

WSP | OPUS



Ōpōtiki District Council

STRONG COMMUNITY STRONG FUTURE



WATERNZ CONFERENCE
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Ōpōtiki District Council work on Private Laterals

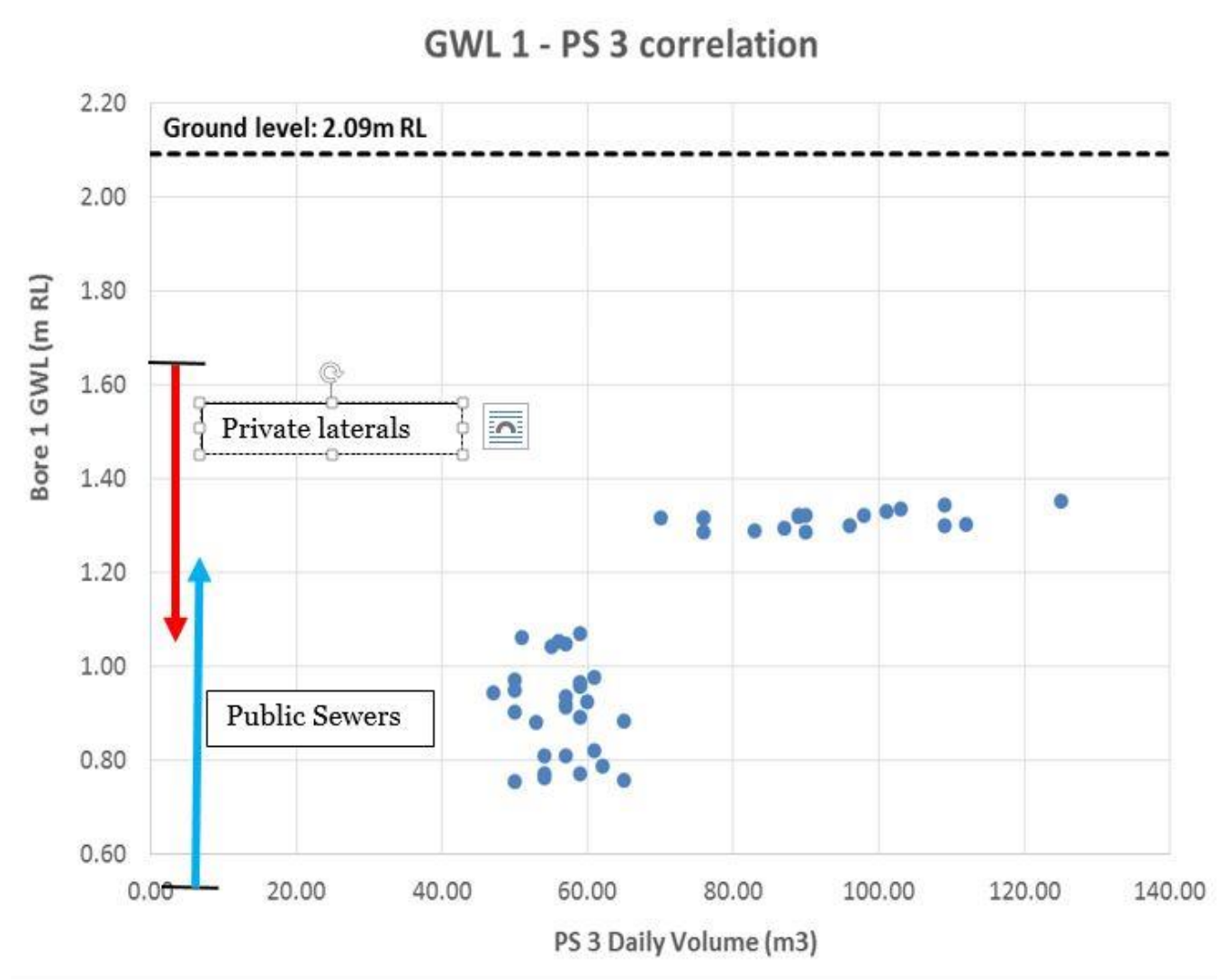
