



Flood Recovery Status Update

MONTHLY UPDATE ON WORK COMPLETED

Issued by: Programme Controller | Month: September 2024

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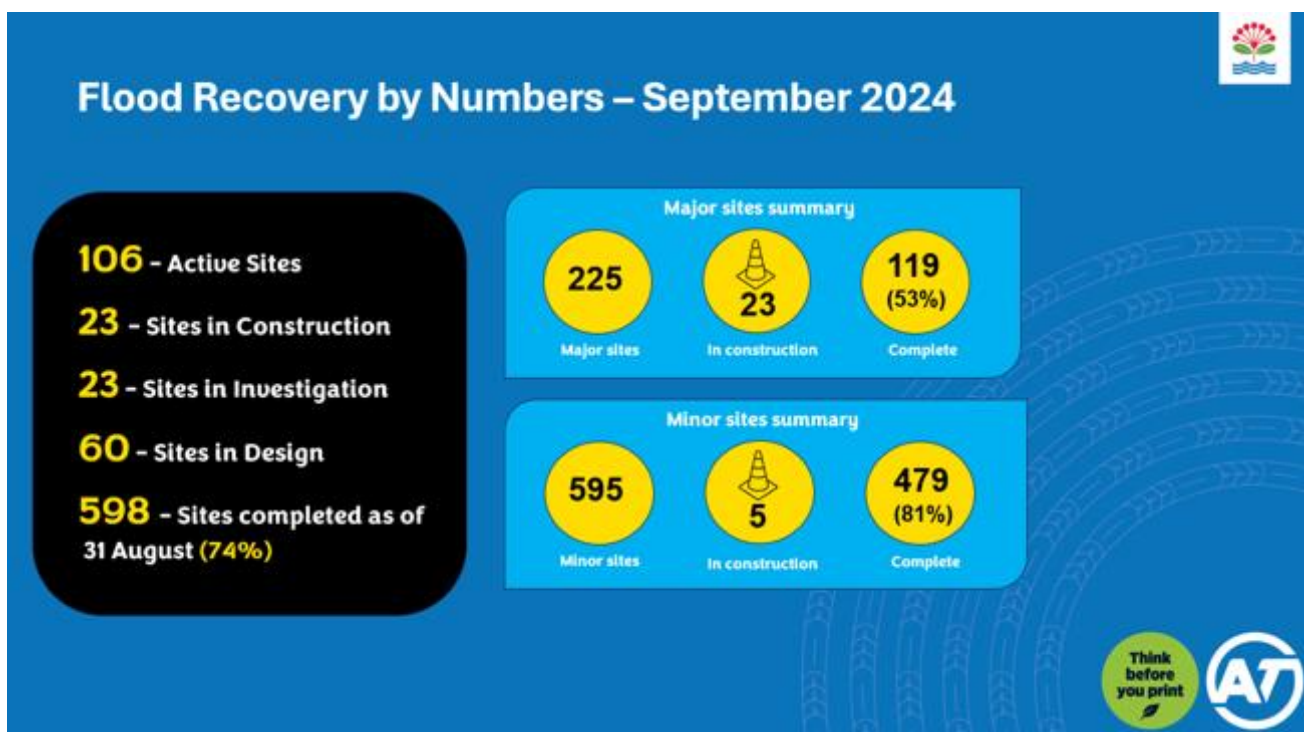


OVERVIEW

The Recovery Team is focusing on providing information on key priorities as follows:

- ▶ Continue responding to our community's needs, in particular isolated communities.
- ▶ Consolidate updates from contractors across Auckland Region with focus on full road closures updates, damage assessment report and budget.
- ▶ Coordinating geotechnical assessments with key operational functions, prioritizing safety of staff and communities.
- ▶ Provide a map overview and statistics showcasing the response to road closures across all regions.
- ▶ Updating AT websites with current information on the work in progress.

PROJECT OVERALL STATISTICS



By Region

	North Rural	North Urban	West	South Rural	South Urban	Central/ GBI/ WI & Rakino
Total no. of Major Projects	78	38	71	21	1	16
Major Active Projects	21	17	47	11	0	10
Major Projects Completed	57	21	24	10	1	6
Projects in Investigation stage	2	5	12	3	0	1
Projects in Design stage	14	9	25	6	0	6
Projects in Construction stage	5	3	10	2	0	3
No. of projects expected to be completed by end of FY24-25	21	17	47	11	0	10

** These figures are correct at the time of issuing this report and are subject to change.

ROAD STATUS

Currently there are **12** local roads with full closures in place, **21** roads open to single lane, **3** roads open under restrictions, and **4** roads closed – (residents' access only). This remains fluid and will change depending on the road work requirements.

MEDIA AND COMMUNICATIONS

This month:

- Together with AT's media team we issued a media release about the new electronic flood alert pilot, supported by the creation of a project web page where folks can sign up to provide feedback on the initial three pilot sites. Check out Electronic flood alert pilot (at.govt.nz).
- The Coatesville Chronicle were provided an update on Mill Flat Road Bridge replacement progress.
- AT's social media team received content to profile:
 - The latest Flood Recovery statistics;
 - The completion of works at Hinemoa Terrace (Birkenhead) with a lovely comment by Local Board Member Melanie Kenrick
"The finished job is beautiful, thank you AT. For decades kids used to learn to ride bikes on the terrace. Hope to see lots of kids on bikes and roller skates over summer"; and
 - The Duck Creek Road (Stillwater) repairs which are providing essential access to residents and contractors working on the Penlink project.
- A longer Duck Creek story was offered to local media (declined). It was also circulated internally and sent to Auckland Council for inclusion in Our Auckland: "Slip repairs crucial to Penlink construction access" (opens in a new tab).
- We contributed an update on Matakana Valley Road repairs to Auckland Council's flood recovery newsletter, which was loaded to the Our Auckland site.

