

Coastal Adaptation Study

Port Elliot

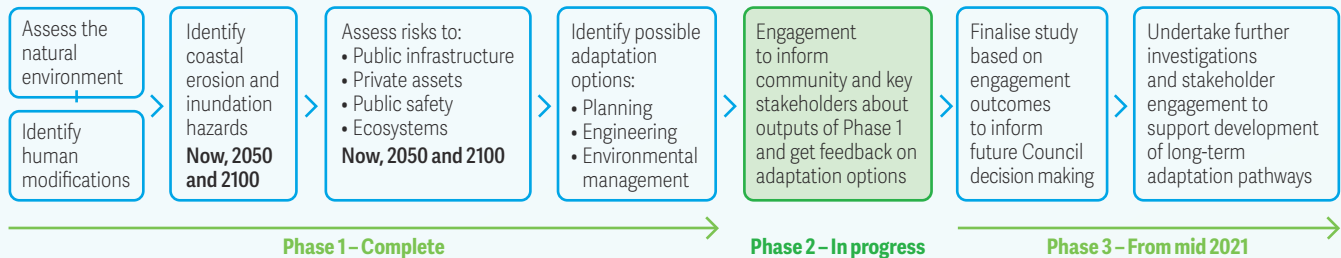
The Alexandrina coastline is of significant cultural, social, environmental and economic value to the local community, Ngarrindjeri nation and visitors to the region.

Climate change is causing sea levels to rise. The Coastal Adaptation Study aims to understand how people, the natural environment and built assets might be impacted by rising sea levels so that Council and other stakeholders, such as State Government and private landowners, can plan for the future.

What is the Study investigating?

The Study is being undertaken in 3 phases. Phase 1 investigated current and future (2050 and 2100) risks to coastal assets and has recently been completed. Phase 2 consultation is commencing now.

Alexandrina Council Coastal Adaptation Study Process



What area was assessed?

Phase 1 of the project has divided the coast into a series of areas. This fact sheet summarises the key findings of the Port Elliot section of the coast.



Map of area assessed

About Port Elliot

The Port Elliot coast includes rocky headlands and the three sandy beaches at Green Bay, Horseshoe Bay and Crockery Bay.

The coast at Horseshoe Bay has been substantially modified, beginning with the installation of the breakwater and jetty in the 1850s. Moving from west to east, Horseshoe Bay transitions from a seawall and boardwalk promenade, to a vegetated embankment along the front of the grassed Commodore Reserve, with a small section of dune remaining at the very eastern end of the bay. Historical analysis reveals that in times past, the dune system was much more extensive in the middle and eastern sections of the bay. The other bays and headlands along this section of coast are less developed but include popular walking trails. The modified coast within Horseshoe Bay has been assessed as highly erodible. Erosion hazard at Green Bay and Crockery Bay is considered low-medium. Sea-water flood hazard has been assessed as low along this section of coast.

Coastal hazards

Now to 2050

In the shorter term (next 20–30 years) the impact of sea level rise will see high water and storm events have an increasing impact on Horseshoe Bay. By 2050 most of the Bay is projected to be directly impacted by waves. The reserve in front of the Port Elliot Surf Lifesaving Club is likely to be over-topped by sea water during high water and storm events. As sea levels rise, erosion associated with these high water events is likely to cause the shore line to move inland – this is known as shoreline recession. Along Horseshoe Bay, shoreline recession of about 8m is expected by 2050, mostly at the eastern end and mid-section of the Bay. Crockery Bay and Green Bay are not expected to be significantly affected by erosion or flooding to 2050.

Long term – 2050 to 2100

By 2100, high water and storm events will have an even greater impact on Horseshoe Bay. Most of the Bay would be likely to be directly impacted by waves and it is considered very unlikely that the Bay would be able to retain its existing formation. There will be significant impacts on assets and infrastructure including the café, bowling greens, boardwalk, walking paths and stormwater infrastructure. Shoreline recession of between 26–29m is expected by 2100. Due to their geology, erosion impacts at Crockery Bay and Green Bay are expected to be more limited.

These maps show the projected extent of sea flooding and erosion potential at Horseshoe Bay by 2100 should sea levels continue to rise as projected.



Learn more about the draft Coastal Adaptation Study and provide your feedback

Join us at one of the 3 virtual Coastal Adaptation Community Webinars to

- Hear about the draft Coastal Adaptation Study and learn how sea level rise and coastal erosion may impact Alexandrina's coastline now and in the future (2050 and 2100).
- Learn about the possible adaptation options for Alexandrina's coastline.
- Ask questions and share feedback.

Complete the online feedback form mysay.alexandrina.sa.gov.au/CA and share your thoughts about what you value about our coastline and how Council and the community might work together to adapt to changes along the coast over time.

Community Webinar dates

Murray Estuary (Hindmarsh Island)

3 Nov 2020, 6.30–8.30pm

Goolwa/Middleton

12 Nov 2020, 6.30–8.30pm

Port Elliot/Boomer Beach

17 Nov 2020, 6.30–8.30pm

To register and view the reports, visit mysay.alexandrina.sa.gov.au/CA; and RSVP by following the links to Eventbrite.

For further information please contact Council's Environmental Strategy Officer on 8555 7000 or alex@alexandrina.sa.gov.au