This Regional Land Transport Plan (RLTP) is a statutory document that must be prepared every six years as required by the Land Transport Management Act (LTMA) 2003 (as amended in 2013). It is prepared by the Regional Transport Committee (RTC), which is a joint committee comprised of two representatives from Greater Wellington Regional Council (GWRC), the mayors of the local councils in the region, and the regional director of the NZ Transport Agency.

The RLTP must contribute to the purpose of the LTMA which seeks ‘an effective, efficient, and safe land transport system in the public interest’. It is also required to be consistent with the Government Policy Statement (GPS) on land transport.

The overall national strategic direction for land transport, as described in the GPS 2015 is to drive improved performance from the land transport system by focusing on:

- economic growth and productivity
- road safety
- value for money

The GPS provides specific guidance on how central government plans to invest to achieve this direction.

**Funding for transport activities**

Central government provides funding for land transport activities through the National Land Transport Fund (NLTF). This fund distributes revenue primarily from petrol taxes and road user charges to activities approved for funding through the National Land Transport Programme (NLTP), administered by the NZ Transport Agency. The GPS 2015 establishes separate activity classes for state highway, local road, public transport, walking and cycling activities and sets a funding allocation range for each activity class. The NZ Transport Agency is required to work within these funding allocation ranges when funding activities through the NLTP. This means that different types of activities are funded from different funding ‘buckets’ in the NLTP – so, for example, cycling projects do not compete for funding against state highway or public transport projects, but they do compete against other cycling projects across New Zealand. The RTC cannot re-allocate funding from one activity class to another. This is set by central government.

The state highway improvements activity class is where the Wellington RoNS projects are funded from. All state highway activities are 100% funded from the NLTF. Funding for local roads, public transport, walking and cycling is provided from a wider set of sources. The NLTF provides funding for around 50% of the costs of approved activities, with the balance being made up from a combination of local council rates, user charges (ie public transport fares), and other funding sources such as development contributions and the Urban Cycleway Fund.

**The role of the Regional Land Transport Plan**

The RLTP forms just one step in the overall funding process. The RLTP informs the development of the NLTP by identifying the priorities and key improvement projects for the Wellington region proposed to be funded or co-funded from the NLTF.

The NZ Transport Agency is required to take account of the RLTP when preparing the national programme. However, it does not have to include any activities or projects in the NLTP, nor is it bound to follow the RLTP when considering detailed funding applications. However, an activity must be in the RLTP to be considered for funding from the NLTF. Many activities also require local funding that is approved separately through each council’s Long Term Plan (LTP) and Annual Plan processes.

The diagram below illustrates where the RLTP sits in relation to the other key transport planning documents at a national and regional level.

![Figure 1](image-url)
There is also a statutory link to the Regional Policy Statement – which sets out the region’s policies for management of land, air, water, soil, energy and ecosystems under the Resource Management Act.

Role of the Regional Transport Committee and its constituent organisations

The RTC is made up of representatives from all local councils, GWRC and the NZ Transport Agency. The primary role of each of these organisations in relation to planning, funding and delivery of the transport network is described below:

- **GWRC** services the Regional Transport Committee and therefore has a strategic transport planning and coordination role. GWRC is also responsible for managing and operating the public transport network. This includes network and service design, the vehicle fleet, stops and stations, park and ride, information and ticketing. GWRC does not manage the rail track infrastructure or provide bus priority lanes on the road network.

- **The NZ Transport Agency** is the road controlling authority responsible for managing and operating the state highway network. This includes walking and cycling facilities along and across the state highway corridor, and any bus lanes or facilities on the state highway network. It is also the central government agency responsible for land transport funding. This includes funding for state highways, public transport, walking and cycling and local roads. The Agency is required to ensure that investment through the NLTF gives effect to the GPS.

- **City/district councils** are the road controlling authorities responsible for managing and operating their relevant local road networks. This includes walking and cycling facilities along and across local roads, and the provision of bus priority lanes and facilities on the local road network.

In many cases, the funding and delivery of a transport project relies on a partnership between multiple parties. For example, the Wellington public transport priority spine project will rely on GWRC for network design, bus fleet decisions and ticketing systems, on Wellington City Council for priority lanes and measures on the local road network, and on the NZ Transport Agency for co-funding and priority lanes and measures on the state highway network.

Other agencies such as KiwiRail, New Zealand Police and the Accident Compensation Corporation play key roles in the delivery of a safe, effective and efficient transport system.

**Structure of the Regional Land Transport Plan**

The RLTP comprises two key parts as shown in the figure 2.

The **strategic context** provides the policy framework and strategic case for developing and investing in the region’s land transport network. This forms the strategic ‘front end’ of the RLTP and will include the statutory objectives, policies and measures required by the LTMA 2003.

The **regional programme** sets out the programme of proposed land transport activities over a six year period. It also includes a 10-year financial forecast.

The RLTP also includes an assessment of how the plan meets the various statutory requirements in the LTMA, together with a description of the approach to monitoring, variations, and a policy outlining when a variation will be considered to be significant.
Determining transport network priorities

Investment in the transport network often involves consideration of the various trade-offs between transport modes and outcomes.

This plan seeks to provide strategic guidance for those considerations by:

- Identifying the key regional transport issues, describing the core problems and the benefits of addressing those problems.
- Outlining the strategic principles and priorities for the development of each of the key transport corridors in the region, including how the different modes are expected to work together as part of an integrated solution.
- Developing a set of network plans for strategic roads, public transport, walking and cycling which set out the hierarchy and identify priorities for development of each network.
- Identifying the key projects and packages that will implement the identified strategic direction and their relative priority.

The RLTP is intended to have a long term horizon of up to 30 years – reflecting the long time it takes to plan, consent and construct major transport infrastructure. The projects contained in the ‘Programme’ part of the RLTP have a 6 year timescale – they are short term priorities. It is expected that over the life of the RLTP a range of projects will be progressed that will work towards the achievement of the longer-term objectives of the plan.

Local network priorities

The development of local area ‘Network Operating Plans’ will be an important tool to aid consideration of the investment and operational trade-offs at a local scale and identifying the appropriate priorities for each mode along particular streets at particular times of the day.
SUMMARY OF STRATEGIC APPROACH

Vision – ‘To deliver a safe, effective and efficient land transport network that supports the region’s economic prosperity in a way that is environmentally and socially sustainable’

A balanced approach will be taken to move the region towards this long term vision, with a mix of investment aimed at progressing towards the range of outcomes sought for the region’s transport network.

