e) in compliance with any written conditions imposed by Council when approving the works, and with any relevant building or resource consent; and
(f) to be consistent with foreseeable catchment-wide works (for example, extending a pipe upstream or downstream) so as to give a benefit to the Catchment as a whole.
(g) To recognise the fundamental concept of Te Mana o te Wai and the status of tangata whenua as Kaitiaki as far as reasonably practical.

8.1.4 Such stormwater drainage works shall remain the responsibility of the Owner of the land on which the works occur unless and until the works are taken over and vested in Council. The cost of all work involved will be at the Owner of the land's cost, unless specific agreement for alternative cost sharing is Approved in writing by Council.

8.2. OTHER DEVELOPMENT

8.2.1 No development may take place and no building or structure shall be constructed on or over or under any land within a Flood Risk Area, Flood Plain or Overland Flow Path unless specifically Approved by Council, and subject to such conditions as Council may set.

8.2.2 No Person shall extend or alter any building or structure which is already constructed on, over or under any land within a Flood Risk Area, Flood Plain or Overland Flow Path in such a way that:

(a) the extent of the obstruction to the Flood Risk Area, Flood Plain or Overland Flow Path is increased in any way; or
(b) the protection from any Nuisance is reduced; or
(c) the likelihood or extent of any Nuisance is increased,

unless specifically Approved by Council and subject to such conditions that Council may set.

8.3. VEHICLE CROSSINGS AND DRIVEWAYS

8.3.1 Where a building is at an elevation below the carriageway of the adjacent road or access way, the vehicle crossing to the site shall be constructed with an over vertical curve to ensure that run-off from the carriageway does not enter the property via the vehicle crossing.

8.3.2 The internal vehicle drive and parking areas shall be designed and constructed to direct run-off away from the buildings and to eliminate the potential for a Nuisance to be created.

8.4. SILTATION AND EROSION PROTECTION

8.4.1 No Person may, as a result of development, discharge any stormwater into a stormwater drain or any drain leading to a stormwater drain, unless such development includes provisions to ensure siltation and erosion are not increased and that water quality is not reduced. This shall include the installation of adequate silt control measures to the satisfaction of Council to prevent the discharge of silt laden water directly or indirectly to any stormwater drain.

8.4.2 Such provisions shall be made before development is started. These control measures shall be maintained and regularly cleaned out until ground cover has been reinstated on the site.

8.5. DIVERTING PUBLIC STORMWATER PIPES

8.5.1 Subject to specific Approval in writing by Council, a Person may divert a public stormwater pipe (including any ancillary structures) in accordance with any engineering requirements specified by Council, and the Developer shall meet the cost of such diversion work.

9. APPROVAL TO CONNECT TO A PUBLIC STORMWATER DRAINAGE NETWORK

9.1. REQUIREMENT FOR COUNCIL APPROVAL

9.1.1 No Person may make a connection to, or otherwise interfere with, the Public Stormwater Drainage Network without prior Approval of the Council.

9.2. REQUIREMENT FOR ATTENUATION MEASURES

9.2.1 When the stormwater arising from a new connection is such that it exceeds the defined Level of Service limits for the Public Stormwater Drainage Network, Council may require the installation or construction of private stormwater attenuation measures including Stormwater Management Devices to attenuate the flow of stormwater, retention facilities to limit the volume of extra stormwater produced from new connections or developments, and/or treatment facilities such as constructed wetlands or other infrastructure to this effect.

9.2.2 Matters Council shall consider in determining the need for and capacity of a Stormwater Management Device (over and above the minimum 3,000 litre rain water tank required by the Water Supply Bylaw) will include the roof area of any building from which Stormwater is collected, the extent of impervious (sealed) areas of the property and the capacity of the Public Stormwater Drainage Network to which the property is connected.

9.2.3 After construction of a private Stormwater Management Device, and subsequent Approval by Council, the capacity, discharge rate and orifice size (if any) shall not be altered.

9.2.4 Any such Stormwater Management Device must be constructed at the Occupier's expense. The Occupier must also meet the costs of the required maintenance and servicing program to ensure that the measures continue to meet their design performance criteria.

9.3. APPLICATION

9.3.1 Every application for connection to the Public Stormwater Drainage Network shall be made in writing on the standard Council form and be accompanied by the prescribed charges. The applicant shall provide all the details required by Council.

9.3.2 On receipt of an application Council shall, after consideration of the application and other matters relating to the application and the stormwater drainage network, either:

(a) Approve the application and inform the applicant of the size of the connection and any particular conditions applicable including any requirement for a Stormwater Drainage Protection Plan; or
(b) seek further information prior to making a decision; or
(c) refuse the application and notify the applicant of the decision giving the reasons for refusal.

9.3.3 Failure to comply with any terms and conditions of an Approval constitutes interference with the Public Stormwater Drainage Network without prior Approval and is a breach of this Bylaw.

9.3.4 Any such connection to the Public Stormwater Drainage Network shall be carried out by a Registered Drainlayer and, if required by the Council, under the supervision of the Council.

9.3.5 Any new connection shall be dimensioned from the immediate downstream manhole to the centre of the newly installed connection, and an as-built plan showing the connection shall be provided to Council within seven (7) days of installation and acceptance by Council.

9.3.6 The applicant must have written evidence of authority to act on behalf of the Owner of the property for which supply is sought (should they not be one and the same).

9.3.7 An Approved application which has not been actioned within six (6) months of the date of application will lapse unless a time extension has been Approved. Any refund of Fees and Charges shall be at the discretion of Council.

9.4. PRESCRIBED CHARGES

9.4.1 In addition to any application, administrative, and inspection charges prescribed by the Council in accordance with the Local Government Act 2002, charges applicable at the time of connection may include a payment to Council or an Approved contractor for the cost of the physical works required to provide the connection.

9.5. POINT OF DISCHARGE

9.5.1 The Point of Discharge from a Premises shall be the point on the Public Stormwater Drainage Network which marks the boundary of responsibility between the Owner and Council.

9.5.2 Unless otherwise Approved there shall be one Point of Discharge only for each Premises.

9.5.3 Where a private pipeline discharges into a Public Stormwater Drainage Network on that same private property, the Point of Discharge shall be the upstream end of the pipe fitting which forms the junction with the public pipeline.

9.5.4 No connections shall be made on a private drain to supply other Premises.

9.5.5 Appendix A includes a series of figures showing the Point of Discharge for a range of property ownership and location arrangements.

10. PREVENTION OF INFLOW AND INFILTRATION FROM THE STORMWATER DRAINAGE NETWORK

10.1.1 The Owner shall take all reasonable steps to prevent any Stormwater or groundwater entering the wastewater drainage system (including from roof downpipes, surface water run-off, overland flow, and sub-surface drainage). Reasonable steps include ensuring that:

(a) there is no direct connection of any stormwater pipe or drain to the Wastewater Drainage Network.
(b) gully trap surrounds are set above Stormwater ponding levels (refer New Zealand Building Code G13), or secondary Overland Flow Path flood levels.
(c) inspection covers are in place and are appropriately sealed.
(d) Private Stormwater Drainage Systems are kept and maintained in a state which is free from cracks and other defects which may allow exfiltration.

11. ACCESS FOR MAINTENANCE, REPAIR AND INSPECTION

11.1.1 Subject to the provisions of the Local Government Act 2002, the Owner or Occupier shall allow Council, with or without equipment, access to any area of the Premises for the purposes of carrying out any work on the Public Stormwater Drainage Network including inspection and survey, and for determining compliance with the requirements of this Bylaw.

11.1.2 Wherever practical Council shall make every reasonable attempt to notify the Owner or Occupier of any scheduled work on the Public Stormwater Drainage Network before the work commences. Where immediate action is required and notification is not practical, work will be carried out without notice.

12. PRIVATE STORMWATER DRAINAGE SYSTEMS

12.1. MAINTENANCE OF PRIVATE DRAINAGE SYSTEM

12.1.1 It is the responsibility of the Owner to maintain in good working order, at all times, the Private Stormwater Drainage Systems on the Premises. This includes all pipes, gutters, Stormwater Management Devices or other components as well as the drainage network itself.

12.1.2 Where unmaintained components of a private drainage system affect neighbouring properties and/or the Public Stormwater Drainage Network, Council will investigate and request necessary works to be undertaken by the Owner or Occupier.

12.2. PRIVATE SOAKAGE SYSTEMS

12.2.1 The Owner of a private soakage system shall, at all times, ensure that the private soakage system is functioning in such a way as to prevent a Nuisance in up to a 10% AEP storm.

12.2.2 The Owner of a private soakage system shall, on request by Council, provide such information as is required to demonstrate that their private soakage system is functioning in such a way as to prevent a Nuisance in up to a 10% AEP storm. If this is not the case, the Owner of the private soakage system shall carry out such works as required to make it meet this standard (having first obtained such Approvals as are required for the works involved).

13. PAYMENT

13.1.1 The Owner shall be liable to pay for stormwater services in accordance with Councils Fees and Charges and / or rating requirements prevailing at the time.

13.1.2 Council may recover all unpaid Fees and Charges and rates as prescribed in the Local Government (Rating) Act 2002, Sections 57 to 83.

