

Puketāpapa Local Board Workshop Agenda

Date of Workshop: **Thursday, 16 February 2023**

Time: **1.30pm – 5.00pm**

Venue: **Puketāpapa Local Board, (Boardroom) 560 Mt Albert Road, Three Kings or via Microsoft Teams**

Attendees: **Ella Kumar (Chairperson), Fiona Lai (Deputy Chairperson), Roseanne Hay, Mark Pervan, Bobby Shen, Jon Turner**

Apologies:

Staff attending: **Nina Siers, (Local Area Manager), Mary Hay (Senior Local Board Advisor), Vanessa Phillips (Local Board Advisor) and Selina Powell (Democracy Advisor).**

Reminder: **Mobile phones on silent.**

Time	Workshop Item	Presenter	Purpose	Proposed Outcome(s)
1.30pm -1.05pm (5 mins)	1.0 Item: Karakia and declarations of interest	Ella Kumar Chairperson	<p>He hōnore, he korōria, ki te Atua He maungārongo, ki te whenua</p> <p>He whakāro pai, Ki ngā tangata, katoa</p> <p>Hangaia, e te Atua, he ngākau hou Ki roto, ki tēnā, ki tēnā, o mātou</p> <p>Whakatōngia, tōu wairua tapu Hei āwhina, hei tohutohu, i a mātou</p> <p>Hei ako hoki, I ngā mahi, ki roto, i tēnei whanau</p>	<p><i>Honour and glory to God,</i></p> <p><i>Peace of Earth, Goodwill to all people</i></p> <p><i>Lord develop a new heart, Inside all of us</i></p> <p><i>Instil in us your sacred spirit, Help us, Guide us</i></p> <p><i>In all the things we need to learn within this whanāu</i></p>

Time	Workshop Item	Presenter	Purpose	Proposed Outcome(s)
1.30pm – 2.00pm (30 mins)	2.0 Item Watercare <i>Governance role: Information</i>	Ben Halliwell Elected Member Relationship Manager Watercare	To provide an introduction with the team from Watercare.	That the local board is introduced.
2.00pm – 3.00pm (60 mins)	3.0 Item Watercare Central Interceptor Project <i>Governance role: Setting direction/priorities/budget</i>	Ben Halliwell Elected Member Relationship Manager Watercare Xenia Meyer Watercare Shalini Sanjeshni Watercare Kmelville@ga-iv.com Peter Wilson Watercare Darren Cunningham Land Advisor Auckland Council	To provide an update from Watercare on the following projects: <ul style="list-style-type: none"> Update on CI project overall Walmsley Park plant room Keith Hay Park project update Frederick St ecological project update 	That the local board is updated and provides feedback.
3.00pm – 4.00pm	4.0 Item Wastewater Network Strategy <i>Governance role: Input into regional decision making</i>	Ben Halliwell Elected Member Relationship Watercare Moana Williams Manager Strategic Relations Watercare	Watercare must prepare a Wastewater Network Strategy (WWNS) every six years as part of its 35 year Wastewater Network Discharge Consent, which requires Watercare to consult with key stakeholders. Consulting with elected members, including the Local Boards and Governing Body, is an explicit condition of the consent.	Watercare will be seeking elected members formal local board feedback at business meetings from March 2023, so this workshop will be an opportunity for Q&A to gain: <ul style="list-style-type: none"> an understanding of the current and predicted future performance of the network. i.e the effects of discharges on reviewing environments. options for resolving issues (if any) in their areas

Time	Workshop Item	Presenter	Purpose	Proposed Outcome(s)
4.00pm – 5.00pm (60minutes)	5.0 Item: I&ES Update <i>Governance role: Setting direction/priorities/budget</i>	Hana Perry Relationship Advisor, Whatu Whanaungatanga Relationship Management Infrastructure and Environmental Services Greer Rasmussen Low Carbon Specialist, Environmental Services, Infrastructure and Environmental Services	To provide a monthly update from I&ES. To also provide an update on climate action.	That the local board is updated and provides feedback.
End of workshop	6.0 Closing Karakia	Ella Kumar Chairperson	Unuhia, unuhia Unuhia mai te urutapu nui Kia wātea, kia māmā, te ngākau te tinana, te hinengaro i te ara takatū Koia rā e Rongo e whakairia ake ki runga Kia tina! Haumi e! Hui e! Tāiki e!	<i>Draw on, draw on</i> <i>Draw on the supreme sacredness</i> <i>To clear and to set free the heart, the body and the inner essence</i> <i>In preparation for our pathways</i> <i>Let peace and humility be raised above all</i> <i>Manifest this! Realise this!</i> <i>Bind together! Affirm!</i>

Next workshop: Thursday, 23 February 2023 at 9.30am

Next business meeting: Thursday, 16 March 2023 at 10am



Watercare

Auckland Council induction 2022

From Sky to Sea – Watercare’s assets and operations



Where our drinking water comes from?

We supply on average 378 megalitres of water per day, the equivalent of 151 Olympic swimming pools, to sustain Auckland homes and businesses.

Water is sourced from:

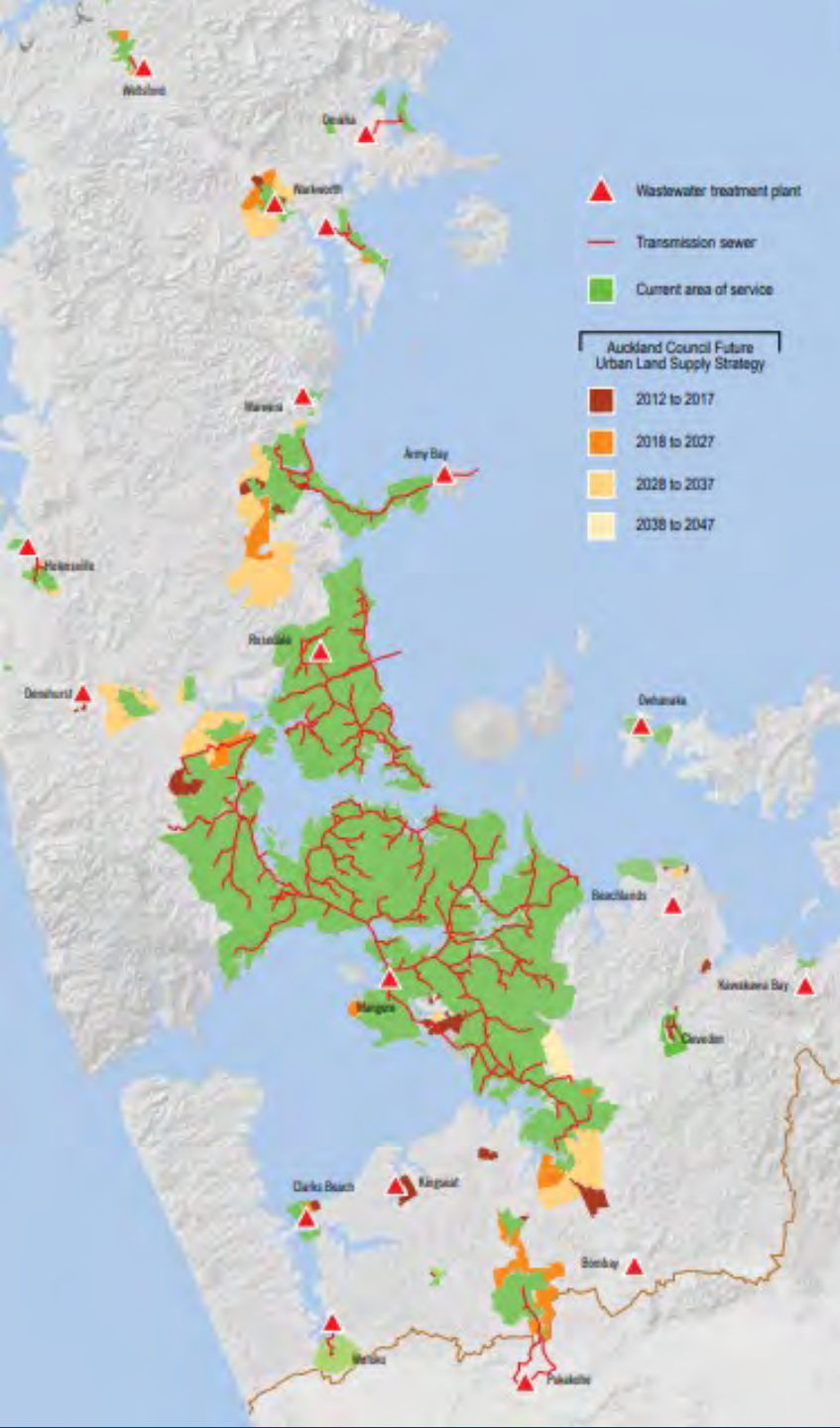
- Storage dams in the Hūnua and Waitākere ranges
- Underground aquifers
- The Waikato River



Our wastewater network

Our 18 treatment plants work night and day to collect and treat wastewater ensuring it is treated to a very high standard before being discharged safely to the environment.

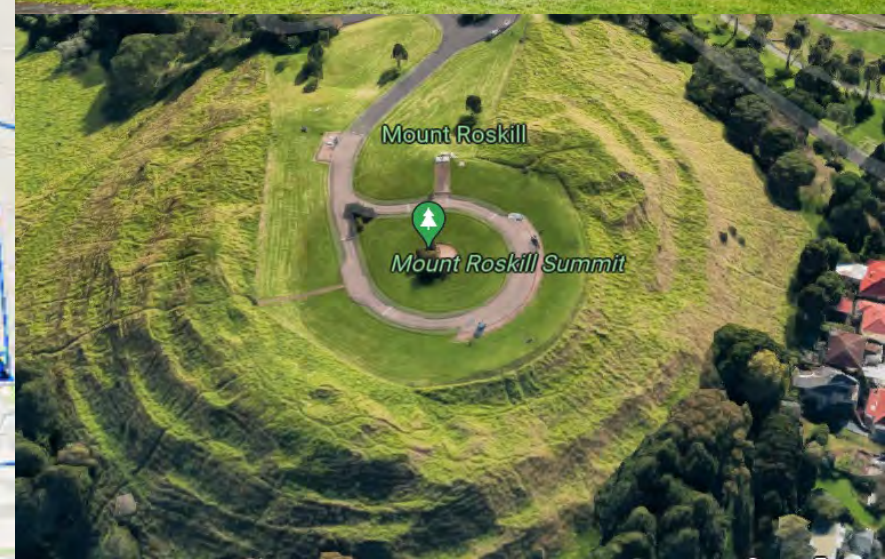
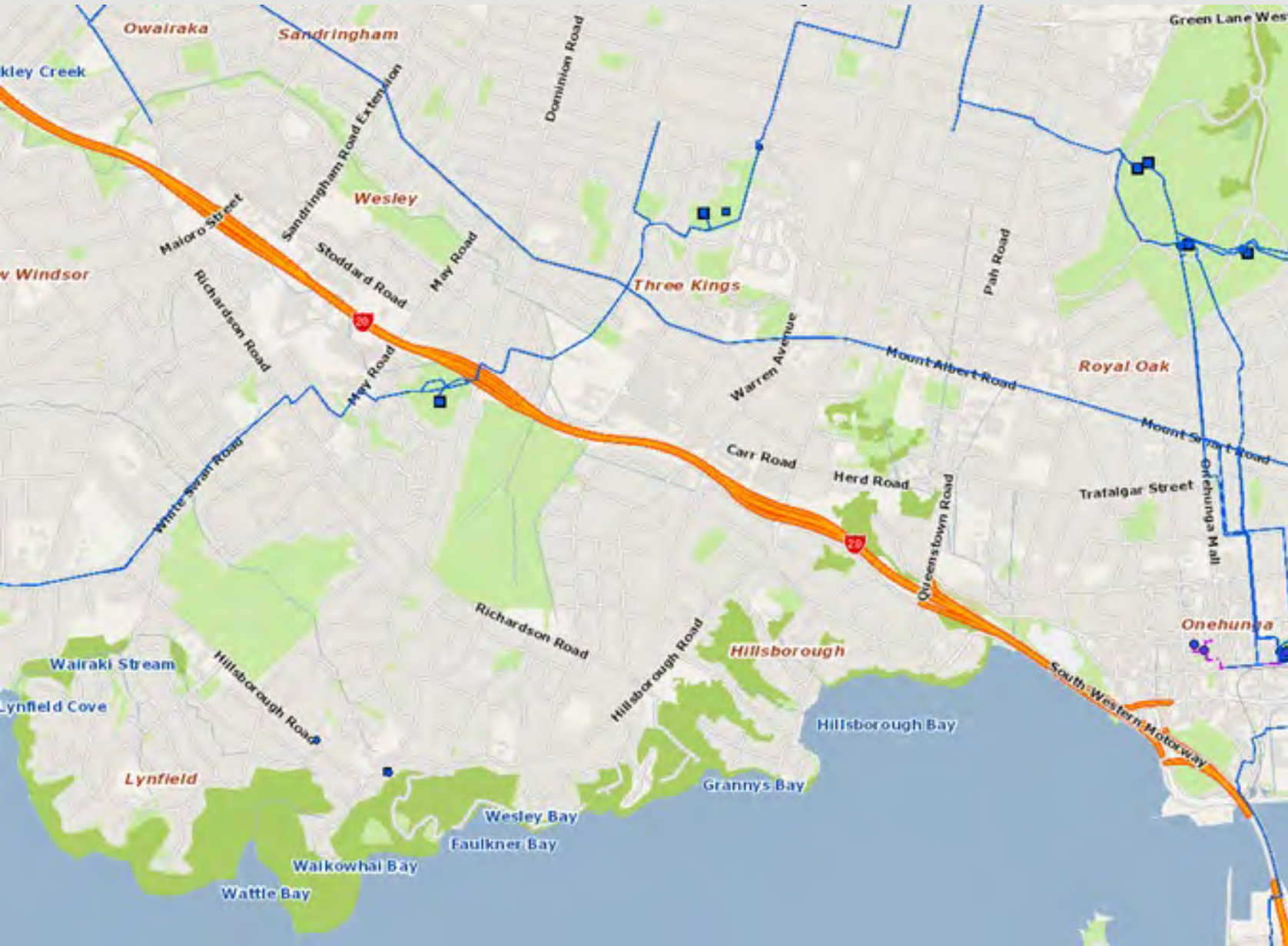
We take our environmental responsibility very seriously and work with our communities to monitor operations and performance.



