

A variety of projects in and around Forrest

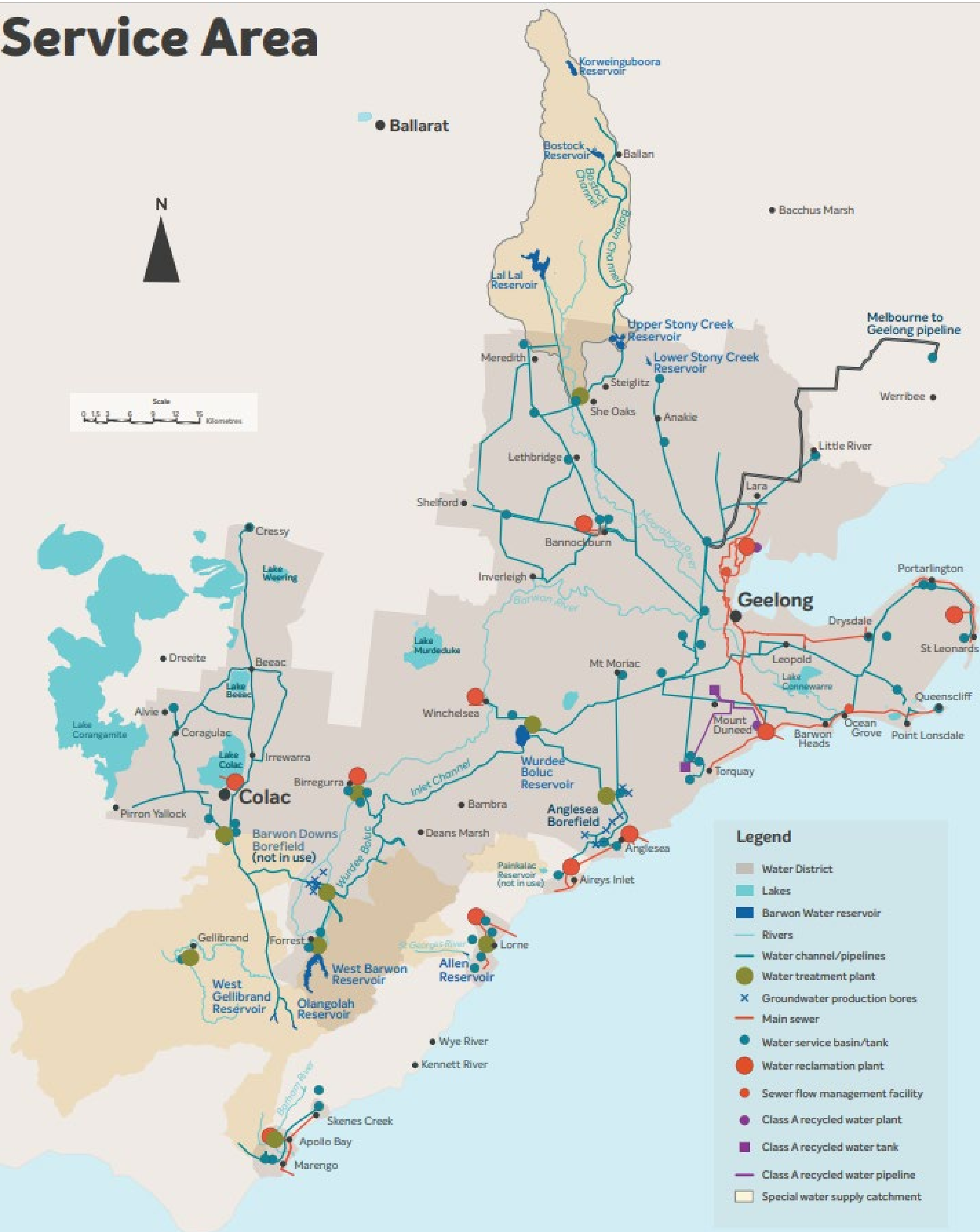
There are a number of projects happening in and around Forrest.

This community information session is an opportunity to provide updates to the Forrest and surrounding communities on a range of project and initiatives, now and into the future, these include:

- Forrest wastewater investigation
- Forrest Water Treatment Plant upgrade
- East Barwon Willows removal project
- Water for our Future – securing water supplies
- West Barwon reservoir operations



Service Area



Wastewater investigation update

Background

Over the past four years, Barwon Water has been working with the community, Colac Otway Shire, and technical experts to undertake assessments and investigations to identify a wastewater solution that supports the community's wastewater vision for the town.

A preferred solution (Hybrid) was identified, which proposed to upgrade or replace onsite systems (where necessary) on all properties, with an additional, centralised system to handle excess wastewater.

Cost estimates and complex implementation

Additional design and cost estimates has identified high costs, ranging from \$17.5 million to \$26.5 million.

Complex challenges from a regulatory and public and environment perspective. Including, ownership and ongoing management of the system.

Support for water and sewerage services to unserviced towns

Barwon Water has developed long term program to systematically improve water and sewerage services to unserviced towns across the region. Forrest township identified as the top ranking town for wastewater improvements.

Barwon Water has tested levels of support and willingness to pay. Although the broader customer base supports the concept of servicing unserviced towns, the willingness to pay for this is lower than what is needed to fund the program.

Committed to finding a way

Barwon Water remains committed to delivering this project in the 2023 Price Submission period, in line with the community's vision and to support the prosperity of the town.

