



OPPORTUNITIES FROM A HOLISTIC NATIONAL VIEW OF STORMWATER ASSETS AND FUNCTIONS

# Seeing the Unseen

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**Stormwater 2024**  
15–17 May | Takina Wellington Te Whanganui-a-Tara

# Once upon a time



**Version as at 17 February 2024**



**Water Services Entities Act 2022**  
Public Act 2022 No 77  
Date of assent 14 December 2022  
Commencement see section 2

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Water Services Entities Act 2022: repealed, on 17 February 2024, by section 8 of the Water Services Acts Repeal Act 2024 (2024 No 2).

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**Note**  
The Parliamentary Counsel Office has made editorial and format changes to this version using the powers under subpart 2 of Part 3 of the Legislation Act 2019.

Note 4 at the end of this version provides a list of the amendments included in it.

**This Act is administered by the Department of Internal Affairs.**

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5	Provisions on Te Tiriti o Waitangi/the Treaty of Waitangi
6	Interpretation
6A	Act applies to water services entity, and its service area, only on and after that entity's establishment date

# The stormwater asset data story

- 2022-2023: New policy framework for three waters
  - 4, then 10 Entities to manage 3 waters, including stormwater
  - Not all stormwater assets & functions to be transferred
    - Roading drainage assets to remain
    - Mixed use assets to remain
    - Land to remain
    - Watercourses and overland flow?
- Geospatial and asset data provided to NTU for centralised/standardised data system
- Project developed to sort stormwater data for each council (66)

# A lot of people did a lot of work




Activities		Total
	People in the team	56
	Steps in the process	23
	Councils completed	65
	Total steps completed	1,840
	Days on the project	135
	Hours spent	6,984.75
	Drop-in sessions & SME review meetings	96

# Nek Minute..



Version as at 17 February 2024



Water Services Entities Act 2019 (No 2)

**REPEALED**

This Act is administered by the Department of the Environment and Heritage

1 Title

2 Commencement

**Part 1**  
Preliminary provisions

3 Purpose

4 Te Tiriti o Waitangi/the Treaty of Waitangi and Te Mana o Te Wai

5 Provisions on Te Tiriti o Waitangi/the Treaty of Waitangi

6 Interpretation

6A Act applies to water services entity, and its service area, only on and after that entity's establishment date

# What has emerged from the fire?





# A lot of learnings

- Data standardisation opens a whole lot of doors
  - Data aggregation
  - Benchmarking
  - Linking datasets
  - Having joined-up conversations
- Stormwater asset management is collaborative and needs to be flexible
- Stormwater treatment needs to seize opportunities
- Stormwater planning is collaborative

# Data Standardisation opens doors



# Statistics – what did we discover?

Asset Class	Asset Type	Number of assets	Examples of asset types in category	
Chambers and Manholes	Catchpit/Sump	13,129	Core urban stormwater assets	
	Chamber	183,840		
	Catchpit/Sump	123,751	Stormwater assets in rural areas or roads, or owned by other parties	
	Chamber	4,528		
Control Structures	Basin	138	Structures and control features critical to the stormwater network.	
	Bund	21		
	Dam Wall	3		
	Erosion Control	462		
	Inlet	4,496		
	Outlet	14,157		
	Spillway	11		
	Wall	34		
	Basin	164		Structures and control features owned by other parties or in rural areas
	Bund	31		
Dam Wall	7			
Erosion Control	325			
Inlet	589			
Outlet	1,219			
Spillway	28			
Wall	5			
Land	Vegetation/Planting	48	Planting associated with primary stormwater treatment facilities	
	Vegetation/Planting	26	Owned by other parties or in rural areas	
Pipes and Conduits	Culvert	1,277	Core urban stormwater assets	
	Main	252,311		
	Service Line	155,199		
	Culvert	10,567	Stormwater assets in rural areas or roads, or owned by other parties	
	Main	44,100		
	Service Line	78,483		
Site Services	Fence	50	Fencing associated with primary stormwater treatment facilities	
	Fence	37	Owned by other parties or in rural areas	
Treatment Devices	Treatment Device	6,597	Primary stormwater treatment devices	
	Treatment Device	3,981	Stormwater treatment devices in rural areas or owned by other parties	

When all of the asset data for the country is put into the same 16 categories, we can start to analyse it

