Roundabout

Magazine of the Transportation Group NZ

Issue 169 September 2021

Climate change: Which way should our industry head?

In this edition:

- Carbon emissions research
- Green-tracking light rail
- Overnight traffic jams
- Bus odysseys
- Virtually driving the world

And much more...

Editorial

Daniel Newcombe
Roundabout Editor
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Our new Chair, Bridget Burdett, and I often complain to each other about the state of our profession and the difficulty in getting simple yet beneficial road safety treatments installed. It helps to have a glass of wine in your hand, to make the conversation flow.

One of my favourite examples is my idea that pedestrian safety would be greatly improved if every driveway had a basic speed bump installed just prior to its connection to the footpath.

In my head, this would slow any speedy cars before they cross the footpath (it wouldn't affect slower-moving cars, but would remind drivers of the potential presence of pedestrians), thus improving pedestrian safety or perception of safety. The simple treatment could form part of the driveway standards in a District Plan.

Although it makes great sense to me, and very occasionally this kind of thing pops up at a supermarket carpark entrance, treatments of this sort in a residential setting have failed to materialize—UNTIL NOW!

I spotted the arrangement shown in this photo at a set of driveways in Massey, West Auckland.

I'm not entirely happy with it (as the sign appears to tell pedestrians to look out for cars, rather than the other way around), but the presence of the speed bump brought a tiny speck of joy to my tired, dejected, engineer's heart.

My idea is that pedestrian safety would be greatly improved if every driveway had a basic speed bump installed just prior to its connection to the footpath.

In other joyful news, you may notice a new format for this edition of Roundabout, as we are trying out some new desktop publishing software.

This should make it easier for more people to contribute to and help edit the magazine, which previously existed on fairly obscure software inherited from druids.

As I mentioned in the last editorial, if you are interested in helping out, with ideas, stories or a helpful spell-checking eye, please let me know. And if you have any comments or suggestions for the new layout, please also get in touch.

Finally, I was sad to hear of the passing of Andy Smith, a long time walking advocate from Living Streets Aotearoa.

Andy was well known across the country for his passionate promotion of pedestrian improvements (as well as his loud shirts).

He was instrumental in establishing the 2Walk&Cycle conferences and we can look back fondly at his legacy in promoting the needs of pedestrians in the planning and delivery of transport infrastructure.

He and his shirts will be sadly missed.

Inside this issue:

Chair's Chat

Bridget Burdett
National Committee Chair
bburdett@mrcagney.com

Welcome to Spring. What a time to be alive.

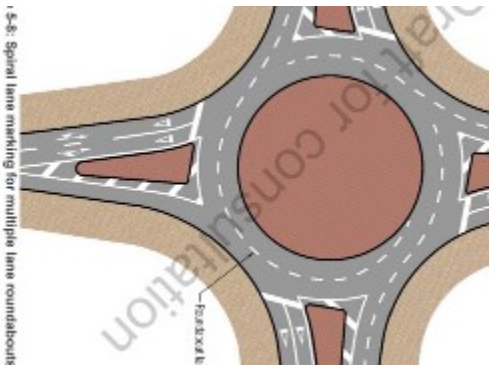
There is a lot going on in the transport sector and busy times are as good as any to think about why we come to work each day, and what change our work inspires.

To that end, I've now hosted two 'Chair's Conversations' to explore disconnect between visions we have for transport, and the outcomes we see on the ground each day. The recordings will be on our Group website soon.

The first Conversation was with Karen Witten, a Professor of Public Health at Massey University in Auckland. One of the outcomes of that conversation was a request for evidence about street design and health to be collated by the Transportation Group. We will look to provide that evidence on our website, so that those of you working on projects where it would be useful to emphasise *why* you are pushing for more walking and cycling facilities (for example) can find it.

And then I talked with Mike Joy, about transport and climate change. That conversation is online too, but in summary:

- We cannot rely on renewable energy to save us: the carbon required to create the infrastructure for renewables is itself polluting and too hard to mine;
- There isn't enough mineral capacity in the world to replace internal combustion engine cars with electric cars, so they aren't an effective climate change policy either;
- We need to live more locally and consume drastically less: both to try to avert the worst outcomes from climate change, and to adapt to a world where traveling long distances will no longer make sense.



Much of the evidence about the myth of renewables is in the report "Assessment of the Extra Capacity Required of Alternative Energy Electrical Power Systems to Completely Replace Fossil Fuels " by Simon Micheaux. You can find his report online and let me know if you find something in there to disagree with. Speaking of limited opportunity to avert disaster, Waka Kotahi has released its draft Traffic Control Devices Manual Part 4 (TCDs at Intersections). Its purpose is best-practice guidance for signs and markings at intersections.

The image of best-practice markings for an urban roundabout is, in my opinion, a disaster. There are no signs or markings showing pedestrians where to go. Of course, in the fine print, there are clauses about 'providing for pedestrians' and reference to mode-specific guidance. But in 2021, with climate apocalypse upon us, I believe that we should start with the default of public transport and walking and cycling-friendly infrastructure, and *then* refer the reader to 'last century's guidance' if they want to remove those features.

If you would like to contribute to a Transportation Group submission on that document, let me know.

It doesn't take a doctorate in cognitive psychology to know that diagrams like this are used at face value by traffic engineers, so we should make those diagrams look as close as possible to the thing we want them to design.

And if you're not sure climate change is real or human-induced, you are in the minority of this Group's membership. See the report later in this issue on our survey of members' views on climate change, and what we should do about it. In summary: they agree with me.

*In 2021, with climate apocalypse upon us, I believe that we should start with the default of public transport and walking and cycling-friendly infrastructure, and *then* refer the reader to 'last century's guidance' if they want to remove those features.*

Roundabout is the magazine of the Transportation Group NZ, published quarterly. It features topical articles and other relevant tidbits from the traffic engineering and transport planning world, as well as details on the latest happenings in the NZ transportation scene.

All contributions, including articles, letters to the editor, amusing traffic related images and anecdotes are welcome.

Opinions expressed in Roundabout are not necessarily the opinion of the Transportation Group NZ or the editor, except the editorial of course.

There is no charge for publishing vacancies for transportation professionals, as this is considered an industry-supporting initiative.

Correspondence welcome, to Daniel Newcombe:

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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The Transportation Group and Climate Change

*By **Bridget Burdett**, Chair, Transportation Group NZ*

In his letter to the Editor in this issue, Duncan Campbell suggested that perhaps my views on the world are not the same as everyone's (correct), and that perhaps we should run a survey of Members to see what they think about climate change. That was a great idea, so we did.

The survey was online for a few weeks, shared with Members both in Mini-Roundabout and as a separate email, and attracted 175 responses. The questions were largely adapted from standard surveys of people's attitudes and beliefs about climate change, with a few transport-specific questions thrown in.

Here are the results.

The main reason for the survey was to determine whether members agree that Climate Change is real, that humans are affecting it, and that it is something we should try our best to do something about as a professional group. The first question confirmed that over 90% of respondents agree that climate change is taking place, and humans are influencing it.

Next, we asked about more specific attitudes. Over **80 percent of respondents** agreed or strongly agreed with all of these statements:
- Climate change is an important issue to me personally
-I have become more concerned about climate change in recent years
- The Transportation Group has a role in responding to climate change
- The Transportation Group should work with other organisations to help practitioners respond to climate change, for example by developing practice notes, case studies, tools, and technical resources
- The transport sector should do more to promote walking, cycling, and public transport
- Walking, cycling and public transport have a significant role to play in reducing emissions

In addition, 78 percent of respondents agreed or strongly agreed that the Transportation Group should be more vocal in promoting decarbonization of transport, and 71 percent agreed or strongly agreed that the transport sector should do more to disincentivize private car travel.

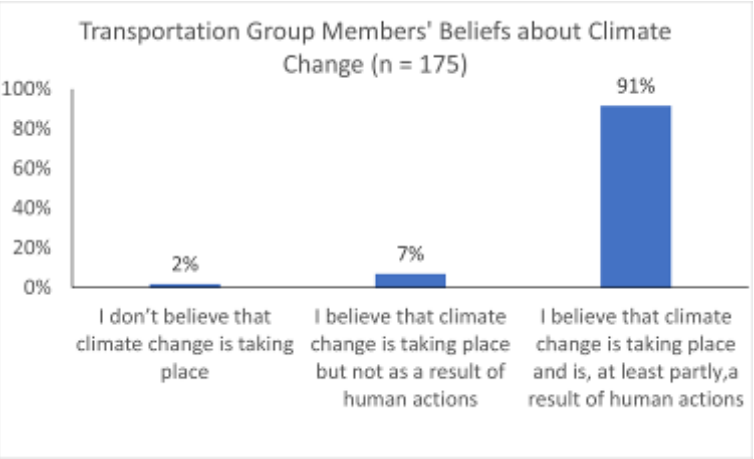
We also asked whether members agree that 'reducing unnecessary car trips' should be an explicit goal of the transport sector in Aotearoa.

Over two thirds of respondents (68 percent) agreed, with 18 percent disagreeing and 13 percent unsure. In the comments, several people pointed out that it would be difficult, if not impossible, to define 'unnecessary'.

There was also discussion of who 'the transport sector' is, because it would be a hard sell for taxi companies to sign up to an explicit goal of reducing travel by car (even though reduction in traffic would make taxi travel more efficient.. See discussion later in this report about simple and easy things).

We provided space for respondents to provide any other comment about transport, climate change and the Transportation Group. There were 68 comments on 68 different topics, but generally respondents expressed concern that we aren't doing enough to either mitigate climate change (as leaders in the world, for others to follow, if not on our own) or to prepare ourselves and our communities for the seemingly inevitable changes coming soon to the world we live in.

Here is a sample of the anonymous comments:
"I believe our role is not to talk at people or virtue signal but to come up with a realistic vision for the future transport system and to bring the public along on that journey "
"Pleased to see these conversations and will be even more impressed if we can move to the implementation of ideas!"
"The TG needs to be a broad church and not become policy zealots. but lets keep working on the things we all agree on -reduction speed, removal of barriers to active mode use but also some of the harder ones like how do you create a 20 minute city.."



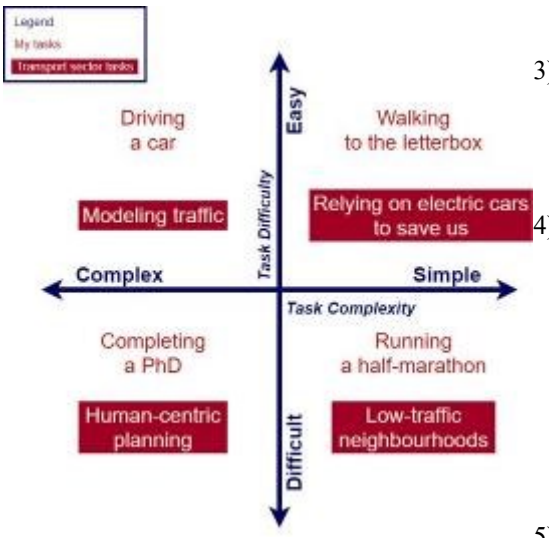
"Can the Transportation Group become more active in persuading politicians to work together and to be braver? "
...and also…
"I feel the Transport Group has got quite political in the past several years and has been acting outside its remit to 'advance engineering knowledge"

...but I will end the results section with this:
"If people say we shouldn't be talking to this, just don't listen. The science is clear and the transport sector plays a huge role in reducing emissions."

Bridget Muses

Before deciding what to do about these attitudes and beliefs, it occurred to me to ask why we haven't done anything yet. Why do we keep building car-centric communities, and compromised bike infrastructure, and why isn't an equity lens on a climate transition a normal thing already?

I think it's because we conflate easy with simple. Reducing traffic is simple, but because of politics and process and habit, it's not easy.



That insight (I made a graph!) doesn't necessarily make it easier. But I think it does help us understand. And change is possible, of course it is—here we are, our last two conferences were about equity and transport decarbonization, neither of which were anything to do with me, by the way—and the momentum in the profession is certainly shifting away from traffic as means to an end, and towards people, community, and planetary health. Good. Let's keep it up.

Call to Action

I was surprised at the high level of agreement about climate change being real, and action being both urgent and within the mandate of this Group

As has been said before, even if we go forth and make it easier to walk, cycle and use public transport, and for people to live locally, and if we improve equity along the way—if we do all of those things and the temperature of the planet does not increase to dangerous levels—then we will still have made good decisions. We will be healthier and happier citizens (Citation needed, you say? Read Happy City, by Charles Montgomery).

So there are several actions we are undertaking as a Group:

1) As Chair I will continue to host conversations with leading thinkers from across sectors, to help us know where to direct our efforts
2) I am also representing the Transportation Group on Engineering New Zealand's new Climate Change Programme Reference Group. I'll report back on our first meeting in the next Roundabout, because cross-sector collaboration is important.
3) Each Branch will continue to consider Climate Change in its activities, in terms of speakers and topics for events, and insofar as encouraging low-carbon participation at those events
4) We will invite participation in working groups to tackle industry tools and processes that need to change for a low carbon future. For example, there is a Group already working on switching the measurement of Level of Service in transport assessments to a more useful metric of reducing Vehicle Kilometres Traveled. If you are interested in that work, or any other initiatives, get in touch with me please.
5) Our conferences will continue to have strong themes that encourage robust debate on issues that matter. We will also continue to support technical efforts in everyday transport policy, planning and practice, but we have bigger goals as well.

Thank you to those who responded to the survey. We have a mandate, and your National Committee and interested members will continue to do our best to act on it.

"68 percent of respondents agreed that 'reducing unnecessary traffic' should be an explicit goal of the transport sector."

Harold and the Mustang Mach-E

Lots of us will have learned to drive in old cars before moving onto newer and better automobiles. But not many are able to say they learnt in a Ford Model T back when it was the latest and greatest.

Harold Baggott is one person that can genuinely say they did, learning at age 10 to drive the family's milkman's delivery float on a farm. That means he actually learned to drive before most of us were even born.

He went on to get his licence in 1936 (the first year they were introduced the UK), and purchased his first car, a Ford 8 Popular in 1937 for £100, about £6,987 (or roughly NZ$14,000) today, and a Ford Anglia the next year.

Harold recently got to relive his Model T memories at the British Motor Museum at Beaulieu in Hampshire, but he also had a special, very modern treat – a drive in a Ford Mustang Mach-E,

Ford's first proper entrant into the global EV market.
He drove his great-grandchildren, 15-year-old Felix, who has ambitions to be a racing driver, and his 12-year-old brother Charlie, three miles from Beaulieu to former shipbuilding village Bucklers Hard.

Struck by how quiet electric vehicles are, Baggott said "Since the age of 10, I've retained my interest in motoring and today find myself interested in the switch to electrification following the government phasing out the traditional combustion engines I'm used to.

"I have reminisced about my driving history with the Model T and seen what the future has in store. It was exciting to get behind the wheel of what I expect to see my great-grandchildren will be driving."

The Ford Model T used a 2.9-litre inline four to generate 15kW of power, paired with a two-speed planetary gear transmission.
Compare that to the Mach-E's twin electric motors generating as much as 358kW. As for torque, the Model T produced a decent amount for the time, around 113Nm, while the Mach E's instant electric twist ranges from 430Nm up to 860Nm.

Source: Stuff

LETTER TO THE EDITOR

Dear Editor,

I am responding to your June Roundabout editorial comment about the recent transportation conference, which I did not attend. You mentioned a general lack of dissent on reducing the carbon footprint, and I take this might also apply to the government declared climate emergency. My comments:

(i) There are some of us and I would go so bold to say many, who think the current government is something of a man-made disaster for this country. Just a few examples include the smothering of the oil and gas industry, and this more recent notion of an EV only near-future at almost any cost to the New Zealand taxpayer.

(ii) It is something of a self-fulfilling prophecy to title a conference as 'Decarbonising Transport' and presume the naysayers will turn up in droves. Indeed any person with the requisite expertise to dispute assertions such as 'climate emergency', will not be in the field of transportation and would not have been invited to speak unless at their own expense. A form of confirmation bias, in other words.

(iii) Not all of this group's members attend these transportation conferences, indeed I know of some who choose to steer clear. Reasons can include a decided trend towards fashionable non-transportation themes or ideologies such as diversity and climate change. What next, biculturalism/maori separatism?

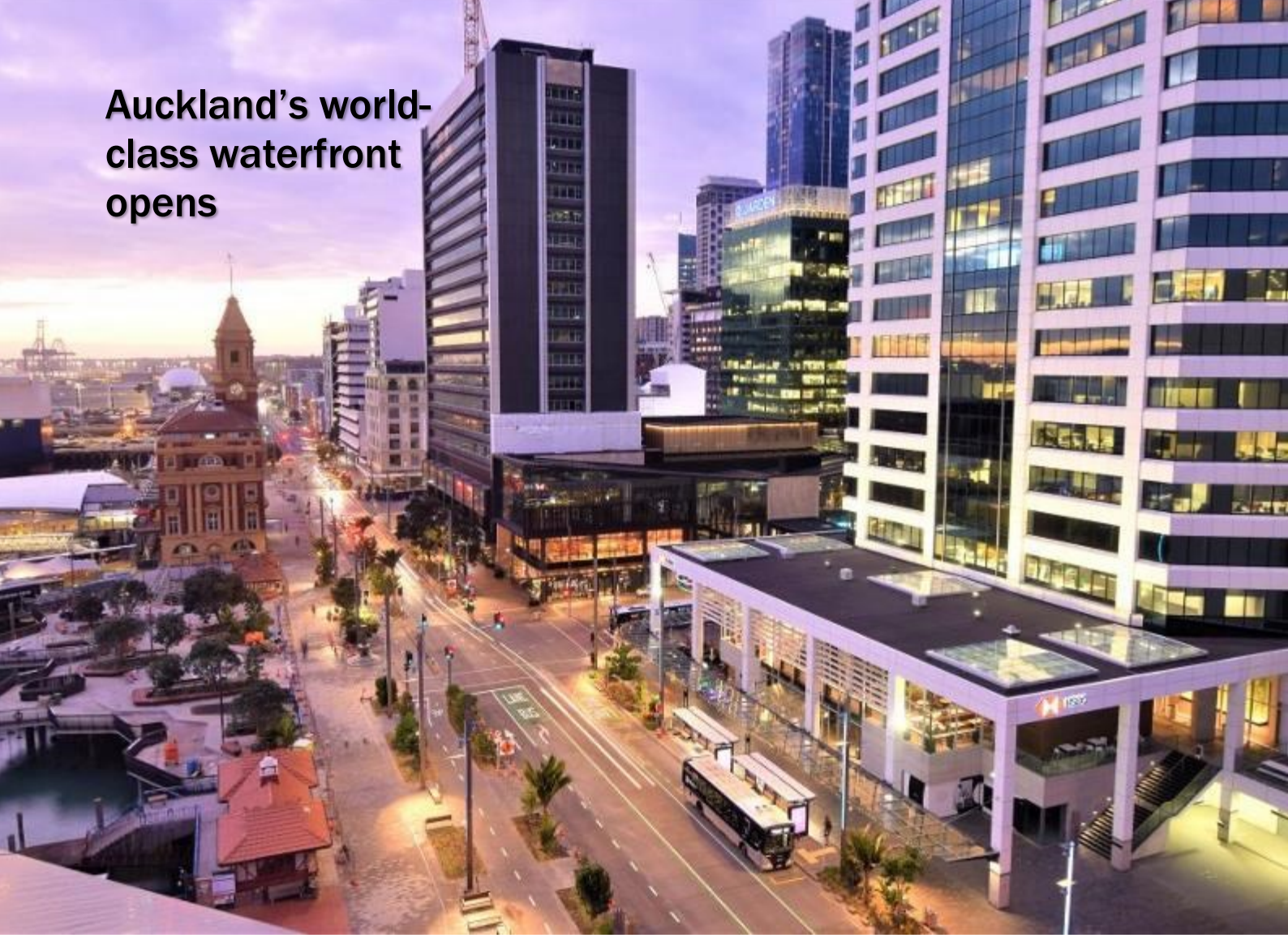
Why doesn't this group undertake a survey of members to find out what they really think? I am not saying that politics can be totally excluded from the field of transportation - the old hands at Transit NZ might never have relented on cycleways if that were the case.

