

Kuranda Range Road

Safety and resilience upgrades

July 2024





Tropical Cyclone Jasper

In December 2023, Tropical Cyclone Jasper and the associated monsoonal rainfall caused severe damage to state-controlled roads in Far North Queensland. In total, 1,706 kilometres of road were temporarily affected, including the four range roads between Cairns and the Tablelands and the Captain Cook Highway. Kuranda Range Road experienced over 30 landslips. Our crews worked around the clock to clear debris and carry out emergency repair works to safely reopen the roads.

Repairing the damage is a mammoth task requiring detailed planning and design to ensure the long-term solutions are fit for purpose and can be built with the available resources and relevant environmental approvals in place. The works require specialised crews that have extensive experience with slope stabilisation projects. We are carefully planning these works, to minimise the impacts on the total road network as much as possible.

Improving safety and resilience on Kuranda Range Road

Tropical Cyclone Jasper has confirmed how important it is to have resilient roads that connect Cairns and the Tablelands. We have listened to road users and the Australian and Queensland governments have committed \$262.5 million to make Kuranda Range Road safer and more resilient. While our focus is on the repair works, we are developing a program of treatments at strategic locations where they are most beneficial to reduce the incidence and duration of unplanned closures and to allow road users safe and reliable travel up and down the range.

We are focusing on the following treatments at strategic locations on Kuranda Range Road:



Guardrail/protective barriers

Guardrail and protective barriers at strategic locations on Kuranda Range Road will improve safety and can reduce the severity of potential crashes. We are also progressing the development, design and approval to install a concrete median barrier at ‘the hairpin’ bend to reduce the risk of head on crashes.



Shoulder widening

Kuranda Range Road is very narrow at certain locations. Widening the road shoulder in these places (where cost-effective), will make the road environment safer.



Centre line treatment

Centre line treatment replaces the existing dividing centre line/s on a road with two new lines with space in the middle. This improves safety by creating a greater distance between opposing directions of traffic.



Turn-around area

A safe turn-around area will provide an option to turn around to change travel plans in case Kuranda Range Road is unexpectedly closed. The turn around area would be suitable for vehicles up to and including a 19 metre semi-trailer, which is the maximum length of vehicle permitted on this road.



Extension of Intelligent Transport Systems (ITS) technology

To improve safety and reduce incident response times, we installed ITS stations on Kuranda Range Road. The ITS stations are equipped with roadside data systems and variable speed limit signs. These stations provide real-time information on road conditions to our Traffic Management Centre (TMC), allowing TMC operators to detect hazards and monitor changes in traffic behaviour. The current technology does not cover the full length of the range and we intend to extend the system by 5.5 kilometres and 10 stations.



Vegetation management

We will investigate and monitor the vegetation that surrounds Kuranda Range Road. In accordance with the relevant environmental guidelines in the area, we will develop a targeted action plan to better manage this to reduce closures due to fallen vegetation.



Slope stability treatments

To reduce the risk of landslips during weather events, we will investigate the slopes on Kuranda Range Road to determine the locations that will benefit from proactive stabilisation. These slope stabilisation treatments are additional to the recovery works on the sections damaged by Tropical Cyclone Jasper.




