

Wellington Regional Land Transport Plan – Annual Monitoring Report



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Executive Summary

This Annual Monitoring Report (AMR) is the second report on progress of the Wellington Regional Land Transport Plan 2021 (RLTP), covering the period 1 July 2021 to 30 June 2022.

The RLTP sets the direction for transport in the region for the next 10-30 years. Consistent with the Government Policy Statement on Land Transport (GPS), the RLTP identifies regional priorities and objectives, and sets out a programme of activities in which we intend to invest.

The monitoring framework for the RLTP consists of three headline targets and the main performance indicators, alongside other measures and indicators. These will track our progress towards achieving the regional programme objectives and outcomes.

During the last year there have been a significant number of events – changes in Covid-19 alert levels, parliament protests, weather related events – that have had an impact on several metrics during the reporting period, making it difficult in some cases to identify short- and long-term trends.

Where relevant, additional commentary is provided around these limitations and uncertainties; the key findings in this report should be interpreted within this context.

Key findings:

- Transport-generated carbon emissions were down in the 2021/22 financial year.
 This was primarily due to decreases in traffic volumes resulting from the Covid-19 restrictions during that period, with secondary impacts being small increases in fleet efficiency and an increase in electric and hybrid private vehicles.
- The number of deaths and serious injuries on the region's roads in the 2021/22 financial year remained at 188, which was the same as the previous year. The five-year rolling average is the same as 2018 at 204, despite significant reductions in traffic through COVID-19 restrictions. In the five years to June 2022, 21% of deaths and serious injuries involved inappropriate speed, up slightly from 20% a year earlier.
- When measured as a three-year rolling average of all trips (taken from the Household Travel Survey), non-car mode share of all trips remained approximately unchanged: 35% in the three years to June 2021 and 34% a year earlier.
- Public transport patronage is still down by around 20% compared to pre-Covid levels. Private vehicle traffic volumes have in recent months trended back towards pre-COVID levels, and there have been increases in cycle volumes on specific corridors in Wellington City.

Table 1 is a summary of the latest results for each headline target and indicator for the period between 1 July 2021 and 30 June 2022. For most indicators, this table refers to the 2021/22 financial year. For some measures, data are available only for calendar years (CY) or for a previous financial year (FY), as marked in the table. Specifically, data from the Household Travel Survey is available only up to June 2021, so mode-share information is presented for the 2020/21 FY. Active travel to school information is derived from the 2018 census.

The 'Change 1 year' column shows the most recent information, compared with 12 months earlier, and five years earlier for the 'Change 5 years' (where available).

Table 1: Headline targets and indicator summary

Headline indicator	2030 Target	Result FY2021/22	Change 1 year	Change 5 years
Combined mode share for public transport & active travel	39%	35% (3 years to June 2021)	no change	1
Deaths and serious injuries on region's roads	122 DSI	204 DSI (5 years to June 2022)	5% down	no change
Land transport generated carbon emissions	770 kilotonnes	1142 kilotonnes	8% down	1
Measure	Indicator	Result FY2021/22	Change 1 year	Change 5 years
Public transport patronage	Bus and rail boardings (peak times)	14.8 million	124% down	1
Public transport journey times	Average travel times on core bus routes	35 mins	2% down	1
Public transport journey time variability	Average travel time variability on core bus routes	AM 1.7 mins PM 2.4 mins	1	1
Active travel and public transport (PT) journeys to work & education	Combined mode share (Cordon survey)	54% (Mar 2021)	no new data	no trend
Deaths and serious injuries on regions roads	Percentage of DSI with speed as a factor	21% (5-year ave)	no change	1
Participation in active travel to school	% of students using active travel to journey to school	33% (2018)	no trend	no trend
Cyclist and pedestrian deaths and serious injuries	DSI for pedestrians & cyclists on roads	55 DSI (5-yr ave)	4% down	1
Road network resilience	Availability of viable alternative routes	Data r	not yet availabl	e
	Frequency of unplanned road closures	100 events	no change	1
	Duration of unplanned road closures	239 hours	106% up ¹	1
The efficiency of the road network on strategic routes	Average travel speeds on selected strategic routes	41 km/hr (3y to 2022)	22% up	1
	Average travel time variability on selected strategic routes	3.7 mins (3y to 2022)	↓	1
Regional freight moved by rail	Annual freight volumes moved by rail	1.46 million tonnes	no change	1
	Transport CO ₂ emissions (per capita)	2.08 tonnes	₹9% down	1
Transport generated emissions	Ambient air quality - Nitrogen dioxide	16.6 μg/m ³ (CY2021)	1 3% up	•
Vehicle fleet composition	% of the private car fleet that are EV and hybrid vehicles	38% of new registrations	12% up	1
	% of the bus fleet that are EV and hybrid vehicles	16% of vehicles	14% up	1