14. BREACHES AND INFRINGEMENT OFFENCES

14.1.1 If any breach of this Bylaw is such that, in the opinion of the Council, there is a risk to public health or safety, or a risk of consequential damage to Council assets or the Environment, the Council may take immediate action to remove or alter a work or thing that is, or has been, constructed in breach of this bylaw; and recover the costs of removal or alteration from the Person who committed the breach.

14.1.2 In addition to any legal penalties arising from any breach, offence, or dispute Council may seek to recover all costs arising from and associated with any such breach, offence or dispute.

14.2 FINES

14.2.1 Every person who breaches this Bylaw, or breaches the conditions of any approval or permit granted under this Bylaw or fails to comply with a notice served under this bylaw commits an offence and is liable upon conviction to a fine as provided for under the Local Government Act 2002. Without prejudice to any of the provisions of this Bylaw, Council may pursue any legal remedies available to it pursuant to the provisions of the Local Government Act 2002 or any other act or regulation applicable to the supply of water.

14.2.2 Every Person who fails to comply with the requirements of this Bylaw, commits an offence and is liable, on summary conviction, to a fine not exceeding $20,000 or as set out in Section 242 of the Local Government Act 2002.

14.2.3 The Council may apply to the District Court under Section 162 of the Local Government Act 2002 for an injunction restraining the Person from committing a breach of this Bylaw.

14.3 INTERFERENCE WITH EQUIPMENT

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

14.4 REMEDIAL WORKS

14.4.1 The Council may:

(a) remove or alter any work or thing that is, or has been, constructed in breach of this bylaw; and
(b) recover the costs of removal or alteration from the person who committed the breach.

15. BYLAW APPROVAL DATE

The Common Seal of the Central Hawke's Bay District Council was attached, under Resolution *(Reference - Part 21 Stormwater Bylaw 2021)* passed at a meeting of the Central Hawke's Bay District Council held on 13 May 2021 and will come into force 13 May 2021.

APPENDIX A

Point of Discharge Arrangements

To be applied in conjunction with Clause 9.5. of the Bylaw.

Single Ownership

For individual Owners the Point of Discharge shall be located as shown in figures 1 - 6 (or as close as possible where fences, walls, or other permanent structures make it difficult to locate it at the required position). Other positions shall require specific approval.

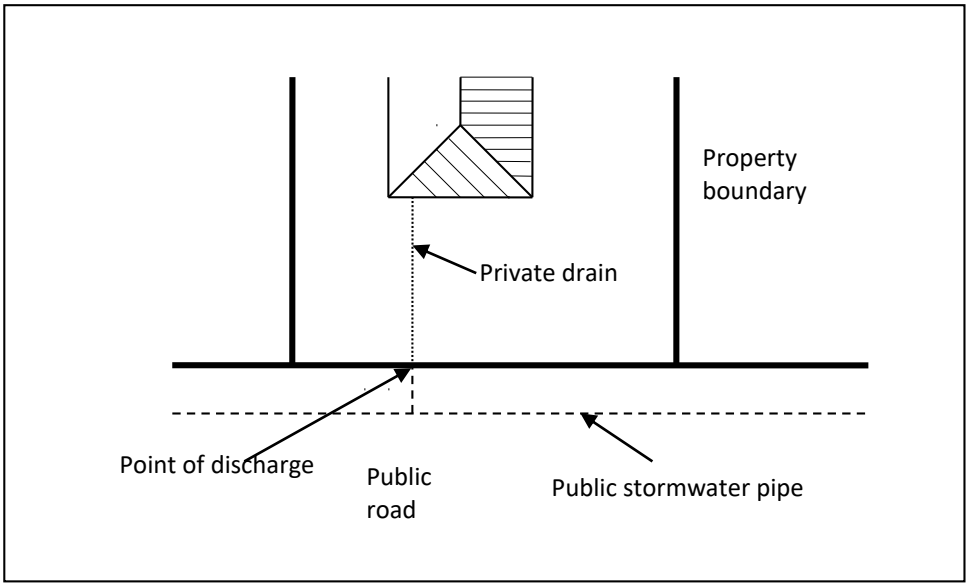


Figure 1 - Point of Discharge Location - With Street Frontage To Public Stormwater Pipe

