Roundabout

Magazine of the Transportation Group NZ

Issue 172 June 2022



In this edition:

- The importance of good lighting
- Helping people with disabilities
- Trams, buses, trains, ships & planes
- Rod Stewart fixes pot-holes
- Elizabeth Line opens
- The rise of fake engine noise
- Bilingual signs, te reo station names
- Transporting cellos by bike

And much more...

Editorial



Daniel Newcombe
Roundabout Editor
daniel.newcombe@atgovt.nz

I was at conference recently (I won't name it, but it wasn't one of our transport ones) and I somewhat disappointed with the views of the speakers.

Overwhelmingly they expressed the view that our Covid-19 pandemic was over and we're being held back whilst 'the rest of the world has re-opened'. There was a lot of grumbling that while our initial response in 2020 was pretty good, since then we have been unnecessarily held back and hindered economically by the government.

It took until halfway through the day before the fact that people die from Covid-19 was even mentioned, with the rest of the focus being on the economic costs (or lost opportunity). I thought it was astonishing how easily the speakers dismissed the ongoing deaths of 15-20 people each day, not to mention the long-term health impacts from Long Covid for thousands of people.

Eventually someone made the salient point that 'wanting the pandemic to be over is not the same as it being over' and there continues to need to be action required to keep as many people as possible as safe as possible.

Wanting the pandemic to be over is not the same as it being over

I always thought it was weird that businesses considered that the lifting of Covid-19 restrictions would see people flood back to crowded pubs and restaurants, when it wasn't the restrictions keeping many people away (I put myself in this category) but a concern of being exposed to the virus. I also thought it was weird (once restrictions began to be lifted) that there then complaints when swathes of staff and customers became sick and therefore businesses couldn't operate or make profits.

It feels to me like we still have work to do to carry on that 'Team of 5 Million' collaboration. As I said, I was disappointed by the somewhat selfish view focusing on economic activity, which ignored the personal impacts of the pandemic (not to mention acknowledging that it was still going, worldwide).

I had just come out of isolation (my son had Covid-19, fortunately the rest of my family avoided it) and it felt like half the school community had it—so it was all very real to me and felt like we still needed to work together to get through it.

The final irony was the day after the conference when the organisers emailed delegates to say that a Covid-positive person had attended (there was very little mask-wearing) and we should monitor for symptoms. Maybe the pandemic is not over after all?

P.S. I am not seeking any correspondence from Covid Sceptics. Focus that scepticism on your information sources.



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Chair's Chat



Bridget Burdett
National Committee Chair
bburdett@mrcagney.com

On page 5 of this issue you can find a brief article I was invited to write, thanks to the popularity of a venn diagram I made about car-centric planning being mutually exclusive from planet-centric planning. The article is provocative, obviously, and it surprised me how popular it was.

I am well aware that an article's popularity on social media is no indication of anything much, except in this case that people like an eye-catching diagram.

Our online voice is heard by a carefully curated audience, selected for us by the mysterious algorithms of the Metaverse-and-friends, whose only goal is to maintain engagement by making us feel the buzz of a like or comment. It is an echo chamber of unknown dimensions.

Sometimes I feel like a rogue Jedi in the Galactic Senate Chamber in Star Wars. People are there in the cavernous space, but they're too far away to see, and you can only really tell if the vibe of the room is for or against what you've said... unless you read the comments.



But increasingly in the galaxy I float around, the vibe is for change. Transport planners and engineers want to contribute towards humanity's thriving, not its demise.

That means a paradigm shift in the current decade towards no new investment for cars. Cars have more than enough space already, and the Climate Change Commission wants less car travel despite population growth.

Perhaps the rebel alliance is gaining traction.

We can deliver healthy, safe, efficient mobility if we want to. I am optimistic. From where I am sitting it feels very much like the force, it awakens.

TRANSPORTATION GROUP NEW ZEALAND

Reminder – Register now Chair's Conversation #7

Join us online for the upcoming Chair's Conversation as Jessica Brenton-Shaw, Co-director of The Workshop joins Chair, Bridget Doran.

Jess is a public narrative researcher and advisor with a PhD in Health Psychology. In roles across government and the not for profit sectors she has focused on placing best knowledge and equity at the heart of decision-making. As Co-Director of The Workshop, Jess currently leads a team researching public mindsets that enable or prevent changes that make a big difference, and developing new narratives to improve decision-making with regard to our big social and environmental challenges.

When: Monday 20 June, 1.30 - 2.30PM
Where: Online
Register: Here

Our online voice is heard by a carefully curated audience, selected for us by the mysterious algorithms of the Metaverse-and-friends

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 editor Daniel Newcombe at:

daniel.newcombe@at.govt.nz

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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Trams back on track

You can now ride on the new 500 m extension to the Christchurch Tramway network! It also marks the finish for most of the work to upgrade earthquake-damaged High Street, north of Tuam Street.





UK street resurfaced around parked car



A driver who failed to heed signs warning of road resurfacing forced workers to tarmac around a parked car.

Notices were put up on Huntley Street in Darlington alerting motorists to the road closure which was in effect on Monday and Tuesday.

But the BMW owner clearly did not get the message and the vehicle was left outlined with fresh asphalt.

"As the vehicle in question has been left in an area without parking restrictions, we're not able to take action against the driver on this occasion."

Darlington Council said the work would be remedied "but it will mean an extra cost" to the local authority.

Traffic cones and signs had been erected to notify drivers there would be no parking and the road would be closed for two days.

Residents say the street, which is close to Darlington railway station, is often used by commuters catching a train.

A Darlington Borough Council spokeswoman said: "As the vehicle in question has been left in an area without parking restrictions, we're not able to take action against the driver on this occasion.

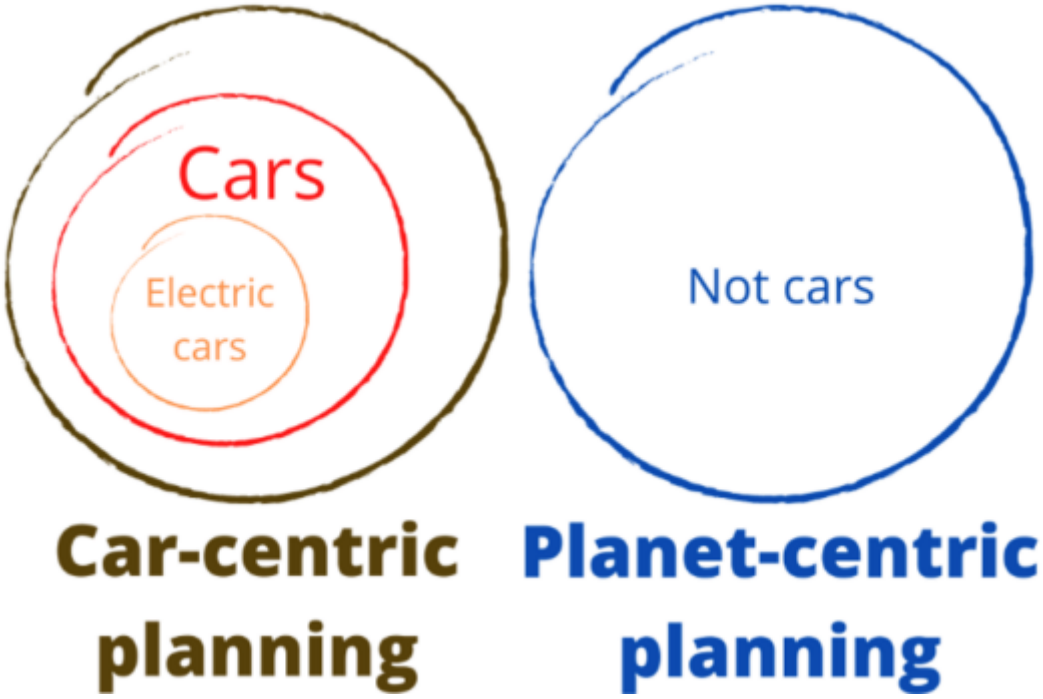
"Attempts have been made to contact the owner to ask them to remove it but so far without success.

"Signage advising of planned maintenance works is put up in good time with the aim of avoiding situations like this." "Signage advising of planned maintenance works is put up in good time with the aim of avoiding situations like this."

Source: BBC



Why transport needs to turn its back on cars, however they're powered



Rather than a goal of efficient traffic, we should focus on access

For decades transport planners have focused on building efficient and safe road networks. Car-centric planning has given us motorways, suburbia, expansive parking lots and multi-car households.

While some cities have reliable, frequent transit services, the maps that define where we live are road maps. So ubiquitous is the car to our lives that roads literally define our neighbourhood form, unquestioned.

To preserve human civilisation we are going to need different maps. For the transport sector that means a shift in focus from car-centric to planet-centric planning. Rather than a goal of efficient traffic, we should focus on access: that means we should care more about how people participate in the activities that make a good life, than how quickly they can drive across town.

Cars of any kind are around for a while because that's the world we have inherited. Turning our backs on planning for cars doesn't mean they will be banned, or not provided for. But all effort and investment in transport from now on must be in access, not mobility.

We will continue to invest in infrastructure, but not in new road lanes for cars. New investment will be in building resilient places where walking, cycling and shared transport are prioritised as part of healthy, thriving communities in harmony with the land they inhabit.

Far from making it harder to get around, focusing on access can only improve mobility. Planet-centric planning delivers safer, more efficient streets, while improving equity of participation. We already have enough roads for buses and rural traffic that needs them, and for freight that we cannot shift onto rail – and a focus on access frees road lanes for people who need them most.

An equitable transition, including for disabled people and those living rurally, is predicated on fewer miles travelled by cars. Discarding car-centric planning means that no government should promote or subsidise cars of any kind, regardless of fuel source.

A shift away from fossil fuels is inevitable in the motor industry. But its acceleration by transport authorities perpetuates the delusion that cars are a sustainable transport mode that will help humans survive this century. Electric cars in policy are a hugely dangerous distraction from the urgent and compelling need for a different kind of transport planning.

Government should only invest in, and plan for, sustainable transport that contributes to a survivable planet. It is astounding how controversial that previous sentence will sound to some.

There is no overlap between planet-saving planning, and car-centric planning.
Source: Energy Voices | illuminem



By Transportation Group Chair Bridget Doran

Serving the transport needs of disabled people

By Alice Davies, winner of the Transportation Group internship for a disabled member

About me
My name is Alice Davies, and I am currently in my third year of studying towards a Bachelor of Social Work at the University of Waikato in Tauranga. I have a special interest in social work with the disabled community.

This interest was sparked by my own experience living as someone medically classified as disabled and wanting to be equipped to help others living with disabilities. I believe throughout New Zealand society there are many structures that are continuing to disadvantage people with disabilities. I want to influence positive change in our country for the disabled community.



My interest in this internship
So how did a social work student end up doing an engineering internship? This internship was advertised for engineering students who had a disability to research an issue in transport engineering.

As the Transportation Group was open to disabled students, I thought maybe they would be open to me researching accessibility as a non-engineering student and I was right! I decided to send in my application pitching my research idea and to my surprise, Bridget loved my idea.

My time at Beca
I was lucky enough to be hosted by Beca for my internship. During my time there, I was a part of their Tauranga transport advisory section. Alongside my research, I worked on some of Beca's transport projects.

I am truly grateful for the environment Beca provided me to learn about transport engineering and share my passion for disability advocacy.

I was able to add my research and perspective on accessibility to these projects to promote accessible designs in Tauranga. I was able to meet with Beca's clients such as the Tauranga City Council and the Bay of Plenty Regional Council to advocate for importance of accessibility in public design.

I learnt a lot about the engineering field and city planning. I received consistent support from the transport team at Beca and I was surprised by how easily I felt a part of the team as a social work student. When sharing my experience of living as a disabled person I was always met with a listening ear. I am truly grateful for the environment Beca provided me to learn about transport engineering and share my passion for disability advocacy.

My research aim/ introduction
My research focused on answering the question of how does current bus stop design affect the disabled community and how could bus stop design be more accessible for disabled users?

I choose this topic as it was relevant to the current projects of Tauranga City Council and Beca's transport team. This research is needed for the disabled community because they are more likely to be dependent on public transport for financial and health reasons.



For disabled people who experience limitations around driving, the bus system allows them to access opportunities like work, education, medical appointments, shops, and social groups (Human Rights Commission, 2005).

From a social policy perspective, an individual living with a disability has the same rights as any New Zealander to access a vehicle available to the public (Human Rights Act, 1993). In their report Statistics New Zealand (2021) presents evidence that for New Zealand's disabled population the unemployment and underutilisation rates are greater than the non-disabled population.

The link between experiencing a disability and having a lower income also contributes to the disabled population's need for accessible public transportation as it is a more economical transport solution compared to buying a car. This is especially necessary for a wheelchair user as a wheelchair accessible car is costly. An accessible bus system has the power to create opportunities and improve the well-being of the disabled community.

The disabled community in NZ
Statistics New Zealand's (2013) disability survey identified 24 per cent of New Zealanders as disabled, a total of 1.1 million people. I have observed that the lack of disability awareness in New Zealand has created a discourse that disabled people are a small minority.

Statistics New Zealand's (2013) survey defined disability as a "long-term limitation (resulting from an impairment) in a person's ability to carry out daily activities" (p. 2). The options participants were given to select what type of limitation they experienced was hearing, vision, physical, intellectual, psychological/ psychiatric, and other (Statistics New Zealand, 2013).

The option for other covered impairment of speaking, memory, learning, and developmental delay. Temporary conditions such as pregnancy or broken bones should also be acknowledged as disabilities. There is not one standard of what is a disability in New Zealand, but evidence shows that a large number of the population struggle with ongoing health limitations.

Research methods
When deciding on what kind of research I wanted to do I realised there were already audits of the lack of quality and standard of bus stops in Tauranga and there were guidelines on how bus stops design can be accessible. I did not seek to create new guidelines, but I wanted to conduct research that inspired organisations to care about incorporating these standards.

So, I conducted a survey to explore how current bus stop design affects the disabled community and how could bus stop design be more accessible for disabled users. I reached out to local disability services and organisations in the Bay of Plenty and had the survey open for a week. The survey had 23 respondents. I hypothesised that the lack of standard bus stop conditions are negatively affecting the disabled community.

Conclusion
Overall, this research has found that the disabled community in the Bay of Plenty experience many difficulties accessing and using public bus stops. The findings proved my hypothesis that the inaccessibility of bus stops in Tauranga negatively affects the disabled community in Tauranga.

This research has contributed to past research by providing Bay of Plenty specific research. This study also has a detailed focus on the public bus system while other past studies have been wider looking at all public transport. This research has been in support of the disabled community in hopes of increasing awareness of the need for accessible public design.

My experience of presenting my research to the regional council
After I finished my internship at Beca, I was invited to share my research with the Bay of Plenty Regional Council's Public Transport Committee.

This was a great opportunity to advocate for Tauranga's disabled community and show the regional council that someone young was interested in what they are doing.

I found that the committee felt they have gone above and beyond for the local disabled community because they have given free bus fares to those who permanently cannot drive because of a health condition.

Although I think this is a great action by the committee, what is the point of free fares if so many disabled people cannot access bus stops? I felt a bit like I was entering the lion's den as a 21-year-old girl telling these committee members how they should be doing better.

I am so grateful for the opportunity to share my research with the committee members as a mere university student and I did feel encouraged by their response. Even if my research inspires just one person to push for more accessibility in Tauranga it will have been worth it. You can see a copy of my research HERE

What is the point of free fares if so many disabled people cannot access bus stops?

Moving forward how I think a social work perspective can be incorporated into transport engineering
I believe transport engineering is an important structure of influence in New Zealand and there is room for perspectives such as social work to become integrated into the field.

Access to public transport can empower community outcomes by providing local people with access to education, healthcare, and work. Even the design of streets and footpaths affects the flow of a community and how people can access nearby amenities.

To bring about change there needs to be communication between transport engineers and the community and that is where I believe social work can fit in. From the disabled community to school children, good transport design can improve the well-being of New Zealand social groups.

I believe transport engineering will reach a new level of influence when engineers step away from narrow design aims of efficiency and cost-effectiveness and acknowledge the ability they have to create environments of community empowerment.



Wellington to introduce Snapper payments on all trains

"It's certainly a Victorian system of payment and quite literally this system was around in Wellington on our tram network when Queen Victoria was still alive."



Wellington is stepping into the 21st century with commuters soon being able to use electronic payments via Snapper cards across the entire rail network.

The decision follows a successful trial of Snapper on the Johnsonville train line, where four out of every five passengers now use the card to pay for trips. Previously, Snapper had only been used on buses. Cash payments were taken on trains or paper tickets could be purchased ahead of a trip.

Greater Wellington Regional Council chairman Daran Ponter wouldn't go as far as calling the system embarrassing but rather described it as "quaint".

"It's certainly a Victorian system of payment and quite literally this system was around in Wellington on our tram network when Queen Victoria was still alive."

Metlink general manager Samantha Gain said the Johnsonville line trial, which started in November, provided the opportunity to get to grips with the physical, operational and passenger requirements needed for electronic ticketing.

"Within three months more than 80 per cent of passengers had adopted the new system. We are delighted by their ringing endorsement of the service."

The regional council plans to roll out Snapper across the Kāpiti line in early November this year, then across the Hutt Valley, Melling and Wairarapa lines later in the month.

The process will require the installation of Snapper validators at all stations. Heritage New Zealand has previously voiced concerns about these validators at Wellington's central train station because they were not in keeping with the building's colour palette.

Concerns were raised about the posts being intrusive and too bulky. The heritage recommendation was for any new elements to be in keeping with the railway station's historic colours and "recede in prominence, ie dark brown, black".

Further correspondence showed Heritage New Zealand eventually backed down from that position, fully supporting installation of the validators on the Johnsonville line.

