

Inverloch Coastal Protection Plan

December 2018

The dynamic coastline at Inverloch has been experiencing significant erosion in recent years, impacting on public access, amenity, and major assets.

The Department of Environment, Land, Water and Planning (DELWP), together with the Bass Coast Shire Council, Parks Victoria, Regional Roads Victoria and the West Gippsland Catchment Management Authority, have formed a working group to address erosion at Inverloch and developed a short-term erosion control plan for key areas along the Inverloch Surf Beach.

Trial works to construct two rows of Beachmaster wet-sand fencing, in combination with a sand renourishment and dune reconstruction, are planned to occur in early 2019. These works will provide a buffer against further coastal erosion and protect the beach for continued community use.



Figure 1: Inverloch primary areas of concern: Bunurong Road (left) and Inverloch Surf Life Saving Club (right).

Background

While the Inverloch foreshore is protected from the strong westerlies associated with the mid-latitudes, it is vulnerable to southerly winds and storm surge events. These storm surge events are particularly strong in winter, while spring and summer are times of calmer weather, allowing for more sand accretion.

In recent years, the volume of sand lost to erosion during storm surge events has greatly exceeded the amount returned to the beach during calmer seasons.

Areas of Concern

The two major areas of concern are the foreshore in front of the Inverloch Surf Life Saving Club and the foreshore in front of Bunurong Road, as erosion threatens to impact built public assets.

The foreshore adjacent to the Inverloch Surf Life Saving Club has seen 33.5 metres of coastline retreat since 2012. Currently, the building is located 16 metres from the face of the dune, with this distance remaining relatively stable since the end of winter.

The foreshore adjacent to Bunurong Road, particularly near the Surf Parade intersection, has experienced 35.6 metres of coastline retreat since 2012. The road is currently within six metres of the eroding edge.

Wet-sand fencing

The multi-agency working group obtained advice from both government and independent technical experts, including coastal and road engineers, on a variety of on-ground options to manage the erosion and protect the built public assets.

The preferred option, wet-sand fencing, is an erosion control structure installed from the estimated maximum erodible level of the beach. Constructed using thin slats of timber connected by wire, it helps to accumulate and maintain sand, working to rebuild a beach for improved community use.

The structure allows waves to pass through carrying sand while limiting the amount that returns offshore. This is due to its design decreasing the wave energy, allowing sand to settle more easily behind the fence.

At Inverloch, two rows of 1.2-metre-high fencing will be installed at two locations: In front of the Bunurong Road primary erosion site and the Inverloch Surf Life Saving Club. The areas will be renourished with sand, reconstructing the foredune to 1.5 metres above current beach level and five metres wide.



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Detailed design of this work is currently underway, with on-ground works to commence in February/March 2019.

The works have been jointly funded by the Victorian Government's *Protection of Victoria's Iconic Beaches and Coastline* project and Bass Coast Shire Council.

Why Wet-sand fencing at Inverloch?

- Low cost and quick to install.
- Minimal impact on the environment.
- When combined with renourishment, retains considerably more sand than renourishment alone.
- Encourages vegetation to advance and help rebuild a beach.

Coastal Monitoring

DELWP, in partnership with Deakin University and the University of Melbourne recently began the Victorian Coastal Monitoring Program for Gippsland. Inverloch was chosen as one of the priority sites.

This citizen science program involves flying drones over the coastline, to create a 3D beach profile. Each run can then be compared to measure volumes of sand lost or gained.

Community members will be trained by drone experts and conduct monitoring flights every four to six weeks for two years. The data collected through this project will inform future coastal protection works at Inverloch.

Next Steps

DELWP are working with all stakeholders involved to prepare medium and long-term options for Inverloch Surf Beach. Community engagement will be central to future planning, and we will keep the community informed as the project progresses.

Further Information

For further information regarding coastal protection works at Inverloch, please contact the DELWP Traralgon office on 03 5172 2111.



Figure 2: Wet-sand fencing at Port Fairy, June 2014. Fence was installed in March, 2014.

Source: *Wattle & Wire*.



Figure 3: Wet-sand fencing at Port Fairy, November 2018. Fence is covered by sand and vegetation.

Source: *DELWP*

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