

# Roundabout

Magazine of the Transportation Group NZ

Issue 160 June 2019

*Aucklanders finally  
able to walk and  
cycle across the  
harbour*

*Also in this edition:*

- Congestion pricing - Micromobility - Public transport growth
  - Robot road cones - Hyperloop - Life memberships
  - Women changing cities - Job vacancies - Venn diagrams
- And much more*

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***"We don't let people put their self-storage containers in public parks, but it's just fine to store their cars on other public land for free"***  
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***"If the paper is published as it stands, it is likely to distort public policy-making in both NZ and Australia."***  
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***"A bit like bell-bottom trousers in the 1970s and shoulderpads in the 1980s, having your own 'alignment plan' with NZTA is all the rage."***  
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Roundabout is the magazine of the Transportation Group NZ, published quarterly. It features topical articles and other relevant tidbits from the traffic engineering and transport planning world, as well as details on the latest happenings in the NZ transportation scene.

All contributions, including articles, letters to the editor, amusing traffic related images and anecdotes are welcome. Opinions expressed in Roundabout are not necessarily the opinion of the Transportation Group NZ or the editor, except the editorial of course. There is no charge for publishing vacancies for transportation professionals, as this is considered an industry-supporting initiative.

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A monthly Mini-Roundabout email update is circulated on the 15th of in-between months and contributions are due by the 12th of each month.

If somehow you have come to be reading Roundabout but aren't yet a member of the Transportation Group NZ, you are most welcome to join. Just fill in an application form, available from the Group website: [www.transportationgroup.nz](http://www.transportationgroup.nz)

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# Editorial



Its time for another what-the-editor-saw-on-his holidays editorial. This time from the lovely Rarotonga (20th wedding anniversary trip).

While most people (rightly) enjoy the relaxed and casual atmosphere of the islands, I also enjoyed the relaxed and casual approach to transport infrastructure. The roads are pretty good, well, road singular – just the main one circling the island. Compared to Vanuatu, Rarotongan roads are smooth and blemish-free.

The speed limit signs are fairly redundant. I never saw anyone trying to go anywhere fast.

I had to go past a Local Area Traffic Management device a couple of times before I realised what it was – an old rope from a large ship, draped across the road. The rope was thick enough to create a noticeable bump for passing traffic so was effective in slowing them down, and solid enough to withstand being driven over repeatedly.



Once the rope got flattened in the wheel ruts, they can just drag it over a bit and a new section is ready to be a speed limiting device. Genius. Saves digging up the road to install an asphalt speed hump.



And where a speed hump has been installed, sometimes the white markings to alert drivers were a bit... shall we say 'homemade'. To be fair, a can of white spraypaint is much cheaper than a roadmarking truck.

Even the road signs showed a local flavour. "Slow Down. Your In Heaven", seen in Aitutaki, gives the right sentiment, even if the spelling is a bit lacking.

My wife noted that the largest advertising sign on the mainland – right by the airport – seemed targeted



at what is probably a very small market of buyers: road resalers.



Who knows how many island evenings have been spent by tourists and locals alike debating whether they prefer hot mix or chip seal?

As with the last time I visited, I was impressed with the friendliness and generosity of the locals. I mean, who wouldn't be in a good mood if you lived there?

Back in NZ, the mood is more mixed. NZTA is going through some churn with a new CEO and Board chair. Local government elections are looming, so it is becoming silly season for outrageous pronouncements from potential candidates looking to gain publicity. Transport issues (or more accurately, the people who manage them) are an easy target and complaints are bound to find a sympathetic audience.

In Auckland, mayoral candidate John Tamihere is advertising to 'Sack the AT Board' and complains about Auckland Transport's policies and practices. As an AT staff member, I found it endearing when our CEO pointed out that AT is simply fulfilling the wishes of central government and Auckland Council – his misguided attacks showed a lack of understanding of the transport world. But presumably it is more important to get attention than be accurate.

I have no problem with Tamihere, or anyone else, complaining about transport policy – we should be able to debate these issues openly – but I have little time for people who just want to complain without actually understanding the issues. We all know people who are perennial complainers and amateur traffic engineers. Grumpy people.

None of them seem to live in Rarotonga, so that's another reason to visit.

**Daniel Newcombe**  
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**TRANSPORTATION  
GROUP** NEW ZEALAND



# Chair's Chat



A lot has happened since our last Roundabout, and it is hard to believe some of it actually happened. Our lovely country hit international headlines for all

the wrong reasons on 15 March, such a tragic day for so many.

The day was surreal for us down in Christchurch, we were ending towards the end of our Friday and the next thing we know we are in lock down and not sure what had really happened. As events unfolded, we experienced, like the rest of the country, a state of shock followed by grief.

The subsequent community events that have brought people together have been inspiring and we move forward with hope.

Later in March Sumner Road, linking Sumner to Lyttelton, reopened after two-and-a-half years of work to reinstate it. It has been closed to traffic since tonnes of rocks came tumbling down onto it from the surrounding cliffs during the 22 February 2011 earthquake.

The local communities either side of the hill and we who cycle the hills and bays rejoiced - our short and long bays rides are back!

In May our notorious Christchurch red light running behaviour claimed another victim. A man cycling through the Moorhouse Ave and Barbadoes Street intersection was

hit by a bus and later died in hospital.

On nearly every trip I make that involves traffic signals I witness red light running in Christchurch, and not just the right turning movement. I despair about this constant unsafe environment and hope that some red light cameras will turn up soon.

I believe the only way this practice, which has become the local driving culture, will change is if people hurt in the pocket.

The Ministry of Business, Innovation and Employment (MBIE) released a proposal in May outlining a new regulatory system for engineers. This proposal replaces CPEng with a certification of general engineering competence and licensing for safety-critical engineering work.

This system would be independently governed and accountable to the Minister. Engineering NZ (ENZ) sought feedback from members as part of drafting their submission to MBIE.

Due to the short turn around for this the TG National Committee put a submission to ENZ (see copy later on in this Roundabout) making the two points below. The draft ENZ submission has subsequently been distributed but doesn't fully reflect our first point so we will let ENZ know this.

1. Although we understand the complexity of defining certain activities safety critical the current scope does not include areas of engineering that also have the

potential to save lives. We consider that defining some engineering activities as safety critical implies other engineering activities are not. We would support a process to improve accountability of transportation engineers involved in safety-critical decisions.

2. We question whether the licensing is best undertaken by a Government Department. We should be no different than other professional bodies who are entrusted with the regulation, certifying and disciplining of their members.

***The first motorist caught speeding in the UK was travelling 8mph in a 2mph zone. He was caught by a policeman on a bicycle and fined one shilling (plus costs).***

Mega maps hit the headlines and talkback last week and started a conversation about safe and appropriate speeds.

I note that one particular media commentator has labelled Mega maps 'The Wacky Tool' which is ironic as I am sure people have often referred to this person using the same label.

On the home front, and relevant to Mega Maps, the driving lessons continue as my eldest son approaches his restricted licence test. A number of his friends have failed this test, several for going too slow in a 50km/hour speed area. Is this part of our culture of inappropriate speeds?

I will investigate this further as I find it disturbing. By the next Roundabout the outcome of the restricted test will be known, hopefully a positive outcome! Watch this space.

Over and out.

**Jeanette Ward**  
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# The Streets Were Never Free.

## Congestion Pricing Finally Makes That Plain.



Congestion pricing has the potential to significantly change how traffic flows through Manhattan streets, how commuters get around the city, how companies like Uber and Lyft operate.

But most radically, if the policy spreads it could challenge a deeply embedded cultural idea, requiring people to pay for something Americans have long demanded — and largely believe they've gotten — free of charge.

The idea of the open road evokes these intertwined meanings: The freedom to use it should be free. Residential street parking should be free. Traffic lanes should be free. Stretches of public curb dedicated to private driveways? Those should be free, too.

In other ways, the government has heavily subsidized driving, or hidden the reality of who pays for it in places no one sees. Local laws require off-street parking from businesses and housing developers, who pass on the construction cost of it to tenants and customers who may not drive at all.

Federal and state governments fund roads with gas taxes that feel far removed from a direct user fee (and that have come to operate like less and less of one in an era of fuel efficiency).

"They add up to a pretty giant system of subsidies," said Michael Manville, a professor of urban planning at the University of California, Los Angeles. "But they don't look like what we often consider subsidies."

This system looks to us, instead, like an entitlement — driving is an American right, and so the infrastructure that enables it should be free.

Congestion pricing is premised instead on the notion that public roads are a valuable and scarce resource. And we should pay in some places to use it not primarily to gin up revenue, but to help manage access for everyone.

"It's a huge departure from how we've culturally thought about this over the years," said Kari Watkins, a

professor at Georgia Tech's School of Civil and Environmental Engineering.

In reality, the government is a monopoly provider of road space, and the government has largely chosen to give it away. It's no surprise, then, that the vast majority of American commuters drive to work alone, or that all those lonely commuters (plus taxis, Ubers, buses and delivery trucks) cause congestion.

When the government holds down the price of something people value, Mr. Manville said, we get shortages. And congestion is effectively a shortage of road — one that occurs at the peak times when people want to use it most.

If we had that problem with other kinds of infrastructure or commodities, we'd charge people more for them. If airline tickets were particularly in demand, their prices would go up. If there were a run on avocados, grocers wouldn't respond by keeping them as cheap as possible.

"The roads hold such a special position in our brain that we use logic around them that we would never use around everything else," Mr. Manville said.

Other countries have socialized health care, parental leave or housing, Jeffrey Tumlin, a transportation consultant at Nelson\Nygaard, pointed out. In America, we've socialized driving — and housing for our cars.

"We don't let people put their self-storage containers in public parks, but it's just fine to store their cars on other public land for free," Mr. Tumlin wrote in an email.

Peter Norton, a historian at the University of Virginia, traces this thinking to the 1920s and '30s, when industry groups and government officials were debating whether to fund America's expanding roads with tolls, which were by then common on bridges.

Road builders were happy to have tolls, and they appeared in places like the Pennsylvania Turnpike. But auto clubs and car manufacturers dependent on car sales opposed them. They preferred a gas tax, a cost less visible to drivers every time they got in a car. Together, they were remarkably savvy about branding the choice as one between "toll roads and free roads." (A 1939 federal report even adopted that phrase as its title.)

"Of course, there's no such thing as a free road," Mr. Norton said. "But they were making the ambiguous association between their cause and the great cause of freedom."

Industry publications at the time linked the need for "free" roads to patriotism, the Bill of Rights, even the Minutemen.

Today, because most people seldom pay directly for roads — or because general funds do — it can seem as



if no one does.

“Therefore the street transportation system has no cost,” said Yonah Freemark, a doctoral student in city planning at M.I.T., who runs the blog The Transport Politic. “And therefore we can just expect to have unlimited parking, we can expect to have unlimited access to neighborhoods, for whatever reason, for free.”

Take those expectations to their logical conclusion in a major city today, and you get 10-mile-per-hour road speeds, rampant double parking, clogged intersections and worsening commute times. You get, finally, the political will for congestion pricing.

Now the culture of limitless, cheap driving may begin to shift in some places. But it will take much longer to change the physical environment that has grown up around that culture over decades, leaving many people without good alternatives to driving alone.

Where there are few other choices, like reliable bus routes, congestion pricing risks burdening poorer drivers in particular. But that is a problem we’ve thought about before, too, Mr. Manville said, if we’re now willing to treat roads as we do other infrastructure. He pointed to “lifeline” utility services: subsidized rates for electricity and gas offered to users with fewer resources.

“Fortunately, congestion pricing comes with its own built-in solution,” he said, “which is that it raises a ton of money.”

*Source: New York Times*



## Vacancy: Principal Engineer, Optimisation Delivery team

We are looking for a Principal Engineer to join an Optimisation Delivery team as a specialist on Traffic Engineering and delivering optimisation solutions. This team are bringing about exciting change and rejuvenating the process of optimisation – join their team and contribute to their vision!

### About the role:

Your engineering background and transportation experience will provide operational insights, contributing to the network optimisation strategic roadmap. A technical leadership role (no direct reports), your expertise in traffic planning and engineering will ensure your success in shaping and influencing traffic optimisation delivery. You will easily build the credibility needed to support and mentor Operation Managers in responding to large unplanned events, future events and managing traffic growth.

### What you'll bring:

- Relevant tertiary qualification with extensive traffic engineering expertise
- Broad view of transport optimisation
- Strong engineering sense with a simplified approach to solving complex technical problems
- Familiarity of the legislative environment around traffic operations
- Excellent communication; able to articulate engineering problems into business language
- Delivery focus, collaborative working style, detail/quality oriented

### The offer:

The people in this government agency make it a great place to work. You'll have flexible hours available to you, and by joining this team of traffic gurus, you'll be part of an innovative organisation focussed on making a difference to the future of our city.

Apply now through this link, with your CV and a cover letter outlining how you can add value to this optimisation team. For further information please call Jayne at Madison Recruitment 09 303 4455.

<https://www.madison.co.nz/job-search/details/92482/>



# Walking and Cycling over the Auckland Harbour Bridge

The NZ Transport Agency has released plans for its preferred option for a shared path over the Auckland Harbour Bridge which will transform walking and cycling not only across the harbour, but throughout the city.

The Transport Agency says its preferred design for the Auckland Harbour Bridge Shared Path will provide a five-metre-wide path flanking the Harbour Bridge's southbound traffic side, directly linking Westhaven to Northcote Point and connecting with the future SeaPath route.

The Transport Agency's General Manager System Design and Delivery, Brett Gliddon, says he's delighted to be able to give more detailed information and certainty about the walking and cycling path which will meet the Government's priority to create more active transport choices for Aucklanders.

"We know Aucklanders want to cross the harbour on foot and by bike as quickly as possible and the Transport Agency has been working hard to develop a design that meets the future demands of all bridge users, is affordable and preserves the structural integrity of the Auckland Harbour Bridge."

Mr Gliddon says since last year a range of options have been investigated as part of the necessary business case process. A multi criteria analysis has identified a preferred option which comprises a 5m wide path to allow for separation between people on foot and on bikes, making it safer and more enjoyable for all users.

"We're confident this will deliver the safest, most enduring solution not only for people now but also for future generations, and that it will become much more than just a transport connection."

"The Transport Agency acknowledges the tireless work and dedication of those who have campaigned for a walking and cycling connection across the bridge, in particular the SkyPath Trust. While recognising their vision and legacy the Transport Agency is also mindful of its role to ensure that we deliver the best outcomes and value for money for all New Zealanders."

"We are committed to transforming walking and cycling in Auckland and this design offers the most far reaching and enduring benefits."

The path will be attached to the bridge piers rather than the clip on, so there will be no load restrictions, meaning there will not be restrictions on the number of people able to access the path at one time, and it is designed to cater for future demands.

The path will go ahead regardless of any future plans for an additional Waitemata Harbour connection, and the path matches the shape and design of the existing bridge. It will include wide viewing galleries where people can gather to enjoy views without impeding the travel of pedestrians and cyclists.



"The route includes areas to pause and sit and it will have three generous viewing galleries. These galleries are terraced down from the pathway to create a natural seating area, distinct from the cycleway. About a hundred metres long and more than two metres wide, they provide plenty of places for people to rest and enjoy the beautiful views from the iconic bridge."

The path will also have clear day and night time modes. The daytime mode creates a strong sculptural symbol for active transport across the harbour bridge while the night mode will use architectural lighting to shine an even greater spotlight on the iconic bridge structure.

The Transport Agency is also continuing to work on SeaPath, a 4km shared path between Northcote Point and Esmonde Road, Takapuna to ensure the design coordinates with plans for the Harbour Bridge Shared Path.

Funding is already included in the National Land Transport Plan for a walking and cycling connection over the Auckland Harbour Bridge and construction of the preferred option could start as early as next year.



Keep up to date with ENZ Transportation Group happenings:

[www.transportationgroup.nz](http://www.transportationgroup.nz)

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# 2019 Transportation Group Conference Review

## “Change is in the air”



The Engineering NZ Transportation Group conference was back in Wellington this year with attendance of over 200 professionals interested in the future direction of our industry and the changes which are expected due to the increased expectations for our key stakeholders.

The conference promised to be bigger and bolder than ever with a diverse range of thought-provoking presentations and healthy discussions amongst industry professionals, political and technological leaders. I am glad that the conference committee delivered on their promise to delegates.

We were fortunate to have some exceptional key note speakers from across the globe which challenged the way we think about the transportation solutions we develop for the public. There were also some fantastic presentations from delegates which showed we are already heading in the right direction in New Zealand.

The theme for this year's conference was “The Changing Face of Transport in New Zealand”. The Government is committed to creating more liveable cities and thriving regions. To support this, our industry is working towards creating an efficient, modern and resilient transport system for New Zealand, across all transport modes.

This system aims to improve safety, decrease congestion and increase economic growth. The new approach is underpinned by two fundamental commitments by the Government: to address the widening infrastructure deficit in our regions, towns and cities, and to invest in the best projects, no matter what kind of transport modes they may be.

In a fast-changing industry, we are witnessing increased investment in regional roads, local roads, public transport, cycling and walking, as well as rapid transit and transitional rail. Stronger focus on safety is being incorporated into our road design to prevent accidents. We are also looking into how we can future-proof our transport system, so it is more resilient, efficient and environmentally sustainable. This change in direction does however require bold solutions and ideas to be developed by our industry.

Often these will be (initially) unpopular with the public and many speakers challenged our industry and politicians to be brave in our solutions and decision making.

With “change” in mind, the conference committee invited abstracts for papers, posters and oral presentations under four major categories – “Changing Processes” (procurement, design integration, materials and technology), “Changing Lives” (safety, resilience,

climate change, health, how we move and customer focus), “Changing Places” (urban design, land use, road space allocation and sharing) and “Changing Minds” (attitudes to transport, social licence for change, behaviour change).

There were nearly 80 abstracts received. The conference committee, along with other volunteers from the industry, worked diligently and produced a carefully crafted conference programme delivered in three plenary and ten concurrent sessions.

