

Hamilton Section



PART OF THE WAIKATO EXPRESSWAY



Project newsletter Issue 23 | November 2021

That's a quarter of a million tests...

Everything we do on this project must be tested – because testing proves we've built everything to the required standard.

By 1 November 2021, we'd completed 264,500 tests – and testing will continue until everything is completed and the expressway opened next year. All those tests are completed by a large team of Winstone Aggregates staff who operate an independent testing laboratory adjacent to the project site office in Ruakura.

Each day a fleet of Winstone utes leaves the lab to carry out the day's testing schedule. Right now the focus is on road pavement construction and sealing.

Each delivery of rock, sand and fine material for our Hi-Lab pavement blend is tested to ensure it meets Waka Kotahi NZ Transport Agency specifications. When the cement binding the different mixtures in the pavement sets hard, core samples are drilled every 50m and the cores are checked for strength and the number of voids (unfilled gaps between the large rocks).

Tests and inspections confirm the sealing layers are applied correctly. The thickness of each layer of asphalt must be consistent and the final levels laid accurately, or the material needs to be milled



When new asphalt is laid and compacted, core samples are drilled every 50m for testing.



The new core is removed and taken to the lab for testing.

up and relaid. Each of the 13 asphalt mixes we have used on this project must be manufactured, laid and tested before it is approved for use. And once it is laid, a core sample is drilled every 50m and tested to verify it has been laid correctly.

Under the road pavement, three layers of compacted sand were tested for moisture content, compaction and bearing capacity/strength.

On our bridges, tests and inspections were carried out at every stage of construction, starting with the piles and abutments (the ends supporting the

bridge beams). Our bridges are designed to last 100 years, so we even tested the chemical composition of the sand we used to build the abutments. This ensures it won't corrode the galvanised steel straps that anchor the abutment walls. Every section of reinforcing steel is inspected before each concrete pour. Concrete is tested before it is poured and again for strength once it has set.

Everything we do is also checked against design drawings. This ensures that any changes are signed off by the relevant engineers and recorded in "as-built" construction drawings.



SH1 commuters will be diverted over the Cambridge Road Bridge.

Changes ahead for SH1 commuters

In the weeks ahead, a major traffic switch will take place on SH1 at Tamahere.

Traffic will be switched onto the eastern lanes of the expressway and will travel over the new Cambridge Road Bridge. This will allow project teams to complete surfacing, barriers and signs on the western lanes.

More traffic switches will follow as the final connections in and out of the city are completed.

Please take care and drive to the speed limit.



Project update: What's happened since our last newsletter?

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New connections through Tamahere

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Project Update: What's happening now?

Bridges and structures

- At Resolution Drive, a walking/cycling underpass has been completed near Tennille St. The extension of Resolution Drive will pass over the top.
- At Powells Road, an underpass has been constructed to take local traffic under the expressway. This is now being tied in to the existing road. Traffic is currently diverted around the underpass.



Fill is being placed either side of the Resolution Underpass.

Connections to local roads

- At the Northern Interchange, three key connections are nearing completion:
 - » A northbound off-ramp will allow traffic to turn off the Hamilton Section and onto the expressway to Horotiu and Te Rapa.
 - » An on-ramp at Lake Road will take traffic south towards Hamilton.
 - » Traffic travelling north on the Te Rapa section will be able to exit at Lake Road.
- At the Resolution Interchange, final sealing is almost complete. Construction continues on the extension of Resolution Drive to the expressway.
- At the Greenhill Interchange, final sealing is complete, along with street lights and directional signs.
- At the Ruakura Interchange, the Ruakura East connection is almost complete. Construction continues on Ruakura West.
- At the Southern Interchange, the bridge over the expressway is open to local traffic, along with shared paths for cycling and walking. Connections to and from the city will be opened in stages. Final connections to and from the Tamahere Interchange are under construction, along with shared walking/cycling paths.



Laying asphalt at Resolution Interchange.



Drainage being installed on the extension to Resolution Drive.



Barriers and finishing

- Flexible barriers (wire rope): 40km complete from a total 72km, 10km under construction
- Concrete barrier: 4km complete from a total 7km
- W-section steel barrier: 5km complete from a total 12km
- Street light poles: 350 installed from a total 500.



Sleeves driven into the road will support flexible (wire rope) barriers.



Another street light goes up in the north.

Road pavement construction and final seal



Building road pavement near Powells Road.



Asphalt being laid at night.

- Construction of our cement-stabilised road pavement is 90% complete. Construction of the two largest remaining sections – at Ruakura and Powells Road – is in progress.
- At 1 October 2021, our surfacing programme was 60% complete. Two asphalt crews have been working day and night shifts over spring, completing the final surfacing on local road connections at the Resolution Interchange, Pardoia Boulevard/Greenhill Interchange, Horsham Downs Road, the Ruakura Road/SH26 Morrinsville Road roundabout, and the Southern Interchange.
- Three crews will complete the final expressway surfacing this summer.