Transport highlights for 2021/22

A number of major projects and milestones occurred during the 2021/22 financial year. Examples include:

Let's Get Wellington Moving

- LGWM's 3-Year Programme implementation commenced with a programme of walking improvements in the central city and a safe crossing on Cobham Drive.
 Business cases were approved and detailed design got underway for improvements along Thorndon Quay and Hutt Road, and for the transformation of the Golden Mile.
- LGWM's People Friendly City Streets overall business case was approved, targeted improvements (for buses and active modes) were identified, and the first tranche of project business case investigations commenced.
- LGWM's Transformational Programme draft Indicative Business Case was completed and its local and central government partners agreed a preferred programme option to take forward to the next stage of investigation. The preferred option includes high-quality, high-capacity mass rapid transit to Island Bay along with continuous bus priority to Miramar; the Basin Reserve transformation; and an extra Mt Victoria tunnel (for public transport, walking and cycling).
- A business case was approved for a programme of *Travel Behaviour Change* initiatives to support people to get around in new ways and to optimise the benefits of LGWM infrastructure investment.

Metlink

- Electric buses now comprise 16% of the fleet, an 18% increase from last year.
- Ika Rere, the first operating electric passenger ferry in the Southern Hemisphere, completed its first public sailing on 1 March 2022. This has roughly the same decarbonisation benefit as eight electric buses.
- Greater Wellington endorsed the Draft Wellington Rail Programme Business Case –
 Wellington Strategic Rail Plan (Draft Wellington Rail Plan). The Draft Wellington Rail
 Plan was developed to explore and determine how the rail network needs to evolve
 in order to deliver strategic outcomes being sought both regionally and nationally;
 it responds to significant mode shift requirements over the coming decades,
 reflecting regional and national targets.
- Electronic ticketing was rolled out on the Johnsonville line, with the intention to roll
 out across the entire regional rail network by the end of November 2022. This
 means Snapper will be accessible on both rail and bus across Wellington region.

Other highlights

• State Highway 1 Transmission Gully was officially opened by Waka Kotahi in March 2022.

- Aotearoa New Zealand's first Emissions Reduction Plan was released in May 2022.
 It sets the direction for climate action for the next 15 years.
- <u>Tupua Horo Nuku, Eastern Bays Share Path</u>, is nearing completion of the detailed design. Construction of the southern portion (Windy Point and Sunshine Bay) is anticipated to start at the end of 2022.
- Wellington region experienced its wettest winter on record, which was accompanied by a record number of slips. Many of these slips were large enough to close roads and require significant remedial works to stabilise them.

Introduction

The Regional Land Transport Plan (RLTP) is a statutory document developed by Greater Wellington with our partners; the local councils in the region, Waka Kotahi New Zealand Transport Agency and KiwiRail. It outlines the direction for the transport network in the Wellington region for the next 10–30 years by identifying regional priorities, policies, targets and objectives. It sets out the transport projects we intend to invest in and provides an avenue to bid for funding through the National Land Transport Plan process. The RLTP includes measures and indicators to assess progress towards the overall long-term vision.

The Ministry of Transport sets a national direction in which the RLTP must be consistent with. The five outcomes identified in the *Government Policy Statement for Land Transport* are:



- Inclusive access enabling all people to participate in society with affordable and reliable transport choices
- Healthy and safe people protect people from transport related injuries and make active travel an attractive option
- Environmental sustainability transition to zero carbon emissions with improvements to air and water quality
- Resilience and security to minimise risks from natural and man-made hazards, adapt and recover from disruptive events

Economic prosperity – the efficient movement of people and products.

This Annual Monitoring Report (AMR) covers 1 July 2021 to 30 June 2022. The 11 measures and 19 indicators were selected on the basis that:

- Indicator results could be reliably sourced on a regular basis (at least annually)
- Indicators were given higher priority if results included more granular level data (city- and district-level data)
- Other transport indicators would be available to supplement the monitoring framework.