The full cost of the project will not be factored into the 2023-2028 customer prices at this time, until further certainty on the final option, cost and funding is known.

This means we will continue progressing the refinement of options and costs, and better understand the regulatory and environmental approvals required.

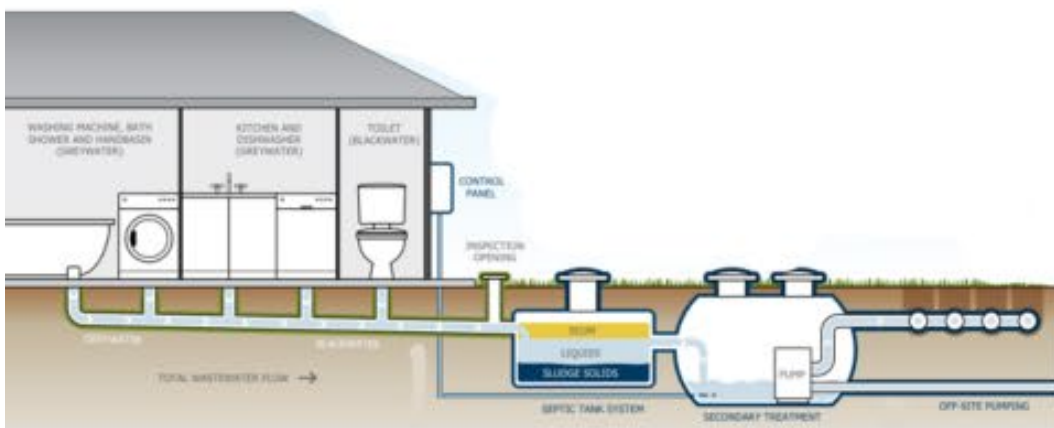
Subject to the resolution of these items and securing an affordable outcome for all, construction would likely start toward the end of the pricing period.

Wastewater solutions

Order of community preference

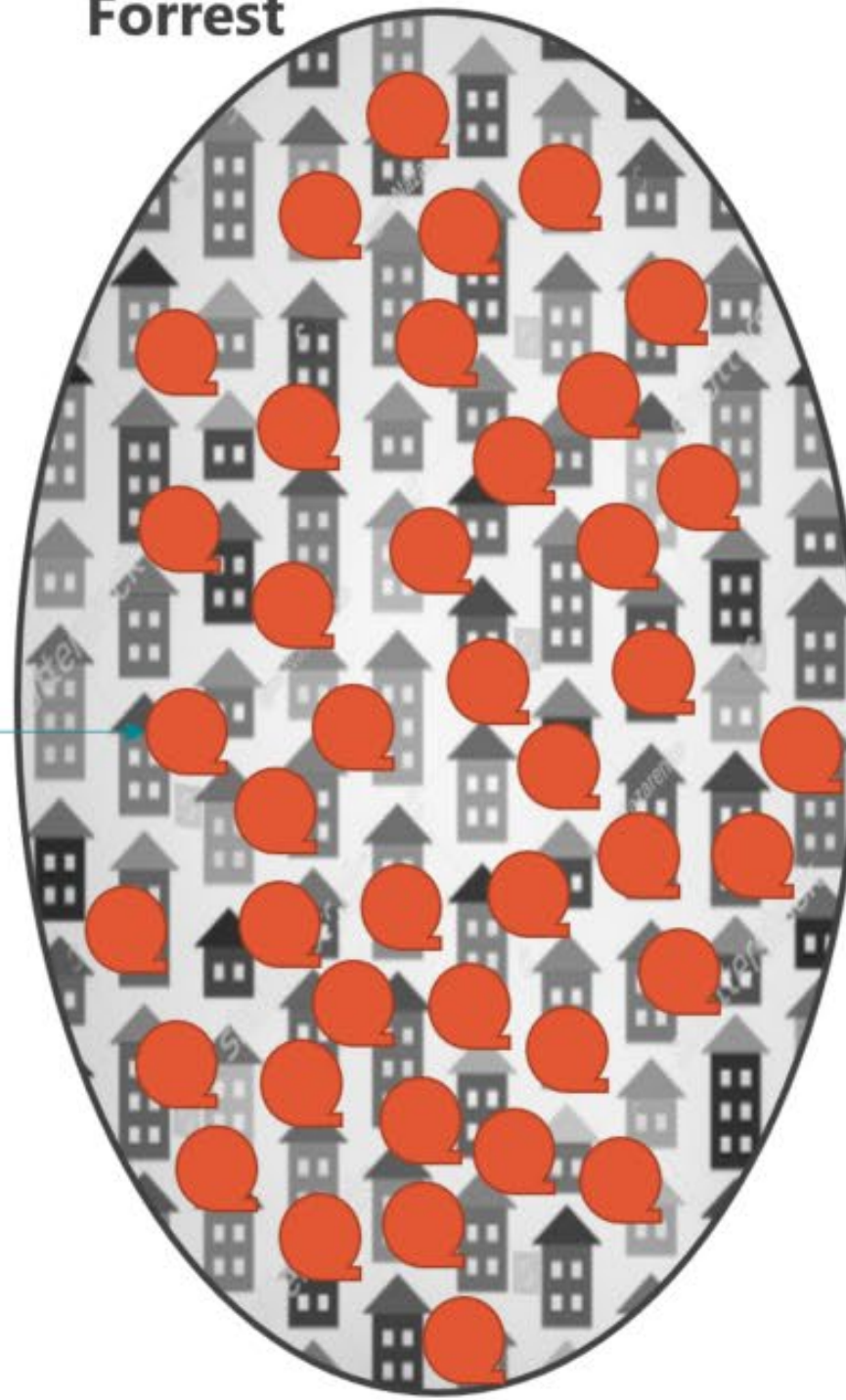
Solution	Onsite		Offsite				Challenges	Estimated cost*
	Treatment	Irrigation	Reticulation network	Treatment	Irrigation	River discharge		
Hybrid <i>(Previously identified preferred option by community)</i>	✓ 144 Individual treatment plants for each house	✓	✓	✗	✓	✗	Complex ownership & management Approvals uncertainty	\$17.5M ~\$122,000 per lot
Centralised	✗	✗	✓	✓ 1 local wastewater treatment plant	✓ 100% land irrigation	✗	Land Availability	\$26.6M ~\$185,000 per lot
Centralised	✗	✗	✓	✓ 1 local wastewater treatment plant	✓ 50% land irrigation	✓ ~50%	Land Availability River discharge approvals	\$25.2M ~\$175,000 per lot
Centralised	✗	✗	✓	✓ 1 local wastewater treatment plant	✗	✓ ~100%	Land Availability River discharge approvals	\$21.5M ~\$150,000 per lot

