

16

# SH16 Brigham Creek to Waimauku safety improvements

## Safe pedestrian crossings

The stretch of state highway between Brigham Creek and Waimauku has a history of deaths and serious injuries and needs to be made safer. Alongside other improvements, Waka Kotahi NZ Transport Agency is proposing crossing points near the roundabouts along SH16 to enable people walking and cycling along the new shared path to safely cross the highway to access bus stops and other key destinations.

We know that it is important to maintain the flow of vehicles through this critical corridor but we also need to provide for the safety of all road users, especially vulnerable road users like pedestrians and cyclists. In selecting our design, we've carefully considered all users of this highway including buses, emergency services and heavy vehicles. The design of the crossings is appropriate for these vehicles to navigate and when combined with the roundabouts will create a safer environment for people walking and cycling.

## Signals and raised safety platforms

The pedestrian crossings will have different features appropriate to each location.

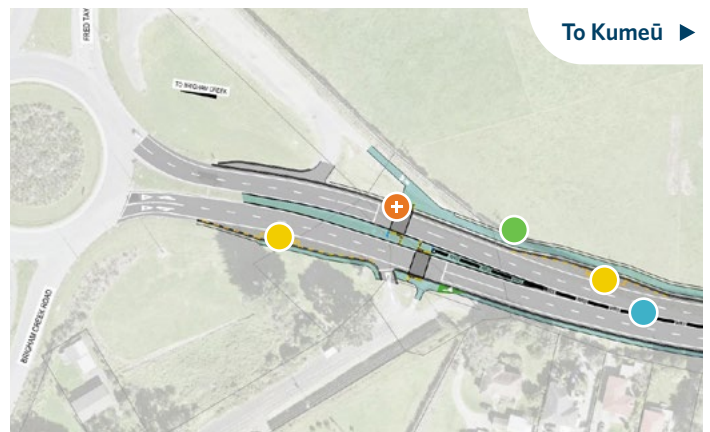
### Key

- + Signalised crossing\*
- Signalised crossing on a raised safety platform
- Unsignalised crossing on a raised safety platform
- Shared path
- Flexible median barrier
- Bus stop
- Existing bus stop
- ⤵ Right turn bay outside Soljans Estate Winery
- Flush median

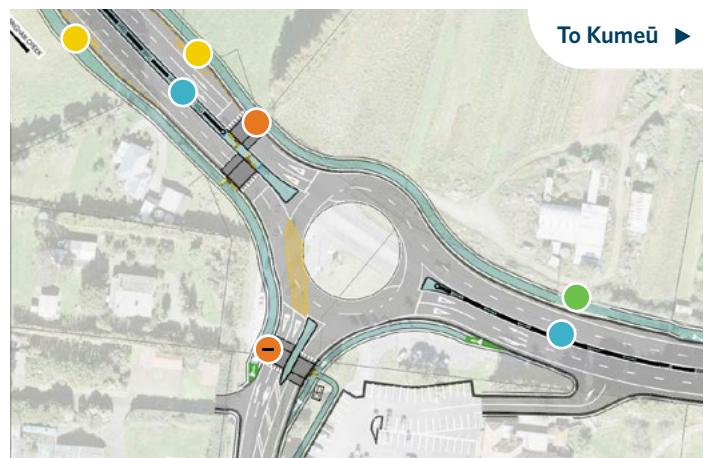
\*A raised safety platform is not proposed at Brigham Creek as this crossing is located further away from the roundabout and vehicles will be travelling at a higher speed. This will be monitored and a raised safety platform will be installed at a later stage if required.

We are proposing:

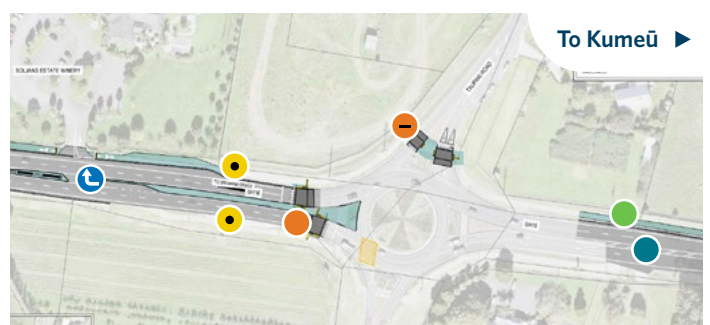
### Brigham Creek Roundabout



### New Coatesville-Riverhead Hwy Roundabout



### Taupaki Roundabout



# Raised safety platforms

## Speed management for high speed roads

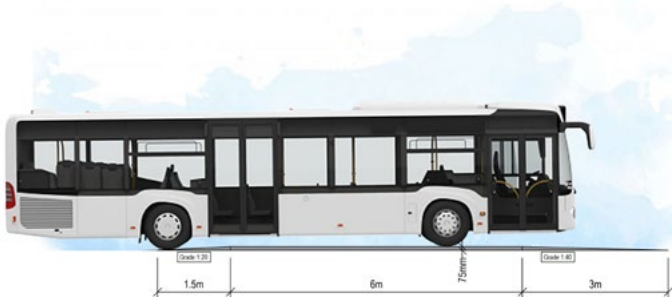
Raised safety platforms are speed management treatments being used across the network in higher speed environments (above 50km/hr) to improve safety through intersections and crossings by encouraging safer speeds. These may take different forms depending on the environment.