This strategic approach recognises that the transport system has different roles and uses at different times of the day and week, and that there are often trade-offs between transport objectives. The goal is to have more people using public transport, walking and cycling—particularly at peak times when the transport network is in high demand—but also recognising that these modes will not suit or even be an option for many trips.

It will be important to continue to improve the different elements of our transport network to achieve multimodal solutions that effectively support the region’s economic growth and community wellbeing.

A summary of the overall strategy for development of the region’s transport network is described below under each of our key strategic objectives:

A high quality, reliable public transport network

A high quality (frequent, comfortable, safe, and easy to use) and reliable peak period public transport network will provide an efficient method for moving large numbers of people at peak times (with associated de-congestion benefits) along corridors where the transport network is in high demand and capacity is an issue. Continuing to improve off-peak accessibility will ensure that the public transport network provides a good base level of service for community accessibility purposes.

Ongoing investment in the region’s rail network is an important part of this strategy. 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 many communities within the region along several key corridors to the north of the Wellington City CBD. The priority is to improve rail’s reliability, capacity and frequency, and over the longer term the aim is to further improve journey times and reach.

Buses play an important role in the region’s transport network and will continue to do so in future. They support the rail network with connecting feeder services and provide core public transport services in many areas. Bus Rapid Transit (high quality, high capacity buses running in dedicated lanes) along the public transport priority spine in central Wellington and beyond will provide fast and reliable journeys through the Golden Mile/CBD and to the southern and eastern suburbs.

Key improvement areas for public transport include:

- Continued modernising of public transport vehicles
- Measures to improve journey times and service reliability
- Enhancing the quality of stations, stops and interchanges
- Improving pedestrian access to public transport stops and stations
- Improving public transport fare, information and ticketing systems
- Improving the design of public transport networks to be more effective and efficient
- Ensuring value for money through new performance based operating contracts
- Maintaining and enhancing park and ride facilities
- Using customer feedback to improve the network
- Promoting public transport use

A reliable and effective strategic road network

The region’s strategic road network provides vital connections between sub-regional centres within the region, and links the region with the rest of the North Island and the South Island via the Cook Strait ferry.

Strategic roads are key connections for freight and enable people to access jobs, schools, shops and other facilities. Severe traffic congestion can impact negatively on access and create blockages that result in people using less suitable or inefficient alternatives. Congestion will be addressed by a range of measures including optimisation and capacity improvements. Investment in our strategic road network will recognise the importance of improving its safety and reliability.
Key improvement areas for the strategic road network include:

- Infrastructure improvements along key strategic routes
- Improving the region’s connection to the north through implementation of the Wellington Roads of National Significance (RoNS)
- Improving the safety of the road network
- Providing better east-west connections within the region
- Minimising congestion, including through mode shift to public transport, walking and cycling
- Advocating for the ability to use road pricing tools

An effective network for the movement of freight

Providing an efficient freight network will support the region’s economic stability and future growth. To ensure the transport network provides effectively for freight, continued improvements are planned to the road and rail networks along key freight routes. Opportunities to enhance the efficiency of freight movements will also be supported. Key improvement areas for freight include:

- Infrastructure improvements along key freight routes, road and rail
- Facilitating high productivity motor vehicles on key freight routes
- Improving access to key freight destinations such as the port and international airport
- Implementation of the Wellington RoNS
- Studies to better understand freight movements within the region
- Identifying locations for potential facilities such as freight hubs, inland ports, freight storage, heavy vehicle parking
- Encouraging use of public transport at peak times to free up capacity on the road network for freight
- Encouraging use of rail for suitable freight tasks

A safer system for all users of our regional transport network

An important goal is ensuring that people can move about the region safely. A safe system approach to road safety will be used to address all aspects of regional road safety and to help move us towards our improved road safety targets. This involves measures to address safer drivers, safer vehicles, safer roads, and safer speeds.

The Swedish approach to road safety known as ‘Vision Zero’ is based on the principle that no loss of life is acceptable. This thinking has been incorporated into the road safety approach in this plan. An ongoing reduction in serious and fatal crashes is sought with the long term goal of a transport system free of fatalities. A key principle of ‘Vision Zero’ is recognising that people make mistakes. The safe system approach aligns well with this principle by addressing all the different elements influencing road safety. It does not remove people’s responsibility for road safety, but seeks to ensure a combination of road/roadside design, speeds and vehicle design that take human fallibility into account.

Key improvement areas for safety include:

- Safety infrastructure improvements – such as median barriers, and improvements as part of wider road projects (including the Wellington RoNS)
- Road safety education and promotion
- Speed limit reviews
- Advocacy for legislative change - for example, relating to driver licensing, blood alcohol levels, and vehicle safety standards
- Promoting use of public transport as a safer mode of transport
- Safe cycling and walking infrastructure.

An increasingly resilient transport network

The transport network needs to be resilient to low impact events (such as traffic crashes, landslips, storms) and high impact events (such as major earthquakes), as well as incremental longer term impacts and trends (such as climate change and fuel price/availability).

Key improvement areas include:

- Identifying key lifelines and transport infrastructure vulnerabilities (road and rail) and progressing mitigation projects to address resilience issues
- Implementing the Wellington RoNS and a new east-west link between SH2 and SH1 to improve network resilience and provide alternative routes.

1 http://www.visionzeroinitiative.com/en/
A well planned, connected and integrated transport network

Good integration between modes and between services contributes to seamless and efficient journeys for transport users. Well integrated land use and transport is critical to ensure the liveability of our region and supports an efficient and effective transport network.

Key improvement areas include:

- Improving integration within and between modes through projects such as integrated ticketing for public transport, improved station/stop/interchange design, more park and ride spaces, and cycle parking at railway stations
- Advocacy for integrated land use and transport planning through processes such as district plan changes and resource consents
- Adoption of appropriate design standards to guide the development of new subdivisions and infill development, including lot layout, street design, integration of active and public transport modes, and parking standards.

