REPORT

WELLINGTON TRANSPORT ANALYTICS UNIT


# RLTP 2027 – State of Transport Network

PREPARED FOR GREATER WELLINGTON REGIONAL COUNCIL

June 2025

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# Glossary

**AM peak** – The morning commuter period, typically 7–9am on weekdays.

**CBD** – Central business district; in this report, usually refers to Wellington CBD.

**EV** (electric vehicle) – powered entirely by electric battery, producing no tailpipe emissions.

**FIGS** (Freight Information Gathering System) – A national data source providing information about freight movement, including port and road volumes and tonnage.

**GHG** (greenhouse gas) – Gases such as $CO_2$ and methane that contribute to global warming and climate change.

**HCV** (heavy commercial vehicle) – Trucks and buses, weighing over 3.5 tonnes.

**Hybrid vehicle** – A vehicle powered by both a combustion engine and an electric motor.

**HTS** – The New Zealand Household Travel Survey. An annual Ministry of Transport survey collecting trip details (eg, origin, mode, purpose, distance) from a sample of households to understand travel patterns and inform transport models and policy.

**In-vehicle time** – The time spent inside a vehicle (car, bus, train), excluding walking, waiting, and transfers.

**Inter-peak** – The period between AM and PM peak travel times, usually 9am to 3pm, or to 4pm, as indicated.

**Mode share** – The proportion of trips that are made by a specific transport mode.

**Multimodal** – Involving more than one mode of transport in a single journey or across a network (eg, walk + bus + train).

**Off-peak** – Any time outside peak commuting periods, including evenings and weekends.

**PM peak** – The afternoon commuter period, typically 4–6pm on weekdays, but 3pm–6pm or 3pm to 6:30pm in some instances, as indicated.

**PT** (public transport) – Transport services available to the public, such as buses and trains.

**RLTP** – Regional Land Transport Plan. This sets the direction for transport in the region for the next 10 to 30 years and guides the region's investments in the region's transport network.

**SH1 / SH2** – State Highway 1 and State Highway 2, the main western and eastern corridors linking the Wellington Region with the rest of the North Island.

**Snapper** – The electronic ticketing system currently used on public transport in the Wellington Region.

**TA** (territorial authority) – A local council area. There are eight TAs in the Wellington Region: Wellington City, Porirua City, Kāpiti Coast District, Hutt City, Upper Hutt City, South Wairarapa District, Carterton District, and Masterton District.

**Total journey time** – including walking to stops, waiting, in-vehicle travel, and any transfers.

**VKT** (vehicle kilometres travelled) – A measure of total distance travelled in a given area over a specific time period.

**WTSM** – Wellington Transport Strategy Model, a 4-stage transport model that is used to forecast changes in travel demand across the region (by mode) and is used to develop and assess transport policies and projects. Further information is available at wellingtontransportanalytics.co.nz

# Executive summary

This report provides an evidence base to inform the development of the Wellington Region's 2027 Regional Land Transport Plan. It summarises recent trends, patterns, and insights about the region's transport system and highlights key issues and opportunities for the future.

Since 2020, the region's transport system has evolved in response to population growth, changing economic drivers, new patterns of work commuting, and increased focus on emissions reduction and equity. COVID-19 accelerated several existing trends that have impacted transport, including more flexibility in timing and location of work and online shopping.

The insights presented here will support the development of a transport network that enables regional growth and contributes to strategic goals, including:

- Expanding the reach and capacity of the public transport network
- Improving travel time efficiency and reliability on state highways, local roads, and public transport
- Supporting housing and economic development
- Enhancing road safety, especially for vulnerable users
- Providing people with better travel choices, including safe and convenient options for walking and cycling
- Strengthening the resilience of the transport system

Many of the insights in this report are supported by interactive maps.

Explore the full set of interactive maps here.

## Key insights

### Population

- The population of the Wellington Region grew at a slower rate than other regions in New Zealand between 2013 and 2023.
- Growth rates have varied across the region – at times Wellington City (which is home to 40% of the region's residents) has seen the highest growth rates but more recently Wairarapa has grown at the fastest rate, although from a lower base.

- The region's population is ageing, with 30% growth in the number of people aged over 65 years in the last 10 years. The median age is 38 years, up from 32 years in 1996.
- The number of children aged under 18 years has decreased slightly over the last 10 years.
- Migration is the main driver of population growth in the Wellington Region.

## Employment

- The economies in different parts of the region have different strengths/focuses, and the employment patterns reflect this.
- Relative to elsewhere in New Zealand, a high proportion of residents in the Wellington Region (nearly 40%) work in professional services, with most of these workers having some ability to work from home.
- In Wairarapa, around 40% of people work in primary industries, manufacturing, construction and trades – with less flexibility in work location.
- Over 40% of the region's jobs are in Wellington CBD.

## Travel patterns

- Around 80% of trips are for non-work purposes, with shopping and leisure trips accounting for the largest proportion of trips.
- Three-quarters of trips start and end in the same territorial authority, with the majority of these trips – particularly outside of Wellington City – being car trips.
- In contrast, most rail trips cross between areas with over 85% starting or ending in the Wellington CBD – and 75% of bus trips take place within Wellington City.
- Mode choice varies based on trip purpose. Trips to work and to education have the highest public transport and active mode share, while shopping and leisure trips are more likely to be by car.
- Around 30% of car trips are less than 2 kilometres.

## Mode share

- Between 85% and 90% of journeys to work outside of Wellington City are by private car, as a driver or passenger.
- Around 50% of journeys to work in Wellington City are by public transport, walking or cycling. In Wellington CBD, the non-car mode share increases to nearly 65%.
- Over the last 10 years, the non-car mode share has increased for journeys to workplaces in Wellington CBD – reflecting the high level of public transport accessibility to the CBD and growth in the population within walking distance – but has decreased elsewhere due to the largely low density, car-oriented nature of development.
- Around 50% of journeys to education are by public transport, walking or cycling, with Wellington City having the highest non-car mode share.

- On key corridors in Wellington City, buses account for less than 2% of vehicles but move up to 50% of passengers during peak times.
- Despite recent growth, the off-peak and weekend public transport mode share is still low compared to peak periods, a function of different travel patterns meaning public transport is not a viable alternative for many off-peak and weekend journeys.

## Highway network performance

- SH1 and SH2 are congested heading towards Wellington CBD at peak times.
- Over the last 10 years, the greatest increase in congestion has been during the pre-peak (before 7am), off-peak and weekend periods, as vehicle volumes have increased and people alter their time of travel to avoid the most congested times.
- Speeds and travel times are highly variable along key state highway and local road corridors at peak times.

## Public transport travel times

- Bus travel times are slow and unreliable, particularly at peak times but also throughout the off-peak and weekends.
- Bus travel times are uncompetitive compared to private cars on most corridors, particularly during the off-peak.
- Rail travel times are similar, and sometimes faster, than private car travel times at peak times.

## Public transport traffic volumes and crowding

- Bus patronage has rebounded to above pre-COVID levels.
- Inter-peak and weekend bus demand has grown at a faster rate than peak demand, with weekend volumes over 30% higher than in 2019.
- Rail patronage has remained around 25% lower than pre-COVID levels due to increased working from home, rail reliability issues in 2024 / 2025 and improved car travel times to Wellington from Kapiti and Porirua following the opening of the Transmission Gully motorway.
- Morning peak bus passenger volumes are 10% lower, and rail 20% lower, on Fridays compared to other weekdays.
- Around 75% of the region's bus trips occur within Wellington City.
- Some bus services on core corridors are crowded at peak times in Wellington City, however spare capacity exists on other corridors and outside of peak times.
- Around 25% of the region's population – 135,000 people – use public transport at least once per week.

## State highway traffic volumes

- State highway volumes have generally increased at the same rate as population over the last 20 years.
- The fastest growth in state highway traffic volumes has been seen outside of Wellington City, due to higher population growth rates and limited public transport alternatives.
- Lower growth rates in Wellington City are due to attractive public transport alternatives and constrained highway corridors.
- Traffic growth has been focussed on the pre-peak, off-peak and weekends, with limited peak period growth due to congestion.
- VKT per capita have remained relatively stable over the last 20 years.

## Walking and cycling

- Cycling accounts for around 4% of journeys to work in Wellington City, but less than 1% elsewhere in the region.
- Walking accounts for around 16% of journeys to work in Wellington City, but less than 4% elsewhere.
- As a proportion of journeys to work, walking has increased, partly due to increased land use intensification, meaning that more people live within walking distance of their work location.

## Freight

- Road freight vehicle numbers have risen at a rate equal to GDP growth.
- Data gaps limit understanding of the region's freight flows and industry needs.
- Freight contributes a quarter of the region's transport-generated $CO_2$ emissions, even though HCVs account for only 4% of the vehicle fleet.

## Emissions

- Since 2000, per capita transport-generated emissions have decreased by 16%. However, in absolute terms transport-generated emissions have increased by 5%.
- Petrol emissions have decreased by 10%, but diesel emissions have increased by 40% since 2000, the result of a 75% increase in the light commercial vehicle fleet.
- EV uptake remains modest - 4% of the region's private cars (including taxis) are fully electric and 10% are hybrids. EV uptake is highest in Wellington City and lowest in Wairarapa.

## Accessibility and equity

- Public transport access to major centres outside Wellington City remains limited, particularly outside of peak periods.

- Public transport use is relatively low in low-income and deprived areas, where car dependency is high because the public transport network often doesn't provide access to desired destinations at suitable times.

### Safety

- Road deaths and serious injuries have decreased by 14% over the last 20 years. Per capita, the decrease is nearer 30%.
- The region's urban areas have some of New Zealand's lowest rates of DSIs per capita.
- In Wairarapa – and South Wairarapa in particular – rates of DSIs are 2 to 3 times higher than the rest of the region due to higher VKT per capita and a higher proportion of VKT occurring on roads with speed limits greater than 50kph compared to more urban areas.
- Vulnerable users, especially motorcyclists, pedestrians and cyclists, remain at higher risk and are over-represented in DSIs relative to their number of trips.
- Alcohol and drugs are a factor in over 40% of DSIs.

## Considerations for RLTP 2027

### Wellington City versus rest of region

- Recent transport trends highlight differences between Wellington City (and Wellington CBD) and the rest of the region, with a high and growing PT / active mode share of trips in Wellington City balanced against a low and declining PT / active mode share of trips outside of Wellington City.
- There are multiple reasons for these differences – the location of population and employment, the frequency, reach and competitiveness of the PT network and the cost and convenience of driving to Wellington CBD compared to destinations elsewhere in the region.
- Efforts to increase public transport and active mode share across the region will depend heavily on aligning land use and transport planning. In areas outside Wellington City, current travel patterns reflect existing low-density land use and limited transport options. Shifting these patterns will likely require incremental change, supported by more compact urban form and better access to frequent public transport. Within Wellington City, there are also opportunities to strengthen and grow public transport patronage, especially for trips to destinations outside the central city.

### Integration of transport and land use planning

- A more compact urban form, with higher density housing, mixed use employment and services in close proximity to public transport will – through time – enable lower car ownership, lower car usage and greater use of public transport and active modes.

- The integration of transport and land use planning – with transport enabling more compact urban form or intensification stimulating improved transport links – has the ability to move more people with fewer vehicles, reduce emissions, improve network efficiency, deliver economic growth and support health benefits.

## Public transport levels of service

- The improvements required to increase the attractiveness of public transport as a travel choice within the Wellington Region vary from one part of the region – and mode – to another.
- Increasing the network reach, increasing service frequencies, improving travel times and competitiveness compared to the private car, increasing the capacity of services and improving service reliability could all be part of a suite of public transport improvements to generate mode shift and increase PT patronage.
- Consideration should be given to developing a full understanding of future network constraints and barriers, to develop targeted interventions across the region to deliver mode shift.

## Active modes

- Walking and cycling (and micromobility) combined has seen the highest growth rate of all modes for work trips into the Wellington CBD.
- Consideration should be given to understanding the potential for further growth, both in Wellington City and outside of Wellington City where the active mode share of trips has declined in recent years.
- Improved integration of active modes and public transport should be considered to increase the network reach and attractiveness of both modes.

## Short and long-distance trips

- Car trips less than 2km in length account for around 30% of trips but only 5% of vehicle kilometres travelled, however they generally occur in busy urban areas and have a significant impact on congestion.
- Whilst the 10% of total car trips longer than 20km account for 40% of vehicle kilometres travelled, a significant proportion of these trips will be undertaken in un-congested conditions.
- Consideration should be given to the strategic priorities and targets when developing interventions. Should the focus be on reducing emissions then focusing on the longer trips is important as that is where a large proportion of the VKT and emissions comes from, however if the focus is weighted more towards reducing congestion, improving public health and promoting accessibility then this might require a greater focus on shorter distance trips.

## Demand management

- Whilst parts of the state highway and local road network operate at capacity during peak periods, sufficient capacity does exist on most of the network outside of peak periods.
- Crowding is observed on certain public transport services and corridors at particular times of the day. However, sufficient capacity exists at other times of the day.
- Alongside the consideration of infrastructure and capacity improvements, consideration should also be given to using pricing tools – such as congestion charging, time of use charging, parking management– to manage travel demand and congestion during peak periods to maximise the efficiency of the current transport network and assets; deliver safe and reliable journeys for those who have to travel at peak times; and encourage people to take alternative modes such as public transport, walking and cycling to move more people with fewer vehicles.

## Flexible working patterns

- Peak period rail patronage is 25% lower than pre-COVID, with peak period bus patronage around 5% lower than pre-COVID, due to a shift to working from home, rail reliability issues and improved state highway travel times due to the opening of the Transmission Gully motorway.
- This trend is apparent across the developed world. Due to having a high proportion of professional services jobs, workers in the Wellington Region are more likely to be able to work from home compared to other jurisdictions in New Zealand.
- Working from home is now embedded in many businesses in the Wellington Region and therefore the current travel patterns can to some extent be considered the new normal. Future planning should focus on delivering growth from this new normal through population growth and improved levels of service, with flexibility to adjust should flexible working patterns evolve through time.

## Off-peak and weekend travel

- While off-peak and weekend use of buses is growing (and now exceeds pre-COVID levels), public transport travel and the public transport mode share during these times remains significantly lower than during peak periods,, due to a number of factors such as different travel patterns at weekends meaning PT is less competitive in terms of travel time compared to the private car, the cost of weekend parking and higher vehicle occupancies.
- Consideration should be given to the extent to which PT service improvements focus on peak period enhancements versus off-peak and weekend improvements that would deliver frequent and reliable all-day services.
- Frequent, fast, all-day services on core routes would encourage additional urban development along major PT corridors, with housing likely to be of a higher density with lower levels of car ownership, contributing positively towards increasing mode shift and reducing emissions.

## Equitable access to public transport

- The public transport network is largely designed to service commuters heading into Wellington CBD during peak periods. Some areas outside of Wellington City have high levels of deprivation but low levels of PT usage and high car dependency as public transport does not take them where they want, when they want.
- Consideration should therefore be given to understanding the unique travel patterns in different parts of the region to design a transport network that provides improved travel choice for people living in deprived areas, or who experience other barriers to transport, with a focus on reducing transport inequality.

## Commercial vehicles and emissions

- The light commercial and heavy commercial vehicle fleet has grown at a rate 2 to 3 times faster than the corresponding population growth rate, in line with economic growth, contributing to an increase in transport generated emissions.
- Due to their higher engine size, these vehicles account for up to 30% of daily emissions but only 5% to 10% of the vehicle fleet, and therefore consideration should be given to this fleet when developing decarbonisation and emissions reduction strategies.

## Safety

- There are differences in the rates and causes of DSIs between Wairarapa and rest of the region (Wairarapa has 2 to 3 times more DSI per capita than elsewhere) and differences in rates of DSIs between different users (motorcyclists and cyclists are more vulnerable).
- Consideration should be given to prioritising safety improvements for vulnerable users across the region, along with a specific focus on improving road safety in Wairarapa.

## Monitoring RLTP 2027 progress

- A further RLTP 2027 consideration will be using the evidence base presented in this report to inform a monitoring framework and set of indicators against which progress will be measured in the future.

# Part 1: People, places, and patterns

# 1. Population and employment

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Low population growth.** The Wellington Region's population has grown slower than the rest of New Zealand over the last 10 years.
- **Employment growth.** The number of employed people increased 41% between 2001 and 2023, whereas the total population increased 23%.
- **Population growth driven by migration**. With low natural population increase, the region's population change is driven by migration, which has been highly variable from year to year and difficult to predict.
- **Lower growth in Wellington City, higher growth in Wairarapa**. The distribution of recent growth has not been uniform with higher growth in Wairarapa and Kāpiti, and lower growth in Wellington City.
- **Infrastructure has stimulated growth**. Growth in Kāpiti and Horowhenua was driven in part by infrastructure improvements (including Transmission Gully and Kāpiti Expressway).
- **Working from home** trends stimulated growth in Wairarapa in the period 2020 to 2023.
- **The cost of housing and housing development has affected growth in Wellington City**. Lower growth in Wellington City was partly driven by the high cost of housing relative to the rest of the region.
- **The demographic make-up of the region varies across areas**. Kāpiti and Wairarapa have a high proportion of older people, with more than 30% of the population aged over 65 years. In contrast, Wellington City has a high proportion of young adults. Porirua has a high proportion of children and young people aged under 20 years.
- **The region's population is ageing**. There has been a 30% increase in persons aged over 65 years in the Wellington Region over the last 10 years.
- **The number of children has declined**. The region has seen a decline in the number of children under the age of 9 years.
- **Employment categories vary between Wellington City and the rest of the region**. Wellington City has 45% of employed people in professional services, many of whom are able to work remotely, compared with 25% to 35% elsewhere. In Wairarapa, the majority of residents are employed in manufacturing, trades and primary industries.

The key considerations for the RLTP are as follows:

- **A public transport network that caters for a changing demographic.** An ageing population and fewer children could result in different requirements for PT services, such as less demand for school services, higher off-peak demand, and more demand

for services to key destinations such as local community centres or health services and potentially more demand for Total Mobility services.

- **Transport that enables population and economic growth**. Population and employment growth across the region over the last 10 to 20 years has been influenced by transport investment projects such as Transmission Gully, Mackays to Peka Peka Expressway and rail improvements in the early 2010s. Transport investment could further enable and influence the distribution of population and employment growth within the region.
- **A transport network that caters for different employment types and locations**. Different employment categories have different travel requirements, which results in different propensities to use public transport or the private car to travel to work or from home. Consideration should be given to the unique employment characteristics in different parts of the region when developing the future transport network.
- **Designing a transport network that is equitable and caters for people from different socio-economic areas**. Transport needs vary across socio-economic groups. Residents of high deprivation areas are likely to have different travel patterns and financial constraints. Areas with high deprivation can have high car ownership and low PT usage, potentially a function of the PT network not catering for local needs. The extent to which the future transport network is equitable should be considered when developing RLTP 2027.

## Purpose and structure

The purpose of this chapter is to provide an understanding of the following within the Wellington Region to inform the development of the RLTP 2027:

- historical population growth
- age structure of the region's population
- employment industries of the resident population
- ethnicity
- recent migration trends
- car ownership

The data is presented in a tabular format with key insights, together with links to more detailed Statistical Area 2 (SA2) GIS maps. For presentational purposes Wairarapa TAs have been aggregated as Masterton, Carterton and South Wairarapa largely exhibit similar trends.

## Population growth

### The population of the Wellington Region has grown by 27% since 1996, but growth was uneven across the region

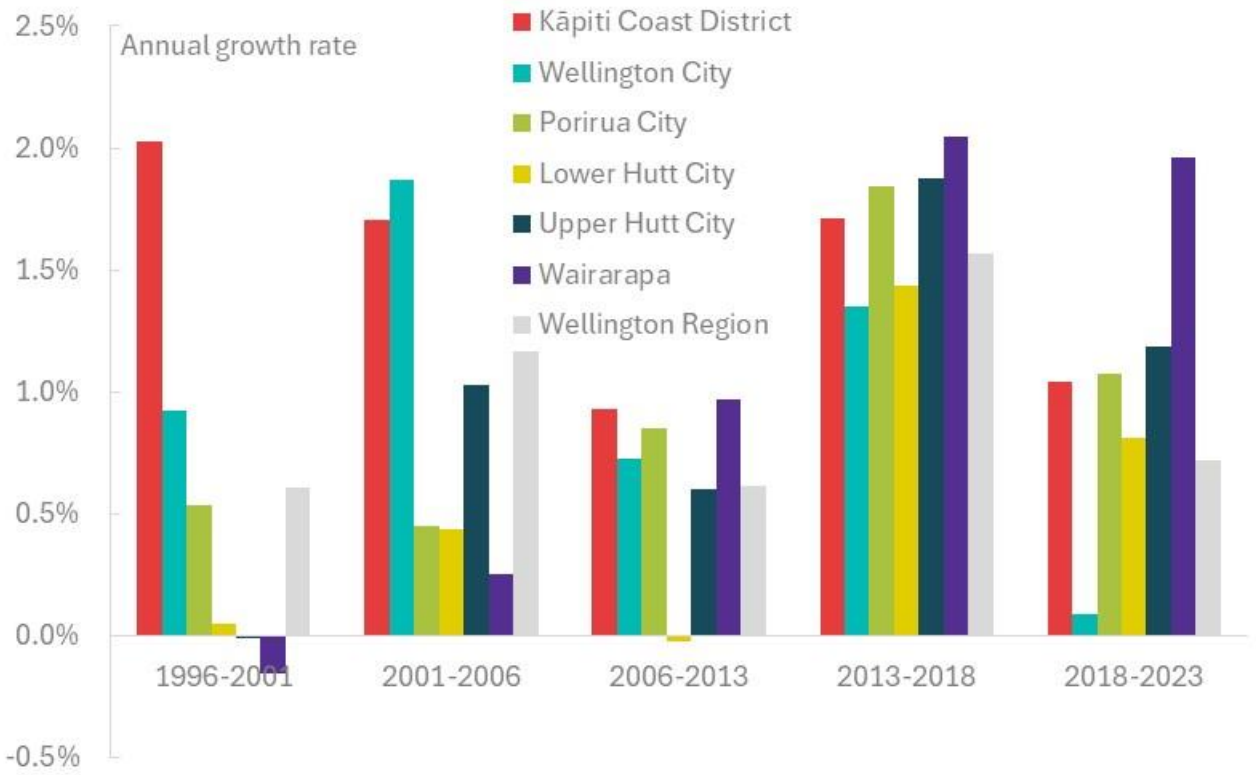
Over the period between 1996 and 2023, the population of the Wellington Region grew by 27% - Kāpiti Coast saw the highest growth rate of 49%, Lower Hutt City the lowest growth rate of 15% (Table 1.1).

Table 1.1. Wellington Region population growth, 1996 to 2023.

| | Year | | Change in population | |
|---|---|---|---|---|
| Item | 1996 | 2023 | Absolute | Percentage |
| Wellington City | 163,000 | 211,000 | 48,000 | 29% |
| Porirua City | 48,000 | 61,000 | 13,000 | 27% |
| Kāpiti Coast | 39,000 | 58,000 | 19,000 | 49% |
| Lower Hutt City | 99,000 | 114,000 | 15,000 | 15% |
| Upper Hutt City | 38,000 | 48,000 | 10,000 | 26% |
| Wairarapa | 39,000 | 51,000 | 12,000 | 31% |
| Region | 427,000 | 543,000 | 116,000 | 27% |

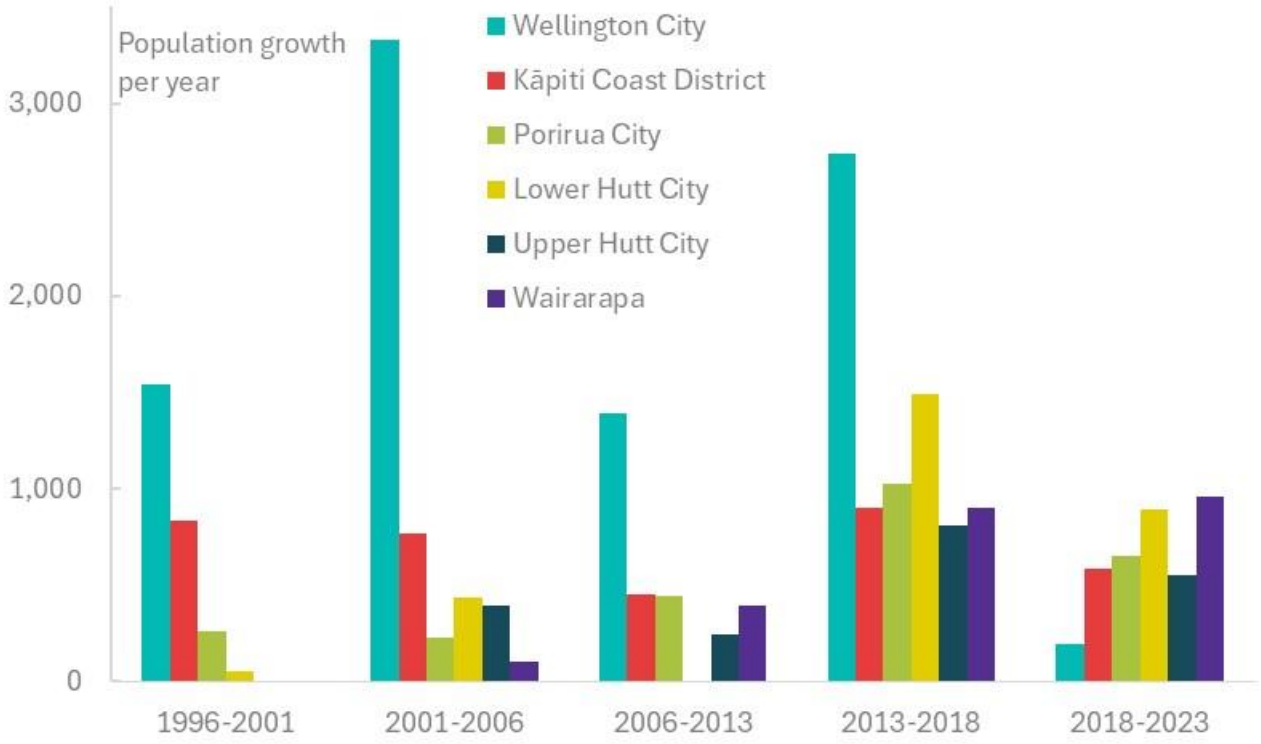
The region's population grew fastest (8%) from 2013 to 2018, with lower growth between 1996–2001, 2006–2013, and 2018–2023 (Figure 1.1).

Figure 1.1. Wellington Region population growth rate, 1996 to 2023.




In absolute terms, each inter-census period had significant variations in growth rates between areas. Between 1996 and 2006, both Kāpiti Coast and Wellington City grew strongly. Between 2013 and 2023 growth rates have been highest in Wairarapa, Upper Hutt, Porirua, and Kāpiti Coast (Figure 1.2).

Figure 1.2. Population growth, by area, 1996 to 2023.




The region's population has growth at an average rate 1% growth per year since 1996, which could be considered as a plausible future growth scenario.

The distribution of growth has been both uneven over the last 30 years, with periods of relatively rapid growth and geographical differences. Future growth will continue to be driven by a combination of macro-economic conditions, housing costs, housing policies, infrastructure constraints and investment.

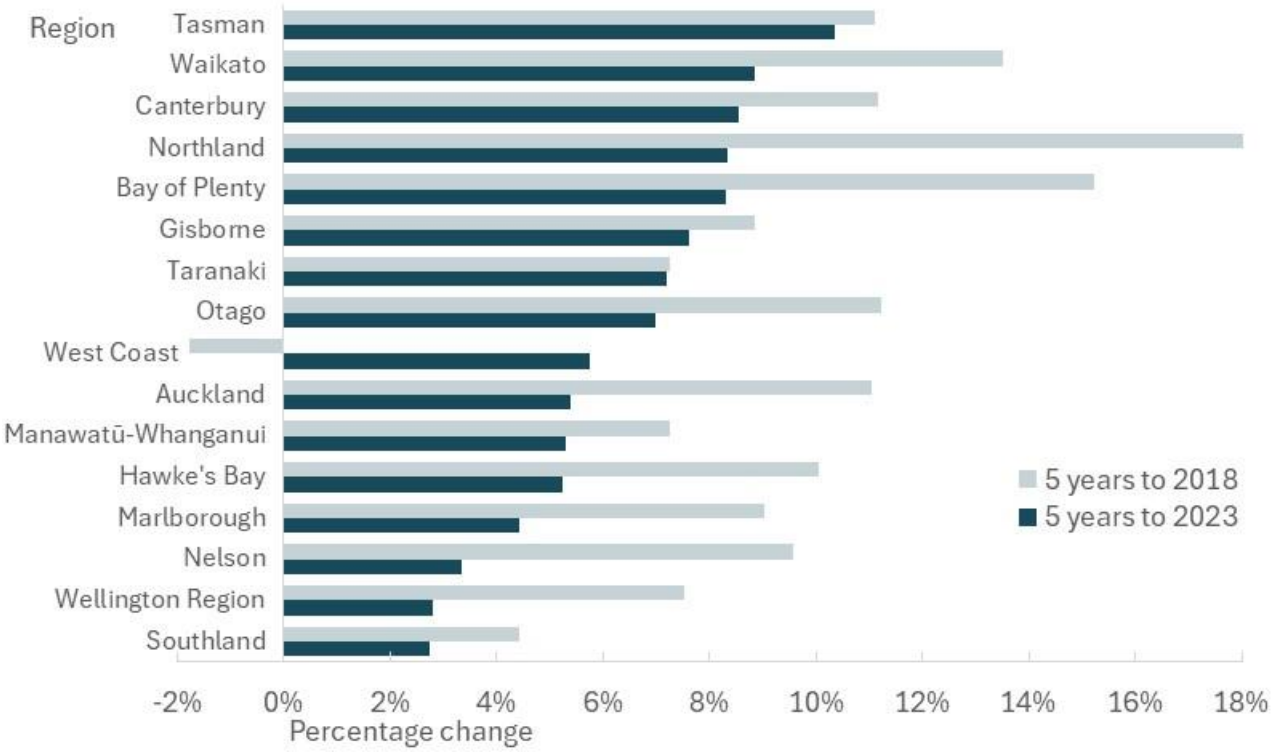
### Over the last 10 years, Wellington Region has experienced a lower population growth rate compared to the rest of New Zealand

Over the period 2013 to 2023, the population of the Wellington region grew by around 10%: 7% between 2013 and 2018, and 3% between 2018 and 2023.

Whilst this trend mirrors what was seen in New Zealand over the same period, the Wellington Region had lower growth rates than the New Zealand average across both time periods.

Of relevance, Auckland and Canterbury have seen growth rates around double what was seen in Wellington Region, with consents in the Wellington Region also lagging those elsewhere in New Zealand.

Figure 1.3. Population change, by region.




The region has grown at a slower rate than many other regions – and New Zealand as a whole – over the last 10 years.

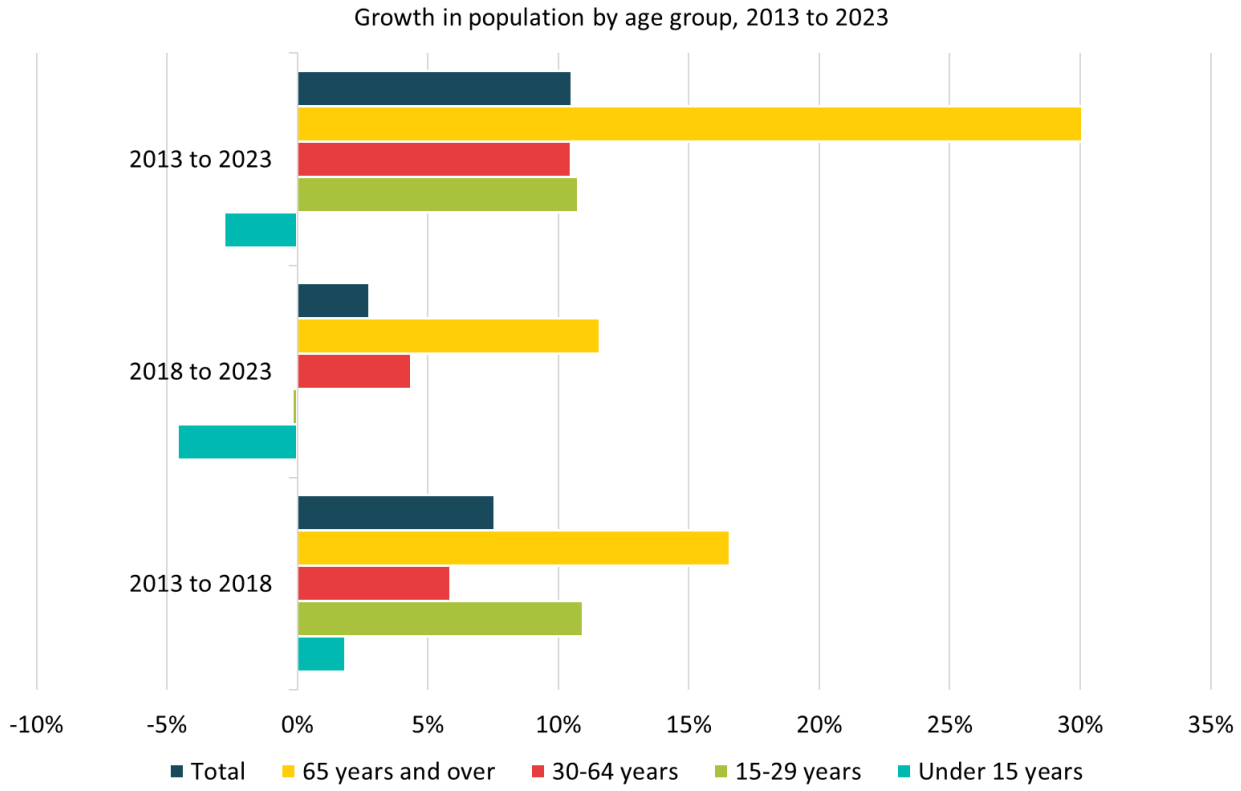
It is likely that Auckland will remain the main driver of population growth in New Zealand followed by Canterbury due to more affordable housing (relative to other major urban areas) and significant land available for development.

Using transport investment as a means of catalysing urban development to generate economic and population could help the Wellington Region remain attractive and competitive relative to other parts of New Zealand

### Wellington Region's population has aged significantly over the last 10 years

Over the period 2013 to 2023, the population of the Wellington Region increased by around 10%. The growth in persons aged 15 to 29 years and 30 to 64 years broadly mirrored the regional average of 10%, however the population of children aged under 15 years dropped by 3% and the number of older persons aged over 65 years increased by 30%.

Figure 1.4. Change in Wellington region population by age group, 2013 to 2023 (%).




The region's population is ageing – as is the population of all western countries – and this is likely to continue, with implications for public transport service planning and provision; for example, there could be more demand for off-peak services to key destinations such as medical centres and supermarkets.

The drop in children under 15 over the last 10 years is a trend that will need to be monitored – recent declines in fertility rates suggest that this trend could continue, which would also have implications for the provision of school transport.

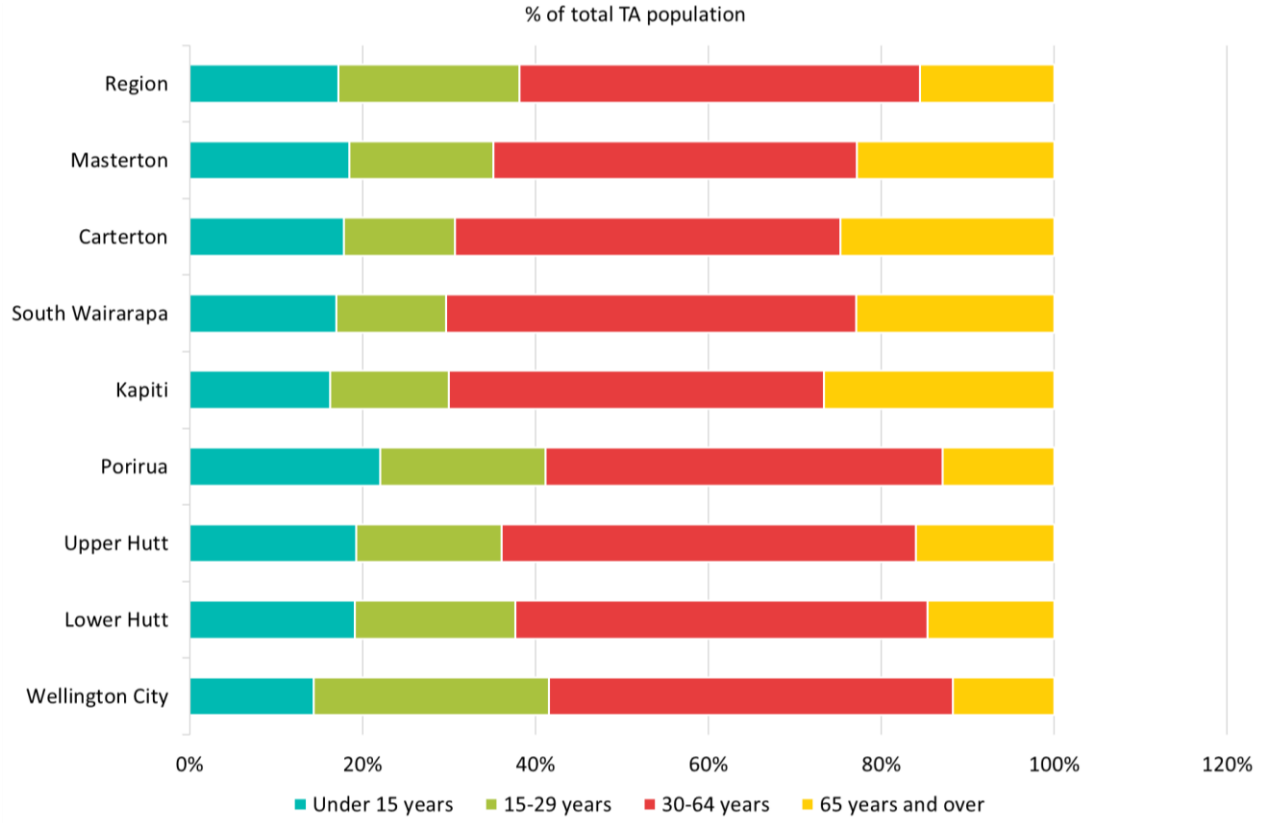
### Porirua has a high proportion of children and Kāpiti and Wairarapa have a high proportion of older people

Across the Wellington Region, around 16% of people are aged over 65, 18% aged under 15 and the majority (66%) aged between 15 and 65. There are large differences across areas:

- Wellington City has the greatest proportion (28%) of younger adults aged 15 to 29 years, driven by:
    - Tertiary-level study
    - Younger professional workers
- Wellington City's proportion of children (14% aged under 15 years) and older people (12% aged over 65 years) is lower than the regional average.

- Across the rest of the territorial authorities, between 18% and 22% of residents are aged under 15 years.
- In Lower Hutt, Porirua and Upper Hutt, between 14% and 16% of the population are aged over 65, whilst in Kāpiti and Wairarapa around 22% of the population are aged over 65 years.
- In Kāpiti Coast, over 25% of the population is aged over 65.

Figure 1.5.Population of Wellington Region by age group, Census 2023.

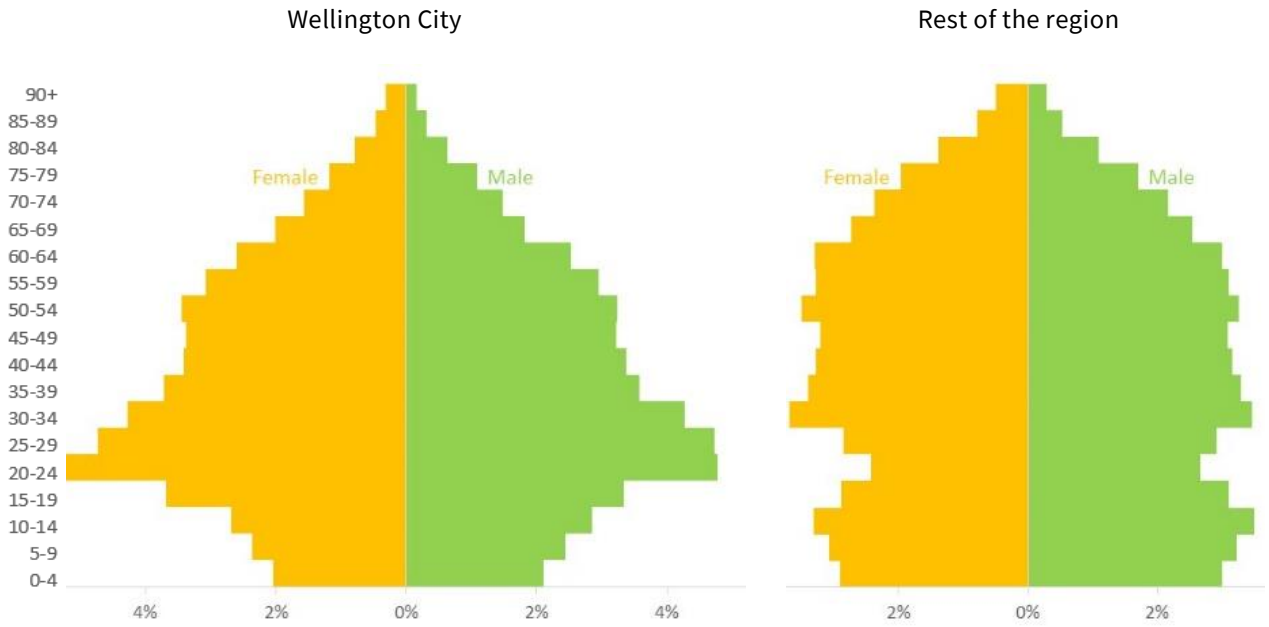



The differences in age profile across the region are illustrated in the age-gender pyramids for Wellington City and the rest of the region.

Wellington City's pyramid has a clear bulge in the 20 to 34 years age range, attributable to students and young professional workers. In contrast, the rest of the region has a higher proportion of children and older adults, and a low proportion of young adults. The pyramid for the rest of the region shows a 'bite' across ages 15 to 29 years, reflecting net migration losses at those young adult ages, potentially to Wellington City but also farther afield.

There are no significant differences in the age profiles between males and females.

Figure 1.6. Age pyramids for Wellington City and the rest of the region, 2023.



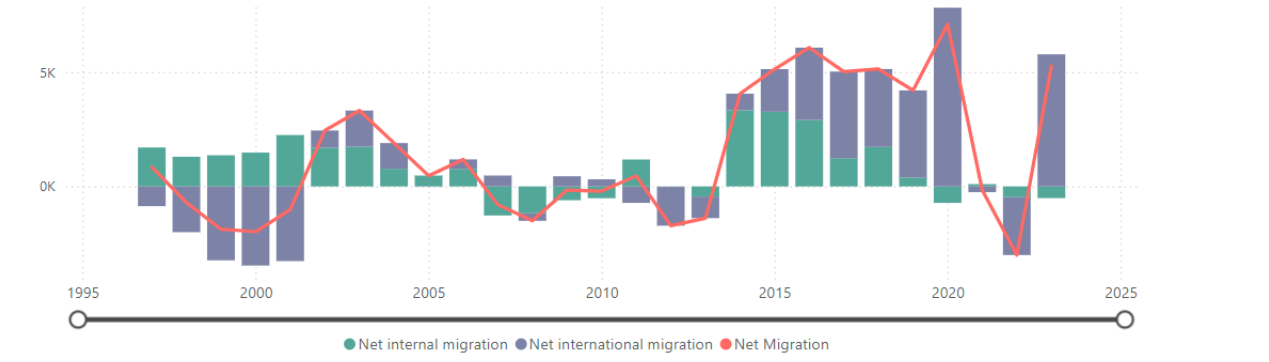

The ageing population in Wairarapa and Kāpiti Coast (and potentially lower growth in persons of working age) could have implications for travel patterns and public transport network design.

Porirua, Lower Hutt and Upper Hutt have the highest proportion of children aged under 15, with implications for the design of PT services for schools.

### Migration is the major driver of the region's population growth

Over the last 30 years there have been a number of migration waves in the Wellington Region (**Figure 1.7**). Over 2014 to 2020 the region had strong international net migration. Over those years, the region received 35,000 more inward than outward migrants. In other periods, there has been net emigration. Since 2017, population growth has largely been driven by international migration, rather than internal migration or natural population increase.

Figure 1.7. Net internal and external migration, 1995 to 2025.



Over the last 5 years, the region's natural increase in the population (excess births over deaths) has remained constant at around 1,500 per year. International migration has been a stronger driver of population growth.

Wellington City has a disproportionate share of net international migration, due to high student numbers and it being the centre of government and employment within the region. Elsewhere in the region, migration is more balanced between international and domestic migration.

In Kāpiti Coast, Upper Hutt and Wairarapa, net domestic migration has been greater than net international migration, a function of people retiring to these areas (particularly Wairarapa and Kāpiti Coast) from elsewhere in New Zealand and the Wellington Region, and younger families moving from Wellington City to these areas.

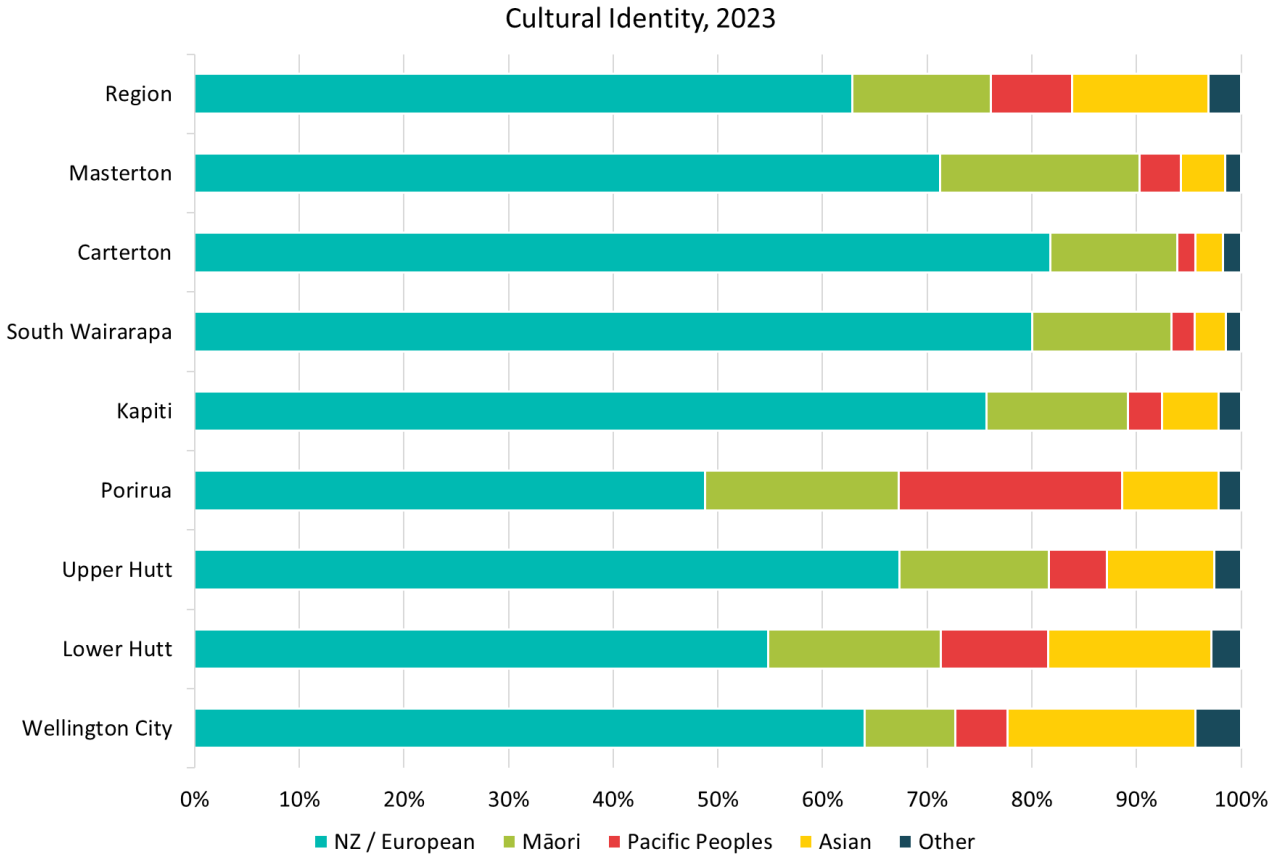
International migration is driven by multiple factors – government policy, macro-economic conditions, skill shortages, the attractiveness of New Zealand relative to other countries – with some of these factors outside of our control.

The competitiveness of the Wellington Region – in terms of housing affordability, job opportunities and having a safe, reliable and efficient transport network – will be critical in attracting migrants and driving economic growth.

### The ethnicity of residents of the Wellington Region varies significantly between areas

Across the region, around 63% of people identify as New Zealand European, with a further 13% identifying as Māori, 13% as Asian, 8% as Pasifika and 3% as other ethnic groups.

Figure 1.8. Cultural identity Wellington Region residents by territorial authority, 2023.




The composition of the region's population by ethnicity varies by area:

- Wellington City (18%) and Lower Hutt (16%) have the highest proportion of their population identifying as Asian.
- In Porirua, 20% of the population identify as Pasifika and 19% as Māori.
- South Wairarapa and Carterton have the highest proportion (over 80%) identifying as New Zealand European.

Different cultural groups might have different actual (or perceived) barriers for using public transport or walking or cycling and this needs to be considered when developing a transport network that is equitable and can offer transport choices.

## Employment

### 27,000 employees commute daily from outside of Wellington City to jobs in Wellington City

Across the Wellington Region, there were 294,000 employed people at the time of the 2023 census, equating to 68% of the population aged 15 or more years. Those numbers have grown from 209,000 in the 2001 census (65% of the population aged 15 or more years). There are differences in the number of employees depending on whether they are categorised at their place of residence or place of work.

Wellington City is the only TA where there are more people commuting into the TA for work than both living and working in the TA, reflecting a significant inflow of commuters into the city from elsewhere in the region

Table 1.2. Employees by place of residence and workplace.

| Item | Employees by workplace | Employees by residence | Difference | Ratio of employees by workplace to employees by residence |
|---|---|---|---|---|
| Wellington City | 154,300 | 126,600 | 27,700 | 1.22 |
| Lower Hutt | 52,600 | 58,600 | -6,000 | 0.90 |
| Upper Hutt | 17,800 | 24,800 | -7,000 | 0.72 |
| Porirua | 24,400 | 31,000 | -6,600 | 0.79 |
| Kāpiti | 22,100 | 27,500 | -5,400 | 0.80 |
| South Wairarapa | 5,700 | 6,300 | -600 | 0.90 |
| Carterton | 4,400 | 5,300 | -900 | 0.83 |
| Masterton | 13,600 | 13,800 | -200 | 0.99 |
| Region | 294,900 | 294,900 | | 1.00 |

By place of workplace location, Wellington City accounts for 154,000 (55% of total) of employees but only 126,600 (40%) when assessed by place of residence - this shows that there is a net inflow of 27,700 workers into Wellington City from elsewhere in the region to their place of work[1].

The opposite can be seen elsewhere in the region, with significantly more workers by place of residence compared to workers by workplace location, the exception being Masterton (and to a lesser extent Wairarapa as a whole) due to its relative isolation compared to the rest of the region.

The difference is greatest for Upper Hutt, with almost 30% fewer employees by workplace location compared to employees by place of residence, due to people commuting both from Upper Hutt to Lower Hutt and to Wellington CBD. Porirua and Kāpiti have around 20% fewer employees by workplace compared to employees by place of residence.

There are significant commuter flows between territorial authorities, with the dominant movement being to Wellington City from elsewhere in the region.

If this trend were to continue, the result would be increased demand between Hutt Valley/Kāpiti Coast/Porirua and Wellington City, requiring an assessment of whether additional rail capacity along the corridor (over and above what is currently committed via LNIRM) would be required to accommodate this increased demand, noting that increased working from home as a result of COVID has changed travel behaviours.

[1] Note that because some employees will work part time and work from home, this does not imply that there are 27,700 employees travelling from outside of Wellington City to a place of work in Wellington City every day

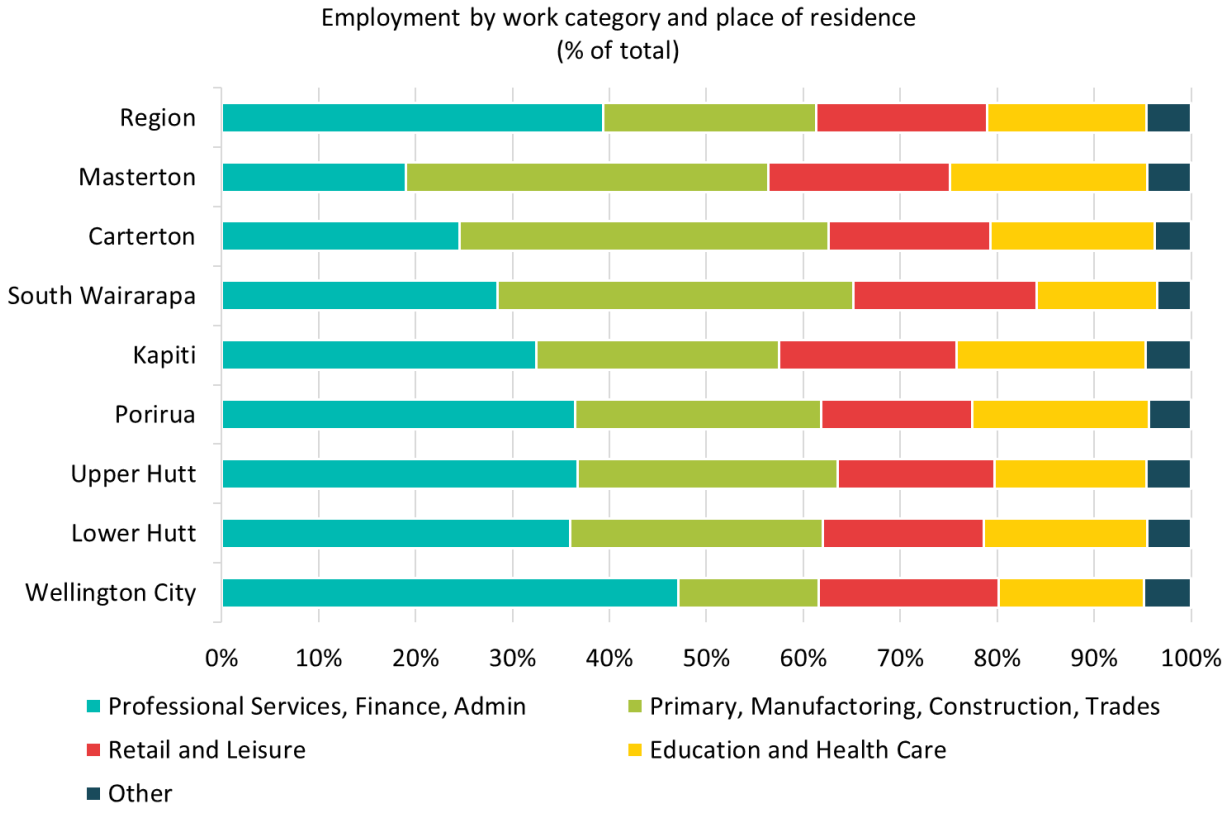
Unlike additional bus capacity, additional rail capacity is not 'incremental' and would require significant levels of investment to unlock growth and carry additional demand during the peak of the peak.

Under an alternative scenario where employment growth shifts to the regional centres, there might be a lesser requirement for additional peak period capacity to Wellington CBD and a greater need for additional PT capacity to service regional centres

### Urban residents in professional services, Wairarapa residents in primary sector and trades

Across the Wellington Region, there are around 294,000 employed persons working in a mix of industries at the 2023 census. The increase in the number of employed people (41% increase since 2021) has been greater than the increase in the total population size (23% increase).

Figure 1.9. Employment by work category and place of residence, Census 2023.




Most employees who live in Wellington City work in professional services. Professional services is the most popular sector for Lower Hutt, Porirua, Upper Hutt and Kāpiti Coast residents, accounting for around 35% of total resident employees.

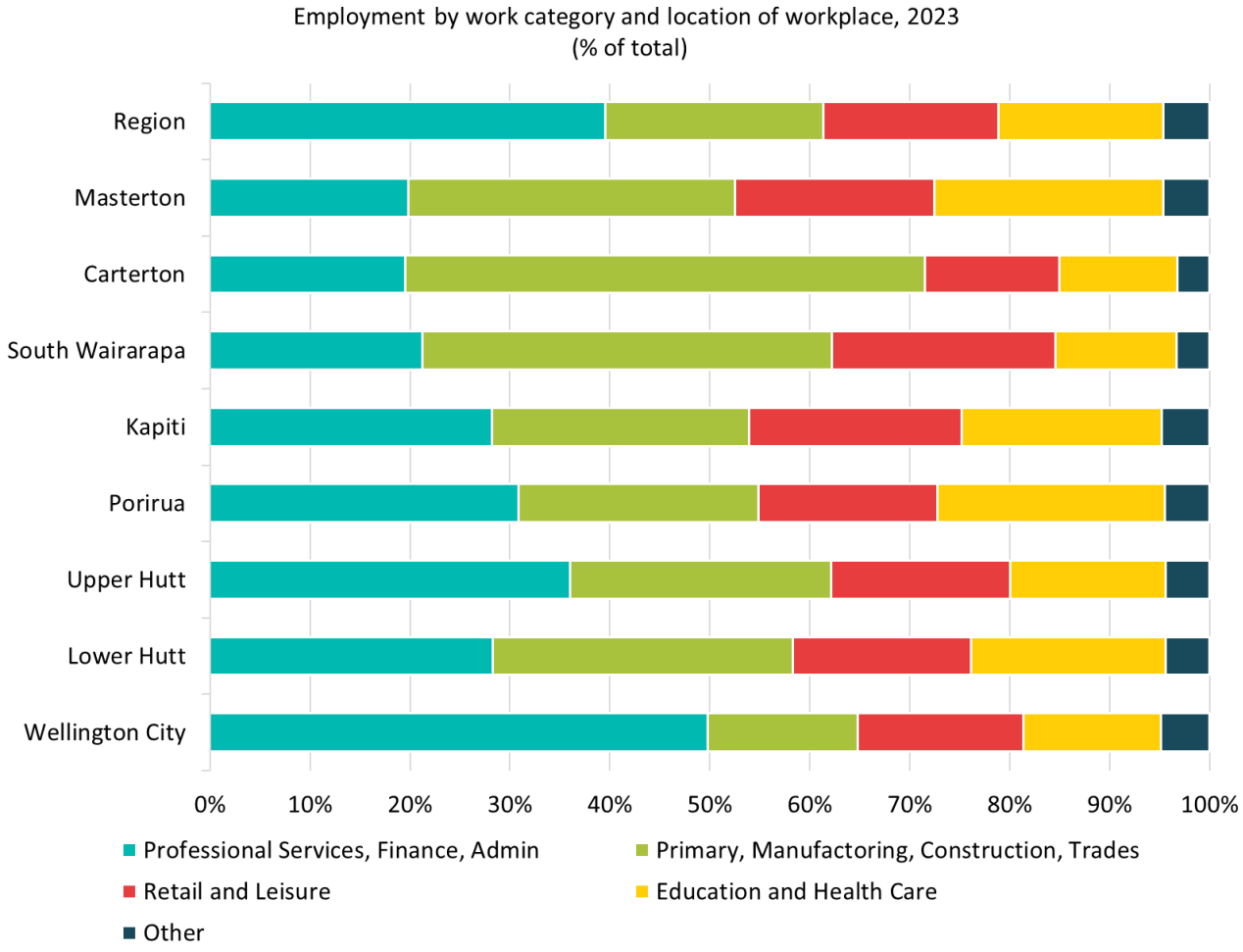
In South Wairarapa, Carterton and Masterton, primary, manufacturing, construction and trades account for the largest proportion of resident employees at between 35% and 40%.

### Professional services dominate in Wellington City, trades in Wairarapa

By location of workplace, Wellington Region's 295,000 employed persons work across a variety of industries with a slightly different composition than by place of residence. Half of

jobs in Wellington City are in professional services. In South Wairarapa and Carterton, over 40% are in primary, manufacturing, construction or trades.

Figure 1.10. Employment by work category and workplace location, Census 2023



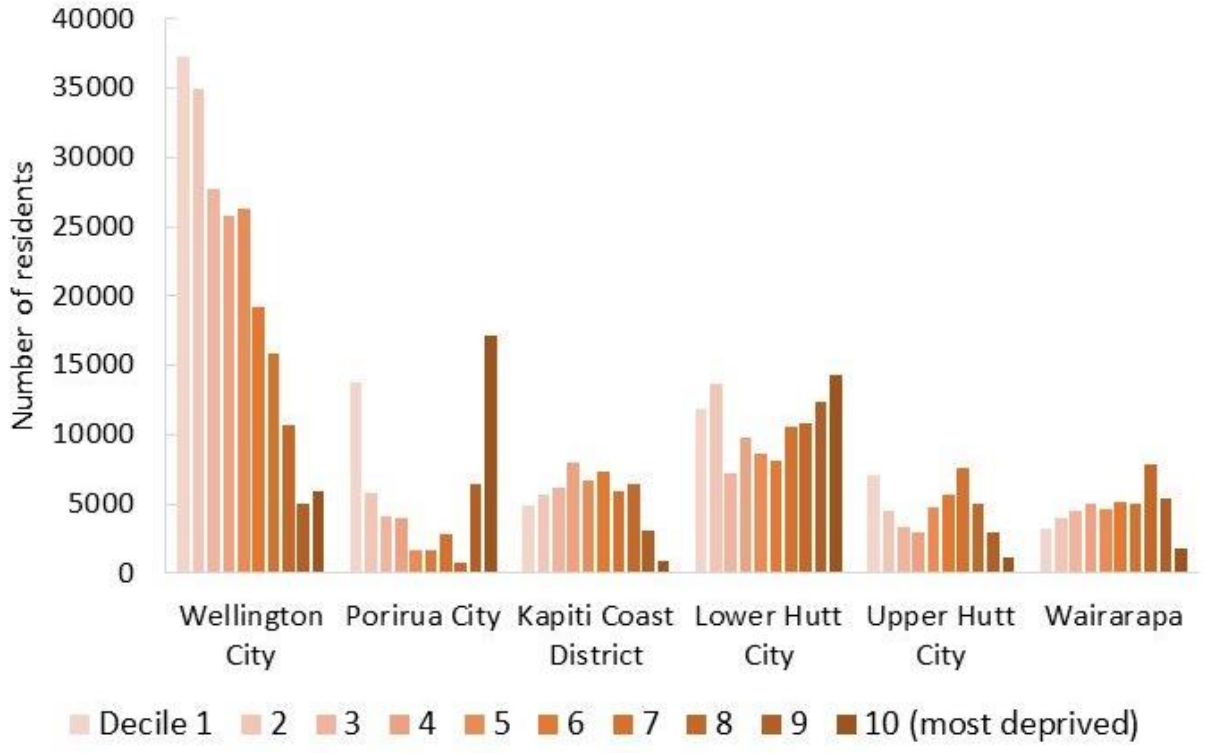

Different industry types have different capacities to work from home, different working hours and different working requirements. People working in professional services may have regular work times, reliable transport connections between home and their CBD workplace and the ability to work from home. People working in trades, manufacturing, or the primary sector may have non-standard work hours, no flexibility in work location, need to carry trade tools, and a work location not accessible by public transport.

The different travel characteristics and patterns – particularly relating to manufacturing / employment centres with high proportions of shift workers, e.g. retail, hospital, and airport – need to be considered when developing the future transport network to provide transport choices.

## Income and equity

### Porirua and Lower Hutt account for the majority of decile 9 and decile 10 (most deprived) areas

Figure 1.11. Number of residents by area and New Zealand Deprivation Index2 decile.




Porirua and Lower Hutt have the highest levels of deprivation within the Wellington Region, however significant variations in deprivation exist between and within territorial authorities:

- In Wellington City, the greatest proportion of people live in low-deprivation areas, with the lowest proportion living in deciles 9 and 10 (most deprived).
- In Porirua, there are significant contrasts, with deciles 1 and 2 (least deprived) and deciles 9 and 10 (most deprived) each accounting for over 30% of the population.
- Lower Hutt, like Porirua, has a significant proportion of the population living in decile 1 or 2 (least deprived) and decile 9 or 10 (most deprived). However, many people live in decile 3 to 7 areas.
- Upper Hutt, Kāpiti Coast and Wairarapa show similar patterns, with relatively even numbers of people living in areas between deciles 1 to 8, with relatively few people living in decile 9 and 10 areas.

People living in areas of high deprivation could have different travel patterns and characteristics to those in more affluent areas - accessibility to jobs and services by PT for

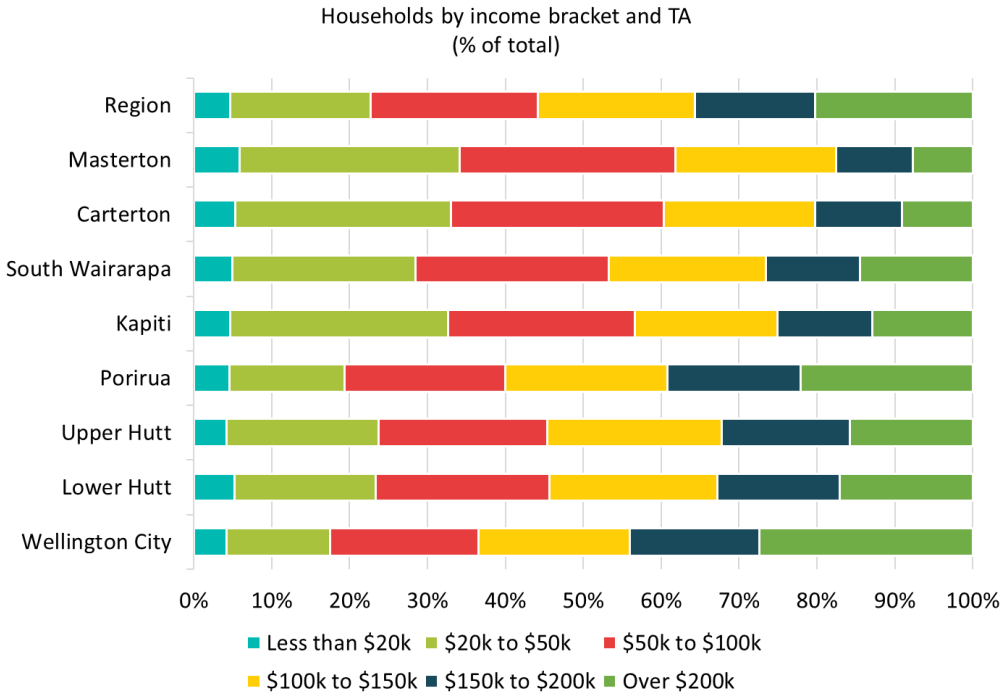
[2] EHINZ

areas of high deprivation should be considered when developing the future transport network to ensure it is equitable and provide transport choices.

### Significant regional income disparities

Average household income varies significantly across the region. Around 20% of households have an income over $200k per year, whilst 20% have less than $50k (Figure 1.12).

Figure 1.12. Household income by TA, Census 2023.




Wellington City has the highest average incomes, with nearly 30% of households earning over $200k and 63% earning over $100k.

Kāpiti Coast and Wairarapa have around 30% of households with an income less than $50,000 – this is likely to be a result of these areas having a higher proportion of older people with New Zealand Superannuation as the main income source.

Across the whole of the region, around 40% to 50% of households have an average income between $50k and $150k.

Income impacts on travel patterns. In the public transport system, affordability is an important factor, but other frequency, quality, and competitiveness of travel times relative to car travel are also important.

### Vehicle ownership varies across the region

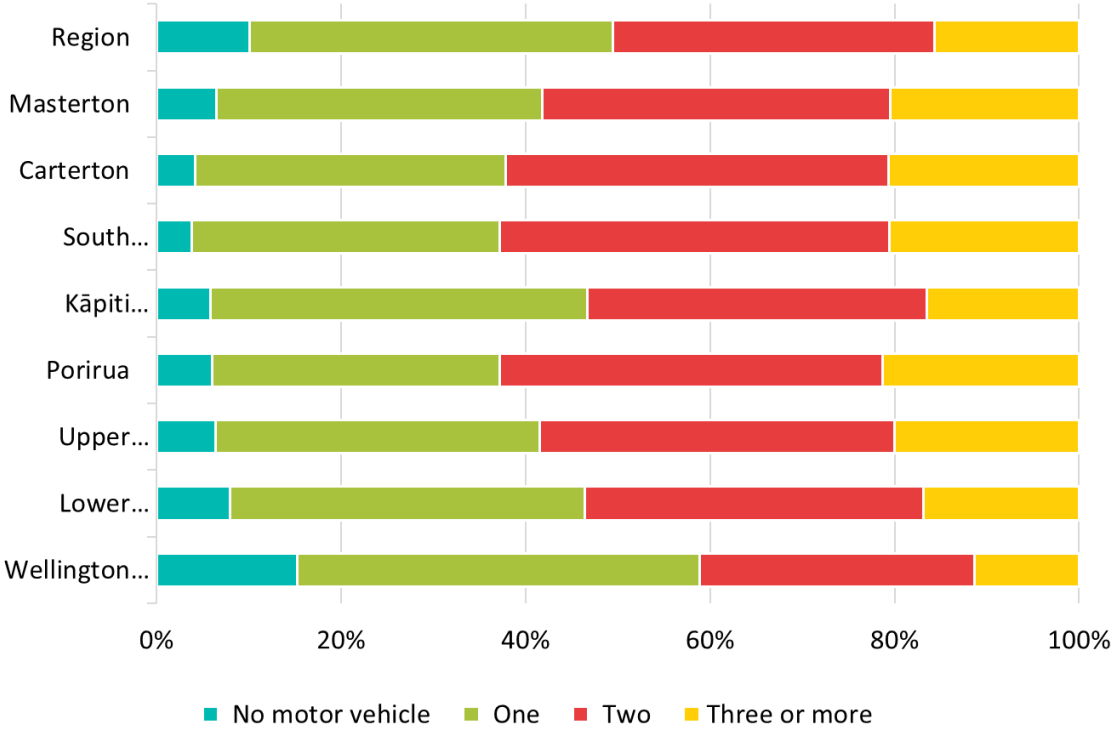
Motor vehicle ownership varies significantly across the region. In Wellington City, 40% of households have two or more cars, compared to 55% to 60% elsewhere in the region (Figure 1.13)

Wellington City has the lowest car ownership in the region, averaging 1.4 cars per household. Around 15% of households have no car, and 45% have just one. This reflects its compact urban form, high parking costs (particularly in the CBD), and a strong public transport network.