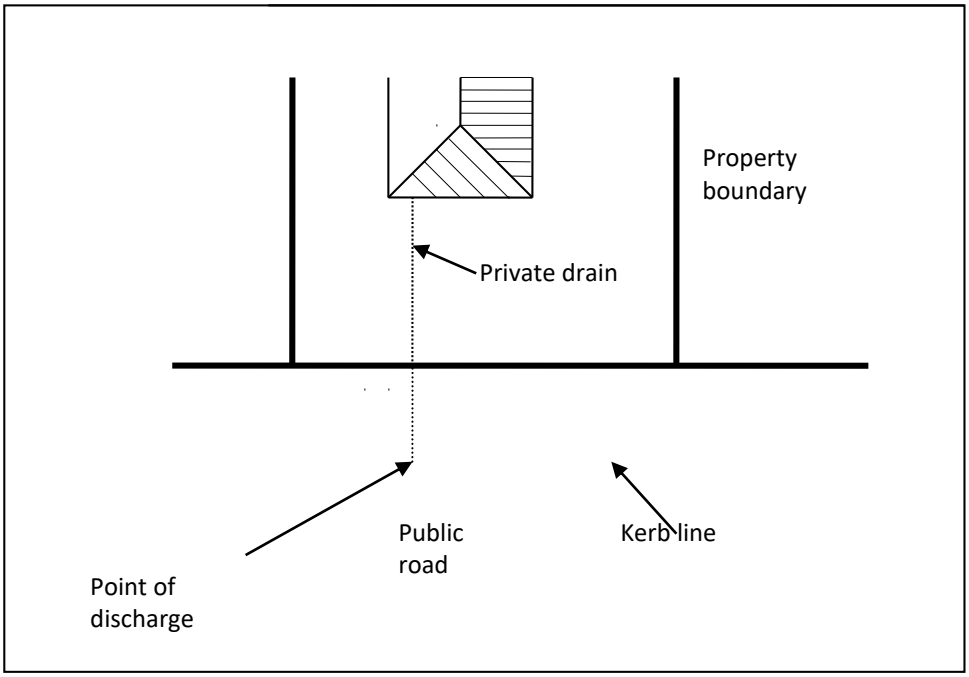


Figure 2 - Point of Discharge Location - With Street Frontage To Kerb

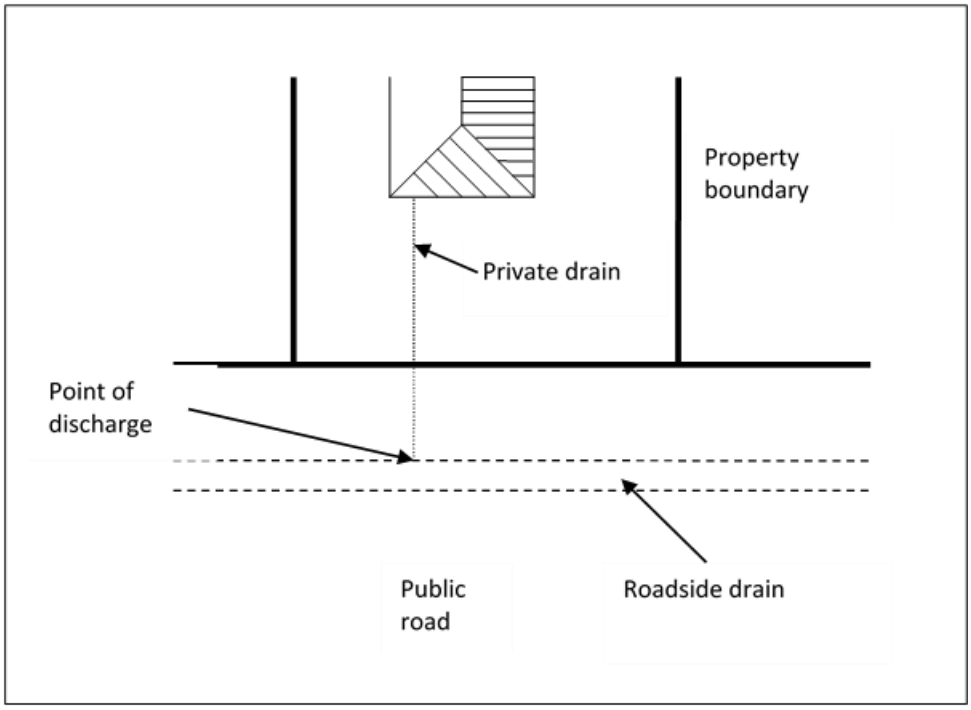


Figure 3 - Point of Discharge Location - With Street Frontage To Roadside Drain

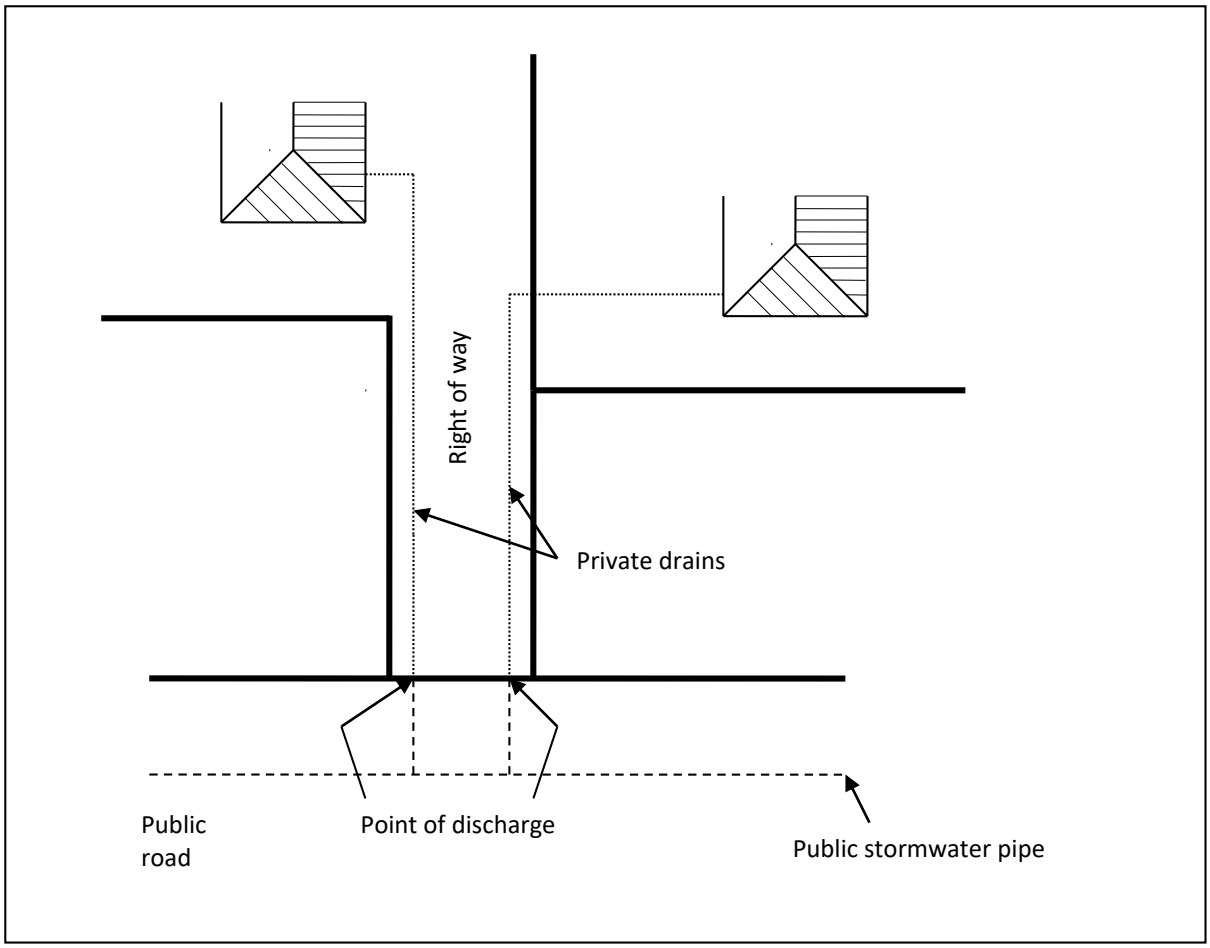


Figure 4 - Point of Discharge Location - Rear Lots

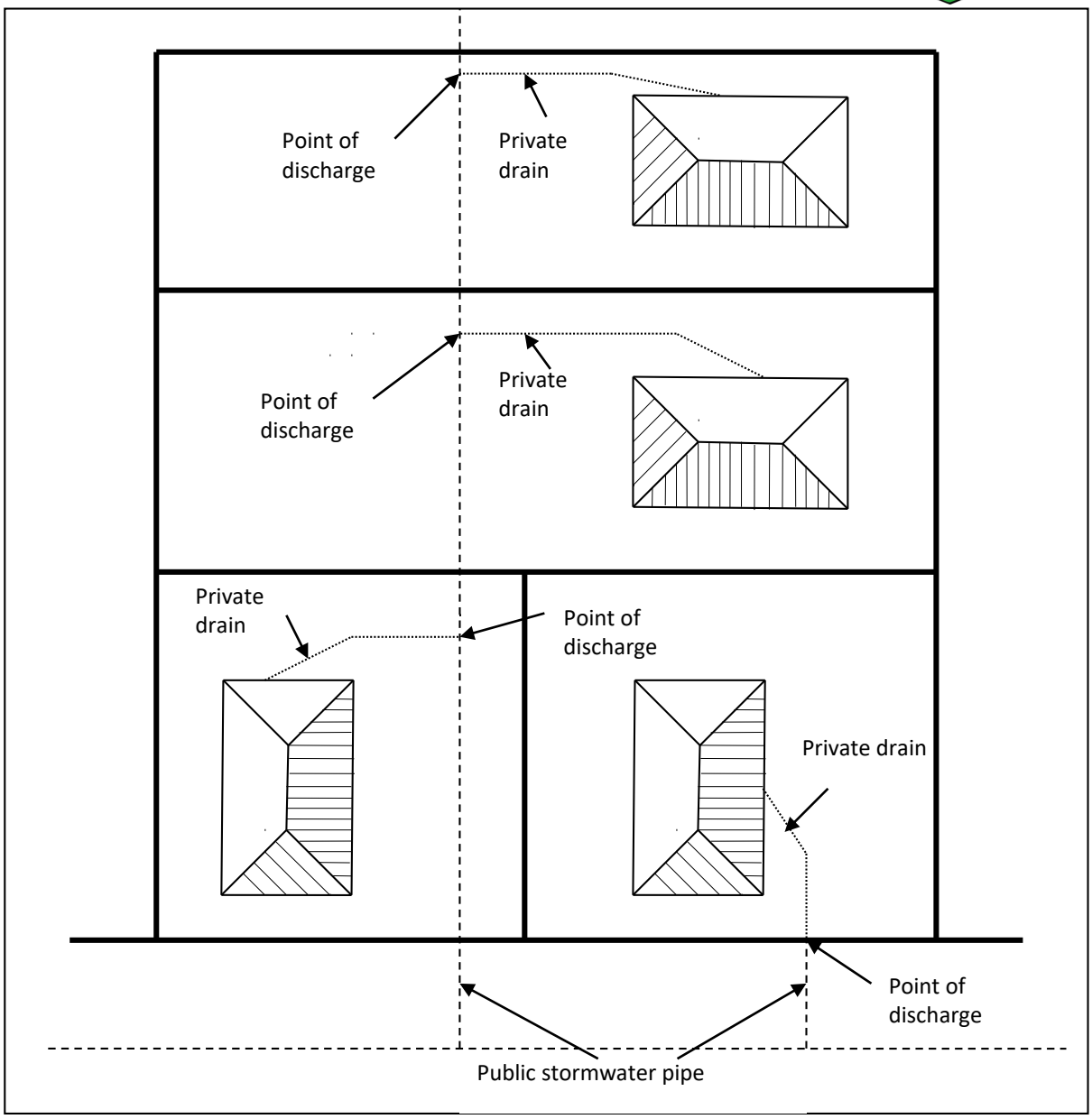


Figure 5 - Point of Discharge Location - Public Stormwater Pipe on Private Property