This year's conference was opened by His Worship Justin Lester, the Mayor of Wellington, at the Museum of New Zealand Te Papa Tongarewa. Justin welcomed the delegates from across the country and beyond and talked about how the transport industry could help realise the Wellingtonians' vision of creating a more liveable city and keeping its title as “the coolest little capital”.



The Minister of Housing and Urban Development and Minister of Transport, Hon Phil Twyford, also spoke during the opening session. The Minister fully supported Transportation Group's focus on creating better integration of transport and urban design to achieve better outcomes for the community.

Other keynote speakers who attended the conference opening morning included Isabel Dedring from Arup Group, Mark Ames from Sydney and Karyn Sinclair representing the New Zealand Planning Institute. All key note speakers talked about the change in our industry and the challenges we face in developing long-term sustainable solutions. Again, being brave and pushing (what initially can appear) unpopular ideas was a key theme that came through these presentations.

Over the course of the three-day conference, the group examined the changing face of the transport industry in





New Zealand and looked at ways we could respond through a programme filled with original presentations and lively debates. The three plenary sessions covered “the Big Picture”, “the Increased Focus on Safety” and “the Increased Focus on Active Modes”.

In the parallel sessions, the delegates immersed themselves in knowledge sharing in popular topics such as “Resilience”, “Mobility & Growth”, “Urban Improvement”, “Changing Processes and Technology”, “Engagement & People”, “Public Transport”, “Road Space Allocation”, “Land Use and Planning” and “Active Modes”.

It was encouraging to see how different presenters managed to deliver their presentations to tackle the key theme of the conference, “the changing face”, from different angles. At the end of each session, all presenters came up on stage and participated in an interactive Q&A with the audience. We found this format an effective way to control the session time, keep the audience engaged and generate meaningful and in-depth discussion that was relevant to the session’s topic.

The 3M Traffic Safety Innovation Award Finalist presentations were ingenious and thought-provoking as usual. The award was based on the Safe System approach which aims for a more forgiving road system that takes human fallibility and vulnerability into account and protects people from death and serious injury. The winner of the award was announced at the conference dinner held at the Banquet Hall in the Parliament Building.

This year’s winning project was ‘Virtual Reality for Safe System Design’ by Beca. A big congratulations to the team (Jack Donaghy, Gary Nates, Clement Germain, Joshua Forrest and Luan You) for creating such an innovative approach to an integral part of road safety work – Safety System design.

The team leader of this project has won a trip to the 2020 ATSSA conference in USA and a visit to the 3M head office. The runner-up for the 3M safety award was ‘Safety MAN Road Safety Truck’ by the NZ Trucking

Association Inc. The 3M Young Professional Award was won by Rebecca Tuke from Abley for her clever research titled ‘4-way stop; Whose move?’. Well done, Rebecca!

This year’s conference dinner held inside the Beehive was likely be a memorable experience (if not only because the house was sitting and the prolonged alarm we got to call members back to the house --- it did provide a good opportunity for delegates to top up their glasses). The attendees were asked to dress up as their favourite or a famous politician. What a great scene it was when Che Guevara reunited with his comrade Fidel Castro and Trump shook hand with Kim at their third summit!



Colin Brodie and Tim Hughes, two hugely respected figures in our industry, were recognised as life members of Engineering New Zealand Transportation Group at the conference dinner for their contribution to the transport industry, especially in road safety. Their hard work and dedication will continue to inspire the transportation professionals in our country to strive for excellence in road safety and eventually achieve ‘Vision Zero’.

Another big change was witnessed by the attendees at the Annual General Meeting of the Transportation Group. Jeanette Ward was elected as the new chairperson of the group at the AGM. Jeanette is the very first female chair in the history of the Transportation Group. What an achievement! We congratulate Jeanette and look forward to supporting her in growing TG into a stronger organisation.

Change is in the air, as old patterns fall away, new energies are emerging. The 2019 ENZ Transportation Group Conference stimulated debates and problem-solving amongst peers for the traffic engineering, road safety and transportation planning community in the country, during an exciting and fast-changing time in the industry.

Finally, a big thanks to all our wonderful sponsors, delegates, Harding Consultants and the organising committee this year. Without your hard work and dedication, the 2019 conference would have not happened! We are excited to pass the baton to our colleagues at the Canterbury/West Coast branch. All the best and see you in Christchurch next year!

*Thomas Small and David Huang, Conference Convenor and Secretary*

# 'Voices on Micromobility'

## - Canterbury branch panel discussion

On 21 February this year, the Canterbury West Coast branch had an event called 'Voices on Micromobility' which was a panel discussion with seven diverse panellists: Ryan Cooney as Operations Manager at Future Transport NZTA, Deirdre McGrath from Age Concern, Amy Strang as a mechatronics engineering student at UC, Lincoln Sell from Last Mile Transport / Yike Bike, Hamish Ellis from Lime as an electric scooter operator, Meg Christie from Living Streets, and Matt Whiting from Canterbury Disability Action Group.



The facilitator was John Lieswyn from ViaStrada, also on the Transportation Group branch committee. The concept of micromobility was described, then the panel was introduced. They each gave their initial perspective on how micromobility was relevant to their respective roles, and then responded to specific questions:

1. What need do you think micro-mobility fills? Who are the likely users?
2. Are the regulations appropriate?
3. What will (or should) future micro-mobility devices have as features?
4. How could it change the way we use our cities?

Here is a consolidated summary of some interesting points and the collective responses:

### SAFETY / INTER-MODAL CONFLICTS

1. Always a risk element to using public spaces, need to balance responsibility between user/operator. Enforcement is difficult, so approach to making rules has been more "please think about these things".
2. Safety perception can be associated with familiarity; disruptive technology can suffer from 'fear of unknown' and sense of invasion from rapid uptake.
3. Preference generally for users to be off footpaths and on separated facilities / shared paths / cycle lanes (smoother riding surface and less speed differential).
4. Footpaths are easily exploited road space, walking is an invisible mode but offers health benefits. Is micromobility 'a solution to a need we don't have'? Or could it help empathy between path users, and highlight footpath deficiencies and pedestrian delays.
5. Cycle lane use could be reviewed by NZTA to relax rules to allow micromobility devices on cycle lanes.
6. Most people don't consider micromobility to be an active mode as walking/cycling require more physical input. But could depend on what mode was replaced as a relative comparison, as shared micromobility users will walk somewhat to reach a device.
7. Personal micromobility benefits include: making it easier to get out to get social interaction - 'bumpability' concept, better air quality outside vehicles rather than inside, gets people outside in the environment, mental

health benefits - users always seem to be smiling!

8. Respect and courtesy with a minority of e-scooter users not respecting others on footpaths. It's not always obvious when someone can not react quickly or is blind/deaf. Courtesy is even required in the road user rules, but that is not well known. Seen as an educational rather than a regulatory problem.

9. Older generations are broadly supportive with few complaints raised, but respect and courtesy is needed.

### SOCIAL EQUITY

1. Disabled users already rely on micromobility eg powerchairs and the see benefits to micromobility and ability to participate in society
2. Should try to avoid detracting from mass transit/public transport, looking for right mixes across road corridors, due to space constraints. Micromobility will help to support public transport by last mile to access PT, including parking further out of CBDs and taking micromobility into CBD
3. Replaces walking and vehicle trips and enables other trips. Not just commuter trips and has a broad target audience.

### INFRASTRUCTURE

4. Building more roads is not viable long term (inefficiency of energy/space, unsafe, polluting), we need to do mobility differently. Micromobility seen as useful transport choice.
5. On-street parking road space could be used to alleviate road allocation pressures with increased pressure from micromobility uptake.
6. Need to address societal matters eg equity in cost (private car ownership vs ride hail vs public transport vs active modes). Poorer demographic disadvantaged through unintended social bias as requires a credit card and costs more than buses.
7. Christchurch had a very successful trial by Lime, possibly as Christchurch is considered well suited to micromobility (relatively flat and small sized city)
8. Different problems could be posed to central cities if micromobility use increases significantly

### TECHNOLOGY

9. Disruptive technology is often deployed suddenly, with some issues around regulations and confusion in rules to be expected. Familiarity of users is variable and influences safety perception.
10. Technology is abundant with solutions to improve micromobility (crash avoidance, detection, sensors, automation, ownership models, disabled users)
11. Batteries can only be charged a maximum number of times each before being thrown away, as they are not currently re-usable. A scooter lasts about 4.5 months on average in NZ. Lime are able to do some cannibalisation to reuse old parts. Unclear what the overall carbon footprint is.
12. Pricing is market driven; Lime rates in NZ are similar to US. Nothing to stop councils entering market as operators.
13. Ownership model will likely change, considering personal ownership uptake. Will need to consider how to lock personal devices.

This was a popular event and drew a wide range of our group members and we will seek a diverse range of stakeholder perspectives more in future.



# Micromobility: Safety problem or transport solution?

*Continuing the micromobility theme, below is a column from Beca's Transport & Infrastructure services team:*



While there has been a significant focus on the replacement of our passenger cars with autonomous vehicles, the explosion of micromobility on our streets has taken many by surprise.

Micromobility has been around for as long as the bicycle. But the technology and form has changed. The proliferation of e-bike and e-scooter start-ups has brought into focus the shape of transport today and in the future. We are waking up to the fact that the future of urban mobility is not just about driverless cars.

## Changing commuter habits

Over 70 per cent of the New Zealand population live in urban areas and there is an increasing shift towards urban living, typified by housing intensification such as apartments and townhouses. Many of these residents will not have the space or need to own passenger vehicles and many won't have access to parking at home or work.

The advent of e-power has changed transport options for many. E-bikes have increased the effective commuting range of cyclists and opened up this activity to people who may have hung up their cycle clips years ago. For shorter commutes, e-scooters have presented new options to those closer to our cities.

What is surprising is how quickly the uptake has been for low-powered e-transport, or is it? Unlike public transport, you can travel whenever you like and from door to door, giving people more freedom. In addition, there is a lower cost to the user plus the feel-good factor of zero-emissions and less congestion.

## But what about safety?

E-powered cycles on shared paths, e-scooters on footpaths, e-skateboards on the road, limited road rules and regulation... Surely this is a recipe for road safety catastrophe?

Our risks have shifted with the added complexity of micromobility. We're switching between the road and footpath, mixing it up with pedestrians, negotiating vehicles emerging from driveways and contending with infrastructure not designed with those scenarios in mind.

But before we throw our hands in the air, we need to

look at these risks holistically. Is it not possible to achieve a solution that's both safe and sustainable? Micromobility has huge potential urban transport benefits and may just make life better.

Safe system principles operate around survivability in a crash. The accepted survivable speed between a car and a vulnerable user (pedestrian, cyclist, scooter user, skateboarder or motorcyclist) is 30km/h. However, cars can travel at or in excess of 50km/h on most urban roads.

Micromobility transport generally operates at speeds of up to 30km/h and involves significantly less mass. This means that micromobility users operate within accepted survivability tolerances, presenting lower risk to themselves and other vulnerable users. Sure, speed on the footpath is an issue and maybe legislation will limit speeds.



Realistically, whatever this speed is, it will at times be too fast and at other times too slow. Either way, enforcement will be challenging. Maybe more 30km/h speed limits on urban roads could be the carrot to encourage more micromobility travel on roads and away from footpaths.

Consideration of safety risks posed by micromobility should be given. But these should also be reviewed in the context of the Safe System and the safety risks we live with (and accept) everyday such as thousands of cars travelling on urban roads at high speeds for vulnerable users.

Without doubt, more guidance and legislation is needed. Infrastructure design will need to change in our cities to cater to lower speed and safe micromobility. Whatever eventuates, it's an exciting time for more liveable and safer cities.

Learn more about Beca's Transport and Infrastructure services team (<https://www.beca.com/transport>) and our role in the design and successful integration of multi-modal transport options.



# TfL to pilot green man authority signals

Transport for London is to pilot green man authority signals on ten pedestrian crossings in the capital. The signal strategy already operates on two bus-only streets, in Hounslow and Morden. The signals show a green signal for pedestrians continuously until a bus is detected, at which time people walking are stopped on a red signal, and vehicles are given a green light to proceed.

TfL now plans to pilot the approach at a further ten crossings. The signal controller will be set with minimum and maximum times for vehicle green periods, and a minimum time for people walking, so the lights will serve each demand appropriately. In times when traffic flows are busier, the benefits of green man authority may not be as evident, because whilst trying to strike a better balance, TfL do not want to create excessive congestion on the roads.

Some of the locations, for example Queen Victoria Street by Distaff Lane, have higher flows of vehicles during the week, so the benefits to pedestrians may

not be as great, but at the weekends, when vehicles are low and pedestrian numbers are much higher, this technology means the balance of priority can be shifted to improve the walking experience.

The crossings will still feature push button units for pedestrians and "will look and feel like every other crossing", said the spokesman.



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## Public transport design guidelines explored

In February, the Transport Agency hosted a meeting to kick-off the collaborative development of Public Transport Design Guidelines for New Zealand.

The reference group, largely comprising of regional and local councils, showed strong aligned support for the project which will help them to deliver high-quality, customer-centric public transport by providing a 'one-

stop-shop' of best-practice guidance, specifically suited to New Zealand's regulatory and operating environment.

If you would like further information please contact Lorelei Schmitt, Senior Multi-Modal Specialist at the Transport Agency: [lolelei.schmitt@nzta.govt.nz](mailto:lolelei.schmitt@nzta.govt.nz)

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## Road safety: UK set to adopt vehicle speed limiters

Speed limiting technology looks set to become mandatory for all vehicles sold in Europe from 2022, after new rules were provisionally agreed by the EU.

The Department for Transport said the system would also apply in the UK, despite Brexit.

Campaigners welcomed the move, saying it would save thousands of lives. Road safety charity Brake called it a "landmark day", but the AA said "a little speed" helped with overtaking or joining motorways.

Safety measures approved by the European Commission included intelligent speed assistance (ISA), advanced emergency braking and lane-keeping technology. The EU says the plan could help avoid 140,000 serious injuries by 2038 and aims ultimately to cut road deaths to zero by 2050.

EU Commissioner Elzbieta Bienkowska said: "Every year, 25,000 people lose their lives on our roads. The vast majority of these accidents are caused by human error.

"With the new advanced safety features that will become mandatory, we can have the same kind of impact as when safety belts were first introduced."

Under the ISA system, cars receive information via GPS

and a digital map, telling the vehicle what the speed limit is. This can be combined with a video camera capable of recognising road signs.

The system can be overridden temporarily. If a car is overtaking a lorry on a motorway and enters a lower speed-limit area, the driver can push down hard on the accelerator to complete the manoeuvre.

A full on/off switch for the system is also envisaged, but this would lapse every time the vehicle is restarted.

It's already coming into use. Ford, Mercedes-Benz, Peugeot-Citroen, Renault and Volvo already have models available with some of the ISA technology fitted.

However, there is concern over whether current technology is sufficiently advanced for the system to work effectively. In particular, many cars already have a forward-facing camera, but there is a question mark over whether the sign-recognition technology is up to scratch.

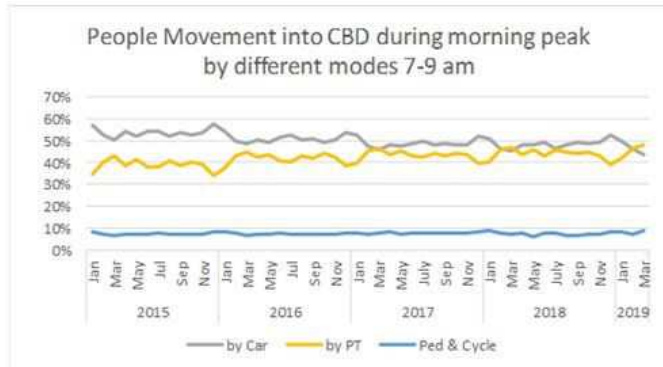
Other approved safety features for European cars, vans, trucks and buses include technology which provides a warning of driver drowsiness and distraction, such as when using a smartphone while driving, and a data recorder in case of an accident.



# Public transport into Auckland CBD reaches new high

A record number of Aucklanders are leaving their cars at home in favour of public transport to get into the city centre each morning.

Auckland Transport's Group Manager Metro Services, Stacey Van Der Putten says 48 per cent of people used buses, trains and ferries to get into the city between 7am and 9am in March.



"This is a new high, up two per cent on February and a six per cent increase on January."

767 fewer vehicles drove into the city in the morning, despite 4,000 more people making the trip.

"It's great that Aucklanders are getting the message that there are options other than driving. In fact total public transport patronage for March was just over ten million trips, another record."

Last year new bus networks were rolled out in the central suburbs and on the North Shore, more than 500,000 Aucklanders now live within 500 metres of a frequent service, which runs at least every 15 minutes, all day every day.

Each weekday morning 620 buses bring Aucklanders into the city many of them using dedicated bus or transit lanes.

Stacey Van Der Putten says, "More bus lanes, electric trains, double decker buses and improved facilities mean more people prefer public transport as a quick and comfortable option."

Auckland Transport actively monitors the transport network within the city centre with the goal of making sure that the movement of people can be as efficient as possible.

To manage the growing demands on the city centre network priority is given to public transport, walking and biking.

People walking or biking into the city also took advantage of the fine weather with the percentage rising from seven to nine per cent. There were 25,000 bike trips on the Nelson Street cycleway and 43,000 trips on Quay Street in March.



ICTH 2019-Melbourne aims to provide valuable insights into the health impacts of technological disruptions in transport and urban planning, governance, strategic and policy decision-making, performance tools and the potential return on investment of a dynamic system.

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## Should we be adding to, or leading the transport conversation?

As transport practitioners, we work to ensure the best transport outcomes for our project, neighbourhood, city or even the entire country. However, optimal solutions are cast differently when viewed through a technical, political or managerial lens.

So while we often agree with the desired end goal, we can end up debating the best methods to achieve those outcomes. This distinction between outcomes and methods recently presented a problem for the Canterbury & West Coast Branch when attempting to make a submission.

In March, public submissions were sought on a proposed plan that was part of a very large (and widely publicised) project in Christchurch – [The Christchurch Northern Corridor](#). The Committee were keen to make a submission to be involved in the discussion around this large project but to also reflect the desire of the wider Canterbury & West Coast Branch to be more involved in being an industry voice for transport issues.