An attractive and safe walking and cycling network

We will continue improving walking and cycling networks, particularly for short trips, so that they provide a safe and attractive transport option. Walking and cycling trips contribute to efficient use of the transport network, and have many wider benefits for our community. While most roads and footpaths provide walking and cycling networks, we need to continue to improve the safety and quality of these facilities. We will also need to continue installing new infrastructure for pedestrians and cyclists such as cycle lanes, off-road paths, and crossing facilities to provide a good level of service.

Key improvement areas include:

- Providing a network of safe and attractive walking and cycling facilities
- Improving integration with public transport services, stops and stations
- Advocating for higher priority of pedestrian and cyclist road safety funding
- Advocating for good walking/cycling provisions in new land use developments
- Promotion and education to improve active mode use and safety.

An efficient and optimised transport system that minimises the impact on the environment

We want to develop and use our transport network as efficiently as possible, so that we are getting optimal benefit from the investment whilst minimising the environmental impacts. Our strategy involves influencing how and when people travel, supporting new technologies, and using tools to make the best use of the network.

Key improvement areas include:

- Promoting awareness of travel options and benefits through programmes such as travel plans for schools and workplaces, Active a2b, Let’s Carpool website, and events/campaigns.
- Supporting and promoting technologies and policies to reduce the demand on the transport network such as teleconferencing facilities, fast broadband access, car-share schemes and flexible work hours.
- Supporting technologies that reduce the impact of transport on the environment - such as electric vehicles, alternative fuels and fuel efficient vehicles.
- Implementing network management techniques and intelligent transport systems to optimise road network performance
- Managing travel demand through pricing measures such as parking charges and road tolling. Advocating for availability of road pricing of the existing network
- Improving and promoting the use of public transport, walking and cycling, particularly during peak periods.
POLICY FRAMEWORK
The RLTP vision is:

'To deliver a safe, effective and efficient land transport network that supports the region’s economic prosperity in a way that is environmentally and socially sustainable'

To achieve this, the regional transport network will provide a high level of access, reliability and safety for both people and freight travelling within and through the region to support economic development and improve productivity. The regional transport network will be developed in a way which recognises the vital national role of Wellington as the capital city and the region’s geographical position on the northern side of Cook Strait.

Access to and between key destinations such as Wellington City Central Business District (CBD) and other regional centres, CentrePort, Wellington International Airport and Wellington Hospital will be quick, easy, reliable and safe. Traffic congestion will be managed at levels that balance the need for access against the ability to fully provide for peak demands due to community impacts and cost constraints.

In urban areas there will be viable alternatives to travel by private car for most trips. Walking or cycling will be an attractive option for short and medium length trips. Pedestrian and cycling networks will be convenient, safe and pleasant to use.

Public transport will provide an attractive option for an increasing number of people, particularly at peak times along key commuter corridors. Public transport trip times, reliability, cost and comfort will compete favourably with private cars for a majority of commuter trips. The public transport system will effectively connect people with key destinations. All public transport services will have a high level of accessibility, including physical access, access to information and simple streamlined ticketing.

People will need to travel less because they have access to excellent telecommunications, local job opportunities and the opportunity to live closer to their main destinations for work and play. More vehicles will run on renewable fuels that are non-polluting. People’s travel choices will recognise the risk and impact of climate change and diminishing non-renewable resources.

Effective safety measures, behaviour change campaigns and other interventions will help to ensure that no one is killed or seriously injured when travelling within or through the region.

More bulk freight will be moved by rail and coastal shipping when economically viable.
The regional transport network provides vital access for people and freight to key destinations including the Wellington City CBD, regional centres, CentrePort (Wellington’s sea port), Wellington International Airport, and Wellington’s regional hospital in Newtown. It also links the region to the rest of New Zealand.

State Highway (SH) 1 and the North Island Main Trunk (NIMT) railway line enter the region near Otaki in Kapiti Coast and extend southwards through Porirua and northern Wellington to the Wellington City CBD. The railway line ends at the Wellington Railway Station at the northern end of the CBD and from there bus services continue along the core public transport network through the CBD to outlying suburbs. SH1 continues through to Wellington International Airport.

SH2 and the Wairarapa Line railway enter the region north of Masterton and extend south-west through Wairarapa, the Hutt Valley and on to merge with SH1 at Ngauranga and the NIMT line at Kaiwharawhara. Other rail connections extend from the Wellington Railway Station to Johnsonville and Melling.

SH58 provides a vital east-west link between SH1 and SH2, connecting Porirua and Lower Hutt. SH53 provides access between Featherston and Martinborough.

Many trips (particularly for freight and tourism purposes) travel between the Wellington region and adjoining regions in New Zealand. The transport network provides for journeys across regional boundaries. Issues affecting one region’s network can have a significant impact on communities and businesses in other regions. Coordination between regions is important to facilitate safe, effective and efficient inter-regional journeys.
The Wellington region’s topographic and geographic constraints mean it has developed a relatively compact urban form along the region’s transport corridors. This supports a good public transport network and has led to one of the highest levels of per capita public transport use in Australasia.

Local arterial roads provide important access to the state highways, major areas of employment and sub-regional and local centres. Buses and general traffic share many routes with cyclists and pedestrians. Local roads also cater for local traffic and access within districts, including access to private property.

The region includes Wellington City, New Zealand’s capital city, and a number of other large urban centres and suburban areas through to districts that are largely rural in character and have different transport system issues and requirements compared to urban and suburban areas.

A summary of the key challenges and issues affecting the region’s transport network is outlined below.

**Network capacity constraints and issues**

The capacity of both SH1 and SH2 steadily increases as they move south through the region until they merge at Ngauranga, creating a six-lane motorway between this point and Aotea Quay (CentrePort/ferry terminals). The Ngauranga Gorge interchange is a major pinch point that limits the amount of traffic that can access or exit Wellington City at peak times.

Other areas of constrained capacity include:

- Otaki (SH1 – during public holidays)
- Waikanae to Paraparaumu (SH1)
- Paekakariki to Pukerua Bay (SH1)
- Ngauranga to Aotea Quay (SH1)
- Terrace Tunnel to Cobham Drive (SH1)
- Approach to Melling Interchange (SH2)
- Petone to Ngauranga (SH2).

Between Aotea Quay and Wellington International Airport, SH1 has a large number of signalised intersections plus two tunnels (Terrace and Mt Victoria) that act as capacity constraints along with a number of other pinch points such as the Basin Reserve, Vivian Street and Ruahine Street. As the state highway crosses local commuter routes the resulting congestion has knock-on effects for local roads and affects the reliability of bus services.

