



SEPTEMBER

# PROJECT UPDATE

## ALICE'S PROGRESS

20



16

DISTANCE TRAVELED **2,000m**  
DEPTH **12.7m**  
No. OF RINGS INSTALLED **966**  
EARTH REMOVED **328,100m<sup>3</sup>**

## Tunnels drive change for New Zealand

It's funny how things work out. Lyttelton Road tunnel was in the news last week as it celebrated 50 years as New Zealand's longest road tunnel. But literally to the day that Lyttelton marked the anniversary, the Waterview Connection tunnels actually inched passed it in length. We have now completed 2km of tunnel, just a tiny bit more than Lyttelton's 1.994km.

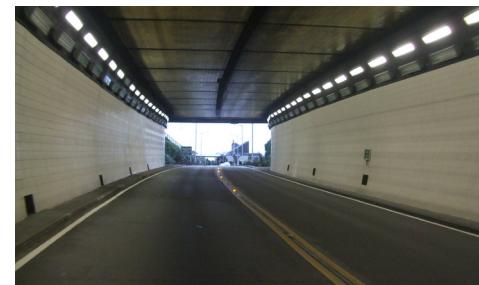
But besides having length in common, these two tunnels share something much important. They both drive progress.

When the Lyttelton tunnel opened in 1964, the community hailed it as the new gateway for the Port to the Plains. It was a significant development in the history of the Canterbury Region, as it not only linked two communities, but drove economic development for Christchurch region by providing easier and

safer access for local industries to get produce to international markets.

In much the same way, the Waterview Connection will drive change for Auckland by providing the missing link between SH16 and SH20. Completing a motorway ring route around the city, it will unlock Auckland's potential to become a truly world class city, combatting regional congestion and creating a direct, time-saving link between the International Airport and CBD.

Having reached the 2km mark, and with just 400m left to go, our team have shifted their focus to Alice's big turnaround in early October. Alice will breakthrough at Waterview in just a few weeks, and then be turned around over four months, ready to commence boring the northbound tunnel in early 2015.



*The Lyttelton Tunnel created opportunities for significant economic growth and development in the Canterbury region when it opened in 1964, and the Waterview Tunnels will have a similar effect for Auckland when they open in early 2017.*



	Lyttelton Tunnel	Waterview Tunnels
Cost	£ 2.7m (about \$130m today)	\$1.2B
Construction Method	Explosives, with a tile finish	Tunnel Boring Machine
Length	1.994km	2.4km



Dennis working over SH16, placing beams for Ramp 3.

## Dennis in action

Having placed over 30 beams so far, Dennis and his team are over a third of the way to completing Ramp three, which will take traffic travelling along SH16 from the west into the tunnel. Ramp three is the longest of the four viaducts that will make up the new Great North Road Interchange.

From September Dennis will no longer be placing beams directly over the motorway, so he will switch from night shift to day shift. Please don't slow down to look at the gantry when driving along SH16. Please take care when driving in this area.

## Dennis is a gentle giant!

- Dennis is 97.5m long - but can have another 12m added to tackle some of the longest spans on GNRI
- He weighs just under 160 tonnes

## Causeway Upgrade Project

If you would like to know more about what's happening on the neighbouring Causeway Upgrade Project, please contact Sarah Price at the Causeway Alliance on info@sh16causeway.co.nz. Sarah can email you the monthly Causeway News which is full of information about the project and the team behind it.



## Temporary Closure of Ernie Pinches Footbridge

Please note that Ernie Pinches Footbridge will be closed for three to four months from late September. The footbridge needs to be widened to allow for an additional northbound lane to be constructed on the South Western motorway (SH20) between Dominion Rd and Maioro Street. Pedestrians will be directed to a detours across May Road bridge and Maioro Bridge. The western footpath will remain open.

## Are You Interested in working on the Waterview Connection Project?

To be connected with employment opportunities within our labour hire agencies and home companies please send your CV to our newly set up email account - recruitment@wellconnected.co.nz.

As a local resident applying for roles with the Well-Connected Alliance, we will endeavour to prioritise your application provided your skills match those required. This initiative has already seen numerous local residents employed in full-time roles on the project, and many more referred to the labour hire companies we use.

