

WHAT WE DO:

QRA is charged with managing and coordinating the Government’s program of recovery and reconstruction works within disaster-affected communities, with a focus on working with our state and local government partners to deliver best practice administration of public reconstruction and resilience funds. QRA is also the state’s lead agency responsible for disaster recovery and resilience policy, working collaboratively with agencies and stakeholders to improve risk reduction and disaster preparedness.

OUR VISION:

Make Queensland the most disaster resilient state in Australia.

OUR PURPOSE:

Enable recovery and build resilience to disaster events within our communities.

DISASTER ASSISTANCE

NDRRA/DRFA GRANTS PROGRAMS

Since establishment, QRA has administered a recovery and reconstruction program through the joint State-Commonwealth Natural Disaster Relief and Recovery Arrangements (NDRRA) and Disaster Recovery Funding Arrangements (DRFA) worth more than \$16.4B.



STATUS OF NDRRA/DRFA DELIVERY PROGRAM

	2018 Events	2019 Events	2020 Events
NUMBER OF EVENTS	6	12	5
\$2,489M Delivery Program	\$269M Program	\$1,547M Program	\$673M Program
\$920M Current Spend	\$255M Spend to date	\$570M Spend to date	\$95M Spend to date
Deadline for Delivery	30 June 2020	30 June 2021	30 June 2022
Time Elapsed	Remainder being delivered under EOTs	58%	8%
% Completion	95% complete	37% complete	14% complete

IMPACT OF COVID-19 ON NDRRA/DRFA PROGRAMS

QRA has received approval from the Commonwealth for extensions of time for delivery and approvals across the active program for delays caused by COVID-19, for example, due to community lockdowns, loss of access to sites, supply chain issues and restrictions on consultants’ and contractors’ capacity to undertake works or prepare tenders.

To date, 27 delivery agents have been approved extensions on their 2018 NDRRA program and 19 delivery agents for their 2019 DRFA programs.

ADDITIONAL RECOVERY MEASURES

QRA is administering a suite of exceptional DRFA assistance measures for recent events.

QUEENSLAND BUSHFIRES (2019) - \$66.975M

TOURISM RECOVERY PACKAGE \$6.0M

- Marketing Campaign \$1.5M**
 - Tourism Events Qld has delivered two regional marketing campaigns working with Scenic Rim, Southern Downs, Sunshine Coast and Noosa LGAs.
 - Go Local campaign is being finalised and will support Scenic Rim, Southern Downs, Sunshine Coast and Noosa LGAs
- Tourism Recovery Officers (TRO's) \$0.5M**
 - Three Tourism Recovery Officers have been appointed for Scenic Rim, Southern Downs and the wine industry who will work across the region.
- Tourism Recovery Fund for Local Government \$3.0M**
 - Scenic Rim Regional Council has developed six activities/initiatives and Southern Downs Regional Council has developed 12 initiatives for funding.
- Walking Trail Restoration and Resilience \$1.0M**
 - Risk assessments completed, scope of works identified and the repair of 35 kilometres of walking tracks damaged in the Lamington National Park has commenced.
 - Specialist arborist contractors engaged to remove numerous fallen trees, overhead hazards and debris in Illinbah Circuit, Gwongoorool Pool Track and Caves Circuit.
- Binna Burra Recovery Package \$1.775M**
 - Clean-up and recovery works, including restoration of road to Binna Burra completed.

COMMUNITY RECOVERY FUND \$14.0M

- Mental Health and Wellbeing \$4.7M**
 - 7.25 clinical staff of the 10.25 funded positions are providing mental health support to the communities in the Hospital and Health Service districts of Central Queensland, Sunshine Coast, West Moreton, Darling Downs and Metro South.
- Community Development Officers \$3.0M**
 - Four Community Development Offices (CDO) have been appointed out of the 6 LGAs allocated CDOs.
- Flexible Funding Grants \$6.0M**
 - 37 Flexible Funding Grant Projects approved in Round 1 to a value of \$1.799M.
 - Round 2 for \$4.2m planned to occur in 2021.
- Monitoring and Evaluation \$300K**
 - Monitoring and Evaluation framework and resources under development.
- Local Economic Recovery Program \$36.8M**
 - Expressions of interest closed 7 September 2020.
 - Approval of Tranche 1 projects expected early October 2020.
- Exceptional Assistance Immediate Support Package \$8.4M**
 - 100% funding distributed to 13 impacted councils identified by the Commonwealth
 - Councils are progressively submitting project plans to QRA for using this funding.