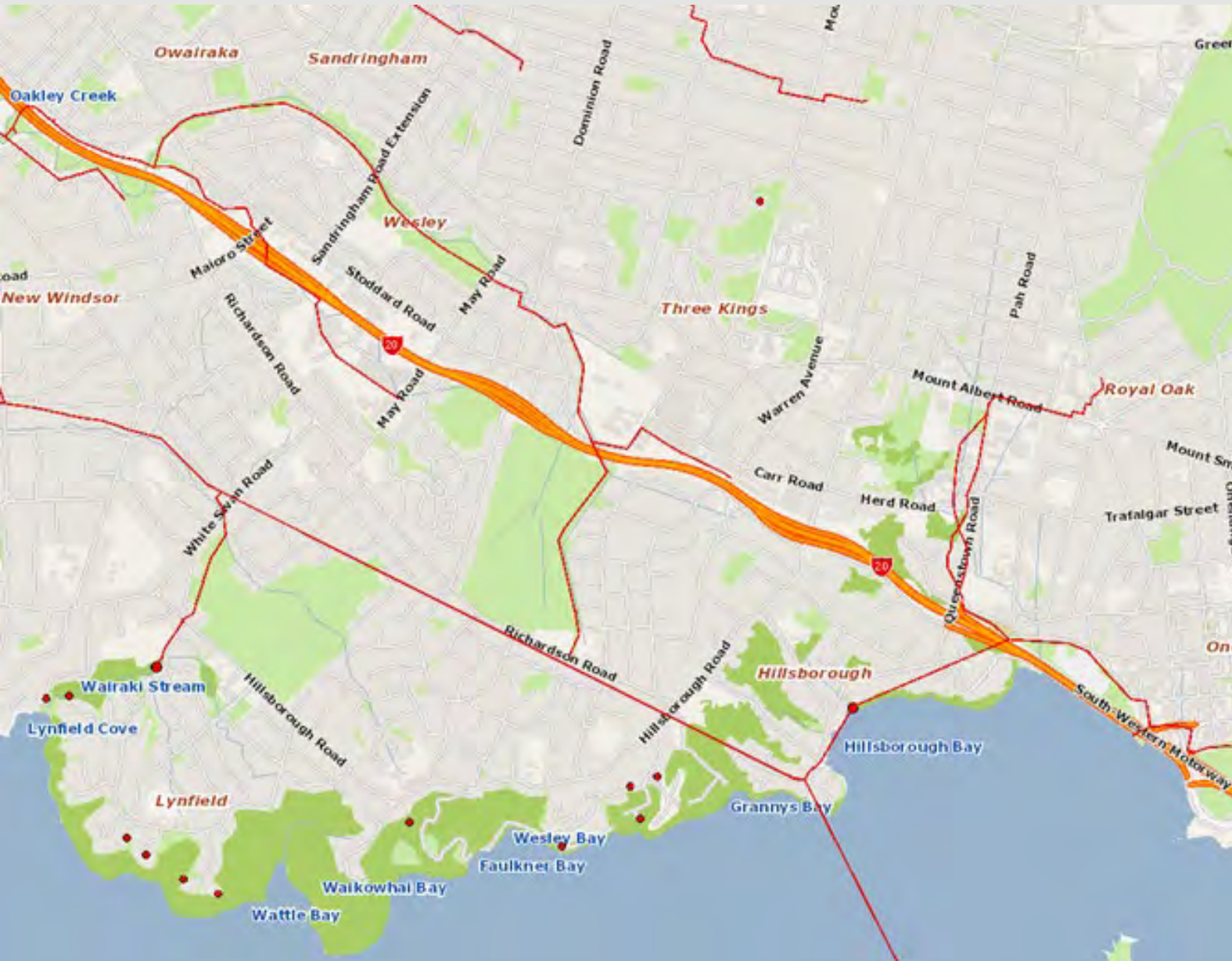
Governance



Drinking water network



Wastewater network



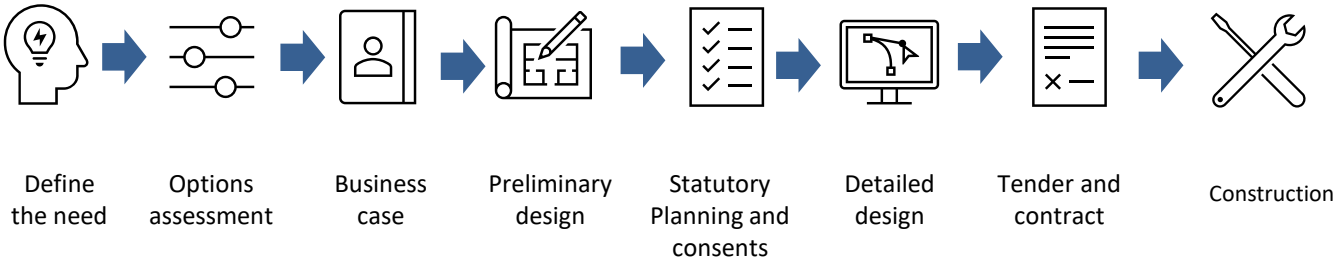
Puketāpapa Local Board – key projects

Project	Status	Project overview / purpose
May Road (Huia 1 Booster) Pump Station	Planning	<p>Drinking water - construct a booster pumpstation to boost the amount of drinking water supplied to the area.</p> <p>We have undertaken investigations of the site and looking to purchase the required land off council.</p>
Waikowhai Pumpstation and Pipeline/Kaingā Ora (SR)	Planning	<p>A pump station will be built opposite Puketapapa Maunga and pipelines. We are working with AT for early engagement on traffic plans and works near schools</p>

Engaging with Watercare - Projects



↑
Servicing strategies



Engaging with Watercare - Operations



Faults at watercare include things like burst waterpipes or wastewater overflows.

If it is an **emergency** always call our call centre 09 442 2222 and press 1.



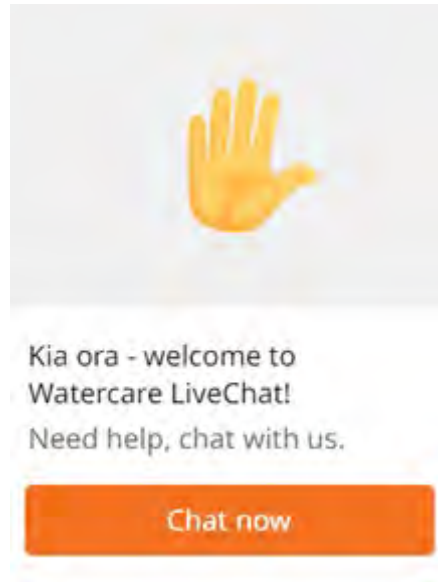
If it is a **new problem** that hasn't been reported, the quickest way to report is using the Watercare LiveChat! Function on the website.

If you want:

- Ensure you're made aware of an outcome
- Follow up on an existing reported problem
- Highlight that a problem is complicated
- Or complain about a response



Send this through to electedmember@water.co.nz



Triaging water issues

Groundwater / Stormwater = **Healthy Waters.**

Drinking water / Sewerage = **Watercare.**

- **Stormwater** - has it just appeared after heavy rain?
- **Drinking water** – is the water gushing out of the ground?
- **Sewerage** - is the water coming from a manhole and is grey/dirty?
- **Groundwater** - is the water stagnant and oily or orange coloured?
- Is it on **private property**? If so, it's likely to be a private pipe not a public pipe.
- Is it in a Council **sports ground** or **reserve**? If so, it's likely to be Community Facilities.



The difference between stormwater and wastewater?

Stormwater



Wastewater



Thank you

He pātai?

Building the

CENTRAL

INTERCEPTOR

Puketāpapa Local Board:

CI project update

16 February 2023



Central Interceptor



Project Overview

Tunnel Boring Machine (TBM):

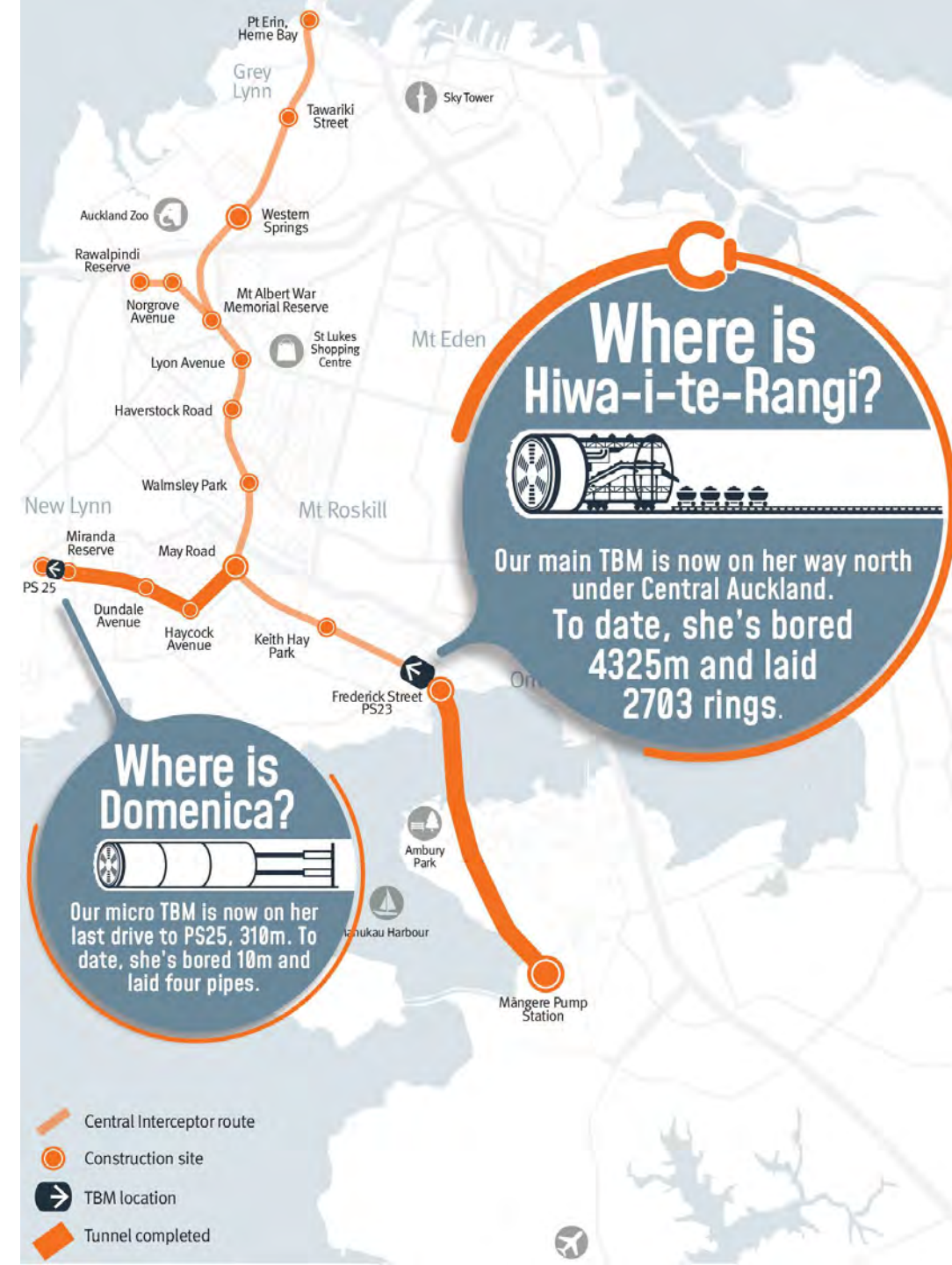
- 4560m tunnelled
- 2850 segment rings installed
- 1.4km away from Keith Hay Park

Micro-TBM:

- On last drive on Link Sewer C from Miranda Reserve on Blockhouse Bay Road to Pump Station 25
- This 330m drive due to finish end of March/early April

Site update:

- 15 construction sites open
- Tawariki St, Grey Lynn to start in early April
- Seeking consent to extend tunnel to Pt Erin Park



Pump Station 23

- Nearly 30m deep shaft has been completed
- Oversized liners brought to site at night
- GRP liners installed
- Currently working on creating the diversion chamber
- Hoskins works underway but delayed
- Blessing event celebrated arrival of TBM – Dec 2022



Keith Hay Park (incl. Branch 9B and Frost Road)

- Deepest shaft on CI, 78m completed
- Six pre-fabricated shaft liners fitted
- Started civil works on creating new chambers
- Sheet piling work commenced in Frost Rd
- Preparing for drilling investigations under the motorway
- Site preparation for manholes at Branch 9b north



May Road

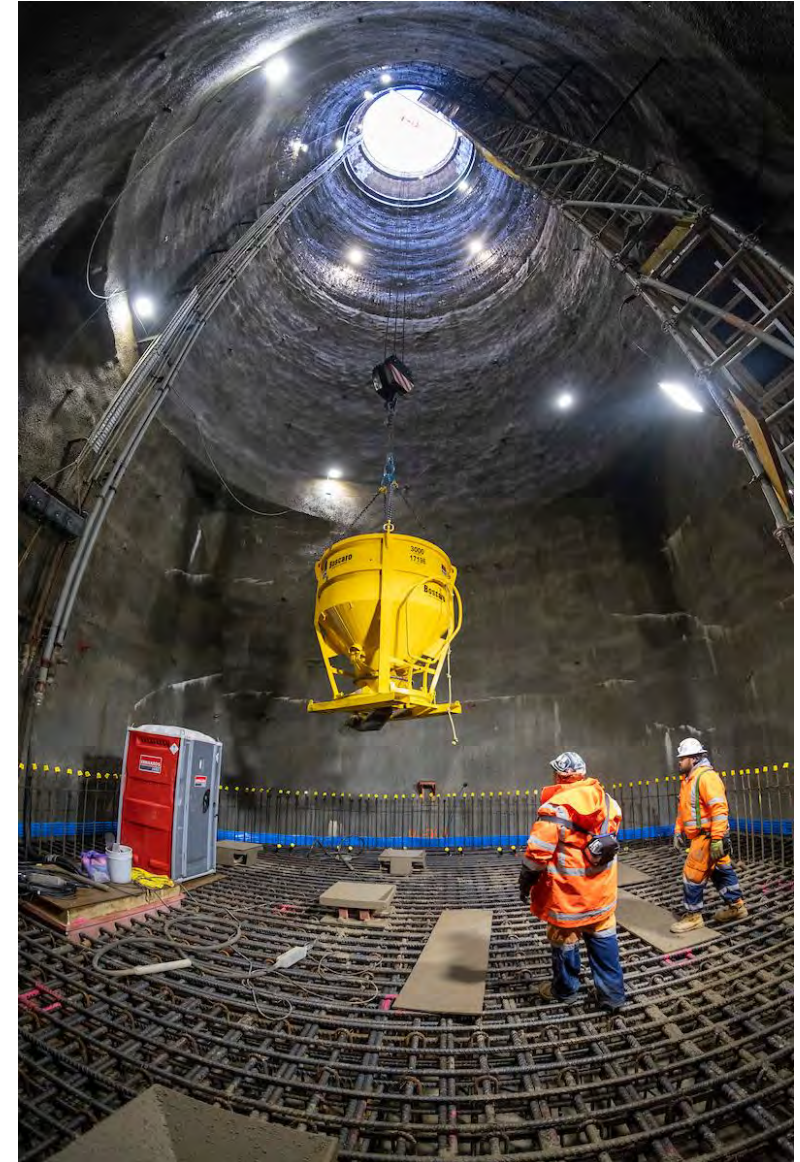
- Finishing flood attenuation ponds for stage 2 excavation
- Preparations for the TBM crew to move to May Rd as the new base