East-west connectivity is serviced by SH58 to the north and the Ngauranga Interchange to the south, leaving a considerable ‘gap’ in the regional network for travel between Porirua/north Wellington and the lower Hutt Valley. This results in longer travel times (compared to travel times between other centres) and contributes to congestion at the already busy Ngauranga Interchange.

SH2 Rimutaka Hill Road between Upper Hutt and Wairarapa involves several sharp turns and narrow road widths with associated safety issues, particularly where heavy freight vehicles are forced to cross the centreline at some locations. The necessary reduced speed through this part of the network also leads to increased travel times. The road is also prone to closure and landslips during stormy weather.

On the local road network, buses and general traffic experience slow and variable travel times, particularly in Wellington City, during peak periods due to:

- a high number of signalised intersections
- high traffic volumes
- bus-on-bus congestion in the central city
- interaction between multiple road users – cars, buses, cyclists, pedestrians
- narrow streets in a geographically constrained urban environment.

For rail, the Kapiti, Hutt and Johnsonville lines are important commuter routes, bringing over 13,000 people into the Wellington CBD for work in the morning peak. The NIMT railway line also plays a significant role in moving bulk freight from across the North Island to the Interislander terminal and Port and then on to the South Island or overseas. Key rail infrastructure constraints include:

- Single track sections on the NIMT railway line between Paekakariki and Pukerua Bay and single track on the Hutt Valley/Wairarapa railway line between Trentham and Upper Hutt limit the number of commuter and freight train trips that are available at peak times
- A lack of passing loops on the rail network affects scheduling flexibility.

**Reliability and resilience**

The Wellington region’s geography has helped to shape its relatively compact urban form and linear transport network, with associated benefits in terms of transport system efficiency. However, it is this form that has left the region largely reliant on two highways and two railway lines for access, with limited alternative routes. The reliability and resilience of the transport network are therefore key issues for the region.

Reliability is a measure of the predictability and variance of transport travel times from one day to the next.

Resilience relates to how susceptible the region’s transport network is to being severely disrupted during a major event such as an earthquake, and how long it might take for key routes and lines of communication to be re-established in the aftermath of such an event. It is also a measure of the ability of the region’s transport network to cope with day-to-day ‘incidents’ such as road traffic accidents and temporary slips.

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1 Greater Wellington Regional Council, Wellington Public Transport Annual Cordon Survey – 2014 data
The region is susceptible to individual incidents causing significant delays – particularly at the following locations:

- SH1 between Kapiti/Porirua and Wellington City (particularly the narrow section between Pukerua Bay and Paekakariki)
- SH2 between Ngauranga and Petone (the only direct link between Hutt Valley and Wellington City)
- SH58 – the only practical east-west link between SH1 and SH2.

In terms of local routes, the following suburbs in Wellington City have limited access:

- Miramar
- Eastern suburbs
- Brooklyn
- Karori
- Northern suburbs.

In Lower Hutt, access to a number of suburbs could be severed due to limited (and sometimes vulnerable) local road access – for example, Wainuiomata, Stokes Valley and Eastbourne. In Wairarapa, access to the town of Martinborough relies heavily on SH53 which is vulnerable to flooding at some locations.

Several sections of the strategic transport network are particularly vulnerable to the impacts of a storm surge. In the longer term, they are also prone to sea level rise from climate change. These include:

- SH1 Pukerua Bay to Paekakariki
- SH1 Cobham Drive
- SH2 Ngauranga to Petone
- SH58 along Pauatahanui Inlet

This vulnerability was highlighted when the June 2013 storm closed the rail line between Ngauranga and Petone for several days. This storm created significant delays on the state highway and had an estimated economic impact of between $12 and $43 million.

Several sections of SH1 and SH2 – Paekakariki, Ngauranga Gorge, Rimutaka Hill road – and SH58 are also prone to disruption should a major storm or earthquake occur, mostly from landslides.

Similarly, the NIIT railway line between Pukerua Bay and Paekakariki, and the Wairarapa railway line between Ngauranga and Petone are vulnerable to these hazards.

Analysis undertaken by the Wellington Lifelines Group predicted that a major earthquake could isolate and fragment the region. Restoring access to the various areas of the region is estimated to take anywhere from three days to 10 weeks. Road access to the Wellington CBD may take an estimated 120 days to restore.

**Population and employment**

Census 2013 data show that the Wellington region’s population has increased at a similar rate to the national average (about 10% between 2001 and 2013). This rise has been faster in Wellington City and Kapiti than elsewhere in the region. In absolute terms, Wellington City (191,000) and Lower Hutt (98,000) account for nearly two-thirds of the region’s population. The Wellington CBD population has grown by 45% since 2001.

The high growth rates in Wellington and Kapiti are primarily a result of:

- large housing and employment developments at Paraparaumu and Waikanae
- new subdivisions in Wellington’s northern suburbs
- a large number of new apartment dwellings in and around the Wellington CBD.

Under a ‘medium’ future population growth forecast, which is representative of how the region has tracked in the recent past, a further 10% increase in population is forecast to occur between 2013 and 2031, with a continued focus of growth in Kapiti and Wellington City.

Development along the Wellington City growth spine is likely to result in lower car dependency. In the CBD specifically, growth is also likely to encourage a higher active mode share resulting from shorter commuting distances, limited parking options, and ease of access to amenities.

The Wellington region’s population is ageing. Between 2001 and 2013 the percentage of the total population aged 65 years or over increased from 11.1% to 13.2% while other age groups have decreased in proportion or remained relatively constant. These trends are likely to continue into the future as the baby-boomer generation reaches retirement, average life expectancy continues to increase and birth rates remain low.

Forecasts suggest that there may be a 36% increase in the number of people aged over 65 living in Wellington City between 2013 and 2025. If a similar increase were to occur across the rest of the region, the percentage of the region’s population aged over 65 may increase from 13.2% in 2013 to nearer 17% in 2025.

People are also working later in life. The proportion of the New Zealand labour force aged 65 years and over has increased from 1.5% to 5.4% over the past decade. This trend is expected to continue as more people continue working into their late 60s and 70s.

