



What the SWOC? Post Cyclone Stormwater Strategy Development

Kyleah Hess & Ben Severinsen



**CENTRAL
HAWKE'S BAY**
DISTRICT COUNCIL



Proudly brought to you by Water New Zealand

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

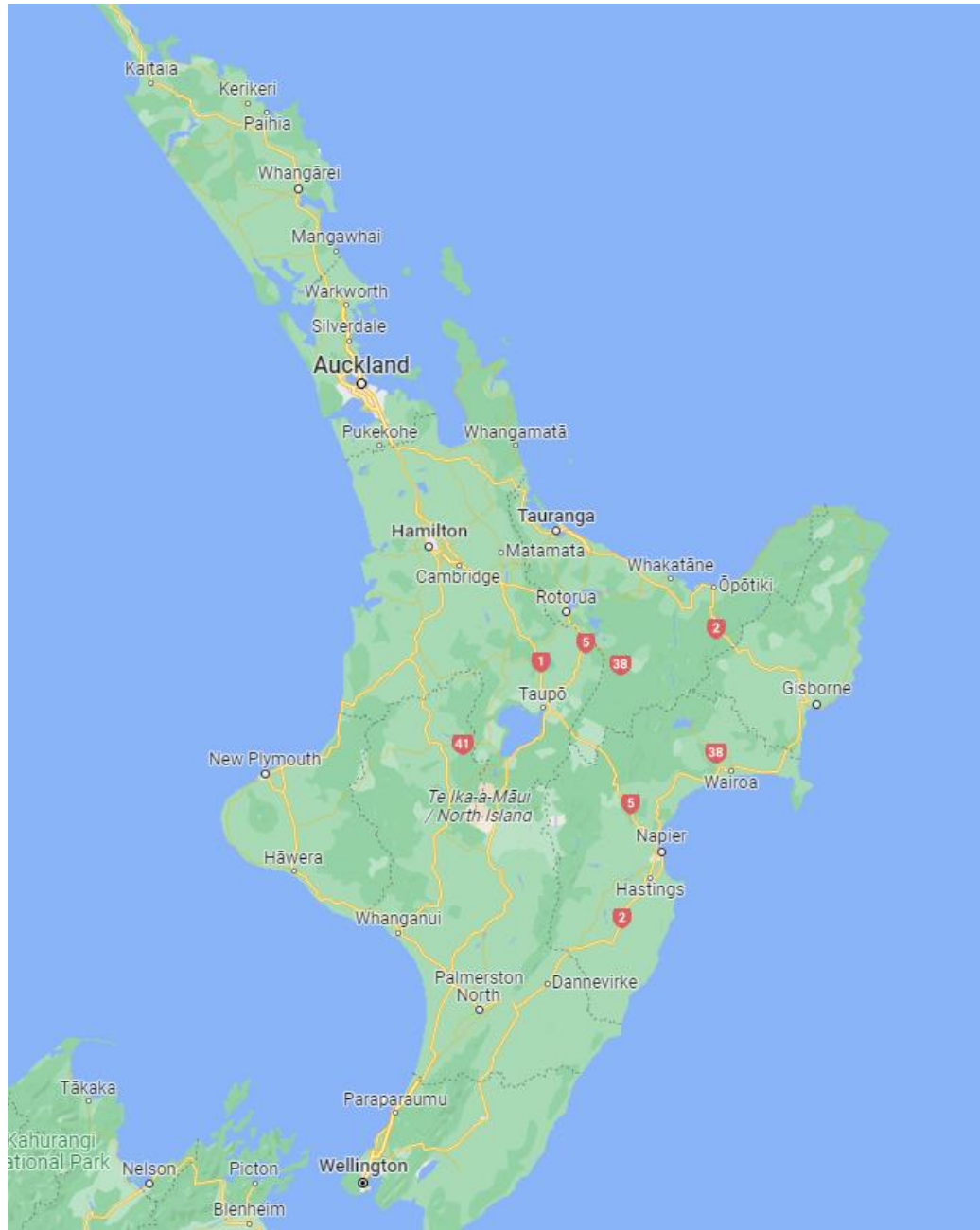
Introduction

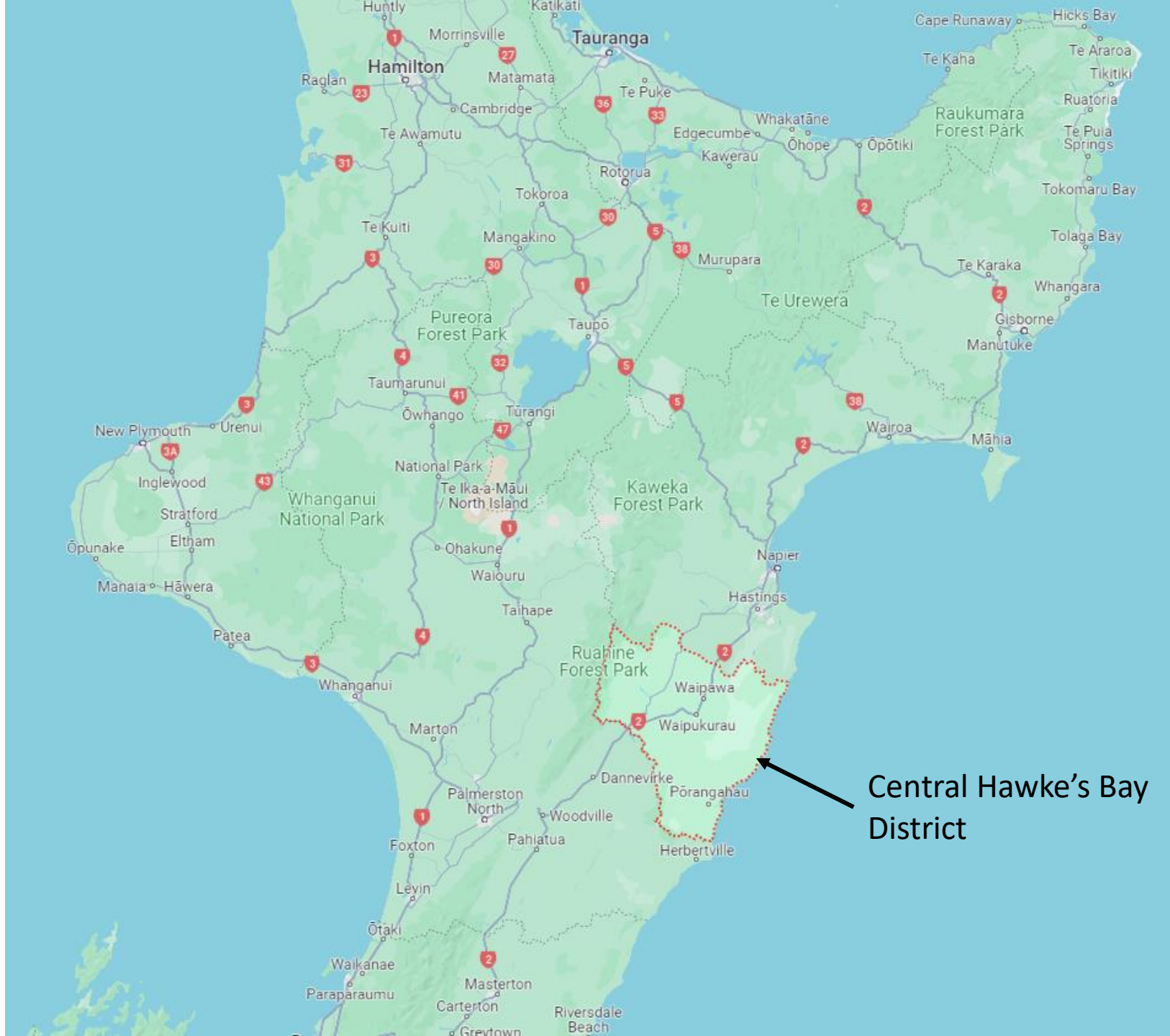


Kyleah Hess - Beca

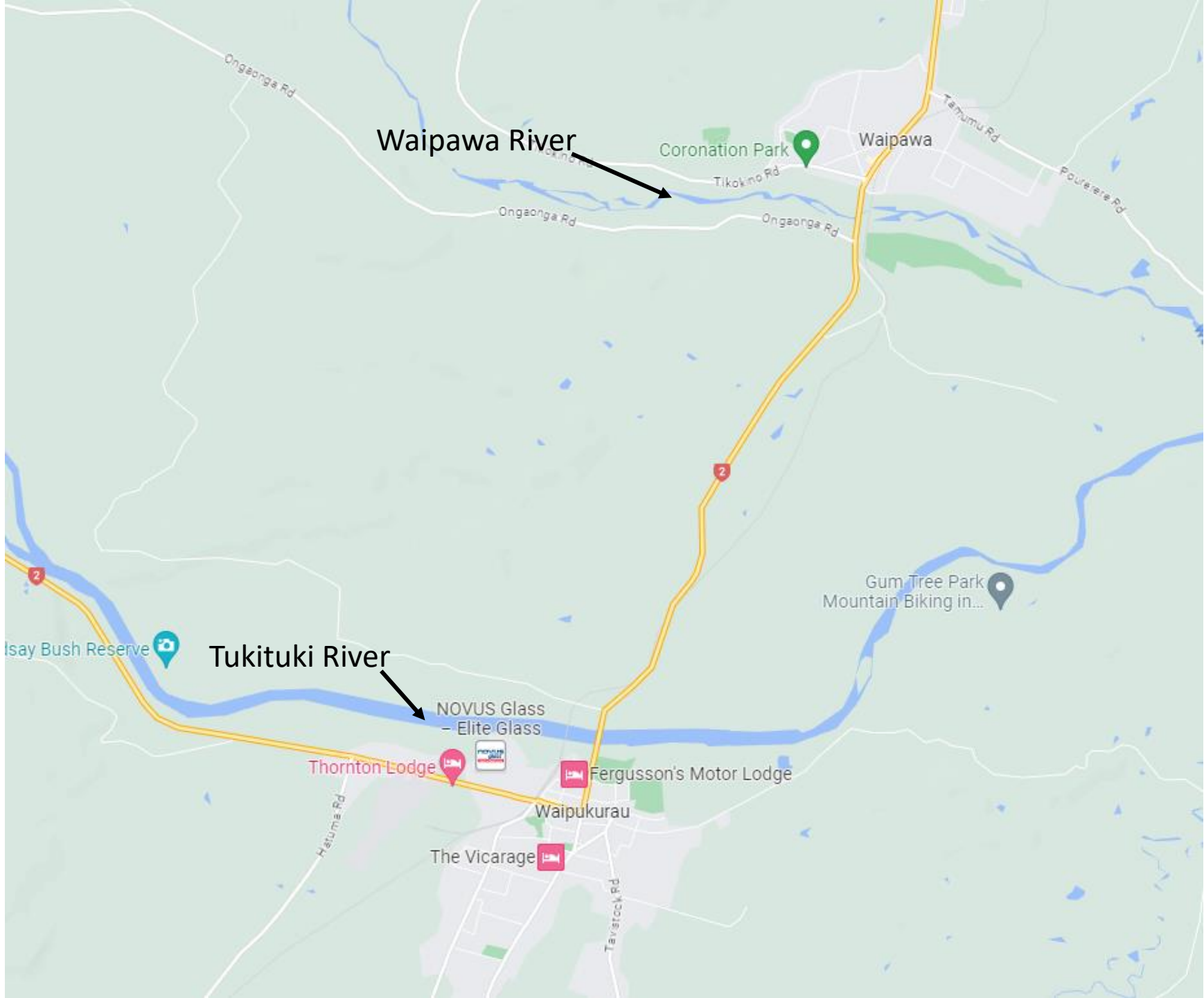


**Ben Severinsen – Central Hawke's
Bay District Council**