In contrast, Porirua, South Wairarapa and Carterton have the highest car ownership, averaging 1.9 cars per household, with over 20% of households owning three or more cars. In Upper Hutt, Porirua and Wairarapa, two-car households are more common than one-car households.

Outside Wellington City and Lower Hutt, only around 5% of households are car-free. High car ownership in these areas largely reflects low-density urban form, which encourages reliance on private vehicles. Other contributing factors may include the type and location of employment, and the limited practicality or competitiveness of public transport for accessing jobs, services and recreation.

Figure 1.13. Household car ownership, 2023.



# 2. General travel patterns

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Most trips are not undertaken for work purposes**. Only about 20% of trips are commuting. The rest are mainly for shopping, leisure, or other reasons, often at off-peak times or weekends.
- **Weekend travel has grown.** Weekends account for 30% of weekly trips and most of these trips are by car.
- **Short car trips are common**. About 30% of car trips are less than 2 km but these only contribute 2% of vehicle kilometres travelled.
- **Car use dominates outside Wellington City.** In Wellington City, only 60% of daily trips are made by car, compared to over 80% elsewhere. This is likely a result of a number of factors including urban density and access to public transport.
- **Wellington City drives PT and active mode use.** About 80% of bus and 85% of rail trips start or end in Wellington City, even though only 40% of the region's population lives there. 25% of trips in Wellington City are made on foot, compared to 10% to 15% elsewhere.
- **Mode choice depends on trip purpose.** Trips to education and work have the highest public transport and active mode share, while shopping and leisure trips are more likely to be by car.
- **Most trips stay within the same area**. Walking, cycling, bus and car trips mostly take place within the same territorial authority, while rail trips are more likely to cross boundaries.
- **People are travelling less.** The average number of trips on weekdays decreased from 4.6 in 2001 to 4.1 in 2018, likely a result of increased in e-commerce, remote working, and other lifestyle changes.

The key considerations for the RLTP 2027 are as follows:

- **Balance between peak and off-peak**. Given changes in working patterns, consideration should be given to the balance of investment between the peak and off-peak / weekend travel, which make up most of the region's trips.
- **Opportunities to increase PT uptake outside of Wellington City**. There is significant potential to grow public transport mode share in the wider region, where usage remain low.
- **Targeting short distance trips**. Greater use of walking and cycling for short trips could help reduce emissions and improve health outcomes.

## Purpose and scope

People travel for a range of different purposes – work, leisure, business – at different times of the day and on different days of the week.

The purpose of this chapter is to understand:

- Reasons for travel
- The modes that people use to travel for different purposes
- Times and days when people travel
- The mode people choose, and how this varies across the Wellington Region
- Differences in travel patterns between different modes and at a spatial level

## Household Travel Survey analysis

The sample rate of the New Zealand Household Travel Survey (HTS) is relatively low, which can limit its ability to represent travel within specific regions or sub-populations.

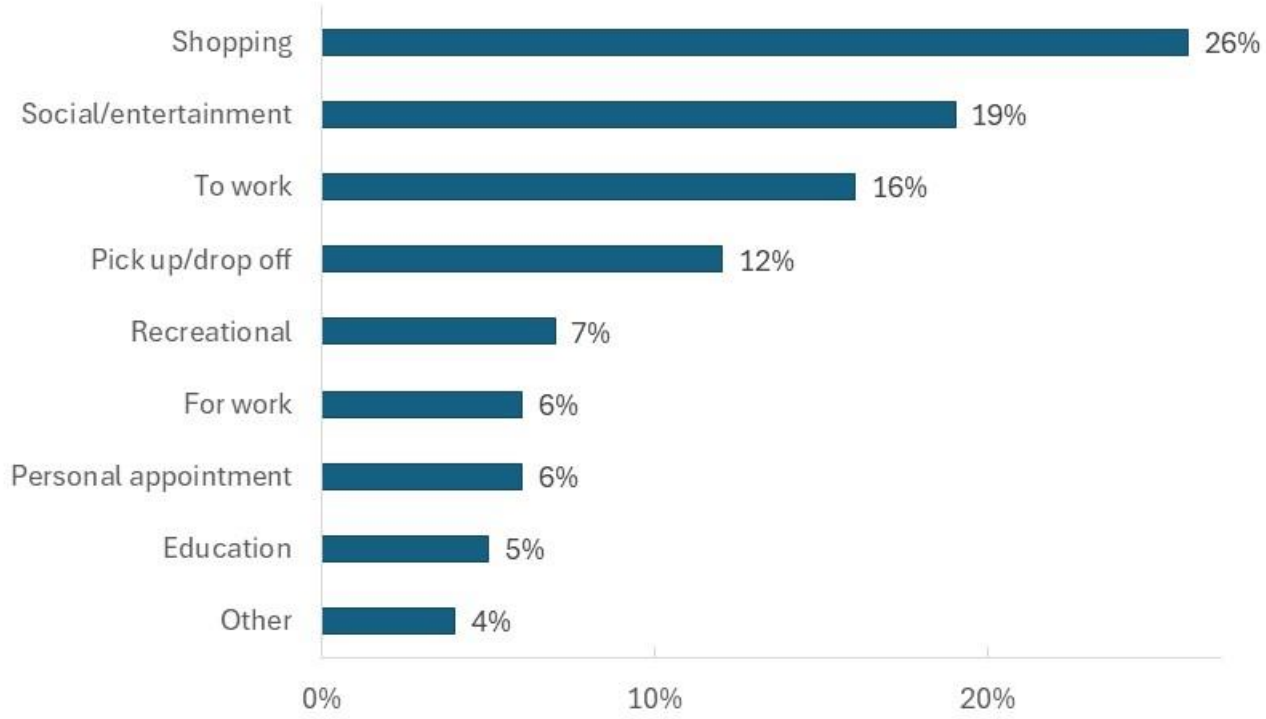
Furthermore, the HTS data is trip-based, rather than journey-based. A journey from home to school (school dop-off) and then on to work will be reported as two trips, one “Pick Up/Drop Off” and one “to Work”. Insights into trip-chaining therefore cannot be easily derived.

Analysis of HTS data should therefore be used indicatively and complemented by other data sources where possible. That said, analysis from the HTS can give valuable and often unique insight into travel behaviour.

## Only 20% of trips are to work

People travel for a wide of reasons (Figure 2.1). The leading trip purposes in the Wellington Region are shopping, social/entertainment, to work, and pick-up/drop-off.

Figure 2.1. Purpose of trips.




Source: Household Travel Survey, 2016 to 2022. Note: Trips with the purpose "to Home" are excluded here as they can be interpreted as the last leg of a single journey, rather than serving a unique purpose.

Nevertheless, commuting trips to and from work stand out because:

- They tend to be highly directional, with urban centres hosting the largest number of jobs and attracting the largest number of trips.
- Many of the trips to work (and to education) happen around the same time of day.
- On average, commuting trip distances are longer than trip distances for most other purposes.
- If done by car, trips to work usually require the car to be parked for the entire duration of the working hours, often in locations where space is limited and costly.

The high temporal and spatial density of commuting trips, combined with the low efficiency of the single-occupant car commuter trips means that the road network near major employment centres is at or near capacity during peak periods.

We should keep in mind that within one category such as shopping, there will be significant variations between the exact nature of such trips. For example, a shopping trip could consist of driving across the region to buy a fridge, or it could be a walk to the dairy around the corner for a bottle of milk.

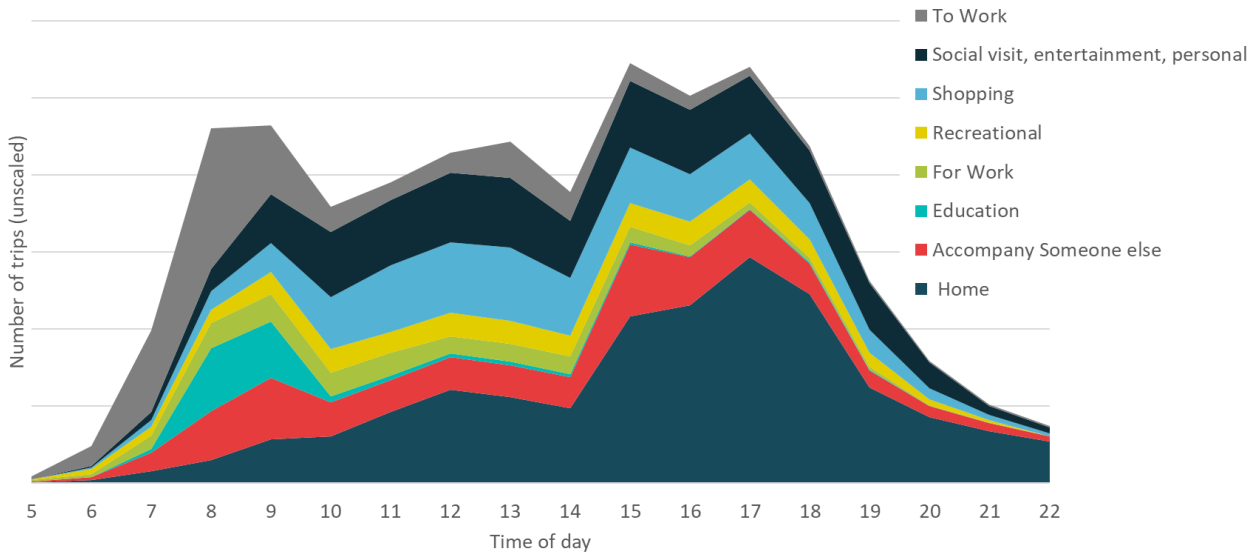
## Prevalence of trip purposes depends on time of day

Figure 2.2 shows the distribution of trips by purposes and time of day.

Trips with purpose "home" (where travel did not occur) are included here to complete the picture. The occurrence of these trips increases throughout the morning and midday and has

a broad peak between 2pm and 8pm. Trips to work and education peak around the same time in the morning from 6am to 10am, with the total number of trips peaking between 3pm and 5pm, coinciding with school children and commuters returning home and people undertaking leisure/shopping trips.

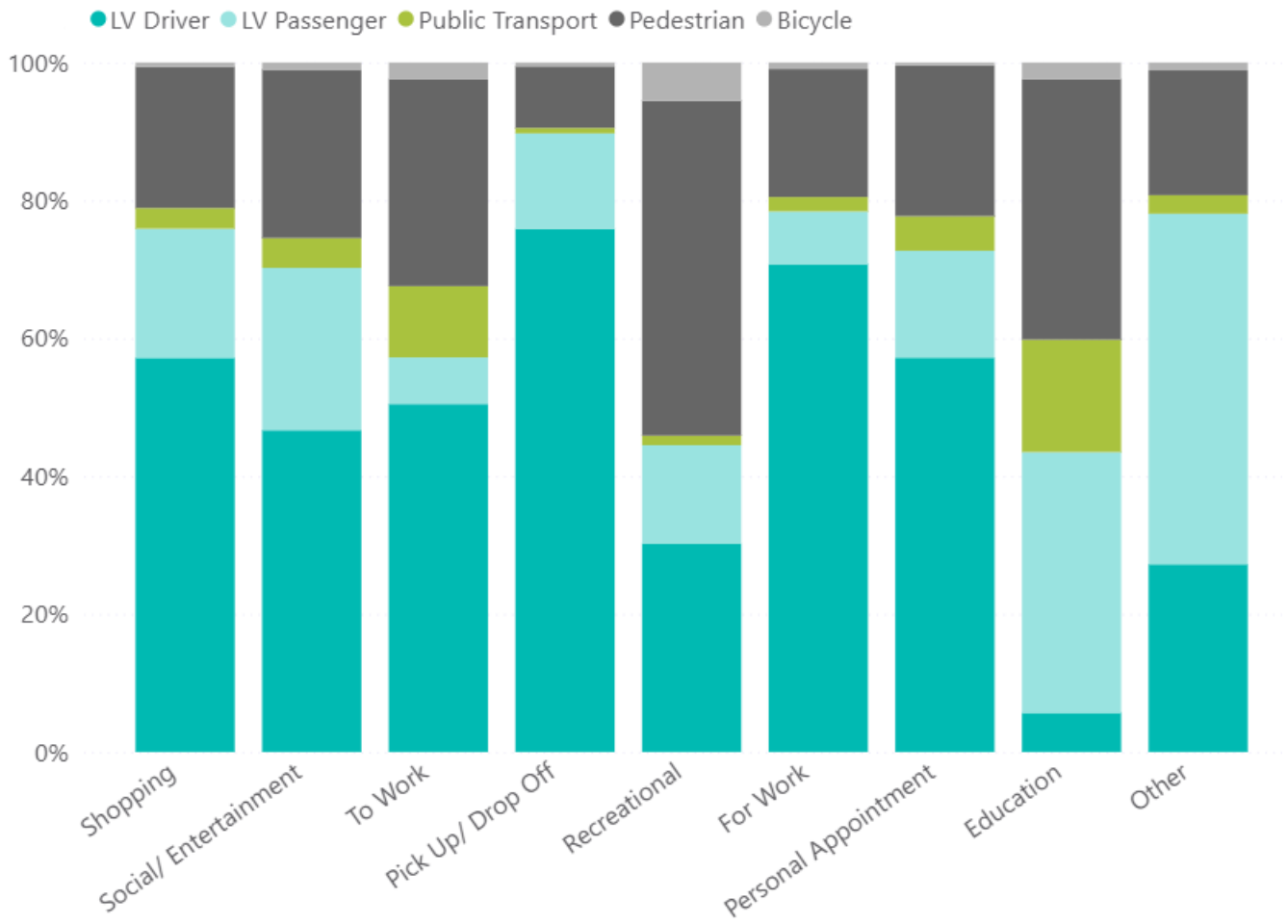
Figure 2.2. Purpose of trip, by time of day.




## Trips to education or place of work have the highest PT share of trips

The HTS also allows us to examine which modes people use for the different sort of trips they make. The results vary significantly from one trip-purpose to the other (Figure 2.3).

Figure 2.3. Mode distribution by trip purpose.




Light Vehicle (LV) is the most-used mode (for both drivers and passengers) across most purposes but varies from about 45% for recreational trips to close to 90% for pick up/drop off trips.

The car mode-share for trips to work is comparatively low at less than 60%, partly due to the low car passenger mode-share of 7% and low overall vehicle occupancy; other trip purposes such as shopping and entertainment have much higher implied car occupancy (ratio of car drivers to car passengers).

Public transport has a relatively high share of trips to education (especially secondary school and tertiary education) and trips to work, but low share of shopping, recreational, and other trips.

Active modes (pedestrian and bicycle) make up the majority of recreational trips and also account for a high proportion of trips to education (especially primary school), trips to work.

Journey-to-work trips have a low car occupancy, highlighting a potential opportunity to increase car occupancy and/or encourage single motor vehicle occupants to use alternative modes to improve the efficiency of the transport network.

Car occupancy is significantly higher for shopping and entertainment trips than for commuting. This makes private cars more competitive and convenient per person for these trip types, compared to public transport. While there is merit in encouraging greater public

transport use for such trips, it is also important to recognise that in some cases the private car will remain the most efficient option.

## Most trips have relatively short trips lengths

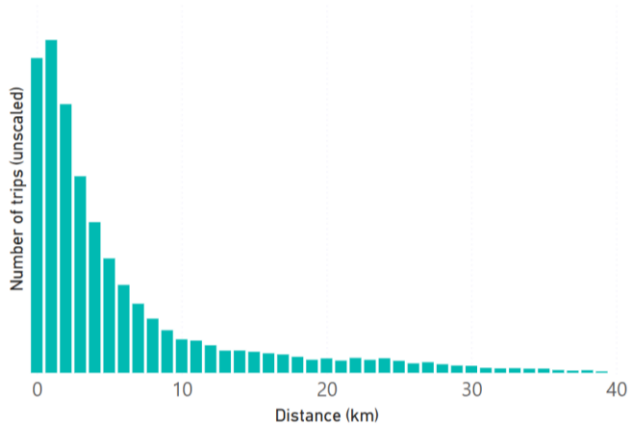
Trips distances are mostly short, with the most common distances varying by mode (Figure 2.4). Light vehicle and cycle trips show a similar distribution up to about 15 km. The trip length distribution peaks at

- 1 to 2 km trip distance for light vehicle trips.
- 2 to 3 km trip distance for public transport trips.
- 0 to 1km trip distance for walking trips.
- 1 to 2 km trip distance for cycle trips.

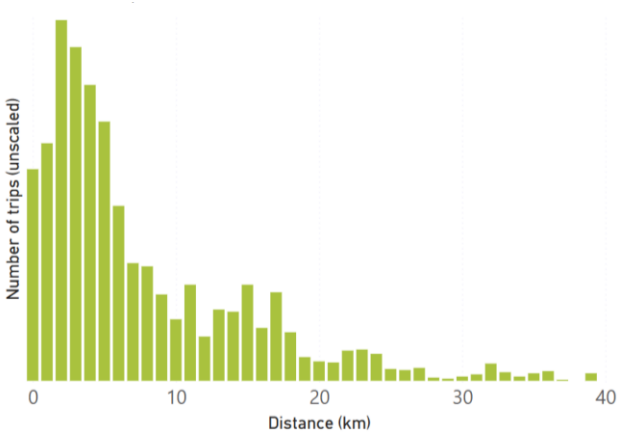
Public transport trips are generally longer

Figure 2.4. Trip length distribution by mode.

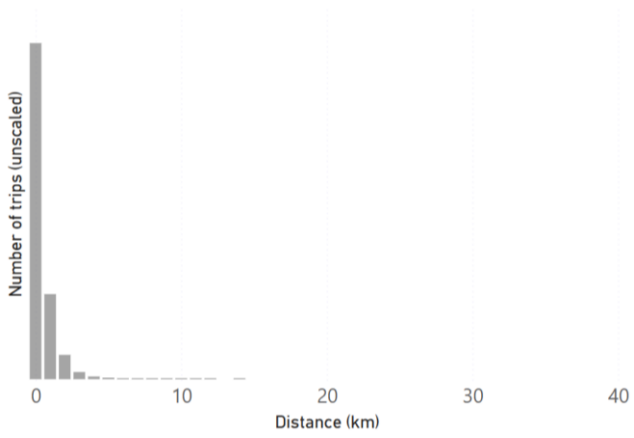
Light Vehicle trip length distribution



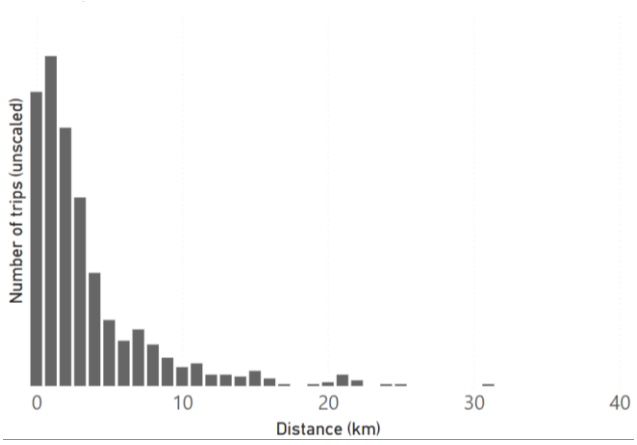

Public Transport trip length distribution




Walking distribution




Cycling trip length distribution trip length



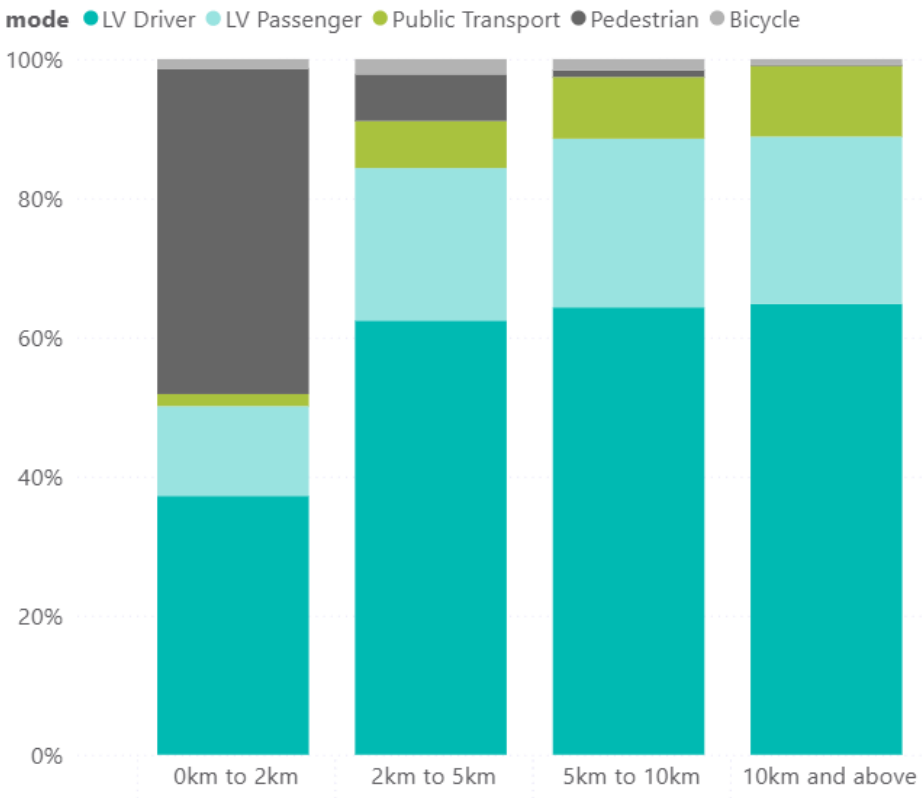
Car trips below about 2 km have the potential to be substituted by walking trips for many people. Car trips in the range of 3 km to 10 km have the potential to be substituted for cycling or public transport, depending on their destination, purpose and other factors.

Longer car trips could potentially be substituted by public transport trips, although this is dependent on the trip purposes and would be dependent on the improved integration of bus and rail networks.

## Half of trips less than 2 km are by car

Analysis of mode distribution within bands of trip length shows that short trips (up to 2 kilometres) are done either by car or by walking – about half each (Figure 2.5). For trips longer than 2 kilometres, 60% to 65% are by car drivers or passengers. Public transport trips have their highest share of around 11% for trips longer than 10km. The cycling mode share is highest for trips between 2 km and 5 km (about 2.2%), followed by 5 km to 10km (about 1.6%).

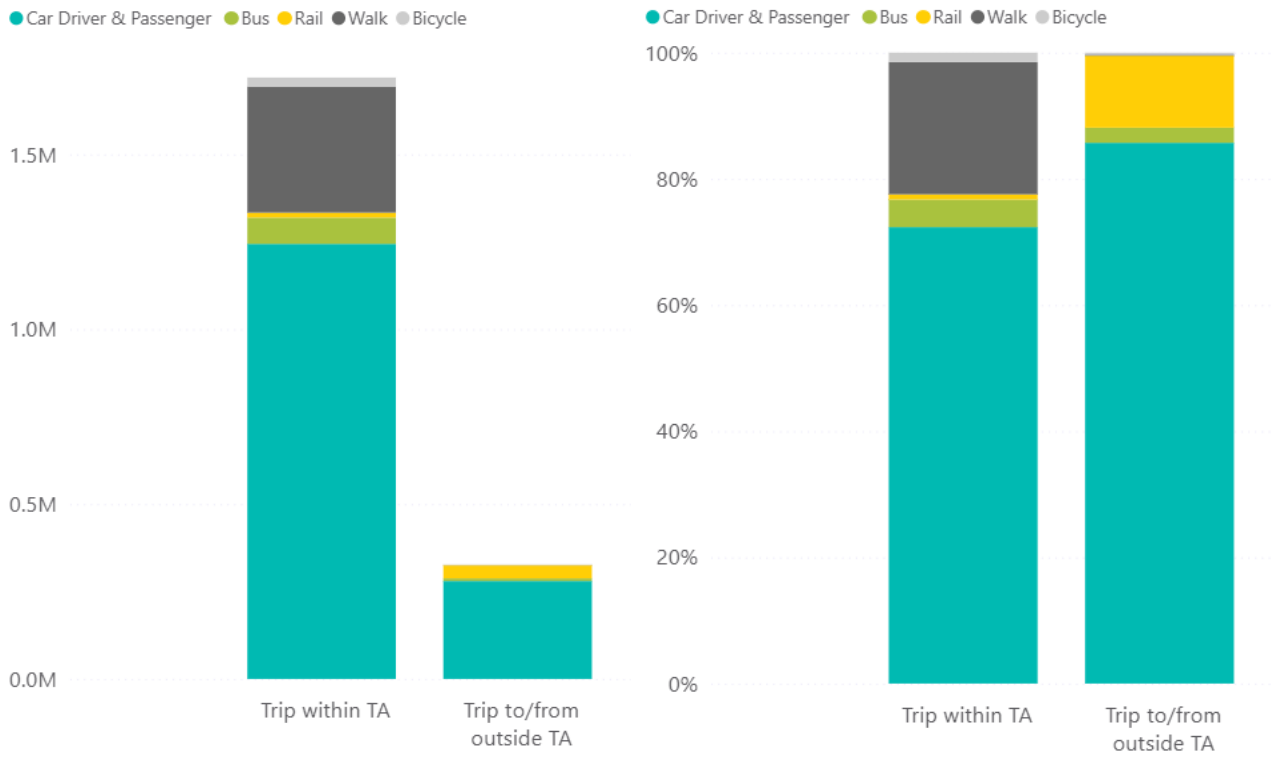
Figure 2.5. Mode choice by trip distance.




## The majority of trips stay within the TA they started in

The Wellington Transport Strategy Model (WTSM) shows that 75% of trips start and end within a single territorial authority (Figure 2.6). Nearly all walking trips remain within a territorial authority, and most rail trips cross from one territorial authority to another.

Figure 2.6. Mode share distribution for trips staying within a TA and trips from one TA to another: number (left) and percentage (right).




## Most kilometres travelled are by car or public transport

Unlike the number of trips, the number of kilometres travelled are dominated by longer trips, which are mostly by car or public transport (Figure 2.7 and Figure 2.8). For example, only 10% of car trips are more than 20km long, but they contribute 40% of VKT.

With the exception of long trips of 10km or more, the distribution of cycling trip lengths is similar to cars.

Figure 2.7. Proportion of kilometres travelled by mode and trip length.

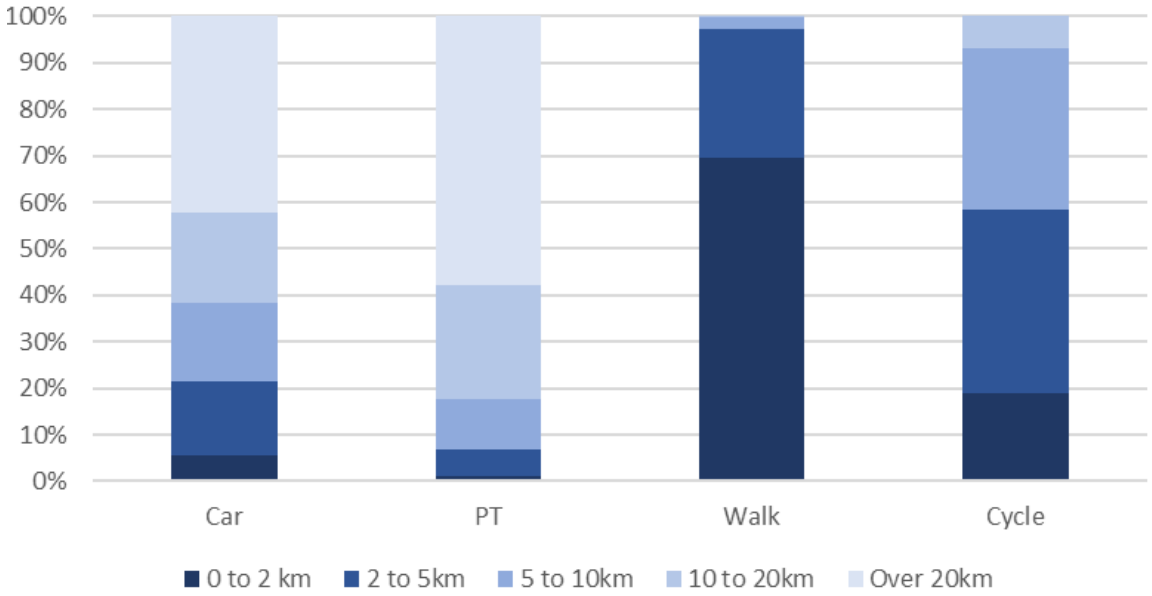
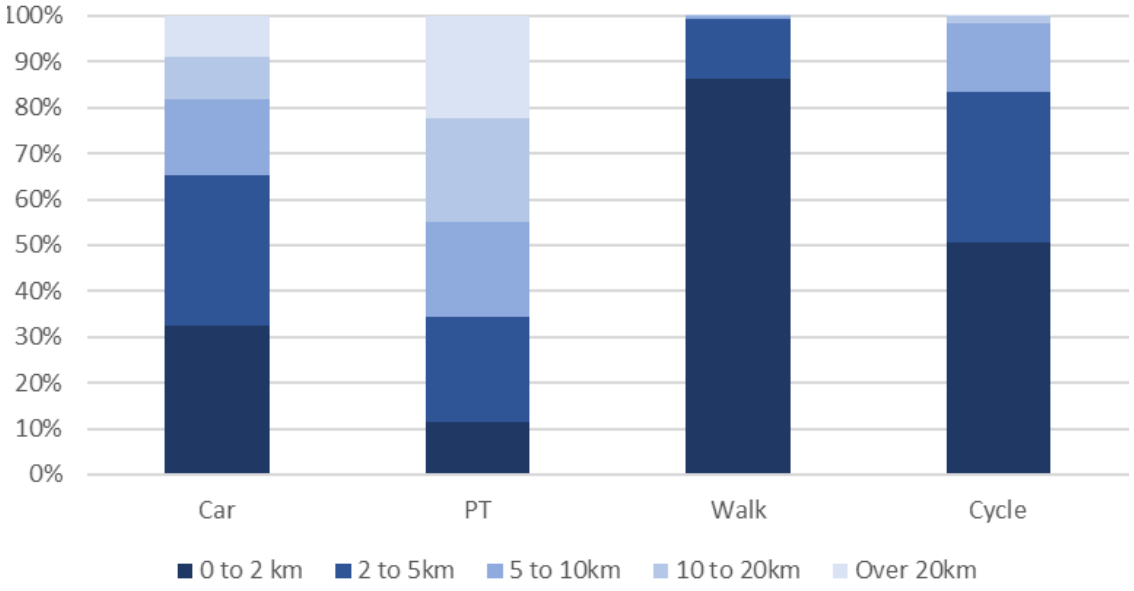



Figure 2.8. Proportion of trips by mode and trip length.




## Three-quarters of trips are by car, but lower in Wellington City

Across the Wellington Region, 74% of trips are done by car, but the proportion varies by area (Table 2.1). In Wellington City the proportion is 63%, compared with 83% to 85% elsewhere.

Table 2.1. Trip mode-share, by origin area.

| | Light Vehicle (pers) | Bus | Rail | Walk | Cycle | Total person trips |
|---|---|---|---|---|---|---|
| Wellington City | 63% | 7% | 3% | 26% | 2% | 100% |
| Lower Hutt City | 83% | 2% | 2% | 11% | 1% | 100% |
| Upper Hutt City | 84% | 2% | 3% | 11% | 1% | 100% |
| Porirua City | 84% | 2% | 3% | 10% | 1% | 100% |
| Kapiti Coast District | 84% | 1% | 2% | 12% | 1% | 100% |
| Wairarapa | 85% | 1% | 1% | 13% | 1% | 100% |
| Region Total | 74% | 4% | 3% | 18% | 1% | 100% |

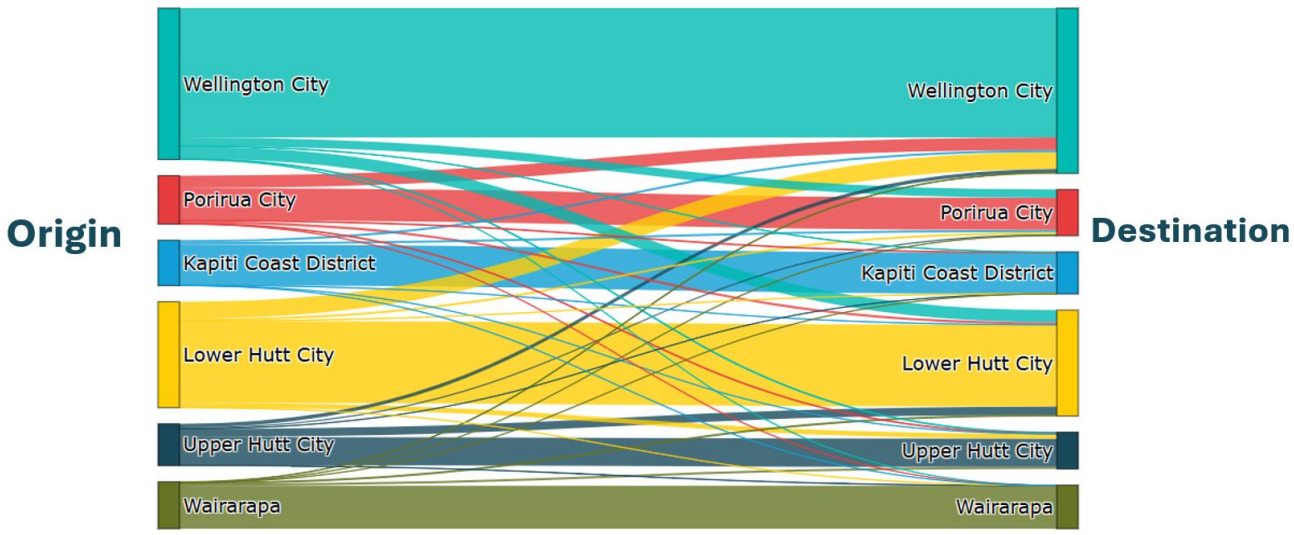
Wellington City's lower car mode share reflects:

- Limited road capacity and parking in the CBD make public and active transport more competitive and affordable than driving.
- Strong bus and rail connections provide viable alternatives to the car.
- The city's compact urban form supports walking and cycling as convenient travel options.

## Most light vehicle trips stay within the area

During the AM peak (6am to 9am), about 30% of the region's light vehicle (LV) trips start and end within Wellington City (Figure 2.9). About 50% of the region's trips are within an area outside Wellington City. Most LV trips are internal (within the area they started in). Most of the LV trips that cross from one area to another are to or from Wellington City. Those distributions vary little across the day.

Figure 2.9. Light vehicle demand, AM peak.

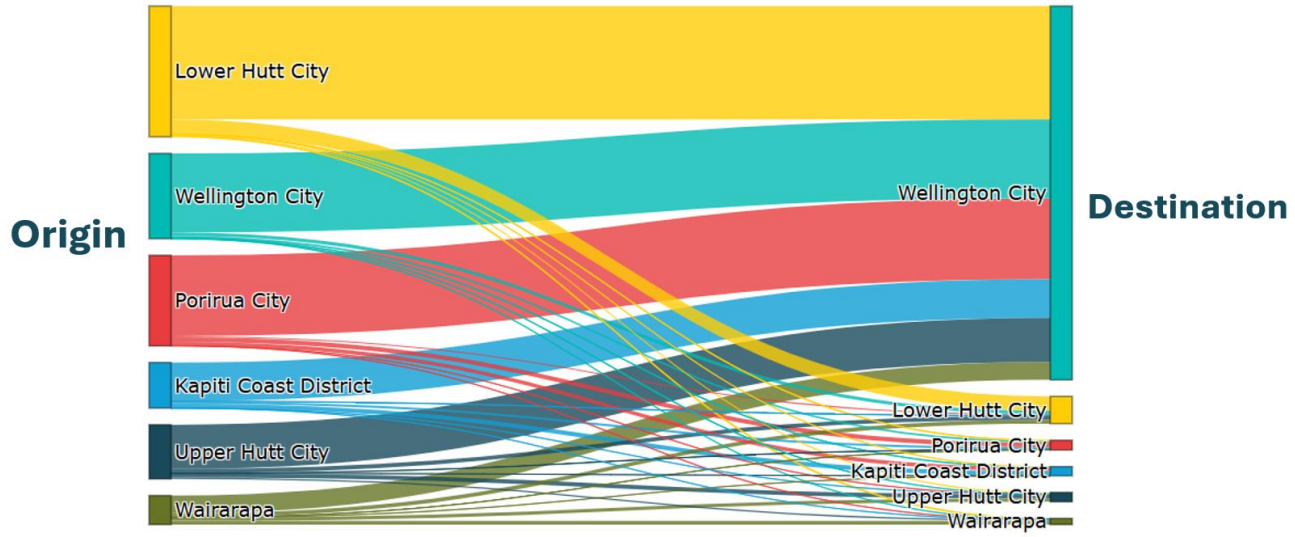



## Most rail trips start or end in Wellington City

During the morning peak, 86% of the region's rail trips end in Wellington City, including 40% from Hutt Valley and Wairarapa lines, and 28% from the Kāpiti line (Figure 2.10). In the

afternoon peak, 79% of trips start in Wellington City. About 75% of all rail trips cross at least one TA boundary.

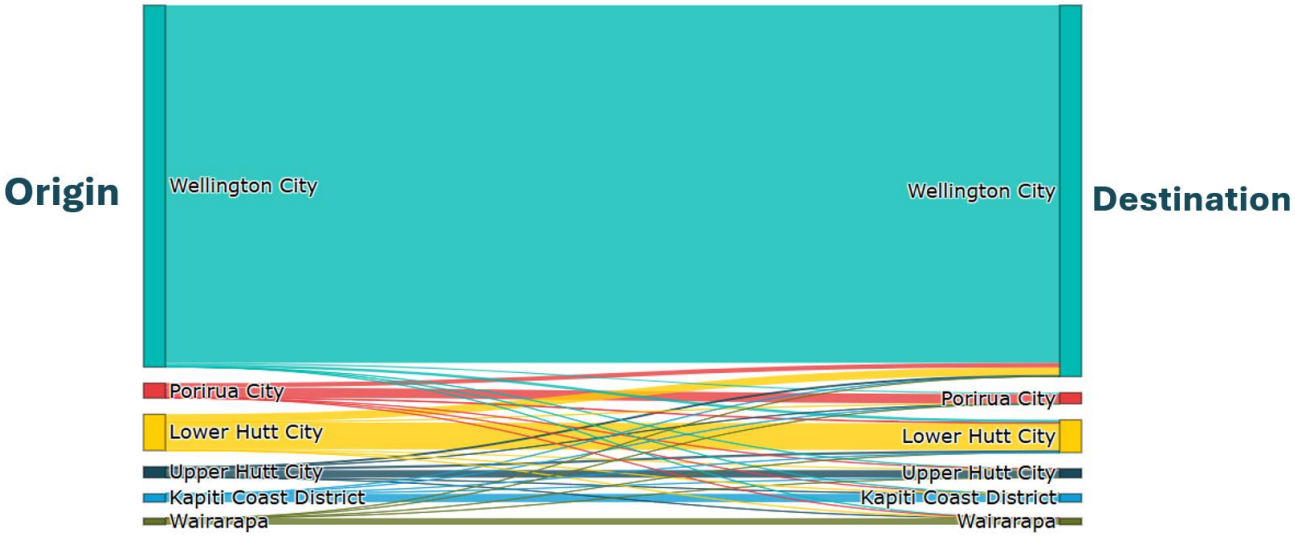
Figure 2.10. Rail demand, AM peak.




## Most bus trips start and end in Wellington City

Wellington City internal trips dominate regional bus travel (Figure 2.11). In the morning peak, 82% of bus trips both start and end in Wellington City. In the afternoon peak, the proportion is 74%. Most remaining bus trips are internal to other areas – very few cross from one area to another.

Figure 2.11. Bus demand, AM peak.



## Trip rates have decreased over the last 2 decades

Household trip rates – the number of trips made per person – can be estimated based on the New Zealand Household Travel Survey (HTS). Weekday trip rates have decreased over the last 2 decades. In 2001 the average number of weekday trips was 4.6 per person and that decreased to 4.1 in 2018. This decrease has potentially been driven by a combination of factors, including growth in e-commerce and remote working, even before COVID. The trend of falling trip rates mirrors trends reported for other countries.

# 3. Journey to work and journey to education

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Wellington CBD is the main commuter destination**. It attracts around 40% of the commuter trips, drawing workers from across the region, but 77% of these trips originate within Wellington City itself.
- **Most people work and study close to home**. Outside Wellington City, most journey-to-work and journey-to-education trips start and end within the same territorial authority.
- **Mode share patterns are diverging**. Since 2001, Wellington CBD has seen a shift towards public and active modes (from 50% to 65%), while other areas have seen increasing car mode share of commuting trips.
- **Cars dominate outside Wellington City.** The private car accounts for around 90% of journeys to work with destinations outside of Wellington City.
- **Active and public transport use is strongest for education trips**. Students (primary, secondary, and tertiary level) are more likely than workers to walk, cycle, or use public transport, particularly in Wellington City and Wairarapa.
- **Employees in the Wellington region have a high propensity to work from home**. Compared to other parts of New Zealand, the concentration of government activity in Wellington CBD results in 40% of the region's workers being able to work from home, a figure significantly higher than Auckland and Wellington.

The key considerations for the RLTP are as follows:

- **Opportunities outside of Wellington City to increase PT and active mode share.** Most non-Wellington CBD destinations still have high car mode share of journeys to work, and consideration should be given to generating mode shift outside of Wellington City and CBD.
- **Integration of transport and land use**. Outside of Wellington City, lower housing density and dispersed employment locations limit the effectiveness and viability of public transport as means of travelling to work, and considering should be given to better integrating land use and public transport as a means of increasing non-car mode share of journeys.
- **Respond to new work patterns**. Growth in flexible and hybrid work has resulted in a change in travel patterns in the Wellington Region, and consideration should be given to how the region's public transport can respond to these changing travel patterns.

## Purpose and scope

As part of each New Zealand Census, people are asked how they get to work and education, if applicable. The census is a rich source of information about the modes people use to access

work (journey to work, JTW) and education (journey to education, JTE). This chapter presents insights from the 2023 census, and also looks into trends and changes through time, looking back to as far as 1996.

As discussed in the previous chapter, trips to work have unique travel and mode share patterns.

The key questions that this chapter answers are:

- How does the mode of travel to work vary across the Wellington Region?
- Which areas have a high number of people working from home?
- How have patterns changed over time?
- Which areas generate a high car- or PT- or active-mode share of journey to work (JTW) trips?
- Which destinations attract a high car- or PT- or active-mode share of journey to work (JTW) trips?

## Data Limitations

In order to inhibit identification of individuals, Statistics New Zealand takes steps to anonymise the data, which means data will be supressed if it relates to a very small number of people. This means that the JTW/Education data can be misleading when analysing less used modes and/or locations. In these cases, aggregated data should be used, if available.

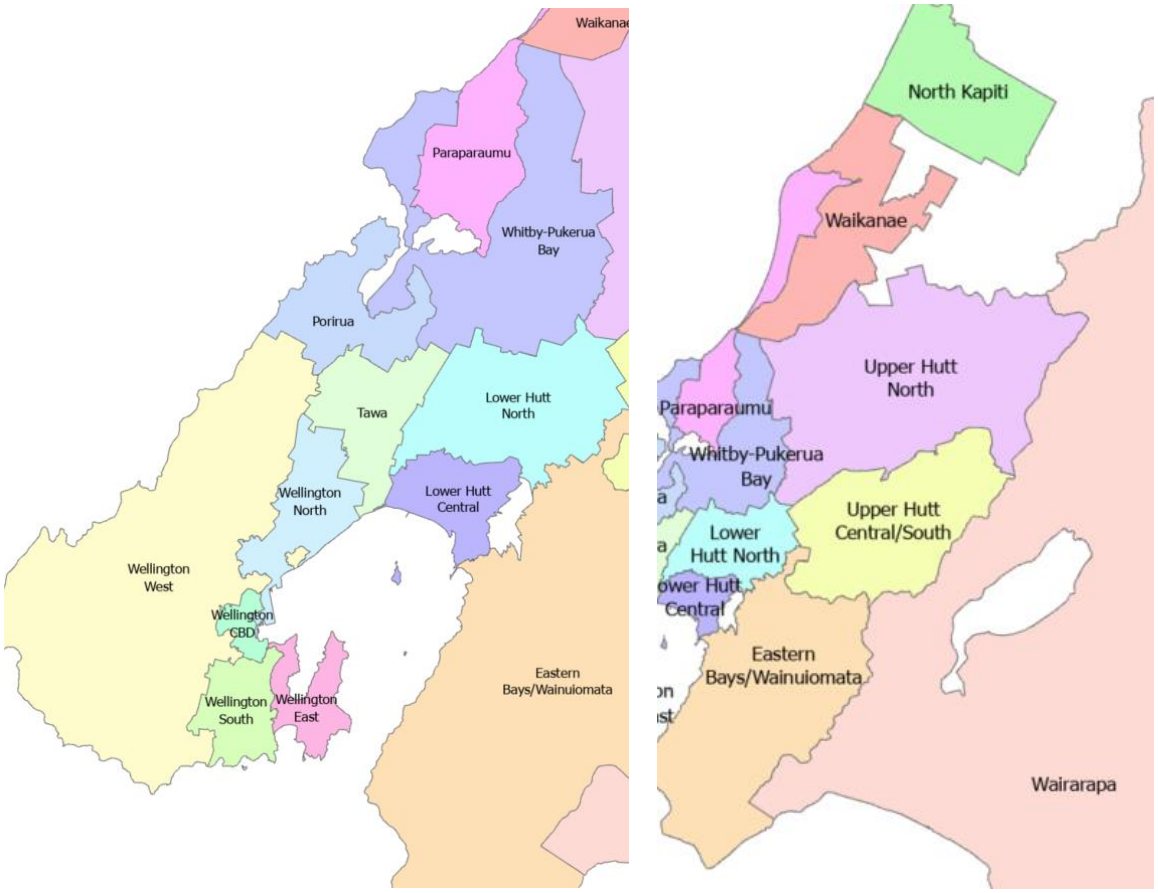
Over the years, census questions and methodologies have changed slightly. For example, between 2013 and 2018, the census “mode of travel to work” question changed from “mode used on census day” to “mode usually used to travel to work”.

In this context, time series interpretation should be restricted to understanding high level patterns, rather than detailed analysis.

## Census journey to work data historical area definition

For time series dating back to 1996 the available journey to work data is aggregated to areas as per maps in Figure 3.1. For consistency and comparability, the data from recent census are aggregated under the same definition.

Figure 3.1. Journey to work data aggregation areas.




## Share of people working from home more than doubled after COVID

For 2018 and 2023, the census asked how people usually get to work. This means that people should indicate "work at home" only if they *predominantly* work from home. Therefore, hybrid workers who work from home less than 50% of their workdays will not be captured in this category. For people who work from home, the "commuting" destination becomes their home address, so the information about their employer's address (if different) is lost.

These limitations aside, the number of people predominantly working from home still more than doubled in the Wellington region from 25,000 in 2018 (about 9% of all workers) to 56,000 in 2023 (about 19% of all workers).

## Wellington CBD is the key employment location, with 40% of the region's jobs

As reflected Section 0, Wellington CBD is the region's primary employment centre, with around 80,000 people working there. However, more than twice as many people (about 200,000) work elsewhere in the region.

## The majority of trips to work start and end in the same area

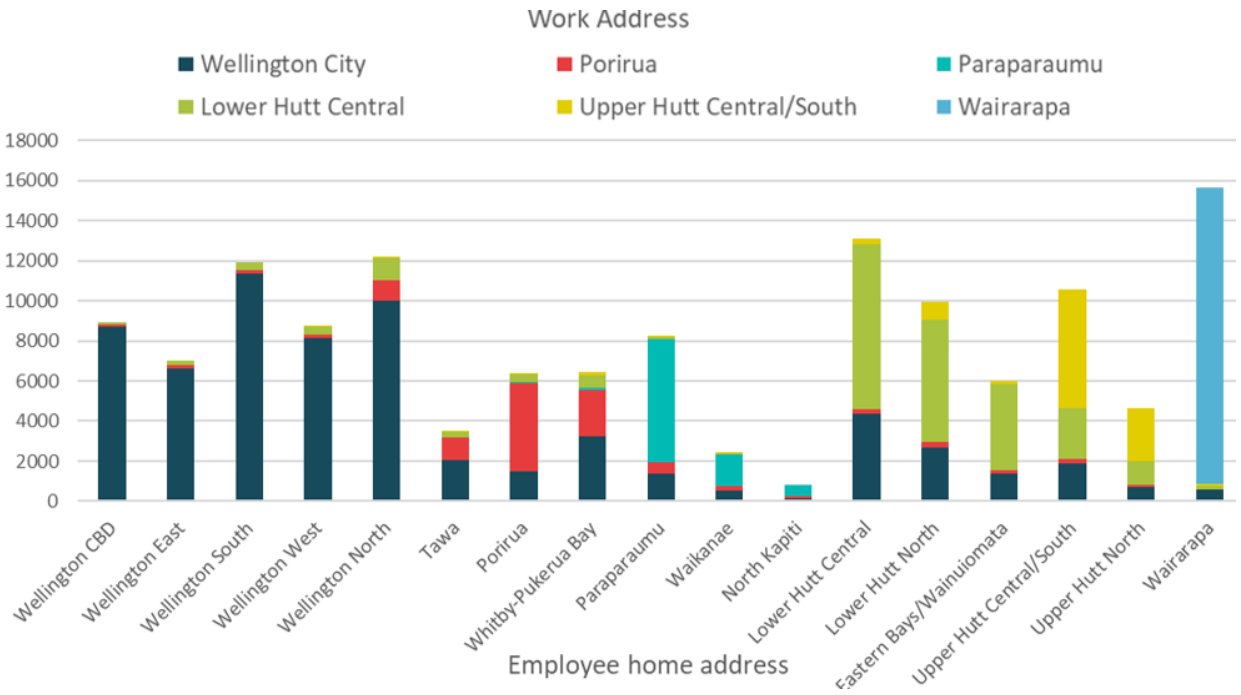
Most people work in their area of residence. The exception is Wellington CBD, which draws significant numbers of commuters from other parts of the region, especially Porirua, Lower

Hutt, and Upper Hutt (Figure 3.2). Commuting from Hutt Valley to Porirua or Kāpiti Coast, and vice versa, is less frequent. Commuting from Wellington City to elsewhere in the region is also limited.

Whitby/Pukerua Bay and Lower Hutt Central have especially high shares of workers commuting to Wellington City - around 40% of work trips from those areas.

Kāpiti Coast, Upper Hutt, and Wairarapa, the areas furthest from Wellington City, have lower proportions of commuters heading to Wellington City.

Figure 3.2. Journey to work trips by origin and destination.



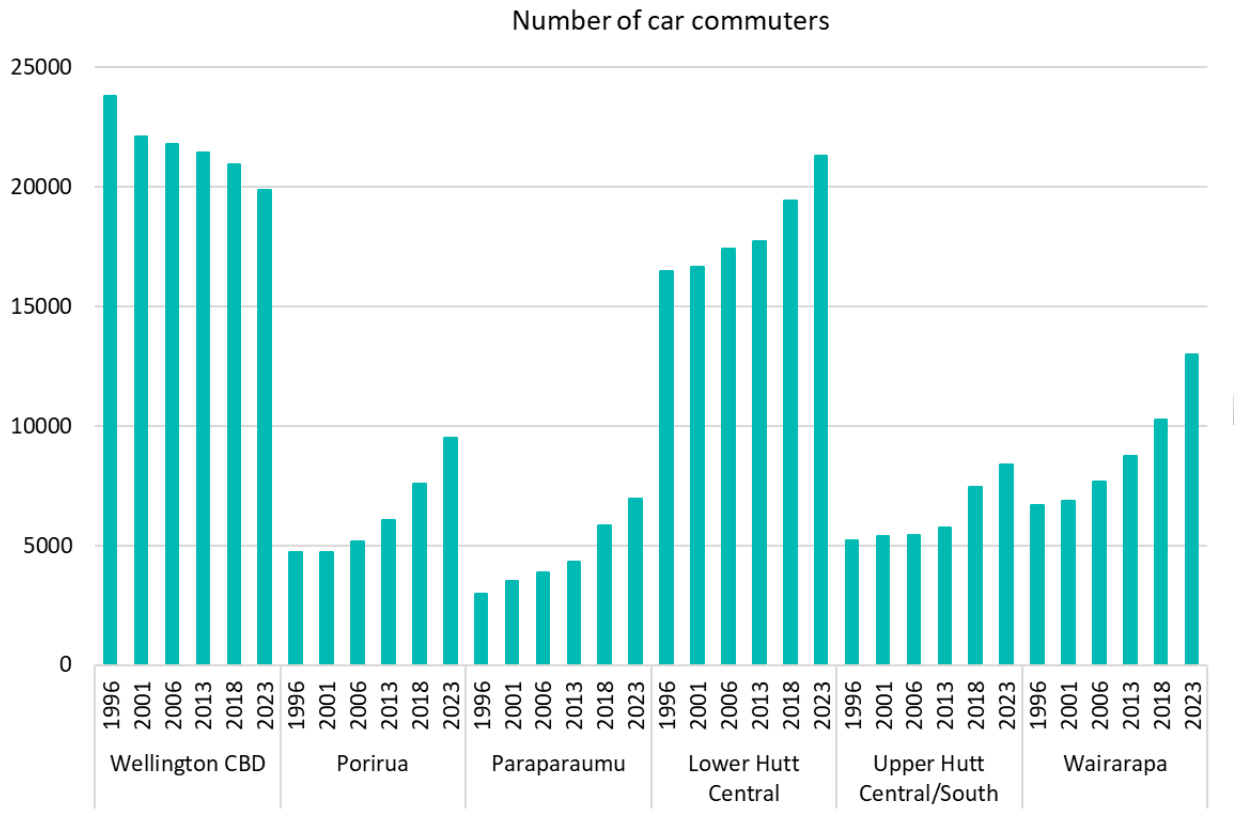

## Trends in commuting trips

The number of car commuters has increased between 1996 and 2023, except for trips to Wellington CBD where the number has declined (Figure 3.3). The number of car commuters to Lower Hutt Central is now similar to the number for Wellington CBD. Car commuters to Porirua and Paraparaumu have almost doubled between 1996 and 2023.

Reasons for the divergent trends between Wellington City and elsewhere include:

- The road network for commuting trips into Wellington CBD during the morning peak is at capacity (see chapter 10) with net growth in demand only able to be accommodated by public transport and active modes.
- The number of car parks available to commuters in Wellington CBD has decreased, and the cost of parking has increased.

Figure 3.3. Change in commuter car trips to regional destinations over time.




## Growth in non-car mode share limited to Wellington CBD

Census journey-to-work information shows consistent growth in the non-car mode share for people working in Wellington CBD since 1996 (Figure 3.4) but the opposite trend in all other areas over the last 10 years.

For trips to Wellington CBD, the car mode share has decreased from around 58% in 1996 to about 34% in 2023. The decrease was for both car drivers and passengers. The fall in car mode share was balanced by increases in public transport and active modes. Active modes had a high relative increase, but from a low base.

Factors that have contributed to the falling car mode share for Wellington CBD include:

- Parking and road network capacity constraints limit the number of car trips into the CBD.
- Bus and rail offer good alternatives for trips into the CBD.
- Increasing population density in the CBD and nearby suburbs has increased walk mode share.
- An increase in safe cycle facilities combined with the increasing availability of e-bikes is helping to make cycling more attractive.

In most other parts of the region, the JTW trends have shown increasing car mode shares over the last 10 years. Exception are other areas of Wellington City (outside the CBD) and Hutt City, where the car mode share has remained steady.

Likely explanations for the decrease in non-car mode share in most areas include:

- New residential zones often at greater distance from employment centres, making active modes less attractive and motorised modes more realistic.
- Public transport is not a good alternative for many origins/destinations due to relatively poor coverage and low service frequency.

Figure 3.4. Mode share for journeys to work in Wellington CBD, 1996 to 2023.

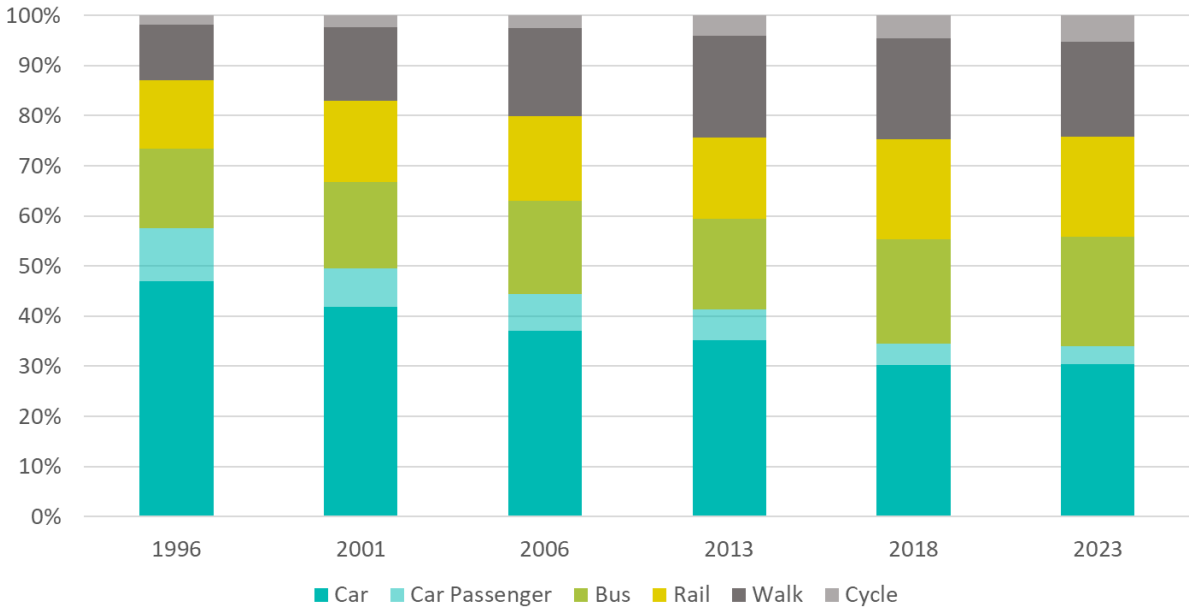
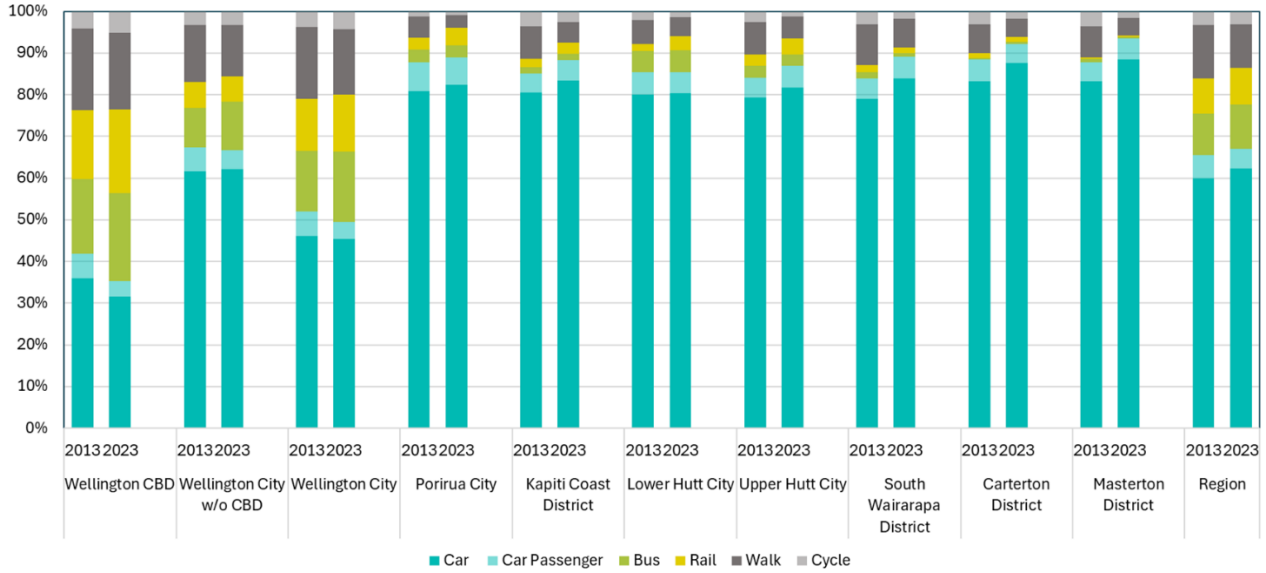



Figure 3.5. Mode share of journeys to work, by workplace location, 2013 and 2023.



## For people travelling to work in the Wellington CBD, all growth has been in non-car modes

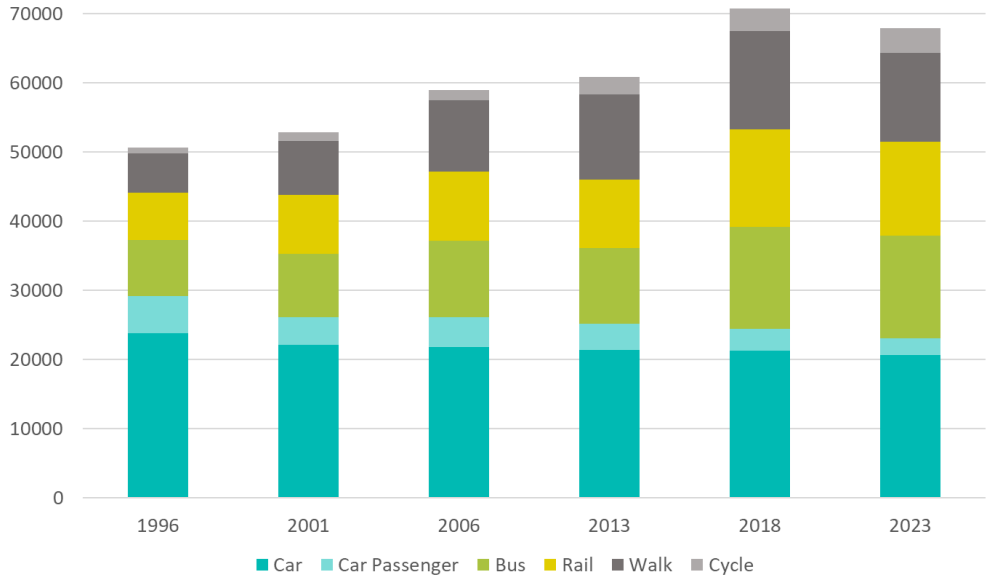
The total number of commuters into Wellington CBD increased from 50,000 to around 70,000 between 1996 and 2023 (Figure 3.6). All of that growth has been in non-car modes. The number of drivers dropped from 24,000 in 1996 to 21,000 in 2023. The number of car passengers dropped from 5300 to 2400.

Over the same period, the number of:

- bus commuters almost doubled from 8100 to 14,900
- rail commuters almost doubled from 6900 to 13,500
- walkers more than doubled 5700 to 13,000
- cyclists quadrupled from 900 to 3600

Between 2018 and 2023, the number of people journeying to work decreased across all modes except cycling, due to the increase in working from home.

Figure 3.6. Trips to work in Wellington CBD by mode, 1996 to 2023.




## Spatial patterns in commuting

Exploration of the journey-to-work data at a local level shows that:

- Walking is the dominant mode for people traveling short distances, often from the residential areas near the main centres.
- Bus is the dominant mode for most of the outer suburbs of Wellington City but is less important in the other territorial authorities.
- Rail is used along the main rail corridors, covering quite large areas, where other modes are used to access the railway stations.

- Car mode share generally increases with distance from workplace. One notable exception are trips into the Wellington CBD, where trips from some northern suburbs have a higher car mode share than trips from further away towards Porirua and the Hutt Valley, due to differences in access to the rail network.
- Cycling uptake is highest in the Wellington suburbs in moderate distances to the workplaces in the CBD, around 20% from Berhampore, for example.

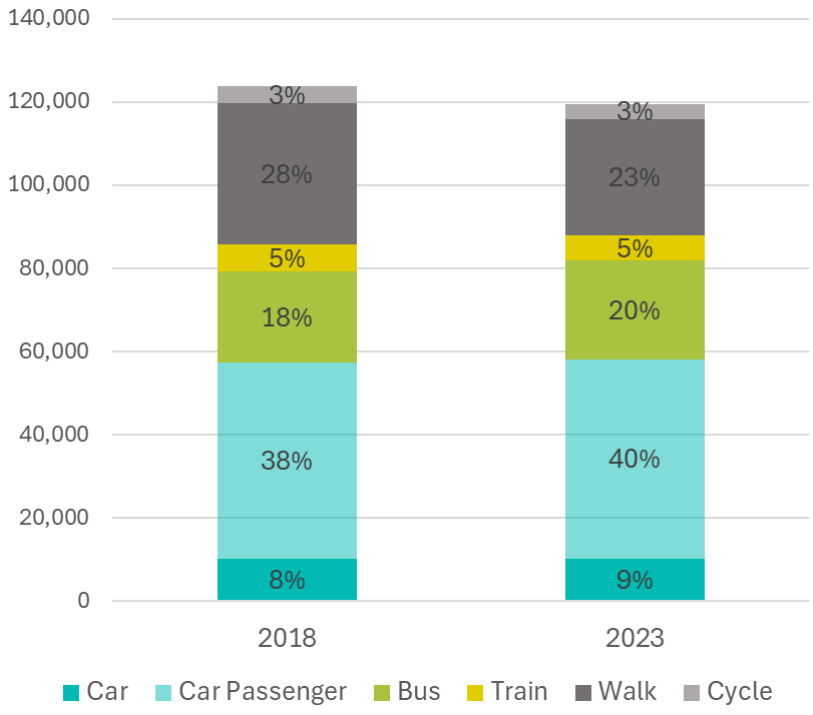
## Journey to education

### Regional journey to education mode share, 2018 to 2023

The journey to education question in the 2018 and 2023 censuses covers primary, secondary and tertiary education, and hence relates to transport behaviour covering a wide range of ages. The information shows:

- Journeys to education dropped from 124,000 to 120,000
- Drop in walking mode share from 28% to 23%.
- Increase in bus mode share from 18% to 20%.
- Increase in car passenger (38% to 40%) and car (8% to 9%) mode share.
- Train mode share remains steady at about 5%.
- Cycling remains steady at about 3%.

Figure 3.7. Mode share for journeys to education, 2018 and 2023.




### Journey to education mode share varies by age and area

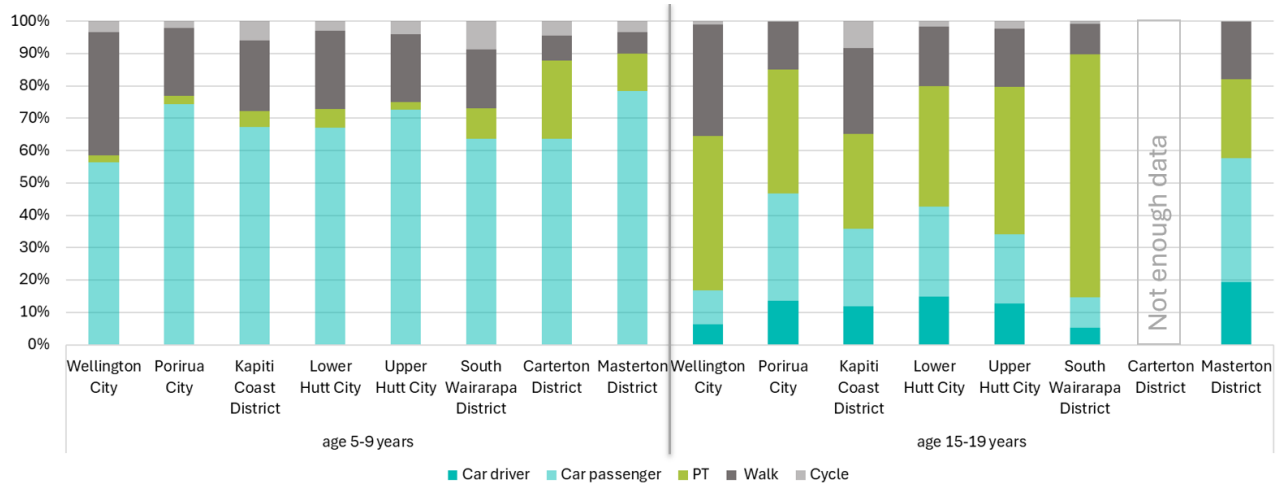
Breaking down the journey to education data into the territorial authority of residence allows insights into sub-regional patterns. The age group 5 to 9 years is a good proxy for primary

school students. The 15-to-19 years age group is dominated by secondary education students but also includes some tertiary students.

At a local level, the results are impacted by the location of education institutions. For example, Carterton District does not include secondary or tertiary level education institutions. The mode share proportions differ widely between areas and age groups (**Figure 3.8**). Younger children often travel to school in cars. Older children often use public transport, including school buses. Walking mode share is relatively even across age groups but is highest in Wellington City for both age groups.

Cycle mode share is higher for younger children. An exception is Kāpiti Coast, where cycle mode share is higher for older children.

Figure 3.8. Mode share for journeys to education, by age group and territorial authority.



# Part 2: Modal characteristics and trends

# 4. Traffic volumes

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Traffic volumes have broadly grown in line with population growth.** Since 2000, traffic volumes across the region have increased by about 26%, in line with population growth.
- **Growth is uneven across time and location.** Traffic has grown faster outside of Wellington City, and faster during off-peak, weekend, and counter-peak direction during peak times, than during traditional peaks.
- **Peak congestion is spreading**. At key locations in the Wellington Region, the peak starts earlier, lasts longer, and congestion continues into the inter-peak period.
- **Flow breakdown limits volumes.** At some locations, traffic volumes fall during peak hours due to hyper congestion, with speeds sometimes dropping to below 10 km/h.
- **Commercial vehicle traffic is rising.** Light and heavy commercial vehicles volumes have grown 2 to 3 times faster than private cars, driving increased diesel use, emissions, and road maintenance needs.
- **VKT per capita is flat.** Despite regional growth, vehicle kilometres travelled per capita in Wellington have remained stable and are lower than in Auckland or Christchurch.

