

Water Re-use on the Kapiti Coast

Transforming how
homes use water on the
Kapiti Coast



Overview of talk

- Current challenges facing the Kapiti Coast Water Supplies
- How the Sustainable Water Use Strategy laid the foundations for the water use plan change
- Managing demand from future residential growth
- Building the case for a dual supplied home
- Introducing Water Demand Management Plan change 75 - a work in progress

Introducing the Kapiti Coast



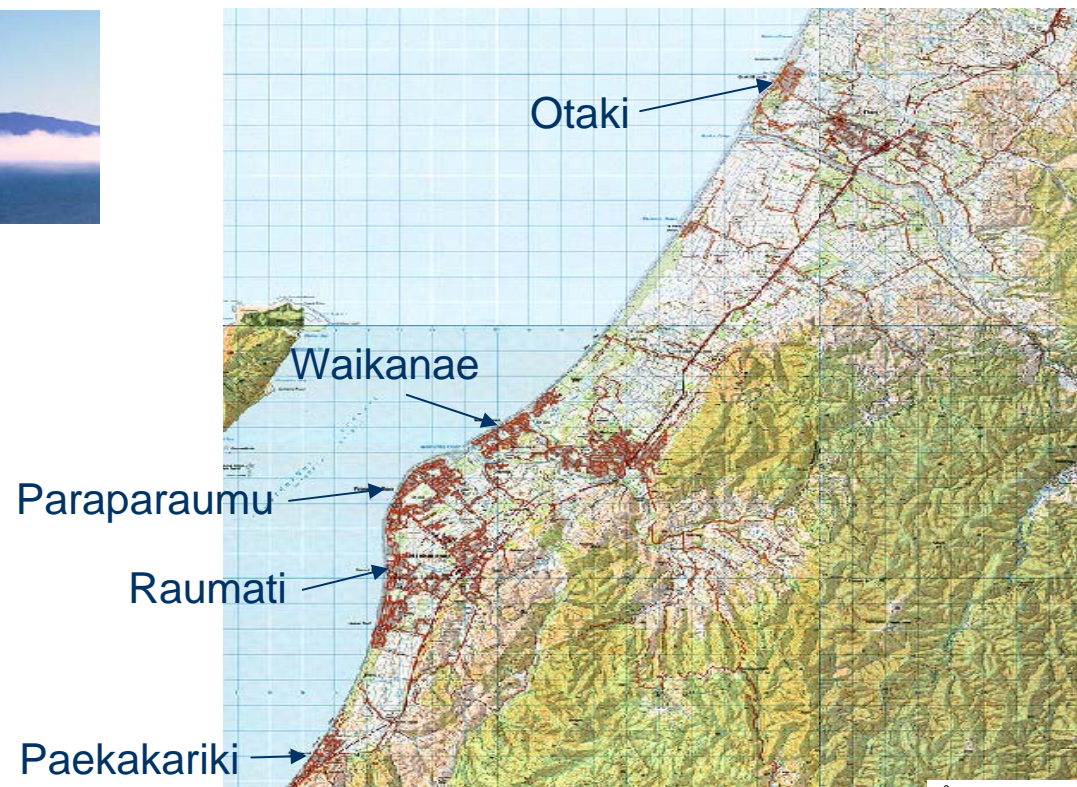
Great climate

Steady residential growth

Three water supplies

High summer water demand

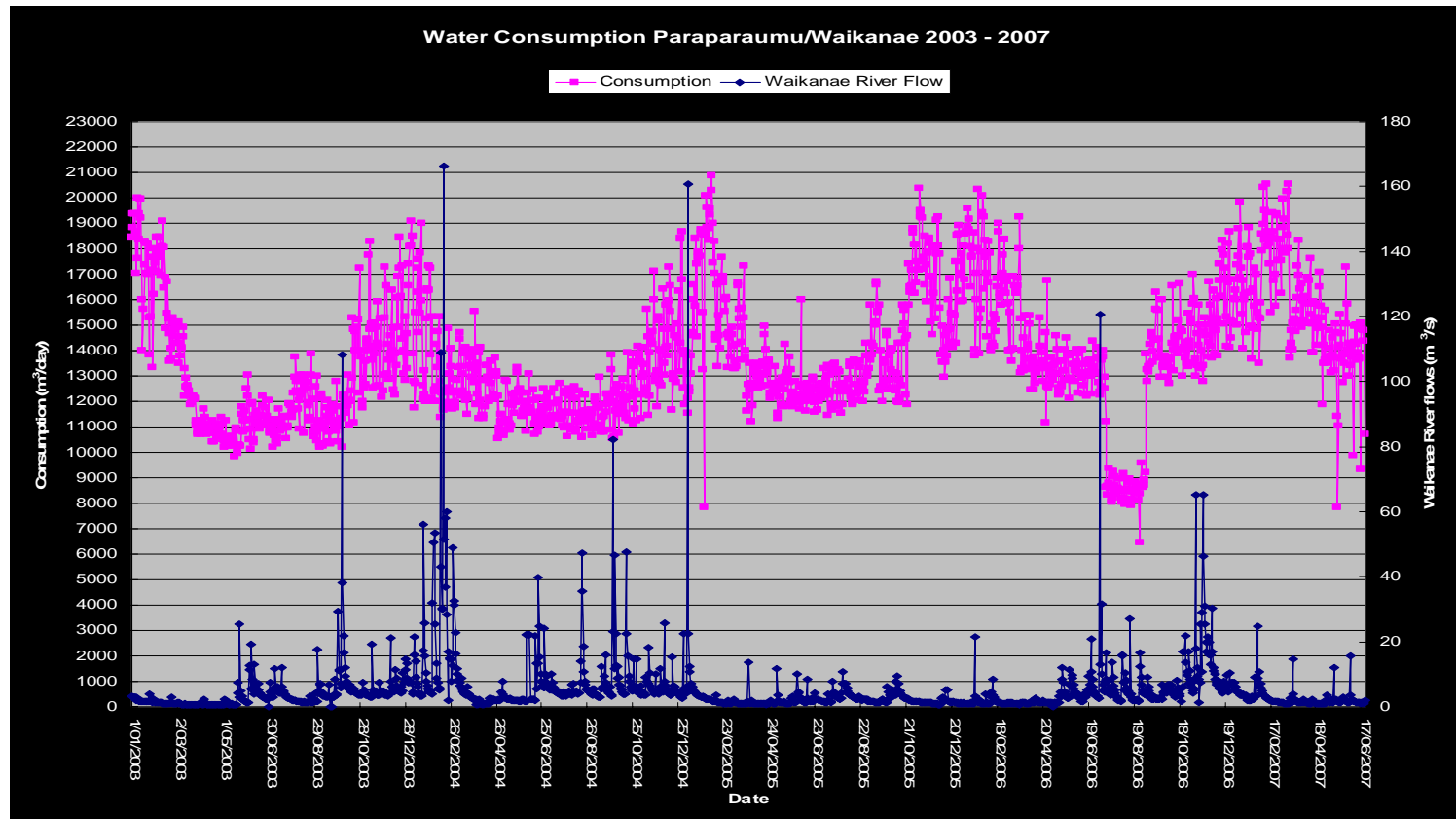
Summer demand can exceed supply capacity