Since early 2020, COVID has impacted significantly on the region's transport system, on the availability of data and interpretation of data and the ability to identify both short-and longer-term trends.

In particular, the Household Travel Survey (HTS), which was normally a face-to-face survey conducted continuously throughout the year prior to COVID, has used alternatives to face-to-face interviews for data collection and has operated at only some parts of the year. COVID has also caused delays in processing and publishing of some survey and other data; thus, measures that rely on the HTS are not yet available for the most recent financial year and results from 2020-onwards may be less comparable than normal with previous HTS results.

Some of the performance measures presented in this report around highway and PT travel times are based on specific months only to provide consistency with previous reports. Some month-to-month variations in travel patterns have been larger than normal in recent years because of COVID-19, parliament protests, and public transport driver shortages. The commentary in this report emphasises that in some instances the patterns based on specific months may not reflect longer term trends. Broader trends may be more apparent in future monitoring.

Headline targets

Headline target	Latest result	Trend	Comment
40% increased mode share in active modes and public transport	35% (three years to June 2021)	Increased from 28% in three years to June 2018	
35% reduction in transport-related CO ₂	1,142 kilotonnes	Decreased by 8% compared to last year and 4% since 2017/18	A reflection of reduced traffic volumes at certain times during the reporting year, primarily due to Covid-19.

Headline target	Latest result	Trend	Comment
40% reduction in deaths and serious injuries	204 deaths and serious injuries (five-year average)	Annual figure the same as 2021. Five-year trend shows no change	

Target 1: 40 percent increase in active travel and public transport mode share by 2030

This target aims to increase public transport and active modes from 28 percent of mode share in 2018 to 39 percent in 2030. Walking, cycling, catching the bus or train should be a convenient, safe and sustainable option for more trips throughout the region. Mode share is measured as a three-year average using the Household Travel Survey (HTS) results, which measures all types of household travel (travel to work and education, shopping, leisure) by travel mode.¹

As the Household Travel Survey represents a three-year rolling average up to June 2021 (data for 2022/23 is not yet available), it still includes pre-Covid travel survey data, and as a result the trend post-Covid trend is uncertain.

Whilst the Wellington AM peak CBD cordon survey has not taken place over the last two years, indicative comparisons of other relevant traffic count data, PT patronage data (rail and bus boardings) and cycle count data from other sources suggest that the non-car mode share of peak period trips crossing the CBD cordon is lower than it was pre-Covid.

A quarterly update will be provided to the Regional Transport Committee (RTC) during 2022/23 to understand how traffic volumes, public transport patronage and cycle volumes are changing across the region as we transition from the Covid-19 emergency.

Target 2: 35 percent reduction in transport-generated carbon dioxide emissions by 2030

In 2018/19, 40 percent of total gross emissions in the Wellington region were attributed to the transport sector². The 2030 target is a 35% reduction of the FY2018 result of 1,232 kilotonnes (kt).

Carbon dioxide (CO_2) accounts for the majority of transport-generated emissions and is therefore a suitable proxy for overall transport-generated greenhouse gas emissions. By converting the annual regional fuel consumption data (litres of petrol & diesel consumed) to CO_2 emissions³ we will be able to track our progress toward reducing emissions.

In **Figure 1**, transport generated emissions for FY2021/22 show:

CO₂ emissions were estimated to be 1,142 kilotonnes.

¹ The mode share target measure is based on trip legs. For comparison, in 2018-2021, pedestrian, cyclist, and public transport comprised only 12% of distance and 30% of travel duration, according to the Household Travel Survey.

² Wellington Region Greenhouse Gas Inventory (Greater Wellington, 2020)

- Total carbon emissions have decreased by 8% compared to 2021 results, and by 4% over the previous five years.
- The red line shows the transport CO₂ emissions per capita, estimated to be 2.08 tonnes. This indicates a decrease of 10% since 2017.
- The decline in total transport generated CO₂ emissions over the last few years has been largely a result of changes in traffic volumes in response to Covid-19 restrictions, with other small influences from increasing uptake of EVs and hybrid vehicles and improved vehicle efficiency.
- Trends are uncertain at present, however as we transition towards a new normal, the trend in terms of emissions will become clearer.