The key considerations for the RLTP are as follows:

- **Consider all-day and weekend network performance**. Demand has grown outside of traditional peak periods, which may have implications for how network performance is assessed and managed.
- **A range of tools could optimise network efficiency during peak periods**. Highway congestion is an issue during peak periods heading towards Wellington City; additional capacity to cater for peak period demand is likely to be costly, and therefore along with infrastructure investment, other tools such as parking and congestion pricing should be considered for managing peak period demand to ensure that those who need to drive during peak periods can do so efficiently.

## Purpose and scope

This chapter examines road traffic volumes and congestion patterns across the Wellington Region. It explores key trends in traffic, including weekday and weekend traffic growth, commercial vehicle movements, peak spreading, congestion, and network constraints.

Understanding these trends is essential for planning future transport investments and policy responses in the 2027 Regional Land Transport Plan.

The analysis explores growth and patterns in highway and local road traffic volumes across the Wellington Region. It draws on:

- Traffic count data from selected monitoring sites on the region's state highways and local roads.
- Petrol and diesel fuel consumption trends.
- Vehicle fleet and ownership trends.

The focus is on road network performance, though the commentary acknowledges interactions with public transport, other travel modes, and population growth where those factors are relevant.

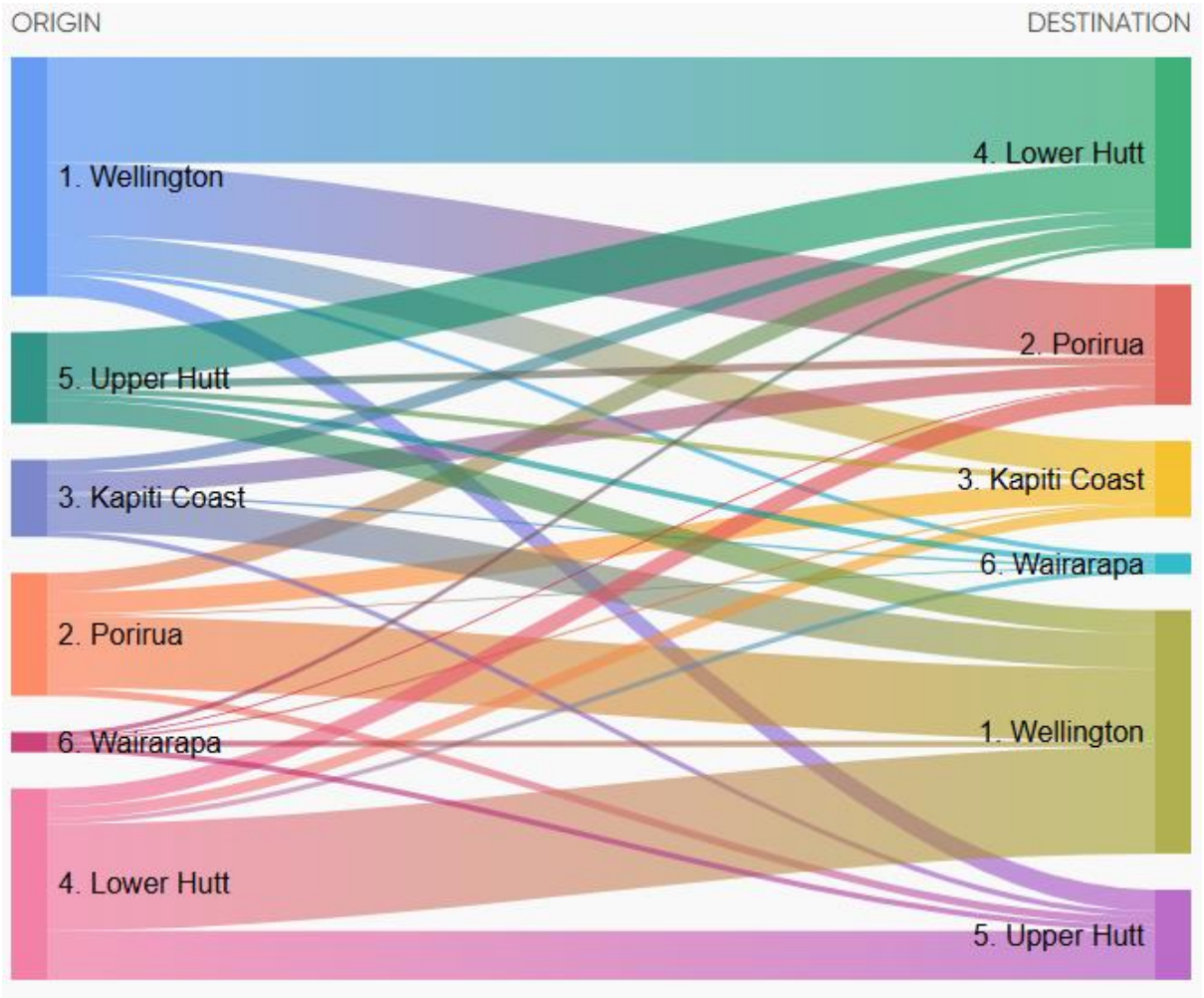
## Changes in traffic volumes in the Wellington region

The highway network plays a critical role in enabling the efficient movement of goods, freight and people within the Wellington Region.

Figure 4.1 shows the relative size of vehicle numbers moving between parts of the region, based on March 2025 data.[3] The largest flows between areas, represented by the broadest connections are those that link Wellington City and Lower Hutt, Porirua and Wellington, and Upper Hutt and Lower Hutt.

[3] TomTom Move O/D Analysis. https://move.tomtom.com/dashboard

Figure 4.1. Vehicle flows between areas within Wellington Region, March 2025.

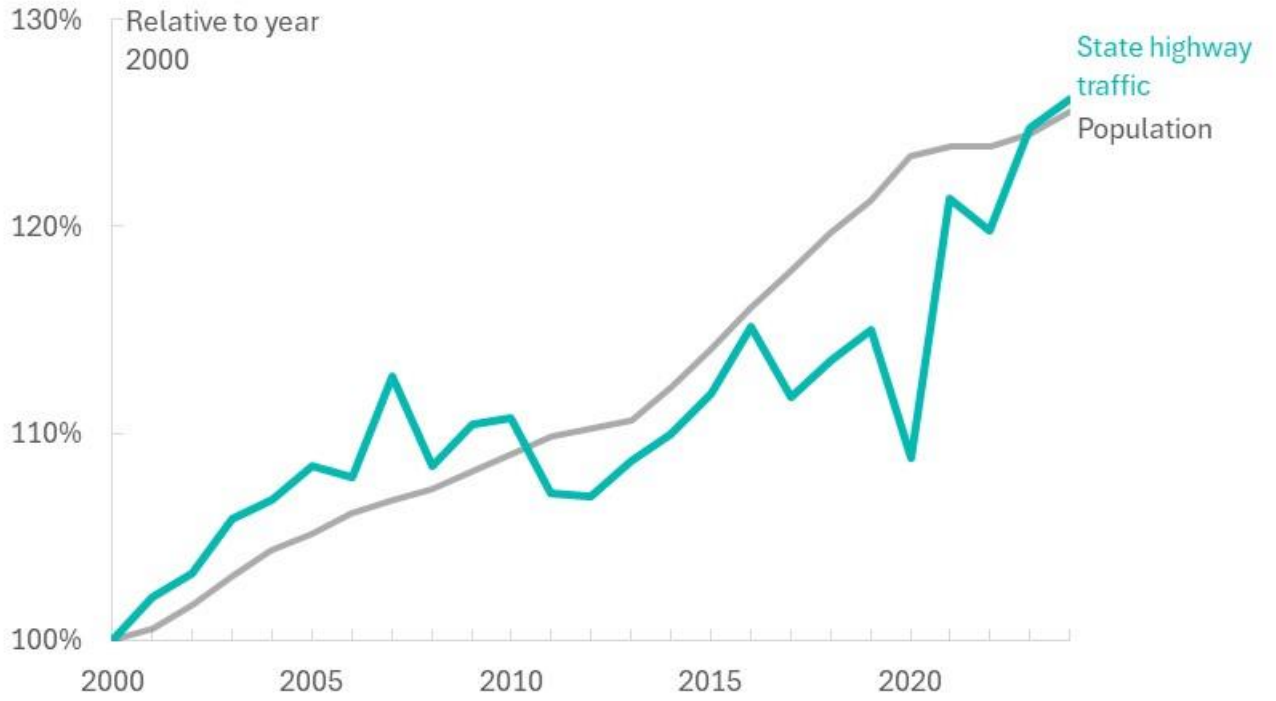



## Traffic volumes have increased over the last 25 years at a similar rate to population growth

Over the past 25 years, traffic volumes in the Wellington Region have varied from year to year, partly driven by economic activity, but overall have grown in line with population size (Figure 4.2). Between 2000 and 2024, the region's population increased by 26%, while average daily highway traffic volumes at 15 monitoring sites with continuous monitoring over that period also increased by 26%.

Beginning in 2020, COVID-19-related disruptions caused temporary reductions in traffic volumes, but by 2023, volumes had generally returned to long-term growth trends.

Figure 4.2. Traffic volume at 20 state highway sites and Wellington Region population size scaled to year 2000.




## Growth rates have varied across the region, with higher growth outside of Wellington City and outside of peak periods

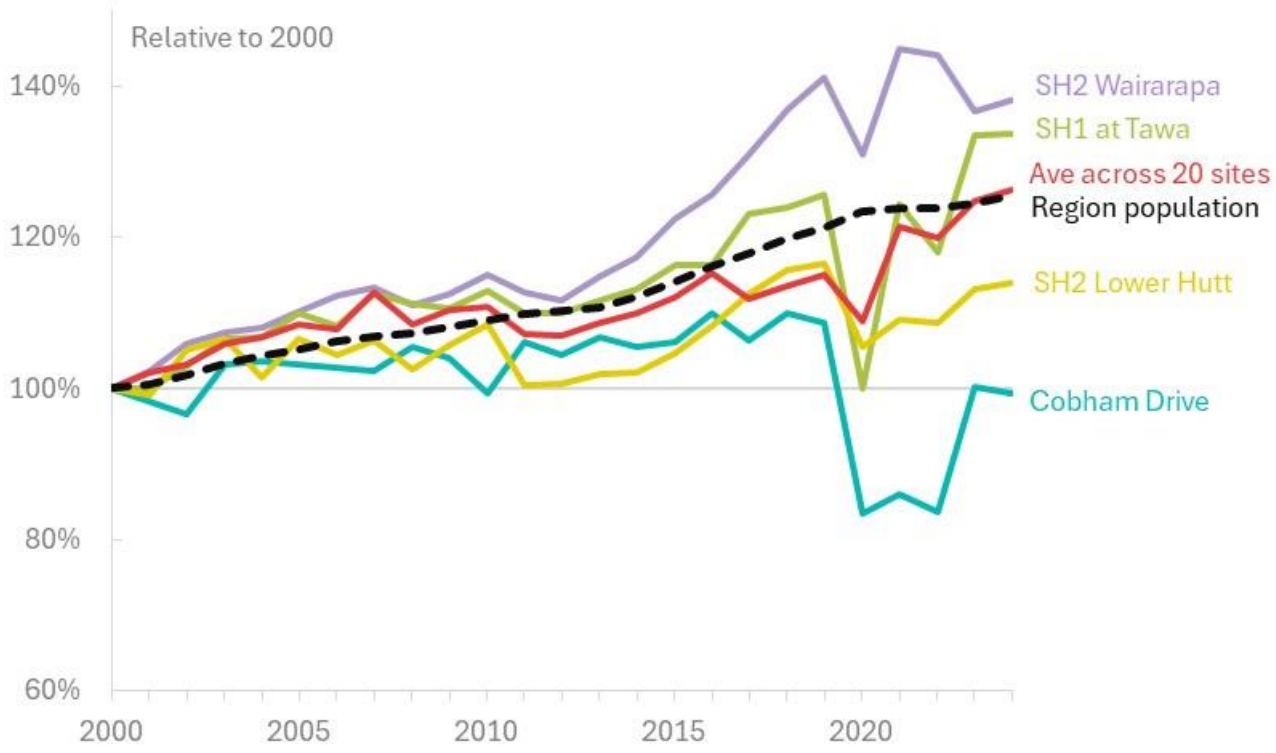
Growth in traffic volumes has been uneven across the region. The western corridor (Tawa-Porirua-Kāpiti Coast) and the eastern corridor (Hutt Valley and Wairarapa) experienced higher growth than Wellington CBD. Higher growth on those main corridors is linked to higher rates of population growth, different travel patterns influenced by low density urban form and dispersed employment locations that favours the private motor vehicle, limited viable and competitive public transport alternatives for trips other than to Wellington CBD and – in the case of the western corridor to Otaki – significant transport investment that has reduced travel times and stimulated growth.

Over the last 25 years, average daily traffic generally increased but the magnitude of increase varied across the region. Across 20 sites that provide continuous monitoring of traffic since year 2000, the changes in average daily volumes ranged from 3% decrease (SH1 at Ngauranga Interchange southbound) to 60% increase (SH58 at Pāuatahanui East) between 2000 and 2024. Trends from four parts of the region are illustrated by the sites included in Figure 4.3

- Cobham Drive in Wellington City had little growth in traffic volume and by 2024 was at the same level as in 2000, likely constrained by capacity limits. COVID impacted traffic volumes at this site over 2020, 2021, and 2022 more than sites further from Wellington CBD.
- SH2 in Lower Hutt (TMS site north of Block Road) had an overall 14% increase over 2000 to 2024.

- SH1 at Tawa increased 34% overall, with much of that increase occurring after Transmission Gully opened in 2022.
- SH2 in Wairarapa (TMS site south of Waiohine River bridge) increased more than at other sites across the region, correlating with high-than-average population growth.

Figure 4.3. Highway traffic volume trends at selected sites, scaled to 2000.




Source: TMS. Sites 200906 (SH2 Sth of Waiohine River Bridge), 01N01058 (SH1 at Tawa College), 210969 (SH2 North of Block Road, Lower Hutt), 01N01078 (Cobham Drive, Wellington City).

## Local roads have seen variable growth rates, with the highest growth linked to locations of significant residential development

Trends in local road traffic volumes are broadly consistent with the trends on state highways but vary more from site to site. The change in 5-day traffic volumes at local road sites varied between a 30% decrease to a 40% increase over the 12 years to 2024. The largest observed increases were on roads that link significant housing developments, such as Churton Park, Whitby, and some areas within Upper Hutt, to the rest of the network. Traffic decreased by a small amount on roads in mature residential areas with limited development over the last decade, including much of Wellington City, which is representative of a general trend of declining trip rates over the last 10 to 20 years.

On average, local road volumes at monitored sites in Wellington City decreased about 5% and increased about 10% in Porirua and Upper Hutt (Figure 4.4).

Figure 4.4. Change in local road traffic volume, 2012 to 2024, by territorial authority and location.

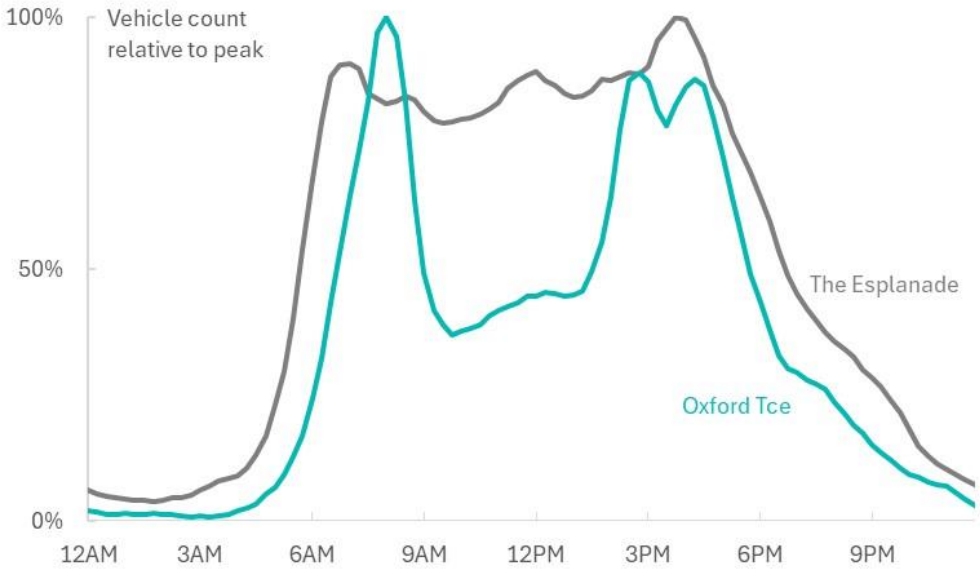

Note: In this figure, 'Arterial' means main roads that connect key areas, generally with high traffic volumes. 'Collector' means roads that connect to arterial roads, generally with medium traffic volumes. 'Rural' roads are out of town and have low traffic volumes. 'Minor' roads are low-traffic volume roads that provide access within residential areas.

Two local roads in Lower Hutt with different purposes and vehicle mixes – The Esplanade and Oxford Terrace – show different time-of-day traffic flow profiles (Figure 4.5). These sites are presented to illustrate the highly variable characteristics of local roads.

At The Esplanade, 16% of vehicles on weekdays are heavy vehicles – reflecting the importance of the route for commercial activity at Seaview – and it is a major corridor for people and freight travelling into Wellington for business. Traffic at this location shows little variation between peak and off-peak volumes. During peak periods, many drivers take alternative routes to avoid congestion on The Esplanade – in this respect the demand (people wanting to use the corridor) is greater in the peak periods than the observed volumes.

Oxford Terrace is a more local connector – only 4% of vehicles are heavy vehicles at Oxford Terrace – and shows more pronounced peaks.

Figure 4.5. 5-day average traffic volume at 2 local road sites in Lower Hutt, August 2024.

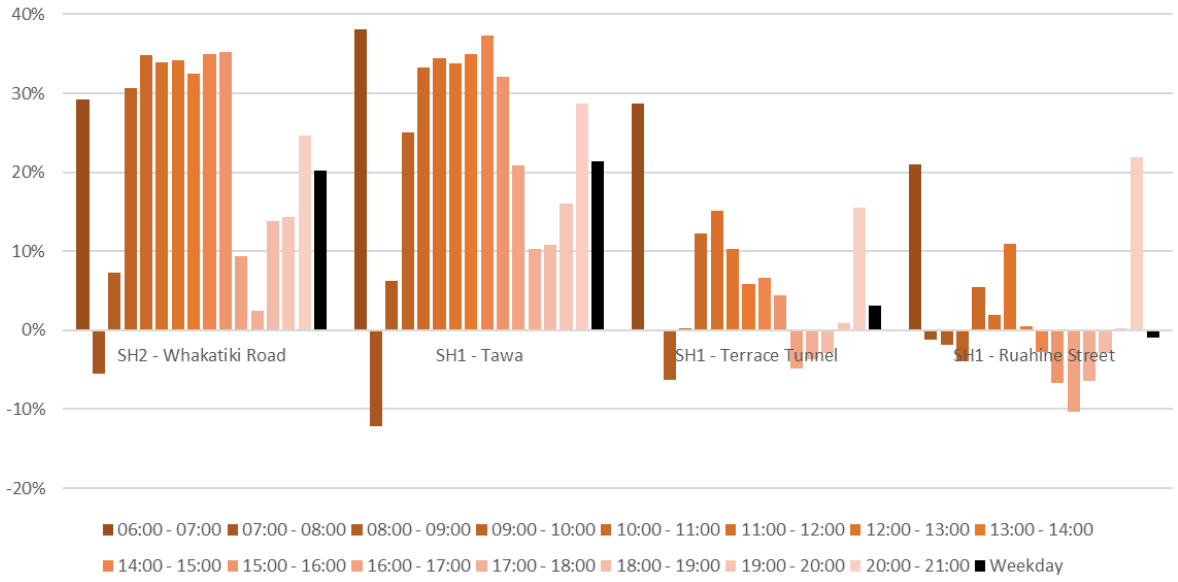



## Traffic volumes have grown fastest in the pre peak, with higher rates of growth outside of Wellington City

Morning peak traffic growth has been limited. Growth has been higher in the pre-peak period (before 7am) and inter-peak periods (Figure 4.6). The Terrace Tunnel and Ruahine Street have seen low growth outside of the pre-peak over the last 12 years, a reflection of the capacity constrained nature of these corridors; in the case of the Terrace Tunnel southbound and Ruahine Street, peak period volumes have decreased.

Growth rates on the western corridor (SH1, Tawa) have been higher than those on the Eastern corridor (SH2, Kelson) due to higher population growth and greater investment in roading infrastructure on SH1 compared to the Hutt Valley.

Figure 4.6. Traffic volume change 2012 to 2024, by time of day.



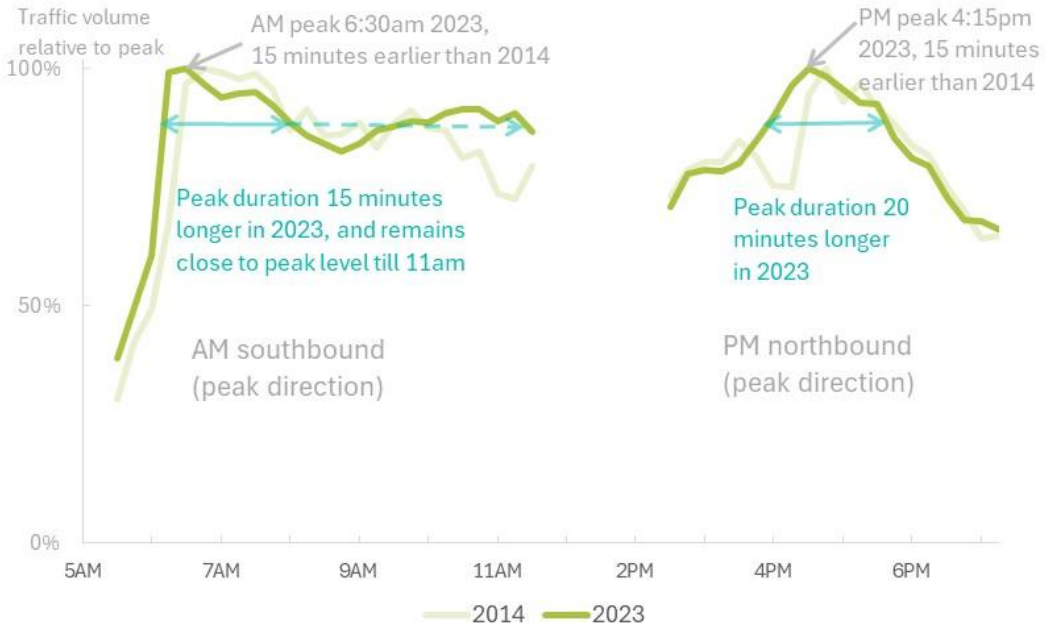

## The duration of the congested AM peak at the Terrace Tunnel has lengthened over the last 10 years

Examining one high-volume location in more detail reveals how peak traffic volumes have changed over the last decade. At the Terrace Tunnel, the morning peak in March 2023 started 15 minutes earlier than in 2014 (Figure 4.7). The AM peak duration[4] widened by 15 minutes and remained close to peak levels until late morning.

The PM peak started 15 minutes earlier in 2023 than in 2014, and the peak duration extended by 30 minutes. Those changes are consistent with the long-term growth in traffic volumes and key corridors operating at capacity at peak times and for much of the inter-peak period.

[4] Peak duration is defined in this analysis as the period when 15-minutes volumes remain above 90% of the maximum 15-minute volume.

Figure 4.7. Peak-direction traffic volumes at The Terrace tunnel, March 2014 and 2023.



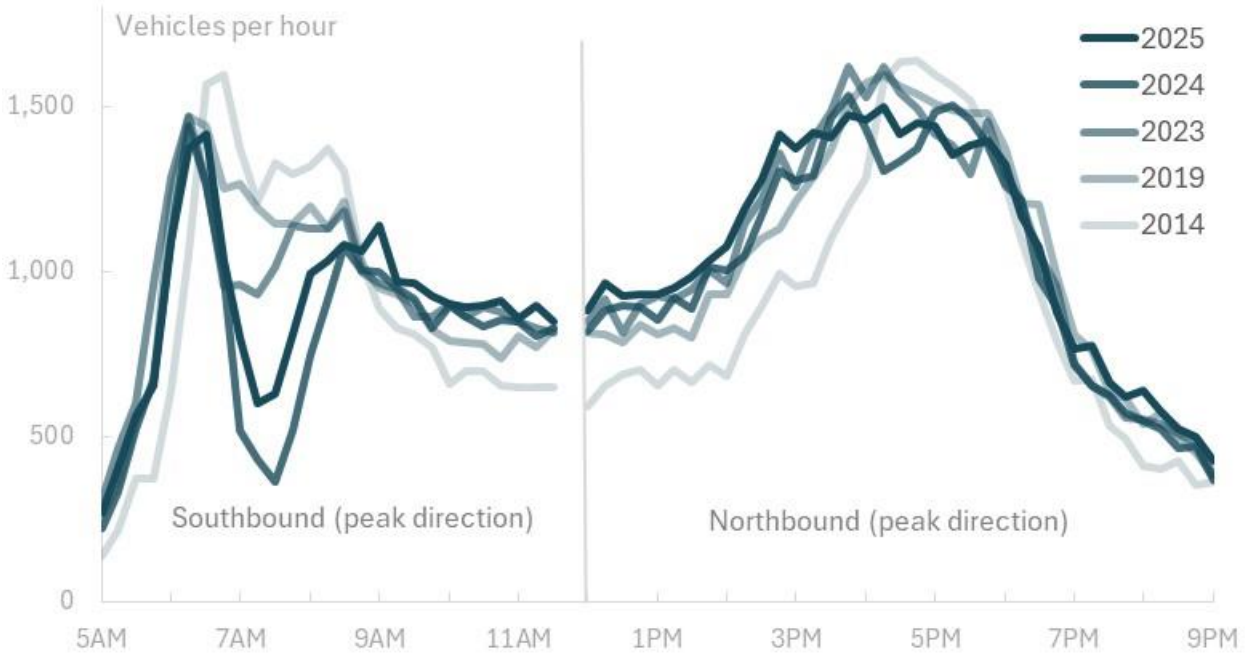

## Flow breakdown is lowering traffic volumes during peak periods

In some circumstances, peak traffic volume falls and speed reduces when demand exceeds capacity. Within the Wellington Region, this phenomenon, sometimes called hyper congestion, can be seen at a number of locations, one being State Highway 2 south of Whakatiki Street in Upper Hutt during the AM peak in 2023, 2024 and 2025 (Figure 4.8).

The location is a key pinch point where traffic from some Upper Hutt locations merge towards Lower Hutt and Wellington City. From about 6:30am on weekdays, traffic volume at this site exceeds capacity and flow is disrupted so much that fewer vehicles can pass despite demand remaining high.

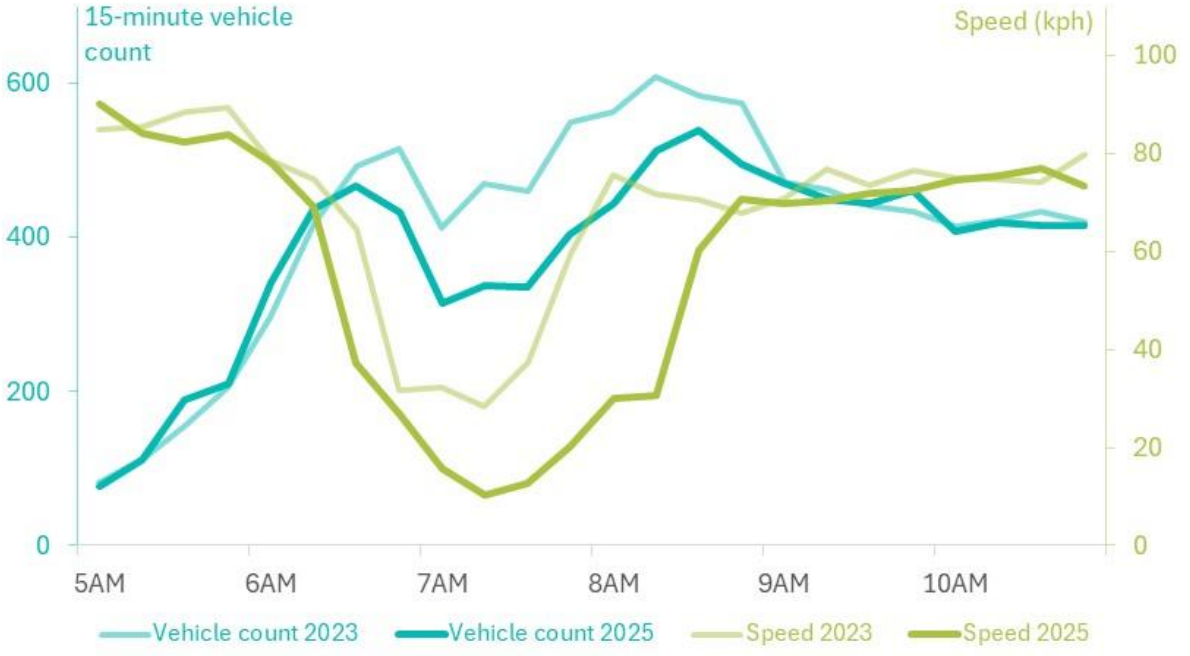
Hyper congestion is confirmed in travel speeds and travel times at the same site (Figure 4.8). Starting at about 6:30am, this section of State Highway 2 reaches maximum capacity in the southbound direction. Despite high demand, the vehicle count decreases as flow breakdown reduces the effective capacity (slower speeds = lower capacities) and volumes and speeds remain low until the peak period ends about 8:30am. Compared with 2 years earlier, the effect was more pronounced in March 2025, with average vehicle speeds reduced to about 10 km/h at 7:15am and 7:30am.

Figure 4.8. Weekday traffic volumes (peak direction) at State Highway 2 south of Whakatiki Street (Upper Hutt), March 2014, 2019, 2023, 2024, and 2025.




While congestion has clear downsides for car occupants, it may also act as a natural incentive for people to consider alternative travel modes or change the time at which they might travel.

Figure 4.9. Vehicle count and average speed from 5am to 11am on weekdays, Stage Highway 2 south of Whakatiki Street (Upper Hutt), 1st week of March 2023 and 2025.




Traffic volumes at the State Highway 2 site in Upper Hutt, like the Terrace Tunnel site, reveal peak spreading and growth in inter-peak traffic volumes.

## Weekend traffic volumes are as high as weekday traffic volumes at many locations on the state highway network

Weekend traffic volumes have increased and are now comparable to weekday volumes in some locations, particularly at bottlenecks such as The Terrace tunnel to the Mount Victoria tunnel within Wellington City.

Vivian Street (within that key Wellington City route) remains at capacity from 7am to 6pm on Monday to Friday and from 10am to 5pm on Saturday and Sunday (Figure 4.10).

In contrast, other state highway sites that are less constrained, such as SH1 at Paraparaumu and SH2 at Upper Hutt, show clearer morning and afternoon peaks and have clearer peaks during AM and PM peaks on weekdays and from late morning till mid-afternoon on weekends (Figure 4.11 and Figure 4.12).

Figure 4.10. Vivian Street average daily traffic, by day of week and time of day.

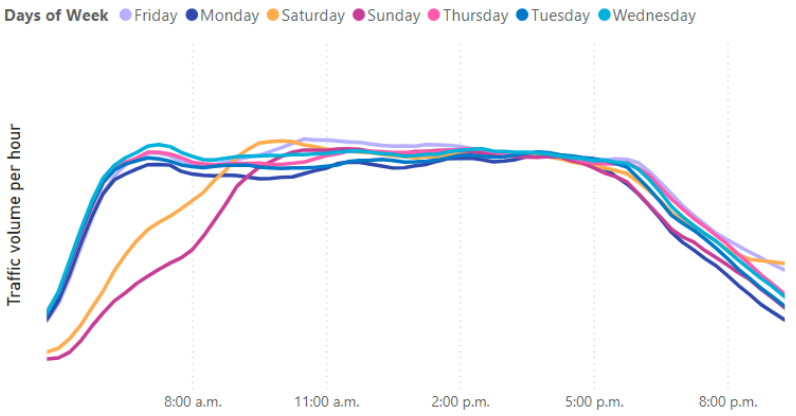



Figure 4.11. SH1 at Paraparaumu average daily traffic, by day of week and time of day.

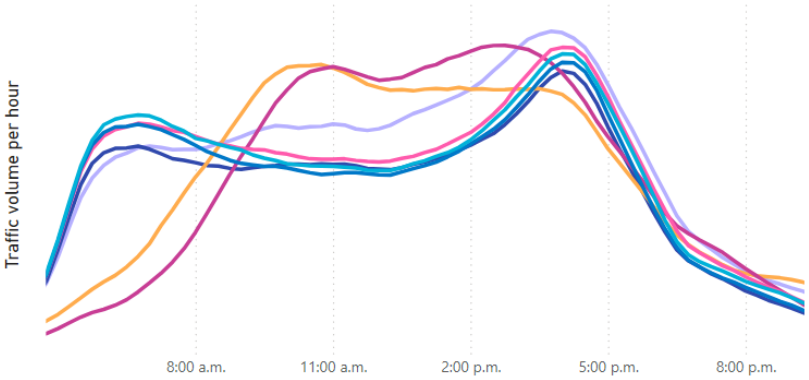
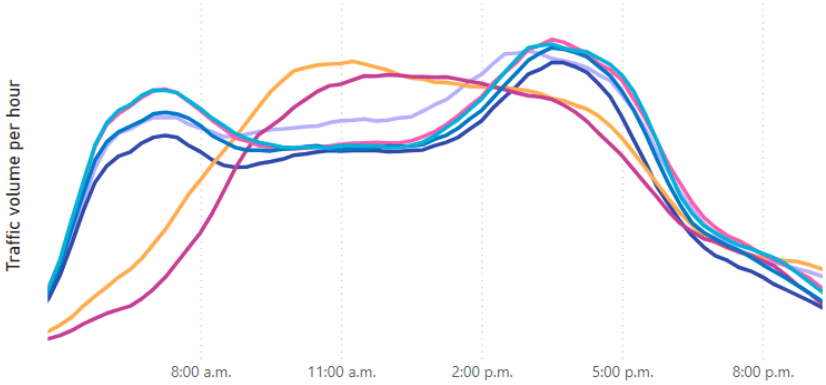


Figure 4.12. SH2 at Craigs Flat in Upper Hutt average daily traffic, by day of week and time of day.




## Selected locations on the state highway network are congested all day

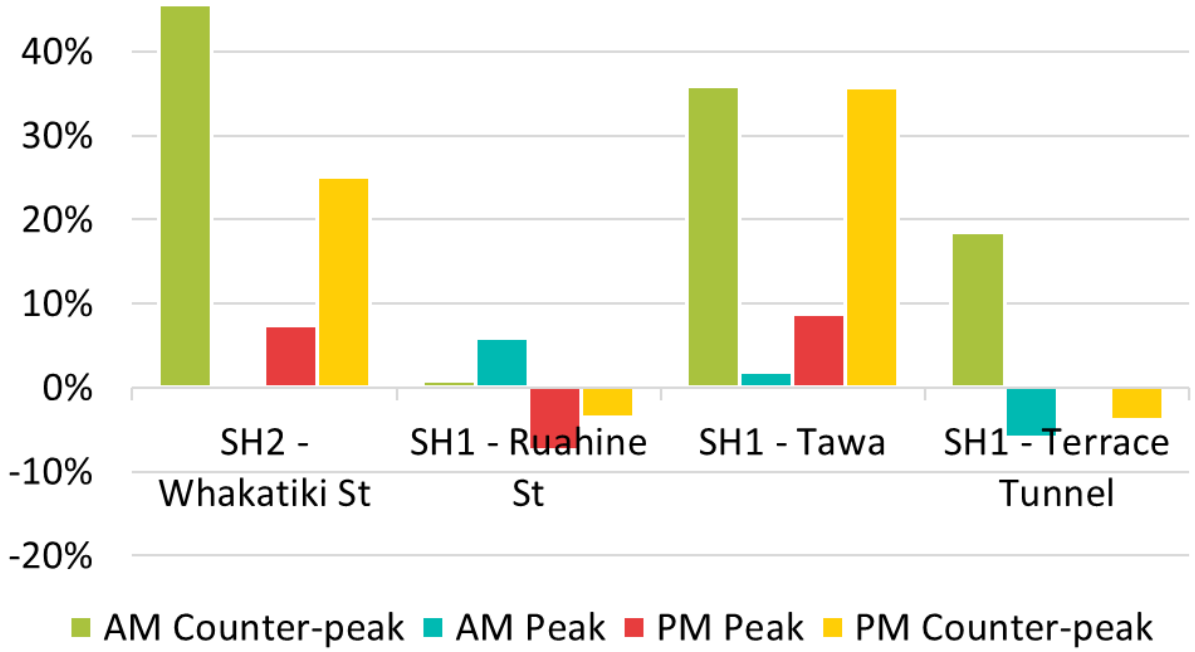
High level analysis of TomTom and Google Maps congestion data has been undertaken to understand how congestion varies by time of day for a series of key locations on the state highway network. Some routes, such as Cobham Drive inbound, operate at relatively high levels of congestion across the day on weekdays and weekends, while other routes are congested at peak times only (Figure 4.13).

Figure 4.13. Congestion level by hour on weekdays and weekends.


## Counter-peak traffic volumes have increased at a faster rate than peak direction traffic volumes

Counter-peak traffic (reverse commuting) is growing faster than peak-direction traffic, driven by employment growth outside Wellington City and limited public transport alternatives for those trips (Figure 4.14).

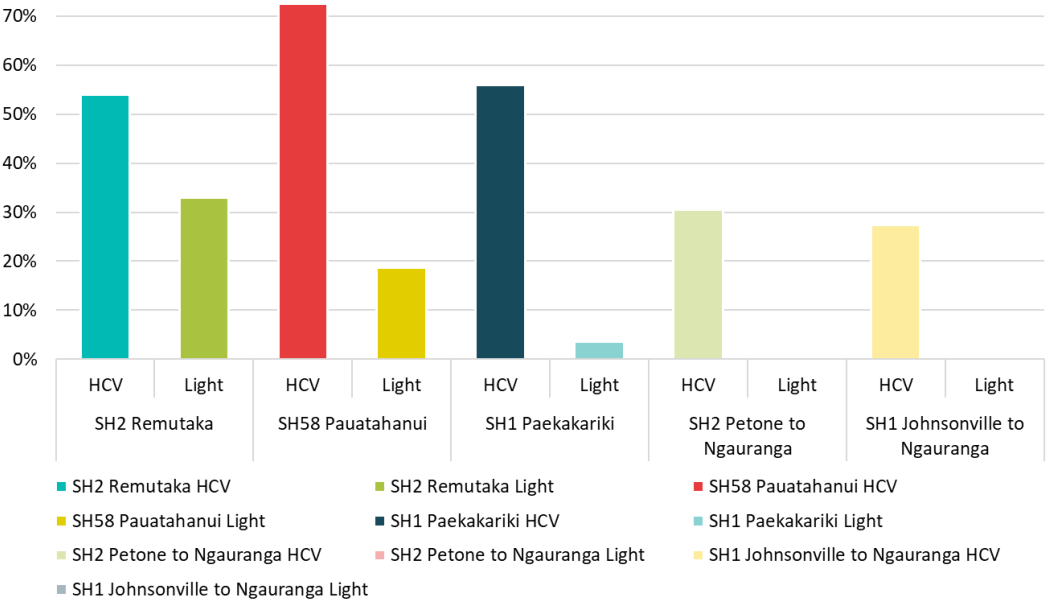
Figure 4.14. Peak direction versus counter-peak direction traffic growth, 2012 to 2024.




## Heavy vehicle volumes have grown at 2 or 3 times the rate of light vehicle traffic volumes

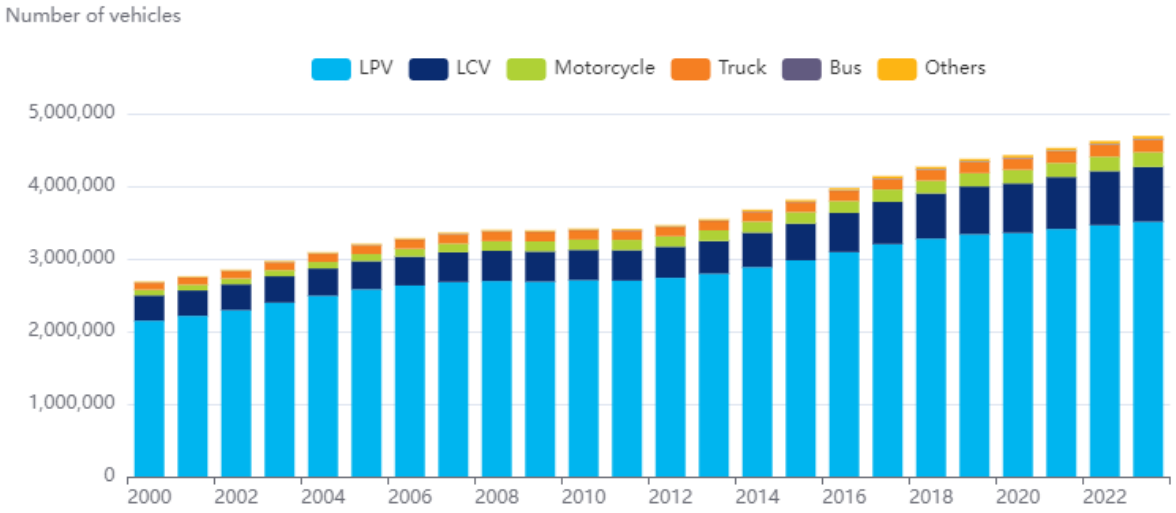
Heavy vehicles (larger trucks and buses) on key state highway corridors have grown at double the rate of light vehicles (Figure 4.15). The increase in road freight is likely driven by economic activity and mode transfer from rail to road.

Figure 4.15. Growth in light (primarily cars) and heavy vehicle volumes on state highways, weekdays, 2012 to 2024.



The light commercial vehicle (vans and utes) fleet has also grown rapidly. Nationally, between 2012 and 2024 the LCV fleet increasing by 75%, compared to a 25% increase in private cars (Figure 4.16).

Figure 4.16. New Zealand vehicle fleet by type



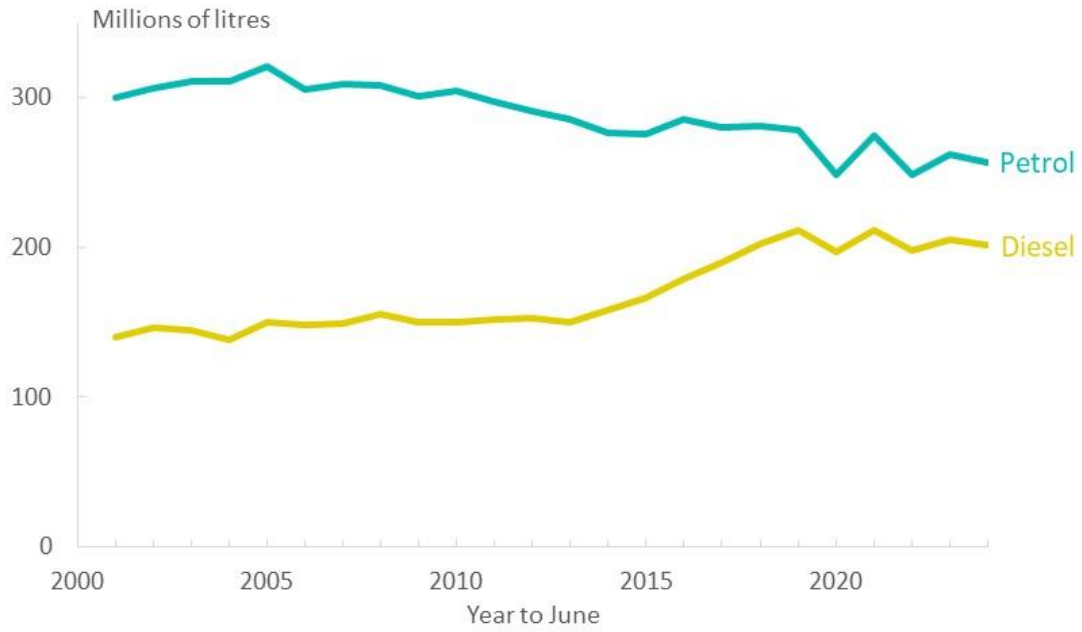

## Over the last 20 years, petrol sales have decreased by 10% but diesel sales have increased by 30%

Trends in vehicle fleet mix and fuel consumption are significant for understanding emissions and long-term transport sustainability.

Despite population growth of 20%, petrol sales in the Wellington Region have decreased by 15% over the past two decades (Figure 4.17). The fall in petrol consumption reflects increasing vehicle efficiency, growth in electric vehicles, and some shift towards public transport and active transport.

However, the fall in petrol consumption is also driven by a transition to diesel vehicles. Diesel sales have increased by 30% and now contribute about 44% of fuel sales (by volume) across the region.

Figure 4.17. Petrol and diesel sales (volume in millions of litres) in Wellington Region.




The growth in diesel consumption shown in Figure 4.17 reflects the growth in light and heavy commercial vehicles. The number of light commercial vehicles (vans and utes) in the region increased by around 75% over the same period, while the number of light private vehicles (cars) decreased by 25%. Commercial vehicles (including light commercials, trucks, and buses) now account for 25% of motor vehicle travel.

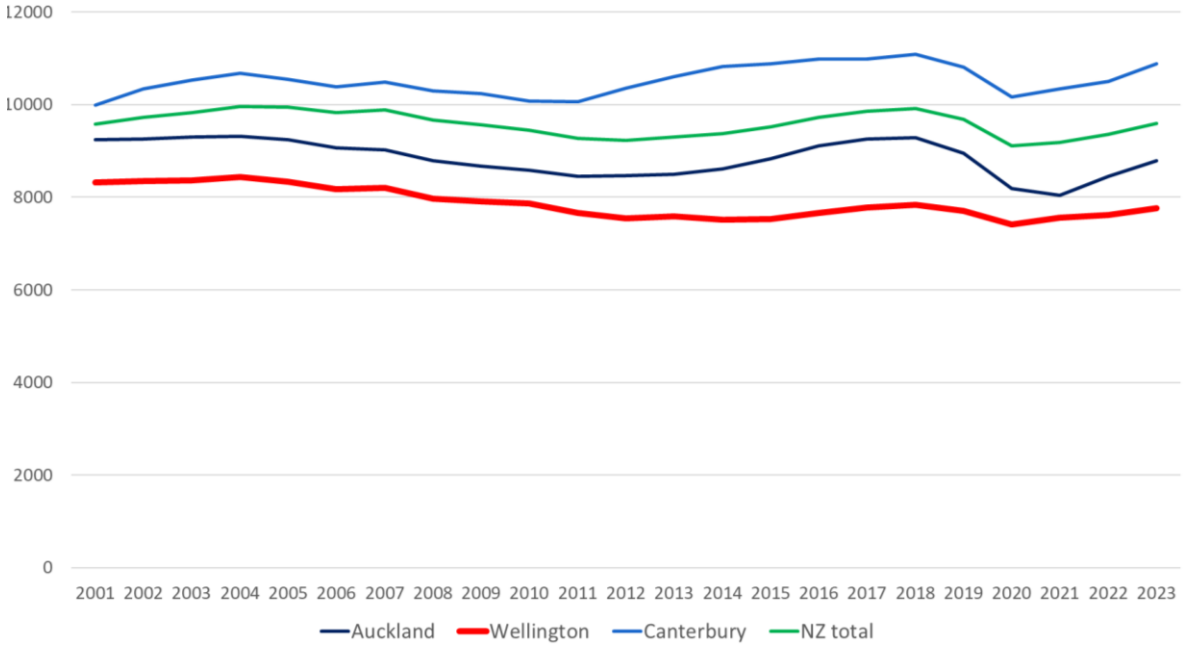
Light vehicle ownership per capita increased by 16% over the last two decades in Wellington Region but has remained lower than in Canterbury and Auckland regions. The rate of increase in Wellington Region was lower than in those other two regions. The increase in Wellington Region's vehicle ownership occurred both in Wellington City and elsewhere.

Heavy commercial vehicles are an important element of economic activity but bring challenges to the region's transport network for three reasons. First, heavy vehicles are high carbon emitters. Heavy commercial vehicles account for about 5% of trips in the region but account for about 25% of emissions. Second, heavy vehicles contribute a disproportionate amount of wear and tear on roads. Third, heavy vehicles are a significant contributor to the region's road safety. In the five years to June 2024, trucks were involved in 5% of the region's injury crashes and 6% of DSIs.

## Wellington's VKT per capita unchanged over the last 20 years

Wellington's VKT per capita is about 20% lower than Auckland and 30% lower than Christchurch, reflecting its compact urban form and strong public transport network. Despite population and economic growth over the last 2 decades, per capita VKT has remained stable in the region, reflecting a shift towards more sustainable transport modes or shorter trips (Figure 4.18).

Figure 4.18. VKT per capita – Wellington City, Auckland, Christchurch, and New Zealand.



# 5. Public transport

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Public transport use has rebounded post-COVID.** Total public transport boardings in 2024 rebounded to above pre-COVID levels, driven by growth in bus use during inter-peak and weekend periods.
- **Peak demand has declined**. Commuter patronage at peak times is lower than before COVID, especially on Mondays and Fridays and particularly on rail.
- **Bus patronage above pre-COVID, rail 25% below**. Bus patronage is 5% higher than pre-COVID levels, but rail patronage remains about 25% below 2019 levels, as a high proportion of rail passengers are peak-time commuters with increased flexibility to sometimes work from home.
- **Bus patronage growth driven by off-peak demand.** Inter-peak (10%) and weekends (30%) are higher than pre-COVID, with morning peak around 10% lower.
- **Lower peak period patronage on Fridays**. Peak period rail boardings are 20% lower on Fridays (compared to the rest of the week) and bus boardings 10% lower.
- **Wellington City dominates bus travel.** Wellington City accounts for 76% of the region's bus boardings.
- **Per capita public transport use is highest in Wellington City** (94 boardings per resident annually) and lowest in Wairarapa (under 10 per resident), largely reflecting the nature of the urban environment in Wellington City and bus service frequencies.
- **Buses are crowded at peak times in Wellington City.** Around 50% of bus passengers arriving into Wellington CBD in the AM peak are on crowded services, with some crowding at other times of day on core corridors but spare capacity on other corridors and outside of Wellington City.
- **Some rail services are crowded during the peak of the peak, however there is also spare capacity.** Around 50% of services on the Kāpiti and Hutt Valley lines are crowded in the busiest part of the AM peak. However, there is spare capacity due to reductions in peak period demand compared to pre-COVID.
- **A quarter of residents use public transport every week**. 23% of residents use public transport weekly, and 21% of those users are high-frequency users who account for 42% of all public transport trips.
- **Around 13% of morning rail passengers at Wellington Station transfer to buses.** The leading destinations for those transferring passengers are secondary schools, tertiary education campuses, the regional hospital, and the 'Golden Mile'.
- **Bus-to-rail transfers are low.** Only about 10% of people boarding trains in the morning peak travel to the station by bus.

- **Half of all bus boardings occur at just 5% of stops**. This highlights the uneven distribution of demand and service provision.
- **Frequency of PT use decreases with distance from Wellington** reflecting increasing rail mode share of trips and increasing working from home.
- **School buses are a large part of peak time volumes**. Over 25% of passengers in the AM peak are children using school buses.

The key considerations for the RLTP are as follows:

- **Targeted bus capacity at peak times and on key corridors**. Bus capacity during the peak of the peak in Wellington City is affecting the ability to accommodate more passengers on key corridors in Wellington City, and consideration should be given to how to deliver targeted capacity improvements during peak periods to increase patronage, whilst acknowledging that spare capacity exists on some corridors at peak times, during the off-peak and outside of Wellington City.
- **A flexible approach to additional rail capacity**. Rail patronage has remained 20% to 25% below pre-COVID levels as demand has been impacted by increased working from home, rail punctuality, and periods of buses replacing trains; some spare capacity during the peak shoulders will likely delay for a period the need for increased capacity on peak-time services which will be dependent on economic growth, population growth and changes in working patterns.
- **Improving levels of service in Wellington City vs improving levels of service elsewhere in the region**. Wellington City has a higher PT mode-share than other TAs in the Wellington Region for a number of reasons, and consideration should be given to balancing the need to improve levels of services in Wellington City though capacity and priority improvements on core corridors against improving network reach and levels of service outside of Wellington City in order to achieve desired regional mode share objectives.
- **Balancing peak period and off-peak service investment**. Whilst patronage growth has been driven over the last 5 years by an increase in off-peak bus trips, the PT mode share of trips is still lower during the off-peak compared to peak periods; consideration should be given with the advent of increased working from home to balancing peak period improvements against further improvements to the all-day network to generate mode shift and behaviour change.
- **Improving the bus mode share of access to rail stations**. Over 6,000 people drive to park-and-ride sites in Wellington Region each day. Potential for growth in park-and-ride is limited, and therefore increasing rail patronage will depend on encouraging and enabling more people to access the rail network via bus and active modes.

## Purpose and scope

This chapter examines the role of public transport (PT) in Wellington Region's transport network by analysing usage patterns, performance, and capacity constraints.

It provides insights into how PT meets current and future needs and informs regional transport planning and includes consideration of the following:

Public transport usage patterns

- Total passenger volumes and long-term trends
- Spatial distribution of usage across the region
- Temporal variations by season, day of the week, and time of day
- Passenger demographics and travel frequency

Network performance and capacity

- Service availability and frequency across different routes
- Crowding hotspots and constraints affecting user experience
- Transfers between bus and rail

Changing travel trends

- Impact of remote work on peak and off-peak travel
- Growth in off-peak and weekend travel
- Shifts in commuter behaviours and mode choice

Future growth and strategic considerations

- Population growth and its implications for PT demand
- Expected pressure points on key corridors
- Opportunities for service improvements

The following key questions are answered:

- How has PT usage changed over time, and what are the main drivers of these trends?
- Which areas and routes experience the highest passenger demand?
- How do travel patterns differ by time of day, day of the week, and season?
- Who are the main users of public transport, and how frequently do they travel?
- Where are the greatest capacity constraints, and how do they affect service reliability?
- How has flexible working influenced PT demand, particularly at peak times?
- What are the expected future growth patterns, and how should the network adapt?

## Trends and current state

### Wellington has the highest PT mode share of trips in New Zealand

Public transport is a crucial part of the Wellington Region's transport system. There were 36 million passenger boardings in 2024, up from 33 million 4 years earlier. Wellington Region's

per capita usage of public transport is 37% higher than in Auckland, based on patronage numbers reported by Metlink[5] and Auckland Transport[6].

Census data shows that in 2023, 15.5% of Wellington Region residents used public transport for their journey to work, compared with a national average of 5.2%, 2.7% in Canterbury, and 7.7% in Auckland.[7]

On the key corridor into Wellington CBD from north of the city, public transport accounted for 41% of trips during the AM peak and 24% averaged across all times in 2024.

The most recent results from the Household Travel Survey reinforce the importance of public transport in the region and the changing patterns of use:

- The public transport mode share in Wellington Region, at 4.6%, is higher than any other region. Auckland is next highest, at 3.9%.[8]
- Bus users in the region make more frequent trips per week compared to rail users.
- Many households use a mix of transport options, with multi-modal travel (eg, combining bus and walking or train and cycling) becoming more common.
- The proportion of the region's residents using public transport for non-work trips (eg, shopping, social visits, and leisure) has increased over time, reflecting a shift in travel patterns.

### Over 20 million bus trips are made across the region each year, with ¾ undertaken in Wellington City

Wellington City accounts for most of the region's bus usage. 76% of the region's bus passenger boardings were in Wellington City in 2024 (Figure 5.1). Half of those Wellington City boardings were on three core bus routes: numbers 1, 2, and 3. Wellington City also accounts for about half the region's rail boardings – much higher than any other area. However, a large portion of those boardings are commuters returning to other parts of the region at the end of the working day.

[5] https://www.metlink.org.nz/about-us/performance-of-our-network#network-patronage-data
[6] https://at.govt.nz/about-us/reports-publications/at-metro-patronage-report
[7] Infometrics. https://rep.infometrics.co.nz/wellington-region/census/indicator/means-of-travel-to-work-by-place-of-residence
[8] https://www.transport.govt.nz/area-of-interest/public-transport/new-zealand-household-travel-survey

Figure 5.1. Bus and rail passenger boardings by trip origin, 2024.


### Per capita public transport usage

Overall, Wellington Region had 68 public transport boardings per person in 2024 – 48 bus boardings and 20 rail boardings.

Per capita use of buses is higher in Wellington City than other parts of the region. On average, there were 94 bus boardings per person per year in Wellington City in 2024, compared with 31 in Lower Hutt and less than 20 elsewhere (Figure 5.2).

Compared to bus journeys, rail journeys are typically long and traverse multiple territorial authorities. For that reason, the geographical distribution of total rail boardings shown in the left-hand side of Figure 5.2 do not reflect the geography of rail passenger residence. Restricting the analysis to passenger boardings before midday (right-hand side of Figure 5.2) better represents the geography of passenger residences. Whereas the region's bus usage is highest in Wellington City, per capita use of rail is more evenly spread across the region. Rates are highest (indicated by rail boardings before midday) in Lower Hutt, Porirua, and Upper Hutt.

Figure 5.2. Bus and rail passenger boardings per capita, at all times of day and mornings only, 2024.


Public transport usage in Wellington City is dominated by commuters travelling to the central city from outer areas. Excluding Wellington Station and the central city[9] reveals that outer areas of Wellington still have higher per capita usage of buses than other parts of the region but lower rail usage (Figure 5.3), broadly reflecting service provision.

[9] Suburbs 'Wellington Central', 'Pipitea', and 'Te Aro'. This includes the 'Golden Mile' Lambton Quay to Courtenay Place, Wellington Station, Thorndon Quay, and Taranaki Street.

Figure 5.3. Bus and rail boardings per capita, by area (excluding Wellington CBD), 2024.


## Temporal patterns

The region's public transport has significant seasonal variations in usage, largely driven by holiday/non-holiday patterns. Weeks without holidays (school holidays, tertiary education breaks, or public holidays) had an average of 783,000 passenger boardings per week, and reaching as high as 860,000 passenger boardings in the busiest week (generally in March and May). Weeks that included holidays were on average 22% lower than other weeks.

### Lower patronage on Fridays

Rail usage is tightly focused on weekday peak-time commuting, whereas bus usage is more evenly spread across times and days. In the middle of the day on weekdays, bus patronage remains at about 35% to 40% of the week's maximum hourly volume (Table 5.1). Weekends have become relatively more important for bus usage – weekends now average 43% of the weekday patronage. For comparison, in 2019 average daily bus patronage on weekends was only 32% of the average for weekdays.

In contrast, rail passenger numbers outside peak times are low, reaching only 15% to 20% of the week's maximum in the inter-peak period and around 10% to 15% at weekends (Table 5.2).

Table 5.1. Bus passenger boardings as percentage of weekly maximum, 2024.

| | 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon | 21% | 82% | 94% | 37% | 28% | 29% | 30% | 30% | 35% | 81% | 65% | 76% | 34% | 15% | 9% |
| Tue | 24% | 89% | 100% | 42% | 32% | 33% | 34% | 34% | 39% | 85% | 69% | 80% | 38% | 18% | 11% |
| Wed | 23% | 85% | 97% | 45% | 33% | 33% | 34% | 36% | 42% | 79% | 68% | 78% | 38% | 18% | 11% |
| Thu | 24% | 89% | 99% | 45% | 33% | 35% | 36% | 35% | 41% | 87% | 70% | 78% | 39% | 19% | 12% |
| Fri | 22% | 83% | 95% | 42% | 32% | 34% | 35% | 35% | 41% | 83% | 65% | 66% | 35% | 19% | 12% |
| Sat | 2% | 7% | 13% | 19% | 23% | 26% | 26% | 26% | 25% | 25% | 25% | 22% | 17% | 11% | 8% |
| Sun | 0% | 3% | 8% | 13% | 15% | 17% | 19% | 19% | 19% | 18% | 18% | 16% | 10% | 6% | 5% |

Table 5.2. Rail passenger boardings as percentage of weekly maximum, 2024.

| | 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon | 36% | 87% | 62% | 21% | 14% | 14% | 15% | 16% | 22% | 50% | 70% | 67% | 25% | 11% | 5% |
| Tue | 42% | 100% | 72% | 27% | 16% | 17% | 18% | 22% | 28% | 57% | 81% | 76% | 30% | 13% | 6% |
| Wed | 41% | 100% | 72% | 27% | 16% | 16% | 17% | 19% | 27% | 54% | 80% | 76% | 31% | 14% | 7% |
| Thu | 39% | 95% | 72% | 25% | 16% | 16% | 17% | 19% | 26% | 56% | 76% | 74% | 31% | 15% | 9% |
| Fri | 31% | 75% | 58% | 24% | 17% | 18% | 19% | 21% | 27% | 51% | 60% | 54% | 26% | 14% | 9% |
| Sat | 3% | 5% | 7% | 9% | 11% | 12% | 12% | 13% | 14% | 16% | 15% | 15% | 12% | 7% | 4% |
| Sun | 1% | 2% | 4% | 6% | 7% | 7% | 8% | 8% | 8% | 8% | 8% | 7% | 6% | 3% | 2% |

The differences in usage patterns between rail and bus services reflect the distinct roles each mode plays in the public transport network – catering to different trip purposes – as well as differences in accessibility, flexibility, and service coverage.

### Rail trips are dominated by weekday commuting

Weekday commuting to and from Wellington CBD is more prominent in train patronage that bus. Rail routes are designed primarily to serve the region's key employment hub with high-capacity peak-time services. In contrast, buses provide more comprehensive coverage across the region, catering to a wider range of trip purposes, including shopping, social visits, education, and off-peak work shifts. The Household Travel Survey found that half of rail trips in the Wellington Region are for work, compared with one-third of bus trips.

## Trends since 2019

### Bus patronage is down at peak times and up off-peak

Although overall bus patronage has returned to pre-COVID levels, there are clear differences across days of the week.

On weekdays, bus passenger numbers have remained substantially lower in the early part of the AM peak. The fall was largest on Mondays and Fridays. On weekdays in 2024, about 2600 fewer people boarded buses in the hour starting 7am than 5 years earlier (Table 5.3). That is a 27% decrease (Table 5.4).

Table 5.3. Change in average daily number of public bus passengers 2019 to 2024, by day of week and hour.

| | 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon | -45 | -1,854 | -774 | -99 | 232 | 361 | 502 | 514 | 612 | 1,040 | 42 | -1,359 | -552 | -41 | 139 |
| Tue | -13 | -1,739 | -446 | -15 | 252 | 317 | 592 | 556 | 739 | 1,093 | 310 | -1,077 | -426 | -35 | 172 |
| Wed | 80 | -1,368 | -48 | 292 | 421 | 493 | 665 | 794 | 776 | 1,525 | 693 | -614 | -167 | 96 | 232 |
| Thu | -32 | -1,730 | -331 | -14 | 142 | 203 | 477 | 476 | 574 | 1,135 | 291 | -876 | -422 | -30 | 105 |
| Fri | -285 | -2,499 | -1,197 | -111 | 156 | 255 | 519 | 425 | 574 | 897 | -175 | -975 | -325 | -63 | 96 |
| Sat | 114 | 170 | 283 | 399 | 551 | 602 | 816 | 862 | 986 | 1,103 | 1,023 | 882 | 544 | 381 | 312 |
| Sun | 109 | 171 | 275 | 504 | 655 | 744 | 860 | 877 | 918 | 957 | 865 | 761 | 563 | 357 | 202 |

Table 5.4. Average daily bus passengers in 2024, relative to 2019, by day of week and hour.

| | 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon | 99% | 80% | 92% | 98% | 107% | 111% | 114% | 114% | 116% | 109% | 100% | 85% | 86% | 98% | 113% |
| Tue | 100% | 82% | 96% | 100% | 107% | 108% | 115% | 114% | 121% | 106% | 104% | 89% | 91% | 98% | 114% |
| Wed | 103% | 86% | 101% | 105% | 111% | 112% | 116% | 115% | 113% | 121% | 109% | 93% | 96% | 104% | 117% |
| Thu | 99% | 82% | 96% | 101% | 104% | 105% | 112% | 111% | 117% | 108% | 103% | 91% | 91% | 99% | 107% |
| Fri | 90% | 73% | 89% | 98% | 104% | 106% | 113% | 110% | 114% | 106% | 98% | 88% | 92% | 97% | 107% |
| Sat | 152% | 121% | 118% | 118% | 120% | 120% | 126% | 128% | 133% | 137% | 134% | 133% | 127% | 130% | 135% |
| Sun | | 146% | 128% | 134% | 137% | 137% | 139% | 139% | 141% | 144% | 140% | 141% | 148% | 147% | 134% |

Similar falls in bus patronage occurred in the afternoon peak, especially in the hour starting at 5pm. Again, the falls were largest on Mondays and Fridays. It may be that many people who prior to COVID would have commuted to work by bus at peak times 5 days per week, have changed their travel-to-work patterns and are now more likely to work from home on Mondays and Fridays.

On mid-weekdays Tuesday/Wednesday/Thursday, bus passenger numbers fell in peak times, but by less than on other weekdays. In fact, numbers increased on Wednesdays in the hour starting at 8am.

This pattern aligns with findings from the 2023 Census journey-to-work data. The data show that while use of public transport has remained high in the Wellington Region, the number of people working from home doubled between 2018 and 2023. That increase in working from home and the decrease in weekday peak patronage likely reflects a trend to hybrid working arrangements, with more people commuting fewer days per week. The Census results support the conclusion that public transport demand remains strong but has shifted away from a strict five-day commuting model.

On mid-weekdays Tuesday/Wednesday/Thursday, bus passenger numbers fell in peak times, but by less than on other weekdays. In fact, numbers increased on Wednesdays between 8am and 9am.

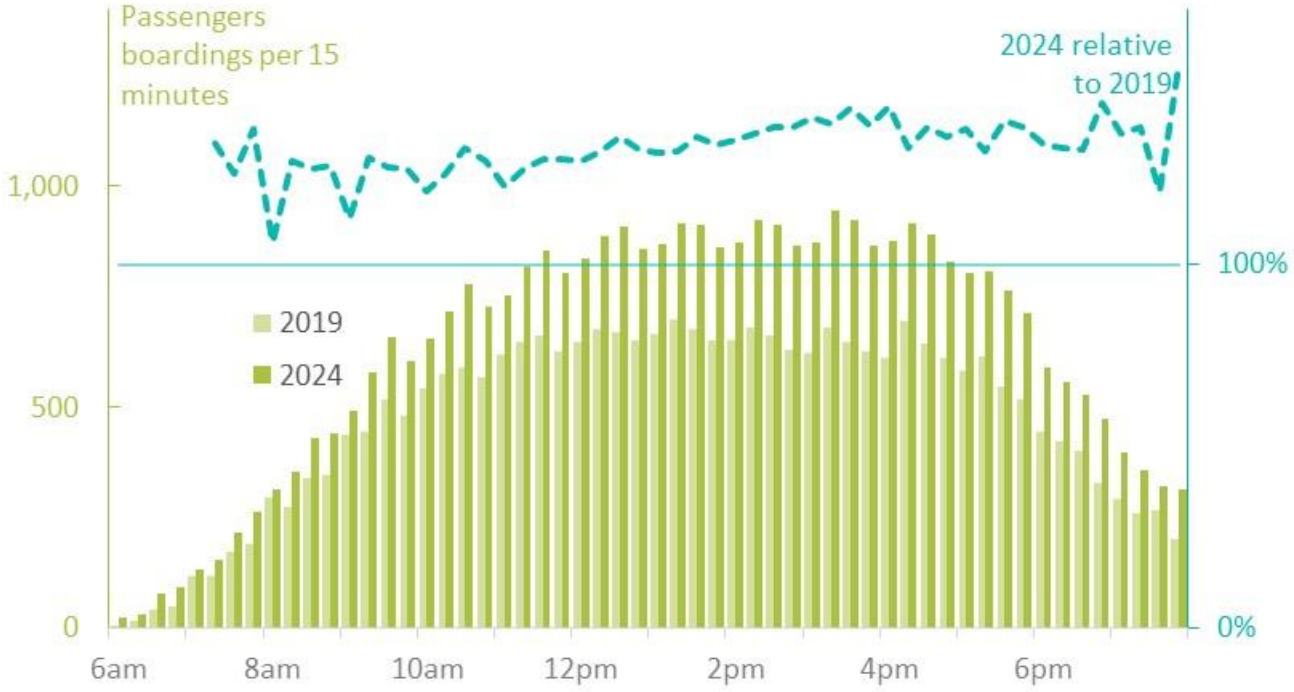
In contrast, inter-peak bus patronage has increased moderately to above pre-COVID levels. The largest increases were early and mid-afternoon, especially on Wednesdays. In the hour starting 3pm on Wednesdays, an average of 2300 more people boarded buses in 2024 than 5 years earlier, which was a 24% increase. Bus patronage in the hour starting 3pm is heavily influenced by school bus services. Unlike many adults traveling for work, school children have very little flexibility to avoid or change the timing of their school-day travel.

The changes in average daily bus boardings between 2019 and 2024 across times of day are also shown for weekdays (Figure 5.4) and weekends (Figure 5.5). The largest falls were early in the early part of the morning peak (before 8am) and later in the afternoon peak (after 5pm). Passenger numbers in the hours starting 8am, 3pm and 4pm were either slightly down or up in 2024 from 5 years earlier, reflecting the times that school buses operate.

Weekend bus boardings were higher at all times of day in 2024 compared with 5 years earlier (Figure 5.5). On Saturdays between 2pm and 6pm and on Sundays between 12pm and 6pm, about 500 to 1000 extra passengers per hour used buses. During those weekend hours, passenger numbers are now similar to weekday inter-peak numbers.

Figure 5.4. Weekday bus boardings, by time of day, 2019 and 2024.

Figure 5.5. Weekend bus boardings by time of day, 2019 and 2024.



