

SNUG Regional Update 2021

WTOC

Wellington Transport Operations Centre



[New Zealand Government](#)

Good morning/afternoon ladies and gentlemen.....

My name is Steen, I am the Technical Services Manager at NZTA, based at Wellington Transport Operations Centre.

I'm here to discuss the challenges we faced with providing a safe and efficient solution for road users at SH1 and SH58 intersection shown on screen.

2020 Overview

The year that was...

- Covid-19
 - Resourcing
 - Technology/Remote access
 - New ways of working
 - Staff wellbeing
- Maintenance/Renewals
- Reviewing optimisation programme
- Projects
 - Transmission Gully
 - Revocation



New Zealand Government

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We faced a number of challenges during Covid that required a lot of flexibility and adapting to new ways of working

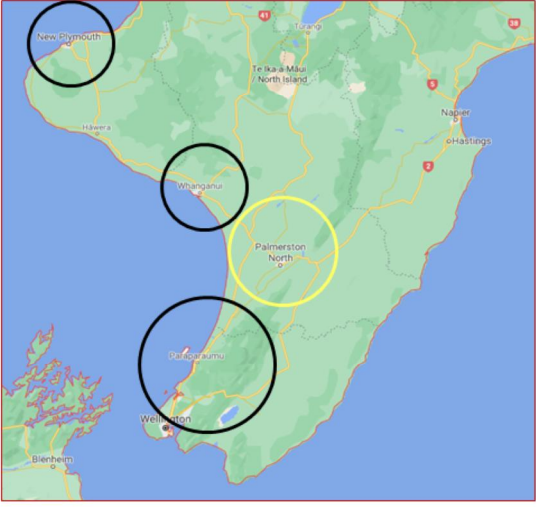
Maintenance/Renewals: Over the past year there has been emphasis on maintaining and renewing our existing assets and assisting local councils with bringing their assets up to standard. Whilst we have not seen great increase in new intersections being commissioned over the past year, we do expect new builds in the near future as a result of the Transmission Gully and Revocation Projects.


Waka Kotahi and local councils have really been focusing on maintaining their existing assets due to .

Regions & Sites

North Island Highways and Local Road Sites

- Wellington Region (58)
 - Hutt City
 - Upper Hutt City
 - Porirua City
 - Kapiti Coast
- New Plymouth (25)
- Whanganui (11)
- Palmerston North (37)




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On screen is an overview of the regions and number of traffic signal sites WTOC manage in the Lower North Island under operational MOU's with Local Councils. The black circles indicate networks we currently manage.

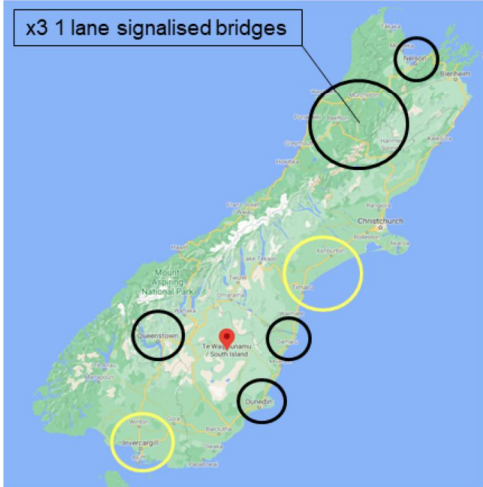
Read slide.

Palmerston North is a region we do not currently operate hence the yellow circle. WTOC recently reached out to Palmerston North City Council to discuss the services for operational support around SCATS and traffic signals. In due course it's likely WTOC will be responsible for the operation of this network on PNCC's behalf.

Regions & Sites

South Island Highways and Local Road Sites

- Nelson (20)
- Oamaru (8)
- Dunedin (83)
- Queenstown (6)
- Ashburton (5)
- Timaru (18)
- Invercargill (31)



x3 1 lane signalised bridges

NZ TRANSPORT AGENCY
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Like the previous slide, this one shows the areas circled in black in the South Island that WTOC currently provide operational support too.

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We are currently in discussions with Ashburton and Timaru District Councils to determine the level of operational support required as a result of the CTOC disestablishment. Invercargill City Council also jumped on board with the services WTOC offer and we are currently working through what this will look like.