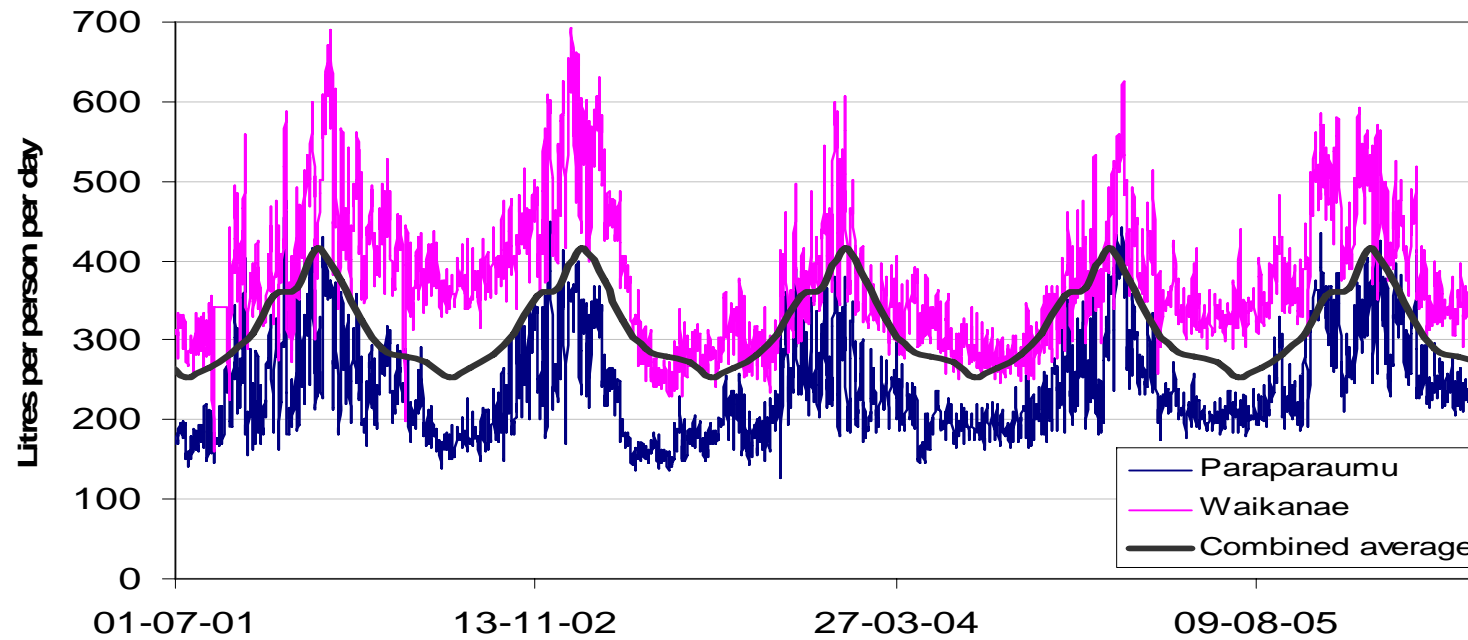
Introduction

- The Council aims to reduce peak water use and consumption overall.
- If Council can reduce water use, the current water supply consents will service local reticulated supplies for longer.
- The use of raintanks, and greywater re-use devices, are known to reduce water demand.