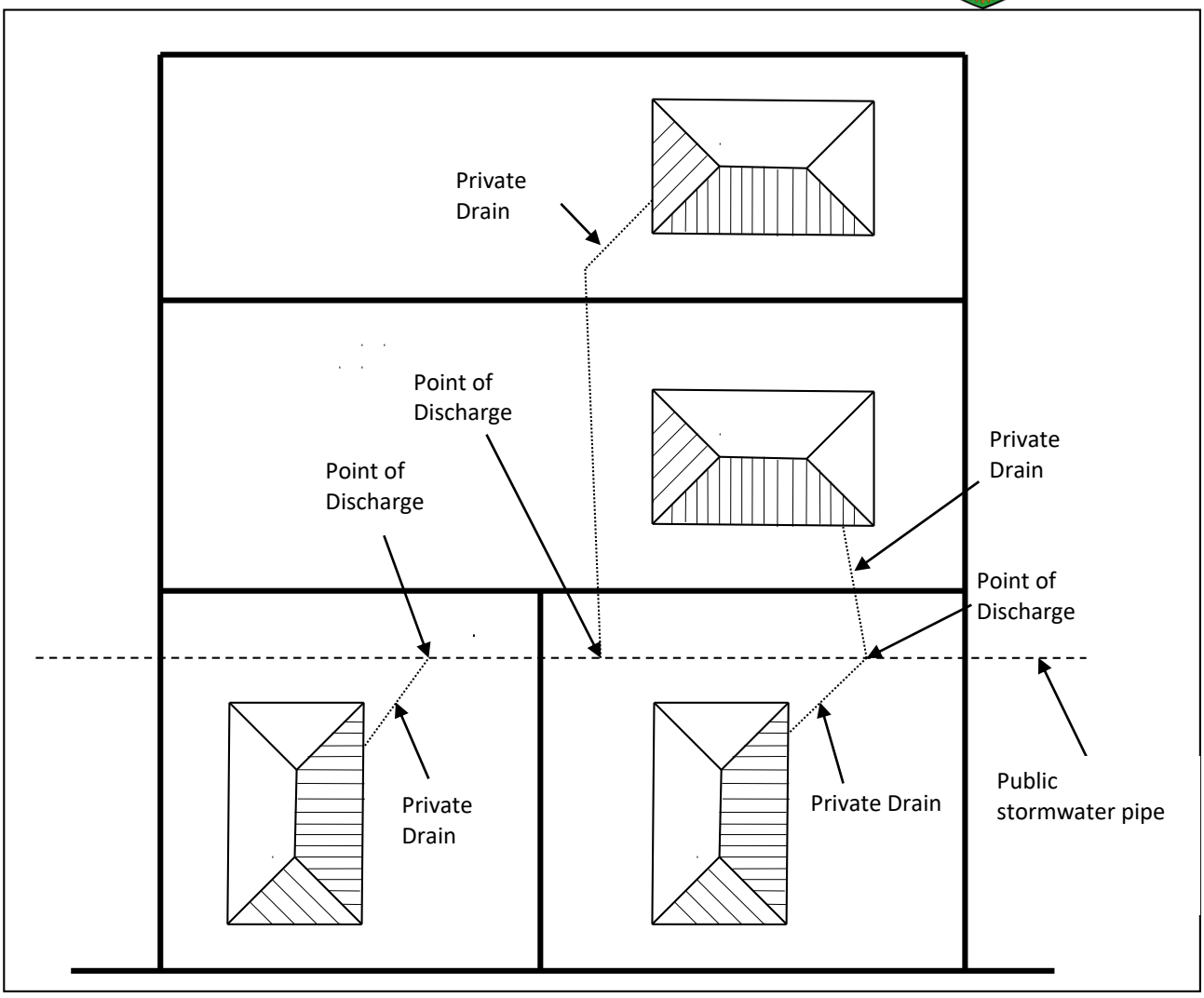


Figure 6 - Point of Discharge Location - Private Drain through Neighbouring Properties

Multiple Ownership

The Point of Discharge for the different forms of multiple Ownership of Premises and / or land shall be:

(a) for a Company Share / Block Scheme (Body Corporate) - as for single Ownership;

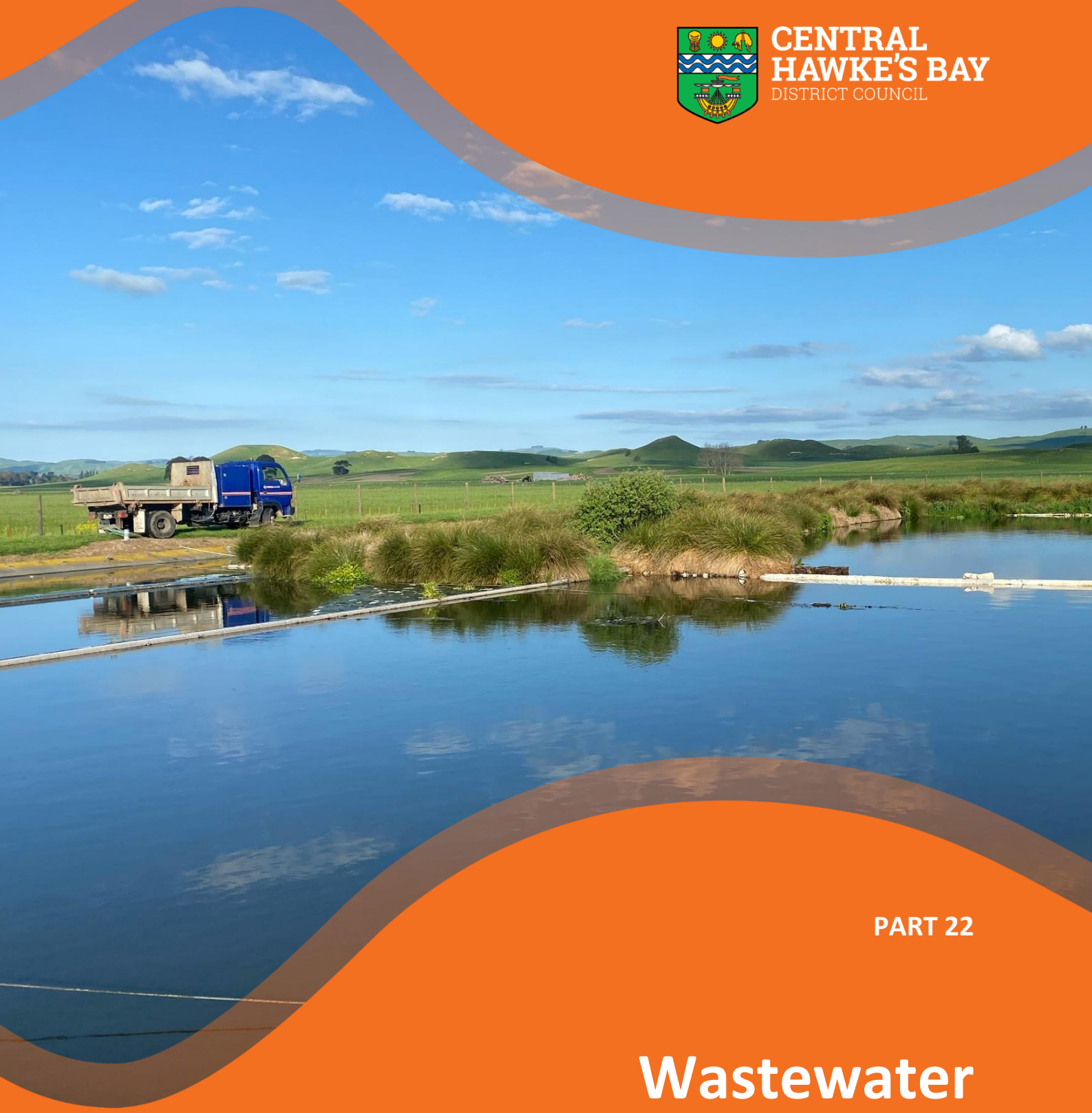
(b) for a Leasehold / Tenancy in Common Scheme (Cross Lease), Strata Title, Unit Title (Body Corporate) and any other form of multiple Ownership - each Owner shall have an individual pipe with the Point of Discharge determined by agreement with Council. In specific cases other arrangements may be acceptable, subject to individual approval by Council.

For a multiple Ownership private drain which was in existence prior to the effect of this Bylaw, the Point of Discharge shall be the arrangement existing at that time, or as determined by agreement with Council for any individual case.

Layout

The physical drainage layout at a Point of Discharge shall be as per the New Zealand Building Code, the New Zealand Standard NZS 4404: Land Development and Subdivision Infrastructure, and as Council approves.

CENTRAL HAWKE'S BAY
DISTRICT COUNCIL



PART 22

Wastewater BYLAW

Superseding CHBDC: Part 22: 2018

May 13 2021

Together we Thrive! E ora ngātahi ana!

CONTENTS

INTRODUCTION

OVERARCHING PURPOSE

To achieve a holistic and integrated approach to three waters management in the District that is consistent with Council's District Plan, other Policies, Plans, Strategies and Objectives and also reflect the principles of the Te Mana o Te Wai, the following overarching purposes have been set for all four water services bylaws (Water Supply, Stormwater, Wastewater and Trade Waste).

1. **Meet Legislation Requirements**
   Proactively meet all Council's statutory requirements relating to the provision of three waters services.

2. **Integrated Approach**
   Adopt an integrated and holistic approach, ki uta ki tai, to the Three Waters (water supply, wastewater including trade waste and stormwater) that recognises the interconnections between each of the waters and promotes their sustainable use and management.

3. **Environmental Responsibilities**
   Facilitate environmentally responsible practices by raising awareness of how the Three Waters interact and effect the District's natural environment. Additionally, ensure that Council meet its own responsibilities in terms of resource consent requirements set by the Hawke's Bay Regional Council.

4. **Sustainable Practices**
   Encourage and incentivise the community and businesses to adopt practices that lead to the enhancement of the environment and the sustainable management of water resources including water and product stewardship, rainwater harvesting, waste minimisation and cleaner production.

5. **Support Sustainable Growth**
   Support the sustainable provision of three waters infrastructure to enable future growth while minimising or eliminating impacts on the environment.

6. **Achieve Project Thrive Values**
   Develop and implement Three Water Bylaws to give effect to 'Project Thrive' values in particular trust, honesty, respect, innovation, and valuing people.

7. **Te Mana o te Wai**
   Recognise the fundamental concept of Te Mana o te Wai as prescribed under the National Policy Statement for Freshwater Management 2020 and in particular the need to restore and preserve the balance between the water, the wider environment, and the community.

8. **Tangata Whenua Status**
   Recognise the status of tangata whenua as Kaitiaki.

9. **Durable Infrastructure**
   Develops and maintain durable and resilient infrastructure that achieves Council's levels of service in an efficient and cost-effective manner.

10. **Safety and Health**
    Ensure the protection, safety and health of Council staff and the community when using or operating the water supply system, and the wastewater and stormwater systems.

11. **Obligations**
    Define the obligations of residential Occupiers and businesses including trade waste Occupiers and the public at large in relation to the Council's water supply, wastewater and stormwater systems.