## Don't wait to Call!

Remember if you experience any noise / disruption from site, please call us at the time of the incident (even if it's late at night – we're always awake!). It's much easier for us to identify the source of the problem and resolve it at the time than later. If you have any concerns, at any time of day, phone 0508 TUNNEL.

## Where can I see what's happening?

The best place to view the southern works and tunnel is the viewing point at 110 Methuen Road, New Windsor. Information boards have been installed to enable you to identify the construction activities. There are also draft plans for urban design features such as landscape planting, pedestrian and cycle bridges, and the Oakley Creek works.

For Waterview and Pt Chevalier, the best place to view the project is the footbridge at the Waterview/Great North Road interchange. For a close-up view go to the end of Herdman Street, where there are windows in the noise wall opposite Waterview School.

## Students tune in to meet Alice

We had some special visitors on site during August when Shelly and Andrew, the teachers from the LEARNZ team came to film the first of four virtual field trips about the Waterview Connection. While Shelly and Andrew filmed on site over 90 schools and 2000 students from around the country tuned in to see Alice at work and meet some of our talented team.

Over the three day field trip, students learnt about the rationale for the Waterview Connection project and how it will drive change for Auckland. They met our southern surface works team who undertook the major excavation and construction works needed



*The LEARNZ team interview Rachel Kelpie, one of the site engineers working on Alice.*

to prepare the Southern Approach Trench for Alice's arrival in October 2013, and got the rare opportunity to see inside the tunnel and watch Alice at work.

LEARNZ field trips take students right to the centre of the action – to places it would be unsafe or impractical to attend a real field trip. During a LEARNZ field trip students remain at school, but as far as technology allows, take part in a live field trip. They can ask questions of field specialists and view interactive materials including video and animations.

There will be another three field trips to the Waterview Connection over the next two years.



*Andrew and Shelly meet Alice.*

## Carrington Road Retaining Walls

Building the twin tunnels and Great North Road Interchange is just one element of constructing of the new Waterview Connection. The new motorway will see an increase in traffic along SH16 and SH20, so a large part of our role is also about ensuring the existing road network is prepared to cope with the increase in demand.

The Carrington Road retaining wall works are one such example of "enabling" infrastructure. Our team are constructing two additional lanes on SH16 to accommodate the entry and exit ramps to the new twin tunnels: Ramp one, which will take traffic from the city into the Waterview tunnels, and Ramp four, which take traffic from the tunnels towards the city. A new separate westbound offramp will also be added.

Constructing the new lanes requires two large retaining walls (RW601 and RW603) to be built along both sides of SH16. As the walls continue further along SH16 to the east, the walls are being delivered under an integrated programme with the neighbouring St Lukes project. Ongoing liaison with the St Lukes team is therefore essential.

A combination of soil nails and bored piles are being used to construct the 470m long walls. Varying between 2m and 7m in height, if the walls were stacked vertically they would be one and a half times as tall as the Skytower!

Over 2000 soil nails are used in every 10m stretch of wall – or enough for one continuous nail from Waterview to Otahuhu. The walls contain over 220 bored reinforced concrete piles, ranging in depth from 5-14m. The walls will be covered in precast facing panels with an exposed aggregate finish. Work on these facing panels will commence in early September 2014.

Constructing the largest wall – 470m - requires an existing retaining wall under Unitec to be completely demolished. The huge wall is being systematically cut into two tonne blocks ready for removal. With over 1200 tonnes of concrete contained in the walls, there's a lot of work to be done!

Works on the walls commenced in December 2013 and will continue until mid 2015. Significant new drainage network is required to be installed as part of the Carrington Road works, including a number of complex motorway crossings.



*Demolition of the existing retaining wall at Unitec to make space for the new motorway lanes and permanent retaining wall. With each block weighing around two tonne, it's a tough job!*

## Southern Ventilation Building takes shape

Work has started on the construction of the Southern Ventilation Structure (SVB), which will house the services and ventilation systems for the tunnels at the Southern (Owairaka) end. The SVB will sit above the southbound motorway lanes at the tunnel portal, against the tunnel headwall.