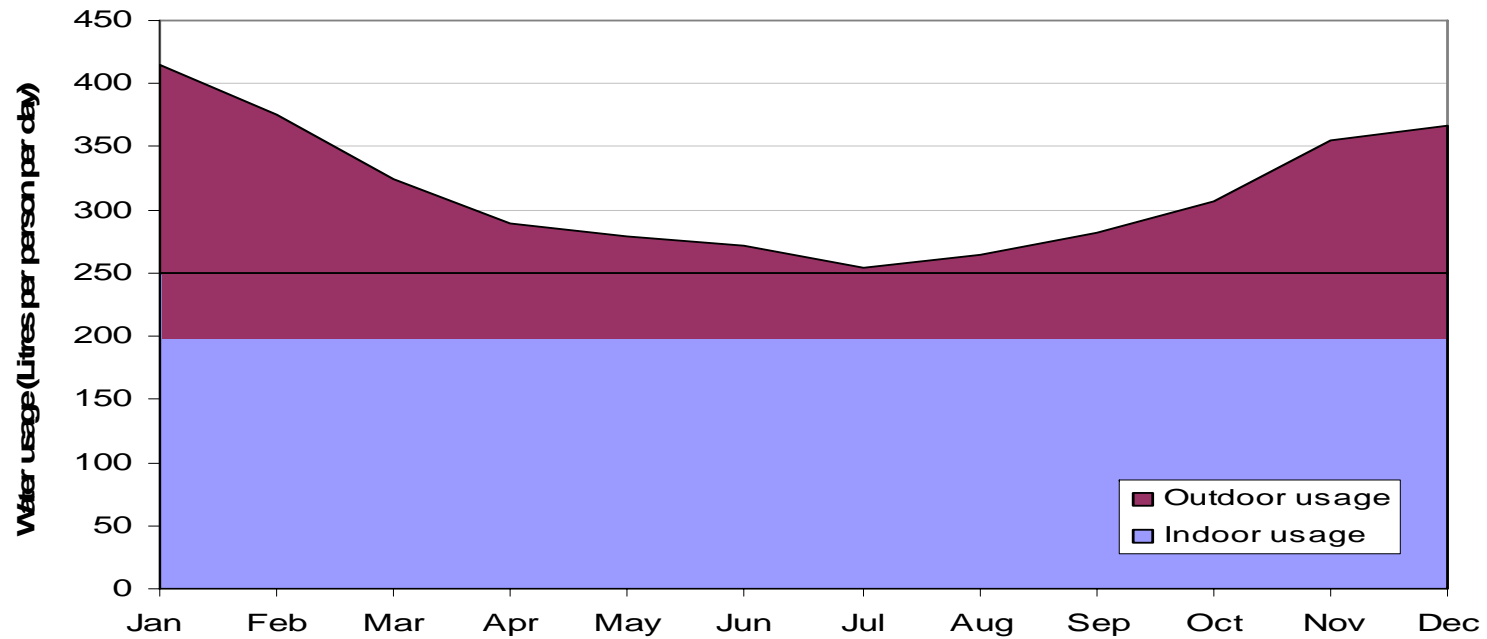
Total Consumption



Average Daily Use



Indoor – Outdoor Water Use Split



Council Sustainable Water Strategy



Kapiti Coast District Sustainable Water Use Strategy

January 2003

Water is precious

Water is finite

Possible to provide a quality water supply to a growing community if:

- households adopt more efficient technology
- use of non potable water
(80% of households have access to non-potable water by 2013)
- people responsibly use water
(peak water use of 250 lpd for essential use and 150 lpd for lifestyle by 2013)

Plan change 75

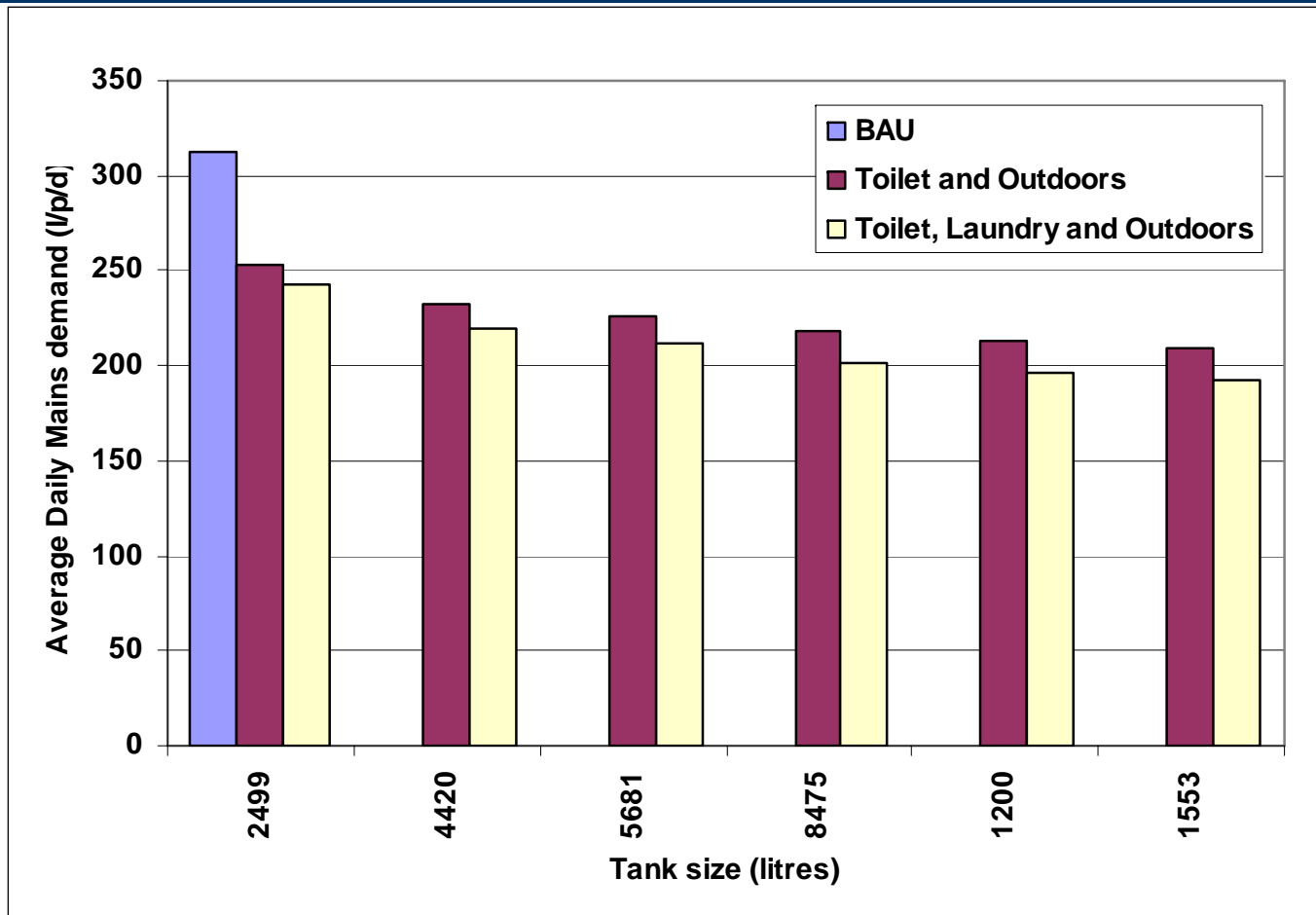
“Water demand management”

