

Lessons learned from one of New Zealand's most challenging civil engineering projects: rebuilding the earthquake damaged pipes, roads, bridges and retaining walls in the city of Christchurch 2011 - 2016.

Beachville Road, Redcliffs - Seawall Repair

Story: Beachville Seawall

Theme: Construction

A work notice issued by SCIRT giving an overview of the Beachville Road seawall rebuild project.

This document has been provided as an example of a tool that might be useful for other organisations undertaking complex disaster recovery or infrastructure rebuild programmes.

For more information about this document, visit www.scirtlearninglegacy.org.nz



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Overview Notice - Beachville Road, Redcliffs. Seawall repair, coastal pathway, road reconstruction and storm water repairs

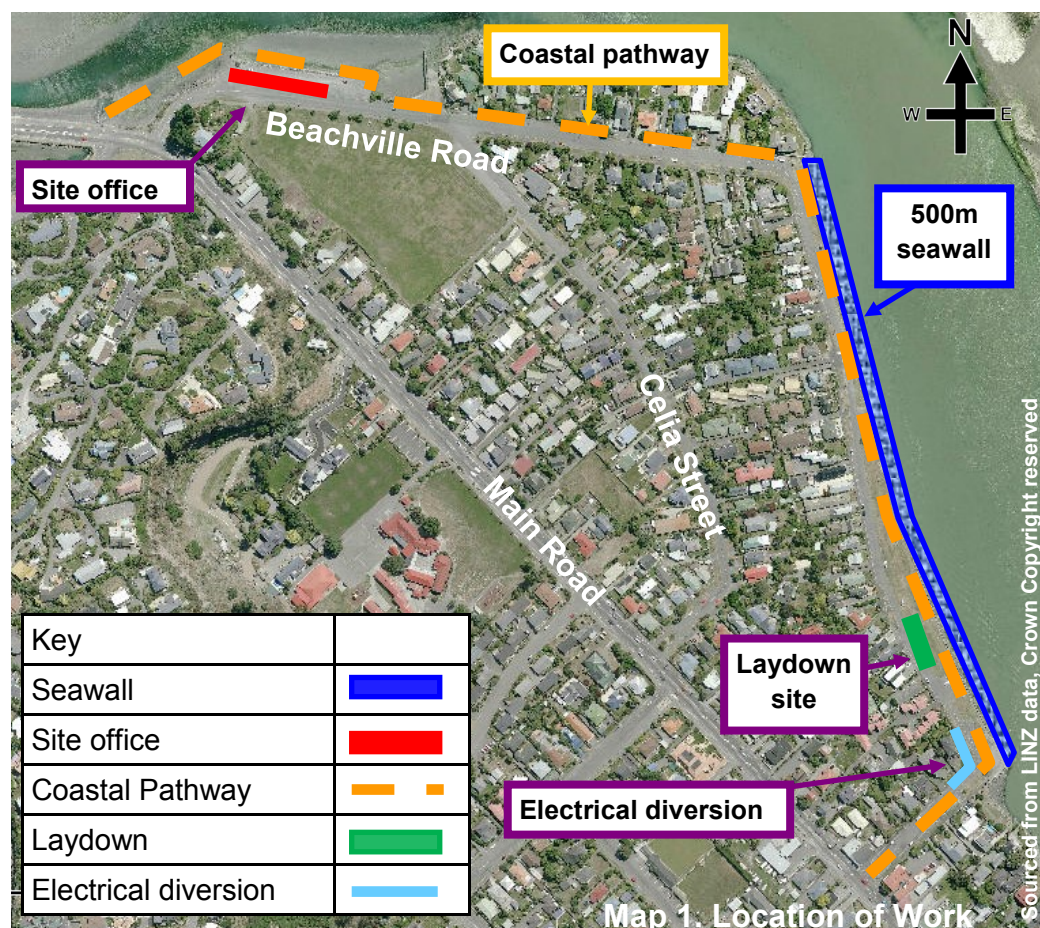
What	Construction of the seawall, coastal pathway, storm water pipes, road, kerb and channels and footpaths repairs
When	Starting 17 August 2015 for 18 months

Downer, as part of SCIRT, will be constructing a new seawall along Beachville Road starting from Monday 17 August 2015. As part of this project we will also repair the storm water, road, kerb and channel, and footpaths on sections of Beachville Road. When construction of the seawall is finished we will continue the construction of the coastal pathway. This project is programmed to take about 18 months, subject to favourable onsite and weather conditions. This work will be done in five phases, see Map 1 below for details.