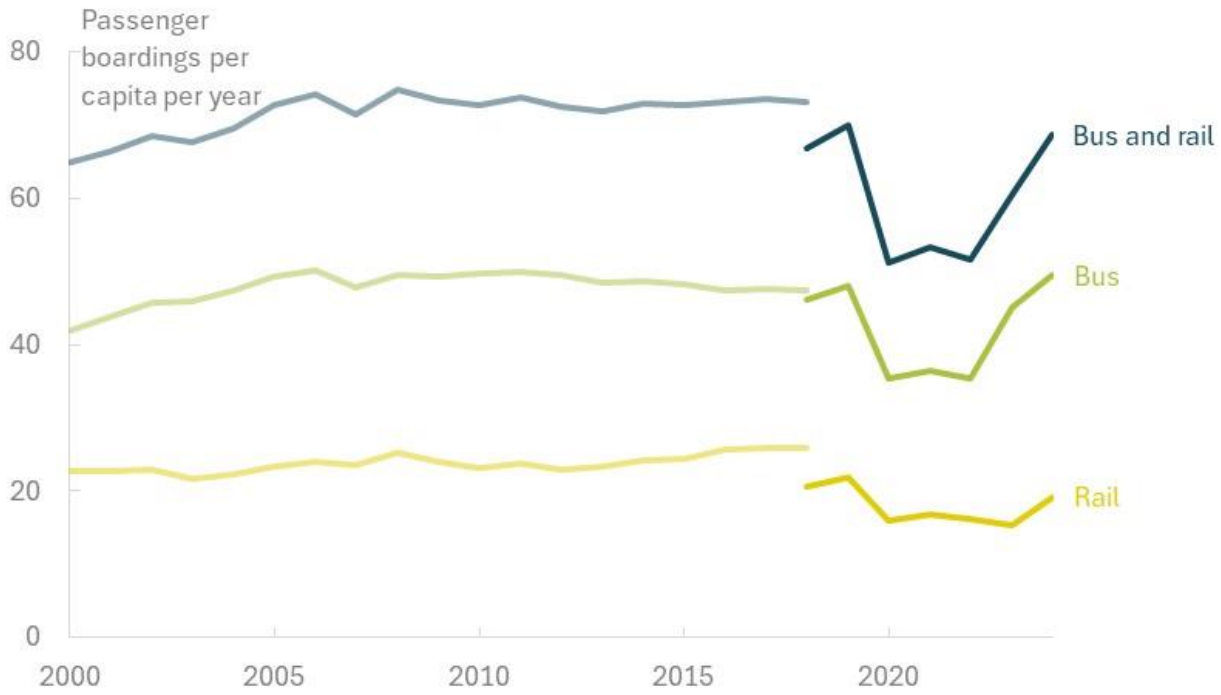

### Long-term historical growth

Per capita usage of public transport in the region grew gradually for many years until 2018 (Figure 5.6). Changes in counting rules mean that numbers from 2018-onwards are not directly comparable with earlier years. However, it is clear that COVID impacted both bus and rail usage in 2020 and subsequent years. Bus usage per capita recovered and by 2024 returned to approximate the same as pre-COVID levels. In contrast, rail usage has remained about 25% below pre-COVID levels. The different post-COVID rebounds of bus and rail are related to differences in the timing and purposes of rail and bus travel. Compared with bus usage, rail usage is more tightly focused on peak-time commuting for adult passengers over longer distances.

Similar trends are evident in monthly patronage data. By early 2024, bus passenger numbers had recovered to pre-COVID levels and have remained about 5% above those levels. Rail patronage trends are subject to counting rule changes over recent years, but statistics published by Metlink indicates that overall patronage in calendar year 2024 was about 25% below 2019 levels.10 Passenger numbers on all rail lines have been impacted by increased remote working, and the Kāpiti line has likely been impacted by some level of mode shift with the opening of Transmission Gully.

[10] Metlink https://www.metlink.org.nz/about-us/performance-of-our-network#network-patronage-data

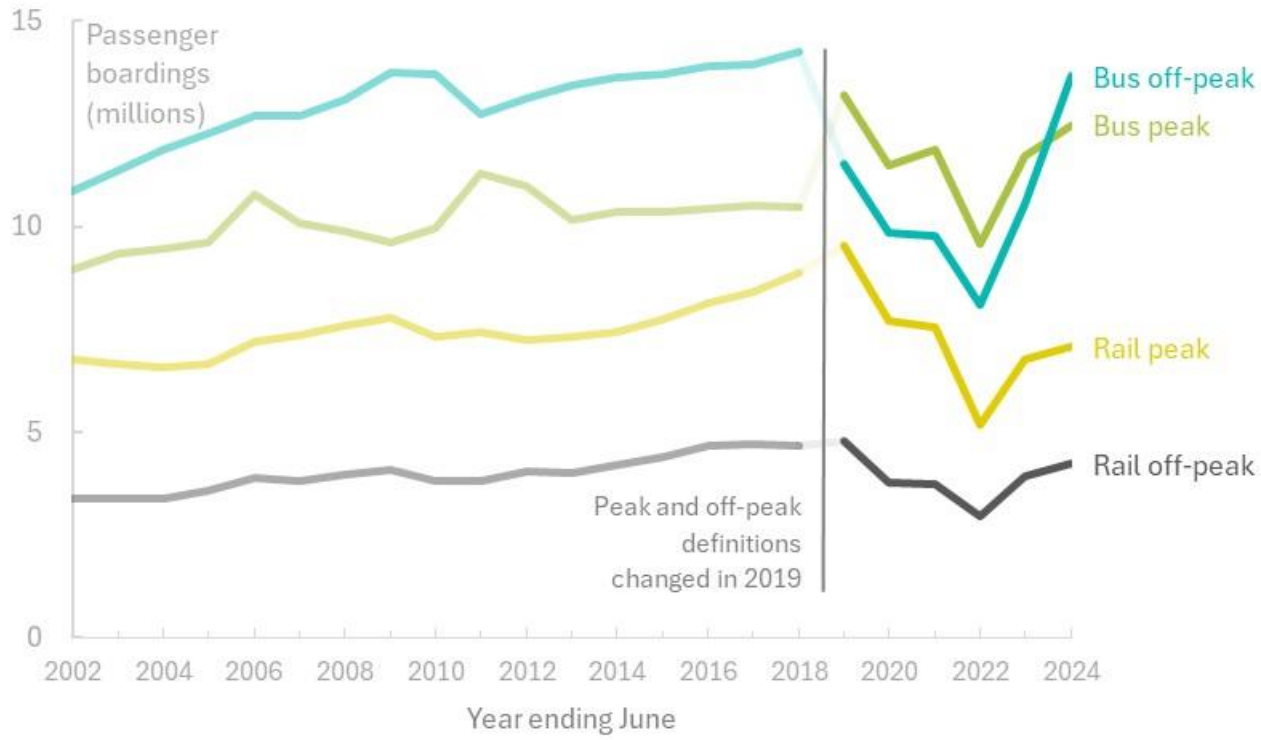
Figure 5.6. Passenger boardings per capita.




Note: Counting rule changes in 2018 mean that data before and after that year are not directly comparable.

Despite changes in definitions of peak periods in 2019, the long-term trends in bus and rail patronage show generally increasing volumes on both modes at both peak and off-peak times (Figure 5.7). The long-term trends have been interrupted in recent years, with off-peak bus patronage growing and rail patronage generally remaining well below pre-COVID levels, especially at peak times.

Figure 5.7. Bus and rail patronage, peak and off-peak, year to June 2020 to 2024.




## Spatial variation

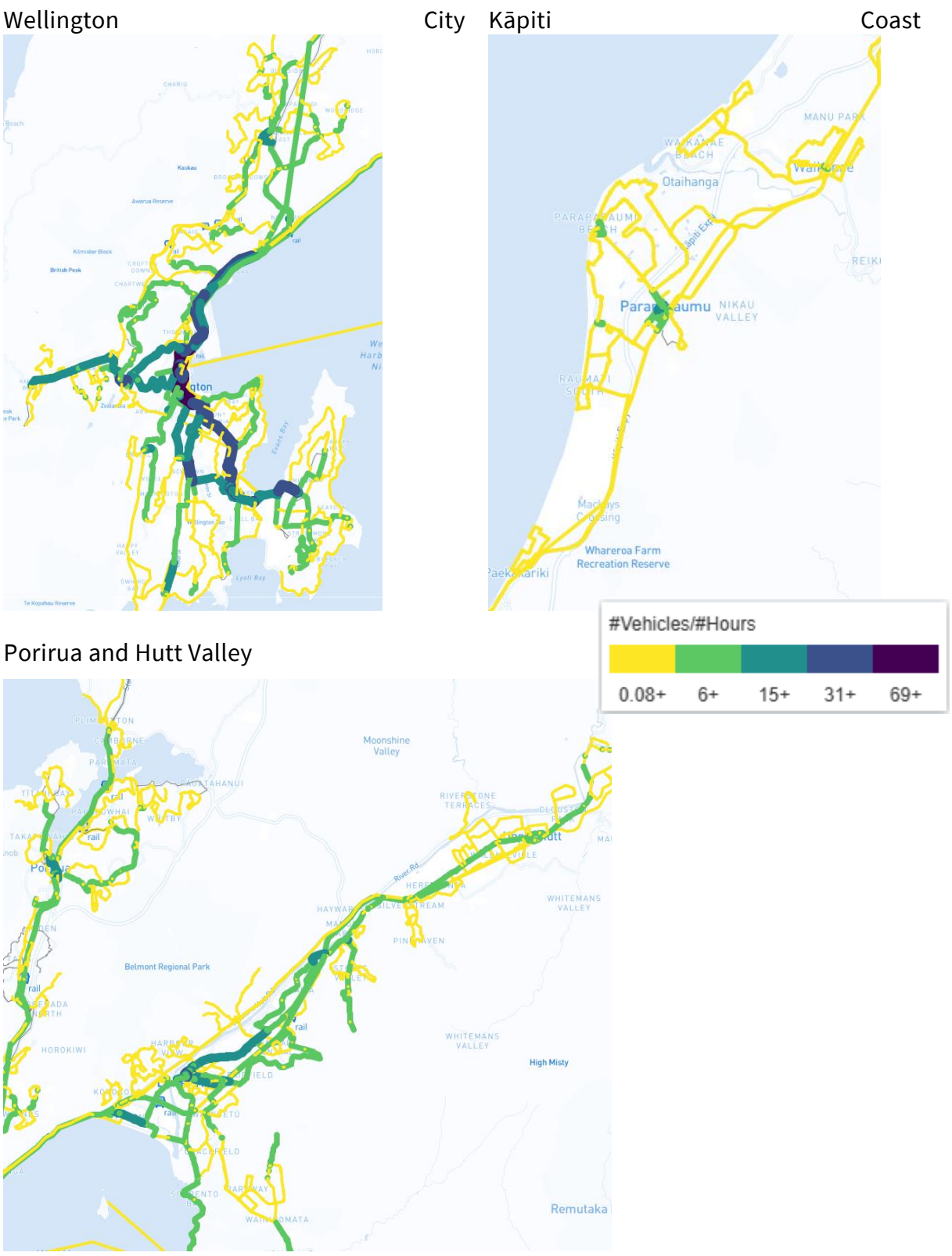
Bus boardings are concentrated at a small number of locations. During the AM peak, 50% of all bus boardings were at just 5% of the region's bus stops in 2024. Rail boardings are also concentrated: the 9 leading rail stations accounted for 50% of the region's rail boardings during the AM peak.

## Service frequencies are highest on core bus routes

Service frequency is relatively high within most parts of Wellington City and on the west and east spines (Figure 5.8). Between 7am and 7pm, there are at least 6 services per hour on:

- many routes within Wellington City
- the west spine north to Porirua
- the east spine north to Upper Hutt
- some branches off those spines, including links to Titahi Bay, Waitangirua, Eastbourne, and Stokes Valley

Figure 5.8. Service frequency (vehicles per hour 7am to 7pm) in Wellington City, Kāpiti Coast, Porirua and Hutt Valley.[11]




[11] Source: MRCagney. *Transit flows*. https://transitflows.mrcagney.works/

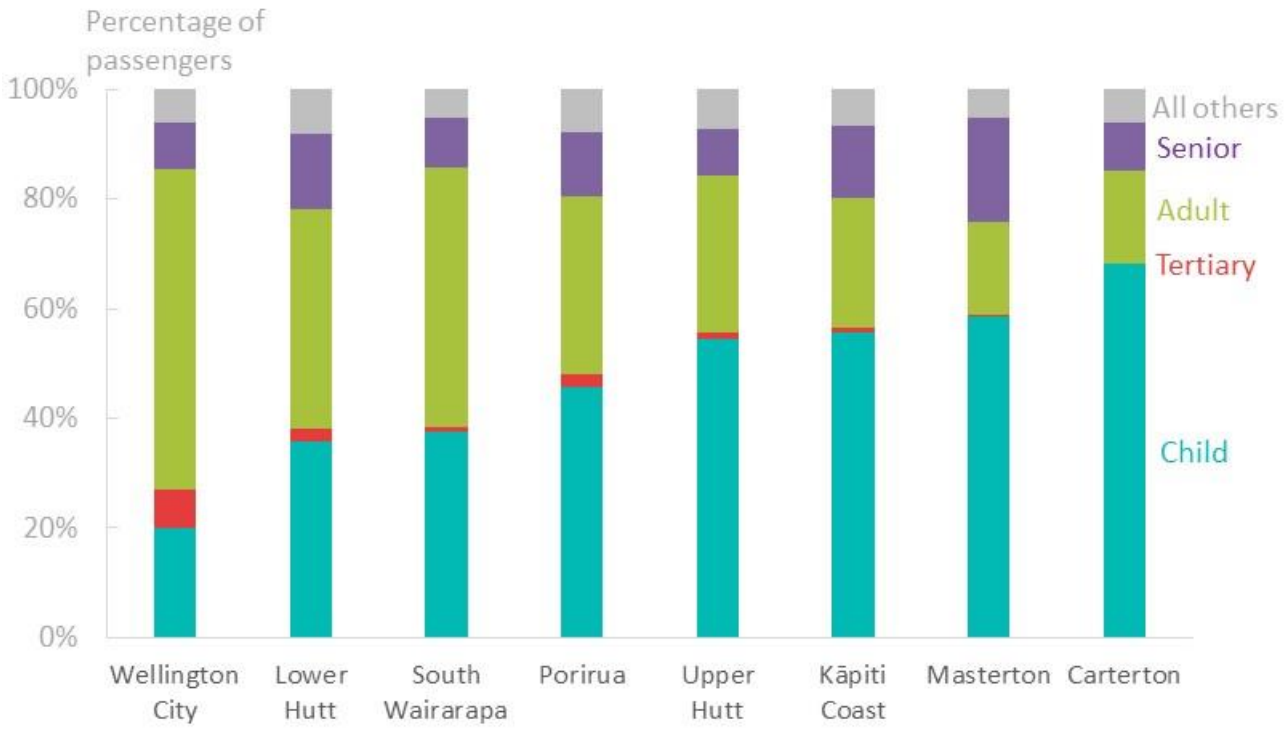
## Demographics of bus users

The analysis below focuses on data available from the Snapper card system, which includes passenger type, frequency of use, and transfers between services. The Snapper card system reflects travel by most public transport users but lacks usage data for users who do not use Snapper, often including young children, Gold Card holders, and users who pay cash fares.

### Adults account for 60% of bus trips in Wellington City, with children accounting for a higher proportion of daily trips outside of Wellington City

The largest groups of bus passengers, by number of trips in 2024, are Adult (53% of boardings), Child (25%), Senior (9%), and Tertiary (6%).[12] Those groups accounted for 94% of bus passenger boardings in the region (Figure 5.9).

Figure 5.9. Bus passenger types, by territorial authority, 2024.




Note: In this analysis, 'Adult' includes passenger types 'Adult' and 'Young Adult 19-24'; Child includes 'Child', 'Child 5-12', and 'Under 5'; 'All others' includes 'Community Services Card', 'Accessible', and 'Others'.

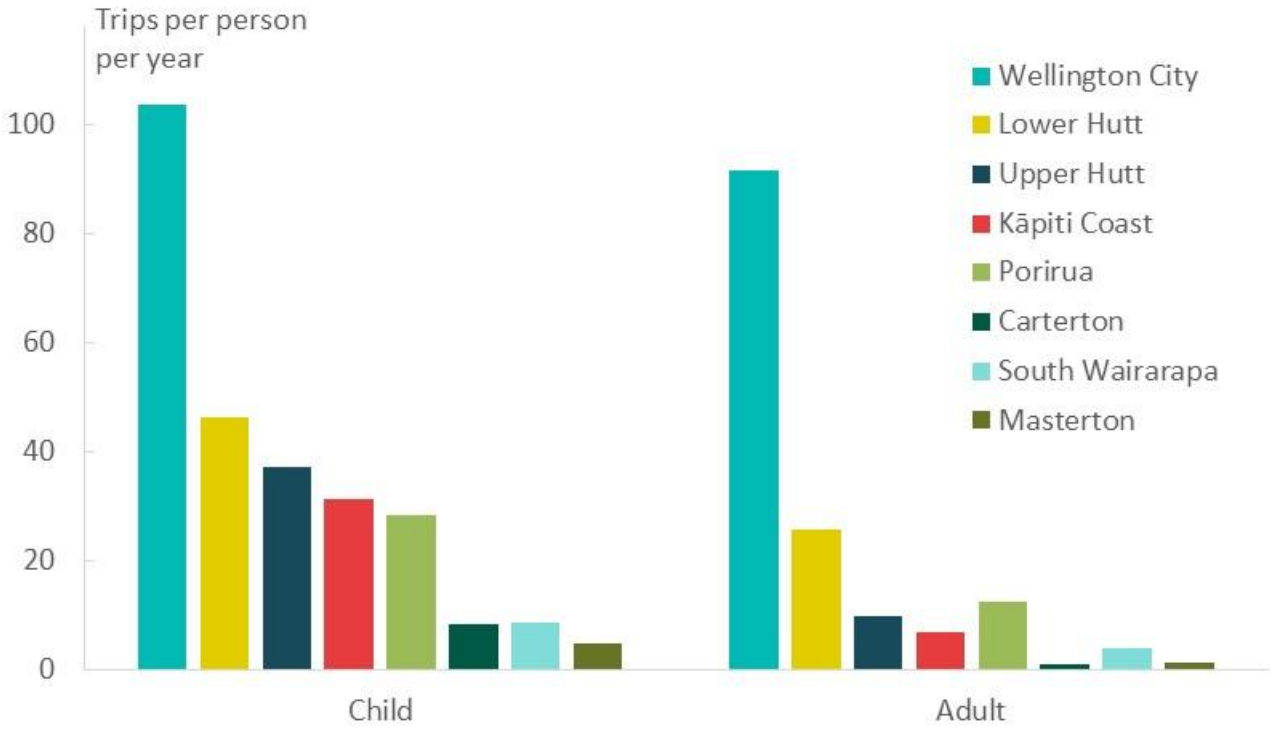
The mix of passenger types varies greatly across the region. In Wellington City, which accounts for three-quarters of the region's bus trips, a high proportion (58%) of bus passengers are adults. In the rest of the region, only 35% are adults. Wellington City also has a higher proportion of Tertiary (7%) bus passengers than the rest of the region (2%). Wellington City has a lower proportion of Child bus passengers (20%) than the rest of the region (42%).

[12] Public transport boardings in mornings is assumed to indicate the geography of passenger residence. Afternoon boardings are more likely to represent passenger work or education locations. Rail passenger boardings by *Seniors* are not recorded in data available for this analysis.

In many parts of the region, the majority of bus passengers are children. For example, in Porirua, 46% of bus passenger boardings before mid-day were ‘Child’. Only 33% were ‘Adult’ and 22% were ‘Senior’, ‘Tertiary’ or others.

Bus usage per person is much higher in Wellington City than in the rest of the region across all major age groups. Among adults, Wellington City residents take an average of 93 bus boardings per year, compared with 14 in the rest of the region. For children aged up to 18 years, the figures are 99 versus 33 boardings per person per year. Older people aged 65 or more years in Wellington City average 64 boardings per year, compared with just 12 in the rest of the region (Figure 5.10). This indicates consistently high per-person bus usage in Wellington City across children, adults, and seniors. In contrast, in the rest of the region, children make more use of buses per person than adults or seniors.

Figure 5.10. Bus trips per person per year, by passenger type, 2024.




Note: In this analysis of per capita boardings, Child comprises passenger types ‘Child’, ‘Child 5 to 12’, and ‘Under 5’. All others passenger types are assumed to be adults aged 18 or more years.

The passenger demographic patterns shown above are consistent with the census-based findings on means of journey-to-work. Across the region, 16% of people reported using public transport to travel to work in 2023, compared with 5% for the whole of New Zealand.

Within Wellington Region, the proportion was highest in Wellington City (20%) and Lower Hutt (16%).[13]

[13] Infometrics. https://rep.infometrics.co.nz/wellington-region/census/indicator/means-of-travel-to-work-by-place-of-residence

### Adult passenger numbers down at peak times, other passengers up off-peak

The number of adult and other passengers boarding buses in each 15-minute period on weekdays is shown in Figure 5.11. In 2019, the number of adult passengers boarding buses peaked at about 2400 at 8:00am and 2300 at 5:00pm.

In 2024, the timing of those peaks was the same, but the peaks had reduced by about 20%: about 1900 adult passengers at 8:00am and 2000 at 5:00pm. All other passengers (senior or child categories) show a different pattern. The morning peak is more sharply focused on 7:45am to 8:30am. The afternoon peak is much earlier than for adults: 15-minute periods starting 3:00pm to 3:30pm. Peak levels for these other passengers were about 10% higher in 2024 than in 2019.

Figure 5.11. Adult bus passengers and other passengers by time of day on weekdays, 2019 and 2024.

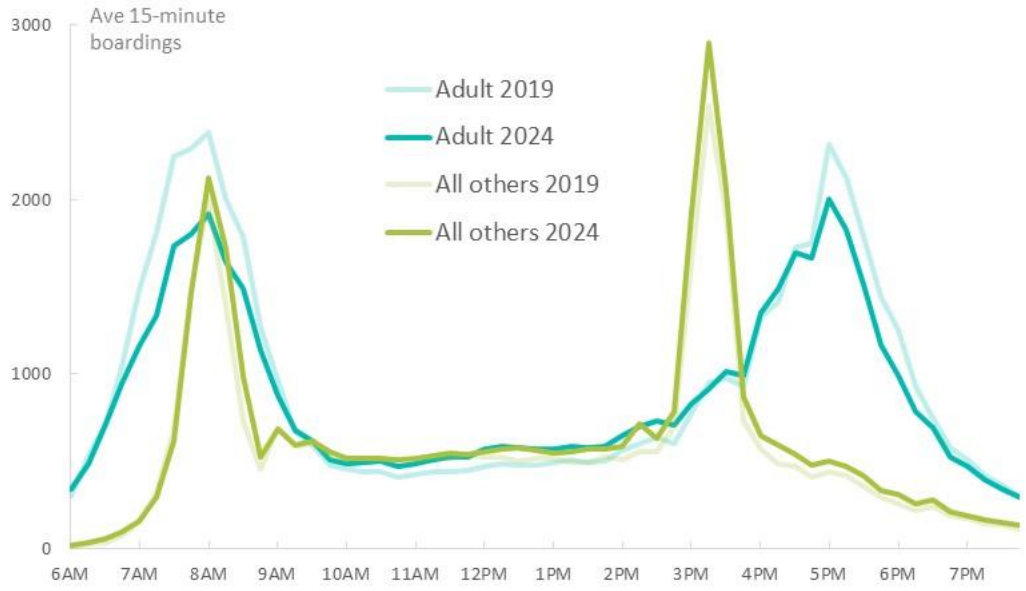
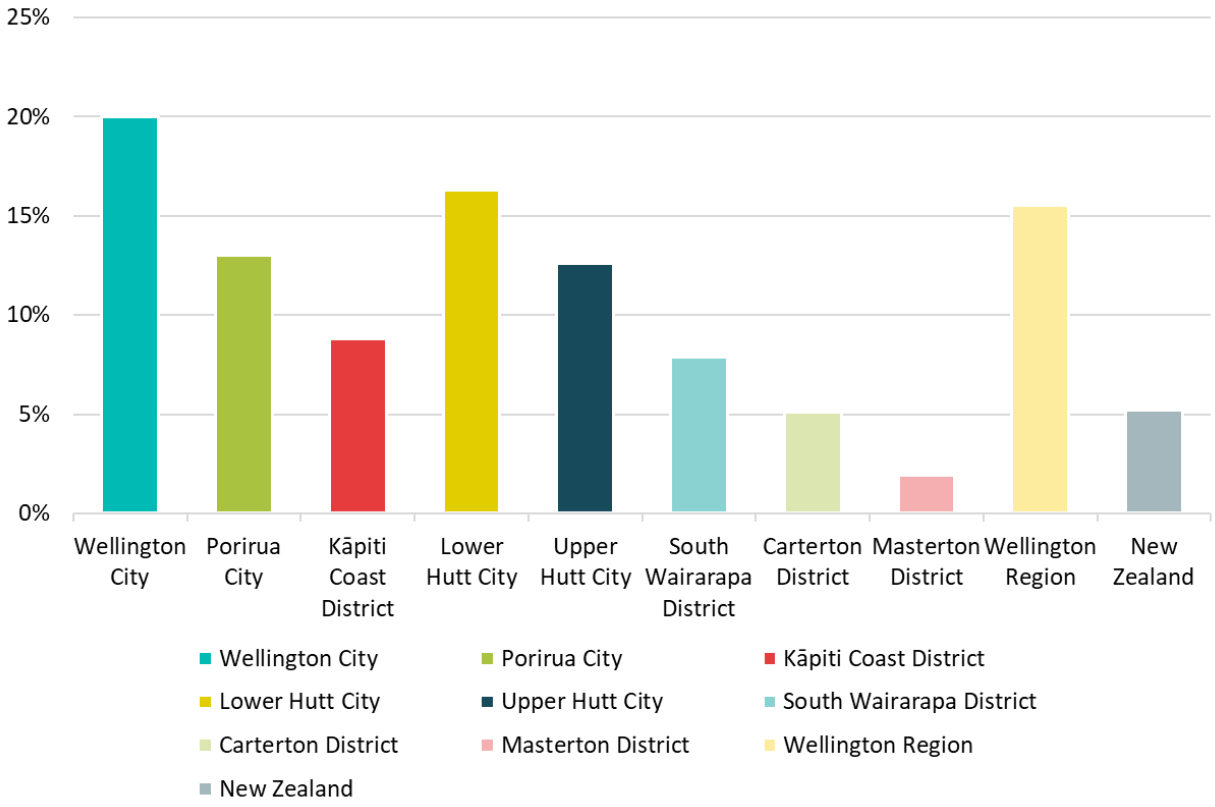


Figure 5.12. Proportion of employed people using public transport as means of journey to work, 2023.




### The farther away from Wellington CBD people live, the longer the trip distance, the greater the share of rail users and the lower the frequency of PT usage

Usage of Wellington Region's public transport system is dominated by high-frequency travellers but there are also many occasional (low-frequency) users. An analysis of Snapper card usage in March 2024 found that 127,000 unique Snapper cards were used each week, equating to 23% of the region's resident population. Half of those public transport users travelled on just 1 or 2 days per week. High-frequency users who travelled on 5 or more days per week made up 21% of all Snapper cards but accounted for 42% of all trips.

The region's public transport users made an average of 5.2 boardings per week and travelled an average of 2.9 days per week. Frequency of use was higher than average among:

- Peak-time travellers - on average 5.9 boardings per week
- Child passengers - 6.4 boardings per week
- People boarding in Porirua (6.0 boardings per week), Lower Hutt (5.6) and Upper Hutt (5.4).

Many people use public transport infrequently. Across the region, 49% of public transport users travelled only 1 or 2 days per week. Frequent travellers (5 or more days per week) comprise only 21% of public transport users, but they account for 42% of passenger boardings. Child passengers have particularly high frequency of use. 32% of child passengers travelled 5 or more days per week, compared with only 14% of adult passengers. Those

differences in frequency of usage reflect differences in flexibility in travel. School children generally have less flexibility in travel patterns than adult passengers.

The analysis revealed that frequency of usage also varies geographically. Residents of areas nearer Wellington CBD (Wellington City, Porirua, Lower Hutt) tend to have high frequency of public transport usage. In contrast, residents of areas further away (Kāpiti Coast and Wairarapa) tend to be infrequent travellers. Only 8% of Wairarapa public transport users travelled 5 or more days per week, compared with 22% in Wellington City and Lower Hutt (Figure 5.13). The pattern of decreasing frequency of public transport usage in the areas furthest from Wellington CBD is also evident in the average of number of days of travel per week and number of trips per week (Figure 5.14).

Figure 5.13. Days of public transport usage per week, by territorial authority.

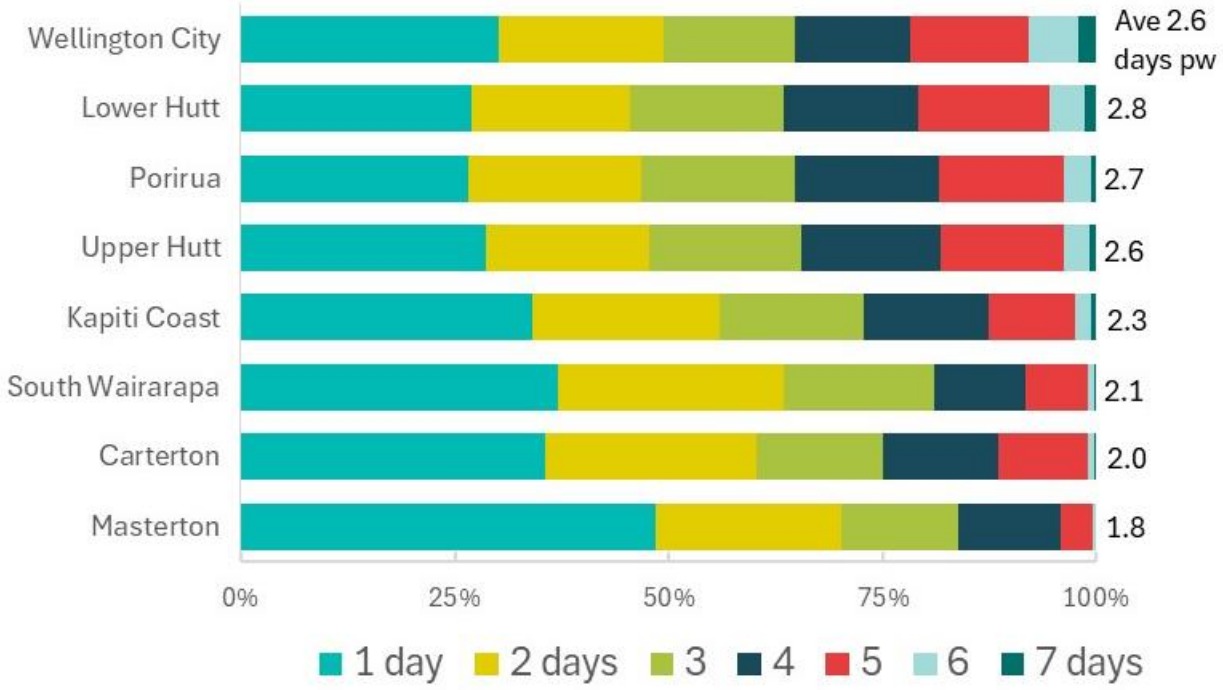
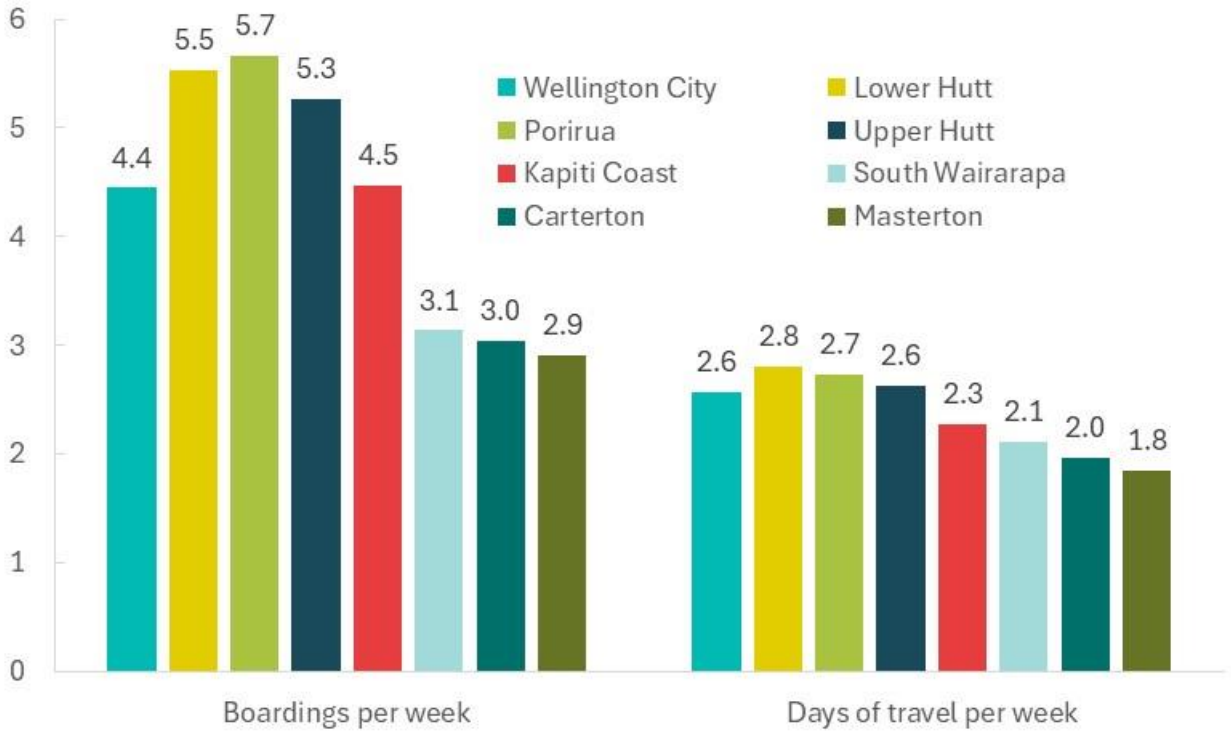


Figure 5.14. Weekly public transport boardings and travel days per person, by territorial authority.



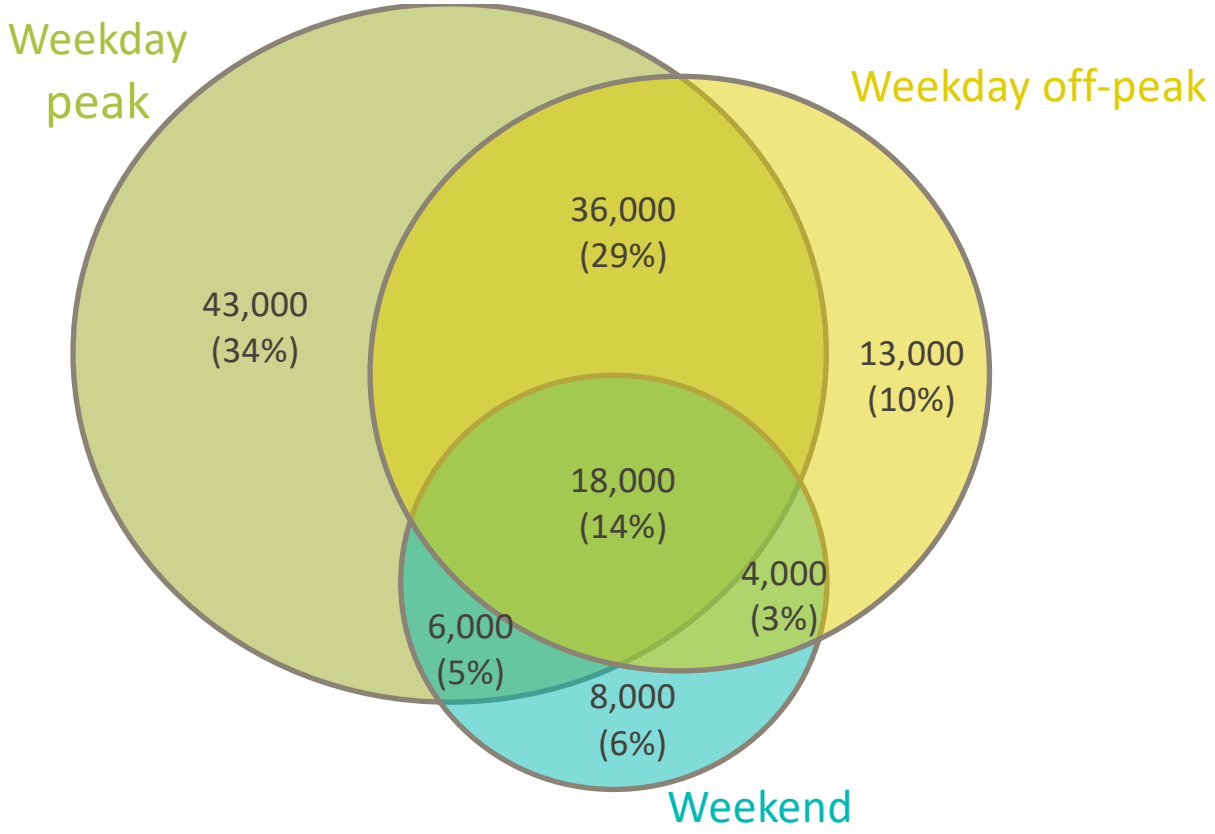

### Usage overlaps across days and times

The analysis of Snapper card usage in March 2024 also revealed that most public transport users travel across multiple times and days. For example, the majority of people who travel at weekends also travel at weekday peak[14] or off-peak times ( Figure 5.15). Although public transport usage is highest at peak times, most of the people who travel at peak times also use public transport off-peak or at weekends. 14,000 people (14% of public transport users) per week travel at all three categories: weekday peak, weekday off-peak and weekend. These patterns reflect the importance of the region's public transport system providing for:

- **Diverse trip purposes**. Public transport serves a wide array of trip purposes beyond commuting, including shopping, social visits, and leisure activities. This diversity underscores the system's role in supporting various aspects of daily life.
- **Temporal flexibility**. The data indicates that many users do not restrict their travel to specific times. For instance, individuals who commute during weekday peaks also use public transport during off-peak hours and weekends, reflecting the system's adaptability to users' varying schedules.
- **Spatial variation**. The overlaps across time categories implies that public transport users often travel to multiple locations, not just between home and work. This spatial variation highlights the importance of a well-connected network that allows for a wide range of origins and destinations.

[14] In this instance, 'peak' is defined at the 3 hours before 9am and the 3 hours before 6pm.

Figure 5.15. Weekly number of public transport users in each time period and combination of time periods.



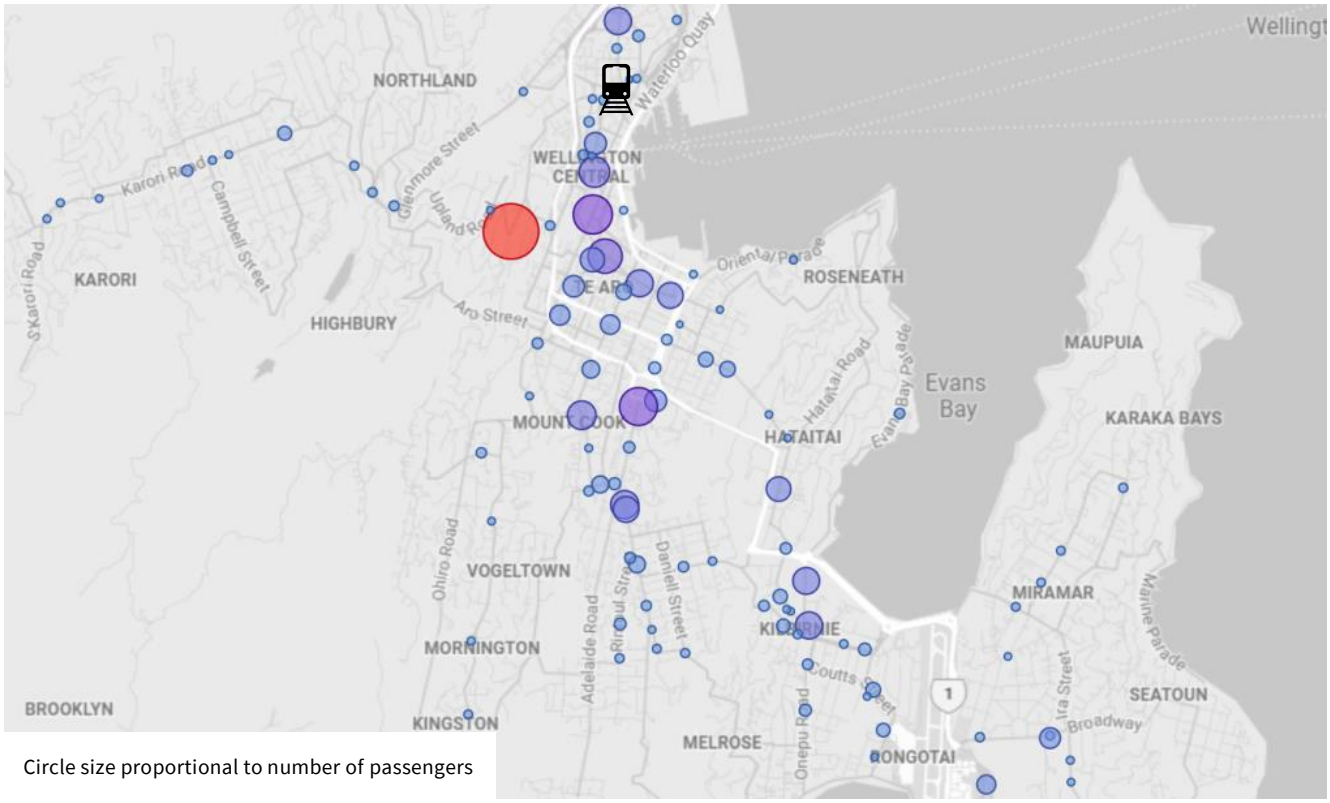

### Around 13% of people alighting from trains at Wellington Station in the morning peak transfer to connecting bus services

An analysis of rail-to-bus and bus-to-rail transfers at railway stations in March 2024 showed that a small number of passengers use both bus and rail at weekday morning peak times.

At Wellington Station, an average of 1600 passengers arriving by rail in the morning peak period (13% of passengers arriving at that time) transferred to a bus for their onward journey (note that under the current fare settings, this is not a free transfer and is charged as two separate trips).

The leading destination bus stop for those passengers was on Kelburn Parade, serving Victoria University of Wellington's Kelburn campus. Other leading destinations were the Basin Reserve (near schools), Wallace Street (near Massey University), Wellington Regional Hospital in Newtown, and bus stops on the Golden Mile (Figure 5.16)

Figure 5.16. Destinations for rail-to-bus transfers at Wellington Station in AM peak, March 2024.



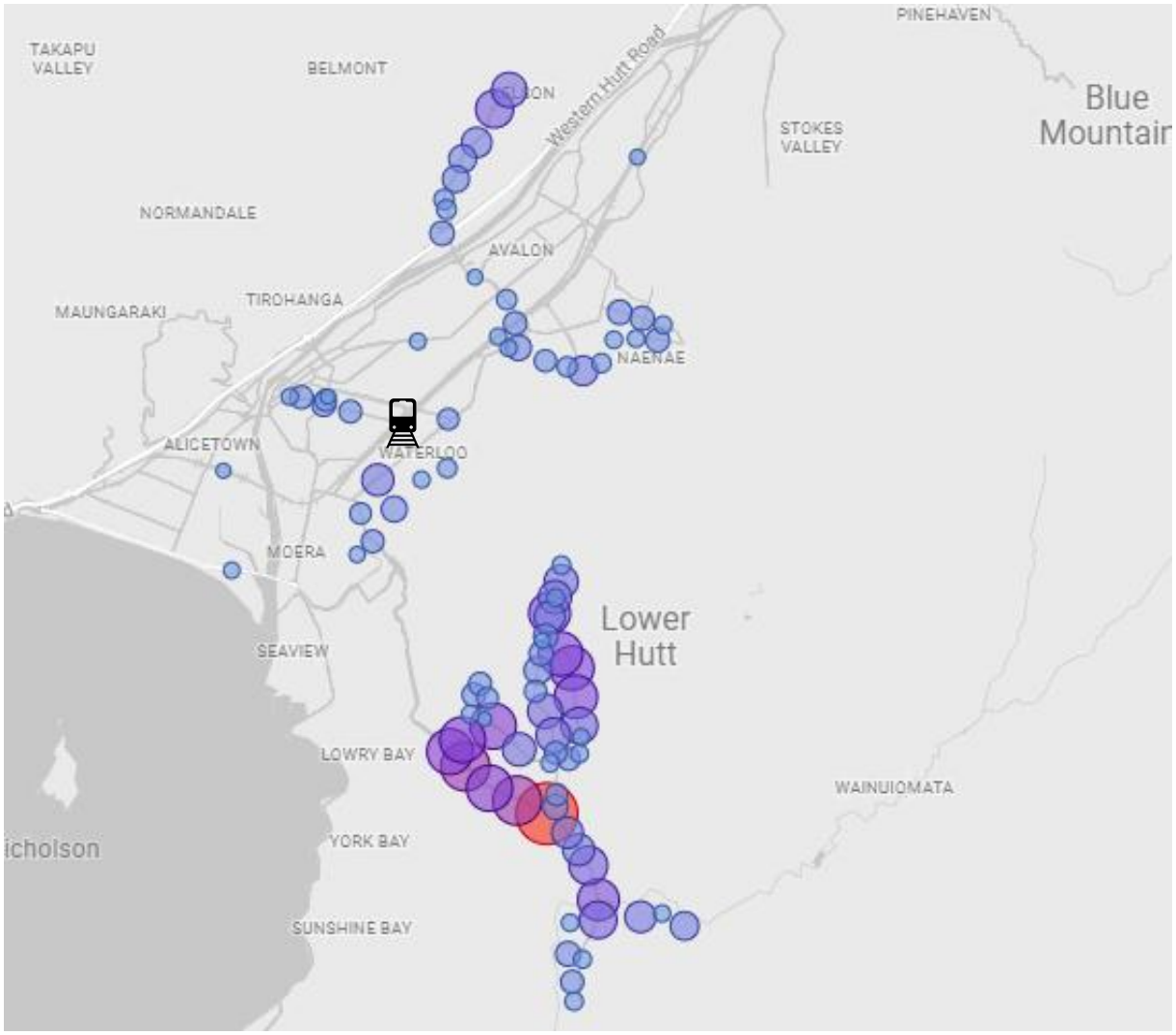

Circle size proportional to number of passengers

Currently, transfers between trains and buses require a separate fare when using Snapper, except when using a 30 day rail pass and travelling on a bus trip covered under the terms of this pass.

In the 2-hour morning peak period, the proportions of passengers boarding trains after transferring from a bus were between 9% and 18% at Porirua Station, Paraparaumu Station, Petone Station, Upper Hutt Station, Waikanae Station, and Waterloo Station.[15] Analysis of those transfers reveals that transfers are particularly important for certain groups of public transport users. For example, a high proportion of passengers who transfer from bus to rail at Waterloo Station in the AM peak are from Wainuiomata (Figure 5.17).

[15] At this stage, Snapper 30-day rail passes generally include free transfer to or from buses at Wellington Station. Otherwise, transfers between bus and rail generally require a fare for each mode.

Figure 5.17. Origins for bus-to-rail transfers at Waterloo Station in AM peak, March 2024.




Those numbers and proportions highlight the importance of bus-to-rail and rail-to-bus transfers in commuter travel. Many passengers use services that connect between modes at those rail stations, despite needing to pay two fares in many instances.

## Bus network capacity and constraints

Crowding deters people from using public transport because of dissatisfaction with standing and not being seated, reduced ability to use journey time productively and discomfort with physical closeness to other passengers.[16] Crowding also results in would-be passengers failing to board services, or waiting for a later service, though data are not available to quantify those effects.

Two metrics have been used to understand the capacity of the bus network:

- **Volume-to-seating capacity ratio (V/C ratio)** - effectively the ratio of passengers on board to the number of seats, expressed as an average across all services passing a

[16] Haywood L, Koning M, Monchambert G. 2017. Crowding in public transport: Who cares and why? *Transportation Research Part A: Policy and Practice*. https://hal.science/hal-01517820/document

particular location on the approach to urban areas; it is recognised internationally that a ratio of 85% is the level above which people start to experience crowding and might not be able to find a seat

- **Number / percentage of people on crowded services** – the number of people (and percentage relative to total patronage) of people on services where the V/C ratio is greater than 85%

Table 5.5 and Table 5.6 below shows inbound and outbound V/C ratios by hour and corridor/area for March 2024.

Table 5.5. Bus service volume-to-seated capacity ratio, inbound, March 2024.

| | Wellington Corridors | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oriental Parade | Hataitai Bus Tunnel | Adelaide Road | Taranaki Street | Willis Street | Salamanca Road | Glenmore Street | Molesworth / Murphy Street | Hutt Rd | Wellington City Corridors Combined | Porirua (Titahu Bay / Mungavin) | Kapiti Road | Lower Hutt (High Street, Waterloo Road) |
| 5am | | 40% | 31% | | | | 31% | | | | 26% | | 8% |
| 6am | 34% | 49% | 44% | 56% | 33% | 29% | 45% | 45% | 45% | 43% | 24% | 23% | 31% |
| 7am | 55% | 67% | 61% | 44% | 43% | 47% | 62% | 65% | 72% | 60% | 33% | 13% | 39% |
| 8am | 70% | 64% | 67% | 59% | 73% | 64% | 73% | 78% | 67% | 67% | 53% | 24% | 51% |
| 9am | 34% | 46% | 36% | 40% | 44% | 34% | 68% | 48% | 49% | 44% | 42% | 30% | 42% |
| 10am | 20% | 52% | 26% | 33% | 28% | 22% | 62% | 28% | 40% | 34% | 32% | 12% | 30% |
| 11am | 24% | 40% | 27% | 39% | 25% | 29% | 48% | 33% | 33% | 32% | 16% | 12% | 30% |
| Noon | 14% | 45% | 23% | 55% | 15% | 32% | 35% | 20% | 25% | 29% | 17% | 14% | 29% |
| 1pm | 20% | 32% | 27% | 47% | 17% | 37% | 34% | 17% | 25% | 29% | 14% | 9% | 31% |
| 2pm | 20% | 40% | 20% | 34% | 12% | 47% | 28% | 32% | 21% | 27% | 23% | 17% | 28% |
| 3pm | 18% | 43% | 55% | 49% | 12% | 49% | 33% | 32% | 16% | 36% | 25% | 40% | 36% |
| 4pm | 12% | 30% | 33% | 36% | 14% | 59% | 24% | 25% | 21% | 30% | 10% | 12% | 19% |
| 5pm | 17% | 38% | 39% | 29% | 17% | 52% | 39% | 25% | 20% | 30% | 11% | 6% | 13% |
| 6pm | 13% | 25% | 18% | 28% | 8% | 40% | 28% | 15% | 13% | 20% | 6% | 10% | 12% |
| 7pm | 8% | 24% | 16% | 16% | 6% | 25% | 14% | 6% | 11% | 15% | 7% | 2% | 16% |
| 8pm | 3% | 16% | 15% | 21% | 4% | 25% | 20% | 7% | 11% | 14% | 6% | 10% | 16% |
| 9pm | 5% | 17% | 10% | 12% | 4% | 11% | 11% | 0% | 9% | 10% | 11% | 0% | 9% |
| 10pm | 1% | 14% | 8% | 2% | 2% | 3% | 6% | 3% | 4% | 6% | 3% | | 8% |
| 11pm | 0% | 6% | 6% | 15% | 2% | 5% | 4% | 0% | 1% | 4% | 0% | | 5% |
| | **24%** | **44%** | **34%** | **39%** | **25%** | **40%** | **44%** | **38%** | **35%** | **36%** | **22%** | **16%** | **29%** |

Table 5.6. Bus service volume-to-seated capacity ratio, outbound, March 2024.

| | Wellington Corridors | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oriental Parade | Hataitai Bus Tunnel | Adelaide Road | Taranaki Street | Willis Street | Salamanca Road | Glenmore Street | Molesworth / Murphy Street | Hutt Rd | Wellington City Corridors Combined | Porirua (Titahu Bay / Mungavin) | Kapiti Road | Lower Hutt (High Street, Waterloo Road) |
| 5am | | 12% | | | | | 0% | | | | | | |
| 6am | 1% | 14% | 17% | 22% | 4% | 7% | 11% | 38% | 15% | 13% | 5% | 10% | 12% |
| 7am | 9% | 23% | 18% | 39% | 4% | 22% | 25% | 41% | 12% | 18% | 6% | 12% | 15% |
| 8am | 19% | 31% | 16% | 41% | 5% | 72% | 21% | 56% | 16% | 31% | 17% | 54% | 20% |
| 9am | 20% | 24% | 19% | 32% | 8% | 68% | 24% | 48% | 18% | 29% | 19% | 20% | 17% |
| 10am | 23% | 34% | 19% | 34% | 17% | 78% | 45% | 37% | 16% | 31% | 20% | 12% | 22% |
| 11am | 34% | 43% | 20% | 29% | 18% | 77% | 44% | 39% | 26% | 35% | 15% | 12% | 27% |
| Noon | 26% | 43% | 33% | 41% | 22% | 76% | 55% | 54% | 29% | 40% | 17% | 12% | 30% |
| 1pm | 20% | 50% | 26% | 48% | 26% | 61% | 58% | 50% | 31% | 38% | 18% | 9% | 33% |
| 2pm | 34% | 51% | 38% | 58% | 40% | 59% | 68% | 52% | 52% | 49% | 34% | 23% | 36% |
| 3pm | 53% | 62% | 51% | 38% | 44% | 50% | 62% | 46% | 74% | 55% | 48% | 35% | 48% |
| 4pm | 41% | 65% | 58% | 70% | 62% | 46% | 71% | 74% | 67% | 63% | 44% | 18% | 38% |
| 5pm | 48% | 61% | 59% | 63% | 62% | 64% | 73% | 66% | 50% | 59% | 27% | 30% | 32% |
| 6pm | 38% | 40% | 40% | 39% | 47% | 43% | 55% | 64% | 43% | 44% | 20% | 13% | 27% |
| 7pm | 25% | 46% | 33% | 52% | 29% | 37% | 46% | 59% | 39% | 39% | 21% | 13% | 26% |
| 8pm | 26% | 57% | 43% | 34% | 27% | 42% | 60% | | 45% | 44% | 13% | 17% | 18% |
| 9pm | 16% | 55% | 31% | 33% | 30% | 43% | 67% | 30% | 37% | 38% | 18% | 2% | 17% |
| 10pm | 17% | 38% | 32% | 20% | 23% | 24% | 49% | 24% | 21% | 28% | 13% | | 16% |
| 11pm | 8% | 25% | 12% | 5% | 12% | 13% | 22% | 8% | 10% | 13% | 5% | | 4% |
| | **28%** | **46%** | **33%** | **43%** | **30%** | **58%** | **52%** | **53%** | **38%** | **41%** | **23%** | **18%** | **28%** |

It shows the following:

- During peak periods – particularly between 8am to 9am– the average V/C ratio for many corridors in Wellington City including the routes in from the east (bus tunnel)

and west (Karori) are over 75%, levels at which people are likely to experience crowding and have to start standing; this average across services will mask the fact that some services will operate with spare capacity whilst other services will have V/C ratios over 100%

- Even during the off-peak, particular corridors such the bus tunnel, Glenmore Street, Salamanca Road and Taranaki Street have high V/C ratios, a function of high levels of all day demand, reduced service frequencies in the off-peak and high student usage on some routes
- Outside of Wellington City, the average V/C ratios are generally lower at around 50% during peak periods, with higher V/C ratios aligning with the times that school children travel to and from school

In order to understand how many people travel on crowded services, the number of passengers on services where the V/C ratio is greater than 85% has been estimated.

Table 5.7 and Table 5.8 below show for each corridor the number of persons on services with V/C ratios greater than 85% and the percentage of total patronage that these accounts for.

Table 5.7. Persons on services where V/C ratio is greater than 85% (inbound / outbound combined), Average Weekday, March 2024.

| | Wellington Corridors | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oriental Parade | Hataitai Bus Tunnel | Adelaide Road | Taranaki Street | Willis Street | Salamanca Road | Glenmore Street | Molesworth / Murphy Street | Hutt Rd | Wellington City Corridors Combined | Porirua (Titahu Bay / Mungavin) | Kapiti Road | Lower Hutt (High Street, Waterloo |
| 5am | - | - | - | - | - | - | - | - | - | **-** | - | - | - |
| 6am | - | 40 | 39 | - | - | - | 34 | - | - | **113** | - | - | - |
| 7am | - | 361 | 356 | 37 | - | - | 181 | 52 | 551 | **1,538** | - | - | 104 |
| 8am | 81 | 553 | 314 | 115 | 276 | 639 | 522 | 195 | 674 | **3,369** | 107 | 71 | 151 |
| 9am | - | 117 | - | - | 68 | 316 | 273 | 42 | 196 | **1,012** | 110 | - | 39 |
| 10am | - | 44 | 36 | 106 | - | 403 | 34 | - | 39 | **662** | - | - | - |
| 11am | - | 32 | - | 32 | - | 278 | - | - | - | **342** | - | - | - |
| Noon | - | - | - | 115 | - | 351 | 32 | 34 | - | **532** | - | - | - |
| 1pm | - | 70 | - | - | - | 224 | 33 | - | 36 | **363** | - | - | 73 |
| 2pm | - | 135 | - | 112 | - | 233 | 189 | - | - | **669** | 30 | - | 125 |
| 3pm | 40 | 341 | 165 | 297 | - | 239 | 168 | - | 411 | **1,661** | 189 | 46 | 326 |
| 4pm | 42 | 436 | 66 | 167 | 75 | 213 | 231 | 75 | 371 | **1,676** | 81 | - | 137 |
| 5pm | 42 | 609 | 94 | 91 | 198 | 233 | 265 | 125 | 347 | **2,004** | 32 | - | 38 |
| 6pm | - | 111 | 75 | 40 | 55 | - | 86 | 41 | 125 | **533** | - | - | - |
| 7pm | - | - | - | 33 | - | - | - | - | - | **33** | 27 | - | - |
| 8pm | - | 42 | 43 | - | - | - | 97 | - | - | **182** | - | - | - |
| 9pm | - | - | - | - | - | - | 66 | - | - | **66** | - | - | - |
| 10pm | - | - | - | - | - | - | 33 | - | - | **33** | - | - | - |
| 11pm | - | - | - | - | - | - | - | - | - | **-** | - | - | - |
| | **205** | **2,891** | **1,188** | **1,145** | **672** | **3,129** | **2,244** | **564** | **2,750** | **14,788** | **576** | **117** | **993** |

Table 5.8. Percentage of people on crowded services (inbound / outbound combined), Average Weekday, March 2024.

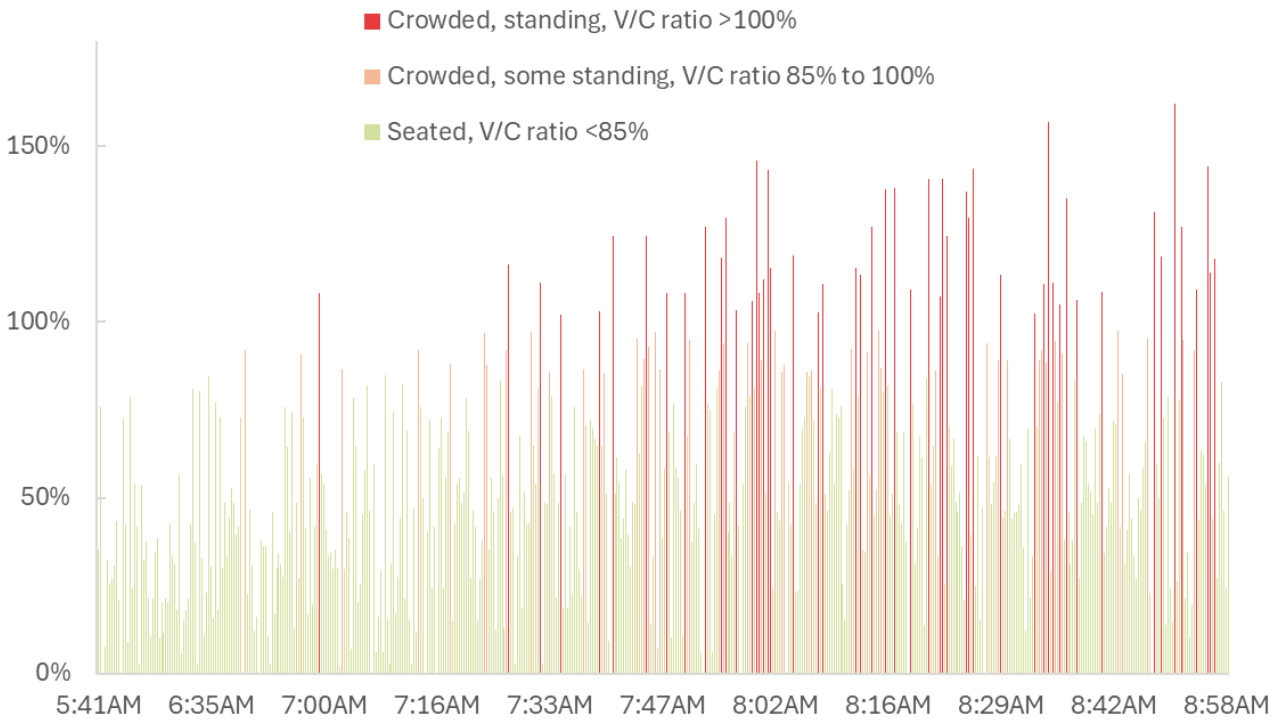
| | Wellington Corridors | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oriental Parade | Hataitai Bus Tunnel | Adelaide Road | Taranaki Street | Willis Street | Salamanca Road | Glenmore Street | Molesworth / Murphy Street | Hutt Rd | | Wellington City Corridors Combined | Porirua (Titahu Bay / Mungavin) | Kapiti Road | Lower Hutt (High Street, Waterloo Road) |
| 5am | | 0% | 0% | | | | 0% | | | | | | | |
| 6am | 0% | 18% | 23% | 0% | 0% | 0% | 32% | 0% | 0% | | 9% | 0% | 0% | 0% |
| 7am | 0% | 42% | 46% | 11% | 0% | 0% | 42% | 16% | 46% | | 32% | 0% | 0% | 9% |
| 8am | 29% | 45% | 37% | 18% | 53% | 62% | 81% | 56% | 48% | | 49% | 10% | 8% | 10% |
| 9am | 0% | 23% | 0% | 0% | 23% | 42% | 61% | 19% | 25% | | 25% | 14% | 0% | 5% |
| 10am | 0% | 11% | 9% | 36% | 0% | 72% | 11% | 0% | 8% | | 23% | 0% | 0% | 0% |
| 11am | 0% | 8% | 0% | 11% | 0% | 48% | 0% | 0% | 0% | | 12% | 0% | 0% | 0% |
| Noon | 0% | 0% | 0% | 31% | 0% | 58% | 12% | 41% | 0% | | 18% | 0% | 0% | 0% |
| 1pm | 0% | 18% | 0% | 0% | 0% | 43% | 12% | 0% | 7% | | 13% | 0% | 0% | 16% |
| 2pm | 0% | 31% | 0% | 32% | 0% | 40% | 67% | 0% | 0% | | 20% | 5% | 0% | 24% |
| 3pm | 27% | 65% | 19% | 54% | 0% | 40% | 43% | 0% | 51% | | 39% | 30% | 9% | 49% |
| 4pm | 23% | 45% | 10% | 32% | 17% | 31% | 43% | 26% | 30% | | 30% | 11% | 0% | 11% |
| 5pm | 17% | 46% | 13% | 17% | 34% | 39% | 42% | 34% | 26% | | 32% | 5% | 0% | 2% |
| 6pm | 0% | 17% | 17% | 15% | 21% | 0% | 21% | 25% | 21% | | 17% | 0% | 0% | 0% |
| 7pm | 0% | 0% | 0% | 28% | 0% | 0% | 0% | 0% | 0% | | 2% | 16% | 0% | 0% |
| 8pm | 0% | 20% | 19% | 0% | 0% | 0% | 51% | 0% | 0% | | 15% | 0% | 0% | 0% |
| 9pm | 0% | 0% | 0% | 0% | 0% | 0% | 57% | 0% | 0% | | 8% | 0% | 0% | 0% |
| 10pm | 0% | 0% | 0% | 0% | 0% | 0% | 40% | 0% | 0% | | 6% | 0% | 0% | 0% |
| 11pm | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% |
| | **9%** | **31%** | **15%** | **21%** | **16%** | **42%** | **40%** | **22%** | **24%** | | **26%** | **8%** | **1%** | **8%** |

The analysis shows the following:

- Around 1,000 people travel through Mt Victoria bus tunnel, along Glenmore Street and along Hutt Road on crowded services in the morning, accounting for over half of all bus passengers entering the CBD via these locations.
- Glenmore Street (route 2), Salamanca Road (university services) and to a lesser extent Taranaki Street and Hataitai bus tunnel have a significant number of people travelling on crowded services at all times of the day.
- Overall, 25% of people on Wellington City services at the observed locations and around 10% of people travelling on Lower Hutt and Porirua services at the observed locations are travelling on crowded services.

Figure 5.18 below shows all bus services entering Wellington CBD between 5am and 9am categorised by V/C ratio. It clearly shows how crowding builds during the peak period, with the worst crowding and highest V/C ratios seen between 7.45am and 8.30am, but that even during the peak of the peak some services on particular corridors operate with some spare capacity.

Figure 5.18. AM peak bus services entering Wellington CBD categorised by V/C ratio, March 2024.




## Rail network capacity and constraints

Analysis of crowding on the rail network has focussed on people on services arriving into Wellington before 9am on a weekday (Tuesday to Thursday) morning by line.

Table 5.9 below shows:

- Number of seats available
- Number of passengers
- Average no of passengers / no of seats ratio across all services
- Number of passengers travelling on crowded services (defined as having a V/C ratio greater than 85%)
- Percentage of total passengers travelling on crowded services

Table 5.9. Rail passengers arriving into Wellington Station (6am to 9am), March 2024.

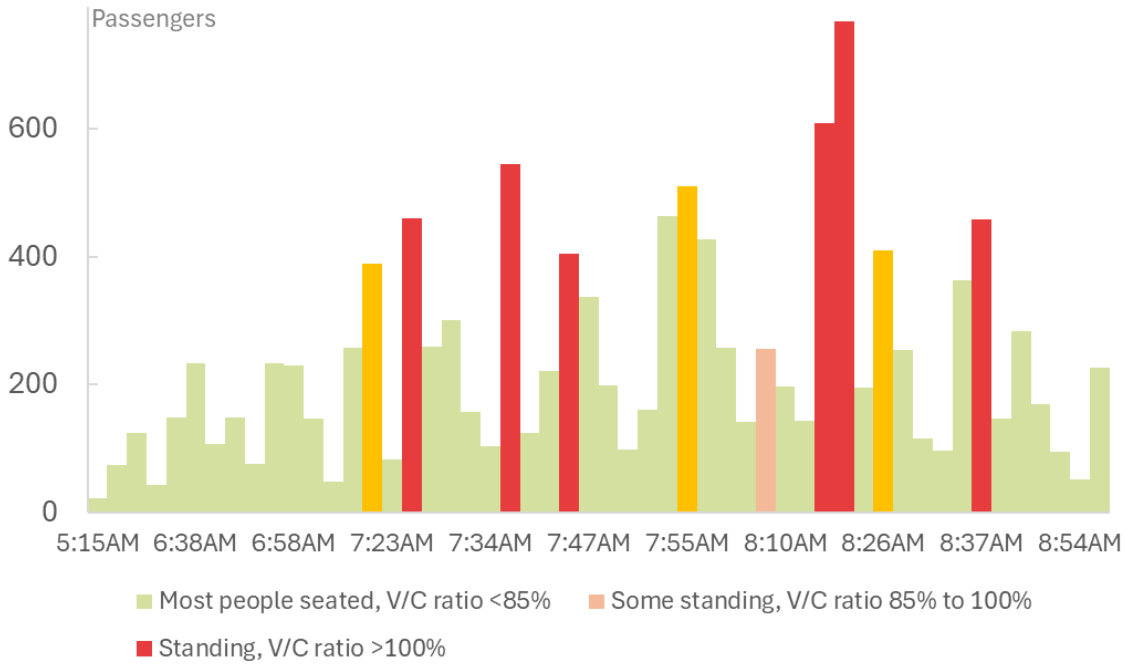
| | Hutt Valley Line | Kapiti Line | Melling Line | Johnsonville Line | Wairarapa Line | All Lines |
|---|---|---|---|---|---|---|
| Number of seats | 6200 | 6600 | 1000 | 3000 | 1200 | 18100 |
| Number of passengers | 5200 | 4800 | 500 | 1200 | 600 | 12400 |
| Average V/C Ratio | 84% | 73% | 50% | 40% | 50% | 69% |
| Number of passengers on crowded services | 2600 | 2000 | 0 | 300 | 0 | 4800 |
| Percentage of passengers travelling on crowded services | 50% | 42% | 0% | 25% | 0% | 39% |

The analysis shows the following:

- The Hutt Valley line has the highest average V/C ratio at 84%, followed by the Kāpiti line.
- Both lines see around 50% of passengers arriving on services where the V/C ratio is greater than 85%, denoting some crowding.
- There is no significant crowding observed on the Melling, Johnsonville or Wairarapa lines.

It should be noted that for many services, the 85% V/C ratio might only be reached at the couple of stops prior to Wellington Station, with passengers boarding further up the line experiencing uncrowded conditions until close to their arrival into Wellington. It should be noted that the Matangi units have a total capacity 30% greater than the seated capacity and that standing on a rail service is generally perceived as being ‘less undesirable’ than standing on a bus service.

Figure 5.19. Rail V/C ratios by services, 5am to 9am arrivals into Wellington Station, March 2024.




The analysis shows that whilst some services have V/C ratios above 100% - with two services, one from Hutt Valley and one from Kāpiti arriving around 8.20am with seated V/C ratios exceeding 130%, there are other services throughout the morning peak period that do have sufficient capacity.