The Northern Corridor was planned and announced as part of the previous government's [Roads of National Significance](#) programme and is essentially an extension of the existing Motorway from the Waimakariri District into the inner suburbs of Christchurch.

The downstream traffic effects on the local community have been an issue that has been [discussed for years](#) but the impending inevitability of the motorway opening has again raised anxieties to the point where a [protest was staged at the Councils civic offices](#).

In 2018, the Transportation Group surveyed members asking them what they wanted to see the national and regional committees putting more effort into. The top four results were:

1. Promoting / sharing transportation best practice
2. Being an industry voice for transport issues
3. Developing / contributing towards industry guidelines
4. Submitting on national / local government policies and plans

This provided a challenge for the committee because as we know from our members, there is a desire for the Transportation Group to be more involved in submissions and promoting best practice. But as a body which draws membership from the full spectrum of people who provide services in the transport industry, there were scores of local members either directly or indirectly involved in a project as large, complex and controversial as this.

As a committee we felt this was an important opportunity to contribute to the debates taking place locally and take a lead in raising any issues for consideration. The committee carefully considered all conflicts of interest with more than two-thirds of the committee either directly involved or belonging to organisations involved in the work, so those members stepped aside from the submissions process.

There was consensus from the remainder of members that the submission be pitched at a high level reflecting current national government policy and strategic priorities around safety, transport choice and resilience, and the role of transport infrastructure in urban place making and liveable cities.

A lot of thought went into the initial submission, with additional time being required from authors to respond to all the feedback received and incorporate revisions. The greatest challenge was to balance the technical nature of what was being asked for comment given the interrelated nature of adjacent work streams.

Much of this work was not visible to submitters or the public, so the intent was to influence a shift in the current thinking on the scope towards a more more neutral approach and a greater focus on the integration of land use and transport.

Scope is a common issue with a lot of transport submissions generally. Often there are very large strategic outcomes at play, which can be lost in the detail of something like a kerb or intersection arrangement. As technical experts, we are in a unique



position in understanding the line of sight between the strategic outcomes and best practice implementation. But given the 'rules of engagement' when it comes to consultation, there is a fine line between providing added value through insight and staying within the scope of the submission.

In the end it was always going to be a very difficult topic to submit on. The scale of and nature of the project meant there were a high proportion of members that were involved in the project that wanted the group to make a submission but weren't able to incorporate all the feedback into a unified set of recommendations.

Coupled with short timeframes, this meant there was pressure to come up with a submission that was high-level enough to find consensus among the broader membership but also able to address the controversial points of the proposed plan. In the end it was decided not to proceed with a submission which was disappointing, but useful in that we are able to take away a couple of lessons learned:

- In future it's important to keep an eye on the consultation horizon so there is adequate time to plan and prepare a submission.
- Take the time to understand the issues and recognise where we can leverage the submission process to speak as an industry voice.
- As a group, separate to a Committee meeting, identify the key points and priorities that should be included in the submission. Debate the level of detail the submission should cover, for example if there is agreement or not with high level principles and strategy, then determine the level of input on the details.
- If there are a large number of Committee Members that are conflicted, put a call out to members to form part of the submission panel/committee so that a wide range of views are also considered at the outset to discuss the points above.

In hindsight, these steps would have saved the few remaining submissions coordinators not belonging to a firm directly involved in the project from a lot of pressure. Critics are constantly looking to draw unscrupulous conclusions between firms and government authorities so adopting these processes in future can help us navigate these perceptions and avoid accusations of any bias.



Given more than 90% of TG members work for consulting firms or central/local government, we may need to consider drawing on academic or retired members to coordinate submissions for large or controversial projects. However academics and retired/life members account for only 4% of the Transportation Group so we may need to engage more deeply with this cohort.

This probably isn't going to be the last time that a large controversial transportation initiative will warrant a Transportation Group submission. Transportation issues will remain a hot button issue, and consequently mainstream and social media will continue to ignite a polarising tone of discourse.

However, this doesn't mean the Transportation Group should shy away from providing a collective and professional opinion on transport issues. By being better prepared, the body can provide effective guidance and continue to be a leading voice on transportation issues throughout the country.



*Check out this Welsh railway station name. We're not sure if it is harder to say it or fit it into the design of a network map.*

# Transportation Engineering Postgraduate Courses 2019



The University of Auckland  
NEW ZEALAND



Department of Civil & Environmental Engineering University of Auckland  
For Master of Engineering Studies [MEngSt] and Post Graduate Certificate [PGCert], with  
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<b>CIVIL759 – Highway &amp; Transportation Design</b> (Monday & Tuesday, three hours / week, 12 weeks)	Economic and environmental assessments of transport projects. Road safety engineering. Crash reduction and prevention methods. Pavement asset management. Pavement rehabilitation techniques. Heavy-duty pavements, highway drainage and chip seal design.
<b>CIVIL762 – Transportation Planning</b> (7-9 August, 2-4 October)	Provides an in-depth exploration of various components of the urban transportation planning process, with emphasis on theories on modelling. Conventional four-stage transport planning model principles, trip generation, distribution, modal split and assignment, are covered.
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## 2020 courses now announced! See our course descriptions later on in Roundabout

NOTE: Other relevant courses at the University of Canterbury (e.g. Civil / Transportation) or at Auckland (e.g. in Civil / Construction Management) or elsewhere can be suitable for credit – prior approval is required.

For Admission / Enrolment inquiries contact: Bevan Clement  
Email: [b.clement@auckland.ac.nz](mailto:b.clement@auckland.ac.nz)

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Further details, including the course outlines, can be found at:  
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Our Transportation Research Centre [www.trc.net.nz](http://www.trc.net.nz)

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## Side thrust gauges (ball bank devices)

Ball bank devices (also known as “side-thrust gauges”) are useful for determining the safe speed for horizontal curves. Professional digital devices can run a thousand dollars, so a few years ago ViaStrada looked after the sale of low-cost and reliable analogue devices that the Transportation Group sourced.  
<https://viastrada.nz/news/2008/side-thrust-gauges>

While there are apps now available that make use of the gyro sensors in modern smartphones, the old-fashioned device is still preferred by many engineers for simplicity. We are now out of stock and have received one request from a council interested in one. Is there anyone out there with a spare? Contact [john@viastrada.nz](mailto:john@viastrada.nz) if you have one that you aren't using, or to register your interest for a possible new run.



# Amsterdam to ban fossil fuel vehicles

Cars and motorbikes running on petrol or diesel will be banned from driving in Amsterdam from 2030. The city's council plans to phase in the change as part of a drive to clean up air pollution, which the authorities blame for shortening the life expectancy of Amsterdammers by a year.

"Pollution often is a silent killer and is one of the greatest health hazards in Amsterdam," said the councillor responsible for the city's traffic, Sharon Dijksma, announcing the municipality's decision.

From next year, diesel cars that are 15 years or older will be banned from going within the A10 ring road around the Dutch capital. Public buses and coaches that emit exhaust fumes will no longer enter the city centre from 2022. By 2025, the ban will be extended to pleasure crafts on its waters, mopeds and light mopeds.

All traffic within the built-up area must be emission-free by 2030 under the Clean Air Action plan. The city plans to encourage its residents to switch to electric and hydrogen cars by offering charging stations to every buyer of such a vehicle. It is hoped that the second-hand electric car market will blossom in the coming years.

There will need to be 16,000 to 23,000 charging stations by 2025 to make the project viable – up from the current 3,000 in the city.

In large part due to heavy traffic in the cities of Amsterdam, Maastricht and Rotterdam, air pollution in

the Netherlands is worse than European rules permit. There are concerns that the levels of nitrogen dioxide and particle matter emissions are causing respiratory illnesses.

But the Rai Association, the automotive industry's lobby group, condemned the plan as bizarre and regressive. A spokesman said: "Many tens of thousands of families who have no money for an electric car will soon be left out in the cold. That makes Amsterdam a city of the rich."

"In 2030, about one third of the cars will be electric, we expect. But there will also be a lot of people who won't be able to afford that by then."

In January 2018, the Dutch health council called on the government to devise an ambitious strategy to improve air quality in the Netherlands, warning that the "blanket of pollution" would cause major health problems in the country.

City authorities and governments around the world are moving towards pushing cars that produce greenhouse gas emissions off their streets. Last year, Madrid began restricting access to petrol vehicles made prior to 2000 and diesel vehicles made prior to 2006. Rome has pledged to ban diesel vehicles from the city centre by 2024.

The Danish government has said it wants to ban the sale of new petrol and diesel cars from 2030 and hybrid vehicles from 2035.

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## Robot road cones for worker safety



A new partnership will trial the potential for robotic self-wheeling traffic cones to improve safety for people working in live traffic on Melbourne's CityLink roads.

The safety initiative has been jointly developed by Transurban and Telstra.

If successful, the remote-controlled robotic traffic cones would remove the need for road workers to manually place or move cones when setting up or taking down road works or emergency zones in live traffic.

Sensors will also be used on traffic cones and rumble strips to test the ability to communicate in real-time with workers via a wearable device such as a vest, which would light up, vibrate and sound an alarm when a vehicle enters the worksite, so they can get out of danger.

Transurban Group Executive Victoria and Strategy, Wes

Ballantine, said the trial will commence by the end of 2019 and will be done during routine maintenance closures of the Burnley and Domain tunnels to manage safety in a controlled environment.

"Road workers can be vulnerable in live traffic and we currently have 10,000 people working to build new roads and more lanes on our projects across the country who all deserve to get home safely," Mr Ballantine said.

# Elon Musk Says ‘Hyperloop’ Tunnel Is Now Just a Normal Car Tunnel Because ‘This Is Simple and Just Works’



Back in 2017, Elon Musk had grand visions for the test track built by The Boring Company, his tunneling firm, in Los Angeles.

The Boring Company’s tunneling work was closely linked to Musk’s Hyperloop idea, which would require hundreds of miles of tunneling to be viable, although the actual test track in California bore none of the traits of an air vacuum-based transportation system.

It would have proprietary vehicles with varying capacities for private travel, public transport, or freight. They would travel along electrified skates for frictionless movement. It would be fast and efficient, but more importantly, it would be different, because he’s a genius.

Six months ago, the first demonstration of that track didn’t quite match that vision: it was a Tesla Model X on a sled going down a very bumpy tunnel at roughly 50 mph.

At the time, Musk said the bumpiness was only temporary: “That bumpiness will definitely not be there down the road—it will be smooth as glass.”

Credit where credit’s due: it does appear to be smooth as glass now, according to a video The Boring Company released of a car going 127 mph down the tunnel. How did it achieve such miraculous speed and comfort improvements in a mere six months?

They paved it.

Yes, for those keeping score, in a mere two years we’ve gone from a futuristic vision of electric skates zooming around a variety of vehicles in a network of underground tunnels to—and I cannot stress this enough—a very small, paved tunnel that can fit one (1) car.

The video’s marketing conceit is that the car in the tunnel beats a car trying to go the same distance on roads. You’ll never believe this, but the car that has a dedicated right of way wins.

Congratulations to The Boring Company for proving dedicated rights of way are important for speedy transportation, something transportation planners figured out roughly two centuries ago. I’m afraid for how many tunnels they’ll have to dig before they likewise acknowledge the validity of induced demand.

Indeed, The Boring Company hasn’t just given up on the sleds in the test track. The company recently signed a \$48.6 million contract with Las Vegas to build a short people-mover through their convention center.

But, as some experts have been pointing out, that plan is also for the familiar technology of cars with rubber tires in tunnels on pavement.

Why did Musk give up on his sled dream? Why was the tunnel paved over? Here’s from the man himself via Twitter:

**Eddie Kuo @EddiOS42**

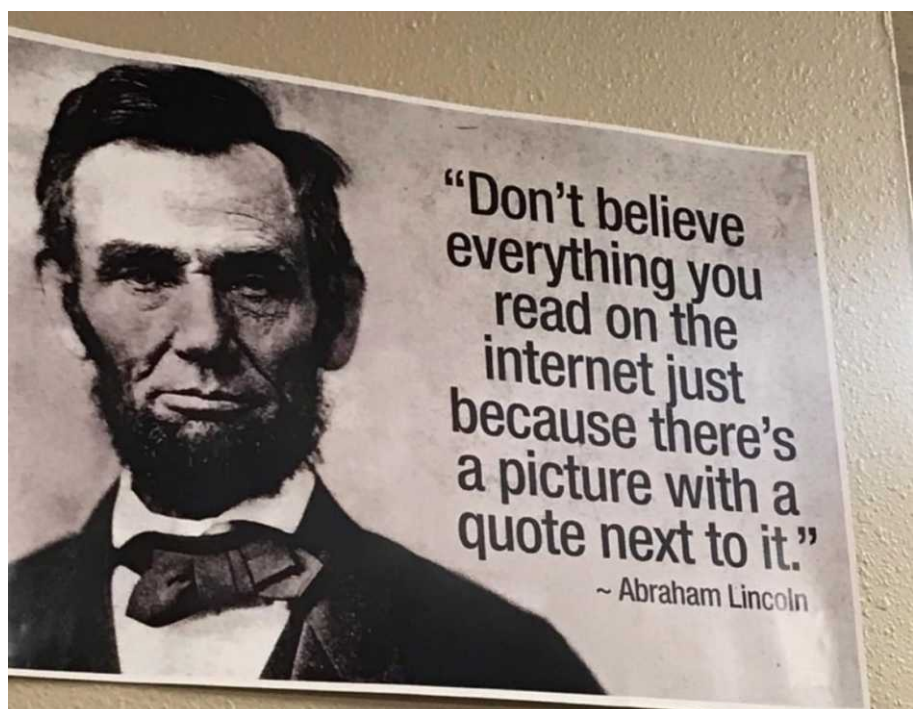
*Why abandon the original idea of sleds? This seems like extra wear in long term on vehicle.*

**Elon Musk @elonmusk**

*This is simple and just works*

To recap: Musk’s company spent two years developing a very narrow car tunnel. To anyone who ever believed Elon Musk’s bullshit: you’ve been had.

Source: Curbed





# Submission on MBIE proposal on regulating engineers

The following is a copy of the submission made by Transportation Group NZ (TG) on the Ministry of Business, Innovation and Employment (MBIE) proposal outlining a new regulatory system for engineers. This proposal replaces CPEng with a certification of general engineering competence and licensing for safety-critical engineering work. This system would be independently governed and accountable to the Minister.

TG National Committee members have compiled this submission and have not had the opportunity to seek feedback from TG members at this stage. Our usual process is to distribute for comment prior to lodging a submission.

## KEY POINTS OF OUR SUBMISSION

1. Although we understand the complexity of defining certain activities safety critical the current scope does not include areas of engineering that also have the potential to save lives. We consider that defining some engineering activities as safety critical implies other engineering activities are not. We would support a process to improve accountability of transportation engineers involved in safety-critical decisions. 2. We question whether the licensing is best undertaken by a Government Department. We should be no different than other professional bodies who are entrusted with the regulation, certifying and disciplining of their members.

## SUBMISSION DETAIL

The MBIE definition of the 'building sector' is very narrow and there are areas of engineering activity that are no less 'safety critical' than those deemed 'safety critical' by MBIE, whose definition excludes transport infrastructure (bridges, roads, railways, etc.).

Engineers play a major role in the design and operation of transport infrastructure. The number of people suffering death or serious injury in NZ each year, as a result of accidents on transport infrastructure, far exceed the number of people suffering death or serious injury each year as a result of buildings (e.g. the CTV building) failing. In 2017, the number of deaths and injuries on roads in NZ was 378 and 14,039 respectively, with the social cost to NZ being \$4.8 billion.

Better transport infrastructure design and operation might well be perceived as offering little scope for improving the safety of New Zealanders, because in-depth investigations of road crashes have revealed that human factors are involved in c.94% of crashes. This statistic is commonly interpreted as indicating that only c.6% of crashes are amenable to reduction or prevention via better transport infrastructure design and operation.

However, this interpretation is not correct, as those in-depth investigations of road crashes have also revealed that road environment factors and vehicle factors are involved in c.27% and c.9% of crashes, respectively. The percentages do not sum to 100% because c.30% of crashes involve more than one type of factor.

Only c.66% of road crashes involve only human factors, so the scope for improving road safety via improvements to road and vehicle design/maintenance

is much larger than commonly thought. Even crashes deemed to be solely the result of a human error have system design influences, particularly in road crashes where design has a strong influence on a road's speed environment, and the survivability of those speeds when a road user makes an inevitable but unintentional error.

A substantial proportion of decisions relating to transport design and operation are made in a 'multi-disciplinary environment'. Decisions can be affected by 'political factors', with safety being compromised. If safety is to become the paramount consideration (the apparent purpose of specifying some activities as 'safety critical'), then it would be appropriate for safety to be a paramount concern in the design of transport, especially given the increase in importance attached to road safety by the Government.

There is a well-established process for safety auditing in NZ. The safety of New Zealanders could be enhanced considerably by increasing the importance attached to safety audits and adopting the recommendations of safety auditors. This would reduce the scope for transport design and operation decisions that compromise safety substantially.

Safety auditing of transport design and operation matters should be treated as a 'safety critical' activity, with safety auditors having to be well qualified and licensed. The client/road controlling authority representative signing of the decisions that result from a safety audit should also be licensed as often the final decision is not aligned with the auditor's recommendation.

The MBIE proposal assumes that the licensing of people to undertake safety critical activities is best done by a Government Department or Agency. However recent experience with the NZTA regulating who can perform what might be considered 'safety critical' activities (e.g. the certification of heavy vehicles, the issuing of Warrants and Certificates of Fitness) casts real doubt on the validity of this assumption.

We should be no different than other professional bodies (e.g. NZ Law Society, Medical Council of NZ) who are entrusted with the regulation, certifying and disciplining of their members. Noting that this is all enshrined in suitable Government legislation with sufficient checks and balances in place (e.g. involvement of lay-people in review committees).

