

The beach at Demons Bluff, Anglesea is now closed. This decision was based on the significant public safety risks that landslides pose along this section of cliffed coastline.

Following the closure of the beach, it is important to note:

- An exclusion zone has been set from 100-metres north
 of the Anglesea Family Caravan Park beach access ramp
 to 300-metres past Grinders Point. The extent of the
 exclusion zone can be seen below in Figure 1.
- Permanent signage will be installed onsite to inform users of the exclusion zone.
- Only authorised individuals are permitted to enter the exclusion zone, access for all other individuals is prohibited.



Figure 1 - Exclusion zone.

BACKGROUND

The sheer cliffs of Demons Bluff are a prominent coastal feature of Anglesea, in the southwest of Victoria. The cliffs rise from the mouth of the Anglesea River to a maximum height of 50-metres near Grinders Point.

Composed of layers of soft siltstones and sandstones deposited up to 45 million years ago, the cliffs uplifted and slowly eroded landward. The beach below is submerged at high tide and the Surf Coast Walk extends along the clifftop.

This cliff line extends over the management tenures of the Great Ocean Road Coast and Parks Authority (the Authority), Parks Victoria and the Department of Environment, Land, Water and Planning (DELWP).

CLIFF HAZARD

Collapses, also known as cliff failures, occur when the internal strength of the formation is reduced beyond a threshold where it can no longer support its weight. Due to the softness of the rock, the Demons Bluff cliffs are easily eroded, and they continually experience both large and small landslips and collapses (see *Figure 2*). These landslips are unpredictable and can occur without warning, posing a significant risk to clifftop and beach users.

Understanding coastal cliff processes and associated hazards enable land managers to make effective management decisions. This knowledge informs risk mitigation both before and after cliff collapse. The Authority and Parks Victoria undertake ongoing monitoring along this cliff line.









Figure 2 - Demons Bluff cliff failure, 2019.

BEACH CLOSURE DECISION

Following the identification of a 60-metre tension crack in the clifftop, DELWP, Parks Victoria, and the Authority formed a collaborative working group to understand the risks associated with this section of the cliff. The working group has taken the following actions:

- An independent geotechnical risk assessment was commissioned, which showed that the risk to life was unacceptable as defined by the 'Australian Geomechanics Society Landslide Risk Management Concepts and Guidelines 2007'.
- Following the risk assessment, a decision was made to temporarily close the beach until a long-term risk management approach could be adopted to reduce the risk to a tolerable level.

The following long-term management options were investigated:

- Managed failure: Removal of pieces of the cliff which exhibit tension cracks using explosives or by mechanical methods.
- Cliff stabilisation: The use of engineering techniques to stabilise the cliff face so that it does not fail or fail over the beach to the same extent.



Figure 3 - Demons Bluff tension crack, 10 February 2021.

- An exclusion zone: Installation of a barrier to stop people accessing the hazard zone below the cliff.
- · Permanent beach closure.

Unfortunately, a permanent beach closure is considered by the Authority, DELWP and Parks Victoria as the only appropriate course of action to take at this location. Although the group recognises that this will affect the public's current use of the beach, closure was assessed as the only viable option to ensure public safety.

ONGOING MANAGEMENT ACTIONS

In addition to the beach closure, other ongoing management actions will continue to control the cliff risk at Demons Bluff. These include:

- Installation and maintenance of fencing and signage on the clifftop to keep users away from the cliff edge.
- Continued relocation of the Surf Coast Walk inland away from the cliff edge as erosion encroaches landward.
- · Regular geotechnical investigations.
- Ongoing monitoring including site visits, aerial imagery analysis and drone surveys (see Figure 4).

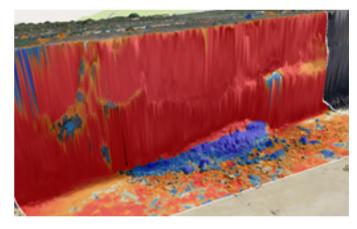


Figure 4 - Drone survey data showing uniform erosion (red).

QUESTIONS

If you have any questions about the closure, please get in touch with us by calling 1300 736 533 or emailing info@greatoceanroadauthority.vic.gov.au.





