Roundabout

Magazine of the Transportation Group NZ

Issue 171 March 2022

In this edition:

- Auckland light rail announcement
- Malcolm Douglass in memoriam
- NZ's public transport in the 1990s
- Wellington crossings and parklets
- Hamilton roundabouts
- ITS development

And much more...

Editorial

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2022 is going well so far, eh?

I'm not sure about you but I was expecting the Delta variant, or perhaps its more popular cousin Omicron, to be the biggest challenge facing NZ as we entered 2022. I had no idea that within two months we'd be facing a barricaded Parliament grounds with protesters threatening to hang politicians and journalists, or a potential World War Three starting in Europe.

Didn't have either of those on my 2022 Bingo card.

Both of those catastrophes have a basis in the spread of disinformation – the wide range of conspiracy theories that the Wellington protesters brought with them, and the state-sponsored Russian efforts to delegitimise Ukraine as a peaceful and sovereign state. If I draw a very long bow, we can think about similar disinformation – or perhaps misinformation – at play in some of our current transport matters.

You only need to look at the commentary and column inches every time a cycle lane scheme is proposed, to note that what some see as a valid road safety effort is seen by others as social engineering and malevolence inflicted by an evil authority. Rarely do we see the simple debating of the actual issues of people's safety on a particular road. It usually descends into debates about perceived plots, historical grievances and wilful exaggerations, often fuelled by commentators seeking to advance their notoriety or audience (I'm looking at you, every talkback radio show host).

I was thinking about this when I first saw Waka Kotahi's new Road to Zero campaign ads on TV. They are jarring, which is their purpose of course, and I endorse the view that we should not be happy to pay a 'toll' of people's lives just to have a road network. In no other setting do we so blatantly accept such tragedy.

However, some of the early responses to the campaign have challenged this view and appear to be saying that because it will be hard to reach zero deaths on our network, we shouldn't try. And further, some imply that its actually a conspiracy to slow and socially engineer our traffic network for nefarious reasons. Some arguments have genuinely been about the emphasis on particular road safety tools, but unfortunately this often gets twisted into a simple opposition to the strategy.

Screenshot from Road to Zero campaign

I know we as a profession have been working harder and harder on road safety for many years, but I see this Road to Zero campaign as a bit of a watershed moment, where we either collectively work as a society to achieve it, or we decide its all a bit hard and go back to tinkering around the edges, as we weren't really willing to have to change our behaviour, our vehicles, or our roads after all.

I see our Group's role as helping share information – and counter mis- or disinformation – when the campaign and strategy is publicly discussed.

I know I will be having BBQ conversations with neighbours who will be repeating what they heard on the radio or social media about this wild scheme to stop everyone driving and force them onto bicycles. I see it as my job to correct the misunderstandings and set out simple explanations of the actual strategy. I don't see it as my job necessarily to convince them to change their minds, but if they are going to disagree with the Road to Zero strategy (or any other transport approach for that matter) they might as well have the basics right.

I see our Group's role as helping share information – and counter mis- or disinformation – when transport strategies are publicly discussed.

Inside this issue:

Chair's Chat

Welcome to 2022, where nothing is certain except death and complaints about traffic congestion.

I am agog that Wellington Airport is taking Wellington City Council to court to protest the installation of a pedestrian crossing on Cobham Drive (see article later in this edition).

The toddler-level tantrum is because the traffic signals that let humans cross a street safely would make a trip to and from the airport slower for the humans in metal boxes.

This in the midst of a climate crisis, a rapidly escalating energy crisis, and, by the way, a mental health crisis – all of which have easier access to walking as part of the solution. What won't help any problem worth solving is 'getting people to the airport faster'. Agog.

The rapidly rising price of fuel is a new disruption to add to the list of 'stuff that makes life less certain now'. It's the perfect time to introduce transport planning nudges, prompts that might help people make a different travel decision.

It would be good to also nudge your transport planning and engineering colleagues – towards more at-grade pedestrian crossings and less fretting over congestion, for example.

Thinking about doing something different takes energy, and people as a rule - even engineers, who are people too (citation needed). But at the moment, there is so little baseline certainty, people seem ripe for change.

So, let's seize the moment and start from first principles. Let's make our communities resilient to climate change, energy crises and pandemic-induced supply chain shortages by building easy, accessible, tree-coated streets that make walking and cycling the natural choice for recreation and travel.

Let's *not* include electric cars as part of the solution.

While they might be better than a petrol car as a transition to a lower-energy future, there literally aren't enough minerals in the world to replace our car obsession with a battery-fuelled substitute. (https://www.theguardian.com/environment/2017/jul/29/electric-cars-battery-manufacturing-cobalt-mining)

We just need to consume less, and for our sector that means way fewer kilometres travelled, whatever the fuel source.

The importance of going back to first principles has been highlighted in Tauranga recently. The inaugural Transportation Group-sponsored intern, Alice Davies, recently completed a study of bus stop accessibility in the Bay of Plenty.

Within a week, Alice, a social work student at the University of Waikato with an interest in transport for disabled people, reported that "The Tauranga City Council guidelines for bus stop accessibility are actually pretty good. It just seems that they don't implement their own guidance."

Correct. I'm going to give Alice an "A" for insight. Keep an eye on your inbox for an invitation to my Chair's Conversation in April, where I'll be talking with Alice Davies about her experiences working in Beca's Tauranga office this Summer.

Kia kaha Transportation Group – and see you all at our online Annual General Meeting later this month.

Bridget Burdett
National Committee Chair
bburdett@mrcagney.com

*Let's *not* include electric cars as part of the solution. While they might be better than a petrol car as a transition to a lower-energy future, there literally aren't enough minerals in the world to replace our car obsession with a battery-fueled substitute.*

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.

Correspondence welcome, to Daniel Newcombe:

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Roundabout is published around the 15th of March, June, September and December each year, and contributions are due by the 10th of each publication month.

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

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An artist's impression of a typical station entrance (rear of image) amongst a redeveloped plaza.

Auckland Light Rail announcement

The Government has announced that it is investing in the vision to build a high-capacity, linked-up rapid transit network across the city. One that improves existing neighbourhoods, brings us closer to work and school, and enables new housing within the city. It's a vision that also reduces sprawl, emissions and our dependency on cars.

It will start with light rail from the City Centre to Māngere, an area that will be home to 17% of Auckland's future population growth and 33% of job growth over the next 30 years. This will be the first leg of a system that will connect to the North Shore and North-West in time.

Where previous governments and councils have failed to plan for the long term, we are committed to preparing for and safeguarding our country's economic future today.

Cabinet have endorsed tunnelled light rail for the City Centre to Māngere corridor. Considering the various options and trade-offs, tunnelled light rail holds:

- the optimal opportunity for high-capacity future-proofed transport that improves travel time and reliability;
- enables a more flexible alignment and unlocks significant urban benefit within the corridor;
- sets the stage for future network integration – including a new harbour crossing and light rail to the North Shore;
- and avoids overwhelming Queen Street and minimises the extent of construction disruption.

Find out more about tunnelled light rail and what's next.

The Ministry of Transport, Waka Kotahi NZ Transport Agency, Auckland Council, Auckland Transport, Kāinga Ora and Mana Whenua have been looking at how light rail can work best for the city, with the priority delivering light rail between the city centre and Māngere.

Tasked with delivering an Indicative Business Case (IBC), the technical assessment work identified that light rail is the ideal form of transport to pursue. The IBC included a short list of options and recommendations about delivery entity, cost and funding enabling the Government to make a decision about the route, mode and delivery entity. You can read the business case here.

Engagement with Aucklanders has been critical to the process. Over July and August 2021 we connected with Aucklanders to get their views and included this in a summary issued to Government alongside the IBC. You might also find our FAQs page useful and if you can't find the answer you are looking for, please contact the team.

Read the Government announcement below:

The Government is bringing Auckland's transport infrastructure into the future by moving forward with an additional Waitematā Harbour crossing, progressing light rail from Auckland's CBD to the airport, and creating a linked-up rapid transport network as part of a 30-year plan.

"Where previous governments and councils have failed to plan for the long term, we are committed to preparing for and safeguarding our country's economic future today," Grant Robertson said.

"Auckland's population is projected to rise to two million by early next decade. In order to move two million people around our largest city safely and efficiently, we need well-planned and connected infrastructure.

"We are not going to repeat the mistakes of ad hoc planning and a scramble to build infrastructure when it is too late – this rapid transit system is about making sure Auckland is able to flourish as it grows.

"We have deliberately chosen this option for Auckland Light Rail that will integrate with other major infrastructure projects across Auckland, like the additional Waitematā Harbour crossing, the Auckland Rapid Transit Plan and Kāinga Ora Large Scale Projects," Grant Robertson said.

"Our largest city needs a linked-up rapid transit transport network that will serve Aucklanders into the future, making it faster to move through the city, connecting communities, providing greater access to businesses, all while reducing congestion," Michael Wood said.

"The Government is taking the next step regarding Auckland light rail from the CBD to the Airport, and is proceeding with the option recommended by the Auckland Light Rail Establishment Unit, which will see Light Rail in a tunnel from Wynyard Quarter to Mt Roskill, which comes to the surface and runs alongside the SH20 motorway to the airport.

"Alongside the City Rail Link, the underground network will bring Aucklanders transport infrastructure into the 21st century, allowing faster trips and reduced emissions. City Rail Link is the heart of Auckland's transport network, and Light Rail will now form the spine of what will be a fully integrated rapid transport network that will lead us into the future.

"The Government is also committed to an additional Waitematā Harbour crossing, and has brought forward planning for the crossing to ensure a fully integrated transport network for Auckland. Public consultation on options for the additional Waitematā Harbour crossing will begin this year, with a preferred option selected in 2023.

"To kick the can down the road could either preclude a second crossing from being a possibility in the future, or require what will be established transport infrastructure to be reconstructed meaning additional costs.

"The Northern Busway is growing by 20 percent a year and will run out of capacity in 10-15 years, so new transport options for the future are needed, and the planning must begin now. This decision alongside the City Rail Link means that we can now ensure rapid transit to the North as well as the South, East and West.

"Addressing future disruption is front of mind for the Government, and designing a support package alongside business will be a major part of this engagement in 2022. We are making a commitment to businesses in the area that significant disruption will be addressed through a comprehensive package, including direct financial support.

"Delivering a high-quality, world-class transport network to New Zealand's largest city is a key priority of this Government. We are already unlocking the city through transport projects such as the Eastern Busway and the City Rail Link, both of which make moving around Auckland faster, easier, and more sustainable. Aucklanders have clearly relayed that they recognise the need for this investment, they want us to get on with it, and we are," Michael Wood said.

We have deliberately chosen the option that will integrate with other major infrastructure projects across Auckland, like the additional Waitematā Harbour crossing.

Features of the chosen light rail option are:

- 24km route with up to 18 stations or stops from the City Centre to Māngere and the airport, running every five minutes so people can turn up and go.
- Capable of carrying up to 15,000 passengers per hour at peak, which is four times more passengers than a dedicated busway or trackless trams.
- Removal of up to 13 car lanes or taking 12,000* cars off the road, which is a great result for local streets, communities and carbon emissions (*average of 1.2 people per car).
- Integrates with current train and bus hubs and the City Rail Link stations and connections. Light rail can also be extended to the North Shore and North West without having to transfer from one line to the other.
- Includes safe walking and cycling along the corridor and with connections to all stations.
- Estimated to bring up to 66,000 new homes by 2051 and open up housing along the corridor in Mt Roskill, Onehunga and Māngere.
- Creation of up to 97,000 new jobs by 2051.

Click here to see a *Flyover video of ALR route*

The Auckland Light Rail unit's latest resources include fact sheets and maps, and the Indicative Business Case. You can also find technical notes summarising investigations into two modes: trackless trams and heavy rail, which we get lots of questions about. Find our resources here. A route map is below.

Magazine of the Transportation Group NZ Issue 171 March 2022

Hamilton's roundabout rethink as CBD pushes west

The lives of inner-city office workers will be put at risk if a planned upgrade to one of Hamilton's busiest roundabouts is left unchanged.

The stark warning from councillor Dave Macpherson comes as city bosses agonise over how to retrofit the Tristram St and Collingwood St intersection ahead of an influx of hundreds of workers into the CBD.

ACC plan to shift 700 staff into a yet-to-be-completed office complex on the intersection's south-west corner. The site will feature only 30 car parks, meaning the majority of workers will have to navigate the busy roundabout on foot or bike.

An initial plan to create a Dutch-inspired singe lane roundabout, that would have given priority to pedestrians and cyclists, was ditched after a review of the design found it would have created major traffic congestion.

Instead, council staff now propose to retain the existing roundabout and provide additional off-road shared paths at a cost of $3.15 million.

However, a proposal to install zebra crossings on raised platforms some distance away from the roundabout has raised concern among some city politicians who say pedestrians will be tempted to try their luck crossing nearer the busier intersection. Only a "handful" of the hundreds of pedestrians navigating the intersection will use the pedestrian crossings, Macpherson said.

"There will be a majority of people who won't use it. They'll cross that little island, and then they'll cross over again.

"I'm not really supportive of roundabouts, and I'm certainly not supportive of hiding the pedestrians 300 metres away from it, it won't work. The first time that somebody is seriously hurt or, God forbid, killed on that intersection, this decision might come back to haunt us."

Installing traffic signals at the Tristram St – Collingwood St intersection would improve pedestrian and cycle safety, a review found, but would also cause unacceptable traffic queues due to land restrictions at the site.

Macpherson said the city's business centre is growing westward, as reflected in the ACC build, and the council will have to find solutions to enable workers to cross over safely towards Anglesea St and Victoria St. The difficulties experienced at the Tristram St – Collingwood St intersection could be a "micro version of the macro problem".

"We don't have a plan really, except intersection by intersection."

Councillor Ewan Wilson said ACC isn't the villain by moving its staff into the CBD and is instead doing what the council's district plan encourages.
"We have designed our district plan around our centres ... and at the heart of that is office space," he said.

Retrofitting existing intersections to make them more pedestrian and cycle friendly is inherently difficult and the proposed upgrade to the Tristram St – Collingwood St roundabout is a pragmatic solution, Wilson said.

The danger of elected members acting like engineers, and trying to design the roundabout themselves, is the intersection won't be ready in time for when the ACC building opens in early 2023.

Elected members' confidence in the council's roading staff took a hit in 2021 following the Innovating Streets debacle. The trial saw the layout and streetscape of Ward St and Rostrevor St overhauled with a mixture of planter boxes, bollards and artwork.

The experiment drew the ire of Ward St businesses, developers and some city politicians due to the confused nature of the roll-out and apparent lack of consultation.
Source: Stuff

"We don't have a plan really, except intersection by intersection."

The latest concept drawing of the proposed upgrade to Hamilton's Tristram St and Collingwood St intersection has the zebra crossings on Tristram St shifted away from the roundabout.

RIP Malcolm Douglass—a colossus of the profession

Some of the major traffic corridors I was involved with included the proposed St Albans and Southern Motorways in Christchurch, Transmission Gully in Wellington, the Sand Hills Expressway in Kapiti, the Eastern Bypass in Taupo, and Hamilton's Waikato Expressway motorway corridors.

Sadly, our colleague Malcolm Douglass (aged 90) passed away recently at The Wood Retirement Home in Nelson.