Introducing Opotiki



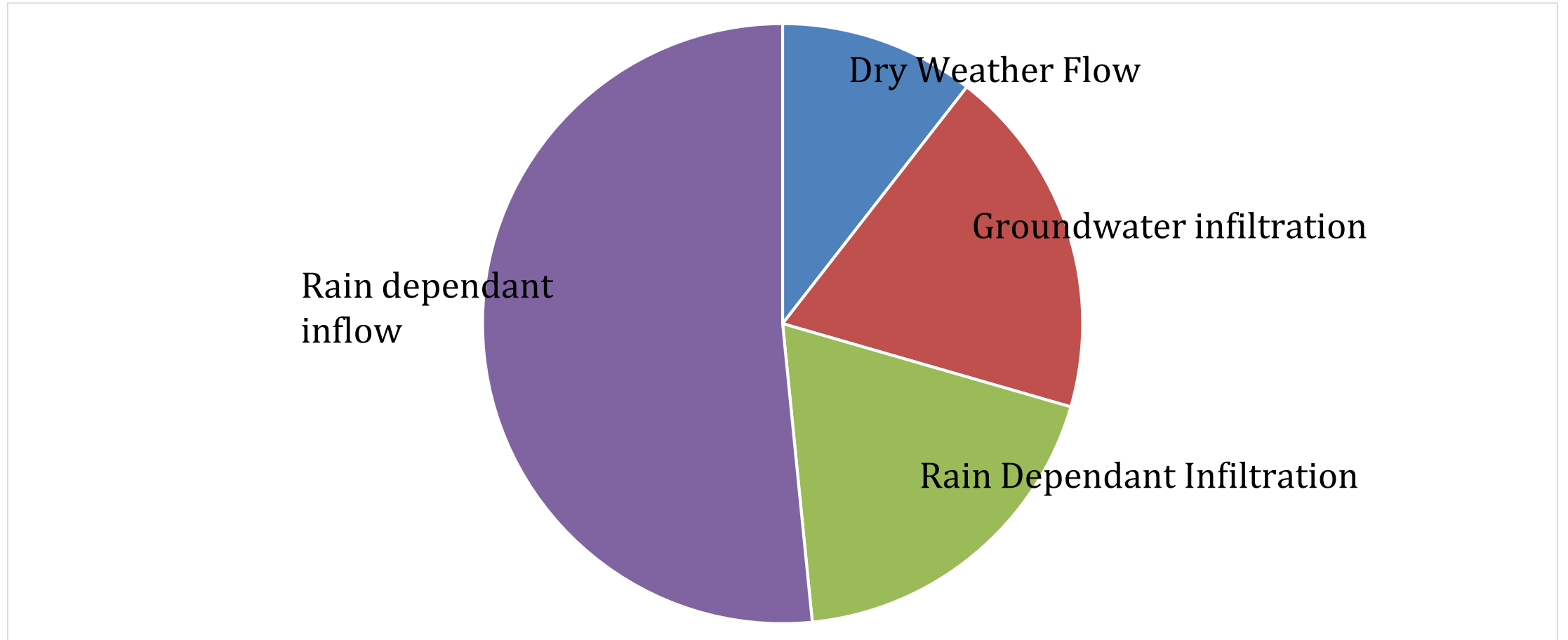
Ōpōtiki and Sewer

- Sewer was old – 1950's
- Leaky
- I&I resulted in $> 10 \times$ ADWF in wet weather
- High Groundwater
- Population of 3,879; median income of \$19,600
- Absentee landlords