About Kuranda Range Road

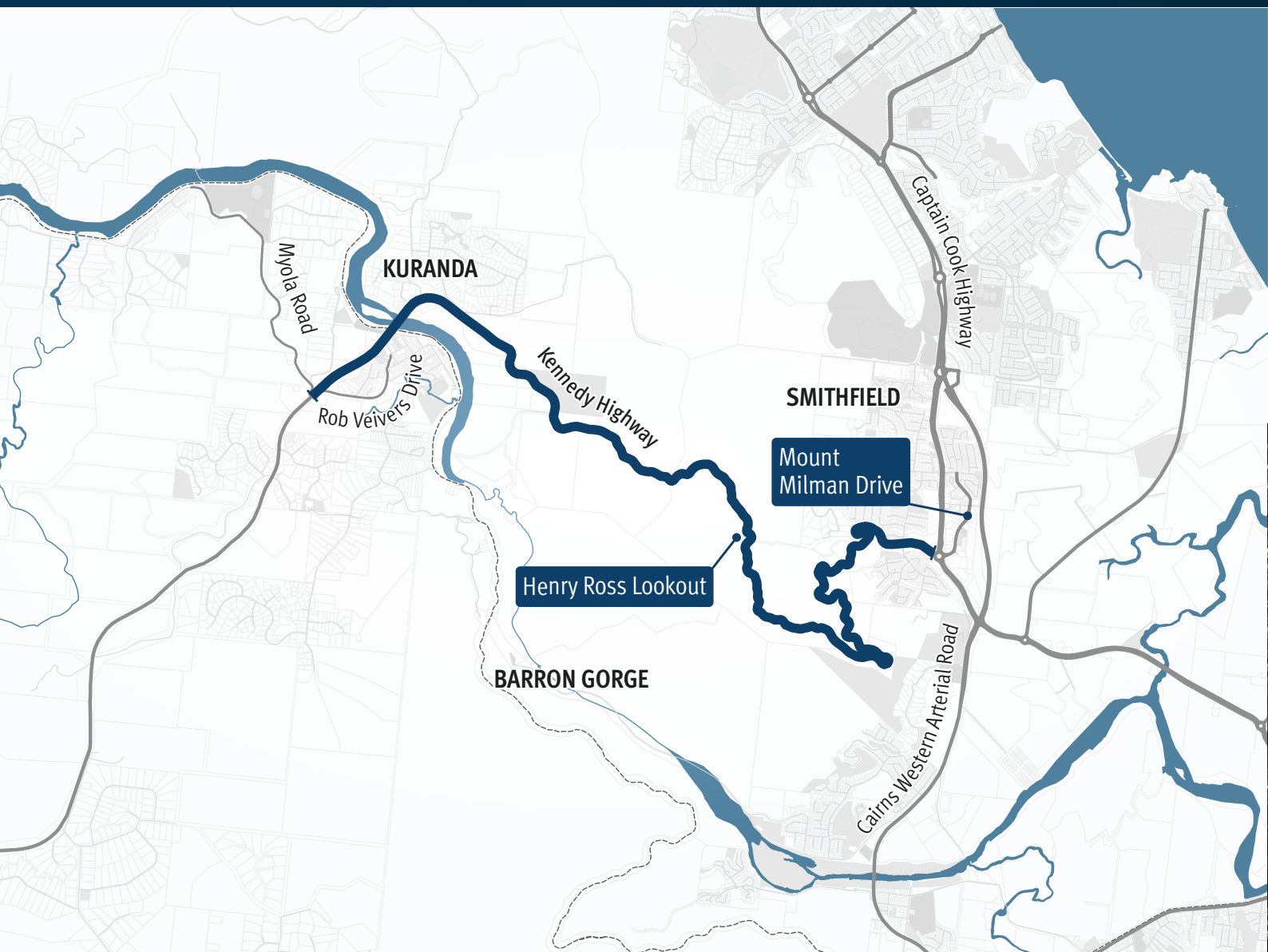
The 13-kilometre section of the Kennedy Highway between Cairns and Kuranda, locally known as 'Kuranda Range Road', is the most direct route between Cairns, the Northern Tablelands and the Cape York Peninsula therefore it is favoured by motorists.

Legend

 Project location

 Kuranda Railway

 Road network



Project map showing the location of safety and resilience improvements on Kuranda Range Road.

The road carries around 9,000 vehicles per day, a mix of local, freight and tourism traffic. The road is narrow and winding, passing through the Wet Tropics World Heritage Area. The Wet Tropics are home to a variety of rare and some threatened flora and fauna species, including the Southern Cassowary, and holds immense biodiversity and scenic value.

Kuranda Range Road regularly experiences unplanned closures due to wet road surface, fallen trees, landslides and crashes. This can make it challenging for road users to plan trips that require them to reach their destination for important (medical) appointments or to catch a flight.

Safety on Kuranda Range Road is affected by:



Geometry

The steep and winding nature of the road presents challenging driving conditions, particularly for freight vehicles, due to narrow traffic lanes and shoulders, and limited passing opportunities.



Climatic conditions

Heavy rainfall and strong winds cause dangerous driving conditions such as slippery road surfaces and fallen debris.



Driver behaviour

Drivers can become frustrated when they are caught behind slow vehicles and overtaking opportunities are limited.



Is an alternative route or major capacity upgrade required?