I am just saying that this engineering transportation group has become too ideological for both the profession and the country's own good. And isn't that supposed to be the point of it?

I am just saying that this engineering transportation group has become too ideological for both the profession and the country's own good

Duncan Campbell ME (Hns) CPEng IntPE(NZ) CMEngNZ
Principal Traffic Engineer & Director
TRAFFESSIONALS Ltd

Auckland's world-class waterfront opens



The new piers are designed for patronage growth and the future introduction of electric ferries

Auckland's Downtown Programme has been completed, with Prime Minister Jacinda Ardern in attendance to mark the occasion.

The six projects delivered by the Downtown Programme reflect an investment of $350 million by Auckland Transport and Auckland Council, $42 million of which was provided by the government.

The programme has created a generous and welcoming destination along the water's edge that is recognisably Tāmaki Makaurau. The space is designed to strengthen people's connection with the Waitematā Harbour – a vibrant, transformed environment for all to enjoy.

Mayor Phil Goff says, "This $350 million upgrade of Auckland's downtown has created a world-class waterfront that is vibrant, people-friendly, attractive and accessible.

"It's a meeting place where the land connects to the sea, and where people can gather and look out over our beautiful Waitematā Harbour in the heart of the city."

He says it's a place to enjoy the ambience created by our heritage buildings, landscaped parks and public spaces, and experience shopping and dining in the new Commercial Bay precinct.

"The creation of the new waterfront Te Wānanga space and Te Komititanga square, the restored Chief Post Office, Amey Daldy Park, and the fantastic Wynyard Quarter and Viaduct Basin, together with the Britomart area, makes our waterfront and downtown area absolutely world-class.

It will be enjoyed by Aucklanders and visitors from around the country alike, and when our borders reopen, will welcome tourists from around the world.

"Our new ferry piers that form Te Ngau o Horotiu will have improved accessibility and greater operational flexibility, providing a better customer experience for the 4 million people who use it each year. Bus and rail connections also make it the most accessible area in the city by public transport.

Auckland Transport Board Chair, Adrienne Young-Cooper, says that the area is now a world class meeting places for Aucklanders and visitors and a central hub for connections to other parts of the region.

"With new infrastructure for ferries, buses and trains all within a short distance, public transport connections are easier than ever. Currently, there are close to 9,000 people a day using our ferries services. This is the fastest recovering mode of public transport since the lockdown, with close patronage

being close to 90 per cent of pre -COVID levels.

"This 'beating heart' of our public transport system sees 20,000 people a day use bus services in the Lower Albert Street bus interchange, and 30,000 people travelling into the recently redeveloped Britomart Station. It would not be uncommon for many travelling on our services to be transferring between these modes.

"When you combine this with the Quay Street cycleway and widened footpaths now positioned together, this area of the city is well prepared for growth and an asset for the thousands of people who live, work and travel to and from the city every day."

Eric Van Essen, Programme Director for the Downtown Programme, says the transformation of Auckland's waterfront involved a design partnership with Mana Whenua that interprets local identity, culture and history.

"This is what downtown now represents, a place with stories, a sense of history, and a unique identity. A place that showcases Auckland that we can all be proud of".

The programme began by strengthening the sea wall that Quay Street sits on, protecting the city for the next 100 years from rising sea levels and seismic events. At the same time, it has revitalised Quay Street and Galway Street to be more people orientated. There are now wider footpaths and a protected cycleway on Quay Street, along with a growing urban forest (ngahere) and native planting offering shade, shelter and carbon absorption.

The ngahere of Quay Street connects with Te Wānanga, the new downtown public space. Seeming to float above the harbour, this new public space has been designed to resemble a tidal shelf, forming a living hinge between the land and sea and shaped to emulate the rocky edges and sandstone headlands of the Waitematā.

A new bus interchange now operates in Lower Albert Street serving some of Auckland's busiest bus routes and providing easy connections to the recently reopened Chief Post Office building at Britomart Station. Six new ferry piers form Te Ngau o Horotiu, built on the east side of Queens Wharf.

Genesis' first electric gas delivery truck hits the road with more than 50 to come

Norman Vaili has been driving trucks for the past four years, but today is the first time he has driven one powered by electricity.

Despite the differences from his usual diesel truck such as a silent engine, and the difference in braking, Vaili said the electric version is a lot of fun to drive.

"It's just like driving a big orange go kart," Vaili said.

Vaili and the rest of his trucking team are enthusiastic about the latest addition to the fleet.

Brad Philips, heavy fleet manager at Genesis Energy said the Fuso eCanter, and was Fuso's first factory production-run electric truck to hit the roads in the Southern Hemisphere.

The 7.5 tonne eCanter has a range of 100 to 150 km. The truck was a step forward for the entire transport industry, Philips said.

The truck is the first of many for Genesis, which has committed to 50 per cent of its fleet being electric by 2025, he said.

Genesis' electric truck fleet would increase to 55 in the next four years, he said.

The conversion to electric vehicles was something that Philips would like to see more transport companies get behind.

Recycled rubber roundabout makes its debut in Waiuku

In a first for Auckland Transport, a cost-effective recycled rubber roundabout has been installed – making a central Waiuku intersection safer.

The intersection of Queen St, Victoria Ave and Court St now has the innovative rubber product being trialled.

The problematic intersection saw a total of 11 crashes between 2015 and 2019 - with two resulting in serious injuries.

The rubber roundabout is expected to lower driving speeds at this intersection and was fitted cheaply, compared to a more expensive concrete roundabout.

The rubber product is relatively new to New Zealand and was supplied by Traffic Products Australia. The product was shipped in pieces and assembled on site.

The chosen rubber product is widely used in Australia and the product materials are environmentally-friendly. The installation of the rubber roundabout was coordinated with road repair work to reseal the intersection.

The new rubber roundabout in Waiuku

Undercover bike cops launch 'best ever' cycle safety scheme in Birmingham

The last two drivers we pulled over, we asked: 'do you know how far away you were from the cyclist', and they said 'what cyclist?'

When Mark Hodson gets on his bike in the morning, like many cyclists in the UK, he has come to expect a few close calls. Perhaps drivers will whizz past him too close, or someone will even try a 'punishment pass'.

Luckily, Hodson is a West Midlands Police traffic officer, albeit in plain clothes, and just yards up the road a colleague in a police car is waiting to pull over drivers that give him less than 1.5m space when overtaking (a distance that increases for faster speeds and larger vehicles).

That driver will be offered a choice: prosecution, or 15 minutes' education on how to overtake a cyclist safely. The worst drivers, or repeat offenders, will simply be prosecuted. This tactic is part of a ground breaking new initiative launched by West Midlands Police, in partnership with Birmingham City Council, to tackle cycling safety.

The Highway Code states drivers should give cyclists at least the same amount of space as they would give a car, but often this is not the case. Over four trial days ahead of the scheme's launch 80 people were pulled over for close passes.

This morning Hodson and his colleagues pulled over eight offenders within an hour – people who could have been prosecuted for their driving. Among those stopped were lorry drivers, and a pupil under supervision by a driving instructor.

In many cases drivers just aren't looking out for cyclists.

He said: "The last two drivers we pulled over, we asked: 'do you know how far away you were from the cyclist', and they said 'what cyclist?'"

One of those was the driver of a 7.5 tonne vehicle.

Responding to the 530 cyclists killed or seriously injured on West Midlands roads over four years, Hodson and fellow traffic officer, Steve Hudson, asked the Central Motorway Police Group to analyse collision data from the region.

They found about 70% of collisions involving cyclists occur at junctions, most involve a motor vehicle, and in most cases occur because drivers failed to see a cyclist.

This tactic will now become part of normal police business in the West Midlands and, after an initial three-month blitz, officers will move beyond the education phase to enforcement only, by which point Hodson says people should have got the message to drive safely.

Then, if anyone is caught overtaking Hodson or one of his colleagues, they will be prosecuted.

Source: Guardian

Register for the AITPM 2021 Online Conference Series

Registrations are now open for the AITPM 2021 Online Conference Series (OCS).

Following on from the successful 2020 event, this is a fully online conference, running for 6 weeks from 6 September, where you have full control of how and when you access the broad program and extensive library of resources.

Registered delegates will have access to:

- 22 online sessions - join live or watch later
- 50+ hours CPD – via live sessions and pre-recorded presentations
- 70+ presentations – with access for 6+ months
- Conference online chat forum – chat with all presenters and other delegates

With a focus on four streams of Place, Transport Planning, Traffic Engineering, and Modelling, the program includes:

- 3 keynote speakers
- 9 interactive panel sessions
- 12 in-depth Q&A sessions
- Young Professional Awards
- OCS Trivia session

REGISTER NOW!

NEW ZEALAND RAIL CONFERENCE 2021 - RESCHEDULED

Due to the lockdown across NZ and parts of Australia the ARA and Informa would like to announce that the New Zealand Rail Conference will be rescheduled to the following new dates: 22 - 23 November 2021.

The conference dinner will be held on the evening of Day One, November 22 and the venue remains the same – The Hilton, Auckland.

The health & safety of everyone in attendance is our main priority and we appreciate that many industry leaders involved with the conference will have operational priorities to deal with during this time.

All pre-existing registrations (including dinner bookings) will be transferred to the new conference dates in November. If you have enquiries, please contact us on + 61 2 9080 4307. We will update and confirm details for our planned site tours in the coming weeks. We continue to be focused on making the conference a great experience for all and we look forward to welcoming you to the Hilton Auckland in November!

Transport Knowledge Hub update

The latest **Transport Intelligence Digest** is now available for reading. The Transport Intelligence Digest, is a quarterly update of the latest transport research and statistical releases. It also includes news and transport-related events in New Zealand. The June 2021 edition can be found here with prior editions here.

Transport Knowledge Conference 2021 (TKC2021).

TKC2021 will be held at the James Cook Hotel, Wellington on Wednesday 1st December 2021. It would be good if you could note this date in your diaries. It will be an in-person event that will also provide for an online joining option for presentations.

Transport Knowledge Hub

There will be a call for topics in the near future, so people can definitely start thinking about topics for TKC2021.

Information about the Transport Knowledge Hub is here:

www.knowledgehub.transport.govt.nz

Consultations — Autonomous cars and the TCD Rule

The Ministry of Transport are seeking feedback on the scope and structure of a proposed **Long-term Insights Briefing on "the impact of autonomous vehicles operating on New Zealand roads"**.

They (correctly) note that this is not really something likely to greatly impact on us in the next 10 years, but want to put a few thoughts out there now on the likely impacts and other pieces of the puzzle (e.g. regulatory changes that might be required).

Note that this is just feedback on what should be covered by the Briefing; a separate consultation seeking feedback on the actual Briefing document itself is likely to be April/May next year after the draft is prepared.

Submission feedback is due by **Fri 17 Sept**: https://www.transport.govt.nz/consultations/long-term-insights-briefing-the-impact-of-autonomous-vehicles-operating-on-new-zealand-roads/

Waka Kotahi is consulting on the draft **Traffic Control Devices Manual Part 4 (TCDs at Intersections)**.

This part of the Manual provides guidance and best practice for road controlling authorities and traffic management practitioners on the use of traffic control devices, such as signs and road marking, at intersections.

Not surprisingly, there's a LOT of detail in there to look over; some of it carried through from MOTSAM but a fair bit of new/updated guidance. The draft is provided as a 35MB PDF but amongst other things they're interested in whether an online HTML final version would be preferred *(as has recently been done to TCD Manual Part 5)*.

Submission feedback is due by **Thu 14 Oct**: https://www.nzta.govt.nz/about-us/consultations/traffic-control-devices-manual-part-4-consultation/

Living Streets Aotearoa AGM notice

The Living Streets Aotearoa Inc. AGM will be held on Wednesday 29 September 2021 at 7:30 pm by Zoom.

This meeting is an opportunity to acknowledge the work of President Andy Smith, who sadly passed away in July this year. Then we will attend to the formal business of our organisation.

All current members are invited to participate and will be able to vote at this meeting. This first notice is also sent to those members who may not have paid their 2021 membership fees. If you are unsure of your membership status, please contact: accounts@livingstreets.org.nz. You can join/renew any time before the meeting - follow this link to join/renew now. We welcome your attendance.

You can join/renew any time before the meeting - follow this link to join/renew now.

Nominations open

Would you like to join the Living Streets Aotearoa executive for the 2021/22 year? Most of the current executive will be seeking re-election but we welcome nominations from other members who would like to help us retain footpaths for feet (including people who use mobility aids), and to work for safer, pedestrian-friendly places and spaces.

To be nominated before the AGM, please contact Gay Richards, Acting President, on the email below as soon as possible. Please write a paragraph (100 words max) about yourself. acounts@livingstreets.org.nz Nominations can also be made at the AGM.

Purpose of AGM

To acknowledge the passing of our long-serving President, Andy Smith, and the legacy of collaboration and walking advocacy he leaves - the Acting President and our executive team will present a report on the year's activities, in lieu of the customary President's report.

To elect the 2021/22 Executive.

To approve the financial accounts as at 31 March 2021.

To consider resolutions raised by the Executive and members.

To discuss any other matters related to the 2020/21 year.

A full Agenda, along with the minutes of the 2020 AGM and the 2020/21 financial accounts will be circulated.

Meeting by Zoom

A link to the Zoom meeting will be sent to all members 14 days prior to the AGM. You do not need to have a webcam or special software to participate in this Zoom meeting.

Finally, we look forward to catching up with our members throughout Aotearoa New Zealand and beyond, regardless of the COVID19 Alert Level in your area, on 29th September this year.

Drive and Listen: Website offers sights and sounds of cities around the world for virtual holidays

How often do you think back to places you've visited around the world and remember what it was like just driving around, or hitting the road to the nearest beach?

With the windows down and the music up, you people watched as you headed through town.

Now, some smart folks with creative ideas, you can relive those moments from the comfort of your own home... well almost.

A website called Drive and Listen lets you virtually hit the road.

You start by choosing from a list of dozens of cities around the world and hitting play, and there you are with dashcam video from someone's car as they drive the streets of that particular city.

Additionally, a live feed from a local radio station is broadcast at the same time and there's even an option to include the road noise being recorded by the camera as well.

The website's creator Erkam Şeker, a Turkish student living in Munich, told Lonely Planet he initially created the website as a way to deal with being stuck inside during the COVID-19 pandemic.

"I missed strolling through my city, even the traffic and the bustle of daily life, so I started looking at online videos of Istanbul," Şeker said.

"It was a lot of fun to see my city, and then I thought it would be great to hear some background radio to get the full experience of driving there. I realised that people all over the world probably missed being on the road too."

In the video above you can see cities such as New York, Singapore, London and even Dunedin featuring on the website.

While the experience comes across as live, there's a bit of a trick to how the website is run.

The radio streams are live, but the dashcam footage is taken from YouTube clips submitted by willing drivers from around the world.

Road crossing signals in Maryborough Queensland have this image in honour of the author of Mary Poppins books, Pamela Lyndon Travers, born Helen Lyndon Goff in Maryborough.

Comparing Freight Transport Emissions by Mode

*By **Ralph D. Samuelson,** Independent Researcher, and **Haobo Wang,** Ministry of Transport*

In New Zealand, moving domestic freight by rail and coastal shipping is widely regarded as using less energy, and emitting less greenhouse gases, per tonne-km than road freight. But how do the actual emissions of these modes compare? Our paper[1] looked at this question and attempts to provide some approximate estimates, which we hope will prove useful in government policy and individual firm decision-making.

Key Results

The bottom line results of our research is summarised in Figure 1.

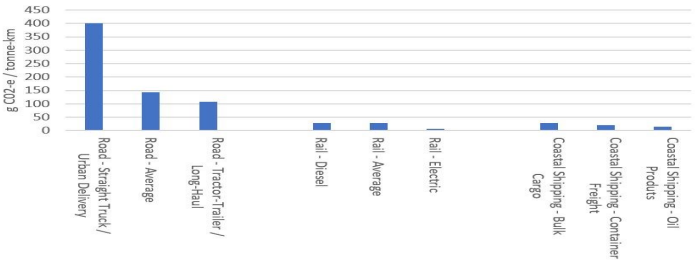


Figure 1 – Comparative Emissions per Tonne-KM by Freight Modes in NZ

The figures shown reflect 'tank-to-wheel' emissions from fuel combustion only, without considering the 'well-to-tank' emissions involved in producing, processing, and transporting the fuel. The latter can vary greatly depending upon the supply chain for the fuel. The figures also reflect CO2-equivalent (CO2-e) emissions of all greenhouse gasses emitted, not just CO2. The difference between CO2 and CO2-e for transport emissions is, however, generally inconsequential—somewhere around 1% of emissions for the road fleet, for example. The figures are also designed to reflect real world operating conditions, including actual loadings and empty movements.

Because the emissions per tonne-km for road freight are much larger than for rail and coastal shipping, it is difficult to compare emissions for the latter modes in Figure 1. Therefore, we show results for rail and coastal shipping only in Figure 2.

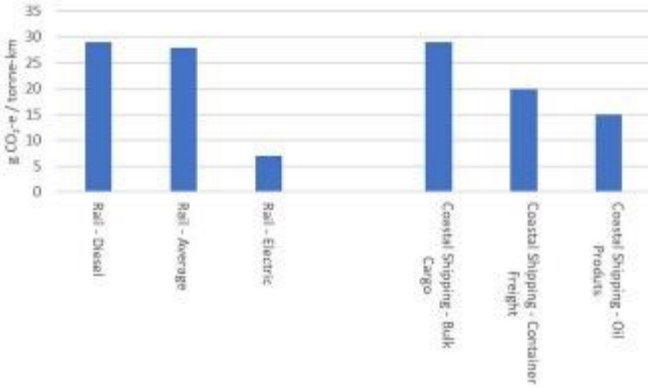


Figure 2 – Comparative Emissions per Tonne-KM for Rail and Coastal Shipping in NZ

How did we get these results? For each mode, we looked at the New Zealand-specific evidence, then compared this to overseas evidence.

Challenges in Estimating Road Freight Emissions

A particular challenge was estimating emissions for road freight in a manner that would be comparable to the other two modes. This would allow estimation of the reduction in emissions that might be obtained from diverting freight from road to rail or coastal shipping.

Using a simple overall average emissions per tonne-km for road freight would not be appropriate as this average includes a large amount of freight that could not feasibly be diverted to other modes due to its small shipment size, short distance, or specialised equipment requirements. Much of this non-divertible freight moves in medium-size trucks. The freight that might be diverted to rail or coastal shipping tends to move in large-size trucks, which would have lower emissions than the overall average for trucks. Data that would allow us to break out emissions per tonne-km for large-size trucks only were not available.

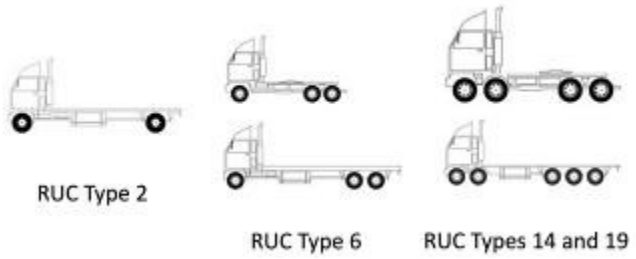
To address this data gap, the Ministry of Transport contracted with EROAD to provide anonymised data on fuel use for a sample of 10,000 trucks in New Zealand by road user charge (RUC) type.