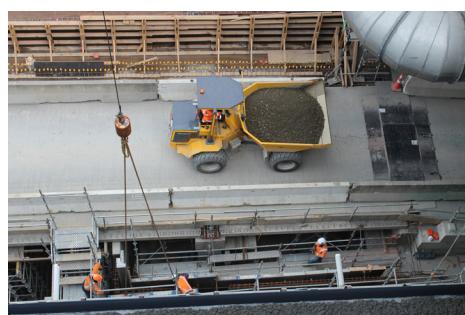
Foundation works for the structure have been underway for six months already, including creating the sump that will collect stormwater from the approach trench and tunnel before it is pumped to the Alan Wood stormwater pond, treated and discharged to the Oakley Creek.

With the foundations now largely complete,

the site has been handed over to the Fletcher Building Team who will build the architecturally designed structure.

The construction team will share the site with the tunnel team which must still have uninterrupted access via the southbound portals to the TBM. Getting the first floor of the building completed, to separate construction from tunnel traffic and services below, is therefore a priority for the construction team.

The construction team will be based at new site offices on top of the tunnel headwall, accessed via SAP 10 on Hendon Avenue.



The SVB team are sharing their space with the spoil conveyor, tunnel team and culvert placement and backfill team.

There are considerable ongoing challenges involved in the building's construction. Not least of them is how the TBM will be removed from the trench once the building is in place.

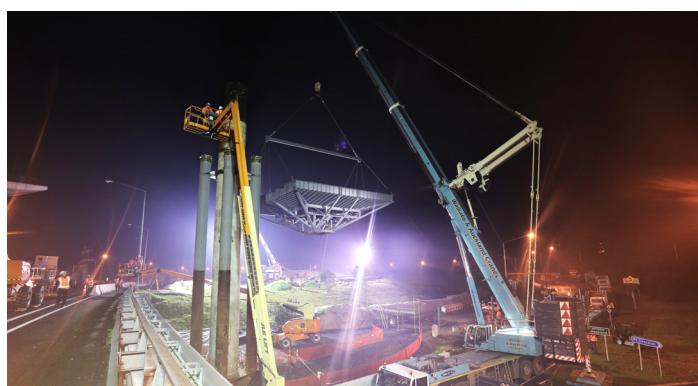
Another major challenge will be placing the 90 precast panels, each weighing up to 11 tonnes that will clad the vent shaft. They are all different shapes and sizes. None is vertical, all being either inclined or declined. And they include 'folds'.

Figuring out how to lift them into place, when the centre of gravity is different for every panel, is exercising the minds of the engineers, architects and constructors.



Artist's impression of the Southern Vent Building once complete.

## Largest pier of the Great North Interchange now complete



Our northern team marked a major milestone in August with the pouring of the largest pier of the Great North Road Interchange.



At left you can see the steel falsework (like a giant mould) being installed and here you can see the concrete being poured for the tabletop.

## Garage sale creates new compute suite for Wesley Intermediate

Pre-loved items donated by the Well-Connected Alliance team were given a second lease of life last weekend on Saturday 23rd August at the inaugural Well-Connected Garage Sale.

One man's trash really did become another man's treasure as the funds raised from the garage sale will be donated to local school Wesley Intermediate for new sporting or academic facilities.



A sausage sizzle and garage sale were just some of the things on the menu at the garage sale.

The \$3,703 raised from the Garage Sale was initially planned to go towards sourcing 25 computers for a new computer lab, however through discussions about donations, one of our suppliers, Sika, generously offered computers directly to the school. Numbers are yet to be confirmed Wesley Intermediate will receive between 20-25 computers from Sika towards upgrading their digital classrooms. The University of Auckland Faculty of Engineering, has also donated 5 computers to the school.

Because of these very generous offers the school plan to put the money raised by the garage sale to other worthwhile causes like buying new library books or more sports equipment.

A great turnout from the local community combined with the stunning weather made it a great day all round. There was a huge variety of items on sale from snowboard bindings to microwaves, as well as bake sale and garden stall, not to mention some great prizes to be won, all donated by our generous suppliers. Thanks to everyone involved for making this event such a success.



# Get Your Greens at the Waterview Garden Market: Saturday 20 September

Are lemons falling off your tree? Can't keep up with the watercress you have grown?