*Thank you for your consideration.*

*Jeanette Ward CPEng, MET, BE Civil, NZCE Civil  
Chair of the Engineering New Zealand Transportation Group*



**TRANSPORTATION  
GROUP**  
NEW ZEALAND



Figure 1: Beach Road diagonal crossing with original signals

## The Changing Signal Faces of Cycling

*This is a summary of the paper by Gregory, Wilke and Dejong (2019) which won the best research paper award at the 2019 Engineering Transportation Group Conference. Further detail is also found in the interim trial report (Fowler and Wilke, 2018) available on request from Christchurch City Council.*

### 1 BACKGROUND

Equipped with signal aspects in the shapes of arrows and discs, traffic engineers have control over each individual motor vehicle movement at an intersection, giving flexibility to the intersection phasing and thus achieving maximum efficiency and safety. In contrast, provision for cycling is limited to a standard cycle signal, a blanket cover for all cycle movements from the same intersection approach.

This makes it impossible to operate two cycle movements from the same approach independently, and generally limits cycle phases to operating only when the most-restricted cycle movement can move. People on bikes who are frustrated with being unnecessarily held back may choose to run a red cycle signal; this could negatively influence other cyclists (including those less capable of judging the situation for themselves), result in conflict with pedestrians or motor vehicles, and irritate drivers.

One example is the diagonal cycle crossing at Beach Road / Te Taou Crescent in Auckland as it was originally installed in 2014. The cycle signal was green when cyclists could cross the intersection diagonally, and red when the general traffic could go. The problem was

that the cycle signals also applied to people wishing to cycle straight ahead, meaning they must be stopped for most of the intersection phase time, including when it would be perfectly safe to continue straight ahead parallel to the adjacent through traffic. Many cyclists wished to travel straight ahead and chose to run a red light rather than accept the unnecessary delay. Before the trial, Auckland Transport had no way of signalling the two cycle movements separately.

The behaviour experienced at the Beach Road diagonal crossing is not surprising; Alrutz, Willhaus, Meyhöfer et al. (1996) showed that cyclist compliance with signals is proportional to the ratio of green time they receive compared to parallel through traffic.



Figure 2: Dimensions for typical directional cycle signal lantern aspect layout



To address this problem, Christchurch City Council and Auckland Transport commissioned ViaStrada to conduct an official traffic control device trial of directional traffic signals for cyclists. The new signals have been installed at four intersections, with the conference paper focussing on three (the fourth was analysed after the conference).

## 2 DEVICE TRIALLED

The characteristics of the directional cycle traffic signals trialled, as outlined in the Gazette notice (NZ Government, 2017), are:

- Signal aspects of 200–300 mm diameter (depending on distance from limit line)
- Masks involving cycle symbols and arrows of 5 or 7.5 mm line width (depending on signal diameter).
- Modern lanterns comprising LEDs
- A diffuser that distributes the light evenly across the aspect giving a consistent light emission across the symbol defined by the signal mask.
- A coloured lens between the diffuser and the mask.
- Signal aspect design based on that shown in Figure 2 with various options for aligning the arrow (left turn, bear left, straight ahead, bear right, right turn).
- Mounted at heights appropriate for cyclists.

The RCAs were given some flexibility in terms of choosing the size of the signals, as well as the arrangement and positioning of signals, which was useful to stimulate public and professional feedback on the optimal arrangements and the visibility and clarity of the signal aspects.

## 3 METHODOLOGY

### 3.1 Trial sites

Four sites were selected for the trial, two each in Auckland and Christchurch:

- High Street / Madras Street / St Asaph Street (Christchurch)
- Beach Road / Te Taou Crescent (Auckland)
- Nelson Street / Victoria Street (Auckland)
- Antigua Street / St Asaph Street (Christchurch) – not evaluated in time for the conference paper, but covered in a subsequent interim report (Gregory, Dioni and Wilke, 2019).

At the Nelson / Victoria site, the directional cycle signals were used to indicate a right turn whereas standard cycle signals were used when cyclists could either travel straight ahead or turn left. At the other three sites, a diagonal crossing was distinguished from a straight-ahead movement.

More detail on the four sites is given in the Transportation Group Conference paper (Gregory, Wilke and Dejong, 2019), and the trial reports (Fowler and Wilke, 2018, Gregory, Dioni and Wilke, 2019).

### 3.2 Evaluation stages

Ultimately, the evaluation will comprise five distinct stages.

1. Before studies of user behaviour were undertaken at sites where the cycleway existed prior to the introduction of the directional cycle signals, to develop an understanding of the baseline characteristics.

2. A hardware testing stage, prior to commissioning the signals, was undertaken by observing various arrangements of masks and lanterns at the High St /

Madras St / St Asaph St site, to confirm that they were considered suitable when viewed in a live traffic environment.

3. During the initial months after installation (the “novelty” period), when road users generally behave differently while they adjust to the change, the RCAs observed the sites closely via CCTV, to identify any initial safety issues. No remedial action was required.

4. Interim evaluations were conducted three to six months after the installation. User behaviour was evaluated at all sites, and user understanding and satisfaction surveys were conducted for Christchurch and Auckland.

5. The final evaluations will be conducted 18 to 24 months after the installation of the directional cycle signals.

The conference paper covers the first four stages, i.e. up to the interim evaluations, for the first three sites.

### 3.3 Evaluation components

The evaluations consisted of:

- User behaviour – compliance with signals, use of lane / facility, trajectory through the intersection, severity of interactions between cyclists and motor vehicles resulting from any non-compliant movements.
  - o Considering both cyclists and motorists
  - o Determined from video footage.
- User understanding and satisfaction – interpretation of the signal arrangements, experience and opinions regarding the new cycle signals.
  - o Distinguishing between cyclists, motorists and pedestrians, and those with experience of the specific trial sites.
  - o Conducted via on-site and online surveys.

## 4 RESULTS

### 4.1 User behaviour

The cyclist trajectory data for all three sites showed an increase in the proportion of cyclists using the “new” movement made possible or clearer by introducing the directional cycle signals.

Figure 3 summarises whether cyclists coming from the cycleway approaches studied complied with the relevant traffic signals and the resulting interaction severity of non-compliant manoeuvres, before and after the installation of the directional cycle signals.

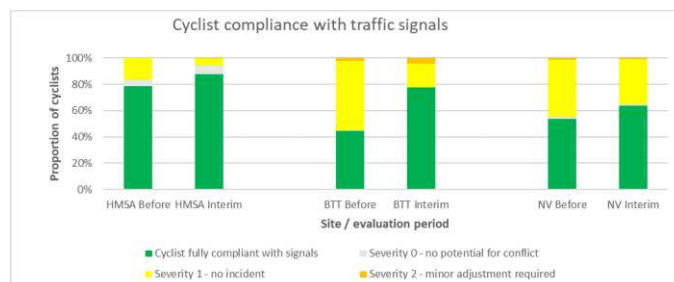


Figure 3: Cyclist compliance with traffic signals and interaction severity of non-compliant movements

Note that the category “cyclist fully compliant with signals” has been used to distinguish from interaction severity level 0, as the latter assumes the cyclist did not comply with their traffic signals (i.e. ran a red light) but there was no opposing traffic present and therefore no

potential for conflict. A chi-squared analysis showed a statistically significant change (to a level of 5%) at the first two intersections, with the significance level at the Nelson / Victoria site being 8.3% (i.e. just higher than the threshold).

Key points regarding cyclist compliance are:

- Was already high at High / Madras / St Asaph (due to the dominant through movement being well-catered for) and improved further when the diagonal crossing with directional signals was introduced.
- Improved greatly at Beach / Te Taou, due to the popular through movement being legalised. The non-compliance in the interim period suggests that cyclists still felt safe travelling across the head of the T intersection at the end of the phase, or when the side street traffic was operating.
- Improved slightly at Nelson / Victoria. The red light running in the interim period was predominantly cyclists turning left, but also some cyclists travelling straight ahead when the adjacent left turn movement had a green arrow but there was no traffic - suggesting that cyclists considered they were being unduly held back and felt safe to cross without conflict.
- Interaction severity was gauged on a scale with a maximum of 5 indicating a crash. No conflicts greater than a level 2, i.e. when the cyclist makes a minor adjustment to their trajectory or speed, without appearing to be worried by the situation, were observed in the study.
- The clear majority of non-compliant movements were gauged as level 1 severity, i.e. there was some parallel traffic present but neither party had to make any adjustments to their speed or trajectory.
- None of the 275 non-compliant incidents analysed were close to becoming a crash (level 4 or greater), which at the very least means we cannot prove that the intersection operation is not suitably safe. To draw a more confident conclusion, it would be necessary to have a baseline understanding of what proportion of conflicts at certain severity levels would be deemed "acceptably safe".
- Overall, the low severities of interactions show that non-compliant cyclists are aware of the situation and generally judging themselves whether it is safe to proceed.

The rates of motorist red light running incidents per video footage time analysed were compared for the before and interim studies. All sites indicated a decrease in motorist red light running, although only the High / Madras / St Asaph result provide statistically significant at a 5% level – having larger sample sizes or comparing with volumes of compliant motorists may improve the confidence levels. The motorist compliance observations suggest that the directional cycle signals have not confused motorists to the point of making errors, rather they may have been more cautious.

The video analyst was not asked to specifically record pedestrian movements, however confirmed that they had not observed any instances of pedestrians trying to cross the intersection diagonally with the cycle crossings.

At Nelson St / Victoria St, a significant number of pedestrians were observed crossing Nelson Street (perpendicular to the cycleway approach) while the

diagonal cycle crossing operated, even though that crosswalk is not operated during this phase. Thus, it seems that pedestrians understand that the directional cycle signals are intended for cyclists only, but at Nelson Street they are comfortable managing potential conflict with cyclists to improve their LOS.

## 4.2 User understanding and satisfaction

For the survey based on the High St / Madras St / St Asaph St site, 103 people responded to the online survey, and 43 participated in the intercept survey. For the survey based on the Beach Rd / Te Taou Crs site, 166 responded to the online survey and 39 participated in the intercept survey. Figure 4 shows the distribution of how familiar the participants were with the specific sites used as examples in the questionnaires.

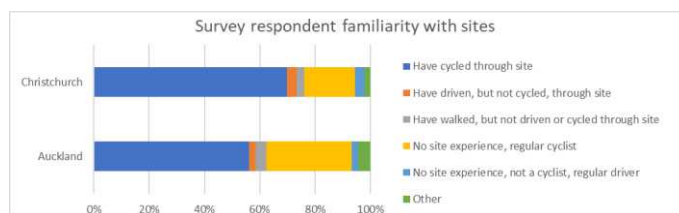


Figure 4: Survey respondents' familiarity with trial sites

Figure 5 summarises the rate of correct responses to the four questions where users were asked to describe what a cyclist (Q2 and Q4) or a motorist (Q3 and Q5) could do in response to certain signal combinations as displayed in images. At least 90% of respondents answered each question correctly – a highly satisfactory result.

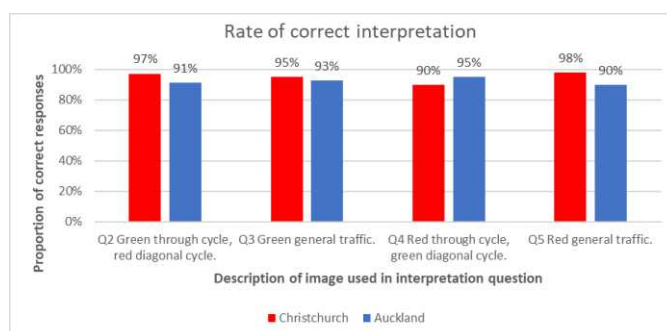


Figure 5: Interpretation of signal combination questions

About 20% of survey respondents from Christchurch and 27% from Auckland reported having experienced some difficulty or confusion related to the new directional cycle signals. Three of the Christchurch survey respondents and 20 of the Auckland survey respondents commented that the size of the cycle signals (200 mm diameter signals were used at the Auckland sites) or symbols within them could or should be increased.

In light of this:

- It is considered that a certain level of confusion is acceptable and basic education and promotion would also help improve understanding.
- Many respondents suggested that levels of confusion will reduce over time, as more people become more accustomed to the changes.
- Part of the difficulty in distinguishing the signals was due to an initial light-spill problem with the hardware installed on-site which has since been addressed, making the symbols clearer.
- Comparing the responses for the 200 mm far-side





Figure 6: Primary signals at Beach / Te Taou

signals at Beach / Te Taou and those for the 300 mm signals at High / Madras / St Asaph suggests that the large signals are more appropriate at larger intersections.

- The placement of the cycle signals with respect to the general traffic signals and the road layout is key and differs between the sites – comments regarding this were more numerous in the Auckland survey.

Several people suggested the signals were mounted too high, one noted that the Nelson St / Victoria St (i.e. primary) signals (Figure 7) were preferable to those at Beach Rd / Te Taou Crs (Figure 6) due to being separate from the general traffic signals, but one respondent



Figure 7: Far-side signal at Nelson / Victoria

identified the problem that the far-side signals at Nelson St / Victoria St do not match the road layout.

As a result of the comments and issues regarding the size and placement of cycle signals, updates have been proposed for the Cycling Network Guidance (NZ Transport Agency, 2018) to include specific guidance on this topic; the key points being that cycle signals should be lower than and separated laterally from general traffic signals, with the signal columns for different cycle movements ideally being physically separated and positioned according to their respective approach cycle lanes.

## 5 CONCLUSIONS

The interim report recommends some site-specific improvements, particularly for the two Auckland sites, for example: creating separate approach cycle lanes to correspond to the two cycle signal columns; replacing the far-side signals with 300 mm diameter aspects; improving the signal placement with respect to the cycleway layout and general traffic signals, in-line with the new additions proposed for the Cycling Network Guidance (NZ Transport Agency, 2018).

Overall, the new directional cycle signals have been successful.

Their introduction has improved LOS for cyclists by enabling a greater proportion of green time to be given to certain movements and therefore increasing their equity with general traffic.

Compliance of both cyclists and motorists has improved and users show a good level of interpreting the new devices in combination with general traffic signals.

Thus, it has been recommended to continue the formal trial at all four trial sites (including the interim trials to be conducted at Antigua / St Asaph).

Based on the interim results it could be expected that the device will eventually be approved for use across the country.





# The 2nd New Zealand Walking Summit

20 and 21 June 2019

Auckland



Our second New Zealand Walking Summit is in Auckland on 20-21 June and this time will focus on two themes.

On the first day we will look at the research and opportunities for children to walk to school and play. We will hear about successful initiatives in the UK to get kids walking and what is happening in New Zealand.

And on the second day we look at the experience of walking and public transport for New Zealanders. We will shine a spotlight on two of the most sustainable modes that rarely get the exposure!

Walking is the glue that binds all these activities.

We have a great line up of presentations talking walking on topics that need the spotlight.

**International experience promoting walk to school**

Hear how Living Streets UK has supported walking to school over many years. They contend with serious issues of air pollution in London and the impact on children's health which has seen some significant changes in approach. Jenni Wiggle will share the perspective from a pedestrian advocacy group.

**What does the research show about children walking to school and play?**

Walking to School as an Opportunity for Adolescents to Be Physically Active

Sandy Mandic will talk about the BEATS Research Programme on individual, social, environmental, and policy influences on active transport to school in adolescents. Presenting findings related to adolescents' transport to school behaviours in urban, semi-urban and rural areas, perceptions of walking to school and associations of transport to school behaviours with adolescents' physical activity levels.

**Where do children go?**

Ryan Gage presents findings from Kids'Cam, one of the first studies worldwide to objectively examine children's environments from their perspective. Wearing a camera for four days Kids Cam followed where children go. He will share key findings from Kids'Cam on

1) Where children go; 2) How they use green space; and 3) Health-related aspects of children's outdoor environments, e.g. their exposure to junk food marketing. We will briefly explore the policy implications of our findings.

**What are we doing to encourage children to walk?**

There is a lot of work happening in Auckland, Christchurch and Dunedin that we will hear about - more details to come.

**Is any connection made between great public transport and how passengers walk to it?**

We'll hear what the government is thinking with information on Public Transport 2045: exploring future scenarios for shared mobility, from the Ministry of Transport, and, a Guide to Public Transport being developed by NZTA.

Inclusive design and accessible transport will be discussed by a number of speakers.

Check out the full list of presenters, walking connections to public transport and the costs and registration details [here](#)





**CALLING ALL ROADING & TRANSPORTATION MANAGERS**

**COULD YOU BE DOING MORE TO KEEP YOUR FLEET SAFE?**

# **FLEET SAFETY**

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**A two day forum addressing safety  
and the tools for efficient fleet management.**

The Fleet Safety conference provides a unique and important forum for safety professionals and fleet managers. The event explores the challenges of improving the safety of New Zealand's fleet and reviews a broad range of best practice case studies and technical solutions.



## **CONFERENCE SESSIONS INCLUDE:**

- How the Health and Safety at Work Act 2015 applies to fleet:  
Are you meeting your legal requirements?
- Case studies focusing on the organisational implementation of fleet safety programs
  - Driving the safety of your fleet and people



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# Cyclists 'exposed to less air pollution than drivers' on busy routes

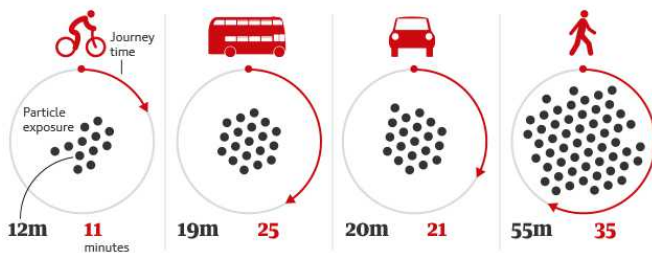
Cyclists are the least exposed to air pollution on daily commutes into a congested city centre, research has shown. People in cars and buses spent longer in toxic air, as did walkers unless they made detours to avoid main roads.

The work, conducted in Leeds, supports the investment in cycle lanes to both reduce air pollution by cutting vehicle journeys and improve citizens' health. It also found that air pollution reached relatively high levels inside cars, echoing a recent warning that cars are "boxes collecting toxic gases".

Other recent research has led experts to advise parents to use covers on their buggies during the school run to protect their infants. Research in London that compared only bus, tube and car commuting found that car drivers were least affected by air pollution.

