

Metlink public transport network overview and the role of public transport in responding to population growth

1. Introduction

The Metlink public transport network is crucial for providing our growing population with access to economic and social opportunities in the Wellington region. Public transport is an efficient way to move large numbers of people, particularly on corridors where travel demand is high and capacity is constrained at peak times. It also provides an important travel option for many people, and reduces traffic demand and congestion on the road network. Ongoing investment in the region's public transport network is a critical factor in responding to population growth and supporting our mode shift and emissions reduction goals.

Rail plays a significant role in providing access to the regional CBDs and growth to the north. Rail is a very efficient way to move large numbers of people over longer distances and we will continue to build on the region's established rail network which links communities to the north of the Wellington City CBD. The strategic focus for the rail network is to improve the frequency, capacity, reliability, safety and resilience of the current network while also looking to expand the network north, providing alternative travel options for those who travel inter-regionally, who would otherwise be using private vehicles.

The bus network also plays a critical role in moving significant numbers of people, providing access to centres and the core rail network in other parts of the region. On some key corridors in Wellington City bus infrastructure constraints and pinchpoints are making it more difficult to increase bus service frequency and capacity in response to growing demand. Significant investment in infrastructure, including a second CBD spine for public transport, terminals/layovers/depots and increased bus priority, is necessary to enable continued growth in public transport within these parts of Wellington City.

The investigation of mass transit through the Let's Get Wellington Moving programme will provide a step change in level of service and capacity to support high levels of intensification along the southern growth corridor from Courtenay Place to Newtown. The programme is a joint initiative between Wellington City Council, Greater Wellington Regional Council and Waka Kotahi - to agree a programme of transport system improvements and associated urban development opportunities in the area from Ngauranga Gorge to the airport, including the Wellington Urban Motorway and connections to the central city, hospital, and the eastern and southern suburbs.

2. Regional transport strategic context

The RLTP 2021 update identifies a number of transport problems facing the region where public transport has an important role to play and which may affect the feasibility of urban development.

- **Meeting growing demand to move people and freight** - As the region grows, more people and increased economic activity will place greater demand on the transport network. The rail and parts of the bus networks are already nearing capacity at peak times, while congestion on parts of the road network results in poor journey time reliability.
- **Improving travel options** - Making it easy to get around and access work, education, healthcare, social and recreational facilities requires providing a range of safe, affordable and attractive options. As the region grows, this requires good planning regarding the location of housing, employment opportunities and transport connections
- **Improving safety** - After declining in the early 2000s, in recent years, the number of deaths and serious injuries on our roads has increased at a higher rate than population growth
- **Reducing carbon emissions** - Emissions from land transport in the region continue to grow. To reverse this, we'll need to shift to greater use of low-emissions vehicles, public transport,

walking and cycling

- **Increasing resilience** – Our transport network is vulnerable to disruption and delays from unplanned events, such as traffic incidents and natural hazards. Climate change is likely to increase this vulnerability.
- **Making progress within funding constraints** - Making our plans a reality takes funding. All transport funding partners are facing competing demands for funding. We must target our investment to deliver the best value from the funding available.

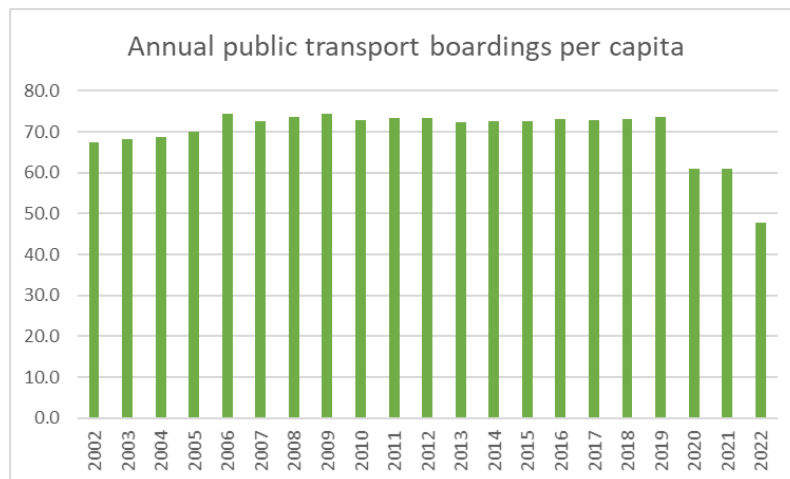
The RLTP 2021 sets out three ambitious headline targets with a ten year outlook. By 2030 we are seeking:

- **Carbon emissions** – 35 percent reduction in transport-generated emissions
- **Safety** – 40 percent reduction in deaths and serious injuries on our roads
- **Mode share** – 40 percent increase in active travel and public transport mode share

The RLTP 2021 also signals a number of ten year investment priorities – the first and most heavily weighted is ‘Public transport capacity’ - *Build capacity and reliability into the Wellington Region’s rail network and into Wellington City’s public transport network to accommodate future demand.*

3. Public transport demand and mode share

17.7 million passenger trips were taken on our bus network in 2021/22 and more than 8.1 million passenger trips are taken on the Wellington Metro Rail Network annually. Our public transport use as a percentage of population is the highest in New Zealand at 47 trips per capita. This is lower than expected due to the impacts of COVID-19, but we have had a steady recovery and expect patronage to continue to grow.



