

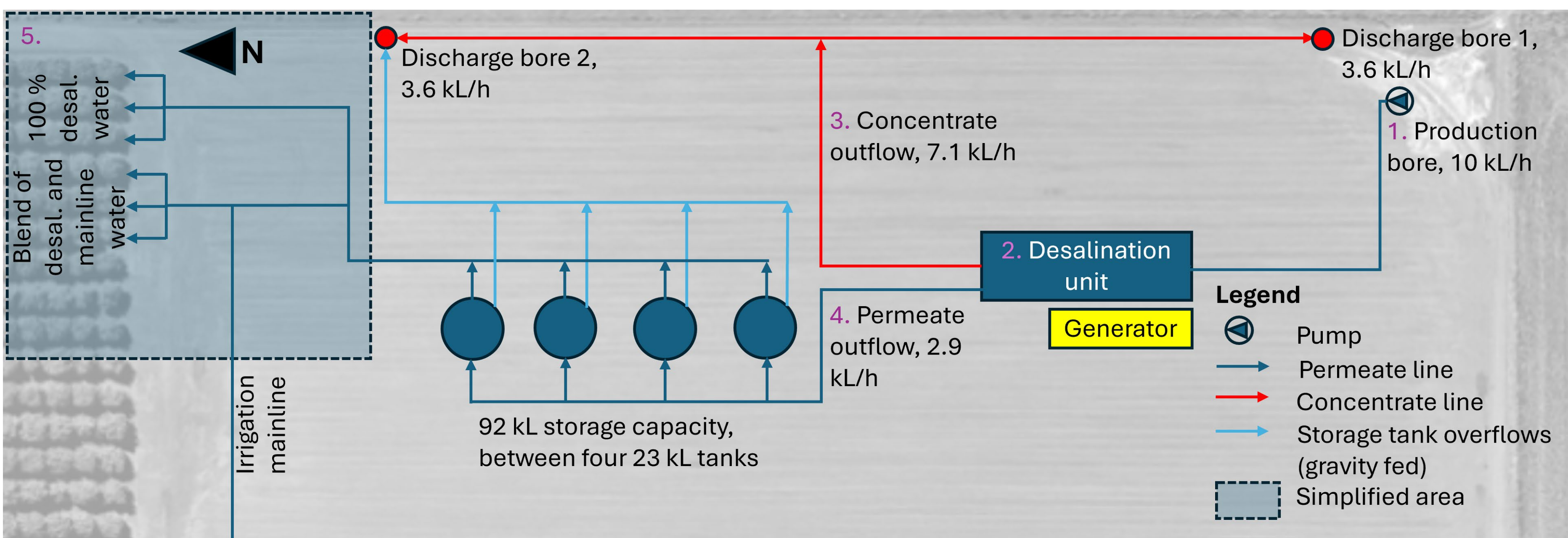
# Overview of the brackish groundwater desalination demonstration site at Century Orchards



## How the system works



The containerised desalination plant used at the field site was supplied by our industry partner, Osmoflo, awaiting connection and commissioning at Century Orchards.



The above diagram displays the layout of the site (not to scale), where the purple numbered items correspond to the list below.

1. Brackish water is extracted from the production borehole.
2. The containerised desalination unit receives the brackish groundwater. The desalination unit has been calibrated for low-recovery yield, meaning fresh water can be produced with minimal energy and no chemical inputs.
3. The desalination brine (concentrate) is disposed of via two discharge bores.
4. The fresh water (permeate) is stored before being sent to the orchard.
5. In this trial, six rows of almonds will be irrigated, three rows 100% desalinated water and 3 rows mixed with 50% with the main irrigation water. Additionally, 3 rows will be included for control comparison, using normal grower practice and river water.

