Organica Food Chain Reactor step-by-step

Step 1. Solids removal

- All flows entering the WRP will be subjected to an inlet screen to ensure the removal of rags, paper and plastics. All screenings are then macerated and pumped back into the Cranbourne main sewer.
- Solid waste is removed from the influent wastewater from the Aquarevo estate.
- Pretreatment can be coupled with other options depending on the influent quality.

Step 2. Biological treatment/ nutrient removal

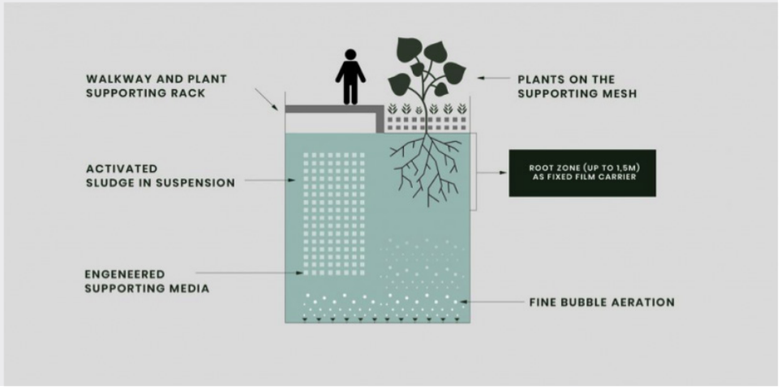
- The wastewater flows through a series of reactors made from natural and engineered root systems.
- These reactors allow distinct ecosystems to flourish and treat the wastewater.

Step 3. Phase separation

- Following polishing and disinfection, suspended solids are at very low numbers.
- Discfilters can be used for a last method of filtering the recycled water ready for reuse.
- All solids obtained from the drum filter are also pumped back to the Cranbourne main sewer.

Step 4. Tertiary treatment

- After the Organica process, the treated water then undergoes tertiary treatment.
- This includes: ultra-filtration, ultra-violet sterilisation and chlorination to remove viruses and any other pathogens.



How the WRP works

A pressure sewer controlled by OneBox® technology manages the flow of wastewater from each household and ensures that the wastewater volumes throughout the day are controlled, giving more consistent flows to the WRP, for the best production of Class A recycled water.

The WRP will adopt new technology, the first of its kind in Australia. It will use the Organica Food Chain Reactor (see diagram above), which has been designed to look like a natural garden and to blend into the landscape.

By using natural and artificial root environments we're able to achieve a highly effective and energy efficient treatment process with a low carbon footprint. An infographic explains the process overleaf.

The recycled water is then transferred back to houses, providing high-quality recycled water for non-drinking purposes, and irrigation for nature strips and waterway reserves within the estate.

Get project updates faster!

Update your email and mobile number so you're aware of major projects and possible service interruptions. Simply log in to **mySouthEastWater.com.au** or call **13 16 94**.

How to get in touch

Report a leak or check interruptions
mysupport.southeastwater.com.au/LIVE

Faults and emergencies 13 28 12 (24hrs)

Account enquiries 13 18 51
(8am – 6pm, Mon – Fri)

TTY users 13 36 77 (ask for 13 18 51)

Interpreter service

Languages other than English
03 9280 0779

Jika Anda membutuhkan seorang juru bahasa, telepon 03 9280 0779

Εάν χρειάζεστε διερμηνέα, επικοινωνήστε με το 03 9280 0779

Follow us on socials for updates

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Aquarevo@sew.com.au

southeastwater.com.au

South East Water

Project news

October 2024


Artist impression for illustration purposes. Subject to change.

Aquarevo Water Recycling Plant

Aquarevo in Lyndhurst is a unique collaboration between South East Water and Villawood Properties to create what's on track to become Australia's most water efficient urban housing development. As part of the development we're now preparing to construct an on-site Water Recycling Plant (WRP) to efficiently treat and recycle wastewater within the Aquarevo Estate.

Currently recycled water is being supplied to homes in Aquarevo by Melbourne Water's Eastern Treatment Plant. As part of the Aquarevo development, we're now preparing to construct a WRP in the estate to recycle wastewater to Class A standard and send it back to each Aquarevo home for use in the garden, toilet and washing machine. The recycled water will also be used to irrigate nature strips and waterway reserves within the estate.

The WRP will be located at Brookwater Parade, beside the railway line (see map below) and will be housed within a greenhouse that's designed to look like a natural garden and blend into the landscape. It will feature an Australian first, state-of-the-art treatment process called an Organica Food Chain Reactor, combining natural and artificial root environments for an energy-efficient treatment process with a low carbon footprint.

