



FRIENDS of Banks Peninsula Inc.

Akaroa's Community Environment Society since 1990

8/05/2024

Christchurch City Council
Long Term Plan

**Presentation by
FRIENDS of Banks Peninsula
regarding
596 WW Akaroa Reclaimed Water Treatment &
Reuse Scheme
8 May 2024**

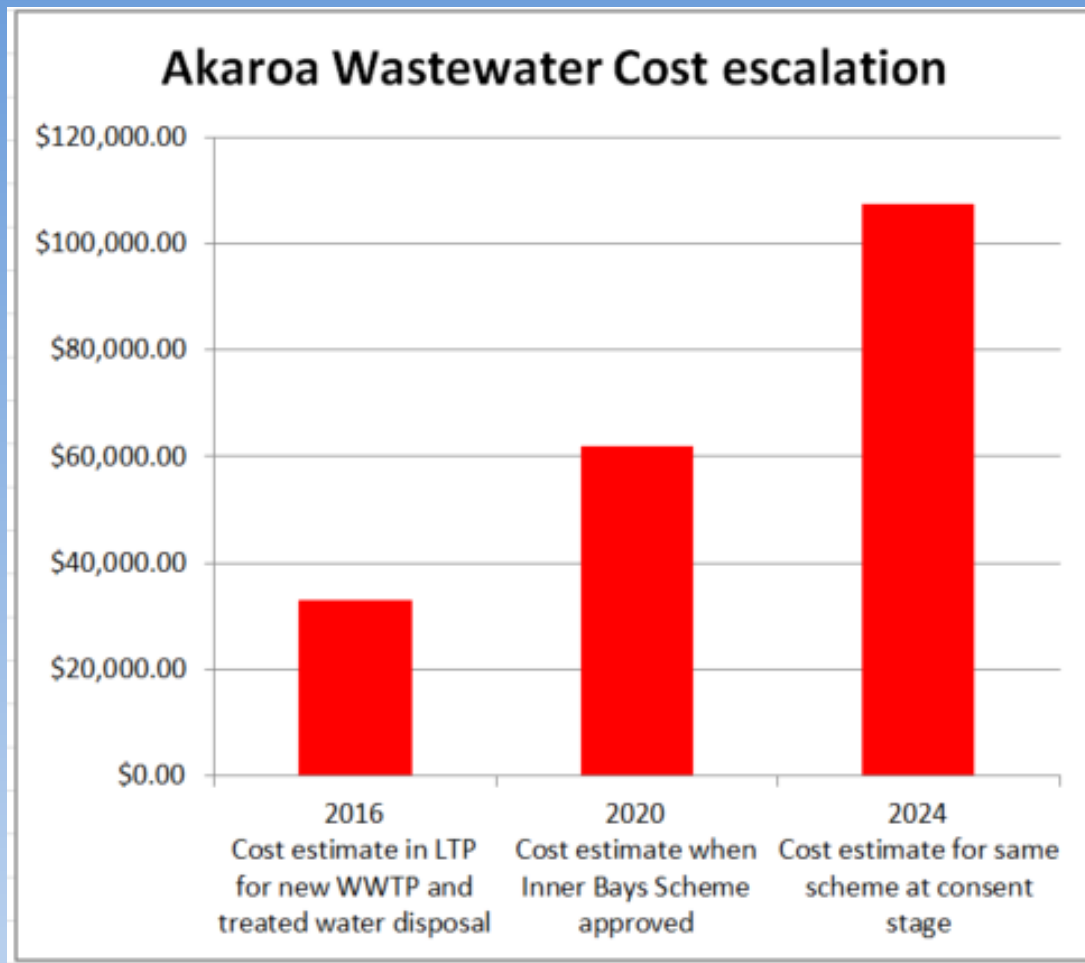
**Suky Thompson
Brent Martin**

(on behalf of submitters FOBP, Turner, Church, Moore)