# 6. Walking and cycling

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Active mode share of journeys to work is higher than the national average.** 10% of people in the Wellington region commute to work by bike or on foot compared to 6% across New Zealand.
- **Active mode share remains highest in Wellington City.** 16% of people walk to work and 4% cycle to work in Wellington City, due to a relatively high percentage of the population living in close proximity to Wellington CBD and good cycle connections from many suburbs to the CBD.
- **Active mode share is low elsewhere in the region.** In Porirua, Kāpiti, Hutt Valley and Wairarapa, only 4% of employed people walk or cycle to work, a function of longer journeys, low density development and employment generally not being within close proximity of people's homes. These areas have 61% of the region's population but only 21% of active mode JTW.
- **Walking and cycling are mostly used for short trips**. Active mode is particularly common for travel to education and has strong weekday peak patterns.
- **Cycling varies with the seasons and weather.** There has been overall growth in cycling but numbers are lower in winter months and on days with rain.

The key considerations for the RLTP are as follows:

- **There are significant benefits to boosting walking and cycling**. Investment in walking and cycling infrastructure and encouraging use of these modes supports mode shift goals, public health and safety benefits, and emissions reduction.
- **Increasing active mode share of journeys to work outside of Wellington City and CBD**. There is a big difference between the propensity to travel to work by foot or bike in Wellington City and outside of Wellington City; consideration should be given to how to improve the active mode share of journeys to work outside of Wellington CBD, including integrating transport land use, and how to build on the investment in Wellington City to develop the cycle network.
- **Focus on core corridors and integration with rail outside of Wellington City**. One approach outside of Wellington City could be to focus on core corridors and connections to public transport nodes.
- **Focussing on shorter distance trips to free up highway and PT capacity for longer distance trips**. Focussing initiatives on encouraging more shorter distance trips to be made by bike or on foot could help free up capacity for car and PT trips and improve the efficiency of the transport network.
- **Increasing travel choice is important**. Someone who cycles one day might take PT another day and drive at the weekend, and the design of the future transport network

should focus on providing people with improved travel choices to achieve the desired levels of behaviour change.

## Purpose and scope

Walking and cycling play important roles in the Wellington Region's transport network, offering sustainable, healthy, and efficient alternatives to motor vehicle travel. These active modes contribute to reducing congestion, improving physical and mental health, and supporting climate goals by lowering transport emissions. However, active mode travel is generally only feasible for short trips.

This chapter examines trends and patterns related to walking and cycling in the region. It provides an overview of infrastructure, usage patterns, and demographic insights, drawing on data from sources such as the Census, travel surveys, and automated counters. The analysis considers walking and cycling for travel to work, to education, and for recreation.

## Cycling mode share: national overview and regional trends

Cycling remains a minor mode of transport in New Zealand, accounting for approximately 2.1% of total travel time in 2023–2024, according to the New Zealand Household Travel Survey.[17] However, participation rates indicate potential for growth: around 10% of urban New Zealanders cycle at least once a week for transport purposes, and about 33% of people reported cycling at least once in the past year. Many of those cycle trips are for recreational purposes only.

In Christchurch, the number of cyclists has increased in recent years, following the development of major cycle routes. Cycle counters across Christchurch recorded 4.1 million counts in 2024, up from 3.8 million in 2023 and 3.6 million in 2022.[18]

Auckland's cycling mode share has remained low at around 1% from 2015 to 2022. However, there are signs of an upward trend. From July 2023 to June 2024, Auckland Transport's automatic cycle counters recorded a 10.2% increase in the number of bicycles, compared to the previous year.[19]

These trends suggest that while cycling currently plays a minor role in New Zealand's transport landscape, targeted infrastructure investments and supportive policies can lead to increased cycling participation, though generally only for short journeys.

## Current state of walking and cycling in Wellington

### Active transport rates in Wellington Region higher than national average

Walking and cycling play a more significant role in the Wellington Region's transport network than in most other parts of New Zealand, though this regional average is heavily influenced by high rates of active transport in Wellington City. Census data consistently shows that the region has some of the highest rates of walking and cycling as a means of travel to work and education. In the 2023 census, 11% of employed people in Wellington Region reported that

[17] Ministry of Transport. New Zealand Household Travel Survey. https://www.transport.govt.nz/statistics-and-insights/household-travel
[18] Christchurch City Council. https://www.newsline.ccc.govt.nz/news/story/christchurch-hits-cycling-milestone
[19] Auckland Transport. https://at.govt.nz/cycling-walking/research-monitoring/monthly-cycle-monitoring

they walk, jog, or cycle to work or education, compared to 6% across the whole of New Zealand.

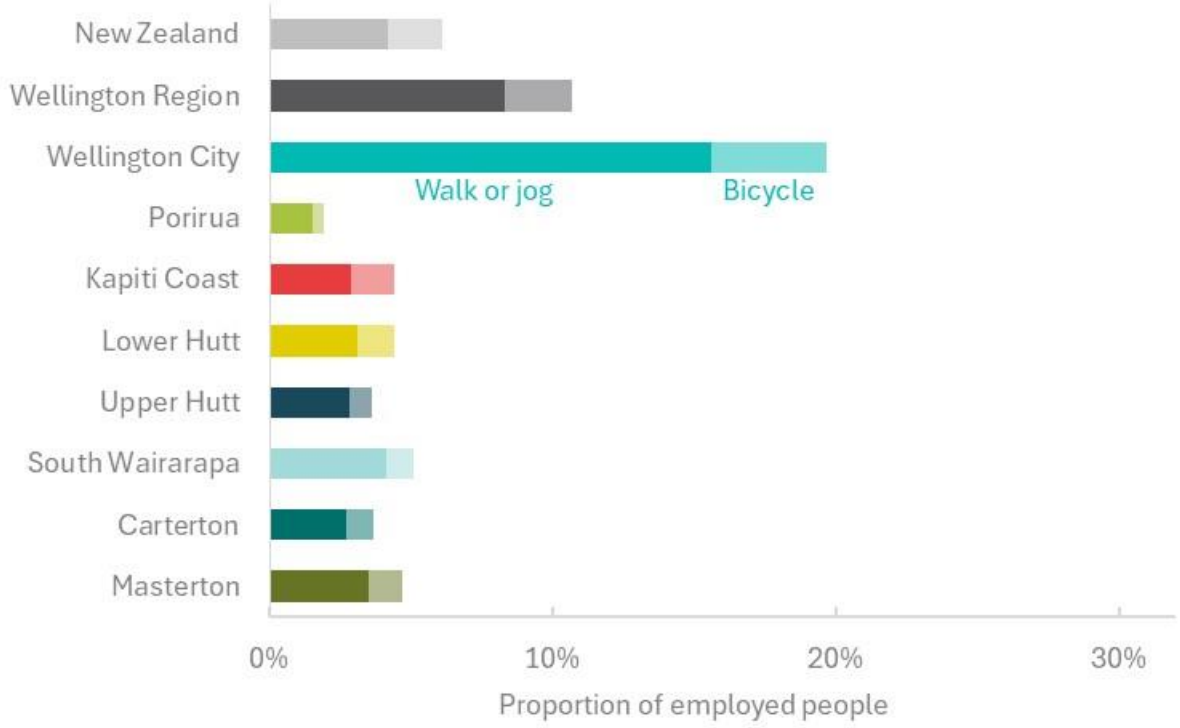
However, the pattern varies greatly within the region. Wellington City stands out as having much higher rates of active transport for travel to work than other parts of the region. 16% of employed people who live in Wellington City reported that they walk or jog to work, and another 4% cycle. All other areas within Wellington Region had rates that were below the New Zealand average.

The compact urban form of the region's main central business district in Wellington City, combined with relatively short commuting distances and investments in active transport infrastructure, have contributed to higher rates of active transport as a means of travel to work.

### High rates of walking and cycling to work in Wellington CBD

Walking as a mode of journey to work (JTW) is particularly common in Wellington City, where short distances and footpaths make it a more convenient mode than vehicle modes for many people. 16% of Wellington City's residents reported walking or jogging to work in 2023 (Figure 6.1). Cycling mode share in JTW is also higher in Wellington City, at 4%, reflecting the impact of dedicated cycleways and other cycling infrastructure.

Figure 6.1. Means of travel to work, 2023 Census.

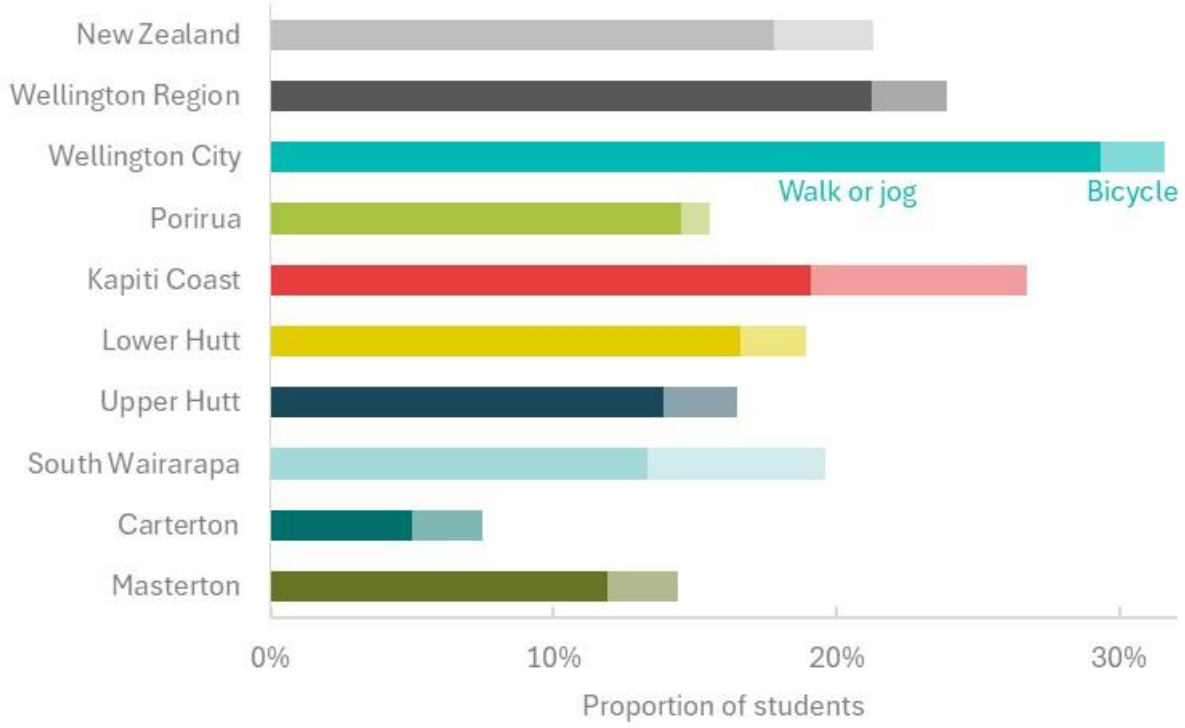



### Walking and cycling to education varies greatly between areas

Mode of Journey to Education (JTE) varies greatly across primary, secondary, and tertiary education, but age-specific JTE data were not available from the 2023 census in time for the analysis presented here. Even without the age breakdown, it is clear from the 2023 census that walking and cycling play an even greater role than they do for JTW. A quarter (24%) of

the region's students (including primary school, secondary school, and tertiary-level education) reported walking, jogging or cycling to education at the 2023 census, compared with 21% across the country. Again, Wellington City (32%) stands out as having higher rates than other areas. Kāpiti Coast District (at 27%) had the next highest proportion of students travelling to education on foot or by bicycle (Figure 6.2). All other areas within the region were lower than the New Zealand average.

Figure 6.2. Means of travel to education, 2023 census.

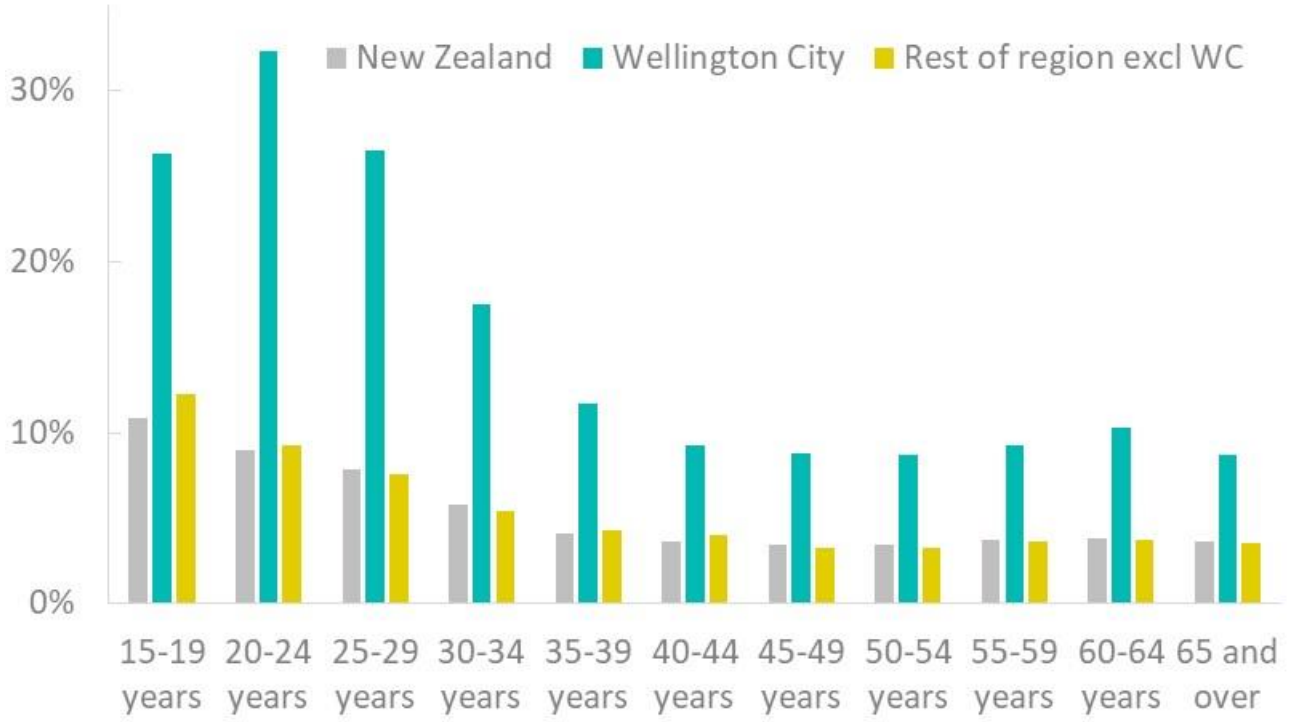



### People across a broad range of ages cycle and walk

The 2018 census data on means of journey to work confirms that at most ages, Wellington City has higher rates of cycling to work than the rest of the region. However, cycling is not restricted to narrow age ranges; a substantial proportion of working-age people cycle at all ages (Figure 6.3). In Wellington City, the proportion of cyclists is highest in the 40s age groups. In contrast, walking or jogging is more skewed to younger adult ages (Figure 6.4).

Figure 6.3. Cycling as means of JTW, by age group, 2018 census.


Figure 6.4. Walking or jogging as means of JTW, by age group, 2018 census.




A high proportion of non-work trips are undertaken by active modes. The Household Travel Survey found that 48% of recreation trips in the Wellington Region were on foot and 6% were by bicycle.

### Most walking and cycling trips are short

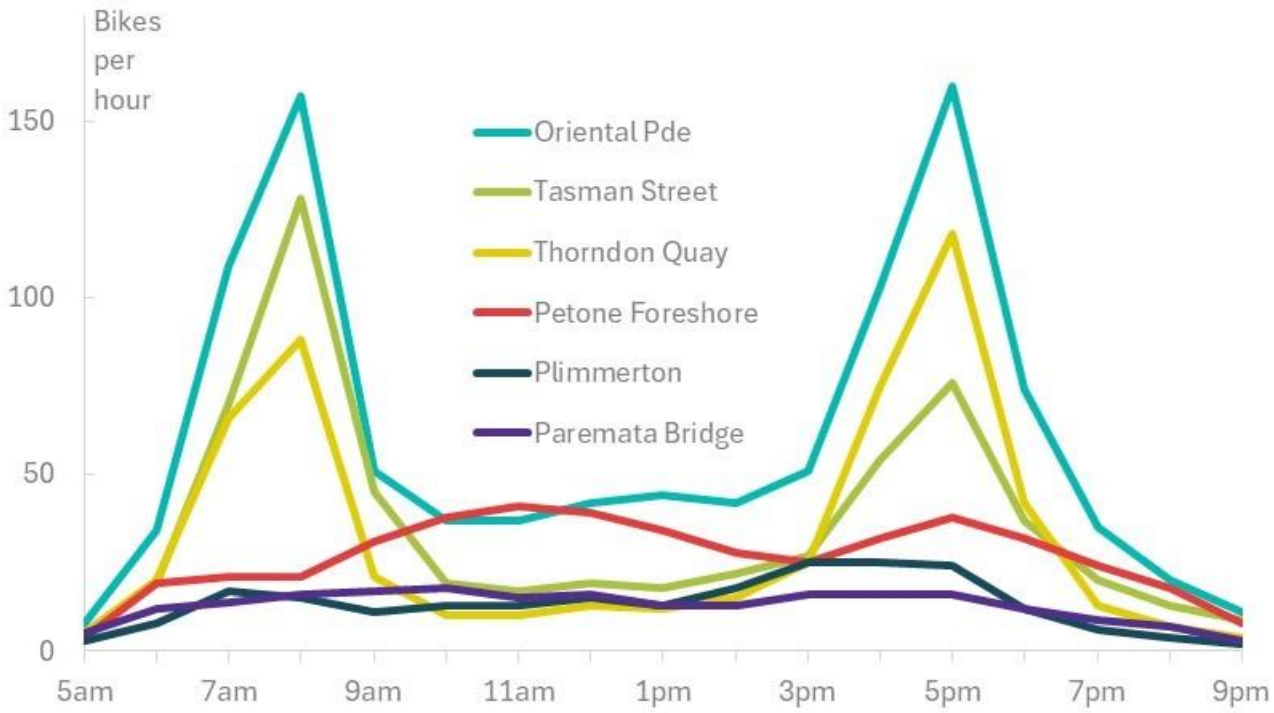
Most walking trips are short distances. The Household Travel Survey found that 93% of pedestrian trips are less than 2 km. 40% of bicycle trips are for less than 2 km and 8% are for trips of over 10 km.

### Trip purposes for walking and cycling are varied, but show clear work commute patterns

People in the Wellington Region walk and cycle for a broad range of trip purposes. The Household Travel Survey found that the leading purposes of pedestrian trips are shopping (22%), work (21%), recreation (20%) and social/entertainment (15%). Bicycle trips are for recreation (31%), work (25%), social/entertainment (11%), and education (10%).

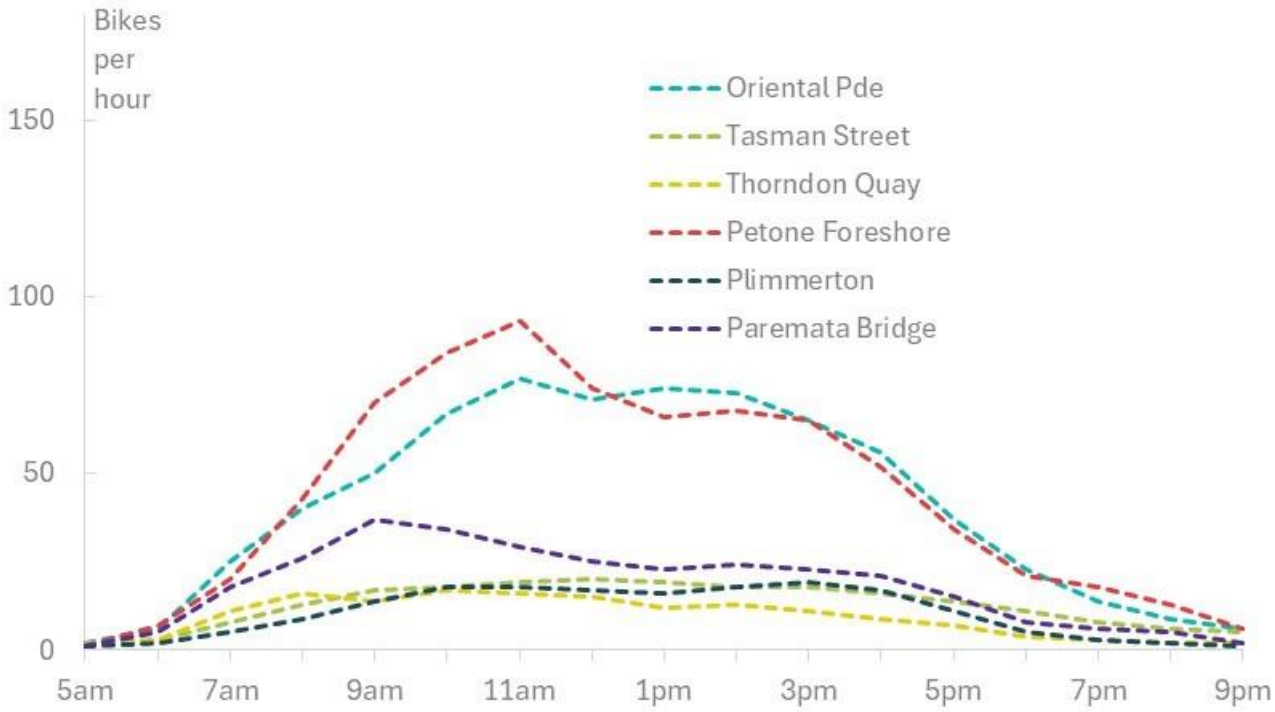
The daily profile of bicycle use at some monitoring locations largely follows the pattern for other modes. At some high-volume sites in Wellington City the weekday profile shows clear peaks centred around 8am and 5pm, aligning with work commute patterns (Figure 6.5). Other sites in Porirua and Hutt Valley peak during the middle of the day, suggesting more recreational cycling at those locations. Weekend bicycle numbers at all monitored sites are highest across the middle part of the day, from 9am to 3pm (Figure 6.6).

Figure 6.5. Weekday bicycle count daily profile at selected sites, 2024.




Source: Eco-Visio.

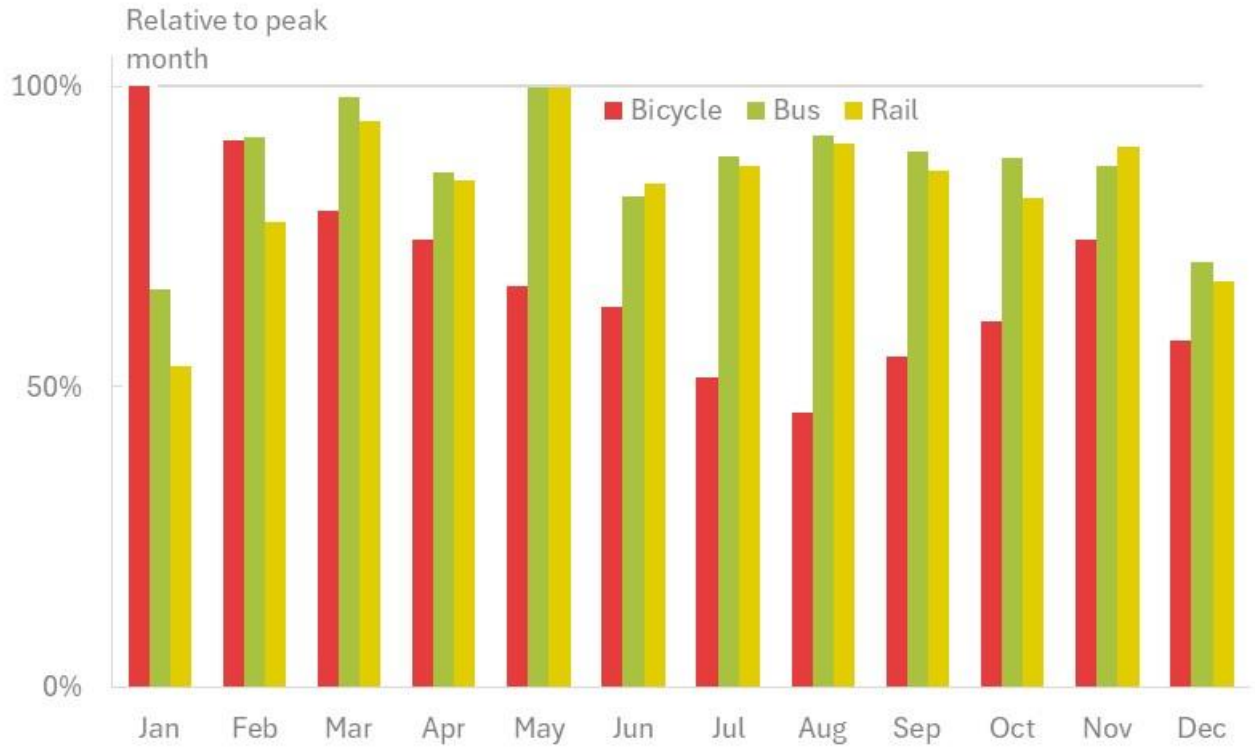
Figure 6.6. Weekend bicycle count daily profile at selected sites, 2024.




Source: Eco-Visio.

Unlike other modes of transport, cycling shows strong seasonal variation. Across the 10 monitored sites, bike numbers are highest in summer months (especially January and February), and lowest in the winter (especially July and August). The number of bikes in January is about double the number observed in August (Figure 6.7). In contrast, bus and train patronage is more evenly spread across the year and is highest in months without school or public holidays, notably March and May.

Figure 6.7. Seasonality of bicycles, bus and rail patronage: monthly volume relative to peak month, 2024.




### Weather's impact on cycling

In additional to the seasonal patterns, the number of people cycling responds to day-to-day weather conditions. On two high-volume bicycle routes into Wellington CBD – Oriental Parade and Adelaide Road – the number of bikes was strongly related to daily rainfall recorded in Wellington in 2024.

Relative to dry days (<0.1 mm rainfall), the average number of bikes per day during the AM peak across the two sites was 37% lower on days with at least 10 mm of rain. In contrast, the number of people using buses within Wellington City during the AM peak was 6% higher on rain days. If that pattern of fewer cyclists and more bus passengers on rain days applies generally to the region's journey-to-work and journey-to-education patterns, then about 4,000 cyclists leave the bike at home when it rains; 2,000 of them take the bus instead and the other 2,000 either do not travel or use a different mode.

These findings highlight the need to provide people with travel choices across multiple modes. Planning should account for weather-sensitive travel behaviour, and by recognising that people who walk or cycle on some days are likely to be the same people who use public transport or cars on other days.

## Trends in walking and cycling over recent years

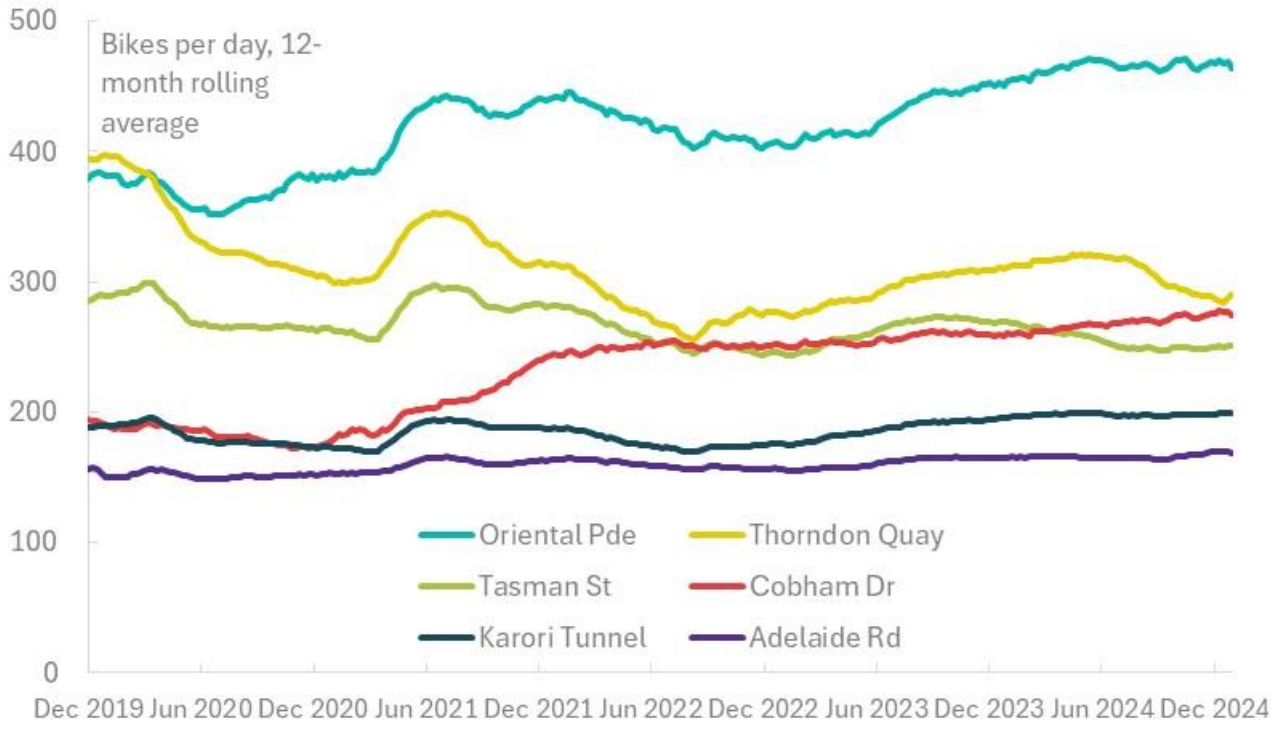
Monitoring of bicycle numbers over the last six years show mixed trends at the sites with consistent data within Wellington City (Figure 6.8). Numbers on Oriental Parade, and on

Cobham Drive have generally increased, but other sites (Thorndon Quay, Tasman Street, Karori Tunnel, and Adelaide Road) have either remained stable or decreased.

The monitoring trends are subject to error. The cycle counting equipment is not 100% accurate, and construction of the cycleways has likely resulted in cyclists taking alternative routes that would have bypassed counting equipment.

Once these limitations are taking account of, the data suggests that for mature sections of the cycle network – Cobham Drive and Oriental Parade – there have been increases in cycle ridership over the last 5 years that appear to be reflective of the investment in infrastructure. Those increases have occurred during increased working from home. An evaluation of the impact of cycleway investment is beyond the scope of this analysis but will be important in informing planning decisions.

Figure 6.8. Average daily bicycle count at selected Wellington City sites, 2019-2024.



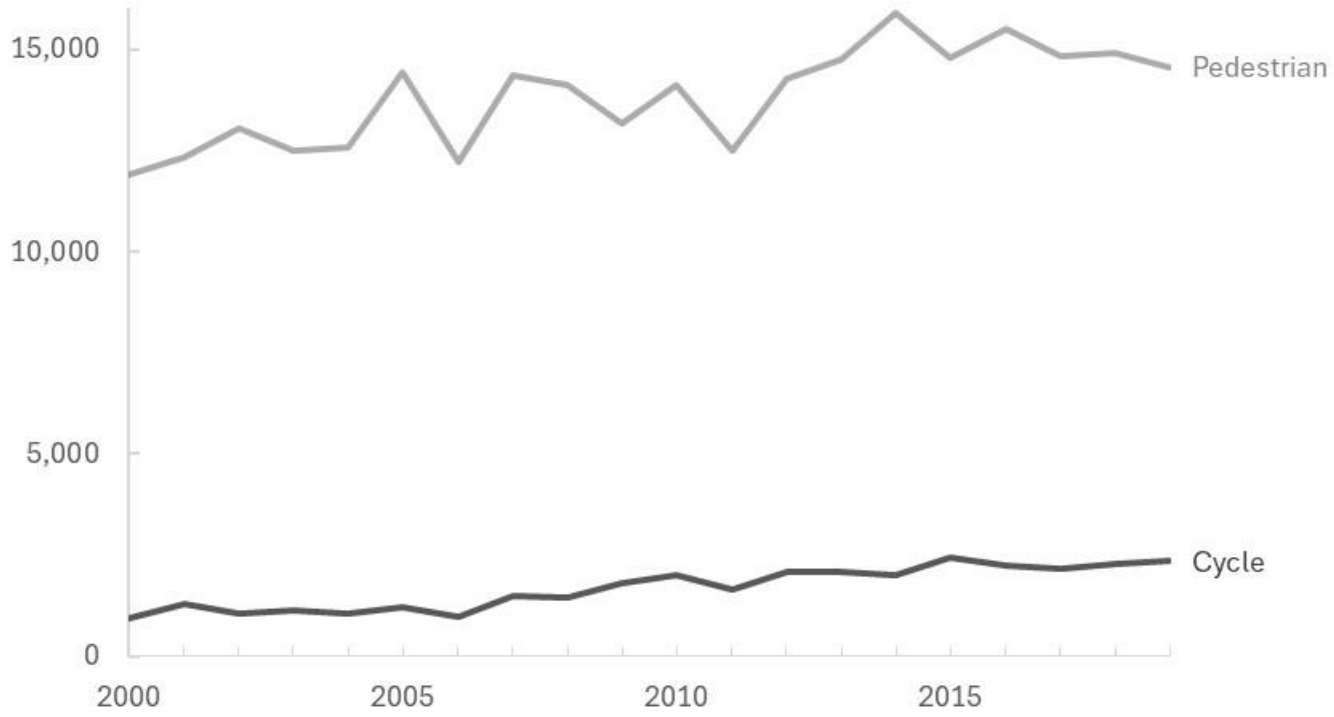

Source: Eco-Visio.

### Cycle and pedestrian numbers crossing the Wellington CBD cordon have increased over the last 20 years

The Wellington CBD cordon survey[20] recorded the number of people entering Wellington CBD by each mode of transport during the weekday morning peak in March each year up to 2021, though changes in methodology mean that the last two years are not directly comparable with previous years. Over the two decades 2000 to 2019, the number of pedestrians was in the range 12,000 to 16,000 on average between 7am and 9am on weekdays (Figure 6.9). As a mode share, pedestrians were 17% in 2019.

[20] In 2021, the Wellington City Cordon Survey was impacted by reduced commuter volumes due to COVID. The survey was fully abandoned in 2022.

Figure 6.9. Number of people entering Wellington CBD, 7am to 9am, March 2000 to 2019.




Cycling has remained at a lower mode share than walking – 2.7% in 2019 – but that has increased over the years. In 2019, the cordon survey recorded an average of 2400 cyclists in Wellington CBD in the morning peak, up from about 1000 two decades earlier.

These patterns of walking and cycling into the Wellington CBD highlight both the importance and the opportunity of active modes in shaping a more sustainable and people-focused transport system. Pedestrian volumes have long formed a substantial share of the morning peak, and the steady rise in cycling volumes over the past two decades suggests latent demand is being unlocked, correlating with improved infrastructure.

Current and anticipated further improvements in active-mode infrastructure and encouragement to shift to those modes hold potential to assist with reducing congestion and emissions, and support public health benefits of physical activity, especially in areas outside Wellington City, where active modes have remained at low levels.

### Nearly 20% of journeys to work in Wellington City are made by bike or on foot

Based on census data, Wellington City consistently has the highest rates of walking and jogging to work, peaking at 19% of employed people[21] in 2018 before falling to 16% in 2023 (Figure 6.10. In the rest of the Wellington Region (outside Wellington City) the proportion of people walking or jogging to work is at or below the New Zealand average of 4%.

Consistent with the national average, all parts of the Wellington Region saw a decline in reported walking or jogging to work in the latest census. The 2018 and 2023 census questions

[21] Excluding people who worked at home.

asked about *usual*, rather than *on census day*, mode of journey to work, so comparisons with across census years be interpreted with caution.

Figure 6.10. Walking or jogging, as proportion of means of travel to work, 2001 to 2023.


**Walk trips as a proportion of journeys to education varies across the region, with**

Walking is more prevalent than cycling as a means of journey to education (primary school, secondary school and tertiary education). Across the region, 21% of students used cycling for their JTE, down from 26% at the 2018 census (Figure 6.11). The proportion walking to education varied across the region, from as high as 29% in Wellington City down to 5% in Carterton District. Until age-specific or education-level results for the 2023 census become available, these results need to be interpreted in the context of different student groups across areas. For example, there are no secondary school or tertiary level education locations in Carterton District, so results for that location include students who do not have the possibility of active mode travel to education.

Figure 6.11. Walking or jogging, as proportion of means of travel to education, 2018 and 2023.


### Wellington City has the highest cycle mode share of journeys to work

The proportion of people cycling to work across the Wellington Region has remained low, at about 2%, over the past two decades (Figure 6.12). In the Wellington Region, 2.4% of employed people reported biking to work in the 2023 census. Wellington City continues to stand out with the highest cycling rates in the region, reaching 4.0% in 2018 and 4.1% in 2023, up from 2.2% in 2001 and 2006.

All the region's territorial authorities other than Wellington City remain below 2% cycling to work, with most showing declines from 2018 to 2023. Porirua, for instance, fell to just 0.4% in 2023.

These changes occurred despite a broader uptake of e-bikes, which have become increasingly popular for commuting, especially in hilly areas and for longer-distance trips. While census data does not separately capture e-bike use, sales and import data suggest they are reshaping who cycles and how far people are willing to ride.[22]

In some parts of the region – particularly Wellington City– there has been significant investment in cycling infrastructure over the past decade. However, much of the wider region lacks connected and safe cycling routes, which may partly explain the limited uptake outside Wellington City. Other factors – especially the longer trip lengths outside Wellington City – are also important influences on the uptake of cycling.

Programmes such as the Te Ara Tupua Wellington to Hutt Valley shared path, and the continued delivery of Wellington City Paneke Pōneke bike network plan are future investments that should further increase the cycle mode share of journeys to work.

[22] Statistics New Zealand reports that in the 12 months to March 2023, e-bike imports were valued at $184M, up from $27M 5 years earlier. https://www.stats.govt.nz/news/electric-vehicle-imports-continue-to-climb/

The decline in reported cycling to work in 2018 and 2023 in some areas reflects the change in how the census question was asked, focusing on travel *on census day* rather than *usual* commuting patterns. This change may have led to under-reporting of biking, particularly among occasional cycle commuters. Increased working from home will also have affected commuter cycle demand between 2018 and 2023 in the same way it affected peak period commuter bus and rail demand.

Figure 6.12. Cycling, as proportion of means of travel to work among employed people, 2001 to 2023.


### Biking to education

Cycling as a means of JTE also varies across the region but shows a different pattern to walking. Kāpiti Coast and South Wairarapa had the highest rates of cycling to education in 2023 (Figure 6.13). The high rates of cycling to education in those areas could be related to relatively flat terrain, less traffic congestion, which supports cycling as a travel mode, and schools located farther away from children's homes. In Wellington City and Lower Hutt, where schools are located closer to children's homes, walking is often a more viable travel mode, though more analysis is needed to understand the validity of that possible explanation.

Figure 6.13. Cycling, as proportion of means of travel to education, 2018 and 2023.


## Infrastructure, health benefits and safety

The Wellington Region has seen substantial investment in supporting people shift to active modes of transport in recent years. Major programmes have included Paneke Pōneke[23] bike network plan in Wellington City, the Porirua Cycle Network, and the soon to be completed Te Ara Tupua Wellington to Hutt Valley shared path.

Gaps in the network and barriers to walking and cycling remain, such as missing links, and accessibility for different user groups, including people with disabilities.

Cycling and walking are less common in adverse weather in Wellington, though growth in e-bikes may partially address the traditional problem of cycling into headwind and up hills.

Active mode transport is known to support physical and mental health, though there are also safety concerns. As described in the Safety chapter, an average of 118 pedestrians and 75 cyclists were injured on the region's roads per year over the five years to 2024. Those numbers were lower than 20 years earlier, despite growth in the number of people cycling.

[23] https://www.transportprojects.org.nz/assets/Bike-Network-plan/BikeNetworkProgressReport-2023.pdf

# 7. Multi-modal travel patterns

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Non-car mode share is highest in Wellington City**. This reflects the high frequency of public transport services and the relative attractiveness of alternatives to driving, especially once parking costs are factored in.
- **Buses move a large share of Wellington CBD peak commuters.** During the 2-hour AM peak, buses make up just 2% of vehicles entering Wellington CBD but carry between 35% and 50% of people.
- **Public transport mode share is lower elsewhere.** During the AM peak, less than 10% of inbound trips to regional centres like Hutt CBD and Porirua CBD are by public transport, reflecting lower service frequency, lower density land use, more dispersed employment locations, less employment focused on traditional business hours, and more affordable parking.
- **Cycle commuting is focussed on Wellington City.** In Wellington City, cycling accounts for a higher share of inbound trips during the AM peak than off-peak or weekends, suggesting commuting is the main purpose for most cyclists.
- **Peak vs off-peak patterns vary by location.** In Wellington City, public transport use is heavily concentrated in the weekday peak. Outside the city, bus usage is more evenly spread throughout the day, with a higher share of discretionary, non-commuter trips.
- **Weekend non-car mode share is low**. Across all corridors, only 5–10% of weekend trips use public or active modes. This is partly due to different trip patterns (eg, more travel to dispersed destinations like sports fields) and higher car occupancy on family or group outings.

The key considerations for the RLTP are as follows:

- **Non-car mode share remains low outside Wellington City during peaks**. There may be opportunities to increase public and active transport use to regional centres during peak times, particularly with targeted improvements in service frequency and coverage.
- **Opportunities to increase off-peak and weekend mode share**. While off-peak and weekend PT use has grown, mode share remains lower than during peaks. Strategies to improve convenience and appeal at these times could help support broader network efficiency and emissions goals.
- **Trip purpose influences modal choice**. Weekend and off-peak travel patterns differ from weekday commuting. Planning for multimodal transport may benefit from considering a wider range of destinations and user needs.

## Purpose and scope

The purpose of this chapter is to summarise volumes (car, PT and cycle) and mode share at key locations (or aggregations of locations) - expressed in terms of vehicles and persons – by time of day and day of week to understand modal patterns.

## Locations

A number of locations have been identified across the Wellington Region for which vehicles and persons by mode have been collated and presented.

Cycle data is not available for all locations, and no reliable daily estimates of pedestrian volumes are available for any locations (Table 7.1).

Table 7.1. Multi-modal key locations.

| Name | Year | | | |
|---|---|---|---|---|
| | Bus | Rail | Cycle | Car |
| Wellington – East screenline | Y | | Y | Y |
| Wellington – South screenline | Y | | Y | Y |
| Wellington – West screenline | Y | | Y | Y |
| Wellington – North screenline | Y | Y | Y | Y |
| Lower Hutt – Wainuiomata Hill Road | Y | | Y | Y |
| Lower Hutt – SH2 / Eastern Hutt Road | Y | Y | | Y |
| Porirua – Mungavin Avenue | Y | | | Y |
| Porirua – Titahi Bay Road | Y | | | Y |
| Wairarapa – Remutaka Hill | | Y | | Y |

Several of the locations are aggregated together to represent volumes from a particular geographic location across different modes. These aggregations are referred to as ‘screenlines’ and have been defined as follows:

- Wellington East – Oriental Parade (car, cycle), Bus Tunnel (bus), Mt Victoria Tunnel (car, cycle)
- Wellington North – Hutt Rd (bus, car, cycle), SH1 (car), rail, Ngaio Gorge (car, PT, cycle)
- Wellington West – Glenmore Street (car, bus, cycle)
- Wellington South – Adelaide Road (car, bus, cycle)
- Wairarapa – SH2 Remutaka Hill, Wairarapa Rail Tunnel
- Upper Hutt to Lower Hutt – SH2 (car), Eastern Hutt Rd (car, bus), Rail

For vehicle occupancy the following approximate assumptions have been made regarding vehicle occupancy:

- Weekday occupancy of 1.25 persons per light vehicle
- Weekend occupancy of 1.50 persons per light vehicle

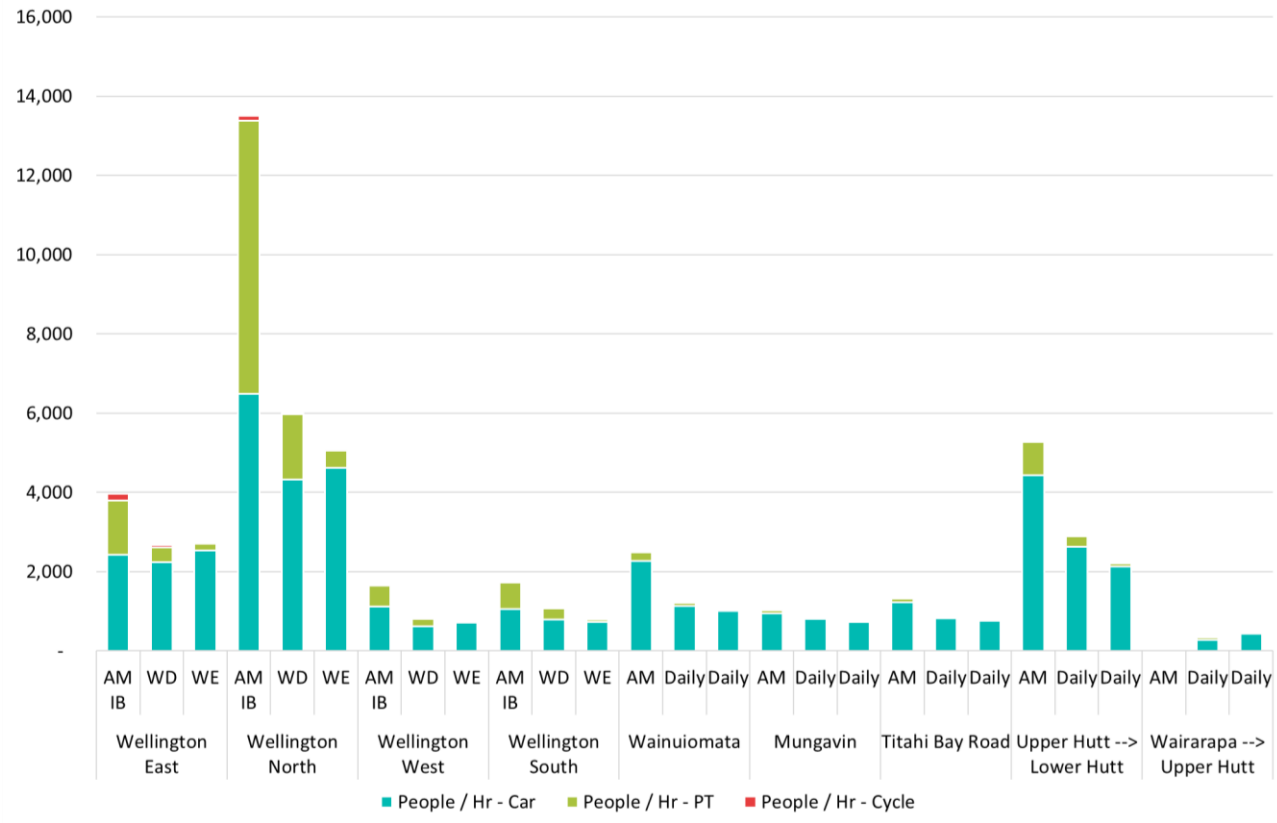
These occupancies should be taken as indicative (Wellington Cordon survey occupancies were around 1.35 in 2021) but appropriate given the high-level purpose of this analysis is to

understand differences in mode share by time of day and across the region and reflect higher occupancies at weekends due to different trip purposes.

Figure 7.1 below shows the number of people travelling along each corridor/across each screenline (in both directions) for the following time periods:

- Average AM peak hour (7am to 9am) inbound towards Wellington CBD or the regional centre
- Average weekday hour between 6am and 8pm (two-way)
- Average weekend hour between 6am and 8pm (two-way)

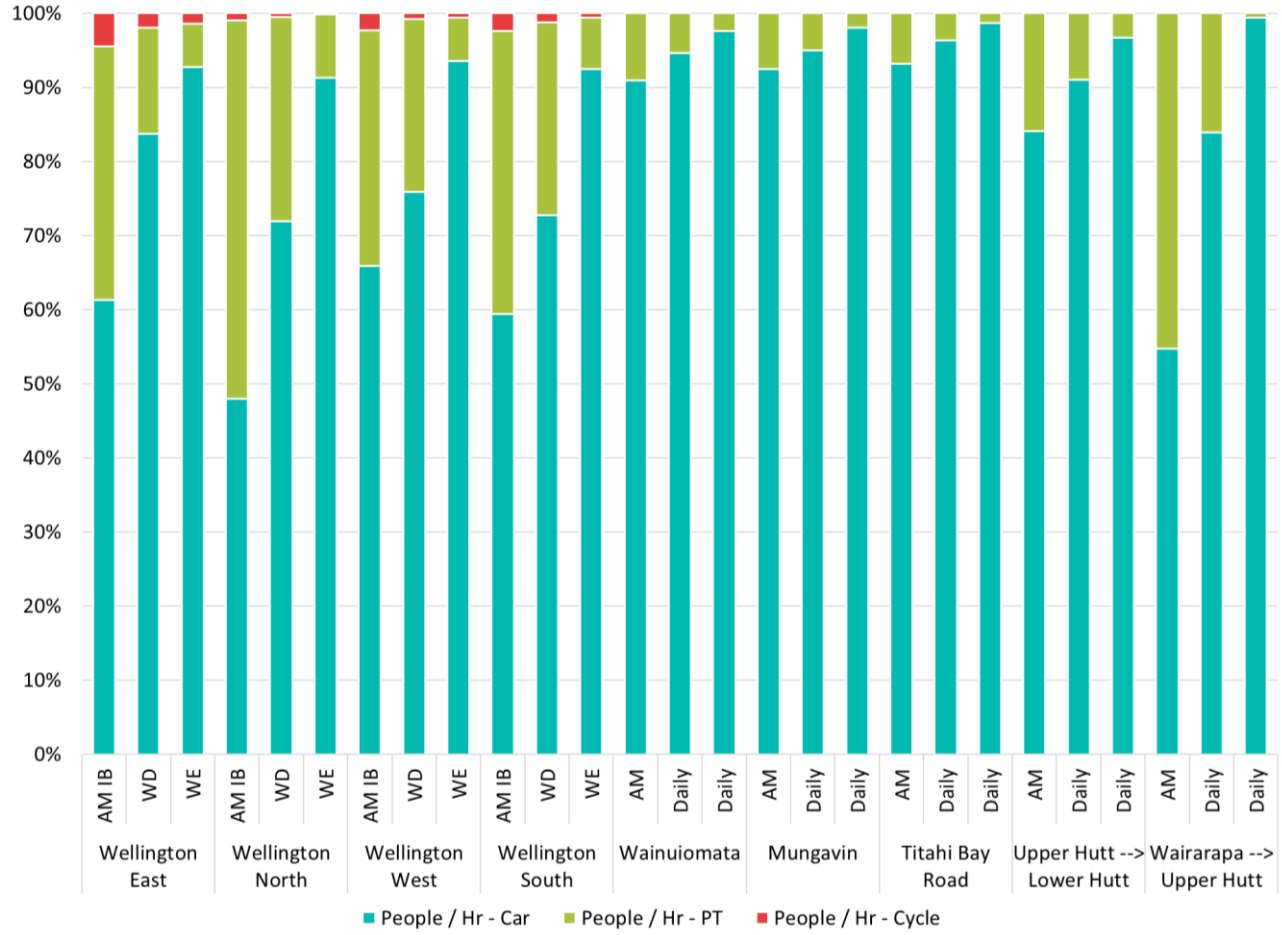
Figure 7.1. People per hour by corridor, mode and time of day.




Nearly 14,000 people per hour head towards Wellington City in the AM peak from the north, with over 50% doing so by PT due to the high number of rail commuters trips heading into Wellington CBD.

Outside of Wellington City, the corridor with the greatest volume is between Upper Hutt and Lower Hutt with 5,000 people per hour heading southbound in the AM peak, mostly in light vehicles (Figure 7.2).

Figure 7.2. Mode share, by corridor and time period.




The highest non-car mode share (mostly public transport) is seen on the Wellington City corridors in the AM peak, ranging from over 50% (Wellington North) to 35% (Wellington West) – this is a result of public transport being an attractive proposition relative to the private car when taking into account travel time, frequency of service and costs (relative to the cost of driving and parking).

Elsewhere in the region, PT mode share in the AM peak is nearer 10%, with the private car a more attractive proposition for most trips due to lower parking charges outside of Wellington City, lower density residential areas and more dispersed employment. The effect of these factors is that it is less cost-effective to serve these areas with public transport.

Weekend non-car mode share is low across the region, reflecting different travel purposes, such as recreation and shopping, that are less focussed on main centres of employment and are not served as well by public transport. Those differences could result in public transport being less cost-effective than driving, especially for families.

## Mode share and location

This section shows the number of people crossing a screenline or travelling through a location – in both directions – by time of day and mode.

### Wellington east screenline: 30% of people use PT or cycle in the AM peak

In the hour starting 8am on weekdays, 2000 (30%) of the 7200 people crossing the Wellington east screenline use public transport or bike. The non-car mode share is lower, at about 10%, in the inter-peak period and lower still – between 5% and 8% - at weekends (Figure 7.4).

Figure 7.3. Weekday mode share on Wellington east screenline, inbound and outbound combined.

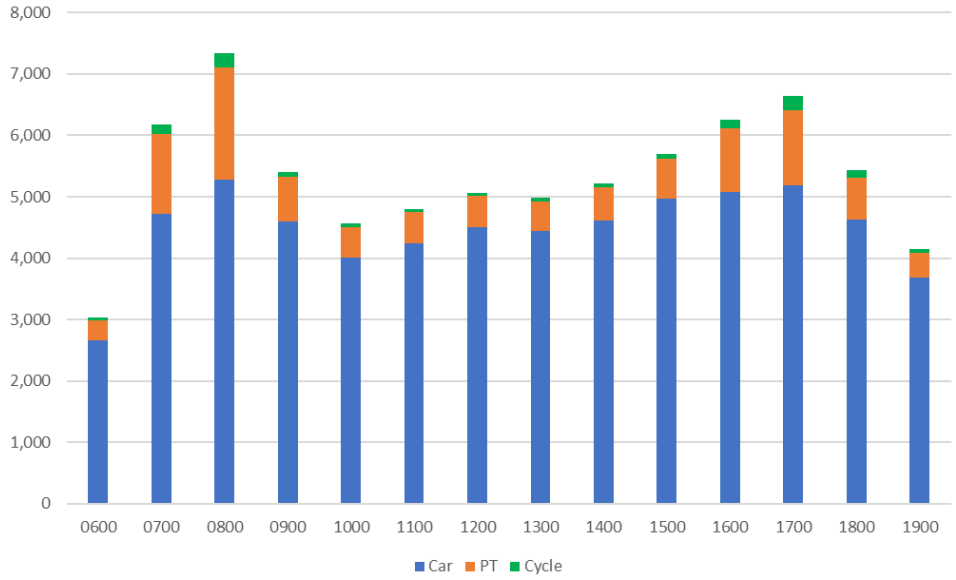
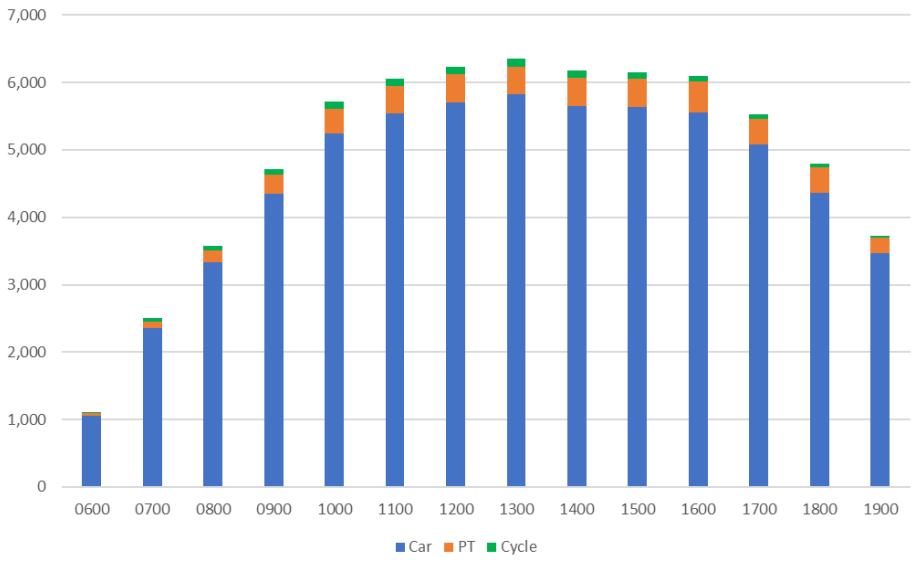



Figure 7.4. Weekend mode share on Wellington east screenline, inbound and outbound combined.




### Wellington north screenline: 20,000 people per hour in the AM peak, with 45% by PT

Nearly 20,000 people cross the Wellington north screenline between 8am and 9am on weekdays, with around 45% doing so by public transport or cycle (Figure 7.5). Rail is the dominant public transport mode. In the off-peak, the PT mode share of trips is lower at around 15%.

During weekends, between 12,000 and 14,000 people travel along the corridor every hour between 11am and 4pm (Figure 7.6). The non-car mode share of trips is around 10%, due to lower PT patronage (particularly rail) at the weekend and higher car occupancies.

Figure 7.5. Weekday mode share on Wellington north screenline, inbound and outbound combined.

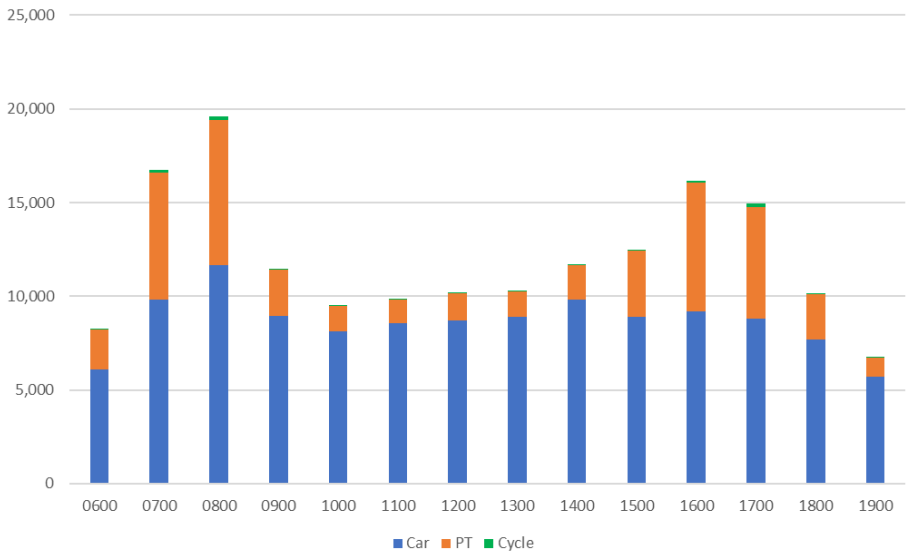
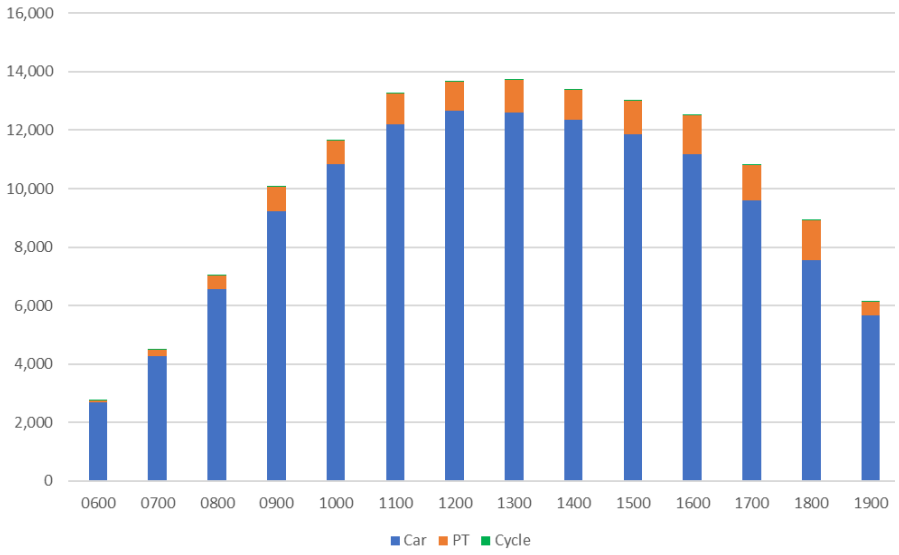



Figure 7.6. Weekend mode share on Wellington north screenline, inbound and outbound combined.




### Wainuiomata Hill: 10% PT mode share

About 3500 people cross Wainuiomata Hill (in both directions) in peak hours, with around 300 people (8%) travelling by bus (Figure 7.7).

Between 2500 and 3000 people per hour move through the corridor on weekend days between 10am and 5pm, with peak volumes observed between midday and 2pm (Figure 7.8). The PT mode share of trips is around 2% to 3%.

Figure 7.7. Weekday mode share on Wainuiomata Hill screenline, inbound and outbound combined.

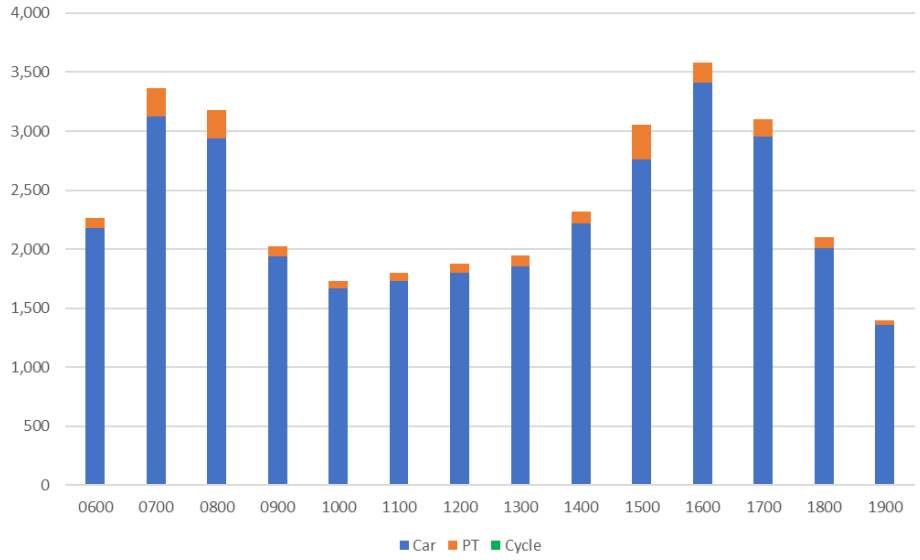
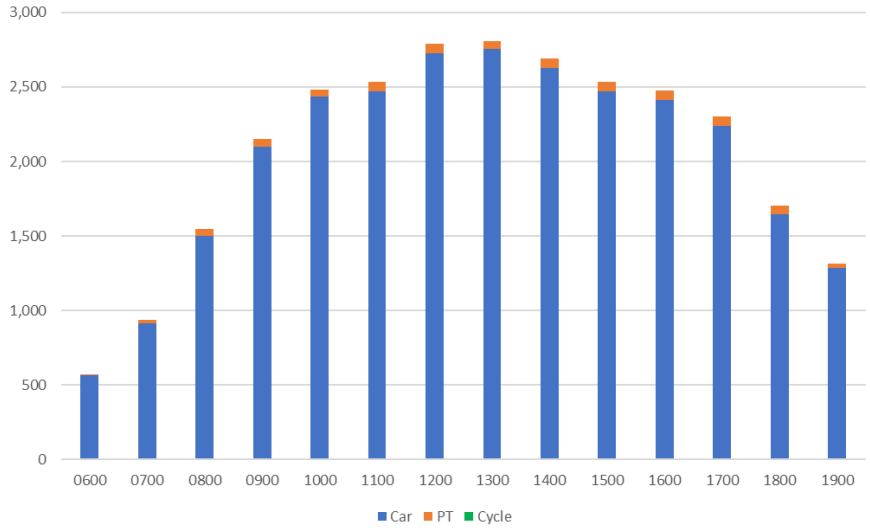



Figure 7.8. Weekend mode share on Wainuiomata Hill screenline, inbound and outbound combined.




### Mungavin Avenue: 5% use the bus on weekdays

Between 8am and 9am and from 3pm to 6pm, around 2000 people travel along Mungavin Avenue, with 95% by car (Figure 7.9). PT volumes are highest between 3pm and 5pm due to children travelling back from school by bus.

Compared to other locations within the Wellington Region, there is little peak/off-peak variation in numbers travelling by bus, which could indicate that discretionary non-commuter trips account for the majority of PT trips along the corridor.

Weekend two-way volumes peak at around 2,000 people per hour, with PT mode share around 2 or 3% (Figure 7.10).

Figure 7.9. Weekday mode share on Mungavin Avenue, inbound and outbound combined.

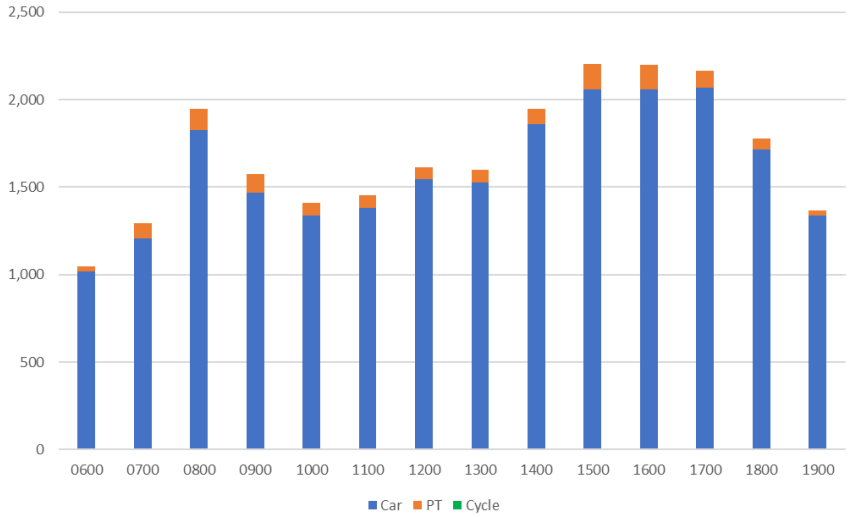
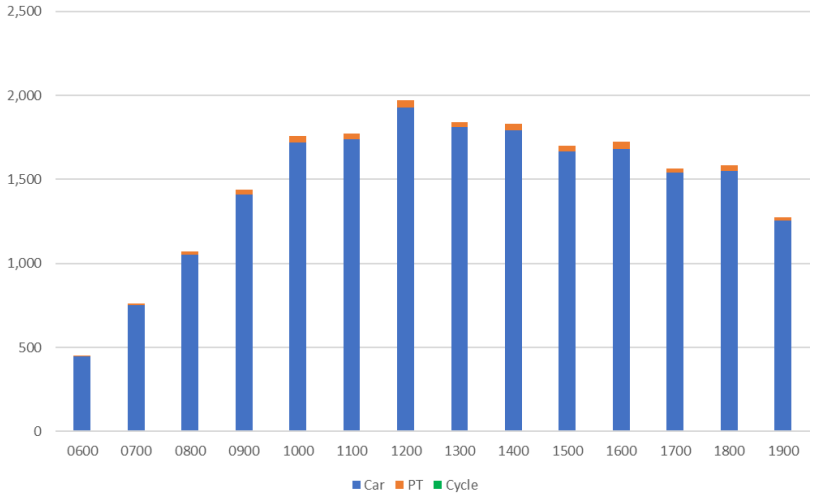



Figure 7.10. Weekend mode share on Mungavin Avenue, inbound and outbound combined.




### Titahi Bay Road: 5% by bus on weekdays

Similar to the Mungavin Avenue corridor, the Titahi Bay Road corridor has two-way volumes of 2100 to 2300 people per hour on between 8am and 9am and 3pm to 6pm on weekdays, dropping to around 1500 per hour between 10am and 2pm (Figure 7.11).

Two-way volumes of over 2000 people per hours between 10am and 5pm show that the number of people travelling along the corridor at weekends is around 30% higher than during the weekday off-peak and only marginally lower than the weekday peak period Figure 7.12).

Figure 7.11. Weekday mode share on Titahi Bay Road, inbound and outbound combined.

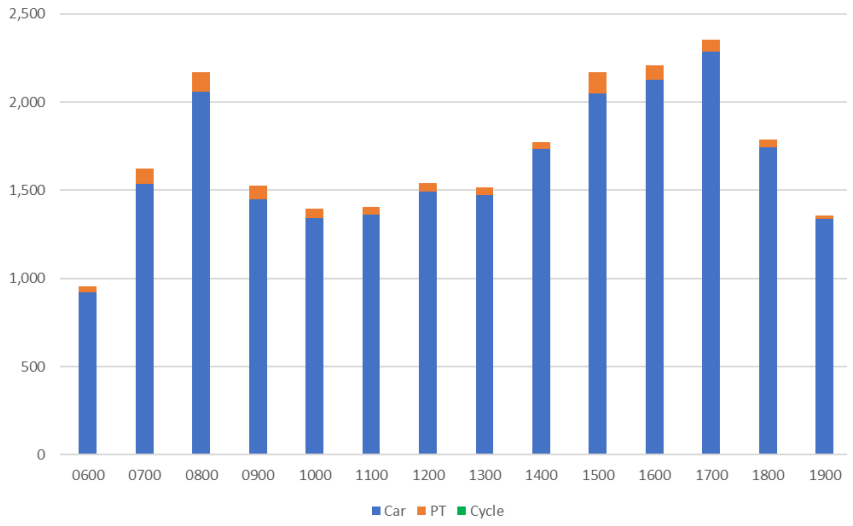
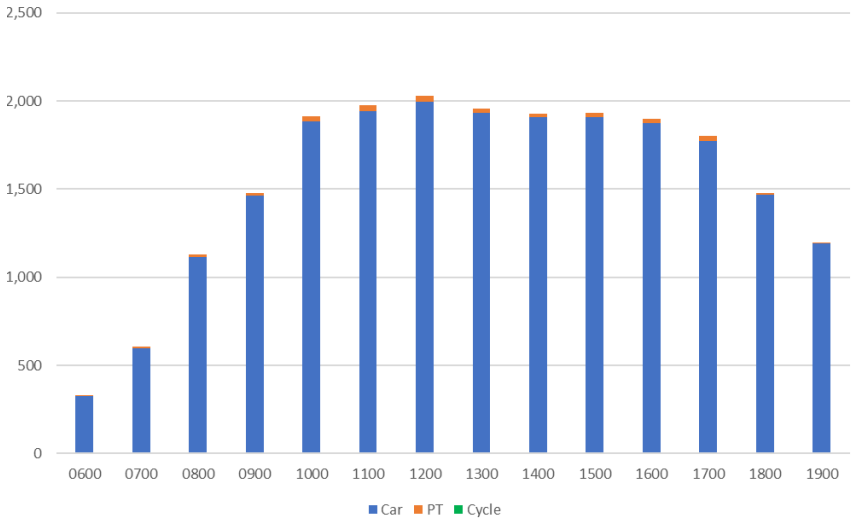



Figure 7.12. Weekend mode share on Titahi Bay Road, inbound and outbound combined.