Hybrid onsite solution



**Install 144 new
onsite treatment
units**

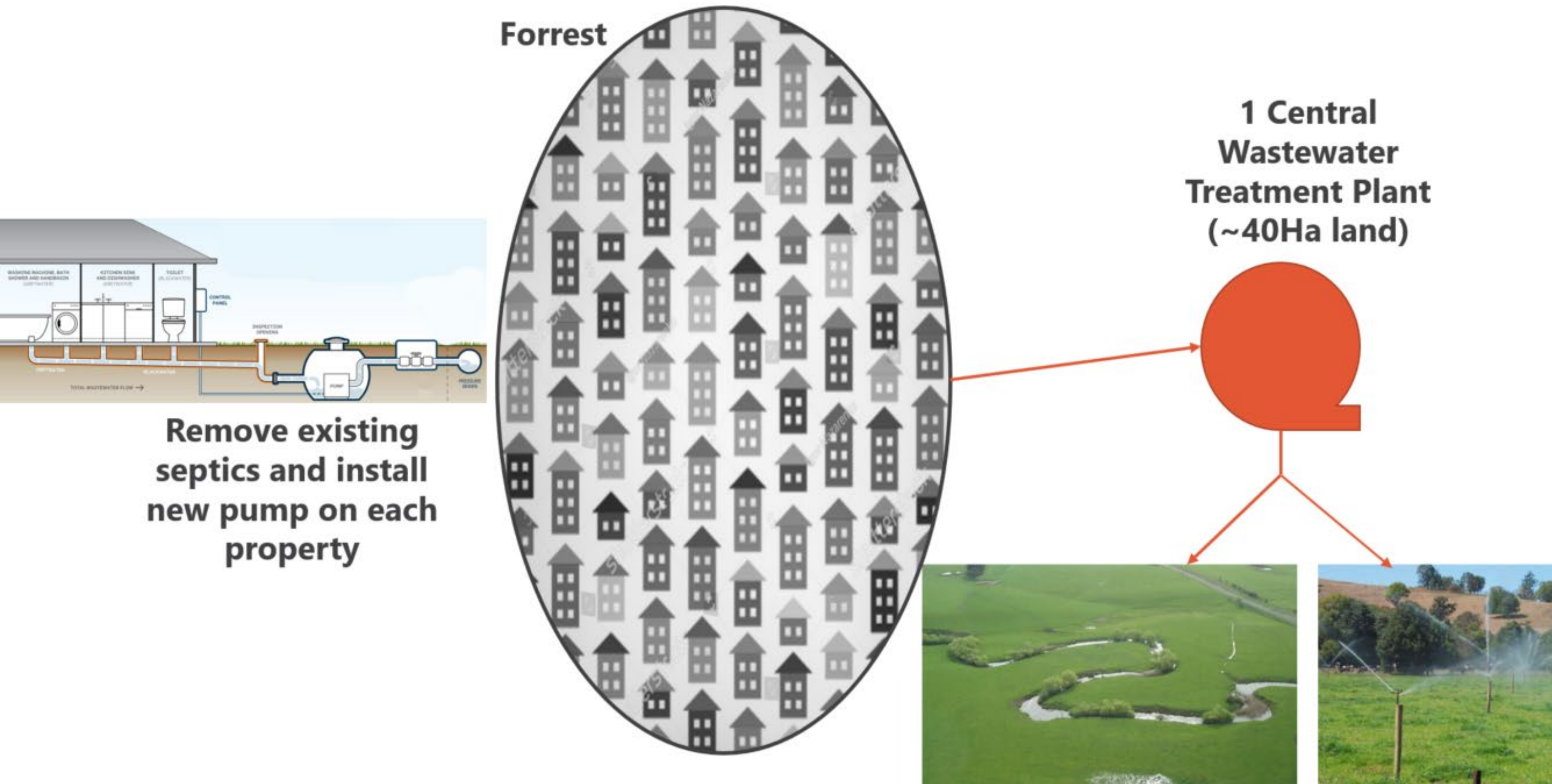
Forrest



**Central Irrigation
of treated effluent**



Centralised onsite solution



Next steps

** Timelines are subject to change dependent on outcomes of each phase of work*

Concept refinement

- Regulatory uncertainty
- Consultation
- Seek customer and ESC support
- Business case development