NORTH & FNQ MONSOON TROUGH (2019)–\$242M

- Infrastructure \$124M**
 - \$116.6M allocated to 166 projects, to restore and improve the disaster resilience of flood damaged essential public, community and water assets.
- Economic \$34M**
 - 3 Industry Recovery Officers (IRO) and 3 Rural Financial Counsellors in operation.
 - 295 small business grants approved with payments to date of \$2.83M
 - Over 245 business owners accessed free mentoring under the Mentoring for Growth program.
 - 12 scholarships awarded for Event Management and Tourism Programs
 - 41 Travel bursaries provided for delegates to attend the Destination Q Events Conference.
 - \$1.93M provided to councils and Rural Aid for fodder supply costs.
- Environment \$46M**
 - 80 projects worth \$30.02M have been contracted for Riparian Recovery.
 - 17 projects worth \$2.4M have been contracted for Coastal Recovery.
 - 22 weeds and pest management projects worth \$3.0M have been contracted.
 - A further 14 riparian projects have been recommended to a value of \$8.51M
 - \$100,000 Emergency Response Program for Parthenium Weed is being delivered through Department of Agriculture and Fisheries.
- Human & Social \$12.25M**
 - 9 Community Development Officers in place.
 - 16 Mental Health clinicians, social and health workers and one Child and Youth Mental Health service delivering services through Townsville, North West and Central West HHSs.
- Resilience \$25.75M**
 - \$13.13M Flexible Funding Grants approved across 187 projects.
 - Townsville Flood Mapping project initiated.
- Monitoring & Evaluation \$500K**
 - The IRO program has been evaluated for the Coastal IROs.
 - Some significant data monitoring improvements have been observed. In particular, Health has developed a Disaster and Emergency Incident Relief and Recovery Application (referred to as the DEIRR app) which will enable tracking of all data including therapeutic outcomes for Cat C funded recovery processes of the Mental Health Program.

IN THE SEPTEMBER 2020 QUARTER:

- No new events activated
- Detailed review of the Delivery Program undertaken resulting in revision of program values to \$2.49B
- \$134M works delivered and \$356M submissions approved
- Additional joint-funded \$36.8M Category D Local Economic Recovery Program announced and released to support projects that contribute to local and regional economic and social recovery in areas most severely impacted by the 2019 Queensland Bushfires
- Monitoring of works continued for 2018 Event NDRRA reconstruction works that received extensions of time for delivery due to COVID impacts. At quarter-end, \$14.0M councils and state agencies that have been approved for extensions of time due to COVID-19 related impacts remained in delivery.

COMING UP – DECEMBER 2020 QUARTER:

- Finalise approvals of 2019 event submissions by 31 December deadline
- Assessment and approval of additional tranches of \$36.8M Category D LER package
- Undertake close-out assessments for works completed to 30 June 2020 ahead of QAO audit and claim preparation in March 2021 quarter.

RECOVERY

QRA works extensively on recovery planning with councils impacted by major disaster events, increasing capability and awareness through active participation and providing support for local recovery governance.

NATURAL DISASTER RECOVERY PLANS

QRA IS CURRENTLY COORDINATING 3 STATE EVENT SPECIFIC RECOVERY PLANS:

QUEENSLAND BUSHFIRES (2019)

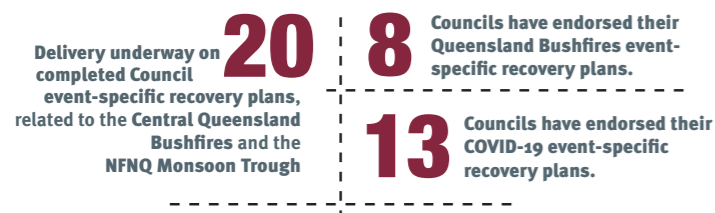
The Recovery Plan focuses on bushfires that occurred across the state during the period September to December 2019. The first quarterly progress report is under development.

NORTH & FNQ MONSOON TROUGH (2019)

The fourth quarterly progress report is being progressed through Government.

CENTRAL QUEENSLAND BUSHFIRES (2018)

Local Government and State agencies are continuing to support the recovery objectives outlined in the recovery plan. Flexible funding grants have enabled Council to use innovative approaches to recovery including the development of Rural Community Connect in the Central Highlands and an art education program in Mackay. The third progress report is currently progressing through Government.