Shaft B:

- 73.2m deep
- Concrete pours to line shaft on-going - 16 night pours scheduled
- Preparing for arrival of TBM in August 2023

Shaft A:

- 72m deep – launch site for Link Sewer C



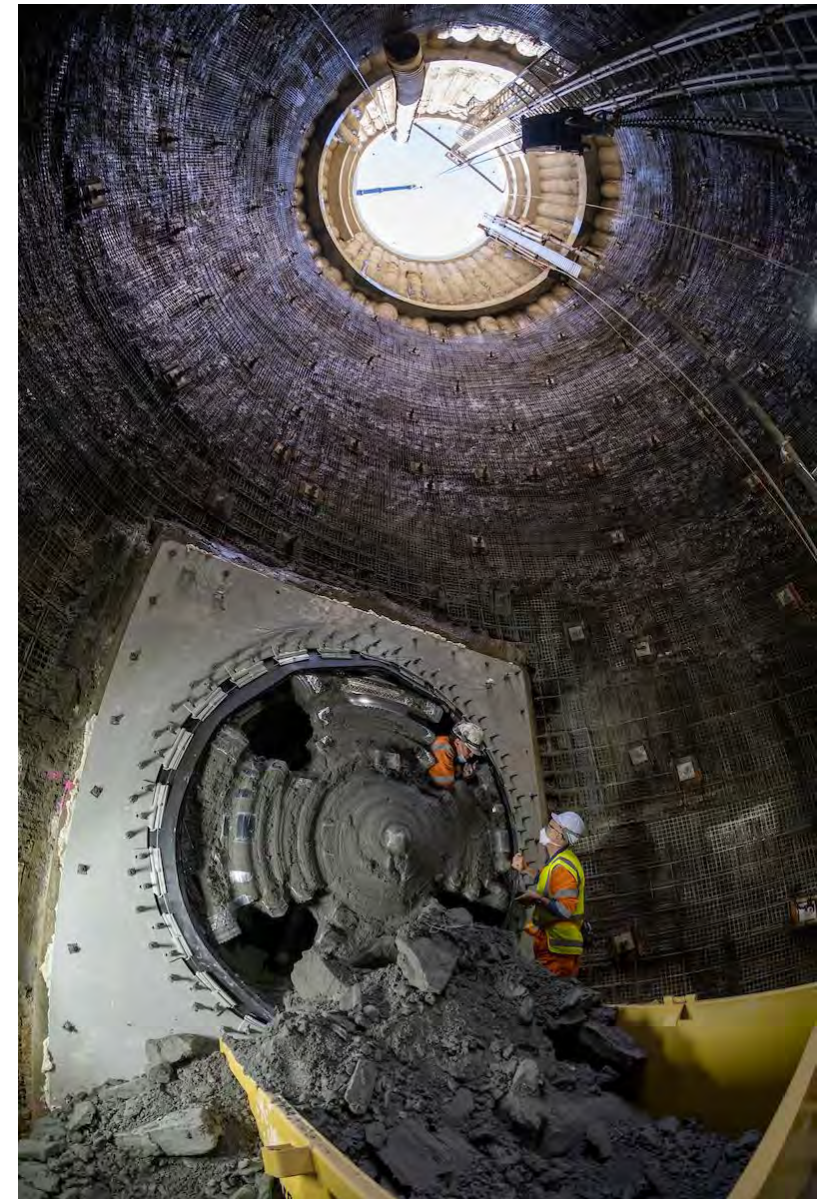
Walmsley Park

- ❏ Shaft has been excavated to 63m
- ❏ GRP (glass-reinforced plastic) liners have been installed
- ❏ Concrete backfill on the shaft completed
- ❏ Preparing for civil works including chambers
- ❏ Site reinstatement engagement underway



Haycock Avenue - Link Sewer C

- ❉ 30m deep shaft completed
- ❉ Shaft liners to be installed
- ❉ Construction of two temporary chambers complete
- ❉ Road closure at Haycock has commenced - construction of chamber in roadway to connect to Western Interceptor in progress
- ❉ Two tunnels completed





**Thank you.
Questions?**



Central Interceptor



Building the

CENTRAL

INTERCEPTOR

Puketāpapa Local Board:

CI PS23 ecological enhancement project

16 February 2023



Central Interceptor



Project purpose

An ecological enhancement project to achieve biodiversity improvement at the Pump Station 23 site in Hillsborough

Intended outcome

Enhance the environment along the coastal area

Consistent with the current environment

Coastal birds – nesting and/or roosting

Coastal fringe vegetation

















Marine ecology



LEGEND

-  EXISTING STORMWATER MANHOLE
-  EXISTING WASTEWATER MANHOLE
-  EXISTING CESSPIT
-  LOG FILES (INDICATIVE)
-  PROPOSED SALT MARSH VEGETATION
-  PROPOSED ROCK SILL
-  PROPOSED BIRD ROOST

LEGEND

-  EXISTING MAJOR CONTOURS FROM LANDS AND SURVEY LTD (1m INTERVALS)
-  EXISTING CONTOURS FROM LANDS AND SURVEY LTD (0.1m INTERVALS)
-  EXISTING CONTOUR2 (LIDAR 2013)
-  WATERCARE DESIGNATIONS
-  TOP OF BATTER OF TEMPORARY CONSTRUCTION PLATFORM
-  BOTTOM OF BATTER OF TEMPORARY CONSTRUCTION PLATFORM
-  PROPERTY BOUNDARIES
-  STORMWATER WATER COURSE
-  MHWB LINE (1.0 m AVD46)
-  EDGE OF ROCK
-  BUILDING EXTENT
-  PROPOSED ROCK CREST EXTENT
-  PROPOSED ROCK TOE EXTENT
-  PROPOSED ROCK REVETMENT (CI WORKS)
-  EXISTING SANITARY SEWER LINES
-  EXISTING STORMWATER LINES



PROPOSED DIVERSION CHAMBER (CI WORKS)

PROPOSED SHAFT (CI WORKS)

PROPOSED ROCK REVETMENT CREST (CI WORKS)

BIRD ROOST PLANTING PROTECTED BY ROCK SILL (REFER DRAWING 1015172.1000-004, SECTION 3)

TIE IN DETAILS TBC IN DETAILED DESIGN

TIE IN DETAILS TBC IN DETAILED DESIGN

ROCK SILL SURROUNDING BIRD ROOST (REFER DRAWING 1015172.1000-003, SECTION 1)

1.5m MINIMUM OFFSET DISTANCE BETWEEN SERVICE AND ROCK PLACEMENT

ROCK SILL SURROUNDING SALT MARSH PLANTING (REFER DRAWING 1015172.1000-003, SECTION 2)

INDIVIDUAL LOG FILES FOR SOLITARY ROOSTING SPECIES. DEMOLITION HARDWOOD TO BE USED FOR FILES. FILE SIZE AND LENGTH TBC IN DETAILED DESIGN. CAST IN OVERSIZED HOLE WITH CONCRETE SURROUND.

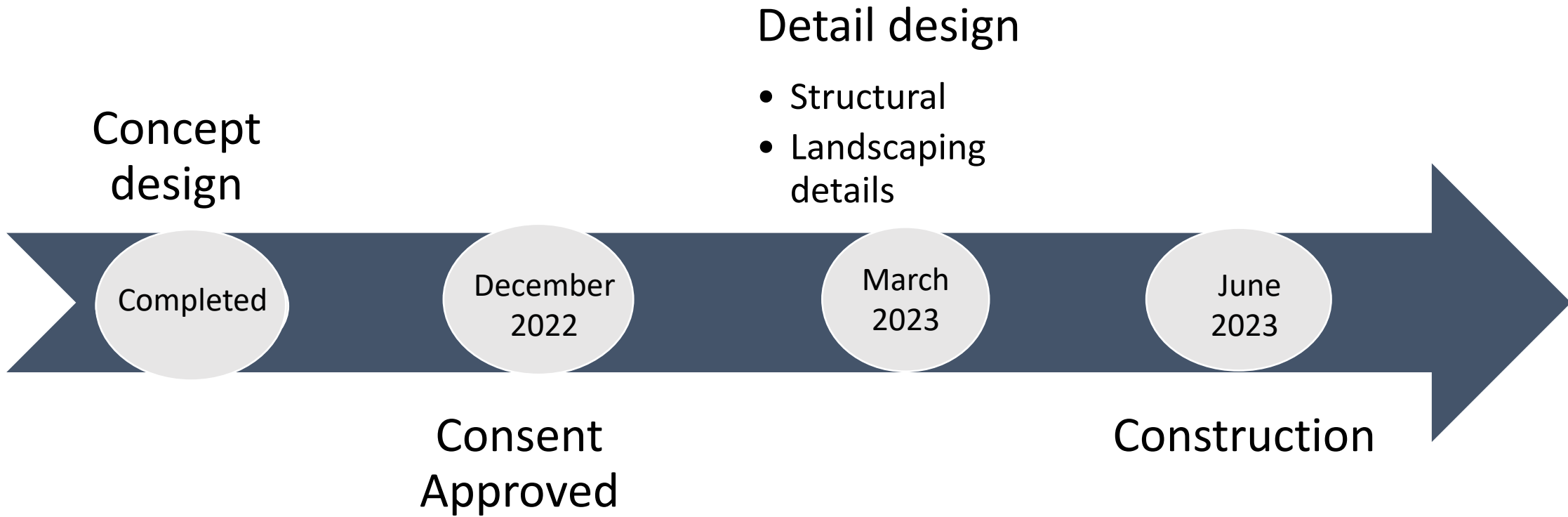
CLUSTERED LOG FILES FOR COLONY ROOSTING SPECIES. DEMOLITION HARDWOOD TO BE USED FOR FILES. FILE SIZE AND LENGTH TBC IN DETAILED DESIGN. CAST IN OVERSIZED HOLE WITH CONCRETE SURROUND.

SALT MARSH PLANTING PROTECTED BY ROCK SILL (REFER DRAWING 1015172.1000-004, SECTION 3)

SOLID PIPE EXTENSION OF STORMWATER OUTFALL THROUGH SALT MARSH. PIPE TO BE INTEGRATED THROUGH ROCK SILL.

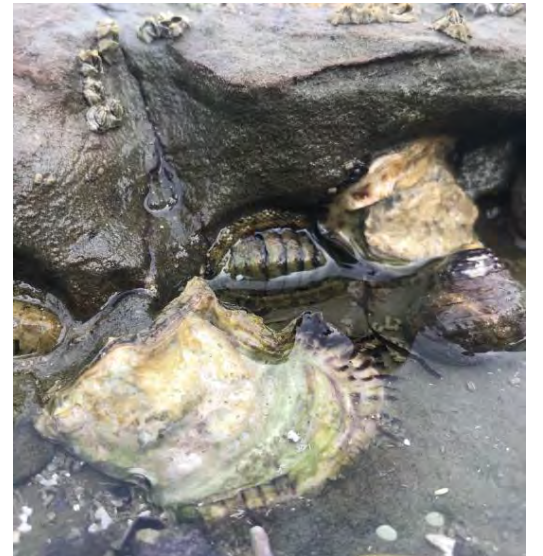
FUTURE BOARDWALK - BY OTHERS

Project timeline



Detail design

- Based on concept design
- Consideration include:
 - Structural
 - Surveys
 - Final reinstatement levels
 - Landscaping
 - Nursey plant sourcing – Local Marae
 - Maintenance elements (weeding and nourishments)



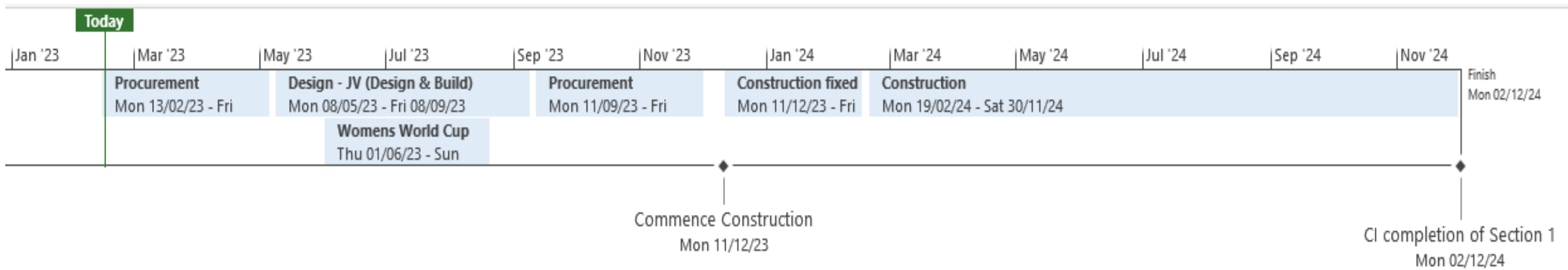


**Thank you.
Questions?**



Central Interceptor





Watercare's Regionwide Network Discharge Consent **Wastewater Network Strategy**

Key tool in the management of Auckland's wastewater network

Puketāpapa Local Board
Feb 2023

Agenda

Wastewater Network Strategy

- Introduction to the Network Discharge consent and the Wastewater Network strategy
- Current performance of the network
- Improvement work in the Network
- Predicted future outcomes
- Community feedback and insights
- What we need from you



Network Discharge Consent (NDC)

- Granted on 17 June 2014, for 35 years.
- Authorises dry and wet weather overflows
- Discharge frequency for wet weather overflows (combined and separated) is:
 - an average of no more than two Wet Weather Overflow Events per Engineered Overflow Point per year;
OR
 - an alternative discharge frequency that can be shown to be the Best Practicable Option (BPO) if this cannot be achieved for one or more Engineered Overflow Points.