Detailed design

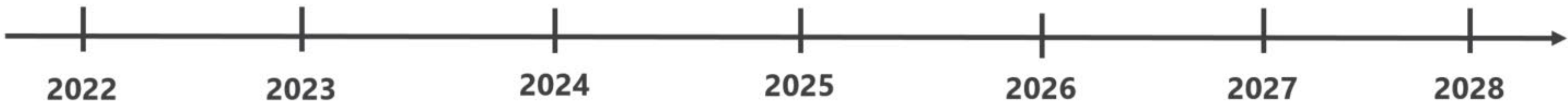
- Onsite and offsite designs
- Land suitability
- Regulatory requirements
- Ongoing consultation

Procurement and approvals

- Land Acquisition
- EPA Approvals
- Contractor procurement
- Ongoing consultation

Construction

- Construction of all onsite and offsite infrastructure
- Commissioning
- Ongoing consultation



Forrest water treatment plant upgrade

The Forrest water treatment plant was constructed more than 30 years ago, over this time several upgrades to the plant have been undertaken to ensure the plant operates effectively in delivering water to the Forrest community. The plant pumps raw water from the West Barwon reservoir and treats the water in accordance with the *Safe Water Drinking Act 2003*.

The need to upgrade

The plant has reached the end of its operational life and requires a complete upgrade to continuing to provide world class drinking water to the Forrest community.

In 2016, Barwon Water identified outlined and costed the project as part of its 2018 Price Submission.

The \$8 million upgrade will involve installing dissolved air floatation trains, media filters and UV disinfection.

The existing plant will be decommissioned and demolished and a new energy efficient and high quality plant will be constructed within the existing Barwon Water site.

Benefits for the community

Once completed, the new plant will house the latest technology and provide a number of major benefits for our customers, community and the environment, including:

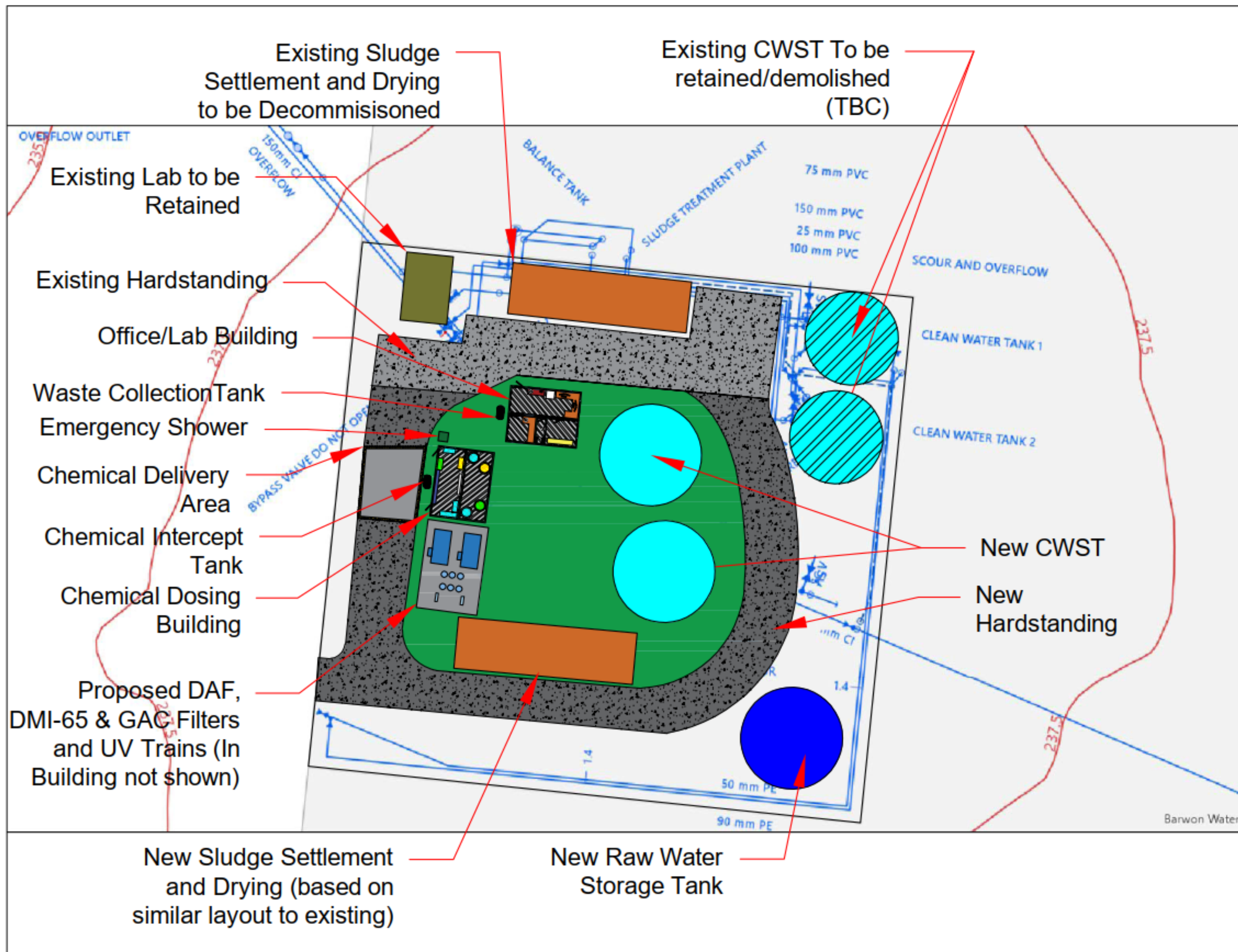
- Enhanced water quality and security
- Necessary protection features to support bushfire resilience
- Supporting increased demand for water during peak times
- Increased water security for the Forrest and District community
- Improved access for water carters
- Added benefits for future growth, increasing the capacity to cater for events and tourism in the area
- Improved access for rural commercial water carting companies