Malcolm was a true gentleman. He contributed to New Zealand's planning, engineering, conservation and arts community. He made New Zealand a better place. He was a significant contributor to the development and progression of the Transportation Group, of which he was a Life Member.

In honour of Malclom, we republish below an interview he gave to Taituarā — Local Government Professionals Aotearoa.

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We interviewed Taituarā Life Member, Malcolm Douglass, who had a very long and successful career in local government. Malcolm's 60 year career focussed on long-term planning – he worked as a Civil Engineer and Town Planner specialising in transportation network and resource management planning.

Malcolm worked for regional government for 18 years which included seven years as a Chief Executive and city councils for 17 years with eight of those years as Director of Planning.

In contrast with these salaried Council positions Malcolm was, for a total of 20 years a consultant servicing local government. From 1975-83 he was a partner with Gabites Porter Consultants. From 1998 he was a sole consultant serving councils, some not for profit organisations and undertaking part time university lecturing.

How did you get started in local government?
My LG career began in Whanganui in 1954 where I was introduced to the full range of municipal engineering.

This led me to specialise in transportation engineering. In 1960-61 I had the opportunity to undertake a post-graduate MSc in Transportation Planning at Birmingham University (UK).
This experience inspired me to train later and become a qualified town planner. I gained a Dip TP. from Auckland University in 1971. This range of qualification suited me well to undertake regional planning, transportation, resource management, urban form and environmental studies on behalf of New Zealand local government.

Tell us more about your career – planning for a long term horizon…
My focus was on long-term planning including reporting and forecasting for public projects, regional and district plans. There was, and still is, a need for quality advice and evidence to support long-term planning.

My reports demonstrated to both the councils and the Environment Court 'why' facilities were justified and 'where' such facilities might be placed when constructed in 20 or 50 years in the future. The detail of 'what' is finally built rests, of course, with the professionals in the next generation.

Many of these studies, undertaken in the 1960s, 70s and 80s, related to strategic urban development and associated major traffic corridors.

They included a consideration of future urban form, the future boundaries of urban areas for the regions of Christchurch, Nelson, Porirua, Taupo and Hamilton.

Some of the major traffic corridors I was involved with included the proposed St Albans and Southern Motorways in Christchurch, Transmission Gully in Wellington, the Sand Hills Expressway in Kapiti, the Eastern Bypass in Taupo, and Hamilton's Waikato Expressway motorway corridors.

This work enabled early protection of the corridors in District Plans by designations and corridor zoning.

My 'forte' was in reconciling the issues and conflicts of urban and rural environments, resource management, catchment management and transportation planning at an early stage in a region's development planning.

The three professions…
I have three 'life membership' professions - Planning, Engineering and Local Government Management and this included membership of the respective institute's boards and committees and a raft of useful papers for annual conferences.

The NZIE supported two of my significant research publications. Firstly the 'Trips Database', recording travel to individual land uses (1972 with ongoing annual revisions), and secondly the 160 page 'A Wheel on Each Corner', a history of 50 years of transportation engineering in New Zealand (1965-2006).

Parallel with my deep involvement in these professional and technical matters I have also been committed to saving heritage buildings including the Christchurch Arts Centre (Old University Buildings) and the Christchurch Theatre Royal. I also promoted the extension of conservation areas along the Summit Road and the Port Hills recreation networks. Meantime my wife, Judie, was busy pursuing her professional acting career in particular as an Associate of the Christchurch's Court Theatre. These activities all interlock and further extended our own long-term community horizons.

What are the biggest challenges facing Local Government today?
Local Government has always been over ridden by central government's impatience to 'mould' the councils to achieve the central government ends.
I believe that there are three key challenges facing local government:

Firstly, planning. This is the most important function undertaken by local government. The challenge is to undertake strategic planning and the planning functions for all activities, (including environment, future urban form, transportation, infrastructure, planning under RMA, council services, community liaison) with enthusiasm and excellence.

Secondly, the partnership between local and central government. This will be different in different regions. The list of functions undertaken and their priority must be agreed between the city/district councils, the regional councils and the central government partners.

Thirdly local government confidence will be greatly strengthened if all the councils in a region have a clear definition of their responsibilities and any shared functions especially those required to be supported by formal regional plans. The regional plans must be prepared with the active participation and support of the constituent city/district councils.

What was your greatest achievement?
The hectic and exciting times of local government reform in the 1980s were a highlight for me. During this time I was involved in submissions and reports to government and Sir Brian Elwood's Local Government Commission.

The 1989 reforms included a clearer recognition of the vital future role for regional councils. These recommendations were supported, in part, by the success of the Canterbury Regional Council's ongoing programme of regional planning studies undertaken between 1956 and 1989.

Also, in this period the Canterbury United Council successfully reviewed its three operative regional plans including North Canterbury's Urban Settlement (1985), the Regional Transportation Plan (1986) and the draft Regional Land and Water Plan (1988).

As Chief Executive of the United and Regional Council at that time I considered the preparation, review and adoption of these Canterbury Regional Plans, coinciding with the local government reforms and the establishment of the new regional councils, was a great achievement.

What did you enjoy about working in local government?
Working for local government is fascinating and rewarding through its contact with colleagues and the community.

I believe both town and regional planning are local government's most important function. This is what attracted me to the vocation originally.

In 60 years, through the tides of success and failure, my faith in the importance of planning in local government has not been shaken. I thank Taituarā for the Long Service Award made to me in 2012. This award occasion was also a special moment.

In 60 years, through the tides of success and failure, my faith in the importance of planning in local government has not been shaken.

The Court Theatre whānau was saddened to hear of the death on Friday 4 March of Malcolm Douglass, a man who had been extremely influential in the early days of the theatre. Malcom and his actress wife, Judie, were highly involved in The Court and acclaimed for their complementary roles – he in the governance field, she on the stage.

An engineer and town planner by profession, Malcolm was the first CEO of Environment Canterbury, but it is for his love of theatre and his contribution to the development of The Court that we salute and thank him. Malcolm was an inaugural member of the Christchurch Theatre Trust set up in 1972 to oversee the operation of the fledgling professional Court Theatre. He served on that body until 1980.

It was thanks to Malcolm and a small team that the Theatre found its first relatively stable home – the Orange Hall on Worcester Street behind the Cathedral. Malcolm soon realised, however, that the Orange Hall could only be a temporary fix.

He then became instrumental in making sure The Court could find a permanent home in the newly proposed Arts Centre. It was very much his drive, determination and planning expertise that brought that to fruition. He and two colleagues even came up with the original design options for a theatre seating up to 280 patrons.

The new theatre opened on 21 February 1976. There is a recollection from Malcolm about this time included in the book The History of The Court Theatre: "We were the fresh injection of blood, sweat and tears that was needed, a team of young men who had the time and the energy to do the work... When the theatre opened we were exhausted, but also very excited. All of us belonged to theatre families, yet could turn our hand to hammers and scene painting."

Malcolm was a true gentleman, full of enthusiasm with a deep pool of experience and an enduring sense of humour. He will be fondly remembered.

From the Court Theatre newsletter , Christchurch

NZ Rail Conference rescheduled

With New Zealand moving to red within the COVID-19 Protection Framework and the impact of this on hosting events larger than 100 people, it has been decided to reschedule the NZ Rail Conference from the 15th-16th February 2022 to the new dates of 10 -11 October 2022.

The NZ Rail Dinner will be held on the evening of Day Two, Tuesday, 11th October. It is known that in person networking is key for delegates, speakers, sponsors and exhibitors and for this reason the organisers have made the decision to reschedule the event to later this year when it may be safer to gather in larger numbers and international travel is a realistic possibility.

The venue for the rescheduled NZ Rail Conference will remain the same – The Hilton, Auckland. All pre-existing registrations (including dinner bookings) will be transferred to the new conference dates in October.

Stay up to date with the program by visiting the website.

Manaaki Tāngata
Caring for the People

Transportation Group welcomes you to Tauranga in March 2023

With the arrival of Omicron in New Zealand (and with our conference theme of Manaaki Tangata – Caring for the People in mind) the Transport Group conference organising committee has made the difficult but necessary decision to postpone this year's conference until 29 – 31 March 2023.

The conference theme and location in Tauranga City will be retained and we look forward to hosting this awesome event in Tauranga next year.

In March 2023 the conference returns to Tauranga in the Bay of Plenty. Tauranga is one of the fastest growing areas in NZ, but this rapid urban growth is putting pressure on our transport system. It is becoming increasingly difficult to access opportunities, crashes continue to cause significant personal and community harm and we have low levels of travel by active modes and public transport. Reshaping transport is vital to the future of Tauranga, and all of New Zealand, so that we can lead happy, healthy, and connected lives in the spaces and places that we enjoy.

With our conference theme of Manaaki Tangata (Caring for the People) in mind, the Transport Group conference organising committee has made the difficult but necessary decision to postpone this year's conference until 2023.

Transmission Gully: NZTA slices red tape to open sooner

Waka Kotahi's move to speed up the opening of Transmission Gully is good news - as long as it does not compromise the quality of the new highway, the mayor of Porirua says.

The Transport Agency has allowed the road builder CPB HEB to defer completion of 19 safety and quality assurance tests, and has dropped some requirements of a further 30 tests.

About 100 tests were supposed to be completed and signed off prior to the road opening. CPB HEB now has 18 left to meet; 15 with reduced requirements. Porirua mayor Anita Baker could not say which tests had been deferred but hoped it did not mean there was a greater risk of the road having to close after opening.

"As long as those effects don't have anything to do with safety, or any issues to do with the harbour, in the catchment with stormwater, and the fact that they won't have to go back and close the road or do them later, I'm okay with it. But otherwise, I'd just like them all completed now and do the job, do it once."

She said people would not mind waiting.

"It just seems silly to rush it now we're almost at the end. Why wouldn't you just tick off those last things even if it is another month? We've all got to the point where ... let's just do it once. We don't want to see it shut again."

Baker said her council would get at least two weeks' notice prior to the road opening, as was a contractual obligation, in order to get the local link roads ready.

Waka Kotahi said the safety and quality of the highway were not being compromised by deferring and reducing the tests. Many of the remaining safety and quality assurance tests required under the Public Private Partnership (PPP) contract to allow Transmission Gully to open are close to being finished.

To facilitate an earlier than otherwise possible road opening, Waka Kotahi has agreed to defer 19 outstanding quality assurance tests that were originally required under the contract to be completed prior to the road opening, leaving a total of 81 tests required.

Waka Kotahi has also agreed to reduce the requirements for a further 30 assurance tests. These 19 deferred and 30 reduced assurance tests will all be completed to the contractually agreed standards after the road opens to traffic.

At 3 March 2022, CPB HEB, the company subcontracted to build Transmission Gully, has had 63 of the 81 remaining safety and quality assurance tests accepted as meeting the required standards. Eighteen assurance tests are outstanding - 15 with reduced requirements, and three with no change to the contractual requirements for road opening. All three remaining consent tasks have been submitted to Greater Wellington Regional Council for certification or confirmation.

Once the road opens, Waka Kotahi will start paying Wellington Gateway Partnership (WGP) for construction, operation and maintenance of the road. WGP have financed the project and have contracts with CPB HEB to build the road and with Ventia to operate and maintain the road.

Source: RNZ/NZTA

To facilitate an earlier than otherwise possible road opening, Waka Kotahi has agreed to defer 19 outstanding quality assurance tests

2022 Engineering NZ Fellows revealed

Fellowship is an honoured class of membership, recognising the most highly experienced professionals who have made a huge impact on engineering in Aotearoa. We're delighted to reveal this year's Fellows and Distinguished Fellows.

Recently Engineering NZ announced the latest round of Fellows and Distinguished Fellows. Some of these are Group members or contributors to our profession.

Fellows

Brett Gliddon
Brett Gliddon is the General Manager Transport Services at Waka Kotahi NZ Transport Agency, leading a team of around 700 people to partner and deliver an integrated transport system.

Brett's experience in the transport sector spans planning, design, procurement, project management, construction, maintenance and operations. He has led many successful teams and worked alongside stakeholders and communities to achieve significant transportation outcomes for New Zealanders.

A great strategist with political nous, Brett has introduced vital changes to Waka Kotahi's operating model to be agile and innovative, so that it can deliver a fit-for-purpose transport system in New Zealand.

Elizabeth Yeaman
Elizabeth Yeaman has focused her 30-year career on the transport and renewable energy sectors. She is particularly interested in the interface between technology and people, and has worked to bring technical insights to policy development and implementation.

After 22 years with the Energy Efficiency and Conservation Authority, Liz founded Retyna, a specialist consultancy on renewable energy for transport with a particular focus on electrifying transport.

Having won the 2014 Furkert Supreme Technical Award for Engineering Achievers, she has gone on to become a leading voice on transport electrification, regularly speaking at conferences at home and abroad.

Keith Atkinson
Keith Atkinson is a Technical Principal – Project Delivery in the Wellington office of WSP, with 47 years' experience. He has played a significant role in the successful project and contract management of numerous major multi-disciplinary award-winning projects in the Wellington area, including the Inner City Bypass, SH2/SH58 Haywards Interchange and Silverstream-Manor Park 4-Laning.

Keith has made a tremendous contribution to the technical health of engineering within WSP in both contract management and cost estimating/risk.

He is a key member of the WSP Contract Management Discipline Committee, has been Engineer to the Contract for some 500 contracts and is Waka Kotahi Accredited Level 4 Engineer to Contract and Engineer's Representative. In addition, he has contributed to cost estimating guidelines and is a Waka Kotahi external cost estimate reviewer.

Keith has also run numerous training courses in contract management and cost estimating/risk and mentored countless young engineers.

Blair Monk
Blair Monk is a Transport Network Operation specialist for Aurecon. He trained as a Civil Engineer and moved through the areas of design in road construction, geometrics, traffic engineering, safety, intelligent transport systems (ITS) and the future transport technology.

Blair has represented New Zealand at international events through his many years of service on the ITS New Zealand board. His passion for optimisation and efficiency shines through when explaining complicated operational issues using plain language. Blair has been recognised as an innovator by industry and his latest work on future urban mobility is eagerly anticipated.

Peter Bailey
Peter Bailey has had a prominent engineering career in both national and local organisations, in roles providing both strategic leadership and technical knowledge.

His skills are acknowledged in a broad range of fields including water supply; sewerage; stormwater; reserves management; solid waste management, minimisation and transportation; and Peter has had numerous successes in his career in these areas.

Peter is acknowledged for his inspiring leadership, community engagement, integrity, and policy advice. He has led projects that have won industry awards for innovation in technical areas and in relationship management.

Stuart Woods
Stuart Woods has 36 years' engineering experience, having worked in local and central government roles as well as in private consultancy. He gained both his Bachelor and Masters degrees at the University of Canterbury.

Almost all of Stuart's professional career has been in roading and transport related engineering, with an emphasis in transport planning, policy and strategy.

His greatest satisfaction has come from leading innovative and collaborative projects that provide improvements for the community. He also has a long history of involvement with various voluntary engineering interest groups such as the Transportation Group and Trips Database Bureau.

Stuart is currently Lead Advisor – Resilience at Waka Kotahi NZ Transport Agency.

Wes Edwards
Wes Edwards founded specialist traffic engineering and transport planning consultancy Arrive in 2002 where he serves as Director.

With more than 30 years' specialist transport experience and seven years in other engineering disciplines, Wes has contributed to the advancement of traffic engineering practice in New Zealand, particularly in bus priority and in residential street layout and design. He is currently a member of the Standards Australia committee responsible for the AS/NZS2890 series of parking standards and is frequently an expert witness in resource management proceedings.