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1 Ministry of Transport, November 2003, The transport impacts of the 20 June 2013 storm
2 WelG/WREMO, March 2013, Transport Access – initial project report
3 Based upon Statistics New Zealand Local Authority projections
4 http://profile.idnz.co.nz/greater-wellington/five-year-age-groups
5 http://forecast.idnz.co.nz/wellington/population-age-structure
6 Statistics NZ Labour Force Survey
An ageing population may result in an increase in off-peak travel demand, particularly for public transport. This, however, needs to be balanced against the fact that the percentage of the overall population categorised as being in the labour force is likely to remain constant through time. An ageing population also has road safety impacts.

Different age groups have different travel patterns. In general terms, young people (0 – 24 years) place more demand on public transport, working professionals (24 – 60 years) drive more and older people (60+ years) have a higher demand for public transport.1

Another emerging trend is people taking advantage of technological improvements in communications – internet, mobile phones, cloud computing – to work remotely, reducing the need to travel. The 2013 Census shows a small increase in persons working from home (compared with 2006), a trend that is likely to continue into the future.

The net result of the demographic and lifestyle changes detailed above, whilst subject to a degree of uncertainty, is likely to be a future where only relatively minor changes in travel patterns occur and average per capita car and public transport trip rates also remain relatively unchanged.

Alongside population, employment is another key driver of travel demand. The spatial distribution of both employment and population determines how much travel people have to do in order to reach their place of work.

There was a 3% reduction in employment across the region between 2008 and 2012 due to the economic slowdown. However, over the longer term there has been an overall 13% increase in the number of people employed between 2001 and 2013. Wellington (approx. 56%) and Lower Hutt (approx. 18%) have a greater percentage of the region’s jobs than they have of the region’s population,1 explaining some of the current commuter travel patterns across the region.

Regional employment is anticipated to grow at a slightly faster rate (12%) than population (9%). The forecasts show that, in percentage terms, employment growth (unlike population growth) will be more evenly spread between the local authorities within the region.2

In absolute terms, however, most new jobs are likely to be added in Wellington City CBD, placing an even greater reliance on the transport network for getting people to/from their place of work.

GDP is forecast to grow across the whole region at an even rate of 1.8% per annum, a rate similar to the average growth rate of the past 20 years.3 Historically, growth in GDP and vehicle kilometres travelled (VKT) was closely linked. In recent years, however, GDP and travel demand appear to have started to ‘decouple’, with GDP having risen over the past 10 years whilst VKT has remained relatively static. As a result of this emerging trend, it is likely that future increases in travel demand will be linked to a range of factors other than just GDP growth, including population and employment in specific areas.

1 Based upon Statistics New Zealand Local Authority projections
2 Based upon Statistics New Zealand Local Authority projections
3 NZ Treasury long term trends and forecasts

Figure 5. Forecast growth in the Wellington region’s population and employment, 2013 to 2031, by local authority area

Source: Statistics NZ
Travel patterns

Looking at Census journey to work data for the Wellington region, between 2001 and 2013 there has been a large observed increase in the number of journey to work trips made by active modes (36%) and a moderate increase in journey to work trips made by public transport (20%). By comparison, the number of journey to work trips undertaken by car increased by only 5% during the same period. Placed in the context of an increase in population of 11% between 2001 and 2013, there has been a per capita increase in active mode and public transport journey to work trips and a per capita decrease in car journey to work trips over this period.

Nationally, growth in vehicle traffic volumes (car and HCVs) on state highways began to slow around 2000, despite the HCV component of this growth continuing to grow at a fast rate. Since 2005, total traffic volumes on the state highway network have decreased by around 1%.\(^1\) However, HCV traffic during this period increased by about 3%. This is similar to trends observed in many other developed countries during this period.

This trend does, however, mask steady growth along a few corridors through New Zealand, which is correlated well with GDP growth. ANZ’s Truckometer\(^2\) shows steady growth in HCV traffic along key roads, attributing it mainly to agricultural output. This indicates that specific routes associated with the movement of agricultural goods are becoming busier, while other sections of the network are experiencing a drop in use. The net result is a static trend in overall vehicle kilometres travelled.

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1 NZ Transport Agency, State highway traffic data booklet
2 http://www.anz.co.nz/commercial-institutional/economic-markets-research/truckometer/

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**Figure 6. Vehicle kilometres travelled per annum, Wellington region, 2000 to 2012 (all vehicles)**

Source: http://www.transport.govt.nz/ourwork/tmi/tv001/
In the Wellington region, VKT on state highways has remained broadly static over the past decade to 2011/12.1 A similar trend can be observed for travel volumes on local roads, indicating that shorter distance local vehicle trips have also remained largely static.

Approximately 1.15 million vehicle-based trips (car, road freight and public transport combined, excluding rail freight) are made every day across the region.2 Around half of daily public transport trips and 40% of daily car trips occur during the morning and evening peak periods. Around 80% of peak period trips are commuter trips whilst most off-peak trips are shopping and leisure related.3

Looking at all journey to work trips categorised by originating local authority area, Wellington City and Lower Hutt have the highest public transport mode share at 20% and 16% respectively.4 Public transport accounts for between 11% and 13% of all journey to work trips originating from Kapiti, Porirua and Upper Hutt. Only 5% of journey to work trips originating from the Wairarapa are made by public transport.

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1 Ministry of Transport, Transport Monitoring Indicator Framework, TV001
2 Estimate: Wellington Transport Strategy Model
3 Sourced from Greater Wellington Regional Council Wellington Transport Strategic Model
4 Census JTW analysis (excluding persons who work from home or did not travel to work on the Census day)
Travel patterns vary between the local areas within the region:

- According to the Census, around 70% of journey to work trips have both their origin residence and destination workplace within the same local authority area.
- Wellington City dominates the region, accounting for 46% of journey to work trips by origin residence and 60% of journey to work trips by workplace destination.
- 26% of region wide car journey to work trips, 56% of region wide active mode journey to work trips (walking/cycling) and 78% of region-wide public transport journey to work trips have their destination workplace in the Wellington CBD.
- Over 50% of journey to work trips originating from Upper Hutt are destined for workplaces outside of the local area, with Lower Hutt and Wellington City the primary destinations.
- Over 50% of journey to work trips originating from Porirua are destined for workplaces outside of the local area, with Wellington City the primary destination.
- The rail network accounts for around 45% of journey to work trips from local authority areas other than Wellington City to destination workplaces within the Wellington CBD, highlighting the importance of the rail network as a means of transporting people to/from Wellington CBD and taking pressure off the strategic highway network.
Public transport

Total regional public transport patronage has increased between 2001 and 2013 from around 30.5 million trips per annum (2001) to 35.2 million trips (2013), an increase of 17%. Growth in off-peak trips (23%) has been greater than growth in peak trips (12%). This growth rate is slightly higher than the growth in population, implying that the number of boardings per capita has increased. However, growth in patronage was considerably higher between 2001 and 2005 (15.5%) than between 2005 and 2013 (1.2%).

