



Warrnambool Sewage Treatment Plant Upgrade

Protecting public health and the environment

Project overview

Our Warrnambool Sewage Treatment Plant services Warrnambool, Allansford and Koroit and is currently operating near the limit of its treatment capacity. We're embarking on a major project to upgrade the plant to meet the needs of housing and economic growth in the region.

Why the upgrade is needed

The project, estimated to cost more than \$40 million, will be our largest ever single infrastructure project.

The upgrade is designed to meet the needs of housing and economic growth in the region. It will ensure the plant has sufficient capacity for a projected increase in sewage volumes while continuing to protect the environment. It will help secure the region's future as a popular and attractive region for investment.



The existing plant

The existing plant was commissioned in 1996 and is located on coastal land west of Warrnambool's Thunder Point. It is an essential facility, treating around 15 million litres of sewage and trade waste each day.

The current treatment process begins with coarse inlet screening to remove solids and non-biodegradable materials prior to flows entering the Intermittently Decanted Extended Aeration (IDEA) tanks for treatment.

Once treated, effluent undergoes further fine screening through a one-millimetre automated effluent screen before being discharged to the ocean under strict licence conditions set by the Environment Protection Authority.

Around half the incoming flow (influent) is domestic sewage, while the other half is trade waste from local industries, creating unique challenges in treatment and operation.

Our region is growing

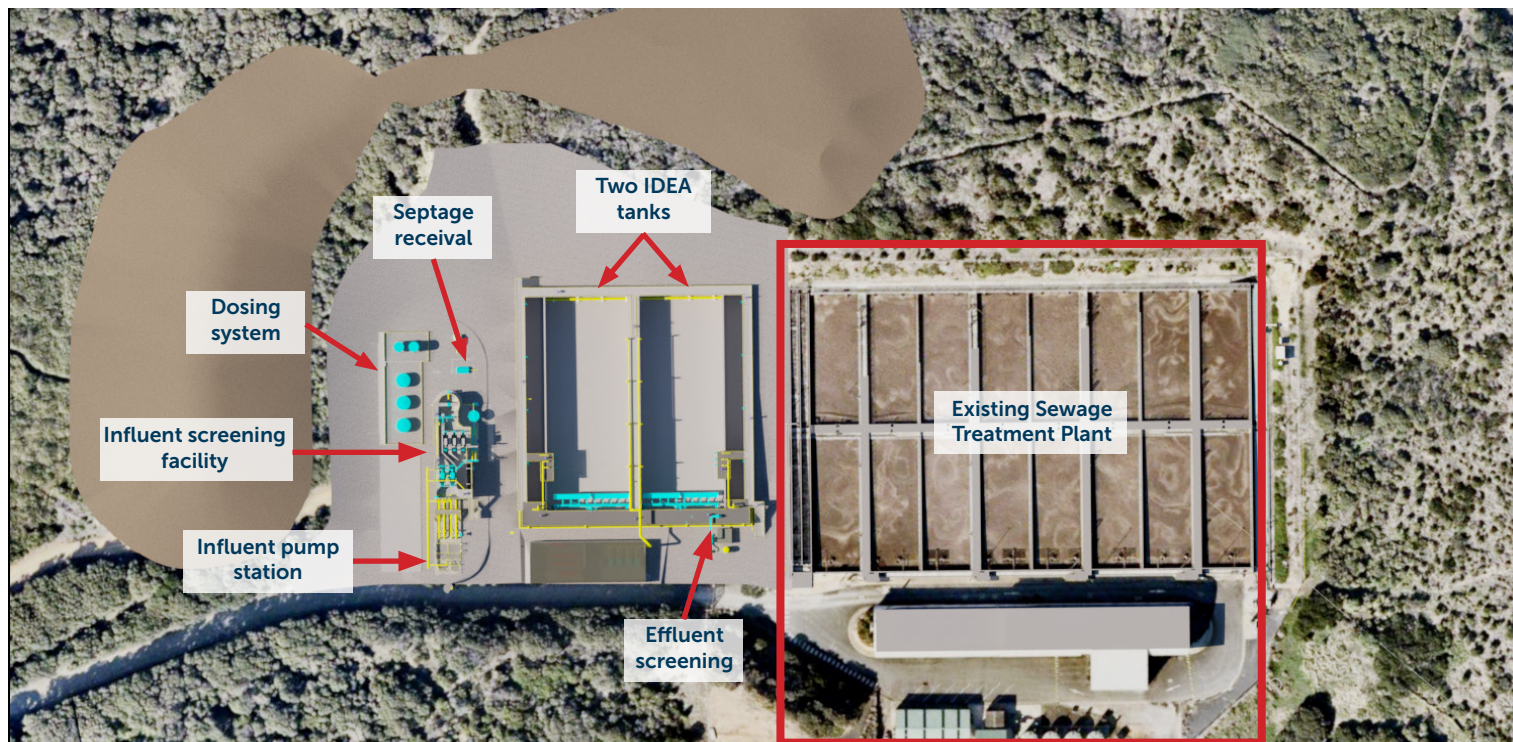
The region's importance as a food industry hub means that demands on the plant are much higher than would normally be expected based purely on population levels. While it is successfully meeting current demands, the plant is operating near capacity,

