



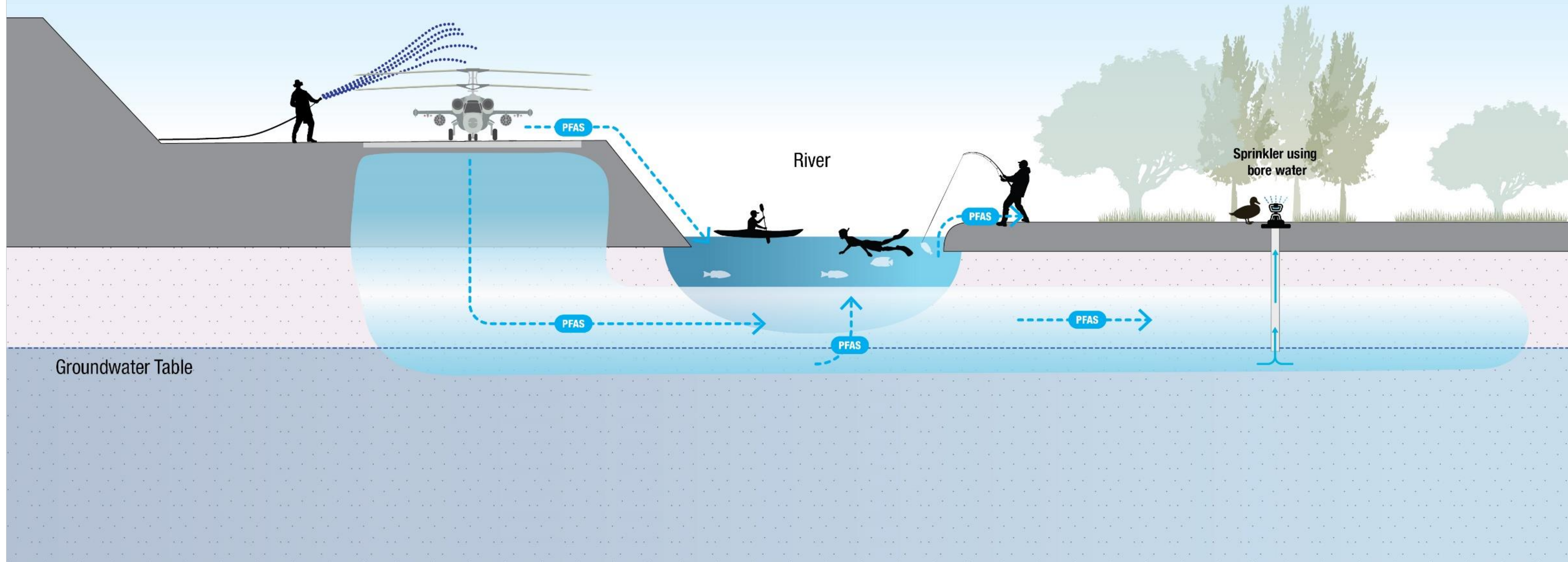
## How PFAS moves through the environment

### THE SOURCE

Legacy firefighting foams used for training  
and to extinguish liquid fuel fires