Distinguished Fellow

Bryan Pidwerbesky
Bryan Pidwerbesky is recognised as a Distinguished Fellow for his contribution in advancing the science and lifetime performance of pavements and surfacing materials.

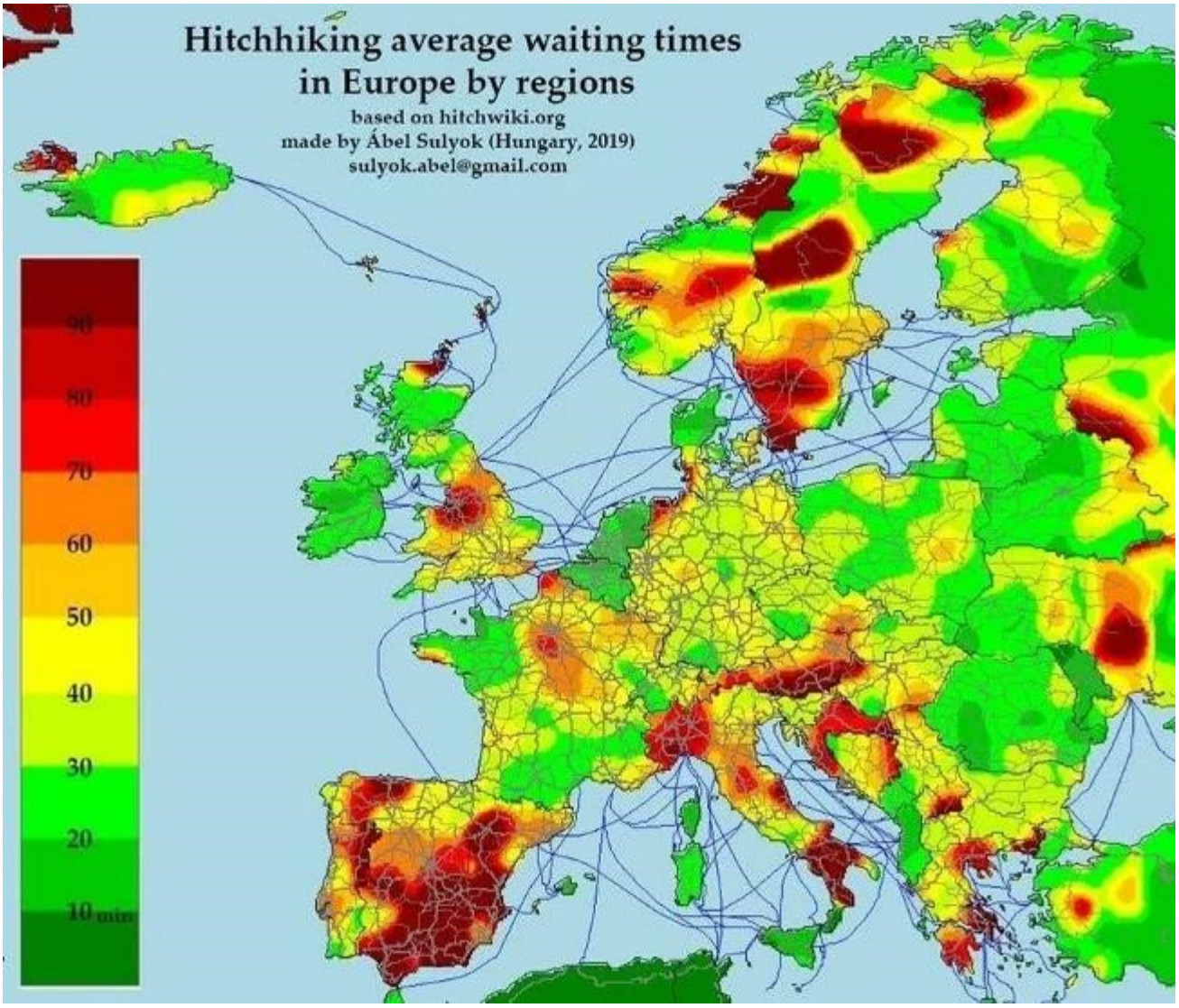
Bryan's depth of experience and professional competency has seen him recognised as New Zealand's 'go-to' person for everything to do with pavements. He was appointed Senior Adjunct Fellow in Civil Engineering at the University of Canterbury and his participation on numerous national and international technical and advisory committees, working parties and boards reflects his international standing.

Bryan has led and has authored many technical papers, and is known for his technical leadership and communication abilities. He has developed and mentored many young and mid-career engineers in all aspects of pavement design and use, from applications ranging from airport runways, container handling, manoeuvring and hard-standing areas.

Wide variations in substrates and local availability of materials has meant Bryan's technical input is frequently sought at the inception of projects. This sees him working with clients, decision makers and key stakeholders to understand issues and concerns, and to explain complex solutions simply. Bryan's knowledge and ability has enabled very considerable advances of the construction and performance of the thin flexible pavements that underpin New Zealand's transport network.

Highly respected by his peers in New Zealand and internationally, Bryan exemplifies the hallmarks of a Distinguished Fellow in terms of eminence, sustained leadership, professional behaviour, profile, and mana.

Bryan Pidwerbesky is recognised as a Distinguished Fellow for his contribution in advancing the science and lifetime performance of pavements and surfacing materials.



The end of the stick? Data shows huge decline in Kiwis taking driver's license test in a manual car

The number of Kiwis sitting their driver's license in manual transmission cars has plummeted by more than 20,000 compared to a decade ago.

Data released to Newshub under the Official Information Act show 12,086 people sat their restricted license in a manual between January and November last year (latest available statistics), compared with 33,396 in 2011.

Nearly 66,000 people sat their restricted test in an automatic last year. The test was sat in an automatic by less than half of that in 2011 at just a touch over 26,000.

Broken down by district, the New Zealand Transport Agency recorded Auckland as having the most people sit their restricted license in a manual last year (2060), followed by Canterbury (1720) and Waikato (1518).

The data also showed a big decline in manual drivers sitting the full license test, with 66,348 opting to sit their test in this transmission in 2011 compared to 12,873 in 2021.

It should be noted however that testing officers aren't required to list the vehicle transmission driven in a full test - meaning these figures are less likely to be accurate - while they are for a restricted test. Automobile Association (AA) Driving School general manager Roger Venn said the figures, especially for full license tests, show an almost "complete switch-around" from manual to automatic between 2011 and 2021.

"The numbers were a little bit surprising, but the trend not so," he told Newshub.

Venn said the perception it's "easier" taking a driving test in an automatic vehicle was playing a part. He said people want to get their licenses the easiest way possible.

The easiest way to get your restricted and full is to do it in auto, so I get it. Whether that's right is another matter.

"The easiest way to get your restricted and full is to do it in auto, so I get it. Whether that's right is another matter. My personal view is that learning to drive in a manual gives you a better understanding of the car's dynamics and the kinetic way a car works, and the mechanics of a car."

The AA Driving School wasn't concerned about the decline in manual drivers, Venn said. "There's a raft of reasons why manual is decreasing in popularity. One of the main reasons is there's a scarcity of manuals full-stop in New Zealand."

Venn said New Zealand had been bringing in Japanese-imported vehicles for more than two decades. 97% of Japanese cars are automatic, he said. Manuals would become even less prominent as the world shifts to using electric vehicles (EVs), Venn said.

"Even if you want to learn stick, we can teach you [to drive] stick in one of our vehicles. But then if you want to practice with a mentor… it's difficult to find a suitable vehicle - especially if you're looking for a vehicle that's affordable, safe, modern and all the rest of it."

The AA Driving School recommends being proficient at both automatic and manual transmission.

"By all means, learn, practice, go through your test in an auto if that's the first step to getting yourself your full license - that's great. Then, why not have some lessons in a manual?

"There are reasons to get that manual experience… all we would say is - take professional tuition, take it seriously. Get your full license, do a defensive driving course and keep practicing and be willing to learn."
Source: Newshub

Wellington Airport going to court to stop new pedestrian crossing

Wellington Airport is launching a legal challenge to stop a new pedestrian crossing on the main route to the airport from the city.

The airport group told Waka Kotahi NZ Transport Agency and Let's Get Wellington Moving on Tuesday it would seek a judicial review of the decision to install a pedestrian crossing and traffic lights on Cobham Drive.

The Cobham Drive pedestrian crossing is one of the projects Let's Get Wellington Moving wants to finish first, but has become a lightning rod of controversy.

"A capital city should have excellent connections to its airport. Cobham Drive is the first experience visitors have of Wellington and being stuck in traffic is not the way to showcase our city," Wellington Airport chief executive Steve Sanderson said.

He said the airport was taking the case both for the local community and because the company believed the crossing would make the congestion on the way to the airport worse, not better.

"The business case for the crossing is flawed and alternative solutions have not been properly considered. It should be dropped in favour of a full review and genuine consultation."

Construction on the crossing is set to begin in April. It will connect the popular Evans Bay shared cycling and walking path to the ASB Sports Centre, Kilbirnie shops, and several local schools.

The crossing has been strongly opposed by Progress Wellington, a business lobby group led by Wellington Airport and the Wellington Chamber of Commerce.

The group is mostly concerned that a pedestrian crossing will slow down traffic, and wants to see a pedestrian overbridge built instead.

Let's Get Wellington Moving rejected this because an overbridge would be significantly more expensive and evidence suggested pedestrians would be less likely to use it.

The nearest pedestrian crossing is almost 800 metres away, adding a significant distance for anyone looking to cross safely.

In reality, many pedestrians and cyclists opt to cross the road – which is part of State Highway 1 – dangerously, running across multiple lanes of 70kmh traffic.

There have been 528 accidents on the road in past 12 years, including 19 serious injuries, and two fatalities.

The crossing will operate only when a person triggers it, with red lights halting traffic. It will also be sequenced so one side of the road doesn't immediately come to a halt while someone crosses the other side of the road.

Let's Get Wellington Moving predicts 250 people per day will use the crossing, and on average traffic is expected to stop for 15 seconds when the crossing is triggered.

A journey from the airport to Ngauranga Gorge may take up to 50 seconds longer during peak period, as a result of the crossing and lower speed limits.
Source: Stuff

The group is concerned that a pedestrian crossing will slow down traffic, and wants to see a pedestrian overbridge built instead. A journey from the airport to Ngauranga Gorge may take up to 50 seconds longer during peak period.

Possibly the optimal access arrangement desired by Wellington Airport. But actually this is from Kuala Lumpur.

Low Emission Projects Announced

EECA is excited to announce the projects receiving co-funding through the new-look Low Emission Transport Fund (LETF).

The line-up includes some truly innovative projects, including New Zealand's first electric milk tanker, a lighter weight electric bus, electric off-road farm vehicles, and new high powered EV charging stations across the country.

The funding was announced by Minister of Energy and Resources, Dr Megan Woods.

"The LETF is all about finding replicable solutions through innovative transport and infrastructure." said Woods. "The projects included in this round show the potential for electric and low-emissions transport across a wide range of sectors: from all-terrain farm vehicles to heavy freight.

Some of these are hard to decarbonise, so this is great progress towards reducing our transport emissions," says Megan Woods.

In total, 13 vehicle and technology projects will receive $3,452,025 and 13 EV charging projects will receive $3,001,400 in co-funding. Take a look at some of the projects that received co-funding below.

The LETF is all about finding replicable solutions through innovative transport and infrastructure. The projects included in this round show the potential for electric and low-emissions transport across a wide range of sectors: from all-terrain farm vehicles to heavy freight.

Vehicle and technology projects

- Fonterra will operate NZ's first electric 46T milk tanker with battery-swap technology at the Waitoa Depot, near Tauranga.
- Bayes Coachlines will build a passenger bus with solar panels providing 5-10% of its own power and designed to have greater range and less maintenance than other electric buses.
- MyFleet Rural will launch four Pickman 4WD, fully electric off-road UTVs throughout NZ at Field Days and A&P Shows.
- Firth Industries will deploy NZ's first electric battery-swap concrete mixer truck, to operate in Penrose.
- IntDevice will work with Auckland Transport to deploy a wireless charging ground pad solution at the Ti Rakau Drive depot for an Auckland Transport bus.
- Kiwi H2 Ltd has exclusively licensed a commercialised dual fuel product from the UK, which converts diesel vehicles to run on 40% hydrogen, aiming to save 40% emissions. This will help fleets decarbonise until commercially available and viable 100% zero emission options are available in NZ. They will convert 2 trucks to use this technology in this project.
- Zenobe Australia will supplement DC charging capability in grid-constrained areas by installing second-life electric bus batteries.

EV charging projects

As part of the LETF, a significant boost to the nationwide electric vehicle charging network has also been confirmed. These projects include:

- ChargeNet will install eight ultrafast chargers in the Auckland CBD, Napier, Whangārei and New Plymouth
- ThunderGrid will install a fast charger in Masterton
- Meridian will install two fast chargers in Christchurch
- Jump Charging will install two ultrafast chargers in the Agritech Business Park in Rakaia
- Z will install 12 ultrafast chargers at a number of locations in the upper North Island.

In total, the government has co-funded more than 1,300 public and private EV chargers.

About the Low Emission Transport Fund

EECA's Low Emission Transport Fund (LETF) supports the demonstration and adoption of low emission transport technology, innovation, and infrastructure to accelerate the decarbonisation of the New Zealand transport sector.

The third and fourth rounds of the LETF will open mid-2022.

Learn more about the fund

UK Highway Code changes

New rules which change how UK drivers and cyclists use roundabouts and intersections have come into force.

The updates to the Highway Code also bring changes to the guidance on who has priority at junctions and pedestrian crossings, as well as placing more responsibility on the drivers of the largest vehicles.

The changes, which came into force from 29 January, are part of a new hierarchy of road users being introduced to help protect the most vulnerable road users.

Under it, those with the most potential to do harm, such as truck and bus drivers, have the greatest responsibility to reduce the danger posed to other road users, with the drivers of other motor vehicles also given more responsibility to reduce the risk to vulnerable road users such as cyclists and pedestrians.

Among the key changes being introduced is a new rule for drivers using a roundabout at the same time as a cyclist.

Under the updated rule, drivers are now told to give priority to cyclists on roundabouts and not cut across their path. Rule 186 states: "Give them plenty of room and do not attempt to overtake them within their lane. Allow them to move across your path as they travel around the roundabout.

"Cyclists, horse riders and horse drawn vehicles may stay in the left-hand lane when they intend to continue across or around the roundabout and should signal right to show you they are not leaving the roundabout.

Similar rules now apply at intersections and when passing slow-moving traffic. Drivers turning into an intersection are warned not to cross the path of cyclists travelling straight ahead when doing so. They are also told to give cyclists at least 1.5 metres of space when passing them.

The updates also aim to strengthen and clarify rules on who has right of way in a variety of situations.

Drivers and cyclists should now give way to pedestrians crossing or waiting to cross at an intersection or zebra crossing. Previously the guidance was only to give way to those already crossing. The rules also make it clear that cyclists should give way to pedestrians on shared-use cycle tracks.

The Department for Transport says the changes are designed to make the roads safer for more vulnerable users but do not mean that pedestrians and cyclists have no responsibility.

It says: “The objective of the hierarchy is not to give priority to pedestrians, cyclists and horse riders in every situation, but rather to ensure a more mutually respectful and considerate culture of safe and effective road use that benefits all users.”

