

# *Te Kowhai Estate Residents Meeting*

*10:00 – 11:30am*

*Saturday 6 April 2024*

*Te Kowhai Community Hall*

# Agenda

- Karakia - Deron
- Welcome – Megan May
- Introduction – Megan May
  - Meeting purpose
- Background – Adam Munro
  - Drainage network explanation
- Babbage report – Mark Curtis
- Discussion points – Keith Martin
- Questions/Comments - Residents
- Closing – TBC
- Karakia



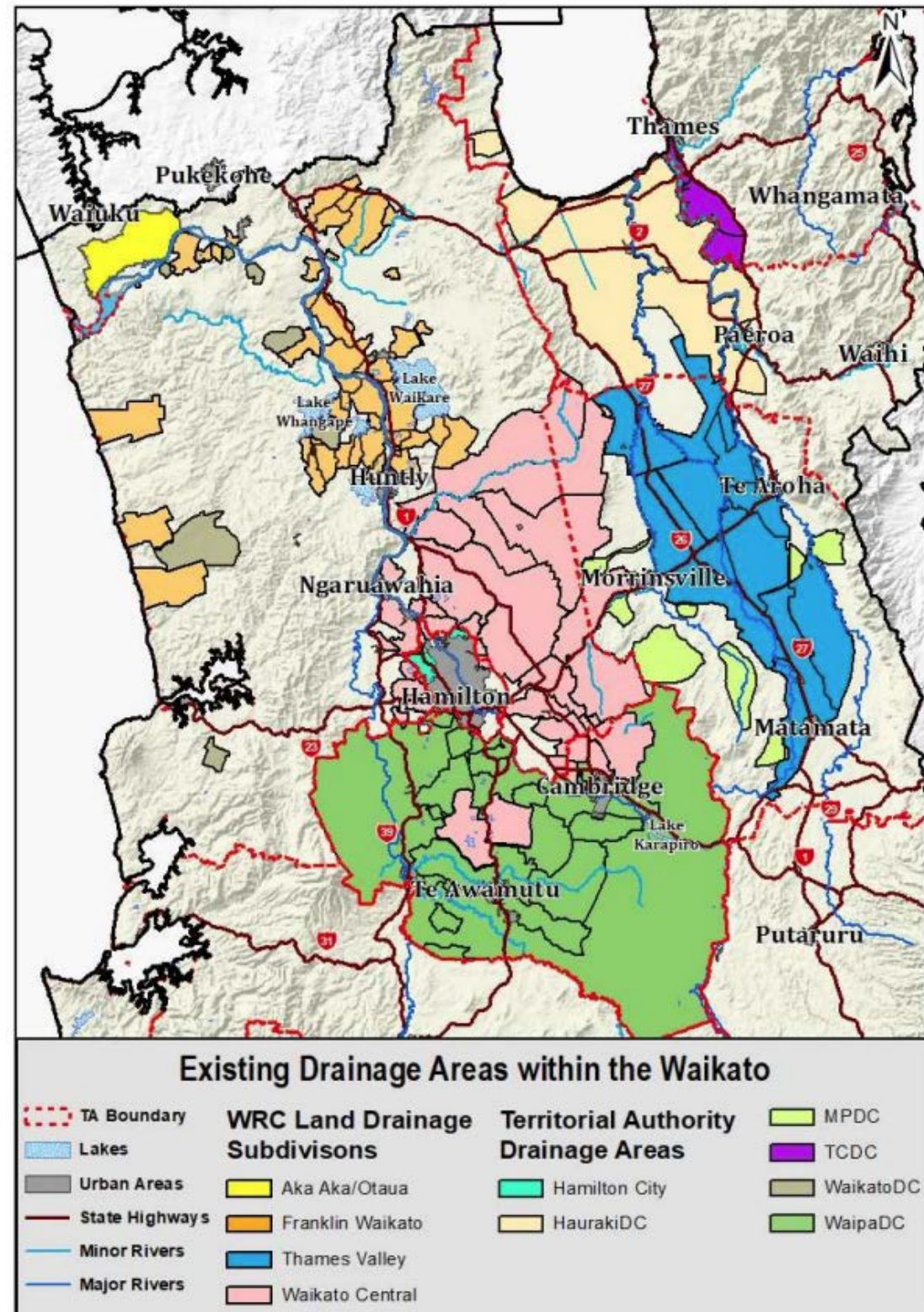
# Introduction

Staff and council representation  
House-keeping, H&S, Conduct  
Privacy  
History of site