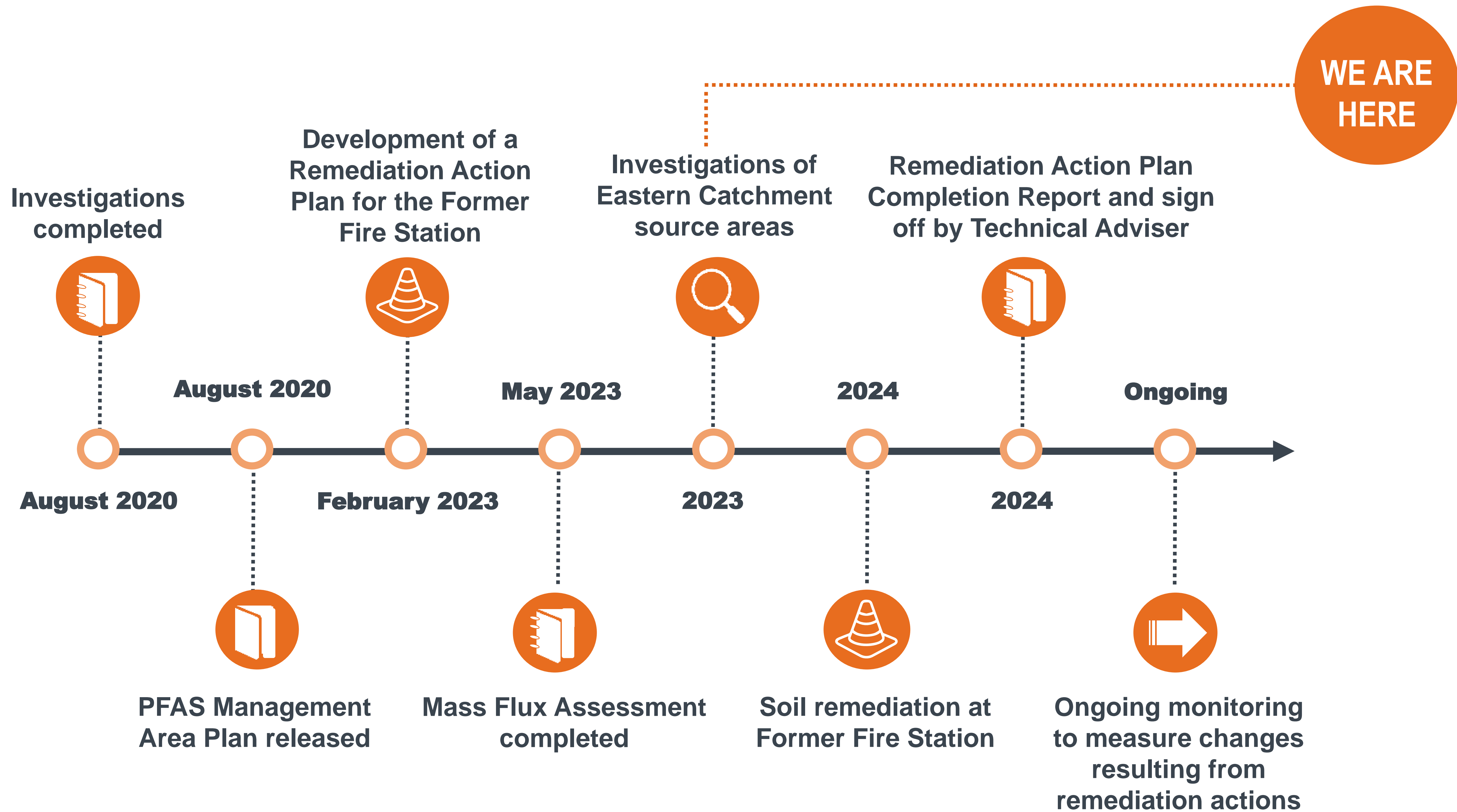
### PEOPLE, PLANTS AND ANIMALS

Aquatic biota in drains/creeks,  
land animals including pets and stock





## Lavarack Barracks timeline of program





## Remediation at Lavarack Barracks in 2024



The aim of remediation is to minimise PFAS leaving the base by focusing on source areas.



Defence will begin remediating using **soil stabilisation** and **thermal destruction** methods at the Former Fire Station.



3,100 m<sup>3</sup> of soil will be treated or removed from the source areas.



Compaction and grading will be undertaken to improve drainage and reduce PFAS movement.