Next steps

On-site investigations will be commencing over the coming months to inform cultural heritage, flora and fauna, service proving, geotechnical and land assessments.

Construction is expected to commence in late 2022 and be completed by late 2023.

Barwon Water will continue to share updates on the project with the community as the project progresses.

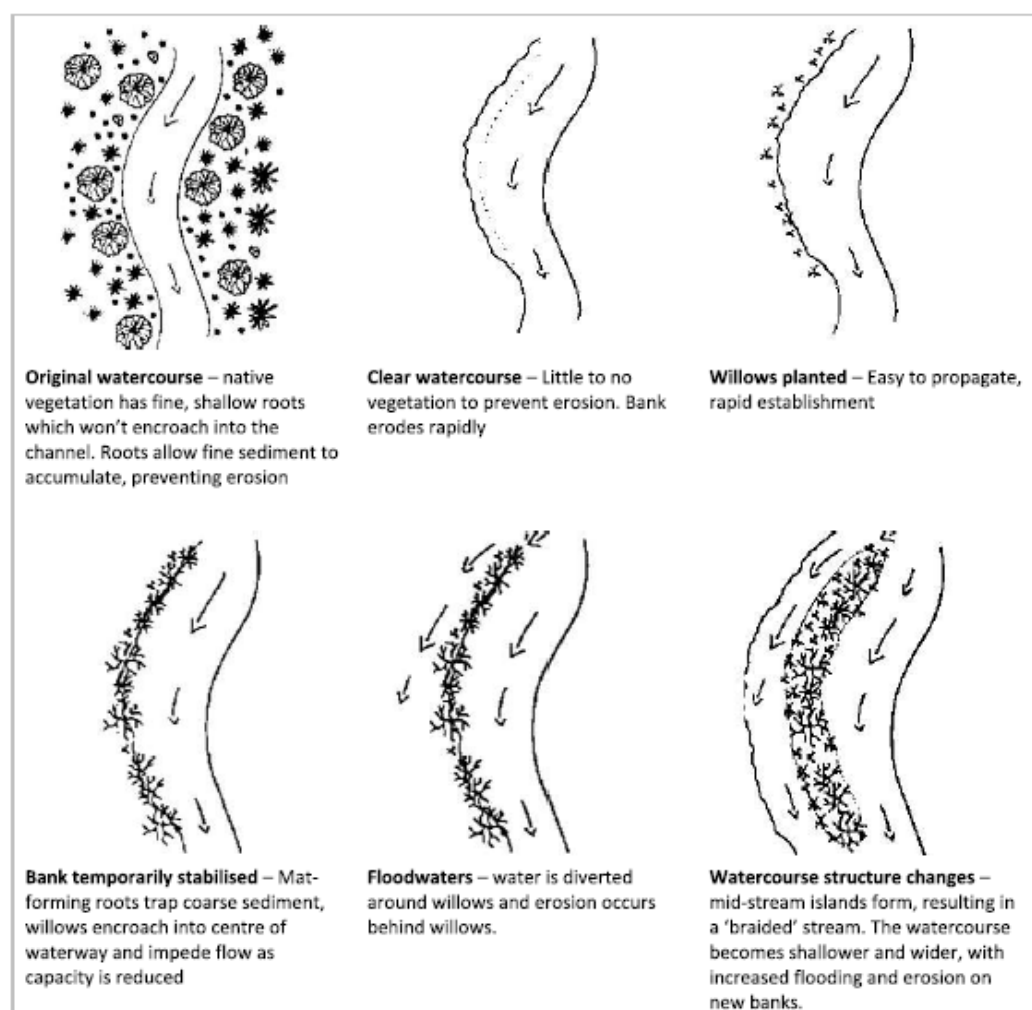


East Barwon willows removal

Barwon Water is working with local landowners, the Corangamite Catchment Management Authority (CCMA) and specialised consultants and experts to remove willows within a section of the East Barwon River to support water security and waterway health.

What does the project involve?

Currently Barwon Water transfers water from its West Barwon Reservoir, via a 3.5 kilometre section of the East Barwon River, at which point it diverts into the Wurdee Boluc Inlet Channel (WBIC) and travels approximately 57 kilometres to the Wurdee Boluc Reservoir where it is treated and supplied to customers in the greater Geelong region.