Phase 1

Site establishment and service diversions. Starting from Monday 17 August we will set up the site office on the northern car park of Beachville Road, this will provide office space and welfare facilities for our crews. Our laydown area (where we will store materials) and the northern section of the seawall will also be established and fenced off to protect the public from construction works.

We need to divert an electrical cable at the southern end of Beachville Road, this will remove electrical



Phase 2

Construction of the 500m seawall that will replace the existing earthquake damaged seawall. We expect to start this phase from Monday 24 August.

Phase 3 (not shown in map) - Earthquake repairs to a water main and the storm water pipes on Beachville Road.

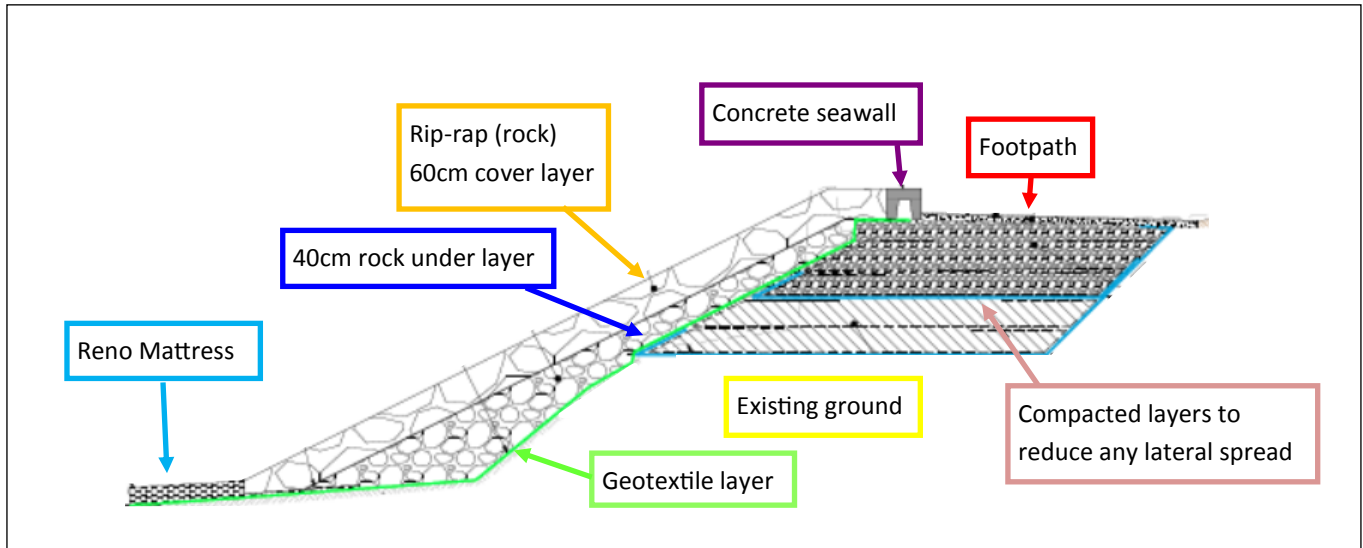
Phase 4 - Construction of the coastal pathway from the intersection of Beachville Road and Main Road. Repairs to the road, kerb and channel on Beachville Road.

Phase 5 - Landscaping around the coastal



Seawall Construction - about 12 months

The new seawall, a rip-rap (rock) revetment, will replace the damaged vertical seawall. This sloping structure (detailed below) will protect against erosion from the sea.