In addition, Liveable Streets submitted the Awhitu Slip Repairs to the Civil Contractors NZ Inc (CCNZ) Project Awards in the category "Projects between Warkworth and Pokeno valued \$0 - \$20 MILLION". The project has been confirmed as a finalist for the Awards being held in November 2024.

AREA: NORTH URBAN

WORK COMPLETED IN THE LAST MONTH

- No completed sites to report this month

PROJECTS IN CONSTRUCTION PHASE

SITE NAME	ESTIMATED COMPLETION DATE
Duck Creek Road (2 projects)	February 2025
Twin Wharf Road, Herald Island	November 2024

CONSTRUCTION PROGRESS UPDATE

- **DUCK CREEK ROAD:** The first retaining wall on the south side is progressing well. A crane is currently on site (see photo bottom left) to hold up a power pole while the retaining wall is constructed immediately below. This innovative approach has generated cost savings and reduced impacts on neighbours. An interesting challenge on this site is accommodating large and long trucks through our narrow work site from the Mahurangi Penlink work. Work on our site needs to stop when the extra-large loads pass through.



- **TWIN WHARF ROAD:** Stage 1 of the slip remediation work commenced in May 2024 and is nearing completion. See before and July 2024 photos in the top row below. This work has included:
 - Retaining wall on embankment side
 - Bank stabilised on seaward side; and
 - Reinstatement of the footpath and carriageway.
- Stage 2 of the slip remediation work has recently begun and includes construction of a retaining wall adjacent to the temporary stairs. For work to continue further, the temporary stairs are to be removed. Pedestrian access after 2 September is via the newly completed footpath along Twin Wharf Road.
- Following completion of the Stage 2 works, a permanent stairway will be constructed near the temporary stair's location as part of our Stage 3 work.



ROAD STATUS

CLOSED

- Twin Wharf Road, Herald Island

OPEN – SINGLE LANE

- Duck Creek Road, Stillwater
- Wade River Road, Wade Heads
- Spur Road, Stillwater

OPEN – UNDER RESTRICTION

- None

CLOSED – RESIDENTS ACCESS ONLY

- None

AREA: NORTH RURAL

WORK COMPLETED IN THE LAST MONTH

- Matakana Valley Road, Matakana (4900)
- Takatu Road, Tawharanui (RP8250-8450)
- Weranui Road (RP6280)

PROJECTS IN CONSTRUCTION PHASE

SITE NAME	ESTIMATED COMPLETION DATE
Ahuroa Road, Puhoi (7784)	On hold pending details for anchors
Ridge Road, Riverhead	October 2024
Weranui Road, Puhoi (649)	September 2024
West Road, Kaukapakapa (271)	On hold pending design change

CONSTRUCTION PROGRESS UPDATE

- **AHUROA ROAD:** All piles have been constructed at the slip site east of J Tolhopf (Site RP7784). The site team has temporarily disestablished from site while the details for the anchors are addressed. A lane closure with stop/go traffic signals remains in place.



Also working on Ahuroa Road are Mason Contractors maintenance crew undertaking extensive road rehabilitation and some minor slip repairs. The current stage (Stage 2B) is planned for completion by the end of October 2024. The next stage, that should complete the remaining section to J Tolhopf, is planned to start construction in Jan 2025.



- **MATAKANA VALLEY ROAD:** Permanent slip repair work began on 28 Feb 2024 and has progressed ahead of schedule. Slip 9 (RP4900) of the 10 slip sites along this road was completed mid-August, including guardrail installation and new line-marking. Site 10 remains in design and work is planned to begin later in the year.



- **RIDGE ROAD:** Work started on Ridge Road on 5 August 2024 to construct two retaining walls and repair the road shoulder. Slip 1 (shown on the left two images) is well underway with the retaining wall largely complete. This month will see backfilling and reinstatement of the kerb and channel in this area. Slip 2 (shown on the right) commenced on 26 August 2024. The image shows how the area has been battered back, with white cloth protecting the exposed material on the batter face. This slip will be repaired using blocks.



- **TAKATU ROAD:** Work started here in December 2023 and was completed in August 2024. Repairs include 5 soil-nailed shotcrete walls and one mass-gravity rock buttress to address the 6 slips identified. During August, the team installed mesh and sprayed shot-crete to the last remaining slip site. All pavement repairs and drainage upgrades are now also complete.



- **WERANUI ROAD:** Work on the third and final major site (RP6280), near the bridge at the intersection of Weranui Road and Waiwera Road, started on 29 July and is largely completed. Guardrail installation and line marking will be carried out when weather permits.



- **WEST ROAD:** Work on West Road started on 1 July 2024 and the first hole was drilled on 11 July. As can be seen in the images below, this area is very soft clay. The team initially drilled to a depth of 9m and then to 11.5m, with no rock found. The team are currently reviewing the design and looking at options to proceed.



- **MILL FLAT ROAD BRIDGE:** A WhatsApp group has been set up with the Mill Flat Road community to liaise during design and construction. The design stage is now complete. A resource consent has been lodged and the construction is out for tender. Access during Stage 2 construction will be restricted for larger trucks and trucks and trailer units. An update was shared with the community via letter on 21 August 2024 which provided detail on the progress to date, design and some of the key anticipated construction impacts. A copy is also located on ATs website.



ROAD STATUS

CLOSED

- None

OPEN – SINGLE LANE

- Ahuroa Road, Puhoi
- Weranui Road, Wainui
- Wishart Road, Helenville

OPEN – UNDER RESTRICTION

- West Road, Kaukapakapa
- Ridge Road, Riverhead

CLOSED – RESIDENTS ACCESS ONLY

Red Hill Road, Te Arai

AREA: SOUTH RURAL & URBAN

WORK COMPLETED IN THE LAST MONTH

- Monument Road, Clevedon (2 sites)

PROJECTS IN CONSTRUCTION PHASE

SITE NAME	ESTIMATED COMPLETION DATE
Awhitu Road, Awhitu (Site 2 of 2)	September 2024
Grahams Beach Road, Manukau Heads	October 2024

Upcoming sites include Hunua Gorge Road (Hunua) and Union Road (Mauku).