OTHER RECOVERY PROJECTS AND ACTIVITIES

RECOVERY PLANNING AND GOVERNANCE PROJECT

The Recovery Planning and Governance project is continuing to be rolled out across the state. COVID-19 has provided the opportunity to continue discussions with local governments on the importance of the project. Consequently, an additional three councils have signed up for a Recovery Planning and Governance Workshop.

The project has resulted in the endorsement of 12 recovery sub-plans by local government (of which six were assisted by QRA), and feedback has been provided to seven local governments to enhance existing recovery sub plans.

13 local Recovery sub-plans are currently in development

53 Council Recovery sub-plans are underway or endorsed

COVID-19 RECOVERY PLANNING

COVID-19 LOCAL RECOVERY PLANS

QRA is working with 33 local governments across the state to develop COVID-19 local recovery plans. 21 local recovery plans are under development. Aurukun, Barcaldine, Cairns, City of Gold Coast, Gladstone, Goondiwindi, Hinchinbrook, Livingstone, Logan City, Maranoa, Noosa, Toowoomba and Yarrabah Local Governments have endorsed their local recovery plans.

QRA will continue to support local government with their recovery planning in relation to COVID-19, and is taking into consideration the concurrent natural disasters that many are also recovering from.

COVID-19 REGIONAL RECOVERY STRATEGIES

Extensive engagement undertaken by QRA, along with the Economic Functional Recovery Group industry and agency blueprints, informed Queensland's Economic Recovery Plan, which was launched by the Treasurer on 20 August 2020.

QRA worked with Treasury and the Covid-19 Taskforce to produce seven Covid-19 Local Economic Regional Recovery Plans.

12 MONTHLY DAMAGE ASSESSMENT AND RECONSTRUCTION MONITORING (DARMSYS™)

2019 QUEENSLAND BUSHFIRES

Across the week of 14 September 2020 and accompanied by Council representatives, QRA conducted the 12 month damage and reconstruction monitoring assessments on 207 properties directly impacted by the Queensland Bushfires, across 12 council areas - Bundaberg, City of Gold Coast, Gladstone, Ipswich, Livingstone, Lockyer Valley, Mareeba, Noosa, Scenic Rim, Somerset, Southern Downs and Toowoomba.

The DARMSys process has indicated a number of properties still in various stages of reconstruction, and some are still working to remove debris from properties. The team was also able to make referrals to support services for some residents who had not accessed them before.



Image: QRA Recovery and Liaison officers undertaking a damage assessment where Binna Burra Lodge once stood.

PROGRAM SPOTLIGHTS

KOWANYAMA ABORIGINAL SHIRE COUNCIL

In 2017-18, Kowanyama Aboriginal Shire Council sought funding from the Queensland Government to purchase yellow plant equipment that would enable Council to develop its own civil construction team.

In late 2018, the Department of Local Government, Racing and Multicultural Affairs granted Kowanyama Aboriginal Shire Council \$1 million to purchase machinery to enable development of a road crew to assist with maintenance and emergent works within the Shire boundaries.

Less than two years on and the crew are now fully qualified operators, delivering road works, including disaster reconstruction works, in the remote Cape York community. Since April 2020, the Indigenous road crew has delivered almost \$500,000 of emergent works, gravel re-sheeting and formation grades, the first time this has been achieved by a solely indigenous and local workforce in Kowanyama Aboriginal Shire Council's history.

In previous years, outside contractors delivered road works with very little local employment and limited training opportunities.

Committed to training their local staff, Kowanyama Aboriginal Shire Council now have a qualified road crew who have successfully delivered their TIDS/ATSI and Roads to Recovery works on time and within budget and are currently completing DRFA reconstruction works.

This project has helped boost the local economy and given Kowanyama Aboriginal Shire Council communities a sense of ownership and pride that the works are being completed using local employment, resources and knowledge.

The waiting list to gain employment on the road crew is ever increasing with Council needing to purchase more equipment to enable both further employment and build a second road crew to expedite works.

Council has recently received approval for over \$5 million worth of rural road reconstruction works under DRFA, which for the first time, Kowanyama Aboriginal Shire Council is undertaking 'in house', utilising a local indigenous business.

This initiative has enabled an indigenous work crew to undertake previously outsourced works, gain experience and personal development and training to maintain their own road network and take pride in their community.



Images: (1.) Works in action (2.) Resealing complete (3.) Kowanyama Road Crew with newly purchased plant equipment.

RESILIENCE

QRA leads the coordination and development of whole-of-government policies for managing flood risk, improving the resilience of communities, and facilitating mitigation against potential disasters.