New connections through Tamahere

This project is improving connections at Tamahere - for driving, cycling and walking.

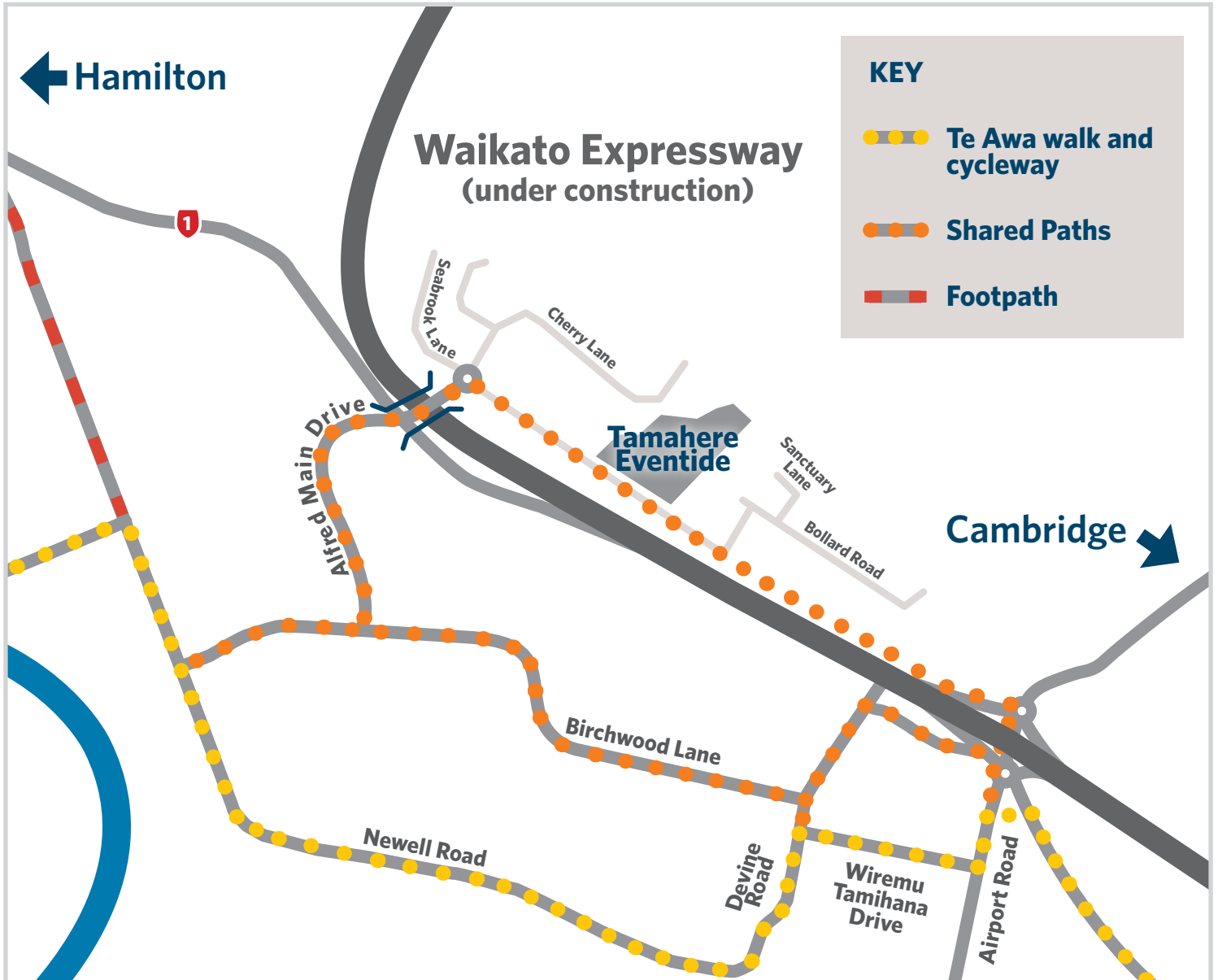
New connections to local roads are being opened early - in stages.

In October, Arthur Main Drive was opened to traffic. This new link road takes traffic, cyclists and pedestrians across SH1, linking Cherry Lane with Birchwood Lane. It also connects a network of shared paths on the eastern side of the expressway with new paths being constructed on the western side.

The graphic below shows the completed network of shared paths, with various sections funded by this project, Waikato District Council and the Te Awa walk and cycleway project.



The 3m-wide walking/cycling path on Arthur Main Drive.



Any questions?

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