Willow infestation has caused loss of transfer capacity through this section of the East Barwon River, which reduces Barwon Water's ability to transfer water and leads to flooding of adjacent properties.

The \$4.35 million project will provide environmental benefits as a result of improved water flows and waterway health, and alleviate flooding issues in this section, as well as ensure ongoing protection of the WBIC embankment.

Current status

The first stage (\$2.35 million) of works involved removing and processing all willow and blackberries, stabilising sections of the

river embankment and installing stock watering systems and exclusion fencing. These works were completed in late April 2022. The replanting of native vegetation is another important part of the project and will help stabilise the streambank, reduce pathogens and nutrients entering the waterway and limit the spread of *Glyceria*. Revegetation works will commence in spring 2022. The second stage (\$2 million) of the project will involve further willow removal downstream of the WBIC diversion along with streambed and embankment reinstatement and stabilisation works.

Ongoing management

Barwon Water have been appointed as the delegated manager of this crown land and therefore we are responsible for controlling weeds and pests on the reserve and ensuring they do not invade neighbouring land. We will support the environment and community through ongoing land and asset management activities. This will include all necessary maintenance and monitoring activities required for the long-term management of the vegetated buffer along this reach of the river.

Dewings Creek waterway restoration project

The Dewings Creek waterway restoration project aimed to improve water quality. The project involved installing stock fencing, removing willows and planting more than 30,000 native plants along the waterway. Establishing new fencing to keep stock out of the waterway had been a major focus of the project with stock manure a major risk to water quality.

The project – completed in 2019 - was staged over three years and was supported by the Upper Barwon Landcare Network, Corangamite Catchment Management Authority (CCMA) and local landowners.

We are responsible for and committed to undertaking all necessary maintenance and monitoring activities required for the long-term management of the vegetated buffers along this reach of the creek. These activities include controlling weeds and pests and ensuring they do not invade neighbouring land along with monitoring and replacement planting as required.

To learn more about this project, check out a short video by scanning this QR code with your smart phone.











About the West Barwon reservoir

Located at Forrest in the Otway Ranges, the West Barwon Reservoir sits at the base of a large catchment on the West Barwon River. It is situated here because it gets much more rain than in Geelong. Work began on the West Barwon dam in 1959, and the reservoir was officially opened on 17 November 1965.

Providing drinking water to greater Geelong

Since construction, the reservoir has played a vital role in supplying water to more than 200,000 residents and more than 20 towns throughout the region. The reservoir holds more than 21,500 megalitres of water when full – enough for about 6 month's supply for the greater Geelong region.

Water is fed via a 57-kilometre channel to the Wurdee Boluc storage reservoir, south of Winchelsea, collecting from smaller rivers and streams on the way.

This water is treated at the adjacent Wurdee Boluc Water Treatment Plant, before being delivered to customers via a network of pipes, tanks and covered storage basins.

Passing flows

Water released to the river from the reservoir is known as passing flows. Four to five megalitres per day of water is released from the reservoir to maintain downstream flows in the Barwon River.

Environmental flows

Under the Upper Barwon Environmental Entitlement, the Corangamite Catchment Management Authority (CCMA) works with Barwon Water to release approximately 1,000 megalitres of water every year from the West Barwon Reservoir to flow down either the Upper East or West branches of the Barwon River to support waterway health in accordance with their seasonal watering plan.