12. **Discharge Controls**
Regulate wastewater and stormwater discharges, including trade waste, and hazardous substances, into the wastewater and stormwater systems.

13. **Equitable Costs**
Provide a system for the equitable share of Council's water services costs between trade waste dischargers, other businesses and domestic Customers.

OBJECTIVES

Further to the Overarching Purpose the specific objectives for this part of the Bylaw is to promote and protect the health of communities and the environment, and to protect the Wastewater System from damage and misuse.

CONTEXT

In Central Hawke's Bay, there are currently six public Wastewater collection and treatment systems located at Otane, Waipawa, Waipukurau, Takapau, Porangahau, and Te Paerahi.

Wastewater is collected from public and private premises within these systems into the public sewer system. This wastewater is conveyed to the District's wastewater treatment plants for treatment and is then discharged to the environment. This Bylaw controls the management, treatment and discharge of this wastewater.

Council has responsibility to provide reliable, safe, effective and efficient collection, management and disposal of wastewater and trade waste to ensure that the capacity of available facilities is optimised and that neither public health nor the environment is compromised.

Renewal of wastewater assets is an ongoing process. Pipelines, manholes, pumping stations and treatment plants are renewed as necessary and as funding allows.

Compliance with Resource Consents is also monitored and includes reporting to Hawke's Bay Regional Council.

PART 22 – WASTEWATER

1. TITLE

This bylaw shall be known as the Central Hawke's Bay District Council Wastewater Bylaw [2021].

2. COMMENCEMENT

This Bylaw shall come into force on the 13 May 2021.

3. REPEAL

This bylaw supersedes and repeals the Central Hawke's Bay District Council Wastewater Bylaw 2018 and all amendments of that bylaw.

4. APPLICATION OF BYLAW

This Bylaw shall apply to the Central Hawke's Bay District.

5. DEFINITIONS

Reference should be made to Part 1 *Introductory Bylaw* and to the legislation referred to under Referenced Documents, for any other definitions not included in this Part.

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

Acceptable Discharge	A Wastewater with physical and chemical characteristics which comply with the permitted discharge characteristics of Council's Trade Waste Bylaw.
Approval or Approved	Approved in writing by the Council either by resolution of Council or by any Authorised Officer of Council.
Buried Services	All public Sewers, Rising Mains, Trunk Sewers and other underground utilities under the responsibility of Council.
Council	The Central Hawke's Bay District Council or any officer authorised by Council or delegated to act on its behalf.
Customer	A person who either discharges or has obtained a consent to discharge or direct the manner of discharge of Wastewater from any Premises to Council's public Sewer. The Customer may be an Owner or an Occupier.
Disconnection	The physical cutting and sealing at the point of discharge from a Premises.
Domestic Wastewater	Either that Wastewater which is discharged from Premises used solely for residential activities or wastes of the same character discharged from other Premises, provided that the characteristics of the Wastewater are an Acceptable Discharge. Such activities shall include the draining of domestic swimming and spa pools subject to clause 9.6 but does not include any solids, liquids, or gases that may not lawfully be discharged into the wastewater system and may include geothermal water.
Fees and Charges	The list of items, terms and prices for services associated with the discharge of Wastewater as approved by the Council in accordance

	with the Local Government Act 2002 and the Local Government (Rating) Act 2002.
Holding tank	A tank installed on a property to store Wastewater from that property and intended to be emptied regularly by a tanker. This excludes septic tanks where the septic tank forms part of an on-site Wastewater treatment process that is fully contained within the property and excludes retention tanks where the retention tank is part of a communal Wastewater treatment process.
Infiltration	Water entering a public Sewer or Private Drain from groundwater through defects such as poor joints, cracks in pipes or manholes. It does not include Inflow.
Inflow	Water discharged into a drain from non-complying connections or other drain-laying faults. It includes Stormwater entering through illegal downpipe connections or from low gully traps.
Occupier	The person who occupies the Premises. This may be the Owner of the Premises, lessee, squatter or any other Person on or using the Premises.
Owner	The Person who owns the Premises.
Person	The Crown, a corporation sole, and also a body of persons, whether corporate or unincorporate.
Point of Discharge	The boundary between the public Sewer and a Private Drain.
Premises	Either: a) a property or allotment which is held under a separate record of title or for which a separate record of title may be issued and in respect to which a building consent has been or may be issued; or b) a building that has been defined as an individual unit by a cross-lease, unit title or company lease and for which a record of title is available; or c) land held in public ownership (e.g. reserve) for a particular purpose d) individual units in buildings which are separately leased or separately occupied.
Private Drain	That section of drain between the Premises and the point of connection to the Council's wastewater system. This section of drain is owned and maintained by the Customer (or group of Customers).
Record of Title	A record of title created under section 12 under the Land Transfer Act 2017.
Rising Main	A Sewer through which Wastewater is pumped.
Sewer	The main public sewer pipes, manholes and lateral connections that carry away Wastewater from the Point of Discharge. The public sewer is owned and maintained by Council.
Stormwater	Surface water run-off resulting from rainfall.
Tankered waste	Water or other liquid, including waste matter in solution or suspension, which is conveyed by vehicle for disposal, excluding

	domestic sewage discharged directly from house buses, caravans, buses and similar vehicles.
Trade Premises	Any: a) Premises used or intended to be used for any industrial or trade purpose; or b) Premises used or intended to be used for the storage, transfer, treatment, or disposal of waste materials or for other waste management purposes, or used for composting organic materials; c) Other Premises from which a contaminant is discharged in connection with any industrial or trade process d) Other Premises discharging other than domestic sewage; and includes any land or Premises wholly or mainly used for agricultural or horticultural purposes.
Trade Waste	Any liquid that is or may be discharged from a Trade Premises or tanker to the Council's Wastewater System of a non-domestic nature.
Trunk Sewer	A Sewer, generally greater than 150 mm in diameter, which forms a part of the principal drainage system of Council's Wastewater System.
Wastewater	Water or other liquid, including tankered waste and waste matter in solution or suspension, discharged from a Premise to a Sewer (also called sewage).
Wastewater System	The collection, treatment and disposal of Wastewater and Trade Wastes, including all Sewers, pumping stations, storage tanks, sewage treatment plants, outfalls, and other related structures operated by Council and used for the reception, treatment and disposal of Wastewater and Trade Wastes.

6. ACCESS TO THE WASTEWATER SYSTEM

6.1.1. No Person other than Council and its authorised agents may have access to any part of the Wastewater System without the written Approval of Council.

7. WORKING AROUND BURIED SERVICES

7.1. General

7.1.1. Any Person proposing to carry out excavation work must view the as-built information held by Council to establish whether Council services are located in the vicinity. Excavation work of the following type will be considered as in the vicinity of Buried Services:

Type of Works	Type of Council Water Supply, Wastewater or Stormwater asset	Specified distance from asset
General excavation	pipes 300mm in diameter and greater, including connected manholes and structures	10 metres
	pipes less than 300mm in diameter, including connected manholes and structures	2 metres
Piling	pipes 300mm in diameter and more, including connected manholes and structures	10 metres
	pipes less than 300 mm in diameter, including connected manholes and structures	2 metres
Blasting	pipes 300mm diameter and more, including connected manholes and structures	15 metres
	pipes less than 300mm in diameter, including connected manholes and structures	15 metres

7.1.2. At least five (5) working days' notice in writing must be given to Council of an intention to excavate in the vicinity of its services.

7.1.3. Any Person causing damage or disruption to the Wastewater System is liable for the cost of repairs and any other costs incurred as a result of the damage or disruption.

7.1.4. No Person may make any connection to, or otherwise interfere with, any part of the Wastewater System except with the written Approval of Council.

7.1.5. Any damage or disruption to the Wastewater System must be reported to the Council immediately.

7.1.6. No Person may undertake any excavation work within 2 metres of any part of the Wastewater System, except with the prior written Approval of the Council.

7.1.7. When granting Approval for excavation work near the Wastewater System, the Council may impose such conditions as it considers necessary.

7.2. Excavation, Loading or material over sewers

7.2.1. No Person may cause the crushing load imposed on a public Sewer to exceed that which would arise from the soil overburden plus a HN-HO-72 wheel or axle load (as defined by the New Zealand Transport Agency (Waka Kotahi) Bridge Manual).

7.2.2. No Person may cover or obscure a Sewer without the prior Approval of the Council.

7.2.3. Removal of any covering material or adjustment of the structures will be at the property Owner's expense.

7.2.4. No Person may excavate, or carry out piling or similar work closer than:

a) five (5) metres from the centre line of any Rising Main or Trunk Sewer; or
b) two (2) metres from the centre line of any public Sewer;

without written Approval from Council. Such Approval may impose conditions on the carrying out of any work near the Sewer.