EROAD is a company that has devices installed in many trucks to help operators monitor their performance and to automate the calculation of road user charges. As shown in Figure 3, RUC type 2 trucks are generally straight trucks with only two axles, which would typically be used in local pickup or delivery service.

They would not generally carry freight that could be moved by rail or coastal shipping. RUC types 6, 14, and 19 are generally tractor-trailer 'big-rigs', having three or more axles, which would typically be used in line-haul operations. These are the trucks that might carry freight

Figure 3: New Zealand Road

[1] https://harding.eventsair.com/QuickEventWebsitePortal/transportation-2021/programme/Agenda/AgendaItemDetail?id=5039d9ae-5cb7-48ac-9d40-637141b7295b; complete references for the data and factual information presented here are contained in the paper.



User Charge (RUC) Types[2]

that could be diverted to rail or coastal shipping.

Based on the EROAD sample data, the authors were able to obtain estimates of fuel use per vehicle-kilometre by RUC type, which may be multiplied by an emission factor for diesel fuel to obtain an estimate of emissions per vehicle-km. EROAD was not able to provide data on tonne-kms or actual loadings. It was, however, possible to calculate average payloads by RUC type from Waka Kotahi/NZTA weight-in-motion (WIM) data. This data are collected by roadside detectors, which record the weight and RUC type of passing trucks. Subtracting the average tare weight for the RUC type, which may be calculated from data in the Motor Vehicle Register, an estimate of average payload for each RUC type may be obtained. Divide average emissions per vehicle-km by average tonnes of payload per vehicle and we obtain emissions per tonne-km.

The Ministry of Transport's own Vehicle Fleet Emissions Model provided an independent estimate of overall average truck emissions per vehicle-km. This data, again combined with the WIM data on loadings per vehicle, enabled us to estimate the average emissions per tonne-km for all road freight, and provided a consistency check for the EROAD data.

Estimating Emissions for Rail and Coastal Shipping

For rail, Kiwirail kindly supplied us with data on fuel/electricity use and tonne-kms for diesel and electrically-hauled rail freight, which are the basis for the rail numbers shown here. Electric rail emissions reflect the imputed emissions from generating the electricity consumed.

Sadly, there are no data available on either fuel use or tonne-kms for coastal shipping that would allow us to estimate New Zealand-specific emissions per tonne-km. Our attempts to obtain data from the carriers directly were not successful. The New Zealand coastal shipping fleet is very small—currently six ships, to be exact—and the carriers regard their data as commercially confidential. These six ships include three bulk cargo ships (two of these being cement carriers), two oil product tankers, and one container ship. The bulk cargo ships are quite small, explaining their higher emissions per tonne-km relative to the other types of ships. There are also five Cook Strait ferries, which we did not consider to be coastal shipping as it is not possible to divert freight from trucks to Cook Strait ferries.

We did, however, have some reasonably good data on the specifications for the six ships, and were able to estimate coastal shipping emissions from data on emissions per tonne-km for comparable ships overseas. The lack of good data on coastal shipping in New Zealand is a significant gap in New Zealand's transport data, which deserves to be addressed.

Concluding Thoughts

For road and rail freight, we compared our results with similar work done in other countries, mainly in Europe. Our results are reasonably consistent with the overseas results, although we note that both road and rail emissions per tonne-km tend to run a bit higher in New Zealand than in Europe. This is to be expected given New Zealand's more difficult topography, and New Zealand's more lightly constructed road and rail infrastructure. The latter would be expected to lead to more grades and curves in New Zealand than in Europe, even in comparable terrain.

The results presented here are, of course, broad averages, which can be affected by many specifics of an individual shipment. These include the type of freight being carried (bulk vs. containers, high-density vs. low-density), the size of the vehicle used (especially for trucks), the fuel source (especially diesel vs. alternative energy sources), as well a vehicle load factors and repositioning requirements, among other factors. Also, many shipments by rail or coastal shipping require a truck movement from the actual origin to the rail terminal or port, and/or from the rail terminal or port to the actual destination. Some consideration should probably be given to the emissions impact of these 'last mile" truck movements on the overall emission factors for rail and coastal shipping.

In general, however, the results of our work do confirm that rail and coastal shipping have significantly lower emissions per tonne-km than road freight. The low emissions for electric rail freight especially stands out.

The results confirm that rail and coastal shipping have significantly lower emissions per tonne-km than road freight.

[2] From https://www.nzta.govt.nz/vehicles/licensing-rego/road-user-charges/ruc-rates-and-transaction-fees/#RUC-rates-for-distance-licences-powered.

Manaaki Tāngata

Caring for the People

Transportation Conference
Trinity Wharf, Tauranga
27 - 30 March, 2022

Save the dates!

27 - 30 March 2022

Trinity Wharf, Tauranga

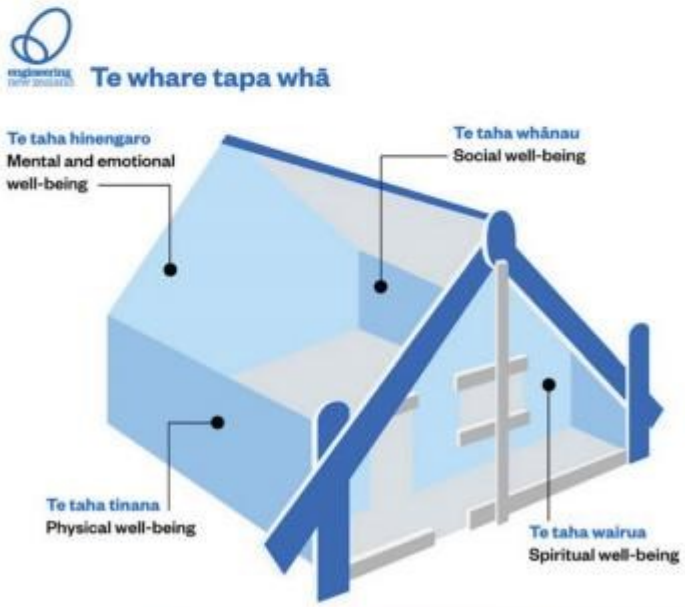
Transportation 2022 invites submission of abstracts

About Transportation 2022

Transportation 2022 is New Zealand's premier forum for the transportation planning, safety, engineering and design community. The conference is intended to stimulate debate and provide problem-solving and thought-leadership amongst peers within the transportation sector and related professions.

The conference has been running for more than 40 years and is hosted annually.

Abstract submissions due 8 October



Theme: Caring for the people

At Transport Conference 2022 we will share and discuss all of the ways that we care for people and our communities by working to improve health and wellbeing. To do this we will explore how transport contributes to the four dimensions of the Te Whare Tapa Whā model.

The Te Whare Tapa Whā model provides an interconnected perspective for us to think about holistic health (Hauora). The model describes the whare as having four walls, and each wall represents a different dimension of health. All four walls are needed for the house to be strong.

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27 - 30 March, Tauranga

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With several exciting projects underway in the Bay of Plenty, there will be no shortage of subjects for the conference technical tours.

While Tauranga's sparkling harbour and magnificent views make it a great place to relax and recharge, there's also plenty to keep you busy.

Stay onsite at the stunning Trinity Wharf Hotel, built over-water it offers panoramic views framed by floor to ceiling glass bringing the tranquil elements of the outside in.

Special accommodation rates will be available when registration opens.

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Find out more about submitting an abstract

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Shadows

Decision-making and designing for an Age friendly Ōtautahi

$0 students / advocates / unwaged
$10 professionals
[incl. Lunch]

SAVE THE DATE
- 1 OCT 21 -

This event will be safely organised in COVID alert level 1 and 2

Come to one or both

further details on registration and speakers to come

Lunch walk – 12 noon to 1pm:
Start @Tūranga Christchurch Central Library
Small group guided walk around the central city to raise awareness of the issues an aging population face (this means 40 years plus!)

Workshop – 1pm to 3pm:
@TSB Room, Tūranga Christchurch Central Library
A deeper dive into age related issues and actions, including governance, long term strategy and design solutions to support an age friendly environment.

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INTEGRATED CARBON EMISSIONS CONTROL IN DECISION-MAKING

*By **Matiul Khan1***
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***Gang Yu1** PhD, CPEng, IntPE(NZ)*
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New Zealand passed a bill on November 7, 2019, requiring the country to be net-zero for all greenhouse gases by 2050 (except for biogenic methane, with plans to reduce that by 24%–47% below 2017 levels by 2050).

This can be an ambitious target unless we have a collective effort from society. At Auckland Transport (AT), we are investigating what this goal means to us and efforts are required to align ourselves as the custodians of the $21 billion value of transport assets.

According to the Ministry for the Environment, the carbon dioxide emissions from manufacturing industries and construction were 17.9 percent of all carbon dioxide emissions in 2018. This is the place where a sustainable asset management approach can influence reducing greenhouse gases emissions.

To control carbon emissions, we must understand how to measure it from an asset lifecycle, including infrastructure assets. The scope of the whole-of-life embedded carbon framework increases over time and new buildings in the public sector need to meet Whole Life embedded carbon caps at a certain level (MBIE, 2020).

It is also noted from the framework that "When caps on embedded carbon are introduced, Building Consent Authorities will need to have the confidence that the data provided is sufficiently robust in demonstrating the whole-of-life embedded carbon is below the cap, in order to award the consent."

Hence, it is time for us to investigate how to measure the carbon emissions quantitatively from the asset lifecycle, which is described as Planning, Acquisition, Operation and Maintenance, Disposal (AssetWorks, 2017).

CARBON FOOTPRINT AND EMBEDDED CARBON EMISSIONS

It has been well accepted that there are two measures of carbon emissions, carbon footprint and embedded carbon emissions. A carbon footprint is the total greenhouse gas (GHG) emissions caused directly and indirectly by an individual, organisation, event or product, and is expressed as a carbon dioxide equivalent (CO2-e) (CARBON TRUST, 2018).

Carbon dioxide equivalent (CO2-e) is the unit of measurement which allows different greenhouse gases to be compared on a like for like basis relative to one unit of CO2. CO2-e emissions are calculated by multiplying the emissions of each of the six greenhouse gases (carbon dioxide (CO2), Methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF6)) by its Global Warming Potential (GWP).

Embedded carbon emissions are the subset of a carbon footprint and can be treated as the carbon footprint of materials. As per the definition from MBIE NZ, embedded carbon emissions are caused by CO2 and other greenhouse gases from non-renewable energy sources or otherwise being released into the atmosphere due to activities associated with a particular material or product (MBIE, 2020).

An indictive illustration of embedded carbon emissions over a transport structure's lifecycle is shown in Figure 1.

LINKING ASSET MANAGEMENT WITH CARBON NEUTRAL GOAL

Risk management is one of the key criteria at the heart of Auckland Transport's decision making within asset management of its transport assets. It is believed addressing the risks proactively will create safe transport environments and safe guard investments. To create quality design outcomes for the sustainable management of transport services that connect people and communities, we suggest the following workflow (Figure 2) to provide our contribution to the carbon-neutral goal:

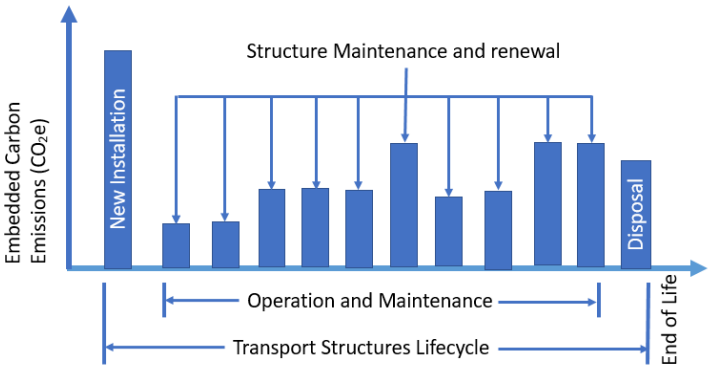
Lifecycle material consumption

As we discussed in the previous section, the lifecycle of transport structure could be described as a new installation, operation, maintenance and disposal. All those stages will generate carbon emissions. By taking a bridge's lifecycle as an example, as shown in Figure 3, in-between its initial installation and final demolition, there are multiple maintenance and/or renewals driven by asset conditions and the outcomes from risk assessments.

The embedded carbon emissions could be calculated quantitatively and measured using carbon dioxide equivalent (CO2e). At the time when the asset owner faces a decision at a particular stage, the embedded carbon emissions can then be weighed against other factors.

Embedded carbon emissions calculation

Figure 1. Embedded carbon emissions over the lifecycle of a transport structure



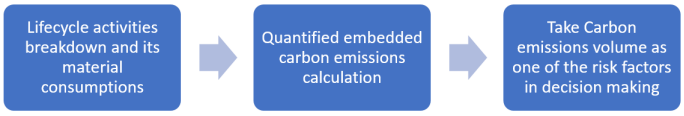


Figure 2. Integrated risk management framework

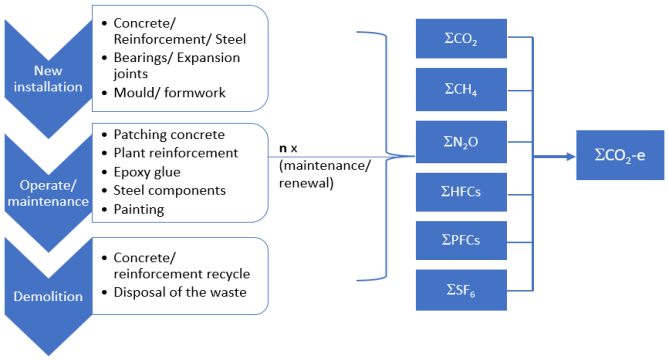


Figure 3. An illustrative lifecycle breakdown of a bridge

The calculation of carbon dioxide equivalent is a specialised topic, while its meaning is straight-forward. It provides a measure to describe the various GHG in a common unit. CO2-e converts any type of GHG to the amount of CO2, which would have the equivalent global warming effect.

The analysis and rational elaboration can be found from the Intergovernmental Panel on Climate Change (IPCC) report (Myhre, et al., 2013).

As for transport structures, the lifecycle embedded carbon emissions can be expressed as,

$$Ce = \sum_{i=1}^{n} Cei = \sum_{i=1}^{n} \sum_{j=1}^{6} W_{ij} \cdot GWP_j$$

Where,

Ce, the CO_2 equivalent, (kg_CO_2)

i, the i^{th} lifecycle stage

Cei, the CO_2 equivalent at the lifecycle stage i

j, one of the six GHG

W_{ij}, the weight of GHG j at the lifecycle stage i, (kg)

GWP_j, Global Warming Potential of GHG j, $(\frac{kg\_CO_2}{kg})$

GWP is periodically updated from the IPCC report (Myhre, et al., 2013).

W_{ij} is the carbon content of materials used in the stage i. Its calculation refers to IPCC Guidelines for National Greenhouse Gas Inventories (Calvo Buendia, et al., 2019).

Carbon emissions in decision making

Knowing the structurally embedded carbon emissions quantitatively, the decisions along the lifecycle of the structures can take the carbon emissions reduction as one of the factors.

If we take reducing the carbon emissions as the single goal, the decision making could be expressed as,

$$Ce_{optimal\ option} = Min\ [Ce_{option\_1}, Ce_{option\_2}, \ldots, Ce_{option\_n}]$$

While the decision-making is also affected by multiple boundary conditions, by taking the transport structure as an example, this will be affected but not limited to the budget, the functionality of the structure, the safety factors and the aesthetic demands.

After carrying out the carbon emissions assessment following this paper's framework, the carbon emissions can be a new factor among other factors in the decisions-making process.

AN ILLUSTRATIVE EXAMPLE

General description

To illustrate the framework proposed, a simplified example below is used to demonstrate how carbon emission influences decision-making.

It is assumed there is a demand to build a single span bridge with a general arrangement of 12m (length) x 12m (width) with 50 years of service life. The structure will be demolished at the end of its service life of 50 years. The superstructure is simply supported by concrete abutments at both ends.

From the optioneering stage, we will choose the preferred superstructure from the options below.
Option 1 - Concrete beams
Option 2 - Steel beams
Option 3 - Timber beam and deck.

We will calculate the carbon emission from its lifecycle of different options, the quantitative outcome will provide us the reference in decision-making from the carbon emissions perspective.

To keep the example simple enough to illustrate the framework proposed, the carbon

Setting up a programme for the standardised assessment of carbon emissions will aid a road controlling authority in it's decision-making processes.

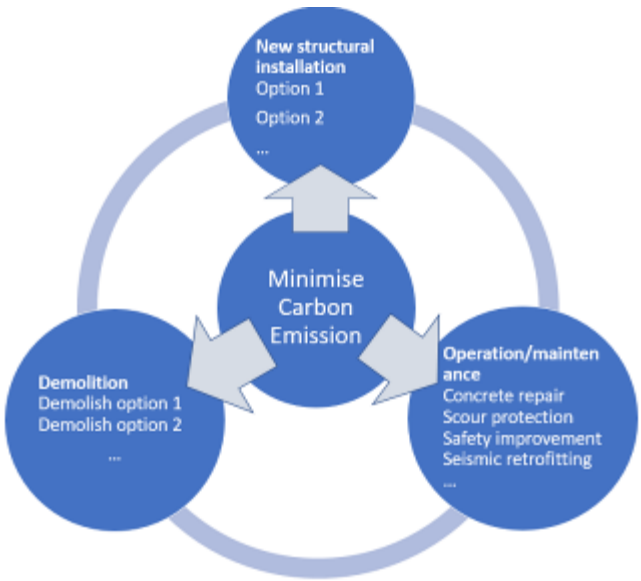


Figure 4. Carbon emissions in decision making of lifecycle asset management

content of different materials is under assumption basis. The breakdown of the lifecycle activities has been simplified.

Lifecycle asset management breakdown

Table 1. Carbon emissions source of the bridge at different lifecycle stages

Options	New installation		Operation/ maintenance	Demolition
	Material production	Construction		
Option 1	Concrete production/ transportation	Beam installation/ Concrete pouring/ Construction equipment operation	Maintenance free	Concrete structure demolition
Option 2	Steel components production/ transportation	Steel installation/ Construction equipment operation	Painting at 25 years	Steel structure demolition
Option 3	Timber components production/ transportation	Site installation/ Construction equipment operation	Major renewal at 25 years	Timber structure demolition

The quantified consumption of material and energy are shown in Table 2, Table 3 and Table 4 corresponding to each lifecycle stage.

It is assumed the concrete option is maintenance free in 50 years of service life.

It is also assumed all the structures are to be demolished at the end of the service life, even which is normally not the case in real life.

Table 2. New installation stage consumption

Options	Concrete	Steel	Timber	Heavy fuel oil	Diesel	Electricity
	(kg)	(kg)	(kg)	(litre)	(litre)	(kWh)
Option 1	126000	54000	-	40	10	108000
Option 2	-	90000	-	35	6	8000
Option 3	-	-	100000	25	6	7000

Table 3. Operation/maintenance stage consumption

Options	Concrete	Steel	Timber	Heavy fuel oil	Diesel	Electricity
	(kg)	(kg)	(kg)	(litre)	(litre)	(kWh)
Option 1	-	-	-	-	-	-
Option 2	-	90	-	-	5	2000
Option 3	-	-	10000	-	5	3000

Table 4. End of life demolition consumption

Options	Material waste			Demolish energy		Transportation
	Concrete	Steel	Timber	Heavy fuel oil	Electricity	Diesel
	(kg)	(kg)	(kg)	(litre)	(kWh)	(litre)
Option 1	126000	54000	-	8	21600	400
Option 2	-	90000	-	7	1600	180
Option 3	-	-	100000	5	1400	120

Embedded carbon emissions factors

The carbon emission factors are provided from the Ministry for the Environment report (Environment, 2020).