While the global financial crisis can in part help to explain lower public transport growth rates between 2005/06 and 2012/13, other possible factors include:

- Historical rail reliability issues. However, rail reliability started to improve in late 2010, accompanied by a relative uplift in rail patronage that has continued through 2012 and 2013
- Slow and unreliable bus journeys of some routes, a result of traffic congestion affecting buses
- A significant increase in the popularity of active modes between 2005/06 and 2012/13, drawing some patronage away from public transport

Public transport usage, measured in terms of annual boardings per head of population, is already higher in Wellington than in most other Australasian cities (and over double Auckland’s figure). Significant further increases in public transport patronage will become more difficult due to the existing level of use and attractiveness of public transport, and the relatively small percentage of the population whose travel behaviour can be influenced. This explains why considerable investment is often required in order to generate what might appear to be a small change in public transport mode share.

Looking at journey to work trips to the Wellington CBD from the various local authority areas in the region, Wellington City itself generates the most vehicle-based trips to the Wellington CBD and has the lowest public transport mode share of trips to the Wellington CBD (29%) compared with the other local authorities in the region, showing that the private car is still attractive for relatively short distance trips from the surrounding suburbs to the Wellington CBD, contributing to the traffic congestion that affects both highways and local roads through the city.

By comparison, Kapiti, Hutt Valley and Porirua have a public transport mode share of between 44% and 50% for journeys to work where the destination workplace is in Wellington CBD. Given that most of these trips are undertaken by rail, this data further highlights the importance and effectiveness of the rail network in managing peak period congestion throughout the region.

Despite planned road investment through the Wellington RoNS programme, public transport patronage is forecast to increase out to 2025 as a result of planned public transport investment, parking constraints in Wellington City CBD, and more people expected to be living in locations that favour walking, cycling and public transport use.

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1 Greater Wellington Regional Council patronage data
3 Census journey to work data
4 Census journey to work data
5 Greater Wellington Regional Council, 2014, Development of Future Scenario (WP4)
Active modes

The active mode share of all trips in the Wellington region is higher than comparable figures for other regions and is also higher than the national average figure.¹

Overall, active modes have increased in popularity in recent years. Morning peak period active mode trips to the Wellington CBD have shown the most growth with the number of pedestrian and cycle trips increasing by 20% and 64% respectively between 2001 and 2013, resulting in the combined walking/cycling mode share to the Wellington CBD during the morning peak period increasing from 17.7% in 2001 to 21.0% of all CBD trips for 2013.² This equates to 17,000 walking and cycling trips crossing the Wellington CBD cordon during the morning peak in 2013.

The potential to increase the cycle mode share further is limited by safety issues and a lack of dedicated cycling infrastructure. The regional strategic cycling network contains some on-road and off-road cycle lanes, but these lanes are often discontinuous and do not always provide an acceptable level of service. The most significant gap in the regional cycling network is between Ngauranga and Petone.

For pedestrians, a key issue is severance caused by physical barriers – such as major roads, railway lines, rivers or hills – with limited crossing facilities. Other issues include conflict with other road users, particularly within busy urban areas where available space is constrained. Factors such as footpath widths, crossing facilities, priority at intersections, shelter, and signage all affect the safety and amenity for pedestrians in urban areas.

Freight

Freight includes anything transported as part of a commercial arrangement – from a courier delivery to the movement of logs, containers and heavy machinery. Over the period from 2008 to 2014 the amount of freight transported throughout New Zealand has increased slowly, with a slight decrease in 2009 that can be directly attributed to the global financial crisis. However, there have been some major growth areas within this overall freight trend including the growth of exports and increasing rail freight mode share.

The growth of rail freight reflects increases in output of some major commodities – particularly milk, dairy products and logs – for which rail offers competitive advantages over road transport, as well as the investments made as part of the KiwiRail Turnaround Plan.³

Freight trips to and from the Wellington region amounted to 5.1 million tonnes in 2012 while purely internal road and rail trips carried 6.4 million tonnes.⁴

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¹ 2013 Census data
² Wellington City Council CBD Cordon Survey
Freight movement in 2012

Wellington is a major freight hub between the North and South Islands and for the export of bulk freight (predominantly primary products). SH1 and the NIMT railway line are the main transport corridors for freight to the region from the North Island. The section of SH2 south of Petone is also a significant freight corridor. Inter-island ferries connect road and rail freight with the South Island (around 2.0 million tonnes and 0.9 million tonnes in 2012 respectively). Other types of coastal shipping carries freight from Wellington’s CentrePort to other New Zealand or international ports.

There is a significant volume of log freight from the lower North Island to Wellington’s CentrePort. A new KiwiRail service from Wairarapa that started in March 2012 allows for up to 80,000 tonnes of the logs to be moved by rail to CentrePort per year. However this still only accounts for 16% of logs coming from the Wairarapa, with the rest currently being transported by road.

In Wellington, road freight is affected by traffic congestion in urban areas as well as slow and variable travel times along SH1 and SH2. Access to the Interislander terminal and CentrePort is sub-optimal and capacity constrained at certain times, with conflicts between freight and commuter traffic a significant issue. Limited physical capacity at the port and ferry terminals themselves is also a constraint likely to affect freight efficiency and future growth. While as a percentage of total freight tonnage freight to/from Wellington Airport is currently low, the time-critical nature of air freighted goods means that effective and reliable road access to the airport for freight is important.

Projected freight growth in Wellington

Wellington’s freight task (tonnage) is projected to increase by around 58% over the period 2012 to 2042. In the Wellington region the projected freight growth is around 75%, from about 8 million tonnes to 14 million tonnes by 2042. This will place additional pressure on the region’s transport network and ensuring reliable, timely and efficient freight movement under this future scenario will be an important challenge to address.