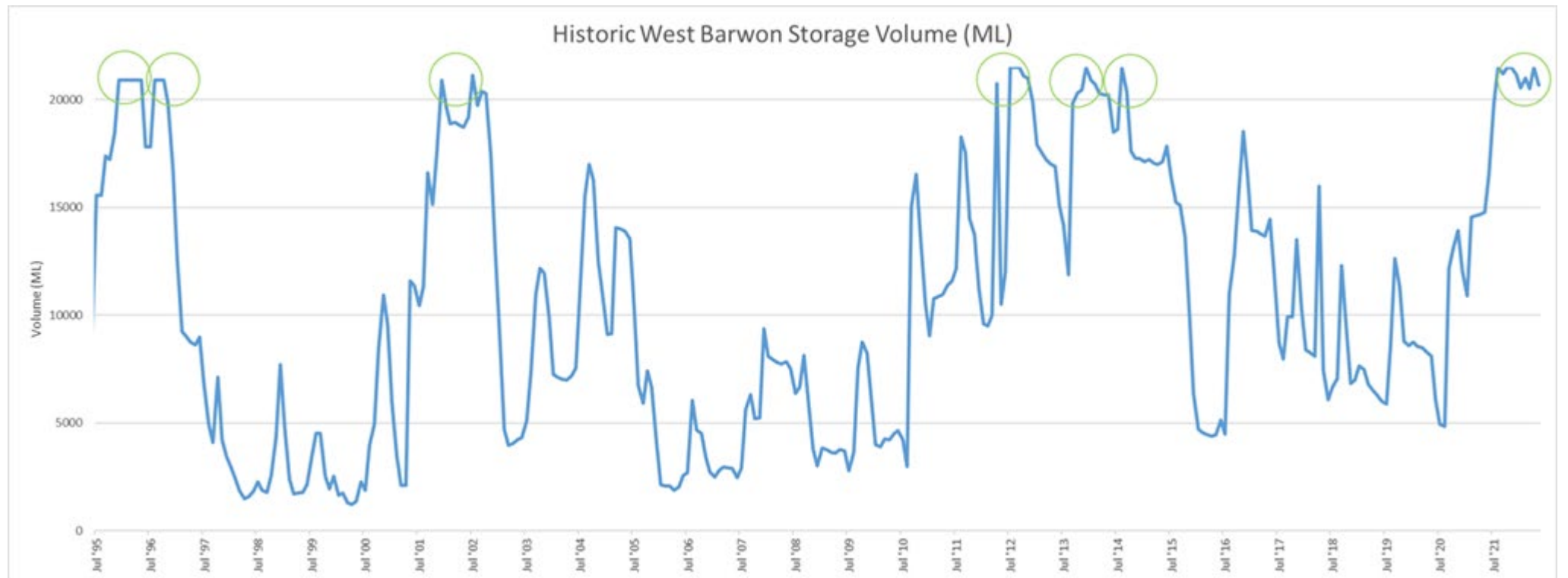
Maximising the benefit of the reservoir

We're aware of community interest in better understanding potential opportunities in the recreational, cultural, environmental, safety and wellbeing benefits available at the West Barwon Reservoir.

We are currently scoping a project to support this, and will have some guiding principles that we will need to work within and we will share these principles with the community in the coming months.

Spilling events at West Barwon reservoir

It is not uncommon for the reservoir to spill, and it has done so multiple times since it was constructed in the 1960's. When the reservoir is at capacity, it spills and the spillway directs overflow water around the dam wall, into the west branch of the Barwon River. Since 2002, there has been 6 spilling events – 2002, 2012, 2013, 2014, 2021 and 2022.



Since early 2022, there has been a total of 515 mm of rainfall at Mt Sabine and 270 mm at West Barwon. As of yesterday, the West Barwon Reservoir is currently 87.8% full.

Given the high summer rainfall, high storage levels and upcoming wet weather over winter, it is anticipated that further spill events will occur at the West Barwon Reservoir this year.

All agencies will continue to work together to monitor and plan for such events and provide timely updates to the community.

In line with our normal seasonal water harvesting operations, transfers from the West Barwon Reservoir to the Wurdee Boluc Reservoir are currently underway, with transfer amounts currently 100 to 140 megalitres per day. The amount we can transfer has significantly increased following the completion of Stage 1 of our East Barwon willow removals project. Transfers will continue until December, at which point they will cease, as per normal operations.

Other projects Barwon Water is supporting in the Forrest and district area

We understand that catchments and waterways are a shared community resource, supporting a range of social, environmental, economic and cultural values across the community and natural environment. We are committed to supporting key stakeholders in order to protect and improve these values through a range of supported and funded programs.

Partnering with Landcare

We are pleased to be supporting the Gerangamete Forrest Landcare group with their holly and woody weed removal project. We provided \$15,000 of funding to the Upper Barwon Land Care Network for the Gerangamete Forrest Landcare group to coordinate efforts to eradicate weeds throughout the Forrest area. The funding was provided as an addition to our Upper Barwon Landcare Network partnership of which we contribute \$52,000 per year.

Feral animal management

We are working with Parks Victoria and Conservation Ecology Centre on feral animal control programs around our West Barwon Reservoir. Feral pigs are destructive pest animals that impact land and waterways by trampling, rooting underground, wallowing and destroying vegetation. The data gained from this management program will greatly assist agencies with future control of wild pigs throughout the Otways.

Supporting planned burns

We also work closely with DELWP's Forrest Fire Management team through their planned burn program. Planned burning is one land management practice used to reduce fuel loads and limit the risk of major bushfires. In relation to our catchment, planned burns help:

- Reduce the risk of major bushfires impacting on water quality and yield
- Protect surrounding infrastructure
- Maintain the surrounding environment's resilience

Platypus monitoring

Barwon Water has been supporting eDNA platypus monitoring within various reaches of the Barwon River. To date \$10,000 has been contributed to this project and we look forward to continuing working with the Upper Barwon Landcare Network on this important project.

Upper Barwon Flagship project

We are also supporting Corangamite Catchment Management Authority (CCMA) on the delivery of the Upper Barwon Flagship project. We contribute annually to:

- on ground work for river health projects in water supply catchments under the Barwon Water-Corangamite CMA River Health Partnership Agreement.
- to support the CCMA Citizen Science program which involves the facilitation of community participation in waterway events and monitoring activities across the Corangamite region

To learn more about this project, check out a short video by scanning this QR code with your smart phone.



The Forrest Mountain Bike (MTB) Network Revitalisation Project

We are supporting the Department of Environment, Land, Water and Planning (DELWP) and Colac Otway Shire council in delivering this project. Part of the trail network is located on Barwon Water land, including the new Barwon Flow trail currently under construction, located behind our water treatment plant.

To learn more about this project, check out a short video by scanning this QR code with your smart phone.



Deakin University research projects

Barwon Water is supporting three Deakin University research projects focusing on riparian buffers within the Upper Barwon catchment. The projects include:

- a PhD project focusing on the effects of willow removal and the physical characteristics of riparian restoration on water quality, microclimate, and morphology (this project is being sponsored by Barwon Water, Deakin and Water Research Australia)
- a masters project to develop a tool for calculating the costs and benefits of riparian buffers for stakeholders, and
- a honours project investigating leaf decomposition rates and processes between streams.