CONSTRUCTION PROGRESS UPDATE

- **AWHITU ROAD:** Work is progressing well to repair the slip near #1966 Awhitu Road (original slip shown below left). The team have now finished all the soil nail and shot-crete work. Drainage installation and pavement repairs will take place this month.



- **GRAHAM BEACH ROAD:** The team have remobilised to the site late August and will begin with soil nail installation. This programme is expected to take approximately one month.



- **MONUMENT ROAD:** Works started on 24 June 2024 to repair the two slips at Monument Road, with all work now complete and the road reopened.



ROAD STATUS

CLOSED

- Manukau Heads Road, Manukau Heads

OPEN – SINGLE LANE

- Awhitu Road, Pollok
- Union Road, Mauku

OPEN – UNDER RESTRICTION

- None

CLOSED – RESIDENTS ACCESS ONLY

- McNicol Road, Clevedon

AREA: WEST

WORK COMPLETED IN THE LAST MONTH

- Bethells Road, Waitakere, 1 site
- Lone Kauri Road, Karekare, 1 site
- Wairere Road, Rooster Ridge, 2 sites
- Whatipu Road,
- Mountain Road, Henderson Valley 1 site
- Scenic Drive, Titirangi 2 sites
- Scenic Drive, Waiatarua, Auckland City Look out, 1 site
- Glenesk Road, Piha

CONSTRUCTION PHASE – NEXT 3 MONTHS

SITE NAME	ESTIMATED COMPLETION DATE
Bethells Road, Waitakere (1 Sites)	August 2024
Forest Hill Road, Waiatarua	September 2024
Huia Road, Titirangi 1 site	December 2024
Karekare Road, Piha	December 2024
Kay Road, Swanson	Dec 2024
Kellys Road, Oratia	December 2024
Lone Kauri Road, Piha	February 2025
Mountain Road, Henderson Valley (2 sites currently in construction, 2 about to commence 3 sites awaiting construction)	December 2024
Scenic Drive, North Swanson	September 2024
Scenic Drive, 'Elevation' Waiatarua (on hold)	Unknown- pending Cat 3 buy-out process
Scenic Drive, Titirangi, 1 site and 1 embankment	December 2024
Scenic Drive, Arataki PR8.25	September 2024
Scenic Drive, Arataki, 2 sites (RP6.75 and RP6.58)	February 2025
Scenic Drive /Shaw Road	Unknown – awaiting Cat 3 buyout.
Takahe Rd, Titrangi	September 2024
Te Henga Road, Waitakere	October 2024
Wairere Road, S bend past Caton	January 2025
West Coast Road, Oratia	To start late October

CONSTRUCTION PROGRESS UPDATE

- **73 BETHELLS ROAD, (NEAR STEAM HAULER TRACK):** This slip repair has included a 30-metre-long, 2-metre-high stone wall to support the road. Additional drainage issues were identified during the works, which were then coordinated with other works in the area. This has meant the work took longer than originally planned, but the repair will be more resilient for the future. The site is largely completed, with one or two small items to be finished.



Block retaining wall completed, seeding and matting has been done and we expect to see the grass growing through soon.

- **TE HENGA ROAD:** Work began on Te Henga Road slip between number 60 and 66 Te Henga Road on 19 August 2024. This section of the road is currently partially closed with a one-lane closure in place. We are repairing the large slip which is currently extending across half of the road. A retaining wall will be constructed to support the road. We have completed the vegetation clearance and the excavation of the site and established the piling platform. We have begun the drilling for the piling which we expect will take a few weeks to complete. Recent weather has made work at this site challenging, with additional ground water to deal with. Works will take up to 2 months to complete, weather dependent.



Slip repairs underway on Te Henga Road, Piling works starting

- **FOREST HILL ROAD, WAIATARUA:** Works began outside 346 Forest Hill Road, Waiatarua, on 13 May 2024. The road is closed. In August, we experienced further delay when drilling uncovered a soft section within the soil, and we had to redesign the retaining wall to ensure it would be resilient. We now expect this work will be completed and open the road around the 22nd of September.
- **GLENESK ROAD, PIHA:** Works began on Glenesk Road was completed in August, with some planting to be completed. We expect the seeding under the matting will soon grow through. We are pleased to have been able to restore this section, with greater resilience for the future.



Slip repair on Glenesk Road

- **HUIA ROAD, #81 HUIA ROAD, TITIRANGI (RPo.9)** The design is completed and under review for this site. We are planning to start works in the September/October School holidays, if possible, with a one lane closure to start on this site. This work will continue until November.
- **KELLYS ROAD ORATIA:** Kellys Road, Oratia, has a one lane closure due to an underslip. We have the design of this repair ready to go. Works will start on this repair once Forest Hill Road is reopened. Before we can start on this repair, Vector will need to isolate the powerlines above this slip to make the site safe for excavation and construction. Vector are working this job into their programme of works and will notify AT when this location is safe for works to begin.



Slip site on Kellys Road Oratia, note the overhead powerlines.

- **KAREKARE ROAD AND LONE KAURI ROAD, KAREKARE:** We completed the site on Lone Kauri Road in August, and on the 19th of August moved back to Karekare Road where we will be working on two sites (K4 and K5) until December 2024. Following Karekare Road completion, Lone Kauri Road will then be closed again in January 2025 to complete one more site (L4). Karekare Road is fully closed during works, all traffic must go via Lone Kauri Road. When there is access available to residents after work hours each day on Karekare Road, the contractor can let the community know through their community WhatsApp group.
- **RPo.582 KAREKARE ROAD: 582 METERS FROM PIHA ROAD:**

Final design has been prepared and this is now under PS2 review nearing completion Works are programmed to start mid-September.



Slip site RPo.582 Karekare Road

- **RPo.980 KAREKARE ROAD (980M FROM PIHA ROAD)**

Works have started onsite with good progress being made; the build of the soil anchors are now in place. Site due to be completed mid-October.