Central Hawke's Bay District



Cyclone Gabrielle

February 2023



Council's Initial Response

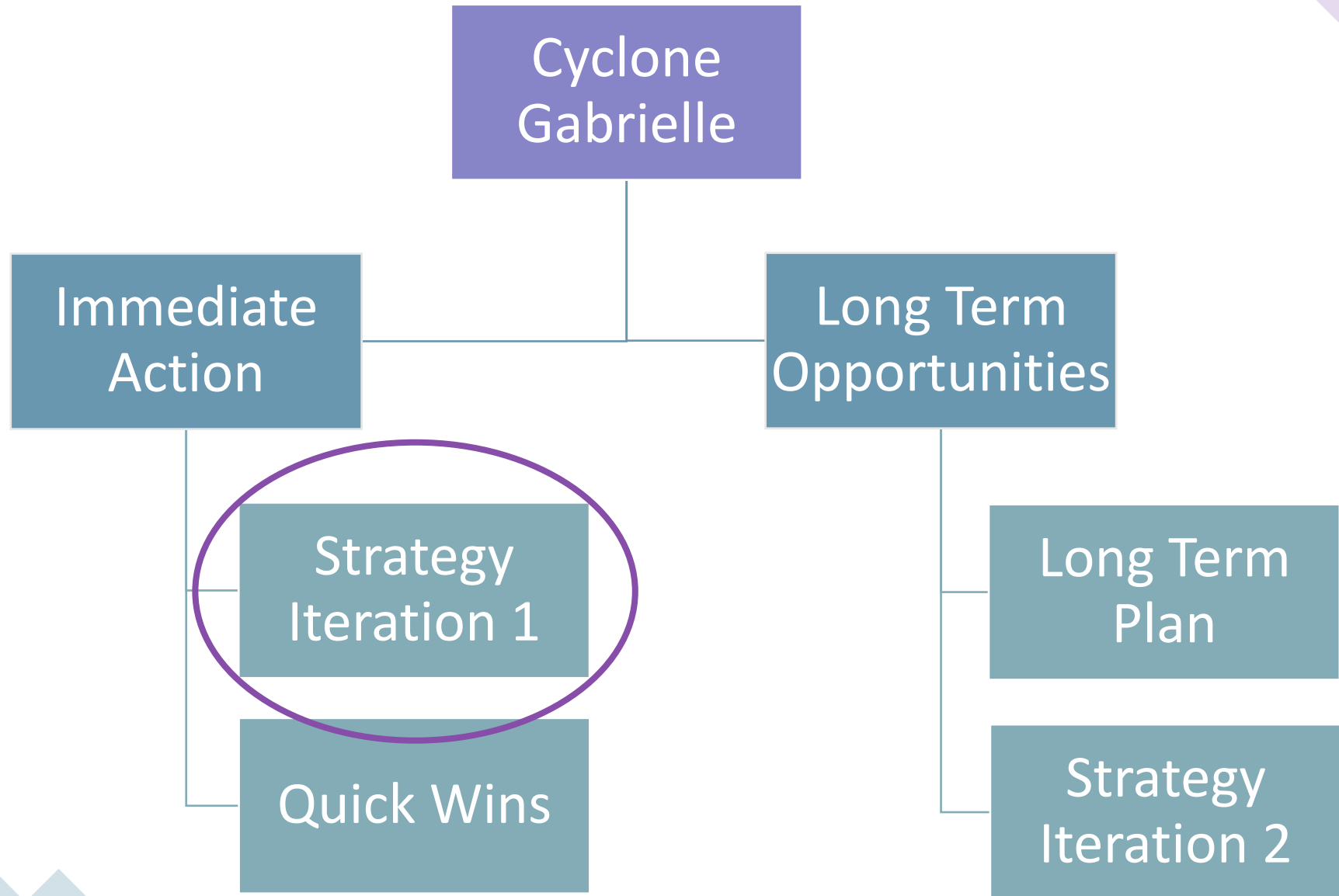
- Stopbank rebuild
- Open drain clearing
- Sediment removal





