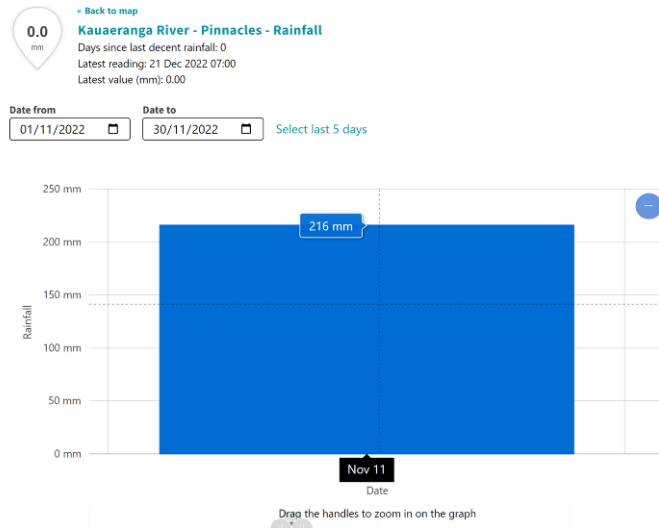


Comprehensive Report: 11 November 2022 Storm Event

1 DESCRIPTION OF MAJOR WORKS – 11 November 2022

A significant rain event occurred in the Coromandel area on 11th November 2022. As a result of this we had a significant number of slips and drainage asset damage throughout the network. This resulted in road closures from both slips and flooding.

Data from the Waikato Regional Council rainfall gauge at the Pinnacles in the graph below shows in excess of 216mm in a 24 hour period on 11th November 22. This is a ARI of between 2-5 years however the rain gauges are quite some distance from the slip sites and there is no available rain gauge data nearby.



Data from the Waikato Regional Council rainfall gauge at Castle Rock in the graph below shows in excess of 112mm in a 24 hour period on 11th November 22. This is a ARI of less than 1.58 years however the rain gauges are quite some distance from the slip sites and there is no available rain gauge data nearby.



Phase 1 - Initial Response, Clean up & Investigation and Design.

There were a large number of slips, damage and flooding in various sizes across the network. A selection of example photos are in the attached appendix and the costs are shown in Table 1.

These included the following roads:

- Blackjack Road
- Colville Road
- Fletcher Bay Road
- Hikuai Settlement Road
- Hot Water Beach Road
- Port Charles Road
- Kennedy Bay Road
- Long Bay Road
- Old Coach Road
- Port Jackson Road
- Stoney Bay Road
- The 309 Road
- Tapu Coroglen Road
- Wharf Road (Colville)
- Wentworth Valley Road

Table 1: Initial Response Phase 1 Cost Summary

Initial Response			
Road	Location & Issue	Permanent Repair	Cost
Network Wide	Network wide slips & drainage asset clearing as per RAMM dispatches	N/A	\$188,000
Total Physical works Initial Response			\$188,000
Professional Services			
Initial Response			\$10,000
Total Professional Services			\$10,000
Total Initial Response			\$198,000

Desktop and on-site analysis for the permanent repair site is summarised below with the costs summarised in Table 2. Photographs of the site are included in the next section as further supporting information. It is noted that capturing the scale of the issue can be difficult in a photo taken from the road. For Health & Safety reasons our personnel are instructed to avoid climbing down unstable banks.

Table 2: Phase 1 Investigation & Design Cost Summary

Permanent Reinstatement site list & estimated Investigation & Design costs			
Road	Location & Issue	Investigation & Design Scope	Cost
Wharf Road (Colville)	RP1.58 – Underslip into traffic lane	Site Investigation & design and construction docs	\$40,000
Port Jackson Road	RP23.25 – Underslip into traffic lane	Site Investigation & boreholes, design and construction docs	\$50,000
Port Jackson	RP22.02 – Underslip	Site Investigation &	\$40,000

Road	into traffic lane	boreholes, design and construction docs	
Blackjack Road	RP0.07 – Underslip with cracking in traffic lane	Site Investigation & design and construction docs	\$30,000
Total Phase 1 Investigation/Design Professional Services			\$160,000

Phase 2 – Construction & MSQA

Table 3: Phase 2 Construction & MSQA Cost Summary

Permanent Reinstatement site list & estimated construction & MSQA costs			
Road	Location & Issue	Permanent Repair	Cost
Wharf Road (Colville)	RP1.58 – Underslip into traffic lane	Rock Wall	\$350,000
Port Jackson Road	RP23.25 – Underslip into traffic lane	Rock wall or post/panel	\$250,000
Port Jackson Road	RP22.02 – Underslip into traffic lane	TBC Based on ground conditions	\$250,000
Blackjack Road	RP0.07 – Underslip with cracking in traffic lane	Rock Wall	\$200,000
Total Physical works permanent reinstatement			\$1,050,000
Professional Services			
Contract Tendering & Admin and MSQA Costs			\$100,000
Total Professional Services			\$100,000
Total Permanent Reinstatement			\$1,150,000

3 Cashflows

A 2-phase approach is planned with investigation and design in the 22/23 FY and construction in 23/24. The evidence from the testing will inform the type of engineered wall required. Cost forecasts will be reassessed once the type of wall is known.

Expenditure in the 2022/23 financial year will include;

Phase 1 - Initial Response	\$198,000
Phase 1 - Permanent Reinstatement Investigation & design	\$160,000
Total	\$358,000

Expenditure in the 2023/24 financial year is estimated to be;

Phase 2 – Permanent Reinstatement MSQA & Construction	\$1,150,000
Total	\$1,150,000

Initial Response Site Photos



Kennedy Bay Road – RP1.0



Old Coach Road – RP0.5



Port Charles Road – RP15.0



Port Charles Road – RP15.0



The 309 Road – RP16.6



Wharf Road (Colville) – RP2.05

Permanent Reinstatement Site Photos



Wharf Road (Colville) – RP 1.58



Port Jackson Road – RP 23.25



Port Jackson Road – RP 22.02



Blackjack Road, Kuoatuna – RP 0.07