The new hierarchy looks like this:

- Pedestrians
- Cyclists
- Horse riders
- Motorcyclists
- Cars/taxis
- Vans/minibuses
- Large passenger vehicles/heavy goods vehicles

Those with the most potential to do harm, such as truck and bus drivers, have the greatest responsibility to reduce the danger posed to other road users.

Streets for People is a three-year fund built on the learnings from the Innovating Streets for People programme 2020-21

The Streets for People programme aims to continue building capability in the rapid reallocation of road space and will help communities to shape more adaptive street improvements in their towns.

One to one meetings are available for councils with our team, and you can book these online here.

Councils will need to have activities aimed at reducing emissions, improving safety and/or accessibility within a current Regional Land Transport Plan or the National Land Transport Plan. These should include improvements to encourage walking and cycling.
Visit our website to learn more.

Programme highlights and outcomes
Streets for People is a three-year fund built on the learnings from the Innovating Streets for People programme 2020-21, which introduced around 89km of interim street treatments in 32 towns across Aotearoa.

These changes led to fewer cars on our streets, more people walking, biking and scooting, and safer and more accessible places to walk and cycle.

Councils have highlighted how being involved in the programme has opened their eyes to new and diverse ways of working, and the benefits of using new and adaptive approaches.

Read more about the programme highlights and outcomes.

Check out some of our Streets for People in action
From cycling safety to community connection, these videos showcase some of the great benefits delivered through projects in 2021.

Find inspiration for your town
Waka Kotahi has been partnering with councils across New Zealand to

help them plan, deliver and monitor innovating streets projects since 2019.

We've developed a range of case studies that showcase different projects and share what has been learned along the way.

Get inspired and explore our case studies.

London mayor wants daily driving charge of up to £2

A 27% reduction in London's car traffic was required by 2030 to meet net-zero ambitions.

London's mayor says he needs to charge drivers a "small" daily fee of up to £2 for "all but the cleanest vehicles" to help hit climate change targets.

The road pricing proposal is part of a push by Sadiq Khan to encourage people towards public transport, walking, cycling or electric vehicles. The RAC called the plan "poorly timed" with cleaner vehicles being "too expensive for most people".

Longer term, Mr Khan says he needs to bring in a pay-per-mile system. He is also considering charging drivers from outside the capital who wish to travel into Greater London, widening out the current charging zone. Mr Khan said he was "not willing to put off action".

A report commissioned by City Hall found that a 27% reduction in London's car traffic was required by 2030 to meet net-zero ambitions. It stated that London faces severe impacts of climate change, with an increase in extremes such as last summer's flash floods which closed hospitals, hit Tube stations and flooded homes and businesses, as well as deadly heatwaves.

Road user charging would be a "simple and fair scheme" that could replace existing fees such as the congestion charge and the Ultra Low Emission Zone (ULEZ), according to the report.

The London mayor said he was "not willing to stand by and wait when there's more we can do in London that could make a big difference".

"We have too often seen measures to tackle air pollution and the climate emergency delayed around the world because it's viewed as being too hard or politically inconvenient, but I'm not willing to put off action we have the ability to implement here in London," Mr Khan said. Transport for London (TfL) and the mayor said there would be a public consultation on the proposals, with the chosen measure potentially implemented by May 2024.

City Hall has previously said that almost every London school is in an area where air pollution levels exceed World Health Organization limits.

The RAC said everyone wanted cleaner air but cleaner vehicles were too expensive for most people and such charges would impact carers, tradespeople and night-time economy staff.

Head of roads policy, Nicholas Lyes, said: "Our research suggests fewer than a third of drivers in London expect to switch to an electric vehicle within the next five years and, at the same time, the mayor himself cannot commit to a zero-emission TfL bus fleet until 2037.

Disused rail tunnel gets green light to become Europe's longest underground cycle lane

A Welsh railway line abandoned for more than 50 years gets new lease of life as ministers clear way for its transition to a bike route

It has been hailed as a feat of Victorian engineering - but the Rhondda and Swansea Bay railway tunnel hasn't seen a train pass through for more than half a century.

Now, campaigners are hoping to connect communities in the Rhondda and Afan valleys by reopening the tunnel as a route for walkers and cyclists.

It is the longest disused tunnel in Wales at 3,443 yards, or nearly two miles.

If it secures enough money to be developed, it will be the longest cycling tunnel in Europe and the second longest in the world.

The tunnel was temporarily closed on safety grounds in 1968 but never reopened, after the cost of repairs were deemed prohibitive.

Following years of disuse, both of the Rhondda Tunnel's portals were finally covered over and landscaped, with access limited to survey teams and the campaigners trying to save it.

The tunnel is sealed at both ends, so visitors have to descend 60ft down an old air shaft with help from experts.

The Rhondda Tunnel Society was established in 2014 and has more than 850 members, with Michael Sheen, the Welsh actor, among those backing the project.

The tunnel used to carry coal trains 1,000ft below the mountains from the mines of the Rhondda to the ports of Swansea Bay, until its closure in 1968 and the entrances to the tunnel at both ends have long been buried.

It was first opened in 1890 during the coal boom after a five-year building project overseen by the tunnel's chief engineer Sydney William Yockney, a pupil of Victorian engineer Isambard Kingdom Brunel.

It would be the longest cycle tunnel in Europe, and second only to the 4,000m Snoqualmie Tunnel near Seattle in the US.

But despite its location in the former mining heartlands of South Wales locals were shocked to discover the tunnel was owned and controlled by Highways England.

Last month, Transport Secretary Grant Shapps promised to hand over control to Welsh ownership - so the project can continue.

Transforming the disused line into a tourist attraction has been estimated to cost £10million.

If it secures enough money to be developed, it will be the longest cycling tunnel in Europe and the second longest in the world.

UK government delays more all-lane smart motorways for five years

New "all-lane running" smart motorways have been paused while their safety is assessed, the government has said.

Using the hard shoulder as a permanent live traffic lane increases capacity, but critics say it has contributed to road deaths.

Five years of safety and economic data for the schemes will now be collected from the motorways built before 2020.

However, hard shoulders will not be reinstated on current stretches of all-lane running motorways. The government's move comes after MPs said in November there was not enough safety and economic data to justify continuing this type of scheme.

If a car breaks down on all-lane running smart motorways, drivers are meant to aim for emergency refuge areas.

But critics say the schemes can leave cars stranded in fast-moving traffic. Highways England said there are roughly 400 miles of smart motorway already in action.

About 200 miles of these lack a permanent hard shoulder, and 63 miles use it as a live running lane some of the time.

The government's decision means that another 100 miles of all-lane running currently in construction can still be completed, while 57 miles are paused for now.

A smart motorway is a stretch of road where technology is used to regulate traffic flow and - hopefully - ease congestion. There are three main types:

- Controlled, which have a permanent hard shoulder, but use technology such as variable speed limits to adjust traffic flows
- Dynamic, where the hard shoulder can be opened up at peak times and used as an extra lane; when this happens, the speed limit is reduced to 60mph
- All-lane running, where the hard shoulder has been permanently removed to provide an extra lane; emergency refuge areas are provided at intervals for cars that get into trouble

All three models use overhead gantries to direct drivers. Variable speed limits are introduced to control traffic flow when there is congestion, or if there is a hazard ahead. These limits are controlled by speed cameras.

According to government figures, 38 people were killed on smart motorways between 2014 and 2019.

Source: BBC

If a car breaks down on all-lane running smart motorways, drivers are meant to aim for emergency refuge areas. But critics say the schemes can leave cars stranded in fast-moving traffic.

Electric vehicles ask a lot of their tyres—here's why

Electric vehicles (EVs) have more mass and lots of torque, but the tyres need to be efficient and quiet.

In the past, we've looked at the technology that goes into winter tyres—and even what makes a good racing tyre. But it's time to dig into the specialized tyres those EVs have to wear.

"We like to design [the tyre] as the car is being designed," explained Ian Coke, director of quality at Pirelli. That means getting started with the OEM several years before the car is due on sale, when it's still just a concept being developed. "Or if you're Tesla, six weeks, because they work in a different way," he laughed.

EVs are generally heavier than an equivalent-sized, conventionally powered vehicle, and because range is so important, low rolling resistance is essential.

"We're getting to know [Tesla] very well now," he said, as the Italian tyre company develops rubber for the automaker. But for an original equipment (or OE) tyre—the kind a new car ships from the factory wearing—"there are so many changes that if you aren't working with the design team [as early as possible], you get caught out and the development costs and times can go on and on," he said.

Why do EVs need special tyres?
Obviously, the four black rubber rings on a car are important—they're the only parts that actually interface with the road. But EVs have a few quirks that complicate life for a tyre.

For one thing, EVs are generally heavier than an equivalent-sized, conventionally powered vehicle. And because range is so important to the EV-buying market, low rolling resistance is essential. In fact, a 20 percent increase in rolling resistance can reduce range by 5–8 percent. But the tyre still needs to have plenty of grip because electric motors make so much torque—and from so low in their rev range.

"We had to introduce a new load index to be able to support the weights of these vehicles. And I think we were the first ones to bring that out with the Lucid," Coke told me. That's done by beefing up the sidewall construction and through the use of synthetic textiles (like aramid fibres).

Once the tyres can support the mass of the EV, they also need to not sap its range. "Clearly, one of the major constraints is you've really got to use a lot of technology in terms of construction, in terms of compounds—especially high-content silica compounds—to really work on that rolling resistance," Coke said.

But that situation is complicated by the fact that EV drivers like to mash the throttle from the traffic lights. "So how far do we go on the rolling resistance to be able to also get the performance that's required, because most of the EVs out there now are performance vehicles? The [Tesla Model] S, the 3 all-wheel drive version, the Y, the Rivian, Lucid, Karma—these are performance vehicles. I wouldn't call them standard commuter vehicles," he said.

While Pirelli has been able to make tyres that deliver on those attributes, the process involves compromising on other characteristics. "The thing that we've seen the most is the wear. If you've owned an EV for a couple of years, you've certainly changed your tyres twice," Coke said.

"It's a trade-off," he said. "Normally, OEMs have a minimum mileage requirement [for an OE tyre] which is reasonable but maybe not aligned with the normal American consumer. If I bring that into the EV world, we're miles apart, pardon the pun." In turn, that has led to consumer demand for replacement (as opposed to OE) EV-specific tyres.

And there's one more problem: EV powertrains are almost silent, so tyre noise that could be unnoticeable in a conventionally powered vehicle becomes significant at the same speed in an EV. "Now there's a variety of technologies out there. [Tread] pattern is one aspect. There has been a big uptake in noise-cancellation systems, which [involves] an open cell structured foam [being] placed inside the tyre; the sponge absorbs the noise, and [the noise cancellation] stops it from being carried through," he explained.

Working on EV tyres has also led Pirelli to become a bit more sustainable, Coke told me. "Here in Rome, for example, we're supplying BMW exclusively with the first tyre that was made from deforestation-free certified rubber. We thought it was a very little thing—it was very important for us because in Rome, our factory is quite small, so we can do neat things like that. Man, this thing took off. I can't make enough of these things with BMW now," he said.

Source: ArsTechnica

Safer speeds are on the way for Tāmaki Makaurau

Auckland Transport's (AT) Safe Speeds programme is part of an integrated nationwide road safety strategy (Road to Zero). The outcome is to make Aotearoa's roads safe where no one is killed or seriously injured on our roads.

In Phase three of this programme, AT is proposing to set new permanent speed limits on approximately 1646 roads around Auckland.

AT currently owns and manages around 7,500km of road network. Under the Land Transport Rule: Setting of Speed Limits 2017, AT is legally responsible for reviewing speed limits for roads under its control and, where current road speed limits are found to be not safe and appropriate, it must make changes.

If approved, these changes will be made by amendment to AT's Speed Limits Bylaw 2019 and come into force in November/December 2022– dependent on public feedback, AT Board approval and implementation considerations.

Project overview
We have reviewed and identified 1646 roads that need new safe and appropriate speed limits.

These roads are:

Around schools: Approximately 980 roads 82 schools around Auckland.

Rural roads: There are 415 rural roads, including areas such as: Waiheke Island, Āwhitu Peninsula, Waitākere, Okura, Stillwater, Waiwera, Whenuapai. AT proposes changing 90% of Waiheke Island roads. Watch video on Waiheke Island safe speeds.

own centre roads: Speed reductions in Glen Innes, Devonport and Takapuna town centres. Learn more about proposed speed limits in town centres.

Residential roads: Approximately 58 roads in the Manurewa Coxhead Quadrant.

Community requests: Approximately 41 roads, mostly, in Ponsonby and Rodney.

Rural marae: 18 roads near 8 rural marae.

Access the full list of proposed speed limit changes. To have your say, please visit AT.govt.nz/haveyoursay

We have reviewed and identified 1646 roads that need new safe and appropriate speed limits.

Auckland/Northland Branch Virtual Event & AGM

2021 has been 'another one of those years'. The Transportation Group New Zealand Auckland/Northland Branch would like to invite you to come to our virtual AGM (delayed a few times on the hope that we could arrange an in-person event).

Wednesday 23 March 2021, 5:00pm – 5:30pm
This year's AGM will take place online.
Please **RSVP today**.

Our brief AGM will commence at 5.00pm and will be very quick and allow you to better understand some of the things that your committee has done on your behalf.

AGM Agenda
2021 Annual Report
2021 Financial Report
2021/22 Annual Plan

We have a healthy, vibrant and strong committee but as is always the case we are keen to see nominations for new Auckland/Northland Committee Members.

Feel free to nominate yourself using **this form** and return it to our Branch Secretary, Hamish Speakman **hamish.speakman@mottmac.com**.

Please **RSVP** by COB 20 March. Unfortunately this event will need to be 'self-catered'. We do however hold out some hope for an in-person event later in the year.

The committee and I look forward to seeing you there.

Kind regards,

David Matthews
Chair – Auckland / Northland Branch

TRANSPORTATION GROUP NEW ZEALAND

Intelligent Transport Systems standards and specifications framework provides clarity, consistency and a safer system

The Waka Kotahi NZ Transport Agency intelligent transport systems standards and specifications (ITS S&S) define the requirements for the design, delivery and integration of ITS equipment, such as electronic signs and CCTV cameras, in our transport network.

A framework is now in place to initiate new or make updates to existing ITS S&S documents used by Waka Kotahi, transport sector partners and the ITS industry. The new framework provides opportunities for ITS users such as Transport Operation Centres (TOCs) and subject matter experts (SMEs) to collaborate and contribute to the S&S documents.

It ensures that our ITS S&S documentation is produced to a high quality so that we can deliver a safer system for all users and provides certainty, consistency and clarity for people in the transport system and industry partners.

Roles in the framework include a working group of Waka Kotahi representatives who work with ITS suppliers, approvers and SMEs. This ensures that a standard or specification is not created or updated in isolation of our work on the network or without our wider business knowledge.

The ITS S&S framework is currently being used to produce 11 quality standards and specifications documents. Over 80 documents will be assessed and prioritised for review based on need, impact and outcome.

‘Delivering a framework by which we can create the specifications and standards that we need in order to effectively, and consistently, deliver change to our networks is a great milestone and one that I’m proud that the team have achieved,’ says Tim Duly, Waka Kotahi Head of Technology Engineering.