# Stormwater Categorisation Results Dashboard

Project Status Report



Te Tari Taiwhenua  
Internal Affairs

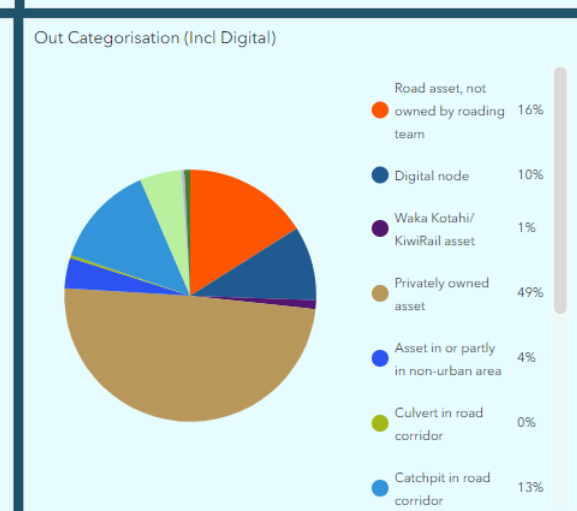
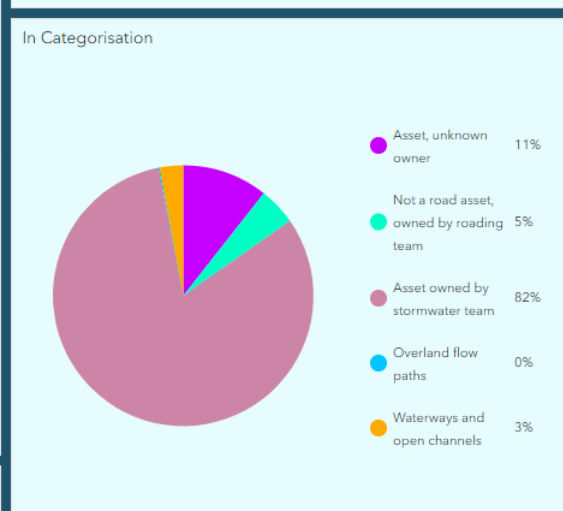
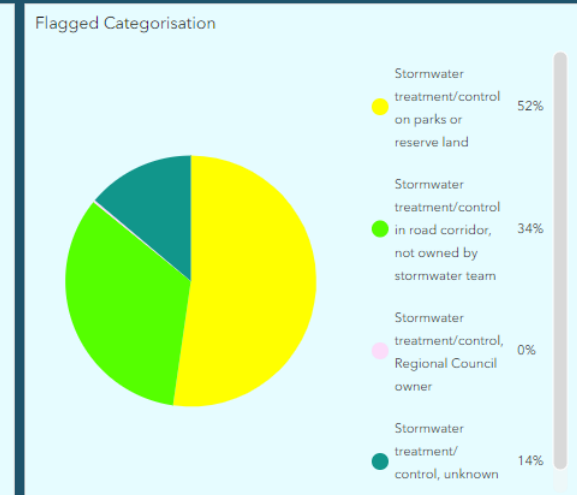
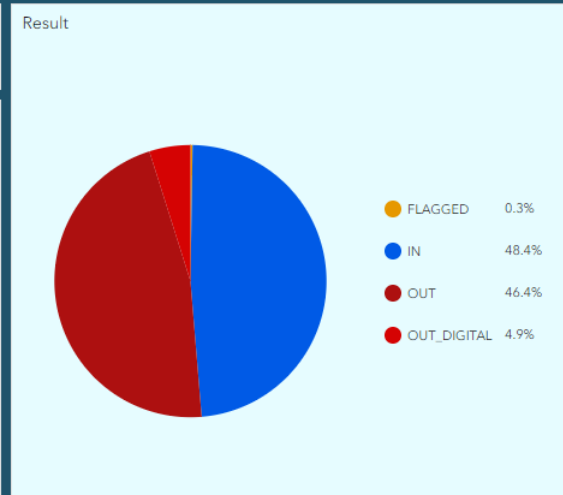
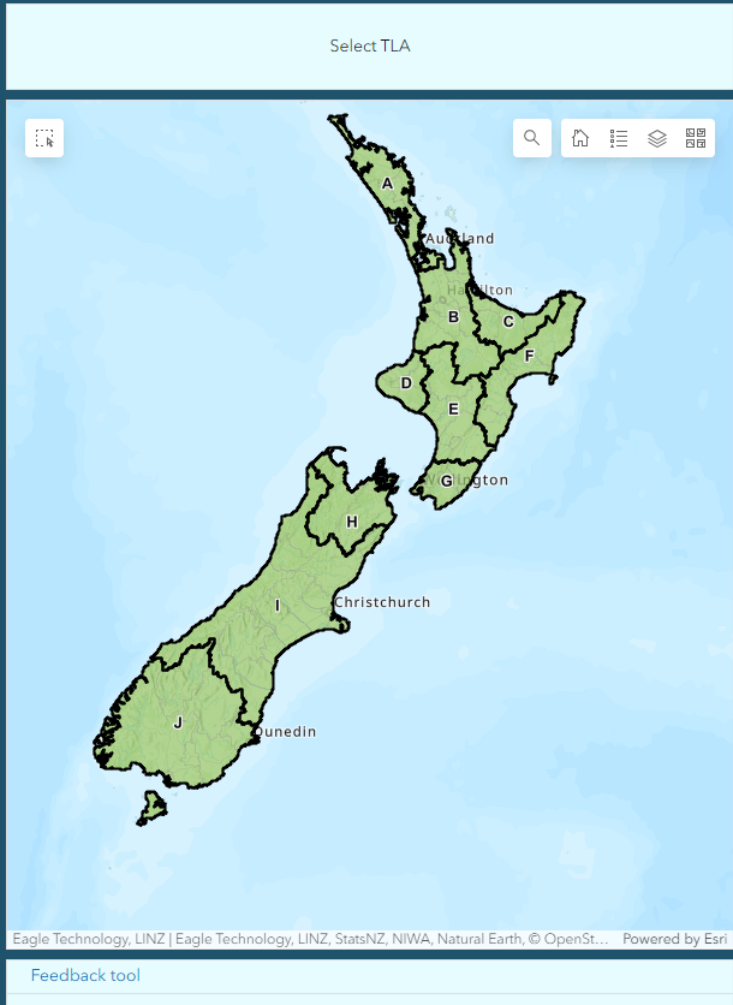
Entity  
None

- A - 1 - Far North District
- A - 2 - Whangarei District
- A - 3 - Kaipara District
- B - 11 - Thames-Coromandel District
- B - 12 - Hauraki District
- B - 13 - Waikato District
- B - 15 - Matamata-Piako District
- B - 16 - Hamilton City
- B - 17 - Waipa District
- B - 18 - Ōtorohanga District
- B - 19 - South Waikato District
- B - 20 - Waitomo District
- B - 21 - Taupo District
- C - 22 - Western Bay of Plenty District
- C - 23 - Tauranga City
- C - 24 - Rotorua District

## Legend

### TLA Boundary

- Hold
- Data Acquisition
- Data Preparation
- Run Model & Display Results
- Review, Initial Meeting & Write Report
- Issued And Complete Till T-12
- Not Started