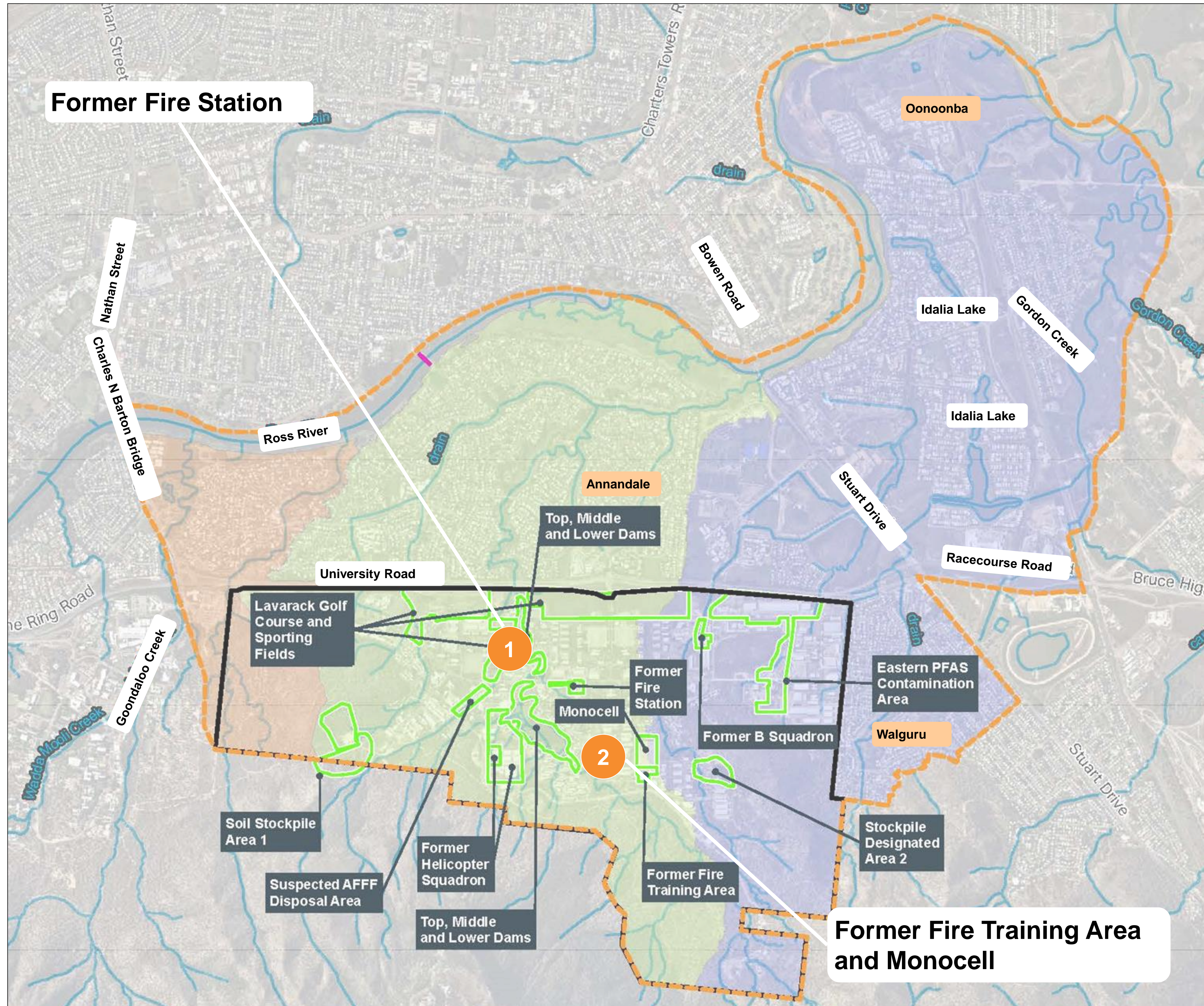
Off base PFAS migration from this source area to be reduced by greater than **75%**.



Lavarack Barracks Former Fire Station



## Lavarack Barracks Management Area and source areas



**Legend**

Base Boundary	<b>Sub-catchments</b>
Management Area	A and West
Aplin's Weir	G and Central
Source Areas	J/K and East

