



## SH1 repair work starting in March

### Roadworks are about to start on the Waikato Expressway north of Hamilton

There has been some rutting of the road surface on both the Te Rapa and Ngaruawahia sections of the expressway and the Transport Agency is taking several approaches to resolve this.

The NZ Transport Agency has been working with contractors to find a solution. In the meantime temporary repairs are about to start to keep the road surface safe.

Remedial work will get under way on the Te Rapa section in March. This will involve a mix of speed restrictions, lane closures, stop/go and some detours where necessary.

The \$172 million Te Rapa section is 7.6km long and was constructed by an Alliance made up of Fulton Hogan, Opus Consultants and the Transport Agency.

The \$160 million Ngaruawahia section is 12.3km and was built by Fletcher Construction under a design and construct contract.

Fulton Hogan and the Transport Agency are working to implement a short-term fix in the form of a new surface coating to the Te Rapa section to provide additional waterproofing and better reliability through the next winter season. It is also hoped this will help to confirm the cause of the failure and ensure subsequent long-term fixes will be appropriate and the best value for money.

The Transport Agency is in discussions with Fletcher Construction to undertake similar resurfacing/weather-proofing works on the Ngaruawahia section around the same time.

## What went wrong?

The road surface for the Te Rapa section is supported by a thick layer of rock fill overlying the existing soils.

From investigations carried out in 2017 and 2018, the Transport Agency believes that the rock layer is consolidating under heavy traffic, creating a loss of support for the upper road layers which in turn causes rutting and cracking, allowing moisture into the road.

On the Ngaruawahia section the imported subgrade materials used to create the road foundation have performed poorly and become weaker when moisture content increases. This results in reduced support for the layers and makes the road susceptible to rutting. As rutting increases, the road surface starts breaking up, allowing more moisture to enter causing further and rapid deterioration.

In both expressway sections, surface deterioration has allowed moisture to penetrate and accelerate the damage.



## Staged approach to fixing road

We plan to fix these two sections in stages

**Stage 1:** Apply additional waterproofing to the surfacing this autumn to provide better reliability through winter and allow a more focused approach to undertaking long-term repairs where necessary. This will also help confirm the failure mechanism for the road surface and ensure any long-term fix is appropriate and best value for money.

**Stage 2:** Undertake additional and more invasive repairs at specific locations to achieve the expected long-term design life. These repairs would be significant in scale and disruption and will be planned to minimise impacts to customers.

## How will works affect road users?

We expect this autumn's works will cause minimal delays to SH1 traffic. Much of the work can be done with closing a lane and reducing speeds through the work site. Some stop-go traffic management may be required, and on the odd occasion a detour will be in place utilising the old state highway routes. These will be clearly signposted and used only when necessary, and probably at night. See detour routes in the map on this page.

People can keep up with progress and the latest traffic management on the channels listed in the information panel below.