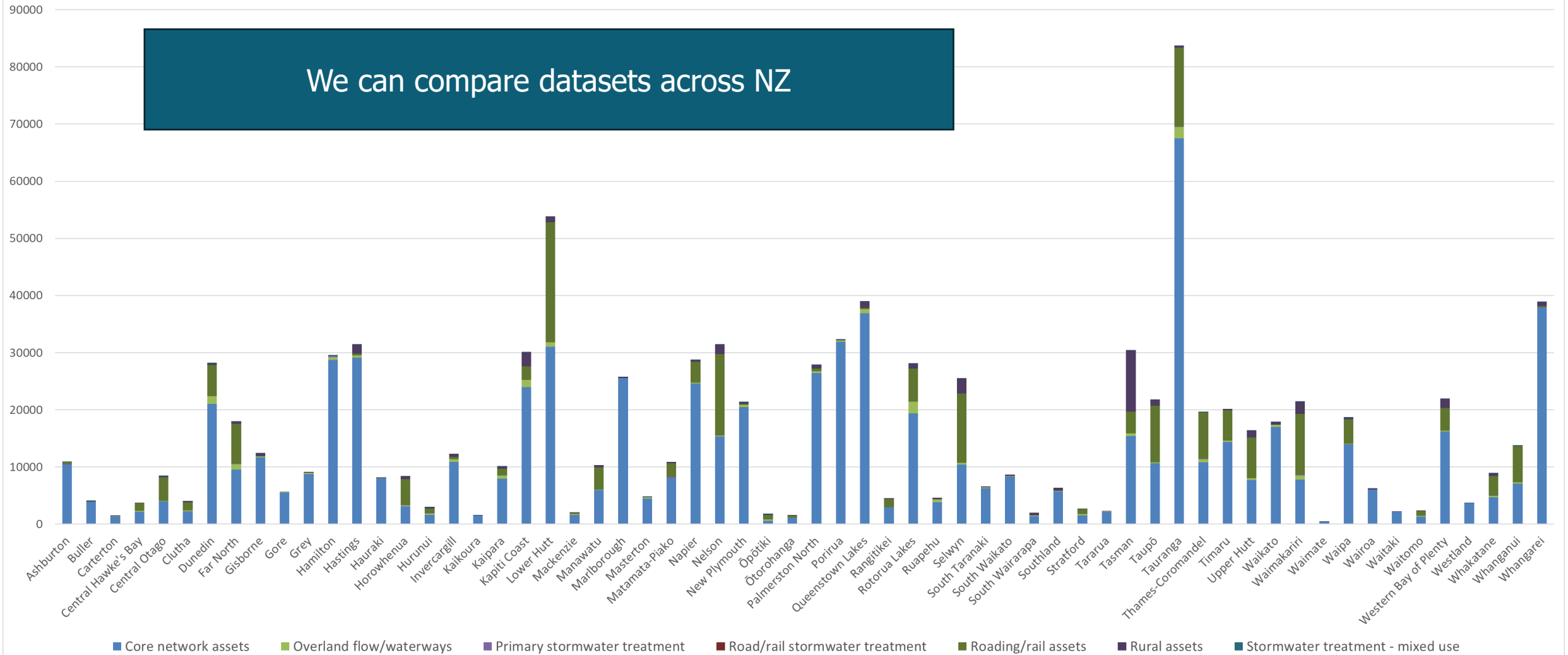


Aggregated data: a national overview of results

Dashboards make it easy to get around and share analysis

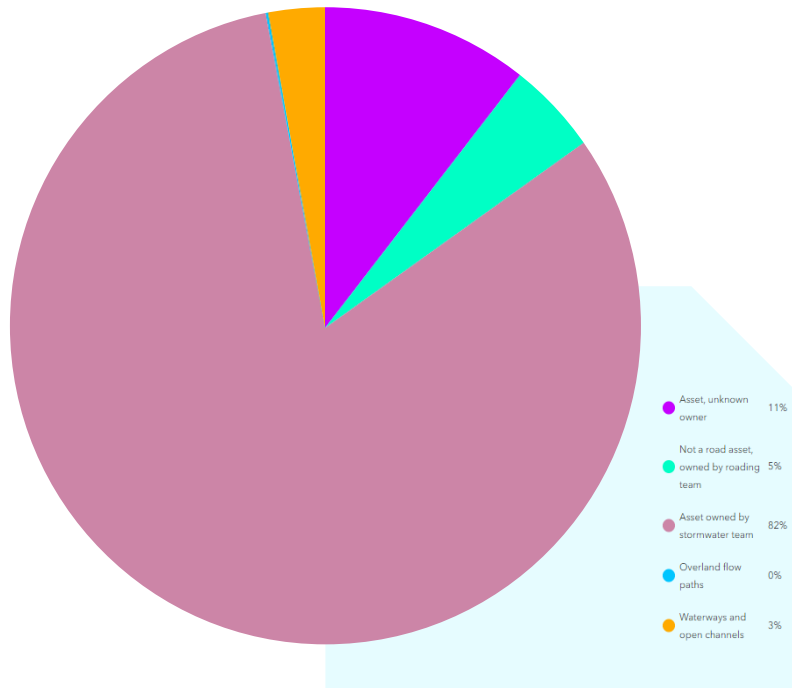
## Stormwater Asset Split - Rest of NZ

We can compare datasets across NZ

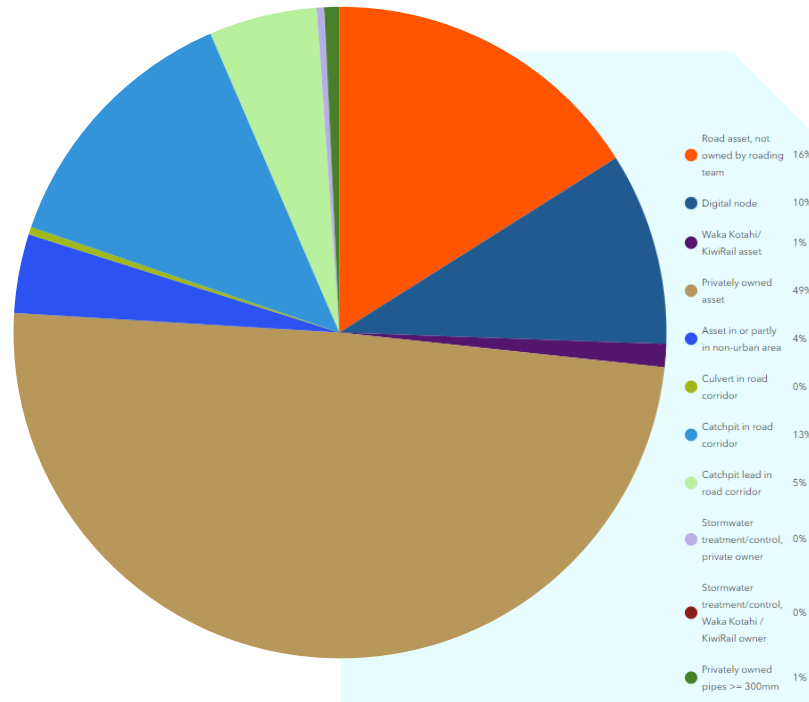


# What was in and what was out?

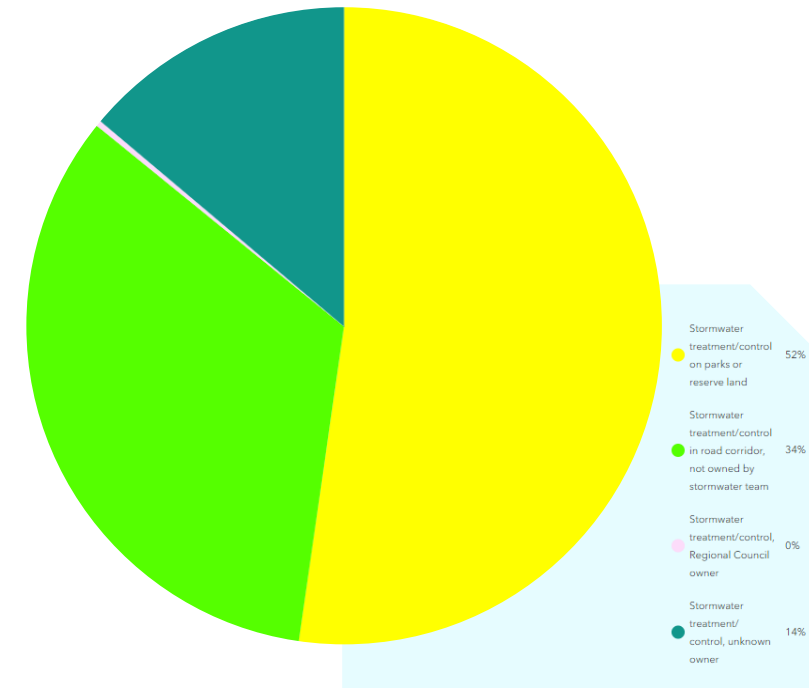
## IN



## OUT

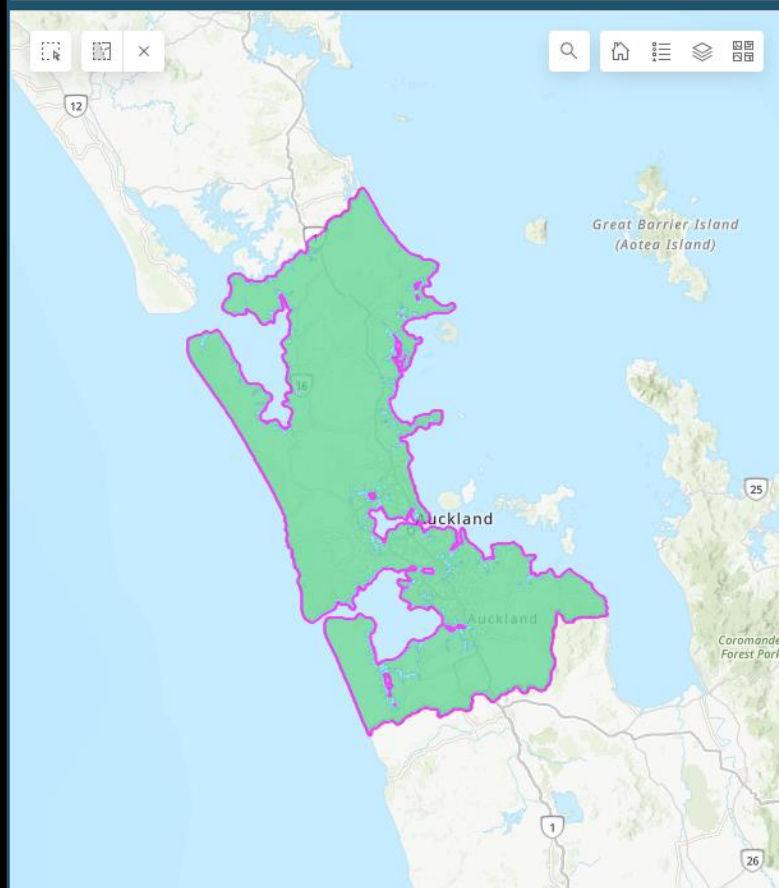


## FLAGGED



Sorting the data is easy

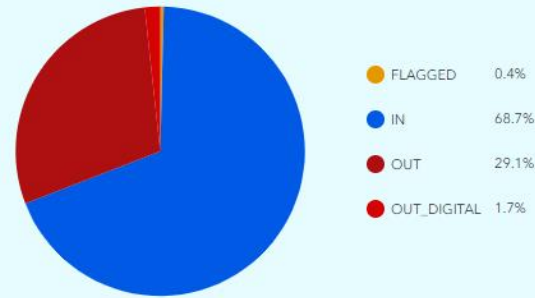
