

Queanbeyan Sewage Treatment Plant upgrade

January 2023

DELIVERING A ROBUST, RELIABLE AND SUSTAINABLE SEWAGE TREATMENT PLANT THAT PROTECTS PUBLIC HEALTH AND THE ENVIRONMENT FOR FUTURE GENERATIONS

Background

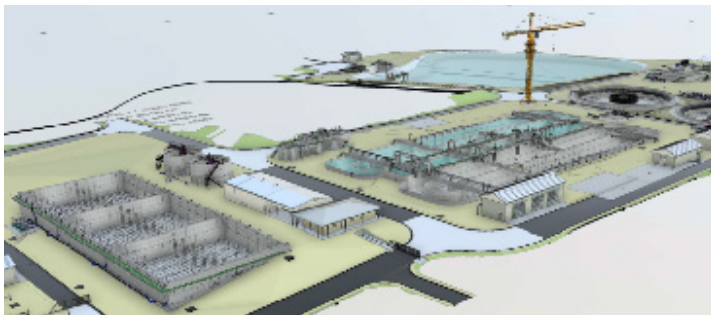
The Queanbeyan Sewage Treatment Plant (QSTP) has been treating Queanbeyan's sewage before discharging it into the Molonglo River since its construction in the mid-1930s. While Council has delivered multiple upgrades and regular maintenance works since, the facility is no longer fit-for-purpose. Council is undertaking a significant upgrade project to replace the existing treatment plant with a modern facility on the same site.

The upgrade

The upgrade will replace the existing sewage treatment plant with a modern robust and reliable treatment facility that will provide additional capacity and improve treatment reliability. The upgrade provides 75,000 equivalent persons of treatment capacity to support growth and development in Queanbeyan.

The Sewage Treatment Plant

The existing plant has a design capacity of 34,500 equivalent persons (EP) and is currently operating above this capacity, servicing an estimated 52,000 EP. The QSTP currently services Crestwood, Jerrabomberra, Karabar, Queanbeyan, Queanbeyan East, Queanbeyan West, Greenleigh, and the ACT suburb of Oaks Estate.

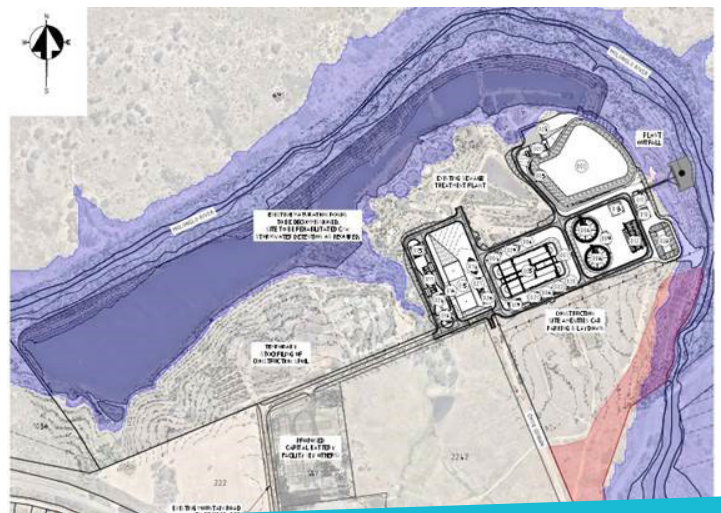


The need

The existing STP is overloaded and at the end of its service life. Due to its age, the plant is experiencing structural failure, reduced equipment reliability and maintenance issues. The existing facility no longer conforms to industry best practice for the protection of public health or the environment and is becoming increasingly difficult to operate to meet licence conditions.

Sustainability

The new QSTP is being designed using the Infrastructure Sustainability Council framework to achieve design and as-built ratings of 'Excellent' through innovation, energy and water efficiency, materials and waste management considerations. The treatment plant will be powered by 100% renewable energy and will include climate change adaptation measures, such as backup power generators to enable full service to be maintained if mains power was lost during floods, storms or bushfires.



Recycled water ready

The proposed tertiary treatment process for the new plant will produce a high quality of effluent capable of meeting recycled water standards. Recycled water will be used onsite and will also be provided for offsite applications such as dust suppression. The plant will be 'recycled water ready' and with some further capital work could supply a larger scale recycled water scheme.