8. BUILDING OVER BURIED SERVICES

8.1. Public Sewers, Rising Mains and Trunk Sewers

8.1.1. Except in accordance with 8.1.3, no building may be built over a public Sewer, Rising Main or Trunk Sewer, or closer than the greater of:

c) 1.5 metres from the centre of any main or Sewer (Refer to Figure 8-1); or

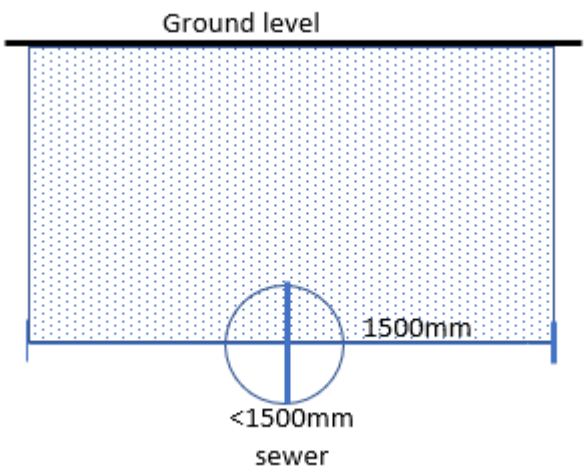


Figure 1: No build zone in vicinity of a public rising main or trunk sewer (less than 1500 mm diameter)

d) the depth of the centre line of the Sewer, plus the diameter of the Sewer, plus 0.2 metres from the centre of that Sewer, subject to compliance with 3.1 of NZS 3604 (Refer to Figure 8-2).

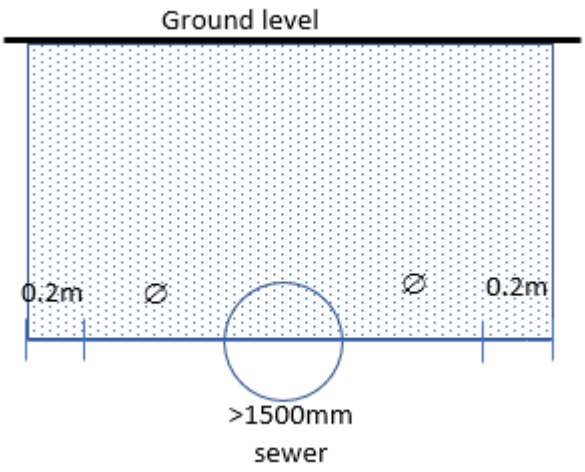


Figure 2: No build zone in vicinity of a public rising main or trunk sewer (more than 1500 mm diameter)

8.1.2. Subject to Approval, a building developer may meet the cost of diverting the public Sewer (including any manholes) in accordance with Council's standards.

8.1.3. Where clause 8.1.1 and 8.1.2 above are found to be impractical and the building cannot be sited elsewhere on the property or modified to conform with the above conditions, and it is essential for the proposed building to be built on that part of the property, approval may be granted subject to the building developer meeting the cost of any specific requirements. These requirements may include:

a) the provision of access manholes, pipe strengthening, ducting, additional support of the building's foundations and re-locatable construction;
b) carrying out sufficient investigations to accurately determine the Sewer's location and depth, and to prove that the Sewer is in a condition where it has a remaining life of at least fifty (50) years; and
c) or carrying out remedial work or relaying the Sewer to meet the requirements of:
    i. bore piling the building 1.0 metre clear distance either side of the Sewer to below the Sewer invert to ensure that no building loads are transferred to the Sewer and so that it is possible to excavate down to the Sewer without threat to the building;
    ii. providing two additional manholes into the Sewer between 2.0 and 3.0 metres from the edge of the building at the points it enters and leaves the building (unless there is an existing manhole within 10 metres), provided that the Sewer lies in a straight line and that there are no other connections between these two manholes;
    iii. carrying out all work on and around the Sewer in accordance with Council's engineering standards.

9. DEVELOPMENT OF PREMISES

9.1. General

9.1.1. No Person may divert any part of the public Wastewater system except with the prior written Approval of the Council.

9.1.2. No Person may make a connection to, or otherwise interfere with the public Wastewater System without prior written Approval of the Council.

9.1.3. All proposed Wastewater works must be designed, constructed and operated:

a) in compliance with any relevant Wastewater Management Plan or discharge consent, including its recommendations or conditions for the area concerned; and
b) to Council's standards for corresponding public Wastewater works where they serve or may serve land or buildings in different ownership; and
c) to Council's Wastewater Drainage Policies; and
d) in compliance with any written conditions imposed by Council when approving the works, and with any relevant building or resource consent; and
e) to be consistent with foreseeable catchment-wide works (for example, extending a pipe upstream or downstream) to give a benefit to the catchment as a whole.

Such Wastewater drainage works will remain the responsibility of the Owner of the land on which the works occur unless and until they are taken over and vested in Council. The cost of all work involved will be the Owner's cost unless specific agreement for alternative cost sharing is approved in writing by Council.

9.2. Application for Connection

Applications must be made to Council to connect to the Wastewater System.

9.2.1. Every application for a connection to the Wastewater System must be made in writing on the standard Council form (on Council's website). The applicant must provide all the details required by Council.

9.2.2. On receipt of an application Council will, after consideration of the application and other matters relating to the application and the Wastewater System, either:

a) approve the application and inform the applicant of the size of the connection and any particular conditions applicable; or
b) refuse the application and notify the applicant of the decision giving the reasons for refusal.

9.2.3. Failure to comply with any of the terms and conditions of an Approval constitutes interference with the Wastewater System and is a breach of this Bylaw.

9.2.4. Any such connection shall be carried out by a registered drainlayer under the supervision of Council.

9.2.5. Any new connection will be dimensioned from the immediate downstream manhole to the centre of the newly installed connection, and an as-built plan showing the connection shall be provided to Council within seven (7) days of installation and acceptance by Council.

9.2.6. The applicant must have the authority to act on behalf of the Owner of the Premises for which the connection is sought and shall produce written evidence of this if required.

9.2.7. An approved application which has not been actioned within six (6) months of the date of application will lapse unless a time extension has been approved. Any refund of fees and charges shall be at the discretion of Council.

9.2.8. Every application to carry out Wastewater works must include drawings and specifications for the proposed works. The drawings must show, to the satisfaction of Council, the proposed works and their effects on the subject site and surrounding land.

9.3. Pump stations

9.3.1. Customers may not use private Wastewater pump stations unless approved in writing by the Council. Approval may only be provided where there are no practical alternatives for a gravity flow discharge to the public Sewer.

10. CONDITIONS OF SUPPLY

10.1. Wastewater from Holding Tanks

10.1.1. Wastewater from Holding Tanks will not be accepted at any of Council's Wastewater treatment facilities, unless approved in writing by Council.

10.2. Point of Discharge

10.2.1. The Point of Discharge marks the boundary of responsibility between the Customer and Council, for maintenance of the Wastewater system, irrespective of property boundaries.

10.2.2. Unless otherwise approved there may only be one Point of Discharge for each Premises, and any private drain shall not extend by pipe or any other means to serve another Premises unless it is a common Private Drain.

Single ownership

10.2.3. For single dwelling units the Point of Discharge will be located at the boundary as shown in Figures 10.1, 10.2, 10.3, 10.4 and 10.5 or as close as possible where fences, walls or other permanent structures make it difficult to locate it at the required position. The Approval of other positions must be made by Council and recorded on the drainage plan.

10.2.4. Where a Private Drain discharges into a public Sewer on that same private property, the Point of Discharge is the upstream end of the pipe fitting which forms the junction with the public Sewer.