# Background - WRC

## Waikato Regional Council Drainage Districts



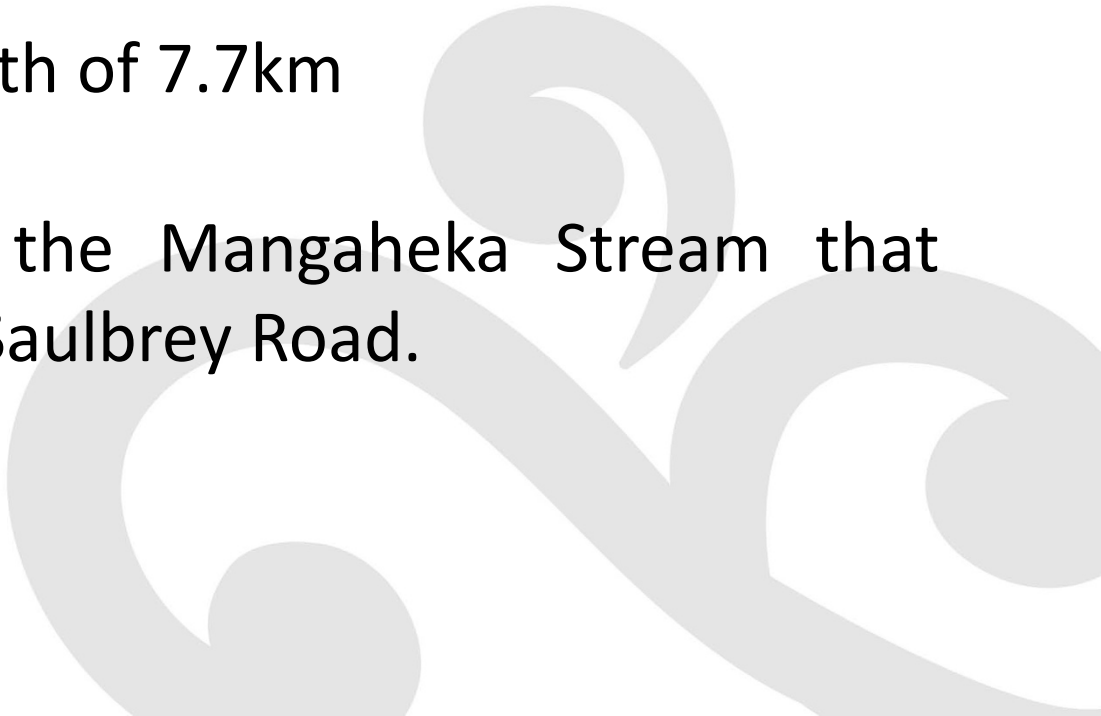


# Te Kowhai Rural Drainage sub (WRC)



# Te Kowhai Rural Drainage sub

## *Background information*

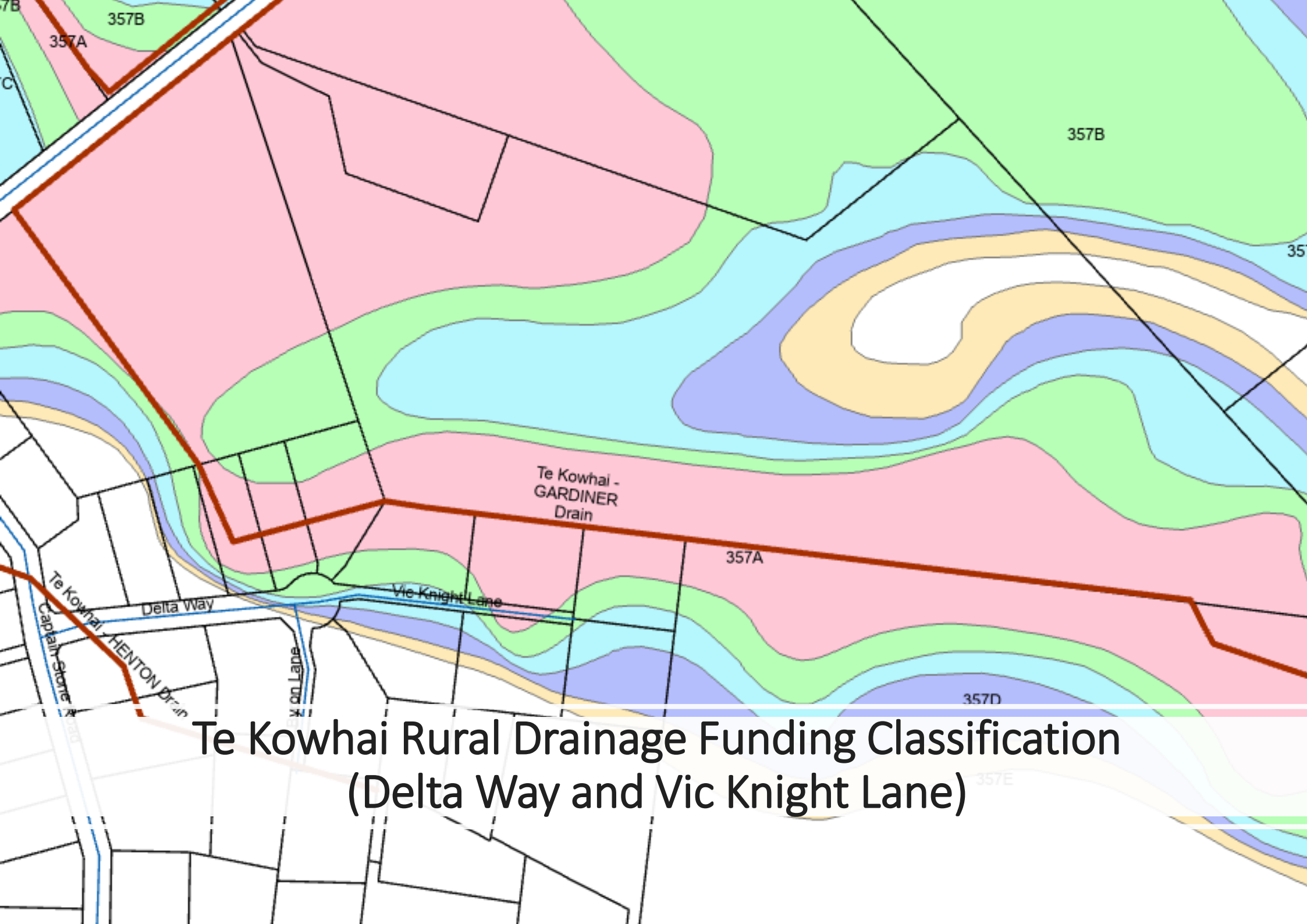
- Initially a WDC administered drainage area
  - The drainage district was one of many transferred to WRC from WDC (in 2012)
  - Area covered: 360 hectares
  - 4 drains equating to a total length of 7.7km
  - Targeted ratepayers: ~202
  - Includes a sub-catchment of the Mangaheka Stream that drains to the Waipa River near Saulbrey Road.
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# Te Kowhai Rural Drainage sub