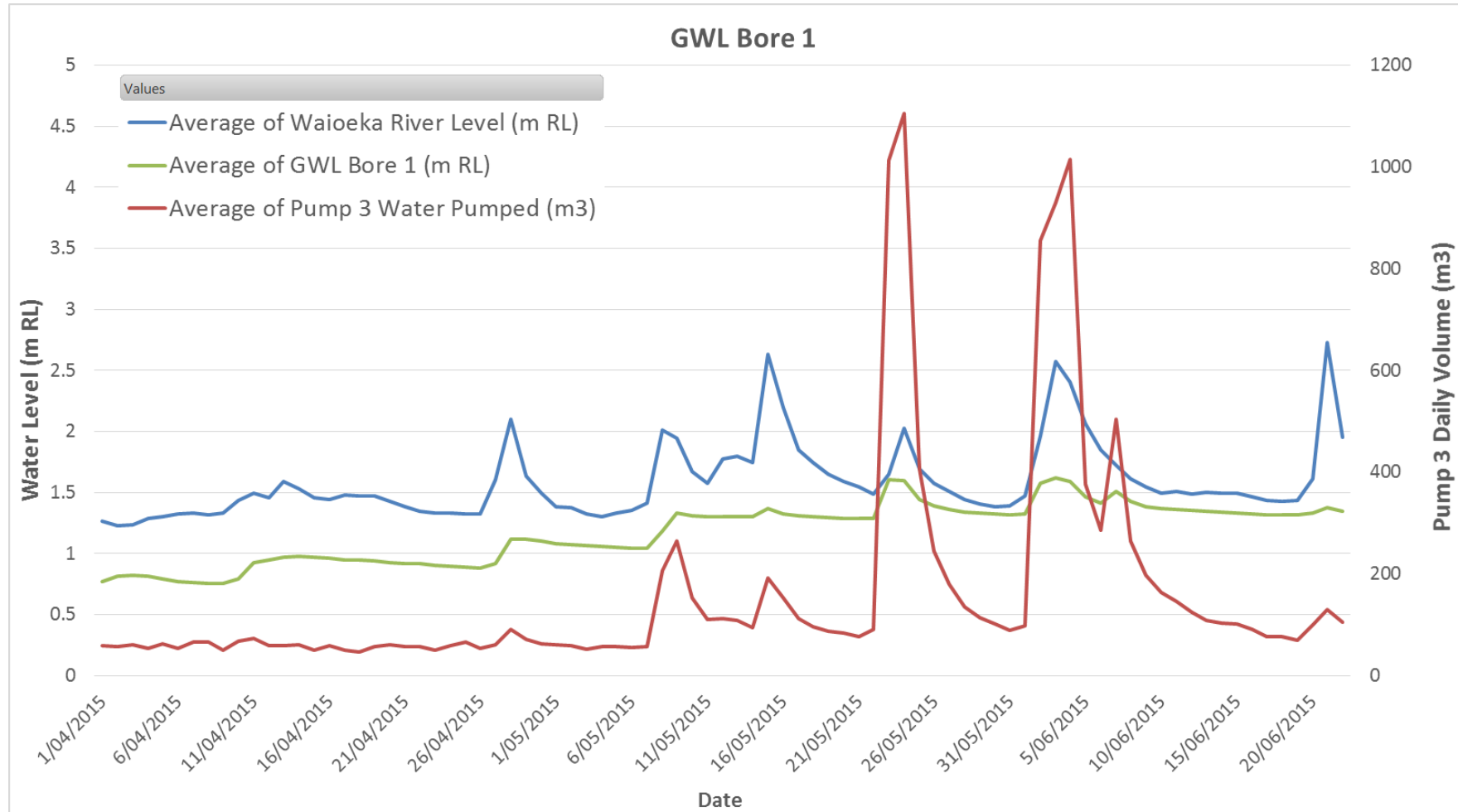
Ōpōtiki – High Groundwater



Inflow and infiltration due to rain and high groundwater



Ōpōtiki River and Groundwater Levels & Sewage volume



Findings



Findings



Findings



Findings



Findings



Flooding in private properties



Flooding



The Action Plan

- Tackle private laterals
- Refined over subsequent contract stages to hit easy wins – obvious infiltration, illegal stormwater connections, low gully traps
- Assess and improve public sewer
- Fix leaky manholes
- Improve stormwater - New trunk mains
- Additional storage basins
- More pump capacity
- Stopbanking

Funding options

- Council funding
- Property Owner funding
- Council rates funding
- Council debt funding

