

Alexandra Headland to Maroochydore Future Buried Seawall

The Sunshine Coast has approximately 60 kilometres of coastline, stretching from Caloundra to Peregian Beach. Our beaches are always changing due to natural coastal processes and weather patterns. Our beaches are vulnerable to repeated erosion during storms, increased swells and other weather events, which can also impact some beachfront property and infrastructure.

Council has a Shoreline Erosion Management Plan (SEMP) in place to guide how we look after areas vulnerable to severe coastal erosion. It outlines preferred management options that are underpinned by sound science, coastal engineering principles and our community values.

These options include sand renourishment, dune revegetation and protection, limiting beach access points and coastal protection structures such as seawalls.

A rock seawall is an important line of defence to protect community assets such as roads, water infrastructure, parks, car parks, pathways, playgrounds and amenity blocks from severe erosion.

Project summary

Planning has been underway since 2011 to protect the future of popular beachfront community areas and assets between Alexandra Headland and Maroochydore from extreme storms and long-term erosion.

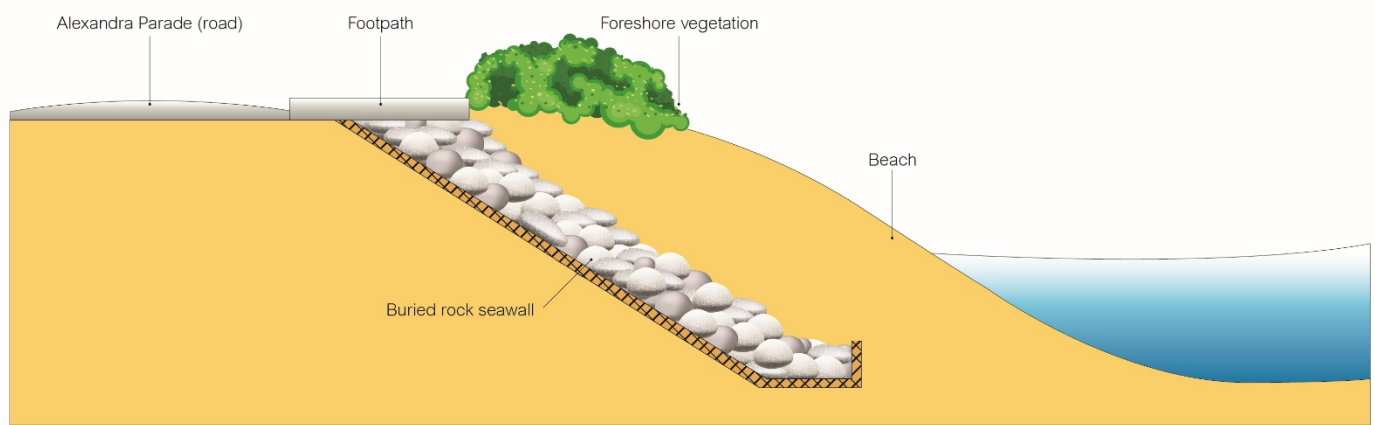
A staged management approach is in place which currently includes sand renourishment, dune revegetation and protection and limiting beach access points. In the longer term, a sea wall is planned to provide ongoing protection.

A future seawall would be buried beneath the sand dunes (see figure 1), and run for about 1.3km from Alexandra Headlands Skate Park in the south to Maroochy Surf Club in the north.

The current aesthetics and useability of the area would not be significantly changed and would have minimal impact on the visual amenity post construction.

Figure 1: future buried seawall design

Please note that landscaping below is for illustrative purposes only. Future landscaping in the area is not known and would be determined closer to the time of construction.



Buried rock wall - Alexandra Headland to Maroochydore

The future construction of the buried seawall would be split into three sections, with two responsible government agencies. The Department of Transport and Main Roads (DTMR) is responsible for sections one and two, and Sunshine Coast Council is responsible for section three (see figure 2 on page 3).

Joint approval for the buried seawall was granted in 2015 (OPW14/0656) as part of planning for the future management of this section of coastline.

There is no timeline for the construction of the buried seawall due to the success of council's current shoreline management approach in providing an erosion buffer along Maroochydore Beach.

Sand renourishment, dune revegetation and protection, and limiting permanent beach access points are all part of the current approach and expected to continue for many years to come. The future buried seawall was and continues to be seen as the last line of defence.

Seawall design

The seawall is designed to be buried underneath the sand, dunes and the foreshore area, with a similar look and feel to the seawall at Noosa Main Beach. It would be constructed with tightly placed, natural rock materials from local quarries with very good longevity.

This means the current aesthetics and useability of the area would not be significantly changed and would have minimal impact on the visual amenity post construction. The rocks may be exposed during extreme storm events, similar to what happens at Noosa Main Beach.

The future buried seawall would be located as far landward as possible, while still allowing for the logistics of its construction and protection of community assets and be supported with a regular sand nourishment program as required.

See figure 1 on previous page for the buried seawall design.

Construction timeline

There is no timeframe proposed for the construction of the buried seawall even though council has a joint approval in place with DTMR. This is because the current sand renourishment strategy is proving successful in maintaining the erosion buffer between the ocean and the community areas.

Construction of the council section three of the buried seawall will heavily depend on the erosion impacts along the beach and progress only once a trigger point is reached, which is 15m from the road boundary at Okinja Road to the toe of the frontal dune after an erosion event or when DTMR begins construction of sections one and two (see figure 2 on page 3).

This 15m trigger width is to allow for enough space for the construction logistics of the buried seawall.

Figure 2: sections of the future buried seawall



What a rock seawall protects

The future buried seawall would protect important public buildings, roads, paths and parks including:

- Aerodrome Road (State controlled road)
- Alexandra Parade (State controlled road)
- Melrose Parade (Council controlled road)
- Maroochydore Beach Holiday Park (marked as Sea Breeze Caravan Park on figure 2)
- public open space including pedestrian and cycle pathways
- beach accesses
- future infrastructure and upgrades.

Existing seawalls are already in place in front of Alexandra Headland Surf Life Saving Club (since 1964) and Maroochy Surf Club (since 1965).

Our coastline is an important part of who we are and council is planning ahead to make sure we can all enjoy our beaches, coastal parks and pathways now and in the future.

The development approval process

In October 2015, approval was given for the buried seawall, however this does not permit the start of any works – but it does mean both DTMR and council can act quickly if the buried seawall is required with a consistent design and construction methodology.

To view the application and approval documentation visit developmenti.sunshinecoast.qld.gov.au and search for the application OPW14/0656.

Permits are required for coastal seawalls constructed within the local government tidal area.

Council is the assessment manager and must assess the application against State Code 8: Coastal development and tidal works of the State Development Assessment Provisions modules. The application is referred to relevant Queensland Government departments for review.

Maroochydore sand renourishment program

Council uses sand from the Maroochy River to widen and restore Maroochydore Beach, to provide medium-term protection of the foreshore and beachfront property, as well as to support events, which bring economic and community value to the region.

Widening Maroochydore Beach increases the distance between roads, paths and buildings, and areas where dunes are damaged. Sand is taken from the lower Maroochy River and delivered to the beach via a buried pipeline.

In 2013, council consulted with the community to develop the sand renourishment program, which remains the preferred management option for the foreseeable future.

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