### Upper Hutt to Lower Hutt: public transport mode share of 20% during peaks but less than 5% at other times

About 8000 people cross the Upper Hutt-Lower Hutt corridor (both directions) between 7am and 8am, with around 20% doing so by public transport (Figure 7.13). The majority of those are by rail. Rail accounts for a significant proportion of commuter trips between Hutt Valley and Wellington City, but most trips on this corridor within Hutt Valley are by car.

At weekends, 6000 people per hour travel along the corridor between 11am and 4pm, with 95% travelling by car (Figure 7.14).

Figure 7.13. Weekday mode share between Upper Hutt and Lower Hutt, inbound and outbound combined.

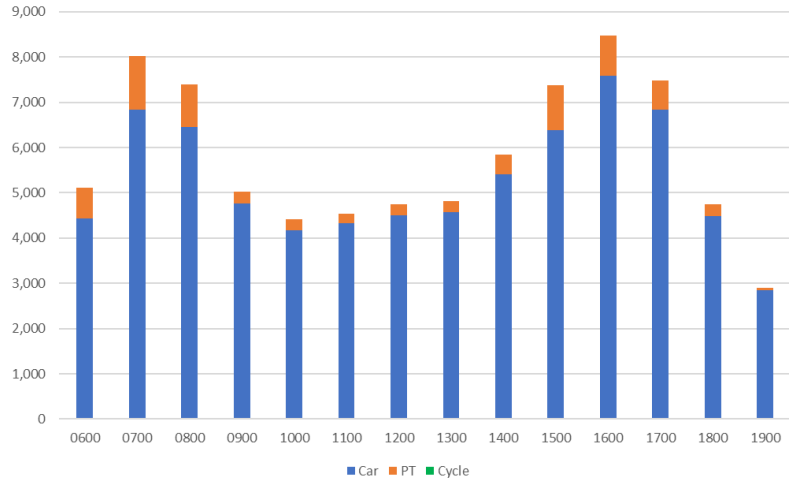
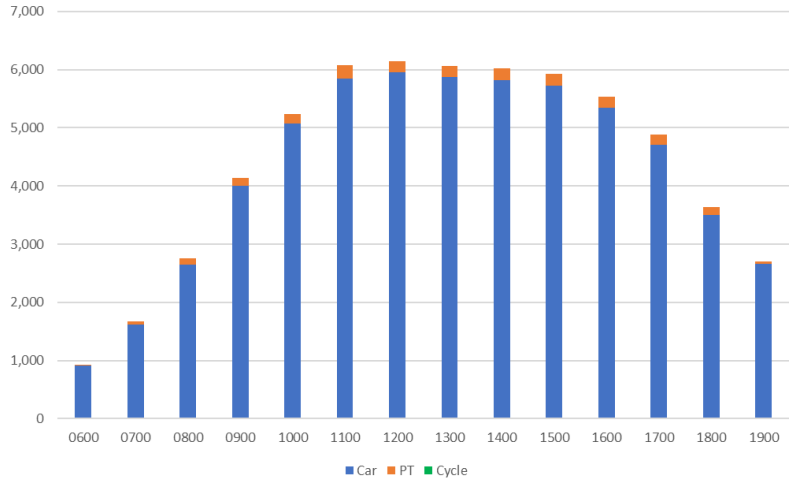



Figure 7.14. Weekend mode share between Upper Hutt and Lower Hutt, inbound and outbound combined.




### Remutaka Hill: half travel by rail in the AM peak

In the AM peak, 50% of people travelling between Upper Hutt and Wairarapa (both directions combined) travel by train (Figure 7.15). In the peak direction into Wellington, the rail mode share is nearer 70%. During the off-peak, around 600 people per hour cross Remutaka Hill, nearly all by car.

At the weekend, between 1000 and 1200 people cross Remutaka Hill by car each hour – this is 40% higher than during a typical weekday off-peak period due to higher traffic volumes for recreational trips and higher vehicle occupancy (Figure 7.16).

Figure 7.15. Weekday mode share on Remutaka Hill, inbound and outbound combined.

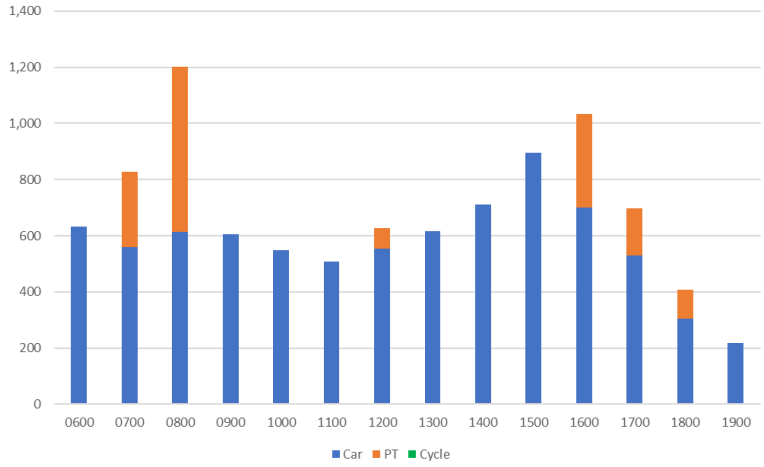
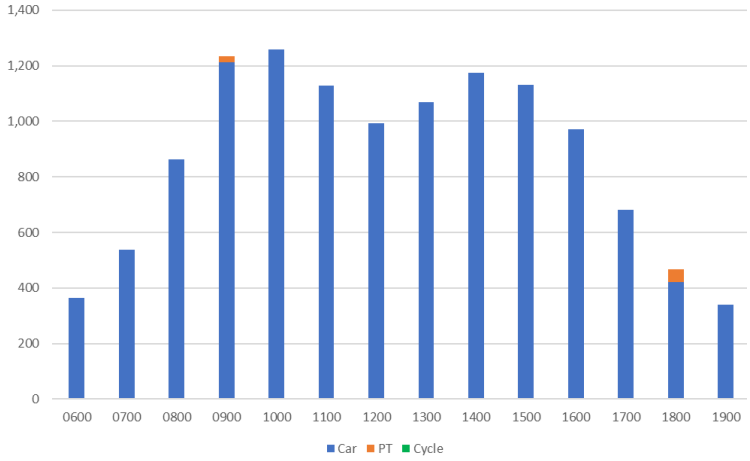



Figure 7.16. Weekend mode share on Remutaka Hill, inbound and outbound combined.



# 8. Freight

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Freight trends reflect economic activity**. Heavy vehicle volumes closely track regional GDP, highlighting freight's vital role in enabling and reflecting economic growth.
- **Road freight is increasing**. Over the last 13 years, heavy vehicle numbers on State Highways 1 and 2 have risen by around 30%, driven by population growth, economic growth and increasing e-commerce.
- **Most freight moves by road.** Road remains the dominant freight mode, especially for shorter journeys within the region. Nationally, 93% of freight is moved by road, and only 5% by rail and 2% by coastal shipping.
- **HCVs account for 30% of transport generated emissions.** HCVs are estimated to account for 5% of regional VKT but around 30% of regional transport generated emissions
- **Inward rail freight dominates**. The majority of rail freight into Wellington comes from the Manawatū-Whanganui region, with less outbound freight moving by rail, reflecting the dominance of log exports.
- **Freight reliability is an issue**. Extreme weather events, road and rail network vulnerabilities, and urban congestion affect the resilience and predictability of freight journeys, especially during commuter peaks and on key pinch points like Remutaka Hill and Highway 1 at Ōhau.
- **Data gaps persist**. Freight data is limited and fragmented, key sources such as FIGS and E-Road provide only a partial view, and there has been no updated regional freight study since 2017/2018.

The key considerations for the RLTP are as follows:

- **Reducing environmental impact**. Heavy commercial vehicles contribute significantly towards regional transport generated emissions. A transition to lower emission freight will require long-term planning across modes, vehicle technologies, and energy systems but could deliver significant environmental benefits.
- **Improving travel time variability**. Congestion in the Wellington urban area affects access to ferry terminals and inter-regional freight movements. While Transmission Gully has improved reliability on SH1, travel times along the SH2 corridor remain variable and improvements would benefit freight.
- **Improving rail integration and mode share**. Rail's share of freight in the region remains low and has declined further in recent years, however it contributes to a significant proportion of exports from CentrePort and there are potential

opportunities to increase the rail mode share to maximise efficient of the transport network.

- **Better information**. Improving freight data could contribute to a more coordinated strategic approach across the lower North Island and beyond. It would enable more coordinated planning and help align investment with future freight demand and sustainability goals.

## Purpose and scope

This chapter explores current patterns and trends in freight within the Wellington Region. Although the focus is on freight by land transport – road and rail – freight through the region's ports (both coastal shipping and international shipping) is also of relevance, given its connections with land transport, but is beyond the scope of this report.

## Importance of freight in Wellington's economy

Freight is a key component of economic activity in the Wellington Region, supporting businesses, supply chains, and trade flows across the nation and internationally. The region's strategic location at the bottom of the North Island and including one of the country's largest urban areas, makes it a key freight hub, with major freight flows moving north-south via State Highway 1 and 2, rail, the Cook Strait ferry network, and international air and sea freight.

The ANZ Heavy Traffic Index[24], which tracks heavy and light traffic flows as a proxy for economic activity, reveals a strong correlation between heavy vehicle numbers and GDP growth at the national level. This highlights the interdependence of freight movement and economic performance. Rising freight volumes in Wellington region indicate increasing economic activity. Conversely, disruptions to freight networks can have immediate economic consequences.

Wellington's freight-intensive sectors, including manufacturing, logistics, forestry, and agriculture, rely on efficient and reliable transport infrastructure. CentrePort Wellington is an important part of the country's – and the region's - supply chains and export connectivity, as is Wellington Airport.

## Overview of freight in the region

### Total freight movement

In 2024, Wellington Region received 376,000 tonnes of freight by rail and 233,000 tonnes by international sea freight.[25] Freight tonnage by road is harder to estimate, but its importance is indicated by a daily average of 2,900 heavy vehicles per day at the Ngauranga Interchange (State Highway 1 and 2, both directions combined), equating to 3.4% of all vehicles at that

[24] https://www.anz.co.nz/about-us/economic-markets-research/truckometer/ The index is based on flows of heavy vehicles weighing more than 3.5 tonnes.

[25] Ministry of Transport Freight Information Gathering System (FIGS) https://www.transport.govt.nz/statistics-and-insights/freight-and-logistics/trade-trends/

location. Nationally, more than 90% of freight is estimated to be moved by trucks, with the remaining 7% moved by rail and coastal shipping.[26]

### Commodities

The main commodities moved by freight in the region are agricultural products, logs, manufactured goods, and consumer goods.

- Logging and forestry traffic is significant along SH2 and SH58, contributing to CentrePort and Napier Port trade volumes.
- E-commerce activity has grown in recent years, contributing to commercial vehicles on urban streets that were designed before that type of activity.

## Key freight corridors and modes

### Road freight

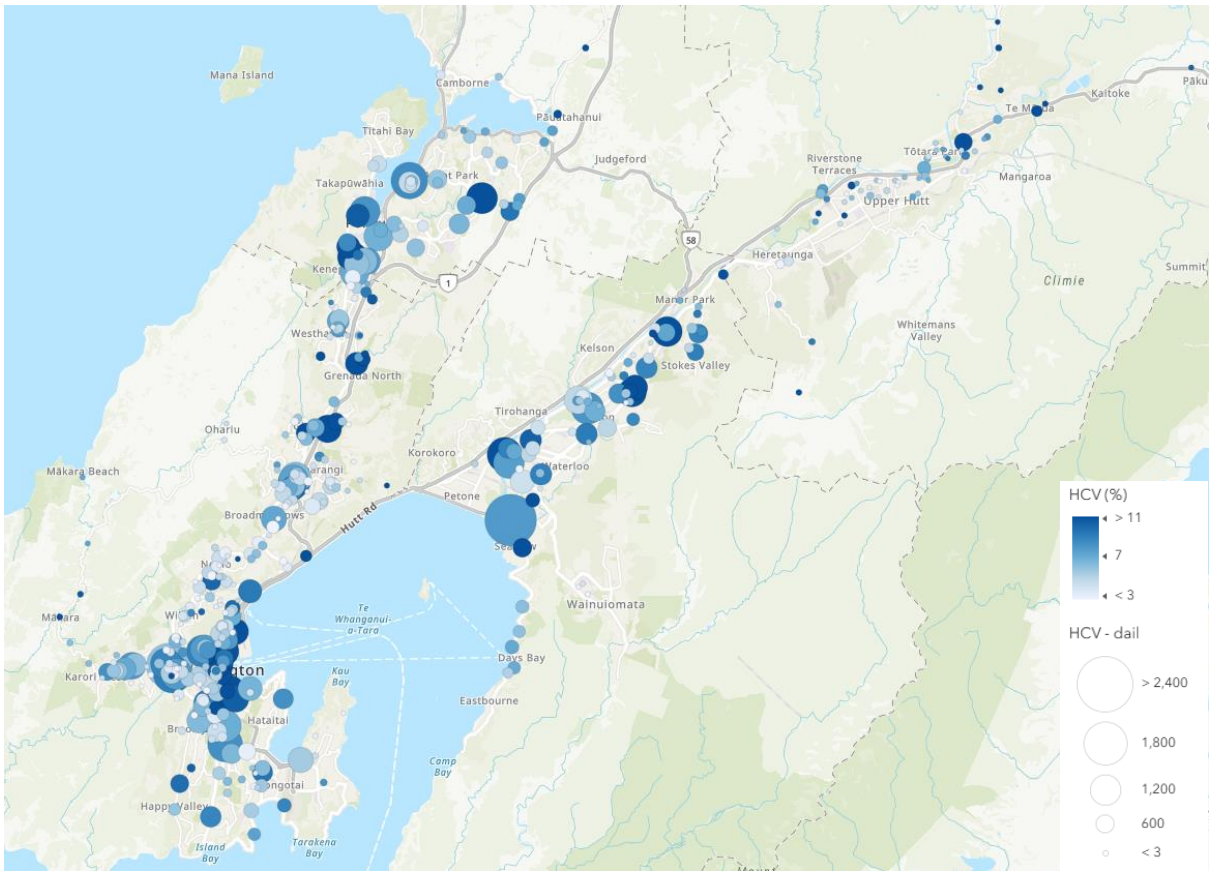
The region's state highway network (SH1, SH2, SH53, SH58, and SH59) is the backbone of the region's road freight transport. Heavy freight traffic concentrated along the SH1 corridor from Palmerston North-Levin-Wellington to the Cook Strait ferries, with logging and agricultural freight prominent on SH2, with keys flows moving to Wellington's CentrePort and Napier Port to the north.

Heavy vehicle numbers are monitored at selected sites on local roads around the region. Numbers are highest near urban centres of Wellington City, Porirua, and Lower Hutt (Figure 8.1) on the State Highway network.

Many of the heavy vehicles within those urban centres are buses – particularly Wellington City - but the geographical pattern also reveals high numbers of heavy vehicles at Waione Street, Lower Hutt, which represents freight volumes to and from the nearby Seaview industrial area and port.

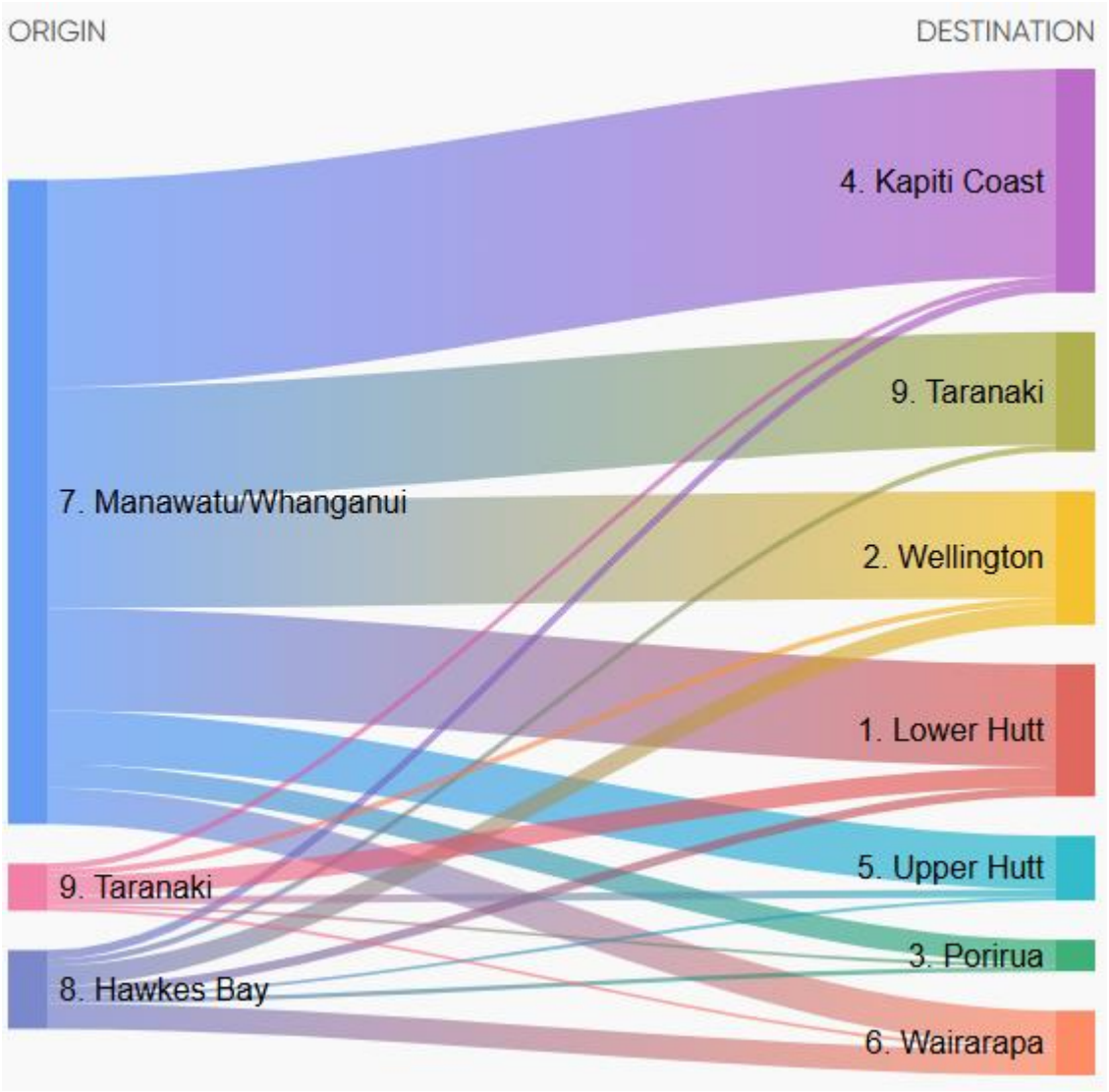
[26] Deloitte (2022). *New Zealand Ports and Freight Yearbook 2022*. https://www.deloitte.com/content/dam/assets-shared/docs/industries/government-public-services/2023/nz-en-ports-and-freight-yearbook-2022.pdf

Figure 8.1. Heavy vehicles (HCV and buses) on local roads – number and percentage of all vehicles.




Palmerston North, although outside the Wellington Region, functions as the primary logistics hub for the lower North Island, linking Wellington Region with Taranaki, Hawkes Bay, and other parts of the North Island. Wellington's Centre-Port serves a major import-export gateway, handling containerised and bulk freight movements. The significance of Palmerston North for road freight is emphasised in the chart below showing 'fleet' road traffic flows into the Wellington Region from regions further north, as recorded in TomTom vehicle trip data (Figure 8.2). The flows from Manawatu/Whanganui, mostly from Palmerston North, are larger into every part of the Wellington Region than flows from either Taranaki or Hawkes Bay.

Figure 8.2. TomTom 'fleet' vehicle flows from Manawatu/Whanganui, Taranaki, and Hawkes Bay into Wellington Region, March 2025.




A more detailed picture of freight is indicated by TomTom's tracking of fleet vehicles.[27] Most fleet vehicles entering the region from the north on State Highway 1 at Waikanae in March 2025 travelled south on Transmission Gully, rather than State Highway 59, then roughly equal numbers continued south towards Wellington City or over State Highway 58 to the Hutt Valley (Figure 8.3). Few fleet vehicles southbound from Waikanae travelled to the Terrace Tunnel or further south into Wellington CBD.

Similarly, few fleet vehicles crossing the Remutaka Hill on State Highway 2 southbound travel as far as the Terrace Tunnel (Figure 8.4). Larger numbers proceed to State Highway 58 towards Porirua or Kāpiti Coast, or destinations within the Hutt Valley.

The above patterns suggest that the key destinations for freight within the region are

- Seaview

[27] TomTom Move O/D Analysis. https://od.tomtom.com/dashboard

- Centreport
- Urban centres: Wellington, Porirua, Paraparaumu, Lower Hutt, Upper Hutt.

Figure 8.3. Destination of 'fleet' vehicles southbound from Waikanae, March 2025.

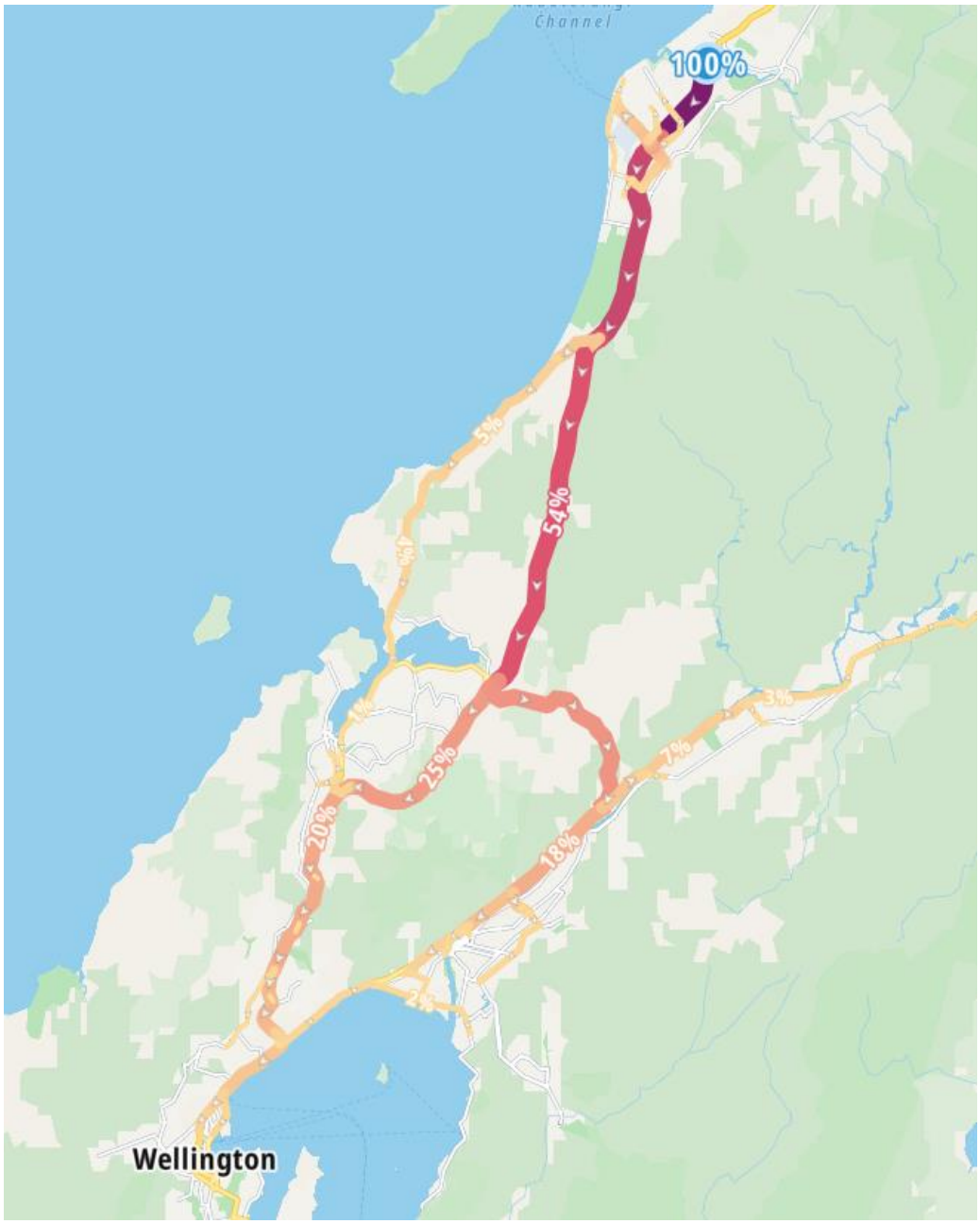


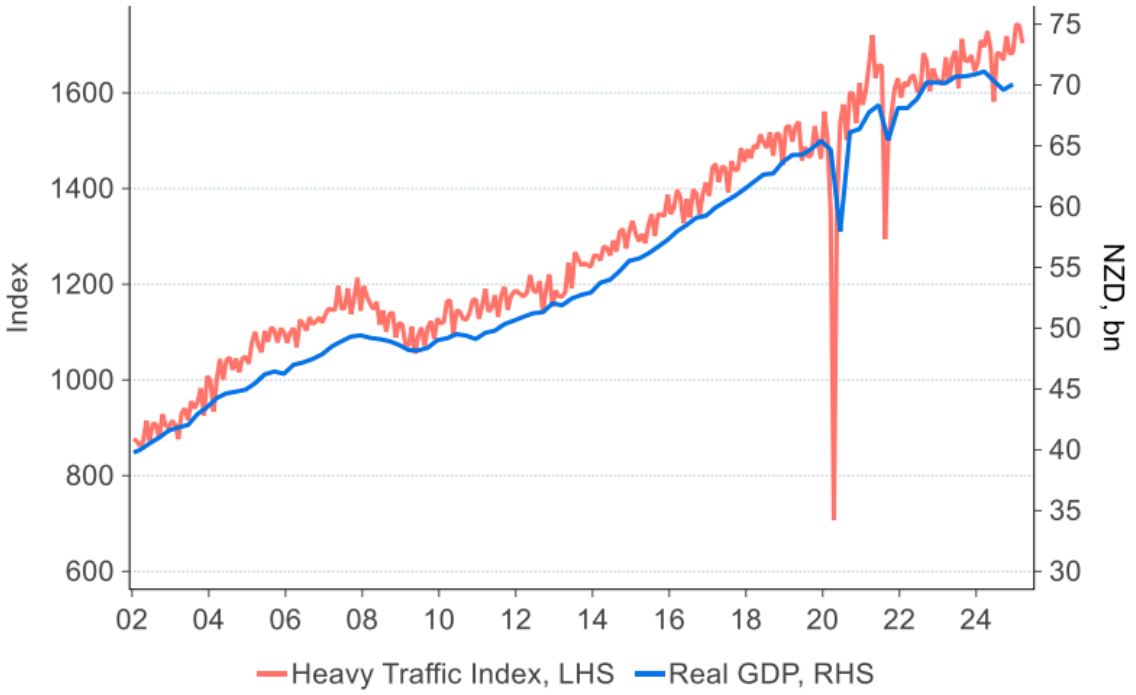
Figure 8.4. Destination of 'fleet' vehicles southbound on State Highway 2 from Remutaka Hill, March 2025.


## Road freight is closely linked to economic activity

Road freight volumes have increased over time, mainly driven by economic growth. Other economic changes, such as just-in-time supply chains and growth in e-commerce, may also have contributed to increased freight volumes on the region's roads.

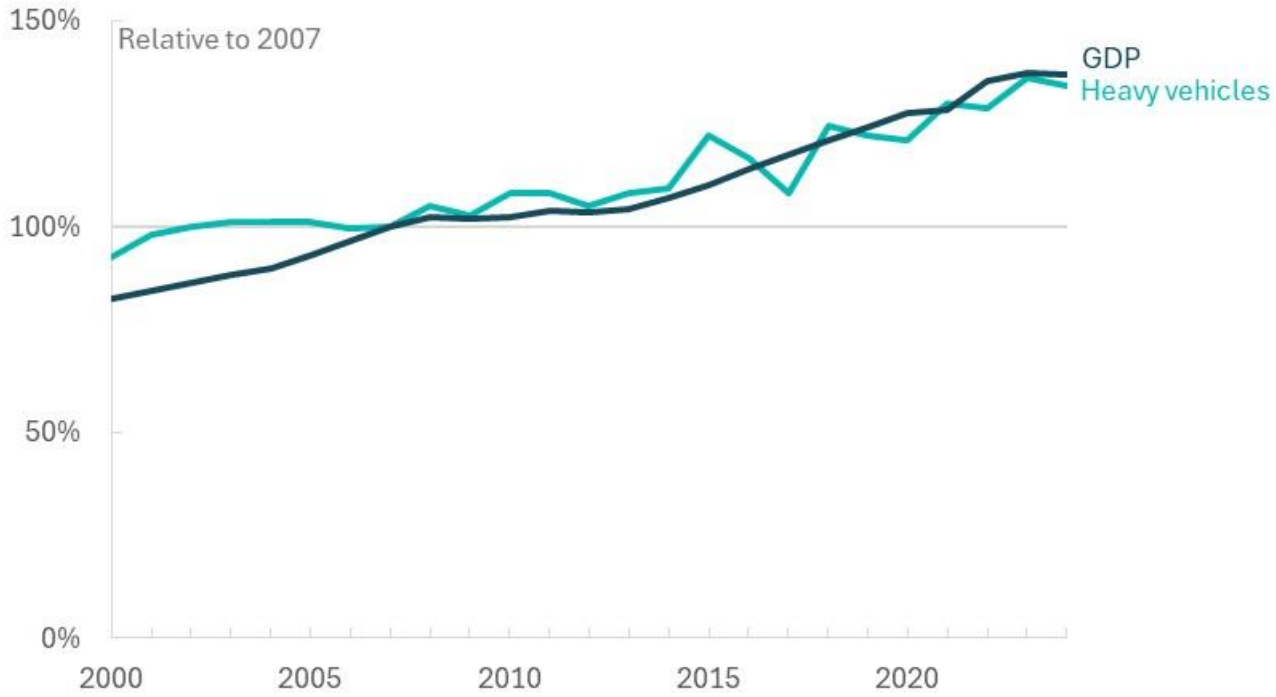
ANZ's *Heavy Traffic Index* shows that heavy vehicle numbers are closely linked to economic activity at the national level (Figure 8.5). Long-term trends in heavy vehicle numbers are only available for a few state highway sites in the region, including State Highway 2 at the Ngauranga interchange. The Heavy Traffic Index includes the Ngauranga site along with 10 other sites from around New Zealand. The correlation between average daily flows of heavy vehicles at the Ngauranga site and the region's GDP is close (Figure 8.6).

Figure 8.5. ANZ Heavy Traffic Index and GDP, New Zealand.




Source: ANZ Truckometer, https://www.anz.co.nz/about-us/economic-markets-research/truckometer/

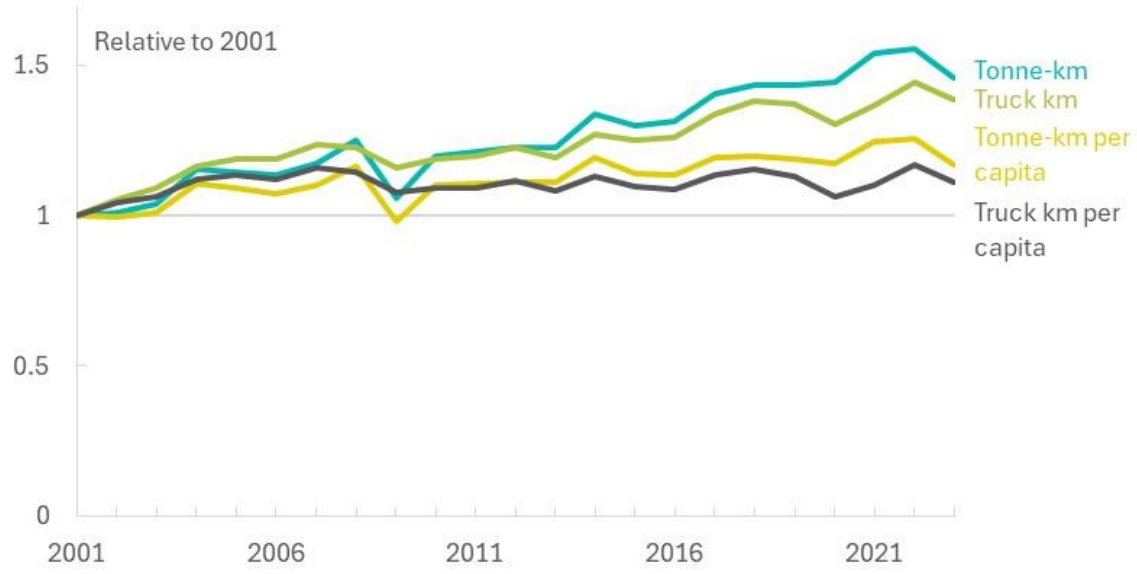
Figure 8.6. Trend in Wellington Region's GDP and heavy vehicles at State Highway 2, Ngauranga Interchange.




The Ministry of Transport Te Manatū Waka reports selected road freight measures at the national level, including truck kilometres and tonne-kilometres. Both the absolute and per capita values for those measures have increased over the last two decades (Figure 8.7**Error!**

**Reference source not found.**). By 2023, tonne-kilometres had increased to 146% of the 2001 level (per capita 117% of the 2001 level), and truck kilometres increased to 139% (per capita 111%) of the 2001 level. Although not specific to the Wellington Region, those increases are consistent with the increased numbers of heavy vehicles observed within the region, as shown above.

Figure 8.7. Road freight tonne-km and truck km, absolute and per capita, scaled to 2001, New Zealand.

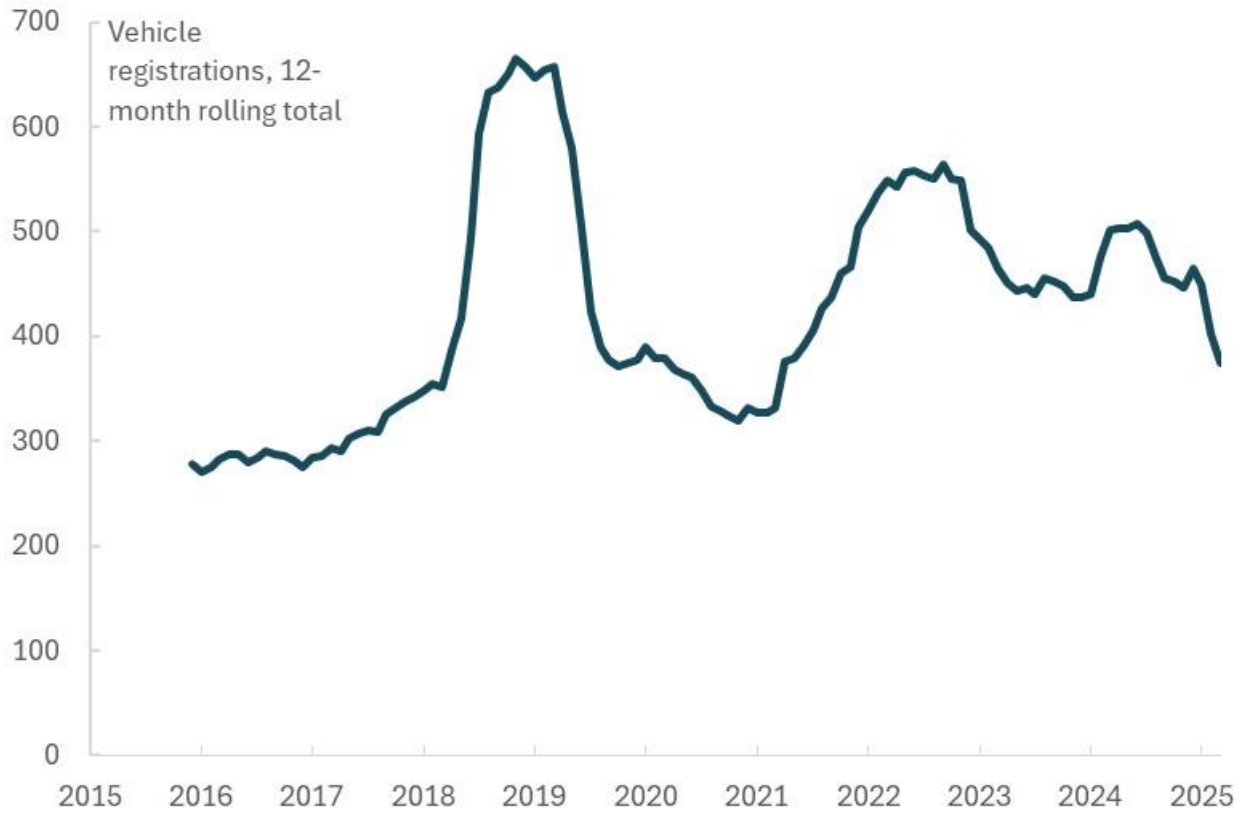



### Heavy vehicles entering the region's fleet

The number of new heavy vehicles entering the Wellington Region's fleet (as indicated by place of registration), has grown overall over the last decade, though with significant variations over time (Figure 8.8). Over the last few years, the average has been about 500 per year. There was a noticeable spike in heavy vehicle registrations in mid-2018. That pattern coincides with Metlink's replacement of older buses from 2018-onwards so may not specifically relate to freight.

The small decline since 2023 is reflective of weaker economic conditions and less investment in new heavy commercial vehicles due to lower demand.

Figure 8.8. New heavy vehicles registered in Wellington Region.




### Rail freight

Rail freight remains an important component of the region's freight network but is under-utilised. A recent analysis described New Zealand's rail network as being in a state of 'managed decline'[28]. KiwiRail's North Island Main Trunk (NIMT) and Wairarapa Line connect Wellington with Palmerston North and further north.

The Ministry of Transport's Freight Information Gathering System (FIGS)[29] database shows that the volume of rail freight into Wellington Region has declined over the last 3 years, after 10 years of growth till 2021 Figure 8.9). From the data it is difficult to discern the reasons for this trend, however it would be due to weaker economic conditions coupled with the cyclical nature of logging that contributes significantly to freight inflows in the Wellington Region.

Compared with inward rail freight, outward rail freight has remained stable over time and at a much lower level – about 15% of the inward freight volume – reflecting the predominantly outward flow of freight transferring from rail to sea.

For both inward and outward rail freight, the leading region of origin or destination is Manawatū-Whanganui, at about half of all rail freight (Figure 8.10 and Figure 8.11). Auckland

[28] Australasian Railway Association (2024). *The Benefit of Rail to New Zealand*. https://ara.net.au/wp-content/uploads/ARA_Benefit_of_Rail_New_Zealand_REPORT_August_2024.pdf
[29] https://www.transport.govt.nz/statistics-and-insights/freight-and-logistics/sheet/figs-rail

has remained the second leading region of origin or destination, but volumes have generally declined over the last decade.

Figure 8.9. Trend in rail freight into and out of Wellington Region.

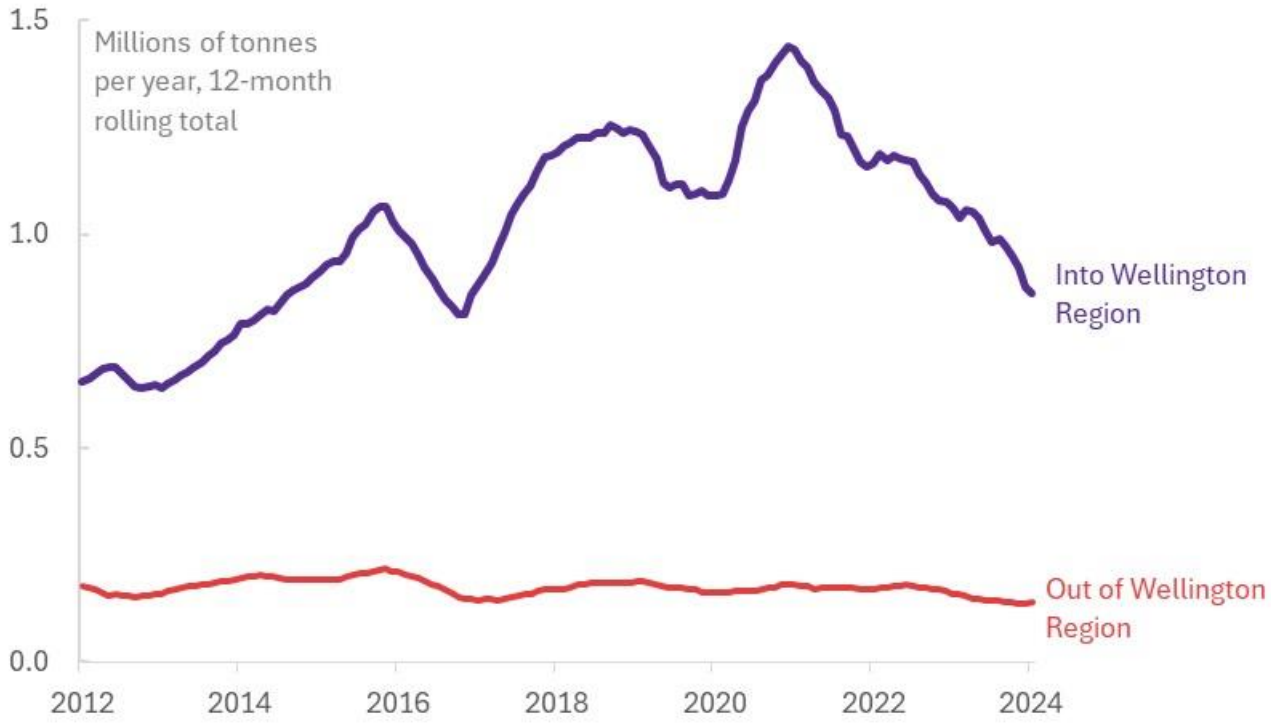



Figure 8.10. Trend in rail freight into Wellington Region, by origin region.

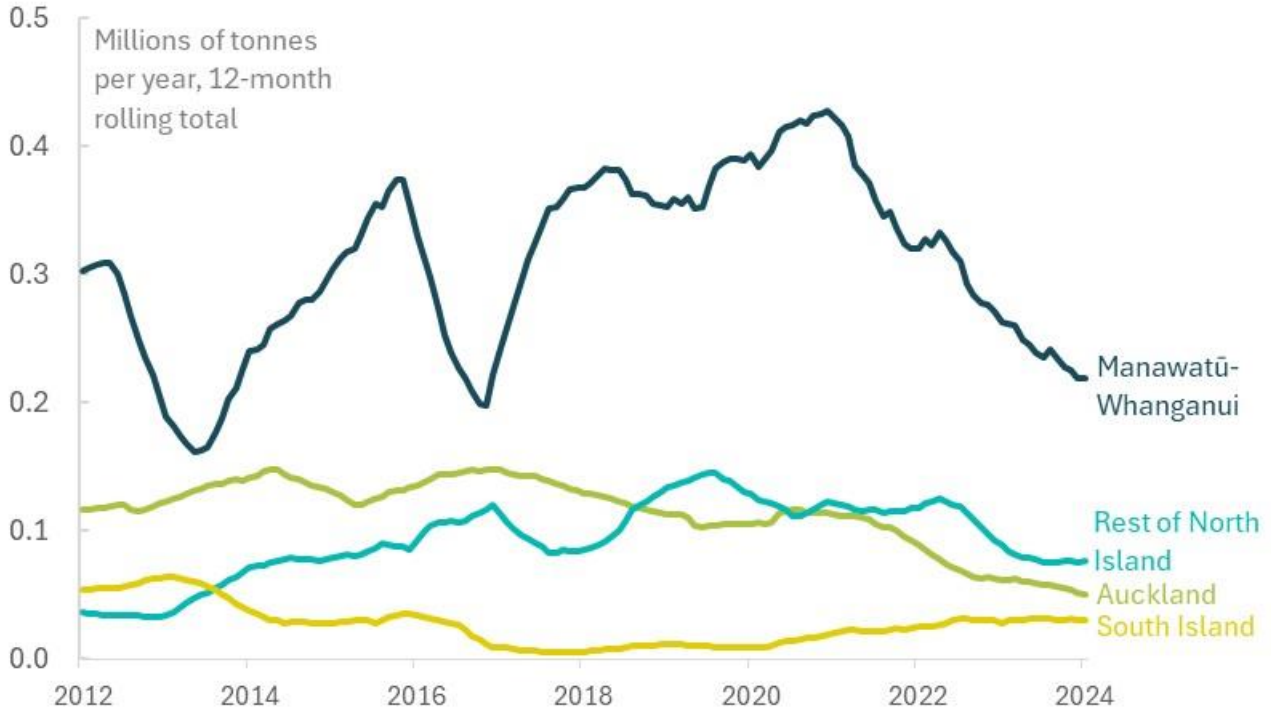
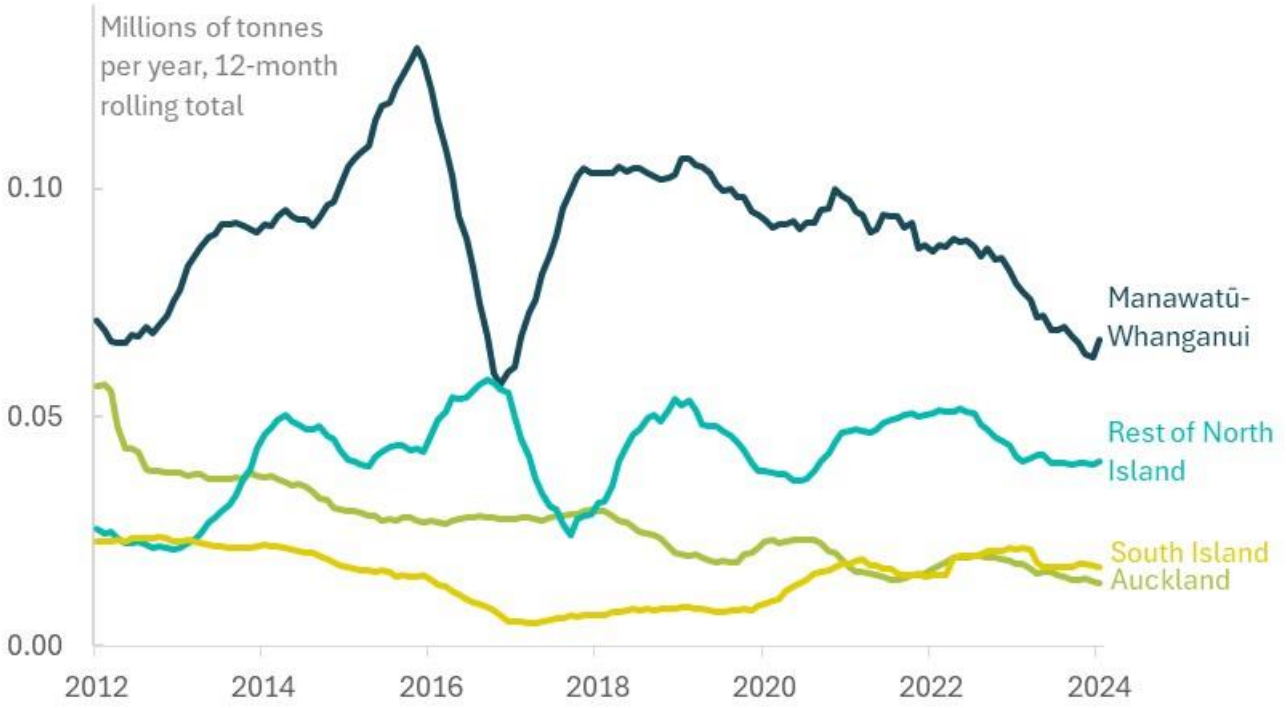


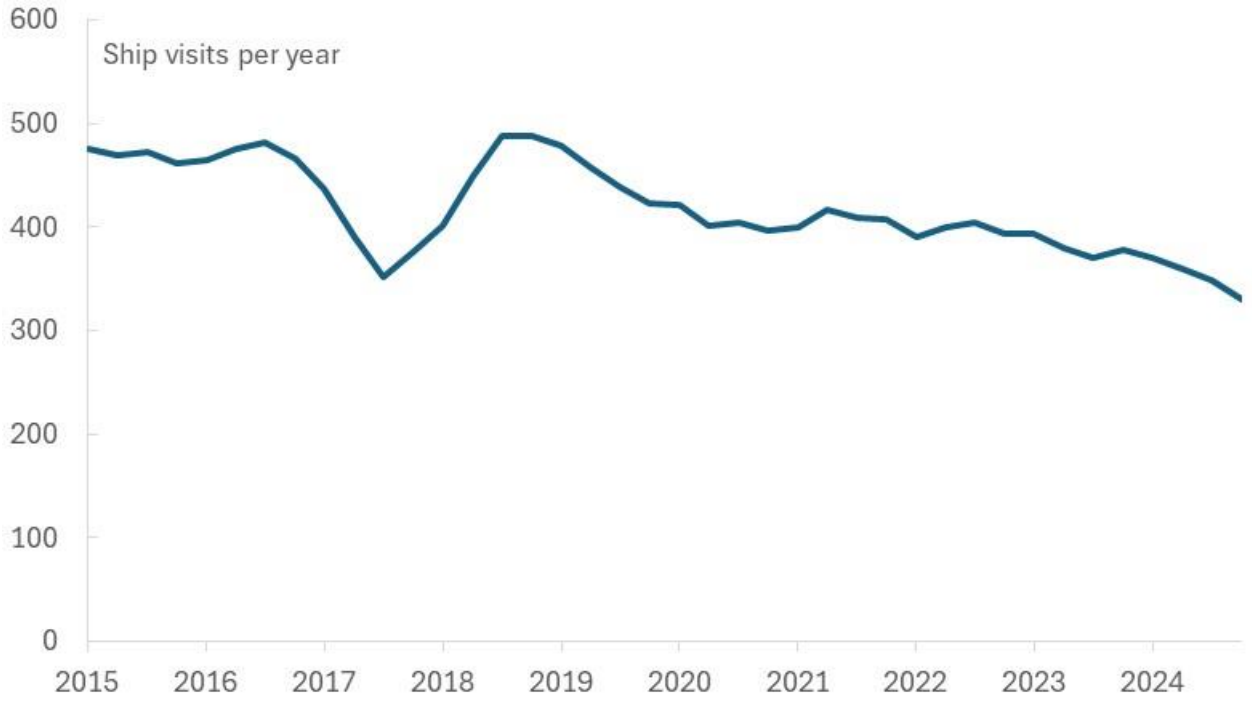
Figure 8.11. Trend in rail freight out of Wellington Region, by destination region.




### Maritime freight

CentrePort Wellington and the Cook Straight ferry network are vital freight gateways, connecting to the region's land transport network. The frequency of international shipping calls at CentrePort has decreased post-COVID, shifting greater emphasis to domestic shipping and land freight into and out of the region. In 2024 there were 330 international ship visits to CentrePort (excluding cruise ships), which was 31% lower than the number 10 years earlier (Figure 8.12). The fall in frequency of ship visits may require CentrePort to hold larger volumes between calls.

Figure 8.12. Number of international ship visits, excluding cruise ships, at CentrePort Wellington.




## Data to support better freight monitoring

This analysis has confirmed a recurring theme in freight analytics: there is a lack of reliable, up-to-date, and system-wide data about freight. This is particularly acute for understanding freight flows across modes and regions.

While the Ministry of Transport's Freight Demand Study (2017/2018)[30] provided a national picture at the time, significant changes have occurred since then, including post-COVID supply chain disruptions, shifts in domestic distribution, and modal investment. Gaps include:

- Limited origin-destination and route-level data, especially for road freight.
- Proprietary commercial data that is not easily shared across agencies.
- Incomplete visibility of freight movements across modes and "first mile/last mile" delivery networks.
- Reliance on proxies like hub odometers, road user charges (RUC), and E-Road, which do not comprehensively capture freight journeys, load, and mode transitions.

Opportunities to improve the evidence base include:

- Supporting a new national freight demand study, with an agreed refresh interval, such as 5 years.
- Partnering with freight operators to harness GPS-based tracking of freight movements.

[30] Ministry of Transport (2019). National Freight Demand Study 2017/18. https://www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf

- Advocating for anonymised access to commercial logistics data to inform planning.
- Integrating data across road, rail, coastal shipping, and air to build a clearer multimodal picture.

Improving freight data will support the region's broader goals for resilience, emissions reduction, and efficient use of transport infrastructure.

# Part 3: Network performance

# 9. Car and public transport travel times

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Slow and variable travel speed on SH1 and SH2**. Speeds on SH1 and SH2 heading towards Wellington CBD are the slowest during the AM peak between 7.30am and 9am, with journeys taking 20 minutes longer than during the off-peak.
- **Transmission Gully has significantly improved travel times along the western corridor.** Transmission Gully has resulted in a 10- to 20-minute reduction in travel times between Waikanae and Wellington CBD in the morning peak, with improved travel times on Transmission Gully (compared to the previous route on SH59) balanced to some extent by a slight increase in congestion in the morning between Tawa and Ngauranga.
- **Bus travel times are uncompetitive compared to the private car**. Rail is the fastest public transport mode, particularly in the AM peak, while buses remain slower due to their interaction with other road traffic, particularly in Wellington CBD.
- **Bus travel time variability is highest on core bus routes**, such as the main east-west corridors connecting Miramar and Karori to the central city.
- **Off-peak and weekend highway travel speeds have deteriorated**. Since 2019, AM peak travel times have slightly improved – due in part to investment (TG) and limited peak contraction- but delays have increased during the inter-peak and weekends due to growing demand.

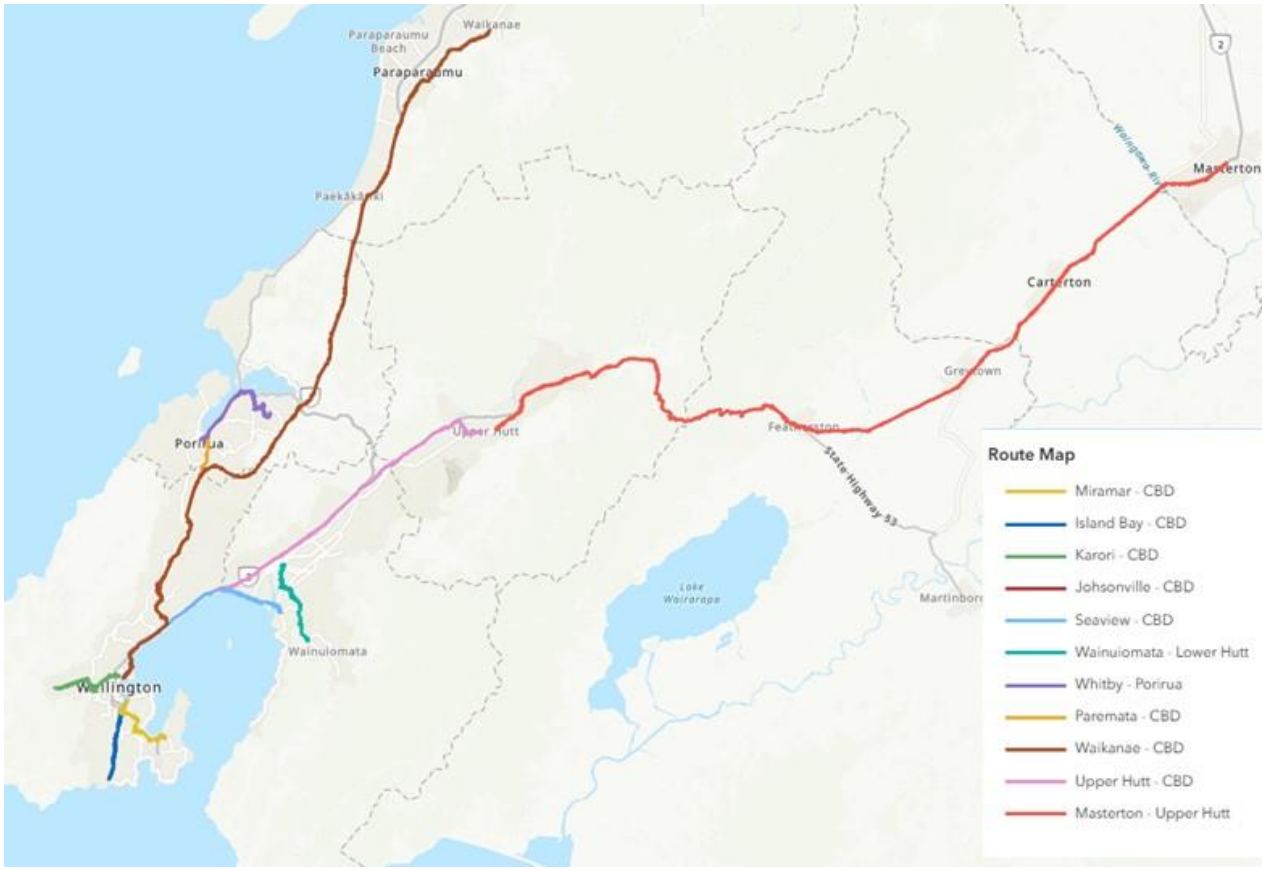
The key considerations for the RLTP are as follows:

- **Managing travel demand to optimise the efficiency of the state highway network;** SH1 and SH2 operate at capacity heading into Wellington in the morning peak and SH1 operates at capacity through Wellington CBD during the off-peak and weekends, and consideration should be given to managing demand to encourage mode shift and maximise efficiency for those who need to drive.
- **Improving the competitiveness of bus versus private car**, particularly during the off-peak. Bus priority improvements on core corridors could help address high volumes, slow speed, unreliability and lack of competitiveness with private cars.

## Purpose and scope

This chapter looks at highway and public transport travel times across the Wellington Region. The analysis includes a range of routes across the region (Figure 9.1). Routes were chosen based on strategic importance, connectivity, and regional coverage and largely reflect the current set of routes that are used for RLTP monitoring purposes. Car travel times are from TomTom Traffic Stats and public transport travel times are from Metlink's NetBI data visualisation tool.

Figure 9.1. Regional travel time routes.



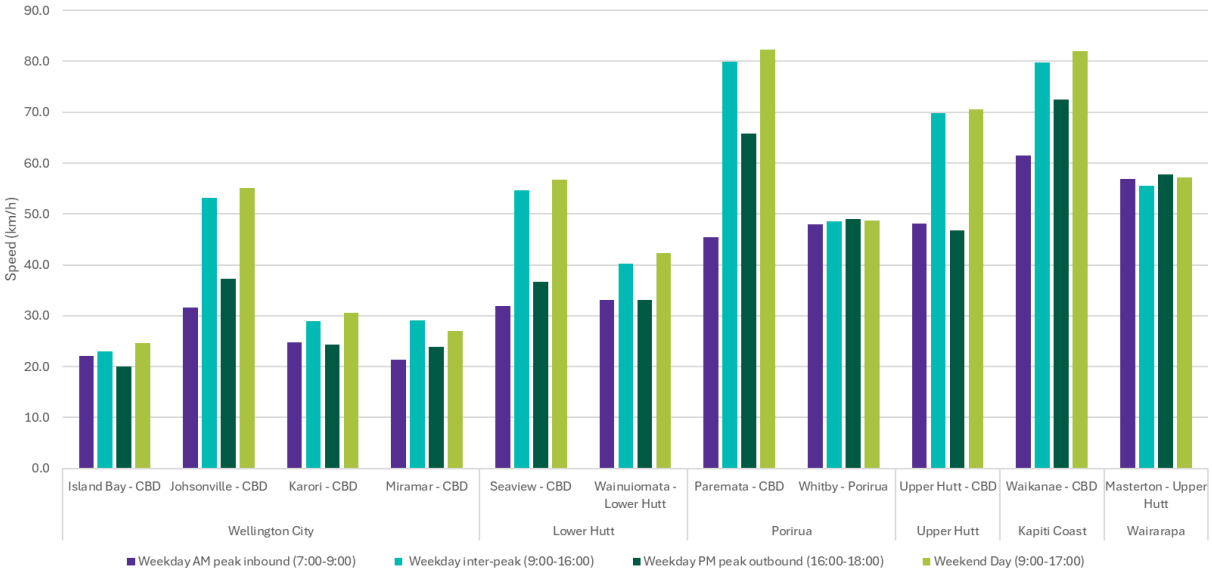

## Speed, variability, predictability, and relativity

The **speed** of travel (and its inverse, **travel time**) indicates how quickly people can get to where they need to go, but other factors matter to travellers. **Variability** refers to how much travel times fluctuate from day to day, while **predictability** is about how reliably people can anticipate how long a trip will take. High variability and low predictability can lead to frustration, missed connections, and the need to allow extra buffer time. **Relativity** between modes also matters: a mode may feel fast or slow depending on how it compares to other available options. Together, these factors influence how people perceive and choose between transport modes.

## Differences between peak and off-peak speeds are greatest on state highway corridors from the north

Average vehicle speeds on monitored routes vary across time periods (Figure 9.2). Generally, the longer routes with higher marked speeds that follow state highways to/from Wellington CBD have a larger difference between peak and off-peak speeds. Local routes within urban areas have less variability between time periods largely because there is some congestion at most times of the day.

Figure 9.2. Car travel speed by time period and direction, 2024.




## Car travel times are affected by bottlenecks on key routes

Travel times are longest during the AM peak (inward direction) and the PM peak (outward). However, peak-time congestion is very unevenly distributed along each route, with specific bottlenecks having an outsize impact on overall travel times. For example, in the AM peak, Miramar to CBD is particularly slow from Cobham Drive to Wellington Road. On that same route in the outward direction during the PM peak, the slowest section is from Kent Terrace to Dufferin Street (Basin Reserve). Those choke points typically add about 10 to 15 minutes at peak times.

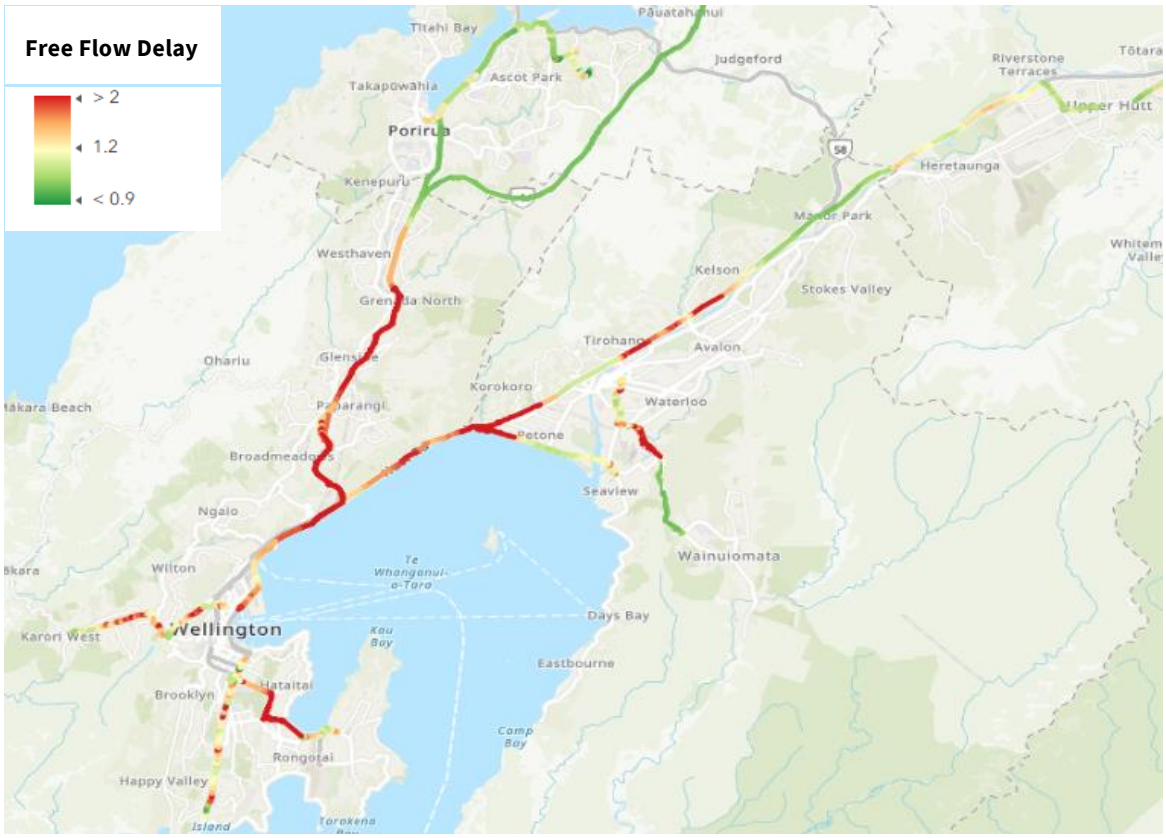
Bottlenecks move through the network during peak periods. For example, in the hour starting 7am on weekdays, the Upper Hutt-to-Wellington CBD route has congestion bottleneck on SH2 starting at Whakatiki Street near central Upper Hutt (Figure 9.3). An hour later, the bottleneck has moved south and is more evident on SH2 near Avalon and Kelson in Lower Hutt (Figure 9.4).

To some extent, bottlenecks in one location (upstream) will meter traffic and maintain reliable travel times downstream, and therefore a whole of network perspective should be taken when considering how to potentially address network bottlenecks.

Figure 9.3. Travel time relative to free- flow, 7am to 8am weekdays.


Note: A ratio of 1.0 represents free flow travel time, and 2.0 represents double the free flow travel time.

Figure 9.4. Travel time relative to free- flow, 8am to 9am weekdays.




Note: A ratio of 1.0 represents free flow travel time, and 2.0 represents double the free flow travel time.

Bottlenecks – areas of localised congestion – can be limited to just short sections of road but often add 10 to 20 minutes to car travel times within the region. Some bottlenecks remain at predictable locations (such as around the Basin Reserve), while others move from hour to hour, such as on State Highway 2 in Hutt Valley.

On the western corridor (SH1), congestion builds up from the north from 7am to 8am, particularly from Transmission Gully to Tawa. Between 8am and 9am, congestion on SH1 from the north moves through the network towards Wellington CBD.

Congestion on the Wellington east corridor from Miramar to the CBD remains significant between Cobham Drive and Basin Reserve at 7am to 8am and 8am to 9am.

Significant congestion is also observed at other bottlenecks around the region, including Wainuiomata to Lower Hutt.

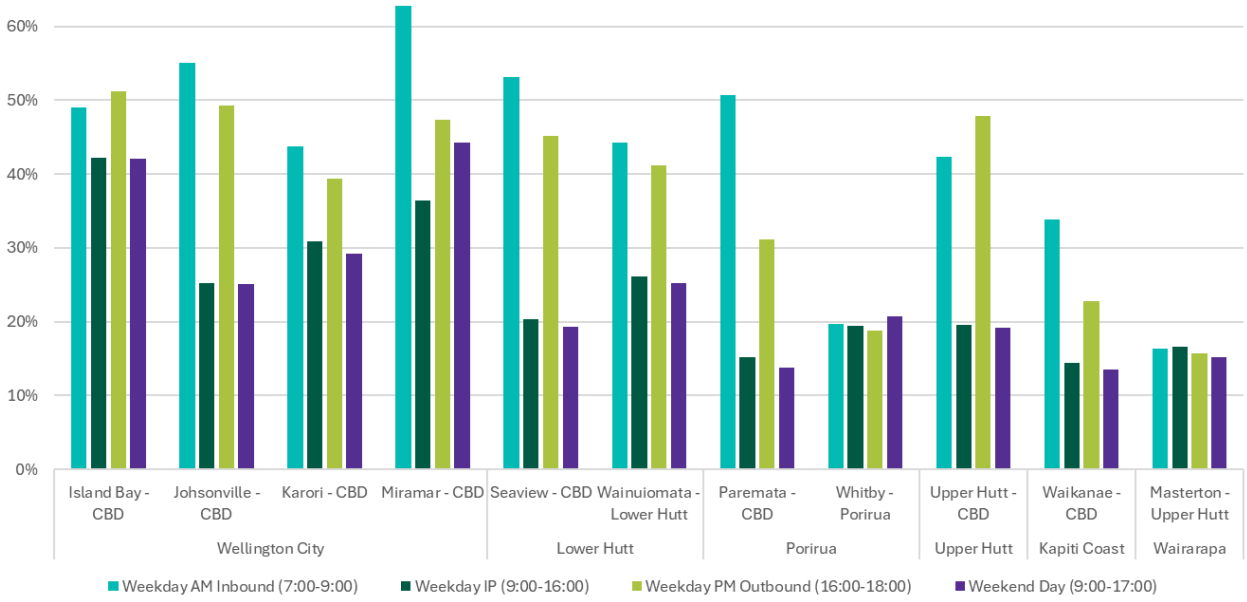
## Car travel time variability

In this analysis, travel time variability is calculated as the difference between the fastest quarter and slowest quarter of vehicles divided by the median. Variability of 10%, for example, indicates that half of all vehicles are within 10% of the median travel time.

Peak periods (both the AM and PM peaks) have much higher variability than interpeak and weekends (Figure 9.5). Two exceptions are Whitby to Porirua and Masterton to Upper Hutt, which are less impacted by peak-time congestion. Across the monitored routes, the most

variable car travel times are on Miramar to CBD in the AM peak – the range of times that includes half of all journeys is 63% of the median travel time.

Figure 9.5. Car travel variability by time period and direction, 2024 average.




Routes that include the state highways into Wellington CBD – from Miramar, Johnsonville, Paremata, Waikanae, Upper Hutt, and Seaview – have travel time variability of around 50% in the AM peak inbound, indicating that travel times are unpredictable.

Some urban routes within Wellington City – such as Island Bay and Miramar to the CBD – have high levels of variability during off-peak times and weekends, due to volumes remaining near capacity across broad times.

Outside of Wellington City, variability is lower during the off-peak and weekends due to lower levels of demand.

