

Hamilton Section



PART OF THE WAIKATO EXPRESSWAY



Project newsletter Issue 16 | February 2020

Building a great road – and a great team

Pavements supervisor Mike Graham came to the Hamilton section project two years ago with one goal – to learn how to build Hi-Lab. Hi-Lab is a stronger, longer lasting road pavement.

“I’ve been building road pavements all my working life, and I wanted to know how to build Hi-Lab. I guess it was the next challenge for me.”

The process started with a Hi-Lab trial at Ruakura. Then Mike and his managers set about developing a team with a ‘can do’ culture to overcome the technical challenges of laying Hi-Lab.

“A lot of operators in the industry were scared of Hi-Lab because it was new and they’d heard stories from other projects. Hi-Lab is more challenging than building traditional road pavement.”

With Kiwi operators in short supply, Mike hired five operators from the Philippines – mainly grader drivers. He trained them up, then set about building a larger team of 25-30 around them.

The demands of the Hi-Lab process meant the team and the way it went about its work was constantly changing. The team needed to be hard working, willing to learn, and willing to change as they learned and fine-tuned their processes.

“I have 100% faith in the team now. They really



Work begins at 6am for the Hi-Lab team.

understand the Hi-Lab material and they’ve proven they can meet or exceed our performance targets.”

Work starts at 6am. Their average daily target is finishing 3600 square metres of new subbase pavement. They tackle all four lanes of the expressway in 400m sections.

Building Hi-Lab is challenging because every step in the process must be confirmed by quality assurance tests. Quality standards are high to ensure the pavement is consistently built to the required standard. More than 100,000 quality assurance tests are still to be carried out on this project. Most of these will test pavement quality.

Once the Hi-Lab rock is spread and mixed with cement, it must be compacted and rolled, and the surface finished the same day.

“If you start stabilising at 2pm, it means you’ll still be here at 8 o’clock at night. So the team needs to schedule their work carefully, and make sure everything they need is on site when they need it – right down to the simple things like having enough water for the cement stabilisation process.”

Twelve months on, the team is now a tight-knit group of operators.

“The key to their success has been the relationships we’ve built within the team, and the relationships we’ve built with key staff at the Transport Agency. We need to build the road the way the Agency wants. There are no secrets here, and the Agency staff can speak to anyone in the team, at any time. If we have a problem, we call them and work through the issue together.”



Cement stabilising in progress near Gordonton Road.

Step by step, layer on layer

Right along the expressway route, the road pavement is being built on top of three layers of compacted sand.

The Hi-Lab team begins by grading and rolling the top layer of sand. Then the first layer of Hi-Lab is laid. This is called subbase. It is made up of 65mm rock – similar to the rock ballast used to support railway tracks – and blended with enough fine material to bind the large rocks together. It is transported in bottom dumper trucks and spread on top of the compacted sand. It is then trimmed and rolled to level. Cement is then spread on top, and a mechanical hoe adds water and mixes it together. Vibrating rollers then compact it, and the final surface is rolled and finished the same day. As the cement sets, the subbase becomes a base for the road.

The next layer is called basecourse. It is constructed in the same way with smaller 40mm rock.

The basecourse is then chip sealed and finished with a thick layer of asphalt (or hotmix).

The Hi-Lab team has so far laid 10km of subbase, covering all four lanes. By May 2020 they will have completed 12.8km of subbase plus 2.8km of basecourse.



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

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Bus tours attract 2000 visitors

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Project Update: What's happened since November?

1 Lake Road



The first layer of Hi-Lab road rock is being laid, cement stabilised and compacted at the tie-in to the Ngaruawahia section of the Waikato Expressway, immediately north of Lake Road.

2 Horsham Downs Road Bridge



The bridge was blessed and opened to traffic at an Iwi-led ceremony on 19 December, attended by local residents, the Mayors of Hamilton and the Waikato District, and local MPs.

4 Greenhill Interchange



The roundabouts at the interchange were chip sealed in January, which completes the chip sealing along Pardo Boulevard. A final layer of thick asphalt is still to be laid over the chip seal. South of Greenhill Road, a second stretch of Hi-Lab road rock is being laid and stabilised.