Community Response

- Heightened awareness of stormwater
- Stream maintenance concerns
- Push for Council to take action



Strategy Purpose



SUPPORT FOR CHBDC
STAFF DECISION MAKING
(ROBUST DECISIONS)



PROVIDE CLARITY TO
THE COMMUNITY ON
HOW COUNCIL
MANAGES RISK AND
PRIORITISES WORK



DEMONSTRATE HOW
FUTURE EXTREME
WEATHER EVENTS WILL
BE MANAGED

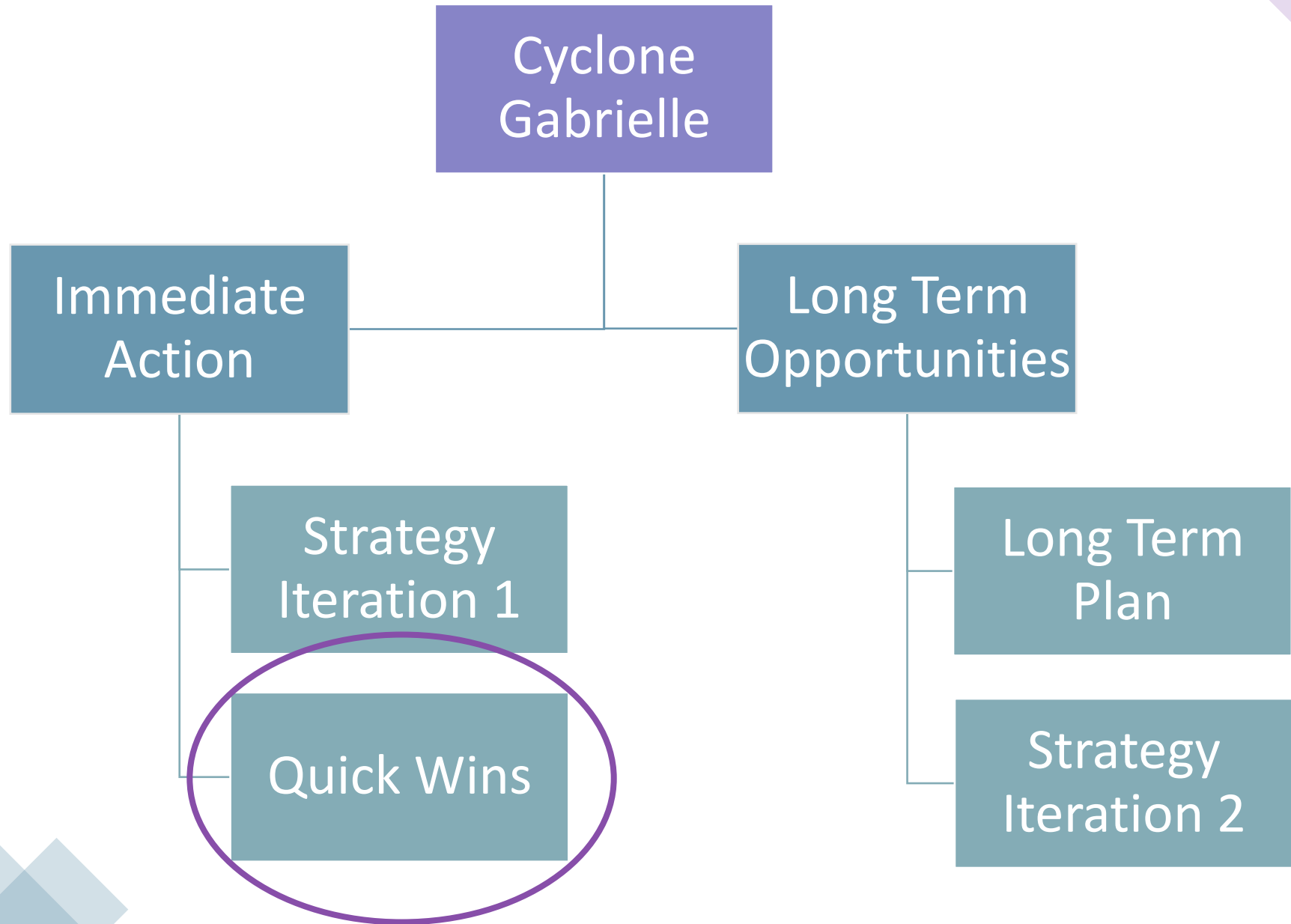


MAKE A PLAN FOR
FUTURE INVESTMENT
(SUPPORT FOR LTP AND
AP CYCLE)