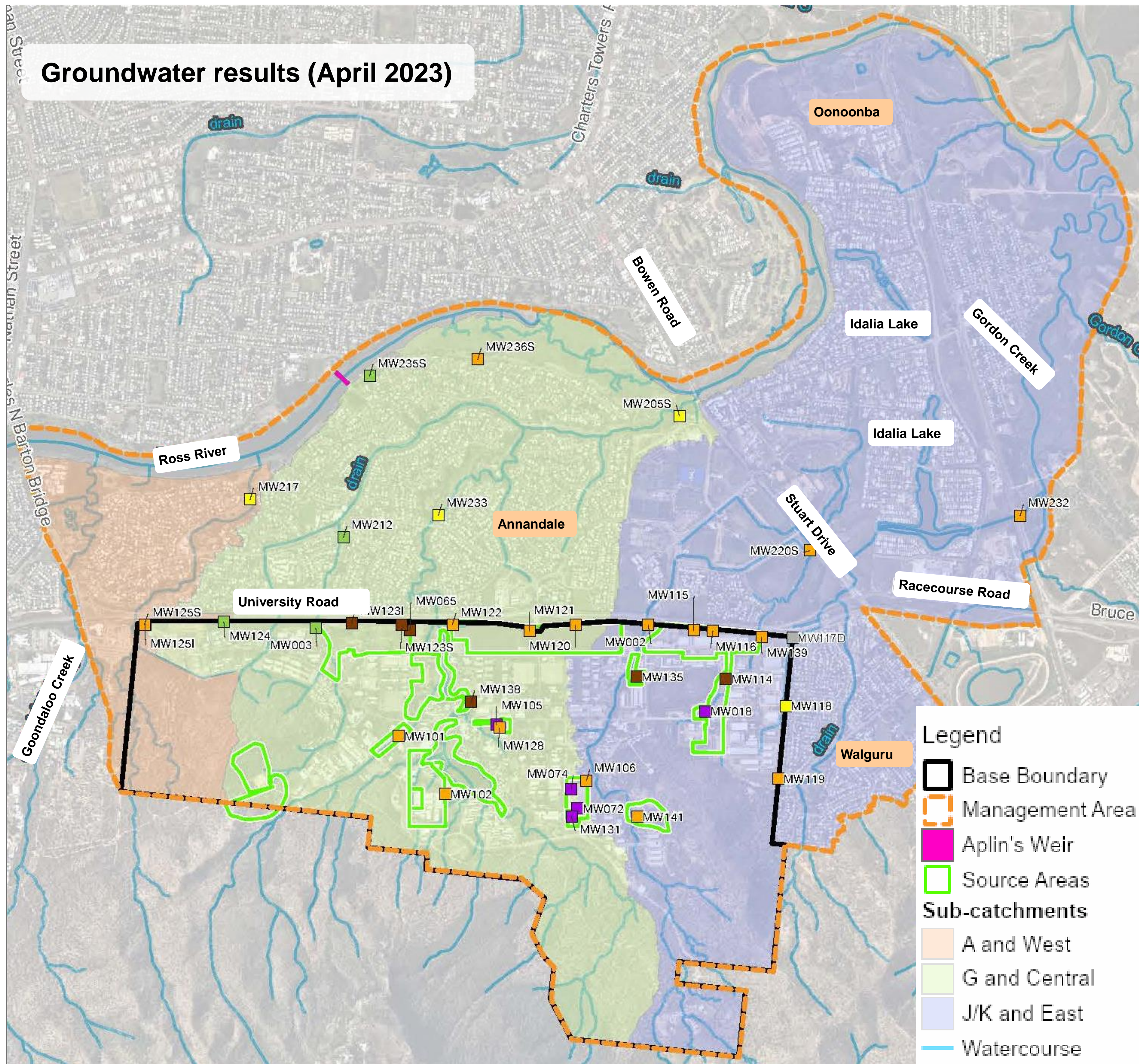
### Source areas

- PFAS source areas are found where firefighting foam was previously used, stored or disposed of.
- Two main PFAS source areas:
  - Former Fire Station
  - Former Fire Training Area and Monocell (underground waste containment cell).
- PFAS moves off-base through surface water in drainage channels, which infiltrates groundwater.
- Groundwater flows to the north and northwest, towards the Ross River floodplain.



## Lavarack Barracks – Recent sampling results

Groundwater results (April 2023)



### Recent key findings

- No change to overall extent of PFAS plume, or to human health risk.
- The highest PFAS concentrations in groundwater are located on-Base, near known source areas.
- Some localised PFAS increases in groundwater at some locations, at varying times during the monitoring period.