RESILIENCE GRANT PROGRAMS

QUEENSLAND RISK REDUCTION AND RESILIENCE FUND

Queensland's commitments under the National Partnership on Disaster Risk Reduction are being delivered via the \$13.1 million Queensland Risk Reduction and Resilience Fund. The fund consists of \$8.3 million in State Government funds and \$4.8 million from the Australian government. Applications for grants under the fund closed in July and assessment completed. Successful projects are expected to be formally announced and the QRA website updated with a list and interactive map of the successful projects in October 2020.

QUEENSLAND DISASTER RESILIENCE FUND (QDRF) AND PREPARED COMMUNITIES FUND (PCF)

For 2018-19, \$10.65M was allocated to 75 projects to strengthen the resilience of Queensland communities, including funding under the fully State-funded QDRF (\$9.5M, 65 projects) and State-Commonwealth funded PCF (\$1.15M, 10 projects). As at 1 September 2020, 24 projects were complete, 44 were in progress, and seven were yet to commence.

NATIONAL DISASTER RESILIENCE PROGRAM (NDRP)

Jointly funded by the Commonwealth and Queensland governments, the Natural Disaster Resilience Program (NDRP) supports community groups, government and non-government agencies, as well as Queensland based not-for-profits, to build disaster resilience across the state. A total of \$14.9 million of funds was allocated to 76 approved projects from 54 councils and 14 organisations and agencies in the 2017-18 funding round. As at 1 September 2020, works were complete for 51 projects, a further 24 projects were in delivery and one project was yet to commence. Projects are due to be completed by 30 June 2021.

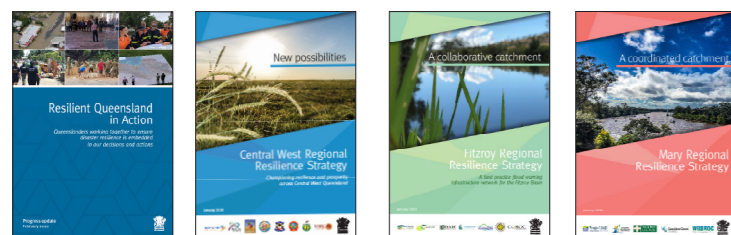


Image: Resilient Queensland strategy covers.

RESILIENCE PROJECTS AND ACTIVITIES

BRISBANE RIVER STRATEGIC FLOODPLAIN MANAGEMENT PLAN (SFMP)

- QRA has oversight of 52 SFMP actions including 34 for State government, of which QRA is responsible for 12.
- One of QRA's actions is to produce a Flood Communication Toolkit which provides a comprehensive suite of flood messaging that councils and relevant state agencies can use in their social media and other flood communication messaging to improve community awareness and resilience to floods for all Queenslanders. The Toolkit was released to all councils on 18 September 2020.
- Work progresses on multiple actions and deliverables, many forecasting completion late 2020. There has been a focus recently in progress of the Disaster Management (DM) actions.

RESILIENCE BUILDING GUIDANCE FOR QUEENSLAND HOMES

Flood Resilient Building Guidance for Queensland Homes

– launched 9 April 2019

Cyclone Resilient Guidance for Queensland Homes

– released 17 December 2019

Storm Tide Resilient Guides for Queensland Homes

– released 17 December 2019

Bushfire Building Guideline for Queensland homes

– complete, due for imminent release

ROYAL COMMISSION INTO NATIONAL NATURAL DISASTER ARRANGEMENTS (RCNDA)

- The RCNDA interim observations were published on 31 August 2020, and has since sought the state's feedback on 165 draft propositions outlining likely recommendations of the RCNDA. QRA is supporting a whole of government response.
- The Royal Commission's final report and recommendations are due to be handed down on 28 October 2020.

RESILIENT QUEENSLAND 2018-2021: DELIVERING THE QUEENSLAND STRATEGY FOR DISASTER RESILIENCE

- *Resilient Queensland in Action* was released on 21 February 2020 as the progress update on delivering the first 18 months of Resilient Queensland, demonstrating how we are implementing the QSDR. It includes case studies and initiatives showcasing some of the great work happening throughout Queensland to improve disaster resilience.
- On 21 February 2020, three regional resilience pilot projects were released as part of Resilient Queensland:
 - **Central West Regional Resilience Strategy**
 - **Mary Regional Resilience Strategy**
 - **Fitzroy Regional Resilience Strategy.**
- Phase 2 of the statewide rollout of regional resilience strategies will commence in early October 2020.

