Belmont Desalination Plant

Modification to Environmental Impact Statement

Hunter Water is planning to build a permanent desalination plant at Belmont so we can continue to meet the needs of our customers now and in the future.

The Lower Hunter Water Security Plan (LHWSP), released in 2022, is a whole of government approach to provide a resilient and sustainable water supply for the Lower Hunter over the long term and during drought.

The LHWSP recommends a diverse portfolio of supply and demand side options including:

- increased investment in water conservation and recycled water and
- delivering a permanent desalination plant at Belmont capable of providing 30 million litres of drinking water per day, which is around 15% of the region's average daily water needs.

In 2021, we received approval from the NSW Government to build a drought response desalination plant with a temporary emergency response design.

Modification to our plans

We're now seeking approval to build and operate a permanent desalination plant at Belmont, as outlined in the LHWSP.

Changing the plant from drought response to permanent means changes to both the design and operation of the plant. We've prepared a Modification Report to the approved drought response desalination plant Environmental Impact Statement (EIS) to describe the proposed changes and assess the potential environmental and social impacts.

We estimate that the cost to design and build the plant is $530 million. This estimate also reflects recent construction cost inflation being experienced across many industries and major projects.

Our analysis has confirmed that a permanent facility remains the most cost-effective option to ensure we can support our communities during drought.

To fund the desalination plant, an annual increase of around $90 on a typical household bill is required. The typical water and wastewater bill for the owner of a house is currently around $1,340 per year. There will be no changes to customer bills prior to 1 July 2025.

Find out more hunterwater.com.au/desal

Key changes and features of the project

We propose modifying the approved plant from a drought response desalination plant capable of providing 30 million litres of drinking water per day to a permanent operation desalination plant with the same capacity.

The location of the plant next to the existing Belmont Wastewater Treatment Works (WWTW) is the same.

Additional changes include:

- raising the height of the development area to protect the plant from changing climate conditions
- increasing the size of the building area within the approved project footprint
- increasing the height of the lime tower up to 15 metres above the adjusted ground level
- relocating the direct ocean intake further north, which in turn reduces the length of the ocean intake pipeline
- changes to the marine intake structures, pumps and pipes to future proof the system
- upgrades to the power network and subsequent changes to plant power supply and
- changes to stormwater management.

There are also changes proposed to the construction methods, plant and equipment including:

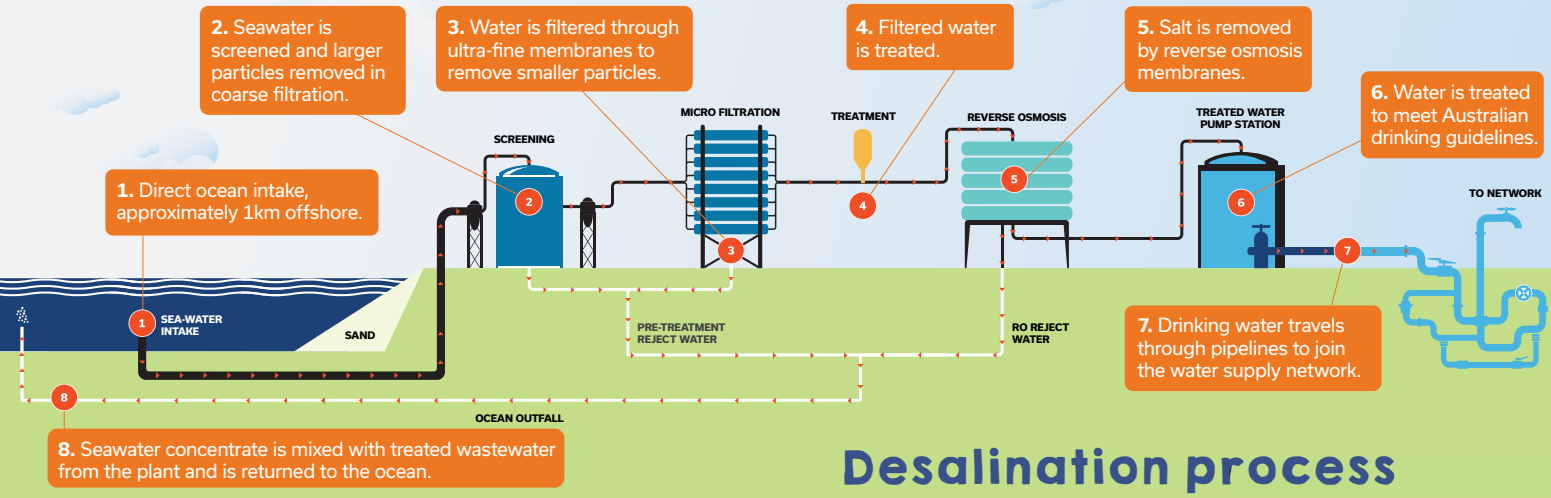
- the location and size of the dredging area
- disposal of dredged material
- using a large crane offshore for marine elements of the project
- using a helicopter to transport workers and materials offshore
- out of hours work (OOHW) during construction including 24 hours 7 days per week (24/7) for some parts of the project
- increasing construction duration up to 36 months
- construction workforce numbers up to 215 full time equivalent (FTE)
- heavy vehicle movements of around 180 – 200 trips per day during peak periods.