Requires:

- an annual network performance report and
- a six-yearly wastewater network strategy



Engineered overflow discharging in wet weather

NDC – Wastewater Network Strategy (WWNS)

Watercare are required to prepare a Wastewater Network Strategy every six years.

The report outlines:

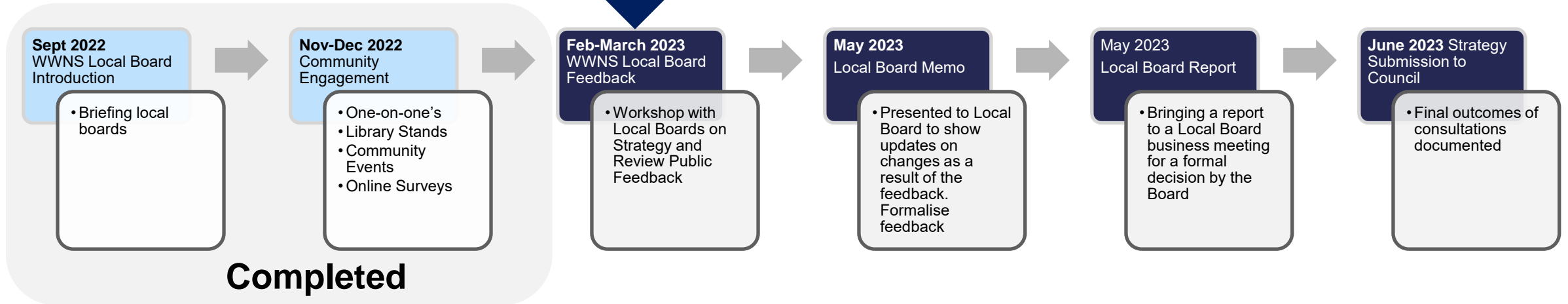
- The existing performance of the network
- Outcomes of completed improvements works
- How existing performance will be improved and how urban development will be provided for

The next strategy due to be submitted to Auckland Council on **15 June 2023**.

Our Asset Management Plan (AMP) over the next 20 years will invest 10.9 billion in our wastewater system and assets.



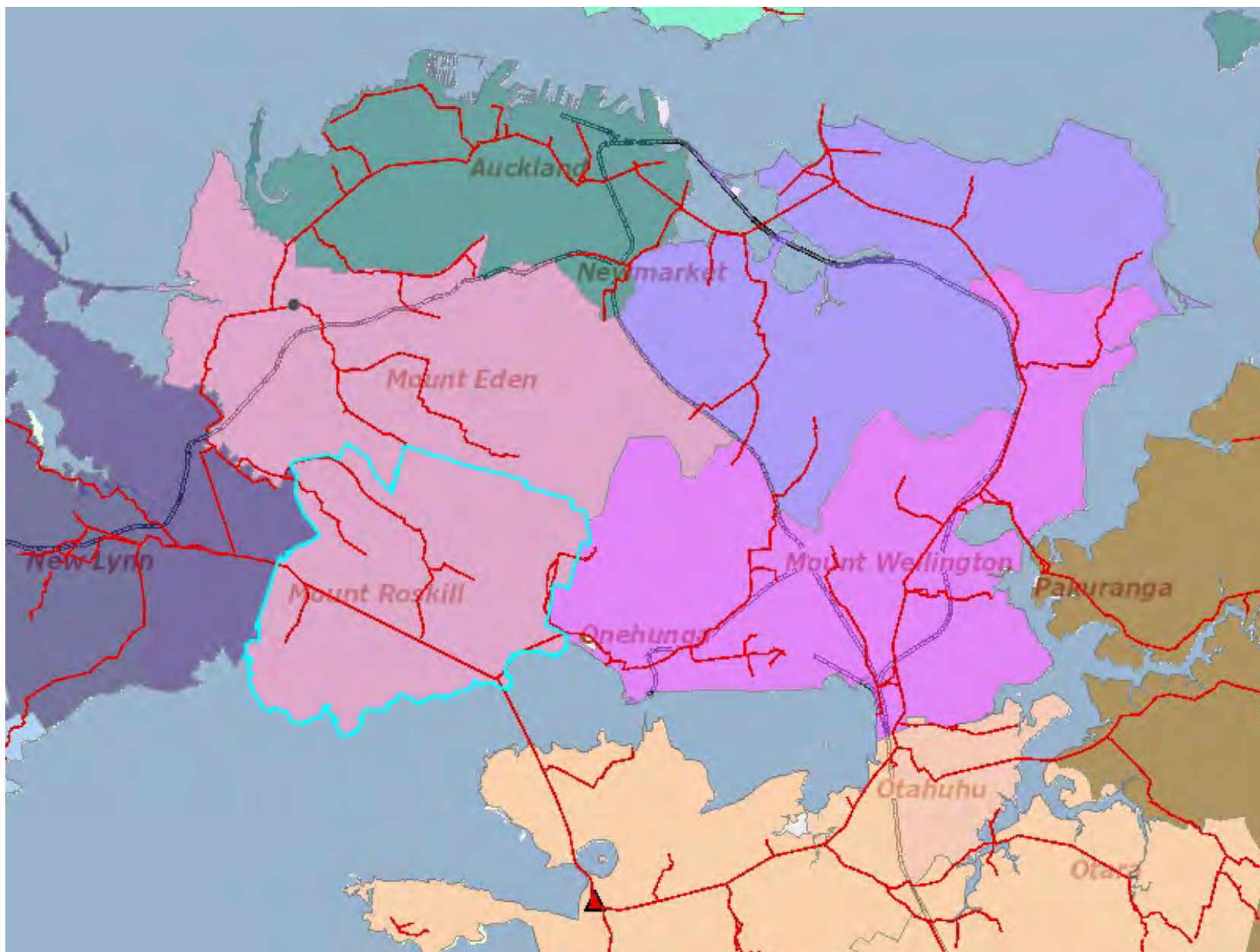
WWNS Local Board engagement journey



Current Network Performance

EOP's, Overflows, Data Trends





Puketāpapa Local Board

Overflow points in your local board area

Puketāpapa Local Board area:

Type 1 and Type 2 Engineered Overflow Points (EOPs): **20**

Type 2 EOPs: **7**

Monitored Type 2 EOP's: **0**

Types of overflow points:

Type one – Pumpstations

Type two – Engineered overflow points

Type three – Classified as uncontrolled

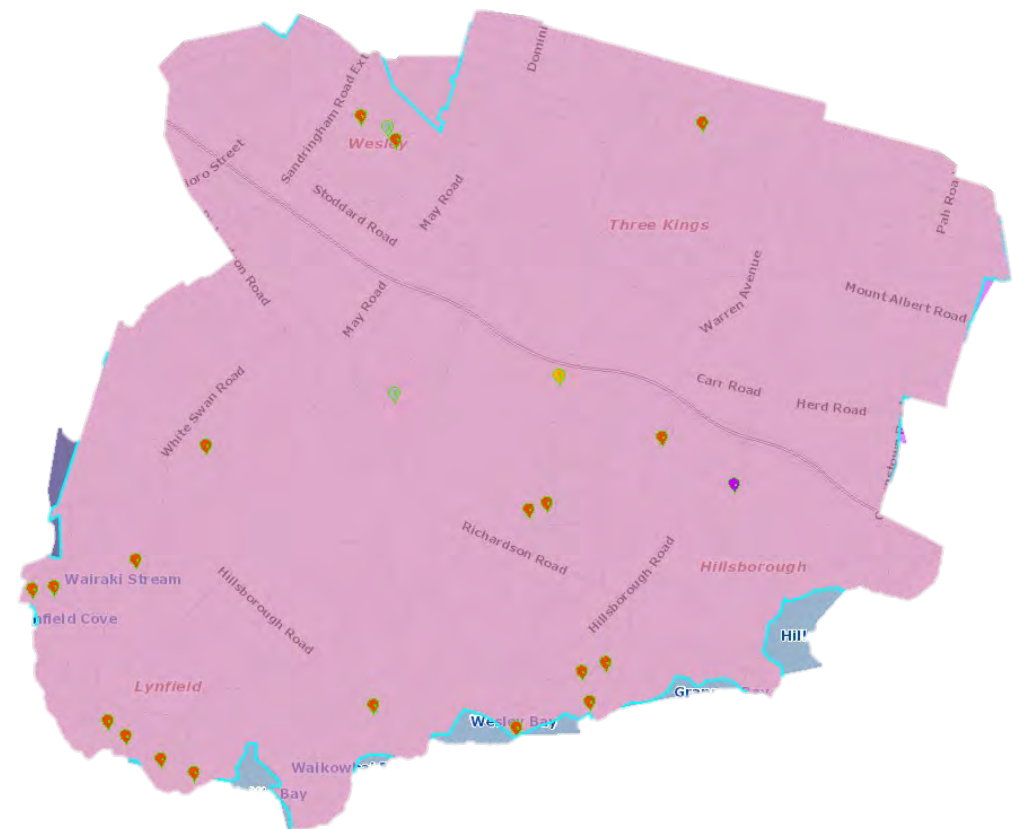
Types of overflows:

Dry weather overflows (DWO) – occur during dry weather

Wet weather overflows (WWO) – occur when the capacity of the network is breached

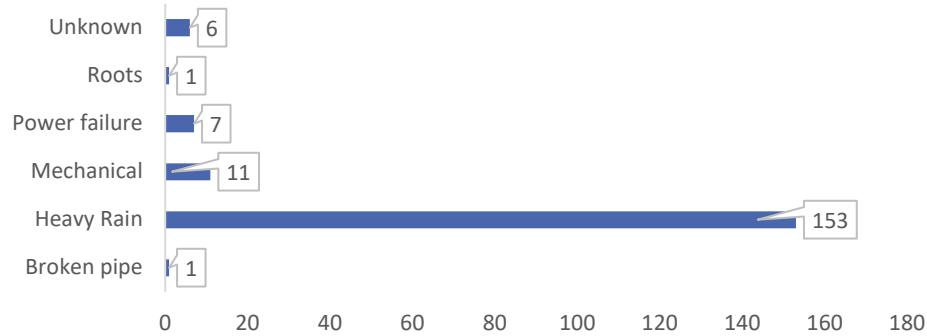
Overflow Schedule

- Future (Type 1 and 2)
- Operational (Type 1 and 2)
- Decommissioned/Sealed (Type 1 and 2)
- Type 3 Confirmed



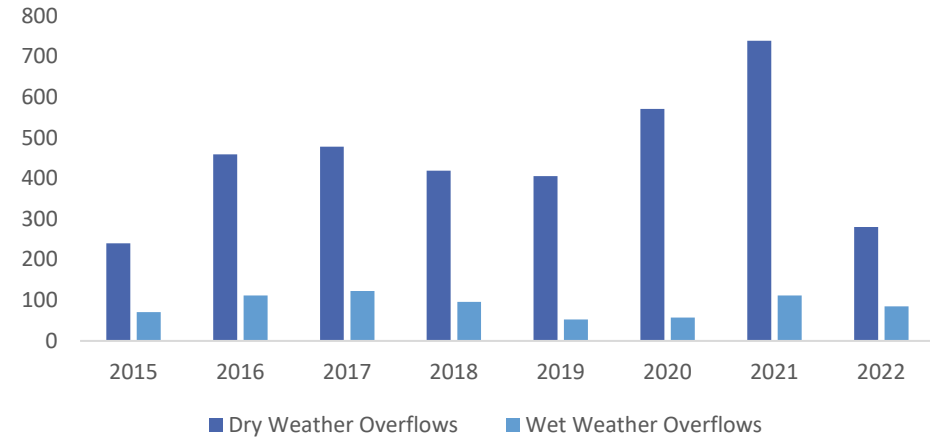
DWO and WWO Overflows in related Watercare catchment zones

Type 1 Overflow Causes*



*Total's based on six years 2016-2022 in the Western Isthmus and Onehunga catchment areas

Type 3 - Total Dry vs Wet Weather Overflows
Onehunga and Western Isthmus Catchments



Western Isthmus							
Issue	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Broken pipe		1					
Heavy Rain	20	22	15	7	10	9	4
Mechanical		4				3	1
Power failure		1	2	2			
Roots		1					
Unknown	2			1			
Total	22	29	17	10	10	12	5

Onehunga							
Issue	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Heavy Rain	7	14	15	9	10	8	3
Mechanical		2				1	
Power failure					2		
Unknown	2				1		
Total	9	16	15	9	13	9	3

Western Isthmus								
Type 3	2015	2016	2017	2018	2019	2020	2021	2022
Dry weather	152	321	325	286	287	382	526	205
Wet Weather	53	83	103	75	39	41	84	77
Total	205	404	428	361	296	423	610	282

Onehunga								
Catchment	2015	2016	2017	2018	2019	2020	2021	2022
Dry weather	88	138	153	133	119	189	213	75
Wet weather	18	29	20	21	14	16	28	8



Network Projects in our Asset Management Plan

Upcoming projects in your local board area



Proposed major works in local board area

Forecast on improvement works subject to feasibility and budget.

Key driver for proposed works: **Overflows and population growth**

Project	Description	Timeframe	Cost (\$)
Central Interceptor* *Central Interceptor programme is not part of the NDC consent. CI has its own discharge consent.	The Central Interceptor (CI) tunnel is 4.5 metres in diameter and will run for 14.7 kilometres from Grey Lynn under central Auckland and the Manukau Harbour to Māngere. The tunnel will lie between 15 and 110 metres below the surface. Along with two smaller link sewer tunnels we are building, the main CI tunnel will collect wastewater from the existing network and take it to the Māngere Wastewater Treatment Plant.	Completion 2026	\$1.2B
Mt Roskill Wastewater Improvements	Upgrade of sewers in the Mt Roskill area to prevent overflows and allow for growth (working with Kāinga Ora)	2023-2035+	75M
Wesley wastewater sewer upgrade	Upgrade of Wesley sewers to prevent overflows	feasibility in progress, design/construction in next 6-10yr	not available

Inflow and Infiltration

Inflow and Infiltration investigations is used to identify sources of stormwater to the sewerage network. Once identified as appropriate Watercare and Auckland Council can remove these sources improving the network performance and reducing the frequency of overflows to properties, waterways and beaches.