However, if Metlink wanted to install permanent validators, this will be subject to further consultation with Heritage New Zealand with respect to size, design, colour, location, number and scale.

Ponter said international and local experience showed customers increasingly preferred and used cash-free methods of payment for public transport.

"Our focus is on providing better services to passengers and, in our regular customer satisfaction survey, passengers tell us that convenience of paying is an area we can improve on with 68 per cent of rail passengers currently satisfied compared to 78 per cent with our bus passengers. Clearly there's room for improvement here and Snapper on rail will have a profound impact."

Regional council transport committee chairman Roger Blakeley said customers would benefit from the convenience of not having to buy a paper ticket.

"Many also prefer to use electronic payment to track and manage their travel budgets, and often, that of their dependants. And as we've seen during Covid we need to have safe, contactless methods of payment available across the region's network."

Source: NZ Herald

Saving the planet and the pocket: Bus fare trial could cut emissions and costs for users

"We want more people on buses and by limiting for older people the time that they can travel reduces their ability to get out and about, perhaps, at times that suit them,"



Getting a bus from satellite towns into Christchurch could soon cost students and community service cardholders just $1 after a low-cost flat fare trial gained universal support from Canterbury councillors.

Environment Canterbury (ECan) councillors met recently to discuss the regional council's draft annual plan and develop a final version to be voted on in June. ECan had been considering three public transport fare review options – a $2 flat fare, free buses for targeted groups, or tertiary students paying child fares – but after public consultation, councillors unanimously voted for a hybrid option.

The proposed model will see a $2 flat fare across Greater Christchurch for Metrocard-holders, including areas currently in zone two, like Lincoln in Selwyn or Rangiora in Waimakariri. It will be just $1 for tertiary students, under-25s, total mobility and community service cardholders.

Cash users would also have cheaper fares, down to $4 and $2 respectively. Zone three – which covers the Diamond Harbour ferry and buses to more remote parts of Selwyn – will remain, with flat fares of $4/$2 for cardholders, and $6/$3 for cash users. If approved, the trial will start in February 2023.

Simon Templeton, chief executive of Age Concern Canterbury, said the new policy would be a "really good move" for the region's older residents.

"We want more people on buses and by limiting for older people the time that they can travel reduces their ability to get out and about, perhaps, at times that suit them," he said.

"We know that loneliness is a really big issue for older people, so anything we can do to remove any barriers to that is fantastic."

Michael Apathy, from environmental campaign group Extinction Rebellion Ōtautahi, said the decision was an "essential step in reducing carbon emissions". "Addressing costs is a great step, but we also encourage ECan to make more improvements in public transport reliability and convenience, so that even more people will switch from private car usage to public transport."

Currently, the fare for an adult travelling one zone is $2.65 with a Metrocard, or $4.20 in cash. For a child, one zone is $1.50 with a card, and $2.40 cash. However, an adult travelling across two bus zones pays much more – $3.85 with a Metrocard, and $5.70 without.

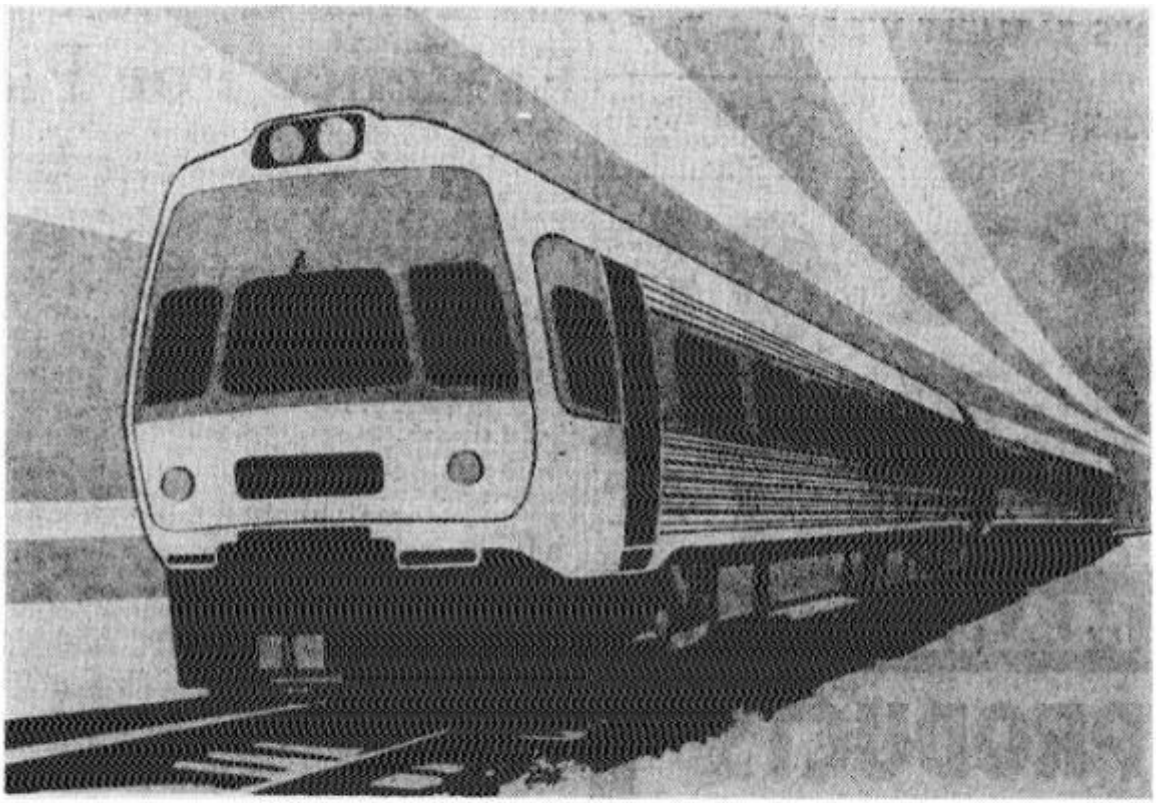
The Government has funded half-price public transport fares until the end of August, so those prices are temporarily halved.
Source: Stuff







Tenders Invited For New Railcars: a drawing of what would become the Silver Fern Railcar 1969



TENDERS INVITED FOR NEW RAIL-CARS.—The specification for the three rail-cars sought by New Zealand Railways for its "Blue Streak" daytime express service between Wellington and Auckland call for normal speeds up to 70 miles an hour on suitable sections of the line. This is a drawing of the proposed air-conditioned rail-car, comprising two 75ft coaches permanently coupled, with accommodation for 100 passengers. World-wide tenders for the supply of these new rail-cars will close on February 11.

Hoe ki angitū – Innovation Fund launched

We know that there is some great work and thinking going on in the private sector to address some of the major transport challenges we face - such as reducing emissions, encouraging mode shift, improving accessible and equitable transport options, decarbonising freight, and improving road safety outcomes

Waka Kotahi has launched a new innovation fund, Hoe ki angitū, and wants to hear from innovators with solutions to some of the problems facing transport in New Zealand.

Hoe ki angitū – Innovation Fund

Hoe ki angitū, a $15 million innovation fund, will support and accelerate innovative projects in the transport sector.

Waka Kotahi National Manager Multimodal and Innovation Deb Hume says the focus of the fund is on encouraging collaboration with the private sector and removing unnecessary barriers, to accelerate solutions.

"We want to engage actively with the private sector and encourage contributions from a broad range of people – community-based organizations, iwi, rural communities, domestic and international companies, start-ups and innovators from all sectors.

"We know that there is some great work and thinking going on in the private sector to address some of the major transport challenges we face - such as reducing emissions, encouraging mode shift, improving accessible and equitable transport options, decarbonising freight, and improving road safety outcomes.

"These challenges need to be urgently addressed to deliver a better-connected, cleaner, and safer transport system that keeps New Zealand moving. Working together we have an opportunity to amplify efforts and really achieve meaningful outcomes. Hoe ki angitū will enable us to support those passionate about solving these problems. For successful applicants, support might be financial - or it might be in other ways including support to navigate the transportation regulatory system, access to data or capabilities or the creation of strategic partnerships. Each project will have a unique set of needs to help it advance."

Hoe ki angitū is challenge-based, and seeks solutions with the potential to deliver real impact for the land transport system. The fund will launch with three specific challenges with others added in future rounds.
Innovation Fund challenges

With an allocated $15million over two years, the fund will partner with and support innovators of all types and at various stages of the innovation cycle.

"Despite there being many challenges to address, transport is one of the most exciting spaces to work in right now. There are many opportunities for innovators to meaningfully contribute to problem solving. We're looking forward to hearing from New Zealanders about what they are working on or thinking about and how we can help," says Ms Hume.

To be considered for funding, innovators will need to demonstrate how their project aligns with at least one of the transport outcomes as outlined in the Government Policy Statement on land transport, as well as address the specific problem presented in the challenge.

Innovators from the private sector including iwi, start-ups, domestic and international companies, research institutions, community and university groups are invited to apply.

It is expected that innovations submitted will be at various stages of development – from idea and testing through to implementation or growth.



A truck loaded with thousands of copies of Roget's Thesaurus spilled its load - left us stunned startled, aghast, stupefied, confused, shocked, rattled, paralyzed, dazed, bewildered, surprised, dumbfounded, flabbergasted, confounded, astonished, and numbed...

Want to know what New Zealanders think about road safety?

The Public attitudes to road safety 2021 report has been released as part of the commitment Waka Kotahi has to delivering Road to Zero. The report shows public attitudes to road safety topics, such as speed, vehicle safety, driver behaviour, enforcement, and Road to Zero.



The findings include:

- More New Zealanders believe that cycling in urban areas is safe (63%) than unsafe (35%).
- Almost half of the population (44%) think deaths from road crashes are acceptable.
- Most agree that the speed limit around schools in urban areas should be less than 50km/h. Those suggesting 20km/h or 30km/h has increased from 68% in 2020 to 74% in 2021.

You can **read the full report on the Waka Kotahi website**. We will publish the report annually to allow the transport sector to understand public feedback and monitor trends.

TRANSPORTATION GROUP NEW ZEALAND

Drinks with the Chair—Nelson and Wellington

Transportation Group Chair, Bridget Doran is visiting Nelson and Wellington in late June – all Transportation Group members are welcome! Join Bridget and your local Branch Chair, Clare Scott in Nelson and Tobie Pretorius in Wellington for good conversation and some light refreshments.

Nelson
Join Bridget and Clare as we launch the Nelson Branch of the Transportation Group! We will meet at the Eddyline Brewery and walk/bike over to have a look at the Salisbury roundabout and talk transport and urbanism in Nelson.

When: Tuesday 28 June, 5 – 7PM
Where: Eddyline Brewery – Front entrance, Champion Road, Richmond
Register: Here

Wellington
A conversation with Bridget, Tobie and other Transportation Group members about everything transport in Wellington and beyond.

When: Wednesday 29 June, 5 – 7PM
Where: Fork & Brewer – Upstairs, Bond Street, Wellington Central
Register: Here



Women in Engineering Day—23 June

This year, ITE-ANZ and Transportation Group New Zealand will be celebrating International Women in Engineering Day by showcasing some incredible women in the Transport Engineering sector.

These four women will tell you a little about themselves and their careers so far and reflect on the challenges they have faced and how they have overcome them. This will be followed by a question time.

The women who will be speaking are:

· **Jesmina Patel** – Graduate Engineer at AT
· **Subeh Chowdhury** – Senior Lecturer in Civil Engineering Transport at The University of Auckland
· **Sarah Zhang** – Integrated Transport and Mobility Practice Lead, NSW & ACT at Aurecon in Sydney
· **Deborah Donald** – Managing Director at O'Brien Traffic in Melbourne

When: Thursday 23 June, 12PM
Where: Online via zoom
Register: Here

Ritchies Transport Names Michele Kernahan as CEO

Ritchies Transport Limited, a leading transportation operator in New Zealand with an 87-year heritage, has announced the appointment of Michele Kernahan as Chief Executive Officer.

Ms. Kernahan brings more than two decades of senior management experience in the manufacturing, transportation and infrastructure industries to Ritchies.

We have an incredible opportunity to shape the future of New Zealand's transportation sector – playing a leading role in adopting zero-emissions technology in our buses and coaches.

She has spent the majority of her career at Fletcher Building Limited, where she held a range of roles over the course of 20 years, including Chief Executive of Building Products and Fletcher's Construction division. She has also most recently held the role of CEO of Hall's Group.

Ms. Kernahan is active in New Zealand's business community, serving as an Independent Director of Ballance Agri Nutrients Limited and a member of the Institute of Directors and Global Women. She holds both a Master of Business Administration and Bachelor of Arts in History and Sociology from the University of Canterbury.

As Ritchies' CEO, Ms. Kernahan will be responsible for accelerating the Company's growth strategy as it builds on its leadership position to stay ahead of New Zealand's evolving transportation needs, including supporting the country's expanding public transport network and promoting greener solutions.

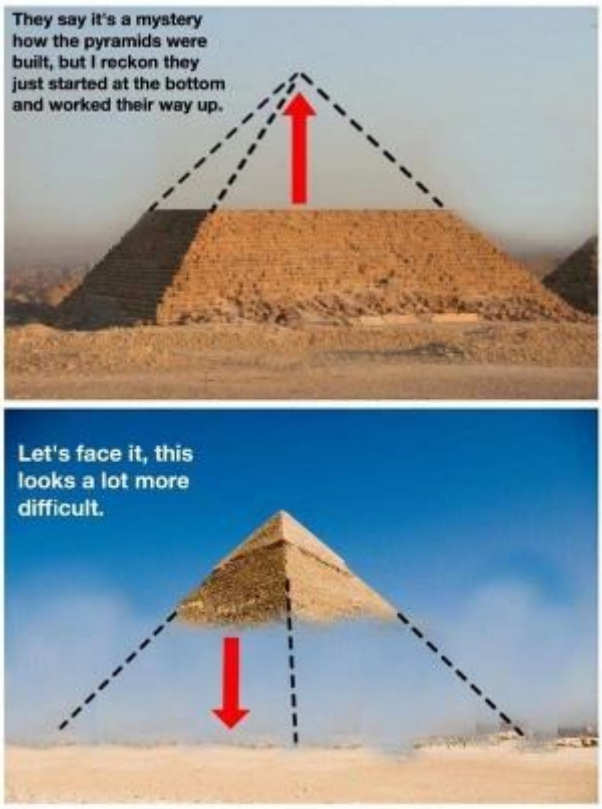
Ms. Kernahan succeeds Andrew Ritchie, who will continue to lead several strategic projects, working



closely with the Board and new CEO. Her role became effective Monday 11 April, 2022.

"Ritchies sets the standard for providing trusted local and regional transport to communities across New Zealand, and I am incredibly honoured to lead the business and work closely with our talented and dedicated team," said Ms. Kernahan.

"Together, we have an incredible opportunity to shape the future of New Zealand's transportation sector – not only by continuing to deliver unmatched service for our customers but also playing a leading role in adopting zero-emissions technology in our buses and coaches."





Auckland's "eBike Expo" returns



Auckland's "eBike Expo" returns to The Cloud at Queen's Wharf on the weekend of November 26 and 27 after last year's event was cancelled due to COVID uncertainty.

A huge display of e-bikes and e-scooters will be provided, along with the chance for test rides at the venue, expo organiser Icon Conference and Event Management managing director Marleen Goedhart says.

It will follow a similar format to last time, with more e-mobility on offer and probably further advice on helping to prevent e-bike thefts.

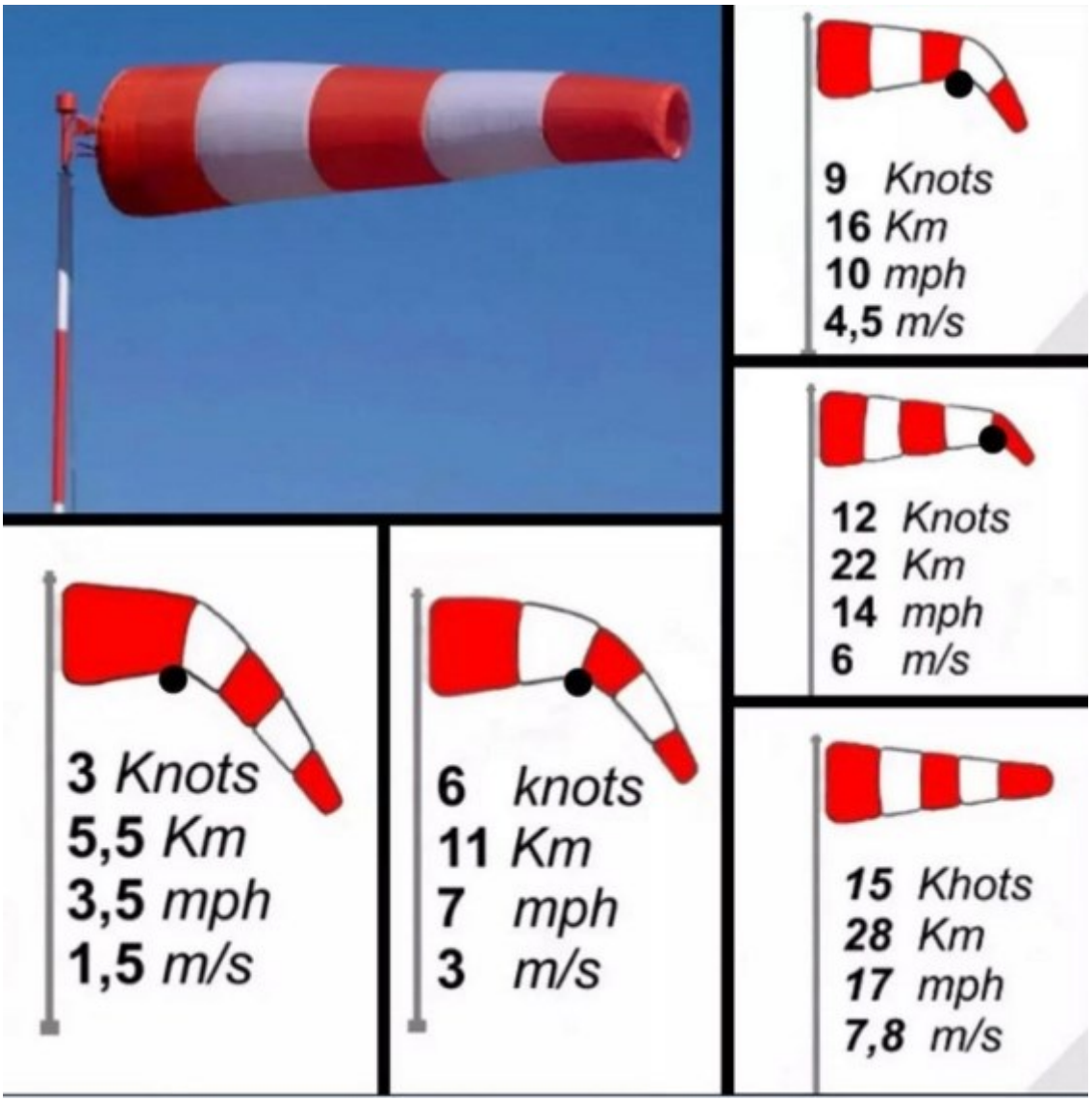
"The global electric bike industry is growing at a considerable rate and continues to develop and evolve with increasing speed as we move into a more environmentally friendly and technology-centric future," organisers say.