Most urban areas in the UK have illegal levels of air pollution, and ministers have lost three times in the high court over the inadequacy of their action. The latest government action plan, described by environmental lawyers as "pitiful", revealed that air pollution was much worse than previously feared.

**During a 4km commute into a city centre cyclists suffered the least exposure to air pollution**



The new research used high-quality portable pollution-measuring equipment to track rush-hour commutes of 4km (2.5 miles) into and out of Leeds city centre in June. All the commuters set off at the same time, and the cyclists were by far the fastest, arriving in 11 minutes, half the time of bus and car travellers.

The cyclists were exposed to a total of 12m pollution particles during their journey, almost half the number encountered by those in buses and cars. Cyclists may breathe more rapidly as they exercise, which would bring the particles they inhale up to close to that of motorised transport users. But on routes with slow traffic, where car and bus commuters are forced to sit in clouds of pollution, cyclists fare best.

"On more congested routes, the cyclist would come out with the lowest inhaled dose," said James Tate, at the University of Leeds, who led the work. Segregated cycle lanes would reduce cyclists' exposure even more, he said, with a distance of even a metre or two from traffic cutting particles by about a quarter. "Cycle lanes mean you can skip past traffic," he said. Other research shows the exercise benefits of cycling outweigh the harm of air pollution.



The commuting route was quite long for walkers, and their 35-minute journey time meant they experienced the highest air pollution. The researchers also tested a green walking route that was 20% longer but avoided busy streets.

They found particle exposure fell by 75% on the green route. In London, another study found green routes cut walkers' exposure by half.

"Walkers have a decision to make, particularly on polluted days," said Tate. "It may take a little longer but, if you have time, you can really cut down on your exposure by walking on a green route."

The team analysed each stage of the commutes and found the most polluted times for walkers were when they waited at junctions controlled by traffic lights. For cyclists, the peak pollution was when high buildings formed a canyon that trapped toxic air.

Nitrogen dioxide, a pollutant largely emitted by diesel vehicles, was only measured in the vehicles, owing to the cumbersome size of the equipment needed. Inside the cabin of a small electric Nissan van, the driver was exposed to levels above the annual legal limit of 40 micrograms per cubic metre for much of the journey, with peaks of over 100 micrograms per cubic metre.

"Once you have drawn it in, it takes quite a while for the cabin to ventilate," said Tate, who presented the work at a Royal Society of Chemistry conference. It would cost manufacturers just a few pounds to fit a charcoal filter that would cut nitrogen dioxide levels by 90%, he said.

Gary Fuller, of King's College London, the author of *The Invisible Killer*, said: "Forty percent of car journeys in England are less than two miles so there is huge scope for walking and cycling."

More active travel has multiple benefits: it can reduce air pollution, reduce climate change emissions and help with urban noise. But most of all, more active travel can help people to get more exercise in their everyday life, and yield huge health benefits as a consequence."

Source: *Guardian*



# Colin Brodie

## Transportation Group Life membership

At the recent TG conference, Colin Brodie was awarded life membership of the Group. Colin Brodie has extensive experience in the roading and transport sector across NZ and internationally. His career started with the Ministry of Works, with his first most significant role being in Tauramanui in the 1980's.



Colin worked on projects such as sealing roads around the Coromandel in the 1970's, building prisons and trout hatcheries in the Tongariro region in the 1980's, building mega dairy factories with Fonterra and pricing toll roads in India in the 1990's, to designing the Tauranga Harbour Bridge duplication and Route K toll roads in the 2000's.

With Colins number one passion being road safety, he enabled a career change in 2005 within Transit NZ when he took up a national safety opportunity. With the new role Colin was given permission to be innovative and make a difference.

With that mandate Colin was jointly responsible for the development and implementation of rumble strip programme, the introduction of KiwiRAP programme, wide centrelines, electronic curve and intersection warning signs, weather activated speed zones and developing national safety programmes.

Internationally Colin has had involvement in Austroads, and a number of other overseas committees. He was invited regularly to speak at international conferences on road safety and implementing change.

Colin has been actively involved in the Engineering NZ Transportation Group activities regionally and nationally and a supporter of the annual conference. Colin has been recognised nationally and internationally for his work in road safety, having recieved more than 10 awards, including being a 3 time winner of the IPENZ 3M award for innovation.

Colin has recently retired from the NZ Transport Agency, to allow him to spend more time in Tauranga, and focus on the many outdoor related activities he so much enjoys.

Nominated; Waikato Branch EngNZ TG  
Supported; Roly Frost; FEngNZ







As designers of the public realm, transport professionals really have the ability to influence the short block theory, not just for pedestrian safety and connectivity but for strengthening the economy by helping business in all locations flourish.

“Most blocks must be short, that is, streets and opportunities to turn corners must be frequent.”

These four components of good neighbourhood planning were discussed on one of the walks as we wandered through the higher density neighbourhood in the northeast of Christchurch’s central city, along Melrose Street, Ely Street and Moa Reserve originally purchase for a motorway that never came to fruition...thankfully!

Photo Credit: Meg Black



It is no coincidence that neighbourhoods that possess these characteristics, (such as the one surrounding Moa Reserve) are imbued with strong communities who invest time into ensuring local streets and parks are safe and well maintained.

There was much discussion around the increase in high fences around properties for privacy but that this has had a negative result on the community as it reduces the ability to interact and say “hi” to people who are passing and takes away the ‘eyes on the street’ that helps people to feel confident and safe when walking around the neighbourhood.

The two largest walks of the weekend took place at Chester Street East/Latimer Square and through Edgware. The Chester Street East/Latimer Square walk was led by Nick Lovett, local chair of the Canterbury West Coast Branch of the Transportation Group and Simone Pearson of the local Chester Community group.

This is another of the inner city's most historic neighbourhoods, where early planning decisions around land-use and transport have left lasting impressions on the neighbourhood. Traffic plans of the 1960s were a recurring theme amongst the urban walks and Nick provided a brief overview of the controversial plans to bisect the inner-city park with a state highway, raising discussions about the competing objectives of movement and place.

The Edgware walk was led by a local persona Peggy Kelly, who was joined by a range of walkers that enjoyed some of the delights of the community garden at Packe Street before exploring new developments

and streetscapes.

The opening of a new northern motorway linking in through the area is again raising anxieties among neighbourhood groups. There was much debate about the best way to manage effects of increases in traffic, which has also led however to the community coming together to challenge the plans to protect the community and switch the focus from moving cars to moving people.

In contrast to the more urban walks, Land under Te Ahu Patiki Mt Herbert, began at Orton Bradley Park in Charteris Bay, within Christchurch’s rural hinterland. The park is a private 650ha rural property, including an arboretum and outdoors adventure centre, open to the public.

Following an introduction to the Park, and the philosophy of its founder, Orton Bradley, walkers were introduced to Laura’s Dairy, including her cows. One of whom was a bit too friendly! Laura has a low impact, ethical approach to dairying, and more generally to life. For the townies amongst the walkers, it was the opportunity to reconnect with where our food comes from, meander and forage amongst the trees.



Photo credit: Josie Schröder

The walks were well attended with a range of walkers from children to older residents, and people with bikes and dogs all keen to hear more about the neighbourhood they were exploring. The feedback received was great, we even have a list of people keen to lead walks around their neighbourhoods next year.

One of the lasting thoughts for us transport practitioners was just how valuable it is to get out and walk the streets with stakeholders and residents. Being on the street to hear first-hand the wealth of knowledge that is held by the community is invaluable in understanding the history and context of an area.

The success of the walks shows us that the lasting legacy of Jane Jacobs is alive and well in our towns and cities by revealing the expertise that resides within our towns and cities.

Gemma Dioni  
Senior Transportation Engineer  
ViaStrada



# City with a female face: how modern Vienna was shaped by women



At 240 hectares, the neighbourhood of Aspern, Vienna, is one of the largest urban developments in Europe. By the time it is complete in 2028, it is due to be home to 20,000 people, plus another 20,000 workplaces, and with an explicitly family-oriented design. Centred on an artificial lake and with half of the entire area devoted to public space, it is billed as “Vienna’s Urban Lakeside”: a model city-within-a-city, in a place that already has the one of the highest qualities of life of any city in the world.

When Christina Atta moved to Aspern four years ago, she was one of its rare single women. “I was alone with my cats, and everybody had children,” she says. Now she is pregnant with her second child, however, Atta, 35, can better appreciate its design. Her only complaint is that the bus to the city can’t accommodate all the young children. But Aspern isn’t just about families. It was deliberately planned with a brand identity, one that might elsewhere be considered political: all the streets and public spaces are named for women.

There are Hannah Arendt Platz, Janis Joplin Promenade, Ada Lovelace Strasse, Madame d’Ora Park and more, chosen by 30 experts. As an official brochure setting out these women’s achievements puts it, “Aspern has a female face” – a small counter to traditional Vienna, where 3,750 streets are named after men.

It is symbolic, yes, but makes a clear statement: Aspern specifically takes in to account women and their needs. In this way it embodies a unique approach to urban planning that began shaping Vienna 30 years ago.

“Gender mainstreaming” is the practice of ensuring women and men are accounted for equally in policy, legislation and resource allocation. Proposed in 1985, it was enshrined as the UN’s global strategy for gender equality in 1995, but Vienna had adopted it years earlier. The city has since conducted about 60 gender-sensitive pilot projects and assessed another 1,000.

As the city’s deputy mayor, Maria Vassilakou, wrote in 2013, gender mainstreaming ensures “fair shares in the city” for all by forcing planning to be approached from different perspectives. But how do pavement widths and bench design relate to gender? And if mainstreaming aims to promote equality, does Vienna’s example prove that it works?

“The argument is, you get a fairer society,” says Eva Kail of the city’s strategic planning unit. “As a public administration, to offer good service for the people – to have better quality of life – you have to take care of gender equality.”

Kail, one of the world’s pre-eminent experts in gender mainstreaming, was previously the head of Vienna’s first women’s office. Initially called the Frauenbüro, the department was established after Kail, then a junior district planner, co-organised a photography exhibition in September 1991 that documented a day in the lives of eight different women and girls – from a young child, to a wheelchair user, to an active retiree.

It was a simple concept that showed a side to the city that was rarely considered. Like most European cities then and now, Vienna was being designed by male planners for men like them: going between home and work, by car or public transport, at mostly set times. There was no accounting for unpaid labour such as childcare or shopping, carried out mostly by women, in many short journeys on foot during the day.

Sabina Riss, an architect and lecturer at Vienna University of Technology’s Department of Housing, says this male-dominated thinking was evident in most large European cities after the second world war: “They designed cities like there would be no other people than men going to work in the morning and coming back in the evening – everything else in between, they kind of had no idea. And because they are the people who design cities, they are in charge.”



With no accounting for their movements, women were being left out of the city. Kail's exhibition was a surprise hit, drawing 4,000 visitors and sparking public discussion of areas where women felt unsafe, how they got around, and – more broadly – who the city was for.

Later, a follow-up postal survey by the women's organisation of the governing Social Democratic party led to a breakthrough revelation: roughly two-thirds of car journeys were made by men, while two-thirds of those on foot were by women. "That was really an 'a-ha' moment," says Kail. For the first time, she was able to prove that men and women's experiences of city living were different – and women's were being overlooked entirely.

In April 1992, she was tasked with turning the momentum into concrete change as head of the Frauenburo, which Kail has called "a little bit of a feminist utopia".

At that time Vienna was in a period of rapid expansion. The Iron Curtain had been swept aside, and the government had set a target of building 10,000 new apartments each year. Architecture firms were awarded contracts – but in 30-odd rounds, no women had even been invited to pitch. "Only men were defining the new structure of the city," says Kail.

Her response was to invite only women architects – then just 6% of the profession – to submit proposals for a social housing project north of the city, with women's everyday life an essential criterion of the design.

It was clear that Vienna's future was in high-density housing; Kail saw this inaugural pilot as an opportunity to prove that taking gender into account resulted in better outcomes for everyone. "I always said we can't have special conditions, it can't be more expensive – we have to prove in the mainstream that we produce higher quality," she says.

The result was Frauen-Werk-Stadt (Women-Work-City), a 357-unit complex made by women and completed in 1997. It was characterised by a woman's perspective at every level: from pram storage on every floor and wide stairwells to encourage neighbourly interactions; to flexible flat layouts and high-quality secondary rooms; to the height of the building, low enough to ensure "eyes upon the street".



"They tried to think it all through, from how you get off the bus to get into your flat," says Riss.

The project was not without challenges. Some of the women brought on to the project were inexperienced, or did not hold feminist views: it was by no means only men who objected to gender mainstreaming in those early years.

There was also resistance within the public service. Though the project had the backing of those at the top of the administration, at lower levels there was sometimes openly sexist objection. There were many cases where department heads who had not been against gender mainstreaming in principle revealed themselves to be less amenable to having to apply it themselves.

Kail recalls being asked to moderate a cross-disciplinary working group for the traffic plan. "The first session was really horrible ... [the men] didn't accept me as leader of the game," she says.

Over the decades, she developed an arsenal of approaches. Some colleagues were won over by the promise of media attention or internal recognition for their pioneering work in gender mainstreaming; others could be engaged intellectually by the opportunities to learn from this cutting-edge discipline. Kail got very good, she says, at buttonholing influential people during the coffee breaks of meetings.

Having shown it could be done with Frauen-Werk-Stadt, the next step was to gender-mainstream the city. Mariahilf, a densely populated central neighbourhood with about 28,000 residents, was designated as a pilot district.

During 2002 to 2006, street lighting was improved in 26 areas identified in surveys as inducing anxiety; traffic lights were altered to prioritise pedestrians; and seating was installed in nine new locations. More than a kilometre of pavement was widened, and five areas were made entirely barrier-free, so as to better accommodate prams, wheelchair users and elderly people.

The link between wider pavements, benches and gender might be obscure, but Kail says it is a question of ensuring equality of opportunity and access. For example, for an elderly person, a well-placed bench might make the difference between participating in the city and remaining at home.

A neat example is the redesign of two parks in the Margareten district in July 1999 to encourage their use by girls, whose number was dropping off from the age of nine. The addition of volleyball and badminton facilities countered boys' dominance over the caged basketball courts; those courts, meanwhile, were fitted with areas for groups of girls to sit, observe and chat. Improving lighting and footpaths added to their sense of security, encouraging them to linger.

Four more parks were devised as pilot projects from 2000 and informed the gender-sensitivity guidelines applied to parks citywide since 2005. That process – of turning gender experts' local knowledge into general guidelines for the whole municipality – has been described as ideal in terms of implementation of gender mainstreaming.

In the absence of measures to ensure different users' needs are taken into account, only those of the dominant group are served. Kail notes that transport planners had thought to devise standards for car parks, but not ramps for bikes or prams, "because they thought it didn't matter". When the women's office opened nearly 30 years ago, transport planners were exclusively "white, middle-class men," she says – "and car drivers in the city looked like them". When the city is viewed only as though through a windscreen, women feel the absence of

measures to benefit pedestrians in a way that men typically do not. As Kail has put it: “if you want to do something for women, do something for pedestrians”.

“It is very political, what is regulated and what is neglected,” she says. Gender mainstreaming has been criticised as cementing traditional gender roles – for example, by equating childcare with women’s work – but she takes a pragmatic view. “You can’t influence the share of unpaid work by architecture, but you can support it. We would hope it would support 50% of men as well – but statistics show it is still more women doing that work.”

Similarly, she betrays an uncharacteristic trace of frustration at the suggestion that attempting to make women more safe by installing lighting absolves would-be attackers of responsibility. Lighting may not prevent sexual assault, she says, but it can alleviate women’s feelings of anxiety, improving their access to the city – and when they are faced with a potential threat, lighting improves their ability to assess the situation.

The line between feminist ideals of equality and practical steps to benefit the majority of women is one that gender mainstreaming sometimes straddles uneasily. Ursula Bauer, one of Kail’s first appointments, now heads the city’s cross-sectional gender mainstreaming department. “Our aim is to make sure that all the infrastructure and services of the city can be equally used by women and men ... and contribute towards a more gender equal society.” Within the administration, it serves an intermediary role.

“We try to translate feminist or gender equality to the departments who deal with the population,” says Bauer – but only, she and Kail agree, insofar as it is necessary to achieve their goal.

In the early years, Bauer and Kail agree that they leaned too much on feminist ideals to make the case for gender-sensitive planning. Eventually, they realised it was counterproductive to their primary goal: not to wave the flag for feminism, but to make women’s lives in Vienna easier and more equal.

Wolfgang Gerlich of the PlanSinn consultancy, which advised on the Aspern project, is sometimes called on to advocate for gender mainstreaming when a man’s voice is seen as more authoritative. He remembers hosting a workshop in the early 2000s that was attended by a German feminist planning expert and men from the city’s construction department.

“It was a glorious, very valuable failure,” he says. “There was no effect except irritation. Then we completely changed the strategy.” One of the techniques in this new inclusive approach was to ask sceptics to think of what they’d wish for their daughter or niece, says Gerlich, “as a means of creating empathy and making it personal”. Another tool is “the four-R method”, asking “Who gets what and why, or why not?” to raise awareness of representation, resources, reality and rights.

Gerlich says there is a segment of the Viennese population – mostly men who drive cars – who resent gender mainstreaming because they are fearful of loss: of quality of life in the city, but also of power. “Of course they are not happy,” he says.

But any rumble of backlash against gender mainstreaming has struggled to gain traction when the message from the city’s highest offices has been one of unwavering support. Statements and symbols have helped to make that clear, such as the introduction of gender-sensitive language and titles to its corporate branding and, on the underground train network, posters to raise awareness of vulnerable passengers that represent men and women equally.

Today gender mainstreaming principles are enshrined in policy, with sanctions for those who do not comply. “Gender budgeting”, for example, introduced in 2005, requires each department to report twice a year on how their expenditure has benefited men and women equally. New housing projects must meet gender sensitivity criteria to be subsidised – a sort of checklist to ensure that mainstreaming is not dependent on individual interest.