2 Grow Wellington data
As the capital city and a major urban hub, much of Wellington’s freight movement consists of short trips within the region. This includes freight trips between key industrial and distribution hubs within the region, the movement and distribution of goods related to Wellington’s service and retail industries, and other light freight movements such as home deliveries. This type of freight movement has different characteristics and needs compared with longer distance and higher volume bulk freight. It is affected by congestion on strategic roads to/from the port, but also on routes across central Wellington city and on other parts of the local road network.

Moving freight from road to rail is really only feasible and practical for some longer distance bulk freight, but is important to support an efficient transport system with associated decongestion, safety and environmental benefits.

New Zealand’s freight task (tonnage) is projected to increase by around 58% over the period 2012 to 2042. In the Wellington region the projected freight growth is around 75%, from about 8 million tonnes to 14 million tonnes by 2042. This will place additional pressure on the region’s transport network and ensuring reliable, timely and efficient freight movement under this future scenario will be an important challenge to address.

Traffic congestion
When demand is greater than available capacity, travel times on the region’s roads can be slow and variable. Such a scenario regularly occurs during the AM peak and, to a lesser extent, PM peak periods, resulting in congestion that reduces the level of service to private vehicles, delays emergency vehicles and increases costs for freight transport. Other factors that affect congestion levels are weather patterns, crashes and construction or maintenance activities.

Congestion on the road network can also affect the reliability and attractiveness of bus services in areas where bus priority lanes are not provided. It can also negatively affect the amenity of people living along transport corridors and other road users (namely cyclists and pedestrians) through noise and vehicle emission pollution.

Between 2003 and 2013, average congestion indicators covering the strategic road network have remained relatively unchanged across all time periods. This indicates that regional congestion has remained relatively unchanged despite economic and population growth and correlates well against traffic volumes/VKT which also remained largely static during this period. Despite this flat trend, severe congestion currently occurs along some key sections of the network and is expected to worsen in the future due to additional traffic volumes generated by population growth.

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2 NZ Transport Agency - Travel Time Surveys

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Figure 8. Comparison of Wellington congestion indicators

Source: NZTA Travel Time Surveys
Looking at strategic roads across the whole region, congestion is worst in the morning (AM) peak period, with the average delay per kilometre travelled varying between 25 seconds and 35 seconds during the period from 2003 to 2013. Whilst the trend of the four-year period from 2010 to 2013 shows a gradual decrease in congestion, peak congestion levels are still elevated compared with other time periods and the all day average.

The inter-peak (IP) congestion levels are the lowest of all the time periods and have remained relatively consistent between 2003 and 2013, ranging from around 10 seconds to 15 seconds delay per kilometre travelled. Evening (PM) peak average congestion levels varied between 19 seconds and 26 seconds delay per kilometre travelled during the period 2003 to 2013. Congestion is not restricted just to weekday peak periods – increasingly, congestion is becoming a problem in certain locations at the weekend.

Key pinch points on the road network where demand exceeds capacity include:

- Along SH1 through the region - the narrow stretch between Paekakariki and Pukerua Bay, Ngauranga Gorge and the SH1 merge with SH2, Terrace Tunnel, Mt Victoria Tunnel, and Ruahine Street.
- Along SH2 through the region – Melling, SH2 merge with Petone Esplanade, and the stretch between Petone to Ngauranga.

These sections are currently at capacity during peak times on the weekday and in some cases at weekends. This results in severe congestion on those and adjacent parts of the strategic road network.

When comparing Wellington’s congestion levels with those of other cities in Australasia, Wellington ranks relatively well, experiencing less congestion than either Auckland or Christchurch. Improvements planned for the state highway and public transport networks out to 2035, combined with low forecast growth in traffic volumes, are likely to result in congestion remaining the same or even reducing despite continued steady economic and population growth.

**Lifestyle and working patterns**

Data has recently emerged highlighting potential structural changes in people’s travel behaviour that have occurred between the late 1990s and the present day. One manifestation of these changes is an apparent decoupling between gross domestic product (GDP) and VKT that has been observed across the developed world, including within New Zealand. Whilst an element of this change is thought to be attributed to the effects of the global financial crisis, some changes pre-date this and can be considered more structural in nature.

Over a third of Wellington City’s population growth since 2001 occurred within the Wellington City CBD and was primarily accommodated within new apartment developments. The rising popularity of living in the CBD encourages people to make more trips by active modes (and, to a lesser extent, public transport) and fewer trips by motor vehicle. The 2013 Census highlights these trends, showing an increase in active mode/public transport trips and a decrease in car trips associated with the Wellington City CBD and surrounding areas.

Changing demographics also affect travel patterns. As has been documented previously in this section, New Zealand has an ageing population as people are living longer and the ‘baby boomers’ are moving into their retirement years. Balanced against this is the fact that people are also working later in life, resulting in an increase in the total number of trips made by people in this age group.

Younger generations (who are more likely to live in high density urban areas) appear to have lower rates of car ownership than has historically been the case and are becoming less likely to obtain drivers licences during their teenage years. However, this should be considered in the context that this age group comprise a relatively small percentage of the total population and total trips made.

Lifestyle trends such as the increasing popularity of working from home (enabled by technological improvements - internet, mobile phones, cloud computing) are also starting to influence travel patterns, providing people with the ability to work remotely and thus reducing their need to travel.

The extent to which these trends will continue into the future is subject to debate. The balance of evidence suggests that a likely future might be one where demographic and lifestyle changes do not result in significant changes in travel patterns, with growth in travel demand linked more closely to population rather than economic growth.

**Costs and affordability**

A future ‘high oil price’ scenario is believed to be more likely given the increasing costs of extraction and increasing oil consumption in emerging economies. Rising prices in this scenario could outweigh future vehicle efficiency improvements and vehicle fleet composition changes.

Demand for petrol and diesel is generally thought to be relatively inelastic, which means that for most trips people will tend to absorb steady price increases without much change in behaviour. Increasing prices, however, will make the cost of transport less affordable if they outstrip wage increases – particularly for those on low or limited incomes. This will eventually suppress the growth of vehicle-based transport, encourage the use of active modes for more short to medium distance trips, and reinforce the trend towards higher density living closer to employment centres.

