

Take a fresh look at the facts

**The Eyre Peninsula
urgently needs a
desalination plant.**

**Billy Lights Point
is our preferred
location.**

Traditional water sources can no longer deliver the level of water security required for the Eyre Peninsula into the future.

Population and economic growth will lead to increased demand for drinking water and water for industry.

A desalination plant will be a drinking water source independent of rainfall, which will ensure water security for agriculture, industry and the community in the region for generations to come.

Throughout Australia, dozens of desalination plants have been built to location-specific conditions and have had no impact on the environment, despite being built in very different locations.

Eyre Peninsula's water security challenges

In 2007, collaboration began with Eyre Peninsula communities to agree a water plan for the region. This identified seawater desalination as the preferred long-term water security solution. For the 35,000 customers living and working in the area, drinking water is sourced primarily from the Uley South Basin, supplemented with River Murray water supplied through a pipeline.

For many years, water in the basin has been gradually depleting towards historic low levels, placing the region's main source of water under severe pressure. Without a desalination plant, SA Water is unlikely to be able to supply water to the region at the volume it currently does – likely leading to water restrictions and economic uncertainty.

How desalination works

1 Pre-treatment

Seawater is pumped through intake screens and filters to remove larger particles, before passing through an ultrafiltration membrane.

2 Reverse osmosis

Semi-permeable membranes allow water molecules to pass through but block larger salt molecules, resulting in the removal of impurities and salt in the water.

3 Post-treatment

The desalinated water is disinfected and re-mineralised to increase alkalinity and reduce the potential for corrosion in the network and customers' plumbing. Treated water meets the Australian Drinking Water Guidelines, ensuring it is safe to drink.

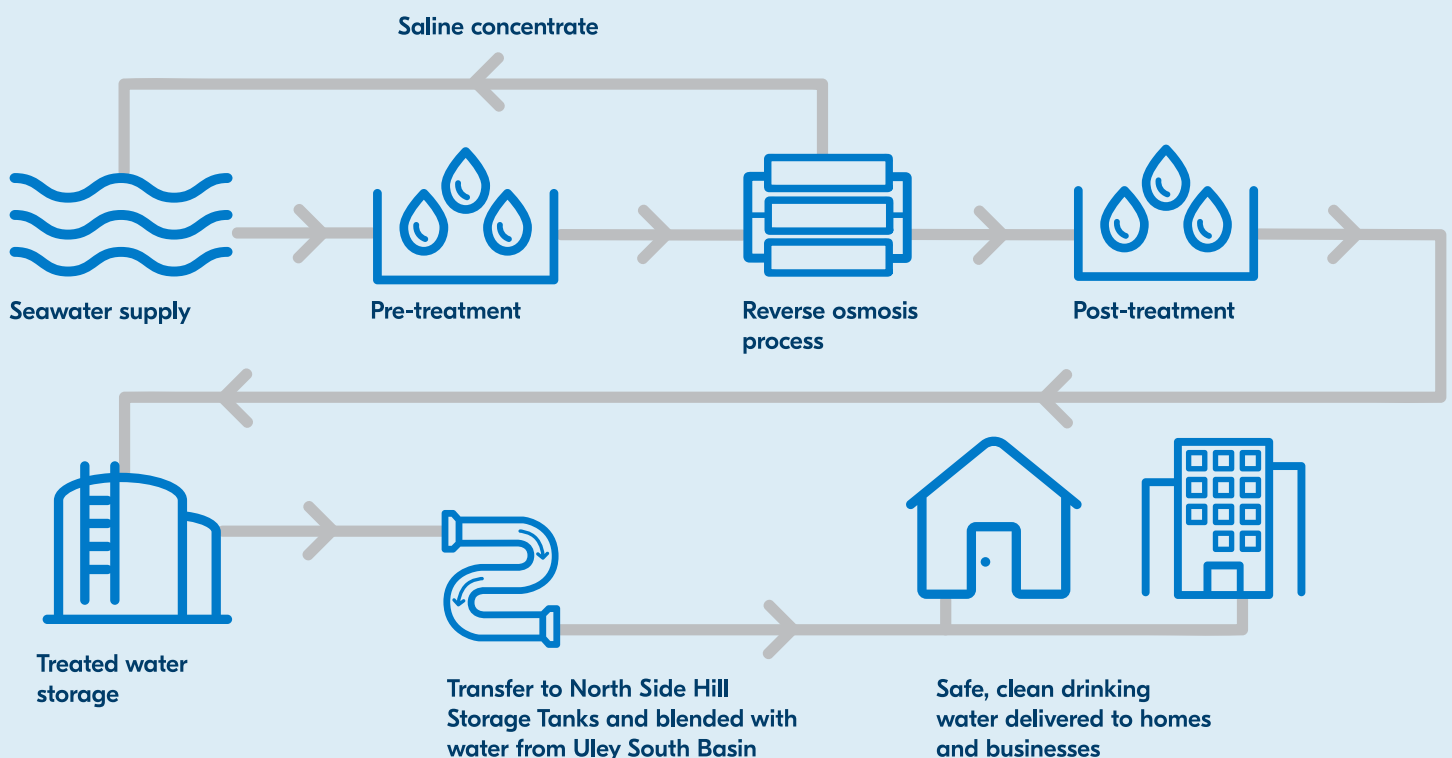
4 Storage

The clean drinking water is then stored and supplied to homes and businesses.

5 Outfall

The remaining concentrated seawater is returned to the ocean through the outfall pipe and diffusers to ensure it reaches the natural salinity levels of the environment.

After desalination, clean, fresh water is pumped to the North Side Hill Storage Tanks near Port Lincoln. The water is then distributed through our network to ensure it reaches regional and remote communities across the Eyre Peninsula for use in homes, businesses and agriculture.