Reclaim \$93.5 million

- 1. Cancel funding for the Akaroa Reclaimed Water Treatment & Reuse Scheme item 596**
 - 4th largest capital spend in LTP
- 2. Reclaim \$93.5 million proposed in LTP**
- 3. Develop a solution that is:**
 - Cheaper to build and run
 - More resilient to climate change
 - Lower risk

Escalating capital cost



- \$107 million total cost includes:
 - 13.9 million spent to date
 - \$93.5 million budgeted in 2024 LTP
- Cost per connection of \$100,000

Existing and proposed systems

- Existing system simple and gravity fed
- 2015 ECAN
 - granted consent for new Treatment Plant on top of Takamatua Hill
 - declined Harbour Outfall because land disposal not adequately researched
- Council has spent 9 years trying to find a land-based solution



Problems with consent Application

- 4 April - Community Board informed Duvauchelle likely to be added to Akaroa system, but this is not in the lodged application
- 8 April - BECA reports that application modelling underestimates wastewater volume in wet winters (not including Duvauchelle)
- 22 April - ECAN decides to publicly notify
- Application as lodged now unlikely to be consentable

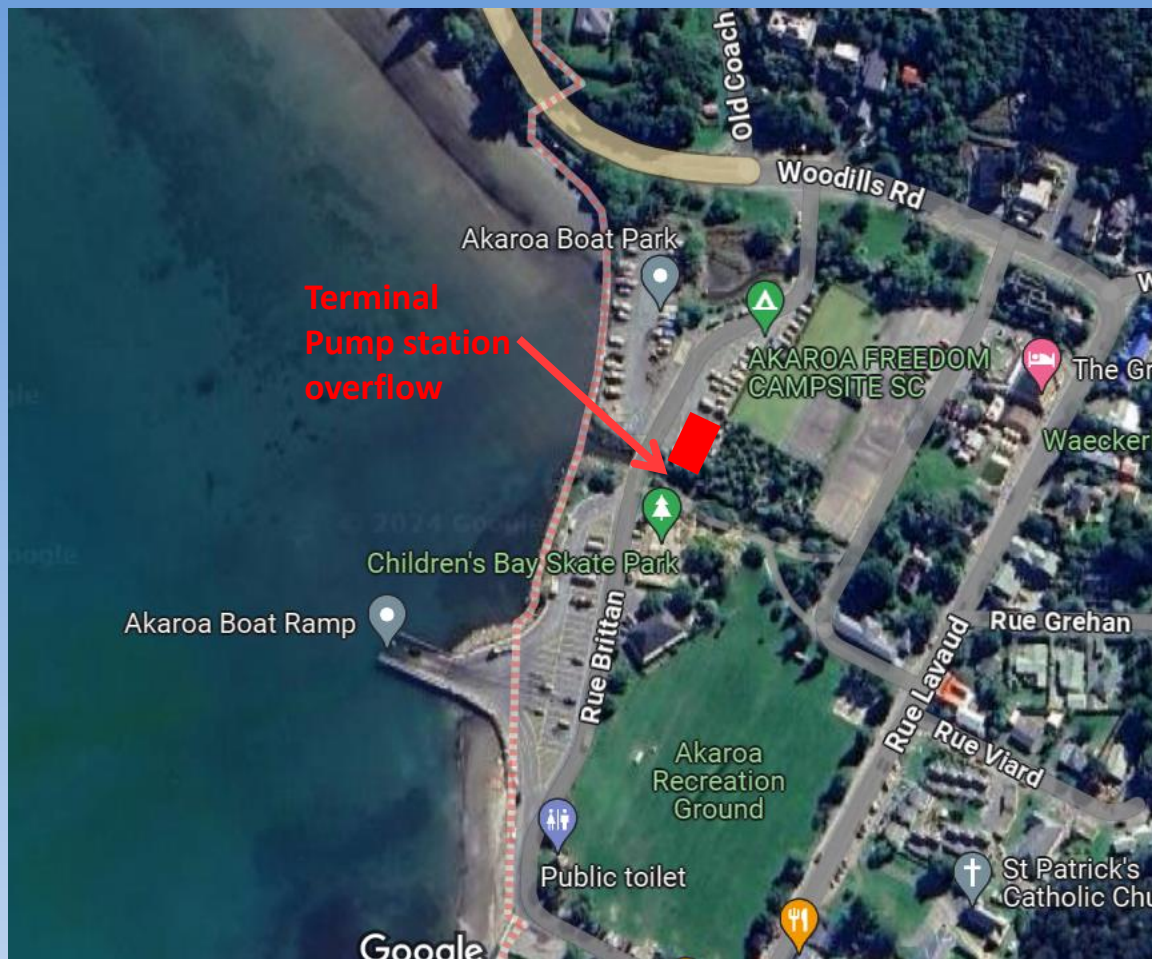
BECA revised modelling

- System as proposed now expected to:
 - Overflow treated wastewater approx 1 in 2 years
