Best of Waterview Connection project in 2016

Wow, what a cracking year!

2016 has been a tremendously successful year for the Well-Connected Alliance, with a number of milestones accomplished, targets surpassed and in some cases achievements recognised. It’s been the busiest year of the project and deservedly many of our people are looking forward to celebrating the Christmas/New Year’s break with their whanau and friends.

As a neighbour to our project we wish you a safe and joyous holiday with your loved ones, whether that’s in the comfort of your home or further afield enjoying the splendour of New Zealand.

Merry Christmas and Happy New Year.

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TEN OF THE BEST IN 2016

- Alice TBM is dismantled and transported to the Ports of Auckland.
- Dennis the giant gantry completes placement of concrete beams on the Great North Road Interchange.
- Great North Road is diverted west to enable construction of the Northern Ventilation Tunnel and Ventilation Stack.
- Work on Waterview Shared Path gets underway.
- New changing rooms, carpark and volleyball court at Valonia Reserve.
- Steel cables are connected on Te Whitinga (the crossing).
- The final layer of tunnel pavement is laid to complete the road surface.
- Construction of all cross passages is completed and handed over to the M&E team.
- The Well-Connected Alliance wins three awards at the Transport Agency GEM Awards.
- Eric Armishaw Boardwalk and Waterview Reserve skatepark and BMX Track opens to the public.

To read about all milestones, achievements listed in our ‘ten of the best’ check out the NZTA Waterview Connection project website and click on Project Updates.
WCA claims safety award

The Well-Connected Alliance have been rewarded for designing an impressive safety initiative by claiming the NZ Transport Agency’s monthly ‘Zero Harm’ award for the first time.

Designing and building a concrete pipe cutting cradle from recycled materials, the cradle has been effective at reducing injuries in a high risk work area on the construction site by holding pipes securely in place while being cut.

The Transport Agency liked the cradle’s simplicity to make working conditions safe, and has been paid an additional compliment by being adapted and used on other projects.

“This is fantastic result underlining Waterview’s commitment to safety and the fact that people are developing their own great ideas to keep themselves and workmates safe ” says Health and Safety Manager Joe McArdle.

“Our teams are coming up with ideas that influence other projects right across the infrastructure industry and that’s what we want to achieve.”

The Transport Agency, like the Well-Connected Alliance, has a strong commitment to safety.

Its Zero Harm award is open to agency staff and people working on its many infrastructure projects in the Auckland and Northland area.

Bridge piers go in for Alford Bridge

In the still of the night in late November, ten large precast piers were lifted into place at Alford Street Bridge for Waterview Shared Path.

The large piers up to five metres tall and weighing as much as 26 tonnes were lifted into position using a 450 tonne crane from the temporary bridge on the western side of Te Auaunga (Oakley Creek).

Iwi artists will paint Maori designs on each pier to reflect the movement of the water in the stream running below.

Five pier sections were lifted into position on either side of Oakley Creek and built up to a final height of approximately 16 metres. Large concrete beams for the bridge’s deck will be placed on top of the piers early next year to complete its main structure.

Alford Street Bridge is approximately 90 metres long and 16 metres high and connects Unitec Campus and Great North Road in Waterview. It’s one of three bridges being built for Waterview Shared Path which connects to the Northwestern cycleway (alongside SH16) and Southwestern Shared Path (alongside SH20).

Drainage in the SVB sump

Some say, Civil Engineers in particular, that drainage is the hidden gem of an infrastructure project.

Hidden below the road surface, out of sight and out of mind, its interaction with the infrastructure above it is a crucial consideration for any world class roading project.

Designed and constructed properly it will help to ensure a long term efficiency and durability of the road as well as help to reduce cracking, potholes, flooding and erosion.

While drainage works on most parts of the project are complete, the Southern Ventilation Building (SVB) sump below the entrance of the northbound tunnel in Owairaka, has been undergoing the installation of large drainage pipes recently.

All the rainwater from the southern approach to both tunnels will end up collecting in catch pits and into the hydrocarbon sump via large glass reinforced plastic pipes. The water then flows through an under and overflow wier to trap hydrocarbons and then into the main sump.

The sump can carry a combined capacity of six million cubic litres of water (in case of a flood event) which will then be pumped by three pumps through a series of rising mains en-route to Alan Wood pond.

Work in the underground sump is close to completion with hydro testing, hatch install and commissioning still to come.

SOLJAK PLACE BRIDGE

The design of an alternative access to and from Trent Street to Soljak Place Bridge has been confirmed. A ground level path will connect commuters to Trent Street instead of a western ramp from Soljak Place Bridge. This will mean people will travel from Trent Street under Soljak Place Bridge to join with the eastern ramp of the bridge as well to continue to Harbutt Reserve.
A large crowd of people including enthusiastic skaters and BMXers celebrated the official opening of the new BMX track and skate park at Waterview Reserve late last month.