This, Kail has written, is a greater achievement than she could ever have imagined back in 1991. After 26 years, it is now fairly common practice in Vienna to approach city living through a gender lens – and in 2008, the UN Human Settlements programme recognised Vienna’s urban planning strategy as best practice.

It is striking that other cities are only lately looking to follow in its example, with Berlin, Barcelona and Copenhagen all beginning to incorporate gender mainstreaming into their urban design. In 2013 Stockholm began implementing gender-sensitive snow clearing, where the routes most used by women – such as footpaths around daycare centres – were cleared earlier in the day. But the fact that the policy was subsequently blamed for long delays (apparently without grounds) shows just how much scepticism there is about strategies to achieve gender equality – or even the need for them at all.

But the more imminent threat to the city’s housing standards is growth. Vienna needs 130,000 new residential units by 2025, and stretched public resources could force compromises in quality, gender sensitivity among them.

“I think it’s already in process,” says Riss. New private developments far short of the high standard set for social housing, she says. “They sell flats with really bad floor plans, they don’t care about stairwells that have daylight or communication between neighbours. All of these achievements that have been implemented – they don’t apply any more.”

Gender must also now compete with other, sometimes conflicting, concerns – climate resilience, migration, the better-access lobby – for resources and attention. But after nearly 30 years, gender mainstreaming is nearly procedural, almost embedded in the municipality mentality.

Aspern doesn’t feel like a “feminist utopia”, as Kail once described the women’s office. Rather, it comes across – in its cohesion, sense of established community and lively public spaces – as simply a very well-designed neighbourhood. Therein lies the importance of gender mainstreaming, says Kail, as well as the difficulty in arguing its case: “If it didn’t happen, we would feel it. But as long as it happens, we don’t see it.

“If they’ve really accepted it, it becomes invisible.”

*Source: Guardian*



# Christchurch Northern Corridor Site Visit

On 14 March the Canterbury West Coast branch had an after-hours site visit of the Christchurch Northern Corridor (CNC) Alliance project.

After an initial safety briefing and project overview at the site office, the attendees hopped back onto the bus and were driven around some of the key sites on the project. We were hosted by John Kerr and Melanie Williams from CNC Alliance, and we thank them for their time and generously agreeing to host us.

A visit to the Waimakariri River Bridge northbound three-laning construction was impressive and interesting, noting the foresight of the original late 1960's designer/project funders to construct headstocks that could enable a future third lane to be built in the inside of the bridge in each direction.

The bridge held up remarkably well during the recent Canterbury earthquakes, so there was good confidence that the bridge would take the additional lane loading, however changes in building code since the 1960's meant that headstock strengthening is required, through steel brackets plates and beams fixed to the original concrete pier headstocks.

This involved precision drilling through the concrete to avoid any critical reinforcing, so that the bracket could be secured.

Importantly, the work includes for a separated cycle/pedestrian clip-on structure on the eastern side of the southbound bridge, the first such dedicated provision across the Waimakariri River for these road users.

The group also visited other bridges and Belfast Road cycle/pedestrian underpasses along the route, noting

the aesthetically pleasing and CPTED-promoting inward sloping walls that form the underpasses, but were structurally difficult to implement!

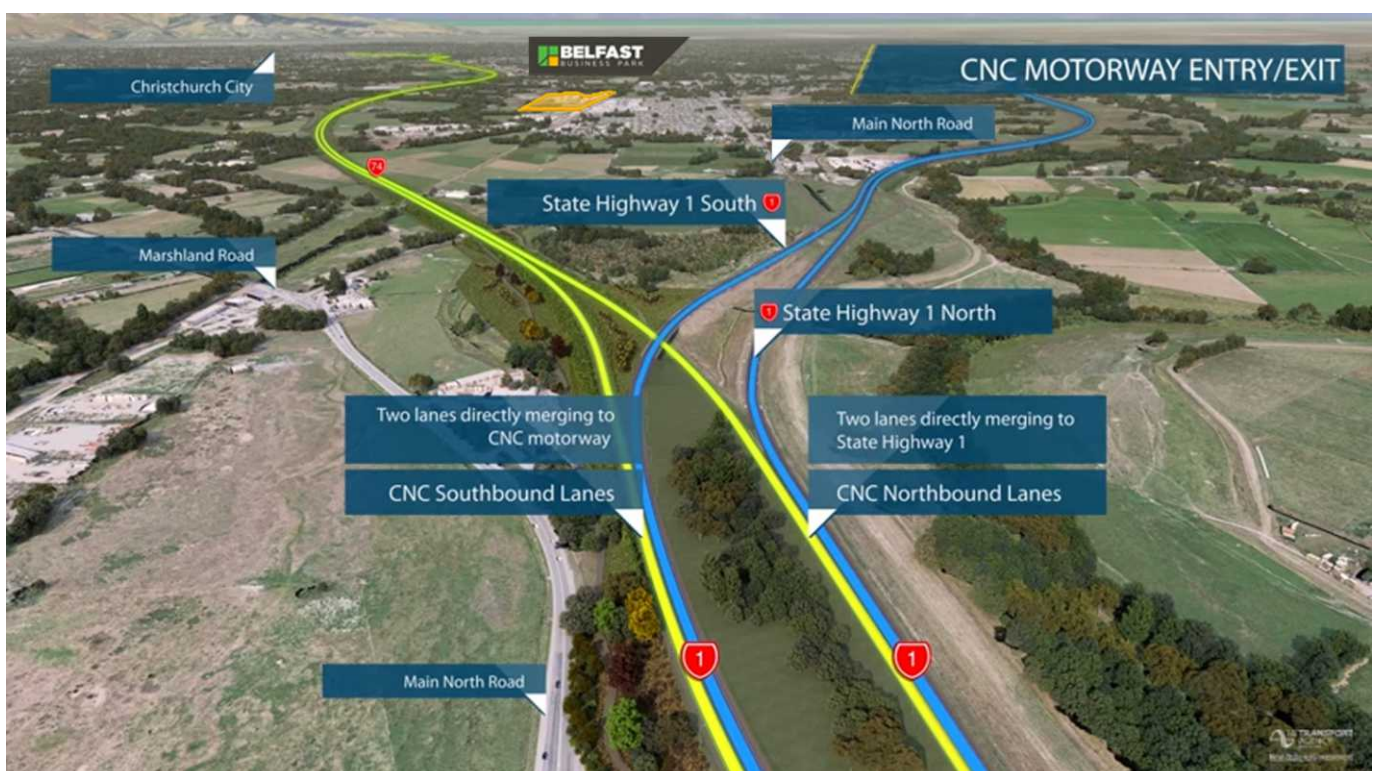
Another key aspect of the project is the very soft and variable ground that the road corridor is being built on, including former marshes and drainage basin. The large pre-loading of built embankments was up to 7m in places, which resulted in up to 1.5m of accelerated consolidation of some sections of the corridor.

It was stated that the quantity of imported material used on the project will be approximately twice that shown on the drawings, due to the loss of material due to ground consolidation.



The project team are confident of delivering the project on time in 2020 and those who attended are looking forward to driving the finished product next year.

This was a popular event with group members and we will look to provide more site visit events later in the year.



# Tim Hughes

## Transportation Group Life membership

At the recent TG conference, Tim Hughes was awarded life membership of the Group.

Despite his Australian roots, Tim has served 40 years as an engineer in the transport sector in New Zealand and has made an immense contribution to road safety, accessibility and sustainability, particularly in relation to vulnerable users.

Tim joined the Ministry of Transport in April 1978 as an automotive engineer where he worked on vehicle noise limits and emissions. He then retrained as a traffic engineer, studying applied statistics and traffic engineering planning and control at New South Wales University, and more recently completed a Masters in Transportation Engineering at Canterbury University.

In 1986 he specialised in crash reduction studies and moved to Christchurch to start the “Blackspot team”. During that period he convened the internal engineers expert group on walking and cycling.

In 2003 there was a new emphasis on walking and cycling and Tim was appointed into a new national specialist position within what was then LTSA. In the years from 2003 to 2010 he was part of a team that made great strides in guidance for walking and cycling and developing policy and tools for accessibility planning. In 2015, Tim was seconded to the National Cycling team to support the Urban Cycleways Programme with expert technical advice.

Tim has led and contributed to a number of important pieces of national policy and planning and design guidance within his area of expertise including: the Neighbourhood Accessibility Planning guidelines, the Non-Motorised User Audit guidelines, the Pedestrian Planning and Design Guidance, The High Risk Intersection Guide, MOTSAM, the Traffic Control Devices Manual, benchmarking for walking and cycling, cyclist skills training, the Guidelines for Facilities for Blind and Vision-Impaired, the AustRoads Part 6A guidance on walking and cycling paths, and the Cycle Network Route Planning and Design Guide which recently evolved into the online Cycling Network Guidance.

He was the New Zealand representative on the Australian Bicycle Council for a number of years which included leading and providing technical advice on Austroads guidelines. Over the years he has also undertaken and peer reviewed many road safety audits. He has been an important member of the Active Mode Infrastructure Group since 2012. He has also led many research projects that have helped advance knowledge and improve awareness of vulnerable users.

Tim’s lifetime of experience in walking, cycling, accessibility and road safety coupled with his eye for detail and thorough approach to research and evidence have made him an invaluable member of NZTA teams (in all their incarnations) and the wider transport sector over the years. He is a mentor to many of us in the active modes area, and is generously imparting much of

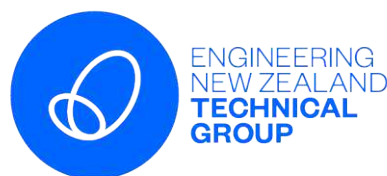


*Unable to attend the ceremony, Tim accepted the award by video*

the wisdom he has accumulated over his 40 years (as long as it’s after 10am), so we can continue on his legacy.

In around the year 2000, Jane Dawson from the Cycling Advocates Network Executive, described Tim as a “subversive bureaucrat, working within the system”. In 2004 he was able to go back to her and state it was now government policy. As he heads towards retirement, Tim sees the new GPS and is very pleased to see that almost everything he has professionally championed over the years is now there in print. We look forward to spending the final years of Tim’s career delivering on these objectives with him.

Nominated by: Claire Pascoe, Gerry Dance, Simon Kennett and Sarah Cronwright  
Safe and Sustainable Transport team  
New Zealand Transport Agency



Engineering NZ welcomed a number of new Fellows and Distinguished Fellows earlier this year, some of which are Transportation Group members.

Congratulations to the following Transportation Group members awarded with Fellowships:

- Don McKenzie
- Michael Kerr
- Dr Nabin Pradhan

More information about Fellowships and recipient citations can be found [here](#)



# Transportation Engineering Postgraduate Courses 2020 (Dates provisional)



The University of Auckland  
NEW ZEALAND



NZ TRANSPORT AGENCY  
WAKA KOTAHİ

**Department of Civil & Environmental Engineering University of Auckland**  
**For Master of Engineering Studies [MEngSt] and Post Graduate Certificate [PGCert], with**  
**/ without Transportation specialisation, or for a one-off Certificate of Proficiency, COP**

## **Semester 1 (Mar-Jun 2020)**

**CIVIL758 – Traffic Systems Design**  
**(Monday & Tuesday, three hours / week, 12 weeks)**

Traffic signal timing analysis, gap acceptance parameters, intersection analysis of performance (priority, roundabouts, signals), introduction to transportation planning and modelling techniques, RMA and other requirements, computer modelling and simulation.

**CIVIL761 – Planning & Design of Transport Facilities (25-27 March & 9-11 May)**

A range of topics on planning and design of transport facilities including fundamentals of traffic flow, modelling and simulation of transport facilities, macroscopic traffic models and traffic signal safety and operations.

**Civil 767 – Pavement Analysis & Design (1-3 April, 13-15 May)**

Pavement design philosophy; stresses, strains and deflections in pavements; pavement material properties and characterisation; traffic loading; pavement failure mechanisms; assessment of pavements; empirical and mechanistic pavement design methods; pavement overlay design; asphalt mix design.

**CIVIL770 - Transport Systems Economics (11-12 March, 29-30 April, 27-28 May)**

Advanced specialist topics in transportation economics including economic analysis, theory of demand and supply of transport, govt. intervention policies, and externalities and agglomeration. A research project analyses 2 major transportation infrastructure projects to determine likely future social benefits and dis-benefits.

## **Semester 2 (Jul-Oct 2020)**

**CIVIL759 – Highway & Transportation Design (Thursday and Friday, 3-hrs, 12 weeks)**

Economic and environmental assessments of transport projects. Road safety engineering. Crash reduction and prevention methods. Pavement asset management. Pavement rehabilitation techniques. Heavy-duty pavements, highway drainage and chip seal design.

**CIVIL765 – Infrastructure Asset Management (12-14 August & 23-25 September)**

Advanced theories and techniques fundamental to the management of infrastructure assets, primary focus on Asset Management Plans (AMP). Entire spectrum of infrastructure, roads, water and buildings. Major project incorporates a literature review / critical review of an AMP from industry.

**CIVIL 771 – Planning & Managing Transport (29-30 July, 16-17 September & 14-15 October)**

An advanced course on integrating land use planning and transport provisions, including planning for different land use trip types and parking, travel demand management techniques, and intelligent transport systems. An independent project applies this specialised knowledge.

**CIVIL 773 - Sustainable Transport: Planning and Design (5-6 August, 26-27 August & 1-2 September)**

Pedestrian and cycle planning and facility design using best practice (network and route planning, trails, roundabouts, footways, terminals, plazas, footways, escalators, etc.); public transport (bus, rail and LRT) and vehicle operations for compact central urban areas and transit orientated developments, shared spaces and user safety in design assessments.

NOTE: Other relevant courses at the University of Canterbury (e.g. Civil / Transportation) or at Auckland (e.g. in Civil / Construction Management) or elsewhere can be suitable for credit – prior approval is required.

For Admission / Enrolment inquiries contact: Bevan Clement  
Email: [b.clement@auckland.ac.nz](mailto:b.clement@auckland.ac.nz)

DDI (09) 923 6181  
Mob: 021 022 65184

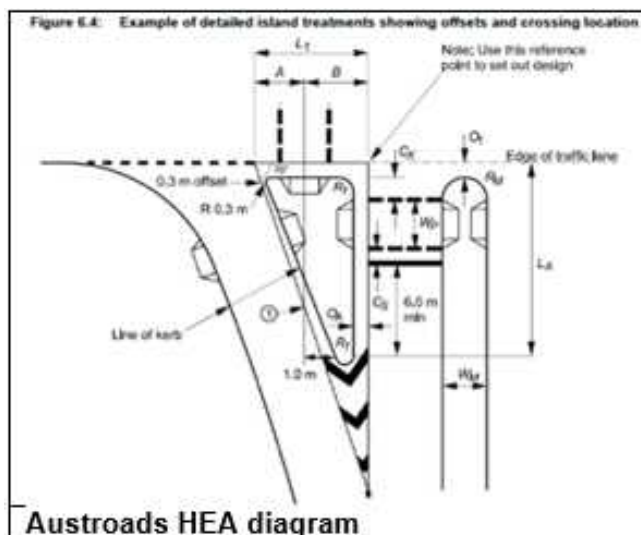
**Further details, including the course outlines, can be found at:**

<http://www.cee.auckland.ac.nz/uoa/home/about/ourprogrammesandcourses>

Our Masters degree Brochure [https://cdn.auckland.ac.nz/assets/engineering/for/future-postgraduates/documents/Transportation\\_final\\_print.pdf](https://cdn.auckland.ac.nz/assets/engineering/for/future-postgraduates/documents/Transportation_final_print.pdf)

Our Transportation Research Centre [www.trc.net.nz](http://www.trc.net.nz)

# Challenge to Left Turns at Signals Research Study



This article is a response to a paper entitled Pedestrian Safety – Left Turns at Signals - Research Study (the ‘conference paper’) by Bruno Royce of Traffic Engineering Solutions Ltd (TES), presented at the ENZ TG Conference in Wellington in March 2019 -

I was informed just after the conference of the commissioned paper and the direction of the results and recommendations in it. I obtained a copy of the paper, and, on reading the paper, I was most surprised at the results which were diametrically opposite to those we (O'Brien Traffic) found in a major peer reviewed study published by the US Transportation Research Board in Transportation Research Record No. 2299 – Pedestrians (2012).

The purpose of this article is to illustrate where the NZ data entry and analysis was flawed, and to explain that the necessary data corrections and re-analyses would appear to support the outcomes and recommendations of our earlier study.

O'Brien Traffic was engaged by the Victorian State Road Authority (VicRoads) to test whether or not VicRoads should continue with its current policy to encourage the use of well-designed High-Entry-Angle (HEA) left turn slip lanes as its preferred treatment at signalised intersections to manage pedestrian and safety issues.

As Mark O'Brien, Principal Author, said in a presentation to AITPM in 2016: “Two conflicting points of ‘common wisdom’ were put forward – planners, urbanists and others “everyone knows that slip lanes are unsafe for pedestrians and so they should be removed wherever possible and no new ones should be installed”, and VicRoads - “slip lanes significantly improve operations and safety and should be maintained and included in new or upgraded intersections””.

Our study was to identify whether VicRoads was justified in continuing with its policy, and, if so, whether there were any policy and design improvements that should be made. Our full results and reporting have been made available as widely as possible, including to NZTA, in the hope that others could use the results, extend the study, and refine it for local conditions where necessary.

I reviewed the 2018 TES research report (the ‘research report’) on which the conference paper was based. In the research report I saw that one HEA site had 3 recorded crashes, which I considered to be most unusual.

On examining the Appendix C table in that report, it was clear that the treatment at this site had been originally coded as C8 (low-entry-angle (LEA)), but later re-classified to C7 (HEA). The Austroads HEA typical design, and an aerial photo of the subject site are shown here.

Some differences between the photo and the diagram are obvious: the length of the island – about 3 m compared to a minimum of about 10 m, the continuous sharp radius curve on the right side of the slip lane compared to the straight side in the HEA diagram, and the area of the islands.

At the site, the pedestrian crossing is just prior to the holding line, compared to best practice which is to be a car length back from the holding line (as per roundabout design guidelines), but which is not shown in the Austroads diagram. This site has clearly been ‘mis-coded’.