## *Funding policy history*

- Funded 100% by targeted ratepayers (no general rate provision)
- Based on a “scale” of direct benefit
  - i.e. area of land that receive the most benefit pay more, whereas those that receive lesser benefit pay less
- Currently there is no criteria for applying an “Urban” related differential similar to WRC administered drainage districts



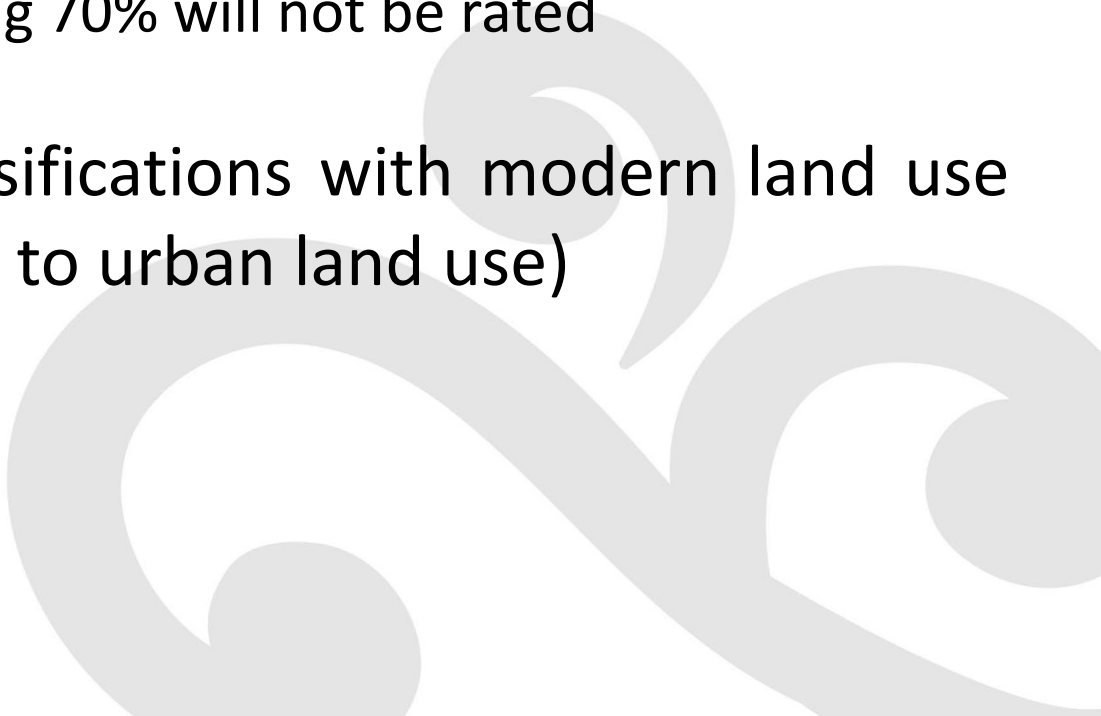


**Te Kowhai Rural Drainage Funding Classification  
(Delta Way and Vic Knight Lane)**



# Te Kowhai Rural Drainage sub

## *Funding policy history*

- Not all properties in the drainage area are located within the rating classification differential – likely to be based on contours
  - The classification/funding policy is area based (or proportional)
    - For example, for a 1 ha property with only 30% of its area within the classification system, the remaining 70% will not be rated
  - Aligning historical drainage classifications with modern land use changes is challenging (e.g. rural to urban land use)
  - Any questions?
- 

# Babbage Report

Area of Focus - Delta Way and Vic Knight Lane area



# Babbage Report

## Report Purpose


- Main Purpose
  - Is current drainage meeting rural Level of Service (LoS)?
    - Network designed to drain ponding from 10yr storm event within 3d
  - Investigate ponding mitigation options