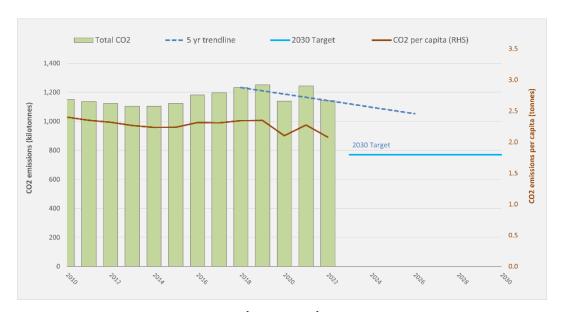


Figure 1: Transport CO₂ emissions (per capita)

Data source: Fuel supply data from WCC & MCDC

Target 3: 40 percent reduction in deaths and serious injuries on regional roads by 2030

Aotearoa New Zealand has adopted the Road to Zero vision of 'zero deaths and serious injuries on New Zealand roads'. The target for 2030 is to reduce the 2018 five-year rolling average of 204 DSIs by 40 percent or to below 122. The five-year average is used to report on serious road accidents because it smooths out annual fluctuations and reveals long-term trends.

In Figure 2, the DSI data shows:

- 188 deaths and serious injuries in the year to June 2022, which was the same as the previous year.
- The five-year rolling average decreased to 204 (a 5% decrease from a year earlier) but overall, about the same as the baseline level in 2019.
- Despite drops in traffic due to COVID-19, DSIs have remained flat indicating more work is needed to see a significant reduction.

Use of a five-year rolling average means that the target measure is influenced as much by DSIs from five years ago – when numbers were relatively high – as by the most recent

numbers. The numbers of DSIs over the last three years were relatively low but will still need to decrease by another one-third to achieve the target level.



Figure 2: Deaths and serious injuries on region's roads

Source: CAS, Waka Kotahi

Measuring against the five transport outcomes

The following provides more detail on our performance against the five national outcomes as a region:

Inclusive access

Enabling all people to participate in society with affordable and reliable transport choices.

Measuring

Public transport patronage, journey times on core bus routes, active travel and public transport journeys to work.

Indicator	Latest result	Trend	Comment
The number of people boarding bus, train and ferry services during peak and off-peak times	Peak times: 14.8 million boardings Off-peak: 11.1 million boardings	Whilst patronage is still below pre-Covid levels, the trend is uncertain given the significant impact that Covid-19 and other events had on patronage in the last year 2017/18 boarding levels.	COVID-19 has had an impact on PT patronage. These figures include periods when COVID Alert Level 3 and 4 restrictions were in place.

Indicator	Latest result	Trend	Comment
Average travel times on core regional bus routes	AM: 35.4mins PM: 33.2mins	Travel times have slowly improved.	
Travel time variability on core regional bus routes	AM: 1.7min PM: 2.4mins	Travel time variability in the AM has almost halved, and reduced by just over one minute in the PM, compared with 2021. However, the trend is uncertain given the impact of Covid- 19 during the reporting period.	The travel time variability metric has been impacted by the reduction in traffic and passengers due to Covid-19 restrictions and lock-downs.
Combined mode share of travel to work trips by walking, cycling & public transport.	No new data available.	Recent trend information not available.	The cordon survey was not undertaken in 2022 due to COVID-19 restrictions.

Public transport patronage

A number of the RLTP targets rely on good uptake of public transport, specifically access to good, affordable travel choices and minimising environmental harm. This indicator monitors annual public transport boardings during peak and off-peak times. The attractiveness of these services through reliable and competitive journey times will help to increase patronage, as measured next.

The nationwide bus driver shortage, and a combination of both seasonal and COVID-19 related staff absences over winter have had an impact on public transport services. The 23-day protest at Parliament and the surrounding area caused significant disruption in March 2022.

COVID-19 influenced the mode and timing of travel for many people. Future monitoring will tell if there have been permanent changes in travel patterns. Preliminary data from Wellington and other locations indicates that rail patronage has been slower to return to pre-Covid level than bus patronage, as a greater proportion of weekly rail patronage occurs during peak periods (compared with bus), and peak period travellers are more likely than off-peak travellers to have the option to work from home.

Figure 3 shows the number of people boarding rail, bus and ferry services during the peak and off-peak. Peak boardings have decreased by 24% over the past year, and 38% lower than five years earlier. The five-year trend continues to decrease.