2021-22 Investigation Projects	Planned for 21-22	In Progress 21-22	Completed in 21-22	Planned for 22-23	Comments
WSL I&I Only Investigation Projects					
Oakley Catchment - Phase 2 (Aldersgate WWPS 1 and 2, Rogan St, Olsen Ave) - FY22 (Planned)	1	1			Olsen Ave area still to do
Joint WSL I&I and HW Safe Networks Investigation Projects					
Green Bay (East and West) - FY22 (Reactive)	1		1		

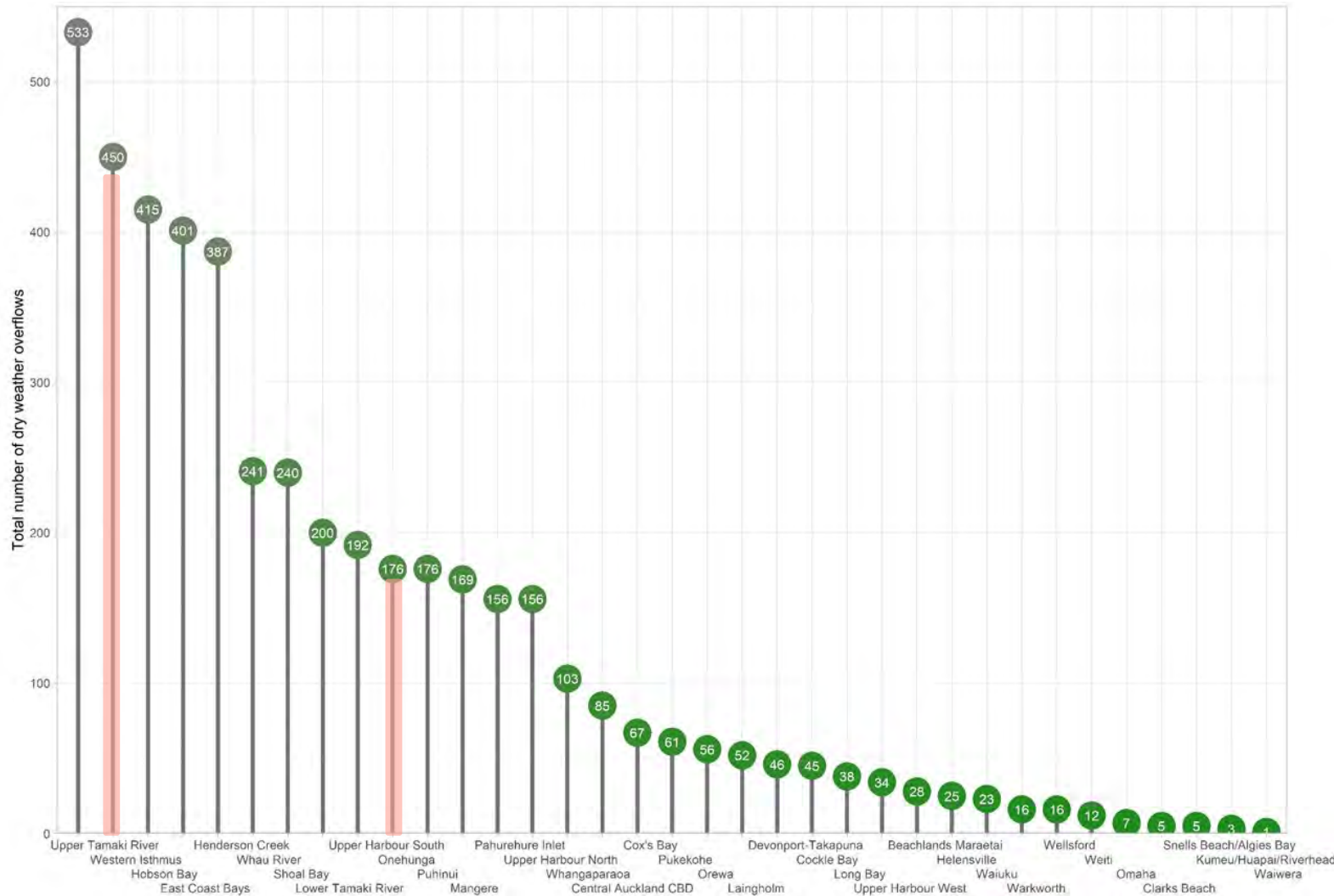
Network Performance

Performance excerpts of the network – taken from 2021-2022 NDC Final Report



Total number of dry weather overflows by catchment

July 2021 – June 2022



The highlighted catchments Western Isthmus and Onehunga make up the Puketāpapa Local Board .

 = Relative Catchments for Puketāpapa Local Board

Dry weather overflow causes in all catchments

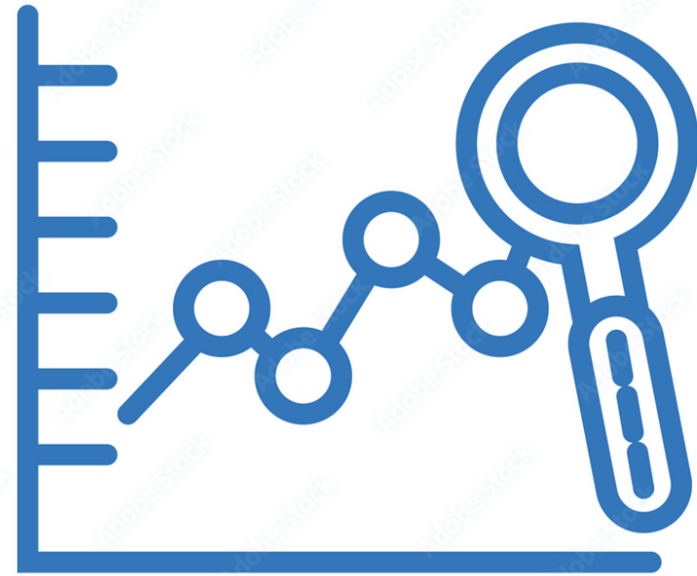


As part of keeping our network flowing, the community play an important part to ensure that the networks function well.

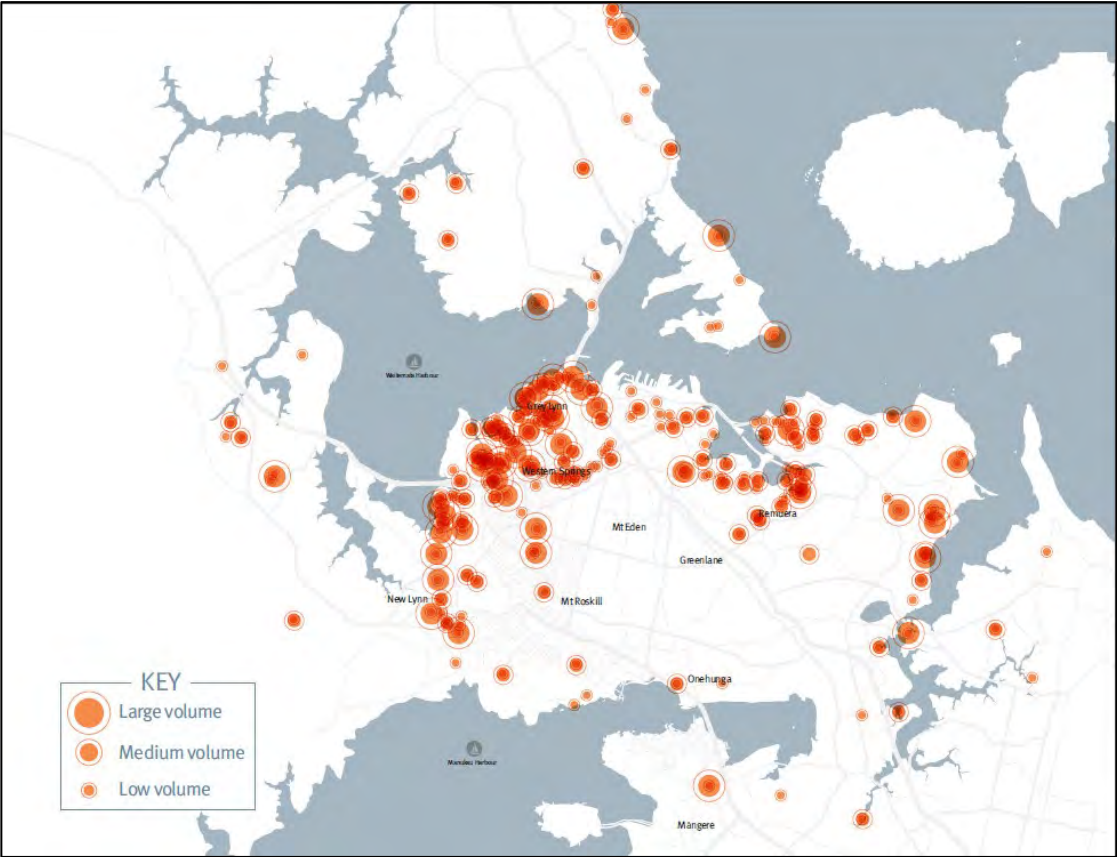
Over the last six years, fats, oil and grease are a large cause of blockages in the network, rags also contribute to the problem and can impact public health and safety. There has been less rubbish going down the drains.

Predicted Future States

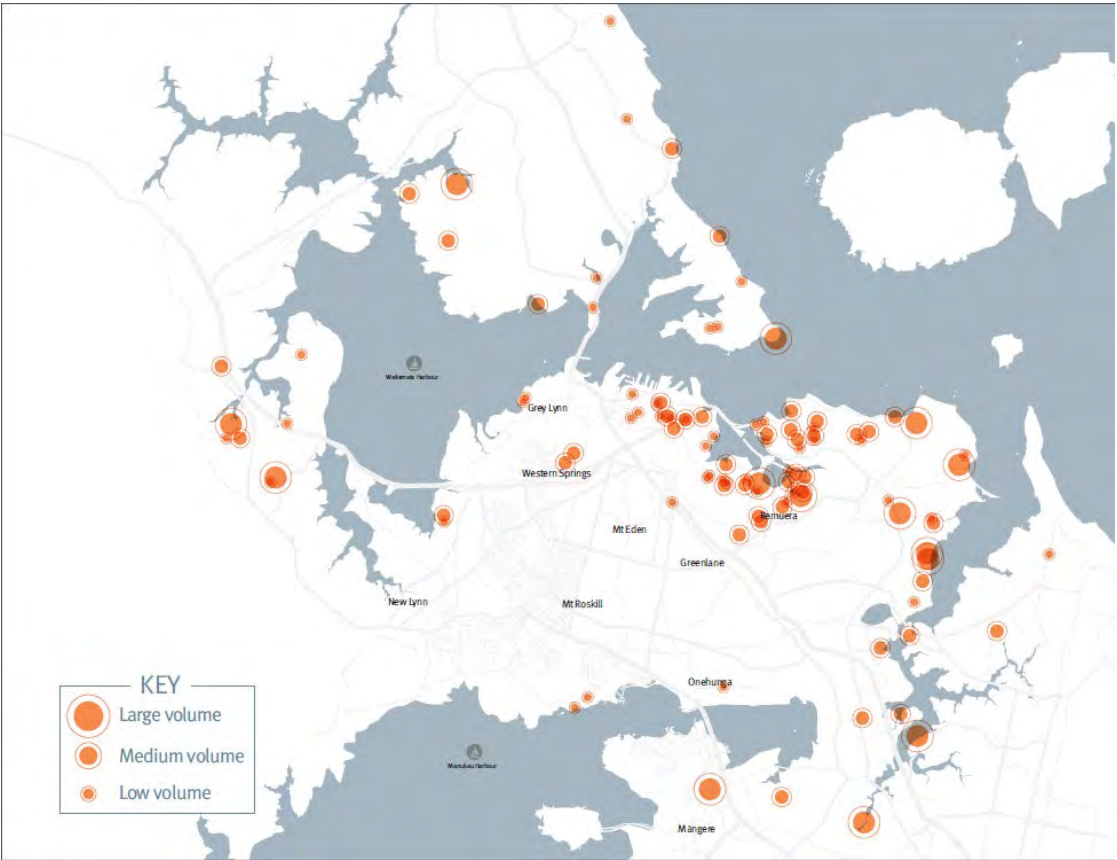
Improvements in network as a result of projects from modelling data



Situation 2017



Situation 2047



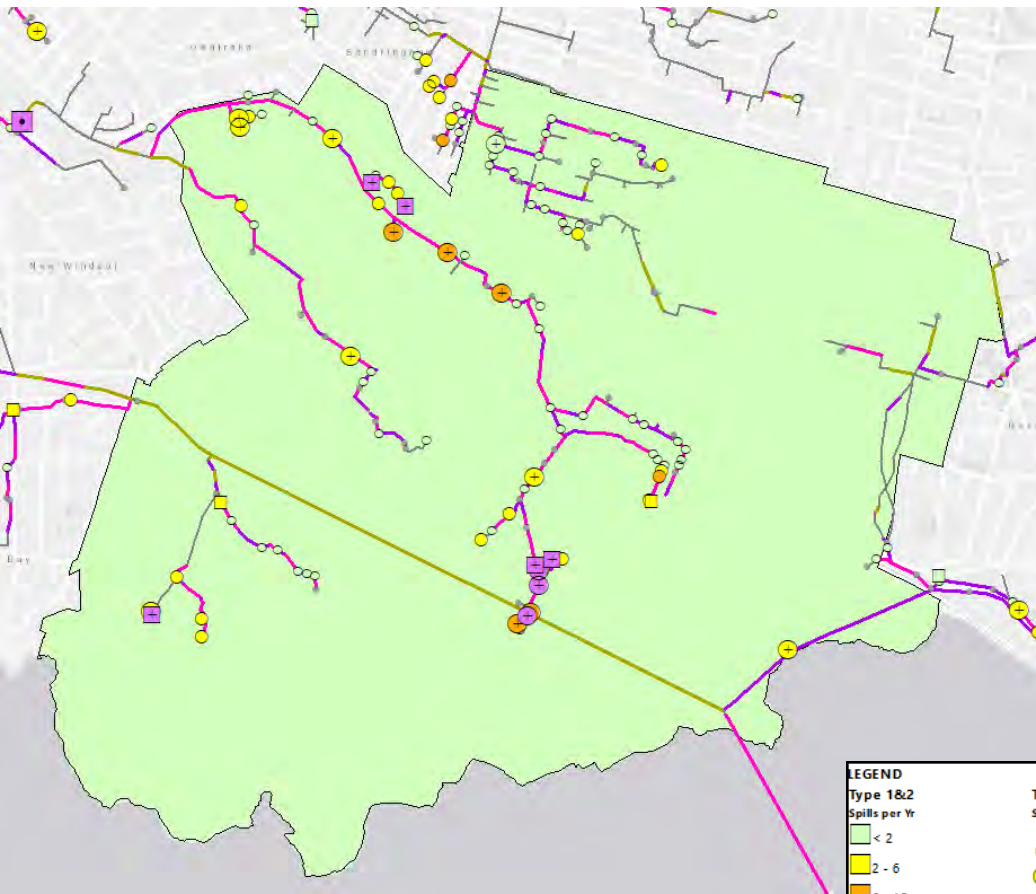
The maps above is indicative of the overflow points that spill more than twice a year due to lack of capacity.