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### Project contacts:

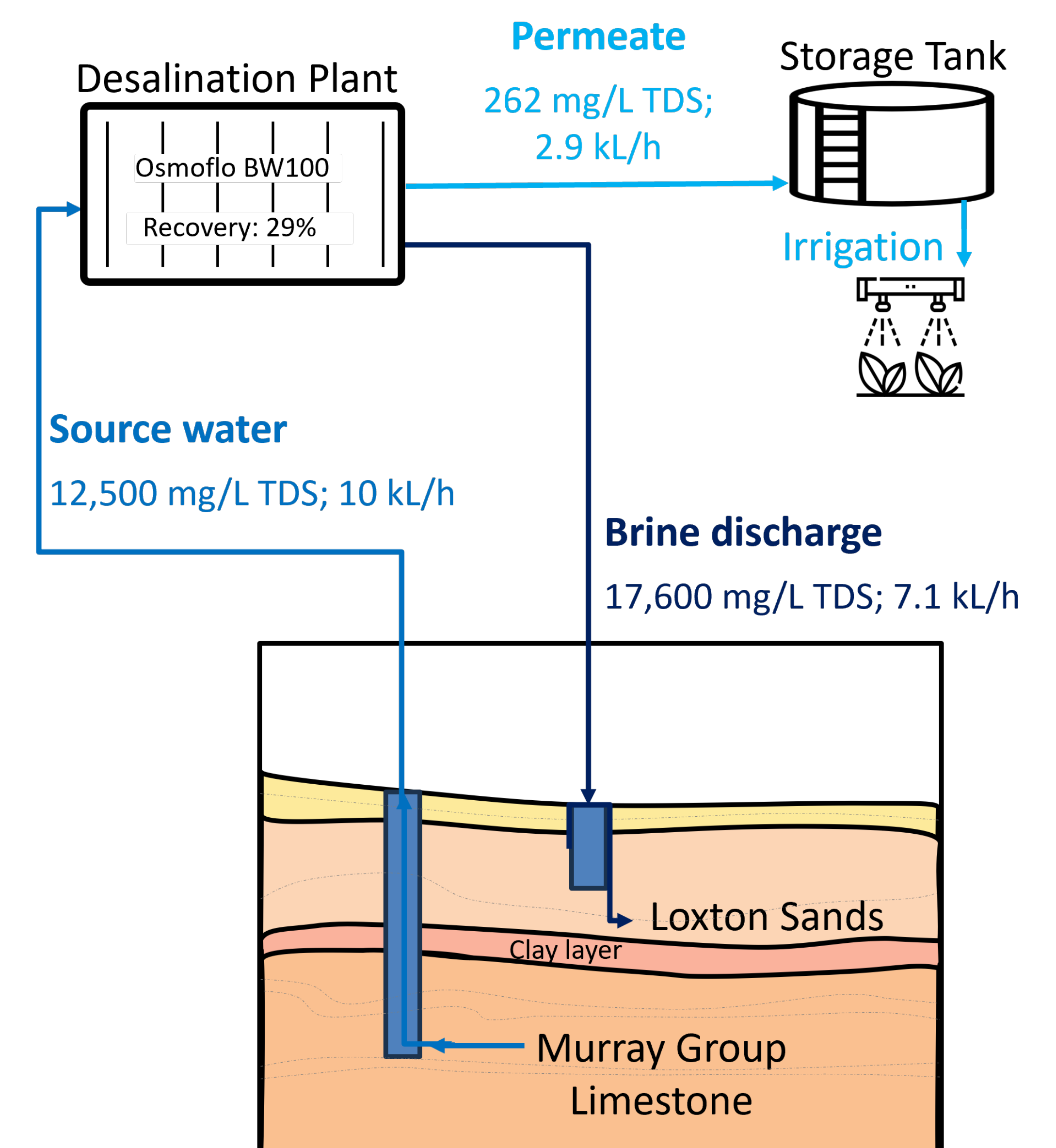
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The project team wish to thank Century Orchards for their extensive support of the project, and the project advisory committee, chaired by Kym Walton (1BCRC), for their valuable input.

## Aquifer disposal of desalination brine



This schematic shows the expected flowrates and water quality at the site.

- This innovative disposal method has several potential benefits when compared to evaporation ponds, including
  - Lower capital outlay
  - Reduced ongoing maintenance
  - Smaller footprint

## Looking to the future

Alternative water sources, such as brackish groundwater, could play an important role in ensuring the ongoing resilience and productivity of the Murray-Darling Basin's irrigation regions.

The demonstration site will operate over the 2024-25 irrigation season and provide valuable insights into this technology.

Other outputs from this project include an online desalination cost calculator, brine disposal report and outlook report. Please subscribe to our newsletter to keep informed.

## Acknowledgement

The One Basin CRC acknowledges the First Peoples of the River Murray and Mallee, the traditional custodians of the land on which we work, learn and live.