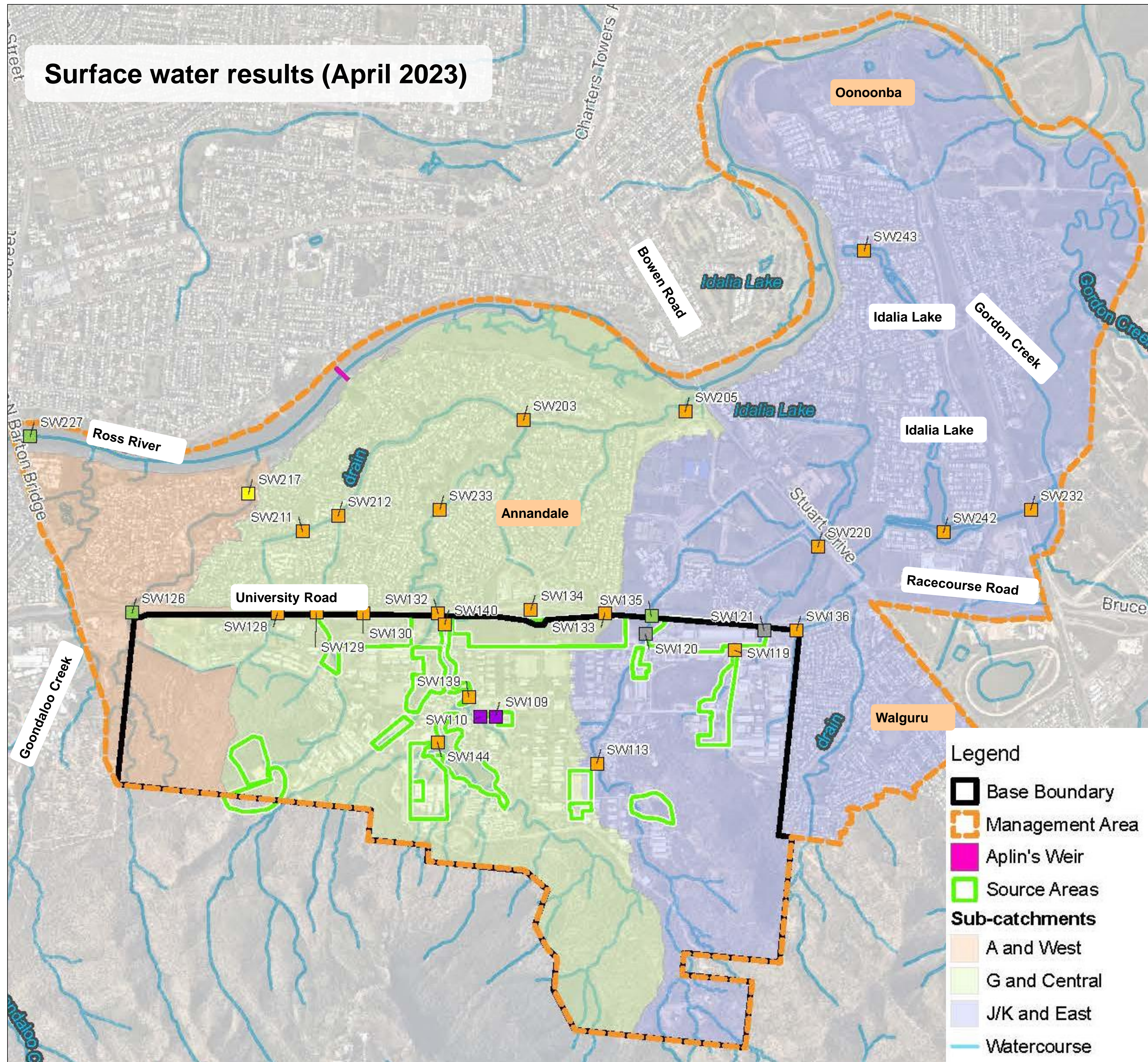
This maps show results of groundwater samples collected in April 2023.

- **Green** represents results where PFAS was not detected.
- **Yellow** is below drinking water guidelines.
- **Orange** is below recreational water guidelines.
- **Maroon** and **purple** exceed both drinking water and recreational guidelines.



## Lavarack Barracks – Recent sampling results

Surface water results (April 2023)