5 Powells Road Underpass



Rock and sand placed on top of Powells Road has been removed. Ground improvements are about to begin for the Powell's Road Underpass. This will protect the underpass structure from liquefaction in earthquakes.

3 Puketaha Bridge



The first layer of Hi-Lab road rock now extends 8km from Lake Road in the north to the Puketaha Road Bridge, and will continue north to south. The Puketaha Bridge is complete.

6 Ruakura Rail Bridge



Final barrier construction and service relocations are under way on this bridge which crosses the East Coast Main Trunk Rail Line and Ruakura Road.

7 Mangaonua Stream Bridge



The steel bridge structure is complete. 600 concrete panels have been laid on top. These are now being tied together by a series of concrete pours to form the deck. Construction of this bridge is expected to be complete in mid 2020.

8 Mangaharakeke/Mangaone Stream Bridges



These bridges are nearing completion. The decks are now complete, along with the end walls and settlement slabs. Placement of bridge barriers will commence shortly. Construction vehicles can now travel across these bridges for the first time.

9 Southern Interchange



The Cambridge Road bridge deck is under construction. Final excavation of the expressway is now advanced. A raised embankment has been constructed across the East West Gully. This will carry the new link road from Cherry Lane, across the East West Link Bridge and across the gully to Birchwood Lane. The new road layout for Bollard Road and Cambridge Road is under construction.



Bus tours attract 2000 visitors

What a difference 18 months makes.

Visitors who took free bus tours on to our project in November noted the progress we've made since they last toured the site 18 months before.

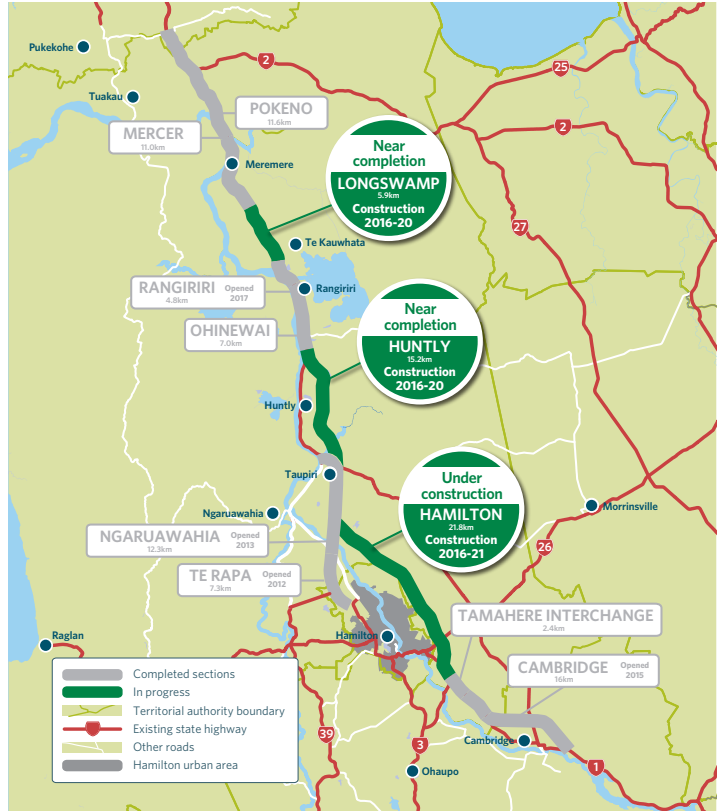
Our bus tours at the Project Open Day on 16 November attracted 2000 visitors - and most also dropped in to our Visitor Centre.

From 9am, three buses departed the project office every 10 minutes but they only just kept pace with the visitors queuing for rides outside the Visitor Centre.

The buses travelled through a major interchange, past one of our largest wetlands, past our longest bridge in the Mangaonua Gully and under the Matangi Bridge. Senior project staff provided commentary and answered questions. Most of the visitors also dropped into our Visitor Centre to view maps, models, displays and videos.



Expressway Overview



Visitor Centre Open

Our Visitor Centre at 72a Ryburn Road is open each week day from 9am to 3pm.

Drop in to see our big floor map, our model and our latest videos.



Any questions?



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