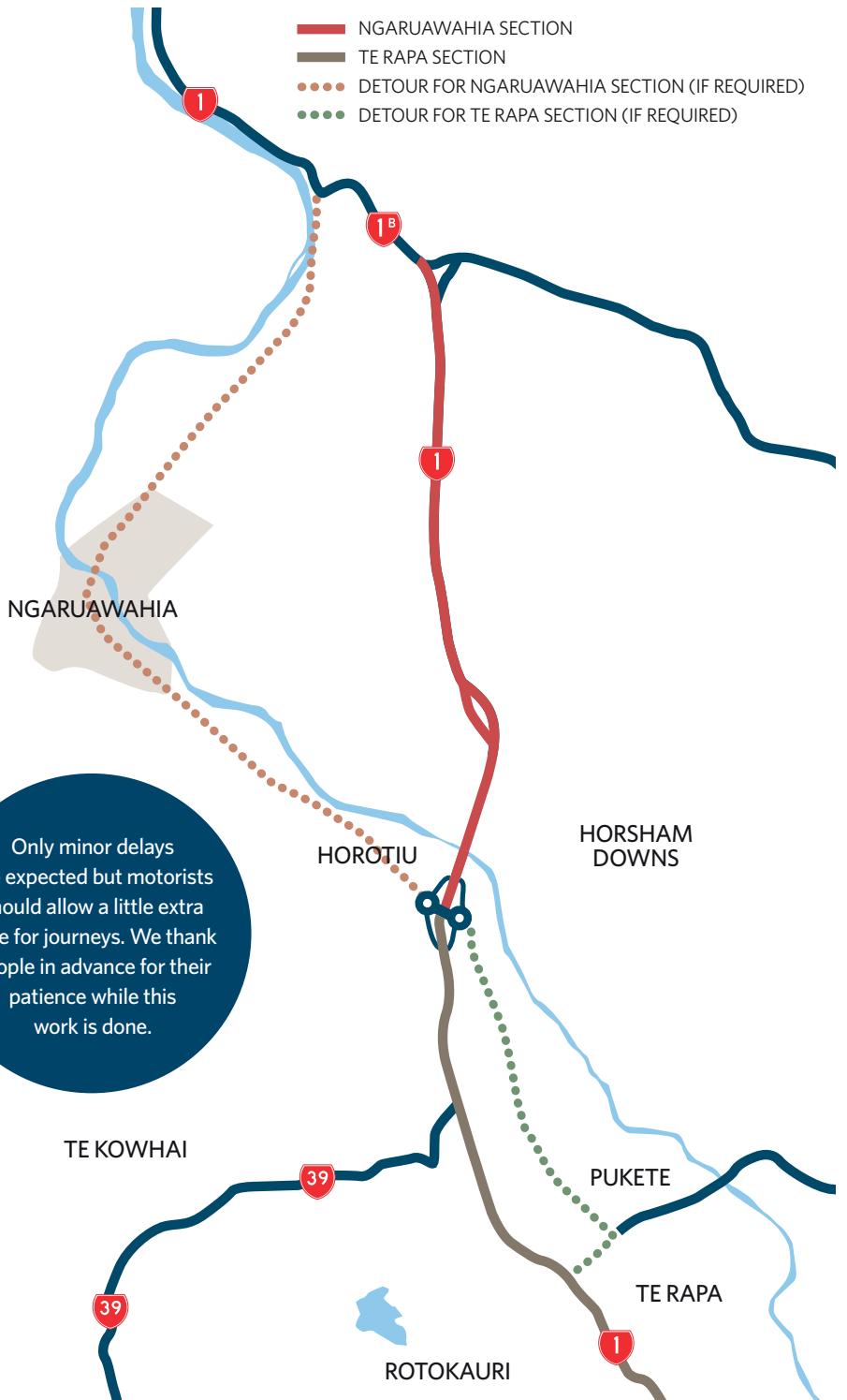
## More strength in new design

The Transport Agency has developed a new road surface design for the Waikato called Hi-Lab. This has been developed based on the quality of the aggregate supply available to build road surfaces.

Trial sections of Hi-Lab on both the Te Rapa and Ngaruawahia sections continue to perform well, while the surfaces surrounding them have the rutting problems.

The remaining three sections of the Waikato Expressway - Longswamp, Huntly and Hamilton - are being constructed using Hi-Lab and follow our supplied specification.


Only minor delays are expected but motorists should allow a little extra time for journeys. We thank people in advance for their patience while this work is done.



## Keeping you up to date

 Under Surface Works tab  
[nzta.govt.nz/waikatoexpressway](https://nzta.govt.nz/waikatoexpressway)

 [waikatoexpressway](https://www.facebook.com/waikatoexpressway)

 Real-time traffic information  
[journeys.nzta.govt.nz/traffic/regions/3](https://journeys.nzta.govt.nz/traffic/regions/3)

### Jo Wilton

NZ Transport Agency  
project manager

Phone 07 958 7956

Email [jo.wilton@nzta.govt.nz](mailto:jo.wilton@nzta.govt.nz)

### If you want to know more

**Te Rapa repairs, Fulton Hogan**

24-hours, 0800 WAI NOC (0800 924 662)