Site underway on Karekare Road, Karekare

- **MOUNTAIN ROAD:** Work on Mountain Road is continuing to progress well, with roadworks underway. This includes soil nailing, and shotcreting and work is expected to continue until end of 2024. We have completed 3 sites and are currently working on the next 2 sites. The next 2 sites will be underway soon. Work on Mountain Road is restricted by the narrow width of the road. Logistics involved with transporting equipment can restrict how many repair activities can be carried out at the same time. We are going to have to work with residents around a full road closure during the day to accommodate some of the works.



Work on Mountain Road – image shows the narrow nature of Mountain Road, works underway on two sites next to each other.

- **SCENIC DRIVE, NORTH SWANSON:** Repairs are being made to the carriageway and the drainage on this section of the road. We have completed the works on the east bound side and now are working on the West bound side of the road. Works have progressed with the continuation of the drainage upgrade works with crew recently been focusing on culvert upgrades and replacement of existing infrastructure which was undersized. They are now working the way uphill with the concrete lined swale construction.

This will be completed under stop/go traffic management and one lane will be open at most times. There may be a time when the road will be closed in short periods of up to 15mins if required. This repair work is expected to be completed Mid- September 2024. There has also been long term monitoring of the bore holes to monitor any further movement.



Works on Scenic Drive, North Swanson

- **RP 8.25 412 SCENIC DRIVE, BETWEEN ARATAKI AND WEST COAST ROAD:** The excavation of this site took longer than expected, with poor ground conditions. A lot of the material had to be removed from site and its condition meant that it was unable to be reused. All piling is now complete and new retaining wall built. The Contractor is now backfilling and compacting material behind the new wall before completing finishing works. Completion is now anticipated at start of September. Vector will be moving the power from temporary generator and reinstating the permanent power poles in middle of August.



Works progressing, ready to lay the road, matting and seeding complete. The retaining wall is completed with the edge beam being installed in August.

RP 6.73 SCENIC DRIVE, BETWEEN ARATAKI AND WEST COAST ROAD:

Design is complete and construction is programmed to start in September after the site at RP8.25 is completed, and the road is opened at that location. This site will require a full road closure, with access only to residents. Residents on the Waiatarua side of the closure will need to change their access route to West Coast Road.



Site ready to start works once the large site at RP8.25 is complete, and access from the North side of the slip is open.

RP 6.58 SCENIC DRIVE, BETWEEN ARATAKI AND WEST COAST ROAD: Design is nearing completion on the concrete piled tied back wall. We are programmed to start construction in October. This repair will require full road closures, with access only to residents.



Site ready to start works once the large site at RP8.25 is complete.

- **SCENIC DRIVE, TITIRANGI RP 0.75, RP0.85, RP0.9:** We started work on 27 February 2024. This site has had some over slips occur and some – rocks falling from above, which we are investigating. As a result, we have had to close the pedestrian access and the other culvert works through the site. Pedestrians need to go via Kohu Road. We have completed the works on two of the retaining walls, at RP0.75 and RP0.9 and will begin work on the third retaining wall (RP0.85) on the first week of September 2024. We have also completed Rock scaling on the embankment above the road to remove any loose rocks, but discovered a section of the embankment is at risk of failure in the future. Our plan is to work on buttress wall or protection on the embankment, and we plan to do this work concurrently with the third retaining wall. We have had some delays with the design of the retaining all at RP0.85 This design delay, and the embankment buttress will push out the completion date of this work to December 2024. The road, and the pedestrian access will remain closed until then. We will also be completing the balustrades on RP 0.75 and RP 0.9 during September.



RP0.75 Scenic Drive Titirangi (Balustrade to be completed.)



RP0.90 Scenic Drive Titirangi (Balustrade to be completed.)

- **SCENIC DRIVE (NEAR TO THE AUCKLAND CITY LOOKOUT):** Works have been completed onsite with all slope stabilization works completed plus, drainage, pavement hydroseeding, line marking, and guardrail works. The road was fully opened at this location in August.



Scenic Drive, Auckland City Look-out slip repair, soil nail wall complete.

- **TAKAHE ROAD, TITIRANGI:** Works to repair the slip on Takahe Road began on Monday 17 June. The road is fully closed during the works around number 32. The work is expected to be completed in Mid-September and is currently on track. The work will include repairs to the pavement and seeding and planting.



Block retaining wall almost completed on Takahe Road

- **WAIRERE ROAD:** Two slips were completed in August at the “Roster Ridge” section of Wairere Road. When we were working on this site, we uncovered additional drainage that needed clearing and restoration which we were able to add into the repair.



Repaired pavement on Wairere Road, at Rooster Ridge.

- **WAIRERE ROAD: 2 SLIPS AT 349 WAIRERE ROAD:** We have reviewed the geotechnical testing that was completed at the site outside 349 Wairere Road where there are two slips. The proposed repair involves digging out the failed section of road and reconstructing it along with upgrades to adjacent drainage. This will include a full closure of the road. This is the only access point for Wairere, Mildon, Horsman and Jonkers Roads. We are currently working with the community to establish a timetable when the road will be open for a short time during the day for vehicles to come in and out. After hours we expect the road will be open to one lane. Work is likely to commence in Mid-October.



Wairere Road slip site 349 Wairere Road

- **WEST COAST ROAD, ORATIA** Work is programmed to start on West Coast Road in late October or early November 2024. This work will require a lane closure, but one lane will remain open. Before this work commences, we will complete Forest Hill Road and re-open it.



West Coast Road, Oratia slip site.