 - Overflow raw wastewater more often than 1 in 5 years
 - Be unable to process all wastewater in high flows
- Beca advise
 - Additional capacity margins needed
 - Extreme storms, not taken into account by this modelling, will become more frequent
- Application as lodged does not deal with any of these issues or include Duvauchelle

Overflow site at Main car park

Public activities in vicinity

- Skatepark
- Playcentre
- BMX track
- MiniGolf
- Boat Ramp
- Boat store
- Freedom Camping
- Recreation Ground
- Major events location
- Tennis Courts
- Croquet Club



Raw Wastewater Overflows

- All of Akaroa's wastewater will be piped to the Terminal Pump station situated in its most flood prone area
- Even with a 300m³ buffer tank added, raw sewage is expected to overflow 1 in 5 years

Overflow is at tidal Grehan stream mouth



Overflow area floods regularly in heavy storms

Treated Wastewater Overflows

- Application stated:
 - 12,000m³ of storage to be built, sufficient to contain all treated wastewater when it can't be irrigated, over 50 year period studied
 - Further 8,000m³ applied for as future headroom if needed
- BECA report graph for most recent 7 years shows:

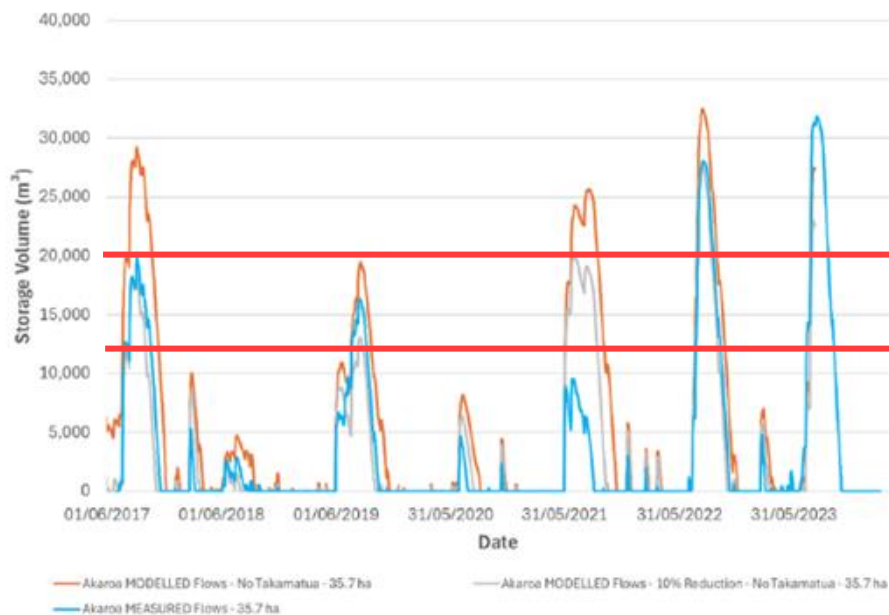


Figure 6-1: Comparison of Irrigation Performance with Modelled and Measured Flows (PDP – Appendix A)