‘The framework is a positive step forward in helping improve safety and create more consistency and clarity for users on city motorways and rural roads. We have enjoyed the opportunity to contribute and look forward to applying our expertise to more documents for the industry in the future,’ says Blair Monk, Principal Transport at Aurecon.

Having a framework means there are defined processes and procedures for future delivery of all standards and specification documents. It includes working with several external authors, managing different entities, and the consultation processes.

This ensures the requirements are captured in the documents in a consistent manner. The author’s guide ensures consistency across all documents.

The steps outlined in the framework to produce the standards and specifications documents include:
1. Generating/authoring a document
2. Consulting SMEs for technical input
3. Going through an expert panel review with several reviewers per document
4. Managing impact on affected stakeholders due to any changes
5. Consultation with the wider ITS industry and Road Controlling Authority (RCA)
6. Ratification of the documents by the Waka Kotahi ratification group
7. Documents are approved, issued, and published on the ITS webpage as the current document.

Intelligent Transport Systems – Waka Kotahi website

High quality and consistent S&S documents also ensure that during the procurement stage suppliers clearly understand what the requirements are, making it an easier, open and transparent process.

The ITS industry is positive about the structured approach we are taking to create ITS S&S documents, particularly around the opportunity to review draft versions and provide feedback.

You probably see or experience ITS in action every day. ITS equipment includes devices such as vehicle detection systems, lane control signals, ramp signals, variable message signs, CCTV cameras, incident detection, emergency telephones, cables and ducting.

We need your help! Register to help shape ITS in NZ.
A crucial part of ITS S&S documentation is the feedback you provide. Get involved in reviewing draft ITS S&S documents and help shape ITS in New Zealand.

You only need to register on our webpage and you will receive communication from us regarding the documents you want to provide feedback on.

Help shape ITS – Waka Kotahi website

FAQs

What are Intelligent Transport Systems?
You probably see or experience ITS in action every day. ITS equipment includes devices such as vehicle detection systems, lane control signals, ramp signals, variable message signs, CCTV cameras, incident detection, emergency telephones, cables and ducting.

Fully optimised ITS equipment benefits and enriches the lives of New Zealanders by providing the capability to communicate with people about delays, manage traffic flows through our Transport Operation Centres (TOC), and where possible, reduce travel times and help deliver safer systems.

What are the benefits of this framework?
Providing new or updated ITS S&S documentation benefits all national transport network projects. Ensuring the consistency and quality standard of our ITS helps Waka Kotahi realise the full benefit of our network upgrade and ensures a safer system for all users through:

Providing safer outcomes, road safety, and risk reduction, delivering our part in the Road to Zero strategy

- Certainty by ensuring that during the planning and procurement stage planners, designers and external suppliers clearly understand current ITS requirements.
- Consistency of ITS nationwide. This helps us consolidate the types of devices used on the network and to make the most out of what we have by managing it well.
- Procurement of fit for purpose ITS kit for transport infrastructure projects by reducing the risk of increased project costs of retrofitting an ITS solution.

All the currently identified ITS S&S documents (84 in total) will be assessed and prioritised for review based on need, impact and outcome.

How does it work?
The framework consists of repeatable roles-based processes to support the creation and ongoing maintenance of the ITS S&S documents.

The documents are created or updated using both internal and external subject matter experts, and in consultation with the industry. This enables an open environment for collaboration and transparency to ensure we work closely with the industry.

Where do I find more information?
For more information about the framework and ITS S&S, visit the webpage or send an email to the team.

Intelligent Transport Systems – Waka Kotahi website

itsspec@nzta.govt.nz

Opinion piece by Anthony Cross
Anthony has worked in public transport planning and management for 35 years - Wellington Regional Council 1986 - 2006; Auckland Regional Transport Authority and Auckland Transport 2006 - 2018; as a consultant on public transport projects in Wellington, Christchurch and Tauranga 2019 - 2020; and for the last year as a Principal Transport Advisor at Auckland Council. Any views expressed here are his own.

Public transport since the 1990s - the glass half full version

The catalyst for this article was a story by Bernard Hickey in The Spinoff on 30 July last year: *"The answer to New Zealand's future lies down a long tunnel in Whanganui"*

The story's byline leads with the sentence "*Our provincial cities had thriving public transport systems until they were wrecked in the early 1990s",* which sets the tone for the whole article.

It may be that some - not all - of our smaller cities have less public transport than they once had but, for New Zealand as a whole, the article paints an overly rosy picture of public transport before 1989 and an overly pessimistic view of what's happened since then.

I haven't always agreed with the twists and turns of policy and legislation in that time - far from it - but there have been positives, and I and many others have worked within the system to achieve significant progress that has often been completely overlooked.

Public transport specialists are a very small subset of transport professionals in this country, and those of us who are public servants don't tend to have a voice. I thought it might be of interest to share an insider's view of what happened before and after the major changes introduced in the 1990s.

I don't take issue with Bernard Hickey's starting point. From the 1950s, New Zealand undoubtedly had "policy settings" - to coin a current phrase - that led to what we might now see as institutionalised car dependency.

But even before that, even in the heyday of public transport before the Second World War, I would argue that public transport wasn't necessarily that well developed, either within or between our towns and cities. That is another huge subject in itself; André Brett's book "Can't get there from here: New Zealand passenger rail since 1920" is a recent addition to the literature on the subject.

Hickey is also correct in that 1989 was a very important year for the way in which public transport was organised in this country, but not necessarily in the way he suggests. Yes, there was a massive reorganisation of local government in that year. But there was also legislation that, for the first time, gave local government a responsibility to consider the needs of the "transport disadvantaged".

Whether councils were actually fulfilling that obligation didn't seem to be monitored - only in very recent times has the Ministry of Transport "discovered" the concept of transport equity – but that doesn't mean that boundaries weren't being gently pushed against, in a largely hostile environment, to achieve better services for those who needed them most.

Before the 1980s, central government funding of public transport, other than in (and between) cities and towns where New Zealand Railways (NZR) was active, was pretty much non-existent. NZR still operated trains in Auckland and Wellington, having discontinued local services in Christchurch in 1976 and Dunedin in 1982, and in other places in the 1960s or earlier although, apart from Wellington, none of these cities ever had levels of service that were impressive by today's standards.

In addition to trains, New Zealand Railways Road Services - trading as Cityline in its last years - operated local bus services from Pukekohe, Papakura and Ma-

Public transport specialists are a very small subset of transport professionals in this country, and those of us who are public servants don't tend to have a voice.

nurewa to Auckland, in Rotorua, Napier-Hastings, the Hutt Valley and on the Kapiti Coast, from Titahi Bay to Porirua, from Khandallah to Wellington and from Mosgiel and Port Chalmers to Dunedin, and in other smaller centres such as Greymouth.

Local governments operated bus services in only nine cities - Auckland, Gisborne, New Plymouth, Palmerston North, Wellington, Christchurch, Timaru, Dunedin and Invercargill. Palmerston North and Timaru had never had trams; Napier and Wanganui had trams but their councils didn't operate buses when the trams stopped.

Eastbourne Borough Council also operated a bus service to and from Wellington - which for many years was notable for being the only "municipal" operation to turn a profit. The lack of "profit" and seriously declining patronage throughout the 1960s and 70s meant that, for example, the Auckland Transport Board (and the Auckland Regional Authority which took over its functions in 1964) didn't place a single new bus in service between 1959 and 1974.

Privately owned bus companies operated in and around many of these cities and elsewhere as well. In a few cases - including, from memory, Whangarei, Waitemata (a west Auckland council which existed between 1974 and 1989) and Wanganui City Councils - local authorities dabbled in supporting and subsidising but not actually operating bus services.

There was therefore no national consistency when it came to public funding of public transport. The Wellington suburb of Newlands is my favourite example of how inequitable this was. The local bus service to and from Bunny St at the northern end of Wellington's city centre, was operated by the privately owned Newlands - Wellington Coach Service, which received no public funding. Newlands residents, however, paid for Wellington City Council's "Big Red" bus services through their rates, and for train and bus services in nearby Johnsonville and Khandallah through their taxes.

Although there was a 1970s Government programme to assist local authorities to replace their worn-out tram-replacement bus fleets, the major turning point was the Urban Transport Act 1980, which created a mechanism for the Government to fund public transport consistently throughout the country in partnership with local or regional governments.

But it was a double-edged sword for Auckland and Wellington because, although it introduced central government funding for public transport on a more or less 50:50 basis, the policy also applied to rail services, which until then had been 100% funded by the government.

When I first joined Wellington Regional Council in 1986 (I became only the fifth member of the council's urban transport team led by the indomitable Dave Watson) a primary focus of the council - which had only been in existence since 1980 - was to resist the government policy of requiring ratepayers to take responsibility for funding urban rail services.

The rail system was faced with an enormous backlog of capital expenditure and ongoing operational funding shortfalls. The regional council's political campaign, which went on for a number of years, was led by Transport Committee chair Betty van Gaalen and regional council chair Stuart Macaskill. The same issue in Auckland was complicated by the fact that the rail system wasn't necessarily regarded as being critical to the city's transport future - it was still regularly under threat of complete closure.

The Urban Transport Act set the scene for much bigger changes in the massive 1989 package of legislation which not only established regional councils throughout the country, but gave them specific transport responsibilities which they still have.

1989 saw the Urban Transport Council disbanded and its functions incorporated into the new Transit New Zealand, the forerunner (via several splits and mergers

over the years) of the current Waka Kotahi New Zealand Transport Agency.

Throughout this period its primary source of funding has been the fuel excise duty (petrol tax) and road user charges (levied on diesel powered vehicles). Only in relatively recent times, however, has the central focus broadened beyond the road congestion benefits of public transport, to recognise that public transport is an inherently valuable "public good".

We need to challenge the idea that public transport is "crap" because it doesn't work for particular journeys.

In the early years, notwithstanding the requirement to consider the needs of the transport disadvantaged, the system was very much based on the default position that the only legitimate justification for national funding of public transport was its ability to relieve road congestion - the idea that peak period bus and train services helped to reduce congestion, and therefore that they represented an economic benefit to the other road users who paid for them through their fuel duties and road user charges.

All regional councils (and Auckland Transport) have the same powers and abilities with respect to public transport.

However, the extent to which they exercise those powers varies enormously, from Auckland and Wellington where they are of primary concern, to the smaller regional and unitary councils which are much more preoccupied by, and dominated around the council table by, rural interests and responsibilities. In the middle are the Waikato, Bay of Plenty, Canterbury and (especially with respect to Queenstown) Otago regional councils which have all taken their public transport responsibilities very seriously.

In the case of Tauranga and New Plymouth, the Bay of Plenty and Taranaki regional councils had a completely laissez-faire attitude towards local bus services in 1991, but that position was eventually reversed; Tauranga now has surprisingly high levels of service on many of its bus routes, but that fact is almost never reflected in the rhetoric of the media and some of the city's politicians.

In the case of Whanganui, the city council stopped operating public transport when it closed the city's tramway system in 1950, although it briefly supported the city's bus company financially before the 1989 reforms took effect.

As Hickey points out, Horizons (Manawatu Whanganui) Regional Council has been responsible for Whanganui's bus services since 1991, although I understand that it

rates for those services locally rather than regionally - the implication being that Whanganui residents could have a much better bus service if they were prepared to be rated more for it.

Bernard Hickey also comments negatively on the Public Transport Operating Model (PTOM): the name given to the way in which regional councils and Auckland Transport contract for bus and ferry services under the 2013 amendment to the Land Transport Management Act 2003.

Contrary to some of the commentary, PTOM did not force regional councils to tender out their public transport services - tendering for public transport services was mandatory from 1991 as a result of the 1989 legislative reforms, which also required councils to "corporatise" their bus companies, all of which have now been sold to the private sector, the last to change hands being Christchurch's Red Bus in 2020.

PTOM was developed by the Ministry of Transport, Waka Kotahi NZ Transport Agency, Auckland Transport, regional councils and public transport operators, and allowed for all bus and ferry services to be contracted - with some exemptions - in contrast to the 1989 legislation, which took effect in 1991 and resulted in a complicated mixture of commercial and contracted services.

Commercial services were those which were not contracted to (nor funded by) a regional council (except for Super Gold funding). Each urban bus route was either fully contracted or had a mixture of commercial and contracted trips within its timetable. There were virtually no commercial services in cities other than Auckland and Wellington, and even they had no exclusively commercial urban public transport routes, with very limited exceptions (such as airport to city services which charged premium fares).

This system made planning public transport as integrated networks very difficult. Therefore, arguably the most important outcome of PTOM has been to enable services to be planned and contracted as whole networks, which Auckland Transport took full advantage of to restructure the entire bus network between 2016 and 2019, and to introduce a zone-based integrated fare system in 2016.

PTOM contracts were also introduced in the Wellington region in 2018, although only the Wellington City bus network was significantly altered, with some unfortunate results. Even then, service levels were significantly improved in parts of the city that previously had poor or non-existent evening and weekend services.

Bernard Hickey's article suggests that public transport has been run down as a result of the 1989 reforms, but I would argue the opposite. The legislation wasn't helpful, but regional councils worked hard to overcome its limitations.

In the 1990s the Canterbury Regional Council (Ecan) made significant bus system improvements in Christchurch; progress was halted by the earthquakes although there is now a completed business case for investing more in Christchurch's public transport future.

Wellington Regional Council implemented continuous incremental bus service improvements throughout the Wellington region from 1992 onwards (some of which were undone in 2018).

Auckland Transport's predecessors, especially the Auckland Regional Transport Authority from 2004, also made network improvements before 2010.

PTOM enabled AT to completely restructure the city's bus network between 2016 and 2019, with a reduced focus on the central city in favour of connecting with the rail network and the Northern Busway and creating more crosstown and suburb to suburb services.

There are now more than 30 Auckland bus routes which operate at least every 15 minutes throughout the day, seven days a week, with plans for several more in the next few years. The majority of other routes operate at least every 30 minutes throughout the day seven days a week.

Contrary to popular opinion, there was a massive increase in in-service bus kilometres in the outer suburbs, particularly West and South Auckland, to bring levels of service more in line with those on the Auckland Isthmus. Pre-Covid, all parts of the Auckland network were experiencing significant increases in patronage as a result of the network changes.

The Auckland experience of comprehensive network reform has received positive attention and interest in the US and Australia, but very few other cities have attempted it because it is so hard to pull off successfully; none of the large Australian capital cities have been brave enough, despite Sydney, Brisbane and Adelaide having bus networks at least as complicated and illegible as Auckland's was previously. In 2020 the South Australian State Government pulled the plug on Adelaide's new network project only three weeks into its consultation phase.

There will always be individuals who can say that they are worse off as a result of any new bus network. Politicians and journalists generally only hear from people who've been disadvantaged by changes, and hardly ever from people who benefit from more frequent or more direct bus routes, or newer buses, or end to end journey fares which no longer penalise journeys involving transfers.

Auckland Transport research shows that a majority of Aucklanders believe that public transport doesn't go where they want to go, but those beliefs haven't been tested against what actually exists as opposed to what people perceive to be the service available to them.

Those perceptions are likely to be many years out of date. We need to challenge the idea that public transport is "crap" because it doesn't work for particular journeys.

Even in cities with the best public transport - many cities in Western Europe, for example - there will always be some journeys that are not convenient by public transport. It is, after all, "mass transit", not a taxi service.

It's also important to acknowledge that conventional public transport is probably no longer the best solution in our smaller cities and farthest flung suburbs.