- **WOODLANDS PARK ROAD, WAIMA:** We are in the final stages of the design work for this repair. As this road is currently a part of the detour route for the works on Scenic Drive, the repair work will be scheduled once Scenic Drive, Titirangi is completed. We expect to start this repair in January 2025



Woodlands Park Road Slip Site

ROAD STATUS

CLOSED

- Kay Road, Waitakere
- Takahe Road, Titirangi
- Paturua Road 17, Titirangi
- Scenic Drive, Titirangi, Woodlands Park Road to Titirangi
- Scenic Drive, Waiatarua, West Coast Road to Arataki Visitors Centre
- Kohu Road, Titirangi, Western End
- Te Henga Road, Bethells,
- Mountain Road, Henderson Valley
- Forest Hill Road, Oratia
- Karekare Road, Karekare

OPEN – SINGLE LANE

- Huia Road, Titirangi
- Huia Road, Piha
- Huia Road 634, Titirangi
- Karekare Road, Piha
- Kellys Road, Glen Eden or Oratia
- Konini Road 157, Titirangi
- Tanekaha Road 28, Titirangi
- Tasman View Road, Te Henga
- Taunton Road 45, Blockhouse

OPEN – UNDER RESTRICTION

- Rayner Road, Piha

CLOSED – OPEN TO RESIDENTS ONLY

- Mountain Road, Henderson Valley
- Scenic Dr, Waiatarua – Slip at #412 – Scenic Drive closed between Forest Hill Rd and North Way, this section of road between West Coast Road and Arataki Visitors center will remain closed when the next two sites start, straight after this site is complete.

AREA: CENTRAL (URBAN)/ WAIHEKE & RAKINO ISLANDS/ GREAT BARRIER ISLAND

WORK COMPLETED IN THE LAST MONTH

- Orapiu Rd, Waiheke Island
- Puriri Bay Road, Great Barrier Island

PROJECTS IN CONSTRUCTION PHASE

SITE NAME	ESTIMATED COMPLETION DATE
None at start of September.	NA

CONSTRUCTION PROGRESS UPDATE

- **ORAPIU ROAD, COWES BAY, WAIHEKE:** Construction started on 24 June 2024 and has been completed ahead of schedule in August 2024. The repair consisted of a 45m long retaining wall with steel piles. The retaining wall is complete, and the road has reopened for traffic.



ROAD STATUS

CLOSED

- None

OPEN – SINGLE LANE – STOP/GO

- Shoal Bay Road, Tryphena, Great Barrier Island
- Hekerua Road, Little Oneroa, Waiheke Island
- View Road, Waiheke Island
- Wharf Road (by Boat Ramp), Ostend, Waiheke Island

OPEN – UNDER RESTRICTION

- None

CLOSED – RESIDENTS ACCESS ONLY

- None

APPENDIX 1 - REGION-WIDE DETAILED SITE INFORMATION

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
North Urban	Birkenhead	Hinemoa Tce	11	Under slip	Open - Normal	Complete
North Urban	Redvale	John Brian Dr	30	Under slip	Open - Under Restrictions	Complete
North Urban	Albany	Bush Rd	33	Under slip	Open - Normal	Investigation
North Urban	Herald Island	Twin Wharf Rd	149	Under slip	Open - Single Lane	Construction
North Urban	Lucas Creek	Paremoremo Rd Site #1	166	Under slip	Open - Normal	Complete
North Urban	Bayswater	Sir Peter Blake Pde	180	Under slip	Open - Normal	Complete
North Urban	Northcote	Raymond Tce	230	Under slip	Open - Normal	Design
North Urban	Redvale	John Brian Dr	240	Under slip	Open - Under Restrictions	Design
North Urban	Birkenhead	Inkster St	267	Under slip	Open - Normal	Complete
North Urban	Greenhithe	Rahui Rd	304	Under slip	Open - Normal	Investigation
North Urban	Stanmore Bay	Riverhaven Drive	358	Under slip	Open - Normal	Complete
North Urban	Albany Heights	Albany Heights Road	545	Under slip	Open - Normal	Design
North Urban	Albany	Gills Road	591	Under slip	Open - Normal	Complete
North Urban		Masterton Road	663	Under slip	Open - Under Restrictions	Design
North Urban	Greenhithe	Tauhinu Rd	723	Under slip	Open - Normal	Complete
North Urban	Stanmore Bay	Scott Road	920	Under slip	Open - Normal	Complete
North Urban	Glenfield	Kaipatiki Rd (Rp1077)	1077	Under slip	Open - Normal	Complete
North Urban		Ridge Road	1160	Under slip	Open - Normal	Complete
North Urban	Riverhead	Ridge Road	1188	Under slip	Open - Normal	Complete
North Urban	Riverhead	Ridge Road	1234	Under slip	Open - Normal	Complete
North Urban	Whangaparoa	Wade River Rd	1615	Under slip	Open - Single Lane	Design
North Urban		Lonely Track Road	1930	Under slip	Open - Normal	Design
North Urban	Stillwater	Spur Rd	2465	Under slip	Open - Under Restrictions	Design
North Urban	Stillwater	Duck Creek Rd Emergency Wk	2503	Under slip	Open - Normal	Construction
North Urban	Paremoremo	Paremoremo Rd Site #2	2794	Under slip	Open - Normal	Complete
North Urban	Torbay	Glenvar Road	3030	Under Slip	Open - Normal	Complete
North Urban	Paremoremo	Paremoremo Rd Site #3	3275	Under slip	Open - Normal	Complete