- 4 overflows at 12,000m³ storage
- 2 overflows at 20,000m³ storage
- Overflows can last weeks and are huge volumes
- At same location as raw overflows
- Graph does not include Duvauchelle

Treatment plant bypass

- Application states:

The applicant has committed to a 'no bypass' approach to wastewater treatment

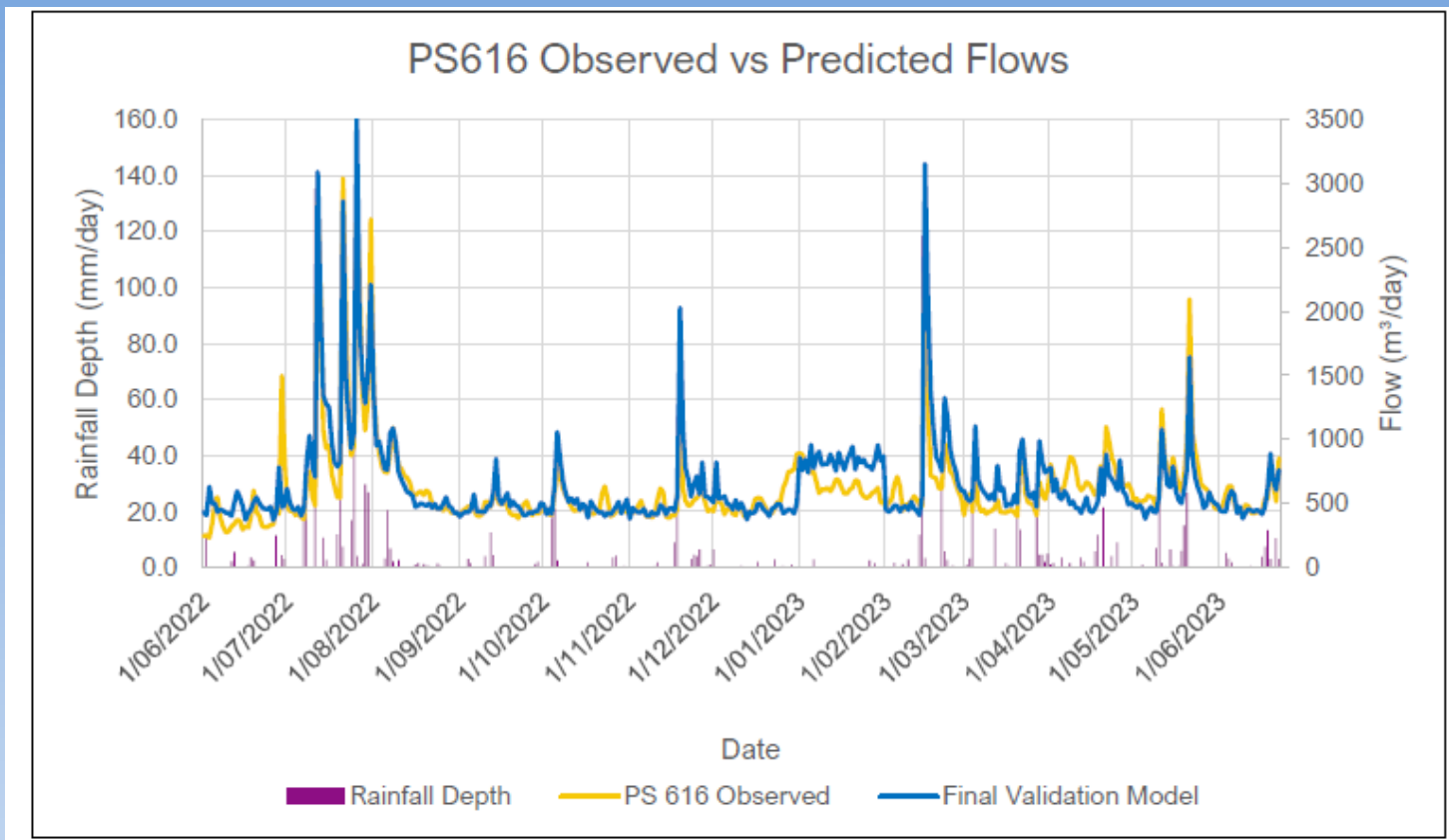
- Beca report states:

Council will explore a high flow bypass for the treatment train which will pass higher daily volumes to the irrigation system

- Council had dropped bypass flows in 2016 due to community concern. Now they are back.