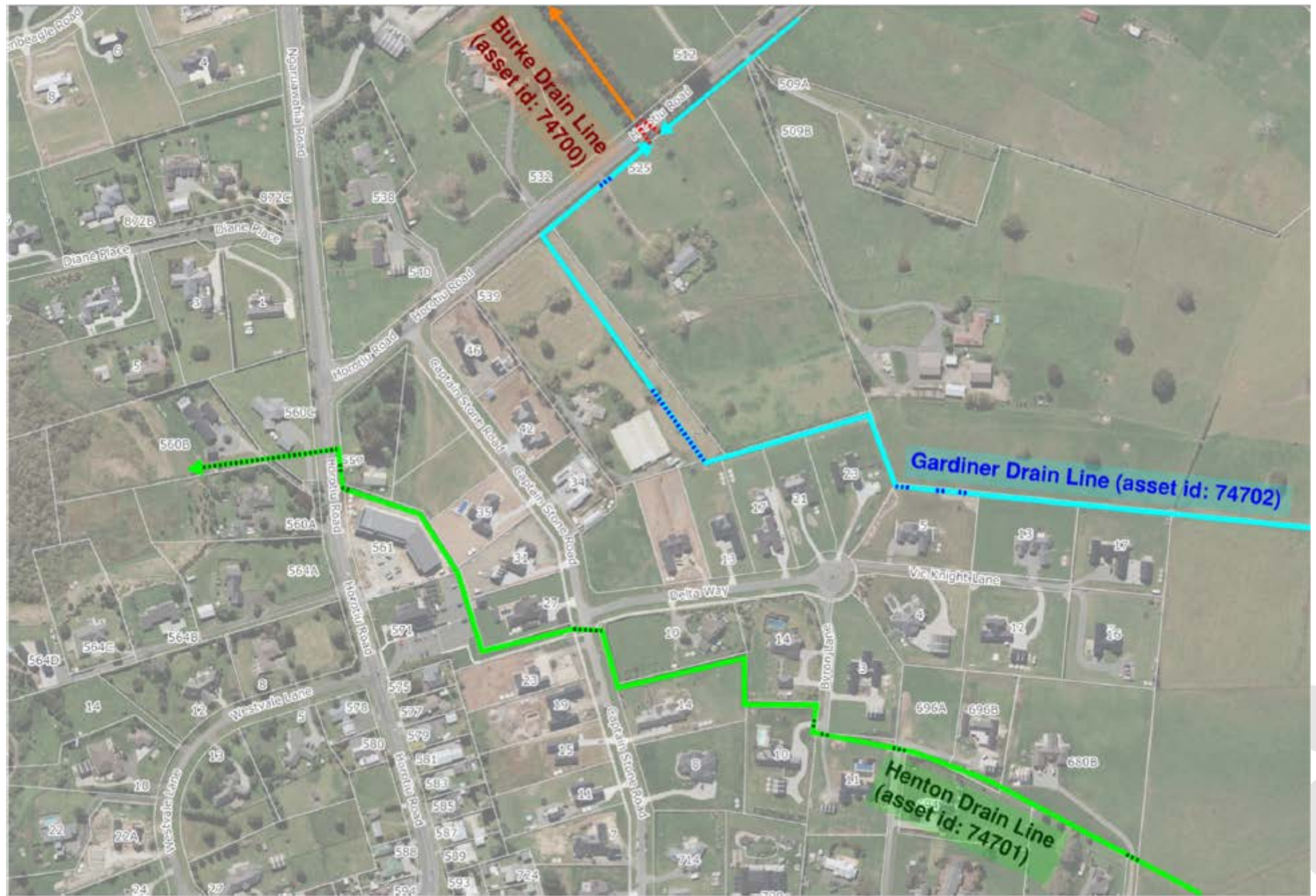


# Babbage Report

## Background – Te Kowhai Estate Drainage

- Topography generally flat
  - Some areas are low lying
  - Drains – flat grade
  - Area contains a number of culverts
  - Two culverts protect gas mains
  - Three Waikato Regional Council (WRC) drains
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# Babbage Report