Timaru's recent success with its app-based MyWay on-demand service shows that there are likely to be better - but probably not cheaper - options in smaller communities, or for feeding into the mainline routes of the bigger cities. This might be the most appropriate system for Whanganui to adopt.

There remains much more to be done in our largest cities, especially to improve reliability, to make transfers easier, to provide new and/or more services in our new (and densifying older) suburbs, and possibly to reduce fares.

But these things will all require unpopular measures such as reallocating road space to give buses priority, and further increasing the level of public funding through rates, fuel taxes, road user charges and congestion charging, at least in Auckland and maybe in Wellington.

But maybe, just occasionally, we should challenge ourselves, and our communities and their representatives, to celebrate the progress we have made in the last three decades, and to talk up our public transport and its potential so that, as we improve it even further, people are more and more inclined to give it a chance.

The Canterbury Regional Council made significant bus system improvements in Christchurch; progress was halted by the earthquakes although there is now a completed business case for investing more in Christchurch's public transport future.

Active Modes Infrastructure Group (AMIG) Update

The year has started with another online AMIG meeting, on Feb 3rd. It so happened that I was in Wellington anyway, so I joined the Waka Kotahi locals in person – a novel experience lately. Here's what was discussed at the latest meeting:

Twan van Duivenbooden from Auckland Transport gave a visual overview of recently built **protected cycleways** along Quay St and Karangahape Rd and some of the lessons learned from these two designs. Challenges along Quay St included distinguishing and separating the pedestrian and cycle spaces and managing the adjacent vegetation that was already flourishing. The K Rd cycleway features angled kerbs and good separation from the roadway, although there are some interesting challenges at intersections, pedestrian crossings and bus stops along the route.

An interesting discussion was held about how to indicate where **scooters (foot or electric)** can go on paths and cycleways; at present we simply have pedestrian and cycle symbols to indicate usage. A scooter symbol is available, although it does beg the question of whether we should then consider signs also for skateboards or other yet-to-be determined forms of micro-mobility… All this is complicated slightly too by waiting still for the final decisions on the 'Accessible Streets' legislation package, which will determine what classes of wheeled devices can do what and where.

A scooter symbol is now available, although it does beg the question of whether we should then consider signs also for skateboards or other yet-to-be determined forms of micro-mobility

At the moment, NZ has a **cycle facility selection** graph (based on traffic volumes and speeds) that is derived from a 2000 Danish graph. More recent guidance, both here and overseas suggests that the location of break points between different cycle provision options may need adjusting, especially if it should also align with the coming One Network Framework – watch this space…

Readers might recall the various earlier discussions about the use of **coloured surfacing** for active mode facilities and other related treatments. The previous discussion document has now developed into a draft Technical Advisory Note on the desired uses for different colours, particularly green and red. Once this Note has been reviewed by AMIG, it will be published for industry use.

A couple of bits of interesting research are underway by ViaStrada, and progress reports were presented to AMIG. Firstly there is an investigation of the effects of different **path restrictive devices** (e.g. chicanes, mazes, vertical bumps) on cycle speeds and other behaviour.

Secondly, another study is looking into options for **"quick-build cycleways"**, reviewing what has been used in NZ and worldwide and making recommendations on the most useful in terms of cost, safety, installation, maintenance, etc.

Don't forget to check to out all the new content in the draft **Pedestrian Network Guidance** website (***https://nzta.govt.nz/png***) and provide any feedback to Waka Kotahi.

For users of the **Cycling Network Guidance** website (***https://nzta.govt.nz/cng***), there is now a new "Guidance notes and tools" tab in the top menu where you can more easily find all those handy guidance manuals, Technical Notes, software tools, and other useful documents in one place.

For more information about the AMIG activities and minutes, check out Waka Kotahi's AMIG website:
https://nzta.govt.nz/walking-cycling-and-public-transport/active-modes-infrastructure-group/

Sadly, thanks to Covid, the next AMIG meeting in April originally planned to be in person will be online again.

Contact co-convenors Wayne Newman (RCA Forum; wayne@cresmere.co.nz) or Gerry Dance (Waka Kotahi; Gerry.Dance@nzta.govt.nz) for more info, or have a chat with me about raising any ideas or issues at AMIG on your behalf.

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

Magazine of the Transportation Group NZ Issue 171 March 2022

ITE Update

Hi there, my name is Madi Salter and I have recently taken over from David Mitchell as the New Zealand Representative for ITE-ANZ.

I am a Transport Planner in the Planning and Investment division at Auckland Transport and I am keen to take on this new role with ITE-ANZ.

Now that the borders are opening up (all going well), it is a good time for me to promote the 2022 ITE International Annual Meeting and Exhibition in New Orleans, USA from July 31 to August 3, 2022.

New Orleans is one of the most electric cities I have ever visited and the line-up of speakers is world class so if you have the chance, I would highly recommend attending.

Feel free to reach out to me with any ITE related questions: madi.salter@at.govt.nz. Stay safe out there!

If we switched to renewable energy, the number of ships crossing the ocean would fall by almost half. Because they're just carrying coal and oil and gas.

Magazine of the Transportation Group NZ Issue 171 March 2022

Roundabout of the Month — Bogotá, Colombia

You Don't Need A Full-Size Pickup Truck, You Need a Cowboy Costume

The most popular vehicles in America may be the greatest examples of overcompensation ever invented.

This is the golden age of full-size pickup trucks. Because the market demands it, and because the market is enormous and extremely profitable, the latest breed of pickup trucks is comfortable, commodious, potent, and dare I say luxurious.

The Ford F-150, Chevrolet Silverado, and Ram 1500 are, respectively, the top-selling vehicles in America. And with their Brobdingnagian scale, appliqué steer horns, remotely erecting towing hitches, and power-opening tailgates that drop like the rear flap on a cowpoke's union suit, pickup trucks may be the greatest examples of overcompensation ever invented.

Only four percent say they would pay extra for a greener vehicle.

If you look at pickups objectively—a stretch for a country raised on "Like a Rock" ads—they are also kind of ruining the world. They're a grotesque addiction. And our unslakable thirst for them is irrational. Americans are batshit crazy for pickup trucks. Last year, in a new vehicle market that was basically flat, full-size truck sales grew to nearly 2.5 million units.

If you include so-called mid-size trucks—many of which are now longer than the full-size trucks of just five years ago and sales of which increased 15% in 2018—that number rises to nearly three million. That's more than one out of every six new vehicles sold in 2018. And this doesn't even take into account truck- or car-based SUVs.

Taken all together, these vehicles now make up seven out of ten American vehicle sales.

Despite all of this market affection, people do not love their trucks as much as you expect. "We run a metric each year called Most Loved Vehicles, and when it comes to the emotional connection that trucks create, it isn't as strong as some of the other vehicles out there," says Alexander Edwards president of automotive research and consulting firm Strategic Vision, which conducts an in-depth, annual, 250,000-person, psychographic new vehicle owners' survey.

"People love trucks, they name their trucks, but they're not necessarily more loved than a Honda Civic or Toyota Sienna."

This may lead you to believe that trucks, and their owners, are vulnerable to some kind of conversion. But strangely, that's not the case. According to Edwards' research, nearly 80% of people who are replacing a full-size truck will buy another full-size truck, the highest loyalty rate of any vehicle category in the market.

Maybe truck buyers are just not quite as effusive about their delight as other drivers. (The fact that they skew far more male—87% versus an industry average of 57%—might have something to do with that.)
So what do people actually like about trucks? According to Edwards, the answer is counterintuitive. Truck drivers use their trucks very much like other car owners: for commuting to and from work, presumably alone.

The thing that most distinguishes truck owners from those of other vehicles is their sheer love of driving. "The highest indexed use among truck owners is pleasure driving," says Edwards. Truck drivers use their vehicles this way fully twice as often as the industry average. "This is the freedom that trucks offer," says Edwards.

This freedom isn't exactly free. I've recently had the opportunity to get behind the wheel of a trio of top-notch, American full-size pickups—the Ford Raptor, the GMC Sierra Denali, and the Ram Laramie Longhorn—and they do deliver specific pleasures. They're roomy.

They have scads of bins and cubbies. And if you equip them properly, in the mid-to-high five-figure range like ours (and those of many Americans), they sport myriad functional luxury features. They are also capable of

traversing blizzards, hauling junk, and plowing through desert canyons, all of which I actually did in Michigan, New York, and Nevada, respectively.

And they certainly have snorting accelerative capabilities. The least powerful of these trucks, the Ram, has an electric-assisted V8 that makes nearly 400 horsepower. The most potent, the Ford, has a twin-turbocharged V6 that makes 450 hp. The GMC is right in the middle with a naturally aspirated V8 that makes 420 hp. All can hustle to 60 mph in five to six seconds. That's '90s Ferrari fast.

The big problem, like so many things in America, is one of consumption. Artificially low domestic gas prices, relative to the damage that burning carbon-based fuels wreaks on the planet and its inhabitants, contribute to the notion that it is acceptable and rational to daily drive a 5,500-pound vehicle, one that the EPA says returns on average 10 mpg less than a passenger car, and one that in real-world driving will often struggle to break out of the very low double-digits.

Whereas fully one-quarter of new vehicle owners state that fuel economy is a top priority for them, nearly half as many truck buyers report holding this as relevant, and only four percent say they would pay extra for a greener vehicle.

Truck owners might protest that they are slightly less likely than owners of other categories to use their vehicle as primary transport (83% vs. 95%), limiting the miles and gallons.

And they might also protest that trucks provide capabilities that other vehicles lack. But, as it turns out, a significant portion of truck owners never use their trucks for these capabilities.

According to Edwards' data, 75 percent of truck owners use their truck for towing one time a year or less (meaning, never). Nearly 70 percent of truck owners go off-road one time a year or less. And a full 35 percent of truck owners use their truck for hauling—putting something in the bed, its ostensible *raison d'être*—once a year or less.

I am not the vehicle police. I don't believe in a nanny state. It is not my job to tell you that you must track your Ferrari or drive your Miata with the top down.

But I do get asked for car buying advice very often, and I always recommend that people acquire the least amount of vehicle that they think they need, not only to help the earth but to make their life—one dominated by driving and parking and refueling—less of a strain.

If you are only towing, off-roading, or hauling once a year, or never, it might be wise to consider a smaller vehicle, and rent or borrow a truck when you really need a truck. There are tens of millions of them out there. There are even amazing services like Turo or ZipCar out there that grant you access to a vehicle for just the time you want it, and may even deliver it to your door.

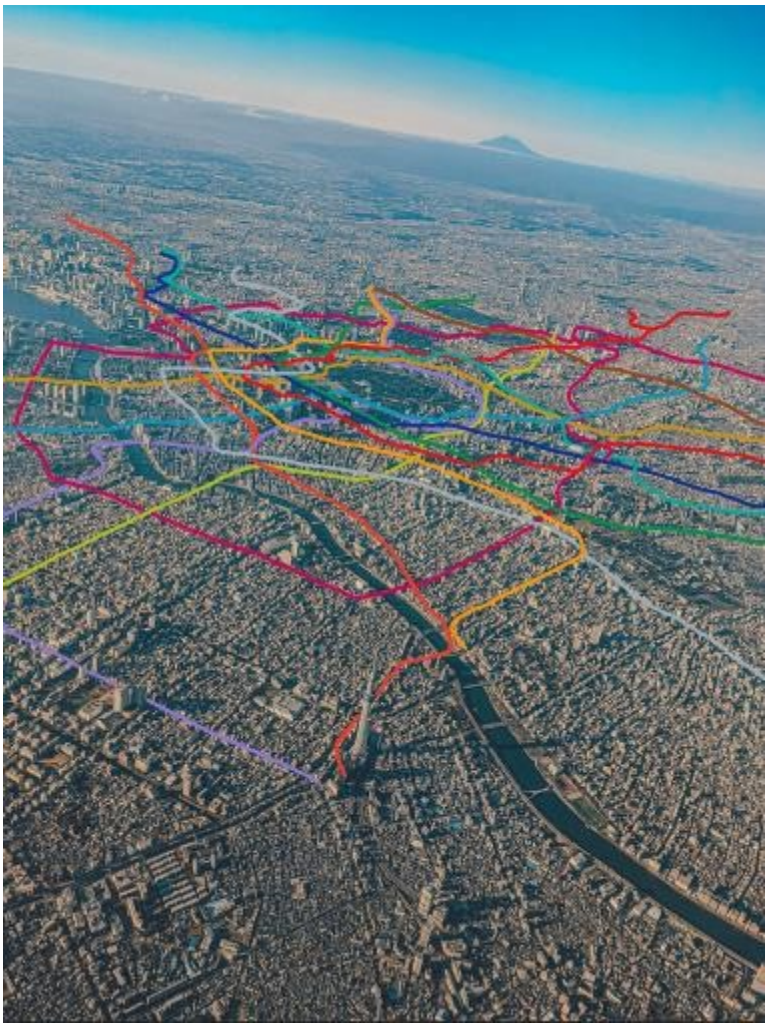
I doubt I've made any converts. Vehicle purchases are, at heart, irrational. Trucks are tough and fun and capable, and people dig being associated with that, in the same way that they seem to enjoy dressing up like their favorite sports stars and watching games, or putting on cowboy clothes on Halloween.

I like to say that All Cars Are Drag, costumes that we put on and take off. And nowhere is this more relevant than with the Butch Drag offered by pickups.

"When asked for attributes that are important to them," Edwards says, "truck owners oversample in ones like: the ability to outperform others, to look good while driving, to present a tough image, to have their car act as extension of their personality, and to stand out in a crowd." Trucks deliver on all of that. At a price.

Source: The Drive.com

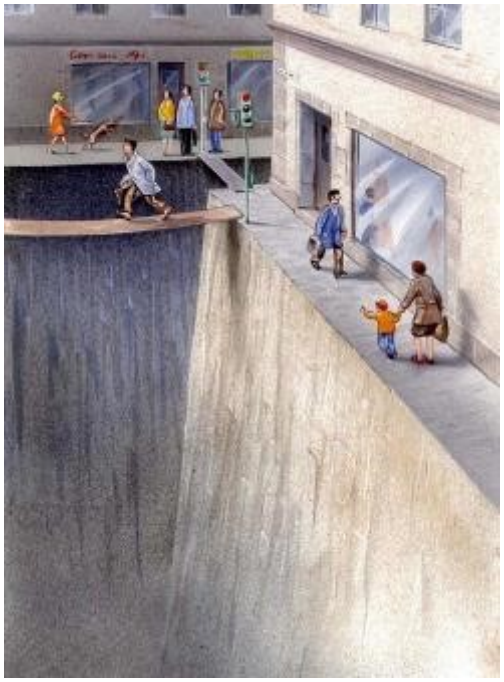
75% of truck owners use their truck for towing one time a year or less. Nearly 70% of truck owners go off-road one time a year or less.



It's not about whether you personally want to or need to drive. It's about understanding the simple truth that in cities, if everyone tries to move by car, no one moves much at all. So the more of us that are enticed to walk, bike & take transit, the better it is for everyone.— **Brent Toderian**

Tokyo metro system overlaid over an aerial photo

Transport photos of the world: Stairs



Mountainous steps in Peru

Roundabout markings contributed to fatal cyclist crash, coroner hears

Road markings at a Hamilton roundabout where a cyclist was fatally hit by a truck were not "fit for purpose", according to the coroner.