"Since e-bikes have been introduced into the New Zealand market and new cycleways have encouraged commuters to try alternative transport options, we are witnessing exponential industry growth and frenzied interest in e-bikes."

The third expo was held in 2020 with e-bike sales soaring, the coming event running from 9.30am to 5pm both days.

Entry tickets for the fourth eBike Expo will be on sale later, costing $5 adult and $15 a family of four.

The global electric bike industry is growing at a considerable rate and continues to develop as we move into a more environmentally friendly and technology-centric future



Decoding a windsock. *You know you always wanted to know*

Construction begins on NZ's first high-capacity green hydrogen refuelling station

Trucks will be able to top up their hydrogen trucks in a period of time comparable to refilling a traditional internal combustion engine truck

Plans for New Zealand to become a 'green hydrogen' hub have gained another shot in the arm, with confirmation that construction of the country's first high-capacity green hydrogen refuelling site is set to commence this week in Palmerston North.

The site is based near Palmerston North Airport and is being constructed by Hiringa Energy and Waitomo Group. The pair plan to build three other refuelling sites, as part of a larger goal of establishing a national hydrogen refuelling network.

Those who use the station will be able to top up their hydrogen trucks in a period of time comparable to refilling a traditional internal combustion engine truck. The facility will be supported by a Waitomo fuel stop, which will support petrol and diesel vehicles.

"What began as a discussion between two innovative, future-focused Kiwi companies about developing hydrogen on our existing and new Waitomo Fuel Stops, is now becoming a reality for future Kiwi generations," says Waitomo Group director Jimmy Ormsby.

"Seeing this vision come to life is particularly poignant for me as the third-generation owner of Waitomo, given Waitomo celebrates its 75th anniversary this year. What a way to cement in the transition to a low-emissions fuel future for the fourth generation.

"Adding low-emission alternative fuel solutions to our network is a no-brainer. We want to leave a legacy for the next generation of Ormsby's to continue in our footsteps. The exciting opportunities that green hydrogen technology offers allows us to deliver on that."



The construction of the high-capacity station follows the creation of the county's first green hydrogen refuelling station, a Tūaropaki Trust and Obayashi Corporation build near Taupo. It opened last December after being in development for three years.

The new Palmerston North refuelling site focuses on heavy transport, where hydrogen has arguably had greater penetration. The country's first hydrogen trucks, including the Hyundai Xcient, have already arrived in the country for practical evaluation.

As with the Hyundai Xcient programme, Hiringa Energy and Waitomo Group's refuelling stations benefitted from support from government funding secured via EECA. It's also backed by Sir Stephen Tindall's firm, K One W One.

Hiringa Energy chief executive Andre Clennett notes that although heavy transport only makes up 4% of the country's fleet, it produces some 25% of the country's emissions.

"Green hydrogen is the key technology that will allow these fleets to stay on the road. It is a mass-market, clean energy solution that can have a real impact on reducing our transport emissions," says Clennett.

The three other sites that Hiringa Energy and Waitomo Group are set to build upon are in Auckland, Hamilton, and Tauriko. Construction of all three is set to commence later this year, with the two companies claiming that the four stations will provide 95% coverage for hydrogen vehicles travelling on heavy freight routes.



Registration now open!!

Join leading road safety and injury prevention researchers, practitioners and policy makers for the Australasian Road Safety Conference 2022.

By 'Changing Today for Tomorrow' this conference will tackle some important concepts and ideas that are circulating the road safety community. Register now to be a part of the conversation.

ARSC 2022 Keynote Speakers

Prof.Susan Krumdieck

Susan is incredibly knowledgeable on using transition engineering for meeting sustainability goals. She will provide thought provoking ideas and create an engaging conversation that will inspire conference delegates. Susan is a thrilling addition to what will be a stacked speaker lineup.



Prof. Claes Tingvall



An outstanding thinker, changemaker and innovator in his field. Claes has been a part of vision zero since its conception. We are very excited for him to present in Ōtautahi Christchurch and listen to him present his ideas for change.

ARSC Programme

With the peer review process completed the ARSC programme is starting to take shape. We have lots of amazing submissions that cover a wide variety of topics. These will be available both virtually and in person.

Welcome Function



Join us for drinks and nibbles at the Christchurch Art Gallery on Tuesday 27 September for our welcome Reception. The art gallery provides the perfect space for mingling with like-minded individuals and getting excited for the next three days ahead.



Registration now open!!

Field Trips

This year ARSC offers field trips on Tuesday 27 September and Thursday 29 September (they are replica trips). When registering choose from one of the options below.



Bike/e-scooter trip



Walking trip



Bus Trip

Do you want to join this growing and prestigious group of wonderful industry supporters? Then please visit the website.

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For general conference and program related enquiries, contact our event team:
+64 3 352 5598 glenda@hardingconsultants.co.nz jessie@hardingconsultants.co.nz rachael@hardingconsultants.co.nz

Bay of Plenty branch update

The BOP section of our branch held our annual mid-winter quiz recently.

This is a trophy competition event between NZPI and the Transportation Group, and this year we also invited our RMLA local colleagues to join us in the new smart UoW venue.

It was a fun evening with nearly 90 keen 'quizzers', hosted by MC Will Johnston.

A slick operation of drink and food refills kept everyone sustained, the questions were definitely harder this year!

Reigning champions TCC were out front in the pizza break, but they were pipped at the post by Lysaghts (& co) consultants.

The Beca 'Qaranteam' team came in second to last, aptly winning face masks!

2022 quiz winners:
1st: Mixed bag (Lysaghts)
2nd: Billy Ray Virus (TCC)
3rd: Hindsight (4 Sight)

Thank you to all the organisers and helpers. Lysaghts keep that trophy safe for next year!







How the term 'engineering' is expressed in different European countries

The world map according to fish





Airport bus will be in action in Wellington by July with nine new buses on the route

The capital has been without an airport bus since the country went into its first nationwide Covid -19 lockdown in March 2020.

Wellington's airport service will return by July after the capital has been without an airport bus since the country went into its first nationwide Covid-19 lock-down in March 2020.

The service will operate on the Metlink network, and will have Snapper ticketing, credit and debit payments by eftpos – a feature not previously available on airport buses – real-time information and a dedicated fleet of ten new zero-emissions electric buses.

A maximum fare had been set at $9.50, and the route would run from Wellington Station, along the city's golden mile, through Kilbirnie to the airport.

As the border opens to visitors without the need for isolation on arrival, a new airport-to-city service will be appreciated by tourists and travellers within the country alike.

Nine new buses arrived this week for the route that will be run by Transdev, the operator of Mana Newlands Coach Services.



The service was previously announced as being fully electric.



Definitely not the view when flying in to Wellington



Kent Terrace and Oriental Parade Wellington in the 1920s

Rod Stewart: Video prompts pothole DIY repair warning



A council has urged people not to try to repair potholes themselves after Sir Rod Stewart was filmed doing it.

Instagram videos showed the singer, 77, shovelling gravel near his home near Harlow, Essex, claiming drivers were "bashing their cars up" on the road.

His post was liked more than 75,000 times in a day and prompted comments praising his actions.

An Essex County Council cabinet member warned anyone attempting to repair a road could become liable for accidents.

Lee Scott, who is responsible for highways maintenance at the authority, said: "You can't take matters into your own hands.

"People must always report potholes to the council and we will fix anything that's dangerous."

In the Instagram post, Sir Rod claimed the road had been in need of repair "for ages" but that "no-one can be bothered to do it".

Dressed in a tracksuit and high-vis vest, he explained why he and "the boys" decided to fix it themselves.

"People are bashing their cars up. The other day, there was an ambulance with a burst tyre. My Ferrari can't go through here at all," he said.

Mr Scott promised he would "endeavour to rectify it" and asked for an officer report as quickly as possible. He said: "All road repairs have to be done to a professional level or the person doing it could become liable for any problems or accidents".

He added he would be happy to arrange a meeting with the singer to discuss the issue.
Source: BBC

"People are bashing their cars up. My Ferrari can't go through here at all," he said.



The Decade of Cheap Rides Is Over



Recently I was talking with an executive who used to work in car-sharing—the wave of companies, led by Zipcar and car2go, that tried to disrupt automobile ownership in the 2010s.

Many of those companies are now gone or in retreat, for which he offered a few explanations, such as the cost of maintaining the fleet (a broken window might eat up a couple months of a car's revenue) and the logistical hassle in cities that liked the idea of new mobility options but didn't always want to part with the curb space that made them possible.

Uber has lost an astounding sum since its founding in 2009, including more than $30 billion in the five years since the company's finances became public

One of the biggest factors in car-sharing's demise, the executive said, was Uber. Getting a door-to-door ride was always going to be more convenient than renting a car yourself. But here's the weird thing: For much of the last decade, even for long rides, taking an Uber has also been cheaper.

That is because Uber has lost an astounding sum since its founding in 2009, including more than $30 billion in the five-odd years since the company's finances became public. Together with earlier losses and a similar strategy at rival Lyft, this has amounted to an enormous, investor-fueled subsidy of America's ride-hailing habit.

Those days are over, Uber CEO Dara Khosrowshahi told employees in a memo last week. "The average employee at Uber is barely over 30, which means you've spent your career in a long and unprecedented bull run," he wrote. "This next period will be different, and it will require a different approach. … We have to make sure our unit economics work before we go big."

As Ali Griswold observes in her newsletter about the sharing economy, that's a weird line coming from a guy whose company's market cap is five times the size of American Airlines. Uber is big.

"Uber has always said it would reach profitability at scale, thanks to network effects, etc.," Griswold writes, "but what is scale if not a company that operates in 72 countries and more than 10,500 cities, which last year had 118 million active users every month and completed 6.3 billion rides/trips/deliveries? Uber is the definition of scale, yet it is still nowhere near consistent and reliable profitability."

How Uber rights the ship is not for me to figure out, but one obvious answer is that rides have been getting—and will continue to get—more expensive. Average Uber prices rose 92 percent between 2018 and 2021, according to data from Rakuten; a separate analysis reports an increase of 45 percent between 2019 and 2022.

Both Uber and Lyft have added a surcharge for riders that helps drivers account for high gas prices. And all that was before last week's ultimatum.

Think of it as a city-transportation parallel to what economists are calling the end of the "era of free money," as interest rates finally rise. It's the end of a decade in which we changed our systems, our habits, even our architecture, around the assumption that we could be driven around for cheap.

The cynical assumption was always that Uber was burning all that investor cash in order to corner the market. Once it killed off car service, taxi cartels, and its ride-hail rivals, the company would stop charging riders less than it was paying drivers and prices would have to go up. On Monday morning, an Uber from Manhattan to JFK Airport was $100—nearly double the fixed yellow cab rate. But good luck finding a yellow cab!

The Uber-taxicab showdown is how most people conceive of Uber's market-swallowing impact, but the Decade of Cheap Rides had more profound effects on how we live and get around. The failure of car-sharing companies like Maven and car2go is one example of how all that subsidy distorted the market, quashed business models that might otherwise have thrived, and changed habits that might have otherwise endured. It did this for the good—reducing the size of parking lots, suppressing drunken driving—and for the bad, increasing car ownership and traffic congestion.

One well-known consequence of the rider subsidy is the decline in public transit.

One study estimates the arrival of Uber and Lyft in a city decreases rail ridership by 1.29 percent and bus ridership by 1.7 percent each year. In San Francisco, where Uber was founded, the authors estimate Uber has decreased bus ridership by 12.7 percent. A second study concluded a 5.4 percent decline in bus ridership in midsize cities. A third study clocked the decline at 8.9 percent.

A related Uber phenomenon has been a sizable increase in downtown traffic congestion. Those effects might reverse if rising prices push people back onto the bus. But other changes have more sticking power: The assumption that Uber would debut flying cars and autonomous vehicles any minute now helped discourage investment in better transit service and capital projects. Airports have been redesigned to account for flyers' likelihood of taking cabs. Real estate developers reacted as the premium for transit access declined.

Observers credited Uber and Lyft with helping to "revitalize Nashville's urban core" and with "changing nightlife in Los Angeles." Food service entrepreneurs went all-in on delivery, opening "ghost kitchens" that sometimes prepared food for a half-dozen "restaurants" at a time.

While the transportation-network companies probably increased vehicle ownership, they also gave cities cover to reduce expensive parking mandates, and developers responded with smaller garages or no parking at all. The builders of Cul de Sac, Phoenix's first parking-free development, credit the rise of "ride sharing" for making their project possible. It has also changed the model for restaurants and bars, which don't require as much parking as they used to. That's good for land use and very good for drunken driving rates, which have fallen significantly as Uber uptake has increased.

Many of those changes have been beneficial. Some have been less so: New York City, for example, overthrew its old taxi regulation system overnight, bankrupting the immigrant entrepreneurs who bought in. The question now is whether all our Uber adaptations stick around as the company seeks profitability and free cash flow. Maybe it doesn't matter that much if prices go up: An on-demand ride is such a good product—and the bus so unreliable, the parking so hard to find, driving so tedious—that people may be willing to pay twice what they did before. Companies come and go, their products and prices change, and consumers adapt.

But maybe not. The level of money plowed into creating the Uber-Lyft system is reminiscent less of typical corporate expansion than of a big government project like the Concorde.

The supersonic jet ultimately wasn't a good enough product to endure in spite of all the money that had been spent on its development. But at least when the Concorde revealed itself to be fundamentally incompatible with the times, it didn't employ millions of people and ferry around billions more.
Source: Slate

In San Francisco, where Uber was founded, a study found Uber has decreased bus ridership by 12.7 percent.



Letter to the editor

Dear Editor,

Recently I had the joy of attending the AGM online. The week prior I tried to find out what is the Transportation Group's strategy plan, noting that we seem to have had a budget windfall for the past financial year and perhaps some of it could be considered for spending to achieve some of our strategic plan goals.

I believe we have a strategy (or is being revived) but I could not locate one on our website or an annual summary document outlining we are progressing on our strategic plan items.

As a Group I would hope that we work to exercise positive influence in our industry. In years gone by we had direct liaison with NZTA (now Waka Kotahi) and the Ministry of Transport.

As a Group I would hope that we work to exercise positive influence in our industry.

One such issue raised I mentioned in my latest company newsletter, namely that **it's overdue to** either legalise right turn bays in medians < 2.5 m wide and/or to enforce consistency throughout NZ (even Waka Kotahi have installed skinny right turn bays so surely its time to clearly allow in particular circumstances).

I created also a "**I consider it time to**" list (in no particular order) of 11 to which I add a 12th . My list which Dr Chris Bennett has helpfully reordered "based on a combination of ease/impact" is given below which I hope the Group will consider and initiate a pathway for actioning them and others worthy to pursue and advocate for.

1. Increase the frequency of reporting on Road to Zero [deaths not carbon] initiatives and KPI metrics with regional etc differentiation
2. Create a CAS user group [according to Waka Kotahi this is up to industry to request, e.g. Transportation Group]
3. [Action] CAS improvements/bug fixes [I have requested dozens and even met with Waka Kotahi to discuss the issue in my own free time]
4. Review speed reductions for 'vacated' road works where a row of cones is left over [feedback from my mates]
5. Ensure that all speed signs are on the left hand side of the road as legally required or amend the road rule [usually rule breached in going from slow to high but not always is this the case]
6. Eliminate traffic signals in 100 km/h speed zones [e.g. SH2 in the Hutt Valley, anywhere else in NZ?]
7. Widen sub-standard rural State Highways [refer the 2006 State Highway Strategy and the years beforehand]
8. Eliminate all motorway curves with advisory speed signs [I think there is only one in Wellington but the Tawa curves are reportedly sub-standard]
9. Eliminate all signals on expressways with one through traffic lane only [e.g. SH2 River Rd at Whakatiki St with large queuing leading to local rat-running, when a simple better design was/is available]
10. Create a centre for road safety excellence in NZ [this I would rank much higher but ex Canadian, World Bank guru and cycle mad Chris perhaps thinks we are not so capable]
11. Develop different crash prediction models for 3 and 4 leg single/multi lane roundabouts recognising their fundamental differences (include also seagulls) [actually Dr Shane Turner could readily do this if given funding]

"12" Enact the recommended cycling legislation from almost a decade ago [Government appointed cycling advisory panel on which was Dr Glen Koorey]

Members please do contact me if you are firmly for or against any of the above initiatives and especially if you wish to add others [I have some pavement related ones I could add].