### Recent key findings

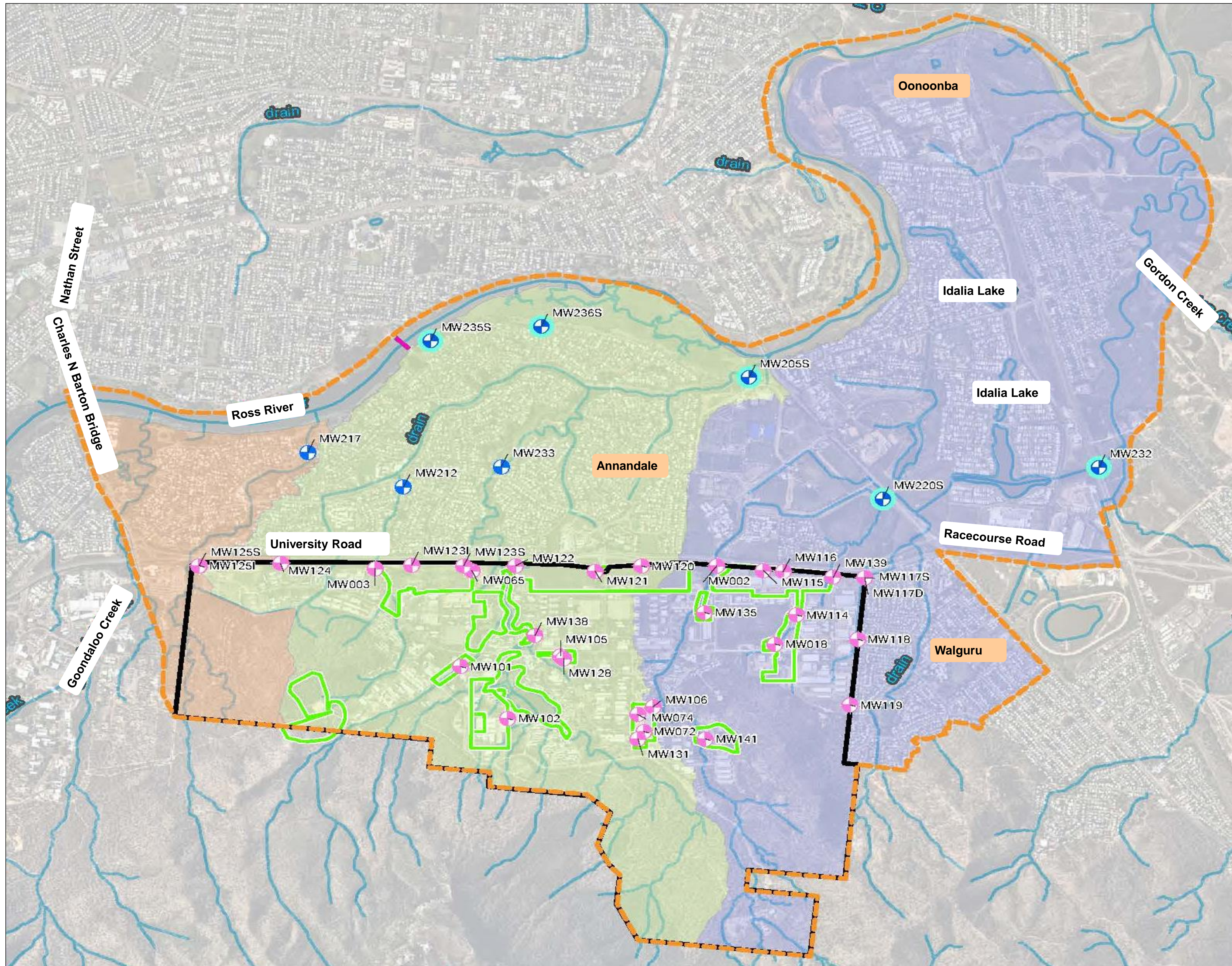
- No change to overall extent of PFAS, or to human health risk.
- Some localised PFAS increases in surface water at some locations, at varying times during the monitoring period.
- Off-base surface water locations typically do not exceed human health guidelines for recreational water.
- Continue following Queensland Government advice about consuming fish from Idalia Lakes.

The maps show results and surface water samples collected in April 2023.

- **Green** represents results where PFAS was not detected.
- **Yellow** is below drinking water guidelines.
- **Orange** is below recreational water guidelines.
- **Maroon** and **purple** exceed both drinking water and recreational guidelines.