Infiltration causes the capacity issues

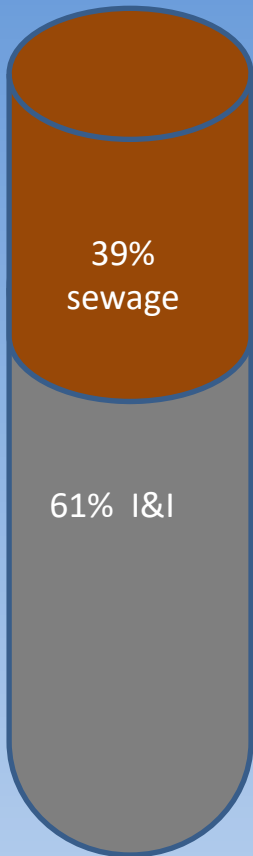
- Beca graph showing wastewater flows and rainfall
 - Spikes are due to rain derived infiltration



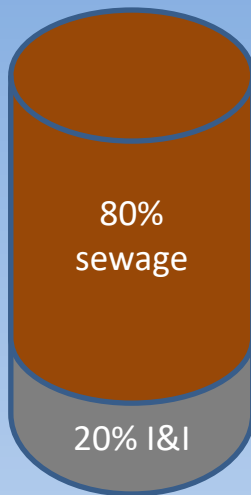
Prioritise I&I reduction

- I&I issue raised by all submitters during 2020 consultation.
- Council decision *recommends that the Council aims for **less than 20% inflow and infiltration***
- Application predicated on reducing I&I **by 20%**
- No explanation of why target has changed

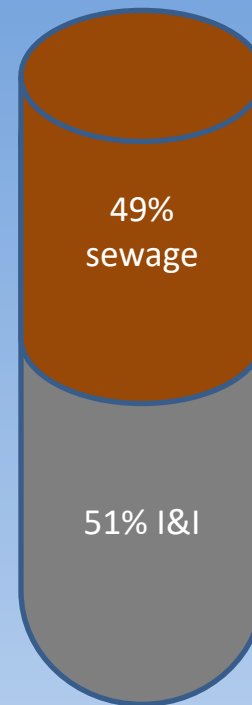
Impact of I&I reduction on total flow



2020 situation



Council 2020 resolution:
Recommended I&I reduce to less than 20%
= Total volume reduced by 51%