Without feedback endorsement the National Committee is reasonably powerless to proceed (mandate needed from members, and helpful if comes via the branch committees – in my time requests/motions from branch/sub group chairs were never turned down by National Committee).

David K Wanty
(former National Chair)
wantydk@gmail.com
022 6431065



Government investment boosts coastal shipping in Aotearoa



As a lower emissions transport mode, investing in coastal shipping will also help us achieve our decarbonisation goals

New Zealand is a step closer to a more resilient, competitive, and sustainable coastal shipping sector following the selection of preferred suppliers for new and enhanced coastal shipping services, Transport Minister Michael Wood has announced recently.

"Coastal shipping is a small but important part of the New Zealand freight system, which is why the Government is investing in making coastal shipping a more viable alternative to strengthen and diversify our domestic supply chain, helping to secure New Zealand's recovery from COVID-19. As a lower emissions transport mode, investing in coastal shipping will also help us achieve our decarbonisation goals," Michael Wood said.

The Government has committed $30 million of funding for coastal shipping funding through the National Land Transport Programme (NLTP) to improve domestic shipping services, reduce emissions, improve efficiency and upgrade maritime infrastructure.

Waka Kotahi worked with the wider freight industry (NZ Shipping Federation, Port Company CEO Group, National Road Carriers, KiwiRail, and Te Manatū Waka - Ministry of Transport), to select four applicants for co-investment in new and enhanced coastal shipping services through the NLTP.

The four preferred suppliers are:

- Coastal Bulk Shipping Ltd
- Move International Ltd
- Swire Shipping NZ Ltd
- Aotearoa Shipping Alliance

"With the freight industry's support, these additional services will help to resolve immediate challenges to the coastal shipping and the wider freight sector, address some of the current issues facing the international and domestic supply chains and provide a platform for future growth across all modes with increases in capacity and capability for both new and existing bulk materials and containerised cargo," he said.

"Each of these four selected suppliers will bring at least one additional coastal shipping vessel into service, and together this will improve the resilience of the overall freight supply chain.

"The four preferred suppliers will invest over $60 million through their proposals, resulting in combined investment in the sector of over $90 million.

"When the new services are fully operational, it is estimated they will remove around 35 million kilometres of truck travel from New Zealand's roading network every year, reducing wear and tear and improving safety for road users, while at the same time creating new employment opportunities for mariners and supporting regional development. This will also support our commitment in the recently released Emissions Reduction Plan to reduce emissions from freight transport by 35 per cent by 2035.

"Through this funding we are taking an important step towards better utilising the blue highway, improving our freight system, and future proofing our national supply chain.

"In the meantime, we're continuing work to mitigate supply chain problems caused by COVID-19, which includes increasing capacity through KiwiRail, extending the aviation support package so businesses can tap into international markets, and working with the sector to address issues as they arise," Michael Wood said.

Source: Beehive

Transportation Engineering

Postgraduate Courses 2022

The University of Auckland
NEW ZEALAND

June, 2022

Department of Civil & Environmental Engineering, University of Auckland

For Master of Engineering Studies [MEngSt] with / without Transportation specialisation, also for

Post Graduate Certificate / Diploma [PGCert/DipEng], or for a one-off Certificate of Proficiency, COP.

Listed below are the Transportation Courses running in Semester 2, 2022

COURSE	DESCRIPTION
Semester 2 (Jul-Oct, '22)	***Provisional - dates / timing changes may be made***
CIVIL759 – Highway & Transportation Design (Monday 12-2pm Lecture + 1 hour Tutorial)	Economic and environmental assessments of transport projects. Road safety engineering. Crash reduction and prevention methods. Pavement asset management. Pavement rehabilitation techniques. Heavy-duty pavements, highway drainage and chip seal design.
CIVIL763 – Smart Infrastructure Analytics An In-class and Online course (Weekly Weds 5-8 pm)	Develops fundamental knowledge in the use of computer programming and data analytics to solve real-world infrastructure problems, such as reducing traffic congestion, predicting water usage and infrastructure failures. Group and independent projects are undertaken in which students study complex smart infrastructure analytics problems using real-world
CIVIL766 – Road Asset Management (8-9 Aug, 12-13 Sep, 3-4 Oct)	Provides an in-depth exploration of various components of the urban transportation planning process, with emphasis on theories on modelling. Conventional four-stage transport planning model principles, trip generation, distribution, modal split and assignment, are covered.
CIVIL 771 – Planning & Managing Transport (27-28 Jul, 18-19 Aug, 5-6 Oct)	Road asset management advanced topics - critical awareness key issues encountered, including evaluation of functional / structural performance; risk management; deterioration modelling and calibration; prioritisation / optimisation. Core skills extended by a complex RAM problem.
CIVIL 773 – Sustainable Transport: Planning and Design (3-4 Aug, 18-19 Aug, 28-29 Sep)	An advanced course on integrating land use planning and transport provisions, including planning for different land use trip types and parking, travel demand management techniques, and intelligent transport systems. An independent project applies this specialised knowledge.
EngGen 726 Climate Adaptation of Infrastructure (25-26 Jul, 1-2 Aug, 16-17 Aug)	Impacts of climate change on infrastructure and adaptation strategies to respond to these changes. Impact assessments, vulnerability studies, and development of adaptation strategies and techniques for whole of life asset management. Decision-making, management and climate resilience of transport, potable water provision, stormwater and wastewater sys-

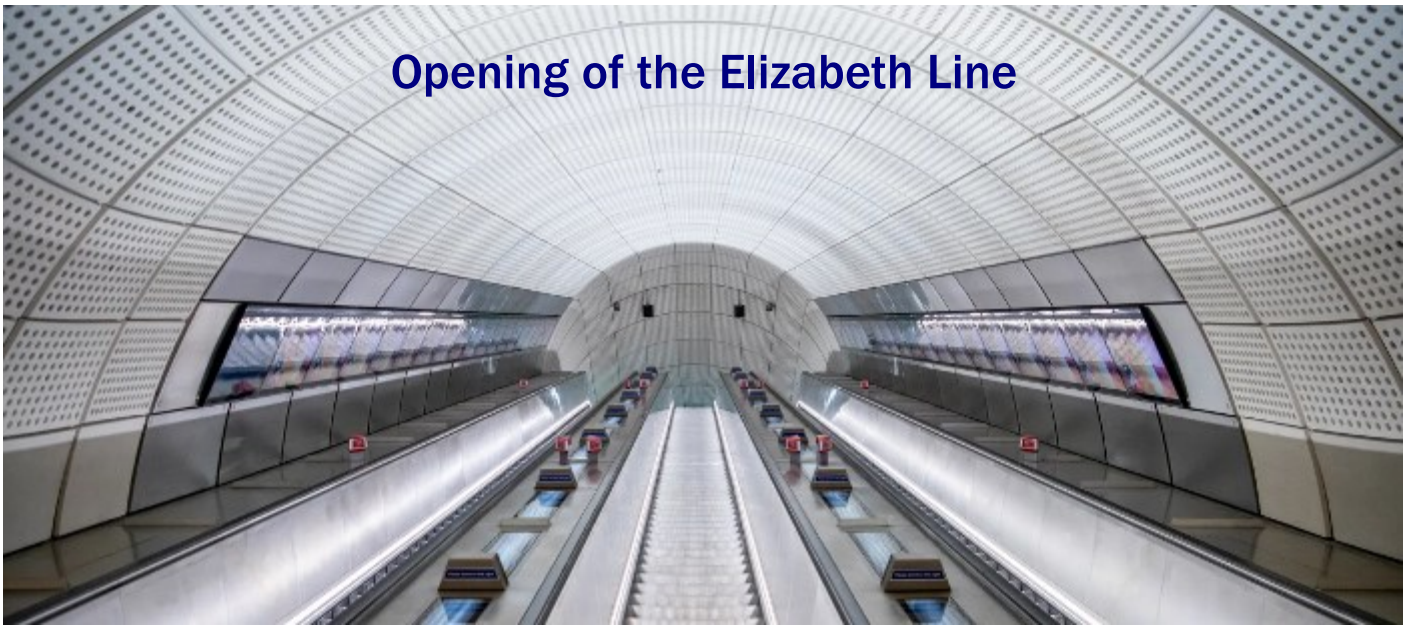
NOTE: Other relevant courses at the University of Canterbury (Civil / Transportation)

For Admission / Enrolment or Course options contact: **Bevan Clement** DDI (09) 923 6181
Email: *b.clement@auckland.ac.nz* Mob: 021 022 65184

Further details, including the course outlines, can be found at: http*://www.cee.auckland.ac.nz/uoa/home/about/ourprogrammesandcourses*

Magazine of the Transportation Group NZ Issue 172 June 2022

Opening of the Elizabeth Line









Almost four decades elapsed between the first official proposals for an east-west "Crossrail" line under London, and the start of construction works for what would eventually become the Elizabeth line. After the knockbacks and political fights over who should pay for such an ambitious scheme, the actual physical work – above and below ground – would take only a relatively short 13 years.

The first official building work was in May 2009, when piles were driven into the ground at Canary Wharf, and excavation started for one of the first huge box-stations. Less popular was the demolition of the Astoria music venue in the heart of the West End, as Tottenham Court Road was cleared for redevelopment.

The tunnelling of the central section under the capital was done by machines, each costing an estimated £10m. Between 2012 and 2015 the eight machines cut 13 miles of wide tunnel for future tracks, shifting out about 6m tonnes of earth. Around half of it was shipped to Wallasea Island on the Essex coast, creating a new wetland sanctuary for bird life.

Archaeologists were combing earthworks in station developments, turning up relics of how London used to be in times of greater crisis. The bodies of dozens of plague victims were uncovered in Liverpool Street and Charterhouse Square.

By 2016, it was announced that the completed project would be named after the Queen: the Elizabeth line. The monarch was due to open the key central section in December 2018. Ten new stations were under way in central London – big enough that several had platform entrances spanning two existing tube stops.

However major delays to the construction of some stations and the digital signalling (plus a site fire) meant TfL took over completion of the project.

Crossrail's designers, engineers and workers have built something unprecedented in the UK: an underground train service whose speed, comfort, and accessibility will transform the experience of passengers. After a pandemic that all but emptied London's transport, the lure of faster, better journeys is ever more critical to lure people back to the capital, reshape the south-east's geography and boost the whole national economy.











More on the Elizabeth Line

Crossrail, or the Elizabeth line as it is now known, is a 73-mile (118km) railway line in south-east England. It runs from Essex in the east to Berkshire in the west, tunnelling underground through central London.

There are two western branches, which terminate at Reading and Heathrow Airport, and two eastern branches, ending at Shenfield in Essex and Abbey Wood in south-east London.

Ten new stations have been built for the central London section, which connects Paddington, Bond Street, Liverpool St and Canary Wharf. The line is expected to increase London's train capacity by 10%.

Services will carry up to 1,500 passengers - significantly more than a London Underground train.

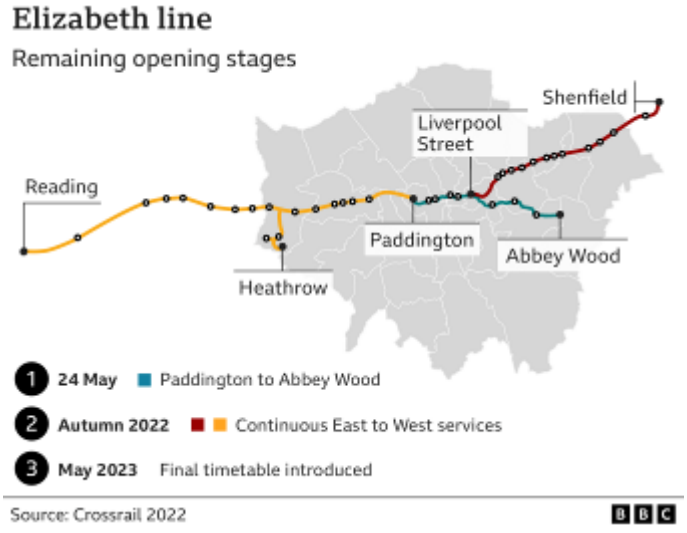
The line travels across the overground rail network, while the central section runs through tunnels and connects with Tube and other rail services.

Initially, trains will run six days a week, every five minutes from 06:30 to 23:00 with no Sunday service. The line will operate in three parts - from Abbey Wood to Paddington, from Heathrow and Reading to Paddington, and Shenfield to Liverpool Street.

Bond Street station in central London will not open until later this year, due to problems during construction.

From the autumn, trains from Heathrow will no longer terminate at Paddington, and will continue on through the central section of the line.

However, passengers won't be able to travel directly from one end of the line to the other until May 2023.





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.

Streets for People programme 2021-24
The Streets for People programme 2021-24 provides funding to local authorities wanting to use quick, adaptive techniques to reshape their streets to expand low-carbon transport choices and improve quality of life for their communities.

16 councils across the motu have recently received funding to develop their chosen project plans and help build their internal capability.

If you are working with a council and would like to learn more about Streets for People practices, you can join our support programme and Community of Practice by emailing streetsforpeople@nzta.govt.nz
Learn more about the Streets for People programme on our website.

Shared path between Waipukurau and Waipawa officially opened
A new shared path in Central Hawke's Bay was officially opened on 26 March. Designed to connect the towns of Waipawa and Waipukurau, the 4.6km concrete path provides a safe space to encourage people to walk, scoot, ride or use a mobility scooter between the towns.

The project broke ground in May 2021, and the 4.6km concrete path opened to the public in December 2021. The construction was a joint project between Waka Kotahi and Central Hawke's Bay District Council.

Sustainable Urban Mobility Benchmarking report
We want our towns and cities to continue to thrive and be places where people can move around independently, in ways that are good for their health and the environment.

To pave the way for healthy, safe, and vibrant cities we need to understand what stage each town and city is currently at on their journey to transition to an actively mobile transport network.

Auckland, Hamilton, Tauranga, Wellington and Christchurch all participated in the first Sustainable Urban Mobility benchmarking process, which is invaluable in connecting the dots from policy to campaign, and allows us to work together in creating impactful and lasting solutions that are fit-for-purpose.

Each council is at different stages, but everyone is progressing and by measuring the same things we can see progress while also identifying gaps and starting to close them.

This is the first year this process has been used and we will adapt and change but it is an exciting collective step forward. It converts assumptions to evidence, so we can start getting a fair representation of the many voices and communities that live in our towns and cities, and their varying needs.
Read the first Sustainable Urban Mobility benchmarking report here.

Getting more people ready to ride
Waka Kotahi has produced a quick guide to help people looking to move around our towns and cities by bike. This guide gives a clear overview of behaviours needed to ride safely in urban environments.

Biking in our towns and cities outlines useful skills and tips for riding on the road. This includes the protective behaviours outlined in the official code for cycling and taught in cycle skills training under our national cycling education system, BikeReady.

The guide was developed collaboratively, with cycle skills instructors playing a key role in bringing this to life. Available in both Te Reo Māori and English, the guide is available on our website.

Wellington cycleways being delivered faster
Wellington City Council's Bike Network Plan, Paneke Pōneke, is getting underway faster – using adaptive techniques.

Wellington City Council and Let's Get Wellington Moving (LGWM) are taking a new approach to community engagement and installation to increase the pace of change. By using lower-cost materials that can be adjusted once they are in place, they are installing an interim bike network and gaining feedback in real time. This will also inform future permanent changes while gaining benefits earlier.

Changes around the city are already underway with protected bike lanes (that can also be used by scooters) and walking and bus improvements where possible.

This approach means they will get more of the planned bike network and connections in place relatively cheaply, and quickly providing practical solutions for the time being. On many routes, these changes will be replaced in years to come with more transformational improvements that will happen as part of LGWM.
Find out more about Paneke Pōneke.

Vehicle safety ratings now consider all road users
It's no longer just about the safety of a vehicle's occupants that determines its safety ratings, but also the safety of those around them.

We've changed the way safety ratings are published on Rightcar.govt.nz to now focus on the impact vehicles have on all people involved in crashes on New Zealand roads, including people walking and on bikes. Making this change is part of Road to Zero, New Zealand's road safety strategy, and will help to reduce the number of people who are killed or seriously injured on our roads.

Used Car Safety Ratings (UCSR) and Vehicle Safety Risk Ratings (VSRR) now use overall safety as their primary safety measure. This measures the safety of a vehicle for not only its own occupants but also all road users involved in a crash, including people in other cars, pedestrians, cyclists, and motorcyclists.
Find out more at Rightcar.govt.nz

Aotearoa Bike Challenge saves tonnes of carbon emissions
23,766 people took part in the Aotearoa Bike Challenge this year – pedalling a combined 3,999,778 kilometres and saving 211,291kgs of carbon emissions. Even if you didn't participate this year, you can still use the Love to Ride website all year round to log rides, track your progress and set goals – and see your carbon emission savings as you go.

Play Streets
Play Street events help us reimagine our streets as places for connecting and improving wellbeing – encouraging physical, social and mental wellbeing for our communities.

Events temporarily restrict vehicles on quiet local streets, allowing tamariki and whānau to play and meet in their neighbourhoods. They are small, resident-led, events, held on quiet neighbourhood streets during daylight hours. Our new Guidelines for Restricting Traffic for Play Street Events provide a framework for councils to use to determine how they can support Play Streets in their towns.

Play Street webinars
Check out the recording from our second Webinar on Play Streets - Tāmaki Makaurau Play Streets Pilot. In this session we heard the first-hand experiences of those involved in trialling Play Streets in seven Tāmaki Makaurau neighbourhoods in 2021. Thank you to Auckland Council, Healthy Families Waitākere, Avondale Play Street Community Champions, and Parallaxx for this valuable and inspirational session!

You may also be interested in this British webinar about the impact of play streets on active travel. This features a conversation with Chris Boardman MBE, England's first Commissioner for Active Travel, Olympic Gold Medal Winning Cyclist, and Chair of Sport England.