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
North Urban	Whenuapai	Brigham Creek Road	3655	Under slip	Open - Normal	Investigation
North Urban	Albany Heights	Dairy Flat Highway #2	4252	Under slip	Open - Normal	Complete
North Urban	Stillwater	Duck Creek Road	4400	Under slip	Open - Normal	Complete
North Urban	Albany Heights	Dairy Flat Highway #1	4784	Under slip	Open - Normal	Complete
North Urban	Hadfields Beach	Hibiscus Coast Hwy	6155	Under slip	Open - Normal	Design
North Urban	Redvale	East Coast Road	9916	Under slip	Open - Normal	Design
North Urban	Birkenhead	Huka Road	80	Under slip	Open - Normal	Investigation
North Urban	Stillwater	Duck Creek Rd Improvements	2630	Under slip	Open - Normal	Construction
North Urban	Whangaparaoa	Hobbs Rd	127	Under slip	Open - Normal	Complete
North Urban	Birkdale	Lanigan Street	260	Under slip	Open - Normal	Investigation
North Urban	Paremoremo	Paremoremo Road (site4)	3773	Under slip	Open - Normal	Complete
Central Urban	Hillsborough	Waikowhai Road	200	Under slip	Open - Single Lane	Complete
Central Urban	Remuera	#160 Bassett Road	1280	Under Slip	Open - Normal	Construction
Central Urban	Orakei	70 Paratai Road	1063	Under Slip	Open - Normal	Investigation
Great Barrier Island	Shoal Bay	Shoal Bay Road	2292	Under slip	Open - Single Lane	Design
Great Barrier Island	Tryphena	Cape Barrier Road	1522	Under slip	Open - Normal	Complete
Great Barrier Island	Blind Bay	Blind Bay Road	6015	Under slip	Open - Single Lane	Complete
Great Barrier Island	Awana #1	Aotea Road	8274	Under slip	Open - Normal	Construction
Great Barrier Island	Awana #2	Aotea Road	8638	Under slip	Open - Single Lane	Design
Great Barrier Island	Awana #3	Aotea Road	19498	Under slip	Open - Single Lane	Design
Great Barrier Island	Whangaparapara	Whangaparapara Road	2922	Under slip	Open - Single Lane	Complete
Waiheke Island	Cowes Bay	203-231 Orapiu Road	1995	Under slip	Open - Single Lane	Complete
Waiheke Island	Little Oneroa	40 Hekerua Road	175	Under slip	Open - Single Lane	Construction
Waiheke Island	Ostend	Wharf Road / Waitai Road	460	Under slip	Open - Normal	Complete
Rakino		South Pacific Road	0	Under slip	Open - Single Lane	Design
Rakino		Jane York Place	100	Under slip	Open - Single Lane	Design
Waiheke Island		The Esplanade Seawall (opposite 46 Moa Avenue)	170	Scouring	Open - Normal	Design
South Rural	Karaka	Linwood Rd 1	9100	Under slip	Open - Normal	Complete
South Rural	Karaka	Linwood Rd 2	8750	Under slip	Open - Normal	Complete

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
South Rural	Karaka	Laing Road Karaka	1890	Under slip	Open - Normal	Complete
South Rural	Manukau Heads	Manukau Heads Rd	6960		Closed	Design
South Rural	Clevedon	Monument Rd	6000	Under slip	Open - Single Lane	Complete
South Rural	Clevedon	Monument Rd	6400	Under slip	Open - Single Lane	Complete
South Rural	Clevedon	Otau Mountain Rd	3300	Under slip	Open - Normal	Complete
South Rural	Awhitu Rural	Awhitu Rd	23454	Over Slip	Open - Normal	Complete
South Rural	Wiauku	Kohekohe Kariotahi	3500	Under slip	Open - Normal	Design
South Rural	Pukekohe	East St (Pukekohe)	285	Over Slip	Open - Normal	Complete
South Rural	Awhitu Rural	1966 Awhitu Road	23750	Under slip	Open - Single Lane	Construction
South Rural	Mauku	Union Road	2346	Under slip	Open - Normal	Design
South Rural	Awhitu	Kemp Road	3455	Under slip	Open - Normal	Design
South Rural	Awhitu	Te Toro Road	740	Under slip	Open - Normal	Design
South Rural	Karaka	Urquhart Road	295	Under slip	Open - Normal	Investigation
South Rural	Manukau Heads	Grahams Beach Road	780	Under slip	Open - Single Lane	Construction
South Rural	Hunua	Hunua Gorge Road	2098	Under slip	Open - Normal	Design
South Rural	Patumahoe	Kingseat Road	2680	Under slip	Open - Normal	Complete
South Rural	Hunua	Skyhigh Road	2575	Under slip	Open - Normal	Complete
South Rural	Clevedon	McNicoll Road	0	Under slip	Open - Residents Only	Investigation
South Urban	Cockle Bay	Marine Parade	392	Under slip	Open - Normal	Complete
South Rural	Whakatiwai	East Coast Road		Over Slip	Open - Single Lane	Investigation
North Rural	Coatesville	Mill Flat Road Bridge	0	Bridge/structure Failure	Closed	Construction
North Rural	Warkworth	Moir Hill Rd	111	Under slip - Major	Open - Normal	Complete
North Rural	Leigh	Goat Island Rd	133	Under slip - Major	Open - Single Lane	Complete
North Rural	Warkworth	Moir Hill Rd	150	Under slip - Major	Open - Normal	Complete
North Rural	Warkworth	Moir Hill Rd	198	Under slip - Major	Open - Normal	Complete
North Rural	Kaukapakapa	West Rd (Kaukapakapa)	271	Under slip - Major	Open - Normal	Construction
North Rural	Warkworth	Moir Hill Rd	279	Under slip - Major	Open - Normal	Complete
North Rural	Dome Valley	Waiwhiu Rd	498	Under slip - Major	Open - Normal	Complete
North Rural	Kaukapakapa	Pinchgut Road	1673	Under slip - Major	Open - Normal	Design
North Rural		Wishart Road	961	Under slip - Major	Open - Normal	Design