Mike Leach, 67, was struck and killed while cycling through a roundabout on Hamilton's Te Rapa Rd on April 5 in 2017. The road was resurfaced two weeks prior to the crash and a Hamilton City Council contractor had been verbally instructed to change the road markings, but forgot.

Te Rapa Rd was resurfaced weeks prior to the crash, and the road marker was verbally instructed to change the cycle lane markings.

The driver of the truck that struck Leach eventually pleaded guilty to a charge of careless driving causing death and was sentenced to three months' community detention and 180 hours of community work. He was also disqualified from driving for 12 months and ordered to pay emotional harm reparation.

Dunn heard from serious crash unit senior constable David Tidmarsh, who said his investigation found the road markings guided cyclists to sit on the far left of the road, which positioned them in the blind spot of vehicles.

This was a contributing factor in the crash, he said. The markings were in breach of the Manual of Traffic signs and markings, which were recommended but not compulsory on council-owned roads. The Manual of Traffic signs and markings said road markings should cease before the roundabout to encourage cyclists to centre themselves on the road, to become more visible. At the time of the crash, the road markings continued to the edge of the intersection.

Both Leach and the truck driver were travelling north on Te Rapa Rd, when the truck driver overtook Leach about 50 metres before the roundabout and indicated to turn left onto Sunshine Avenue.

When asked if Leach saw the truck's indicators, Tidmarsh said it was possible. But based on Leach's positioning and pathway straight through the roundabout, said "he must not have known that truck was turning". Leach was on the left of the truck, and the driver said he did not see him before turning, and assumed Leach had mounted the footpath or stopped.

The front centre of the truck hit the rear of his bike in the centre of the turn into Sunshine Avenue. Following the crash, council contractors stopped road markings 30 metres before the roundabout and a green cycleway encouraged cyclists to mount the footpath.

Hamilton City Council acting city transport manager Robyn Denton said Te Rapa Rd was resurfaced weeks prior to the crash, and the road marker was verbally instructed to change the cycle lane markings. She said council staff were not aware of the mistake until after the fatal collision.

"Hamilton City Council accepts the cycle lane involved did not comply with Manual of Traffic signs and markings," Denton said.

Following the incident, Hamilton City Council switched to written instructions, and an on-site check following completion. A council staff member would often attend and help with marking out. All intersections that did not comply were also identified and corrected, she said.

The guidelines were introduced in 2009, but it was common practice to make intersections compliant when maintenance or resealing work was due.
Denton said although roundabouts were traditionally considered one of the safest ways to efficiently move traffic, it had recently been accepted that they posed risks for cyclists – especially two-lane roundabouts. The 2012 to 2022 and 2015 to 2025 Long Term Plans did not include funding for large roundabout improvements, she said.

Although this year's 2018 to 2028 plan included some funding, the council had reviewed crash data and did not deem the Te Rapa Rd and Sunshine Ave high risk. Risk was determined by traffic volumes and crash data, she said.

Crash data was obtained from police, but was limited to crashes reported to police and where an officer attended. It did not consider near misses or smaller unreported crashes.

Reassigning the flush median strip to reposition cyclists on the road was sometimes adopted, as were "hit sticks" to protect cycle lanes and speed bumps to slow traffic and help cyclists feel more confident in the centre of the lane.

"It [the intersection] is safer than it was but not as safe as I would like it, but I don't know the best way to treat it to ensure safety for not only cyclists but pedestrians."
Source: Stuff

Apply to create a parklet in Wellington

Parklets are parking-space sized mini parks or outdoor dining areas that are constructed in on-street carparks. You can apply for a free parklet permit as part of the Council's Pandemic Response Plan.

Parklets can transform parking spaces into vibrant public spaces built for people to sit, relax, and enjoy the city. Parklets are best where the street lacks public space, or the footpaths are too narrow to provide outdoor dining spaces.

Parklets can:

- improve the street experience
- be good for businesses because they bring more life to the street
- provide more space to socialise
- slow traffic and make the street safer
- help give an area its own special feel and identity
- be low cost and simple to construct
- provide more outdoor space for businesses and their customers to safely spend time during the Covid-19 pandemic.

Spaces approved for parklets are free until March 2023. After that, fees may apply.

If you decide to renew your parklet after 12 months, Wellington City Council may commercially value the car parks and charge you annually.

As a business, you need to pay for construction, installation and maintenance of your parklet.

Apply here

Canterbury and West Coast branch update

Having put in a really good shift at the helm of the Canterbury and West Coast Branch, Grace Ryan is stepping down as Chair.

This role will now be filled by Stacey Lloyd, a Transportation Engineer based in Christchurch. The Committee will continue to plan events and would like to welcome any ideas for events from our members.

Open CHCH, the one-weekend only festival of architectural excellence, depends on a group of dedicated and energetic people to offer their time to help deliver the festival programme. It couldn't happen without volunteers!

This year, they need your help more than ever - volunteers will play an integral role in ensuring that Te Pūtahi can deliver the festival safely.

Te Pūtahi is committed to the safety and wellbeing of our Open Christchurch volunteers. (Take a look at their website page for information about some of the measures they have in place.)

As a volunteer, you'll commit to giving some of your time over the festival weekend (30 April - 1 May 2022), and to some training pre-festival. There is also a need for keen volunteers to help out in the lead up to the festival.

Connect with like-minded individuals who share a passion for architecture, city-making and storytelling and enjoy an exciting behind-the-scenes experience of our architectural festival. Perks include special access to buildings and the waiving of booking fees.

Advanced Pavement Design - 2022

Aims and Objectives:
This course covers important aspects of pavement design and rehabilitations. The first part of the course is mainly concerned with main factors affecting pavement performance; different types of distresses; pavement evaluations, drainage, rehabilitation strategies and material characterisations. The **pavement materials characterisation and mix design**, with emphasis on Superpave technology for bitumen characterisation, hot mix design will be **compulsory reading for students**.
The second part covers in detail **Mechanistic-Empirical (M-E) design** for both flexible and rigid pavements. The Austroads M.E. pavement design for is fully covered. Deflection analysis utilising FWD and deflectograph, deflection bowl parameters and backcalculations are thoroughly covered. Circly software and backcalculation software are fully covered.

At the end of the course, students should:
- Be able to carry out advanced material characterisation using both conventional and Superpave specifications.
- Be able to carry out Mechanistic-Empirical pavement design for both new flexible and rigid pavements.
- Be able to undertake overlay design of existing flexible and rigid pavements.
- Demonstrate their research and presentation skills through their research work.

Indicative Course Content
The course will comprise teaching material covering the following topics:
Introduction to pavement design
Distresses in both Flexible and Rigid Pavements
Fatigue Model lings and Endurance Limit
Permanent Deformation Behaviour
Material Characterisations for fine grained, coarse grained unbound materials and asphalt concrete mixes Bending Beam, Dynamic/ Resilient Modulus Tests, CBR Tests
Stresses, Strains, and Deflection analysis of Multilayer system using Circly
Traffic Loading and Volume analysis
Austroads Mechanistic–Empirical Pavement Design Procedure
Structural Responses in Rigid Pavements
Rigid Pavement Design Procedure (Austroads)
Deflection Analysis and backcalculations
Overlay Design

Teaching Block:
The course is delivered over two blocks, each block is two days of teaching from 9:00 to 5:00 pm with some frequent breaks for lunch and tea. Each block would comprise lectures, tutorial, students' presentations for reach topics, and demonstrations within the pavement laboratory.
The teaching block would be held at the University of Canterbury. Students would need to make their own travel/accommodation arrangements.
Block 1: 25 and 26 of July
Block 2: 22 and 23 of August

Indicative Course Assessment: *(subject to confirmation)*
- Research Paper (due date TBC) 10%
- Two Assignments (due a week before final exam) 20%
- Lab report (details TBC) 10%
- Challenge Exercise (Optional) 5%
- Final Exam 60%

Students will choose a research topic to investigate from a range of suggested topics (based on the course notes provided) or in any other related subject if the student desires (discuss with the course coordinator beforehand). Students have to carry out literature review on this subject and make a class presentation for 10-15 minutes on this topic during the teaching block and submit a research report. The research project report will be in the form of conference or journal paper format.

The final exam will be a closed-book exam designed to test students' understanding and application of the material covered in the course notes and teaching block. Students from outside of Christchurch will be able to arrange to sit the final exam in their home town with a suitable local supervisor.

While a **minimum 50% overall grade** of the total course mark is the usual benchmark for passing, to guarantee a pass in the course you must also achieve **at least 40%** in both coursework and examination total marks.

Teaching Staff:
This course will be taught by:
Mofreh Saleh *(Course Coordinator)*, University of Canterbury

Target Audience:
This course is available to full-time and part-time students enrolled in Canterbury's postgraduate transport programme (i.e. ME, MCE, PGCertEng or CoP see the website ***www.met.canterbury.ac.nz*** for more information).

Other undergraduate or postgraduate students at Canterbury (e.g. in engineering, geology, etc) may also apply to enrol and will be considered on a case-by-case basis. Such students should make contact in advance with the course coordinator.

The course will also benefit industry professionals and practitioners involved in pavement design but with little theoretical experience. The course can be undertaken for a one-off Certificate of Proficiency (COP) or as part of a larger qualification such as ME.

Some previous training in basic pavement engineering/design or rehabilitation is desirable, e.g. the undergraduate course ENCI415 (background reading references can be provided if necessary).

Course Workload and Learning Resources:
This course is worth (15 points), which translates into a nominal average of **150 hours** of lectures, labs, assignment work, background reading and other study time for a typical student.

All participants will be given detailed lecture notes for each topic at the beginning of the course. While there is no required textbook, suggested books in the Engineering Library will be indicated where appropriate, and students will also be expected make use of the Library's research tools (note: distance services are available for non-Christchurch students).

Links to useful websites and electronic documents (including Austroads pavement guides) will also be provided on the University's online teaching system, **Learn**, and students will be expected to use Learn for ongoing communications and discussions.

Enrolment:
All students should apply to enrol in "ENTR603" no later than one week prior to the start of semester, i.e. by **Mon 11th of July 2022** – otherwise late fees may be applied. Students new to the UC programme should ideally apply earlier than this to confirm eligibility.

Completion of enrolment (documentation, fees, etc) is required before access to Learn and course notes can be provided. See ***www.canterbury.ac.nz/enrol/*** for details on enrolling.

For more information about this course contact Professor ***Mofreh Saleh****, Civil & NatRes Eng Dept*
Phone: (03) 3695118 Email: Mofreh.Saleh@canterbury.ac.nz
Postgraduate Transportation website: ***www.met.canterbury.ac.nz***

Pavement Maintenance, Rehabilitation, and Management - 2022

Course Outline Aims and Objectives:
This course covers important aspects of pavement maintenance, rehabilitation, and management. The first part of the course is concerned with methods and measures of pavement condition. Students will then learn about maintenance and rehabilitation strategies appropriate for different types of pavements at different stages of deterioration. The last part of the course introduces students to pavement management, network definition, performance models, budget scenarios and the development of multi-year maintenance and rehabilitation plans.

At the end of the course, students should be able to:
- List and describe methods of pavement condition evaluation and the corresponding condition indices.
- List and describe maintenance and rehabilitation (M&R) strategies for flexible, rigid, and composite pavement structures.
- Select appropriate M&R strategies as a function of pavement type, condition, traffic levels, and environmental factors.
- List and describe the elements of a pavement management system (PMS) network.
- Develop an M&R decision matrix for implementation in PMS - Use simple regression techniques to develop pavement condition models
- Compare and contrast PMS budget scenarios
- Demonstrate research and presentation skills Indicative Course Content

The course will comprise teaching material covering the following topics:
1. Review of pavement structures and materials.
2. The pavement life cycle.
3. Pavement condition evaluation: distress, roughness, deflection, coring, GPR, friction.
4. Asphalt concrete distress. 5. Flexible pavement preventive maintenance treatments. 6. Flexible pavement traditional maintenance and rehabilitation strategies.
7. Flexible pavement recycling and reclaiming strategies.
8. Portland cement concrete distress.
9. Rigid pavement preventive maintenance treatments
10. Rigid pavement traditional maintenance and rehabilitation strategies.
11. Rigid pavement recycling and reclaiming strategies.
12. Elements of a pavement management system
13. M&R decision matrix
14. Performance models
15. Budget scenarios
16. Multi-year M&R plans and GIS integration

Teaching Block:
The course is delivered over two blocks, each block is two days of teaching from 9:00 to 5:00 pm with some frequent breaks for lunch and tea. Each block would comprise lectures, tutorial, students' presentations for reach topics, and demonstrations within the pavement laboratory. The teaching block would be held at the University of Canterbury. Students would need to make their own travel/ accommodation arrangements.

Block 1: 5th and 6th of September
Block 2: 3rd and 4th of October

Indicative Course Assessment: (subject to confirmation)
- Research Paper (due date TBC) 10%
- Two Assignments (due a week before final exam) 20%
- Lab report (details TBC) 10%
- Challenge Exercise (Optional) 5%
- Final Exam 60%

Students will choose a research topic to investigate from a range of suggested topics (based on the course notes provided) or in any other related subject if the student desires (discuss with the course coordinator beforehand). Students have to carry out literature review on this subject and make a class presentation for 10-15 minutes on this topic during the teaching block and submit a research report.

The research project report will be in the form of conference or journal paper format. The final exam will be a closed-book exam designed to test students' understanding and application of the material covered in the course notes and teaching block. Students from outside of Christchurch will be able to arrange to sit the final exam in their home town with a suitable local supervisor. While a minimum 50% overall grade of the total course mark is the usual benchmark for passing, to guarantee a pass in the course you must also achieve at least 40% in both coursework and examination total marks.

Teaching Staff:
Instructor: Dragos Andrei, California State Polytechnic University, Pomona
Course coordinator: Mofreh Saleh, University of Canterbury

Target Audience:
This course is available to full-time and part-time students enrolled in Canterbury's postgraduate transport programme (i.e. ME, MCE, PGCertEng or CoP see the website www.met.canterbury.ac.nz for more information). Other undergraduate or postgraduate students at Canterbury (e.g. in engineering, geology, etc) may also apply to enroll and will be considered on a case-by-case basis. Such students should make contact in advance with the course coordinator.
The course will also benefit industry professionals and practitioners involved in pavement design but with little theoretical experience. The course can be undertaken for a one-off Certificate of Proficiency (COP) or as part of a larger qualification such as ME. Some previous training in basic pavement engineering/design or rehabilitation is desirable, e.g. the undergraduate course ENCI415 (background reading references can be provided if necessary). Course Workload and Learning

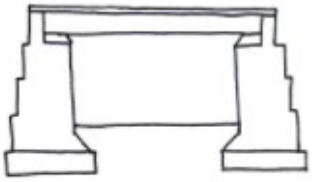
Resources:
This course is worth (15 points), which translates into a nominal average of 150 hours of lectures, labs, assignment work, background reading and other study time for a typical student. All participants will be given detailed lecture notes for each topic at the beginning of the course. While there is no required textbook, suggested books in the Engineering Library will be indicated where appropriate, and students will also be expected make use of the Library's research tools (note: distance services are available for non-Christchurch students). Links to useful websites and electronic documents (including Austroads pavement guides) will also be provided on the University's online teaching system, Learn, and students will be expected to use Learn for ongoing communications and discussions.