We will host a general FAQ session for councils planned for April (date to be confirmed). To register for the webinars, or to learn more about Play Streets, contact our team at playstreetguidelines@nzta.govt.nz.

We can also provide one-on-one support to councils who are interested in supporting Play Streets in their region.

The Prison Break
A new cycle route has been added to the New Zealand Cycle Trails network. This 60 kilometres long trail connects the popular central North Island Timber Trail with the Forgotten World Highway Heartland Ride.

The ride follows quiet country roads through Okahukura Scenic Reserve and the old prison town of Ohura. Ohura is an ideal location for cycle tourists due to its excellent Mexican café and camping and accommodation options.

There are now over 6,300 kilometres of cycle routes in the New Zealand Cycle Network. For more information about the growing network of cycle routes in New Zealand explore the Waka Kotahi map.

Waipapa Suspension Bridge
In an area of growing development, Waka Kotahi and Western Bay of Plenty District Council have anticipated the need to provide a link for people to walk and cycle across the Waipapa River near Omokoroa.

This new bridge and connecting paths will provide access to the rapidly growing Omokoroa suburbs from Pahoia's main road and connection to the Pahoia Domain. The next link will be to the Apata Packhouse.Setting of Speed Limits Rule 2022

As part of Road to Zero, New Zealand's road safety strategy, we're making changes to how speed limits are set, to put people, and the diverse ways we use our roads and streets, at the heart of how we plan and maintain our transport system, ensuring it's both safe and efficient.

Safer speeds protect our more vulnerable road users (pedestrians, children, seniors, the disabled) and create safer roading environments, which can encourage more people to feel confident to walk, bike, or scoot.

Waka Kotahi is developing a new regulatory framework, the Land Transport Rule: Setting of Speed Limits 2022 (the Rule), to improve how road controlling authorities plan for, consult on, and implement speed management changes.

Around schools, speed limits can be set at 30km/h to provide better opportunities for children to walk, bike or scoot to school. We know how important active travel to schools is for healthy communities, and how it helps meet many local and national government objectives. International evidence shows that 30km/h is a safe speed where there are a high number of active road users.

The Rule is expected to come into force in the second quarter of 2022. Visit the Waka Kotahi website for up-to-date information on speed management planning.

Cleaner, easier transport options coming
The Government released Te hau mārohi ki anamata – Towards a sustainable, productive and inclusive economy Aotearoa New Zealand's first emissions reduction plan (ERP) last month. It also announced $1.3 billion in new funding for the transport sector to provide cleaner, easier transport options.

Lisa Rossiter, Senior Manager Environment and Sustainability at Waka Kotahi outlined the immediate steps that will be rolled out. "One of the early investment programmes will provide more than 100km of safe urban cycleways to build more connected networks, significant safety improvements at around 25 'hot spot' pedestrian areas and safer, cleaner and healthier travel to up to 100 schools."

"It will also cover bus priority improvements in over 40 locations as well as improvements to bus shelters and providing better customer information at stops and stations to make public transport more reliable and easier to use."

"These changes are important in contributing to emissions reductions from land transport – currently the second largest source of greenhouse emissions – and they are important to creating a New Zealand where low-emissions transport is safe, easy and accessible."
Find out more

Innovation Fund, Hoe ki angitū launched
This month, Waka Kotahi launched its Innovation Fund, Hoe ki angitū. The fund has been set up to help address some of the challenges facing the transport sector.

Challenge based, the fund launched with three key challenges. This includes one that addresses the uptake of public transport, asking how we might integrate low emission first-and last-mile travel solutions into the transport system to reduce climate impacts, congestion, and vehicle dependency.

Another challenge looks at how we provide underserved communities, including rural communities and those traveling outside normal commuting times, with greater access to transport options. And how we ensure that these transport options are safe, low emission options and include reliable modes of transport other than private vehicles.

A third challenge focuses specifically on construction, asking how we might reduce the environmental impacts of transport infrastructure construction, operation, and maintenance activities through accelerating the use of recycled materials and sustainable practices.

Funding is available for a 16-week period as it's not about funding solutions long term but about providing innovators a step up to the next stage of the innovation cycle.

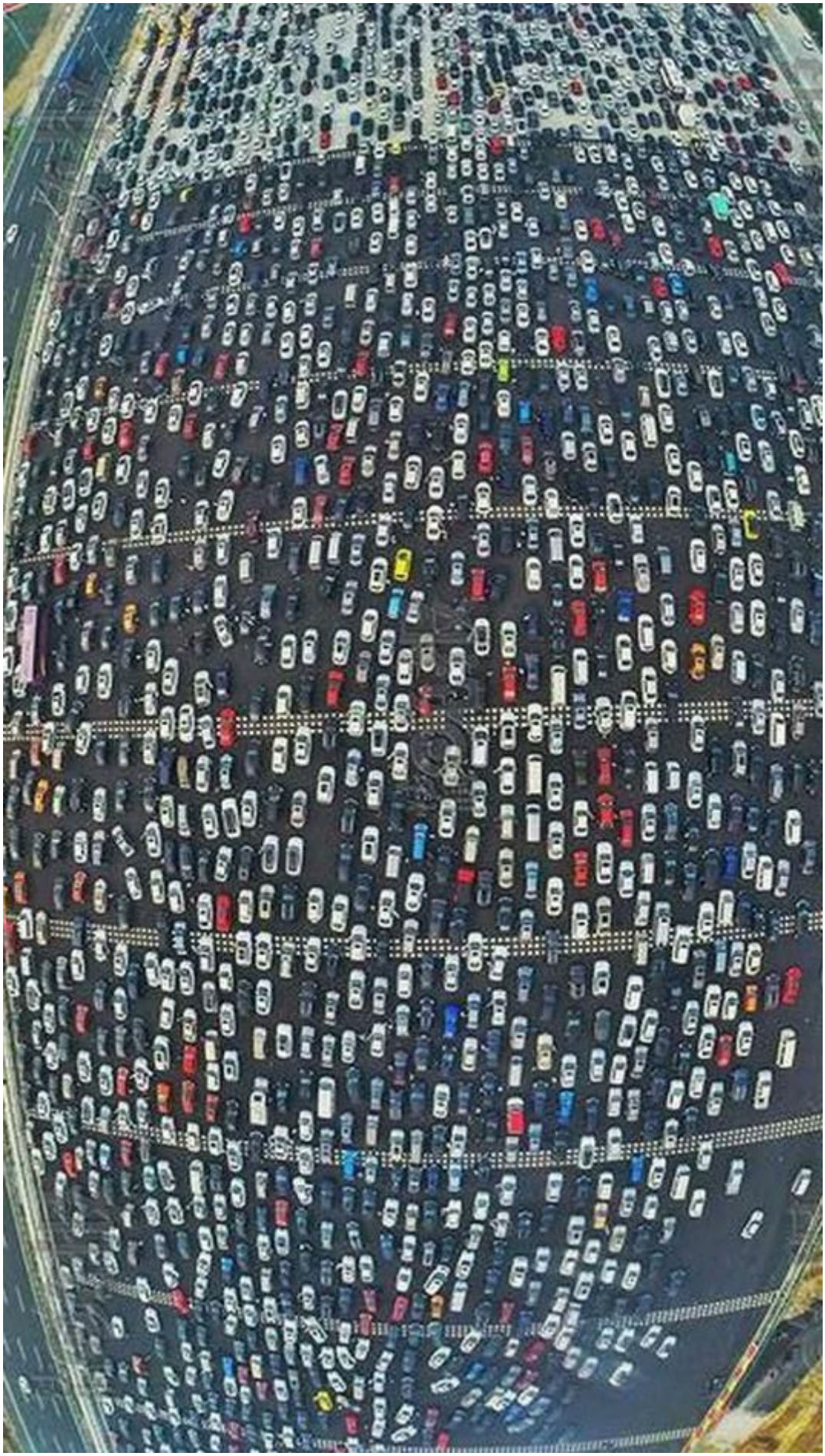
Anyone within the private sector is eligible to apply. This includes start-up companies, individuals, community groups, iwi and research institutes. If you think you have a solution to solve one of these challenges or know someone who does, then encourage them to apply. Applications open on **7 June 2022** and close on **4 July 2022.**
Find out more

225kms of urban cycleways delivered
The Urban Cycleway Programme ran from 2015 – 2019 delivering 225km of urban cycleways, accounting for 60% of the total kms built in New Zealand since 2014.

In total 50 projects were completed across the country including Te Rewa Rewa Bridge, Coast walkway and cycleway, New Plymouth, the Heathcote Expressway, Christchurch and the Northwestern Cycleway in Auckland.

The recently released Urban Cycleway Programme Review has pulled together all the lessons learnt throughout the programme and provides details of what is needed for an optimal infrastructure investment programme including a network level approach and national and local leadership. If you would like to receive a copy of the report,
email **cyclelife@nzta.govt.nz**





A grocery store in walking distance means more walking.

A grocery store in driving distance means more driving.

Thank you for listening to my TED talk about land use and transportation.

America's best-selling cars and trucks are built on lies: The rise of fake engine noise



The 2015 Ford F-150 plays a muscular engine note through its speakers.

The engine growl in some of America's best-selling cars and trucks is actually a finely tuned bit of lip-syncing, boosted through special pipes or digitally faked altogether.

Stomp on the gas in a new Ford Mustang or F-150 and you'll hear a meaty, throaty rumble — the same style of roar that Americans have associated with auto power and performance for decades.

It's a sham. The engine growl in some of America's best-selling cars and trucks is actually a finely tuned bit of lip-syncing, boosted through special pipes or digitally faked altogether. And it's driving car enthusiasts insane.

Fake engine noise has become one of the auto industry's dirty little secrets, with automakers from BMW to Volkswagen turning to a sound-boosting bag of tricks.

Without them, today's more fuel-efficient engines would sound far quieter and, automakers worry, seemingly less powerful, potentially pushing buyers away.

Softer-sounding engines are actually a positive symbol of just how far engines and gas economy have progressed. But automakers say they resort to artifice because they understand a key car-buyer paradox: Drivers want all the force and fuel savings of a newer, better engine — but the classic sound of an old gas-guzzler.

"Enhanced" engine songs have become the signature of eerily quiet electrics such as the Toyota Prius. But the fakery is increasingly finding its way into beefy trucks and muscle cars, long revered for their iconic growl.

For the 2015 Mustang EcoBoost, Ford sound engineers and developers worked on an "Active Noise Control" system that amplifies the engine's purr through the car speakers. Afterward, the automaker surveyed members of Mustang fan clubs on which processed "sound concepts" they most enjoyed.

Ford said in a statement that the vintage V-8 engine boom "has long been considered the mating call of Mustang," but added that the newly processed pony-car sound is "athletic and youthful," "a more refined growl" with "a low-frequency sense of powerfulness."

Among purists, the trickery has inspired an identity crisis and cut to the heart of American auto legend. The "aural experience" of a car, they argue, is an intangible that's just as priceless as what's revving under the hood.

"For a car guy, it's literally music to hear that thing rumble," said Mike Rhynard, 41, a past president and 33-year member of the Denver Mustang Club. He has swayed between love and hate of the snarl-boosting sound tube in his 2012 Mustang GT, but when it comes to computerized noise, he's unequivocal: "It's a mind-

trick. It's something it's not. And no one wants to be deceived."

That type of ire has made the auto industry shy about discussing its sound technology. Several attempts to speak with Ford's sound engineers about the new F-150, a six-cylinder model of America's best-selling truck that plays a muscular engine note through the speakers, were quietly rebuffed.

Car companies are increasingly wary of alerting buyers that they might not be hearing the real thing, and many automakers have worked with audio and software engineers to make their cars' synthesized engine melody more realistic.

Volkswagen uses what's called a "Soundaktor," a special speaker that looks like a hockey puck and plays sound files in cars such as the GTI and Beetle Turbo. Lexus worked with sound technicians at Yamaha to more loudly amplify the noise of its LFA supercar toward the driver seat.

Some, including Porsche with its "sound symposer," have used noise-boosting tubes to crank up the engine sound inside the cabin. Others have gone further into digital territory: BMW plays a recording of its motors through the car stereos, a sample of which changes depending on the engine's load and power.

Orchestrated engine noise has become a necessity for electric cars, which run so quietly that they can provide a dangerous surprise for inattentive pedestrians and the blind. Federal safety officials expect to finalize rules later this year requiring all hybrid and electric cars to play fake engine sounds to alert passersby, a change that experts estimate could prevent thousands of pedestrian and cyclist injuries.

With traditional engines, some boosters have even celebrated artificial noise as a little added luxury. Without it, drivers would hear an unsettling silence or only the kinds of road racket they would rather ignore, like bumps in the pavement or the whine of the wind.

Yet even drivers who appreciate the accompaniment have questioned the mission. A SlashGear reviewer who otherwise enjoyed the new F-150 said the engine sound was piped in "arguably pointlessly."

Which raises a more existential question: Does it matter if the sound is fake? A driver who didn't know the difference might enjoy the thrum and thunder of it nonetheless. Is taking the best part of an eight-cylinder rev and cloaking a better engine with it really, for carmakers, so wrong?

Not everyone is so diplomatic. Karl Brauer, a senior analyst with Kelley Blue Book, says automakers should stop the lies and get real with drivers.

"If you're going to do that stuff, do that stuff. Own it. Tell customers: If you want a V-8 rumble, you've gotta buy a V-8 that costs more, gets worse gas mileage and hurts the Earth," Brauer said. "You're fabricating the car's sexiness. You're fabricating performance elements of the car that don't actually exist. That just feels deceptive to me." .
Source: Washington Post

Which raises a more existential question: Does it matter if the sound is fake?



UNIVERSITY OF CANTERBURY

ENTR621: Pavement Maintenance, Rehabilitation, and Management

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 course end, students will 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 in "ENTR621" 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

UNIVERSITY OF CANTERBURY

ENTR603: Advanced Pavement Design - 2022

Course Outline—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

New bilingual 'Kura School' sign unveiled in move aimed at sharing 'taonga of te reo in our signage'



Part of a journey for Aotearoa New Zealand in which we respect each other and grow together . . . that makes this a better country

Transport Minister Michael Wood unveiled a new bilingual school sign in Rotorua recently, a move he said would "share the taonga of te reo in our signage".

Wood unveiled the sign at Whangamarino School after telling the assembled guests, which included Rotorua mayor Steve Chadwick, Labour list MP Tamati Coffey, Deryk Te Ariki Morehu, chief and kaumātua, Ngāti Pikiao, and Mātai Smith, Te Mātāwai board member and He Tohu Huarahi Māori Partnership Rōpū member.

He also praised those who had battled in the past to save, and revive, te reo Maori.

"Everything we do today is built on those who went before us," he said.

"Part of a journey for Aotearoa New Zealand in which we respect each other and grow together . . . that makes this a better country."

He said he wanted to attend the unveiling as the Rotorua community had been behind the push for greater recognition of te reo, and he also noted that with bilingual signage "nothing is lost to Pākehā".

Wood also said the answer to anyone questioning whether bilingual signage was safe was "unambiguously yes". He also sought to get ahead of any cost complaints, telling the audience it was simply "business as usual" with bilingual signs to be rolled out as part of general replacement work.

Rotorua mayor Steve Chadwick said it was "fantastic" to see the ongoing revitalisation of te reo, and cited bilingual signage erected in Rotorua back in 2018.

"So here we are in 2022 and it's another move forward," she said.

"Huge for us here."

Ahead of the unveiling Kane Patena, director of land transport at Waka Kotahi NZ Transport Agency, said public consultation on the Kura School sign had received 90 per cent backing from respondents.

He said respondents said bilingual signage "would be a positive step forward in normalising the everyday use of te reo Māori".

He said there were an estimated 60 bilingual traffic signs on the state highway network Waka Kotahi is responsible for, and that in the wake of a change to a land transport rule in April this year enabling bilingual school signs, more would be on the way.

"The Kura School signs are just the beginning. Now the focus is turning to enabling a package of other bilingual traffic signs before the end of 2023. Public consultation is planned for later this year," he said.

"We want to recognise the significance of te reo Māori in Aotearoa New Zealand and contribute to the revitalisation of the language. We also want to ensure safe and consistent use of the signs across state highways and local roads."

Patena said he estimated there were 14,000 English-only School signs across the transport network, "which will eventually be replaced by the new 'Kura School' signs".

Source: Stuff

NZMUGS NEW ZEALAND MODELLING USER GROUP

2022 CONFERENCE, 12-13 SEPTEMBER, RYDGES, CHRISTCHURCH

Registration opens soon!

The NZMUGS Conference provides a great opportunity for customers, researchers, engineers, modellers and other practitioners in the transport modelling fraternity to discuss current developments across a wide range of modelling applications.

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

Lies, damn lies, the modeller and the decision maker: how many clichés can we fit in one conference theme?

- Where should us modellers sit in the decision making process, merely a cog in the machine or helping to move the machine forward?
- How do we bridge the gap between the multitude of assumptions in our models and the information used to inform decision making?
- Is cognitive dissonance an issue, and if so how do we bridge that gap?
- We know that doing what we've always done isn't sufficient, but what do we do when we know getting what we've always got isn't good enough?

Registrations are due to open later this month, watch your inbox for details in the coming weeks. .

Waiters serve steel workers lunch on a girder high above the Waldorf-Astoria Hotel, New York, 1930



Building capability to create Streets for People



Cities and towns need to be places where people can easily move around safely in ways that are good for their health and the environment.

Fifteen councils across the motu have been selected to plan and scope projects as part of the Streets for People programme 2021-24, which aims to help create healthier futures by putting people and place at the heart of New Zealand streets.

Streets for People is built on solid learnings and experiences from the Innovating Streets for People programme, established by Waka Kotahi in 2018. Councils and community groups across Aotearoa delivered 89km of dynamic street changes in 32 towns and cities, that included cycleways, parklets, low traffic streets, community spaces, and safer school crossings.