# Auckland



Eagle Technology, LINZ | Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenSt... Powered by Esri

Feedback tool

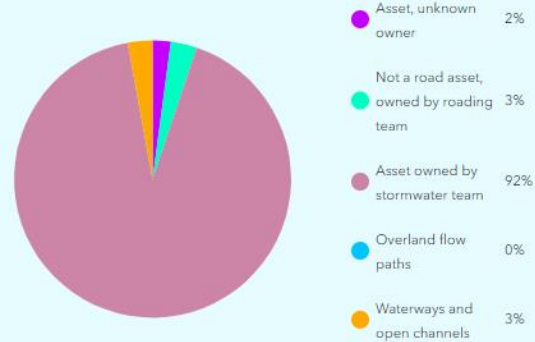
## Result



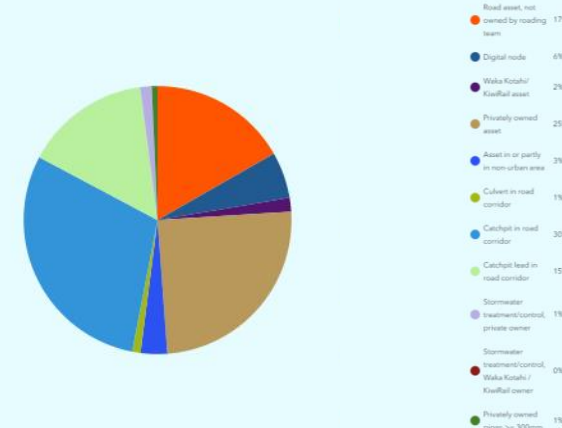
## Flagged Categorisation



## In Categorisation

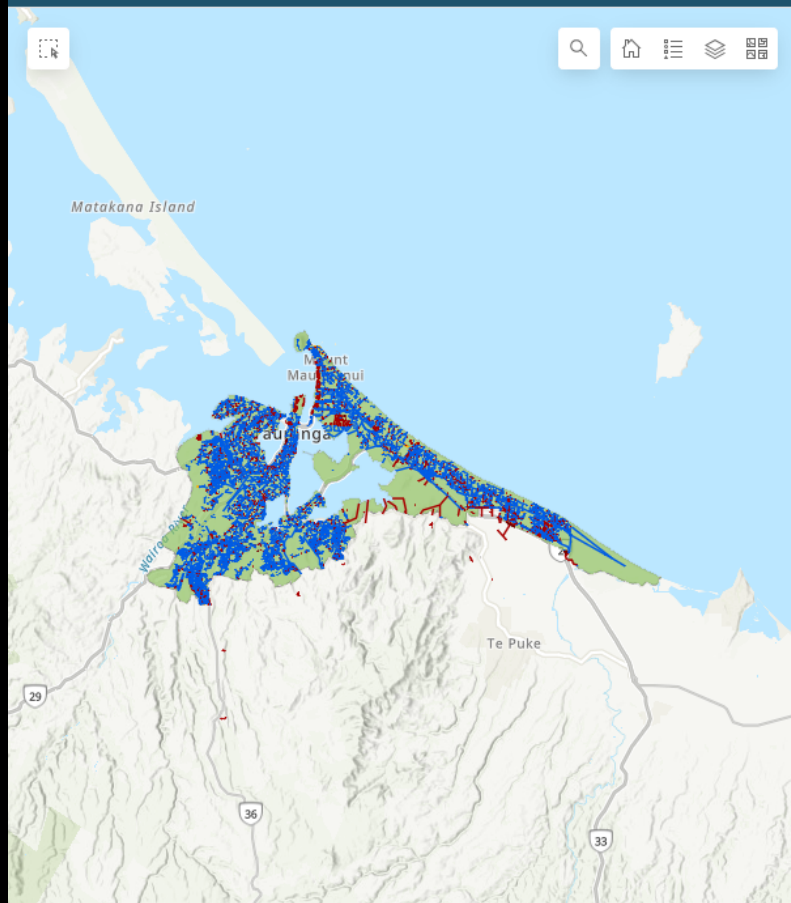


## Out Categorisation (Incl Digital)



Everywhere is unique

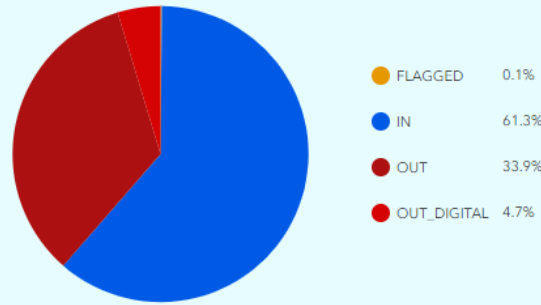
# Tauranga City



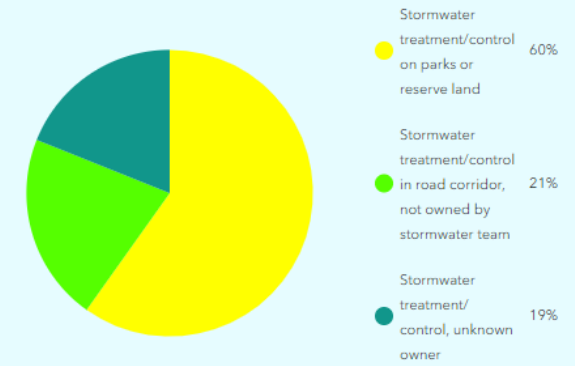
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Feedback tool