- Plan Change 75 is one of many Council programmes to achieve goals in Water Matters
- Plan Change 75 targets new housing stock, which will make up a third of homes by 2050
- Aims to reduce demand by requiring non-potable water for uses not needing potable water

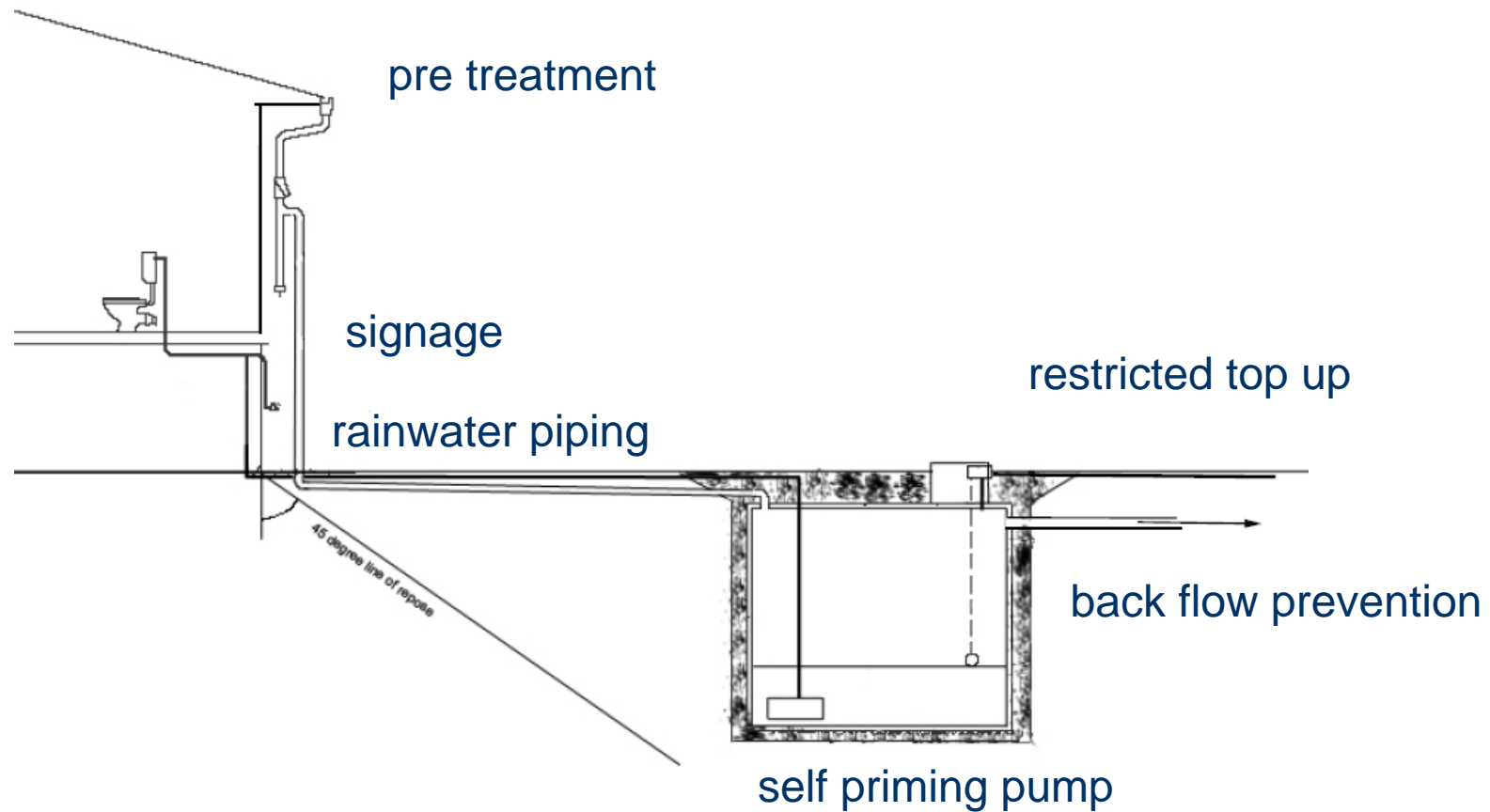
Investigating options

- Modelled how difference greywater and rainwater combinations could reduce town water use.
- No outside taps connected to town supply
- Investigated rainwater supplying toilets, laundry and outdoors
- 600 litres town water top up rainwater tanks when water falls below 1000 litres
- Greywater from laundry and bathroom used for subsurface irrigation