Table 5. Embedded carbon emission factors list

Items	Materials			Energy			Waste
	Concrete	Steel	Timber	Heavy fuel oil	Diesel	Electricity	Construction/ Demolition
Unit	kg	kg	kg	litre	litre	kWh	kg
Carbon emissions ($kgCO_2e/kg$)	0.203	2.85	0.013	3.22	2.69	0.0977	0.14

Carbon emissions of three options and decision making

Following equation 1 above, the carbon emissions of three options are calculated and summarised below in Table 6.

By taking option 1 as an example:
At the new installation stage, the carbon emission is,

$$126000(\text{Concrete quantity}) \times 0.203(\text{Concrete emission factor}) + 54000(\text{Steel quantity}) \times 2.85(\text{Steel emission factor}) + 40(\text{Heavy fuel oil quantity}) \times 3.2(\text{Heavy fuel oil emission factor}) + 10(\text{Diesel quantity}) \times 2.69(\text{Diesel emission factor}) + 108000(\text{Electricity quantity}) \times 0.0977(\text{Electricity emission factor}) = 190185kg\_CO_2$$

At the operation/maintenance stage, the carbon emission is,

$0kg\_CO_2$ Maintenance free assumption as concrete.

At the end of life demolition, the carbon emission is,

$$126000(\text{Concrete quantity}) \times 0.140(\text{Waste construction/demolition emission factor}) + 54000(\text{Steel quantity}) \times 0.14(\text{Waste construction/demolition emission factor}) + 40(\text{Heavy fuel oil quantity}) \times 3.22(\text{Heavy fuel oil emission factor}) + 400(\text{Diesel quantity}) \times 2.69(\text{Diesel emission factor}) + 216000(\text{Electricity quantity}) \times 0.0977(\text{Electricity emission factor}) = 28412kg\_CO_2$$

Total emissions of Option 1,

$$90185 + 0 + 28412 = 218597kg\_CO_2$$

Table 6 shows that Option 3 has the lowest total carbon emissions from its lifecycle among all the options, hence the timber beam option is the preferred by taking carbon emissions as the measure in this case.

The effort to reduce the carbon emissions shall come along with the whole lifecycle of the structures from the decision making, all the way from the start of the asset creation to the end of its service life.

The carbon emission is one of many factors in decision making, while its weight or contribution is to be further discussed.

The proposed framework is illustrated using a simplified example. The parameters used in carbon emissions calculations are to be investigated and updated to suit the specific environment.

It is worth it to set up a programme from the road authority for the standardised carbon emissions assessment. The quantified outcome will aid the decision-making process.

The proposed quantitative carbon emission calculation framework is suitable for:

- Whole of life asset management, for example the asset lifecycle carbon emission control, and

Table 6. Carbon emissions of different options

Options	Carbon emissions of lifecycle stages			Total emissions
	New installation	Operation/maintenance	Demolition	
	(kg)	(kg)	(kg)	(kg)
Option 1	190185	0	28412	218597
Option 2	257410	465	13263	271139
Option 3	2281	457	14476	17213

- Specific stage asset management, for example in choosing a specific preferred option for a new structure, or for a structural rehabilitation.

CONCLUSIONS AND RECOMMENDATIONS

The proposed framework has illustrated how to measure carbon emissions and how it can be used as a decision-making factor quantitatively within the asset management practice.

Auckland Green Drinks events

Auckland Green Drinks is held at Wynyard Pavilion from 5:30 to 7:30 on the first Wednesday of every month (Covid levels allowing). We believe there are many people who are passionate about Auckland and working away in their own little corners on making it greener, more connected, more liveable. We want to connect these keen sustainability people and offer a little incubator for ideas and connections.
Please register at our EventBrite page: https://www.eventbrite.co.nz/e/green-drinks-auckland-tickets-28992115197

abley

Transport + Location Intelligence

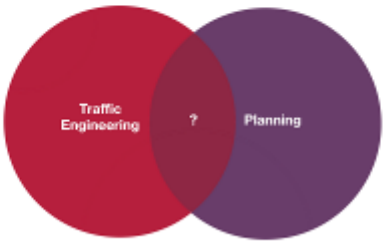
What is Transport Planning?

Which profession's role is it to provide advice on whether Auckland should have a new walking and cycling bridge? Whether a congestion charge is a good idea? Whether a supermarket will cause traffic congestion? Or how long you should be allowed to park on street?

It's not the job of a transport engineer, or a land use planner, or a project manager, or a politician. That's the job of a transport planner. I've been a transport planner for my whole career. Every time I meet someone new, virtually without fail, I have to explain what I do.

Even people who work in transport often struggle to understand that no, we're not engineers, and no, we're not planners either. As an aside, I'm often accused of being a traffic engineer, but in reality, there is no such profession any more, Transport Engineering is the correct term, since 'traffic' is not our only concern. The adjacent graphic shows how a lot of people envisage the industry.

"It's a bit like town planning.....No, I'm not an engineer....Imagine you're building a supermarket."

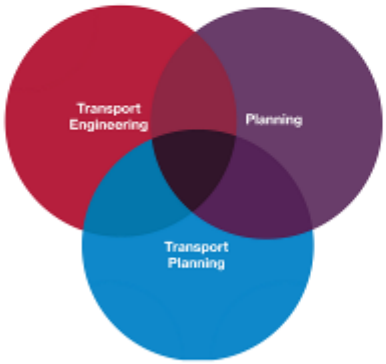


Conventional view of transport and planning

Transport engineering or planning?

Confusion arises because often transport planners do transport engineering, and transport engineers also do transport planning. Both work alongside planners. Transport planning is a distinctly different profession. We generally have not done an engineering or planning degree, and often come from a geography, economics, science, logistics, or academic background.

Some of us even have transport planning specific degrees. Transport planning is not land use planning – even though transport planners often have knowledge of the Resource Management Act and consenting processes and provide advice to planners. Nor is it transport engineering, though often transport planners can, and do provide transport engineering advice, like how wide a cycle path might need to be, or whether a new access location can operate safely. In many countries transport planning precedes engineering inputs to ensure a holistic approach to design.



Broad interrelationship between transport engineering, planning and transport planning

The connection between land use and transport outcomes

I like to describe transport planning as the connection between land use and transport outcomes. Transport planners are the people who do the thinking about what impact a change in land use will have on transport outcomes for people, and conversely, what a change in transport design will have on land use.

How transport planning links transport engineering and land use planning

Here are some examples to help illustrate my point. Firstly, let's look at how land use affects transport outcomes. In Auckland the Terrace Housing and Apartment Building (THAB) zone permits multi-storey apartments. Looking at Auckland's Unitary Plan we see that these zones are clustered around transit nodes like railway stations. The illustration shows the THAB zone in orange clustered around Mount Albert Railway Station.

Land use zoning - Mount Albert Station and surrounds

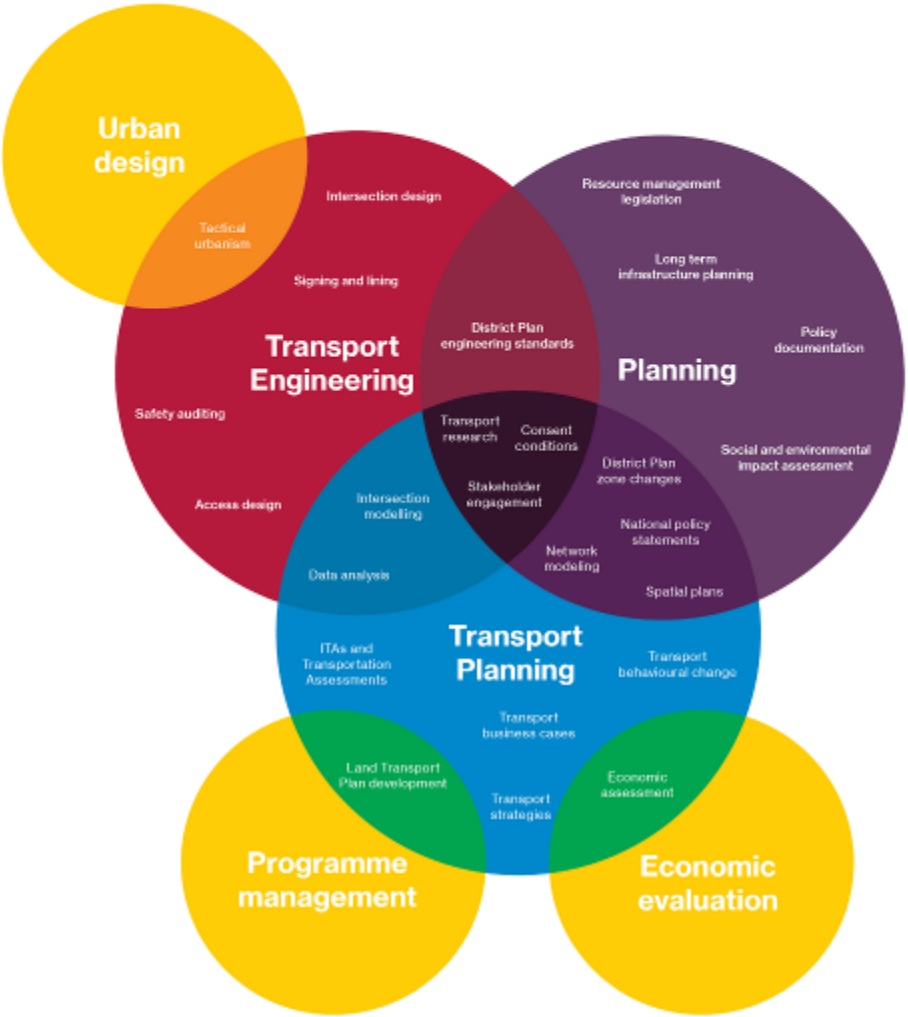
While a high-density development in another location might lead to significant vehicular travel demand, the theory is that those living within walking distance of a transit node have the opportunity to use public transport. These people are therefore less likely to own cars and more likely to walk and cycle or use public transport. Some developers have proposed developments with no parking, in locations such as Mount Albert and Grey Lynn in Auckland. Long term, integrated land use planning can affect demand for public transport, on-street parking or pedestrian crossing facilities.

Conversely, the construction of significant transport infrastructure shapes and connects the built environment. In Wellington a cable car (actually a funicular railway) was constructed in 1902, permitting the development of the suburb of Kelburn, until then a steep uphill walk from the city. In Auckland the construction of the Harbour Bridge in 1959 triggered the development of areas like Glenfield in the 1960s. Until this point the North Shore was mainly farmland. In both cases the significant reduction in travel time is the factor which led to the development of land, although one was a low carbon outcome and the other a high carbon outcome. Of course, the high carbon outcome could have been better if the bridge design had included active travel provision, but that's another story.

In both cases transport planners might prepare public transport strategies, parking management strategies, travel behaviour change strategies or walking and cycling strategies. This is to reinforce positive outcomes for equity, liveability, wellbeing, safety and inclusivity.

abley

Transport + Location Intelligence



What is a transport planning task?

Key tasks of transport planners

Some key tasks of transport planners, land use planners and transport engineers can sit within one, two or all three disciplines. Some common tasks are identified, noting that some aspects of work, like safe systems approaches, zero carbon approach, or inclusivity, apply holistically across our workload. The diagram includes a couple of other disciplines and activities as examples that also overlap with transport planning and engineering tasks.

Some tasks transport planners perform are actually land use planning or transport engineering tasks. For example, I believe that tactical urbanism lies within the remit of transport engineers and urban designers. That's not to say that a transport planner can't contribute to tactical urbanism or provide advice on the design of a pedestrian crossing, in the same way that a farmer can also be a skilled retailer and businessperson.

Transport planning is a separate, distinct profession with representation throughout many organisations. As we are not generally engineers or planners, we are not readily recognised by organisations such as Engineering NZ or the NZ Planning Institute. Future developments in the industry include consideration of professional recognition for transport planners, which we hope will raise our profile and may help encourage people into this profession.

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A Transport Planning Professional qualification for Aotearoa New Zealand

There is a need to understand Te Ao Māori and the Treaty of Waitangi and the relevance for transport

By Gemma Dioni, ViaStrada
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In the last edition of Roundabout I wrote an article as the winner of the best poster category at this year's conference. There is something to be said about planting a seed and watching it grow….

July 23rd will be remembered for great reasons! A meeting of around 25 transport professionals coming together by the wonders of modern technology to start a conversation to create a vision for the future.

Image 1: Teams: Always catching your good side!

For me, it was such an inspiring and engaging conversation. All these fabulous new and existing connections joined in and shared ideas, and were motivated to see something change to acknowledge transport planning professionals. The presentation by Lisa Malde (WSP), Sarah Loynes (Waka Kotahi) and myself took the attendees through a journey about the "why?", the existing approaches worldwide to professional recognition, and why one route in particular may lend itself well to the Aotearoa New Zealand context.

To understand more about what a transport planner is and does, read the article by Jo Draper in this edition. It's a great read.
The Transport Planning Professional (TPP) Qualification from the UK has been designed to "provide professional recognition for transport planners in the same way that Chartered Engineer recognises the highest level of engineering competence". The video meeting attendees were keen to ensure that, whilst an overseas qualification, it needed to work in the New Zealand context. A summary of the discussion from Meeting 1 is shown in Image 2.

As per the requirement from the Transport Planning Society website, candidates for the TPP qualification need to demonstrate an appreciation of a broad range of transport planning procedures and techniques, and a competence to work effectively in their chosen areas of the profession.

It was decided that Meeting 2 would focus more on the competencies, and understanding any gaps or tweaks needed for the competencies used for the assessment.

Image 2: Meeting 1 outcomes

With momentum in full swing, the second meeting was attended by even more organisations (if you don't see your organisation there and want to join in, please contact me). In this discussion, these issues were raised:

- Te Ao Māori and the need for particular reference in relation to Treaty of Waitangi. Requires knowledge of the principles of Kaitiakitanga, Wāhi Tapu, Taonga, Mātauranga, Te Tiriti and their relevance for transport.
- Suggestions on the data competency and specific suggestions around Māori data.
- Covering off a more 'partnering' approach for NZ as, unlike the UK, the present systems (outside of Auckland) rely on a great deal of partnership agreements and multi-party funding arrangements.
- International Association for Public Participation integration and engaging effectively.

And so the journey continues! Next stop, National Transportation Group Strategy Day in September to present the story so far and how we make this happen as a sector. Tune in next time…

Note: Just a big thank you to my Director, Glen Koorey for allowing me some of my work time to develop this cross-sector network and conversation.

Susan Cambridge becomes a Life Member

At a Canterbury/Westcoast Branch event on 8 July Susan Cambridge was awarded Life Membership of the Transportation Group. Below is the award citation as read by Past Chair Jeanette Ward.

I have referred to A Wheel on Each Corner many times over the years. (It is a book documenting the history of the Transportation Group written by Malcolm Douglas).

I have often spotted photographs of groups of men and one lady. One day when I looked closer, I realised it was a lady I remembered seeing around at the Christchurch City Council early in my career. A lady called Susan Cambridge.

Susan was the Road Safety Coordinator at the council, in fact I believe she was the first Road Safety Coordinator in NZ. She led that area and worked closely with all the other coordinators that emerged in NZ.

I have found various presentations that Susan gave over the years while in this role, such as Parents as Role Models and Encouraging walking through drive safety education. I also recently spotted she was a contributor to the Pedestrian Planning and Design Guide.

The earliest mention of Susan in the book was her involvement in the Christchurch cycling Committee in the 1980s. Then in 1994 it is noted that she won the AA Award at the Transportation Group conference with Wayne Osmers and Tony Francis for their paper 'Evaluation of speed trailers in Canterbury'.

Susan's involvement in the running of the Transportation Group started with her being on the National Committee in 1994-1997. In those days the National Committee was regionally based for 3 years, rotating around the country.

When it returned to Canterbury in 2003 she was back on the committee, in fact we also have the Chair of that committee here tonight, Alan Nicholson.

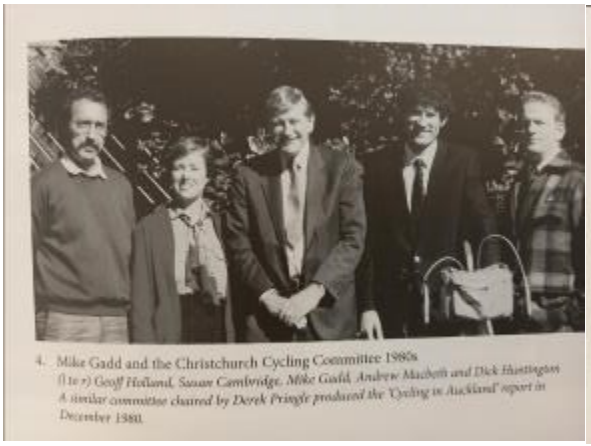
In between these two stints on the national committee, she was on the 2001 Transportation Group Strategic Planning Team which involved people from around the country.

Other pictures of Susan in the book show her with a group of industry legends at Mike Gadd's funeral, then again at the 2006 Transportation Group conference where she was a finalist in the 3M awards.

I consider Susan to be a real pioneer in our industry with regard to both road safety and as a role model for transport ladies.

Susan it is great pleasure that the Transportation Group make you a life member for your contribution to the group, the industry and the community.

Photo: Susan Cambridge surrounded by (from the left) husband Tony Francis, Glen Koorey, Bill Greenwood, Jeff Holland Alan Nicholson



4. Mike Gadd and the Christchurch Cycling Committee 1980s
(l to r) Geoff Holland, Susan Cambridge, Mike Gadd, Andrew Macbeth and Dick Huntington
A similar committee chaired by Derek Pringle produced the 'Cycling in Auckland' report in December 1980.

2. 3M Contenders at the Arrowtown Hall Dinner
Alan Nicholson (and from l to r), Andrew Macbeth, Mitch Tse, Axel Wilke, Colin Brodie (Award winner 2006), Alan Parker, Susan Cambridge

TWO KEY EVENTS FOR NEW ZEALAND ENGINEERS

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- Auckland Harbour Bridge emergency repairs 2020
- Case study 1: Te Ahu a Turanga: Manawatu Tararua Highway

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- Materials' showcase: Durability of new materials | Things to consider
- Asset owners' panel: Insights into asset maintenance
- Protecting New Zealand's steel highway structures

Councils urgently need to forecast road network CO_2

*By **Benjamin Walch***
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Road transport CO_2 emissions represent 43% of Aotearoa's gross CO_2 emissions (2018 data from MoT, 2021) and 44% of Auckland's (Auckland Council, 2016 data) total greenhouse gas emissions. Addressing road transport emissions is therefore one of the big levers to reduce NZ's greenhouse gas emissions and Road Controlling Authorities (RCAs) play an important role in this regard.

National initiatives

Waka Kotahi New Zealand Transport Agency has developed a national vehicle emission dataset" (NVED). Initially a spreadsheet, it was progressed to a GIS based Vehicle Emission Mapping Tool (VEMT) illustrated in Figure 1 (Waka Kotahi, 2021). This tool has been through successive refinements allowing estimates of pollutants to be calculated including carbon dioxide (CO_2) based on factors such as traffic volume, speed, fleet profile, gradient, tyre and brake wear, and average regional temperatures, for all public roads in NZ (Jacobs, 2018).