Throughout May and June 2022, the fifteen selected councils have been working with the Waka Kotahi team to build capability and enable them to partner with their communities more quickly and easily to accelerate their proposed street-change projects.

Each council will present their proposal to Waka Kotahi, and the final leading cohort of councils and the successful projects will be announced later this year. Streets for People will support councils keen to accelerate the successful delivery of an approved local strategy or plan by introducing low-carbon transport choices and street spaces that enhance community connection. It aims to build on the council projects within the programme to inspire a growing national movement. There is a need to improve our capability and capacity across the system, lift our knowledge and skills, and actively curate a culture of collaboration across the wider industry.

The funding pool is similar to the Innovating Streets for People programme, with $30m set aside from the National Land Transport Plan (2021-24) and a Funding Assistance Rate of up to 90%.

How Streets for People is different
Key differences are the smaller cohort and longer timeframe: the new programme runs through to June 2024, giving councils more scope to build strong foundations for delivering on bold climate action in the future.

Kathryn King, Urban Mobility Manager for Waka Kotahi said: *"For this new programme, we'll be working with a smaller cohort of councils and enabling them to partner with their communities more easily – to test safer connections and create more welcoming spaces for people, quickly.*

"Letting communities around Aotearoa see the difference and enjoy the advantages of low-cost improvements now, while working towards more permanent solutions.

"Streets for People will help us move towards a healthier and safer future for us all, by putting people and place at the heart of our streets."

Next steps
The funding process is split into three steps, each being a gateway to the next stage.

1. The EOI established whether a council was ready, with processes in place and the willingness to get tactical.
2. Successful applicants have now moved into Phase 1 - Funding the Foundations (pre-implementation), which aims to help build capability and invites council leadership, with support from Waka Kotahi staff and external experts, to present their proposal to Waka Kotahi leadership.
3. For Phase 2 - Funding the Projects (implementation), all final participating councils will be announced later this year. Additionally, a support programme will be developed for councils who are not successful in securing funding but would still like to build capability within their organisation.



Built on solid data, learnings and experience
Streets for People is built on solid learnings and experiences from the Innovating Streets for People programme.

Innovating Streets for People
Programme learnings:
Outcomes reported included –

- 29 projects reported a reduction in vehicle speeds
- 17 projects reported a reduction in vehicle volumes
- 28 projects reported an increase in the number of people biking, walking and scooting
- 25 projects reported safer and more accessible environments for pedestrians
- 10 projects reported a safer and more accessible environment for people cycling
- 7 projects reported an increase in the number of people spending time in the altered area.
- https://www.nzta.govt.nz/roads-and-rail/streets-for-people/programme-learnings/

Full Innovating Streets Evaluation Summary is available here.

Case studies and video content:
Case studies available here.
Innovating Streets final video

The Case Against a Walking or Cycling Strategy (not serious, but . . .)

There's a petition going around for a New Zealand Cycling Strategy. This may have been inspired by a recent UK Cycling Strategy, 'Changing Gear'.

At the same time Living Streets Aotearoa, the national walking advocacy body, have called for a New Zealand Walking Strategy (see their website).

What's not to like? But we've been here before. In 2005 the government launched its strategy 'Getting There: On Foot, By Cycle' – not many years ago. Did the last one not make enough of a difference, and if not then why not?

Last time . . . .

In 1999 I received the Transportation Group's annual Study Award (together with some support from other sources) for the 'NZ Cycling Strategy Foundation Project', outlining what a NZ Cycling Strategy would look like.

At the same time, and entirely unconnected (we weren't even aware of each other) Reena Kokotailo received funding from the Road Safety Trust for a 'National Pedestrian Project', effectively a NZ walking strategy.

Both projects concluded about 2000-2003, mine with a 2000 recommendations report I called 'Into The Mainstream'.

In late 1999, shortly after both projects started, the government changed from National-led to Labour-led, and was suddenly very keen to prepare a National Walking and Cycling Strategy. A commitment to a cycling strategy had been won by new MP Sue Kedgley, as part of the Green Party's Confidence and Supply agreement. Reena's work may have influenced this to be broadened to cover walking as well. After her project had concluded, Reena was hired by the Ministry of Transport to lead preparation of the new strategy. Both our projects inputted into this.

Other influences were also pushing towards positive action on walking and cycling. The lobby groups Cycling Advocates' Network (now Cycling Action Network) and Living Streets Aotearoa were getting going, as were separate two-yearly walking and of cycling conferences.

So what went wrong?

At the same time as my report recommended training for planners and engineers in dedicated cycling infrastructure planning and design, Axel Wilke, then at Christchurch City Council, was pushing for exactly that, and succeeded in attracting funding in 2002. Since then, Axel and others (and later his firm Viastrada) have run many such courses, including some expansion and 'advanced' version training.

Why then do we sometimes still get new road designs appallingly 'unfit-for-purpose' for cyclists, even in Axel's stamping ground of Christchurch?

We need to ask hard questions like these before assuming new walking or cycling strategies will make much difference.

Most of my 'into The Mainstream' recommendations were taken up in some form or other, and the government's 'Getting There' strategy culminated in the 2006 Hastings and New Plymouth 'Model Walking and Cycling Communities' project, which brought many of the strategy's action together geographically. This was meant to be the strategy's 'flagship' (the word of Waka Kotahi lead staffer Gerry Dance) and (as its name implies) a model for action elsewhere.

But in 2007 the government changed to National-led, and the 'Model Communities' final report made no mention of the 'Getting There' strategy of which it had been part; seemingly discarded as politically tainted. Implementation funding was cut dramatically.

John Key's government announced the NZ Cycle Trail in 2009, for economic regeneration reasons, breaking new ground in reasons used to justify cycling investment. Then came the 2014 Cycling Safety Panel (following a spate of cyclist deaths) and after this the 'Urban Cycleways Programme', at $100 million (since expanded) more money than cycling had ever had devoted to it before. It seemed that cyclists' Christmases had all come at once.

The Key government, in all areas not just this one, believed in infrastructure rather than strategies. The new initiative was based around high-profile 'cycleways' in major centres, together with promotion of their use. Again, what's not to like? A couple of things.

Firstly, and again, we've been here before, students of the UK early post-war 'new town' of Stevenage will be aware of its extensive and well-designed walking and cycling path network – and wonder why it is not better used.

At the same time, Stevenage was rolling out an extensive network of equally well-designed arterial roads. And with driving made so easy, who's going to cycle? Many other examples of the same could be cited, all through the intervening years and down to Christchurch, which had both a 'Major Cycleways' and a 'Major Motorways' programme.

Secondly, what about walking? All the post-2014 government enthusiasm had been for cycling. Reena Kokotailo had warned urgently against what she called "the joined at the hip problem", that once you conflate walking and cycling you inevitably eclipse walking (like the combination of the walking and cycling conference streams, apparently for Waka Kotahi funding convenience and vigorously opposed by walking advocates).

I think Reena has since been proven right. Cycling carried sporty, vigorous, healthy and environmentally

We need to ask hard questions before assuming new walking or cycling strategies will make much difference.

benign associations, yet walking remains neglected, distinctly un-sexy (despite its key roles in placemaking, crime deterrence and more).

"Integration"?

One of my 'Into The Mainstream' recommendations was that cycling be integrated into the so-called 'integrated transport strategies' which were in vogue in the 1990s. Since these had emerged from the increasing sophistication of transport modelling, and since almost no data was gathered on cycling usage, these spectacularly omitted cycling (and walking, for the same reason). You could say this need has been addressed by now, with well-known multi-modal strategies (such as the Auckland Transport Alignment Project and 'Let's Get Wellington Moving') including walking and cycling proposals – but dig a bit deeper.

Many strategies, and also Network Operating Frameworks and the One Network Road Classification, include walking, cycling, public transport and roading elements all together, typically amidst rhetoric about providing for "all forms of transport". But at the practical level proposals work against each other. A new road will undermine viability of public transport (especially rail) in the same corridor.

And what 'gives' when a road width cannot contain the general traffic lanes, bus lane, cycleway (separated from the roadway, as good quality ones are these days) and footpath called for in an 'integrated' strategy, not to mention the on-street car parking which excites such emotion at proposals to remove it? In the real world of push and shove between different types of influencers, guess who usually loses out?

The 2005 'Getting There: On Foot, By Cycle' strategy included something called the 'Road User Hierarchy' (sometimes also called the 'Sustainable Transport Pyramid'). This basically gives first priority to providing for pedestrians, second for cyclists, then public transport users and as lowest priority single-occupancy private car use. I told those involved at the time that this was pointless, because such a hierarchy affects all transport – not just walking and cycling – and so it can only be effectively applied when included in a strategy covering all transport. I think I have been proven right.

A prime recent example of fine strategy failing to translate into practical local action is the vigorous opposition against, and quick dropping of many local projects from, the 'Innovating Streets' programme; or this year's judicial review legal challenge opposing certain Wellington cycleways.

A big breakthrough in planning for cycling was the so-called 1996 'Hierarchy of Measures', saying reducing motorised traffic volumes (first priority) and reducing motor traffic speeds (second priority) were the most important measures to help cycling; more important than 'cycleways'. This hierarchy has even been included in Waka Kotahi's Cycle Network Guidance, but where has all the attention been? Cycleways! Yes, they help, but only marginally without reducing motor traffic volumes and speeds.

Christchurch has had extensive and very good quality dedicated cycling infrastructure, and these are highly valued by cyclists, yet cycling remains very much a minority form of transport. It's Stevenage all over again.

The 'hierarchy of measures' also finds expression in the 'ASI approach': 'Avoid, Shift, Improve'. Firstly, avoid the need to travel; secondly shift the form of transport (for example, from car use to public transport); and lastly improve (such as switching from petrol to electric vehicles).

Unlike the 'hierarchy of measures', hampered through being tucked away in the niche (dare I say backwater) of a walking and cycling strategy, the 'ASI approach' has been talked about in mainstream transport planning since the 1990s.

Yet has it been applied? I have heard a lot more, in recent official initiatives, about EVs (electric vehicles) than I have about reducing car use; and a lot more about 'greening' the road truck fleet than about rail freight investment and development.

If you think we can't reduce car use, then try 'filtered permeability'. The Dutch don't cycle because cities are flat or because they are born with an ethnic affiliation for cycling. They cycle because road and path connections are frequent, direct and inviting by foot or cycle but more convoluted and awkward by car. Again, this is about planning connections for all form of travel, and only marginally about 'cycleways'.

Recent examples from elsewhere (look them up) are the Barcelona (Spain) 'Super Blocks'; Ghent (Belgium) 2017 Circulation Plan; or the 2020 Birmingham (UK) Transport Plan which followed the Ghent approach for its CBD. Retrofit initiatives of this kind in New Zealand have, like arterial on-street parking removal, excited some strong local opposition – but they work.

Cheer up

To conclude, we can look on the bright side of positive recent strategies on climate change response and emissions reduction – but these are only of any use if followed through by practical action. Explicitly giving non-car transport priority over mass car movement has become professionally less avant-garde as an idea – but that's no good if it remains just an idea.

This isn't new, but the urgency is. Think climate change; and then there's practical real-life social equity effects, a key theme of Holly Walker's November 2021 'Te Ara The Fair Path' report, published by WSP and the Helen Clark Foundation).

I called my 2000 report 'Into The Mainstream' because only when providing for walking and cycling are part of mainstream transport planning – rather than a niche add-on or even the 'greenwash' for associated big roading projects – will a walking or a cycling strategy succeed, or even be worth embarking on. Yes, prepare walking and cycling strategies by all means – but make sure the mainstream foundations are in place first.



By Roger Boulter
Boulter Consulting
283 High Street South
P O Box 89
Carterton 5743
mob 021 872 654
roger@boulter.co.nz
www.boulter.co.nz

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How to transport a cello by bicycle: a photo essay

















Sydney's flagship harbour metro rail line billions over budget

The cost of building the NSW government's signature metro rail line under Sydney Harbour and the central city has blown out by at least $2.2 billion following the renegotiation of contracts with large construction companies.

Amid a surge in building costs, tender documents reveal the government has agreed to increases to scores of contracts for the City and Southwest rail line, including those for new stations at North Sydney, Martin Place and Waterloo.

Senior government sources, who spoke on the condition of anonymity, now expect the total cost of the rail line to pass $17 billion.

The blowout in the cost of the metro rail line from Chatswood to the central city, and on to Sydenham in the south and Bankstown in the west, comes as the government faces overruns on other transport projects, including the first stage of the M6 motorway in Sydney's south.

The contract variations for the City and Southwest line amount to a $2.2 billion increase in the cost of the vaunted rail project, even before all deals for the underground rail line and the conversion of a 13-km stretch of the Bankstown line have been awarded.

The contract for tunnelling and station excavation works surged by $1 billion to $3.73 billion, making it the largest change in contract price. It involved constructing 15-kilometre twin tunnels between Chatswood and Sydenham and excavating caverns for new stations.

The extent of contract variations is the strongest indication that the final cost of the metro rail line will run billions of dollars over the government's original budget of about $12 billion.

The *Herald* has previously revealed that transport officials estimated several years ago that the City and Southwest metro project risked blowing out to $16.8 billion, which a senior government figure said it would almost certainly surpass.

The City and Southwest line, which is meant to open to passengers in just over two years, is the second stage of Sydney's emerging metro rail network.

The *Herald* reported last year that the cost of the biggest part of the network – the Metro West line between central Sydney and Parramatta – risks ballooning to almost $27 billion, which is nearly $3 billion more than earlier estimates.

In a sign of the challenges for the City and Southwest project, tender documents show the amount payable to contractors for work at Sydenham station alone is estimated to have surged by $456 million to $757 million.



The cost of the new Waterloo station has increased by $52 million to $352 million, while the Victoria Cross station in North Sydney has risen by $72 million to $530 million**.** The price of the Martin Place station in the Sydney CBD has surged by $269 million to $647 million, and the metro station and upgrade works at Central Station by $185 million to $1.14 billion.

The escalating costs come as the NSW Auditor-General conducts a performance audit of the unsolicited proposal by Macquarie Group for the Martin Place metro station to determine whether the government effectively assessed, planned and managed the deal in 2018.

Source: Sydney Morning Herald

The total cost of the rail line is now expected to pass $17 billion.



AT Accessibility Support of Assistant Guide Dogs

If you see an intelligent looking dog in a blue coat riding on one of Auckland's buses, know that they are hard at work.

Auckland Transport's Accessibility Support of Assistant Guide Dogs is part of the ongoing efforts to encourage more of the wider population of Tāmaki Makaurau onto Public Transport.

This is to help train the dogs across the network (Bus, Rail, and Ferry), for the new handler to be able to use public transport safely.

Metro Optimisation with the stellar expertise of the HOP team, have begun a trial with the Assistance Dogs Trust New Zealand. This is to help train the dogs across the network (Bus, Rail, and Ferry), for the new handler to be able to use public transport safely. You might even see them out at the airport. All working dogs can have access to the priority seating areas in bus, rail, ferry if required by the handler or trainer.



AT also supports this initiative under the government-granted public rights access for all working dogs under the Human Rights Act 1993 and Dog Control Act 1996. For working dogs anywhere on the network, please don't distract or touch the guide dog working or in training. When in doubt, always talk only to the trainer or handler if they need support.

You'll be familiar with the red and yellow coats of the Blind and Low vision puppies in training. For the ADNZT dogs, they usually wear blue coats as pictured, sometimes grey, or other colours according to the persons disability. Some dogs might have the blue disk on their collar the handlers, trainers or parents might show a verification card as a handler on their phones if asked. Whether dogs are training or working, they will always wear the blue jacket.

ADNZT provide trained dogs to clients with any disability. Significantly 72% of their clients are children and young adults under 20 years old, and 50% of their clients live with autism and often multiple disorders.

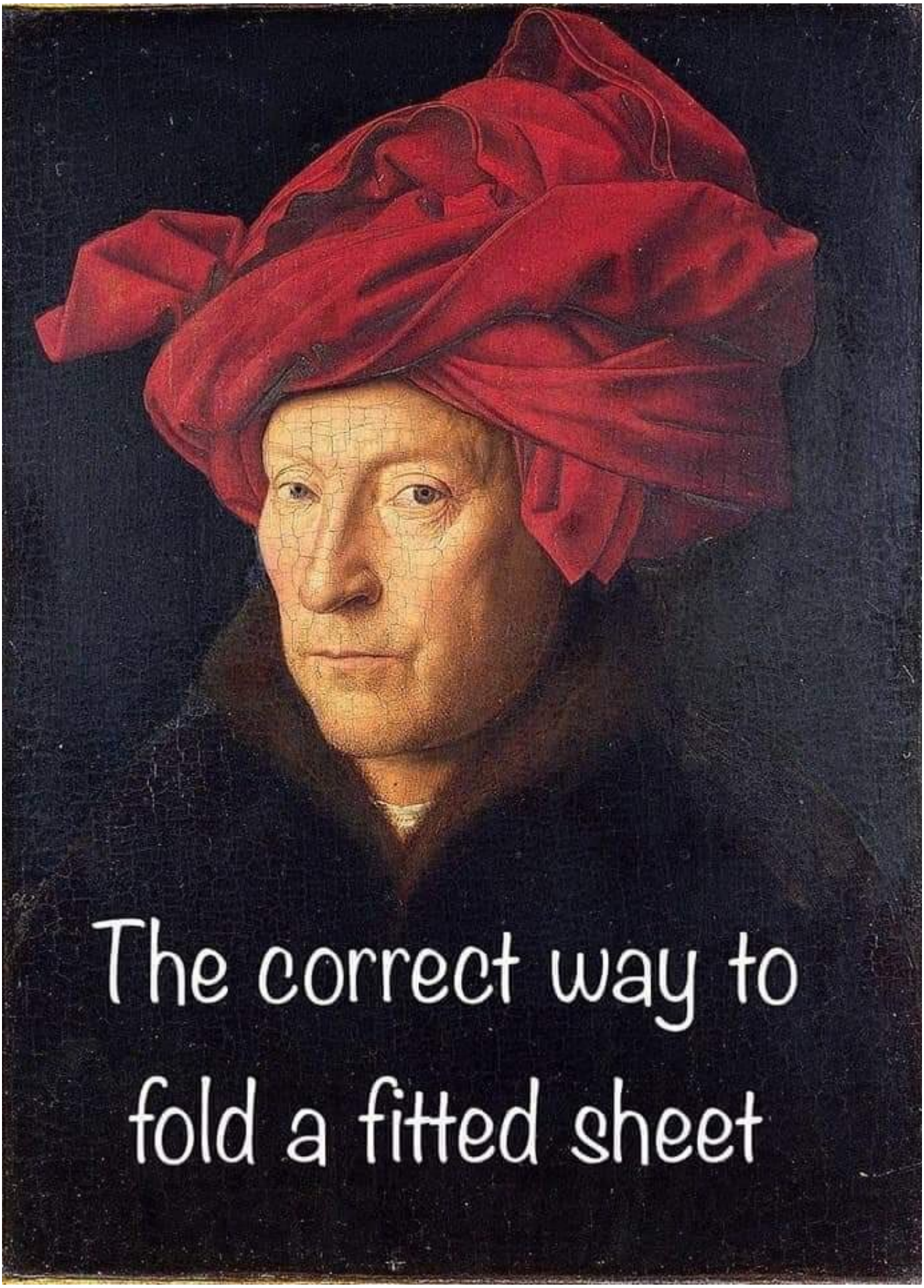
Please note that many of the new handlers are children and they might be in a small group (trainer, and a friend of family member, usually Mum or Dad who must also learn, how to manage these wonderful canines).