Across Tāmaki Makaurau there is approximately (30%) 237 of the 787 overflow points spill more than twice per year.

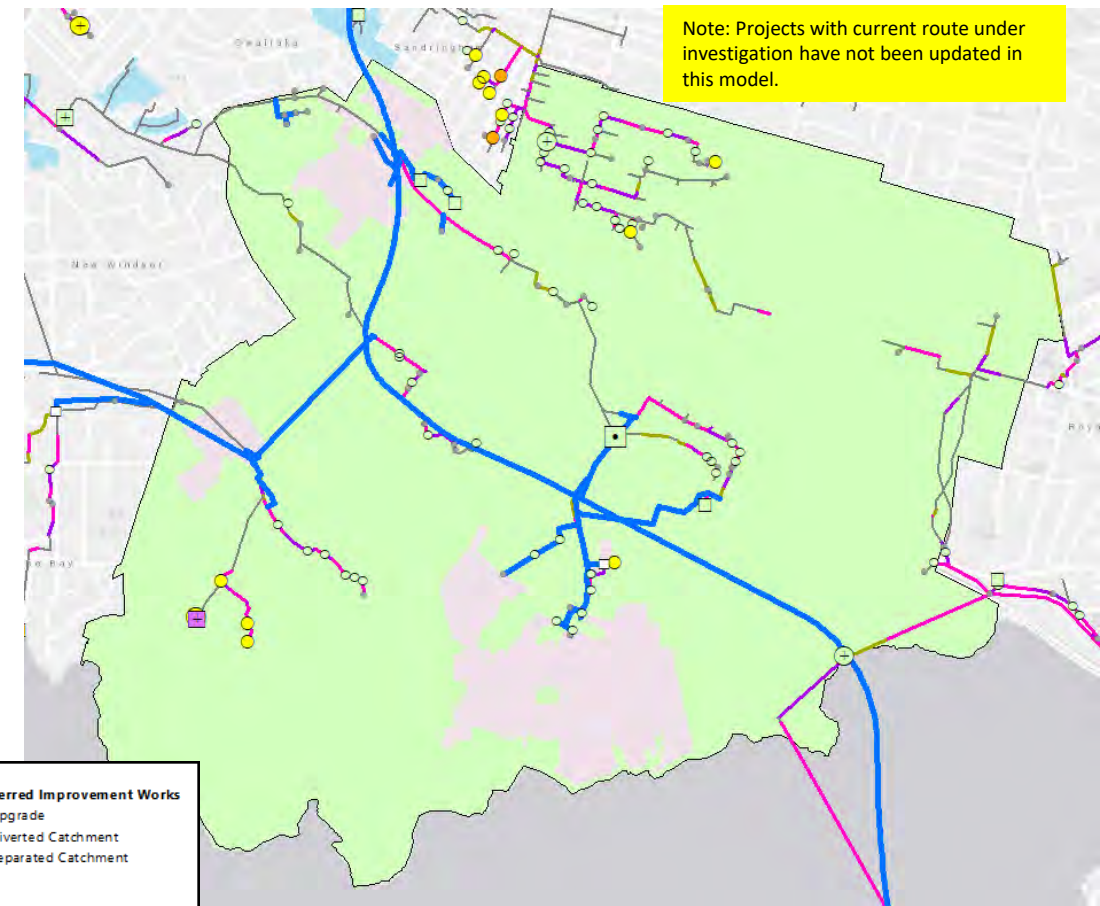
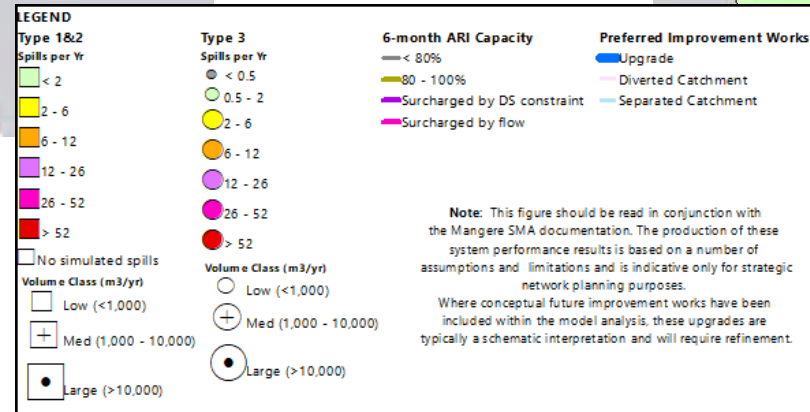
In 2047 we aim to reduce approximately (12%) 100 of the 787 overflow points spilling more than twice a year.

Based on 2017 – Have a new model coming out in 2023

Puketāpapa LB – Modelling with committed and proposed works



Māngere SMA Model 2017
2030 Population Projections



Note: Projects with current route under investigation have not been updated in this model.

Māngere SMA Model 2023
Incl. proposed and committed works
2030 population

- Key projects:**
1. CI – Central Interceptor
 2. WIWQIP – Western Isthmus Water Improvement Programme

Community Insights

We are currently working through the feedback from the community with the outputs that will be available March 2023.

Watercare engaged with the community through multiple engagement channels including:

- Public Events
- One-on-ones with interest groups
- Online Survey
- Voice of Auckland Survey
- Libraries
- Global Cafe

What people can influence

- Programme order
- Programme scale for future long-term plans (LTP)

What people cannot influence

Funding in current long-term plans, Inter-relationships of projects, developments, existing plans and standards or policies, projects that are in flight.



WWNS Feedback and insights

Preliminary Insights from Tāmaki Makaurau

Watercare has received over 150 pieces of feedback. Below some of the insights from the online/paper survey forms.

Key themes:

- **General support for the strategy** but belief that it does not go far enough
- **A need for general education** about Wastewater and disposing of items
- **Wastewater infrastructure needs investment** into climate change and minimise health risk and remove pollution on the awa/moana
- **Community priority areas**

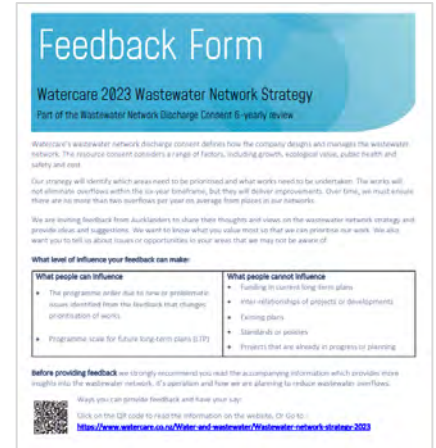
Protecting public health	Improving local waterways/enhancing Te Mana o te Wai	Preparing for Climate Change impacts (droughts and floods)	Affordability of water services	Improving social and community outcomes	Building more houses (managing growth well)	Reducing carbon impact	Increasing access to recreational activities
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Insights at a local level

Responses from WWNS Survey's

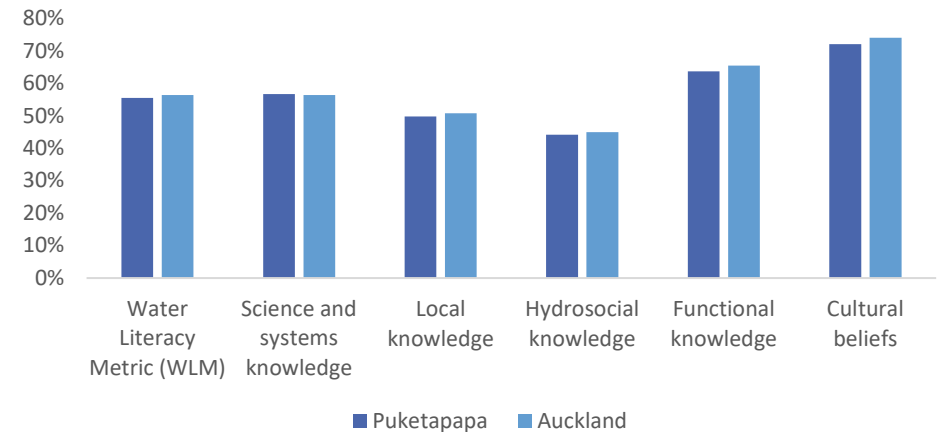
Of the 150 + pieces of feedback 127 respondents provided their suburb details.
0% (0) were within the Puketāpapa local board area.



Voice of Aucklander's

- An online survey conducted by Watercare that is representative of the Auckland population 18 and over.
- The survey objective is to understand
 - Awareness
 - Trust
 - Reach
 - Consumption
- 4,918 people were surveyed across Tāmaki Makaurau of this 232 were from the Puketāpapa Local Board Area

Water Literacy Survey Results
 Feb-Dec 2022 Average Score out of 100%



What we need from the Local Board

Wastewater Network Strategy

We are seeking from the local Board:

- Feedback on the strategy and plan to improvements in your area.
- What is the most important to you on the sequence of proposed works.



Thank you

Pātai? Any questions?

Memorandum

To: Puketāpapa Local Board

Cc: Ben Halliwell, Elected Member Relationship Manager - Watercare Services Limited

From: Chhan Chau, Principal Wastewater Planner - Watercare Services Limited
Moana Williams, Stakeholder Engagement Manager - Watercare Services Limited

Subject: 2023 Wastewater Network Strategy

Date: 07 February 2022
This memo is an update from the original memo dated 09 November 2022.

Purpose

1. The quality of our waterways and beaches is linked to the performance of our wastewater network. Watercare’s Wastewater Network Discharge Consent and the associated Wastewater Network Strategy help guide our journey towards fewer overflows and the improved operation of our pipes and pump stations. The purpose of this memo is to inform the Puketāpapa Local Board about the preparation of the Wastewater Network Strategy (WWNS), due for submission in June 2023.

Summary

2. Watercare is preparing the 2023 Wastewater Network Strategy (‘the strategy’) as part of the 35-year Network Discharge Consent with Auckland Council.
3. The strategy is a key implementation tool designed to reduce overflows and improve the public wastewater network.
4. This is a strategy that is reviewed every six (6) years, and which reports on network condition, performance, and the schedule of proposed improvement works.
5. Consent conditions require Watercare to consult with a variety of entities including Local Boards, Iwi, Auckland Council, Auckland Transport, the Auckland Regional Public Health Service, and Veolia.
6. For this strategy we intend to go beyond compliance holding conversations with key stakeholders, advocacy groups and the community – our desire is to help educate our communities on the complexities and challenges involved in operating the wastewater network, but more importantly to listen to their concerns values, priorities and feedback.

Context

7. The wastewater network is made up of 7,999 kilometres of pipes and 518 pump stations. It operates to move sewage from homes, businesses, and industrial sites to treatment plants. Approximately 410 million litres of wastewater are treated daily in Auckland’s treatment plants.
8. Watercare has five consents that cover our wastewater network. When combined these cover Auckland's network from Wellsford and Helensville in the north down to Waiuku, Kingseat, and Beachlands in the south.¹
9. Network discharges include both treated water from Watercare’s plants and unintended untreated wastewater overflows.

¹ Note: These consents do not include Kawakawa Bay, for which the sewage system is under vacuum and has a separate consent.

10. As part of these consents there is a Wastewater Network Strategy which covers a 35-year period and is reviewed every six years. The strategy is the key implementation tool used to report on current network condition and performance, and to outline the schedule of proposed works to improve the network.
11. The strategy focuses on unintended overflows from the network. A wastewater overflow occurs when wastewater spills out from gully traps, manholes, Engineered Overflow Points (EOPs) or pump stations and flows into public or private property, waterways, and the sea. Overflows occur primarily because of blockages in the system, lack of storage space, cracks and leaks in pipes, power outage, or broken parts. These are categorised into 3 types:
 - Type 1 from pump stations
 - Type 2 from EOPs
 - Type 3 uncontrolled overflows.
12. EOPs are structures in the network designed to overflow if something goes wrong in another part of the network such as a blockage. They control where the overflow takes place to ensure that it does not occur in someone's home, business or a school where there is a higher public health risk.

Discussion

13. Our next Wastewater Network Strategy will outline the works we plan to deliver in 14 Strategic Management Areas (SMAs). SMAs are based on wastewater flows to treatment plants and do not align with Local Board boundaries.
14. The wastewater network in the Puketāpapa Local Board area is substantial and sits within the Western Isthmus and Onehunga catchment areas.
15. The Western Isthmus catchment is to the west of central Auckland, with predominantly residential
16. land use. The catchment has 628.3 km of wastewater pipes, 44179 connections (70.3 connections per km pipe) and 120 EOPs (0.20 EOPs per km pipe). Please see **appendix 1** for a map of the catchment area.
17. The Onehunga catchment covers approximately 23 km² on the northern shores of Māngere Inlet and the Manukau Harbour. The catchment is heavily developed, with a large business and industrial activity area along the coastal margins of Māngere Inlet and Onehunga Township. The catchment has 259.6 km wastewater pipes, 17903 connections (69 connections per km pipe) and 19 EOPs (0.07 EOPs per km pipe). Please see **appendix 2** for a map of the catchment area.
18. Some SMAs will require more work than others, depending on how they are currently performing and how much they are expected to grow. When we prioritise the catchments, there are many factors we will consider, as shown in the diagram below.
19. Based on this assessment the catchments, the catchments within the Boards area have been classified as a high priority areas due to the number of overflows and the age of the network.



Network Performance

20. Based on the Western Isthmus and Onehunga catchments, there are a total of 20 Engineered overflow points (Type 1 and 2 EOP's) across the Puketāpapa Local Board area, no EOP's are monitored in your area.