They're designed so that if something happens, vehicles speeds are slow enough that there is enough time for people to react to either avoid a crash or by reducing potential injuries when they happen. They can reduce deaths and serious injuries by up to 40%.

## How are they different from speed humps?

Raised safety platforms are different from speed humps or speed tables that you see in lower speed residential environments. They are specifically designed for higher speed environments as they are wider and have a gentler ramp.

The raised safety platforms on SH16 are designed to encourage speeds of 40km/hr. This is closer to Safe System levels that are more likely to be survivable for people walking and cycling while still being appropriate for a high speed road. The platforms have a gentler ramp than other speed tables seen in residential environments and also have a more gradual departure ramp to produce a smoother ride for buses. They will be 75mm high and have a six metre wide flat top which enables the wheelbase of a bus to sit flat on the top of the platform.



## Raised safety platform in a high speed environment

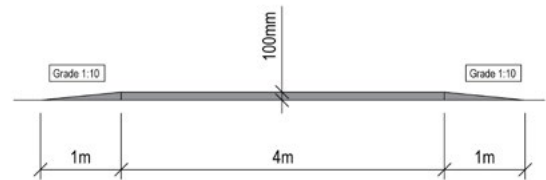
- Encourage speeds of 40km/hr
- Gentler gradients (1:20 approach and 1:40 departure)
- Longer departure ramp to allow a smoother transition from table top to the road
- 6 metre wide flat top
- Designed specifically for high speed environments



To see raised safety platform in action go to: <https://austroads.com.au/publications/traffic-management/ap-r642-20>

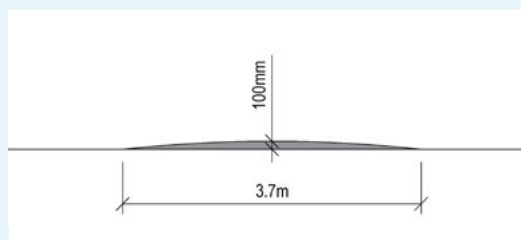
## Speed tables in a lower speed residential environment

- Encourage speeds of 25km/hr
- Steeper approach and departure ramps (1:10)
- 4 metre wide flat top
- Used in residential environments often in areas like schools where pedestrian demand is high



## Speed humps

- Encourage speeds of 25km/hr
- Shorter and more rounded Generally recommended for use on local roads



# What will they look like?

## Do raised safety platforms work?

Raised safety platforms have been successfully used on other high speed arterial and rural roads such as at the Thomas/Gordonton intersection, an 80km/hr road on the fringe of a developing urban area in Hamilton. Evaluation of the raised safety platforms at Thomas/Gordonton found them to be an effective treatment for achieving safer speeds<sup>1</sup>. After installation, most drivers travelled through the intersection well below the design speed of 50km/h.

The use of safety platforms in high speed environments was pioneered in the Netherlands and are now increasingly being used in Australia and New Zealand. Austroads research report (2020) investigated their use in high speed signalised intersections and across other rural and urban settings and found that they were effective in reducing traffic speeds to Safe System levels for vehicle collisions (50km/hr) and pedestrian survivability (30km/hr)<sup>2</sup>. There was little evidence that raised safety platforms alone materially affect intersection capacity. International research has shown raised safety platforms reduce death and serious injuries by about 40%.

## Will they slow emergency vehicle response times?

Vehicles including emergency vehicles will need to slow down to travel over the raised safety platforms however they will already be travelling at a reduced speed when approaching and through the roundabouts.

Evaluations on raised safety platforms on some of Melbourne's busiest emergency vehicle routes found that they do not significantly affect response times.<sup>3</sup> We have also engaged with emergency services on the design including the signalised crossings on raised safety platforms.

1 Mackie, H, Blewden, M, Thorne, R, & Hirsch, L. (2019). Raised safety platform evaluation: Gordonton and Thomas Road intersection. Prepared by Mackie Research for the NZ Transport Agency. Auckland, New Zealand.

2 Austroads (2020) Effectiveness and Implementation of Raised Safety Platforms. <https://austroads.com.au/publications/traffic-management/ap-r642-20>

3 Safe System Solutions. (2021) Raised Safety Platforms. <https://safesystemsolutions.com.au/wp-content/uploads/2021/06/Raised-Safety-Platforms-Brochure-Final-small.pdf>

Visualisation of the signalised crossing on raised safety platform at the new roundabout at Coatesville-Riverhead Hwy



## For more information on raised safety platforms

### Safe System Case Study – Raised Safety Platforms

[www.nzta.govt.nz/assets/Safety/docs/road-to-zero/safe-system-case-study-raised-safety-platforms.pdf](http://www.nzta.govt.nz/assets/Safety/docs/road-to-zero/safe-system-case-study-raised-safety-platforms.pdf)

### Safe system solutions brochure on raised safety platforms

<https://safesystemsolutions.com.au/wp-content/uploads/2021/06/Raised-Safety-Platforms-Brochure-Final-small.pdf>