

Arnhem Highway – Adelaide River Floodplain Upgrade (Stage 1)

Road open to traffic

24 December 2021

Dear Stakeholder,

The upgrade of the Adelaide River Floodplain is nearing completion with whole of Stage 1 now open to traffic.

This \$77.8 million project is funded by the Australian Government and Northern Territory Government through the Northern Australia Roads Program.

Upgrade of the Adelaide River Floodplain will reduce closure due to flooding. For example, during the large flood event in March 2007, the highway was inundated to a maximum depth of around 1.8 metres and remained overtopped for approximately 10 days. Subsequent weight restrictions extended for much longer, impacting all users and heavy vehicle operators who rely on this highway.

Stage 1 includes approximately 6.6km of upgraded road and 13 new bridges, which will improve the flood resilience of this section of the Arnhem Highway from an average annual closure of six days per year to less than four hours per year.

The new section of road will also significantly improve road safety and increase productivity to a range of industries. Flooded roads are dangerous and some road users may continue to use the road despite warnings. Long road closures and mass restrictions due to flooding impact residents and industries including transport, tourism, extractive, mining, and pastoral businesses.

Q) Why does the road surface along the newly opened section of Stage 1 seem rough to drive on?

A) The soft texture of the underlying floodplain soils required significant ground improvement works to support the weight of the newly elevated road embankment. In some parts there was up to 24 metres of black soil/mud.

The earthworks required specialised treatments and improvement to overcome and account for short and longer-term settlement, swelling and shrinkage, which naturally occurs in these types of soils.

Road construction in this unique and challenging environment includes allowance for post construction settlement, which is expected to occur the following two years from opening. It is expected that over this period, the road surface will compress by up to 5 centimetres in depth.

The road surface will require time and additional surface work as it consolidates further.



The project includes a program over 12 to 24 months after the road is open for the contractor to mill and fill new layers of asphalt on the road surface at the approaches to the bridges. This is normal and was anticipated and was included in the project scope.

Road users may notice more bumps as they approach or exit a bridge. This is also normal given that the underlying foundation of a bridge is rigid with solid pile foundations to bed rock, whilst the road surface and pavement is more flexible and will have post construction settlement, as described above.

Q) Is the road surface safe and does it meet relevant standards?

A) Yes, the road surface is safe.

The project development prior to construction included hydrographic and topographic surveys, geotechnical and seismic investigations, hydraulic analysis and flood studies and geotechnical modelling. The road is performing as expected based on the modelling, which anticipated some median term settlement and surface corrections post road opening.

Testing was recently completed prior to the opening of the new section of road and confirmed that the new section of road meets and largely exceeds the Departmental standards.

Monitoring and some localised resurfacing work will continue where necessary over the next 12 months to 24 months, as the embankment continue to consolidate and settle.

For any queries about the Arnhem Highway Adelaide River floodplain projects, please email communications.dipl@nt.gov.au or call the project hotline number on **1800 560 308**.