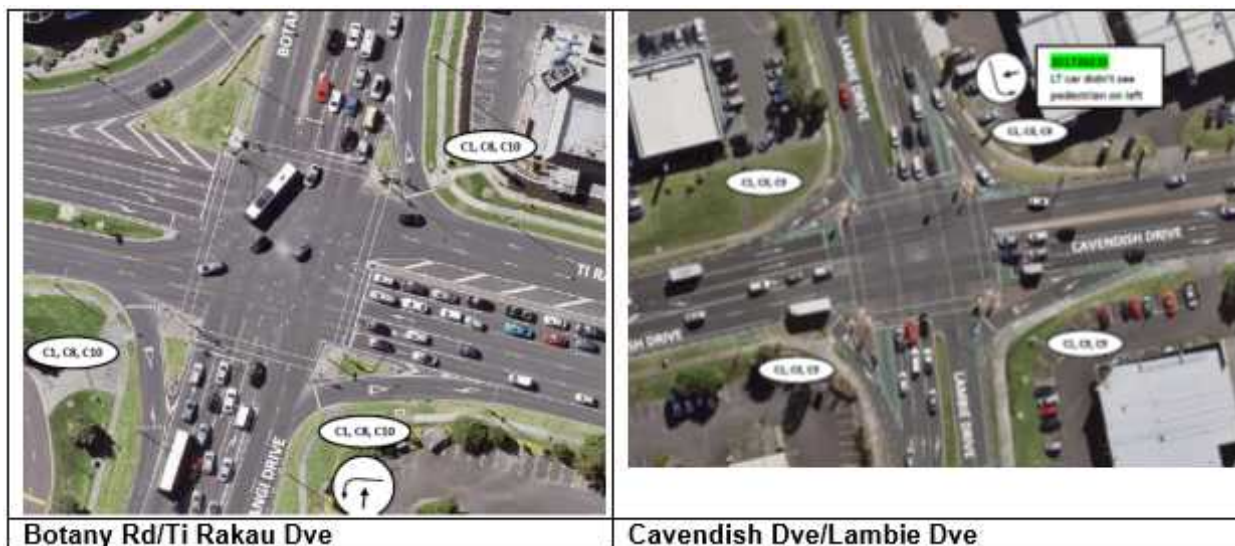
Given the mis-coding of the above site, I then decided to check if other slip lane sites had been mis-coded as HEA.

To my surprise, I found the opposite – 91 approaches were coded as LEA instead of HEA and that clearly complied with the Austroads diagram of a HEA slip. There were many others that arguably complied as HEA slips.

I reassessed the latter group, and this added a further 69 HEA sites, resulting in a total of 281 HEA sites with 1 minor injury crash and 2 non-injury crashes. But 16 sites that should have been coded as LEA ones were wrongly classified as C7 (HEA) – reducing the overall number of HEA sites to 265.

Two of the locations with a total of 7 wrongly-coded left turn treatments (C8 instead of C7), and that also had crashes, are shown on the facing page.





The conference paper safety outcomes are shown in the Table 1, with the revised results in Table 2 following it.

Treatment	TES Study	
	Frequency No. of Sites	5 Year Crashes No. of Crashes
a - Shared signalised	675	13
b - Exclusive Signalised	384	6
c - Left Turn Slip	637	25
<b>Total</b>	<b>1,696</b>	<b>44</b>
c1 - Slip standard	404	12
c2 - Slip + Ped Xing	147	13
c3 - Slip + Platform	3	0
c4 - Slip + Ped Xing Platform	1	0
c5 - Slip Signalised	54	0
c6 - Slip Free Flow	28	0
<b>Total Slip Lanes</b>	<b>637</b>	<b>25</b>
c7 - Slip Sharp Angle	121	3
c8 - Slip Gentle Angle	516	22
<b>Total Slip Lanes</b>	<b>637</b>	<b>25</b>
c9 - Slip Short Length	205	10
c10 - Slip Long Length	432	15
<b>Total Slip Lanes</b>	<b>637</b>	<b>25</b>

Table 1 – left turn treatments and recorded crashes – from the conference paper

The corrected critical data are shown in the Table 2. Note that there were no crashes in the C3, C4 and C6 categories, and that ‘slip sharp angle’ is the same as HEA, and ‘gentle angle’ is the same as LEA.

Revised data analysis (by O'Brien Traffic)		
	No. of Sites	Crashes per 5 years
a - Shared signalised	675	10 (M), 3 (N)
b - Exclusive signalised	384	1 (S), 3(M), 2 (N)
c7 - Slip Sharp Angle (HEA)	265	1 (M), 2 (N)
c8 - Slip Gentle Angle (LEA)	372	4 (S), 15 (M), 2 (N)
<b>Total Slip Lanes</b>	<b>637</b>	
Sub-categories:		
c7 - Slip Sharp Angle - with Pedestrian crossing	50	0
c8 - Slip Gentle Angle - with Pedestrian crossing	100	3 (S), 8 (M), 2 (N)

Table 2 – Revised site category numbers and crashes

The revised injury crash data in Table 2 shows that the ‘C7 Slip Sharp Angle (HEA) slip lane treatment is far safer than any of the other types. The crash data also indicates that there is no reason not to incorporate pedestrian crossings at such slip lanes.

In terms of injury crashes per site, ‘shared signalised’ is about 1 in 68, ‘exclusive signalised’ is about 1 in 96, ‘HEA left turn slip lanes’ is about 1 in 265, and LEA left

turn slip lanes’ is about 1 in 20. These results support conclusions diametrically opposite to those reported by Royce.

The crash data also support the original reasoning for doing away with the other unsafe slip lane types. One of the under-pinning principles in developing the HEA slip lane was to control speed of left turn traffic, and this is done by requiring the left turn movement to be through a tight radius at the end of the slip lane.

Another later principle was to keep pedestrians in view of the driver prior to a potential conflict. It is noted that the NZ data included crashes involving pedestrians where there was no injury – differentiating it from the Melbourne study which did not include non-injury crashes as those are not reportable.

It is my firm opinion, based on a logical assessment of the slip lane angles, that the main conclusions within the published paper need to be revised, to be:

- HEA slip lanes provide the safest form of treatment - and by a significant margin;
- LEA slip lanes are the most hazardous treatment - also by a significant margin;
- Pedestrian crossings on HEA slip lanes had no observed safety issues – clearly indicating that using pedestrian crossings on HEA slip lanes do not make those slip lanes less safe for pedestrians.

Further, I submit that the results, conclusions, and recommendations in the research report and the conference paper are so misleading that the latter needs to be corrected in data entry, related analyses, and results to more accurately reflect the true safety performance of the various slip lane facilities relative to the other left turn treatment options.

If the paper is published as it stands, it is likely to distort public policy-making in both NZ and Australia for a significant period. However, if it is corrected, the conference paper would strongly suggest that most localities in both countries are likely to benefit in the same way from policy refinements and design improvement with respect to slip lanes.

Andrew O'Brien  
Chairman - O'Brien Traffic  
Melbourne



The opening ceremony for the Hurunui Heartland Cycle Ride was held at the Hurunui Hotel in April. The Hurunui Heartland Cycle Ride is an on-road cycle route going all the way from Leithfield and Amberley, through heartland countryside, to Kaikoura.

It is designed to link some rural communities for cyclists and to provide them with a safe and scenic route through the district. It will also be the foundation leg of what will ultimately be a route going all the way from Cathedral Square the top of the South Island.

Mark Inglis, Mountaineer, Researcher, Paralympian and Motivational Speaker, was appointed the Trails Coordinator for the Hurunui Trails Trust. He has been overseeing the Hurunui Heartland Cycle Ride through to its grand opening. "It's been a privilege working with the team that had the concept to get cyclists from Christchurch to Kaikoura in, not just a safe way but, a way that connects with our great communities" he said.



## Designs unveiled for Hutt to Wellington coastal pathway

Associate Transport Minister Julie Anne Genter has unveiled designs for public consultation on the Ngauranga to Petone shared walking and cycling pathway. The Associate Minister also announced funding approval to begin construction on the Petone to Melling pathway.

"This project will provide people living in the Hutt with a congestion-free commuting option into the city," said Julie Anne Genter.

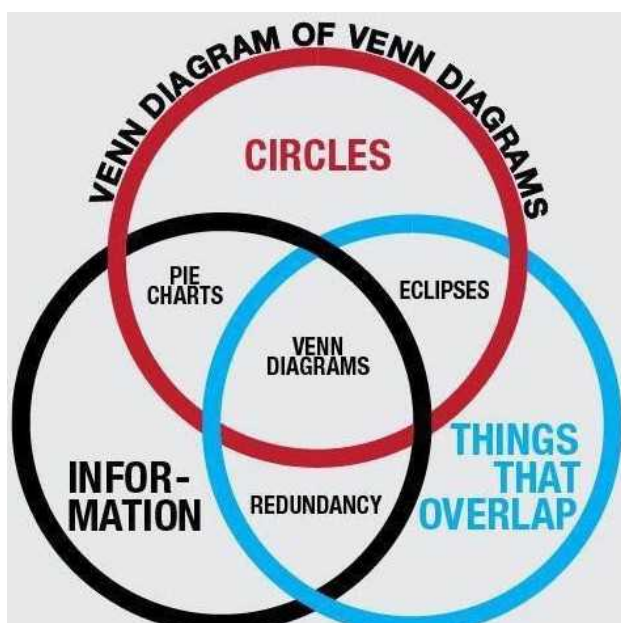
"With the rise of e-bikes and e-scooters, this path will provide people with more options for travelling between the Hutt, Petone, and Wellington City. The new designs show that the pathway will be an attraction for both visitors and residents alike. The 5m wide path will include additional space for people to rest, picnic, and fish the coast. An iconic overbridge at Ngauranga will connect people to the coastal pathway.

"The project itself represents the most significant expansion of public access to Wellington's waterfront in decades. The seaside path provides a critical resilience upgrade to the network, with protection of State Highway 2 and the rail line from erosion and damaging storm surges.

"In addition, the Transport Agency has approved construction to begin to extend a shared walking and cycling path from Melling to Petone. This path will make it safer and easier for people to walk, cycle and scooter to the train station, which will help reduce congestion and take the pressure of park and ride facilities.

"Ultimately the Melling to Petone section will connect to the coastal pathway and provide access right to the city. Work is expected to start on this section before the end of this year, with the project completed by the end of 2020," said Julie Anne Genter.

People can find out more about the proposed design for the Ngauranga to Wellington section and have their say using an online platform, Social Pinpoint: [nzta.mysocialpinpoint.com/w2hmlink](https://nzta.mysocialpinpoint.com/w2hmlink)





# Advanced Intersection Design for Cycling

Wed 24<sup>th</sup> July 2019  
Majestic Centre, Wellington



Following the recent “Planning and Design for Cycling” introductory courses, NZ Transport Agency and ViaStrada staff are presenting this full-day advanced industry training workshop based on the NZTA Cycling Network Guidance, recent cycling research, and local case studies.

## Course content



This interactive workshop focuses on advanced intersection design for cycling, particularly issues around signalised intersections and roundabouts, and the use of separated cycleways.

Participants receive a series of introductory presentations on how to provide for cycling at intersections and then work in groups on four real-life site problems.

Topics covered will include:

- Overview of the Cycling Network Guidance, recap of target audiences and 6 Elements of Continuity
- Left-turning movement options (signals, bypasses)
- Through movement options (conflicts with turning traffic, signal phasing options, bypasses)
- Right turn & other movements (signal phasing options, hook turns, protected intersections)
- Non-signalised treatments (side roads & driveways, roundabouts)
- Putting it all together (general principles of intersection design)

The group design exercises will be designed to apply workshop learnings to local scenarios (identified by nearby road controlling authorities), with an opportunity to discuss the findings afterwards. The emphasis will be on the selection of the most appropriate intersection design elements for each situation.

This course is aimed at designers tasked with delivering cycleways with intersection treatments; ideally participants will be familiar with fundamental aspects of simple cycleway design and/or intersection design.

*Note: Participants should ideally have either previously undertaken the introductory cycle planning/design course (or equivalent) or have sufficient previous work experience in cycle facility projects.*

## Workshop fees

- |   |                     |
|---|---------------------|
| • Early bird registrations received by 5pm Monday, 8th July, 2019 | \$460 (\$400 + GST) |
| • Registrations received after 8th July                           | \$575 (\$500 + GST) |

Cancellations received after the early-bird cut-off date incur a fee of \$100 (+GST) per person. Non-attendance on the day will be charged at the full registration rate, but substitutions are welcome.

## Further information and registration

- For further updates and to download a registration form visit the ViaStrada website <https://viastrada.nz/cycling-training>
- For further information regarding registration & venue requirements contact:  
**Anna Castellani: E: [anna@viastrada.nz](mailto:anna@viastrada.nz)**
- For further information regarding the course material and background experience contact:  
**Glen Koorey: Ph: 027 739 6905 E: [glen@viastrada.nz](mailto:glen@viastrada.nz)**

## Auckland/Northland Branch

A Panel Discussion on the sharing economy and the future of mobility in NZ was held on the 22nd March. It was a great opportunity to hear from some of those actively involved in providing services in the sharing economy including Yourdrive and Lime. Thanks to our panellist and everyone who attended for a great night.

The annual quiz is coming up on Wednesday 19th June at The Paddington, 117 St George's Bay Road, Parnell, Auckland at 5:30pm (for a 6:00pm Quiz Start). Email your Team Name, Organisation, and the number of team members to [David.Matthews@ghd.com](mailto:David.Matthews@ghd.com) and be in to win a \$100 bar tab plus and all the associated bragging rights for another year. The committee will sponsor nibbles.

## Canterbury-West Coast Branch

Since the last update the branch update the committee has been busy helping organise Canterbury's inaugural weekend of Jane's Walks. They were very well received, and Gemma has done a great write up of the weekend in this issue of Roundabout.

We've also been reflecting on ways in which we can better support our members' desire to engage more in submissions and raising best practice. Following our recent experience with the Council's Downstream Effects Management Plan submission we feel better prepared to respond to submission in future. (also covered in an article in this issue).

Other than that we've been looking forward to the National conference in Christchurch next year and Gemma Dioni has stepped up to be conference convenor for 2020, it will be held at the Christchurch Town Hall from the 11th – 13th of March. Theme and topics are still being decided but watch out for the call for abstracts in the next couple of months.

Finally, the annual transportation group quiz will be on Thursday the 1st of August so start thinking about assembling your teams now in order to have a shot at one of the most coveted bragging rights in the transportation profession! Details and venue are TBD so stay tuned for updates.

## Southern Branch

In May the Branch held an event on 'Transportation Economics and the Secrets of Cost-Benefit Analysis' by Matthew Gatenby at WSP Opus.

Also in May, the Branch had a committee meeting where Olivia Heer announced she was leaving WSP Opus and Dunedin for 'an OE' for 6 months and then will return to Waiheke Island and start back work in Auckland.

At the same meeting, Phil Dowsett announced his retirement from NZTA. Our committee suddenly went from 5 to 3!

The Southern Branch will be holding an AGM soon to determine who will be the next Chair and to recruit more for the committee. In the interim, Lisa Clifford will be Acting Chair.

## NZ Modelling User Group

### NZMUGS 2019 Conference Call For Presentations

The 12th annual NZMUGS Conference will provide an opportunity for customers, researchers, engineers, modellers and other practitioners in the transportation modelling fraternity to discuss current developments across a wide range of modelling applications.

**Monday 16 & Tuesday 17 September 2019**

**Museum of New Zealand Te Papa, 55 Cable Street, Te Aro, Wellington**

To cover what NZMUGS perceives as a growing area of transport planning and practice in New Zealand and Australia, we invite presentations in the following area:

***To Model or Not To Model, That is the Question***

The transport modelling industry has been collecting data, analysing data and developing more and more sophisticated models over the last 50 years, but have the outputs from these models resulted in better decisions being made?

Has the right advice been given to the right people at the right time? Or are we just muddying the waters with more data and uncertainty?

With a growing emphasis on having a robust evidence base from investment decisions, how should transport modellers be contributing to this, providers of the evidence base, or advising on the decisions?

NZMUGS will accept presentations that best illustrate the conference theme. As is previous years, there will be two types of presentation slots:

- A standard slot of 15 minutes with 5 minutes to field questions from the audience; and
- Short "Quick Fire" presentations of 10 minutes with no questions from the audience.

These "quick fire" sessions are intended for young professionals and students to present to the industry in a non-threatening environment.

As is previous years, there will be prizes for best presenter and best young presenter. If interested, please submit your conference presentation title and abstract (<300 words) summarising the content of your presentation by Friday 21 June 2019.

Please email all enquiries to John Pell at [John.Pell@gw.govt.nz](mailto:John.Pell@gw.govt.nz) with the subject line: 2019 NZMUGS Conference.

We also invite interest in sponsorship and have different levels that will suit a variety of organisations. For these sponsorship opportunities, please contact Bob Hu at [Bob.Hu@jacobs.com](mailto:Bob.Hu@jacobs.com) for further information.

Remember if you are a Transportation Group member, it is free to join NZMUGs. All you need to do is email [tech.groups@engineeringnz.org](mailto:tech.groups@engineeringnz.org) and ask to sign up.



# Active Modes Infrastructure Group Update

The latest AMIG meeting was held in Wellington on May 29th, with a bumper turnout attending. Just as noteworthy was the fact that we actually finished on time... Here are some key discussion points:

- The “**Innovating Streets for People**” project mentioned last time is moving along with a couple of trials to be considered around pedestrian crossings. One is to look at flashing belisha beacons that activate when people wish to cross (see right); the other is the use of “dragon’s teeth” (aka diagonal edgelines) on the approaches to crossings and school zones. It looks like there is interest from a few cities to test these out, with the Transport Agency helping with the analysis. Contact Claire Pascoe (NZTA) for more information.



- Some interesting proposals for road rule changes under the planned **Accessible Streets package** were presented for technical feedback. Unfortunately, I can’t say much about these right now; you’ll just have to wait and see what Govt decides to run with...

- The NZTA’s Cycling Network Guidance (CNG) has been available for three years now for industry use.

