Northern Water Supply

BACKGROUND

The Northern Water Supply (NWS) project is one of a number of projects being considered for the Upper Spencer Gulf as part of the State Government's plan to decarbonise local industry, provide for future jobs and economic development, and position the region as a global leader in the net-zero economy.

The NWS business case is assessing the potential risk and benefits of building a desalination plant to provide a secure and reliable water supply for communities, agriculture and emerging green energy industries in the Upper Spencer Gulf and far north of South Australia. Narrowing down a recommended site for further study of the potential environmental and technical implications for building a desalination plant is part of this process.

Selecting where a new plant could potentially be built is critical. There are construction and maintenance costs to consider, as well as ensuring the location allows for access to a suitable source of water and where treated water can get to the regions that need it. We also need to look at impacts to the land and marine environments, cultural and social impacts and how resilient the site will be to further changes in our climate.

In this fact sheet, we outline the rigorous assessment process we are undertaking to select a recommended study site for inclusion in the business case. The final decision for a study site will be made by the State Government when it considers the business case.

SELECTING A RECOMMENDED STUDY SITE

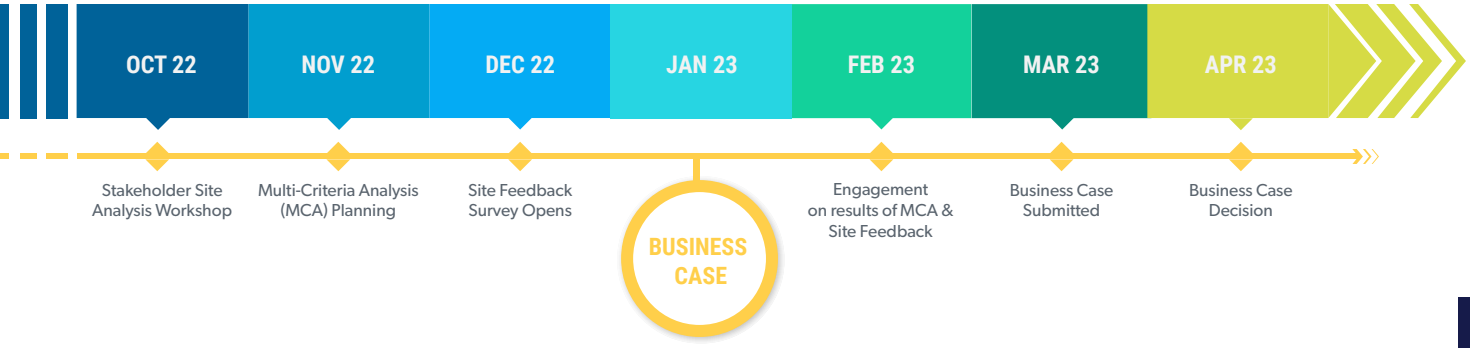
The identification of a recommended study site to focus on for further studies has been broken down into three steps:

STEP 1 - COMPLETE
Identify regions where a desalination plant may be possible

STEP 2 - COMPLETE
Screen sites to determine a short list of potentially feasible sites

STEP 3 - IN PROGRESS
Select the best site from the short listed options to recommend as the study site in the business case

The final study site decision will be made by the South Australian Government Cabinet when it considers the business case - see step 4.



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STEP 1

IDENTIFY REGIONS WHERE A DESALINATION PLANT MAY BE POSSIBLE

First, we looked at regions in the region which might be suitable for a desalination plant based on access to salt water and proximity to the regions where the water will be used. The map upper right shows the areas investigated.

STEP 2

SCREEN SITES TO DETERMINE A LIST OF POTENTIALLY FEASIBLE SITES

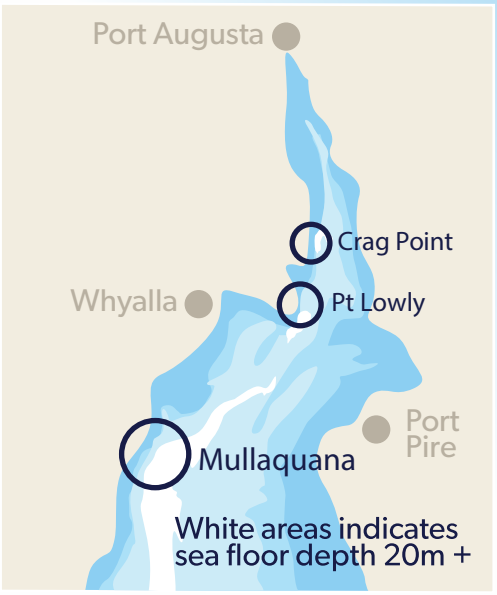
A coarse screen was applied in order to remove sites that were clearly not feasible from an environmental or cost perspective. Site were excluded from further consideration if:

- Their oceanographic features would cause significant issues for water quality and environmental management; or
- The expected capital cost was calculated to be more than $1 billion over the Port Bonython site.

The previously costed Port Bonython desalination site, which was approved for a 280 Megalitre per day desalination plant in 2009, was used as the 'base case' for cost comparison.

A qualitative assessment of sites in each region were reviewed against a list of important considerations to support the screening process including:

- Is there enough available and suitable land to build the plant and associated infrastructure?
- How far would pipes need to extend out into the Gulf waters to reach a suitable depth? Are there any water quality issues or other factors which would make that water hard to access?
- How hard would it be to connect the treated water into the existing network from this location?
- How hard would it be to connect this site to an existing power source?
- A high-level review of surrounding environmental conditions and features



Following this process, we have identified three potentially feasible sites:

Site 1 Crag Point

Site 2 Pt Lowly

Site 3 Mullaquana

(The Mullaquana site is more than 2 km north of Murninnie Beach and approximately 10 km south of Cowleds Landing)

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STEP 3 WHERE WE ARE NOW

SELECT ONE OF THESE SITES TO USE AS THE RECOMMENDED STUDY SITE FOR THE BUSINESS CASE

The next step in this process is to look at how these sites compare to a range of identified criteria and select the option that performs best.

Two processes will be undertaken to inform a recommended study site to be put to cabinet

COMMUNITY FEEDBACK

About the sites in the form of an online survey; and

A MULTI-CRITERIA ANALYSIS PROCESS:

Multi-Criteria Analysis (MCA) is a formal process used to compare options against a range of different factors. The criteria and measures which will be used to evaluate them, have been developed in consultation with subject matter experts and stakeholders including representatives from Traditional Owner groups, environmental organisations, fisheries, industry and the community.

CRITERIA USED IN THE MCA INCLUDES

- **ENVIRONMENTAL SUSTAINABILITY**
  How well would this site minimise marine and climate impacts, are there risks to native flora and fauna?
- **SOCIAL SUSTAINABILITY AND LIVEABILITY**
  Can we ensure local heritage sites are preserved and maintained and how might the plant impact community health and wellbeing needs, and social values
- **WHOLE OF LIFE COSTS**
  How much will it cost to build, operate and maintain a site at this location?
- **CONSTRUCTABILITY AND OPERABILITY**
  How complex would it be to build a plant there and would there be any issues operating?
- **CLIMATE RESILIENCE**
  Would this site be robust against future climate changes or would there need to special considerations in any design?

STEP 4

BUSINESS CASE DECISION INCLUDING SELECTION OF STUDY SITE

Review of the business case by the South Australian Government Cabinet will include a decision on whether the South Australian Government support the continuation of the project beyond the business case.

It will also include final endorsement of the study site, including consideration of the results from the MCA together with stakeholder and community feedback.

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NEXT STEPS

Following the selection of a study site, and should the Government decide to proceed with the project, the project team will undertake detailed social, economic, and environmental assessment, and engineering studies and design, to decide on a final construction site.

Management measures to reduce risk and increase benefit will also be identified. Stakeholders and the community will invited to have input into this assessment process.

HAVE YOUR SAY!

Opportunities for input on Northern Water Supply

Information will be provided **online at YourSAy** or you can **contact our team directly**

- You can provide feedback on three sites from December 2022 to February 2023
- We will share the results of the MCA which is expected in early February 2023
- You can provide feedback on the MCA outcome until the end of February 2023
- We will provide you with a summary of what we have heard
- We will announce the outcome from the business case
- You can provide feedback on the business case decision and next steps

GET IN CONTACT

(08) 8429 4650
northernwatersupply@sa.gov.au
northernwatersupply.sa.gov.au
yoursay.sa.gov.au/northern-water-supply

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