Around 85,000 people come into Wellington City over the morning peak (from 7am to 9am) from across the region. The public transport mode share of travel into Wellington CBD is 34%. Peak travel accounts for 57% of public transport journeys.

Wellington Regional Mode Share for Travel to Work in 2018 (Source Waka Kotahi)¹

| | TOTAL VEHICLES | TRAIN | BUS | BIKE | WALKING | SHARED AND ACTIVE | WORK FROM HOME | OTHER |
|-------------------------------------|----------------|-----------|-----------|-----------|------------|-------------------|----------------|-----------|
| Kapiti Coast District | 68% | 13% | 1% | 2% | 3% | 19% | 13% | 1% |
| Porirua City | 72% | 14% | 2% | 1% | 2% | 19% | 8% | 1% |
| Upper Hutt City | 71% | 13% | 2% | 1% | 3% | 19% | 8% | 1% |
| Lower Hutt City | 66% | 14% | 6% | 2% | 4% | 26% | 7% | 1% |
| Wellington City | 45% | 4% | 17% | 4% | 19% | 44% | 8% | 3% |
| Wairarapa councils | 71% | 7% | 0% | 1% | 4% | 12% | 18% | 1% |
| Wellington Region Mode Share | 58% | 9% | 9% | 2% | 10% | 31% | 9% | 3% |

4. Wellington Region's Public Transport Network

The Metlink network is based on a layered hierarchy of services: core routes, local routes and targeted services identified in the Regional Public Transport Plan (PT Plan). The Wellington region's public transport network consists of four layers:

- **Core Bus** routes provide high-capacity, frequent, all-day services within urban areas. These meet all-day travel demand. They operate at least every 15 minutes during the day, and often more frequently during busy periods.
- **Core Rail** routes provide high-capacity, long-distance, time-competitive commuter services connecting key urban areas across the region.
- **Local Bus** routes include all-day medium- to low-frequency services connecting town and activity centres along the lower-demand corridors, providing local access to town and activity centres within the suburban areas. These routes complement the core network by covering areas it does not serve and by collecting and distributing passengers to and from it.
- **Targeted services** provide services to areas or link destinations where there is not enough demand to justify core or local routes, or where normal services cannot meet the peak demand.

Targeted services include:

- **Targeted Rail and Ferry services:** these are services that don't currently justify core or local levels of service.
- **Peak-only services:** commuter services that provide additional capacity at peak times. They may provide increased capacity on a section of an existing route, or the only public transport service to an area where there is not enough demand to justify a service at other times of the day
- **School services:** bus services in urban areas to schools not served by regular bus routes, or where capacity on those routes cannot meet demand
- **Night services:** services for after-midnight travel on weekends

¹ <https://www.nzta.govt.nz/assets/resources/keeping-cities-moving/Wellington-regional-mode-shift-plans.pdf>

- **Special event services:** services deployed when additional demand caused by, for example, major public events, concerts, festivals and sport events, would exceed the capacity of regular services
- **Community services:** services that include discounted taxi services for people who are transport disadvantaged, demand-responsive and shopper services, and services to outlying urban and rural areas where scheduled core or local services are not viable.

The Wellington region's layered network is shown in Appendix 1. The layered network concept is critical for understanding our plan for developing public transport to accommodate population and employment growth, and address congestion and other problems.

In particular, a key focus is developing the core network so it can deliver high quality, high capacity public transport services that provide journey times that are competitive with car travel, and deliver a high quality customer experience. Part of this includes improvements to information, ticketing and technology systems that support public transport.