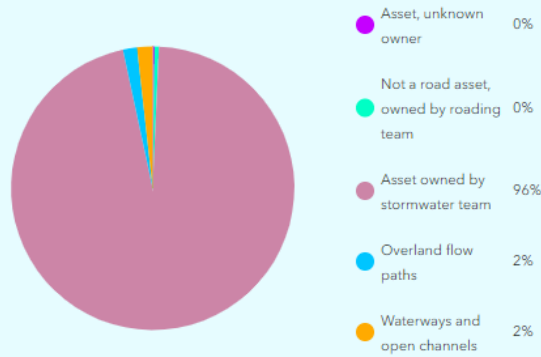
## Result



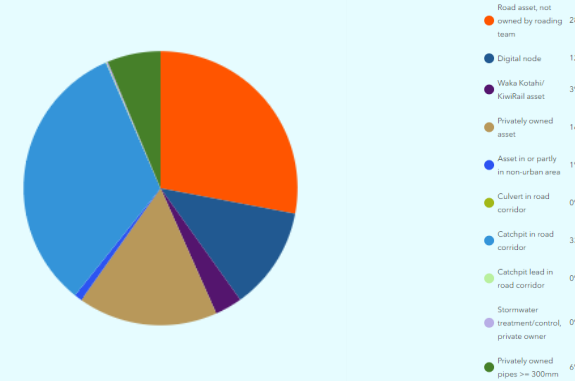
## Flagged Categorisation



## In Categorisation



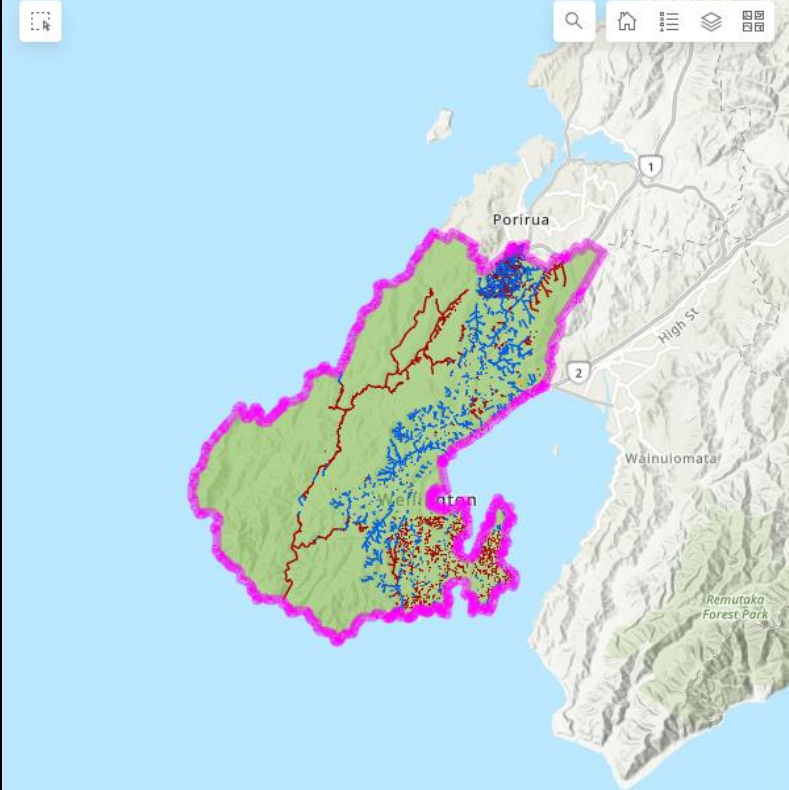
## Out Categorisation (Incl Digital)



Everywhere is unique



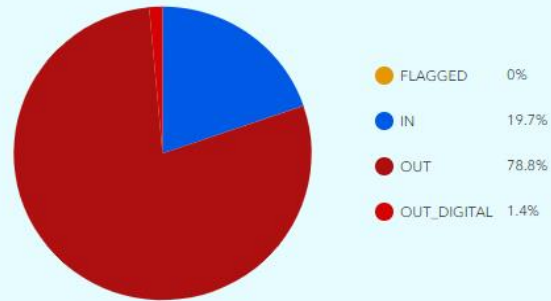
# Wellington City



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Feedback tool

## Result



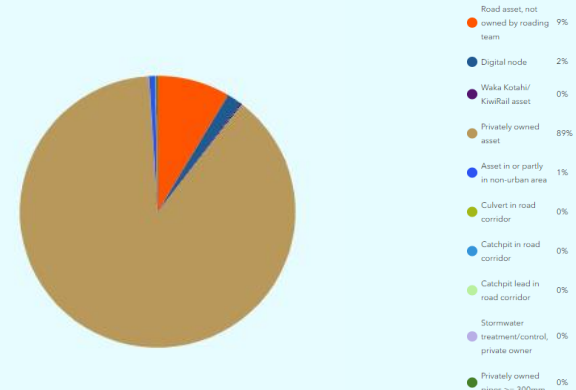
## Flagged Categorisation



## In Categorisation



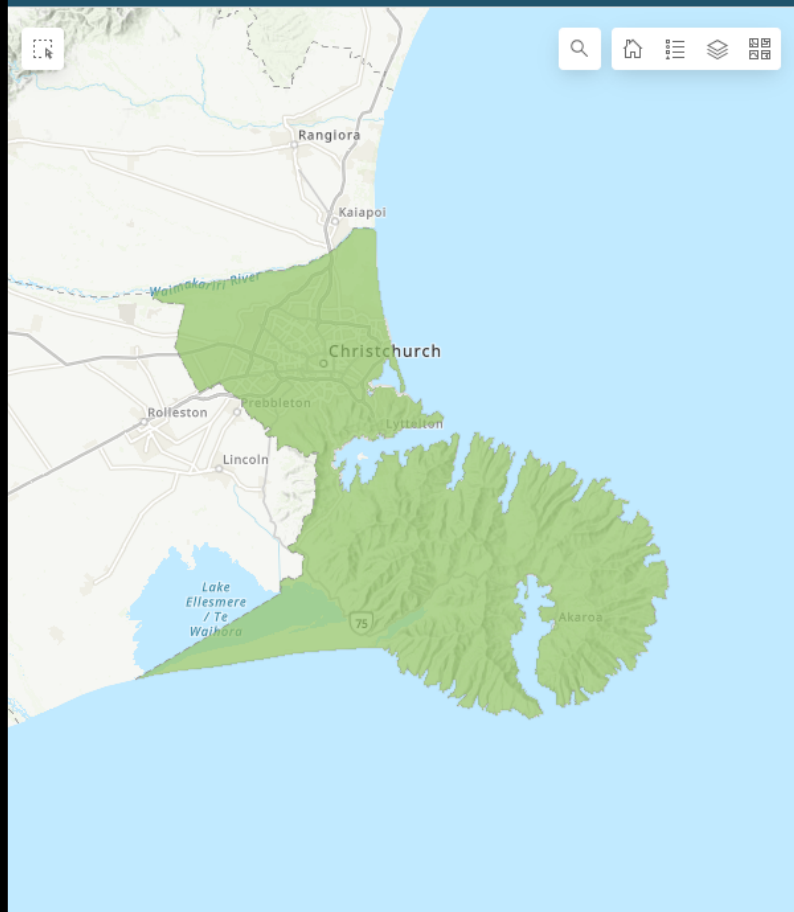
## Out Categorisation (Incl Digital)