STORMWATER STRATEGY – ITERATION 1

PROPOSED STRUCTURE & CONTENT





Quick Wins Programme



Installation of
Flap Gates

Pipe Size
Upgrades

Waterway
Bank
Stabilisation

Waterway
Maintenance

Prioritisation

Prioritisation Matrix

	Low (1)	Medium (5)	High (10)
Flood Risk		Some risk reduction	
Cost			Low cost
Scale of Benefits		Some benefits	
Constructability			Easy to construct
Environment	Little environmental benefit		
Final Score	31/50		

Maintenance Plan



Maintenance Plan



Inspection/Maintenance Activity



Target Frequency



Priority (Reduced Frequency)

Inspect open waterway grates

Twice per year or following 10% AEP storm event

High – could be reduced to once per year

Good Condition

Poor Condition

Open Waterways



Clear of sediment build-up, sloped sides, mowed grass



Vegetation/sediment/debris built-up in the waterway restricting flow, grass needs mowing, potential contaminants in the water



Banks planted with vegetation for stability, sloped sides to avoid slumping



Vertically cut banks slumping into the base of the waterway



SWOC

Severe Weather Outlook Checklist (SWOC)

Open Waterways

Catchpits

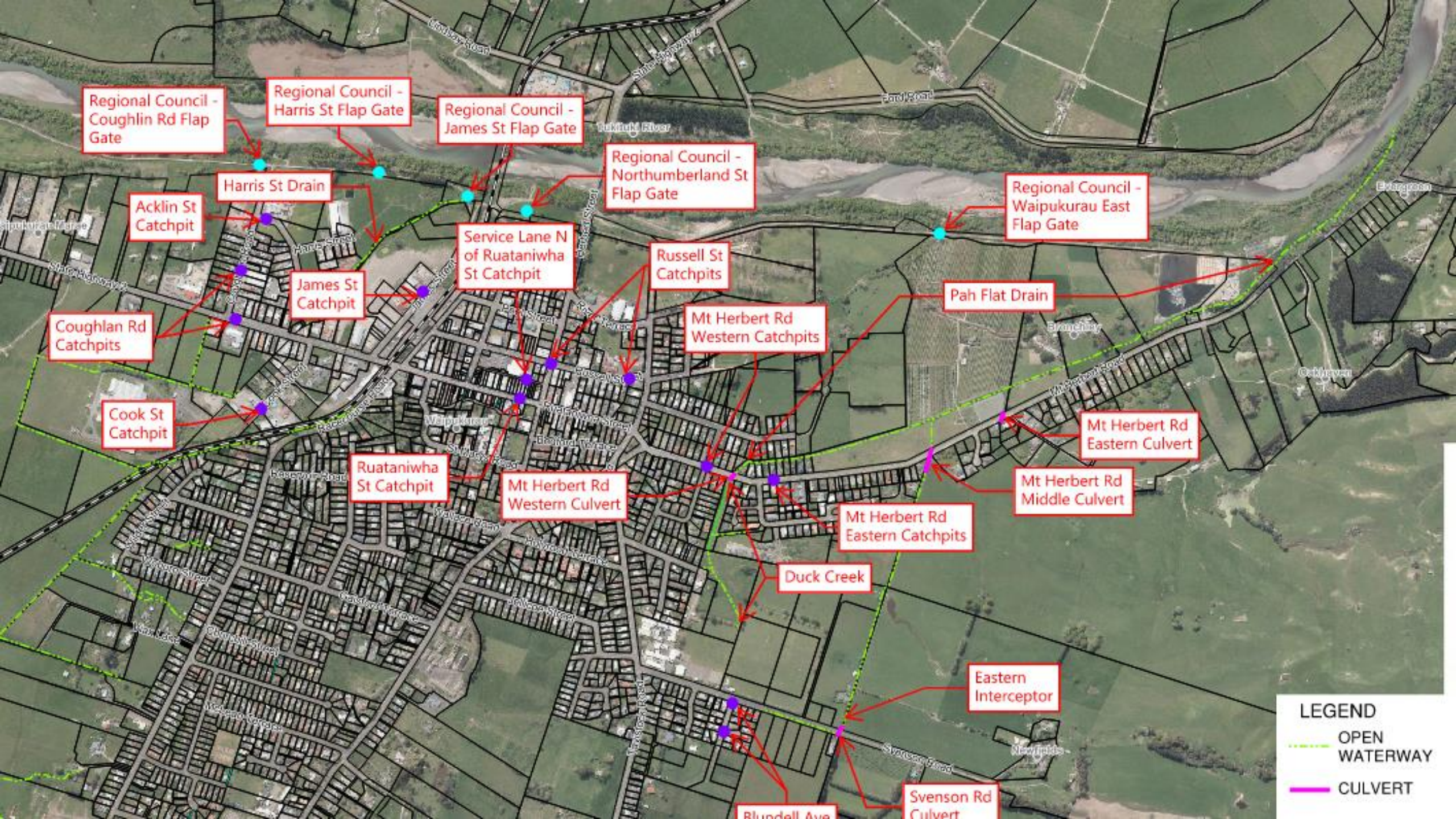
Culverts

Flap Gates

River Outlets

Other

	Checked?		Maintenance Needed?			Maintenance Performed?		
	Y	N	Y	If Yes, Details?	Y	N	Y	
Culverts <ul style="list-style-type: none">Inspect culvert inlet & outlets for blockages, clear as neededInspect inlet grates for debris/litter, clear as needed								
Otāne State Highway 2 Culvert				Report maintenance needs to Waka Kotahi		N/A	N/A	
Brogden St/Carruthers St Culvert				Report maintenance needs to Kiwi Rail		N/A	N/A	
White Rd Culvert								