5. Challenges for public transport

There are also key challenges for public transport in responding to these issues:

Public transport capacity

- There is difficulty in providing additional public transport capacity to respond to growth in Wellington City. Most public transport in Wellington City mixes with general traffic on increasingly congested roads, affecting reliability and constraining capacity by limiting the services we can operate on core routes. The core bus spine through Wellington City CBD via the Golden Mile is a current pinch point that needs to be addressed to unlock future bus network capacity.
- On some routes, e.g. Karori, there is limited ability to add more services without increased priority measures. To address these capacity constraints significant investment in public transport priority and supporting infrastructure is required before capacity for future growth can be delivered. We need to plan now for measures that give priority to public transport services, such as bus lanes and traffic signal priority.
- The ongoing staff issues for all our bus operators provides a real challenge. While infrastructure upgrades and prioritisation of public transport is needed, these measures will not unlock the patronage growth expected if there are not enough bus drivers to provide a frequent and reliable service.
- Patronage growth on the rail network was much higher than anticipated up to the 2019 FY. Year on year network-wide rail patronage growth was 5.7% across all periods and 7.3% at peak periods between the 2018 FY and 2019 FY. The impact of COVID-19 slowed patronage growth however we are recovering steadily. Plans to upgrade this network to increase service frequency and capacity are signalled in the 2021 Regional Public Transport Plan plan. These upgrades will ensure that the rail services are "quick, frequent, reliable and high-capacity" to enable greater intensification around the rail stations.
- A Mass Rapid Transit corridor between Wellington Station and Island Bay is being investigated through the Let's Get Wellington Moving programme and will provide a step change in level of service and capacity to support future urban regeneration and intensification along the route.

Land use and transport planning

- The capacity of the bus network is not generally an issue outside Wellington City, but there is poor utilisation of existing services. This is due to a number of factors including: low density and dispersed urban form in the outer districts; geography; employment location and general cultural reliance on the car for mobility.

- It is important to consider when developing new greenfield sites how these could be served by public transport. Suburbs with single roads in or out and large numbers of cul de sacs are much harder to serve with public transport than a more connected road network. High quality pedestrian environments also support greater use of public transport, particularly in and around public transport hubs.
- Further intensification of existing urban areas will help improve the viability of public transport in the region (particularly bus services). Where possible intensification should be delivered where there is already high quality public transport. New growth areas need to be designed and located in a 'smart' way to ensure they consolidate the urban footprint, have a focus on centres and generally increase density.

Customer expectations

- Customer expectations for public transport are changing, it is not enough to ensure that there is just capacity. Public transport must also be high quality, accessible, affordable, reliable and frequent for people to use it as their preferred choice.
- Part of this challenge is delivering improvements to services while maintaining affordability. There is increasingly demand for better quality real time information, improved ticketing and modern comfortable vehicles that are accessible to all people. All of this comes at a cost. Delivering the capacity on public transport to enable growth needs to be complemented by investment in a high quality customer experience.

Changes to technology

- Changes to transport technology and travel behaviour such as e-bikes and scooters, ride sharing and MaaS for the first mile/last mile connections to railway stations will likely affect demand for public transport. There is a greater need to develop key railway stations as mobility hubs to enable access to core public transport network for new modes of mobility. This may impact on the viability of some bus feeder services.

6. Challenges to public transport mode shift

- Outside of Wellington City there are relatively low population densities to support regular, frequent, and direct public transport services in many parts of the region.
- Public transport travel times are not competitive with car journeys for many journeys.
- Due to insufficient bus priority lanes, ongoing driver shortages, signal and track issues on rail there is a lack of reliability across the public transport network.
- Many peak services are at or over capacity, reducing the customer experience.
- People are travelling differently in a post COVID-19 environment. With more flexible working arrangements in place people are commuting at different times and on different days. This creates planning and timetabling challenges as Metlink grapples with how to provide services for a more flexible working environment.
- With the increase in the cost of living, and without the half price fare initiative, fares are not always competitive with car journeys, particularly if free end of trip parking facilities provided.
- Limited inter-regional travel options mean those travelling to the Wellington region for work, healthcare or social reasons are more likely to travel by private vehicle rather than public transport, adding to congestion and safety issues on the road network.

Kāpiti Coast and Horowhenua

- Kāpiti is rapidly growing as a commuter town due to housing supply and affordability issues. Public transport provision is increasingly having to balance the needs of commuters, and the large proportion of retirees in the area.
- The Kāpiti expressway and Transmission Gully motorway make it easier and faster for car travel, making public transport a less attractive option.

- Otaki and Horowhenua have no regular rail service, and increasing population growth.

Porirua City

- Porirua's Park and Ride facilities are fast reaching or are over-capacity. This encourages many commuters to remain in their cars.
- Some parts of Porirua do not have good public transport connections.

Wairarapa

- The Wairarapa is growing rapidly, with many residents commuting into Wellington CBD. This growth needs to be supported by adequate provision of public transport options.
- Most of the Wairarapa is still extremely rural and low population densities make it difficult to service by public transport.
- Access to Wellington hospital remains a key concern for residents.

Upper Hutt City

- Capacity on the Hutt railway line was reaching, or over capacity before COVID-19.
- Upper Hutt has urban sprawl, with many areas not served by public transport in evenings or weekends.