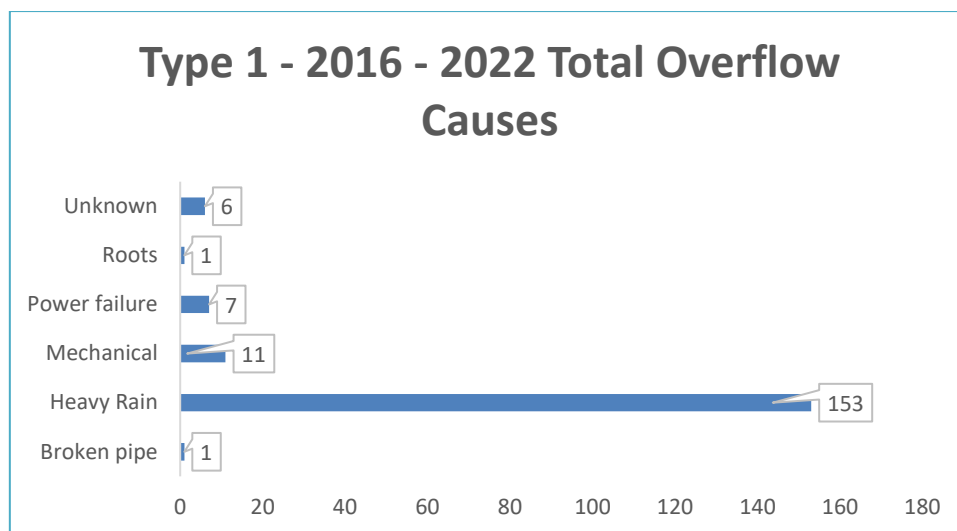
21. The tables below outline the causes of pump stations (Type 1) overflows by cause and year. This illustrates that stormwater inflow is a significant cause of overflows from pump stations over the past six years.

Western Isthmus – Type 1 EOP

Issue	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Broken pipe		1					
Heavy Rain	20	22	15	7	10	9	4
Mechanical		4				3	1
Power failure		1	2	2			
Roots		1					
Unknown	2			1			
Total	22	29	17	10	10	12	5

Onehunga – Type 1 EOP

Issue	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Heavy Rain	7	14	15	9	10	8	3
Mechanical		2				1	
Power failure					2		
Unknown	2				1		
Total	9	16	15	9	13	9	3



22. There are 7 Type 2 engineered overflow points in the Puketāpapa Local Board area. The Type 2 EOP's in your area are not monitored. The worse performing EOPs are monitored.

The table below represents the Western Isthmus catchment Type 2 EOPS that are monitored. They are monitored due to the network performance in the area and the high likelihood off overflows. Please note that the locations are not in Puketāpapa Local Board area.

Western Isthmus – Type 2 EOP

Type 2 EOP	FY18	FY19	FY20	FY21	FY22
Branch 8 Mt Albert MH31	75	67	54	50	46
Orakei Main Sewer MH38	15	14	21	20	23
Edendale Branch MH1	56	53	43	45	44
Branch 8 Mt Albert MH7	27	57	45	47	56
Total	173	191	163	162	169

23. Type 3 overflows which are uncontrolled i.e. not from engineered overflow points, are split into dry weather and wet weather overflows. Dry weather overflows are a combination of domestic, commercial, industrial loads, and groundwater infiltration. Wet weather overflows include the above but also rainfall that enters the wastewater network. The Henderson Creek and Whau River catchments consistently have some of the highest number of dry and wet weather overflows.

24. The tables below outline the overflow rates from dry weather and wet weather overflows.

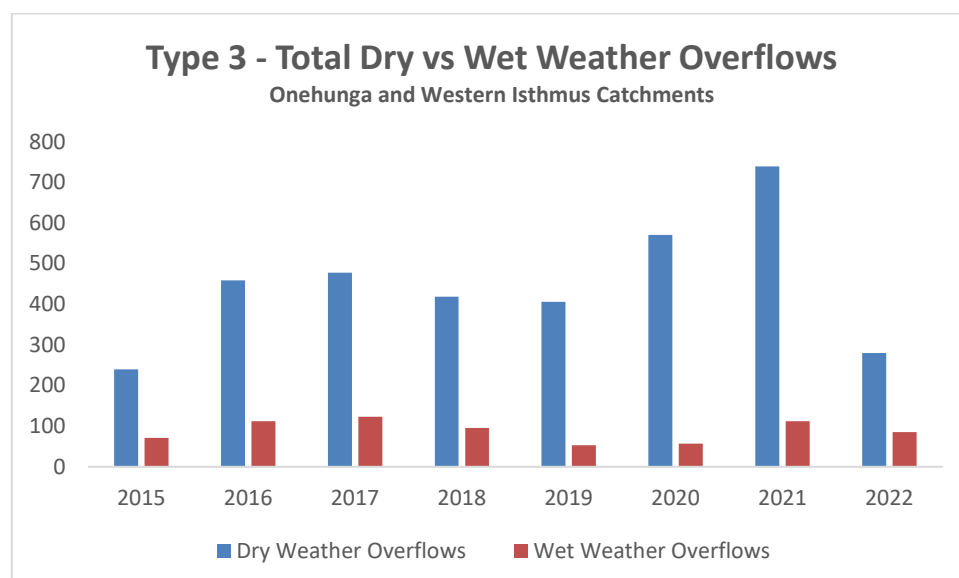
Amended Tables from Previous Memo*

Western Isthmus – Type 3

Type 3	2015	2016	2017	2018	2019	2020	2021	2022
Dry weather	152	321	325	286	287	382	526	205
Wet Weather	53	83	103	75	39	41	84	77
Total	205	404	428	361	296	423	610	282

Onehunga – Type 3

Catchment	2015	2016	2017	2018	2019	2020	2021	2022
Dry weather	88	138	153	133	119	189	213	75
Wet weather	18	29	20	21	14	16	28	8



Planned activities

25. In response to the overflows, we will identify the work we need to do to improve the performance of our wastewater network. This includes:
- Infrastructure delivery:** construction work to upgrade our assets. For information on major infrastructure investment to date in your local board area you can refer to the details in the Puketāpapa Local Board [information hub](#) on the Watercare website.
 - Inflow and infiltration (I&I) programme:** inspection work to identify where stormwater is entering the wastewater network and remove it.
 - Community education:** educating the public on the causes of overflows and how we all have a role to play in preventing them.
26. The following table outlines the major programmes of infrastructure works planned for the catchments over the next ten years:

Forecast on improvement works subject to feasibility and budget.

Key driver for proposed works: **Overflows and population growth**

Project	Description	Timeframe	Cost (\$)
Central Interceptor *Central Interceptor programme is not part of the NDC consent. CI has its own discharge consent.	The Central Interceptor (CI) tunnel is 4.5 metres in diameter and will run for 14.7 kilometres from Grey Lynn under central Auckland and the Manukau Harbour to Māngere. The tunnel will lie between 15 and 110 metres below the surface. Along with two smaller link sewer tunnels we are building, the main CI tunnel will collect wastewater from the existing network and take it to the Māngere Wastewater Treatment Plant.	Complete date to 2026	\$1.2B
Mt Roskill Wastewater Improvements	Upgrade of sewers in the Mt Roskill area to prevent overflows and allow for growth (Working with Kāinga Ora)	2023-2035+	75M
Wesley wastewater sewer upgrade	Upgrade of Wesley sewers to prevent overflows	feasibility in progress, design/construction in next 6-10yr	not available

27. Inflow and Infiltration work has been completed in the Oakley Catchment (Aldersgate Road, Rogan Street, and Olsen Ave) and Green Bay area in 2022. Watercare also works closely with Auckland Council's Healthy Waters department on the [Safe Networks Programme](#) undertaking monitoring and investigations in local streams, watercourses and the stormwater network to identify and track contaminants to their source e.g. an incorrect wastewater connection to a stormwater pipe.

The following table outlines the inflow and infiltration completed works in 2021-2022 and planned works for 2022 - 2023:

2021-22 Investigation Projects	Planned for 21-22	In Progress 21-22	Completed in 21-22	Planned for 22-23	Comments
WSL I&I Only Investigation Projects					
Oakley Catchment - Phase 2 (Aldersgate WWPS 1 and 2, Rogan St, Olsen Ave) - FY22 (Planned)	1	1			Olsen Ave area still to do
Joint WSL I&I and HW Safe Networks Investigation Projects					
Green Bay (East and West) - FY22 (Reactive)	1		1		

28. Community education occurs via a number of channels including the seasonal '[Tapped In](#)' newsletter, 'Local Matters' newsletters, typically prepared in response to local overflow issues including blockages from fats oils and grease. Comprehensive information on how to care for your drains and to avoid overflows is also available on the [Watercare website](#) or the [Water for Life website](#).

Predicted future performance of the network:

26. With the forecasted proposed and planned works on the wastewater network over the next six years and based on 2030 population projections, Watercare have developed the 2023 modelling to demonstrate the expected improvement of the network and the expected reduction of overflows in the Puketāpapa Local Board area. The Central Interceptor and WIWQIP are the two key projects that are intended to have the largest impact on overflow reduction. The map below provides the base modelling from 2017 figure 1 which indicates the current network performance and after map figure 2 includes proposed and committed works and the indicative reduction of overflows:

Figure 1 Māngere SMA Model 2017 - 2030 Population Projections

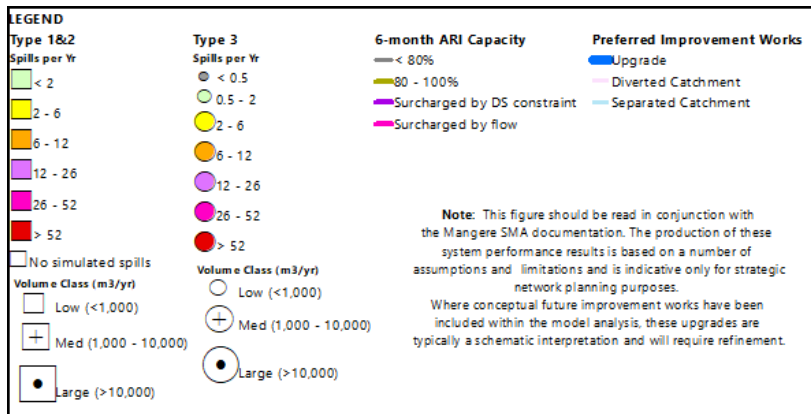


Figure 2 Māngere SMA Model 2023 - Incl. proposed and committed works 2030 population



Note: Projects with current route under investigation have not been updated in this model

Key projects:

1. CI – Central Interceptor
2. WIWQIP – Western Isthmus Water Improvement Programme

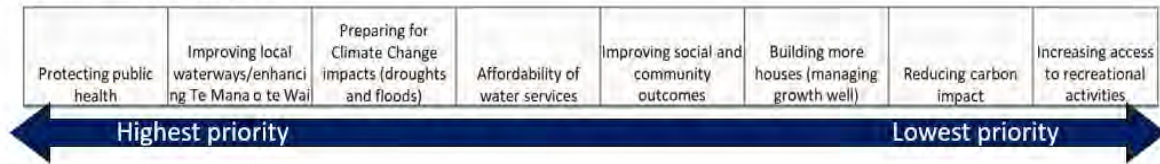
WWNS Community feedback and insights:

Preliminary Insights from Tāmaki Makaurau – Summary of public feedback

27. Watercare has received over 150 pieces of feedback via online survey's and manual feedback forms from people all across Auckland, we are currently working through the feedback and identify key insights with the findings and outcomes from the feedback that will be available on 31 March 2023. While we work through the feedback, below are some of the insights we have discovered to date:

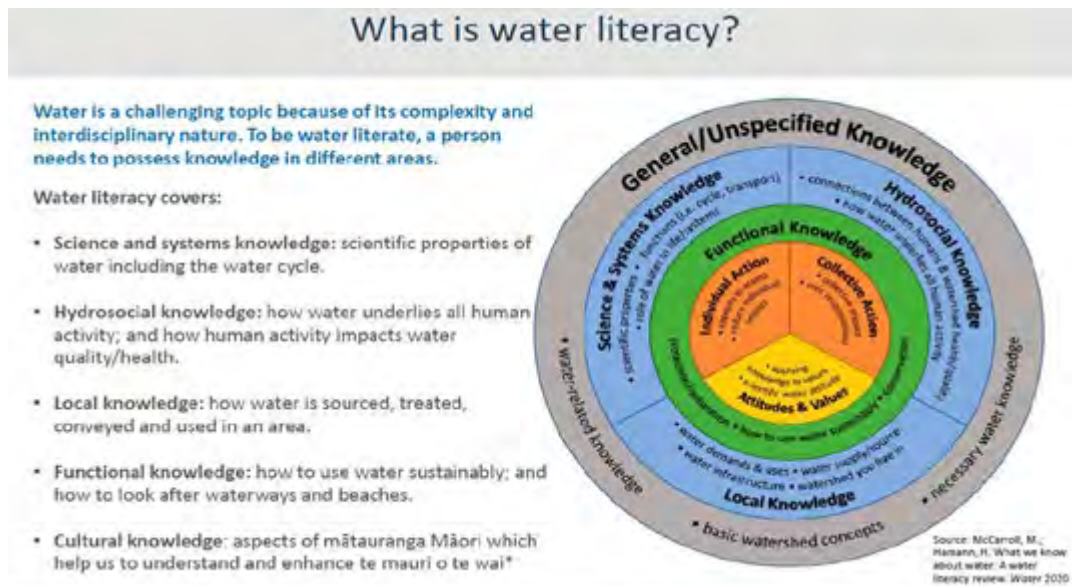
Key themes:

- **General support for the strategy** but belief that it does not go far enough
 - Community believes that any overflows are unacceptable
- **A need for general education** about Wastewater and disposing of items
- **Wastewater infrastructure needs investment to:**
 - Cope with Climate change
 - Minimise health risk and remove pollution on the awa/moana
- **Community priority areas**

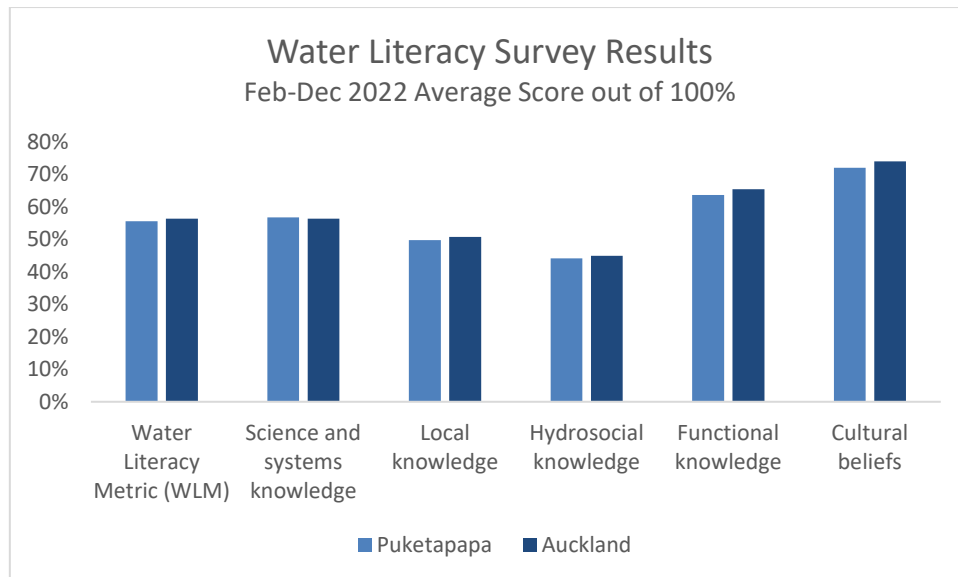


28. Respondents of the survey had the option to provide their suburb details, of the 150 + pieces of feedback 127 respondents provided their suburb. There were no respondents that identified within the Puketāpapa local board area.