Rationale for council funding

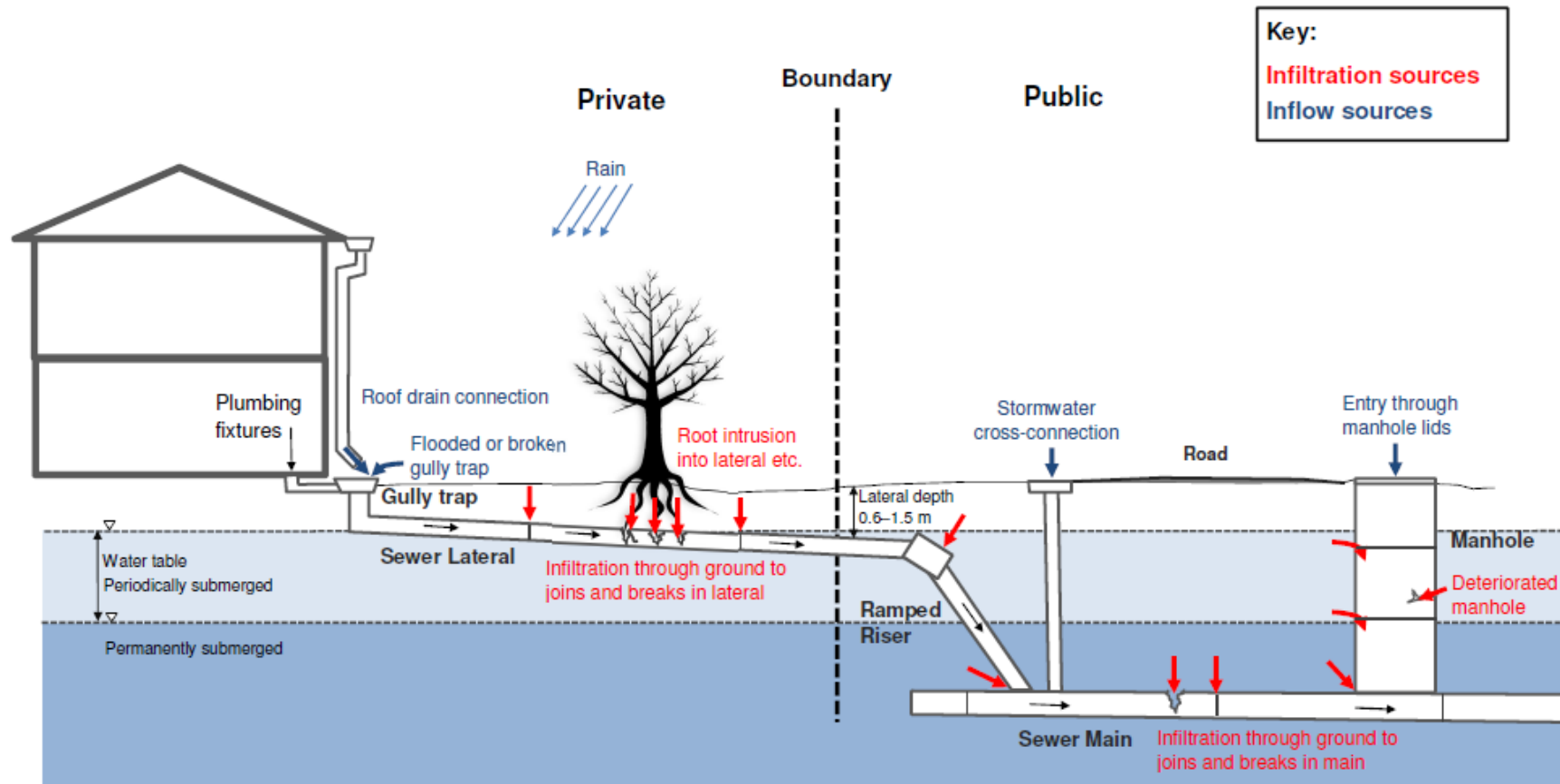
- Low income home owners
- Absentee landlords to pay for work
- No direct benefit for the occupant and not experiencing any drainage difficulties

Council funding

- \$2,000,000 spread over 3 years
- Total of 1,700 properties
- 1,550 residential properties
- 150 commercial properties

Inflow and infiltration sources

Wastewater Reticulation: Inflow + Infiltration



Three contracts – Contract/Phase 1

- Phase 1 – two local contractors worked with 60 properties each
- Typical faults included pipes, faulty joints, root intrusions, broken, ineffective and low gully traps.
- Illegal stormwater connection

Phase/ Contract 2

- Phase 2 – One local contractor worked with 350 properties
- Loss of staff
- Delay due to weather condition
- Large portion of highly deteriorated lines

Phase/Contract 3

- Phase 3 –Tender with “Price Quality Method” for 1,200 properties
- Panel contract
- Dig and Repair of damaged laterals
- CIPP lining of laterals

Findings



Gully trap raised



Gully trap raised



Damaged Earthenware Lateral



CIPP Lining of Laterals - Preparation



CIPP Lining of Laterals – Pumping Resin



CIPP Lining of Laterals



CIPP Lining of Laterals



Work completed to date

- Illegal stormwater connections – 53 disconnected
- Low and/or damaged gully traps – 404 repaired, raised or replaced
- Cracked/damaged leaking laterals – 449m replaced, 698m relined
- Other sources of infiltration – 202 root intrusions dug up and repaired.
- Grey water, kitchen, handbasins and other sinks removed from stormwater system.

Questions?