How about donating any extra fruit, vegetables and herbs you won't eat to the inaugural first Waterview Garden Market?

From Saturday 20 September, the garden market will be held every third Saturday of the month beside the Waterview Coffee Project at, 29 Daventry Street. The market will coincide with Claire Cooney, our Northern Stakeholder Manager's regular slot at the Waterview Coffee Project, so it's a great opportunity to find out more about what's happening on the Waterview Connection.

Keen gardeners can donate any produce they don't need, and the less green-fingered among us can enjoy freshly picked fruit and veges for just a few dollars. All proceeds go to Waterview Primary School. If you're keen to give gardening a go, you can pick up free seedlings and chat to other local gardeners.

The market is the brainchild of Waterview local Violet Ellis who is looking to share her passion for "garden to table" eating while connecting with the local community.



**WATERVIEW**  
Garden Market

## Waterview Garden Market

Third Saturday of the month @ 9am

Starting 20 September

Next to the Waterview Coffee Project



Enjoy the taste of freshly grown product at the Waterview Vege Market, starting Saturday 20 September.

## Community Survey

It's always nice to hear positive feedback. Back in July we asked our readers to tell us what they thought about how we are delivering this project. We were pretty chuffed with the results, so we thought we'd share some of the results.

Of the questions we asked:

- 81% of people either strongly agreed or agreed that they receive timely information and have opportunity to comment on work that affects them
- 86% of people either strongly agreed or agreed that the Well-Connected Alliance (WCA) wants to work with the Community.
- 78% of people either strongly agreed or agreed that they thought that Alliance would deliver an outstanding result for the project.

Some of the standout comments were:

"I have seen a willingness from WCA to listen to, engage and work with the affected community as good neighbours!"

"Definite positive change in opinion. Am impressed with the final plan and the care taken to include local community input, and respond to this."

"The timely updates keeping us informed the feeling that it all belongs to 'us', the naming of Alice and Dennis makes the changes more personal."

All those who responded to the survey went in the draw to win a spot at our TBM breakthrough celebration event. The lucky winners are:

- |                                 |                                 |
|---------------------------------|---------------------------------|
| • I.E. Tolley – Waterview       | • Helen Peterson – Pt Chevalier |
| • Graham Rusbatch – New Windsor | • Max Allen – Waterview         |

Thank-you to all those who responded to our survey. We always keen to hear what you think, so let us know any time on [info@wellconnected.co.nz](mailto:info@wellconnected.co.nz)



**Saturday, 27th September 2014**  
(event starts 10:30am. Fun Run - Walk at 11:30am)

## Heron Park, Waterview

Take part in a 2.1 or 5km Fun Run/Walk around Heron Park as an individual or team relay event with 'obstacles'

Register on the day between 10:30 - 11:15am or online: [waterviewcommunityday@hotmail.com](mailto:waterviewcommunityday@hotmail.com)

Fun Family events • Network with others over a FREE sausage sizzle • Enjoy local entertainment

## WHAT'S COMING UP ON THE WATERVIEW CONNECTION?

- Closure of Ernie Pinches Footbridge for three months from the end of September. The bridge is being extended to accommodate an additional northbound lane on SH20.
- Great North Road will be moved back to its original position at the end of September, however Oakley Avenue will retain its "kink"
- Work continues on the southern vent building, which will house all the services and ventilation systems for the Waterview tunnels at the Owairaka end
- Removal of the steel falsework from last weeks major

concrete pour on pier 10 of ramp four of the new Great North Road Interchange. Night closures will be in place from the 2nd to the 4th and 7th to the 9th September on Great North Road between the westbound on ramp and Carrington Road for stripping of this falsework.

- Combined closure of SH16 EB offramp with Causeway Upgrade project at the end of September
- Alice's big breakthrough in October

**WELL-CONNECTED**  
ALLIANCE PROUDLY  
DELIVERING

16/20 Waterview Connection



Contact us at  
[info@wellconnected.co.nz](mailto:info@wellconnected.co.nz)  
if you would like to receive  
Project Updates by email

FREPHONE 0508 TUNNEL (88 66 35)  
PROJECT WEBSITE [www.nzta.govt.nz/waterviewconnection](http://www.nzta.govt.nz/waterviewconnection)  
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