Riparian rejuvenation

The project will remove the existing maturation ponds and landscape this area to create a well-vegetated riparian community. The landscaping plan for the decommissioned maturation ponds has been prepared with community and stakeholder involvement.

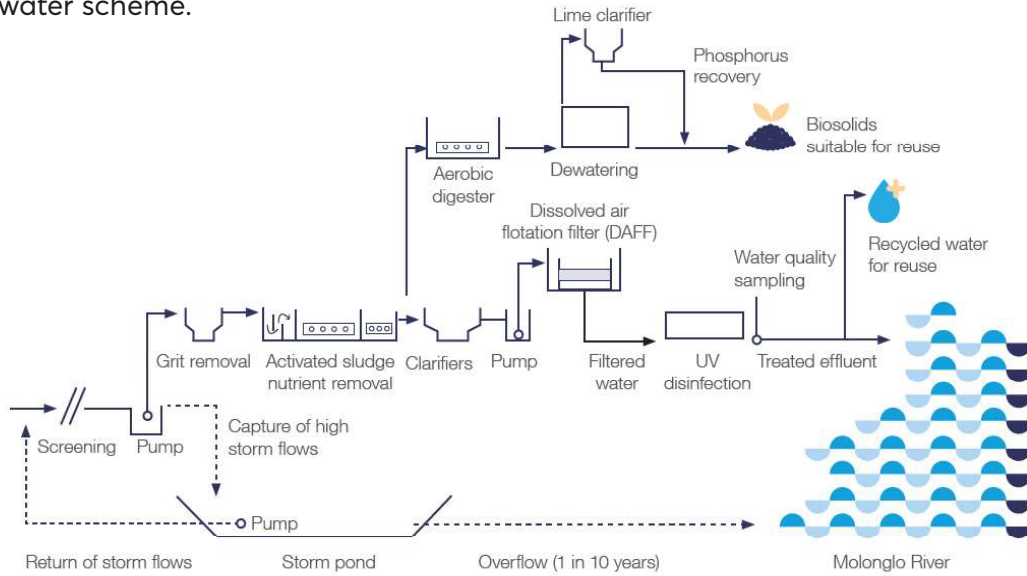


Figure 2.6: Proposed upgrade process flow and discharge of treated effluent to Molonglo River

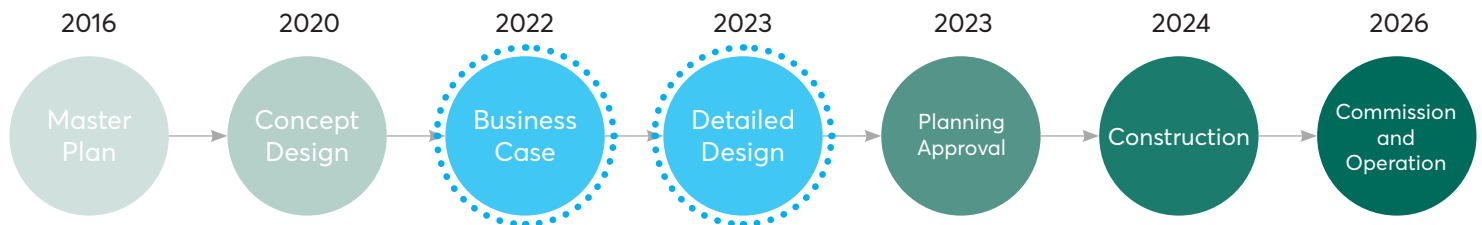
High water quality standards

Key design features to improve water quality outcomes in the Molonglo River include storm flow treatment measures, phosphorus removal measures including biological and chemical phosphorus removal with ferric and lime dosing, and dissolved air floatation filters. Additionally, we have the ability to enable low nitrogen effluent if required.

Environmental Impact Statement

Read the draft EIS on the [ACT Planning](#) page.

Anticipated works timeline



IN PROGRESS

We have completed the revised Environmental Impact Statement (EIS) which is a key part of the ACT Government Impact Track approvals pathway. We expect to receive EIS approval early in 2023. Once the EIS is approved we will lodge a Development Application with the ACT Government. **Detailed Design** work and early vendor engagement is well underway.

Learn more at

www.qprc.nsw.gov.au/Major-Works-Projects/Queanbeyan-STP-upgrade