Why Billy Lights Point for a desalination plant?

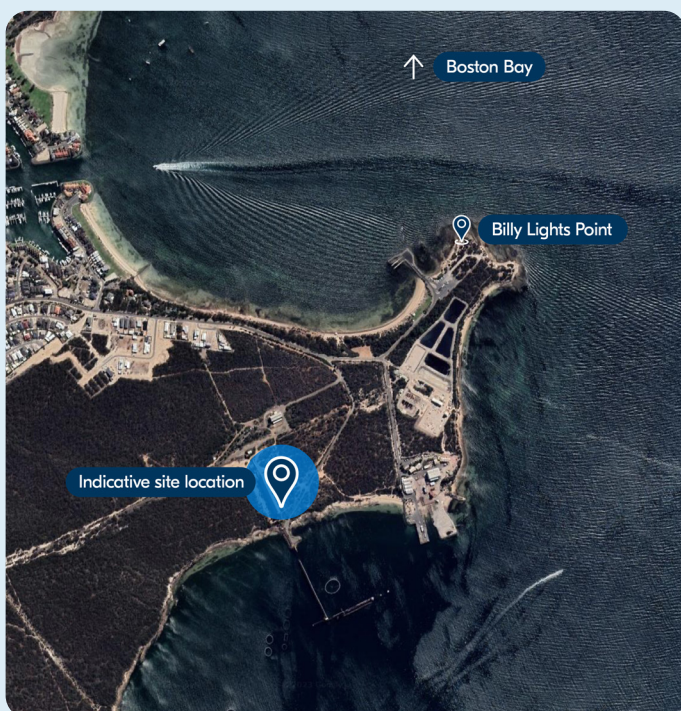
Impacts on the beauty of the region are minimised by using a previously impacted and degraded industrial site.

Up to 230 jobs would be supported each year over the life of the project via construction and new supply chain opportunities for local businesses.

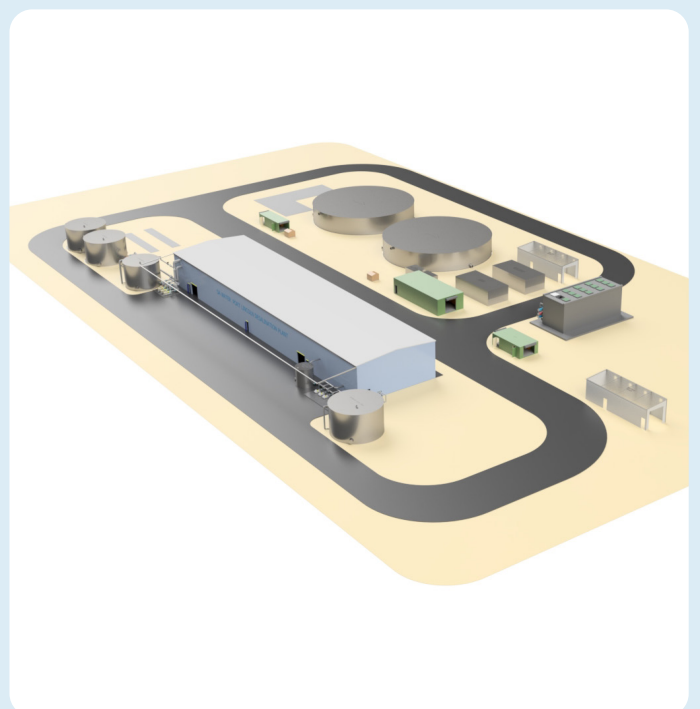
In close proximity to the existing water supply network, a desalination plant can be safely and cost effectively built here.

Other locations considered for the desalination plant had challenges such as nationally and state protected flora and fauna, and unique geology.

Map showing indicative location for desalination plant site.



Concept render for Billy Lights Point desalination plant. Design subject to change.



Billy Lights Point desalination plant solution

A desalination plant at Billy Lights Point is the quickest solution to ensure water security to the region, with the least impact on future water costs for customers.

With the right engineering design, the science indicates that a desalination plant at Billy Lights Point can be built with minimal impact on the marine and coastal environments. Billy Lights Point is:

- in close proximity to existing water and electricity networks, requiring a short, 4 km powerline route and a short water transfer main of 7.4 km
- large enough to accommodate future growth and we will ensure that the footprint is minimised so as to reduce the visual and environmental impacts
- relatively sheltered with a flatter landscape, helping to reduce construction risks and challenges and deliver the best value option for customers.

A separate business case is being developed by Infrastructure SA into the Northern Water Supply project which is examining a new water supply for the far north and Upper Spencer Gulf. We continue to work with the Northern Water Supply project team to assess if this is a viable solution.

Other site constraints

A number of possible locations have been assessed and investigated for the desalination plant on the Eyre Peninsula. However, other locations considered present prohibitive challenges, including:

- internationally and nationally protected species such as migratory whales
- location within or adjacent to a State Marine Park
- unique geology
- high cliffs and exposed coastline requiring significant engineering and construction resulting in an additional \$150 million cost impost on customers.

First water expected 2025

By the end of 2025, the desalination plant at Billy Lights Point would produce 0.016 gegalitres of fresh, clean drinking water per day – which is approximately 6 Olympic-sized swimming pools per day. It would have the capacity to be expanded to around 0.024 gegalitres per day.

Further scientific investigations and assessments will inform the detailed design of the plant and the location of the intake and outfall. At the same time, alongside other approvals, SA Water will lodge a Crown development application for the plant at Billy Lights Point with the State Planning Commission for assessment. The Crown development application process provides an open, accountable and responsible decision-making process that includes further community consultation.

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Get all the facts at

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