

Bird Lake Project

Bird Lake in Port Augusta is being rehabilitated with local native plants in selected areas to reduce the potential for odour issues and improve the area.

The project is being delivered by the Port Augusta Council with the cooperation of land owners and funding support from the South Australian Government.

About Bird Lake

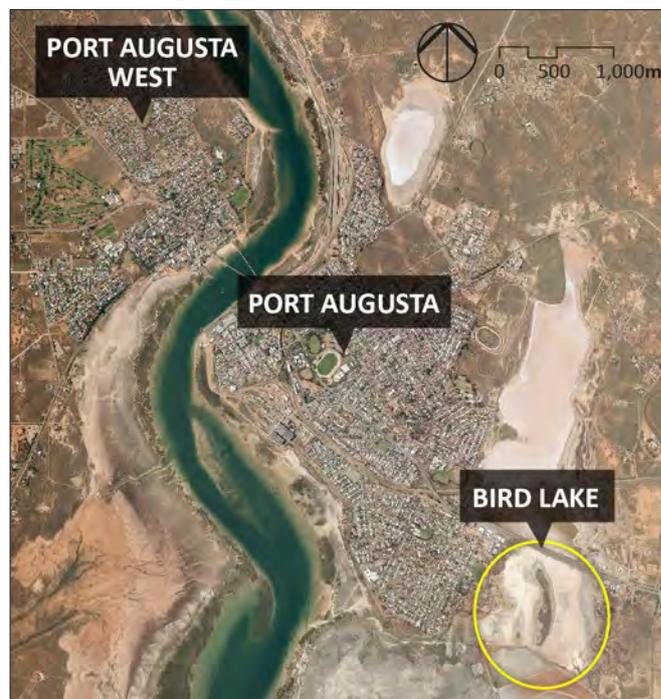
Bird Lake is a part of the Augusta Lakes salt-lake system, on the south-eastern approach to Port Augusta (see map). Most of the project area is owned by Council with some areas on its periphery privately owned.

In its natural state Bird Lake is not full of water and historically foul odours and biting insects were a problem from time to time.

Following mutual agreement between the Electricity Trust of South Australia and the Council in the 1970s, Bird Lake became a permanent shallow lake, kept full of water through the pumping of ash slurry from the Augusta Power Stations into the Ash Disposal Area, which overflowed into Bird Lake. A salinity management strategy was later put in place to keep water within the lake at a very high salinity to control breeding of midge flies.

Whilst the power station was in operation, the water level and salinity largely kept odours and insects under control.

With the closure of the Northern Power Station in May 2016, water stopped being pumped into the ash ponds and as such Bird Lake started to dry out. From that time there has been issues with strong and offensive odours, especially in the summer of 2016/17. By early 2018 the lake had dried out completely, exposing the lake bed along with some rubbish that had been hidden when it was full.



Why does Bird Lake smell?

The odour coming from Bird Lake is mainly caused by decaying mats of algae around the lake edge (see diagram on page 3). The algae grew while the lake was full. Very saline and nutrient (phosphate) rich water from the ash ponds drained into Bird Lake, providing a permanent, shallow (and therefore warm) body of water which supported the growth of algae.

When the Northern Power Station closed and the lake dried out, the algal mats were exposed and started to decay. This decay is what is creating the odour. In deeper areas of the lake, the bed is covered by a thick and hard salt crust which is providing a natural cap over any odorous material.

How strong the odour is, is dependent on the wetting and drying of the algal mats. After a lot of hot and dry weather the algal mats dry out and the odour lessens. However, when the mats get wet, following rain, the odour may return until such time as the algal mats decompose completely.

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How is it being rehabilitated?

Bird Lake is being rehabilitated by covering areas of decaying algal mat around the fringes of the lake with soil and seeding this soil with low growing local native plants that are tolerant of the highly saline and arid conditions. “Capping” the algal mats this way will reduce the potential for odour from the lake.

During the planning stages of the project consideration is also being given to whether there are suitable areas for localised planting of larger local native shrubs to enhance the visual impact.

