

Great Ocean Road



Image: Visit Victoria / Belinda VanZanen

The place

The Great Ocean Road was constructed between 1919 and 1932, as part of a repatriation and war memorial project. It stretches for 242 kilometres through south-western Victoria, from Torquay to the Princes Highway east of Allansford, and is the largest war memorial in the world. It is also a critical piece of road infrastructure, providing access for coastal communities along its length.

The road is managed primarily by Transport for Victoria because it is active infrastructure. The Great Ocean Road Coast and Parks Authority (GORCAPA), established in 2020, manages coastal Crown land along the length of the Great Ocean Road in partnership with the Wadawurrung Traditional Owners Aboriginal Corporation and the Eastern Maar Aboriginal Corporation.



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Location

South West Victoria, Surf Coast Shire; Colac Otway Shire; Corangamite Shire; Moyne Shire

Traditional Owners

Wadawurrung and Eastern Maar Peoples

Main Impacts



Sea levels **rising** by around **24 CM**



More **intense** downpours

Type

Historic infrastructure, comprising:

- asphalt, road base and sub-base
- built elements including the memorial arch, retaining walls, drains and culverts.

Heritage Listing

National Heritage List

The Great Ocean Road winds sinuously through a dramatic landscape. (Image: Visit Victoria / Jarrod Andrews)



Heritage significance

The Great Ocean Road – the road itself and road infrastructure – is significant as a tangible reminder of the work undertaken from 1919 to 1932 by returned servicemen to honour their comrades who died in the First World War. It is also important for its potential to contain features, deposits and relics associated with the building project and occupation of construction campsites and toll booths, and as an outstanding example of how a road was constructed largely by manual labour over very difficult terrain. It is significant as a sinuous road winding through a dramatic landscape and as an internationally renowned, iconic road.

Climate change impacts

Due to its extreme coastal location, large parts of the Great Ocean Road are already experiencing the effects of sea-level rise and associated worsening coastal flooding, inundation with sea water, storm surge and coastal erosion. Storms and downpours are likely to be more intense and frequent, resulting in increased damage from rockfalls and landslips.

The road is in an area of high bushfire risk, and the frequency and intensity of bushfires is expected to increase as a result of climate change.

Climate change is also expected to bring about an increase in the area of acid sulfate soils. The release of large amounts of sulfuric acid, iron and aluminium associated with this will cause major impacts on infrastructure and the environment.

Site vulnerability and heritage impacts

The consequent climate change risks to the heritage values of the site are complicated by other factors such as increasing tourist visitation and issues of public safety.

As an isolated and lengthy piece of infrastructure in a highly exposed and volatile environment, the Great Ocean Road is extremely vulnerable to the impacts of coastal erosion and bushfire.

Damage from rockfalls and landslips, storm surges, inundation and related coastal erosion is already experienced and predicted to increase in severity and frequency. Combined with more intense rains or inundation, washouts of surfaces, sink holes or subsidence of road will be more frequent.

More frequent bushfires will impact the landscape and settlement pattern, as well as the fabric of the road itself (loss of signage, asphalt melting or softening and cracking). The forested sections of the inland section between Apollo Bay and Lavers Hill will be extremely vulnerable in this regard.



Landslips blocking and undermining the road. (Image: Department of Transport)



Flood damage along the road. (Image: Department of Transport)

Works undertaken to limit the risk to the road itself and to public safety, such as rerouting to avoid hazardous sections and the construction of barriers, caging to prevent landslides and clearing for firebreaks, are likely to compromise the heritage values of the road and its environs.

Climate change is also expected to impact residents' and visitors' experience of the road. Anticipated indirect impacts include loss of significant landscape setting, deterioration or loss of sections of road, loss of walking tracks and lookouts, and reduced connectivity between communities. Changes to vegetation, wildlife and ecosystems due to higher temperatures, longer and more intense droughts and more frequent burns could also change the dramatic landscape views from and to the road.

Current management for climate resilience

Transport for Victoria's management for climate change risk has involved responding to hazards identified by daily VicRoads patrols along the road. However, the organisation is becoming more proactive in planning for future scenarios for the asset in a changing climate.

GORCAPA is working with relevant government agencies to develop and implement Coastal Adaptation Plans for the Great Ocean Road coastline. Projects already delivered include the construction of new groynes at Apollo Bay that will protect a section of the road from coastal erosion. The Authority's drone surveys are providing data to help manage areas where coastal hazards are expected to increase because of climate change.

Strategies for building resilience

Coastal Adaptation Plans being developed will identify short and long-term options for managing the impacts to the heritage road and protecting foreshores, Crown land and critical infrastructure from storm surge, wave attack and rising sea levels.

There is recognition of the need to become more proactive in preparing for climate change, rather than being reactive. A new overarching strategic planning framework is being developed for the Great Ocean Road region to give effect to the long-term vision for the region. The framework will consider the broader area holistically and climate change will be an important layer.

The Great Ocean Road Action Plan 2020 recommends a review of the long-term risks from coastal erosion and inundation, severe weather events and climate change on coastal Crown land and assets. Shifting and elevating values for other parts of the region away from the road, such as the hinterland, could relieve pressure on the Great Ocean Road itself.

Specific actions cannot be identified until threats to particular parts of the road are identified. Key actions to aid this will include:

- monitoring and regular maintenance
- installing safety barriers and signage
- emergency work to stabilise the road
- relocating sections of road to safer ground



Work to prevent rockfalls and erosion beside the road. (Image: Department of Transport)

- constructing new roads to improve connectivity between communities
- collating data and analysing with mapping and modelling tools to help identify key pressure points.

Engineering and maintenance strategies remain a key tool for building resilience. The use of matrices incorporating climate, aesthetic and other factors when determining engineering treatments to prevent or minimise rockfalls is becoming common practice.



Replacing culverts near Wye River. (Image: Department of Transport)