Hutt City

- Much like Upper Hutt, most peak rail services were at, or over capacity prior to COVID-19.
- There is currently no direct rail access or connection to Lower Hutt CBD
- The Melling line is underutilised and the Western hills are dependent on bus connections.

Wellington City

- Wellington City has no rail network past the main railway station.
- Limited provision of bus lanes means public transport services are more likely to be delayed due to road congestion.
- Increasing growth around the northern suburbs has meant public transport is at or over capacity during peak travel.

7. Opportunities for public transport mode shift

The Wellington Regional Mode Shift Plan and other key business cases and plans such as the Wellington Rail Programme Business Case outline key opportunities to increase mode shift. These include:

Horowhenua

- Upgrades to the Capital Connection trains and service frequency
- Intensification around rail stations and improved multi-modal access
- Improved access to public transport, including the Levin- Waikanae service

Kāpiti Coast

- Intensification and development around public transport and improved multi-modal access to train stations, rail improvements.

Porirua City

- Intensification and development around public transport and improved multi-modal access to train stations, rail improvements.
- Eastern Porirua regeneration and improved urban form and access to city centre
- Porirua Northern Growth Area development

Wairarapa

- Increased density around rail stations, centres and greenfield development (e.g. Carterton East) and improve safe multi-modal access to rail.

Upper Hutt City

- Improve access to rail stations by public transport and active modes
- Potential access improvements for better connections with public transport hubs from suburbs not directly connected to a rail station.

Hutt City

- RiverLink, including new Melling Station located with direct connection to Lower Hutt CBD
- Intensification and development around stations/stops and improved multi-modal access to stations
- Preparations for double-decker buses on network.

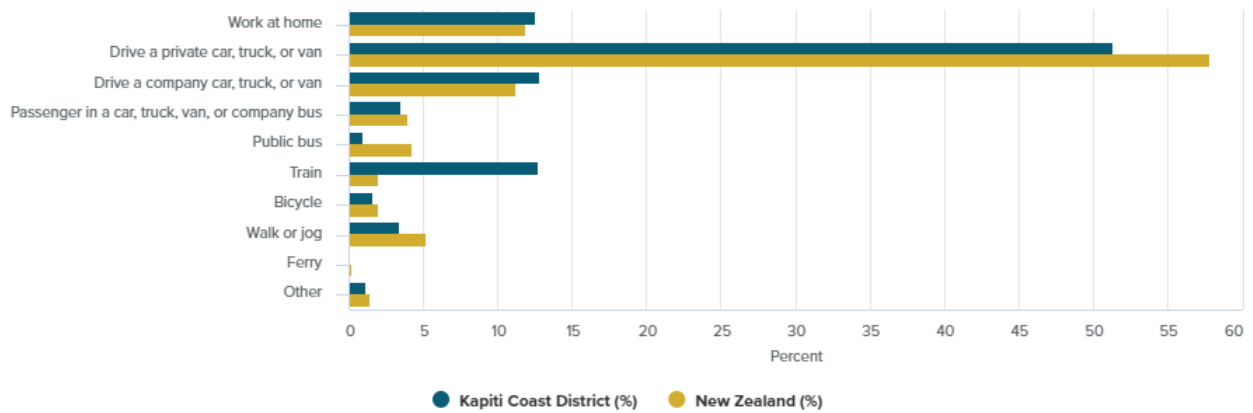
Wellington City

- Let's Get Wellington Moving, including bus priority, second CBD PT spine, and mass rapid transit
- Bus improvements through, more frequent, higher capacity buses, and, and route refinement.

8. Regional Commuting Data (Census 2018)

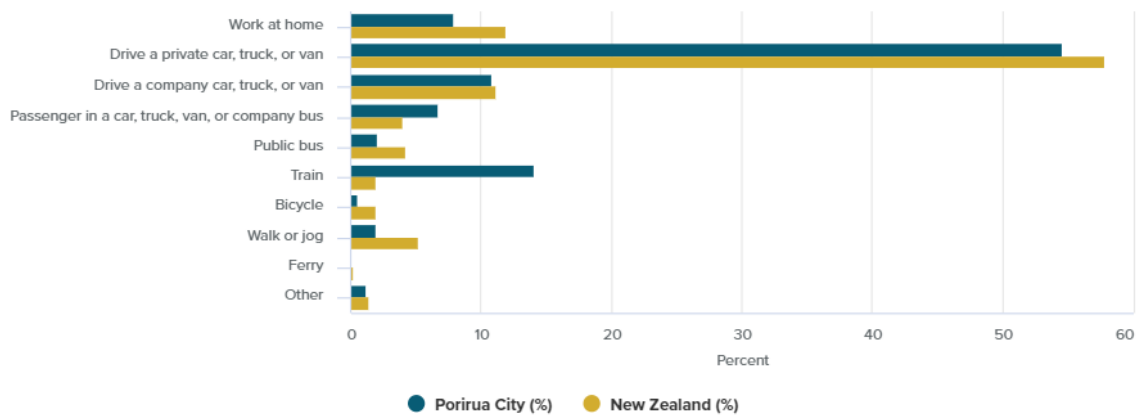
Kāpiti Coast

Main means of travel to work for people in Kapiti Coast District and New Zealand, 2018 Census