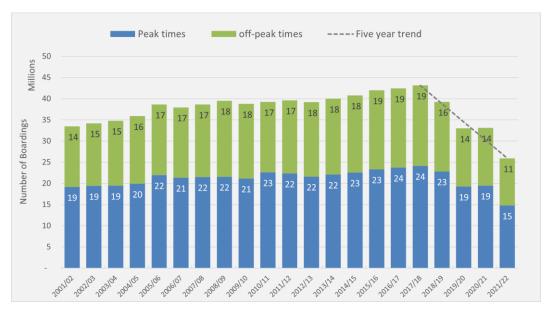


Figure 3: Annual public transport boardings by time-of-day

Data source: Metlink, GWRC

Bus journey times and variability

Public transport is more attractive when it is consistent, reliable and offers competitive journey times to other transport choices. By tracking travel times on a selection of core public transport routes, we can monitor reliability and speed. This is shown in **Figure 4**.

- The average travel time for AM peak is 35.4 minutes, an improvement of just over one minute since 2019
- The average travel time for PM peak is 33.2 minutes, an improvement of four minutes since 2019
- Morning peak trips are on a slight downward trend over five years, meaning a slightly faster bus journey. This is more pronounced in the downward trend of PM trips over the previous five years.

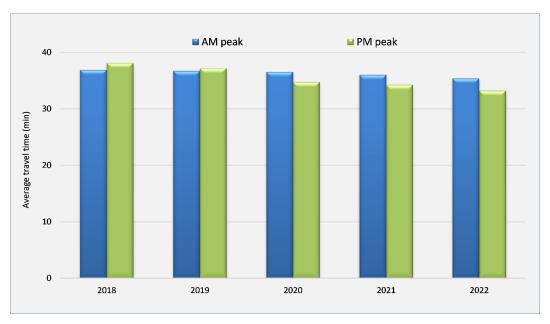


Figure 4: Travel times on core bus routes (FY2014 - 2022)

Data source: Metlink, GWRC

Consistency of travel times is an important consideration for people moving around the region. **Figure 5** indicates the average reliability of our bus service during peak times on core routes.

- The morning peak variability has continued to improve since 2019, with 2022 figures at 1.7 minutes about half the previous year.
- Average lateness for PM peak services improved over the previous three years, with an average for 2022 at 2.4 minutes. This is a reduction of just over one minute compared with 2021.

More detailed reporting will be provided in quarterly progress dashboards that will be provided to RTC to understand how travel time variability on core routes changes through time to understand if there are any emerging trends.

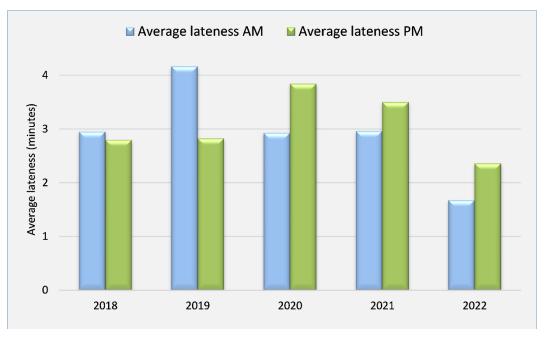


Figure 5: Travel time variability on core routes

Data source: Metlink, GWRC

Mode share for travel

The Wellington City CBD cordon survey counts all people by transport mode as they travel inbound into the Wellington CBD during morning peak time (7-9am). This annual survey takes place over one week in March. The cordon survey was not conducted in 2021 due to COVID-19 disruptions. Commentary will be included in the next AMR.

Healthy and safe people

Protect people from transport related injuries and make active travel an attractive option.

Measuring

Deaths and serious injuries from road transport and participation in active travel to school.

Indicator	Latest result	Trend	Comment
Percentage of crashes involving death and serious injury when inappropriate speed is a contributing factor	21% of serious or fatal crashes (5 years to June 2022)	Increased to 40 crashes in 2022 from 33 in 2021	

Indicator	Latest result	Trend	Comment
Percentage of students cycling, scooting & walking to school by school sector	32% of travel to school is active travel for ages 5–9 years and 34% for ages 10–14 years (2018 Census)	No trend yet	The methodology changed for travel to education in the 2018 Census, so no time series yet
Number of deaths and serious injuries for pedestrians and cyclists	55 DSI (five-year rolling average)	While the annual number is down from 2021, the trend-line shows DSI increasing	

Deaths and serious injuries when speed is a contributing factor

Improving road safety is expected to have a particular emphasis on infrastructure and speed management. Addressing these issues will be critical if the region is to improve its safety performance and contribute to Road to Zero. The new Land Transport Rule: Setting of Speed Limits 2022 will assist local councils in planning for speed management, with a focus on safer speeds around schools in the first plan.