## Change in car travel times over the last five years

Car travel times within the region have changed significantly over the period 2019 to 2024 (Figure 9.6). On several routes travel times have decreased, especially during the AM peak. Those improvements could be due to peak contraction and reduced traffic volumes, with more people working from home or having flexibility to avoid peak-time travel.

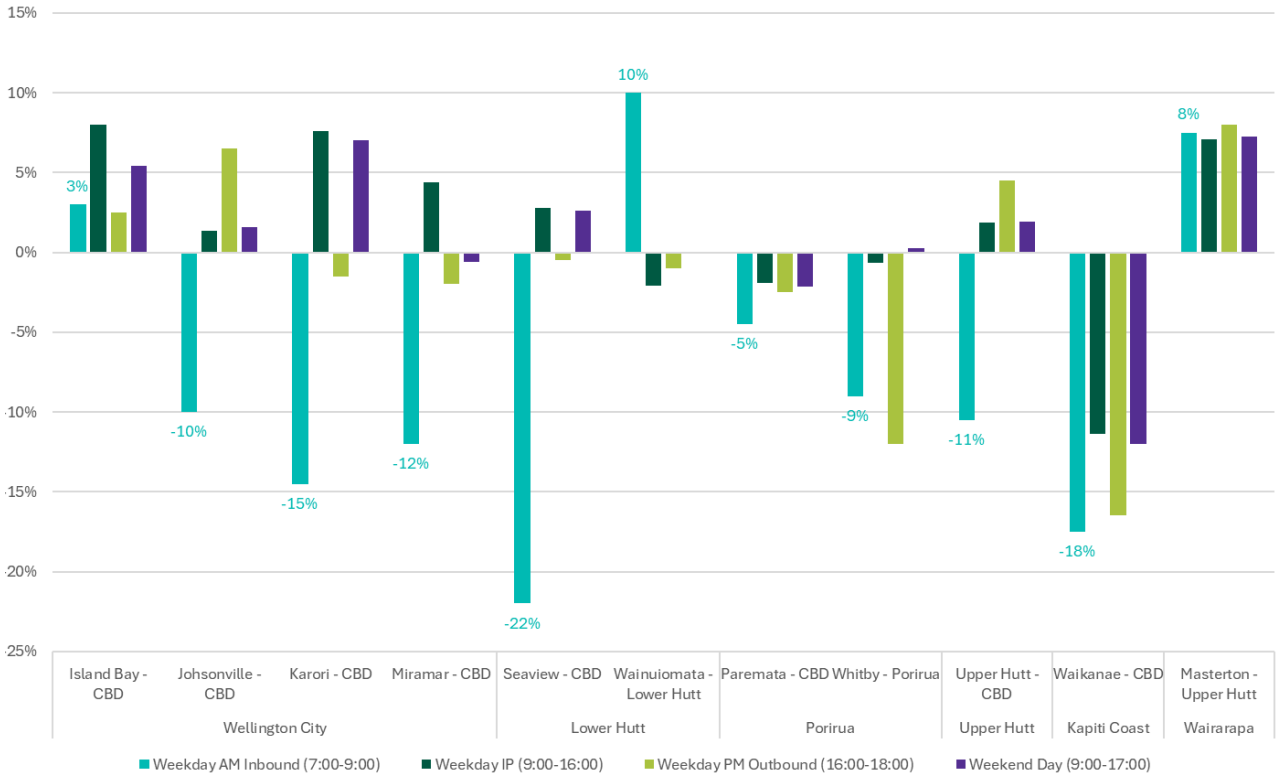
The most consistent decrease in travel times occurred on the Waikanae to Wellington CBD route, which was impacted by the opening of Transmission Gully. Travel times reduced between 13% (inter-peak) and 18% (AM peak) on that route.

Conversely, Masterton to Upper Hutt travel time increased around 8% across all time periods. This change reflects a decrease in the speed limit on parts of State Highway 2 in Wairarapa.

Travel times within Wellington City generally decreased in the AM peak period and increased at off-peak times, reflecting changes in travel patterns, with reduced focus on peak-time commuting.

Improvements in travel times from Whitby to Porirua can be attributed to decongestion benefits on SH58 and SH59, as a result of Transmission Gully opening.

Figure 9.6. Car travel time percentage change 5 years to 2024, by time category.




## Impact of investments on State Highway 1 over the last 10 years

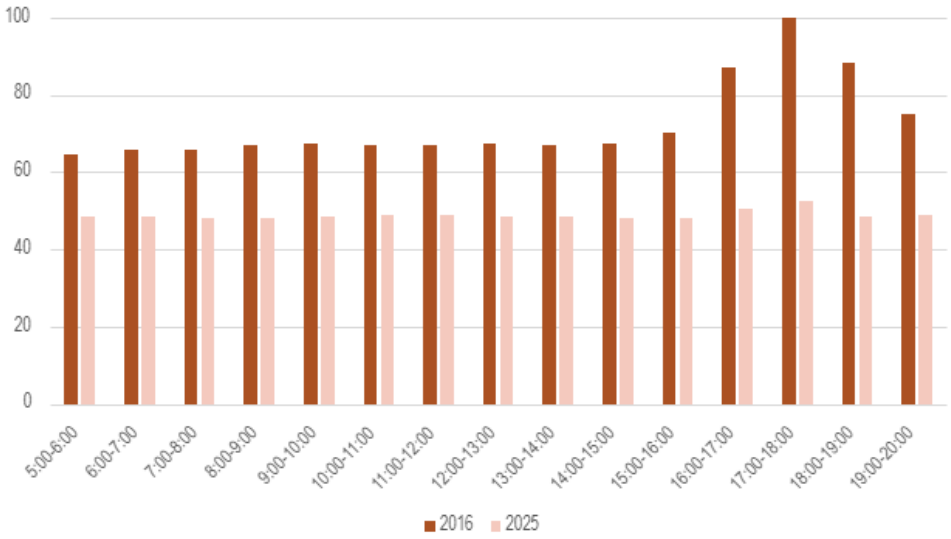
Travel times between Ōtaki and Ngauranga have decreased over the last 10 years, as a result of the opening of

- Mackays to Peka Peak expressway (2017)
- Transmission Gully (2022)
- Peka Peka to Ōtaki expressway (2023)

Southbound towards Wellington, improvements of 15 to 20 minutes are consistent across time periods, with the largest gain (20 minutes) at 6am to 7am and 7am to 8am (Figure 9.7). Northbound (Ngauranga to Ōtaki), the improvement is largest in the PM peak, when travel times have decreased by as much as 50 minutes (Figure 9.8).

Figure 9.7. Ōtaki to Ngauranga travel time (minutes), Tuesday to Thursday, March 2016 and March 2025.


Figure 9.8. Ngauranga to Ōtaki travel time (minutes), Tuesday to Thursday, March 2016 and March 2025.




Investment in Wellington's northern corridor ($630 million for Mackays to Peka Peka expressway, $445 million for Peka Peka to Ōtaki expressway, and $1.25 billion for Transmission Gully)[31], has improved travel times between Ōtaki and Ngauranga in the off-peak by around 10 to 20 minutes in both directions.

During the AM peak, inbound travel times are around 20 minutes faster, though peak period travel times are still around 10 to 15 minutes slower than in the off-peak, due to congestion between Tawa and Ngauranga.

[31] New Zealand Transport Agency https://www.nzta.govt.nz/projects/wellington-northern-corridor/

Decreased travel times during peak periods may be due to the northern corridor improvements, increased working from home (lower traffic volumes), or a combination of both.

In the outbound direction at peak times, the improvement in travel times has been up to 50 minutes, due to the removal of bottlenecks at Mana Esplanade, Pukerua Bay, Paraparaumu and Ōtaki.

Off-peak travel times northbound are about 20 minutes quicker.

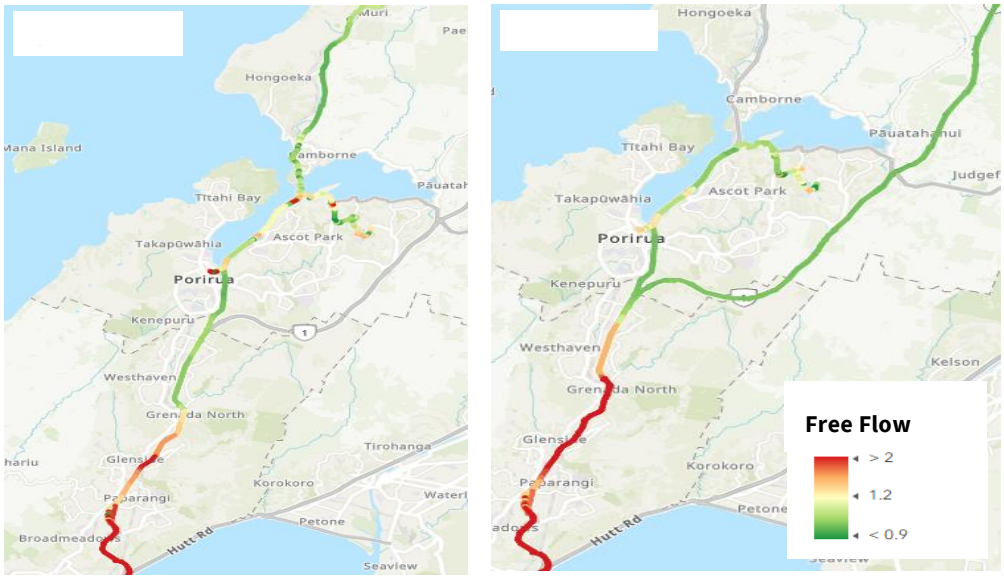
Transmission Gully and the Mackays to Peka Peka expressway have each contributed 10 to 20 minutes of travel time savings in the northbound direction in the PM peak.

## Localised impact of Transmission Gully

The opening of Transmission Gully in 2022 increased AM peak travel speeds on state highways through Porirua (Figure 9.9). The improvements near central Porirua have been partly offset by a shift in congestion southwards towards Wellington CBD, with an overall decrease in peak-time speeds on SH1 from Grenada North to Ngauranga.

Transmission Gully has improved travel times on SH1, SH58 and SH59 near central Porirua, with overall shorter times for the Waikanae to Wellington route of between 10 and 20 minutes. That improvement is partly offset by increased congestion further south, between Tawa and Ngauranga.

Figure 9.9. Travel time relative to free flow, weekday 8am to 9am, September 2019 and 2024.




Note: A ratio of 1.0 represents free flow travel time, and 2.0 represents double the free flow travel time.

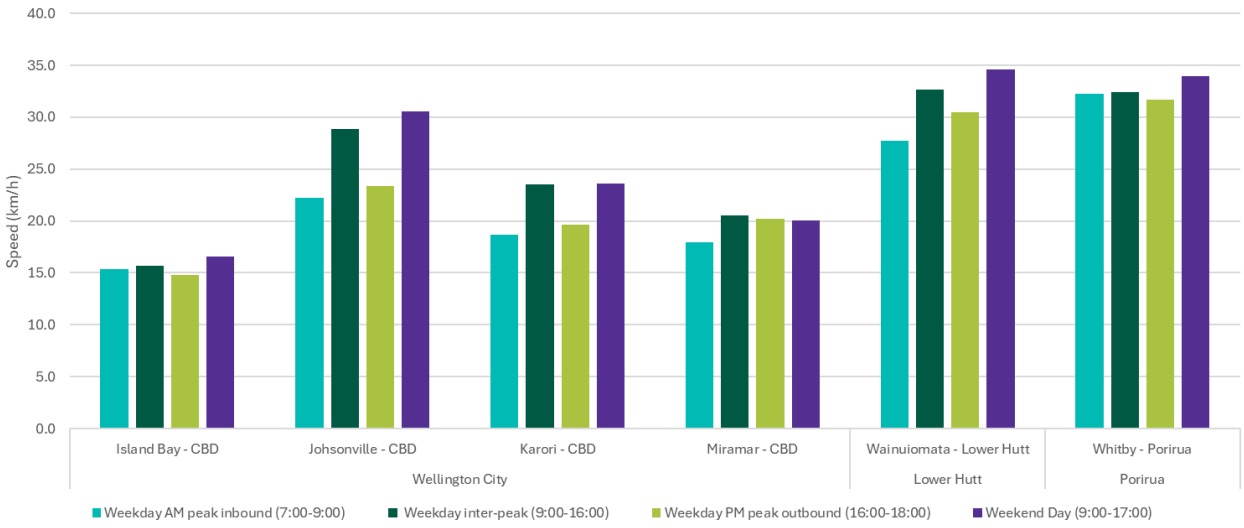
## Public transport travel time and variability

Peak period speeds on public transport are slower than off-peak and weekend speeds on most routes, a function of higher levels of boardings and alightings and increased congestion compared to the off-peak (Figure 9.10).

The Johnsonville and Karori to CBD routes show the greatest differences in travel speeds between peak periods and the off-peak, due to congestion on Karori Road/Glenmore Street and Hutt Road/Ngauranga Gorge impacting bus travel.

The Miramar and Island Bay corridors are slow all day and at weekends – this is due to high numbers of boardings and alighting at all times of the day along these corridors, together with consistently high levels of congestion affecting buses.

Figure 9.10. PT travel speed by direction and time of day.




## Comparison of car and public transport travel times

This section summarises public transport relative to car travel times for selected routes to understand the relative competitiveness of public transport. A relativity (or ratio) less than 1.0 indicates that public transport is faster than car travel. A relativity of 2.0 indicates that public transport takes twice as long as cars. In this analysis, only 'in vehicle' time is compared. Time spent waiting for a bus or train, walking to and from the bus or train stop and walking to or from a car park is excluded, along with any monetary costs of travelling by car or public transport.

Across most monitored routes and time periods, public transport travel times are about 1.5 to 2.0 times longer than car travel (Figure 9.11). Public transport is most competitive on rail in the AM peak, as the rail corridors are congestion free, have large distances between stations (fewer stops) and compete against the most congested highway corridors.

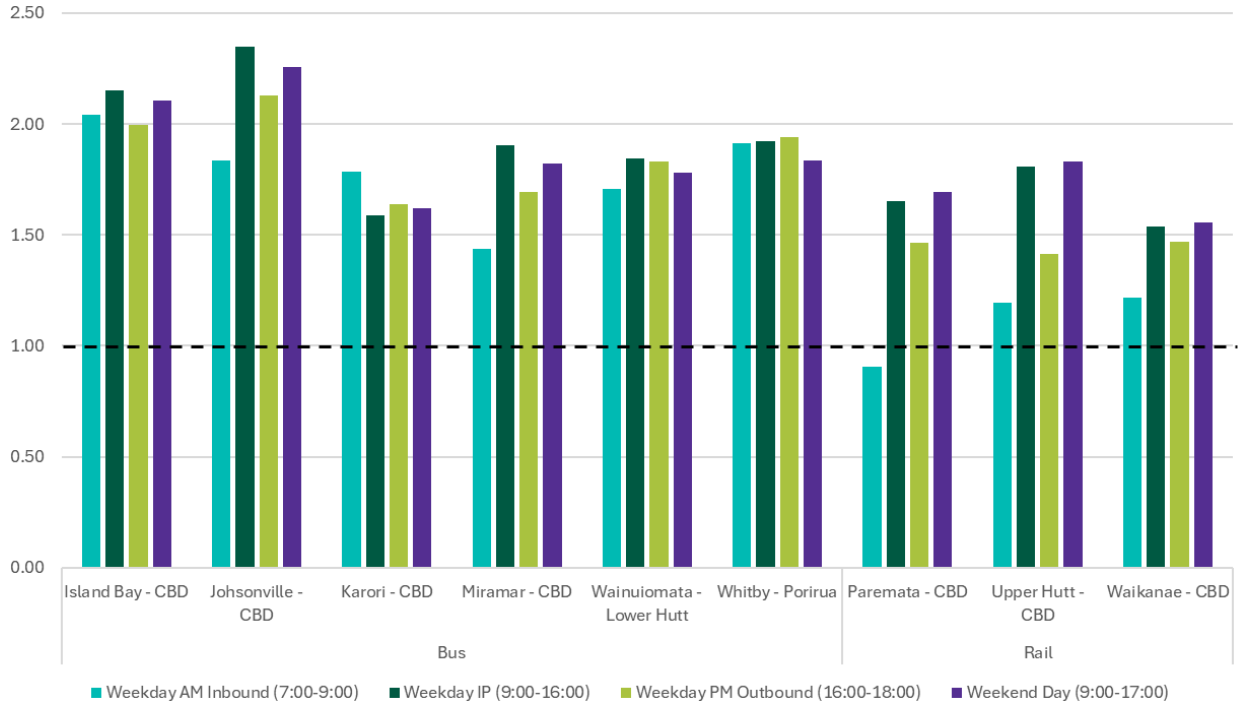
Bus routes are subject more to congestion on local roads and generally show higher travel time ratios of 1.5 to 2.0. Bus routes tend to be most competitive during the AM peak, during which both buses and car are slowed by congestion.

Karori to the CBD is the most competitive bus corridor at off-peak and weekend times.

On the Miramar–CBD route, buses are most competitive during the AM peak (ratio of about 1.4), due to bus priority lanes, the Mount Victoria-Hataitai bus tunnel, and express services.

Rail is most competitive during peak periods. For example, rail travel times for Paremata to Wellington is approximately the same as car travel.

Figure 9.11. Public transport relative to car travel times.



# 10. Congestion

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Peak period travel times are 30% longer than off-peak travel times.** Across the whole of the region, AM peak and PM peak travel times are up to a third longer than comparable free flow travel times.
- **Greatest congestion occurs between Lower Hutt to Wellington**. Congestion is mostly concentrated around key bottlenecks. Trips from Hutt Valley to Wellington City account for around 5% of trips but around 30% of delays.
- **Lower Hutt / North Wellington and Miramar have the greatest delays per kilometre** in the morning peak, due to trips from Lower Hutt / North Wellington encountering congestion on SH1 and trips from Miramar encountering congestion through Mt Victoria Tunnel.
- **Wellington is average**. Compared to other cities and regions across the world, Wellington's congestion can be considered 'average'
- **Congestion results in slow and unreliable travel times** leading to economic dis-benefits.

The key considerations for the RLTP are as follows:

- **Some congestion is inevitable**. There will always be congestion at peak periods as it would be prohibitively expensive and inefficient to develop a highway (or PT) network that has excess capacity at all times of the day, and therefore a key consideration relates to how congestion can be managed and mitigated in a cost-effective manner where demand and supply is largely kept in balance.
- **Some congestion may be desirable**. Despite the costs, traffic congestion can discourage single-occupant private vehicle trips. It can contribute to shifts to non-car modes, and in the long-term support land use that is concentrated along public transport corridors.
- **Demand management should be considered**. Congestion is primarily focussed on peak times, and consideration should be given to managing peak demand to improve network efficiency.
- **There is no silver bullet**. A range of demand management tools other than highway infrastructure improvements could help address congestion, such as congestion pricing, parking policy, improvements for public transport and active modes, and integrating transport and land use planning.

## The relationship between traffic volumes and congestion is non-linear

Traffic congestion occurs when demand on the road network exceeds its effective capacity. As more vehicles use a road, congestion increases, leading to slower speeds, longer and less

reliable travel times, and greater fuel use and vehicle wear. This also reduces access to work, education, healthcare, and social opportunities.

However, the relationship between traffic volumes and congestion is not linear. At low volumes, adding extra vehicles has minimal impact on speed or travel time. But as traffic approaches a road's capacity, even a small increase in vehicles can cause a delay. Eventually, additional vehicles can lead to a breakdown in flow, where speeds drop significantly and overall throughput may even fall.

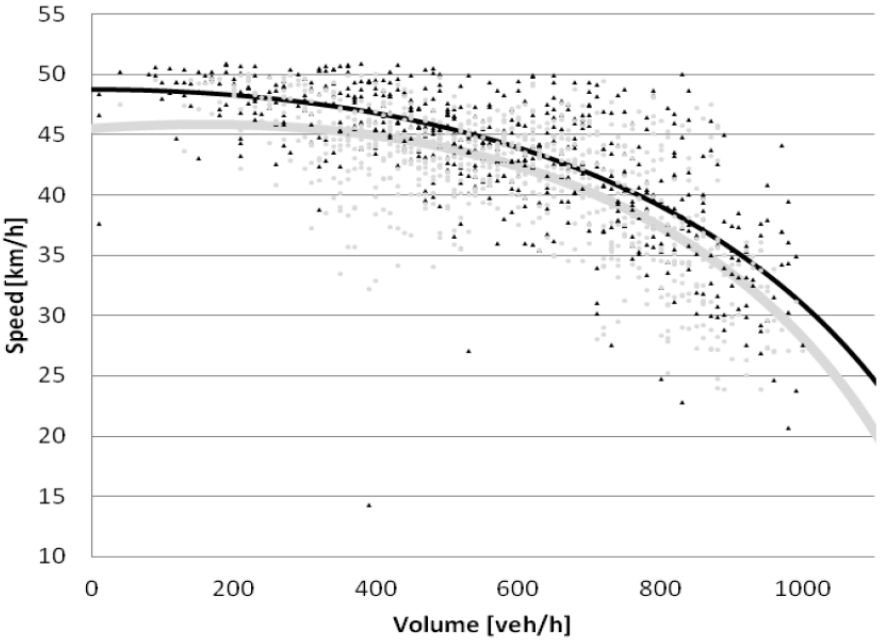
Figure 10.1 shows how this relationship can play out on a road. Speed remains relatively stable at low volumes but drops steeply as volume nears 1,000 vehicles per hour. Notably, the data show few or no instances above this threshold, suggesting the road's effective capacity is being reached. Beyond this point, attempts to push more vehicles through do not increase throughput — instead, they result in slower travel and lower overall volumes due to queuing and gridlock.

Congestion can be broadly categorised as either:

1. **Recurrent congestion**: predictable, regular delays during peak periods when demand exceeds capacity. This can be worsened by factors such as narrow lanes, intersections, and the mix of vehicle types.
2. **Non-recurrent congestion**: unexpected events like crashes, roadworks, or severe weather that temporarily reduce capacity.

In urban areas across New Zealand and Australia, the majority of congestion (over 90%) is from recurrent causes. In the Wellington Region, pressure on the network is greatest during the morning and afternoon peak periods. These peak flows are often directional: inbound to the city in the morning, outbound to suburbs in the evening.

Figure 10.1. Speed dependence on traffic volumes, example showing two datasets and theoretical fits.



Source: Oskarbski, J., Jamroz, K., Smolarek, L., Zawisza, M., Zarski, K. (2017). Analysis of possibilities for the use of volume-delay functions in the planning module of the Tristar system. *Transport Problems*, 12(1): 39–50. https://transportproblems.polsl.pl/pl/Archiwum/2017/zeszyt1/2017t12z1_04.pdf

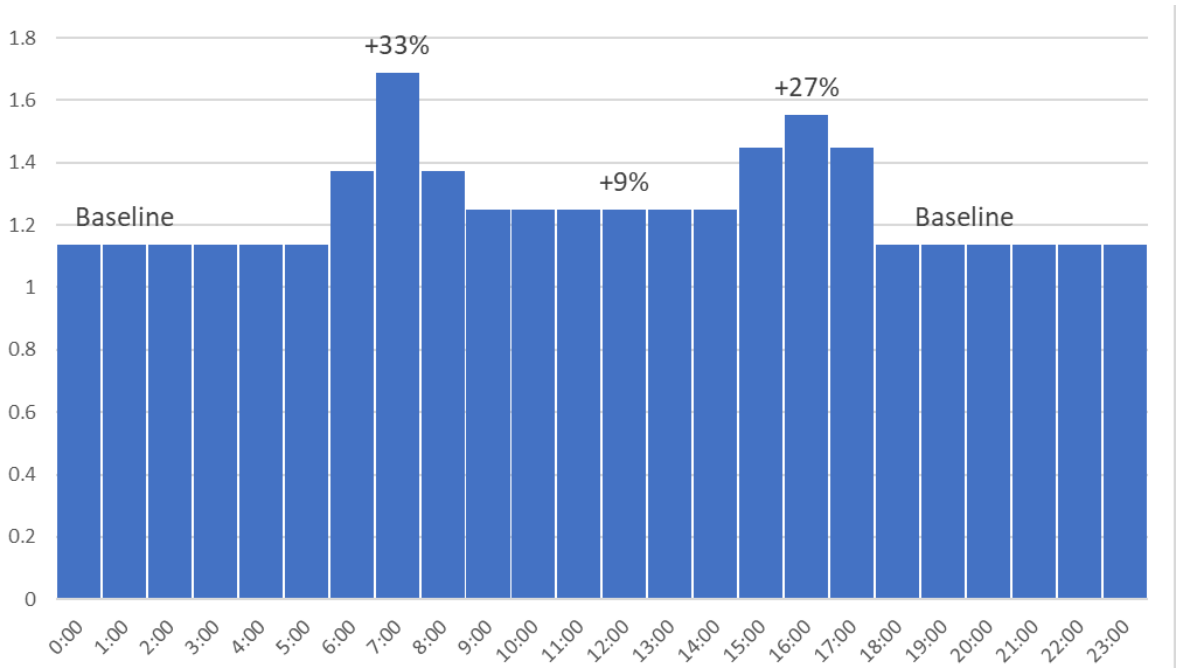
The non-linear relationship between volume and congestion, combined with varying demands and travel patterns throughout the day, makes delays highly variable, and depended on location and time of the day.

It also means taking just a relatively small number of vehicles off the road during the peaks can significantly improve travel times. This is often observed during school holidays and is one of the ideas behind time-of-use congestion charging.

## Peak travel times are around 30% slower and interpeak 10% slower than free flow

For the remainder of this chapter, analysis of congestion is presented drawing upon outputs from the Wellington Transport Strategy Model (WTSM) base year 2018 scenario.

Figure 10.2. Travel time (minutes per kilometre) by time of day as modelled by the Wellington Transport Strategy Model.




In the Wellington Region, travel times is raised above the baseline during the morning peak and the afternoon peak (and to a lesser degreed during the interpeak). The morning peak shows a spikier profile than the broader afternoon peak.

## Trips from Hutt Valley towards Wellington CBD experience the greatest delays

Based on the WTSM model results, the most significant source of delays for trips in the Wellington Region is to/from Wellington CBD. The largest delays are on trips from Hutt Valley

along SH2. Trips along SH1 from Porirua to Wellington CBD show significant delays, but less than from SH2.

Trips elsewhere in the region show much lower levels of congestion, but delays add up as the number of trips is much higher.

Wellington City internal trips show a relatively low level of congestion when compared with the trips coming into the city from other territorial authorities.

## Trips into Wellington City from the north contribute around half of the delays on the region's highway network

Across the region, there are about 32,000 person-hours of travel delay each day (Table 10.1). That equates to 3.5 minutes per person, but some people will experience significantly higher delays, while others experience none, depending on time and location of the trip.

About one-third of delays are due to trips into/out of Wellington City along SH2. Another 13% are due to trips into/out of Wellington City along SH1. One-quarter of delays can be attributed to Wellington City internal trips, and one-third are attributed to trips elsewhere in the region.

Table 10.1. Regional overview of light vehicle daily delays.

| | Daily delays in hours | | Total number of trips | Average delay per trip in Minutes |
|---|---|---|---|---|
| | Hours/weekday | Percentage of total | | |
| Wellington City Internal | 7,786 | 25% | 332,898 | 1.4 |
| To/from Wellington City via SH1 | 4,140 | 13% | 62,203 | 4.0 |
| To/from Wellington City via SH2 | 10,220 | 32% | 79,532 | 7.7 |
| Origin and destination elsewhere in the region | 9,608 | 30% | 594,620 | 1.0 |
| Entire region | 31,754 | 100% | 1,069,252 | 1.8 |

## Hutt Valley to Wellington City trips have the highest average delay per kilometre

Delays per trip are worse in the peak periods compared to inter-peak, for trips between Hutt Valley and Wellington City (Figure 10.3).

Figure 10.3. Delays per kilometre (minutes) by time period and trip location.


## Peak periods cause most delays, despite fewer trips than inter-peak

The inter-peak (9am to 3pm on weekdays) accounts for the majority of trips, however the peak periods account for the majority of delays due to higher traffic volumes.

Relative to the number of trips, journeys between Hutt Valley/Kāpiti Coast/Porirua and Wellington City have a disproportionately large level of delay (Figure 10.5).

Figure 10.4. Percentage of delays, by time period and location.

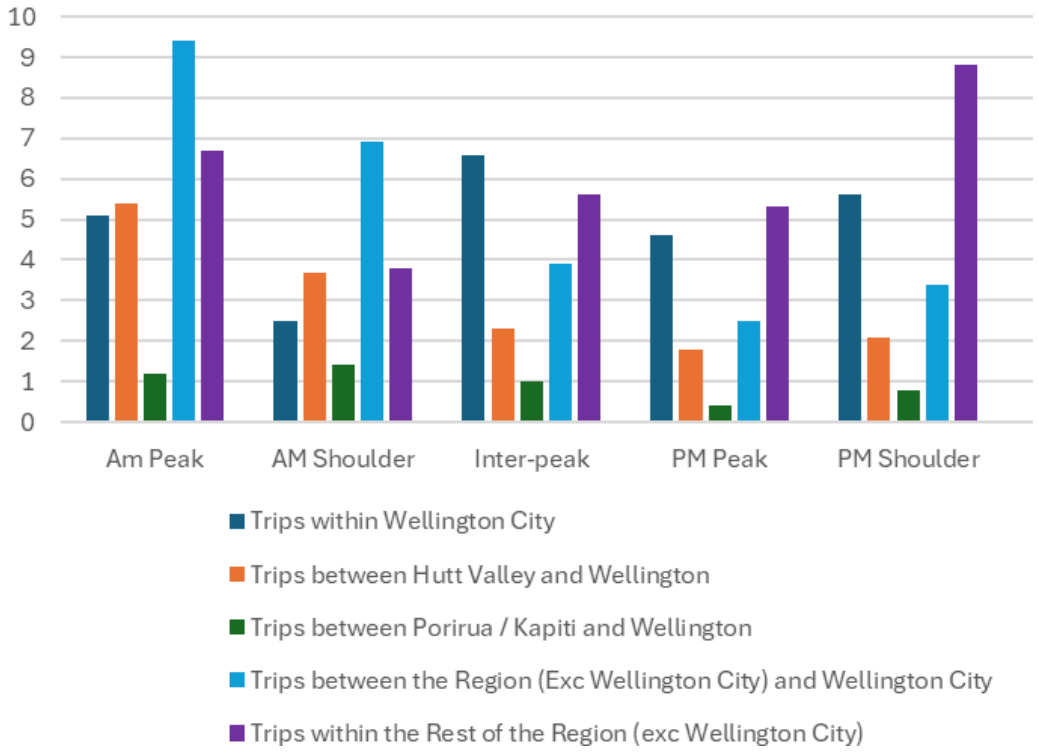
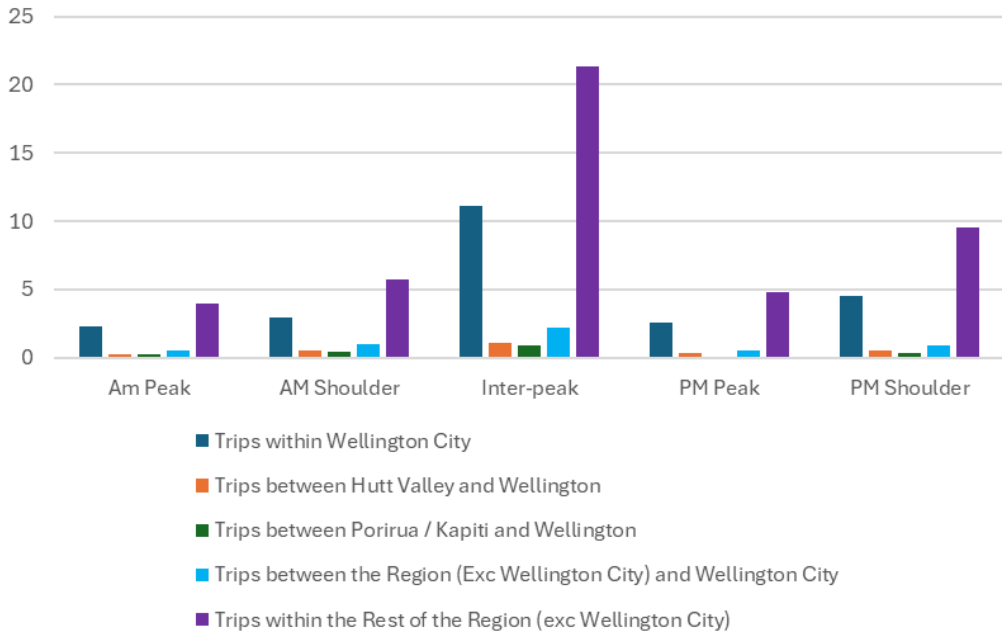



Figure 10.5. Percentage of trips, by time-period and location.




## SH1 and SH2 are the most congested routes in the AM peak

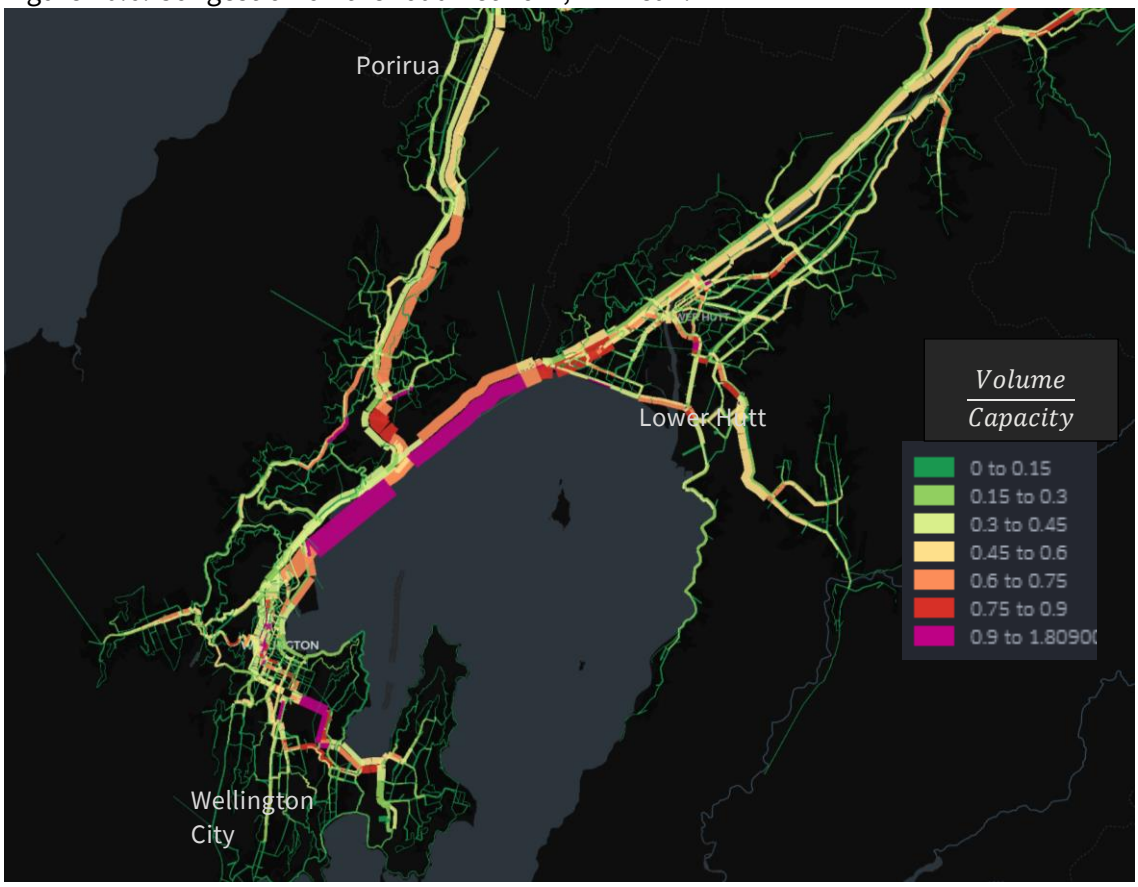
Congestion on the road network in the 3-hour AM peak is estimated in the Wellington Transport Strategy Model. The measure for congestion is volume divided by capacity (V/C). Figure 10.6 shows the congestion across the network, with red representing roads nearing

capacity and pink representing roads at or above capacity. The width of the lines is proportional to light vehicle volumes.

In reality, it should not be expected that the vehicle volume on any given section of road can exceed the capacity of this road. In a transport macro model like WTSM on the other hand, volume can exceed capacity. But volumes near or above capacity indicate a road that is severely congested. It should also be noted that WTSM has a relatively simplistic representation of delays and will not necessarily represent blocking back of traffic through intersections and bottlenecks as can be the case in reality.

The map shows that the state highway network and some local roads are operating near or over capacity during the weekday AM peak period.  Not shown here are the turns (movements at intersections) which are the other major source of delays, especially in the inner city.

Figure 10.6. Congestion on the road network, AM Peak.

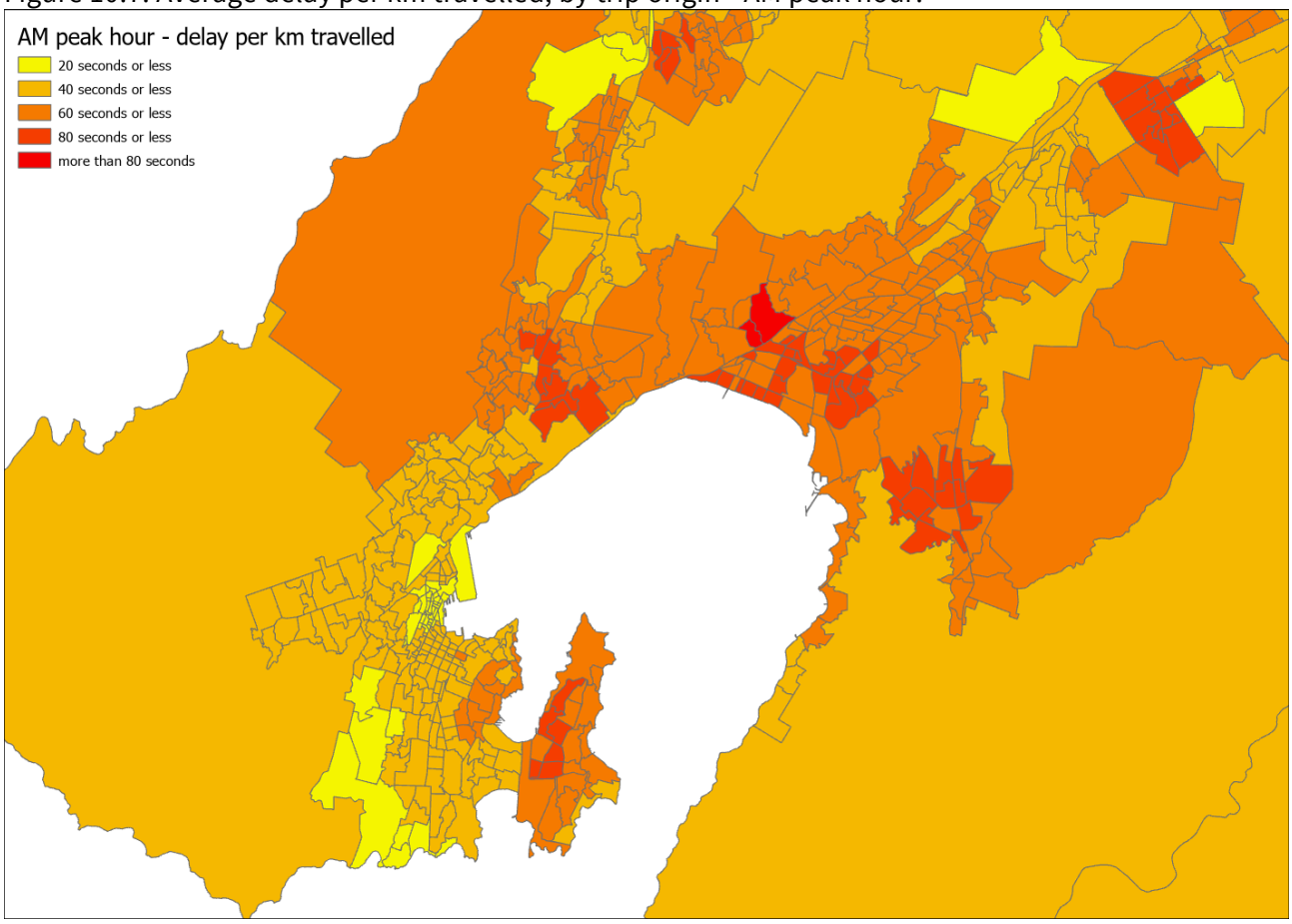



Note: Width of lines is proportional to vehicle volume, colour is mapped to volume/capacity.

## Wainuiomata, north Wellington and Miramar have high delays per kilometre in the AM peak

Most delays come from trips into Wellington CBD (Figure 10.7). Origins of trips that experience the highest delay per kilometres during the morning peak include Miramar and Wellington City's northern suburbs. Outside of Wellington City, trips from Hutt Valley also show high delays.

Figure 10.7. Average delay per km travelled, by trip origin - AM peak hour.



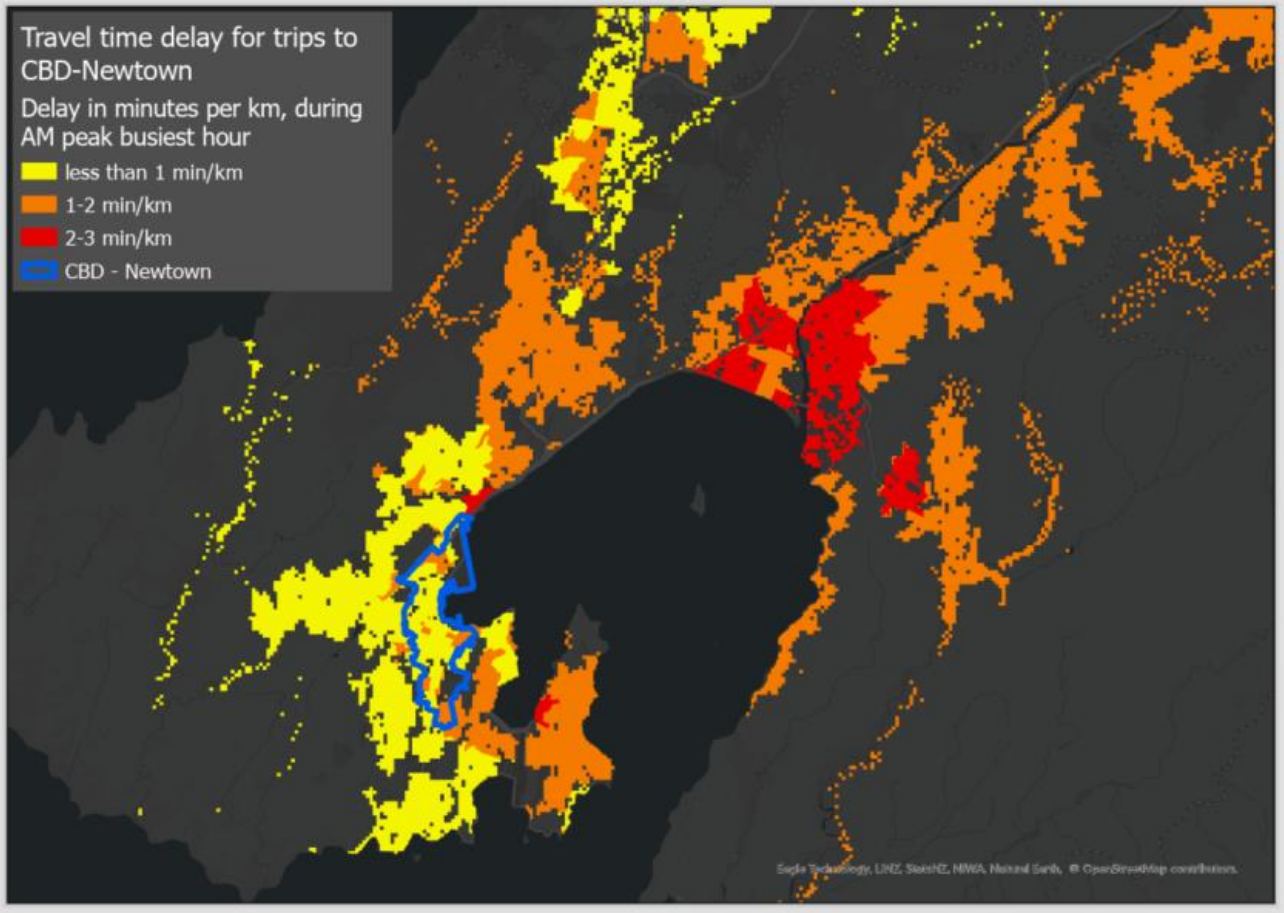

## High delays on AM peak trips to Wellington CBD from Newtown, Lower Hutt and Miramar

Figure 10.8 shows the average delay per km travelled for each origin zone during the morning peak-of-the-peak hour for trips into the CBD-Newtown area (marked in blue). This map is presented as WTSM zones clipped to residential built-up areas. Gaps in the map represent unoccupied areas. This approach means that mostly empty rural areas do not visually dominate the map.

The map shows that for Wellington City, trips that experience the highest per-km delay include trips originating in Miramar and the Wellington City's northern suburbs. Delays here are 1-2 min/km.

Outside of Wellington City, areas within Petone and Lower Hutt tend to have the largest travel time delay by distance travelled (2-3 minutes/km), mostly attributable to congestion along the state highway network. While trips from Wainuiomata and Upper Hutt pass through the same congested areas, these trips have a longer distance overall and likely longer periods spent in relatively uncongested conditions. These factors potentially explain why trips north and to the east of Petone and Lower Hutt have travel time delays of 1-2 min/km.

Figure 10.8. Average delay per km travelled, by trip origin - AM peak hour.




## Across a range of global cities, Wellington's level of congestion is moderate

The TomTom Traffic Index has a number of different measures to quantify congestion in 387 cities from around the world. Of these, we have selected all cities with between 100,000 and 300,000 residents.[32]

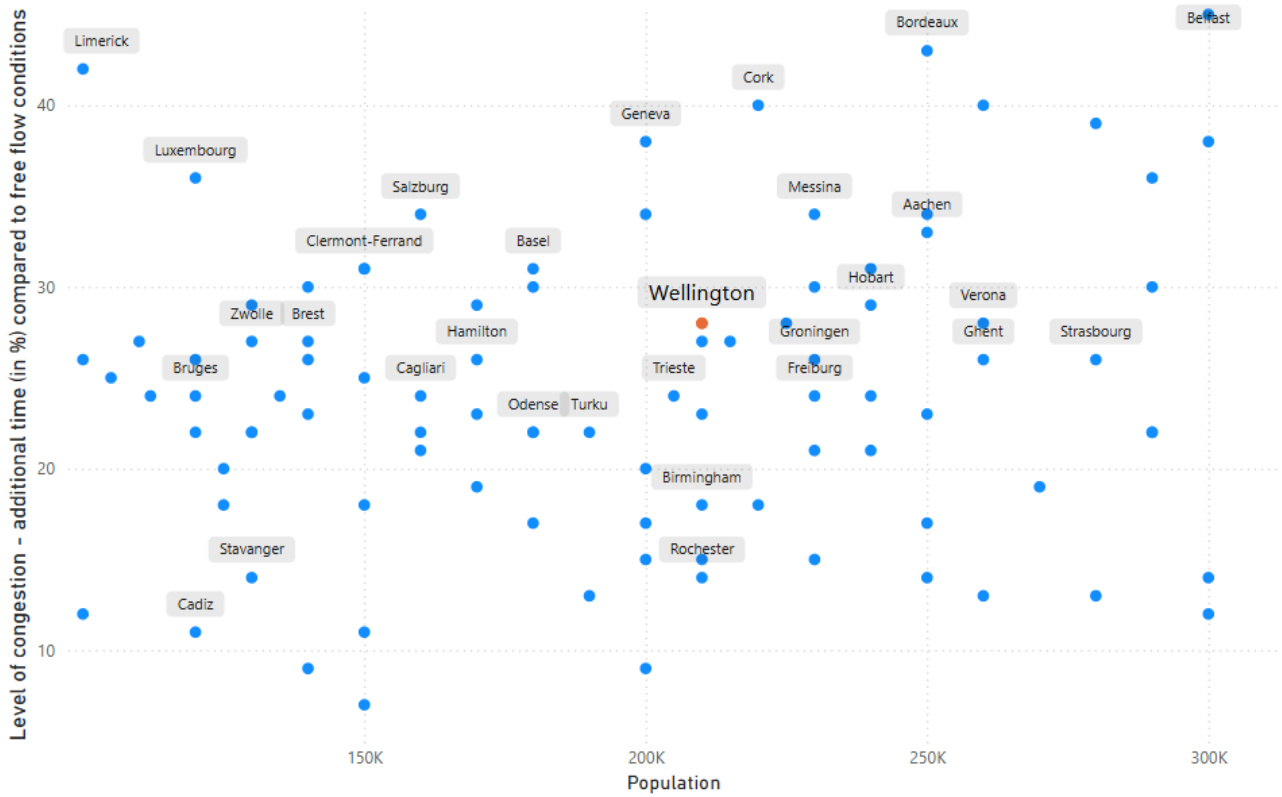
Figure 10.9 shows the level of congestion in these cities. The main takeaway is that congestion in Wellington is not an outlier, but largely in line with its international peers.

Here, the level of congestion is measured as the average additional time (in percent) compared to driving in free-flow conditions in the centre of these cities (about 5 km radius).

In this metric, Wellington City centre, marked in orange, has a congestion level of 28, indicating that trips within the city centre take on average 28% longer than free-flow conditions. This is similar to cities like Avignon, Bonn, Frankfurt am Main, Genoa, Pittsburgh, Verona and Winnipeg.

[32] The population numbers were estimated with the help of AI.

Figure 10.9. Level of congestion (TomTom Traffic index), by population, Wellington and selected comparison cities.




## On average, the PM peak is the most congested time, although less so on Mondays and Fridays

TomTom data also allows insight into the distribution of travel times throughout the week. Figure 10.10 shows by how much travel time increases (over free-flow "middle of the night" conditions) throughout the week. Shown here is data for the Wellington centre.

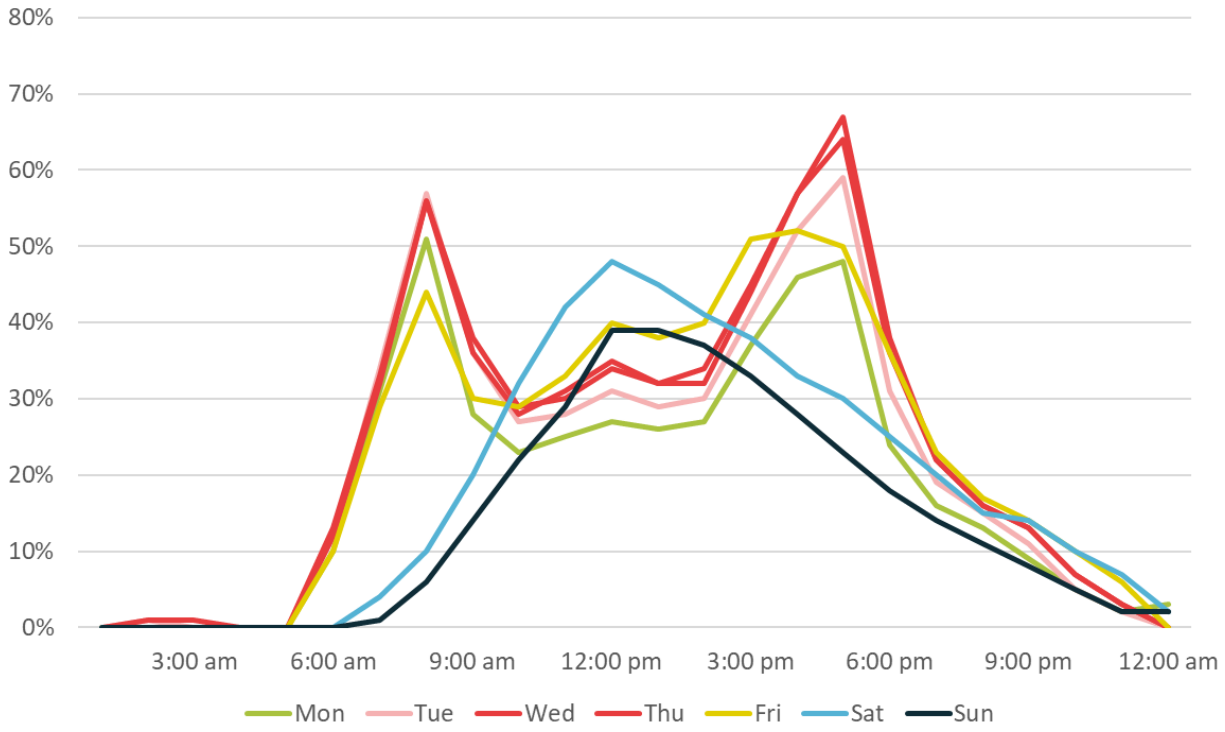
- Tuesday, Wednesday and Thursday have the longest travel times (Tuesday slightly faster).
- Monday follows a similar profile to Tuesday-Thursday but is faster throughout.
- Friday has the fastest AM peak, but the PM peak starts significantly earlier than on other days.
- Weekends have faster travel times than workdays.
- Sunday travel times are faster than Saturday.
- Mid-day Saturday is almost as busy as a mid-week peak.

Focusing on the workdays, time-of-day shows:

- Longest travel-times during the AM- and PM-peak.
- PM peak slightly slower and lasting for longer than AM peak.

- On average, a trip that would have taken for instance 5 minutes in the middle of the night, takes roughly 7.5 minutes during the peaks.
- Inter-peak and evening travel times still elevated.

Figure 10.10. Travel time, percentage increase over free flow time, for the average trip in Wellington, throughout the week.




Source: TomTom Move.

For further insights on volumes and delays on the network, see Chapters 4 and 9.

# Part 4: Access, emissions and safety

# 11. Access to key destinations

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Walking supports access for short trips in urban areas**. In Wellington CBD, many residents live within a 20-minute walk of key destinations. Walk access drops off quickly in lower-density areas.
- **Car generally provides the greatest accessibility to key destinations and services**. For distances over 2 km, car travel is generally faster than other modes across the region, including into the Wellington CBD.
- **Rail is fastest for long-distance commuter trips**. In-vehicle rail times from Upper Hutt and Paekākāriki to the Wellington CBD are under 40 minutes during the morning peak, but total journey times, including walking, waiting, and transfers, are often 1.5 to 2 times longer than by car outside peak periods.
- **Bus travel is often slower and less reliable**. Total journey times by bus can be 20–30 minutes longer than by car for similar trips, particularly outside of Wellington City and peak periods, where frequency and directness are limited.
- **Cycling is competitive for shorter trips**. For short to medium trips, cycling is often the second-fastest mode. In some areas, bike travel times to the CBD during peak are comparable to car. Cycle mode share remains low overall, but is significant for some trips (eg, about 20% mode share for trips to workplaces in the CBD from Berhampore).
- **Public transport accessibility is highest for destinations in Wellington City**. Outside Wellington City, fewer than 20% of residents can reach major centres such as Upper Hutt or Porirua within 30 minutes by public transport in the morning peak. This reflects limitations in service coverage and frequency in outer urban and rural areas compared to Wellington City
- **Accessibility to services by public transport varies significantly across the region**. Areas such as Wainuiomata, Whitby, and parts of Wairarapa experience longer journeys and less frequent services
- **Public transport accessibility is affected by walking time to access stops and time waiting for PT services**. Whilst PT travel times might be competitive on particular corridors, once accessing the PT network and waiting for services (and connecting services) is factored in, PT becomes less attractive relative to the private car.

The key considerations for the RLTP are as follows:

- **Accessibility patterns differ across the region**. Public and active transport options are more comprehensive in Wellington City, with more limited service coverage and frequency elsewhere, and consideration should be given to improving accessibility outside of Wellington City

- **There may be opportunities to improve non-car access**. Investments in walking, cycling, public transport (including Total Mobility), and higher density urban form could increase access to key services without relying on car travel.
- **Greater integration between transport and land use.** More compact development near key corridors and centres could help bring services and transport options closer together, improving access across multiple modes.
- **Greater integration of transport modes**. Improved integration of bus and rail services can help reduce barriers and travel times. Similar, integration of PT and active modes can make trip-chaining more seamless. Lastly, integration of car and PT through *Park and Ride* and *Kiss and Ride* can play an important part, but often there are constraints in available space that need to be managed.
- **Reduce PT travel times and travel time variability**. Reducing wait times, increasing stop access, and speeding up services (bus lanes, all door boarding, intersection priority etc.) could make public transport a more attractive alternative.
- **Increase active modes safety, amenity and directness**. Active modes travel times could be improved through measures like intersection priority and more direct routes. The greater scope for improvements for these modes is likely safety (traffic and personal) and amenity.
- **There may be opportunities to improve car access**. Access by car is often faster than other modes, but congestion can substantially slow down traffic. Shift to other modes, congestion pricing and reduction of bottlenecks can help, but costs and other trade-offs need to be considered.

## Purpose and scope

This chapter uses data from the Wellington Transport Strategy Model (WTSM) to investigate access in the Wellington Region. Therefore, it examines access in the sense of "how accessible is a place for an able-bodied adult". It does not cover topics of accessibility for people with special transport needs, including children, elderly or people from deprived socio-economic backgrounds.

Further, this chapter focuses on the travel time aspect of access. Other aspects can also play a role for accessibility. For instance:

- Availability and affordability of car parking at both trip ends.
- Access to a vehicle (car/motorbike/bicycle etc): ownership/availability/affordability.
- Perceptions of safety, in particular for active modes, but also for car and PT.

We should also keep in mind that smaller centres might not need to be accessible by many people to fulfil their functions.

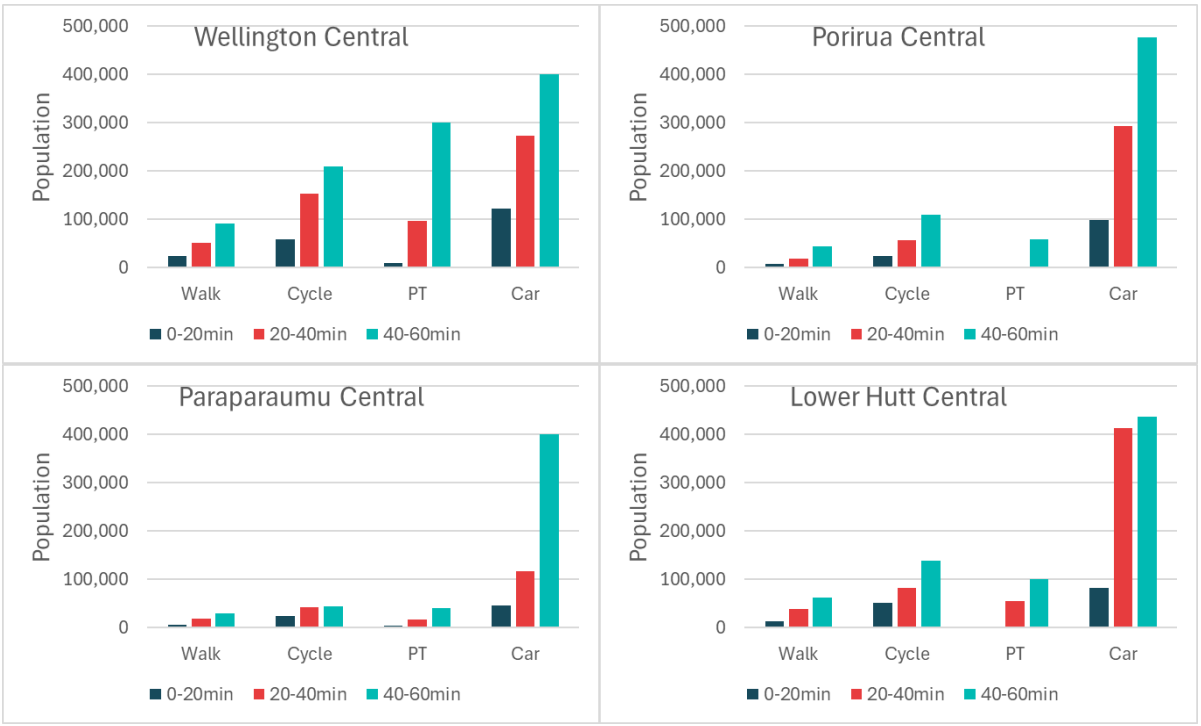
## Access to key destination

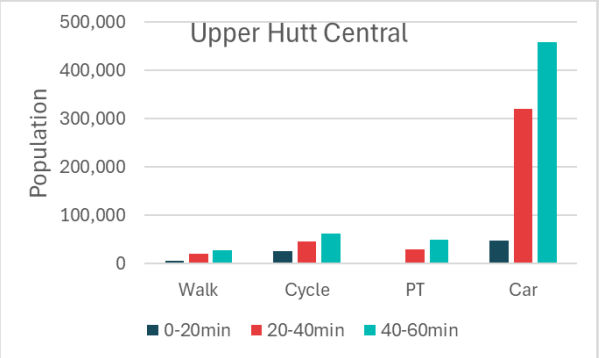
### Population with access to key destinations during the morning peak

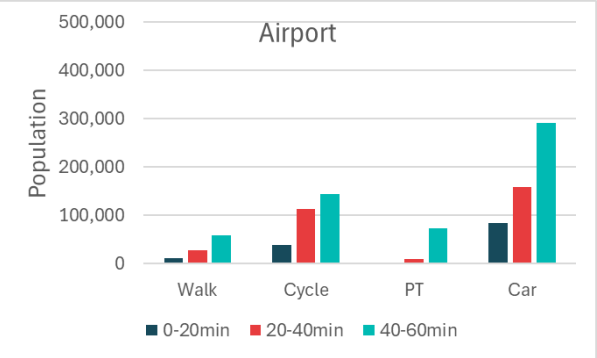
Figure 11.1 shows how many people live within 20, 40 or 60 minutes travel time to 9 different key destinations. Travel times are estimated from the Wellington Transport Strategy model (WTSM) for the 6am to 9am morning peak. The analysis shows that

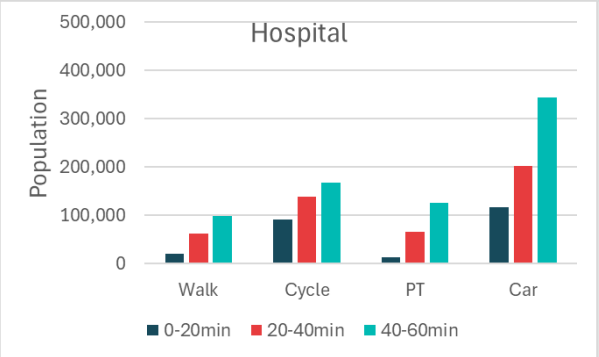
- Accessibility is highest by car for almost all destinations.
- Access by bike is second in terms of coverage of population for most destination.
- For many destinations, access by PT is comparable to access by walking.
- The important exception here is Wellington City, where PT gives access to a large amount of people with travel times of 20 to 40 and 40 to 60 minutes.
- The amount of people who can access a destination by walking largely depends on the population density for people living relatively close to that destination.
- One destination that stands out is Masterton central. Most people living in Masterton can reach Masterton centre within 20min by bike or 40 minutes by foot. Beyond that, other areas in Wairarapa can only be reached by car in less than 60 minutes.

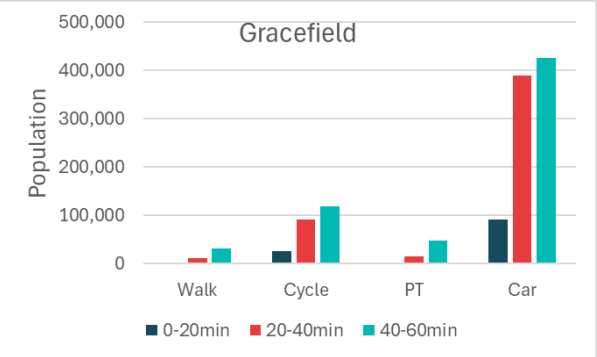
Figure 11.1. Population, by travel time to key destinations, and mode.

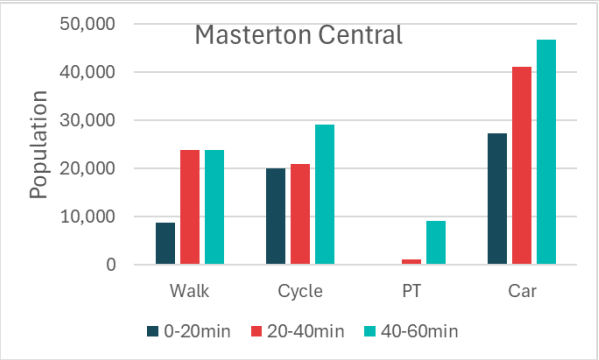





### Access to key destinations maps

Travel times have been estimated from the Wellington Transport Strategy Model (WTSM) and represent demand weighted daily averages. A link to those maps is on page 2 of this report. There are two maps for each of the public transport modes, bus and rail:

- In-vehicle time (IVT): the time spent on the bus or train (for rail trips where bus is used as an access mode)
- Total Time: in addition to the IVT, total time includes time accessing the bus / rail stop and getting from the bus / rail stop to a final destination, along with time waiting at the bus / rail stop. For bus trips, access/egress mode is assumed to be walking. For rail trips this can be a combination of walking, park-and-ride, kiss-and-ride and bus. Presented here is the demand weighted average.

Car travel times largely represent point-to-point times. They don't include walk access/egress time or time spent looking for a car park etc. Five minutes extra time was added to represent these additional times, but that could still under-represent the extra time for some car journeys.

### Rail

In-Vehicle-Times are less than 20 minutes along the rail corridors from Hutt City and Porirua into Wellington CBD and less than 40 minutes from to Upper Hutt and Paekakariki. For these areas, this is comparable or faster than access by car. Once access times and wait times are included, though, the rail times increase significantly. For destinations outside the Wellington CBD, rail is often slower than bus, unless it is for origin/destination combinations relatively close to the stations

### Bus

Total travel times for bus trips are roughly 20 minutes longer than in-vehicle-times for trips into the Wellington CBD and trips starting in Wellington City, largely caused by walk time to and from bus stops and wait time at the bus stop.

The comparison with car travel times shows that, on average, total travel times for bus journeys are significantly longer than for car.

### Car

On average, car trips are faster than other modes. Exceptions include trips during rush hour, where some rail trips may be faster than car, particularly if they have short first mile/last mile connections. Cycle trips into the urban centres can often be faster than car trips on congested routes. For very short trips, walking is often faster than trips by car.

### Walk

Walking is the slowest mode, other than for short intra-CBD trips. For these trips, walking is often the fastest, most convenient and cheapest mode, making it the most-used mode for these trips in the Wellington CBD (see chapter 4). Walking from the inner suburbs into the centres also plays a significant role. For these trips, the simplicity, low cost and congestion-free nature of walking are likely factors that increase the attractiveness of this mode.

### Cycling

Bike is generally the second fastest mode after car. Exceptions are longer distance trips along the rail corridors, where rail shows shorter travel times. Additionally, in congested conditions, during rush hour, cycling can be faster than car for short- to medium-distance trips to the centres.

# 12. Emissions

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Total emissions have risen but per capita emissions have declined**. Since 2000, the region's transport-generated emissions per capita have decreased by 16%. However, the population has grown over that period and absolute emissions have increased by around 5%.
- **Diesel is a major contributor**. While emissions from petrol have decreased 10% since 2000, diesel-related emissions have increased by about 40%, largely due to growth in the light commercial vehicle fleet.
- **Light commercial vehicles are driving emissions growth**. Nationally, light commercial diesel VKT has more than tripled since 2000, while light commercial petrol VKT has decreased by 10%. HCV VKT has grown by 50% and light private vehicle VKT by 25%.
- **Commercial vehicles produce a disproportionately have share of emissions**. Light and heavy commercial vehicles make up only about 10% of the regional fleet but contribute over 30% of emissions due to higher usage and engine size.
- **EV uptake remains modest but growing**. As of 2024, 4% of regional passenger cars are fully electric and 10% are hybrids. EV uptake is highest in Wellington City and lowest in Wairarapa.
- **Recent changes in EV uptake reflect policy shifts**. New EV registrations rose to 10% of all registrations in late 2023 but fell to 2-3% after the removal of the Clean Car Discount on 31 December 2023.

The key considerations for the RLTP are as follows:

- **Commercial vehicles are a key emissions source**. Diesel-powered utes, vans and trucks contribute disproportionately to emissions and should be a focus area for the decarbonisation of the transport network
- **EV and hybrid adoption is increasing but uneven**. While new vehicle purchases are shifting away from petrol, the existing fleet turns over slowly and electric uptake varies across sub-regions.
- **Behaviour and land use also matter**. Reducing emissions will likely require a mix of mode shift, urban intensification, and vehicle technology improvements, in line with the Regional Transport Emissions Reduction Plan.
- **Freight's emissions impact may warrant attention**. Heavy commercial vehicles are a small share of traffic but a significant source of emissions, suggesting freight decarbonisation could play an important role.

## Purpose and scope

The purpose of this chapter is to:

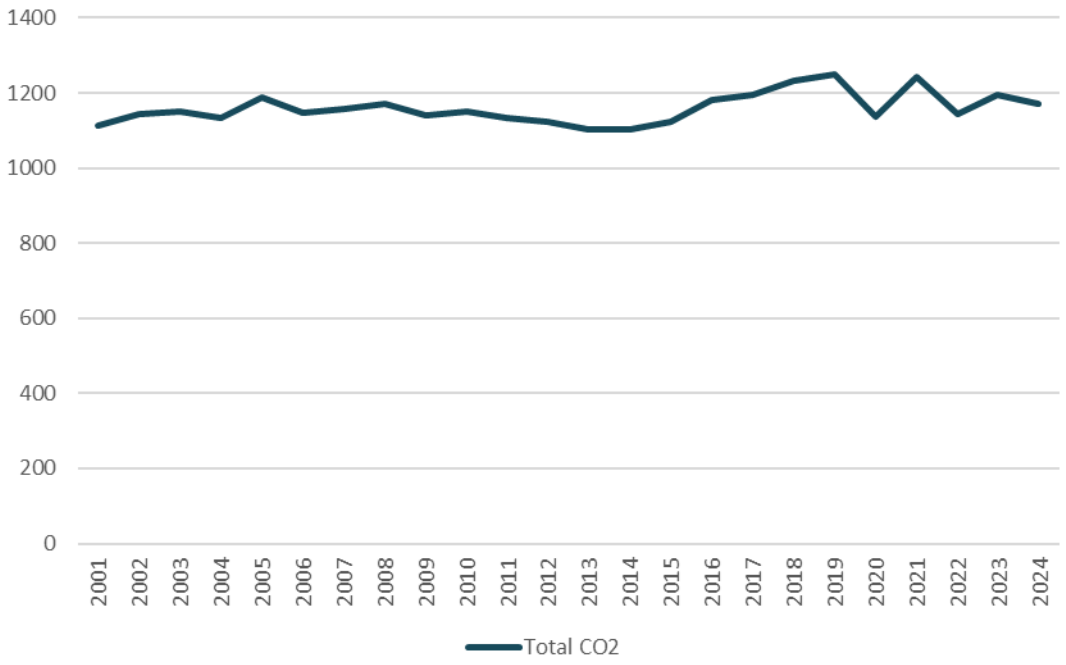
- Understand how transport generated emissions have changed through time.
- Understand the composition of the Wellington light vehicle fleet mix, and how it has changed in the last 5 years.