## Lavarack Barracks – Groundwater monitoring locations

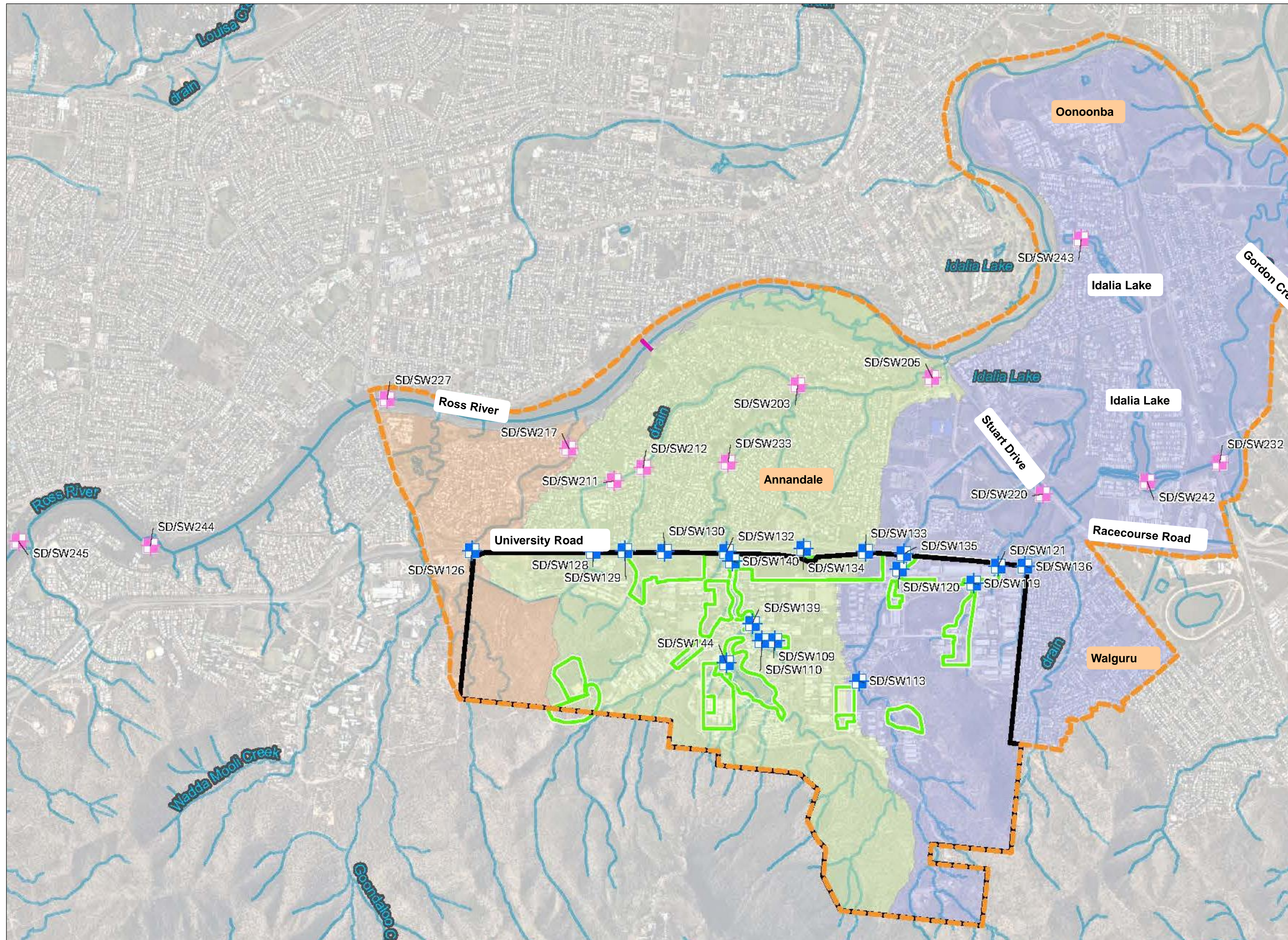


**Legend**

-  Base Boundary
-  Management Area
-  Aplin's Weir
-  Source Areas
- Sub-catchments**
-  A and West
-  G and Central
-  J/K and East
-  Watercourse
-  On-Base Monitoring Well
-  Off-Base Monitoring Well
-  Tidally Influenced Groundwater Sample Location



## Lavarack Barracks – Surface water monitoring locations



**Legend**

- Base Boundary
- Management Area
- Aplin's Weir
- Source Areas

**Sub-catchments**

- A and West
- G and Central
- J/K and East

Watercourse

On-Base Co-located Surface Water and Sediment Sample Location

Off-Base Co-located Surface Water and Sediment Sample Location