Figure 6 shows that inappropriate speed contributed to approximately 21% of crashes involving death or serious injury in the region over the five years to June 2022. The proportion of speed-related accidents has trended downward (shown by the green bars). However, the *number* of crashes caused by inappropriate speed in the year to June 2022 was higher, at 40, than in the two previous years (32 in 2020 and 33 in 2021).

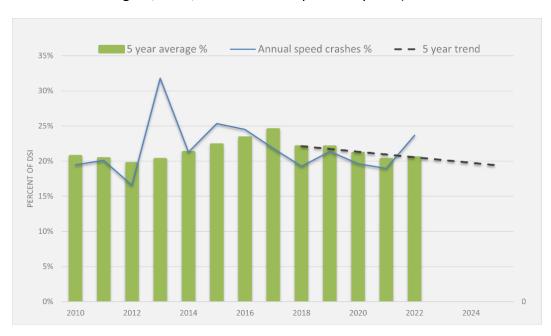


Figure 6: Proportion of deaths & serious injuries when speed is a contributing factor

Data source: CAS, Waka Kotahi

Pedestrian and cyclist deaths and serious injuries

This indicator assesses the safety of the road network for pedestrians and cyclists by monitoring reported deaths and serious injuries over time. A five-year rolling average is applied to the data to even out fluctuations in the annual results (based on the calendar year).

Figure 7 shows the number of pedestrian and cyclist deaths and serious injuries each year. The five-year average (blue bars) for 2022 is 55 DSI – this is similar to the previous year. The annual results (orange line) have decreased slightly.

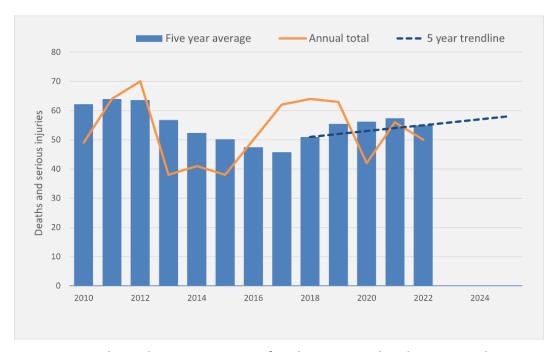


Figure 7: Deaths and serious injuries of pedestrians and cyclists on roads

Data source: CAS, Waka Kotahi

Participation in active travel to school

Waka Kotahi is extending the trial of Te Haerenga o Ngā Tamariki ("Tamariki Tool") to a second year in early 2023 to expand on the data collected in 2022 when COVID significantly impacted on the ability of schools to participate. Use of the Tamariki Tool will be widely promoted to all primary schools in the Wellington region and augmented by learning resources by GW. Schools are using the student travel data (collected via the tool) to build an understanding of active travel and encourage classroom discussion around mode choice, carbon emissions, and well-being.

At the 2018 census, 32% of children aged 5–9 years and 34% of children aged 10–14 years travelled to school by active transport.

Resilience and security

To minimise risks from natural and man-made hazards, adapt and recover from disruptive events.

Measuring

Road network resilience.

Indicator	Latest result	Trend	Comment
The availability of a viable alternative to high-risk and high impact routes	No information available	No trend available	Although the indicator is not yet quantifiable, the opening of Transmission Gully has improved the availability of alternative routes on key regional routes.
The frequency and duration of resolved road closures on major roads	100 road closures, 239 hours of unplanned road closures	While there was an increase in the number of road closures by only one, the duration of resolution doubled	Wellington experienced a particularly wet winter contributing to major slips. Eight events contributed two-thirds of the total road closure hours.

A resilient road network

A key objective in the RLTP is to ensure journeys to, from and within the Wellington Region are connected, resilient and reliable. At this time there is no suitable data source for the availability of alternative routes.