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
North Rural	Kaukapakapa	Pinchgut Road	1015	Under slip - Major	Open - Normal	Design
North Rural	Te Arai	Red Hill Rd	1155	Under slip - Major	Open - Normal	Design
North Rural		Coatesville-Riverhead Highway	1178	Under slip - Major	Open - Normal	Complete
North Rural	Coatesville	Potter Road	1259	Under slip - Major	Open - Normal	Design
North Rural	Kaukapakapa	Pinchgut Road	1339	Under slip - Major	Open - Normal	Design
North Rural		Ashton Road	1350	Under slip - Major	Open - Normal	Complete
North Rural	Snells Beach	Mahurangi East Rd	1450	Under slip - Major	Open - Normal	Complete
North Rural	Makarau	Jordan Rd (Makarau)	1453	Under slip - Minor	Open - Normal	Complete
North Rural	Warkworth	Moir Hill Rd	1531	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	1550	Under slip - Major	Open - Single Lane	Complete
North Rural	Riverhead	Ridge Road	1672	Under slip - Major	Open - Normal	Construction
North Rural	Kaukapakapa	Pinchgut Rd	1673	Under slip - Major	Open - Normal	Design
North Rural	Dairy Flat	Pine Valley Rd	1790	Under slip - Major	Closed	Design
North Rural	Puhoi	Krippner Rd	1821	Under slip - Major	Open - Normal	Complete
North Rural	Waitoki	Kahikatea Flat Rd	1877	Under slip - Major	Open - Normal	Complete
North Rural	Wainui	Haruru Road	2000	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2074	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2214	Under slip - Major	Open - Normal	Complete
North Rural	Dome Forest	Smyth Rd	2301	Under slip - Major	Open - Single Lane	Design
North Rural	Warkworth	Moir Hill Rd	2317	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2351	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2400	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2475	Under slip - Major	Open - Single Lane	Complete
North Rural	Puhoi	Krippner Rd	2550	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd (This Is Not A Duplicate!)	2584	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Krippner Rd	2656	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Weranui Road	7312	Under slip - Major	Open - Normal	Complete
North Rural	Tahekeroa	Tahekeroa Rd	3610	Under slip - Major	Open - Normal	Complete
North Rural	Leigh	Pakiri Rd	4218	Under slip - Major	Open - Normal	Complete

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
North Rural	Puhoi	Krippner Rd (Duplicate?)	4403	Under slip - Major	Open - Normal	Investigation
North Rural	Makarau	Makarau Rd	4740	Under slip - Major	Open - Normal	Complete
North Rural	Makarau	Makarau Rd	4740			Complete
North Rural	Leigh	Leigh Rd	5577	Under slip - Major	Open - Normal	Design
North Rural	Matakana	Matakana Valley Rd(Not A Duplicate)	5875	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Matakana Valley Road	4900	Drain-Scour Damages		Construction
North Rural	Matakana	Matakana Valley Road	5900		Open - Normal	Complete
North Rural	Matakana	Matakana Valley Rd	5990	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Takatu Rd	6109	Under slip - Major	Open - Single Lane	Design
North Rural	Puhoi	Weranui Road	7312	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Weranui Road	6280	Under slip - Major	Open - Normal	Design
North Rural	Dairy Flat	Dairy Flat Highway/6634	6634	Under slip - Minor	Open - Normal	Investigation & Design
North Rural	Matakana	Matakana Valley Rd	7037	Under slip - Major	Open - Single Lane	Complete
North Rural	Matakana	Matakana Valley Rd	7330-7257	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Matakana Valley Rd (Apart of RP7037)	7091 (7037)	Over Slip - Major	Open - Single Lane	Complete
North Rural	Matakana	Matakana Valley Rd	7500	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Ahuroa Rd(Included In The July/Aug23)	7540	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Matakana Valley Rd	7730	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Ahuroa Rd/7784	7784	Under slip - Major	Open - Single Lane	Design
North Rural	Matakana	Takatu Rd	7852	Over Slip - Major	Open - Normal	Design
North Rural	Wainui	Wainui Rd (Albert Su-July/Aug23 Storm)	7960	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Takatu Rd	8300	Under slip - Major	Open - Normal	Construction
North Rural	Matakana	Takatu Rd	8350	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Takatu Rd	8281	Under slip - Major	Open - Normal	Complete
North Rural		Takatu Rd	8290	Under slip - Major	Open - Normal	Complete
North Rural	Matakana	Takatu Rd	8329	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Ahuroa Rd (Hill)-Realignment	8330	Under slip - Major	Closed	Complete



Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
North Rural	Matakana	Takatu Rd	8381	Under slip - Major	Open - Normal	Complete
North Rural	Puhoi	Ahuroa Rd (Hill)-Realignment	8200-8600	Under slip - Major	Closed	Complete
North Rural	Puhoi	Ahuroa Rd	8710	Under slip - Major	Closed	Complete
North Rural	Kaipara Flats	Tauhoa Rd	9516	Under slip - Major	Open - Single Lane	Complete
North Rural	Wainui	Haruru Road	9536	Under slip - Major	Open - Normal	Complete
North Rural	Leigh	Pakiri Rd	12395	Under slip - Minor	Open - Normal	Complete
North Rural	Leigh	Pakiri Rd	12768	Under slip - Major	Open - Normal	Complete
North Rural	Woodcocks	West Coast Rd (Woodcocks)	13570	Under slip - Major	Open - Normal	Complete
North Rural	South Head	South Head Road	23717	Under slip - Major	Open - Normal	Complete
North Rural	Woodcocks	West Coast Rd (Woodcocks)	10429 (11900)	Under slip - Major	Open - Normal	Complete
North Rural		Wainui Road	7960-8115			Complete
North Rural	Tahekeroa	Tahekeroa Rd (Kiwi Rail)	0	Over Slip - Major	Open - Normal	Complete
West (Ventia)	Titirangi	40 Otitori Bay Road	270	Under slip	Open - Normal	Complete
West (Ventia)	Waitakere	Bethells Road	3790	Under slip	Closed	Complete
West (Ventia)	Waitakere	Bethells Road	2799	Under slip	Open - Normal	Construction
West	Waitakere	Bethells Road	9315	Under slip	Open - Normal	Complete
West (Ventia)	Waitakere	Bethells Road	11036	Under slip	Open - Normal	Complete
West (Ventia)	Waitakere	Caton Road 16	91	Under slip	Open - Normal	Complete
West (Ventia)	Massey	Chamberlain Road	1675	Under slip	Open - Normal	Complete
West	Piha	Glenesk Road	61	Under slip	Open - Normal	Complete
West	Piha	Glenesk Road	178	Under slip	Open - Normal	Complete
West (Ventia)	Piha	Huia Road	12500	Under slip	Open - Single Lane	Design
West (Ventia)	Titirangi	Huia Road	4072	Under slip	Open - Single Lane - Traffic Lights	Design
West (Ventia)	Piha	Huia Road	11347	Under slip	Open - Single Lane	Design
West (Ventia)	Titirangi	Huia Road	13700	Under slip	Open - Normal	Scoping
West (Ventia)	Titirangi	Huia Road 81-85	916	Under Slip	Open - Normal	Design
West	Piha	Karekare Road	582	Under slip	Closed - Residents Only	Design
West	Piha	Karekare Road	1260	Under slip	Closed	Complete
West	Piha	Karekare Road	1143	Under slip	Closed	Complete