Draft Water for our Future Strategy

Over the past two years, we have been working with our community to co-design a water future that meets all of our needs.

Our customers and community have told us that a secure water future is one where there is a diverse mix of water sources, the health and cultural values of our rivers are protected and affordable and equitable access is provided for everyone.

Our modelling shows that under a worst-case scenario, we will need to find or save an extra 1,000 million litres of water each year for the next 50 years to meet the needs of the Geelong, Golden Plains, Bellarine and Surf Coast system. This equates to an extra 50,000 million litres of water per year by 2070.

This target is even greater given we need to return water to rivers to meet the needs of the environment and Traditional Owners.

To respond to this challenge, we have set out a clear plan for action for the next five years and will continue to progress opportunities over the 50-year horizon of the strategy to ensure a secure water future for our region. This will include gradually reducing our reliance on rivers and groundwater as we transition to more climate resilient water sources.

Key short term actions Barwon Water will take include:

Extend the reach of the Melbourne to Geelong Pipeline so it can supply more of the Geelong, Bellarine and Surf Coast, allowing 3,700ML/year of water to be returned to the Moorabool River for cultural values and environmental needs.

Implement the integrated water management plan for the new Northern and Western Geelong Growth Areas, including supply of Class A recycled water.

Support improved waterway health on the Barwon River by undertaking complementary river rehabilitation works

Increase the use of recycled water for non-drinking purposes.

Further information can be found in the draft Water for our Future Strategy, which you can view by scanning the QR code with your smart phone:



157,932

customers
connections
across

5 water supply systems,
covering 8,100 square
kilometres



Need to find or
save an extra
53,470
million litres
of water each year,
within 50 years' time,
under a worst case scenario – even
more to meet environmental and
cultural values

Average annual water
consumption of

34,500

million litres over
past 3 years



Over next 5 years, we expect
that water restrictions will be:

Very Rare
(**<1%**)

Geelong, Golden Plains,
Bellarine, Surf Coast,
Colac and Gellibrand

Rare
(**<5%**)

Lorne and Apollo Bay



Over the next 50 years, **we may need to be on water restrictions in a dry period or drought,** but we plan for this to occur less than **5%** of the time.

We will not run out of water.

At all times, even during droughts and emergencies, we will
continue to supply drinking water to meet essential human needs.

**Current water supplies will no longer
reliably meet customer demand for
water, under a worst case scenario, by:**

2054
for Colac

2027

for Geelong, Golden
Plains, Bellarine and
Surf Coast

>2070
for Gellibrand

2027
for Lorne

2028
for Apollo Bay

**25 actions proposed over the
next 5 years, which will:**



Deliver 4,950 million litres of extra water security



Put 1,000 million litres of recycled
water to productive use



Save 1,000 million litres of drinking water



Return 3,700 million litres of water to rivers –
to support environmental and cultural values



Progress opportunities to support agriculture
and business with fit for purpose water

The future of the Barwon Downs borefield

Barwon Water through its draft Water for our Future Strategy has ruled out any future use of the Barwon Downs borefield as a water supply source.

About the decommissioning plan

Barwon Water is currently working on developing a decommissioning plan for the Barwon Downs borefield. The plan will need to be submitted and accepted by Southern Rural Water prior to undertaking any decommissioning activities.

At this stage, any accepted decommissioning works are likely to occur between 2023 and 2028 as part of Barwon Water's next 5-year price submission – the action plan that sets out how Barwon Water will deliver services and the prices customers will pay on their water bills.

Barwon Water will continue to share updates on the decommissioning plan development with the community.



Delivering our next 5 year customer promise

Every five years, Barwon Water prepares a plan that proposes the:

- service standards we will provide to our customers (water, wastewater and recycled water)
- capital and operating expenditure to deliver these services and meet regulatory obligations
- prices that customers will pay in return.

This plan – known as a price submission – is submitted to the Essential Services Commission (ESC) for review and determination. The ESC provide detailed guidance about what must be set out in a price submission, which includes a clear statement of the outcomes that will be delivered to customers.

In developing our next price submission, we have been listening and learning from customers and communities over the last five years about their services and outcomes they want Barwon Water to deliver.

A draft Price Submission is being developed based on this customer feedback. The draft will be released in July 2022 at which point customers will have an opportunity to provide feedback.

To stay updated and to learn more about the 2023 Price Submission, please scan the QR code with your smart phone.



Keeping in touch

To keep updated on all other Forrest projects, we have created a dedicated an online Forrest Community Hub which details all key projects. To stay updated and to learn more about the 2023 Price Submission, please scan the QR code with your smart phone.



Over the past 5 years, we have been listening to our customers ...

*We have been consistently
rated by customers **top 3** for
**value for money, trust,
reputation and
performance** across all
Victorian water businesses*



Some of the things we've been hearing ...

**Protect and enhance our
precious natural
environment**

Move away from rivers

**Give me support when I
need it most**

**Help us drive a clean
and green regional
economy**

**Support programs are valued
and effective**

**Partner with Traditional
Owners and respect their
Country**

**Partner with me so I can be
more sustainable**

**Deliver me innovative
services that I can rely on**

**Community expectations are
changing the regulatory
environment**

**Transition to climate
independent water sources**

**Customer outcomes are
the right ones**

Expand recycled water use