Regional Council -
Coughlin Rd Flap Gate

Regional Council -
Harris St Flap Gate

Regional Council -
James St Flap Gate

Regional Council -
Northumberland St
Flap Gate

Regional Council -
Waipukurau East
Flap Gate

Acklin St
Catchpit

Harris St Drain

Service Lane N
of Ruataniwha
St Catchpit

Russell St
Catchpits

Pah Flat Drain

Coughlan Rd
Catchpits

James St
Catchpit

Mt Herbert Rd
Western Catchpits

Cook St
Catchpit

Ruataniwha
St Catchpit

Mt Herbert Rd
Western Culvert

Mt Herbert Rd
Eastern Culvert

Mt Herbert Rd
Middle Culvert

Mt Herbert Rd
Eastern Catchpits

Duck Creek

Eastern
Interceptor

Blundell Ave

Svenson Rd
Culvert

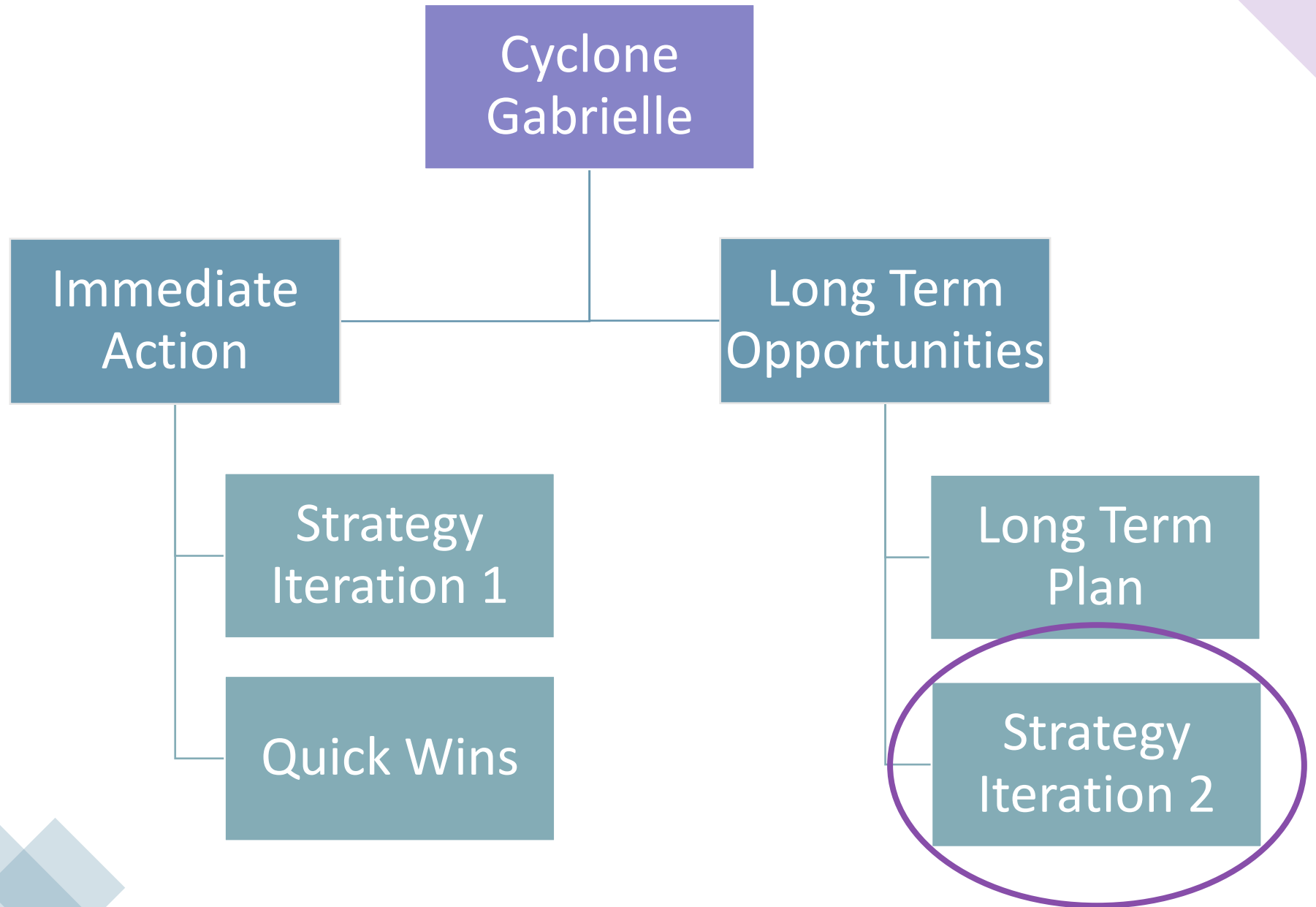
LEGEND
 --- OPEN
 WATERWAY
 --- CULVERT

SWOC in Action

November 2023

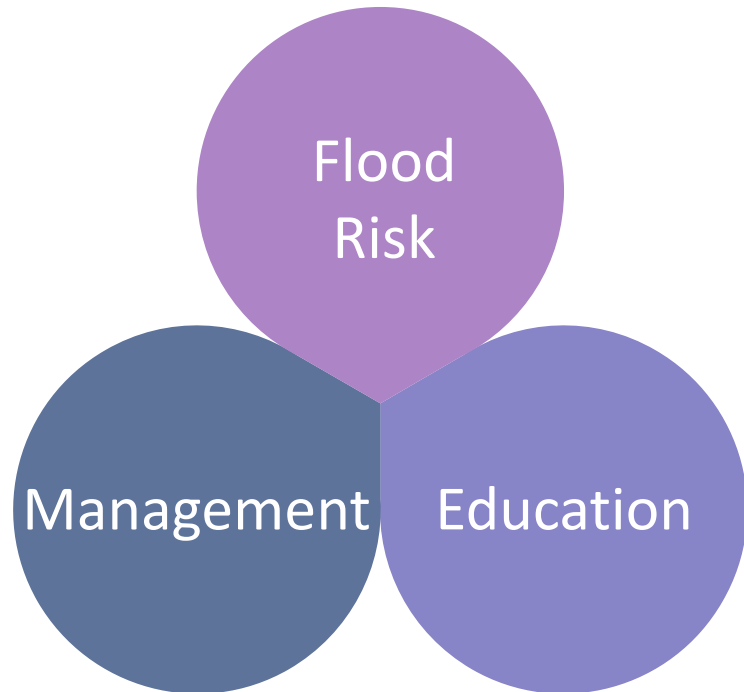
- Five open waterway blockages
- Three culvert blockages
- Two flapgates needing maintenance