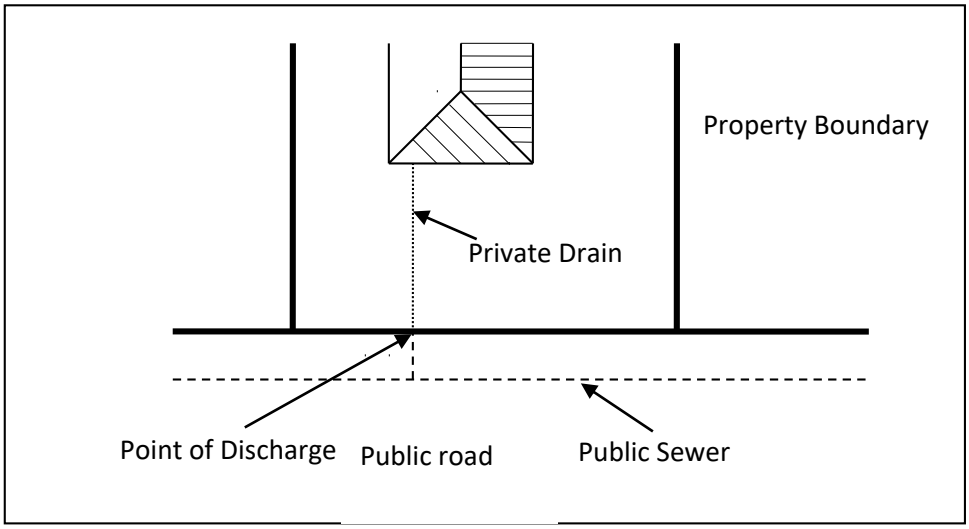


Figure 3: Point of Discharge Location - With Street Frontage

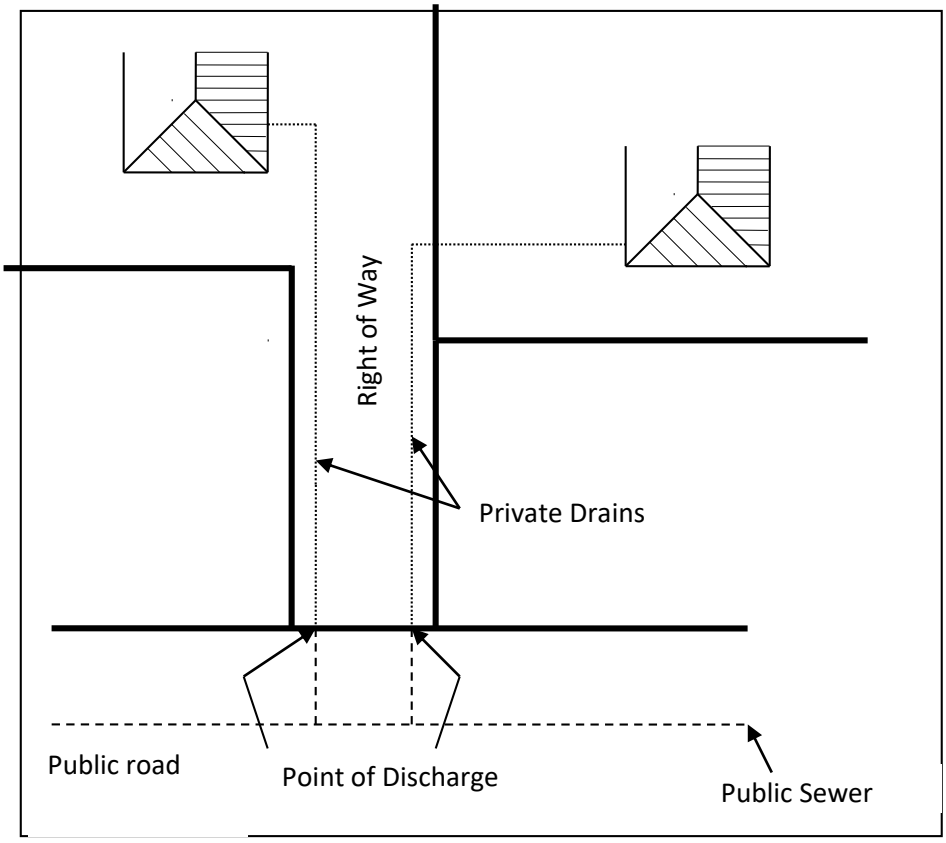


Figure 4: Point of Discharge Location - Rear Lots

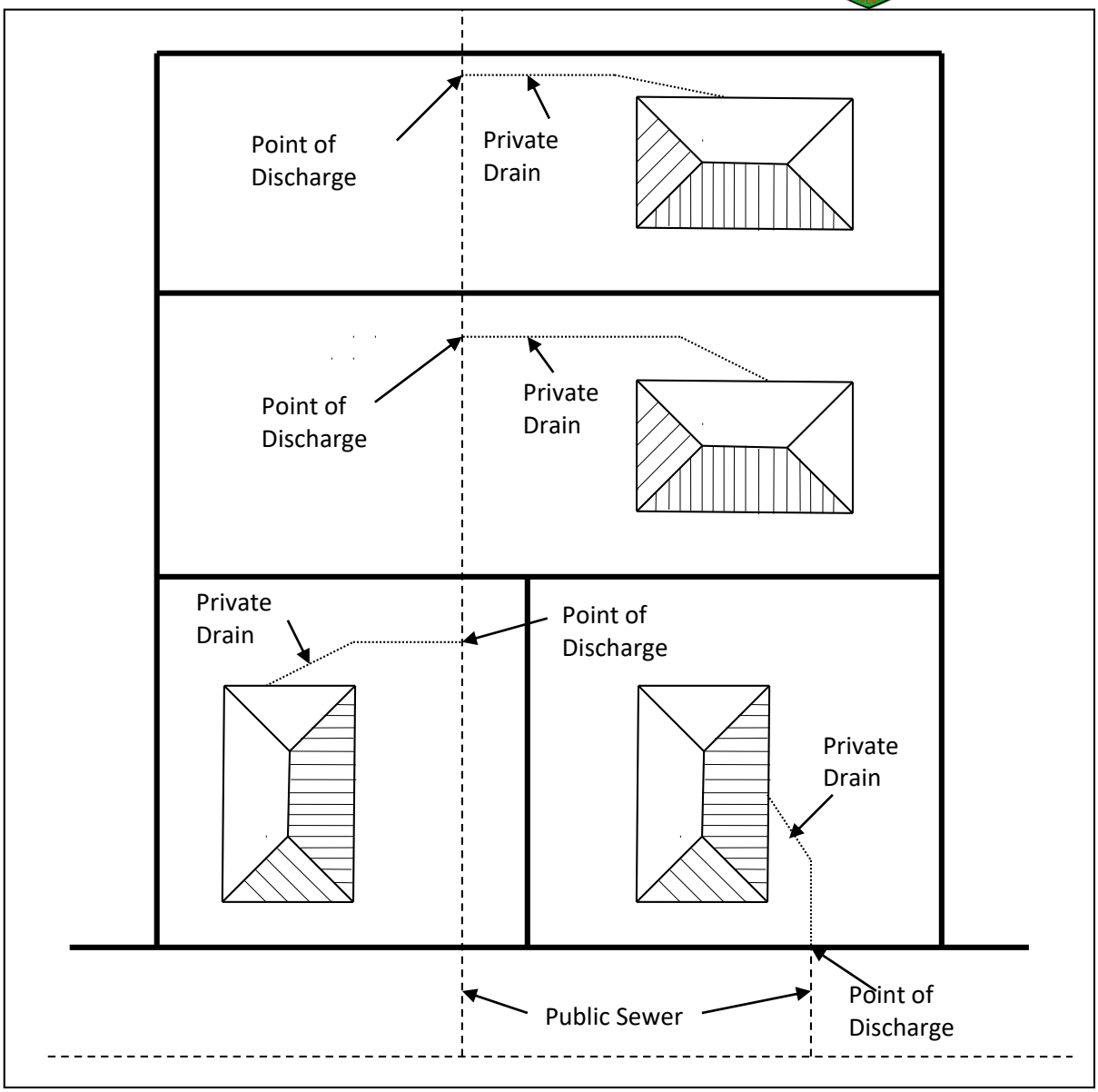


Figure 5: Point of Discharge Location - Public Sewer on Private Property

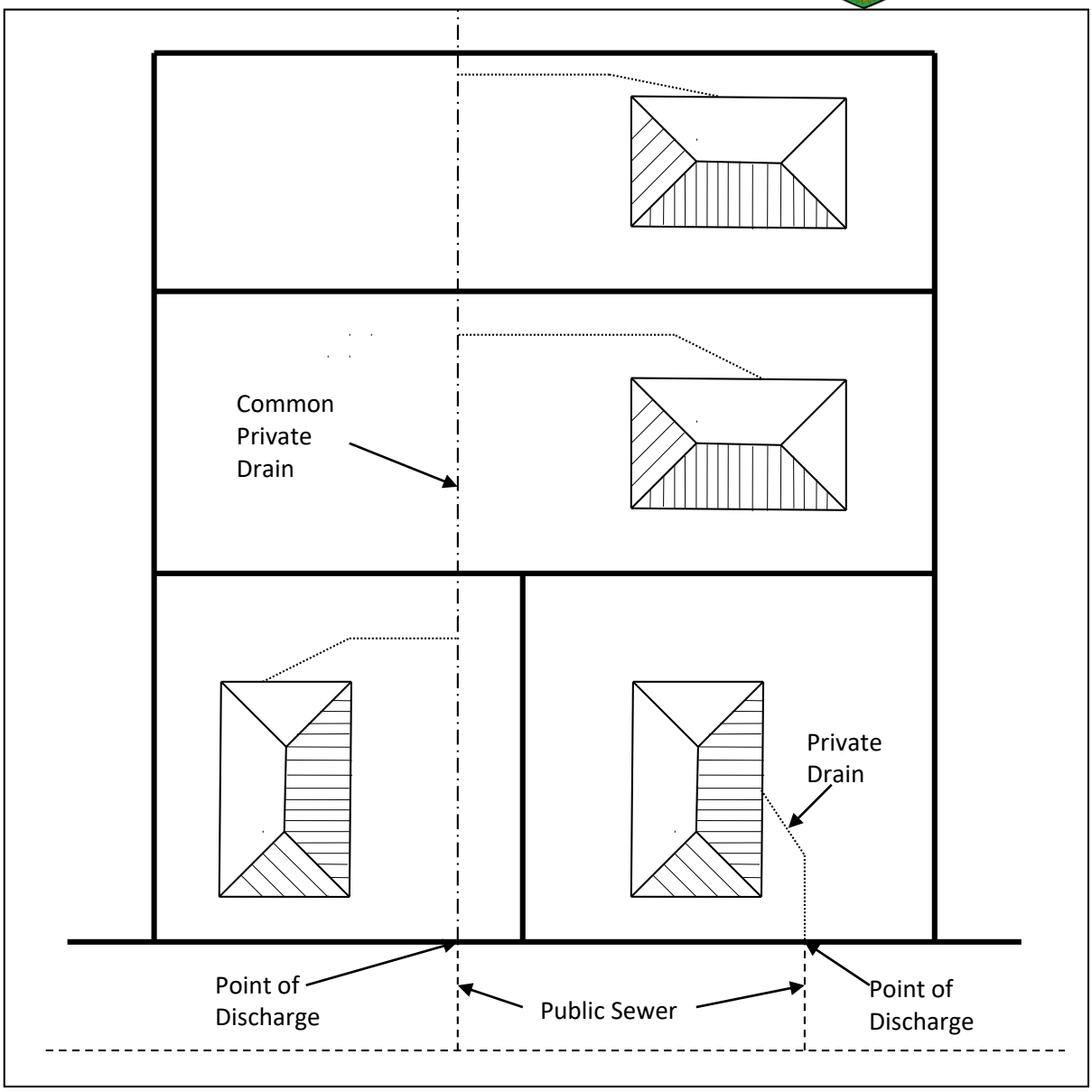


Figure 6: Point of Discharge Location - Common Private Drain

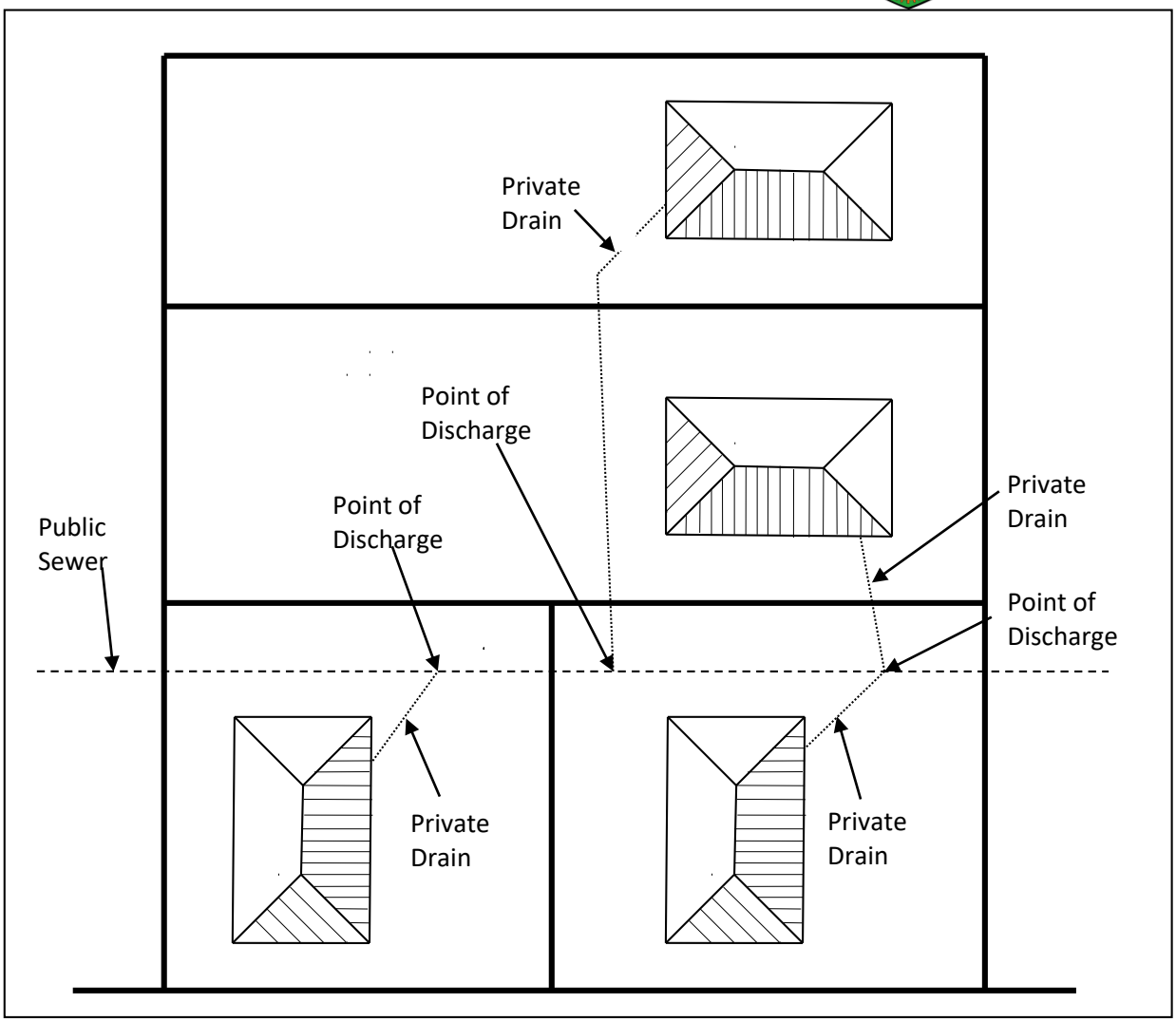


Figure 7: Point of Discharge Location - Private Drain through Neighbouring Properties

Multiple Ownership

10.2.5. The Point of Discharge for the different forms of multiple ownership of Premises and / or land shall be as follows:

a) for company share / block scheme (body corporate) - as for single ownership;
b) for leasehold / tenancy in common scheme (cross lease), strata title, and unit title (body corporate);- where practicable each Owner shall have an individual drain with the Point of Discharge determined by agreement with Council. If not practicable there shall be a common private drain which shall be incorporated as an additional provision in the lease agreement. In specific cases other arrangements will be acceptable subject to individual Approval.

Layout

10.2.6. The physical drainage layout at a Point of Discharge must be as per the New Zealand Building Code, the New Zealand Standard NZS4404:2010 Land Development and Subdivision Infrastructure and approved in writing by Council.

10.3. Common private drains

10.3.1. Common Private Drains may serve a maximum of five (5) single dwelling units and must have one Point of Discharge only (in common).

10.4. Domestic Wastewater

10.4.1. No Domestic Wastewater may:

a) exceed the limits for permitted discharge characteristics in Schedule A of the Council's Trade Waste Bylaw; or
b) contain any of the characteristics prohibited in Schedule B in Council's Trade Waste Bylaw.

10.4.2. Where part of a domestic Premises is used as an office or other trade related activity from which no Trade Waste could be produced, and which no other Persons apart from those living at those Premises use, then it may be treated as domestic Premises for the purpose of this bylaw. Any trade activity which produces or has the potential to produce a Wastewater will be treated as being from Trade Premises.

10.5. Maximum flow rate

10.5.1. The maximum instantaneous flow rate discharged from a domestic Premises must not exceed 2.0 litres/second and / or $5m^3$ per day.

10.6. Swimming pools

10.6.1. Swimming and spa pool drains must be fitted with a flow limiting device to ensure any discharge does not exceed a maximum instantaneous flow of 2.0 litres/second.

10.7. Prevention of Inflow and Infiltration

10.7.1. The Customer must take all reasonable steps to prevent any Stormwater or groundwater entering the Wastewater System (including from roof downpipes, surface water run-off, overland flow, and sub-surface drainage). Reasonable steps include ensuring that:

a) There is no direct connection of any Stormwater pipe or drain to the Wastewater System;
b) Gully trap surrounds are sealed and set above Stormwater ponding levels (refer New Zealand Building Code G13), or secondary overland flow path flood levels;
c) Inspection covers are in place and are appropriately sealed;
d) Private Drains are kept and maintained in a state which is free from cracks and other defects which may allow Infiltration.

10.8. Blockages

10.8.1. Any Person who causes a blockage in a public Sewer, by discharging non-acceptable wastewater, or by forcing a blockage downstream into the public Sewer in the course of clearing a Private Drain is liable for the cost of unblocking the public Sewer.

10.9. Disconnection

10.9.1. A Customer must give seven (7) working days' notice in writing of their intention to demolish or remove a building connected to the Sewer. The demolition or removal must not commence until the property has been disconnected from the Sewer by Council.

10.9.2. A Customer must give two (2) working days' notice in writing to Council of their requirement for Disconnection of the discharge connections if relaying of the private Drain is required.

10.10. Emergency

10.10.1. During an emergency, Council may restrict or prohibit the discharge of Wastewater for any specified purpose, for any specified period, and for any or all of its Customers.

10.10.2. Any such restrictions shall be publicly notified.

10.11. Defect Notices

10.11.1. In the event of a breach of this bylaw, Council may serve a defect notice on the Customer advising its nature and the steps to be taken within a specified period, to remedy it. If, after the specified period, the Customer has not remedied the breach, Council may charge a re-inspection fee.

10.12. Remedial Works and cost recovery

10.12.1. The Council may:

a) Remove or alter any work or thing that is, or has been, constructed in breach of this bylaw; and
b) Recover the costs of removal or alteration from the Person who committed the breach.

11. FEES AND CHARGES

11.1.1. Council may prescribe fees and charges relating to matters provided for in this bylaw in accordance with section 150 of the Local Government Act 2002.

12. OFFENCES

12.1.1. Every Person who breaches this Bylaw or fails to comply with a notice served under this bylaw commits an offence and is liable upon conviction to a fine as provided for under the Local Government Act 2002 and may be liable to penalties under other legislation.

13. BYLAW APPROVAL DATE

The Common Seal of the Central Hawke's Bay District Council was attached, under Resolution *(Reference - Part 22: Wastewater Bylaw 2021)* passed at a meeting of the Central Hawke's Bay District Council held on 13 May 2021 and will come into force 13 May 2021.