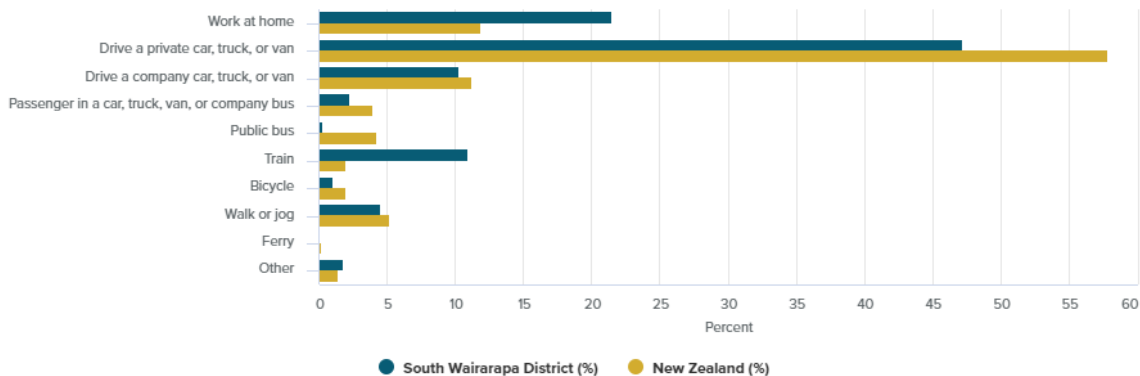
Porirua City

Main means of travel to work for people in Porirua City and New Zealand, 2018 Census



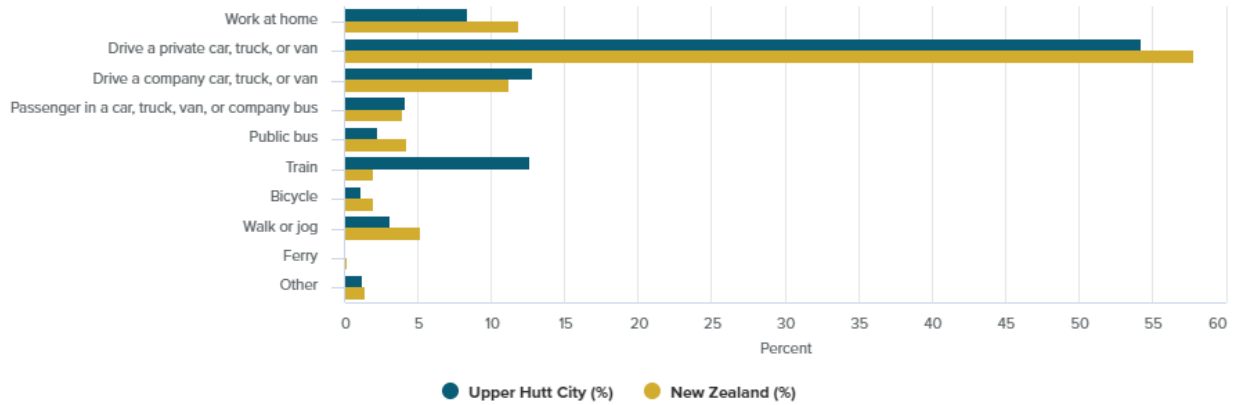
Wairarapa

Main means of travel to work for people in South Wairarapa District and New Zealand, 2018 Census