Enrolment:
All students should apply to enrol no later than one week prior to the start of semester, i.e. by Mon 11th of July 2022 – otherwise late fees may be applied. Students new to the UC programme should ideally apply earlier than this to confirm eligibility. Completion of enrolment (documentation, fees, etc) is required before access to Learn and course notes can be provided.

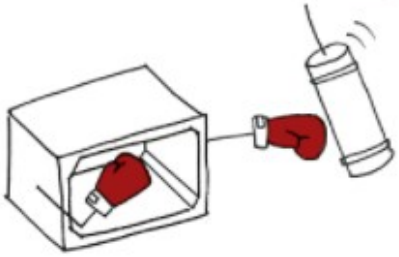
See www.canterbury.ac.nz/enrol/ for details on enrolling.
For more information about this course contact Professor Mofreh Saleh, Civil & NatRes Eng Dept Phone: (03) 3695118
Email: Mofreh.Saleh@canterbury.ac.nz Postgraduate Transportation website: www.met.canterbury.ac.nz

Good things come in threes

PIPE CULVERT



SLAB CULVERT



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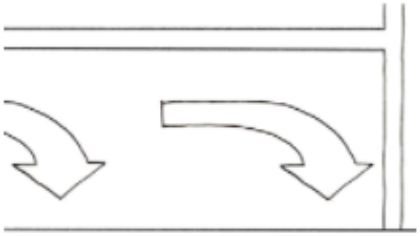
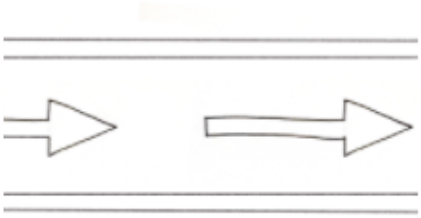


TURN LANE



THROUGH LANE

STAND UP LANE

EDGELINE

CENTRELINE

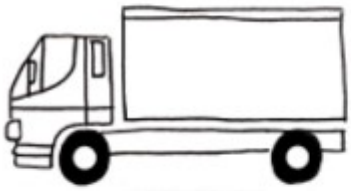
SHYLINE

How our Road Safety Engineers choose jeans...

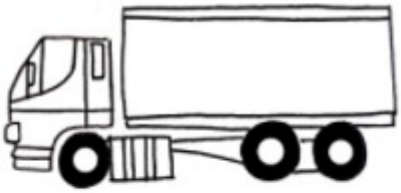
NO

NO

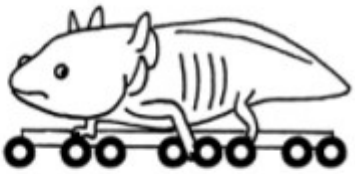
GAP ACCEPTANCE



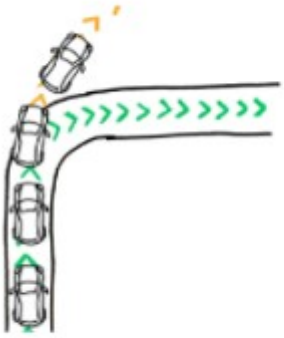
DUAL AXLE



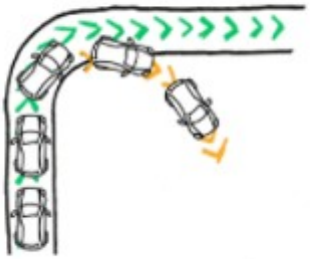
TRI AXLE



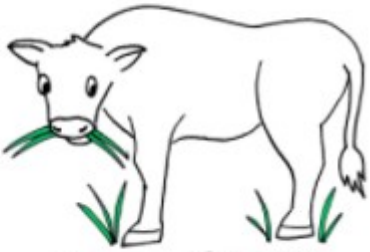
AXOLOTL



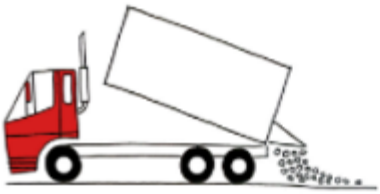
UNDERSTEER



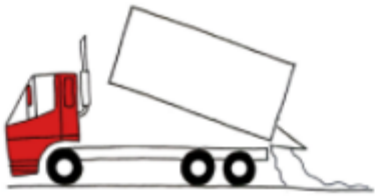
OVERSTEER



ANGUS STEER



SPRAY SEAL



SLURRY SEAL

CAPE SEAL

Our vision is an Aotearoa where children can bike, scoot or walk to school independently, explore their neighbourhoods safely; where you can hear birdsong instead of car engines, and streets are pleasant, sociable places.

Te Ara Matatika - Transport equity and how Aotearoa can transition to connected, low-traffic cities

Following COP26, the urgent need for climate action and decarbonisation is at the top of mind for public and policymakers alike. But not every method of decarbonisation leads to an equitable outcome.

The Helen Clark Foundation and WSP co-hosted **a free, public webinar** to discuss what an equitable climate change response might look like for our communities and cities in Aotearoa, especially with regards to transport equity.

This webinar builds on their recently-published report on this topic, **Te Ara Matatika – The Fair Path.**

Author Holly Walker introduced the report and facilitated a discussion with an expert panel of Alec Tang, Director Sustainability at Kāinga Ora; Peter McGlashan, Lead Advisor Urban Mobility at Waka Kotahi; Erin Gough, disability advocate and Lead Advisor Rights at the Office of the Children's Commissioner; and Kumeroa Pihama, Pou Whanake, Technical Director Māori at WSP.
Watch the webinar on Youtube.

Recognising our Agents for Change in reimagining our street spaces

Our vision is an Aotearoa where children can bike, scoot or walk to school independently, explore their neighbourhoods safely; where you can hear birdsong instead of car engines, and streets are pleasant, sociable places.

Waka Kotahi is thrilled to award ten councils with our Agent for Change trophies in recognition of their outstanding contribution to transforming street spaces through the Innovating Streets for People programme.

The winning projects were:

- 'Create the Vibe' Thames - Thames-Coromandel District Council
- Streets for People: Cambridge - Waipā District Council
- Drews Avenue Arts Quarter Living Street Project - Whanganui District Council
- Te Manawa ō Owhatiura - Rotorua Lakes District Council
- Streets Alive - Gore District Council
- West Quay streetscape and traffic calming improvements - Napier City Council
- Creating Safer Streets - Emily Place - Auckland Council
- Golden Bay High School - School Zone Trial - Tasman District Council
- Your Streets Your Future Mangere (West) - Auckland Transport
- Te Waka O Waihopai - Invercargill City Council

We recognise the great effort that all of the projects involved in the Innovating Streets for People programme 2020/21 have put in to trialling tactical urbanism, and the gift of shared learning that will benefit everyone working on future projects.

These projects have contributed greatly to helping people around Aotearoa to reimagine our street spaces and move towards a future where people can move freely around our towns and cities.
Read more about what these projects have helped us learn through the Innovating Streets for People programme 2020/21.

Across Te Ika a Maui

Throughout 2021, Waka Kotahi and councils have been busy enhancing North Island sections of the New Zealand Cycle Trails. Our focus has been on sections of Great Rides that cross highways or run parallel to them.

On the Waikato River Trail for example, we have improved two crossings at Whakamaru and moved a highway barrier to provide more space for the trail. We have also upgraded highway crossings on the Mountains to Sea Cycle Trail near Horopito and the Hawke's Bay Trails. And on the Remutaka Cycle Trail we have improved a highway underpass at Te Marua to make it much easier to ride.

All these enhancements make the cycle trails safer and more enjoyable for you to explore this summer. Get out there and check them out. There is no better way to explore Te Ika a Maui than by bike! **Find out more about the 22 Great Rides.**

New path from Invercargill to Bluff

For those hardy travellers walking or cycling 3000 km from Cape Reinga to Bluff, there is at last a safe alternative to the shoulder of State Highway 1 when riding to Bluff.

After riding it for the third time with mates, local cyclist Ray Robinson has declared that **"it's bloody good".** Waka Kotahi has even received a poem from one grateful trail user, Tim Anderson, who said "10/10 for the workers, who laid that trail to Bluff".

In the past, walkers and cyclists have had to share the road with large trucks racing to the port at Bluff. It was often terrifying and of course the truck drivers did not like it either. Now everyone is happy.

The 2.5-metre-wide path from Invercargill to Bluff is 26 kilometres long and has taken just over ten years to build. There are plans underway for a grand official opening in March 2022, once interpretation signs have been installed. The trail starts at Tweed Street on the western edge of Invercargill and ends at the northern edge of Bluff. Travellers following Te Araroa New Zealand's trail then travel through town to the famous AA signs at Stirling Point.

New connections to the Hurunui Heartland Ride

The other fantastic new riding opportunity in Christchurch heads north from the city centre, on a string of cycle paths to Kaiapoi, Rangiora, and beyond to connect to the **Hurunui Heartland Ride**. The well-established Papanui Parallel leads to Rutland Reserve, on the edge of the city.

From there the smoothest path in the country follows the Christchurch Northern Corridor to the Waimakariri River, where the bridge has a new clip-on shared path for safe crossing. Only 21 km from town, the cafés of Kaiapoi are the perfect destination for a short ride. However, the wonderful Passchendaele Path leads on to Rangiora, another great place to refuel in style. Beyond Rangiora, a mix of roads and cycle paths lead to Amberley, Culverden, and Kaikoura. The full Hurunui Heartland Ride is 260 kilometres long and details can be found on the **NZ Cycle Trail website.**

For information on how to explore Otautahi Christchurch by bike, check out **Christchurch cycle map: Christchurch City Council.**

City Rail Link update

Views through carriage windows will be a little different now for passengers on resumed Western Line services after an ambitious and successful programme of holiday work at City Rail Link's Mt Eden Station site.

Their trains will ride on 1.3 kilometres of new track through the busy site - a switch critical to connect the Western/North Auckland Line with CRL at a redeveloped Mt Eden Station.

"Our teams worked flat stick, including double shifts, in some pretty sweaty summer temperatures over the holidays to complete a big step for the project," says Dale Burtenshaw, North Auckland Line Construction Manager for the Link Alliance, CRL's main contractor. "Importantly, we've regained a lot of construction momentum lost to the covid lockdowns and restrictions."

Our teams worked flat stick, including double shifts, in some pretty sweaty summer temperatures over the holidays to complete a big step for the project

The country's largest transport infrastructure project took advantage of KiwRail's maintenance closure of the Western/North Auckland Line over Christmas/New Year – known as a Block of Line - to make the switch.

Trains, passenger and freight, running in both directions continue to use a temporary single line through Mt Eden.

The previous line has been removed for necessary construction in that corridor with trains now using the new one on the northern side of the redeveloped Mt Eden Station. It is anticipated that both lines will return to dual track operations in mid-2023.

The tight construction timetable work required close collaboration between Link Alliance, KiwiRail, Auckland Transport and rail specialist contractors Martinus and Siemens.

Completing a successful switch involved around 200 working on the tracks, signalling, installing electrified overhead lines and bonding and earthing them, and associated civil works.

Other Mt Eden work included relocating safety hoardings, earthworks for new retaining walls and utilities, building a new haul road, and works to prepare for the second drive of CRL's Tunnel Boring Machine, Dame Whina Cooper, later this year.

Further Block of Line closures at Mt Eden are planned for March and April to help deliver a CRL project that will allow Auckland to grow and prosper.

Magazine of the Transportation Group NZ Issue 171 March 2022

Building bridges

Golden Gate Bridge under construction, 1937

Clip-ons being added to the Auckland Harbour Bridge, 1968

Transportation Group National Committee

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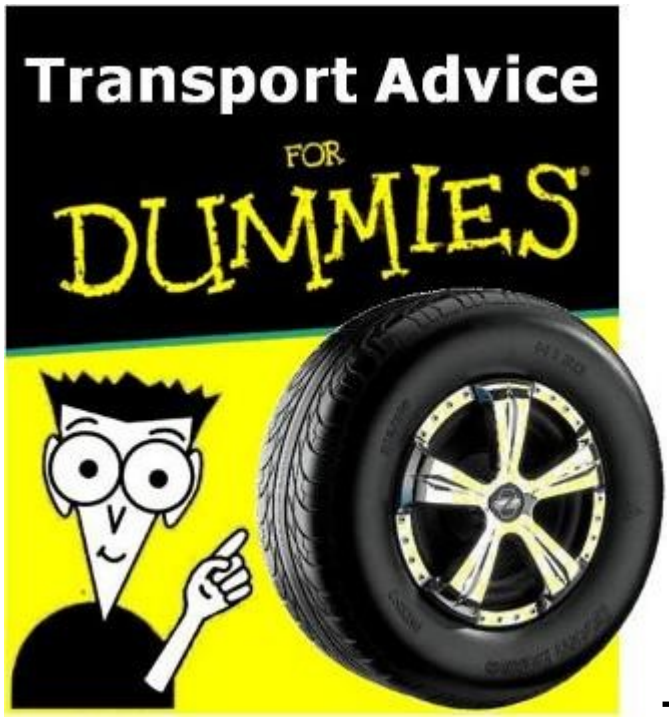
Southern: TBA

Roundabout Editor: Daniel Newcombe
daniel.newcombe@at.govt.nz

Find us on the web:
Transportationgroup.nz

"It's rigged."



A tongue-in-cheek column on transport matters by The Transport Guy. The contents do not represent the views of the Transportation Group, or anyone else for that matter. Follow the advice at your own risk. If you have a question for The Transport Guy, no matter how stupid, email it to transportfordummies@gmail.com and he'll do his best to answer.

Dear Transport Guy

I hear there is a stupid plan to slow down traffic with yet another set of traffic lights on the way to Wellington airport.

On top of other ridiculous plans for buses and trams, it seems our planners are obsessed with penalising drivers.

Free-flowing traffic to the airport must be a priority.

Chris, Miramar

Dear Crushed

I think you make a fair point. The up-to-50 second delay to allow pedestrians to avoid death crossing the road is unacceptable in your 30 minute drive to the airport, where you must arrive 45 minutes before departure on your hour-and-a-half flight to Auckland and your 15 minute wait for bags, before your hour-long taxi to downtown… where you will become a pedestrian and expect to be able to cross the road without risking death.

The Transport Guy

Dear Transport Guy

I'm the proud owner of a ute and I am tired of the vitriol I get when I drive around town, picking up my coffee and heading to the office.

I need the ute because sometimes I need to hop on the footpath to park closer to the place I'm visiting. People complain about how big and unsafe and unnecessary my ute is, but I need it.

Damian, Ponsonby

Dear Demonic

You are right, it is unfair you are being picked on (by which I mean being subject to passive aggressive stares from people walking on the road around your ute blocking the footpath) just because you've chosen a large, inefficient and inappropriate vehicle for a suburban situation.

Those people are not to know that once or twice a year you might be asked to tow a trailer with a set of drawers on it for a colleague moving house. Or that you enjoy not worrying too much about fitting into a parking space, as you can just bump up the kerb onto the footpath.

Sure, you can't see smaller people – I think they call them children – in front, behind or beside your ute because it is so unnecessarily bulky. But if you rev your engine enough, those little people should get out of the way in time.

Just embrace your fragile masculinity and keep driving your large black climate-killing machine to work and back. Its your right.

The Transport Guy

Sure, you can't see smaller people – I think they call them "children" – in front, behind or beside your ute because it is so unnecessarily bulky. But its your right to drive it.

Kids explain traffic engineering

“Sometimes you don’t want to go straight there fast.”