Raintanks



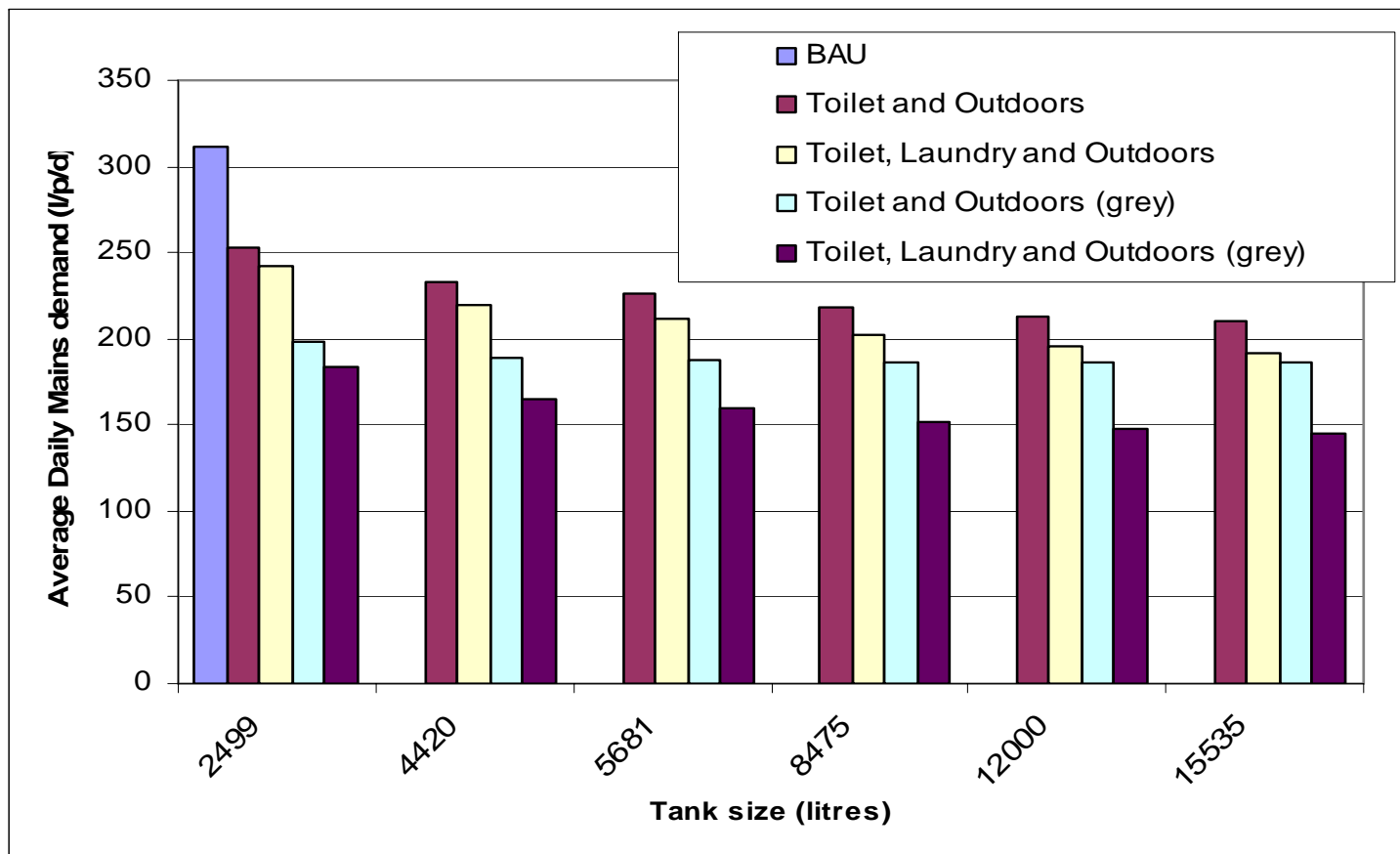
Raintank components



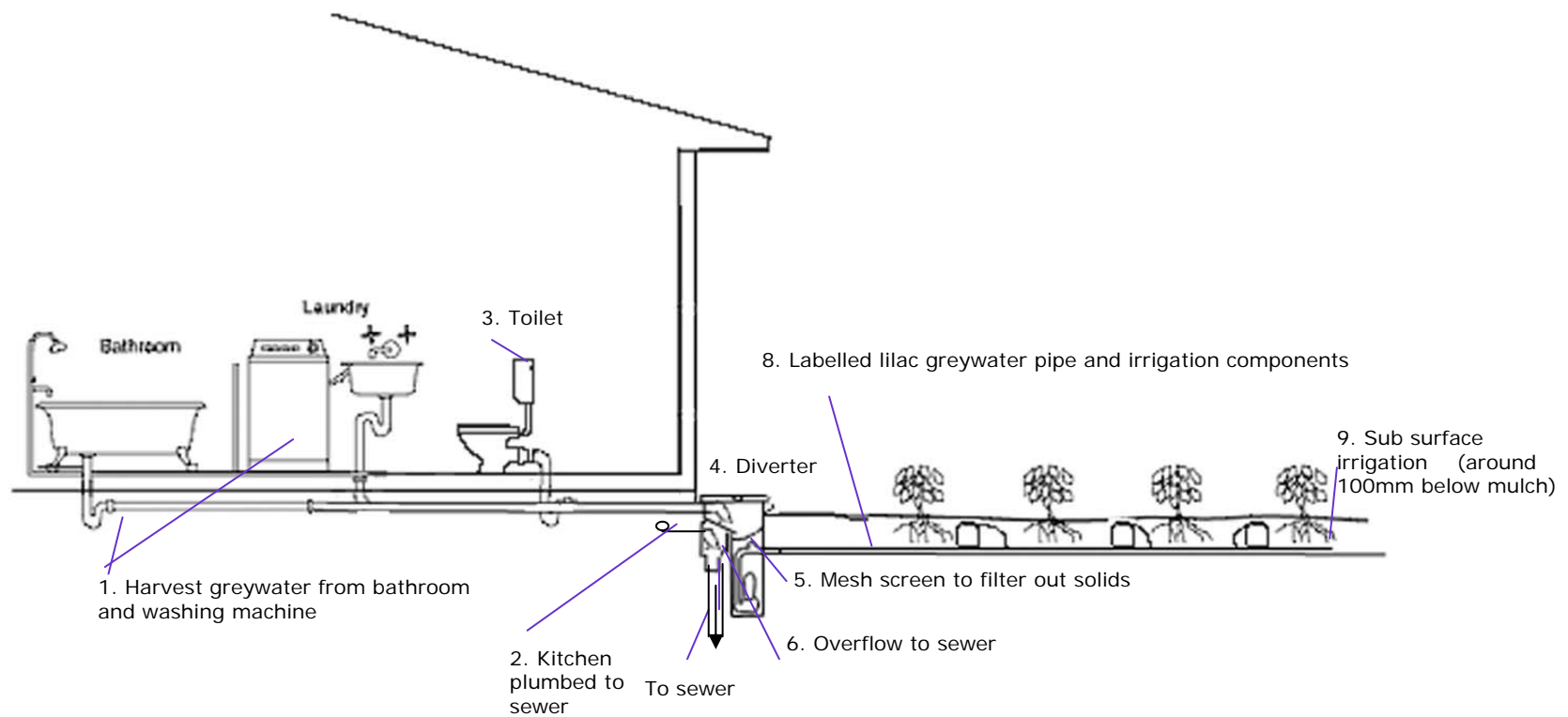
Greywater

- Council supports greywater irrigation with greywater diversion devices.
- Currently no national standards around greywater reuse. The Council will permit greywater diversion devices that can get a watermark licence and meets the performance requirements outlined by NSW Health.
- Plumbers will need to get an installers certificate from manufacture or supplier

Greywater's potential



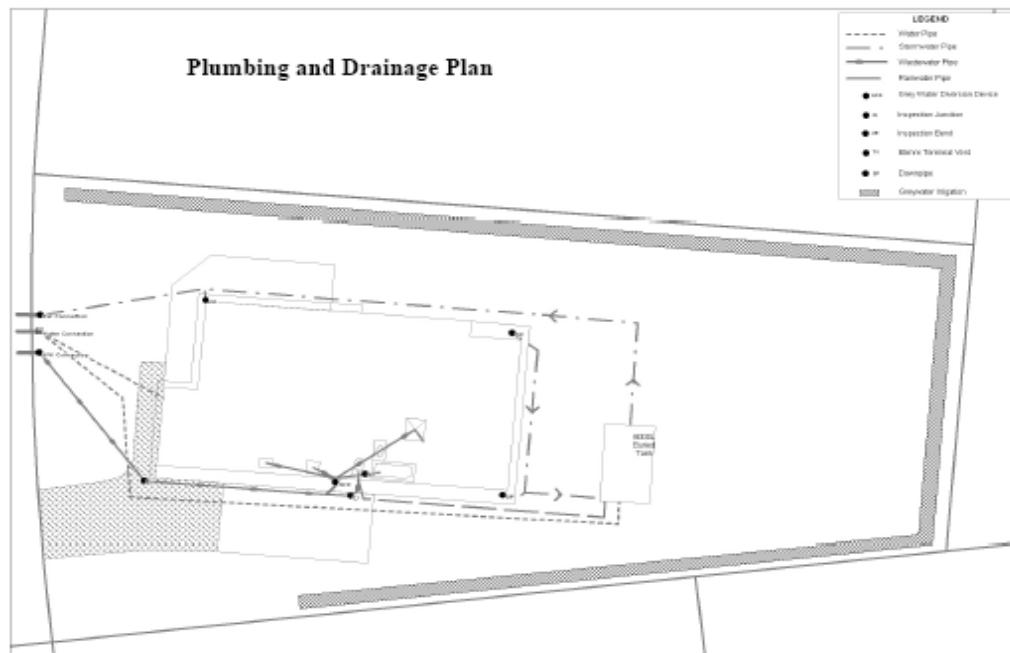
Key elements of a compliant greywater system



New Requirements

- People building in residential areas now have to incorporate water demand management into house design that reduces peak and average demand by 30%.
- Two permitted activities:
 - 10 000 litre rainwater storage supplying water to toilets and outdoors
 - 4500 litre rainwater storage supplying water to toilets and outdoors and an approved greywater diversion device.
- Not including either will make the land use consent non-complying

Changes to building application



- Once approved, all water demand solutions must comply with the building act.
- Building consent team will assess, inspect and sign off work as per usual.
- The water demand solution info will be stored on Council database, for future monitoring and to inform future homeowners.

It's a work in progress

- Developing a greywater diversion code of practice, with further detail on:
 - Managing environmental and health risks
 - Public education
 - On-going monitoring
- Allowing for future innovative solutions that achieve the 30% savings in peak and average water use