Figure 8 shows the duration and frequency of unplanned events on the region's state highways that lead to road closure. These events disrupt the flow of commuter traffic and freight causing delays and test the resilience of the network. The main cause of unplanned road closures are crashes, slip, flooding, and vehicle breakdown.

The frequency of events has increased in the previous five years, from 86 in 2017/18 to 100 in 2021/22. However, this is an increase of only one event since the previous AMR. The average length of time to resolve these events is strongly influenced by a few long-duration events. In the most recent year, the average was driven up by a two-day closure caused by a slip on Paekākariki Hill Road, and a small number of other long-duration events. Eight events contributed two-thirds of the total road closure hours; the other 92 events contributed just one-third. The overall average duration of unplanned closures was 2.4 hours, up from 1.2 hours in the previous year.



Figure 8: The duration and frequency of unplanned road closures on state highways

Data source: Waka Kotahi

Economic prosperity

The efficient movement of people and products.

Measuring

The efficiency of the road network on strategic routes and regional freight moved by

Indicator	Latest results	Trend	Comment
Average travel speeds on selected strategic routes	Average speed 37 kph during AM peak, and 47 kph during off-peak (three-year average to Feb 2022)	Increase from 35 kph AM peak and decrease from 48 kph off-peak 12 months earlier	The indicator is based on travel during February each year. Parliament protests in February 2022 and Omicron may have contributed to lower traffic volumes in that month, compared to previous years, and to increased average speeds.

Indicator	Latest results	Trend	Comment
Average travel time variability on selected strategic routes	6.0 minutes variability during AM peak and 4.7 minutes off-peak (3- year average to Feb 2022) 4.5 minutes variability outbound	Decrease from 6.8 minutes during AM peak and 5.0 minutes off-peak	The decreased variability may be related to less traffic congestion and faster average speeds.
Annual freight volumes moved by rail	1.46 million tonnes	The movement of freight by rail has increased by 40% since 2017	

An efficient road network

A key investment priority is to improve access to key regional destinations, including the port, airport and hospitals for people and freight. Strategic routes comprise state highways and high-volume regional roads. These key routes provide access and connectivity for people and goods to key regional destinations.

The efficiency of the road network can be estimated by trends in travel speed at peak travel times. The latest three-year rolling average is 37 kph for AM peak (up from 35 kph a year earlier) and 47 kph for off-peak (down from 48 a year earlier).

Whilst the data suggests that travel speeds have increased at peak time, particularly on SH1 and SH2, this data should be used with caution and is not indicative of a trend for the following reasons:

- The data is collected during February each year, and February 2022 was impacted by COVID-19 and the parliament protests
- This resulted in fewer vehicles on SH1 and SH2 at peak times, and a corresponding increase in travel speeds
- Analysis of more recent data from September 2022 suggests that traffic volumes have increased (compared to February 2022), congestion has increased and peak travel speeds on SH2 are broadly back to what has been observed over the period 2019 to 2021.

Regional freight moved by rail

The region relies on road, rail and coastal shipping networks to move freight efficiently. Developing the rail network to increase the volume of freight moved by rail will benefit the regional economy.

The Freight Information Gathering System (FIGS) data provides annual estimates of rail freight volume nationwide and within each region. The combined movement of freight by rail inbound and outbound was 1.46 million tonnes in 2021/22 for the Wellington Region, shown in **Figure 9**. Over the last five years, freight volume has increased by 40%, mainly driven by an increase in the volume of freight moved out of the region.

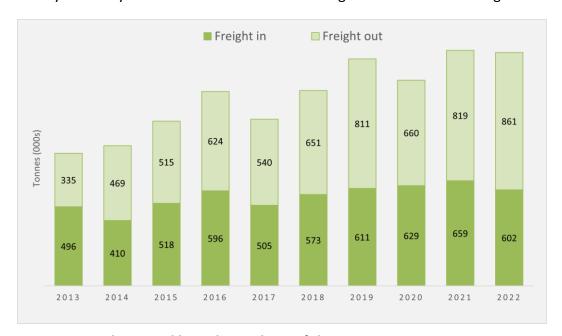


Figure 9: Freight moved by rail in and out of the region

Data source: FIGS, Ministry of Transport

Environmental sustainability

Transition to zero carbon emissions with improvements to air and water quality.

Measuring

Transport generated emissions and vehicle fleet composition.