Rubbish scattered around the lake and the old cloth screens adjacent the highway will also either be removed or buried under the capping soil.

The adjacent image shows the areas of the lake that will be capped and seeded.

The lake will be seeded with species that would have naturally occurred in the Bird Lake area or are suited to the harsh conditions. Seed will be collected from nearby remnant natural vegetation to sow directly at the lake. These plants are naturally adapted to the environment and will have the best chance of survival.

A “borrow pit” will be identified on or adjacent the site from which soil will be excavated for capping of the algal mats. Access tracks will be established to enable transport of soil from the “borrow pit” to the rehabilitation areas, and for the movement of other vehicles and machinery. Discussion and approval will be sought from land owners and relevant government agencies as required.



Bird Lake current state



Bird Lake after rehabilitation (artist's impression)

Bird Lake Revegetation Areas



Bird Lake Project

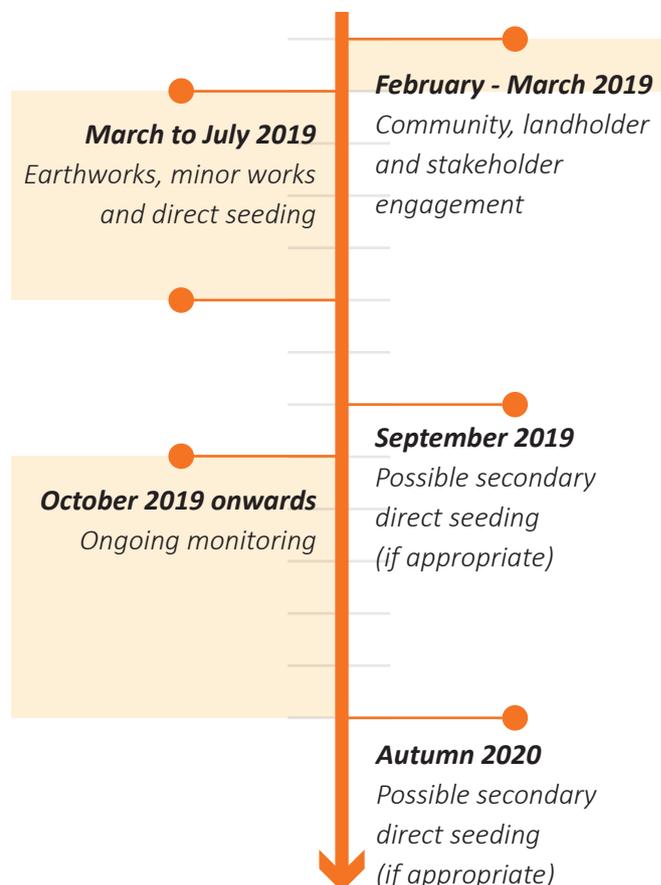
Managing dust and insects

The soil capping earthworks will be undertaken in autumn 2019 when the risk of strong(est) southerly winds has reduced. The soil will then be direct seeded with native plants to allow time for the seeds to germinate and commence growing prior to the coldest winter weather, and to be established enough to survive over summer. The success of the revegetation in the first year will be extremely dependent on local rainfall and follow up seeding may be needed in the following spring or autumn.

During construction the contractor will have a dust management plan to minimise dust generated from the works.

Biting insects such as midge flies naturally occur at the lake and nearby tidal areas along Old Power Station Road and Hospital Creek. It is not anticipated that the rehabilitation works will increase the prevalence of biting insects. Some water will collect in the lake following rainfall, however this will quickly evaporate and soak in. Council will monitor the lake over time and respond to any issues as required.

Timeline



Want to stay in touch or get involved?

To receive updates about the project's progress or to register your interest to be a part of the project's community reference group, please send your contact details or call the project at the contact details below.

The community reference group will participate through either email updates and or meetings as a way of providing ongoing community input into the project.

Contact or more information

 portaugusta.sa.gov.au/birdlake

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