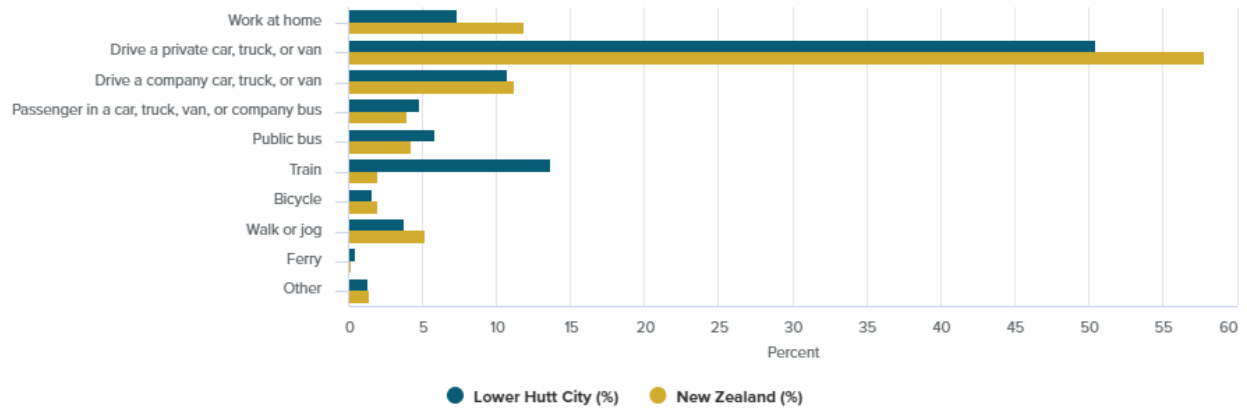
Upper Hutt City

Main means of travel to work for people in Upper Hutt City and New Zealand, 2018 Census



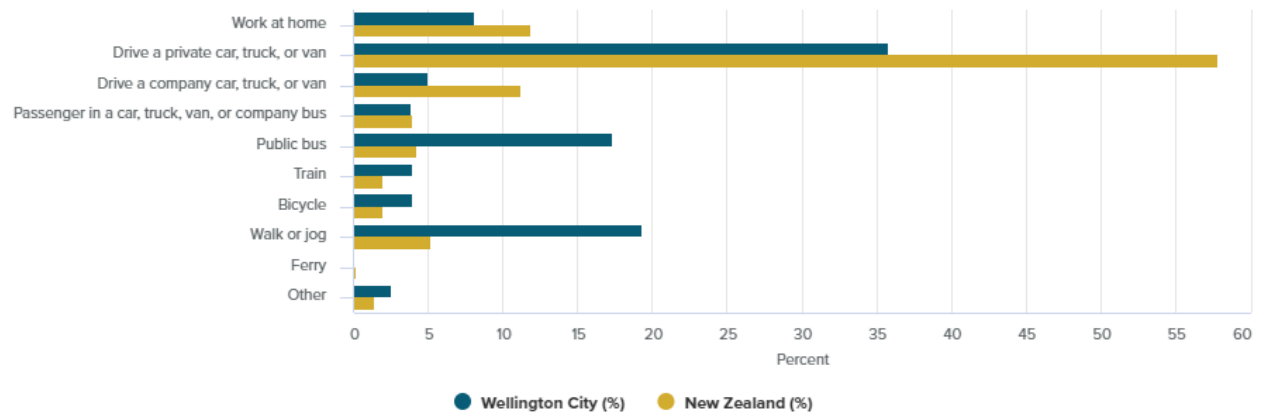
Hutt City

Main means of travel to work for people in Lower Hutt City and New Zealand, 2018 Census



Wellington City

Main means of travel to work for people in Wellington City and New Zealand, 2018 Census