Figure 1: Snapshot of CO2 emissions on Auckland's road network from the Vehicle Emissions Mapping Tool (Waka Kotahi, accessed 2021)

Queries can be run on the dataset to summarise emissions on all roads controlled by an RCA, generating an estimate of road network CO_2 emissions for an entire city or district. However, an independent review mentioned that the "model is constrained at the regional level by a lack of good quality data from territorial and local authorities" (Aecom, 2020).

Current work on the tool is improving its capability to test scenarios and their impact on CO_2 emissions. This is useful in assessing the CO_2 emission impact of changes in traffic volumes or speeds, or the evolution of the fleet profile. In terms of Climate Change planning however, the VEMT's shortcoming is that it is not explicitly set up for long term forecasting yet.

Council-led initiatives

Historically, some Councils have measured various types of emissions through Air Emission Inventories. These inventories had more of a public health lens rather than a climate change lens and therefore mainly focused on emissions with potential adverse health impacts such as suspended particles (PM10), carbon monoxide (CO), sulphur oxides (SOx), and nitrogen oxides (NOx) rather than greenhouse gases like CO_2. When CO_2 emissions were estimated as part of the Air Emission Inventories, the focus was on urban areas (Nelson, Tokoroa & Morrinsville, Blenheim) rather than the road network or the whole district (Environet 2014 & 2017, Waikato Regional Council, 2016).

In 2020, Queenstown Lakes District Council (QLDC) sought to find out the amount of carbon emissions generated by vehicles travelling on their entire road network in the past year (2018/19) and commissioned Abley to calculate estimates. This then enabled annual road transport emissions to be forecast across the district up to 2048.

Using Vehicle Kilometres Travelled (VKT) data extracted from the Queenstown-Lakes Transportation Model alongside Ministry of Transport (MoT) fleet composition projections and Ministry for the Environment (MfE) emission factors, Abley modelled the impact of increasing VKT (projected by the traffic model) as well as changes in the fleet composition (projected by MoT) over the years.

It was estimated that road transport emissions in the district would peak in 2029/2030 (see Figure 2) under a base scenario, an important data point for Council's climate mitigation policies.
Overall, when accounting for the transport programme intended to be delivered through ongoing transport business cases, total emissions on QLDC's road network were projected to drop by 29% between 2018 and 2048.

While this approach is less detailed than the model developed by Waka Kotahi, it delivered relatively accurate results within a short turnaround: for the year 2019, Abley calculations found road transport CO_2 emissions in the Queenstown-Lakes District to be just 4% higher than the National Vehicle Emissions Dataset figure

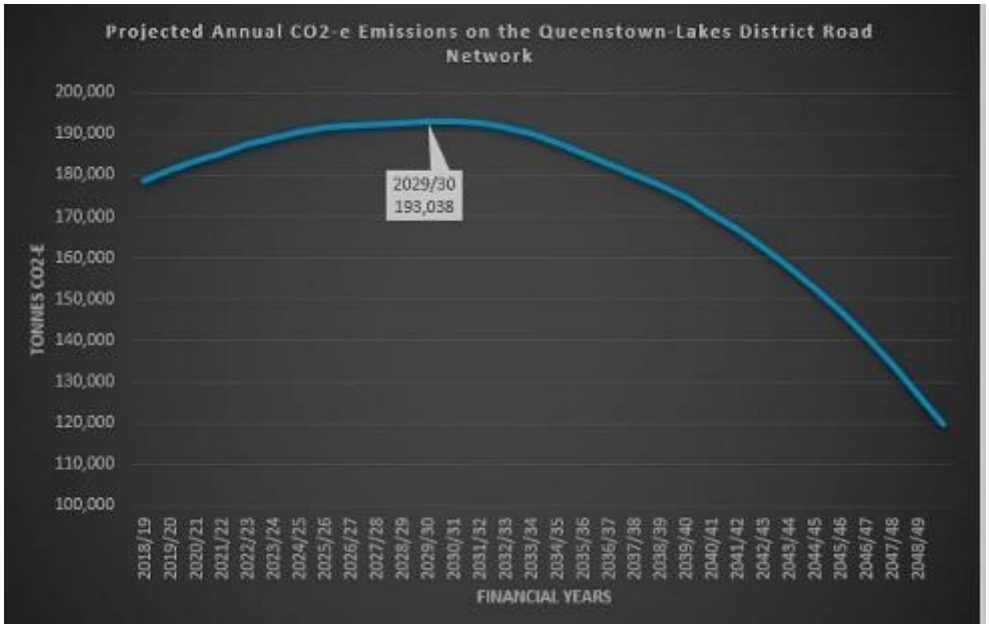


Figure 2: Projected CO2-e Emissions on the QLDC Road Network (QLDC/Abley)

(181 kilo tonnes versus 174 kilo tonnes). Additionally, emissions were forecast to 2048, which isn't currently done with the NVED.

This work shows that Councils do not need to wait for national tools to support emissions forecasting: they can start planning their emissions reduction pathways now and perform a reality check on their planned programmes.

Risks of steering local transport policies without road network CO_2 data

So how important is it for RCAs to measure and forecast road network CO_2? The following questions, which every RCA should look to answer urgently, are a good place to start:

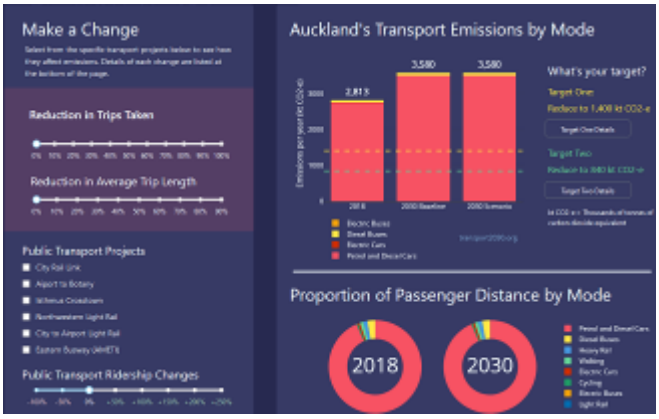
- If not measuring nor forecasting CO_2 emissions on our road network, how can we steer their reduction?
- Are we doing enough to reduce emissions on our road network in line with national climate targets?
- By how much are we underachieving on our carbon reduction?
- Which policies and programmes will be sufficient to get us back on track?
- When do these policies and programmes need to take effect for our road network CO_2 emissions to drop fast enough?

In Auckland, the 1 point 5 project (https://1point5.org.nz) has presented policy makers with a reality check. Research undertaken by the group suggests near complete decarbonisation of road transport by 2030 is a necessity to achieve Council's ambition of halving all emissions by 2030, as other sectors will not be able to reduce their greenhouse gas emissions by as much. Led by Paul Winton and supported by MR Cagney, the team developed the https://transport2030.org interactive dashboard which allows for testing a range of scenarios in a simple interface.

The dashboard below shows which levers have the greatest impact on forecast 2030 transport emissions and which levers are less significant.

The main finding from this tool is that Public Transport and cycling investment in Auckland are unlikely to meet emission reduction targets in isolation, even if investment in these modes is significantly increased. Policies that would be the most effective at reducing transport emissions are policies that would directly reduce VKT as an outcome.

Councils do not need to wait for national tools to support emissions forecasting: they can start planning their emissions reduction pathways now and perform a reality check on their planned programmes



Snapshot of the Transport 2030 dashboard website (https://transport2030.org).

Using the national emissions budgets recommended by the Climate Change Commission, it is possible to derive carbon budgets for each territorial authority and provide a steer on how much reduction needs to be achieved

Territorial Authority	Share of national road transport CO2
Auckland	27.0%
Christchurch City	6.2%
Waikato District	3.5%
Wellington City	2.7%
Tauranga City	2.4%
Hamilton City	2.2%
Whangarei District	2.1%
Selwyn District	2.0%
Dunedin City	1.8%
Hastings District	1.8%
Taupo District	1.7%
Western Bay of Plenty District	1.6%
Southland District	1.6%
Rotorua District	1.5%
Far North District	1.5%
Waipa District	1.5%
Queenstown-Lakes District	1.5%
Tasman District	1.4%

Breakdown of road transport carbon emissions by Territorial Authority (largest shares only)

Following this work, the importance of performing reality checks using sound estimates of emissions was confirmed by the draft Regional Land Transport Plan for Auckland which was consulted on early 2021: it stated that "the region's total emissions are expected to increase by six percent between 2016 and 2031" (Auckland Transport).

This is fundamentally incompatible with the previously announced target of reducing transport emissions in Auckland by 64% between 2016 and 2030 (Auckland's Climate Plan).

This example shows that Councils run the risk of making decisions that are not the most effective in reducing road transport emissions unless they can reliably measure and forecast emissions on their road network and be transparent about this data.

Similarly, realising that road transport emissions are only projected to peak in 2029/2030 (as was the case in Abley's forecast for the Queenstown-Lakes district), can provide decision makers with a renewed sense of urgency more aligned with the effort required for the country to be carbon neutral by 2050.

Carbon Budgeting

With central government committing NZ to no more than 1.5 degrees warming and becoming carbon neutral by 2050, RCAs need to understand the role they will need to play in achieving climate targets.

With the Climate Change Commission's advice, a new tool for steering transport policy is being introduced called "carbon budgeting". This concept is based on the idea that a certain amount of greenhouse gas emissions (the emissions budget) will induce the maximum tolerable amount of global warming. The budget being a set amount (as it does not renew every year), the more we overspend in the present, the more we will have to save in the future. This is a useful tool to hold policy makers accountable and provide a science-based benchmark for policy ambition.

Using the national emissions budgets recommended by the Climate Change Commission, it is possible to derive carbon budgets for each territorial authority and provide a steer on how much reduction needs to be achieved by each RCA.

At a high level, this trickle-down exercise is straightforward. It could be used and refined by Central Government to translate the Commission's final report into tangible policy targets. Three steps are required:

1. National Vehicle Emissions Database 2019 data obtained from Waka Kotahi (left) allows estimating the share of total road transport CO_2 being emitted in each Territorial Authority in the country.

   While Auckland is an outlier, the following table teaches us that emissions are very distributed across the territory, reinforcing the responsibility of Territorial Authorities and Waka Kotahi as RCAs.

2. The Climate Change Commission's proposed budgets (snapshot below) are high level but we know that road transport accounts for 43% of gross CO_2 emissions nationwide (MoT, 2018 data). We can therefore estimate an annual road transport CO_2 emissions budget for Aotearoa.

Based on the Commission's data and the known share of road transport emissions in total CO_2 emissions, national road transport CO_2 emissions budgets are 16.125 $MtCO_2e$ for the year 2019 and then:

- 14.62 $MtCO_2e$/year in the first 4 years (2022-2025, Budget 1),
- 12.814 $MtCO_2e$/year in the next 5 years (2026-2030, Budget 2),
- 10.363 $MtCO_2e$/year in Budget 3 (2031-2035). (Climate Change Commission, 2021, p.79)

Recommendation 2

Break down of emissions budgets

We recommend that the Government implement policies that will meet emissions budgets based on the balance of emissions and removals as outlined in the table below.

	Emissions budget 1 (2022 - 2025)	Emissions budget 2 (2026 - 2030)	Emissions budget 3 (2031 - 2035)
Total net emissions budget *Annual average*	278 $MtCO_2e$ 69.5 $MtCO_2e$/yr	298 $MtCO_2e$ 59.7 $MtCO_2e$/yr	240 $MtCO_2e$ 47.9 $MtCO_2e$/yr
REMOVALS Forestry carbon removals *Annual average*	26 $MtCO_2e$ 6.6 $MtCO_2e$/yr	50 $MtCO_2e$ 10.0 $MtCO_2e$/yr	69 $MtCO_2e$ 13.8 $MtCO_2e$/yr
EMISSIONS - LONG-LIVED GASES Gross long-lived gases	178 $MtCO_2e$	199 $MtCO_2e$	166 $MtCO_2e$
Carbon dioxide	136 $MtCO_2e$	149 $MtCO_2e$	121 $MtCO_2e$
Nitrous oxide	32 $MtCO_2e$	38 $MtCO_2e$	36 $MtCO_2e$
F-gases	7 $MtCO_2e$	8 $MtCO_2e$	6 $MtCO_2e$
Non-biogenic methane	3 $MtCO_2e$	4 $MtCO_2e$	3 $MtCO_2e$
EMISSIONS - BIOGENIC METHANE Gross biogenic methane*	5.04 $MtCH_4$	5.99 $MtCH_4$	5.70 $MtCH_4$

Source: Recommended emissions budgets, Climate Change Commission first advice to government (final), p.78.

3. Finally, we know the breakdown of road transport emissions between territorial authorities so we can obtain an annual road transport emissions budget for every Territorial Authority in the country (extract below). This provides a benchmark for every RCA to ensure that their programmes and policies are aligned with or converging towards targets.

Territorial Authority	2019 budget (Mt) *MtCO2e/year*	Budget 1 (2022-2025) *MtCO2e/year*	Budget 2 (2026-2030) *MtCO2e/year*	Budget 3 (2031-2035) *MtCO2e/year*
Auckland	4.362	3.955	3.466	2.803
Christchurch City	1.001	0.907	0.795	0.643
Waikato District	0.558	0.506	0.443	0.359
Wellington City	0.442	0.401	0.351	0.284
Tauranga City	0.387	0.351	0.307	0.248
Hamilton City	0.362	0.328	0.287	0.232
Whangarei District	0.343	0.311	0.273	0.220
Selwyn District	0.324	0.294	0.257	0.208
Dunedin City	0.292	0.265	0.232	0.188

(Note: table showing the largest budgets only. Get in touch to obtain the full table with all Territorial Authorities.)

Conclusion

The practice of estimating and forecasting CO_2 emissions due to land transport activity in New Zealand is not widespread. This means that RCAs are largely operating without a steer on road network emission reduction. This gap needs to be urgently addressed.

Road network CO_2 emissions are an essential piece of information to guide RCAs in their decision-making, so estimating and forecasting them should become routine for all RCAs. However, as the data is still rarely studied by RCAs, they run the risk of investing significant resources in programmes that are not the most effective in reducing road transport emissions. The likely consequence is that transport schemes are funded which are inconsistent with national and local climate change targets. The Climate Change Commission's advice provides an opportunity to adopt carbon budgeting as a science-based tool to steer local transport policies and hold decision-makers to account.

Transportation practitioners have a crucial role to play in requesting road transport CO_2 forecasts and challenging their absence from the policy-making process.

Calculate journey times and costs of travel in the Roman Empire

Spanning one-ninth of the earth's circumference across three continents, the Roman Empire ruled a quarter of humanity through complex networks of political power, military domination and economic exchange. These extensive connections were sustained by premodern transportation and communication technologies that relied on energy generated by human and animal bodies, winds, and currents.

Conventional maps that represent this world as it appears from space signally fail to capture the severe environmental constraints that governed the flows of people, goods and information. Cost, rather than distance, is the principal determinant of connectivity.

For the first time, ORBIS allows us to express Roman communication costs in terms of both time and expense. By simulating movement along the principal routes of the Roman road network, the main navigable rivers, and hundreds of sea routes in the Mediterranean, Black Sea and coastal Atlantic, this interactive model reconstructs the duration and financial cost of travel in antiquity.

Check it out at ORBIS: The Stanford Geospatial Network Model of the Roman World

City Streets package to provide more ways for Wellingtonians to get around

This will contribute to overall improvements in how our streets are used, including people who still need to use a vehicle for their journeys .

The City Streets package to be considered by Wellington City Council, Greater Wellington Regional Council and Waka Kotahi over coming weeks will support the wider Let's Get Wellington Moving programme by improving connections for people on buses, bikes or walking between the central city and suburban centres.

The package proposes better bus priority, improved walking, cycling and public facilities. It incorporates earlier work from the 2019 Bus Priority Action Plan and will help complete the city's cycleway network.

"City Streets will be a $350 million ten-year investment in public transport, walking, cycling, and street improvements. It will help prepare Wellington for future growth, make our city a better place to be, and provide options for people to get around without using their car.

"It will also help us reduce carbon emissions as we work towards the goal of becoming a net zero carbon capital by 2050," says Let's Get Wellington Moving Acting Programme Director, David Dunlop.

The Let's Get Wellington Moving vision for Wellington is a great harbour city, accessible to all, with attractive places, shared streets, and efficient local and regional journeys. Mr Dunlop says for this vision to become a reality, we need to move more people with fewer vehicles.

"This is an incredible opportunity for Wellington as we look to the future. City Streets will take into account the major changes being planned by Let's Get Wellington Moving for our city, such as Mass Rapid Transit and improvements at the Basin Reserve and through Mt Victoria.

"By improving the safety and efficiency of public transport, walking and cycling, the City Streets Programme will encourage more people to use these modes to get around Wellington. In turn, this will contribute to overall improvements in how our streets are used, including people who still need to use a vehicle for their journeys through and to the city," says Mr Dunlop

Approval of the City Streets package will unlock funding to begin more detailed investigation along nineteen recommended corridors for improvement, incorporating better walking, cycling and public transport options to improve connections between the city and suburbs.

The cycling improvements will be fully integrated with the significant investment in developing the cycling network that Wellington City Council has committed to in the Long-term Plan.

"There is a huge amount of investigation and design work to be done before individual projects are defined and commissioned. Hearing from local communities and people will be a vital part of that work," says Mr Dunlop.

The City Streets package will be funded by Let's Get Wellington Moving funding partners and divided into multiple stages over ten years, with the first stage taking three years to complete.

More information can be found here.

Auckland to get a new rail operator

Auckland will have a new passenger rail operator from next year.

Auckland Transport recently announced the result of an international tender for the City's rail services, worth around $130 million a year. The contract has an eight-year initial term.

The successful operator is Auckland One Rail (AOR); a joint venture comprising ComfortDelGro Transit Pte Ltd (CDGT) and UGL Rail Pty Ltd (UGL Rail) in a 50:50 equity relationship.
AOR brings the expertise of two world class transport organisations.

CDGT's parent, CDG, is one of the world's largest multi-modal passenger transport providers, with a footprint in seven countries, more than 24,000 employees and annual turnover in 2020 of NZ$3.4 billion.

CDG, through its subsidiary SBS Transit, is the operator and maintainer of two Singapore mass rapid transit lines and a light rail system.
UGL Rail's parent, UGL, is Australia's largest supplier of outsourced rail asset management and rolling stock maintenance services, with a fleet of more than 2,000 rail vehicles across its Australian rolling stock maintenance contracts.

UGL is also consortium partner in Metro Trains Melbourne, Metro Trains Sydney, Canberra light rail and the operator of the Adelaide light rail system.
The unsuccessful tenderer was Aka Tangata Ltd (ATL); a consortium comprising Transdev NZ Ltd, John Holland NZ Ltd and CAF NZ Ltd.

The existing Auckland passenger rail contract has been in place since 2004 and, following several extensions, expires in March 2022.

AT's chair Adrienne Young -Cooper says the review of the current way of delivering rail services provided an opportunity to change the delivery model to better integrate all aspects of operations, with an eye on $7 billion of investment that is being made in rail with the construction of the City Rail Link opening in 2024, electrification of the rail line between Papakura and Pukekohe, and the purchase of additional electric trains over the next few years.

As a result, the new contract will see AOR having responsibility for not only train operations but also electric train maintenance, station operations and maintenance, safety, and security.

"The prime driver for moving to a more vertically integrated model is to reduce organisational interfaces and to improve customer and safety outcomes," she says. "While cost savings were not the primary outcome sought, the pricing received through this very competitive procurement process has resulted in savings over current costs."