What we are doing

- The rip-rap revetment will extend into the estuary from the level of the existing seawall, down to the level of the seabed. This design will protect the land, road and services buried under the ground from erosion.
- We will be building the seawall in stages. Each stage will be about 25m long. During the full extent of work there will be four 25m stages being worked on at one time, a total of a 100m work area.
- Work will start at the north end of the seawall and move south. The entire length of the seawall will be fenced off to ensure public and workplace safety throughout construction.
- The rip-rap revetment cover layer will be around 60cm thick and will be placed on top of a 40cm thick under layer. This will sit on top of a geotextile layer that will keep the rocks in place.

Construction impacts

- Material will be temporarily stockpiled at the southern end of the worksite in our laydown area. The laydown is shown in Map 1.
- We will be using large machinery, this will make general construction noise. We will arrange a community site visit once the machinery is on-site. You will receive further notification about this closer to the time.
- Steel sheet piles will be vibrated into the seabed. This technique greatly reduces negative impacts such as ground shaking and noise. As standard practice we will monitor the vibrations and their effects.

If you live on, or own a property on Beachville Road please contact the Downer team using the details on the back page of this notice. Providing us with your email and phone number will enable us to keep you best informed throughout the project



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Traffic impacts - Seawall construction

	<p>Vehicle access</p> <ul style="list-style-type: none"> There will be a shoulder closure in place along the length of the seawall throughout the project. There will be a rolling road closure in place. The closure will be up to 100 metres long and will start at the north end of the wall and move in line with the construction towards the south. The crew will do what they can to minimise these closures. Where closures are unavoidable we will endeavour to give you vehicle access to your property outside of work hours (between 6pm and 7.30am). If access to your property is going to be affected you will be notified at least 48 hours before the access restriction. You will always be able to access your property safely by foot or bicycle. If you have any urgent access requirements please contact the Downer team using the details on the back page of this notice.
	<p>Pedestrian/cyclist access</p> <ul style="list-style-type: none"> It will not be safe for cyclists and pedestrians to use the reserve area in front of the seawall. This area will be fenced off. Pedestrians and cyclists will use the footpath on the west side of the road.
	<p>Water users</p> <ul style="list-style-type: none"> It will not be safe for waterway recreationalists to use the estuary near the seawall throughout the seawall repair. For your own safety, please keep well away from the seawall and surrounding water.

Storm water repair - about 3 months

- The storm water pipes along Beachville Road will be replaced. This work will start in about a year (when the seawall is finished) and take about three months to finish.
- To install the new storm water pipes we will be digging trenches.
- More information about the storm water work will be provided before the work starts.

Road, kerb and channel, and footpath repairs - about 3 months

- We will be building new road surfaces, kerb and channels and footpaths along Beachville Road.
- This will be the last stage of work and will start in about 15 months (when storm water repairs are finished). We expect this stage of work to take about three months to finish.
- More information about the roading, kerb and channel and footpath repairs will be provided before work starts.



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Coastal Pathway

- This seawall project will also include construction of the Coastal Pathway which will be next to Beachville Road.
- The existing footpath on the north side of Beachville Road will be widened to accommodate the pathway and shall include new kerbs and landscaping.
- The construction of the coastal pathway, including landscaping will occur towards the end of the project. This work will be done at the same time as the road repairs



An existing section of the Coastal Pathway

General Information:



Please contact Downer on 0800 400 310 if you have any specific access requirements that we need to consider .



Our standard work hours are Monday to Friday between the hours of 7.30am and 6.00pm. On rare occasions we may need to work outside these hours, but it is not expected.



There will be increased noise, dust and vibration levels associated with this work.



Works will have no planned impact on current power, telecommunication, water or gas services. However, the network is still fragile so please be prepared in case there is an unexpected service cut off.



All works are subject to favourable weather and on-site construction conditions.



Safety is our number one priority. Safety is your responsibility too. Stay clear and stay alert - keep children and pets at a safe distance from the work site.



Please put your rubbish and recycling out before 6:00pm the day before your collection. Our work crews will move your bins to the end of the closure for collection and return the empty bins back to your property boundary. Please make sure your house number is visible on the bins so our crews can return the bins to the correct property.

Need more information?



Call Downer on: 0800 400 310 between 8.30am and 5.00pm Monday to Friday



Email Downer at: eqinfo@downer.co.nz



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