CSIRO - RESILIENCE ADAPTATION PATHWAYS AND TRANSFORMATION APPROACH (RAPTA)

- QRA has worked with CSIRO to develop a tailored version of their Resilience, Adaptation Pathways and Transformation Approach (RAPTA) for Queensland to support resilience building activities.
- Draft reports have been received by QRA for final endorsement. Given the complexity of some of the materials, QRA intends to publish a summary document to introduce the materials when they are made available on the QRA website. This summary document is under review prior to release.
- QRA and CSIRO hosted a webinar with state agencies on 24 September 2020, to outline and discuss the findings of the completed work.

NATIONAL BUSHFIRE RECOVERY PLAN

- COAG tasked the National Bushfire Recovery Agency (NBRA) to work with states, territories, local governments and other stakeholders to develop a National Bushfire Recovery Plan.
- NBRA has provided QRA with a number of draft plans for jurisdictional feedback, prior to finalisation.
- QRA consulted with key state agency stakeholders to inform our feedback, which was submitted to NBRA on 4 September 2020.

NORTH AND FAR NORTH QUEENSLAND MONSOON TROUGH CATEGORY D - FLOOD MAPPING AND FLOOD WARNING PROGRAMS

- The \$1 million Burdekin and Haughton Catchment Resilience Strategy Project will develop locally-led and regionally-coordinated resilience solutions to address recent and emerging disaster risks for councils in the catchment area including Townsville City Council. This project is currently underway and due for completion by April 2021.
- The \$8 million Flood Warning Infrastructure Network Project has paid all 28 impacted councils an initial 30% funding entitlement. The North West and Central West areas of operation have merged together (as AO1) to provide time and cost efficiencies in their procurement and delivery of assets. AO1 (North West) and AO2 (Far North) have commenced their tender processes to each appoint a delivery project manager, due to be appointed Nov-2020. The project has provided all three AOs with a 'Project Manager Guideline' that provides delivery workflow processes, roles & responsibilities, the necessary technical specifications and standards for FWI installation, and the administrative & reporting requirements for the project.
- The Townsville Recalibrated Flood Modelling and Mapping Project, supporting Townsville City Council to update and recalibrate flood modelling and mapping across the council area including the Ross River, is underway.

REFORM OF DISASTER RECOVERY FUNDING ARRANGEMENTS (DRFA)

- On 13 March 2020, the Council of Australian Governments (COAG) tasked Emergency Management Australia (EMA) to lead a review of the DRFA in consultation with States and Territories.
- Following stakeholder consultation, EMA identified the following key areas for review:
 - national comparison of state and territory DRFA assistance measures;
 - streamlining the Category C activation process; and
 - reviewing the assurance arrangements for the DRFA.
- QRA is leading reform negotiations on behalf of Queensland Government agencies, and established a multi-agency DRFA Community Recovery reforms project board to ensure agency input is captured.
- Key progress on each of the reform measures include:
 - National comparison of state and territory DRFA assistance measures - On 24 August, Minister Littleproud wrote to State Emergency Management Ministers to advise that the Commonwealth will seek to achieve consistency in recovery measures available between states. QRA has received the draft final COAG review: national comparison of DRFA assistance.
 - Streamlined Category C activation process - EMA has circulated an updated Category C activation process, supported by QRA, which removes the need for states to meet the strict criteria previously applied. Minister Littleproud has advised that the new Category C activation process will be in place for the 2020-21 disaster season.
 - Review of assurance arrangements for the DRFA - EMA has advised that consultation will recommence with states following the ANZEMC meeting on 8 September 2020, and QRA will continue to participate in this process.



Image: QRA representative Laura Gannon presenting at the Burdekin Water Futures meeting on 17 September in Ayr.

RESILIENCE

GET READY QUEENSLAND (GRQ)

GRQ is a year-round, community resilience program that helps Queenslanders prepare for disasters. The program integrates a state-wide research driven awareness campaign led by the QRA, alongside a grass roots grants program implemented by providing \$2M across all 77 Queensland councils to tailor information most credible and relevant to their community.