## Hydraulic Modelling Findings

- WRC drainage provides rural Level of Service (LoS)
  - Network designed to drain ponding from 10yr storm event within 3d
  - WRC are meeting their responsibility and therefore are not obligated to improve the drainage network on that basis
- The modelled 100yr storm flood level is below recommended finished floor level (FFL) stated in Wainui report (culverts not included in model)

### **Potential Consequence:**

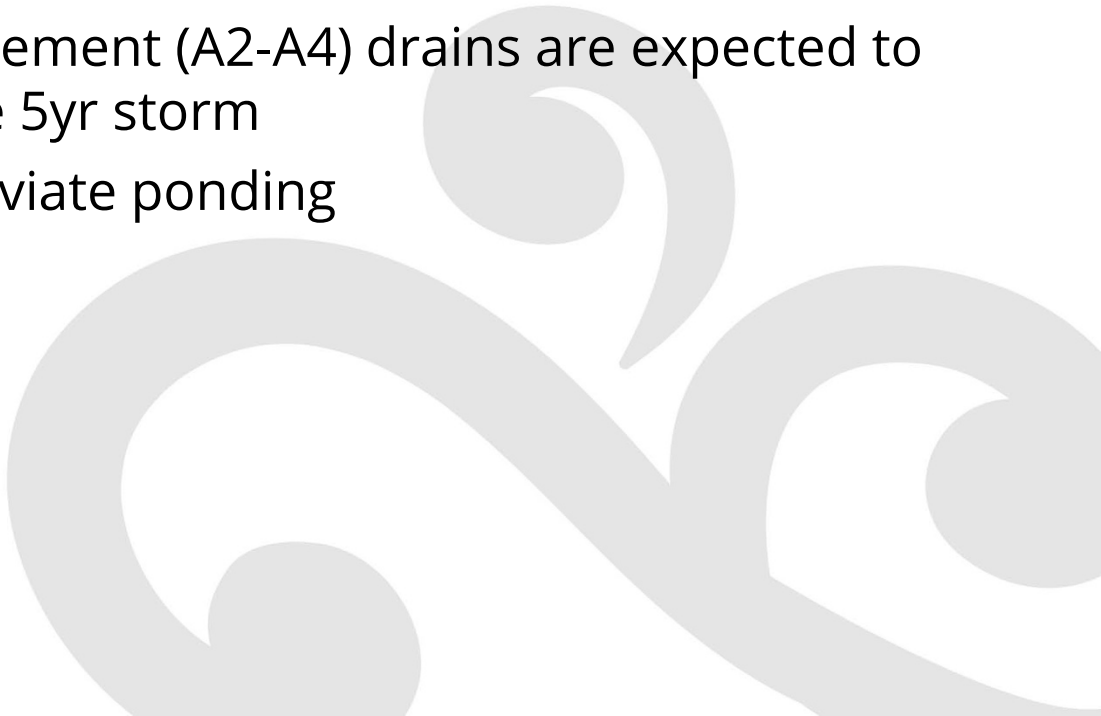
- Risk of home inundation low (Note: Assumes no culverts)

# Babbage Report

## Hydraulic Modelling Findings

- Upstream of culverts (A2-A4), drains overflow during 5yr storm

### **Potential Consequence:**

- With existing culvert arrangement (A2-A4) drains are expected to overflow quite frequently ie 5yr storm
  - Culvert removal should alleviate ponding
- 



# Babbage Report

## Hydraulic Modelling Findings

- Culvert A1 appears to be bottle-neck

### **Potential Consequence:**

- Culvert A1 may lead to overflowing drains
- Culvert removal should alleviate ponding