Everywhere is unique



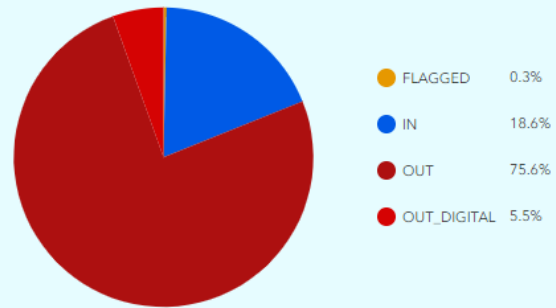
# Christchurch City



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Feedback tool

## Result



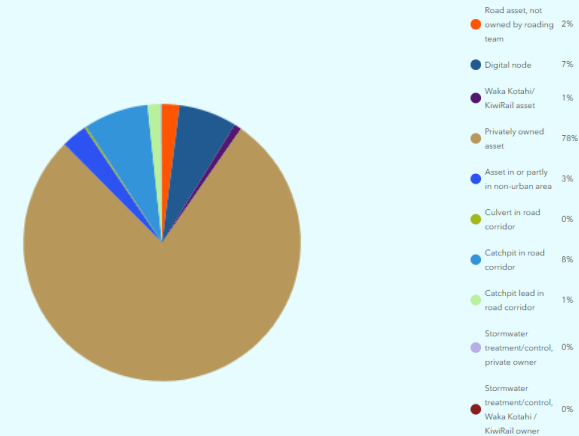
## Flagged Categorisation



## In Categorisation



## Out Categorisation (Incl Digital)



Everywhere is unique

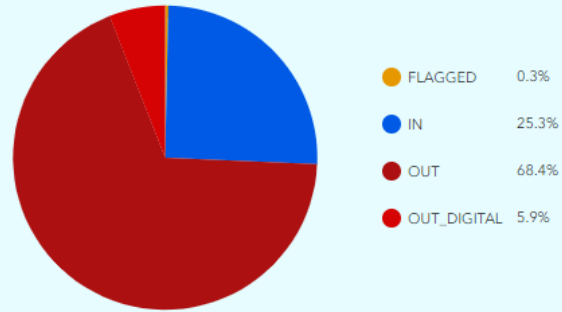
# ENTITY I



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Feedback tool

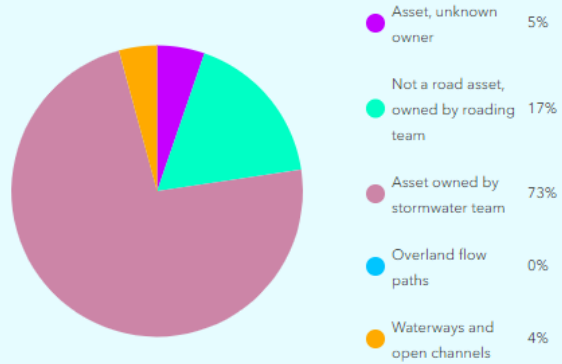
## Result



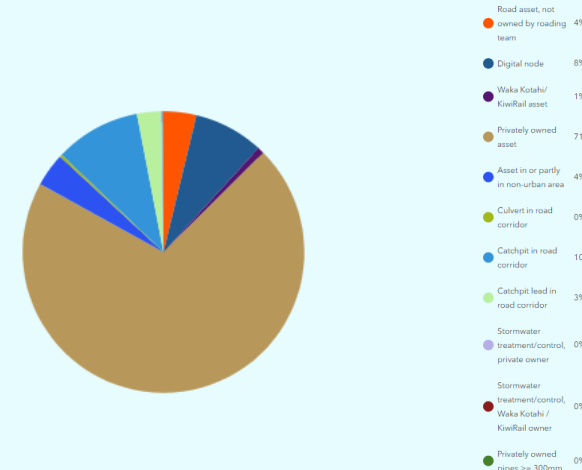
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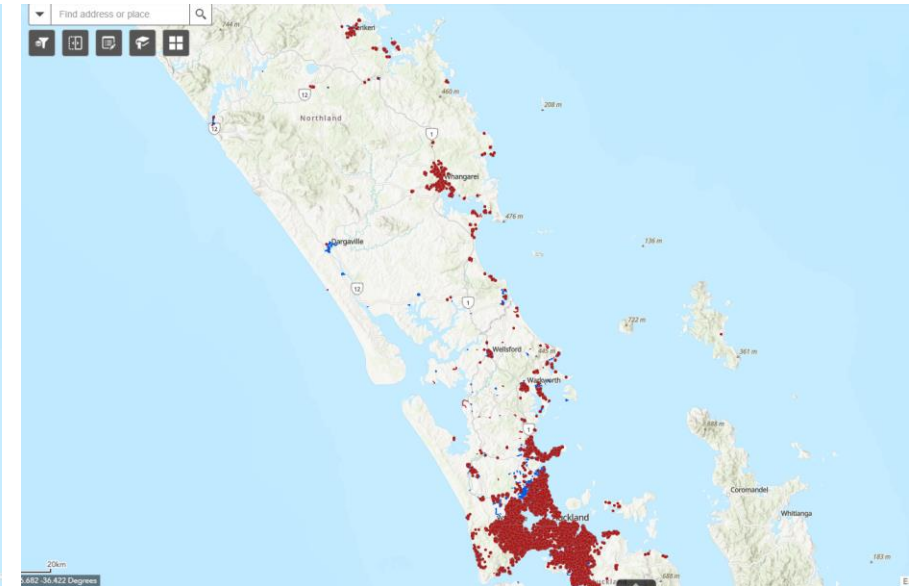
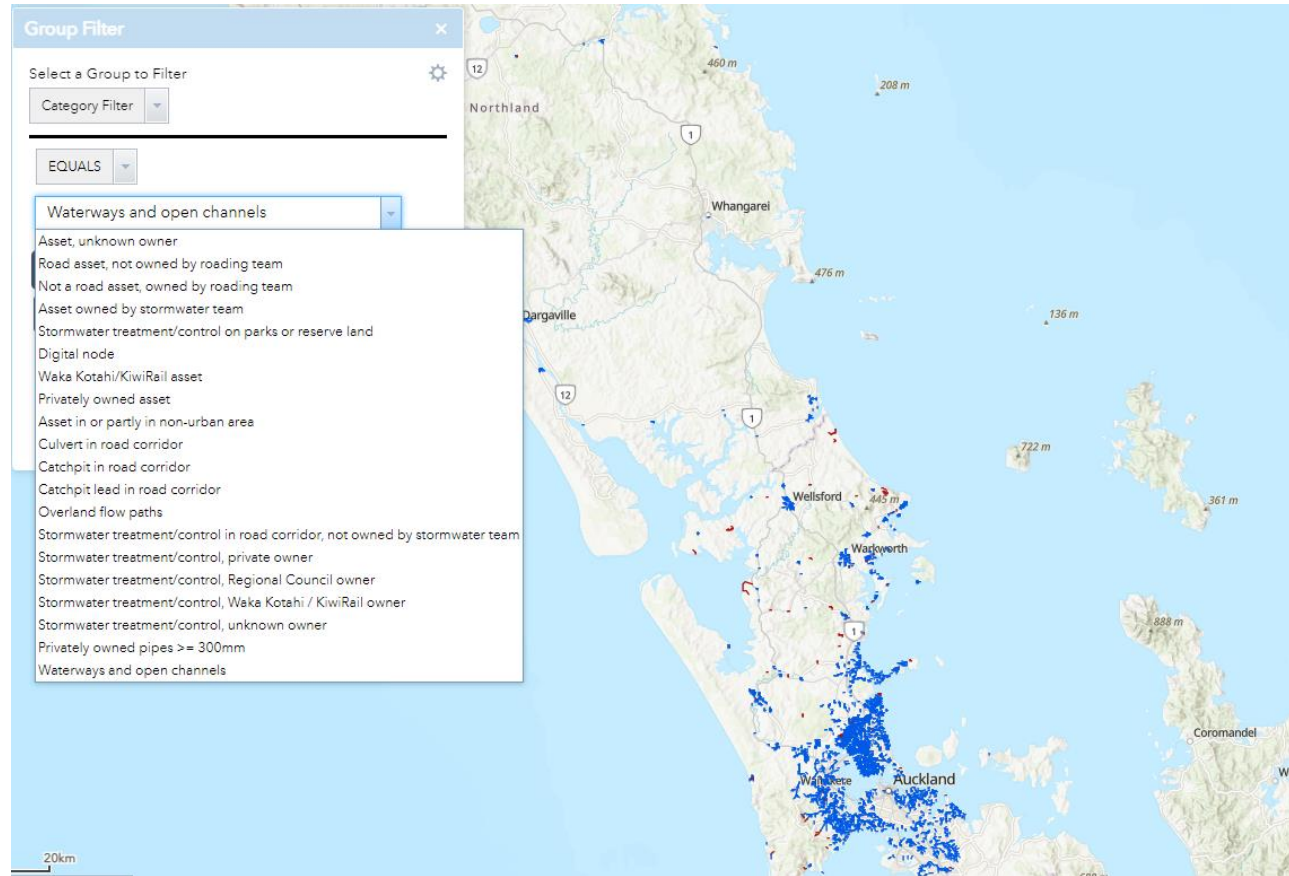