Now similar work is underway to develop a “**Pedestrian Network Guidance**” suite of material and also some **Public Transport Design Guidelines** (which also includes consideration of walking/cycling connections with PT; see below).



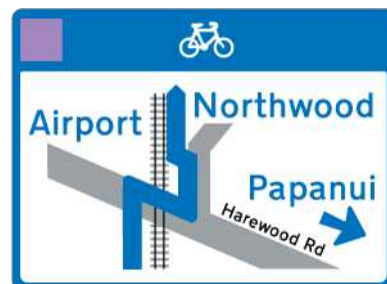
Review/updating of existing material and development of new material has started in each case; expect to see the first batch of guidance in the first half of next year.

- Speaking of the CNG, a number of draft items were presented for feedback to AMIG; either introducing **new CNG guidance or updating existing material**.

Topics this time included contra-flow cycleways, “access control devices” (aka bollards, barriers, etc), cycleway treatments across commercial accesses (see below), bike parking, heritage considerations, and treatments for shared area conflicts.



- In case you hadn’t heard, the **2018 Omnibus Amendment Rule** was finally signed off, meaning that a whole raft of minor road rule changes have now been enacted. For walking and cycling that includes new ways to store school crossing signs, the ability to use either signs or markings for regulatory control on paths, and a variety of new cycleway warning signs/markings and cycle route direction signs (see right). Check out the updated Road User Rule and Traffic Control Devices Rule for details of the changes.



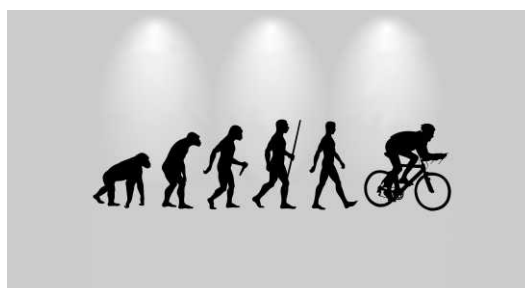
Other items discussed at AMIG this time included whether to approve a neighbourhood greenway shared street sign, use of sharrow markings in shared cycle/left-turn lanes, and the use of raised ped’n/cycle crossings across side roads.

Auckland Transport also presented some interesting examples of “Copenhagen-style” cycleways being built in new Auckland subdivisions. If you want to know more about this and previous AMIG meetings, check out the group’s [webpage](#)

The next AMIG meeting will be on **7th August 2019** also in Wellington. If you would like to attend, or at least be part of the ongoing email discussion group, contact co-convenors Wayne Newman (RCA Forum; [wayne@cresmere.co.nz](mailto:wayne@cresmere.co.nz)) or Gerry Dance (NZTA; [Gerry.Dance@nzta.govt.nz](mailto:Gerry.Dance@nzta.govt.nz)).

As always, you can have a chat with me about raising any ideas or issues on your behalf – I’m happy to do so.

**Glen Koorey (Trptn Group AMIG rep), ViaStrada**  
([glen@viastrada.nz](mailto:glen@viastrada.nz), ph.027-739-6905)



The courses below are available for full-time or part-time students studying for the following postgraduate transportation qualifications at Canterbury:

- Certificate of Proficiency (COP) ~ for individual one-off courses (great for CPD!)
- Postgraduate Certificate in Engineering (PGCertEng) ~ typically four courses
- Master of Engineering Studies (MEngSt) ~ typically eight courses
- Master of Engineering in Transportation (MET) ~ up to six courses plus research project or thesis

Please see the website of the University of Canterbury for fees per course in 2019:

<http://www.canterbury.ac.nz/courseinfo/MyGetCourses.aspx?course=&year=2019>

*All courses run in “block mode” to enable part-time and distance students to easily take part. In 2018, the contact time will be four days (i.e. a 2-day block of 2 blocks), and students taking the courses will be expected to do more reading and learning in their own time.*

*All prospective students must apply to enrol in courses no later than one week prior to the course starting (preferably earlier), otherwise late fees may apply.*

*Candidates with a Bachelor of Engineering OR other relevant degrees (e.g. planning, geography, psychology, maths), OR non-degree qualification and suitable work experience, will be considered for entry.*

## **COURSE Semester 1**

## **DESCRIPTION (see flyers on website for more details)**

### **ENTR 401: Fundamentals of Transport Engineering**

Self-study course with tutorials on 27 Feb (Semester 1) and 24 July (Semester 2)  
Course coordinator: Dr. Kun Xie Traffic engineering; Road geometric design;  
Highway capacity and level of service; Intersection analysis & design; Traffic flow  
theory; Traffic signal control; Transportation planning; Accident reduction; Statistical  
analysis. [bridging course for non-transportation students]

### **ENTR603: Advanced Pavement Design**

Block dates: 18-19 Mar, 13-14 May Course coordinator: Assoc. Prof. Mofreh Saleh  
Covers the principles and fundamentals of Superpave characterization system;  
Multilayer analysis using Circly; Traffic volume and loading calculations; Austroads  
mechanistic empirical pavement design; Deflection analysis and backcalculations;  
Overlay design.

## **Semester 2**

### **ENTR608: Traffic Management and Monitoring** (Block dates: 26-27 Aug, 30 Sep-1 Oct)

Course coordinator: Dr. Mehdi Keyvan-Ekbatani This course will provide students  
with a fundamental understanding of traffic network estimation techniques,  
including control theory, traffic estimation and traffic control techniques using a  
variety of simulation and software packages. This course is expected to develop  
student skills to the level where the student understands the theory behind traffic  
control and can identify, diagnose and manage traffic flow problems.

### **ENTR612: Transport Policy and System Management** (Block dates: 19-20 Aug, 23-24 Sep)

Course coordinator: Dr. Diana Kusumastuti Transport economics; Travel demand  
management; Transport policy objectives and instruments

### **ENTR615: Advanced Traffic Flow Theory and Simulation** (Block dates: 2-3 Sep, 16-17 Sep)

Course coordinator: Assoc. Prof. Dong Ngoduy This course introduces advanced  
concepts and principles of traffic flow modelling. Participants will also obtain skills in  
the practical application of traffic simulation software.

*Note: Other relevant courses at the University of Canterbury, University of Auckland or elsewhere may also be  
suitable for credit to a PGCertEng, MEngSt or MET (contact Assoc. Prof. Saleh for approval).*

For more details contact:

**Associate Professor Mofreh Saleh** (Ph. 03 369 5118; Email: [mofreh.saleh@canterbury.ac.nz](mailto:mofreh.saleh@canterbury.ac.nz))

Or visit the website: [www.met.canterbury.ac.nz](http://www.met.canterbury.ac.nz)





# Photo Competition

Street art can be really clever. Here are some great examples seen around the world. Seen any others? Send photos to: [daniel.newcombe@at.govt.nz](mailto:daniel.newcombe@at.govt.nz)





## Transportation Planners (Intermediate/Senior/Principal) Auckland and Wellington

We are proud to have recently been named on some of New Zealand's largest roading infrastructure projects, the City Rail Link (CRL), and RiverLink - which are presenting wonderful opportunities for our employees, and the potential for us to expand our Transport team!

Our Transport team is in demand and is growing rapidly. We are looking for Transportation Planners at all levels to help drive this increasingly successful part of our business forward. These roles are available in Auckland and Wellington.

Tonkin + Taylor is a specialist, employee-owned New Zealand multi-disciplinary consultancy. We are renowned for our innovative solutions, exceptionally talented people and client delivery. We are a dedicated team of professionals who enjoy our work and like to have fun! Tonkin + Taylor is not only a place to work - it's a place where your work will make a difference.

You can look forward to:

- A highly competitive remuneration package
- Potential for shareholding in one of New Zealand's largest employee owned environmental and engineering consultancies
- Freedom and autonomy in the work you do
- The opportunity to shape and contribute to some of New Zealand's most complex and challenging transport projects
- A senior role in a Company that believes strongly in the value our people bring to our clients and their projects.

Joining this team, you will be planning multiple projects in a buoyant transport and infrastructure market across both NZ, Australia and Asia Pacific. The work is technically challenging, varied and could see you leading challenging transport/land use planning studies as well as shaping energetic Alliance and design build projects.

To be successful in the position you will be a highly motivated self-starter. You'll have a proven track record for delivery on projects, being a technical specialist in your own right and have the client relationships to develop and maintain continued opportunities in the industry.

It is expected that you will have:

- Auckland and New Zealand experience
- Proven background in technical delivery of transportation planning and engineering projects
- A relevant tertiary qualification
- Member of Professional Institute
- Multi-modal planning experience

This opportunity will allow you to:

- Lead, take ownership of and deliver projects
- Broaden your experience, working with a variety of other disciplines
- Realise your potential through exposure to nationally significant projects that require innovation and the ability to think outside the square

Tonkin + Taylor offers an excellent remuneration package, ongoing training and development, flexible work/life balance and a high level of technical expertise. If you are, or are aspiring to be, the best in this field and want to work in a vibrant office then this represents a unique opportunity to become part of a very successful company.

If you are an individual that thrives on challenges, works well in a team, and is keen to support others in a growing industry; then this is the opportunity for you!

**CLICK HERE TO APPLY NOW**

Or if you would like any more information about this position, please contact Vasanti Bhana [VBhana@tonkintaylor.co.nz](mailto:VBhana@tonkintaylor.co.nz)

For further information on Tonkin + Taylor, go to [www.tonkintaylor.co.nz](http://www.tonkintaylor.co.nz)

***We are proud to be an Immigration New Zealand Accredited Employer, and a member of Diversity Works.***





## Transportation Engineers (Intermediate/Senior/Principal) Auckland and Wellington

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Tonkin + Taylor is a specialist, employee-owned New Zealand environmental and engineering consultancy. We are renowned for our innovative solutions and exceptionally talented people. We are a dedicated team of professionals who enjoy our work and like to have fun! Tonkin + Taylor is not only a place to work - it's a place where your work will make a difference.

Due to sustained growth in several exciting areas of our business, T+T are currently seeking Intermediate, Senior and Principal Transportation Engineers to help drive our growth. The work is technically challenging and varied. We have various pathways open and scope for you to develop.

You can look forward to:

- A highly competitive remuneration package
- Freedom and autonomy in the work you do
- The opportunity to shape and contribute to some of New Zealand's most complex and challenging transport projects
- A role in a company that believes strongly in the value our people bring to our clients and their projects.

Joining this team, you will have the opportunity to be involved in the delivery of multiple projects in a buoyant transport and infrastructure market across both NZ, Australia and the Pacific. The work is technically challenging, varied and could see you involved in energetic Alliance and design build project environments as well as challenging transport/land use planning studies.

We are working on landmark infrastructure projects across New Zealand and Australia. We provide opportunities to work, learn and contribute across a wide range of sectors including transport, urban re-development, water resource, energy, ports and solid waste.

If looking for a change and a challenge, we have a place for you. To be successful, you must be a self-starter and able to show initiative. You will have the opportunity to work autonomously so your confidence, organisational skills and ability to multitask will be fully utilised. Given the consultancy nature of our business, you will also need to demonstrate excellent verbal and written skills.

To be successful in the position you will be a highly motivated self-starter. You'll have a proven ability to establish new business and build client relationships. Your ability at a strategic level with both clients and within T+T will be important. It's expected that you will have:

- A relevant tertiary qualification
- Member of Professional Institute
- Multi-modal planning experience
- Experience in delivering Transport solutions and applying innovative approaches when opportunity arises

This opportunity will allow you to:

- Lead, take ownership of and deliver projects with a high level of responsibility
- Broaden your experience, working with a variety of other disciplines
- Realise your potential through exposure to nationally significant projects that require innovation and the ability to think outside the square

At T+T, we offer an environment in which innovation, technical rigour and achievement of results are rewarded. With our commitment to training, we will support your career needs and provide opportunities for development.

If you are not already convinced about joining us, we also offer competitive remuneration and transfer packages along with a wide range of employee benefits. Tonkin + Taylor is not just a place to work - it's a place where innovation, technical rigour and achievement of results are celebrated and rewarded. It is a place where you can work alongside New Zealand's experts to solve some of the most challenging, interesting, and meaningful projects nationwide.

If you are an individual that thrives on challenges, works well in a team, and are keen to support others in a growing industry; then this is the opportunity for you.

### About us:

We are a dedicated team of professionals working in the environmental and consulting engineering space who enjoy our work and like to have fun. Tonkin + Taylor is not only a place to work - it's a place where your contribution will make a difference.

### CLICK HERE TO APPLY NOW

Or if you would like any more information about this position, please contact Vasanti Bhana [VBhana@tonkintaylor.co.nz](mailto:VBhana@tonkintaylor.co.nz)

For further information on Tonkin + Taylor, go to [www.tonkintaylor.co.nz](http://www.tonkintaylor.co.nz)

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# Roundabout of the month



This image, whilst technically showing a drainage grill rather than a roundabout, actually shows what amounts to a small roundabout for water to pass around rather than drain away. Presumably the team in charge of getting the drainage levels right did it by eye and never checked it during wet weather.

Seen a better pic? Email: [daniel.newcombe@at.govt.nz](mailto:daniel.newcombe@at.govt.nz)

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## Biologist



## Microbiologist



## Molecular Biologist



# Caption competition



This edition's caption competition comes from Axel Wilke and shows what he suggest is the most poorly-placed road sign in the country. Don't blink or you will miss it.

An appropriate caption has been suggested. If you have a caption suggestion, or a photo of your own you want captioning, send it to [daniel.newcombe@at.gvt.nz](mailto:daniel.newcombe@at.gvt.nz)

## Which London transport mode are you?

1. trams



- never goes north of the river
- kinda awkward
- under-appreciated
- doesn't really belong in london tbh

2. docklands light railway



- the one who can drive
- stable job, stable relationship
- generally very good at life
- admired by all

3. underground



- the old and wise one
- reliable in an unreliable kinda way
- the glue that holds the group together
- wouldn't be the same without them

4. bus



- cheap and cheerful
- gets a bit freaky after dark
- always up for an adventure
- helps your drunken self get home

5. overground



- the annoying hipster one
- wardrobe full of wavy garms
- never turns up on time
- thinks its trendy to live in a shithole

6. emirates air line



- lives for the sesh
- never going to get a real job
- isn't really going anywhere
- still good fun though

# Transport Advice

## FOR DUMMIES



**Dear Transport Guy**

I find it preposterous that NZTA say so many of the country's roads apparently have speed limits that are too high. Surely if they were that bad then we'd have a horrendous road toll to show for it?

**Terrence, Kapiti Coast**

**Dear Terrible**

I think you'll find we do have a horrendous road toll.

**~Transport Guy**

**Dear Transport Guy**

I totally reject the idea that our speed limits are too high and should be reduced. Surely the problem is that the roads just need to be upgraded as quickly as we can?

**Simon, Bay of Plenty**

**Dear Slimey**

Lots of things should be done quickly - picking up food off the floor for instance (5 second rule) - but many things should be done slowly. Like driving on a narrow, winding road with lots of roadside risks. Sure, let's improve the most dangerous roads. But only an idiot would think that in the meantime the rest of the roads need to operate at anything other than speeds appropriate to their conditions. An idiot who doesn't mind people dying.

**~Transport Guy**

*A tongue-in-cheek column on transport matters by The Transport Guy. The contents do not represent the views of the Transportation Group NZ, Engineering NZ, or anyone else for that matter. Follow the advice at your own risk.*

**Dear Transport Guy**

I see Wellington has gained their own version of Auckland's ATAP, called Get Welly Moving, and I hear other cities are clambering to get an equivalent. Is this the way of the future?

**Denis, Tauranga**

**Dear Deceased**

A bit like bell-bottom trousers in the 1970s and shoulderpads in the 1980s, having your own 'alignment plan' with NZTA is all the rage. Of course the hard part isn't agreeing a comprehensive set of priorities and solutions with multiple agencies, it's choosing the best name.

In Auckland, ATAP has moved from being just an acronym to a genuine word, and there is a quaintness about Get Welly Moving (though no-one can agree quite where it should be moved to).



Other pending names for future alignment plans include:

- Tauranga: We'll Be The Car-Based One
- Dunedin: Its Alright Here, Though Some Carparks Have Burnt Couches In Them
- Hamilton: Bridges, Can We Please Have Some More Bridges
- Christchurch: We Already Have A Tram But Would Like Some Trains
- Whangarei: Please Don't Bypass Us Completely
- Napier: We Don't Really Understand Traffic Lights
- Taupo: The Only Waterside Town That Doesn't Have To Worry About Sea-Level Rise
- Rotorua: What About Us?
- Taupo Again: OK, Us And Rotorua
- Queenstown: Ahem

**~Transport Guy**

Do you have a dumb question for Transport Guy? Email it to:  
[transportfordummies@gmail.com](mailto:transportfordummies@gmail.com) and he'll do his best to answer...





### Transportation Group National Committee

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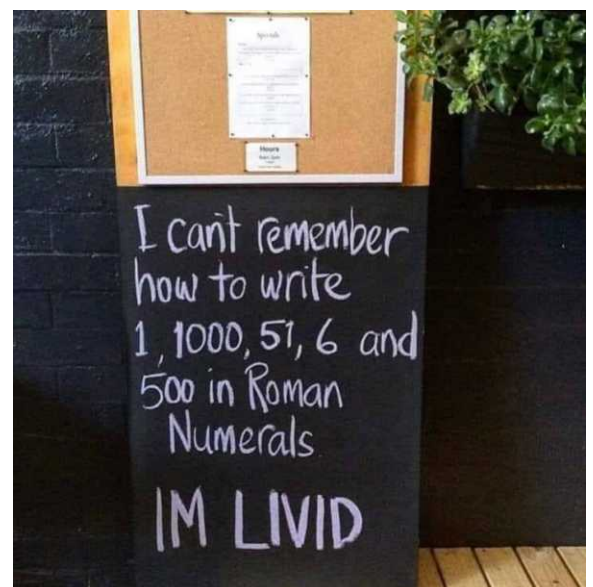
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**Additional dogsbody:** John Lieswyn  
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# Kids explain traffic engineering



*"Electric cars are almost as good as riding a bike but not as much fun."*