An alternate route between Cairns and the Northern Tablelands has been called for by the community. The issues with the Barron River bridge and the damage caused by Tropical Cyclone Jasper along Kuranda Range Road have increased these calls. While there are clear challenges with safety and resilience on Kuranda Range Road, capacity is not an issue. Current modelling indicates that one lane in each direction is sufficient for current traffic volumes and expected traffic volumes up to 2051.

More information can be found in the [Cairns to Northern Tablelands Access Strategy](#).



Barron River bridge

Inspections in 2020 found fatigue cracks in certain steel components of the Barron River bridge at the top of Kuranda Range Road. These cracks are attributed to the type of steel used to construct the bridge and decades of exposure to heavy vehicle loads, which have significantly increased since the bridge's construction. To address these structural concerns, we undertook thorough investigations, testing and repairs to ensure the bridge is safe for vehicles under 42.5 tonnes.

As the bridge is nearing the end of its life, a planning study to identify the preferred long-term solution is progressing as quickly as possible with completion expected in late 2024. We continue to monitor the bridge via an ongoing detailed inspection and monitoring program to ensure the bridge remains safe and operational.

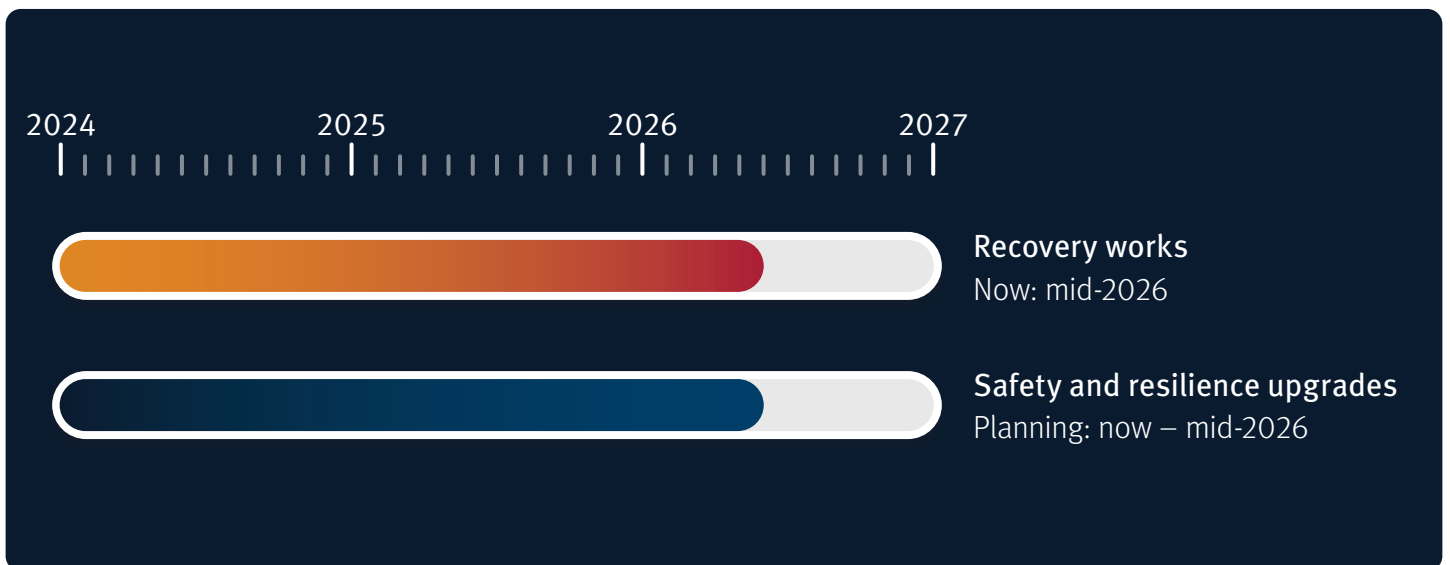


Timeline

It is our priority to repair the sections on Kuranda Range Road damaged due to Tropical Cyclone Jasper. These repair works are currently in design and will be carried out in stages to minimise impacts on the total road network as much as possible.

The sections currently under single-lane operation will be given priority. The recovery works are jointly funded by the Australian and Queensland governments through the Disaster Recovery Funding Arrangements (DRFA). These works are expected to be completed in mid-2026, weather and construction conditions permitting.

To minimise impacts for road users, works for safety and resilience upgrades will start as soon as possible after completion of the recovery works.



More information

For more information about the safety and resilience upgrades on Kuranda Range Road, contact the Department of Transport and Main Roads:

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