The Transport Agency's Regional Director for Auckland and Northland, Ernst Zöllner says the redevelopment is an excellent example of how big infrastructure projects like the Waterview Connection work with local communities.

“The BMX track and the skate park are world class. A feature of the Waterview Connection project is the focus on providing new sporting facilities, playgrounds as well as news paths to be used by cyclists and walkers.”

Albert-Eden Local Board member, Margi Watson was equally full of praise.

“The community has spent eight years working towards this day,” she says. “The job is done! We’ve got some fabulous facilities for people to use. Very exciting!”

The facilities include features for both novice and experienced skateboarders and BMX riders. One skater Tim Collins, who had travelled from East Auckland to try out both facilities described them as ‘sick as’ and ‘easily the best in the city.’

The BMX track and the skate park are the second and third stage of a redevelopment of the Waterview Reserve, part of the NZ Transport Agency’s Waterview Connection project.

What’s been happening at Wiri Quarry?

Tucked away near the gateway to Manukau lies a significant part of the Waterview Connection project - Wiri Quarry.

The quarry is home to over 790,000 cubic metres of spoil that has been excavated for our tunnels since Alice TBM started her journey to construct the southbound tunnel in October 2013.

Wiri Quarry Superintendent Brett Zimmerman and his team have toiled away at the quarry since the first truck pulled in to dump the grey muck. “It’s not a task for the faint hearted. It really takes a lot of patience and endurance to see this out to the end which we’re closing in on,” he says.

The end is early 2017 and Brett reckons that as we enter the summer season, he and his team will continue to meet and in some cases exceed their monthly targets. Before Christmas he expects to compact another 50,000 cubic metres of spoil and the remaining 150,000 cubic metres before the project’s end.

“We’re pretty confident that we can dry and compact it all by early next year which would be another great success for this outstanding project. Considering the amount of spoil we’re dealing with it’s not a feat that will easily replicated,” he says.

The weather will of course play a key part to attaining that success, with Brett checking the weather conditions at least four times a day to ensure that they can continue their final drive to completion.

“The fact remains though that although the top layer of the stockpile is relatively dry and hard, the rest of it retains the same consistency as the day that it came out of the tunnel – so let’s hope for good weather.”
With the tunnels road surface already complete and ready to drive on, the Well-Connected Alliance has received several enquiries about whether the tunnels will be ready to open prior to Christmas.

While we appreciate the enthusiasm of people to drive through New Zealand’s longest and largest road tunnels, before we can open arguably the most important stage of the construction process is required to be carried out – commissioning.

On the Waterview Connection project commissioning serves two main purposes – installing and testing gear which will assist traffic to operate safely in the tunnels such as lights, jet fans, cameras, video messaging signs. The other is to ensure that all the fire life safety equipment in the tunnels perform as expected particularly in the event of an emergency.

Well-Connected Alliance Commissioning Manager, Warwick Sextus, explains the comprehensive process that is involved in commissioning.

“We have approximately 4159 pieces of individual mechanical and electrical equipment in the tunnels alone that requires checks and tests, before we run it at full power to measure peak performance,” he says.

“We do a thorough examination of the equipment’s software and check that all back-up systems such as electrical, communications and battery, work correctly. This will allow us to meet our regulatory and compliance requirements to demonstrate that these world class tunnels are safe to open.”

The mechanical and electrical team have a large scope of work on the project – commissioning all electrical gear from parts of the Causeway project on State Highway 16 to the Great North Interchange and tunnels right through to Hillsborough Road on State Highway 20.

“As construction finishes the transition phase to commissioning starts – which so far has been working very well, says Warwick.

“We can tick off what works well as well as identify issues with some equipment and work to rectify them, which is exactly what this rigorous and extensive process is intended to do.”

ROAD CLOSURES AND TRAFFIC CHANGES

- Road surfacing will continue on State Highway 16 and 20 during December as the Waterview Connection project moves closer to opening in early 2017.
- On State Highway 16 closures around the Great North Road Interchange will remain in place on selected nights to continue the final surfacing works.
- The Great North Road will be put back to its original alignment in January, weather permitting.
- Two weekends (9-11 December and 16-18 December) have been scheduled for full closures of the Dominion Road Southbound off-ramp. These closures are required as to widen State Highway 20 (SH20) southbound from Maioro St to Hillsborough Road.
- To help you make smarter travel choices around Auckland register at NZ Transport agency’s onthemove.govt.nz to receive notifications about your daily travel route. ON THE MOVE is a fully customisable service that provides information to travellers prior to their journey about road and driving conditions, incidents and road works taking place across New Zealand’s state highways.