The project is currently in the detailed design phase, which is expected to be complete by late 2024. The WRP will be prefabricated off-site, reducing the time it takes to construct.

We're planning to begin construction in early 2025 and expect be complete within three to six months. We expect the WRP to be operational by late 2026.

We'll keep you updated and get in touch prior to starting construction.

We're here to help. You can reach our project team via email: aquarevo@sew.com.au or call 1800 055 465 .

Key facts

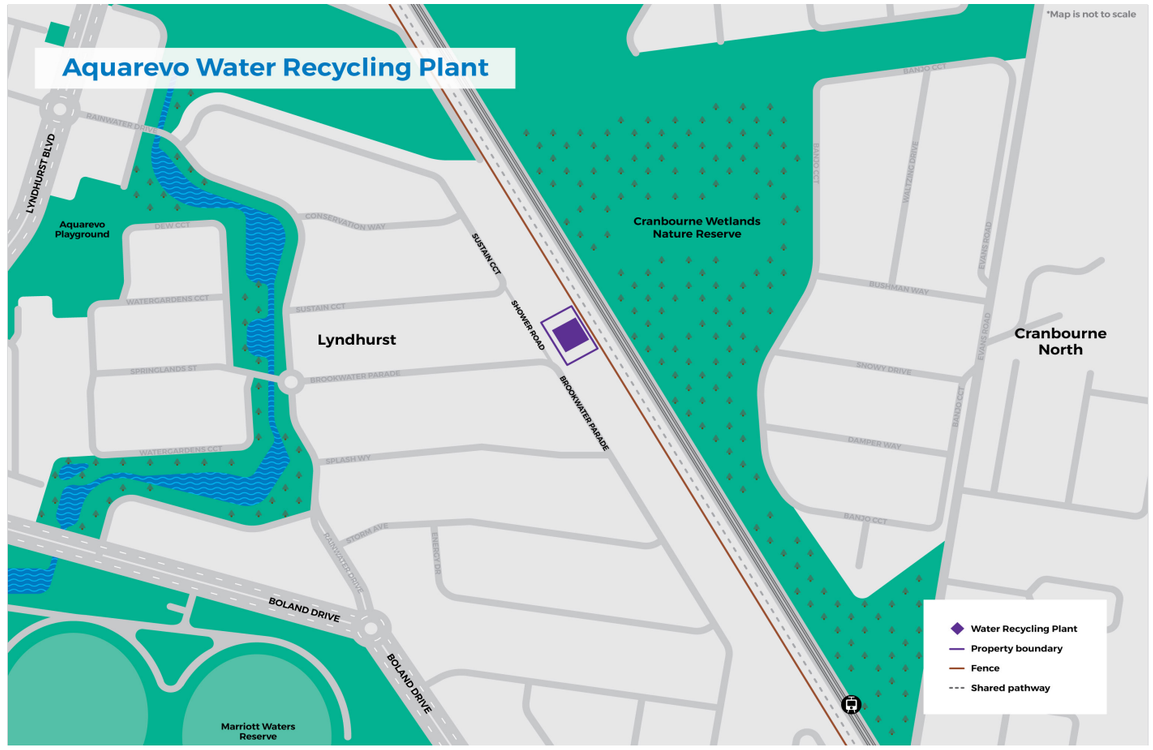
The WRP will have capacity to treat 230kL of wastewater every day - that's the volume of an olympic swimming pool in 11 days.

The Aquarevo estate aims to reduce drinking water use by 70%.

Energy use will be reduced by up to 50% thanks to the photovoltaic cells and solar battery.

Water will be recycled and treated to Class A to be returned to houses and reused for toilets, gardens and laundry.

Find out more
Scan the QR code or visit sew.com.au/aquarevowrp to find out more info about this project.



Project timeline*

Sep - Dec 2024
- Detailed design phase
- Local community engagement

Jan - July 2025
- Delivery and Construction commences
- Local community engagement

Late 2026
WRP operational

Early 2027
- Reinstatement and landscaping
- Local community engagement

*Depending on the weather, permits and technical reasons

The benefits

Aquarevo homes benefit from an integrated approach to water management.

Each house in the Aquarevo estate is provided with:

- drinking water
- recycled water (for gardens, toilets and laundry)
- rainwater (for hot water in showers, baths and laundry)

This means that three sources of water (drinking, recycled and rainwater) are integrated into each home for specific purposes to minimise demand on the city's drinking water supply and attempt to reduce drinking water consumption by up to 70%.

What we're doing next

We're now preparing to award the contract for the project.

We'll provide updates on our website and at community information sessions as the project progresses.

More information

For more information on the Aquarevo water recycling plant, please contact the project team on:

1800 055 465

aquarevo@sew.com.au

sew.com.au/aquarevowrp