If you spot one of the blue-coat doggies on the network and interested to support in monitoring the trial, email Angela Drake (the new Metro Accessibility Lead) with the place, time and day you saw the dog.

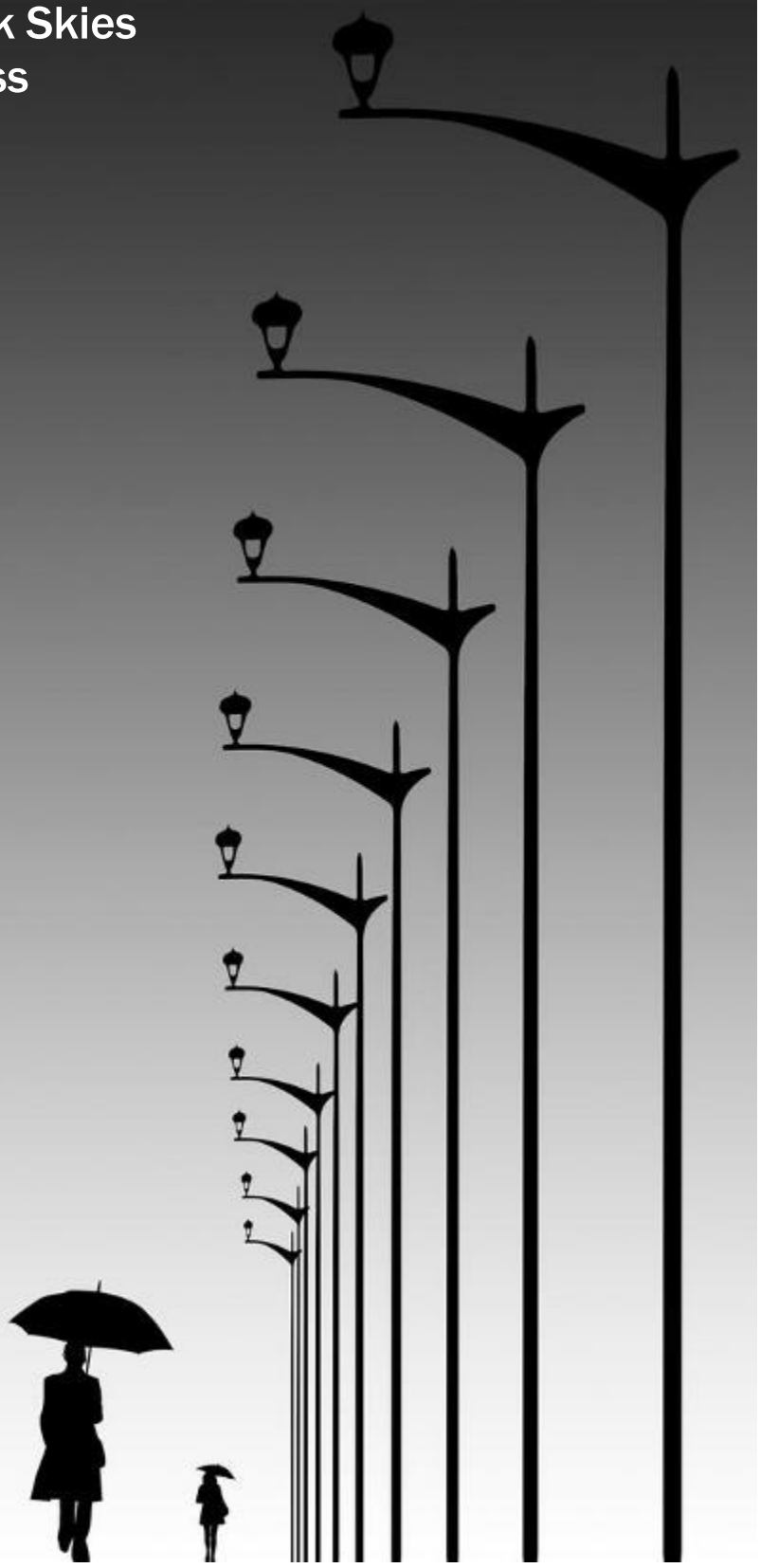


Check out this unique bridge between China and Macau. Because you drive in the left lane in Macau and the right lane in China, this is how drivers switch from left to right and vice versa.

Magazine of the Transportation Group NZ Issue 172 June 2022



Good Lighting and Dark Skies - A Pathway for Progress



A Joint Position Statement from: Lighting Council New Zealand Illuminating Engineering Society of ANZ – New Zealand Chapter

This Position Statement on astronomical and ecological aspects of light at night is provided as a joint lighting organisation statement from lighting industry and lighting engineers to provide information about the characteristics of LED outdoor lighting and ways of assisting with appropriate application in New Zealand.

Executive Summary

Appropriate application and use of light at night is important for enhancing safety and/or the perception of safety, and providing ambience in urban environments that people frequent. Equally important is controlling any unwanted effects of lighting, such as spill light, glare, and skyglow.

Only applying light at night where and when it is actually needed reduces these effects, to people and to the environment, and has the added benefit of reducing the power use, and thereby carbon emissions. The use of competent, professional lighting designers, selection and specification of good quality luminaires, lighting control systems, and careful installation and monitoring of the lighting scheme is recommended.

For those wanting to make a tangible contribution to improving outcomes, please contact IESANZ and LCNZ, who contribute along with other interested parties to the development of AS/NZS technical standards publications for both New Zealand and Australia.

Outdoor Lighting Commentary

In recent years there has been much general media and internet commentary about the characteristics of LED outdoor lighting, much of it focusing on the perceived shortcomings of the technology from an astronomical and ecological perspective. Most of this comment does not include professional lighting input and only considers a limited range of light spectral and application issues.

When assessing the suitability of outdoor lighting the task is not only about light physics, it is essential to also recognise the overarching issues of public safety, the New Zealand design and application context, the role of technical standards, local government regulation, and practical budget considerations.

International case studies and reports are often cited as relevant to New Zealand, but without expert lighting technical advice to meaningfully translate for differences in local design standards and application regulation, there is much scope for misinterpretation. There is undoubtedly a need for lighting scheme owners and managers, lighting designers, and lighting equipment suppliers to consider and act on astronomical and ecological issues but there are many other considerations to balance.

Over the last decade the driving force in the New Zealand outdoor lighting market has been an understandable desire to capture the 50-80% energy reductions possible with LED lighting, and around 50% maintenance cost savings for local government and private sector lighting scheme owners.

Technology is rapidly advancing with the recent availability of affordable digital lighting controls, and this second wave of step-change innovation opens up more avenues for energy savings, as well as meeting growing market demands for low-carbon infrastructure and more environmentally astute solutions.

Benefits of Light at Night

Good lighting at night is important for the safety and comfort of pedestrians outdoors in places such as streets, parking lots, parks, and precincts. An overview of the outdoor surroundings and the ability to detect other people at sufficient distance is essential to feel safe at night.

Good urban lighting can contribute greatly to the feel and character of a retail or hospitality zone, influencing mood and behaviour and facilitating economic growth.

Main road lighting contributes significantly to transport safety, enabling road users to detect obstacles, moving vehicles and potentially dangerous situations.





Importance of Night Protection

The introduction of electric light into the built environment can cause skyglow effects which limit the opportunity for astronomical study, and the enjoyment of the vista of the stars in a dark night sky. It can also disorient and detrimentally affect the well-being and breeding habits of endangered nocturnal wildlife.

It is very important that the decision to install outdoor lighting is a considered decision, and if deemed necessary, the lighting scheme is competently designed and installed, and is operated in a manner that is environmentally respectful and preserves the night sky experience.

Appropriate application and use of light at night is important for enhancing safety and/or the perception of safety, and providing ambience in urban environments that people frequent

Low specification luminaires, ineptly designed or improperly installed lighting, can detract from night sky protection, create neighbourhood nuisance, and waste energy and money. If residential bedroom windows are in a spill light zone, obtrusive light can disrupt occupant sleep patterns.

It is well-known that inadequate sleep can lead to a range of serious short and long term human ailments. Any urban light that is spilled appreciably beyond the designed and targeted application area should be avoided, and any such unwanted light should be seen as a design or installation error.

Importance of Lighting Design
Successful outdoor lighting application requires a professional understanding of lighting science and technology as well as AS/NZS standards and local council regulation. There are no 'one-size-fits-all' lighting solutions.

Only applying light at night where and when it is actually needed reduces these effects, to people and to the environment, and has the added benefit of reducing the power use, and thereby carbon emissions

In all instances it is important to engage the services of a lighting designer experienced in outdoor lighting and a member of the Illuminating Engineering Society of ANZ (MIESANZ). The designer should be provided with a detailed client brief that clearly sets out the goals and priorities.

The design brief should also have realistic consultancy budgets that include any special design requirements, developing adaptive light schedules, and verification of control system commissioning. Additional advisory services could include compilation of luminaire and controls tender specifications, and participation as a technical expert in the tender assessment panel.

The AS/NZS 1158 series and AS/NZS 4282 lighting application standards play an important role in defining New Zealand fit-for-purpose lighting requirements and procurement specifications. AS/NZS standards committees are a critical local forum for stakeholder debate and consensus about appropriately balancing the needs of safety, procurement budgets and environmental protection. Both committees for these standards include expert representatives from dark skies NGOs.

It is noteworthy that the AS/NZS standardised minimum light levels for New Zealand residential roads are much lower than those specified in most other developed countries.

Outdoor Lighting in General Areas
A distinct benefit of the use of LED luminaires is that precise optical control is facilitated by multiple light distribution options, a substantial improvement over legacy technologies. This allows lighting designers greater flexibility for minimisation of spill light and obtrusive light effects.

Growing user preferences for warmer light is leading to NZ councils more frequently specifying lower correlated colour temperatures (CCT) for public lighting. There is an extensive range of LED product options available locally, including luminaires with specialised CCT and spectral power distribution (SPD), if buyers have preferences for these options.

Lighting controls have advanced greatly in recent years and are a practical way of adjusting light levels and illuminated locations according to time-of-need, avoiding excessive or unnecessary lighting. For private precincts, real-time presence sensor switching is very effective, as is timer control for illuminated building facades and advertising billboards.

For larger public precincts and roads, internet connected Central Management System (CMS) controls deliver programmed trimming, dimming and switching. As a result of substantial Waka Kotahi NZTA funding assistance many New Zealand councils have now installed world-class CMS control systems for public lighting, and the astute use of these controls is a pathway to improved night sky protection.

Outdoor Lighting in Sensitive Areas
Good outdoor lighting is critical for facilitating safe human movement and activity at night for communities and for road transport networks. In some regions there are sensitive areas where other activities need to be prioritised for specific attention. Such areas could be in the proximity of astronomical observatories, dark sky reserves or wildlife sanctuaries with endangered species such as migratory birds, bats, or insects.

In these areas, disturbance from outdoor lighting can be minimised by using special LED luminaires with optimised SPD using very low CCT or amber LED in combination with internet connected CMS lighting controls. Luminaires with precise photometric distribution and optical shielding should be selected, and installed and aimed in a way that limits unintended light spill.

Lighting schemes with CMS controls can be trimmed, dimmed or switched off at selected locations and times when light is not needed for human safety and amenity. For sensitive areas, procurement processes should include budgets that recognise additional lighting design input and the cost of specialty luminaires.

Best Practice Recommendations
The provision of high quality and fit-for-purpose outdoor lighting is a joint responsibility of owners and managers of lighting schemes, lighting designers, and lighting equipment suppliers.

The following list is a prompt on the main points of focus for decision makers:
1 Implement good lighting design
- Engage MIESANZ qualified professional lighting designers
- Apply latest AS/NZS lighting standards and avoid overlighting
- Include special design requirements for sensitive areas where applicable
- Verify correct luminaire installation (positioning) and controls commissioning

2. Use good luminaires
- Select quality luminaires based on superior design performance and life cycle value
- Select shielded luminaires with photometric distribu-

tion to limit spill light and glare
- Select special luminaires for sensitive areas where applicable

3. Use good lighting controls
- Install real-time lighting controls with presence sensor switching where possible
- Install CMS lighting controls for adaptive trimming, dimming and switching

4. Operate lighting only where needed
- Install and aim luminaires to avoid spill light and neighbourhood nuisance
- Dim or switch off luminaires at selected locations at times of off-peak activity

5. Operate lighting only when needed
- Operate lighting schemes with adaptive light levels in accord with night activity/need
- Dim or switch off luminaires at times of off-peak activity

A Pathway for Progress

For material advancements to be made in New Zealand in dark sky lighting practice it would be valuable to progress additional stakeholder interaction.

The appropriate forums are AS/NZS standards committees with input that incorporates the interests of all stakeholders. This includes astronomical and ecological communities alongside those of local government, property owners, lighting scientists, lighting designers and the supply industry.

Reference Sources

For further exploration, there are many international reference documents available on outdoor lighting technicalities and application available from independent and non-commercial organisations. Some examples are:
- Illuminating Engineering Society of North America (IESNA) – USA
- International Commission on Illumination (CIE) – Austria
- Institution of Lighting Professionals (ILP) – UK
- US Department of Energy (US-DoE) – USA
- Illuminating Engineering Society of Australia and NZ (IESANZ) Australia and NZ
- Institute of Public Works Engineering Australasia (IPWEA)
- Australia and NZ Lighting Council

New Zealand (LCNZ) is the industry association for lighting product manufacturing, importing, and distribution companies in New Zealand.
www.lightingcouncil.org.nz
e: admin@lightingcouncli.org.nz

The Illuminating Engineering Society of ANZ (IESANZ) is a professional association in the art and science of lighting and the education of lighting professionals.
www.iesanz.org
e: secretariat@iesanz.org

Good outdoor lighting is critical for facilitating safe human movement and activity at night for communities and for road transport networks.



Active Modes Infrastructure Group (AMIG) Update

Since our last update, AMIG has convened two online meetings; one on April 7th and the latest on May 26th. There's quite a lot of focus on various cycling guidance in development or review at the moment; here's what was discussed at these forums:

Sharrows, those shared-use lane markings for cycling in quiet streets, are under review again as consideration is given to more situations where they might be appropriate to use, such as busier roundabouts, tunnels or bridges. The key would be to limit them to where 85th percentile speeds were still low, such as 30 km/h in urban areas and maybe more in rural situations – speed management features might be needed in some cases to achieve this.

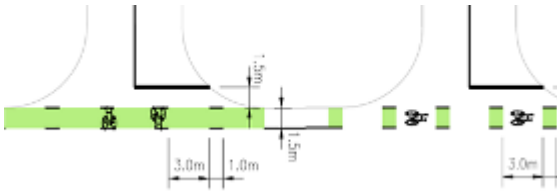


Other cycling guidelines currently being reviewed are **widths for separated cycleways**, be they one-way or two-way. As with many design parameters for biking, the bar continues to get raised on path widths; particularly to ensure that they can cater for higher numbers of riders. There's also a desire to do away with the various levels of "minimum" and just have one standard value, with a case needing to be made to reduce that. Practically speaking, on a one-way cycleway it should be clear whether the width allows for passing between riders or whether it is kept narrow for single-file use sometimes, due to other constraints.

There's also a desire to do away with the various levels of "minimum" cycle lane width and just have one standard value, with a case needing to be made to reduce that



An interesting question posed is whether to review how **cycle lanes at side roads** are marked. Some suggestions are to reduce the amount of green colouring used there (e.g. dashed blocks or lines) or to orient cycle symbols sideways to be more visible to crossing traffic. Further feedback is being sought from the AMIG team on their preferences.



Various other pieces of new or updated **cycling guidance** are currently being worked on too. These include separated cycleways at signalised intersections, cycling on rural roads, lighting for cycleways, and cycling on hills and gradients. Some findings from recent research on path speed control devices were also presented. Hopefully these updates will make their way to the CNG very soon.