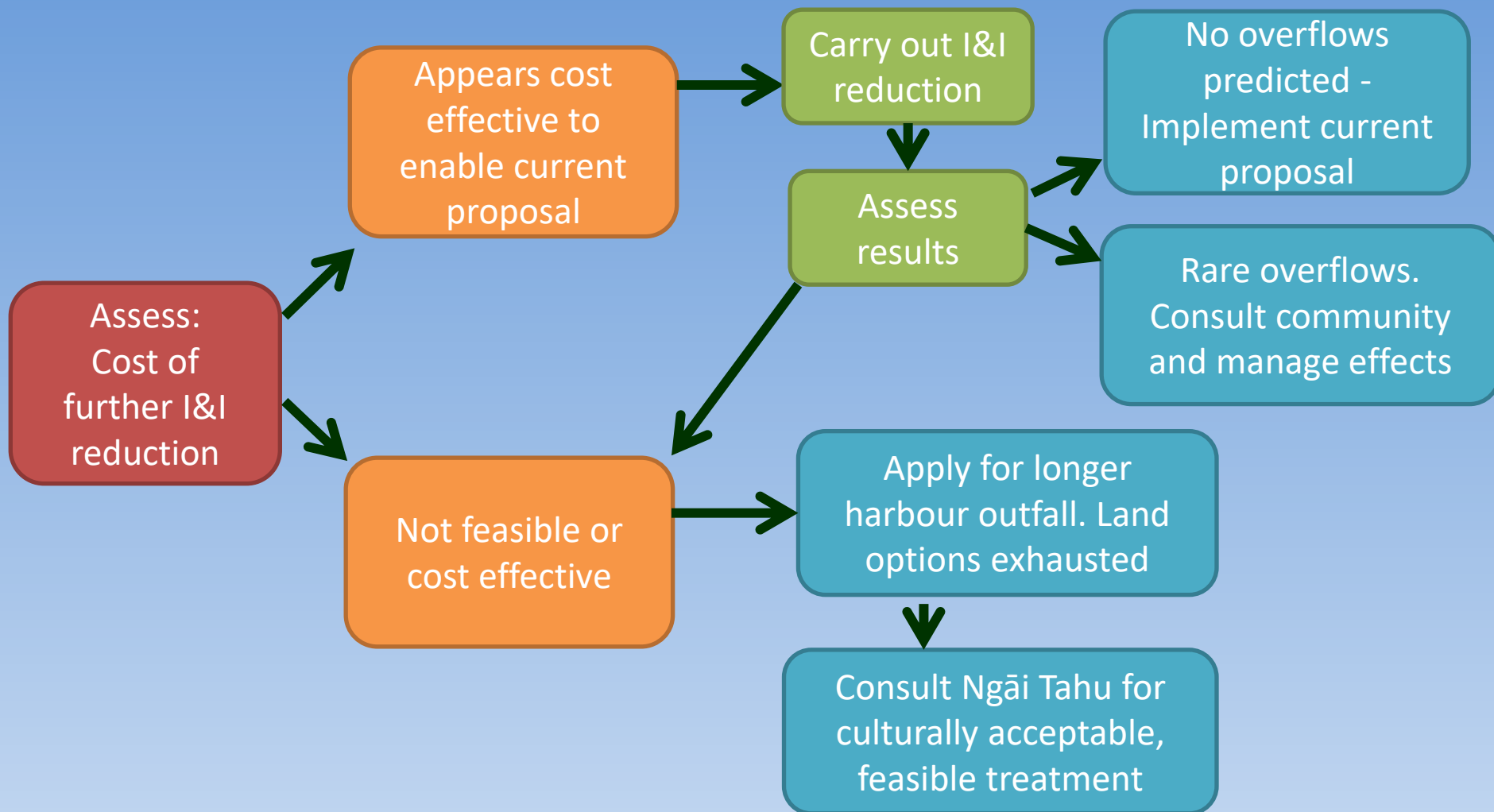
Application proposal:
reduction of I&I by 20% and retentate reduction
= Total volume reduced by 21%
Not achieved

Summary of issues

- Application is not consentable in its present form
 - significant environmental effects have not been assessed
 - design parameters are incorrect
- Fails to achieve cultural objective
 - wastewater will overflow to harbour
- Badly leaking pipes are not compatible with
 - fixed capacity irrigation fields
 - pumping up big hills and over long distances
- Less resilient to climate change than existing system
- Problem of fixing pipes and ongoing beach pollution from leakages left for the future
- Costs set to increase further with current proposal

Solution

Re-arrange the work schedule



Conclusion

- Cancel current funding for Akaroa Treated Wastewater System
 - Spending a further \$93.5 million on a system that will regularly overflow is untenable
- Withdraw the consent application
- Re-allocate some funding to assess I&I reduction
 - Including I&I reduction at Duvauchelle
- Once reductions assessed then either
 - revise current proposal, or
 - revert to harbour outfall with longer pipe

Questions?