Mrs Young-Cooper adds that the transaction has been structured so that the incoming operator takes over the existing Transdev Auckland operating company and all of its staff, ensuring that the Transdev Auckland staff remain on their existing terms and conditions of employment.

At this stage AT will continue to employ transport officers to manage fare evasion.

AOR will also establish an additional rolling stock maintenance facility for train overhauls in South Auckland with targeted employment of Māori and Pasifika into trades and engineering apprenticeships. This complements the existing facility at Wiri.

The contract award is part of AT's ongoing focus to continue the rapid growth in Aucklanders using the region's rail services, which has grown from just over 2 million passenger boardings per annum in 2000 to over 22 million by 2020, a 10-fold increase.

"This new rail franchise contract represents a significant investment for Auckland and Aucklanders," says Mrs Young-Cooper. "The robust procurement process ensured AT was able to secure a competitive contract, despite the effects of the global pandemic on the international rail sector.

"Auckland One Rail will have a critical role in driving the customer experience forward and bringing innovation to grow the number of people who use trains to move around."

AT also acknowledges the work of Transdev Auckland Ltd who has been the operator of rail services in Auckland since 2004.

The review of the current way of delivering rail services provided an opportunity to change the delivery model to better integrate all aspects of operations, with an eye on $7 billion of investment that is being made in rail

The Failure Page


COMMON HOUSEHOLD
BISCUITS & SLICES
OF NEW ZEALAND
GINGER CRUNCH
LOUISE SLICE
SQUIGGLE
PINK WAFER
AFGHAN
GINGERNUT
PEPPERMINT SLICE
SHORTBREAD
BELGIUM BISCUIT
RAISIN BISCUIT
MELTING MOMENT
SULTANA PASTY
MARSHMALLOW SLICE
CARAMEL SLICE
CAMEO CREME
LOLLY CAKE
MALLOWPUFF
PEANUT BROWNIE
HUNDREDS & THOUSANDS
SHREWSBURY
ANZAC BISCUIT
illustrated by Giselle Clarkson

Green Tracking of Light Rail in Auckland

Image: Green tracks in Barcelona, Spain (left) and Grenoble, France (right)

Ed Clayton—Republished from Greater Auckland blog

While this post concerns how to develop a transport network that improves water quality, to do this first we need to look at the upcoming water reforms and why reliance on cars and e-vehicles is incompatible with ensuring clean freshwater for future generations.

Aotearoa New Zealand has a new national direction governing water management with the introduction of the Essential Freshwater reforms. This demands immediate improvement to our freshwater systems and the need to bring waterways to a healthy state within a generation.

Te Mana o te Wai is the central concept of this and sets out the directions councils need to take to improve waterways. Key to this are the principles of governance and stewardship, where those with authority must prioritize (improving and enhancing where required) the health of waterways now and into the future to ensure the needs of future generations are sustained.

To give effect to Te Mana o te Wai councils must apply the hierarchies of obligation, being the following:

- the health and well-being of water;
- the health needs of people; and
- the social, economic and cultural well-being of people and communities.

Following such directions, it can be reasonably interpreted that councils should take steps to ensure that infrastructure supports Te Mana o te Wai. For transport this means building infrastructure that firstly has low pollutant generation and secondly can actively treat pollutant loads through sequestering contaminants within its structure, ensuring any discharged water is filtered and cleaned before entering the receiving environment.

But our current transport paradigm is inherently polluting. Centering cars and private vehicles in our urban spaces creates swathes of impervious surfaces. This results in "Urban Stream Syndrome", where paved areas create faster runoff, leading to streams that have higher flood peaks and more erosive power, transport more pollutants and sediment and have fewer species and less complex ecosystems. Compounding this is that the more we drive not only do we require more impervious surfaces to drive on, we increase the number of tyres. And tyres are major sources of heavy metals and microplastics.

Tyres are 1-2% zinc oxide by weight, added during vulcanization to make tyres harder wearing and longer lasting. In Auckland zinc is a major contaminant in our marine receiving environments, where too much zinc creates toxic conditions for the little critters that are integral parts of the food web. And tyres also produce microplastics from wear and tear on road surfaces with it being estimated that 10% of all microplastics in the world's oceans are directly sourced from tyre wear.

None of the above is new. Auckland Council recognizes that roads carrying more than 10,000 vehicles per day are high contaminant generating activities. To mitigate this, such roads should have treatment devices within the corridor that can do a mix of reducing pollution and runoff.

Yet retrofitting existing roads is challenging because these treatments devices generally take up more room than is available without a drastic reshaping of the corridor. And changing our vehicle fleet from ICE cars to electric vehicles will not address tyre wear either.

Knowing that we need to improve our waterways and knowing that cars create toxic freshwater environments leads to incompatible outcomes. The requirements of Te Mana o te Wai legislation will place responsibilities on local government that creates conflict with building roads as normal. We need to ask the question "What would urban transport look like if the fundamental requirement was a net-gain in water quality?"

We may have an answer if we can build a light rail network that is integrated with engineered swales and biofiltration devices. Overseas, the use of "lawn tracking" in light rails is extensive in Europe and implemented in a

"What would urban transport look like if the fundamental requirement was a net gain in water quality?"

range of other countries including China, the U.S.A and Australia. These tracks incorporate grasses and groundcover plants over infilled soil.

Often the only visible parts of the light rail network will be the rails themselves and the overhead wires. Such designs have important benefits. Compared to a standard concrete light rail surface, they reduce the noise associated with light rail vehicle movement, lower urban heat island effects and have lower embedded emissions as there is less concrete used in construction.

They improve air quality through helping filter airborne contaminants and help improve community wellbeing through increased visual green space. And most importantly for this discussion, they allow surface water to soak in, thereby removing contaminants and slowing stormwater runoff with studies showing up to 90% of rain falling within the rail corridor soaking in and being used by the plants. Yet these tracks are not designed with water quality outcomes as a priority. Usually, lawn tracks are built to delineate the light rail lines, stop cars from using them and provide aesthetic quality to local areas.

While the final alignment of Auckland light rail is yet to be decided, it is likely to go via either Sandringham Road or Dominion Road in the central isthmus before heading to Onehunga and then on to Mangere. This alignment will likely be adjacent to roads carrying between 15,000 and 25,000 vpd, all classified as high contaminant generating activities.

In the isthmus, some of it overlies fractured basalt zones where stormwater is directed to soakage (and then to aquifers) or combined stormwater/sewer networks. These soakage systems feed the Meola and Motions Creeks catchments that in turn discharge to coastal areas under permanent swimming bans.

Other areas have more standard stormwater systems that discharge directly to urban streams. Treatment for these roads is sporadic at best with gross pollutant traps only at a select few locations (usually not good enough to filter out microplastics and particulate bound contaminants such as zinc).

Possible raingarden design, Jellicoe St Auckland (left) and a vegetated swale example from Seattle (right)

Making a conscious decision to put water quality outcomes first means that we could build light rail with swales and raingardens that can treat all of the runoff from adjacent road surfaces. How this might look is similar to the photos of overseas examples but with specific engineered soils designed to infiltrate and treat contaminants. Cross sections would be altered to drain water from road surfaces to a centre running light rail line.

Effective treatment trains would consist of vegetated swales for pretreatment before discharge to raingardens, removing sediment in swales and ensuring efficient infiltration in the raingardens. Native plants could be used to provide a rough surface texture that slows water movement, keeping water visible at the surface when it rains and providing food for bees and pollinators when dry. In areas where road stormwater discharges to streams and marine areas, we could remove contaminants generated from tyres.

Where possible, clean water would soak to the aquifers below in much the same way as it does now, but at slower and more manageable rates. In places where the corridor has a wide margin, such as the section between Mt Roskill and Onehunga running adjacent to the motorway, trees could be planted to create a linear forest. We know that climate change is likely to deliver more extreme heat events that impact on rail systems, trees can create a more consistent microclimate that shade and protect the infrastructure.

As an example, to treat the 4.9 km stretch of Dominion Road between the two proposed stations at Mt Roskill Junction and Dominion Road Junction (see the proposed Dominion Road route map), only 1500 m of swales and 150 m of raingardens would be needed (assuming treatment efficiencies as described in Auckland Council's GD01 document). And these would not be needed in a continuous stretch, rather short sections of treatment could be targeted at suitable areas with enough hard space in between for stations, vehicle crossings and intersections (although let's face it, more is better!).

We could build such a system to tie into a revitalized Queen Street that has been returned to the Waihorotiu, making a green and blue space that, if extended to additional parts of the proposed light rail line, created a stunning biophilic linear transport network from the city center to Mangere.

So how can we make this happen? Currently the Auckland Light Rail Establishment Unit is beginning to consult with the public. What this entails is not clear as well-deserved criticism has emphasized already. We may only have 6-months to seize this opportunity to create a sustainable light rail network that can achieve Te Mana o te Wai.

This could be the example we need to put our freshwater systems first when we plan infrastructure. And it must be part of an urban design process that addresses not just the light rail line but the adjacent land use too. At a personal level these ideas need to be communicated as widely as possible so spread and share this post on social media. Tāmaki Makarau deserves great public transport. Let's make it happen.

Knowing that we need to improve our waterways and knowing that cars create toxic freshwater environments leads to incompatible outcomes

5000 free fast electric car chargers to be built around Australia

What we find in the Australian market is that people do want to purchase electric vehicles, but they don't have the infrastructure in place in order to support their purchase.

Australian electric car charging network JOLT plans to install 5000 free fast chargers across capital cities after Blackrock, the world's largest asset manager, bought a stake in the company and pledged an initial $100 million towards building the network.

Drivers using JOLT chargers would receive 7 kWh – equivalent to about 45 kilometres of driving – for free, and be charged for power drawn after that. JOLT would also make money from advertising sold on its charging stations.

All the power it sells will be renewable and the installation of the charging points is expected to begin in Sydney in September. JOLT operates charging stations in Adelaide.

Charlie Reid, a managing director of BlackRock's Global Renewable Power team, said for the world to reach net zero emissions by 2050, the last internal combustion car engine would need to be sold by 2035. He said this would happen globally and in Australia, whatever government policies were in place, as Australia imported its vehicles.

"With the world heading towards fully electric or hydrogen fleets, Australia will follow suit and will follow quickly," he said.

"What we find in the Australian market is that people do want to purchase electric vehicles, but they don't have the infrastructure in place in order to support their purchase. And that's part of the rationale for our investment in JOLT."

Mr Reid said the global electric car fleet would have to increase from about 12 million to more than 200 million by 2030.

"That creates a $7 trillion investment opportunity and a $1 trillion investment opportunity in infrastructure to support those vehicles," he said.

JOLT chief executive Doug McNamee said the investment showed that, after a slow start, Australia's electric car market had turned a corner.

He said the total cost of ownership of electric cars was lower than for comparable internal combustion cars, and they would soon also be cheaper to buy.

Tesla had demonstrated electric cars could be attractive to consumers on merit, and now that major car manufacturers were dedicating all of their research and development to the technology, they would continue to improve.

According to a new report by the Electric Vehicle Council, which represents the industry in Australia, in the first half of 2021, 8688 electric cars were sold in Australia, which was more than was sold in all of 2020.

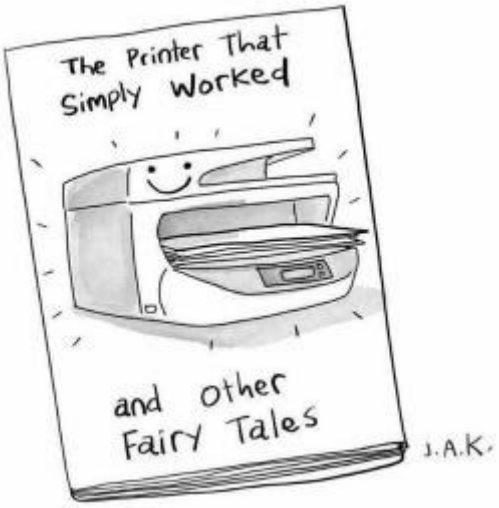
The council's chief executive Behyad Jafari said this was about 1.5 per cent of new cars sold, compared with a market share of about 10 to 15 per cent in similar markets overseas. He described the figure as low but growing rapidly.

The growth now appeared to be locked in, particularly due to new policies announced by the NSW government to encourage the use of the technology, he said.

Source: SMH

In England , "booster shot" is spelled "borchestershire shot"

By replacing your morning coffee with green tea, you can lose up to 87% of what little joy you still have left in your life.



London council worker's bus odyssey

I started to lose grip on things on the Number 8 from Manchester to Bolton

When Jo Kibble, a 39-year-old council employee from Greenwich, set out to travel as far as he could from London in one day only using public bus routes it was supposed to be a personal project. But he ended up sparking a Twitter storm, causing a debate about how to build a fairer country along the way.

"One day I decided to see if it worked in person and not just on paper," Mr Kibble said.

The bus journey would take him through some of the "fly-over counties" he'd never experienced.

"Northampton, Leicester, Aylesbury - the unknown quantities between the big metropolis. Places we'd normally travel through on a train at 130mph."

At 03.00 BST on Friday he boarded his first bus, the N9 to Heathrow - "London's fourth-longest route".

From there he travelled through Slough before pivoting north through the Chiltern Hills.

Preston bus station

While travelling he said he discovered there was a "large fan following of Preston Bus Station".

"People sent me messages telling me I needed to go and visit Preston Bus Station. Luckily it was already on the route.

"It is a remarkable piece of architecture; seeing that first hand was surprisingly moving in a way.

Another highlight was travelling through the Peak District on the TP2 service, Mr Kibble said.

"Derby to Buxton is absolutely stunningly beautiful; gorgeous villages, lovely streams and hills and sheep.

"It is classic tourist country but happens to be on a very good, very fast public transport link."

Mr Kibble's planning, as intricate and precise as a well-played game of chess, was nearly derailed once he left Northampton.

"I was on a seriously delayed bus. The X7 from Northampton to Leicester got delayed due to roadworks and attempted fare dodgers.

"The bus driver also stopped to speak fluent Italian to some tourists struggling to buy a ticket, which was frankly incredible public service."

Across a whole day of travelling this led to the only missed connection, which, luckily, was into a very frequent bus route.

At 00.29 on Saturday Mr Kibble arrived at Morecambe Bus Station, six minutes early.

The 260-mile journey had cost him £56.95 - roughly £16 more than the cost of the train journey home.

The trip also provided "an interesting microcosm of a day", Mr Kibble said.

"Seeing your late-night revellers in London, then people starting early shifts at Heathrow, then on to a normal commuting route through Milton Keynes.

"I got to Northampton and Leicester around the time older people's bus passes become valid, which was a very different crowd, and then on to students pub-crawling through Greater Manchester.

"I now know too much about the sex lives of some Lancaster University students and the tall tales some people tell about their batting prowess."

Despite spending 21 hours and 24 minutes travelling on buses, Mr Kibble says he never "went mad".

"I started to lose grip on things on the Number 8 from Manchester to Bolton.

"It was mile after mile of suburban dual carriageways and towns merging into one another, some of them unusual names like Irlams o' th' Height.

"I started to get tunnel vision on never-ending roads. But I managed to snap out of it with a quick stop and a walk around Bolton."

Frequent toilet breaks and walking around town centres while waiting for connecting bus routes kept him going.

He also singled out Aylesbury Bus Station as "one of the most depressing places on earth".

The station, at the bottom of a multi-storey car park, is "a concrete bunker full of diesel fumes and awful toilets", he said.

Source: BBC

Aylesbury bus station

Infrastructure Victoria abandons contentious East West Link

The state's independent infrastructure adviser has gone cool on the merits of the East West Link, a controversial road project still backed by the Victorian opposition and the Morrison government.

The project was dumped by Premier Daniel Andrews but the federal government has refused to allow the $4 billion it promised for the link to be spent on any other Victorian project.

Victoria spends $15.5 billion a year on new building projects and will now have most of the infrastructure it needs by 2051. The advisory body wants the government to cease continually building new projects and instead maintain and maximise the benefits of what the state already has.

However, due to pressure on the rail network, instead of East West Link, Infrastructure Victoria has favoured two underground rail projects in the city and another road and rail corridor connecting Melbourne's outer suburban suburbs in its 30-year strategy released recently.

A brief dip in population growth wrought by the COVID-19 pandemic offers some reprieve to the city's roads, trains and key services following a decade of rapid population growth that led to chronic congestion and shortfalls in housing and jobs.

But population growth will return to pre-pandemic levels by 2024-25 with the state's infrastructure-poor outer areas to take 40 per cent of the increase, creating more pressure for new and better rail lines feeding into the city.

On the backburner is the East West Link, with the advisory body declaring the case for the cross-city road connection "less compelling" than it was under the agency's earlier, 2016 strategy.

Mr Andrews ripped up contracts signed by the Napthine government for the project linking the Eastern Freeway and CityLink in 2015, describing it as a "dog of a project" that didn't stack up. It cost more than $1.1 billion.

Modelling of the road's eastern section shows it would make very little difference to the traffic volumes on Hoddle Street, Nicholson Street, Lygon Street and other north-south roads used to connect from Alexandra Parade into inner Melbourne.

There is no "immediate need" for the East West Link due to other major projects being built, including the West Gate Tunnel, which serves the function of the East West Link's western section, the advisory body found.

The benefit-cost ratio of the project estimated to cost between $9.1 billion and $13 billion is very low at 0.5, meaning 50 cents would be returned for every $1 spent on the project — a disastrous outcome for a multibillion-dollar project.

But preliminary planning for the road, including preserving land along the eastern section is recommended in case there is a need for the road in 20 to 30 years' time.

Source: SMH

Due to pressure on the rail network, instead of East West Link, Infrastructure Victoria has favoured two underground rail projects.

How a pedestrian crossing is dividing Wellington

The plan for a pedestrian crossing on the way to Wellington airport has erupted into an angry debate involving some of the city's largest businesses, thousands of public submissions, and now threatens to poison the $6.4 billion Let's Get Wellington Moving programme.

An average of 35,000 vehicles a day drive along the four-lane of Cobham Drive highway. It's the main route between the city and the airport, the capital's' connection to the world.

But for Miramar resident Mike Mellor, the road is more of a separator than a connector.

For a full 1.8-kilometre stretch, walkers and cyclists have nowhere to cross. It blocks off access to the ASB sports centre, several local schools, and the Kilbirnie shops.

For Mellor, the nearest designated crossing is at the traffic lights at Evans Bay, which adds a detour of about 2km, roughly doubling his journey.

"You have to wait for gaps. The traffic goes fast, sometimes you have to run. People do still cross it, there are a lot of paths worn across the centre strip, but it's risky, and puts people off," he said.

"It's senseless, and it's making life difficult for people having minimal impact on the environment."

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

Cobham Drive has been a key target for Let's Get Wellington Moving. The programme has proposed to lower speed limits and put a new traffic light crossing on the street near the ASB Sports Centre.

Three-year programme director Siobhan Procter said pedestrian safety was the main reason for the crossing to be added.

"It provides that connection that doesn't exist at the moment. We know that people are constantly making unsafe crossings there," she said.

According to LGWM's modelling, the new crossing would add a 15-second delay to the average vehicle trip on the road, she said.

This crossing was meant to be a quick win, a relatively uncontroversial project to prove that LGWM is actually moving, before it begins more major steps like the second Mount Victoria Tunnel, mass rapid transit, and removing private vehicles from the Golden Mile.

Progress Wellington, a group made up of some of Wellington's biggest businesses and lobby groups has been set up to oppose the crossing, taking out full page ads in The Dominion Post and rallying public opposition.