# Babbage Report

## Hydraulic Modelling Findings

- Gardiner drain culverts appear to have more capacity issues than Henton drain

### **Potential Consequence:**

- Ponding mitigations should focus on the Gardiner drain



# Babbage Report

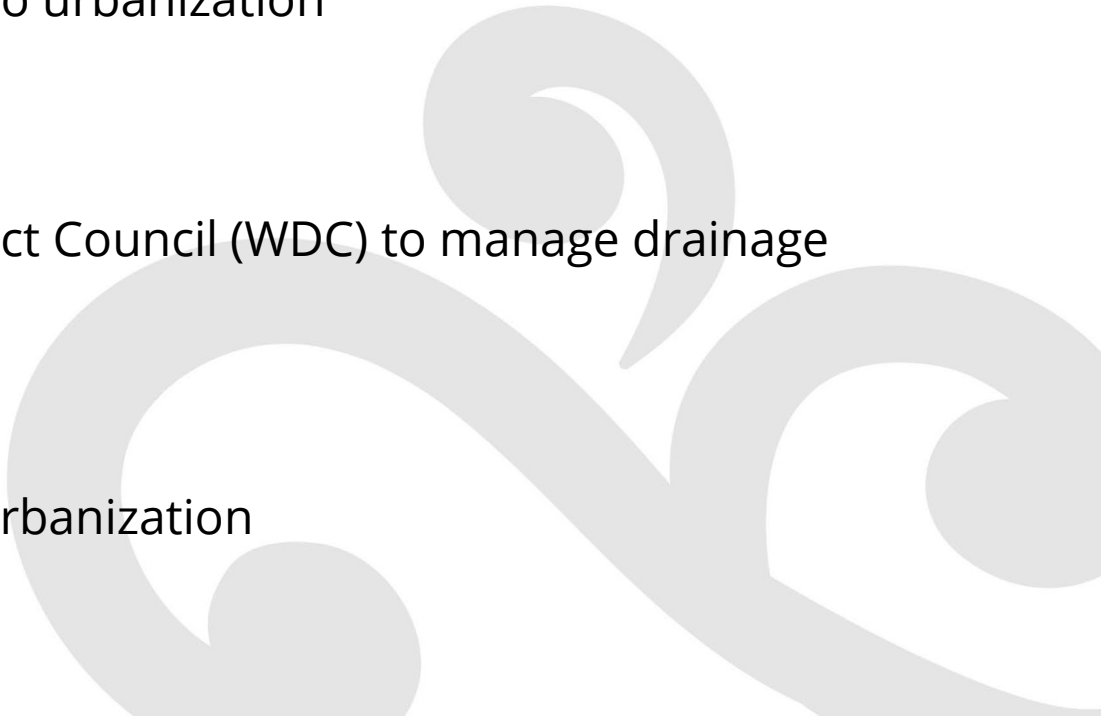
## Proposed Mitigation Options to Reduce Ponding

1. Upgrade entire network
2. Upgrade culverts with suspected capacity issues
3. Remove some culverts (daylight) with suspected capacity issues

## Options Assessment

1. High cost
2. Also high cost – further feasibility investigations required. Open drains may require modifications
3. Lowest cost option – downstream effects require investigation and access restrictions to land and assets needs to be considered

# Discussion Points

- Funding
    - WRC's drainage provides agreed LoS
    - WDC not receiving SW rates
    - Future Work:**
      - Identify potential works funding options
      - Investigate potential changes due to urbanization
  - Urbanisation driving change?
    - Urbanisation driving Waikato District Council (WDC) to manage drainage network?
    - Increase LoS?
    - Future Work:**
      - Investigate potential changes due to urbanization
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# Discussion Points

- Change takes time

- How are the issues managed in the meantime?

**Future Work:**

- Develop short-term flood mitigation options
- Civil Defence plan
- Emergency pumping options

- Private Assets

- How are private assets managed?

**Future Work:**

- Private landowners to consider improvement to their drainage



# Discussion Points

- Other Considerations
  - Select drainage improvement works
  - Investigate downstream effects due to potential Te Kowhai drainage improvements
  - Investigate other potential ponding mitigations
    - Modifications to pipework connecting culvert A2 with Delta Way
    - Pumping options

***NB: These considerations are not rated for and are therefore not funded***



# Residents Questions/Comments

Suggestions for resolving the issues, ...