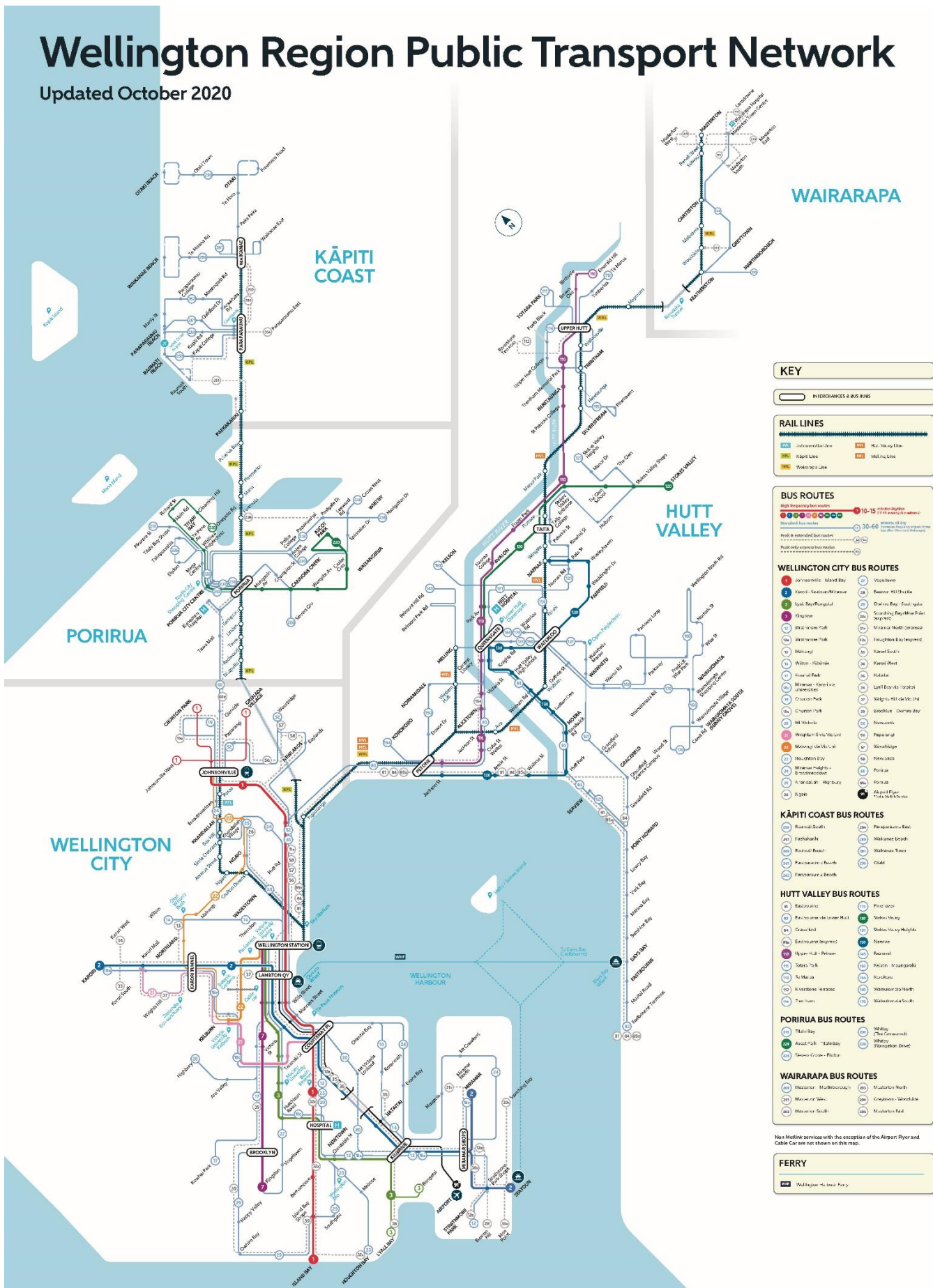


Appendix 1: Metlink Public Transport Network

Source: Wellington Regional Land Transport Plan 2021, pg 28

Wellington Region Public Transport Network

Updated October 2020



Appendix 2: Increasing Wellington public transport capacity to meet growing demand (excerpts from the 2021 Regional Public Transport Plan)

| | |
|--|---|
| <p>Provide a high quality, high capacity core network</p> | <ul style="list-style-type: none"> • Implementing the Wellington Regional Rail Strategic Direction investment pathway of regional rail service, rolling stock and infrastructure improvements. • Procuring and delivering Lower NI regional rail trains. • Increase rail timetable frequency up to ten-minutes where practicable by 2030. • Working with the LGWM programme to provide Mass Rapid Transit in Wellington City. • Working with the LGWM programme to deliver City Streets and implement the bus priority action plan. • Developing and investing in bus layover including a new Wellington CBD bus layover depot by 2024. • Improve access to public transport by • Improving multi-modal access to public transport hubs, including paid parking for Park and Ride through actions in our ‘Smarter Connections Strategy’. • Continuing to improve public transport services through ongoing service reviews in line with growth across the Lower NI. • Establishing a unit to provide a service from Wellington Station to Wellington Airport. • Tailoring services to meet community needs e.g demand responsive services. • Working with our regional partners to ensure urban form and new subdivisions can accommodate PT. • Promote behaviour change by: <ul style="list-style-type: none"> ○ Promoting mode shift to public transport and active modes through the LGWM Travel Demand Management package. ○ Proactively marketing off-peak and inter-peak public transport services. ○ Encouraging peak spreading through levers like off-peak discount and providing additional services and capacity. ○ Promoting behaviour change through initiatives like work travel plans and improved digital technology. |
| <p>Influencing travel demand and transport choices</p> | <ul style="list-style-type: none"> • Progress the Let’s Get Wellington Moving (LGWM) Travel Behaviour Change and Parking Levy investigations and programmes • Further develop and implement targeted workplace travel plans for hospitals and other large workplaces • Use public transport fare structures alongside integrated ticketing to encourage public transport use including inter-peak and off-peak travel • Develop Journey to Work and travel option and cost information throughout region especially on key corridors building on the Best Time to Travel campaign and Greater Wellington Mobility as a Service investigations • Facilitate availability of technology and apps as enablers for increased use of shared or active mobility choices • Update/implement parking policies to discourage long-stay on-street commuter parking and enable reallocation of road space |