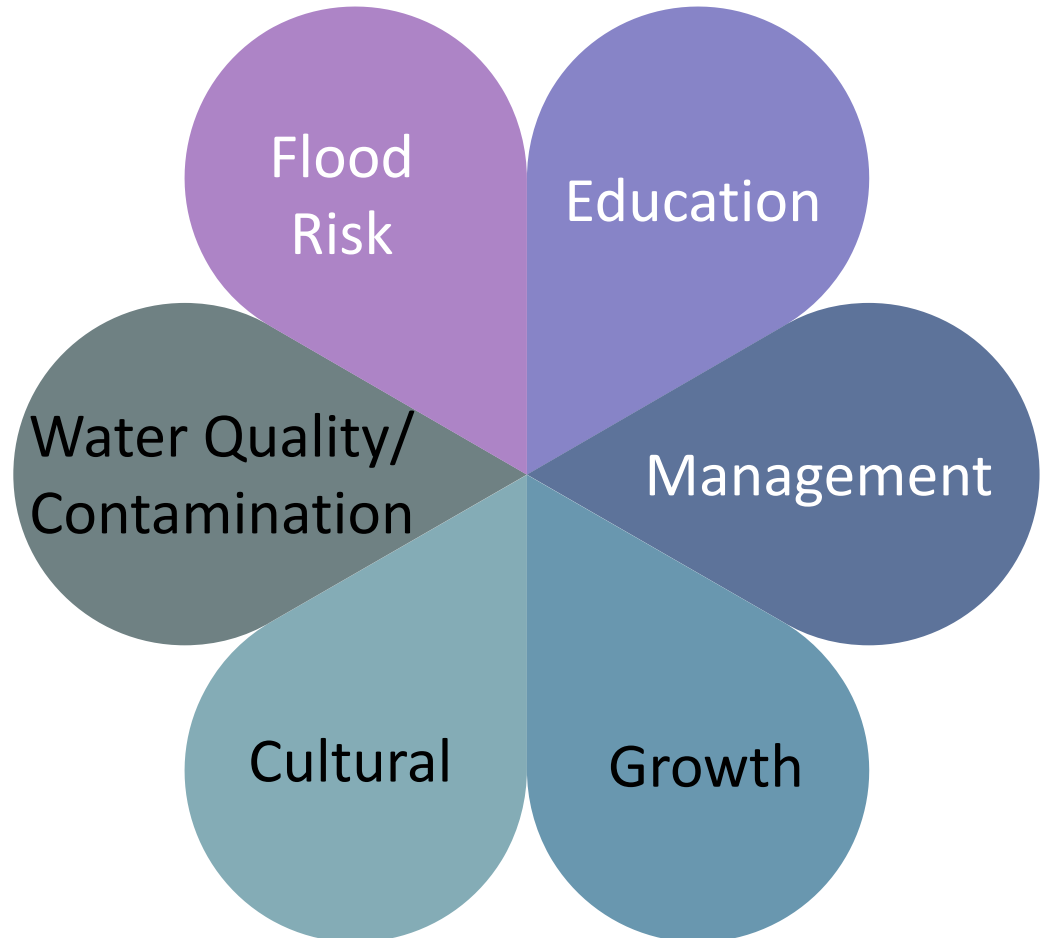


Prioritisation of objectives

Iteration 1 (qualitative):



Iteration 2 (comprehensive):