## Emissions trends

### Annual transport-generated emissions have increased by around 5% 2001 and 2024

Overall regional $CO_2$ emissions from transport fuel consumption have increased by around 5% between 2001 and 2024 in the Wellington Region (Figure 12.1).

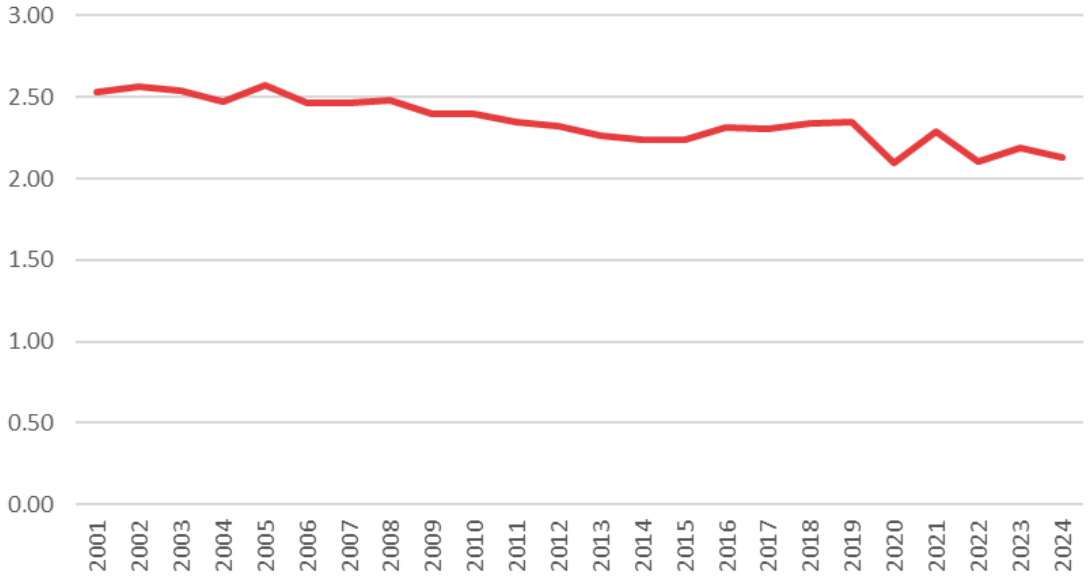
Figure 12.1. Transport-generated $CO_2$ emissions (kilotonnes), 2001 to 2024.




### Transport generated emissions per capita have decreased by 16% since 2000

In per capita terms, the rate of increase in the region's population has been greater than the rate of increase in transport generated emissions, resulting in total per-capita regional road transport emissions decreasing by 16% from 2.53 to 2.13 kilotonnes (Figure 12.2).

Figure 12.2. Transport-generated $CO_2$ emissions (tonnes) per capita.




This per-capita emissions decrease, combined with a population increase of about 25% over the same period led to an increase of about 5% in total regional road transport emissions (Figure 12.2). There was an increase between 2014 and 2019, followed by volatility and decrease during the COVID years, the economic downturn and fuel price increases.

### The light commercial vehicle fleet has grown at a faster rate than the heavy commercial vehicle fleet

Estimates from the Ministry of Transport show millions of Vehicle Kilometres Travelled (VKT) by vehicle class in real terms (Figure 12.3) and change since 2001(Figure 12.4). These show the strong growth in light commercial vehicles travel, especially after 2014, with growth of over 200% in diesel powered light commercial vehicles nationwide between 2001 and 2024.

For comparison, the population of New Zealand grew at about 35% over the same period.

Figure 12.3. Vehicle kilometres travelled, by vehicle class (million km).

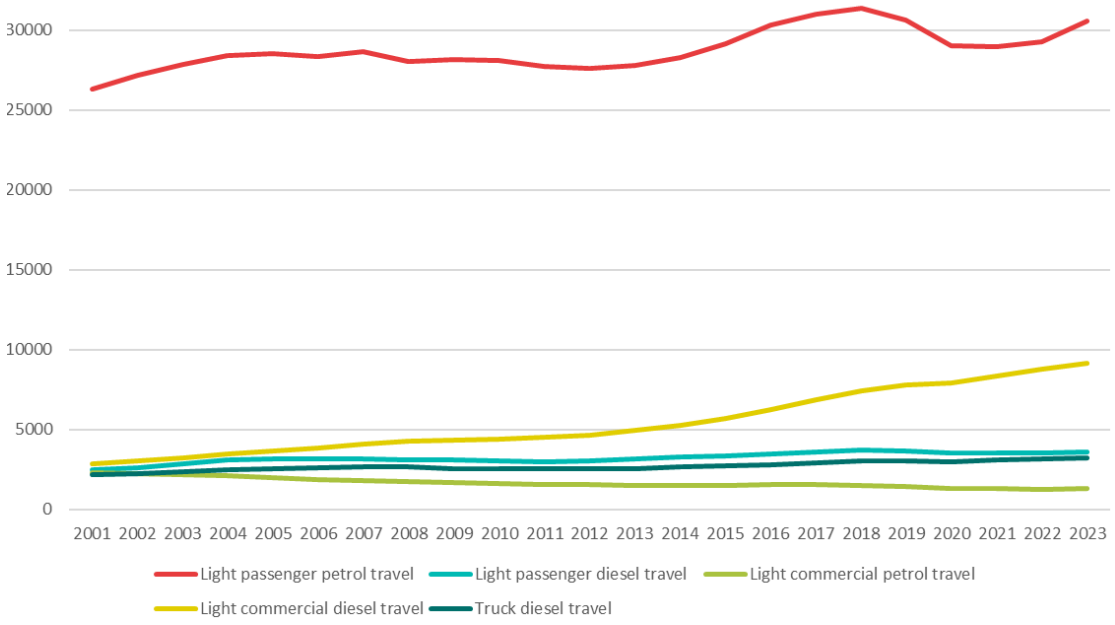
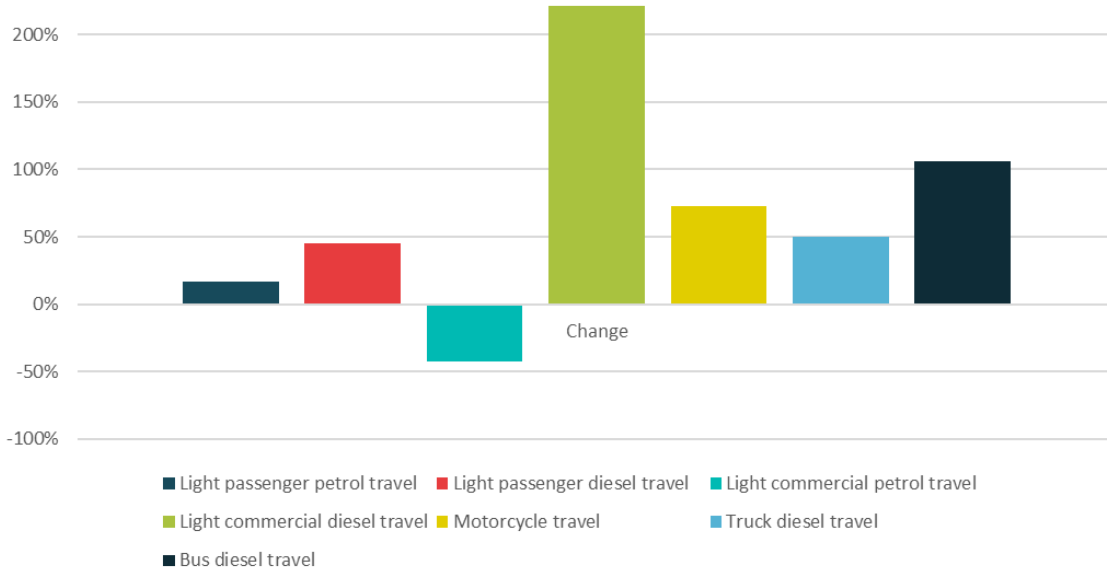


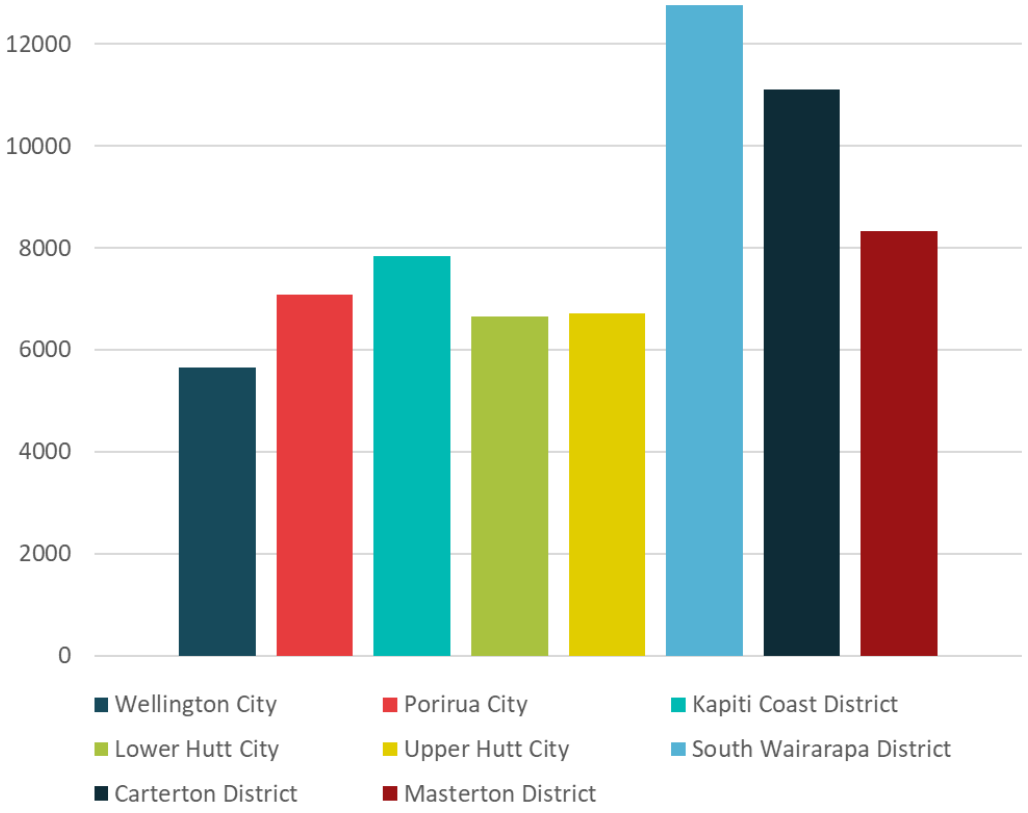

Figure 12.4. Change since 2001 in vehicle kilometres travelled, by vehicle class, New Zealand.




## Vehicle kilometres travelled (VKT) per person varies across the region

Figure 12.5 shows how many km were travelled (in 2024) by vehicles on the networks of the different TAs, divided by the number of people living in each TA.

Figure 12.5. Vehicle kilometres travelled per person, 2024.



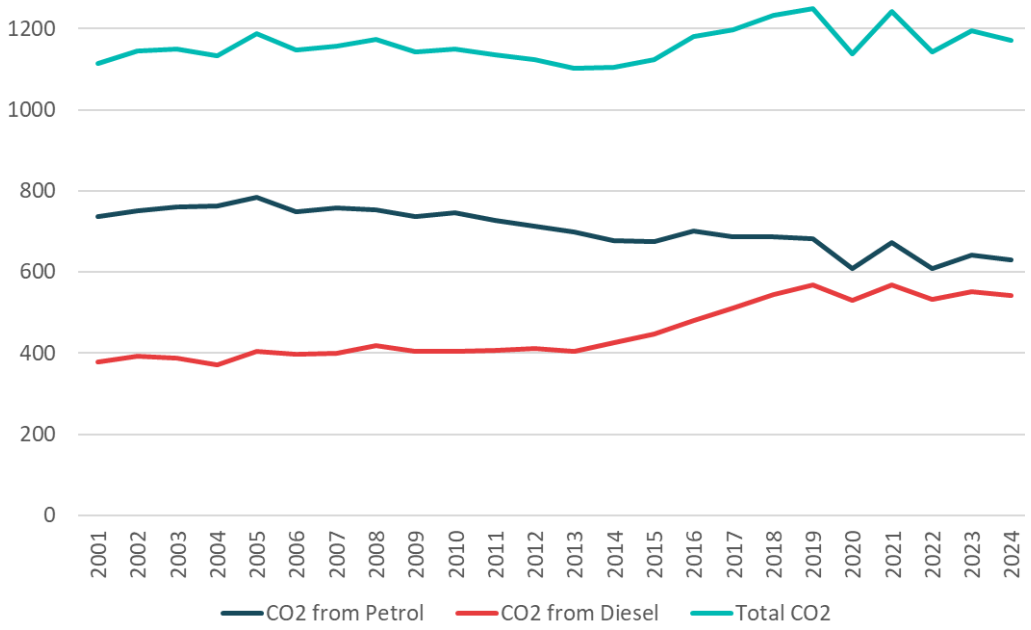

The data shows:

- Fewer VKT per person in the denser populated urban areas
- Higher VKT per person in the less densely populated, rural areas
- Significant differences between Wairarapa areas

### Diesel emissions have increased by 30%, petrol emissions have decreased by 10%

Figure 12.6 shows how total regional emissions from petrol engine vehicles have developed differently from emissions from diesel engine vehicles. While emissions from petrol have decreased, emissions from diesel have increased, particularly between 2014 and 2019.

Figure 12.6. Transport-generated $CO_2$ emissions (kilotonnes) from petrol and diesel consumption.

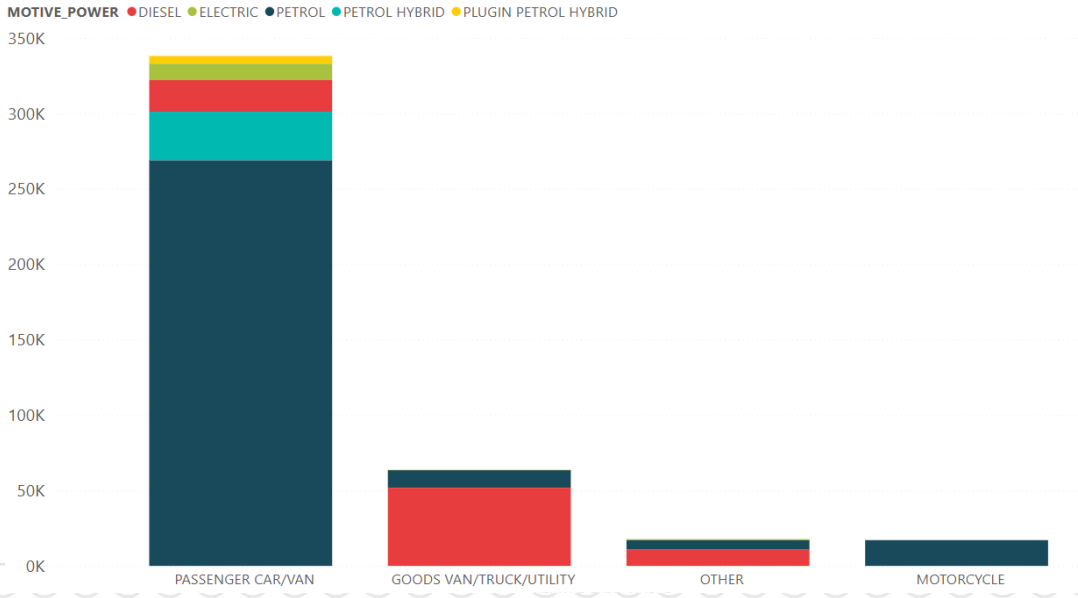



This is due to the 75% increase in the region's light commercial vehicle fleet and 50% increase in HCV fleet over the period (compared to a much smaller increase in the light passenger fleet).

### Wellington City has more hybrids, Wairarapa more diesels

Hybrid vehicles account for 4% of total vehicles in Wellington City. In Wairarapa, diesel vehicles account for a high proportion of vehicles. Across the region, most vehicles are passenger cars or vans, with most of these having petrol engines, although 10% are categorised as petrol hybrids (Figure 12.7). Of the 50,000 goods vehicles (light or heavy), the majority have diesel engines.

Figure 12.7. Vehicles by type and engine category.

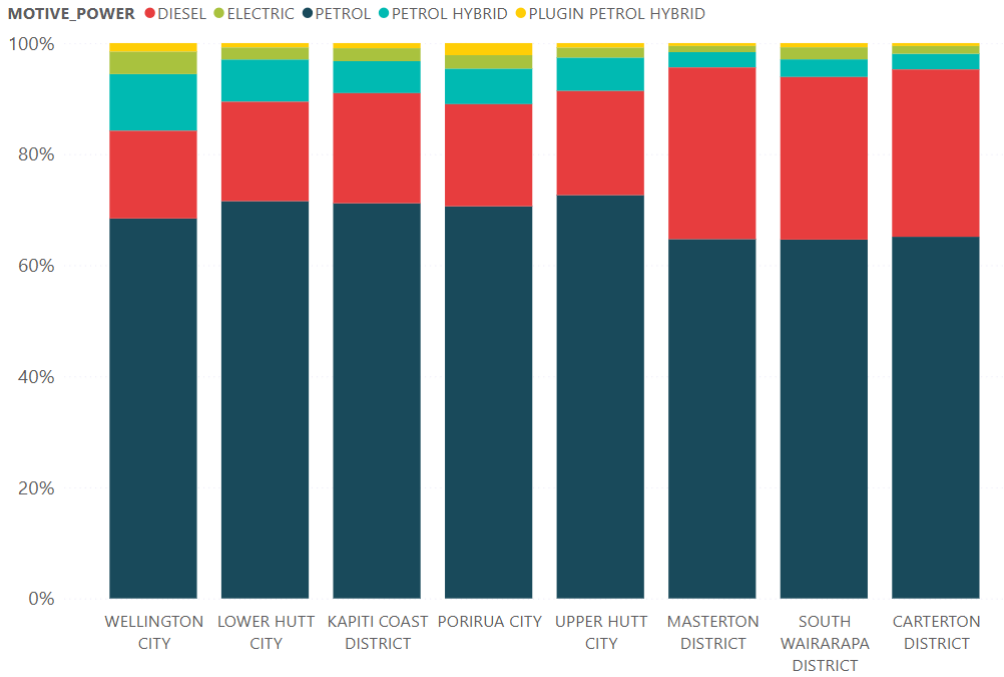


A high proportion of vehicles across the region, ranging from 65% in Wairarapa to 73% in Upper Hutt (Figure 12.8).

Diesel engines range from 16% of vehicles in Wellinton City to 30% in Wairarapa. The high percentage of diesel vehicles in Wairarapa relates to the the nature of the economy, with a high proportion of manufacturing and agricultural work.

Petrol hybrid engines vary from 3% in Wairarapa to 10% in Wellington City. In Wellington City, 4% of vehicles have electric engines but elsewhere, the proportion is 1 to 2%. Plug-in hybrid engines are below 1% in all areas except Wellington City (1.5%) and Porirua (2%).

Figure 12.8. Distribution of engine types, by territorial authority.




Over recent years, there has been a shift towards hybrid and fully electric vehicles (EVs). In 2019, hybrids or EVs accounts for less than 10% of vehicle registrations in the Wellington Region. By early 2025, they accounted for around 50% (Figure 12.9).

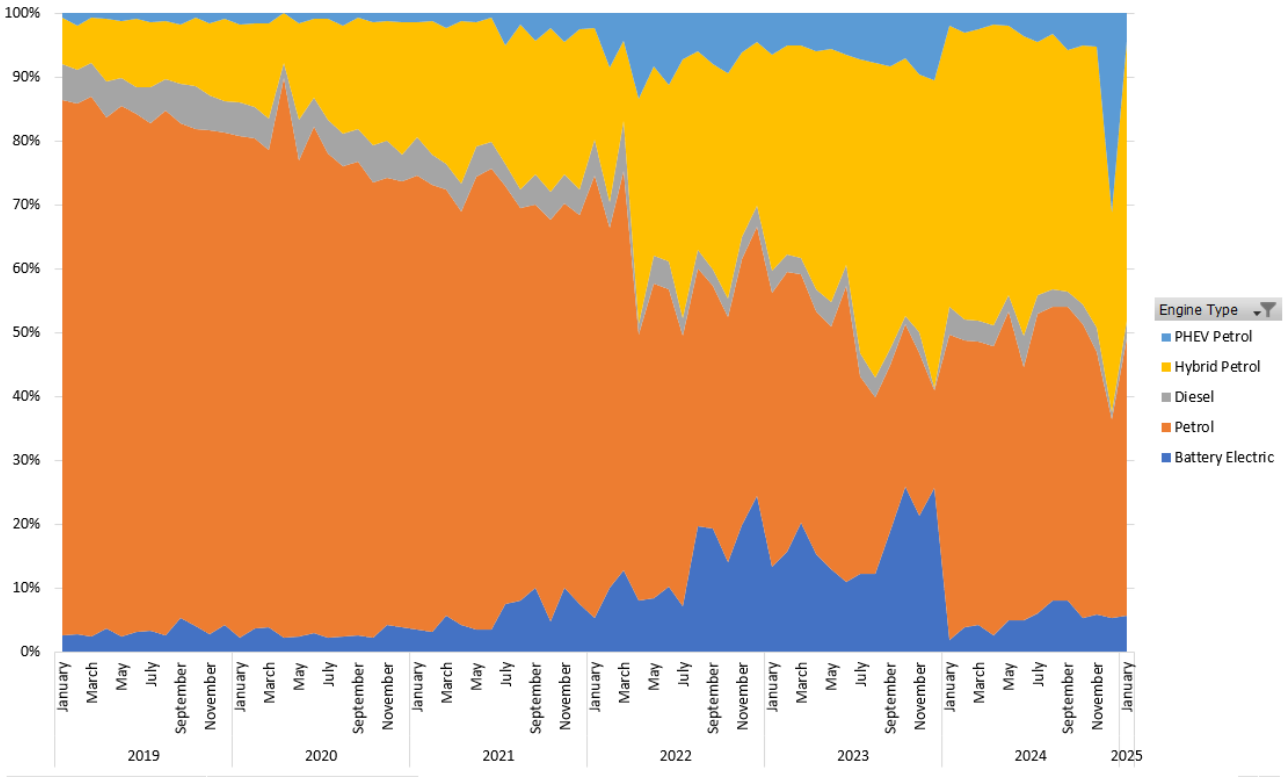
There was a noticeable spike in EV sales during the period where the Clear Car Discount was operational (April 2022 to December 2023).

Petrol engine vehicles have declined by more than 80% to around 40% in 2023, noting that most of the Hybrid vehicles will predominantly run on petrol. Petrol hybrid engine vehicles are now at a similar level as petrol (around 40%).

EV registrations grew to around 20% of all vehicle registrations in December 2023, however since the removal of the Clean Car Discount, they have dropped back to around 5%.

As a result of these changes in engine types registered (in combination with slightly increased efficiency for some engine types), the average exhaust $CO_2$ emissions in g/km has decreased for passenger vehicles.

Figure 12.9. Vehicle registrations by engine type (light passenger vehicles only).



# 13. Safety

## Key insights and considerations for RLTP 2027

The key insights are as follows:

- **Deaths and serious injuries on the region's roads remain high**. Despite long-term improvement, around 1,100 people are injured and 200 are killed or seriously injured each year in road traffic crashes in the Wellington Region.
- **Road safety has improved**. DSI numbers are down 14% compared to 20 years ago. On a per capita basis, the improvement is larger: injury crashes down 21% and DSIs down 29%. If rates from the early 2000s had persisted, the region would have had an extra 1,400 injuries, including 400 DSIs over the past 5 years.
- **The cost of road crashes is high**. The Wellington Region's 200 deaths and serious injuries each year is estimated to come with a social cost of hundreds of millions of dollars per year.
- **Wellington Region has DSI rates per capita 30% to 40% below the national average**. Per kilometre travelled, the region is around 20% safer than the national average. The region's urban centres are among the safest in the country, including Lower Hutt, Wellington City, Porirua, and Upper Hutt.
- **Rural roads remain high-risk**. Wairarapa has only 9% of the region's population, but 22% of the region's alcohol- and drug-related DSIs.
- **Crashes are distributed across multiple road types.** 74% of DSIs happen on local roads and 61% are on roads with speed limits of 50 km/h or less.
- **Speeding contributes to many crashes**. Inappropriate speed is recorded as a factor in about 200 injury crashes and 39 DSIs per year, but the true impact of speed is likely to be higher, due to under-recording of this factor.
- **Drink driving remains a major problem for road safety**. Alcohol and drugs are involved in 43% of DSIs—around 80 people per year.
- **Motorcyclists and active travellers are disproportionately affected**. Motorcyclists account for 20% of DSIs but just 0.2% of trips. Cyclists make up 11% of DSIs but only 3% of travel time.
- **Injuries involving e-scooters are rising**. There were 373 ACC claims related to e-scooters in the region in 2022 – just three years after being introduced commercially to the region.
- **Crash risk is highest on Friday and Saturday nights**. The risk is highest late at night on weekends. Between midnight and 3am Thursday to Sunday, crash risk per vehicle is 4–5 times higher than average.

The key considerations for the RLTP are as follows:

- **Wairarapa and the rest of the region have different road safety problems and opportunities**. A tailored approach to safety, focussing on the unique problems and opportunities across the different parts of the region is critical for success in reducing deaths and serious injuries.
- **A mix of location-specific and broader network interventions are likely to be required**. Safety interventions targeted at high-risk locations or subgroups of road users are important, but the largest potential gains could come from broad-based, network-wide improvements, such as a safer speeds programme.
- **Behavioural change and greater enforcement of rules is critical**. Speed and alcohol still contribute large numbers of deaths and serious injuries on the region's roads, and the risks are higher at specific times during the week. Changing behaviour through education and regulation, backed up by enforcement could contribute significantly to improving road safety.
- **Focussing on vulnerable users**. Cycle safety has improved over the last 5 to 10 years, but some vulnerable road users – in particular motorcyclists – are still over-represented in deaths and serious injuries.

## Purpose and scope

The purpose of this chapter is to provide a high-level analysis of road safety in the Wellington Region, focusing on patterns, trends, and contributing factors to road traffic injuries.

The cost of road crashes is high. With the average social cost road crashes estimated to be $15 million per fatality and $800,000 per serious injury, the Wellington Region's deaths and serious injuries come with a total social cost of about $340 million per year.[33]

By identifying key issues and areas for improvement, this chapter informs the development of the 2027 Regional Land Transport Plan and supports efforts to enhance road safety for all users.

This analysis uses the Crash Analysis System (CAS) data from New Zealand Transport Agency Waka Kotahi as the primary source. While the broader concept of transport safety includes public transport, off-road travel, and active modes whether or not involving vehicles, the scope here is limited to injuries from crashes involving motor vehicles on public roads, due to data availability. CAS includes injuries to drivers, other vehicle occupants, and active travellers where a motor vehicle was involved. Injuries to pedestrians, cyclists, and e-scooter users on public roads can be included in CAS but are likely to be vastly under-reported when motor vehicles are not involved.

The analysis examines temporal trends, vehicle and road user characteristics, behavioural factors, and environmental conditions. Alternative data sources, such as ACC claims and hospitalisations, offer valuable insights but are generally outside the current scope.

[33] The estimate is based on each fatality costing about $15 million and each serious injury about $800,000, as estimated by the Ministry of Transport in 2024 https://www.transport.govt.nz/area-of-interest/safety/social-cost-of-road-crashes-and-injuries

As with all data sources, the CAS data has limitations, such as under-recording of minor injury and non-injury crashes and underreporting the true role of speed as a contributing factor to crashes but enables a detailed understanding of road safety patterns in Wellington Region, based on reasonably consistent data across time, place, and other variables.

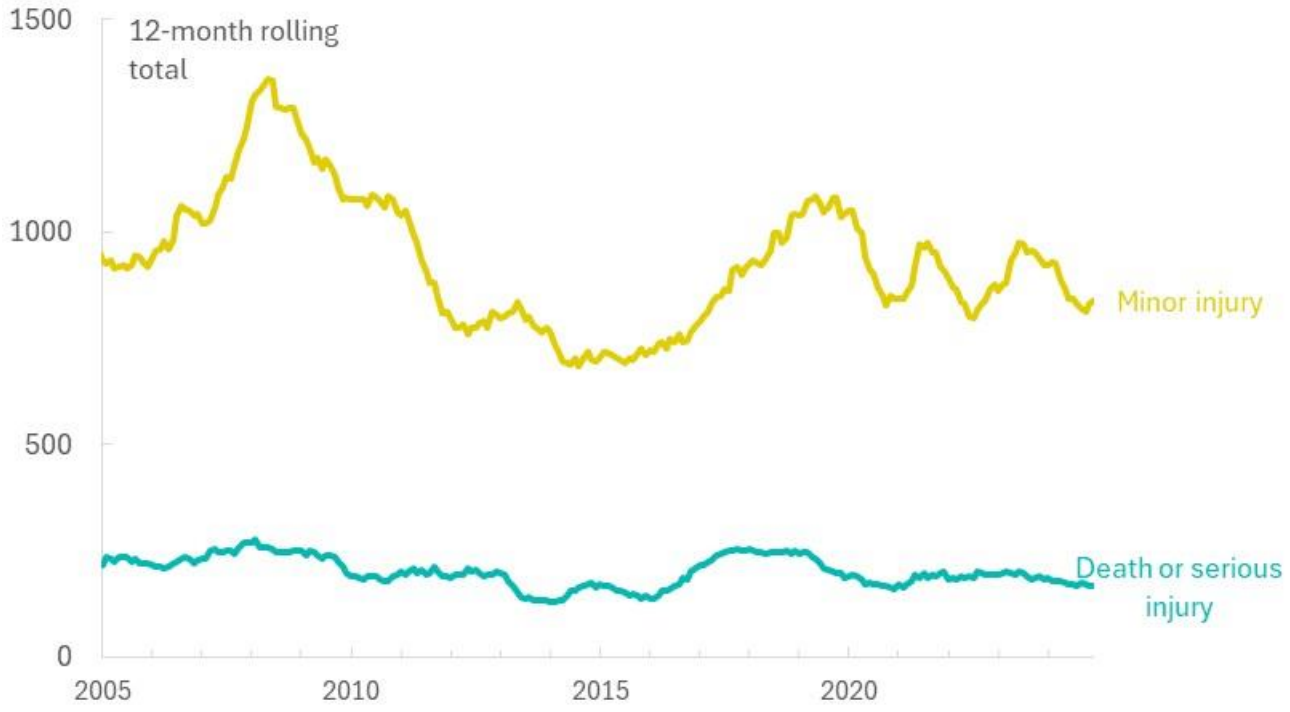
## Current state of road safety

### Deaths and serious injuries have decreased over the last 20 years despite a 20% increase in population

Over the last 20 years, there were 23,000 road traffic injuries, including 4,000 deaths or serious injuries (DSIs), in the Wellington region – an average of 1,100 injuries and 200 DSIs per year. The number of injuries has varied considerably from year to year, but the overall trend has been towards improving road safety (Figure 13.1). In the most recent 5 years, the number of injuries was 3% lower than 20 years earlier, and the number of DSIs was 14% lower.

The social cost of crashes is not directly quantified in this report, but nationally the cost of each fatal or serious crash is estimated in the millions. With about 200 DSIs per year, the implied cost to the region likely exceeds $200 million annually.

Figure 13.1. Minor injuries and DSIs, 12-month rolling total 20 years to December 2024.

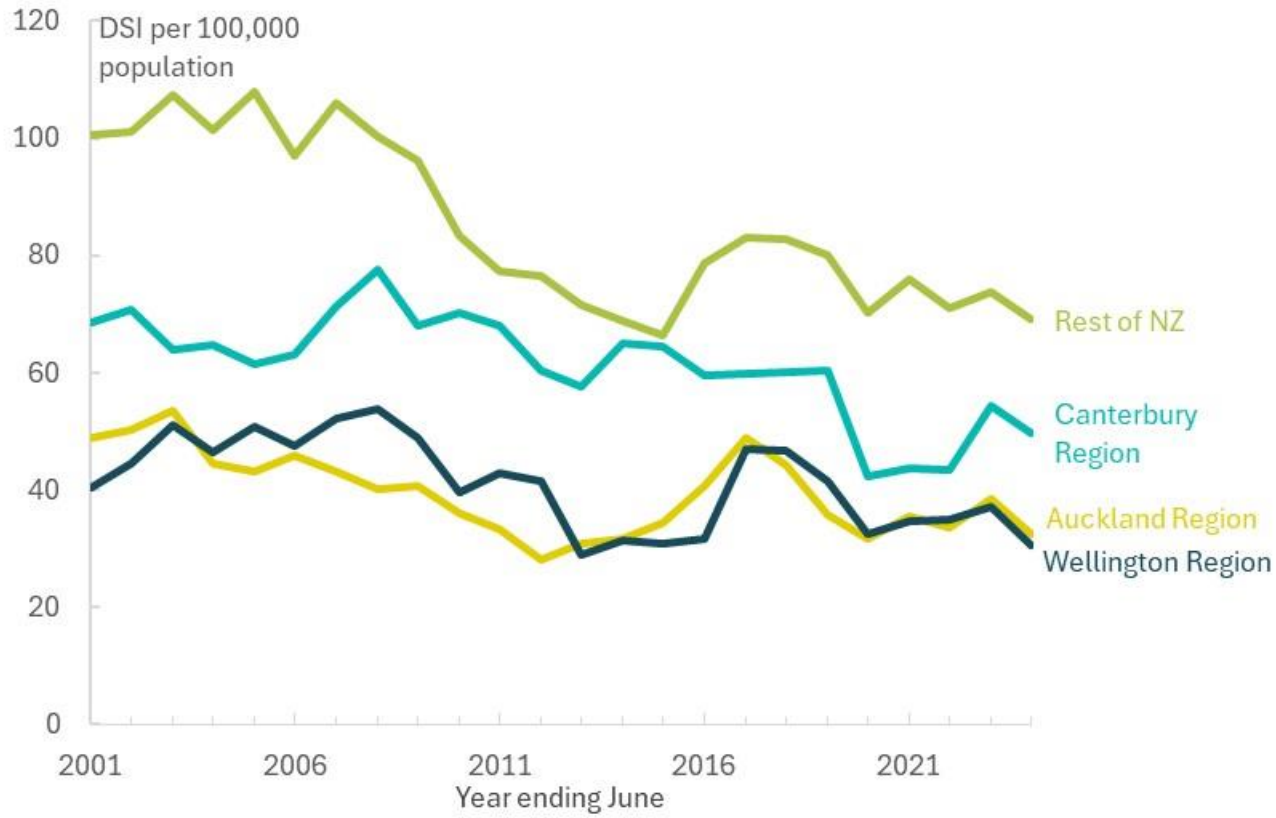



Those decreases in injury numbers have occurred while the region's population has increased. The per capita rates of injuries have fallen more substantially than the absolute numbers. The injury rate per 100,000 population was 21% lower and the DSI rate 29% lower in the latest 5 years than 20 years earlier. Another way to view those per capita rate decreases is: If the rates from 2000 to 2004 had persisted, an extra 1400 people would have been injured, including 400 people killed or seriously injured, in the last 5 years.

### Due to its largely urban nature, the Wellington Region has low rates of deaths and serious injuries relative to the rest of New Zealand

Wellington Region compares well with the rest of the country for road safety. The per capita rate of DSIs in Wellington Region has been consistently 30% to 40% below the New Zealand average over the last 20 years. Wellington Region's rate is similar to the rate in Auckland and below the rates in Canterbury and the rest of the country (Figure 13.2).

Figure 13.2. Deaths and serious injuries per capita, Wellington, Auckland, Canterbury, and all other regions.




Part of the explanation for Wellington Region having relatively low per capita DSIs is that the amount of vehicle travel is lower than in the rest of the country, due to the largely urban nature of the Wellington Region, high public transport usage, low average car trip lengths (relative to more rural areas) and lower average speeds. However, even when expressed as DSIs per million vehicle kilometres travelled (VKT), the Wellington Region rate is about 20% lower than the New Zealand average, which is related to the urban nature of the Wellington Region and lower average speeds compared to other parts of New Zealand.[34]

Most of Wellington Region's 8 territorial authorities have low rates of DSIs per capita, compared with other parts of New Zealand. Rates in Lower Hutt, Wellington City, Porirua, Upper Hutt, and Kāpiti Coast were among the lowest in the country, along with the country's other main urban centres in the last 5 years (Figure 13.3). DSI rates in the region's three Wairarapa territorial authorities were higher than the rest of Wellington Region and the rate

[34] NZTA *Transport Insights* https://transportinsights.nz/

in South Wairarapa has been consistently higher than other parts of the region. Those patterns have persisted over the long term (Figure 13.4).

Figure 13.3. Deaths and serious injuries per capita, by territorial authority, 2020-2024.

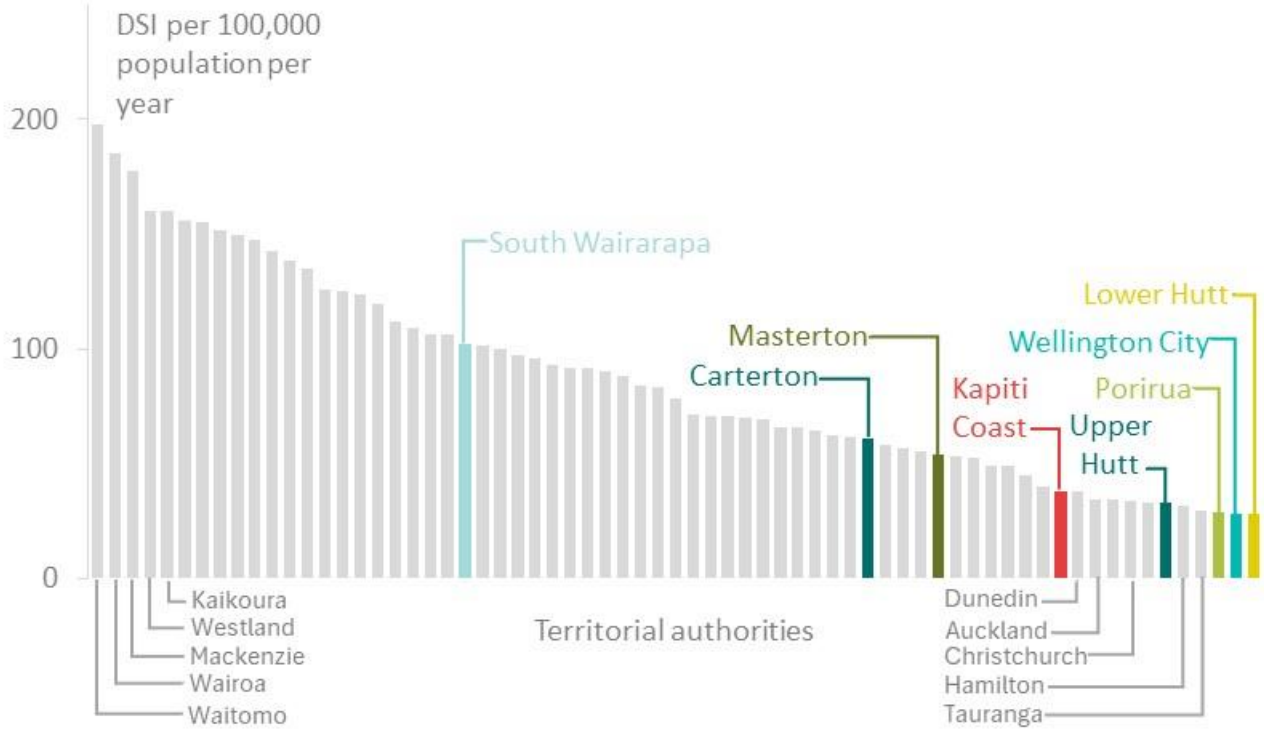
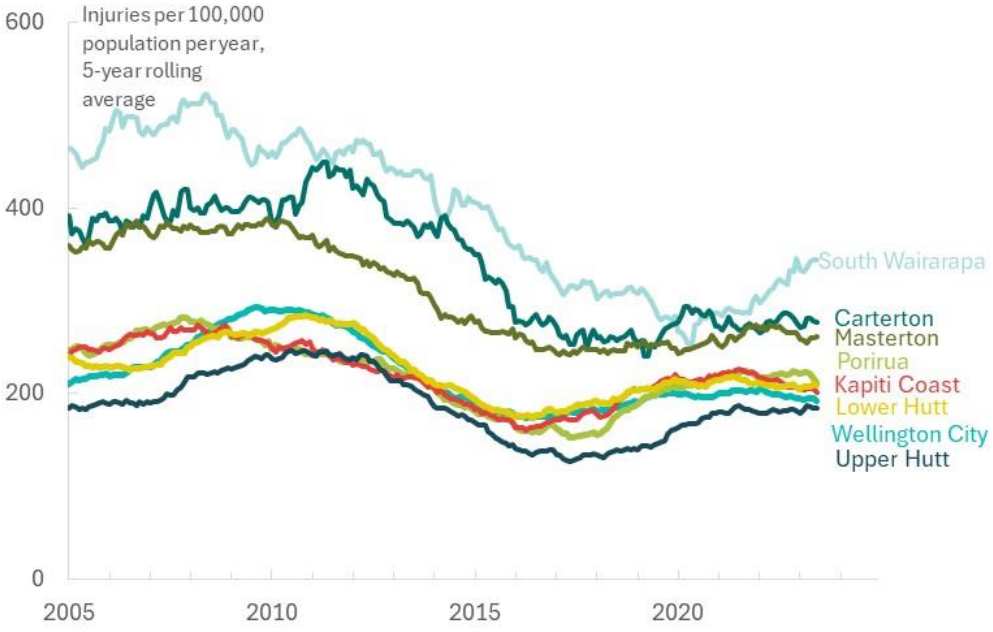



Figure 13.4. Road traffic injuries per capita, by territorial local authority.



### Exposure and risk per distance travelled

Differences in DSI rates across the Wellington Region reflect both the amount of vehicle travel and the type of roads travelled on. In South Wairarapa and Carterton, vehicle kilometres travelled (VKT) per capita are about twice as high as in Wellington City, Porirua, or Lower Hutt, meaning residents are more exposed to risk because they drive more (see Figure 12.5). Much of this travel occurs on higher-speed rural roads, where crashes are more likely to result in death or serious injury. In South Wairarapa District and Carterton District, about 75% to 80% of VKT is on rural roads, compared with just 30% to 40% in Lower Hutt and Wellington City.[35]

Rural roads often lack safety features common on urban arterials and state highways, such as median barriers, sealed shoulders, lighting, and pedestrian or cyclist infrastructure, further increasing the risk.

Even when adjusted for distance travelled, Wairarapa's DSI rate remains relatively high. While the Wellington Region overall has a DSI rate per million VKT about 20% below the national average, rural areas within the region tend to be less safe on a per-kilometre basis. This highlights the need for targeted improvements on rural roads with high exposure and limited safety infrastructure.

### State highways and local roads

State highway crashes contribute 24% of the region's road traffic injuries. Restricting the analysis to the remaining 76% of crashes that occur on local roads reveals that per capita rates are highest in Wairarapa and Lower Hutt (Figure 13.5).

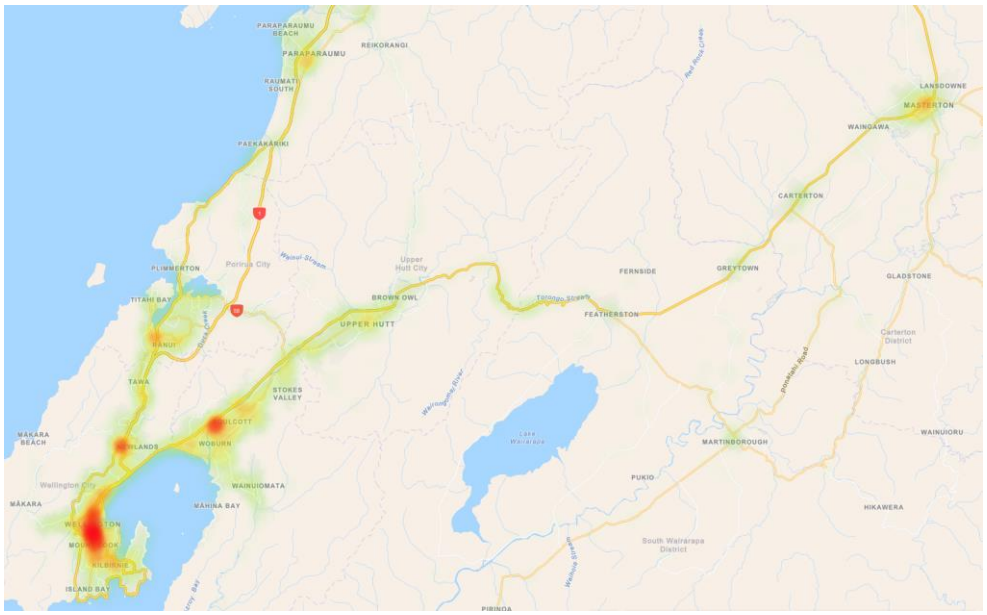
[35] NZTA https://www.nzta.govt.nz/planning-and-investment/learning-and-resources/transport-data/funding-and-transport-dashboard-and-open-data

Figure 13.5. Road traffic injuries per capita on state highways and local roads, by area, 5 years to December 2024.


### Crashes are located across the region, with the highest number occurring on the busiest parts of the network

Heat maps of crash locations reveal that injury crashes are concentrated at a relatively small number of key locations – in or near urban centres, which is where traffic volumes are highest (Figure 13.6).

Figure 13.6. Heat map of road traffic injuries, 5 years to December 2024.



Of the region's DSIs in the last 5 years:

- 12% were on State Highway 2, including 3.4% in Wairarapa
- 7% on State Highway 1
- 4% were on the Wellington urban motorway (SH1/SH2 combined)
- 3% were on the region's other state highways (SH53, SH58, SH59).

The remaining 75% of DSIs were on local roads, but no single road contributed more than 1% of the total. By implication, large reductions in crashes will require interventions that impact broadly across many or all of the region's roads, rather than targeting only 'black spots' or higher risk roads.

### Relative to traffic volumes, a disproportionate number of accidents occur in the early hours of Saturday and Sunday mornings

Injury crashes occur across all days of the week and times of day. The peak times for injury crashes are generally when traffic volumes are highest, particularly in weekday afternoon peaks. In the last 5 years, the highest numbers of injury crashes were weekday late afternoon and Saturday early afternoon (Table 13.1). However, those few high-intensity crash periods only account for 20% of all crashes; the remaining 80% occurred at other times and days. By implication, interventions that target only high-risk times might have relatively little impact on the total burden of the region's injury crashes.

Table 13.1. Time of day and day of week distribution of road traffic injuries, 5 years to December 2024.

| | 3 hours starting | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 12am | 3am | 6am | 9am | 12pm | 3pm | 6pm | 9pm | All times |
| Monday | 0.4% | 0.3% | 1.8% | 2.0% | 1.9% | 3.6% | 2.0% | 0.8% | 12.8% |
| Tuesday | 0.3% | 0.5% | 2.9% | 1.9% | 2.4% | 2.8% | 1.8% | 0.9% | 13.5% |
| Wednesday | 0.4% | 0.3% | 2.8% | 2.5% | 2.8% | 3.6% | 2.2% | 1.0% | 15.6% |
| Thursday | 0.5% | 0.5% | 2.5% | 1.9% | 2.2% | 3.3% | 2.3% | 0.9% | 14.2% |
| Friday | 0.5% | 0.4% | 1.5% | 2.2% | 2.5% | 3.8% | 2.4% | 1.6% | 14.9% |
| Saturday | 1.4% | 1.0% | 1.0% | 2.4% | 3.6% | 2.6% | 1.7% | 1.9% | 15.6% |
| Sunday | 1.7% | 1.3% | 1.1% | 1.7% | 2.8% | 2.5% | 1.4% | 0.8% | 13.4% |
| All days | 5.1% | 4.4% | 13.6% | 14.7% | 18.2% | 22.2% | 13.8% | 7.9% | 100.0% |

Although the overnight number of DSIs is low, the risk per vehicle is high. The 3 hours starting midnight on Thursday, Friday, Saturday, and Sunday are the times with the highest risk per vehicle, with DSI rates per vehicles about 4 or 5 times the average across all days and times (Table 13.2).[36]

[36] In this analysis, relative risk is calculated as the ratio of observed to expected number of DSIs. The expected number is calculated as the number that would occur if the DSI rate per vehicle were uniform across all days and times. The analysis uses vehicle counts at Vivian Street, Wellington in the first week of March 2024 as a proxy indicator of the region's pattern of vehicle flows across days and times.

Table 13.2. DSI relative risk per vehicle, by time of day and day of week, 5 years to December 2024.

| | 3 hours starting | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 12am | 3am | 6am | 9am | 12pm | 3pm | 6pm | 9pm | All times |
| Monday | 1.2 | 1.0 | 0.5 | 0.9 | 0.7 | 1.0 | 0.8 | 1.5 | 0.8 |
| Tuesday | 0.8 | 1.6 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.4 | 0.8 |
| Wednesday | 1.3 | 0.9 | 0.8 | 0.8 | 0.9 | 1.1 | 1.1 | 1.4 | 1.0 |
| Thursday | 4.9 | 1.1 | 0.9 | 0.6 | 0.7 | 0.8 | 1.1 | 1.2 | 0.9 |
| Friday | 3.9 | 1.9 | 0.4 | 0.9 | 1.0 | 1.5 | 1.1 | 1.9 | 1.1 |
| Saturday | 3.3 | 3.3 | 0.4 | 1.0 | 1.3 | 1.2 | 0.9 | 1.6 | 1.2 |
| Sunday | 5.1 | 3.0 | 0.6 | 1.0 | 0.6 | 0.9 | 0.7 | 1.5 | 1.1 |
| All days | 3.5 | 1.8 | 0.6 | 0.9 | 0.9 | 1.1 | 0.9 | 1.4 | 1.0 |

## Factors contributing to crashes

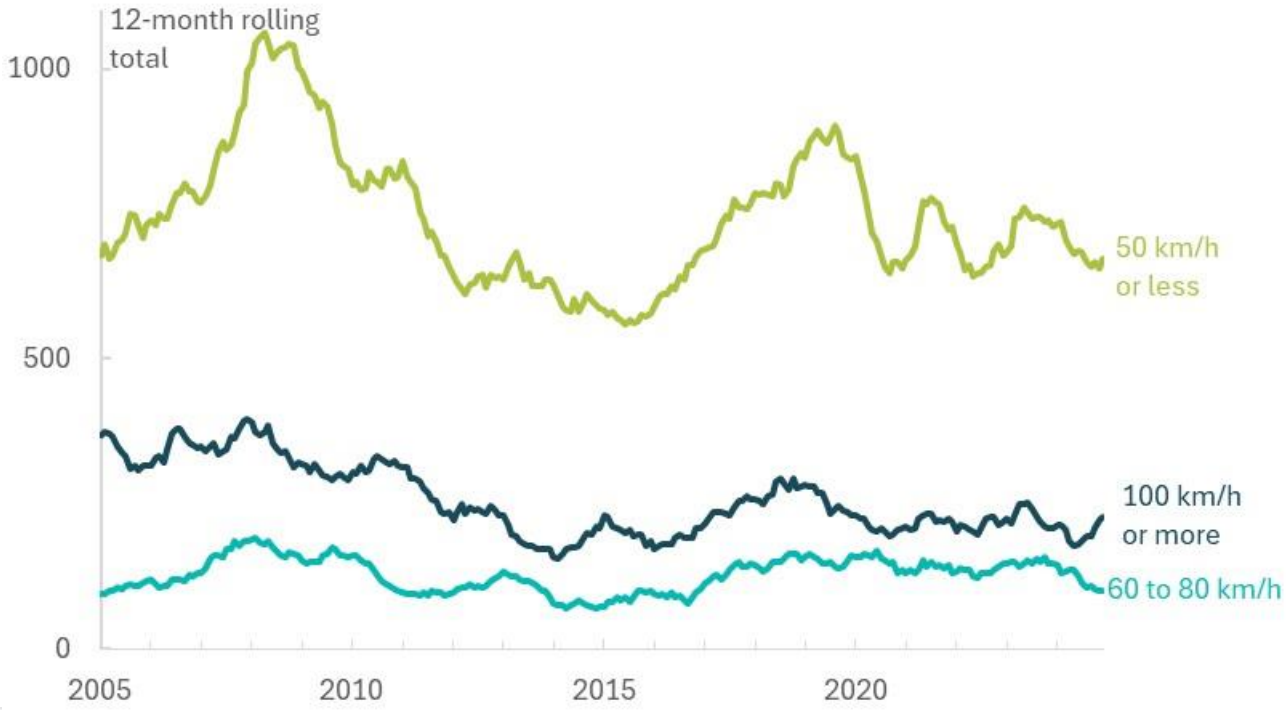
The CAS data source includes information about a wide range of factors contributing to crashes. This analysis focuses on one road environment factor (posted speed limit) and three road user behavioural factors: inappropriate speed, alcohol and other drugs, and driver inattention.

### Posted speed limit

Higher speed both increases crash risk and increases injury severity, assuming all else equal.

Most of the region's injury crashes occur on roads with speed limits of 50 km/h or less (Figure 13.7). In the 5 years to December 2024, 66% of all injury crashes (and 61% of DSIs) were on roads with posted speed limits of 50 km/h or less. 21% of injury crashes (and 26% of DSIs) were on 100 km/h or more roads.

Figure 13.7. Posted speed limit of road traffic injuries.



Over the last 2 decades, crashes on 100 km/h roads have trended down. The number of injury crashes on 100 km/h roads was 40% lower in the 5 years to December 2024 than 20 years earlier. The number of DSIs on the fastest roads fell by an even larger amount (down 50%). That trend is partly explained by speed limit reductions, meaning that fewer roads have 100 km/h speed limits,[37] but also represents better road safety resulting from improved fleet quality, more congestion (slower speeds), road engineering improvements, and enforcement activity on faster roads. In contrast, the number of crashes on slower roads (up to 50 km/h) was up (both injuries and DSIs 6% higher) in the latest 5 years, compared with 20 years earlier.

### Inappropriate speed is a contributing factor to many crashes (and official statistics are likely to underestimate the number)

Irrespective of the posted speed limit, inappropriate speed is a contributing factor in many crashes. Identifying and recording this factor necessarily involves a degree of subjectivity, and is likely to be substantially under-recorded, so trends should be interpreted with caution. One review of the evidence from multiple New Zealand sources concluded that speeding was involved in around 60% of fatal crashes and 71% of injury crashes.[38]

In the CAS data, an average of 188 injuries per year had inappropriate speed recorded as a contributing factor, including 39 DSIs, in the 5 years to December 2024 in Wellington Region. Those numbers are little changed from 20 years earlier (Figure 13.8), implying that the percentage of crashes where inappropriate speed is a cause has increased over the last 20 years against a backdrop of decreasing number of overall crashes.

[37] In recent years, 100 km/h speed limits reduced on State Highway 2 between Featherston and Masterton, on the Remutaka Hill, between Kaitoke and Te Mārua, and Owen Street to Grounsell Crescent. State Highway 1 speed limits reduced from Riverbank Road to Kowhai Road, and Pekapeka to Hemi Street. Source: NZTA https://www.nzta.govt.nz/safety/driving-safely/speed/speed-limit-review-locations/interim-state-highway-speed-management-plan/wellington/

[38] Source: Job, R.F.S and Brodie, C. (2022). "Understanding the role of Speeding and Speed in Serious Crash Trauma: A Case Study of New Zealand". *Journal of Road Safety*, 33(1), 5-25. https://doi.org/10.33492/JRS-D-21-00069

Figure 13.8. Inappropriate speed – all injuries, and deaths and serious injuries.


### Alcohol and drugs were a factor in 43% of DSIs over the last 5 years

Alcohol and drugs increase crash risk and increase the potential for death and serious injury to drivers, passengers, and other road users. Alcohol and drugs have long been recognised as a major problem for road safety in New Zealand. However, data errors and inconsistencies in recording of alcohol- and drug-related crashes in CAS mean that long-term trends from that data source may not be reliable.[39] This analysis focuses on data from the 5 years to December 2024. Over that period, about 250 people each year were injured, including 80 killed or seriously injured, in crashes related to alcohol and drugs in the Wellington Region. Those crashes make up a substantial proportion of the burden of the region's road traffic injuries. Alcohol- and drug-related crashes accounted for 24% of all the region's crash injuries, and 43% of deaths and serious injuries over the last 5 years. While alcohol- and drug-related crashes are primarily linked to driver behaviour, infrastructure improvements such as traffic calming, better lighting, median barriers, and safer intersection designs can help reduce the severity and likelihood of crashes involving impaired drivers. In addition, local government can influence alcohol-related crash risk through local alcohol policies, community road safety education, and by supporting Police and national agencies in enforcement activities.

Per capita rates of alcohol- and other drug-related crashes were much higher in Wairarapa than in other parts of the region (Figure 13.9). The three Wairarapa territorial authorities accounted for 22% of the region's alcohol- and drug-related DSI, despite accounting for only 9% of the population.

[39] Researchers have identified significant errors in recording of alcohol-related crashes in CAS in late 2018, meaning that the data source is not a reliable indicator of alcohol-related crashes around that time. https://www.nzta.govt.nz/assets/resources/research/reports/694/694-Alcohol-related-crash-trends.pdf

Figure 13.9. Alcohol- and other drug-related road traffic injuries per capita, by area, 5 years to December 2024.


### Driver inattention is a contributing factor to many crashes

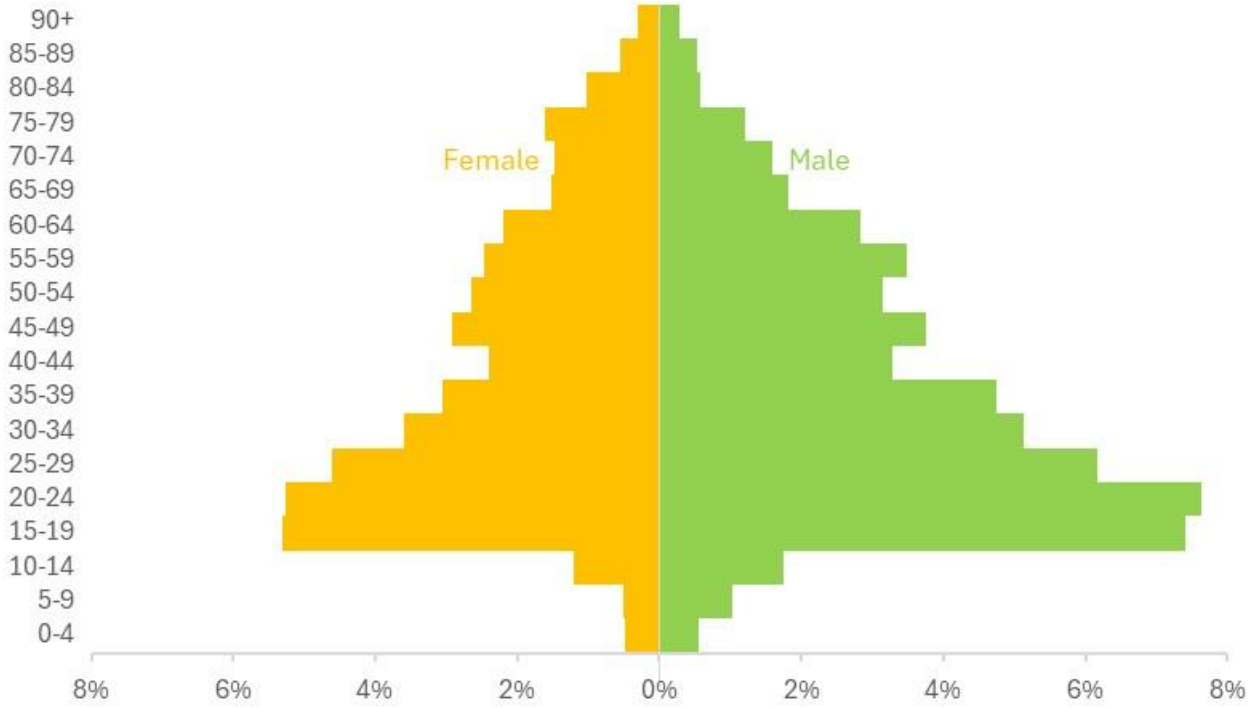
Driver inattention or distraction is a contributing factor in many crashes. As with some other factors, it is likely to be significantly under-recorded, and the rate of under-recording may have changed over time. Thus, trends should be interpreted with caution. In the 5 years to December 2024, an average of 82 people per year were injured (including 10 killed or seriously injured) in crashes where driver inattention or distraction was recorded in CAS. Those numbers have trended down over the long term, with injuries down 28% and DSI down 58% from 20 years earlier (Figure 13.10).

Figure 13.10. Driver inattention or distraction-related road crash injuries and DSI.


### Young males aged 15 to 29 years are over-represented in crash statistics

The population pyramid for people injured in road traffic crashes in Wellington Region over the last five years shows a small proportion of children and a large proportion of young adults and working-age adults (Figure 13.11). At most ages, more males are injured than females, reflecting gender differences in road usage, risk, and exposure. This pattern highlights that young and middle-aged males are particularly vulnerable to road traffic injuries, aligning with broader trends in transport and activity patterns within the region.

Figure 13.11. Population pyramid of people injured in road traffic crashes, 5 years to December 2024.



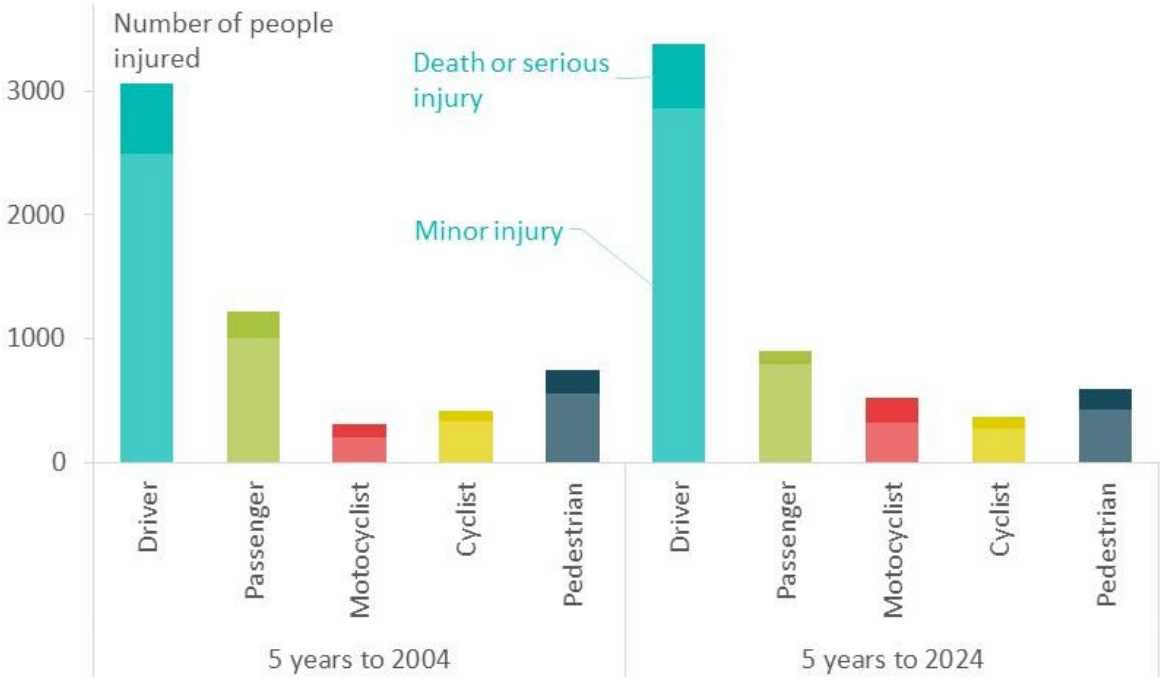

Of the 2,200 drivers injured in the last 5 years, 67% had a full driver licence, 16% had a restricted licence, 14% had a learner licence, and 3% were not licensed.

### Cyclists and in particular motor cyclists are over-represented relative to their contribution to total trips in the DSI statistics

About half of the people injured in road traffic crashes are motor vehicle occupants (either drivers or passengers) but other road users also account for significant numbers of people injured (Figure 13.13). Cyclists are over-represented in the injury numbers – they made up 11% of deaths and serious injuries, but only 3% of household travel time in the Wellington Region.[40]

[40] Environmental Health Intelligence New Zealand, 2023. Household travel time by mode of transport. https://ehinz.ac.nz/assets/Surveillance-reports/Released_2023/Household-travel-time-by-mode-2023.pdf

Figure 13.12. Road user type, minor injuries and DSIs, 5 years to 2024 and 20 years earlier.




Over the last 5 years, an average of 118 pedestrians, 104 motorcyclists, and 75 cyclists were injured per year in the region. Compared with 20 years earlier, the latest 5 years had improvements in the numbers of injured pedestrians (down 21%) and cyclists (down 10%), but the number of injured motorcyclists increased 65% (Figure 13.13).

Figure 13.13. Pedestrian, motorcyclist, and cyclist injuries.

Those downward trends in pedestrian and cyclist injuries have occurred over a period of increasing cycling and pedestrian activity, at least as reported in mode of journey to work in the census. At the 2023 census, 24,000 people reported walking or jogging to work (up from 17,000 at the 2001 census) and 7,000 people reported cycling to work (up from 4,000 in 2001). By implication, active travel (walking and cycling) has become safer but is still over-represented in the injury statistics.

There is little specific information about trends in motorcycle use in the Wellington Region. However, for the whole of New Zealand, motorcycles are estimated to contribute only 0.1% of total distance travelled per year.[41] That low amount of motorcycle travel and high number of motorcyclist injuries implies a high risk per kilometre of motorcycle travel.

Use of e-scooters has increased since being introduced commercially in 2019 but the CAS data source does not specifically record injuries for this road user type. Other data sources suggest that the number of e-scooter-related injuries is substantial. For example, Accident Compensation Corporation has reported that there were 373 new claims for e-scooter-related injuries in Wellington Region in 2022.[42]

## Benchmarks for improvement

Road safety improvements can address road user behaviour, vehicle characteristics, or the road environment. Agencies can influence all those factors within Wellington Region, including local, regional and national government. Quantifying the scope for improving Wellington Region's road safety is beyond the scope of this analysis, but the analysis can provide some level of benchmarking by showing the burden of road traffic crash injuries that relate to selected characteristics. The relative burden relating to those characteristics are summarised in Table 13.3. Of the characteristics shown, large proportions of crash injuries in the most recent 5 years were related to the times, places and road types that account for the majority of road use:

- on local roads (71% of injuries),
- on 50 km/h roads (61%),
- during weekday peak commute times (27%),
- and located in Wellington City (32%).

Of road user behaviour factors, alcohol (and sometimes other drugs) stands out as a major factor in injury crashes (22%) and a much higher proportion of deaths and serious injuries (39%). By implication, if all the region's alcohol and drug-related crashes had been prevented, there would have been 39% fewer deaths and serious injuries in the region, equating to 383 fewer people killed or seriously injured, over a 5-year period.

Motorcycling is a high-risk mode of travel. Motorcycling accounts for only 0.2% of trips in the Wellington Region but 20% of deaths and serious injuries (and 9% of all injuries).

[41] Ministry of Transport: New Zealand Household Travel Survey 2020-2023 https://www.transport.govt.nz/statistics-and-insights/household-travel

[42] https://www.acc.co.nz/assets/oia-responses/claims-data-for-shared-e-scooters-and-shared-e-bikes-oia-response-gov-028140.pdf

Table 13.3. Proportion of region's injuries and DSIs relating to selected characteristics, 5 years to December 2024.

| Domain | Characteristic | Injuries | Deaths and serious injuries |
|---|---|---|---|
| Place | Wellington City | 35% | 34% |
| | Porirua | 11% | 10% |
| | Kāpiti Coast | 10% | 12% |
| | Lower Hutt | 21% | 17% |
| | Upper Hutt | 8% | 9% |
| | South Wairarapa | 4% | 6% |
| | Carterton | 3% | 3% |
| | Masterton | 7% | 9% |
| Time | Friday and Saturday night 6pm to 6am | 13% | 16% |
| | Weekday peak times 6am to 9am, 3pm to 6pm | 29% | 23% |
| | Christmas/New Year holiday | 3% | 3% |
| | Other public holidays | 3% | 3% |
| Road environment | Posted speed limit 50 km/h or less | 65% | 60% |
| | Posted speed limit 100 km/h | 21% | 25% |
| | State highways | 24% | 25% |
| | Local roads | 76% | 74% |
| | Dark (night-time) | 26% | 32% |
| | Weather: rain, mist, fog | 19% | 16% |
| Road user behaviour | Alcohol and drugs | 23% | 42% |
| | Inappropriate speed[43] | 18% | 21% |
| | Driver inattention [43] | 8% | 5% |
| Vehicle and road user type | Cyclist | 7% | 11% |
| | Motorcyclist | 10% | 21% |
| | Pedestrian | 11% | 17% |
| | Motor vehicle occupant | 69% | 46% |

[43] Under-recording of inappropriate speed and driver inattention means that the true percentages attributable to these factors are lik ely to be higher than is revealed by the available statistics.