## Out Categorisation (Incl Digital)



Aggregation can happen at any scale

# Looking at more than one council at a time



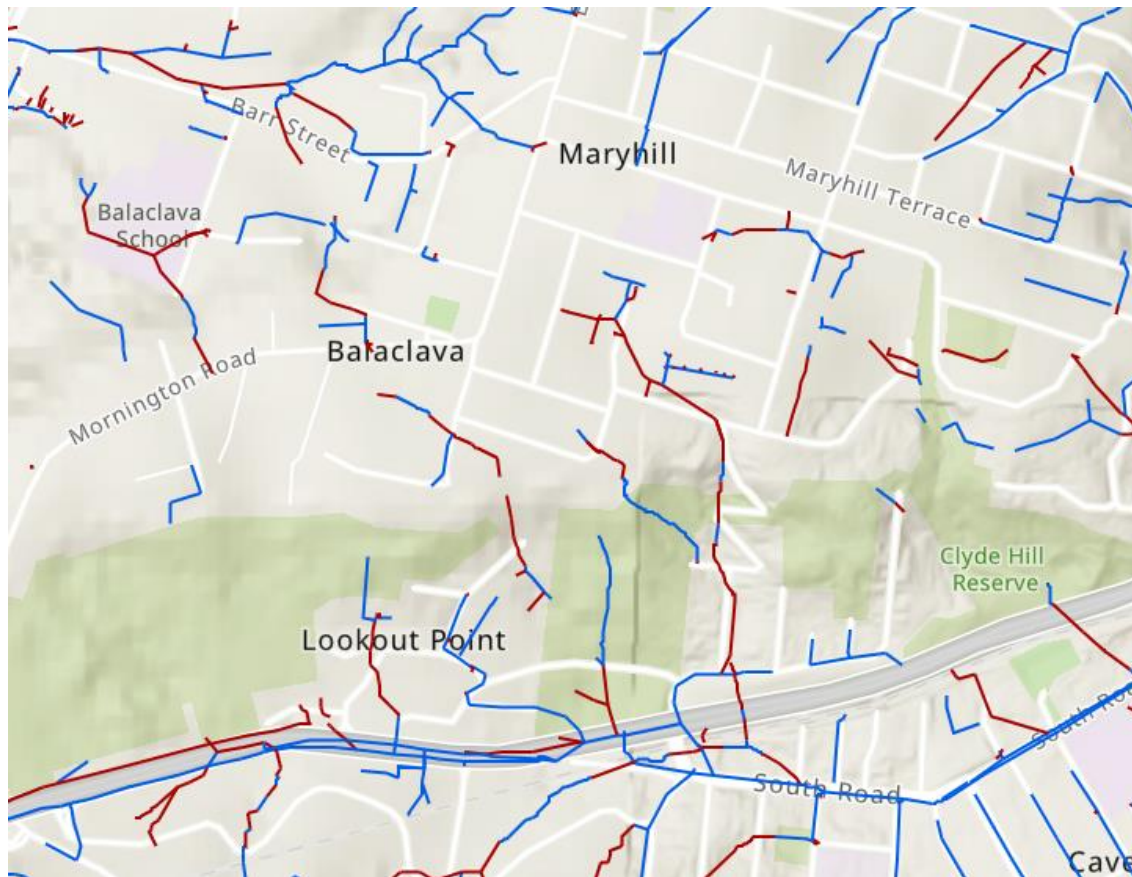
Finer details can be explored

# Asset Management is Collaborative



# Urban Waterways

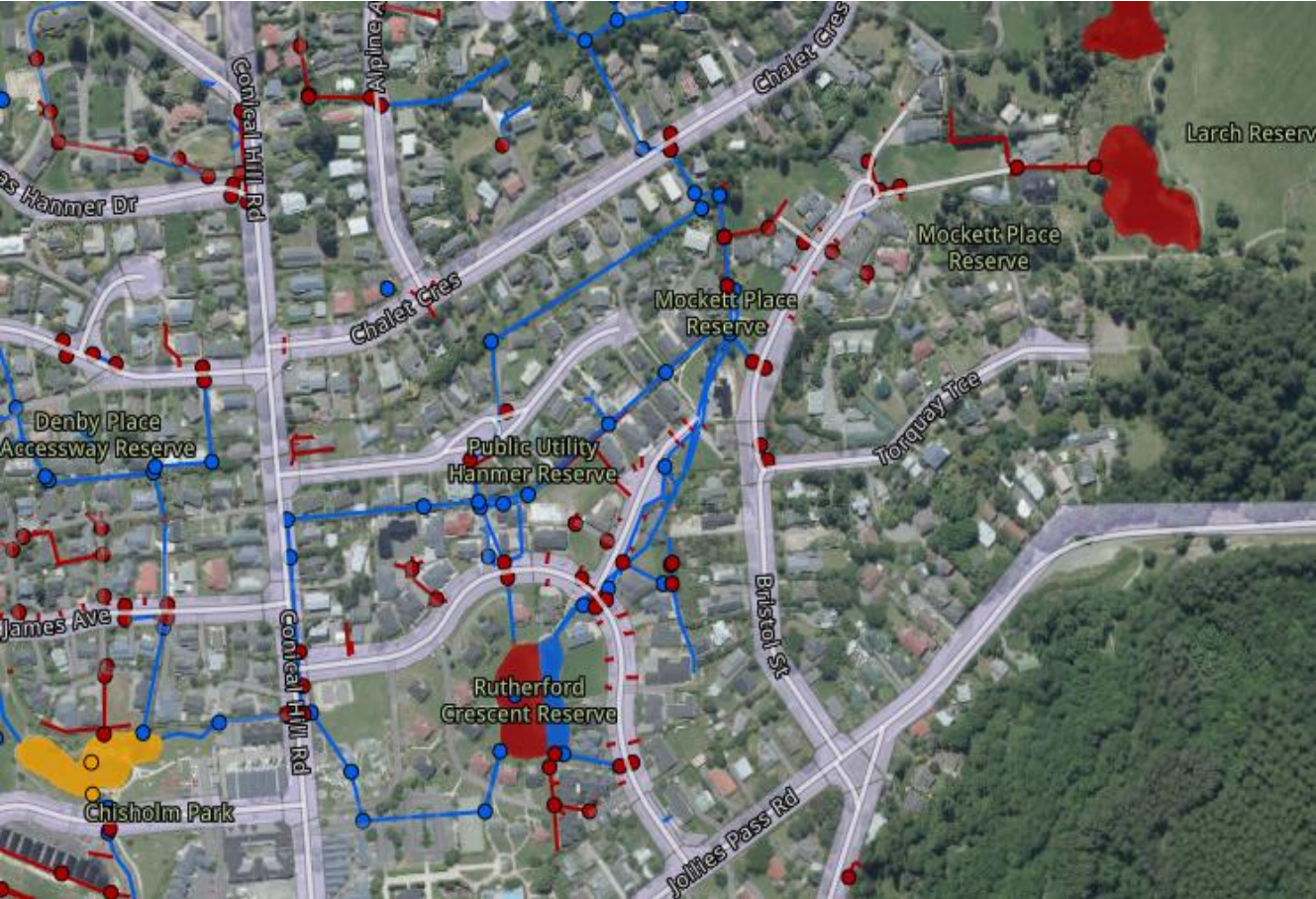
(and overland flow-paths?)



# Stormwater treatment needs to seize opportunities



# Mixed use assets





# Private assets





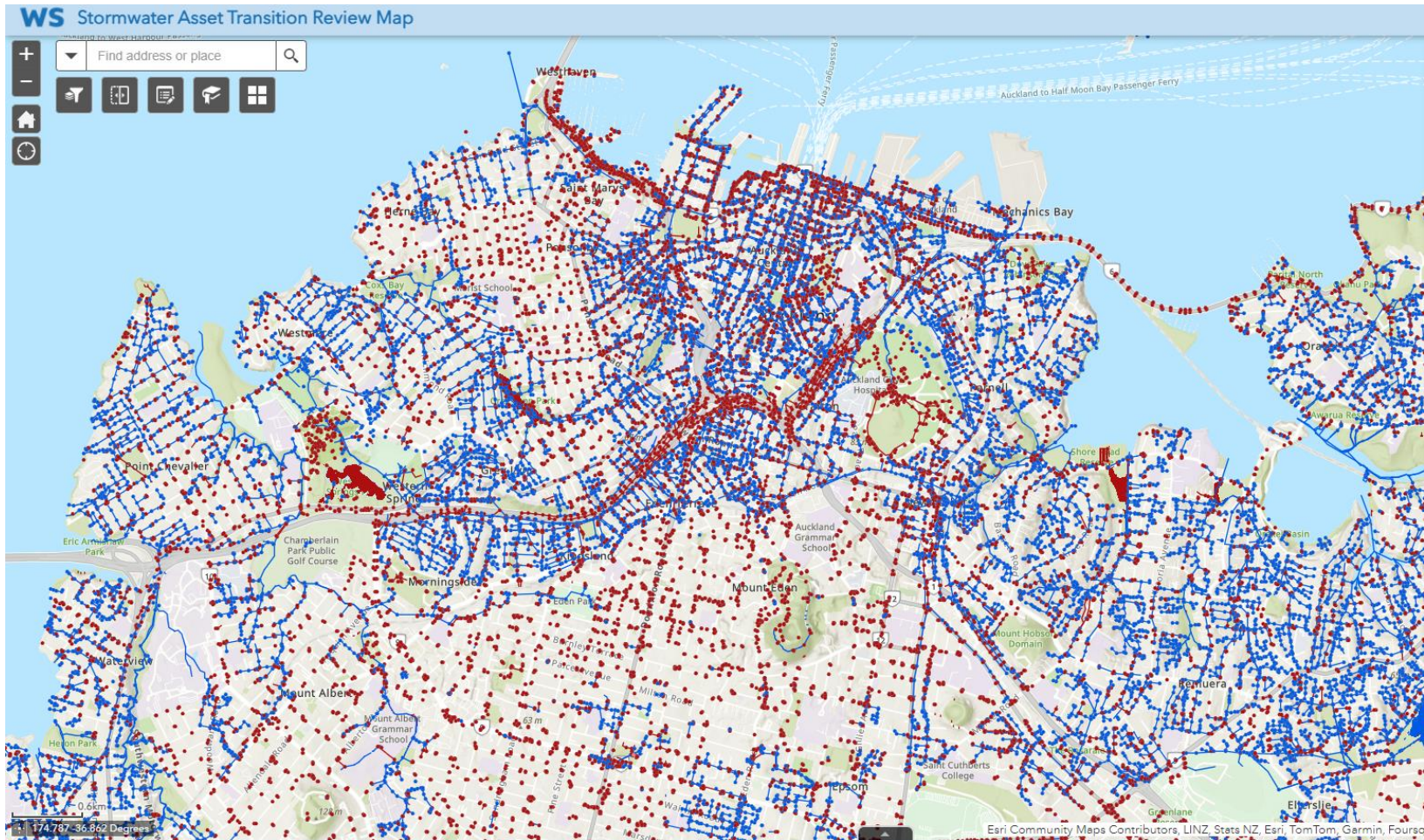
# 'Pseudo-private' assets



# Stormwater planning is collaborative



# Transport Assets



# Conclusions

- Data standardisation is essential
- Stormwater management requires a flexibility and collaboration
- Stormwater treatment has occurred due to opportunity
- Stormwater management requires integrated catchment planning

# Where is the data now?

- Available to councils via DIA
- Being handed across to Taumata Arowai

# Thanks to

- The people in the now dis-established National Transition Unit within the Department of Internal Affairs. Tight timeframes and an enormous task were met with dedication and hard work.
- Council staff who were already very busy brought their expert skills and institutional knowledge to the table, providing data and supporting the project on top of their day jobs, during a stressful time of change.
- The multi-organisation consortia team and Entity Leads worked together collaboratively, leaving their affiliations at the door to achieve the best outcome for the project. Ngā mihi nui ki a koutou.



**Thank you!**  
**Questions? Patai?**