29. Voice of Auckland’s is an online survey conducted by Watercare that is representative of the Auckland population 18 and over. The water literacy survey objective is to understand Awareness, Trust, Reach, Consumption. The questions are categorised into 5 areas as shown below:

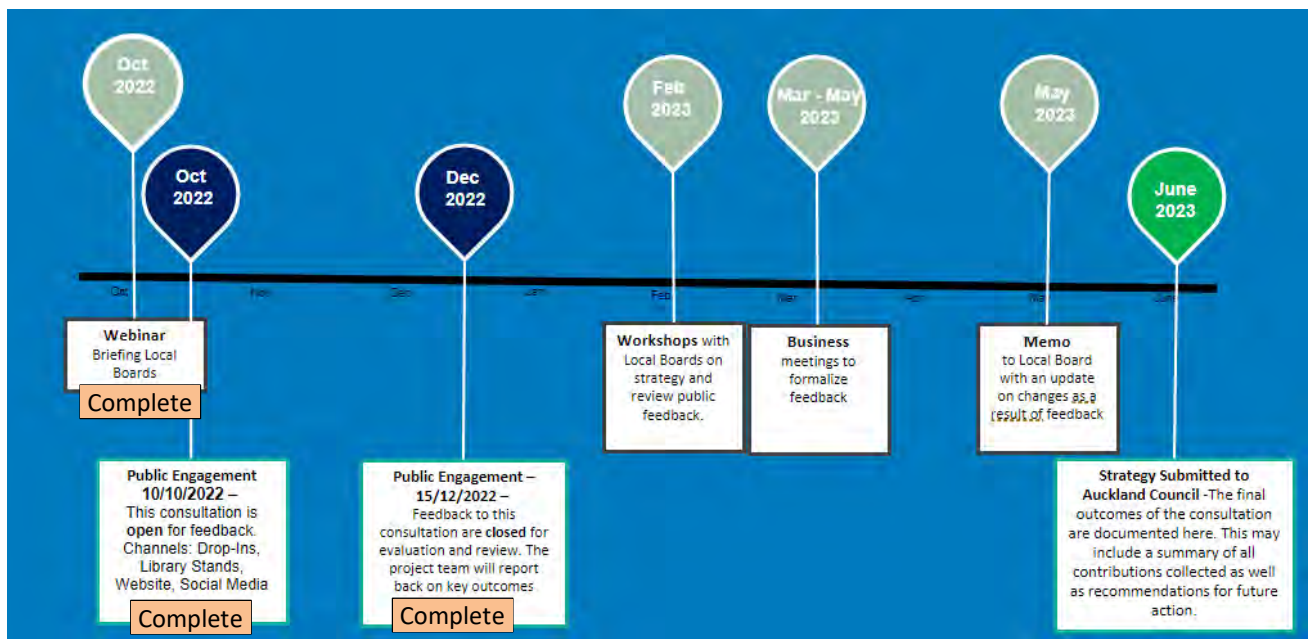


The survey helps us identify how well our communities understand the water and supports the development of pathways/tools to improve water literacy. 4,918 people were surveyed across Tāmaki Makaurau of this 232 were from the Puketāpapa Local Board Area. The graph below provides an overview of the results, which indicate that your community have a good understanding of water literacy and the community have a good understanding and awareness in alignment with the general Auckland area:



Next Steps

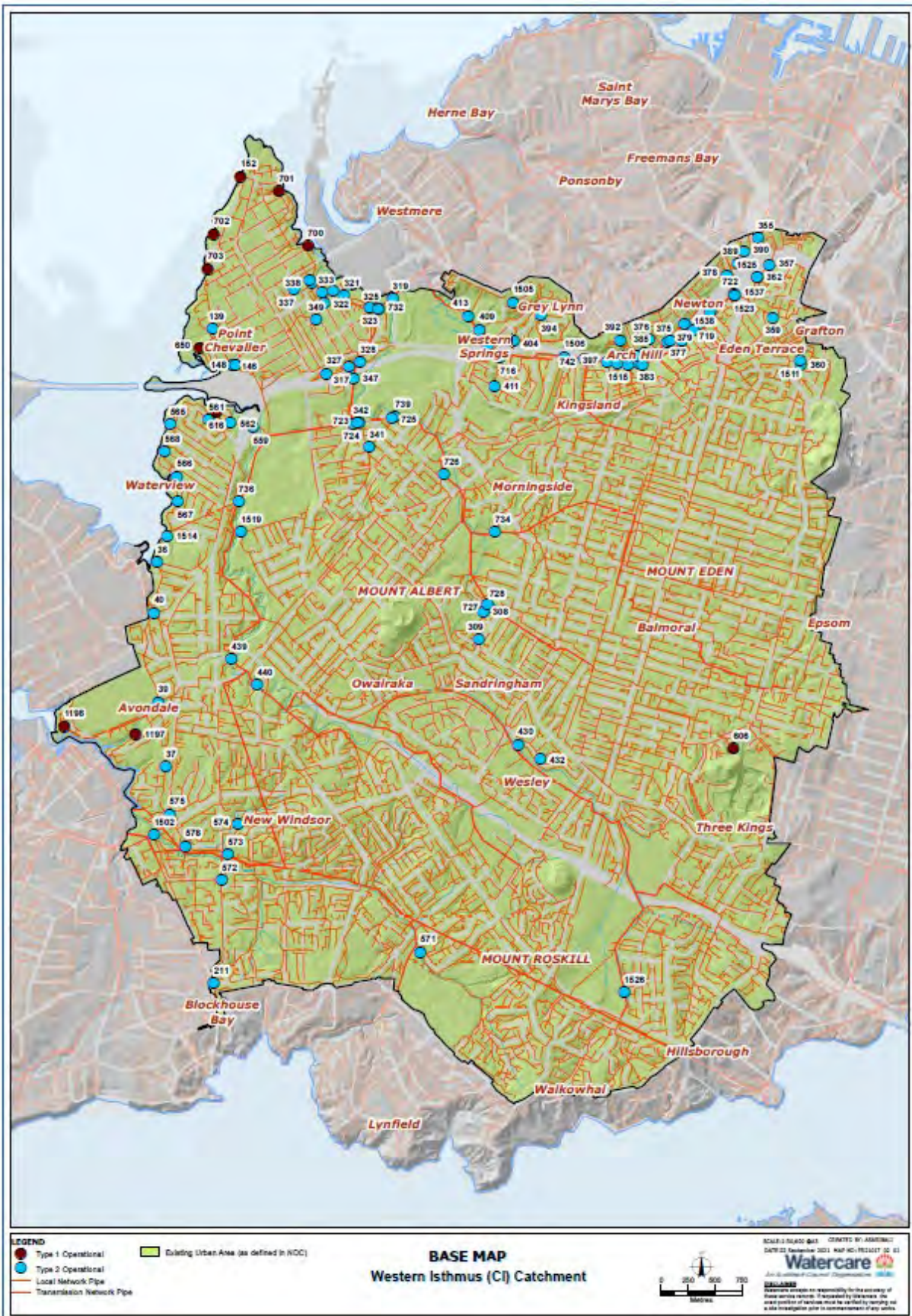
29. The next update of the Wastewater Network Strategy is currently in the preparation stage with a submission due date to Auckland Council in June 2023. Feedback from the Local Boards, stakeholders and the community will be included.
30. Watercare is currently engaging with other entities such as Iwi, Auckland Council staff, Auckland Regional Public Health Service, other wastewater utility operators, and Auckland Council's Healthy Waters department.
31. Public engagement was completed on the 20 December 2022, which included five drop-in events across Tāmaki Makaurau (North, South, East, West, Central), six library stands in high worked areas and nine high interest community groups. The results of the survey's and feedback summary is currently under development and will be made available to Local Boards and the public by the 31 March 2023.
32. You can find more information about the strategy here: <https://www.watercare.co.nz/Water-and-wastewater/Wastewater-network-strategy-2023>.
33. Please see below for a timeline summary of the plan for public and local board engagement on the strategy.



34. We are holding the workshop with Puketāpapa Local Board in February 2023. This memorandum is intended as a re-introduction to the strategy and as context for the local board in preparation for the workshop. We are seeking your feedback on the strategy, to identify challenges and opportunities on the plan to improve the wastewater network in your area and to understand what is the most important to you on the sequence of proposed works.

Appendix

Appendix 1 – map of the Western Isthmus Catchment



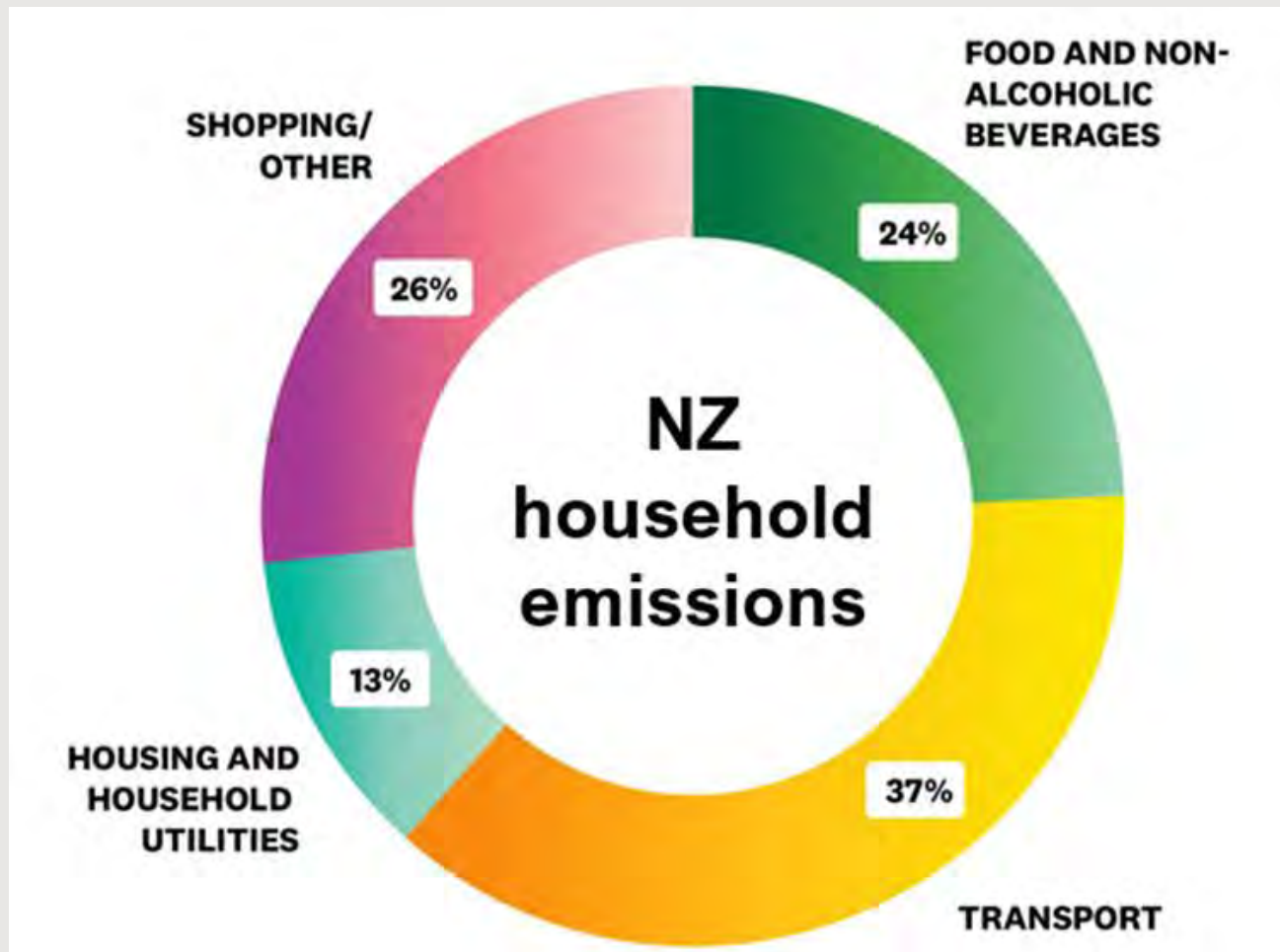
Appendix 2 – map of the Onehunga Catchment



Climate Action Work Programme Update

Greer Rasmussen – Community Climate Action
February 2023





New Zealand household emissions by category (*Stats NZ consumption emissions 2021 with most recent data from 2019*)



Climate Activation Contracting Team



Richard Barter
Contract Holder
Activator Mentor



Pascal Gillies
Sub Contractor
Activator Delivery



Challenges we are addressing :



Climate Change – make it meaningful

Density

Diversity

Funding and scalability

Connectivity



Work Programme Action Areas



PK1: Puketāpapa Climate Action engagement
Communications, events, business

PK2: Local Active Transport Journeys

Places of worship, e(cargo)bikes and bike trailers promotion, bike to sport, Infrastructure change and density

PK3: Capacity building – local climate champions

Working with local groups (do-good feel-good challenge), junior activator position, Eco festival support

PK4: Updating the plan

Review of plan, progress report



Puketāpapa Repair Cafe

Coming to a community space near you!



Auckland Climate Grant



Successful Applications:

- Active Transport Trust – e cargo bike
- Roskill Together – do good feel good challenge
- Community Collective (EcoNeighbourhoods) AE PKT Climate Festival



Upcoming activities



- **Low Carbon Lifestyles-
Transport Pilot**
- **Albert Eden – Puketapapa
Ecofestival**
- **Welcoming Communities**
- **New Mover Pilot – Caldera
(Fletchers)**