Carbon emissions

We propose installing a combination of rooftop and ground mounted solar at the plant site in future to offest some energy requirements. We have also adopted an ambitious target to be net zero* by 2035. This target is subject to customer and community support and we are exploring this now.

**Scope 1 and 2 emissions.*

The Belmont desalination plant will take around four years to build once approved



Desalination process

Project benefits

A permanent desalination plant at Belmont will:

- add up to 30 million litres per day of water supply to the Lower Hunter's system, which is around 15% of the region's average daily water needs
- provide a safe and reliable source of rainfall-independent drinking water to our system
- extend the time for reaching critical water storage levels during severe droughts
- allow us to be responsive to our region's water needs by providing a small, continuous supply of water when total storage levels are high, and increasing to full supply capacity as storage levels fall in drought.

Rainfall independent

Improves diversity of our water supply

Slows depletion of water storages during drought

Flexible and responsive, we can ramp up and down as needed

Why desalination in Belmont?

Desalination is an important rainfall-independent water supply option and will help support our customers and communities with a safe and reliable water source regardless of changes in weather or climate.

We selected Belmont as the location for a desalination plant following the completion of a multi-site analysis that compared:

- the costs of the plant and associated infrastructure
- power supply requirements, and
- community and environmental impacts.

The site at Belmont provided the best option for a number of reasons including ability to connect to our water system, proximity to the ocean and low levels of community disruption and impacts due to the relatively remote location. In addition we already own the land and construction costs are lower than for other sites.

The site also allows the discharge of brine (the remaining salt water from the desalination process) to the ocean via the existing outfall at the nearby Belmont Wastewater Treatment Works.

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How to have your say

The Modification Report is on public exhibition via the NSW Department of Planning, Housing and Infrastructure (DPHI) for 28 days from Wednesday 24 January to Tuesday 20 February 2024.

The Modification Report display is an opportunity for you to make comment on the environmental impacts and mitigation actions of the proposed changes to the desalination plant. Anyone can make a submission to DPHI during the exhibition period, which closes on Tuesday 20 February 2024.

Make a submission

You can make a submission online at the DPHI major projects website https://www.planningportal.nsw.gov.au/major-projects/projects/on-exhibition

For more information about making a submission, please call DPHI on 1300 305 695.

Find out more

A full copy of the EIS Modification Report including all appendices and supplementary documents is available:

Online:

https://www.planningportal.nsw.gov.au/major-projects/projects/on-exhibition

Display copies can be viewed at:

Belmont Library
19 Ernest Street, Belmont

Hunter Water
36 Honeysuckle Drive, Newcastle

Lake Macquarie City Council Administration Building
126-138 Main Road, Speers Point

Information sessions:

Drop in anytime to a face-to-face session at Belmont Library - 19 Ernest St, Belmont - on Saturday 3 February 2024 between 10am and 12pm.

Register to attend our virtual information session on Wednesday 7 February 2024 by visiting hunterwater.com.au/desal or emailing desal@hunterwater.com.au

Timeline

- Lower Hunter Water Plan identifies desalination as drought response measure
- Desalination readiness investigations begin
- Hunter Water prepares concept design and Environmental Impact Statement
- Public exhibtion of Environmental Impact Statement
- Submissions considered and scope changed
- Public exhibition of Environmental Impact Statement Amendment Report
- Assessment by Department of Planning, Industry and Environment
- Drought response desalination plant approved
- Lower Hunter Water Security Plan released
- Planning investigations for a permanent desalination plant
- Modification to Environmental Impact Statement on public exhibition — **We are here**
- Construction starts if consent issued for modification
- Desalination plant begins operating

Contact us

hunterwater.com.au/desal

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1300 657 657 (Mon-Fri, 8am-5pm)