Indicator	Latest result	Trend	Comment
Transport CO ₂ emissions (per capita)	2.08 tonnes of CO ₂ per capita	Current result is 10% less than five years ago	Decreases in traffic volumes due to COVID-19 restrictions have been the primary contributor towards the observed reductions in emissions, with an increase in the percentage of the fleet comprised of EV and hybrids also a minor contributory factor.
Ambient air quality – Nitrogen dioxide & black carbon matter	Nitrogen dioxide is 18.2 μg/m³ (5-year average to June 2021)	Nitrogen dioxide is 3% up on last year but has decreased by 12% over the last five years	
Percentage of the private car fleet that are EV and hybrid vehicles	38% of new registrations are hybrid or electric	New registrations have increased from 6% to 38% in the last five years	Refers to light private vehicles.
Percentage of the bus fleet that are EV and hybrid vehicles	16% of buses electric at June 2022	EV buses were first introduced in 2018. In 2021, 2% of the fleet were electric	

Air quality – Nitrogen dioxide

The RLTP advocates for and supports initiatives that contribute to ongoing improvement of the vehicle fleet to reduce greenhouse gas emissions and improve air quality, including uptake of electric vehicles, alternative fuel options and improved fuel efficiency.

Air quality is monitored based on levels of nitrogen dioxide (NO_2) , a harmful pollutant arising from vehicle emissions. The data is from Waka Kotahi's national NO_2 monitoring network at multiple sites across the region (except the Wairarapa). The Waka Kotahi sites are mostly along the state highways, but include a small number of local roads.

Figure 10 shows the results from NO_2 monitoring sites. In 2021, NO_2 was on average 18.2 μ g/m³, calculated using a five-year moving average. Levels of NO_2 have decreased by 12% over the last 5 years.

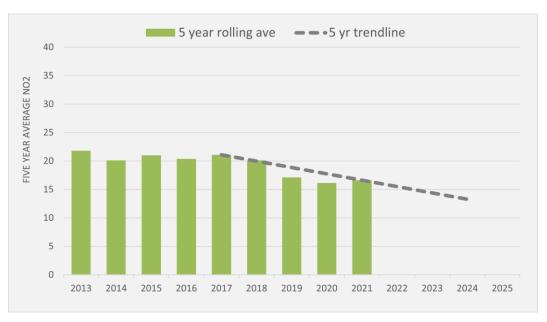


Figure 10: Air quality nitrogen dioxide

Data source: GWRC/Waka Kotahi

Changes to the vehicle fleet

This indicator monitors the transition from fossil fuel-based engines to low-emission vehicles such as electric (EV) and hybrid vehicles in Wellington Region.

As shown in **Figure 11**, new registrations of electric and hybrid cars and vans have increased to 38% in the year to June 2022, compared with 6% five years earlier. Across the whole of New Zealand, electric and hybrid vehicles increased from 4% of the car/van fleet at June 2021 to 6% by June 2022.

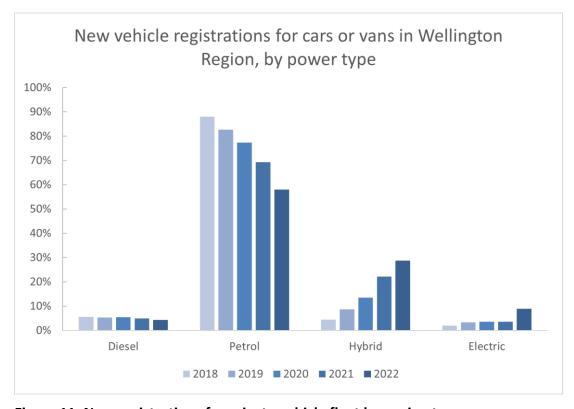


Figure 11: New registrations for private vehicle fleet by engine type Data source: Waka Kotahi

Electric bus fleet

At June 2022, 16% of the regional bus fleet was electric, up from 2% a year earlier. New electric buses will continue to replace diesel buses in the fleet, reducing the fleet's total carbon emissions

Reporting on the RLTP Prog 2021-24

Further reporting on the RLTP Programme is a collaborative effort by the RLTP partners and undertaken every six months. It covers project highlights, risks and issues, and mitigations, alongside time, scope and cost of each project. Some variations may be noted as projects progress. You can find these reports on the Greater Wellington Regional Council website www.gw.govt.nz.

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