Galston Road,
Galston Gorge

Rehabilitating Slopes

transport.nsw.gov.au

May 2022

Galston Road between Hornsby Heights and Galston is closed due to the dangerous situation of rock and soil slippage. Road slippage sites can be dangerous things with sometimes further movement and change in the ground and rock.

We closed Galston Road to ensure the safety of motorists and workers who are trying to rehabilitate the site. Our priority is to open Galston Road as soon as safely possible. Maintenance teams are working hard to remediate the slippage sites.

Remediation of slippage sites

Transport for NSW closed Galston Road, through Galston Gorge on Monday 28 February, after heavy rainfall caused landslides that deposited large boulders, soil and trees onto the road.

The unprecedented amount of rainfall this year has led to eight slippage sites along Galston Road between Hornsby Heights and Galston, we have remediated five.

Large boulders blocking Galston Road

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Safety

Slopes at the slippages sites in Galston Gorge are in imminent danger of further slippage and failure without warning. Such failure could lead to serious consequences for road users. Safety is our highest priority, and we are duty bound to avoid placing the public at such risk. The potential for further slippage also poses a risk to our valued workers whose safety must also be assured.

What's involved?

To remediate the slippage sites a detailed assessment of the affected Gorges slope has to be carried out prior to works. This involves various physical site assessments and geotechnical investigations.
As the data comes in, it is then analysed so we can develop a solution to prevent any further damage and repair the slopes. These solutions involve an assessment of the potential land failures and how they can be made safe with engineered and constructed solutions.

As part of the remediation of each slippage site we carry out:

- site assessment
- geotechnical investigations
- vegetation clearing
- scaling and profiling the slope surface
- removal of rock (about 600 tonnes of rock to date has been removed)
- installation rock bolts
- installation soil nails
- installation strip drains
- application of tinted shotcrete
- laying of geofabric to prevent future erosion.

Rain gauges are fixed into the slopes of the slippage sites to monitor the amount of water and alert the project team during ongoing weather events.

We estimate that we will need to remove an **additional 1,000 tonnes of rock** before works are finished.

The **Tunks Creek Bridge** was also damaged in the heavy rainfall, with parts of the bridge's embankments washed away. The embankments have now been rehabilitated, and the bridge cleared by a structural engineer.

Keeping you informed

This is an evolving situation, and we will keep the community updated. We thank you for your patience during this vital work.
Please take note of VMS (Variable Messaging Signs) and visit LiveTraffic updates by visiting www.livetraffic.com or by downloading the LiveTraffic app.

Staged approach to the remediation of the remaining slippage sites

Site	Remediation activities	Estimated timeframe	Status
1	• Removal of boulders at crest of slope and remove material from slope to form bench • Benching under the affected slope to reduce rock fall onto the road • Drainage under slope	2 weeks to complete	Targeting end of May 2022
2	• Stabilisation of boulders • Soil nails, mesh, strip drains & tinted shotcrete	2 weeks to complete	Targeting end of May 2022
3	• Failure of dry-stone retaining wall • We are currently assessing options to repair this wall, which we expect to require significant works	Pending design and approvals	Works to take up to 4 months (weather permitting)
4	• Removal of boulder and debris on road • Scaling and profiling of the slope	2 days	Complete
5	• Failure of dry-stone retaining wall • Removal of vegetation • Installation of soil nails, shotcreting and profiling of the slope	2 weeks	Complete
6	• Removal of two boulders that were identified as precarious at the top of the slope (each boulder was between 50 and 70 tonnes) • Installation of rock bolts	4 days	Complete
7	• Failure of bridge embankments at Tunks Creek bridge • Clearing of debris and removal of vegetation • Reinstatement of concrete bags, and installation of rock bolts with mesh to prevent further deterioration	2 weeks	Complete
8	• Removal of boulders and debris on road • Removal of vegetation and scaling of the slope	2 days	Complete

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Location of slippage sites