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
West	Piha	Karekare Road	938	Under slip	Closed	Construction
West	Piha	Karekare Road	150	Under slip	Closed	Complete
West (Ventia)	Waitakere	Kay Road	1090	Under slip	Closed	Investigation
West (Ventia)	Oratia	Kellys Rd int w/ West Coast Rd	5954	Over Slip	Open - Normal	Complete
West (Ventia)	Glen Eden or Oratia	Kellys Road	240	Under slip	Open - Single Lane	Design
West (Ventia)	Titirangi	Konini Road 157	1501	Under slip	Open - Single Lane	Design
West	Laingholm	Laingholm Drive	0	Bridge/structure Failure	Open - Normal	Investigation
West	Piha	Lone Kauri Road	2080	Under slip	Closed - Residents Only	Complete
West	Piha	Lone Kauri Road	600	Under slip	Closed - Residents Only	Complete
West	Piha	Lone Kauri Road	2500	Under slip	Closed - Residents Only	Design
West	Piha	Lone Kauri Road	5170	Under slip	Closed - Residents Only	Complete
West (Ventia)	Henderson Valley	Mountain Road	655 (No. 177)	Under slip	Closed - Residents Only	Complete
West (Ventia)	Henderson Valley	Mountain Road	712	Under slip	Closed - Residents Only	Complete
West (Ventia)	Henderson Valley	Mountain Road	899	Under slip	Closed - Residents Only	Design
West (Ventia)	Henderson Valley	Mountain Road	1318	Under slip	Closed - Residents Only	Design
West (Ventia)	Henderson Valley	Mountain Road	636	Under slip	Closed - Residents Only	Complete
West (Ventia)	Henderson Valley	Mountain Road	1387	Under slip	Closed - Residents Only	Design
West (Ventia)	Henderson Valley	Mountain Road	1468	Under slip	Closed - Residents Only	Design
West (Ventia)	Henderson Valley	Mountain Road	2775	Under slip	Closed - Residents Only	Design
West (Ventia)	Henderson Valley	Mountain Road	1664	Under slip	Closed - Residents Only	Construction
West (Ventia)	Henderson Valley	Mountain Road	1833	Under slip	Closed - Residents Only	Construction
West (Ventia)	Titirangi	Ngaio Road	25	Over Slip	Open - Normal	Investigation
West (Ventia)	Henderson Valley	Opanuku Road	1265	Under slip	Open - Normal	Investigation
West (Ventia)	Henderson Valley	Opanuku Road	1536	Under slip	Open - Normal	Investigation
West	Titirangi	Paturoa Road 15	262	Under slip	Closed	Design
West	Titirangi	Paturoa Road 17	260	Under slip	Closed	Design
West	Piha	Piha Road	12755	Under slip	Open	Design
West	Piha	Rayner Road	47	Under Slip and Over Slip	Open - Under Restrictions	Investigation
West (Ventia)	Massey	Red Hills Road	2150	Under slip	Open - Normal	Design

Area	Suburb	Road Name	Fault RP	Failure type	Road status	Stage
West (Ventia)	Waiatarua	Scenic Dr	6580	Under slip	Open - Single Lane/ Residents only	Design
West (Ventia)	Waiatarua	Scenic Dr	6735	Under slip	Open - Single Lane/ Residents only	Design
West	Swanson	Scenic Dr	12500	Road Surface	Open - Normal	Complete
West	Titirangi	Scenic Dr	900	Under slip	Closed	Construction
West	Titirangi	Scenic Dr	750	Under slip	Closed	Construction
West	Waiatarua	Scenic Dr	9500	Under slip	Open - Normal	Design
West	Waiatarua	Scenic Dr	8250	Under slip	Closed	Construction
West	Waiatarua	Scenic Dr	850	Under slip	Closed	Design
West	Waiatarua	Scenic Drive North	166	Under slip	Open - Single Lane	Construction
West	Oratia	Shaw Rd	3720	Road Surface	Open - Normal	Investigation
West	Henderson Valley	Simpson Road	1850	Bridge/structure Failure	Open - Normal	Design
West (Ventia)	Waitakere	Stoney Creek Drive	775	Over Slip	Open - Normal	Investigation
West (Ventia)	Waitakere	Stoney Creek Drive	850	Under slip	Open - Normal	Investigation
West	Titirangi	Takahe Rd	261	Under slip	Closed	Construction
West (Ventia)	Titirangi	Tanekaha Road 28	513	Under slip	Open - Single Lane	Investigation
West (Ventia)	Te Henga	Tasman View Road	65	Under slip	Open - Single Lane	Investigation
West	Waitakere	Te Henga Road	1600	Under slip	Closed	Construction
West	Titirangi	Titirangi Beach Rd	375	Under slip	Open - Normal	Complete
West	Titirangi	Titirangi Beach Rd	735	Under slip	Open - Normal	Complete
West	Titirangi	Titirangi Road	4246 (418)	Under slip	Open - Normal	Complete
West	Swanson	Vineyard Road	615	Under slip	Open - Normal	Complete
West	Waitakere	Wairere Road	3430	Under slip	Open - Single Lane	Design
West	Oratia	West Coast Road	5267	Under slip	Open - Normal	Design
West	Titirangi	Woodlands Park Road	1511	Under slip	Traffic light Priority give-away	Design
West	Massey	Yelash Road	538	Under slip	Open - Normal	Complete