The group is led by the Chamber of Commerce and includes organisations such as Wellington Airport, Weta Digital, the Property Council, Hospitality NZ, Retail NZ, and several taxi companies.

Cobham Drive is a test run for Progress Wellington, a chance for it to flex its muscles. The group is already positioning itself to be the main force to reckon with when the larger projects get going.

The Road Transport Forum, a lobby group representing the trucking industry, was among those who joined. Chief executive Nick Leggett was concerned the programme would delay freight deliveries.

"What concerns me is that's a deliberate strategy to make vehicle traffic less appealing. It might be fair to suggest people get out of their cars, but there has to be an alternative. Creating gridlock without a solution is going to further choke Wellington," he said.

Leggett said the obvious thing to do would be to build a bridge over the road instead, so traffic was not delayed. He said it made little sense to delay drivers for a small minority of walkers and cyclists.

"You're not realistically going to shift people from cars, buses and trucks onto bicycles. It's not a fair comparison".

Procter said they had already considered a bridge, and decided it would be too expensive and have fewer safety benefits.

"We know that if you put in bridges there will be a certain number of people who won't bother using them because they don't want to climb stairs or a ramp."

She also pushed back on the suggestion drivers were being unfairly inconvenienced.

"It's an interesting argument that one, because it kind of works against itself. They're complaining about a delay for so few pedestrians, but given there are so few pedestrians and cyclists the delay is going to really minimal."

Public consultation on the project returned a largely negative reaction. Of the 3479 respondents, 43 per cent of people strongly disagreed with the crossing's location, and negative responses outweighed positives 56 per cent to 25 per cent.

However, Procter pointed out that 74 per cent of the submissions came from motorists, who had strong opposition. Walking and cycling groups largely preferred an at-grade pedestrian crossing.
Source: Stuff

They're complaining about a delay for so few pedestrians, but given there are so few pedestrians and cyclists the delay is going to really minimal.

Kenyans stranded overnight in Mombasa Road traffic jam in Nairobi

Frustrated drivers in Kenya have been venting their anger after spending hours overnight in an enormous traffic jam in the capital, Nairobi.

"Ridiculous that I'm getting home at 4am" after an 11-hour journey, tweeted lawyer Pauline Otsyula.

Other commuters explained that they arrived home in the early hours just in time to leave for work once again.

Nairobi is notorious for its traffic jams but a recent night saw the worst many residents can remember.

Videos and photos show irritated drivers still stuck on one of the city's main highways, Mombasa Road, early the next morning.

One tweeter said that people had parked at the roadside to sleep in their cars.

Communications specialist Anthony Ndiema commented that someone could have taken a flight to Doha and done two hours of work in the time he took to get home.

The gridlock happened on a stretch of road where a massive new expressway is being built but the traffic jam was reportedly made worse by a road accident.

Some called for the contractors to provide alternative routes while the work was being carried out.

While Gerald Ngui urged businesses to let their employees who lived in the area work from home. "It's the humane thing to do," he said.

The road construction is part of the $550m project aimed at providing a fast road linking cities north-west of the capital to the country's main international airport.

On completion, it will stretch 27km (17 miles) across Nairobi and it is meant to ease traffic flows in and out of the centre of the city.

It is being financed and constructed by the China Road and Bridge Corporation (CRBC) - and the Chinese firm will operate the highway under a public-private partnership.

Source: BBC

People had parked at the roadside to sleep in their cars.

Christchurch City Council vacancy: Manager City Streets Maintenance

When you join the Christchurch City Council you'll be getting involved first hand and working to shape the future of this city, our communities and environment. As well as working with awesome people within the organisation, you'll find many opportunities to develop and progress your career with us. Christchurch City Council, where it's possible to love what you do.

If you are looking for a role that covers the breadth of Christchurch then Manager City Streets Maintenance could be for you. The City Streets team are responsible for the day to day maintenance and operational work activities across the City and Banks Peninsula road network. Managing a team of 12 which includes 5 direct reports, working across 4 contracts you'll ensure the focus is keeping the roads safe, accessible and able to manage the impacts of weather events as they occur.

The role works closely across many of the Council units from Three Waters to Parks, and with many teams within Transport, including Traffic Management, Asset Management, Network Planning and Capital Delivery. You'll help shape the programme of renewals and then in turn ultimately deliver those work each year which includes resurfacing, footpath renewals, drainage works and road metalling.

In this role no two days are the same, you'll shift from determining financial progress, monitoring contract performance, responding to requests for information through to media responses, chatting to customers and being visible onsite. You'll have a proven background in contract management, performance management, road renewal construction, change management, asset management, RAMM Contractor and business improvement. You'll also have valuable experience in road maintenance and experience in building and leading a team of technical experts.

You'll be someone who is calm and can easily prioritise demands. You'll be able to give clear direction and know when to support your team or empower them to take the lead. You'll be forward thinking and have exceptional communication skills, particularly in technical writing to provide clear responses. You'll ideally have come from a local government background or central government sector and will have a relevant tertiary/university qualification.

This is a unique opportunity to influence the shape of what gets done in your community and you'll get to be a leader and report on the wider Transport business.

Are you passionate about creating a better future? Find out what's possible, apply today. *Applications close 22nd September.*

To view the position description please click on the link

New Journeys in Mobility for Aotearoa

IMPORTANT ANNOUNCEMENT:
Trafinz 2021 Conference is rescheduled. New dates are:
21 - 24 November 2021

COATINGS & CORROSION Conference - 3 November 2021 | NZ BRIDGES SUMMIT & AWARDS 2021 - 2-3 November

Coatings and Corrosion Conference | Conferenz
It's back for 2021 as a 1-day intensive conference and co-located with NZ Bridges Conference. The New Zealand Coatings & Corrosion Conference & Exhibition hosts a gathering of Asset owners, contract, project and maintenance managers, designers and architects, engineers, research and scientists, coaters and application experts and those in concrete and steel industries.

2021 New Zealand Bridges Summit & Awards Gala Dinner | Conferenz
This is a live event – it may be required to run as an online only event Due to the possibility of ongoing uncertainty around government regulations on mass gatherings in response to COVID-19 at any particular time or region, the organisers may determine to run the event online and On-Demand only.
www.conferenz.co.nz

Council strikes back against rogue Christchurch motorists' bid for free parking

Parking will soon be permanently restricted across four central Christchurch blocks as the council cracks down on rogue commuters.

The Press reported in June that motorists were parking all day for free on Huanui Lane after concrete barriers were pushed aside to gain access.

The lane, which runs through Rauora Park in the east frame, is a shared zone for pedestrians, cars and cyclists, but is yet to officially open to vehicles.

The council was waiting until the surrounding residential development was built up before opening the area.

But motorists could not wait and began parking on both sides of the narrow lane.

The paved lane was designed to have six parking spaces, one mobility park and a motorcycle park on one side of each of its four blocks, which run parallel to Manchester St between Lichfield and Gloucester streets.

The council made its first move in late July, temporarily discontinuing all parking on Huanui Lane for 12 weeks – the maximum time allowed under law.

It also installed new signs at each entrance and exit, advising that stopping and parking was restricted. Previous signs had been removed.

Warning notices were issued to all vehicles for one week and vehicle registrations were recorded.

The council's central city parking restrictions subcommittee last week decided to allow for parking along the eastern side of the lane in keeping with its original design. Parking would be free, with a two-hour limit. The changes would be made before the 12-week temporary designation expired.

Sub-committee member Councillor Mike Davidson said the two-hour limit would prevent people from parking in the spaces all day.

A council report said the restrictions were appropriate and would prevent a relapse of the rogue parking.

The lane is a shared zone for pedestrians, cars and cyclists, but is yet to officially open to vehicles.

Transportation Group NZ's Transport Research Award

Applications are now open for the Transportation Group Research Award

The Transportation Group aims to advance the knowledge base and practice of the transportation profession in New Zealand. Each year the Group provides a Research Award worth up to **$8,000** for a Group member (or members) to undertake research to learn about issues that are important and topical in the transportation area, and then to spread that useful and usable knowledge to peers.

If you believe you can help the profession learn more about important transportation issues, apply now for the Award. The essential requirements are that the research area is relevant to the interests of the Group, and that you document and disseminate your newfound knowledge to your Group peers.

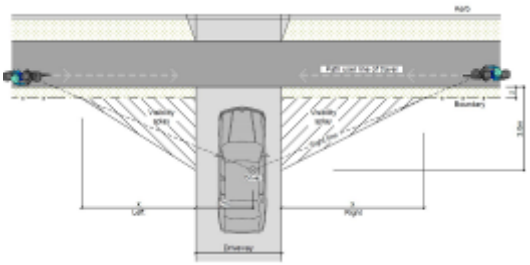
The deadline for applications is Friday 29th October 2021. Go HERE for details. Enquiries or applications should be sent electronically to Transportation Group Awards Co-ordinator - Daniel Newcombe daniel.newcombe@at.govt.nz

TRANSPORTATION GROUP NEW ZEALAND

Active Modes Infrastructure Group (AMIG) Update

Since last report, AMIG has held another online meeting on August 5th; here's what got discussed:

An interesting challenge is arising due to trying to fit narrow **central refuges with zebra crossings** on narrow roads (often to allow for separate asymmetric raised platforms each side). Technically, that makes for two separate crossings, so motorists only have to stop for people crossing on their side – but does the average person crossing know that? The current law doesn't help as it talks about giving way to people "obviously waiting" to cross – if you're already crossing one side, are you going to stop and wait in the middle to cross the other side too? Possibly one option is to change the rule to say you must give way to someone "intending" to cross…



Draft national guidance was also presented on **wayfinding signage for cycling routes**, based on the good guidelines already developed for Christchurch. This includes advice on developing a network/route plan, sign design elements, graphical standards and installation & maintenance. Some further consideration to the use of bilingual wayfinding signage is also being looked at.

Four local councils gave some short presentations on the results of their recent **Innovating Streets trials** in Wellington, Palmerston Nth, Hastings and Rotorua, particularly focused on cycleway and school safety measures. Various practical lessons were learned about consultation, design and installation, and a notable finding from some of them was drops in motorist speeds of 6-10 km/h.

There is some growing interest in work here and overseas on **rubberised asphalt pavements**, which have the potential to help with waste reduction while also mitigating injuries through a softer surface.

Following the previous discussions, a draft Technical Note on **pathway visibility at driveways**; was presented for feedback. The aim is to provide guidance on suitable visibility splays so that motorists on driveways have sufficient time to see and stop for a path user (often travelling reasonably fast). Once further feedback is taken on board, the final guidance will be shared with industry.

Other items discussed at the last AMIG meeting included signing of cycle paths to accommodate other wheeled users, and potential signing of school speed zones under the new Speed Limit Rule. There is also a new W16-11 warning sign now available for approaching a marae (*NZ Gazette* notice 2021-au1615).

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

The next online AMIG meeting will be on 30th September. After that an actual in-person meeting *(Covid willing…)* is planned for Hastings in November. RCA members who would like to be added to the group can contact co-convenors Wayne Newman (RCA Forum; wayne@cresmere.co.nz) or Gerry Dance (Waka Kotahi; Gerry.Dance@nzta.govt.nz). Other TGNZ members are always welcome to talk with me about raising any ideas or issues on your behalf at AMIG as well.

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

Motorists only have to stop for people crossing on their side – but does the average person crossing know that?

UK's rude place names to be toured by man on moped

A man is embarking on a 1,800-mile tour on a 50cc moped of places with rude and funny names.

Paul Taylor, from Wantage, Oxfordshire, is making the charity fundraising trip in memory of a friend who died of cancer.

His journey will begin in Shitterton, Dorset, on Wednesday and will take in locations such as Twatt in Orkney and Booze in the Yorkshire Dales.

Mr Taylor's Slovenian Tomos XL45 Classic has a top speed of 28mph.

He said he chose Shitterton, near Bere Regis, as his starting point because of its "appealing" name.

"Everyone starts a long journey like that from Lands End to John O' Groats - I wanted to do something similar, with a bit of twist," he said.

"There's some good ones around there, like Happy Bottom Nature Reserve and Sandy Balls New Forest Holiday Park"

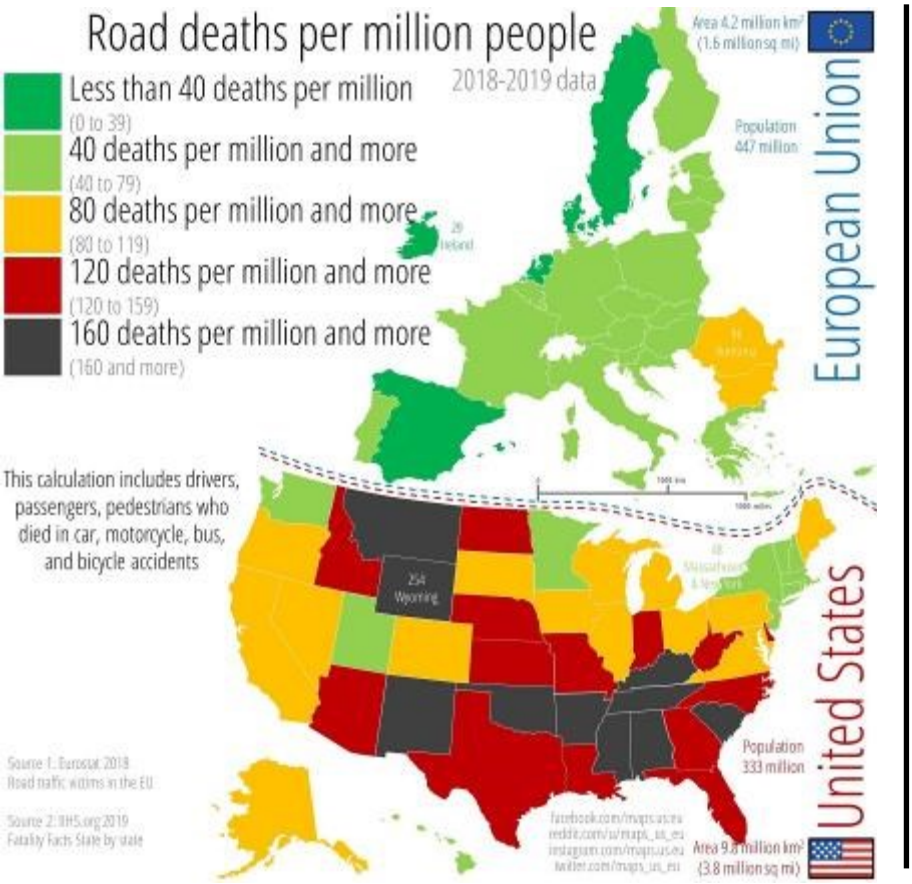
"There's some good ones around there, like Happy Bottom Nature Reserve and Sandy Balls New Forest Holiday Park."

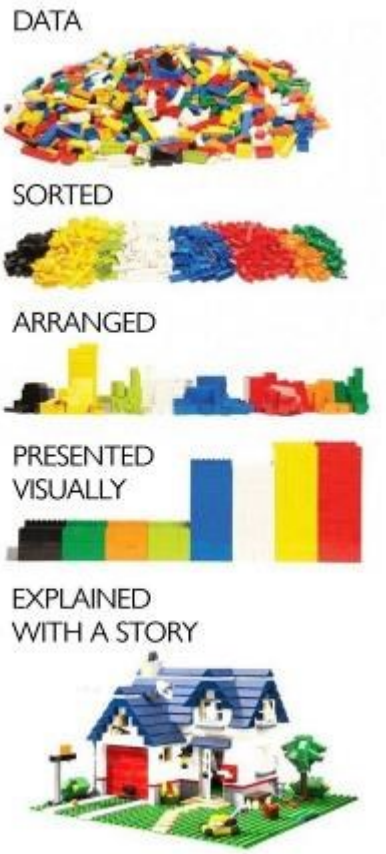
Other destinations include Pity Me in Durham, Dull in Perth and Kinross, and the neighbouring hamlets of Crazies Hill and Cockpole Green near Reading in Berkshire.

Funny street names on his itinerary include The Knob in King's Sutton, Northamptonshire, Butthole Lane in Shepshed, Leicestershire, and Titty Ho in Raunds, Northamptonshire.

Mr Taylor said after his friend Alexis Leventis died of cancer last year, aged 55, he wanted to do something "to help beat this awful disease".

"I thought this trip was a suitably ridiculous place to start and, as Alexis was a motorcyclist as well as a car nut, two wheels was not only appropriate but made it more of an adventure."

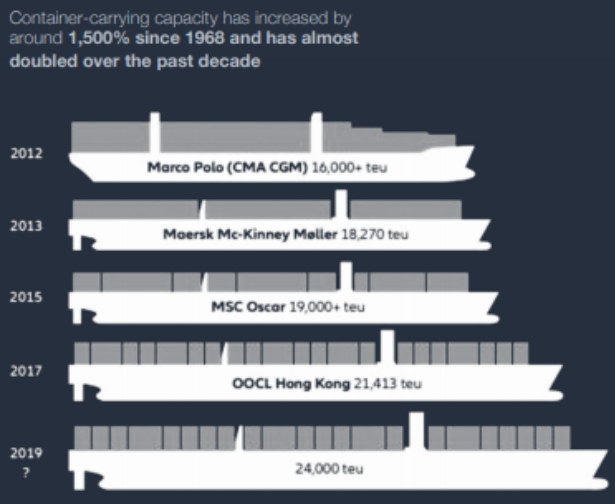




Ever Given Aftermath

What's Next for Global Trade?

For comparison, in 1968 the largest freighter aircraft in the world was the Boeing 747-200F wich could carry 95.3 tonnes. In 2019, the largest freighter aircraft in the world was the Boeing 747-8F which could carry 140 tonnes. A 151% increase.



City Rail Link update

Two sections of New Zealand's deepest railway station are joined up after an underground breakthrough at City Rail Link's Karangahape Station.

The breakthrough occurred 18 metres below the station entrance under construction at Mercury Lane – the building is now connected directly to the mined tunnel excavations underway for Karangahape's platforms.

"It's quite a milestone for us – construction of the station building below street level began in early March and within five months, we've laid the concrete slabs for two of the station's floors, removed 16,000 cubic metres of spoil, and joined up with the mined tunnels beneath," says Jonathan Hill, the Link Alliance's Project Manager for the Karangahape Station.

A combination of vibro ripper and hammer working inside the station entrance excavation chiseled its way through layers of rock to open the hole in the roof of a pilot tunnel below that had been used to excavate the platform tunnels.

With access now available from both the underground station and the mined tunnels, there is more flexibility to share resources between teams to excavate the remaining 16,500 cubic metres of rock for the station.

On- site innovation solved a safety challenge facing Link Alliance workers. Before the breakthrough, the pilot tunnel was backfilled with spoil from the mined tunnel, eliminating the risk of machinery falling into the tunnel from above, or debris falling if the breakthrough had been tackled from below.

When completed, Karangahape will be 32 metres below ground. Excavation work has finished on the southbound platform tunnel closest to Mercury Lane and work is underway on the adjoining northbound one. The platforms are 203 metres long to accommodate nine-car trains instead of the current six used on the Auckland network.

City Rail Link Ltd has advised the Government that it will operate its Tunnel Boring Machine at reduced level allowed under current Covid-19 health and safety regulations.

"TBMs are not designed to be 'parked' underground for an open-ended period – they need to keep moving forward, even at reduced capacity, to avoid the risk of getting stuck," says Dr Sean Sweeney, City Rail Link Ltd's Chief Executive.