- **Get Ready Week** – This year’s Get Ready Week will run from Monday 12 October to Sunday 18 October. Local governments have been unable to host large public events this year and alternative virtual and smaller events are scheduled. A comprehensive key messages and social media campaign has been developed for councils to support their online engagement in 2020 and is available for councils to download from the Get Ready Queensland website.
- **Schools competition** – the Get Ready Schools competition was launched in early September and runs until 6 November. Schools are encouraged to download a series of six activity sheets to colour in and personalise their own preparedness activities such as packing an emergency kit, preparing the home, checking on neighbours and packing a pet emergency kit. The competition has been enthusiastically received across the state with the winning school to win a visit from Get Ready Queensland Ambassador Johnathan Thurston in late November 2020.
- **New council funding round launched** - All council 2020-21 Get Ready Queensland funding submissions were approved in September and notifications sent to councils. The funding guidelines were updated this year to enable councils to pool their funding for shared initiatives. The funding is to be directed towards preparedness and prevention activities for natural hazards and pandemic.

- **GRQ advertising campaign 2020-21** – the new state-wide advertising campaign featuring GRQ’s ambassador Johnathan Thurston will run from 12 October to 15 November. Advertising channels will include television, Coles radio, social media and electronic retail panels. A shared media announcement will be made with the Bureau of Meteorology to inform communities about this season’s weather outlook and the commencement of Get Ready Week.
- **Corporate sponsorship** – QRA has entered into a two-year sponsorship agreement with Suncorp that will provide additional funding to extend the GRQ advertising reach across the state, particularly through television.
- **Resilient Australia Awards (Queensland)** – GRQ will host a virtual award ceremony on Wednesday 14 October to coincide with Get Ready Week. Queensland winners will be recognised in the national awards across six categories including community, schools, business, local government, state/federal government and photography.
- **Stakeholder engagement** – GRQ is holding virtual meetings with councils to brief GRQ representatives on preparations ahead of Get Ready Week in October 2020. **Agency briefing** sessions are also being held to coordinate preparedness messaging for this disaster season.
- **GRQ Market Research** – state-wide market research was undertaken in July 2020 to understand levels of community preparedness across Queensland regions. Community attitudes captured in the market research are being used to inform key messages for the 2020-21 awareness campaign. Council and agency stakeholders will be briefed on the results of the market survey in September to consider in their local strategies. The market research results will be publically released on 12 October as part of the Get Ready Queensland Week launch.



Image: advertising campaign featuring GRQ’s ambassador Johnathan Thurston

PROGRAM SPOTLIGHTS

BINNA BURRA ROAD REOPENING MARKS RECOVERY MILESTONE

Binna Burra Road reopened on 31 August 2020, marking an important recovery milestone for the Binna Burra community and local tourism after last year’s devastating bushfires.

The road had been closed after numerous bushfires burned across the Gold Coast hinterland in September 2019, causing severe damage throughout the World Heritage-listed Binna Burra rainforest reserve. Binna Burra Road is the only road leading to and from Binna Burra Lodge, where the historic wooden lodge building was destroyed by fire.

Immediately following the bushfires, Transport and Main Roads (TMR) undertook emergency works to make the site safe for workers. Reconstruction to repair severe slope damage along Binna Burra Road commenced in late October 2019 at two critical sites between Binna Burra Lodge and the Rangers Hut.

Access to the work site was hampered by ongoing wet weather in early 2020 but works recommenced in mid-March 2020 after further geotechnical assessments, additional batter slope scaling activities and removal of fallen and unstable fire-damaged trees.

The reconstruction project has been complex due to the steep terrain and narrow, winding nature of Binna Burra Road. This meant works to stabilise the slopes required specialist personnel trained in rope access construction and specialist geotechnical equipment abseiled down the cliff face.

While the ongoing road closure was required to manage access constraints and community safety, with the majority of works completed the road has reopened under traffic control.

Slope stabilisation above the road included drape mesh and rock-fall protection. Downslope work has involved installing large rock gabions (or rock-filled cages) and anchoring these with long soil nails and rock anchors into the cliff face. Other completed works include pavement widening, concrete channelling, laying new bitumen seal and asphalt, line marking and installing signage.

Works are in their final stages and are expected to continue under stop/slow traffic arrangements until late October 2020, weather and site conditions permitting.

Pavement restoration, drainage reinstatement, sealing, asphalt, some guardrail installation and line marking are funded through the Queensland Transport Roads Investment Program (QTRIP). Eligible reconstruction works are funded jointly by the Commonwealth and Queensland Governments under the Disaster Recovery Funding Arrangements (DRFA).



Images: (1.) Binna Burra Road – rock descaling with long reach excavator (2.) Binna Burra Road – drape mesh and rock gabions (3.) Binna Burra Road – rock gabions and drape mesh (4.) Binna Burra Road – workers abseiling down steep slopes to install soil nails.