Development in the Warrnambool area is expected to continue as a result of population growth and industry expansion. New housing estates are being established in the areas around Hopkins Point Road, Aberline Road, Wollaston Road and north and south of Dennington.

Infill development is occurring in established residential areas and future industrial growth has been earmarked for a site east of Horne Road.

The plant currently services nearly 15,000 houses - a figure expected to increase by more than 80 per cent to 25,000 properties in the next 50 years.

It is also vital we are able to cater for the growth of our local industries into the future. Upgrading this plant will ensure we are doing all we can to protect and enhance the local environment and support the economic growth and prosperity of South West Victoria.



What the project involves

The upgrade will be based on the proven technology of the existing plant. However, new treatment technologies, latest design principles and allowances for the future will be incorporated into the new structure.

The key components of the design include:

- **Earthworks** - an earthen mound will protect the local visual amenity using material excavated during construction. Contaminated soil around the old nearby rifle butt will be remediated and all disturbed areas will be revegetated to improve and match the local flora.
- **New influent pump station and screening facility** - raw sewage will be screened, removing rubbish, grit and other coarse solids. Once operational, the existing inlet screening facility will be decommissioned.
- **Septage receival system** - to screen wastewater from septage tankers prior to treatment from within the secure site.
- **Treatment tanks** - sited adjacent to the four existing IDEA tanks and designed to operate in parallel with the existing tanks. They will be optimised to enhance treatment processes and will increase the plant's storage capacity. Allowances for a future upgrade to a new technology will be made to avoid extensive modification works in the future.
- **Chemical dosing facility** - to the entire site, improving the treatment process and increasing the flexibility to rapidly adapt to changing sewage characteristics.
- **Odour control facility** - treating foul air from the influent pump station, inlet screening and septage receival facility. The existing site does not have an

odour facility.

- **Tertiary effluent screening** - providing tertiary screening in the effluent channel of the two new IDEA tanks, ensuring no particles greater than one millimetre are discharged to the ocean.

Future improvements

In parallel with this project, we will be developing a new Effluent Management Strategy for the plant in accordance with the development licence approved by the Environment Protection Authority.

The strategy aims to identify alternatives for the disposal of wastewater from the plant which is currently discharged via an ocean outfall.

Options may include:

- Disinfection
- Recycling
- Tertiary treatment
- Optimising the existing ocean outfall design and location
- Retaining the existing outfall with additional treatment processes.

The strategy will be guided by a new reference group which includes community representatives and agency stakeholders.

The group will provide advice and recommendations on the scope of the studies and the preparation of an evaluation report to the Wannon Water Board. The group is expected to take several years to complete its work.