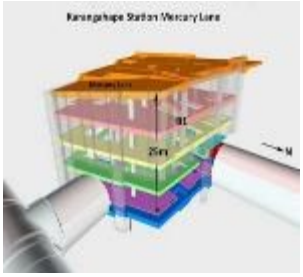
Dr Sweeney says the Ministry of Business, Innovation and Employment (MBIE) has been advised of the rationale for operating the TBM within current regulations.

"We are not planning to continue full-scale mining – the TBM will be working at a much lower level than full capacity. We will be operating on a 'do minimum/as necessary' basis that falls within the parameters of this month's Covid-19 Public Health Response Order.

"This low-level operation will allow us to remove the risk of pressure from earth settling around a stationary TBM and 'trapping' the machine. If that happened here, the costs and time involved in freeing the TBM would be catastrophic and completely derail the project," he says.

"Our priority will be to keep our workers safe – they will be working under strict health and safety guidelines. Our neighbour are being kept informed of our actions," Dr Sweeney says.

Everyone loves a TBM tracker. Follow Dame Whina Cooper, CRL's tunnel boring machine at: https://digcrl.co.nz/progress



In May, the last concrete was poured to complete the first underground floor (B1 in pink above) of Karangahape Station.

Aerial photo of TBM entry point at Mt Eden construction site

"NO TURK ENTRY"

An unusual specification was recently sent in from an unnamed Auckland Council consents transport planner reviewing a consent application:

"9. The following must be installed/marked in accordance with the Auckland Transport Code of Practice 2013.

(i) Directional arrows on the driveway surface and within the site to indicate the direction of flow of traffic for entry and exit to JOAL's 101 to 104,

(ii) ***NO TURK ENTRY*** *signs to be installed within the site for JOAL's 103 & 104.*

(iii) Wheel stops to be provided for all parking spaces abutting footpaths, landscape strips and/or fences."

We can only hope these restrictions based on nationality don't catch on.

Sorry buddy, no entry for you.

Digital Study Tour: The Elements for making The Good Street

Next in our series of pre-recorded sessions is a study tour with Lennart Nout of one of Utrecht's busiest arterial streets to learn more about the various elements that go together to create The Good Street.

A direct link from Utrecht Centraal to the city's Northwestern neighbourhoods, Amsterdamsestraatweg is a good case study for arterial road design that allows for higher traffic volumes while still enabling walking, cycling and retail activity.

Using 360-degree camera footage, Lennart will show you how transit has been integrated into the design of the street, even in constrained environments. See how continuous foot- and cycleways at side street access point give priority to more vulnerable road users, and of course, he'll take time to dissect protected intersections along this vital link in the city.
Watch the study tour here: https://youtu.be/Y4DcWebctPg

Report on Congestion Charging

Earlier this year, the Minister of Transport, Michael Wood, wrote to the Transport Select Committee to ask them to hold an Inquiry into Congestion Pricing.

They have now produced a thorough report that includes a unanimous cross-party recommendation to move forward with this work.

The Minister has said he will be considering the report carefully at the same time as the Government finalises the draft Emissions Reduction Plan.

The report is available here

The Transport and Infrastructure Committee has conducted an inquiry into congestion pricing in Auckland and recommends that the Government progress legislation to enable New Zealand cities to use congestion pricing as a tool in transport planning

UK government backs scheme for motorway cables to power lorries

While cars can rely on lithium ion batteries, the weight of a battery required to power a fully laden truck over long distances has prompted trucking companies to look for alternatives.

The UK government will fund the design of a scheme to install overhead electric cables to power electric lorries on a motorway near Scunthorpe, as part of a series of studies on how to decarbonise road freight.

The electric road system – or e-highway – study, backed with £2m of funding, will draw up plans to install overhead cables on a 20km stretch of the M180 near Scunthorpe, in Lincolnshire. If the designs are accepted and building work is funded the trucks could be on the road by 2024.

Road freight is one of the hardest parts of the economy to decarbonise, because no technology exists yet on a large scale that is capable of powering long-haul lorries with zero direct exhaust emissions.

New diesel and petrol lorries will be banned in Britain by 2040 as part of plans to reduce carbon emissions to net zero by 2050. That has given lorry companies little time to develop and commercialise technology that will be crucial to the functioning of the economy. While cars can rely on lithium ion batteries, the weight of a battery required to power a fully laden truck over long distances has prompted trucking companies to look for alternatives.

The e-highway study is one of several options that will be funded, along with a study of hydrogen fuel cell trucks and battery electric lorries, the Department for Transport said recently.

On the e-highway, lorries fitted with rigs called pantographs – similar to those used by trains – would be able to tap into the electricity supply to power electric motors. Lorries would also have a smaller battery to power them over the first and last legs of the journey off the motorway.

The project is led by Costain, an infrastructure construction company that also operates some UK motorways, using trucks built by Sweden's Scania and electric technology from Germany's Siemens that is already in use in smaller-scale trials there, Sweden and the US.

Also involved are academics from the Centre for Sustainable Road Freight, a joint project between Cambridge and Heriot-Watt universities, which previously found that that an electric roads system could put all but the most remote parts of the UK within reach of the trucks by the late 2030s, at a cost of £19bn. The white paper, published last year, suggested that the plan would pay for itself within 15 years through charges on electricity.

However, the consortium's efforts to secure government backing will probably face stiff opposition, not least from other projects. The industry is split between advocates for lithium ion batteries and hydrogen fuel cells, as well as e-highways.

Lorry manufacturer Leyland Trucks, owned by America's Paccar, will receive funding to trial 20 DAF battery-electric trucks with the NHS and other government bodies.

Another will see London-headquartered Arcola Energy design a trial of hydrogen fuel cell trucks and new refuelling infrastructure in Scotland. Hydrogen fuel cells produce only water as a byproduct, although their green credentials are reliant on producing the gas using renewable energy sources.

Source: Guardian

Karangahape Road upgrade complete

Karangahape Road has been upgraded, making it more pedestrian and bike-friendly, attractive and environmentally sustainable.

Waka Kotahi part-funded the upgrade through the National Land Transport Fund, along with Auckland Council and Auckland Transport.

A colourful hub and popular Auckland destination, Karangahape Road has a flourishing residential and business community and is one of the busiest roads in the region with thousands of people travelling along it daily. This growth is set to continue with a 30-year projection of a million more people calling Auckland home.

Transport choices are also growing in the city. More people are opting to walk, bike, scoot, skate, and bus and when the City Rail Link is completed in 2024, the rail network will double in capacity, carrying up to 54,000 passengers an hour.

Read more here

Wellington to make the Golden Mile more pedestrian friendly

Let's Get Wellington Moving announced it will start working to transform Wellington's Golden Mile – from Lambton Quay to Courtney Place – into a vibrant and welcoming place by changing the road layout and creating more pedestrian friendly spaces.

The transformation was announced following feedback earlier this year from nearly 2,000 people who said they wanted more space for people. Construction is likely to start in late 2022.

Read more here.

Innovating Streets making streets safer for everyone

Innovating Streets projects are experiencing positive feedback and results as more and more people experience them and see the benefits the changes are making for their community.

Waverley and Eltham – both towns have State Highway 3 running through them making it difficult and dangerous for people crossing the road due to heavy vehicles and high levels of traffic passing. New courtesy pedestrian crossings and raised safety platforms have been installed to help make it easier and safer for people to cross the road.

Ferry Road, Christchurch – the number of people biking along Ferry Road has increased by 19% since January 2021 because of the new protected cycleway way that was introduced three months ago.

Brooklyn Hill cycleway – earlier this month, Wellington City Council held an open day for people to try out the new Brooklyn Hill cycleway. Councillors and members of the public came out to see it and have a go, with many commenting on how safe they felt because of the distance from large buses and cars.

Drews Avenue, Whanganui – the community celebrated the new people and bike friendly space on Drews Avenue during the annual Lights on Bike festival this month. Hundreds of people took to the streets to enjoy music, dance and mystical lights.

Whanganui's Creative Quarter embraces street changes

Businesses on Drews Avenue in Whanganui are seeing the benefits of embracing the changes, with takings increasing between 20 – 35% since the changes were made. Footfall to the area has also increased.

People have been enjoying the reduced traffic and safer environment while taking in the vibrant artwork developed by local artists and relaxing in the sunshine on the purpose-built seating area.

They've also been taking a trip down memory lane by picking up the phone and listening to the history of the street or expressing themselves at the musical bus stop.

The project has brought increased safety due to a reduction in traffic, as well as vibrancy to a street that is now having a resurgence and becoming a must visit location in Whanganui.

Project WAVE provides safer outcomes for all road users

A new protected cycleway in Auckland (an Innovating Streets installation known as Project WAVE) has given people on bikes a safer way to get around the city centre, with the

Businesses on Drews Avenue in Whanganui are seeing the benefits of embracing the changes, with takings increasing between 20 – 35% since the changes were made.

Drews Avenue, Whanganui
(Credit: Whanganui City Council)

Images: Left; where people used to ride their bikes, right; shows how the majority are now riding in the seperated cycleway. (Image credit: Auckland Transport)

"To catch the reader's attention, place an interesting sentence or quote from the story here."

separated space making the entire street safer for all users. Check out cycle trips on Lower Hobson Street before and after the introduction of the protected cycleway. Read more

Te Huia service now arrives in Auckland at the weekend

People wanting to travel from Hamilton to Auckland on Saturdays using the Te Huia train will no longer have to change trains at Papakura, as the train now travels to the Strand Station in central Auckland.

The new Saturday service will depart Hamilton at 7.41am arriving into The Strand at 10.10am. It will depart The Strand Station at 5.40pm on Saturday, arriving in Hamilton at 8.14pm.

Te Huia is proving very popular at the weekends and during school holidays. Since the launch of the service just over three months ago, it has transported more than 11,000 passengers.

Teaching children to cycle

If you're teaching any children to ride a bike at the moment, there are some resources at hand to help.

The BikeReady programme is New Zealand's national cycle education system and includes curriculum-based learning, but the programme also offers some advice to parents and caregivers who may be teaching children to ride at, or close to, home. Read more

Brooklyn Road cycleway to be made permanent

The Brooklyn Road cycleway, piloted as part of Innovating Streets for People programme, will soon become a permanent addition to Wellington's growing cycleway network, after councillors unanimously voted to make it permanent.

Since it opened, more people have started cycling from Wellington CBD to Brooklyn, while the number of cars travelling on the road has decreased by 6%. 51% of people asked about the cycleway thought it made Brooklyn Road safer for all users, while 59% rated their experience of the cycleway very positive or positive. Read more

On your bike Wellington

Wellington's annual cycle count results are in and the new separated cycleways are having a positive impact.

Latest figures show that on average 2,462 people a day biked into the city from key directions. The 12,309 people recorded over the 5 mornings was the highest ever weekday total, and 17% on the previous highest 5-day total.

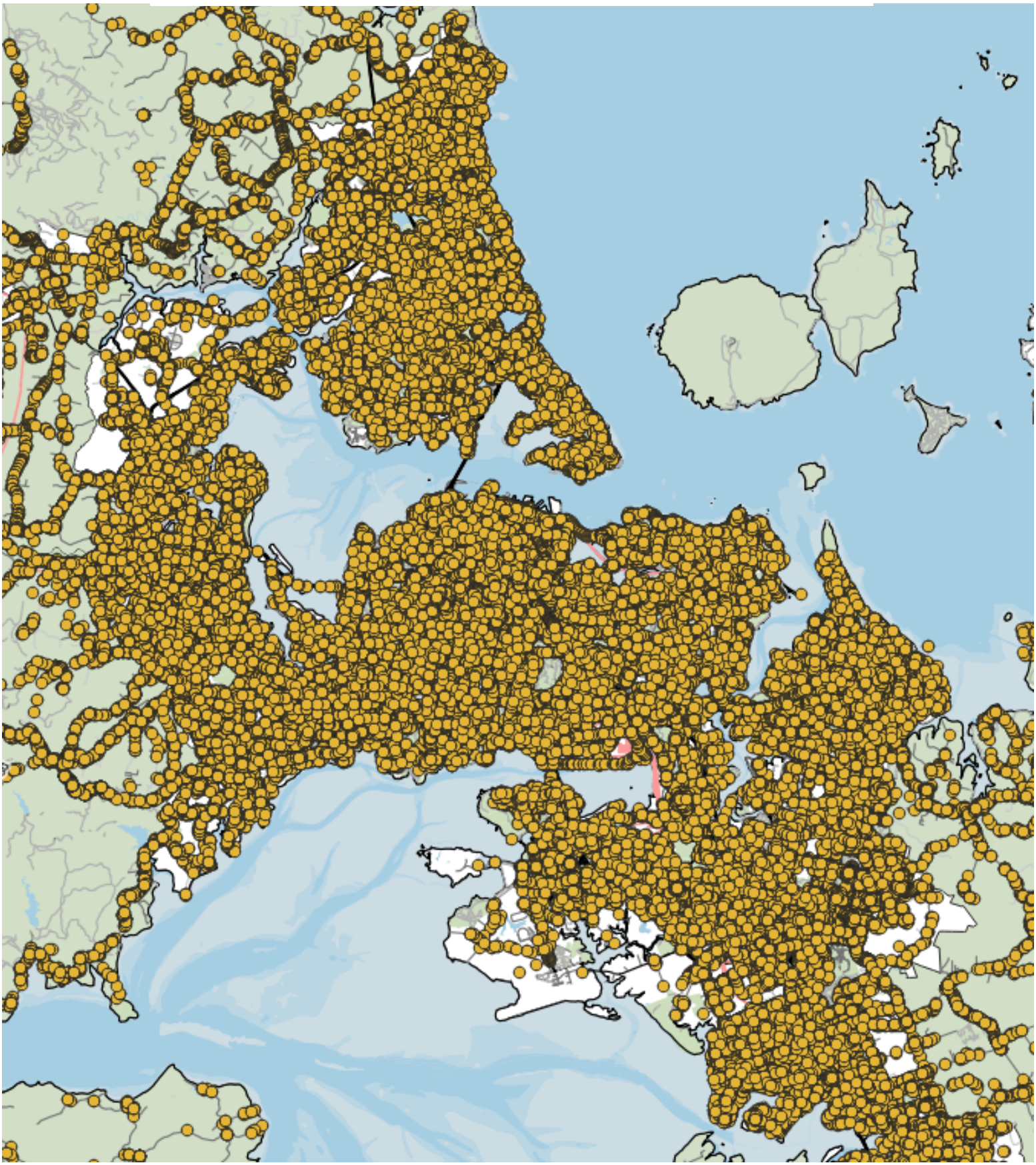
Weekly totals from several key intersections are up and, in some cases, are the highest to date. Some of the biggest gains are from the east, where new bike and walking paths are progressively being developed.

The most significant jump was recorded at the intersection of Cobham Drive, Evans Bay Parade and Wellington Road:

- This year 648 people biked past this point between 7am –9am on a Tuesday compared with 423 last year.
- This highest daily total was 53% on last year and 67% higher than 2019.
- The 2,439 weekday total over the two-hour commute period was the highest ever, 44% up on the previous highest total of 1,693 recorded in 2017.

Read more

Locations of all 166168 road signs in Auckland



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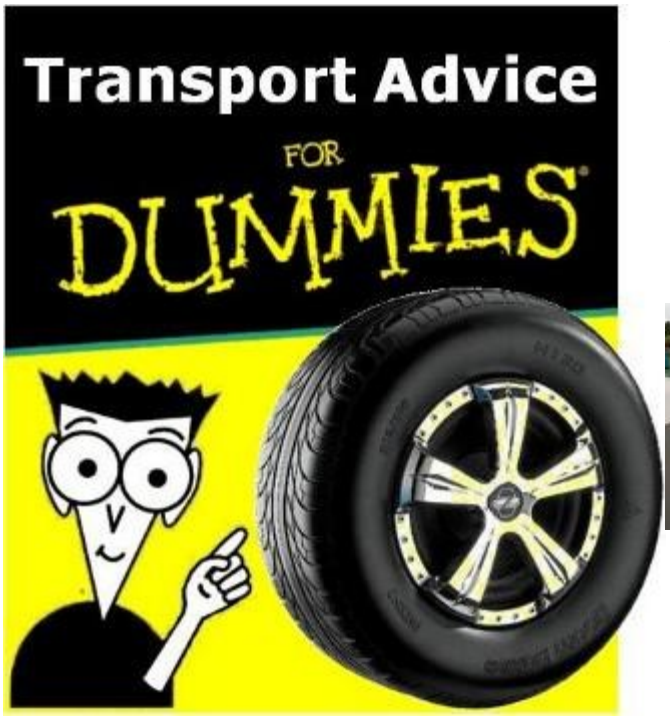

A tongue-in-cheek column on transport matters by The Transport Guy. The contents do not represent the views of the Transportation Group, or anyone else for that matter. Follow the advice at your own risk. If you have a question for The Transport Guy, no matter how stupid, email it to transportfordummies@gmail.com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

Innovating Streets

Dear Transport Guy

Those Innovating Streets projects have been a complete waste of time. They stuck out all these planter boxes and painted the road, and then a whole bunch of them got removed or changed. Shows the uselessness of their planning!

Lucy, Henderson

Dear Lunatic

I'm not sure if you properly understand the purpose and definition of a 'temporary trial' but that was the exact point. Test it and see what happens. Turns out many people are intolerant to safer and more pleasant streets...

The Transport Guy

Auckland Harbour cycle bridge

Dear Transport Guy

What a debacle! That horrendously expensive ($685million! For a BCR of just 0.4!) cycle bridge across Auckland harbour for a handful of lycra-clad warriors was an absolute disaster from the beginning (what were they thinking?!) and now it looks like it will be dropped under public pressure (good job!) and they will do what they should have done in the first place—get on with a new road crossing in a tunnel. Sort it out government!!

Kevin, Silverdale

Dear Kevlar

Thanks for all the exclamation marks. I don't listen to talkback radio, but I imagine this is what it looks like in written form.

Just to clarify—you oppose a low-BCR $685million project which will address congestion, mode shift and climate change, but are cool with a lower-BCR $15billion (21 times more expensive! Hey these exclamation marks are fun!!!!!) project that will worsen congestion and undermine both mode shift and climate change efforts?

I only ask because it kinda looks like you are opposing the cycle bridge for ideological reasons rather than really being concerned with the cost or BCR.

Wait! (There's another exclamation mark! They just keep coming!) If this is like talkback radio then there's no point trying to use evidence or thoughtful discussion to change your mind. I get it now, you just want an ill-informed rant. Thanks again for your correspondence. Perhaps next time you could just put it on Facebook?

The Transport Guy

Dear Transport Guy

What I don't understand about that proposed cycle bridge across the harbour is why cyclists can't just use ferries? It would be way cheaper and hardly anyone cycles anyway.

Irma, Papakura

Dear Ill-informed

There is a saying for this situation along the lines of ''You can't justify a bridge by the number of people swimming across a river'. People on bikes already use the ferries to cross the harbour, to the point that so many want to cross that the ferries are too full of bikes and cyclists are turned away. So I guess that is both proof of demand and evidence that ferries might not be a full solution.

I liken it to a car ferry (as there used to be before the current harbour bridge was built). Hardly anyone used it as it was slow, tedious, prone to cancellation and was a real disincentive to making that trip. Once they built the bridge, driving across the harbour became easy, quick and convenient so gazillions of people started driving to and from the North Shore. I think the same would happen if a cycle bridge was built—it would become hugely popular and a lot more people would use it than expected (cycle-clip-ons anyone?).

Maybe a more relevant question is: is there anyway we can increase the bike-carrying capacity of Auckland's ferries until a cycle crossing is actually built?

The Transport Guy

Kids explain traffic engineering

“We should have trams again because they are better for the environment. And they’re quite fun to ride in.”