There are also a several signalised 1 lane bridges throughout the South Island which brings me to my next point.....

One Lane Bridge Spec.



- Signal layout/arrangement
- Environmental factors
- Equipment/communications
- Security
- Catering for all users

Due to the number of signalised one lane bridges on state highways and the various installs and users, we felt that some form of guidance was needed to be put on paper to ensure consistency.

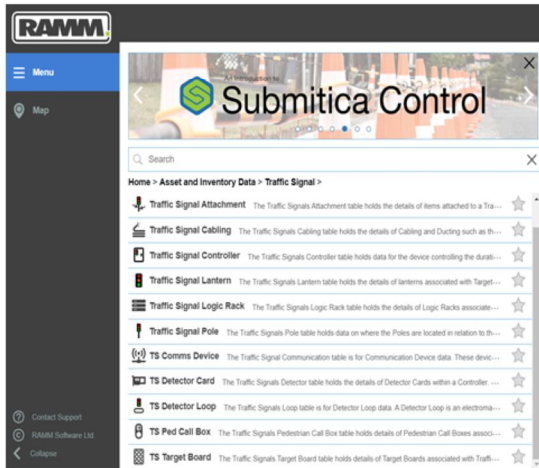
We are working with Jacobs to produce a specification for signalised 1 lane bridges that will highlight factors that need to be considered when designing traffic signals for these structures.

Some of these include.....Read slide.

We have completed the first draft which is currently being reviewed and hope to have this released within the next few months.

RAMM

Asset Management



- Waka Kotahi do not have an asset management system for traffic signals/CCTV assets.
- Looked to our peers/contractors and internal support for system suitability and decided to go with RAMM.
- Currently working through setting up the UDT's and building the intersections.



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For a long time Waka Kotahi have not had an asset management system for traffic signals and CCTV.

Recently we decided that this was something that needed to be implemented so we liaised with key stakeholders and determined that due to internal expertise, contractor familiarity and support we decided RAMM would work best for us.

We are currently working through building the Wellington Region intersections and then will move towards the rest of the state highway assets.

New Technology

Pedestrian Contactless Sensor Trial

- Designed by a local contractor in response to the Covid-19 pandemic.
- Waka Kotahi and Hutt City Council decided to trial the hardware for 3 months.
- Commissioned March 2021.
- Additional piece of hardware - sensor installed above the existing push button.



As a result of Covid-19 one of the local contractors in Wellington - HTS Group Ltd, developed a touchless sensor that works in conjunction with the pedestrian call box. Once they had developed and tested it they approached us to consider trialling it at a local site.

We discussed the idea with Hutt City Council and they were keen to jump on board.

From there we started considering requirements.....next slide

Considerations

Pedestrian Contactless Sensor Trial



- Select an intersection with high volumes of pedestrians.
- Segregated pedestrian crossings as opposed to Barnes Dance without Y- to ensure greater opportunity for pedestrian interaction.
- Sensors would be wired to ensure if they fault this could be identified by a SCATS operator, although they can be wired in parallel with existing call box.
- The units needed to be easy to use.

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We agreed that the intersection of Hutt Rd and Jackson St would be an ideal candidate for this trial and so far they have are working really well.

Hardware Specs

Pedestrian Contactless Sensor Trial



- 3D printed unit
- Blue hand signal = "Ready"
- Red hand signal = "Detection"
- Detection distance of 100mm
- Sensors have the ability to detect a range of gestures, left, right, up, down



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They can also detect more complex gestures such as circular motion if that was desired, it also detects proximity which is currently used to try and filter out false activations from highly reflective distant sources such as windows and mirror reflections.

The device can even detect colour which is currently not in use, but could allow the validation of weak activation signals such as if a person was wearing black gloves.

I also know that CSL have a touchless option that is incorporated into the callbox which is a really tidy arrangement.

Customer feedback...

- We have seen positive interaction with the use of the sensors since being installed.
- No verbal feedback from users yet as it is very early in the trial.
- Currently working on a social media release to promote awareness and encourage usage which should generate feedback from users.



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Questions

