



# Traffic signals

## About ViaStrada

ViaStrada is a transport planning and design consultancy based in Christchurch.

We provide professional services for national, regional and local authorities as well as for private clients throughout New Zealand and Australia. Our main service areas are:

- transportation policy and planning
- traffic engineering
- safety auditing and peer reviews
- planning and design for cycling and walking
- intersection design and modelling
- industry training
- network planning.

To find out more about us, and other projects we've worked on, get in touch or visit our website.



Traffic signals can improve journeys for all travellers. They help balance the flow of traffic across a complex or busy intersection; they maintain a right of way for vehicles approaching from a less dominant corridor that might have lower traffic volumes or a different speed environment; where they include a signal phase that prioritises pedestrians or cyclists, they improve safety by reducing conflict with motorised traffic.

Designing or reviewing traffic signals is a specialist discipline. As well as considering the practical and legal implications of signal phasing options, there is a need to ensure that the layout, design and operation meet the safety and efficiency needs of all people moving through the intersection.

## What we do

We work on behalf of central government agencies, road controlling authorities and developers. We take your project objectives and turn them into a workable scheme. Our skills include:

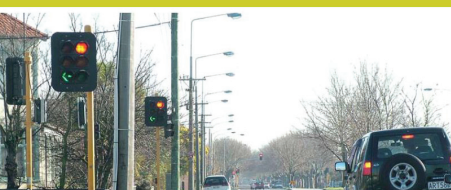
- developing schemes to a detailed design stage for traffic signals, complete with controller information sheet and software
- integrating cycleways into signalised intersections
- developing design guidance for cycle and pedestrian treatments at traffic signals, used by Waka Kotahi NZ Transport Agency
- working with regional government on official trials for directional cycle signals and, soon, Barnes Dance phases that include cyclists
- auditing signalised intersections nationwide.

# Project profiles



## Stop and goes of traffic signals

A traffic signal auditor's perspective



We have several traffic signals experts on the team and often partner with Bill Sissons from Advanced Traffic Solutions. Between us we've designed, reviewed, audited, or optimised hundreds of signalised intersections. Some examples are:

### Whanganui District Council

Scheme and detailed design of five intersections allowing redesign or retrofit of five sets of traffic signals along the Te Tuaiwi shared pathway.

### Waka Kotahi NZ Transport Agency (Dunedin)

Scheme planning for protected cycleways, including twenty signalised intersections, along State Highway 1.

### Traffic Design Group

Concept, scheme, and detailed design stage safety audits of proposed conversion of a give way-controlled T-intersection to a signalised cross intersection at Belfast Road/Main North Road.

### Christchurch City Council

Several Waka Kotahi-compliant road safety audits of proposed signalised intersections with different speed environments and traffic volumes.

### Auckland Transport/Christchurch City Council

Formal trial and evaluation of directional cycle signals at two locations in Auckland and two in Christchurch. A paper presenting the findings won 'Best Research Paper' at the 2019 Transportation Conference.

### Napier City Council

Detailed design, including signal planning to address safety and capacity issues at a signalised intersection which has seen major land use and transportation developments in recent years.

## For more information regarding traffic signals, contact Axel Wilke or Bill Sissons

Axel has designed many signalised intersections, urban arterial traffic management schemes, road safety schemes, and is called upon as an auditor. His skills have been sought for projects with a national scope.

- *Best research paper Directional cycle signals (Transportation Conference, 2019)*
- *Best technical paper Legal issues for Separated Bike Facilities (SNUG, 2014)*
- *Author of the traffic signal audit handbook "Stops and Goes of Traffic Signals"*

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Bill has been involved with traffic signals since the early 1990s. He is a technical expert whose knowledge and experience enable him to shape the development of traffic signals for New Zealand.

- *Introduced SCATS into Christchurch*
- *Oversaw the second biggest network of traffic signals in New Zealand*
- *Past secretary of the Signals NZ User Group (SNUG)*

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