Appendix 3: Ongoing Rail Upgrades

| Line | Upgrades |
|---------------------------|---|
| Wellington Station | <ul style="list-style-type: none"> • Wellington Station signalling and safety Improvements |
| Hutt Valley Line | <ul style="list-style-type: none"> • Replacing overhead power system – improving service reliability. • New power supply for signals – improving service reliability. |
| Johnsonville Line | <ul style="list-style-type: none"> • Renewing traction power overhead line systems. • Renewing sleepers within all seven tunnels. • Slope stability improvement Ngaio Gorge. |
| Kapiti Line | <ul style="list-style-type: none"> • Porirua Area Capacity Enhancements : <ul style="list-style-type: none"> ○ A complete upgrade of Plimmerton Station north of Wellington, including three main and nine new turnouts ○ A new platform/shelter, pedestrian underpass extension and all associated overhead line equipment ○ Upgraded signalling and drainage. The upgrades are required to enable an enhanced timetable to be implemented as a part of the Future Rail upgrades in Wellington. • Upgrading Porirua station shelter. |
| Wairarapa Line | <ul style="list-style-type: none"> • Replacing rail, sleepers and ballast, renewing bridges, refurbishing road crossings, and carrying out extensive drainage and vegetation work along the line. • Wairarapa Line Upgrades, including installing a signalling system between Featherston and Masterton, additional passing loops at Maymourn, Woodside and Featherston, and upgrades at Waingawa log yard. |

Appendix 4 – Proposed Bus Service Upgrades

| Service | Consideration |
|--|---|
| Lower Hutt – Petone: Routes 120 and 110 | Consider ways to improve the high frequency core route through central Lower Hutt; in particular by extending the Stokes Valley route (120) to Petone and inter-working it with the Upper Hutt to Petone route (110) to provide a high frequency service of 7.5 - 15 minutes at all times between Avalon, Hutt Hospital, central Lower Hutt and Petone. |
| Wainuiomata – Lower Hutt Routes 160 and 170 | Consider operating either Route 160 or 170 to and from Petone Station via Gracefield (with the other route continuing to serve Waterloo Station and Lower Hutt) provided that customers would be able to transfer between the 160 and the 170 in Wainuiomata, so that customers in both route catchments (Wainuiomata North and Wainuiomata South) would benefit from improved access to the additional destinations; or operating a single high frequency route through the most well patronised parts of Wainuiomata, to replace both Routes 160 and 170, supported by an on-demand service to serve parts of the community that are not on that new route. |
| New Tirohanga Route | Investigate establishing a Tirohanga route to and from Melling Station and Queensgate, either all-day or at school times only. |
| Totara Park Route 111 | Consider introducing Sunday services. Consider traversing the California Drive loop only once in each return trip from Upper Hutt Station to address the perception of operational inefficiency, bearing in mind that train connections may be less convenient as a consequence. |
| Timberlea Route 112 | Consider introducing Sunday services. |
| Coastlands | Work with Kāpiti Coast District Council and Coastlands is underway to improve bus access to Coastlands, taking into account the constraints around bus-train connections at Paraparaumu Station. |
| Porirua Routes 210, 220 and 226 | At the time of the next Porirua network review (in light of current roading and residential developments in the area), consider ways to integrate Routes 210, 220 and 226, to enable a high frequency core route through central Porirua between Whitireia Polytechnic and Porirua Station. |
| Kenepuru Route 60 | Implement the proposed diversion of Route 60 via Kenepuru Landing to serve the new residential area and retirement village on the old Porirua Hospital site. |
| Elsdon Route 226 | Consider ways to include Raiha St in a bus route, possibly by varying the Elsdon route (226) in order to serve Te Korowai Whāriki residents. |
| Ascot Park Route 220 | Consider extending Route 220 to Aotea Countdown (Whitford Brown Ave / Routeburn St roundabout) to enable two-way operation along Conclusion St (to eliminate the confusion and inconvenience associated with operating the long-standing Ascot Park loop). |
| Whitby and Papakowhai | At the time of the next Porirua network review, consider ways to: <ul style="list-style-type: none"> • Increase coverage in new parts of Whitby and Papakowhai • Improve connections with trains at Paremata and Porirua • Provide more direct services for Whitby • Provide a hybrid network of fixed route and on-demand services to provide additional coverage (given the low density nature of development and the preponderance of lengthy cul-de-sac subdivisions) |
| Tawa | A trial of on-demand services to connect the extremities of Tawa (such as the area east of the motorway) with train stations and with bus Route 60 is underway. |
| Wairarapa | Consider better coverage of bus routes in the Masterton area, including to rail services. Develop a plan for more frequent trains to and from Wellington in line with the availability of additional rolling stock, currently expected to be 2025. |