Other presentations given recently at AMIG meetings were a summary of the planned Wellington cycling network (Paneke Pōneke), an overview of how the new One Network Framework (ONF) accounts for different hierarchies by mode, and the potential for new markings to reflect a wider range of wheeled path users now and in the future. There were also discussions about the best way to mark space for cycling in part-time bus lanes.

A reminder to check to out the new content in the draft **Pedestrian Network Guidance** (PNG) website (***https://nzta.govt.nz/png***) and provide any feedback to Waka Kotahi. And for users of the **Cycling Network Guidance** (CNG) website (***https://nzta.govt.nz/cng***), remember that the new "Guidance notes and tools" tab in the top menu helps you 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/
The online AMIG meetings continue, with the next one in late July. 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 drop me a line if you wish me to raise any ideas or issues at AMIG on your behalf.

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

Government to spend $550M on Northland railway, including spur to Northport

The Government will spend up to $550 million upgrading Northland's rail system, including a long-awaited rail link to Northport at Marsden Pt.

Northport - the region's deepwater port - was granted consent without the need for a rail link to the port, but there's been a push in recent years to get a rail link to help transport goods, particularly if it starts taking containers full-time.

Northport has now begun the process to be recognised as a container ship port. It confirmed its intention to apply for resource consent to expand its eastern end while continuing to develop proposals for a shipyard and dry dock on its western side. The land for the rail link has already been designated and the geotechnical work has been completed by KiwiRail.



And at a recent Regional Transport Committee (RTC) meeting, Waka Kotahi NZTA's North Island director regional relationships Steve Mutton said the body would be spending between $450 million and $550m on the new Port Marsden to Whangārei rail link.

He would not be drawn on exactly how much of that total would be spent on the rail link, as the funding was also for upgrades to the Whangārei to Otiria rail line. No further details of the spend, such as when work starts and how long it will take, have been released at this stage.

The Government had earlier halted plans to four-lane State Highway One from Whangārei to Port Marsden Highway (SH15) and instead diverted funding to a Port Marsden to Whangārei rail link – and SH1 upgrades along the route.

But this has raised the ire of one Northland roading leader who is calling for a judicial review of the decision to can the multimillion-dollar four-lane highway from Whangārei to Port Marsden.

RTC member Ann Court said she wanted a judicial review of the information the Government had used in reaching its decision last June to halt the four-laning. The SH1 Whangārei to Port Marsden project was to be an upgraded 22km, four-lane corridor. It was axed by the Government in June, shocking local community leaders.

Court said Northland's voice had obviously not been adequately heard. She said the four-laning had been clearly justified through the Waka Kotahi-commissioned business case "Connecting Northland".

She said the business case for the new rail scenario had yet to go to the Government, but it was apparently progressing anyway. This business case will address scope, cost and timing for the new plan.

Court said it was not okay to divert roading money collected from Northlanders through road user charges and fuel excise tax into rail, at the expense of the four-laning and adequate roading.

"We are not just going to roll over and accept that," said Court, who is also Far North Deputy Mayor. Court said Northland contributed significantly towards road funding but was not part of making decisions about how its use played out locally.

"We need to be at the table as part of these conversations," Court said.

She said it did not make good sense for the Government to channel four-laning spending to KiwiRail, an entity with "no skin in the game" when it came to roading. Mutton told the RTC meeting the Government was committed to a Northland roading and transport spend that was much the same as the $700m it had previously announced.

After the change of tack on four-laning, the Government would be spending $150m to $200m on SH1 safety improvements on the "northern package", he said. Mutton said safety work on the SH1 "northern" section between the highway's Port Marsden roundabout and Whangārei was being rescoped after the Government halted funding for four-laning for this stretch.

He said earlier four-laning preparations would inform current work on this section of SH1. Mutton said work on the highway's "central" section - from the SH1 Port Marsden roundabout to the north side of the Brynderwyns – was under way.

Alternative designs for original Waipū SH1 safety upgrades were being developed "after feedback from the community and stakeholders".
Source: NZ Herald

ITE Update



The June 2022 issue of the ITE Journal has some interesting articles in it so make sure you have a read!

There is an excellent article entitled Beyond Multimodal Metrics: Adapting Streets for People and Our Evolving Environment *By Michelle DeRobertis, Ph.D., P.E. (F) and April Renard, P.E., PTOE, RSP2I (M)*.

This talks to different metrics that should be measured when considering the impact of changes to a street, including the social, environmental, and economic impacts. This is rather than the traditional car-based metrics of LOS or VKT as they do not tell the full story. There are case studies from North America which give insight into different measure of success cities have used when altering streets.

Upcoming Events for ITE-ANZ:
International Women in Engineering Day Webinar in conjunction with Transportation Group NZ: 12pm, Thursday 23 June 2022
Pedestrian Modelling Webinar: 6:30pm, Wednesday 29 June 2022

Scholarships for ITE-ANZ members:

Worldwide Learning Opportunities:
ITE-ANZ has re-launched the Austraffic Worldwide Learning Opportunities program for 2022! The Worldwide Learning Opportunities program was established in 2016 and has since helped seven young transport professionals attend conferences in the US, Japan, Canada, Hong Kong and New Zealand. This program offers transport professionals under the age of 35 the opportunity to grow and develop their skills. It offers financial support for young and emerging professionals to attend worldwide conferences, meetings and professional events, allowing them to interact with and learn from other professionals in the transport industry. Applications are open on an ongoing basis. Further information is available here.

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



New kind of street tree...

Magazine of the Transportation Group NZ Issue 172 June 2022

Roundabout of the Month — Terminal 1, Paris-Charles de Gaulle Airport

(OK it's not a roundabout, but it's round...)



Council cuts artificial grass to remove weeds

A bemused driver said he was "absolutely amazed" to see a council worker strimming a patch of artificial grass on a Somerset roundabout.

Nigel Castle, 49, was driving through Yeovil when he saw the man attempting to remove weeds growing up through the synthetic cover.

The father-of-three said the damaged plastic should be removed now because of its negative environmental impact.

South Somerset Council apologised and said officers should hand pick weeds. In a statement it said: "Additional training will be provided.

Mr Castle, who lives in Yeovil, was driving and asked his niece to take a photo from the passenger seat of his car on Thursday. He said he was "absolutely amazed" at the "daftness" of watching someone cut plastic grass.

He said he was "absolutely amazed" at the "daftness" of watching someone cut plastic grass.

"They've put plastic grass down, weeds have grown through it and they're strimming the weeds," he said.

He said he later posted the photo on social media to apply pressure on the council to remove the plastic grass in favour of a greener solution. The aircraft engineer told the BBC: "For me it's about the use of plastic grass which they shouldn't be using.

"It is terrible stuff - there are so many different choices that they could have used. Clover, for instance, is low maintenance. There's lots of plant cover that they could have put down that doesn't take a lot to maintain and is a lot better for wildlife."

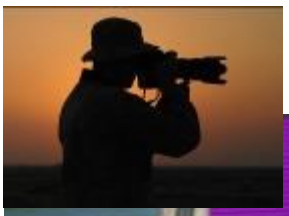




Mr Castle said he wanted to highlight the "nationwide issue" of plastic grass becoming increasingly prevalent across the country.
Source: BBC



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Transport photos of the world: Tulips











City Rail Link update



On 6 May 2022, City Rail Link Ltd in partnership with Auckland Transport publicly announced details of the proposed te reo Māori names for CRL stations at an event held at the Te Wai Horotiu Station (Aotea) site and attended by local dignitaries.

CRLhas a longstanding partnership with our Mana Whenua Forum which began in the early stages of the project in 2012. Part of the purpose of this partnership is to ensure Māoritanga is intrinsically woven through the essence of CRL at every stage.

Māoritanga is intrinsically woven through the essence of CRL at every stage

In 2017, the Mana Whenua Forum gifted us with four names for our stations. These names are steeped in history, represent important elements of iwi tradition and heritage and reflect significant geographical features around the stations.

"Whatungarongaro te tangata toitū te whenua - as man disappears from sight, the land remains. This demonstrates the holistic values of te ao Māori, and the utmost respect of Papatūānuku, the mother of the earth. People will come and go but the land will remain."

This whakapapa is a chance to share and celebrate the rich history of Tāmaki Makaurau with the wider community. It's about reinstating the traditional names of the area – looking back to a time before concrete and skyscrapers - when people lived off the land.

The gifted station names Maungawhau, Karanga a Hape, Te Wai Horotiu and Waitematā reflect the mythology, atua, people and aspects of early life indigenous to the landscapes.

These new names reflect the rich cultural narrative of the areas that these stations will serve – which will be mirrored in the designs of the stations themselves.

Together with Auckland Transport we are beginning the process of having these names, which are steeped in history, officially recognised by the New Zealand Geographic Board Ngā Pou Taunaha o Aotearoa (NZGB). We look forward to a world-class outcome that is distinctly Tāmaki Makaurau. Check out the explanatory videos at : Meet your stations — City Rail Link

Maungawhau Station (Mt Eden)
The gifted name Maungawhau literally translates to mountain (maunga) of cork tree (whau). The whau tree was used for fishing floats and medicinal purposes.

The station's entrance wall is patterned precast concrete from floor to ceiling with basalt inserts. The giant wall design references the atua (deity) Mataoho, the creator of the basalt volcanic field in Tāmaki Makaurau. The 53 lava-coloured, cast glass triangles are organised to represent a map of these volcanic



cones. The large main triangle is created from Maungawhau basalt and has water flowing over the surface of this section of the wall. This references Maungawhau, the basalt caverns, caves and water springs below ground.

It pays respect to Parawhenuamea (atua of freshwater) and how freshwater needs kōhatu (rock) to flow. This narrative will continue with the designs on the paved area.

Karanga a Hape Station (Karangahape)
The name 'Karanga a Hape' is a grammatical correction of the current Karangahape.

Named for the great calling of Hape, who was left behind by his people when he was denied passage across the ocean in his waka (canoe). After performing a karakia he was gifted a kaitiaki (guardian) - a stingray - and together they crossed the water to arrive in Aotearoa ahead of the Tainui waka that left before them.

While all four CRL stations are designed around the creation story with Ranginui (the sky father) and Papatūānuku (the earth mother), Karanga a Hape Sta-



tion's design also references their son, Tāne Mahuta, God of the forest, who pushed his parents apart to create light (day). Allusions to the kauri tree are shown through the large pupurangi shells on the entrance ceiling (these snails live on the tree's leaves).

Te Wai Horotiu Station (Aotea)
This name has been gifted in recognition of the Waihorotiu stream and wetland system that flowed in close proximity to the station, past the Horotiu pā down to the Waitematā, providing fresh water for iwi living nearby.

At the Wellesley Street entrance the hanging rods ceiling design reflects a sense of human craft. Their undulating pattern reflects the water as well as the kaitiaki of the area, moving and connecting people in place as they flow through the station.

Te Wai Horotiu will become New Zealand's busiest station and the te reo Māori name reflects that link between the past and present where the original water source provided a service to local people for cooking, cleaning, bathing and growing food, just as now it will provide the service of transport.

Waitematā Station (Britomart)
The name Waitematā was gifted to reflect the closeness of the harbour next to the station, which is built on reclaimed land.

This large body of water is named after its resemblance to matā (obsidian), for its flat, glassy waters. This is also where the Waihorotiu stream and the Waitematā converge: a mingling of waters and people. In the second interpretation, the harbour's name reflects a visit from a Te Arawa ancestor who placed an obsidian stone as a mauri (talisman) in the northern part of the harbour.

Waitematā is different from our other three CRL stations because the majority of our work has been completed there and it is currently operating as 'Britomart Station'. From a design perspective, it has also been approached differently because it is centred around the Chief Post Office (CPO). It was essential to preserve a building of such significant heritage.

The CPO is Britomart's flagship building, and its regal exterior provides elegant Edwardian-age presence in the heart of the city. Intermingled with this, the station hosts design elements that speak to Māori cultural narratives and the history of the area before the navy ship HMS Britomart (for which the area is named) docked in 1840.



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Transportation Group National Committee

TRANSPORTATION GROUP NEW ZEALAND

National Chairperson: Bridget Burdett
bburdett@mrcagney.com
Vice Chairperson: John Lieswyn
john@viastrada.nz
Immediate Past Chair: Jeanette Ward jeanette@abley.com
Auckland Branch Chair: Stephanie Spedding
stephanie.spedding@jacobs.com
Waikato/Bay of Plenty Branch Chair: Craig Richards
craig.richards@beca.com
Central Branch Chair: Tobie Pretorious
tobias.pretorius@lgwm.nz
Canterbury/West Coast Branch Chair: Stacey Lloyd
Stacey.Lloyd@stantec.com

Southern Branch Chair: Lisa Clifford
lisa.clifford@nzta.govt.nz
Treasurer: Melanie Muirson
Melanie.Muirson@stantec.com
Modelling User Group: Nathan Harper
nathan@invise.co.nz
Signal Network User Group: Paul Addy
Paul.addy@wsp.com
Active Modes Infrastructure Group: Glen Koorey
glen@viastrada.nz
Research Sub-committee: Bridget Burdett
bburdett@mrcagney.com
TDB rep: Tony Brennand Tony.Brennand@nzta.govt.nz

Branch Administrators

TRANSPORTATION GROUP NEW ZEALAND

Auckland: Chun-Lin Lee chun-lin.lee@stantec.com

Waikato/Bay of Plenty: Sarah Dove
s.dove@harrisongrierson.com

Central: Josephine Draper
josephine.draper@abley.com

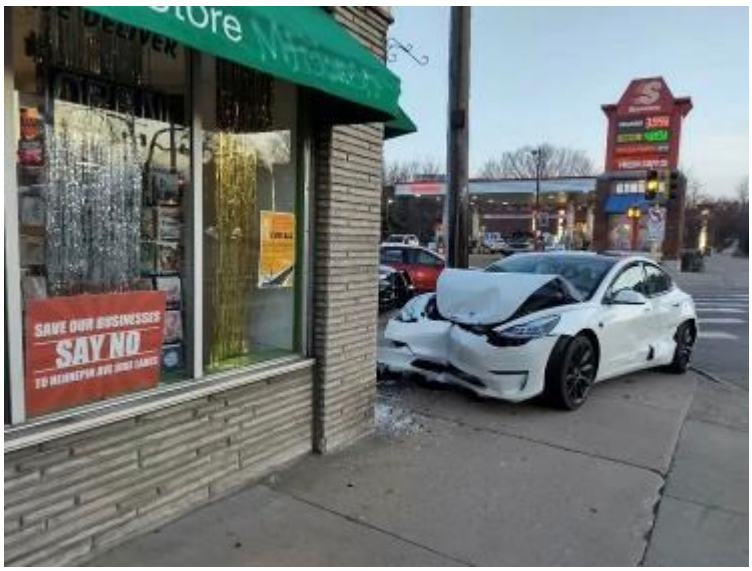
Canterbury/West Coast: Sahan Lalpe
sahan.lalpe@stantec.com

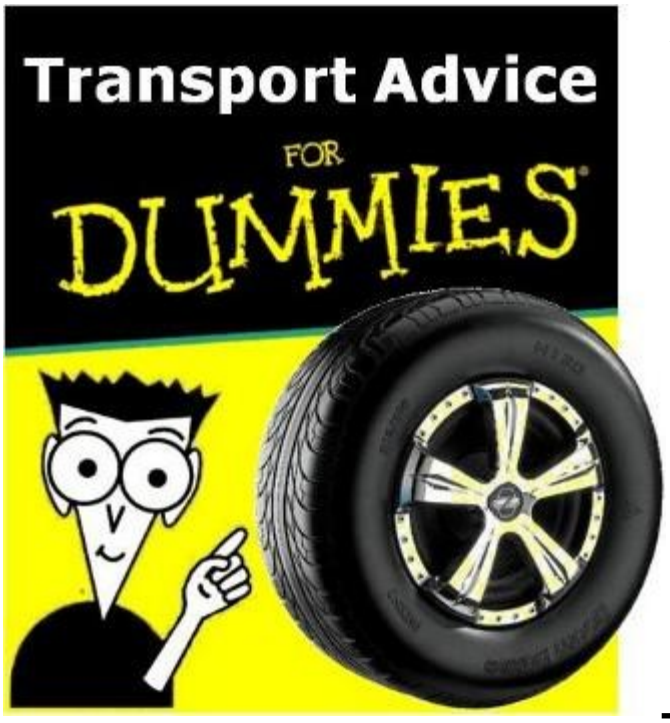
Southern: TBA

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

Find us on the web:
Transportationgroup.nz







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 heard they are renaming Britomart train station. I mean, its OK to come up with new names for new stations but, come on, we all know it as Britomart so why does the name have to change?

Jordan, St Heliers



Dear Jawing

The land upon which Britomart—an underground station—is built is all reclaimed. The station is literally already in the Waitematā harbour.

The Transport Guy

Dear Transport Guy

Now that Transmission Gully is open and traffic is able to freely flow, I hope all those greeny nay-sayers are eating their words. I bet we'll see them driving on it, even though they protested against it!

Charles, Lower Hutt

Dear Chuckle

You are right, we'll see them driving on it. Mainly because there are no bus services or cycle facilities and it is illegal to cycle on the motorway itself.

As for 'free-flowing' I guess that is true, up until the point that the traffic hits the end of the next queue, much like any motorway project. And like any motorway project, the additional traffic induced to use the shiny new road will eventually create just as much congestion as the old road.

But wait! In addition to that, those old local roads will become quieter, enticing more cars onto them (traffic that was suppressed by the previous congestion). And you know what that means, Chuckle? That's right, they will end up just as congested as before!

The only thing that will be different is that we'll have a lot more emissions. Oh, and maintenance costs.

Yep, I bet those greenies are really gonna see this as a big loss. Which it is.

The Transport Guy

And like any motorway project, the additional traffic induced to use the shiny new road will eventually create just as much congestion as the old road.



Kids explain traffic engineering



“There’s too many cars. Stop adding lanes, just use a bike or a bus.”