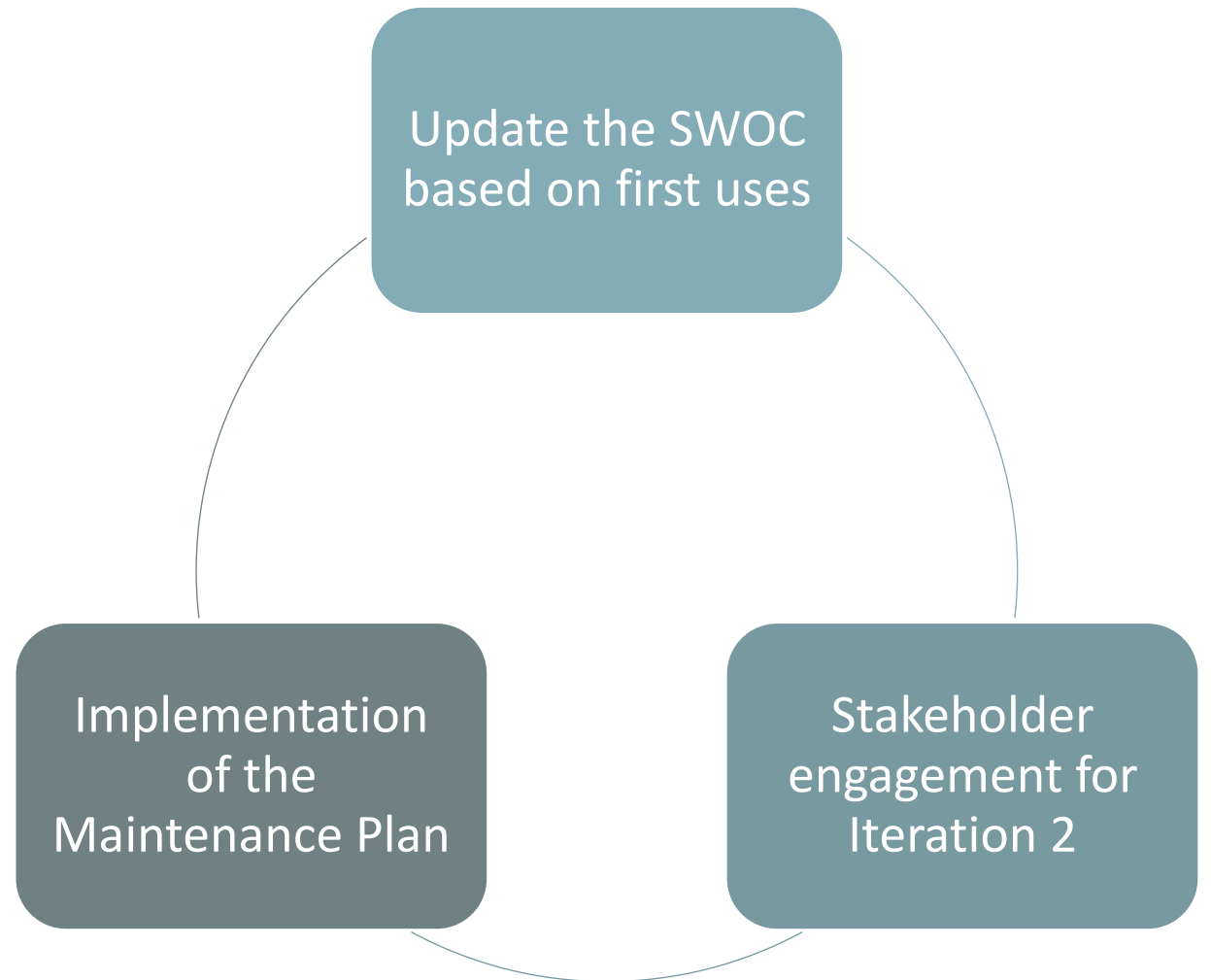


STORMWATER STRATEGY – ITERATION 2

PROPOSED STRUCTURE & CONTENT



What's next?



Thank you!
Questions? Patai?