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1 Greater Wellington Regional Council, 2012/13 Annual Monitoring Report on the RLTS  
3 Census data 2013  
Higher density, inner city living is more expensive in terms of property related costs. However, associated transport costs are lower since people can use active modes more and need to travel less. Living further from city centres generally means lower property costs but higher transport costs and more car dependence.

Public transport fare prices are likely to continue rising over time under the current policy setting. However, in a high oil price scenario, the relative cost of car travel will rise faster than both GDP and public transport fares. This will make public transport relatively more affordable over time, especially if GDP rises at a faster rate than fares.

Road safety

The total number of road user injury casualties recorded across the region during 2013 (excluding cyclist and walking injury casualties) was 897, a record low when looking at historic information dating from 1997.1

From 2001 to 2013, there was a gradual increase in road user casualties between 2001 and 2007 followed by a steady decline in injury casualties thereafter.

There were 18 fatal and 115 serious injury casualties in the Wellington region reported in 2013.2 Overall, the trends for fatal and serious casualties are similar to total injury casualty trends.

These reducing trends are likely to be due to a combination of road safety measures, including targeting accident black spots, safety infrastructure improvements, police enforcement, road safety educational programmes and campaigns, and improved vehicle safety standards. In addition, lower speed limits have been applied to many parts of the region’s road network (including parts of the state highway network) and the police have introduced a much lower tolerance towards speeding.

Cycle injury casualties across the region doubled from 75 in 2000 to 150 in 2008, before dropping between 2008 and 2013 (100). When placed in the context of a doubling of cycling trips between 2000 and 2013, the risk to any individual cyclist has slightly reduced between 2000 and 2013.3 The majority of cyclist injury casualties occur in Wellington City as this is where most cycle trips take place.

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1 NZ Transport Agency, Crash Analysis System
2 NZ Transport Agency, Crash Analysis System

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**Figure 9. Annual regional injury casualties, all road users (exc. walking and cycling), by local authority area, 1997 to 2013**

Source: NZ Transport Agency, Crash Analysis System
Despite this recent downward trend, the Wellington region has the second and first highest personal risk for cyclists and motorcyclists respectively compared with other regions in the country. Casualty numbers remain disproportionally high given the relatively low number of these trips compared to other transport modes.

The NZ Transport Agency’s ‘Communities at Risk’ analysis identifies patterns associated with different parts of the region. Wairarapa is overrepresented in terms of crashes involving young drivers, alcohol, and excessive speed. Wellington City and Hutt City are overrepresented in terms of vulnerable road users such as pedestrians, cyclists and motorcyclists. Wellington City is also notable for the higher risk of crashes at intersections. Kapiti Coast is overrepresented in terms of crashes involving older road users.1

Whilst the number of pedestrian injury casualties has fluctuated in recent years, there has been an overall slight downward trend between 2000 and 2013,2 which should be placed in the context of an increasing number of walking trips. It is thought that these recent improvements are partly due to the development of safer pedestrian zones around busy urban nodes, improved infrastructure (crossings, speed cameras, designated slow speeds zones) and driver/pedestrian education campaigns.

Road safety as a concept covers most aspects of the land transport system. It includes motor vehicles using the road network (including trucks, public buses, and motorcycles), pedestrians and cyclists using the road network (including shared paths), and motor vehicles at rail crossing. The NZ Transport Agency monitors incidents and accidents on the rail system nationally – the occurrence of serious or fatal casualties for rail passengers or staff is very low.

**Climate change and carbon dioxide emissions**

Climate change is a global problem, however many of the impacts of climate change are highly localised – the effects over the coming decades are expected to vary considerably from one area to another. In the future, New Zealand is expected to suffer from more extreme weather patterns and a rise in sea level leading to damaged infrastructure.3

The Wellington region contributes to this global environmental issue through the consumption of non-renewable fossil fuels and the consequent production of greenhouse gas emissions. For the region, fossil fuel use is primarily for transport purposes.

Despite regional population and economic growth occurring between 1999 and 2013, transport-related greenhouse gas emissions rose between 1999 and 2005 before declining between 2005 and 2013. The most recent year (2013) saw regional transport-related carbon dioxide emissions at their lowest level since 1999.4 When expressed in per capita terms, annual transport-related carbon dioxide emissions have fallen by around 10% between 1999 and 2013.

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Future transport-generated emissions will be governed by a number of factors:

- Population and employment growth rates, which will determine future travel demand
- Mode choice – public transport generates lower emissions (per passenger kilometres travelled) than the private car. Active modes generate no emissions
- Vehicle fleet composition – more efficient, more environmentally friendly vehicle engines will have lower emission rates. The Ministry of Business Innovation and Employment (MBIE) forecasts that fuel efficiency will improve by around 20% over the period to 2035
- Taxation and government policy – increases in fuel duty, a congestion charge, road tolls or a carbon tax and various registration/import charges for more efficient vehicles, if introduced would affect travel demand and transport-generated carbon dioxide emissions
- Travel demand ‘saturation’ – emerging evidence suggests that people’s propensity to travel is already reaching a saturation point, with per capita trip rates perhaps having reached a peak.

Uncertainties associated with forecasting assumptions make it difficult to accurately forecast levels of future transport-related emissions. However, given our knowledge of recent trends and future forecasts, it is likely that transport-generated emissions will continue to decrease into the future.

Air and water quality

The air contaminants monitored are particulate matter ($\text{PM}_{10}$), carbon monoxide (CO) and nitrogen dioxide (NO$_2$) which are by-products of fuel combustion and are known to have adverse human health effects when their concentrations in air exceed guidelines.

The air quality monitoring site located in the Wellington CBD indicates that concentrations of NO$_2$ and CO were well within national standards and have been at ‘acceptable’ levels or better throughout the monitoring period. Particulate concentrations have exceeded the national standard only on one day throughout the entire eight-year monitoring period from 2005 – 2012.\(^1\)

Pollutant concentrations have been found to vary considerably by time of day, day of the week and month of the year. Maximum daily levels of CO and NO$_2$ coincide with the peak periods of traffic intensity. However, more traffic data is required in order to fully explore the relationship between pollutant concentrations, meteorology and vehicle counts.

Surface water contaminants from the road network include fuels, additives, oil, grease, and brake and tyre residues. These contain a variety of toxic components including heavy metals and organic compounds. The presence of dissolved metals in many urban streams has been detected, with some concentrations above national water quality guidelines. It is currently not possible to isolate the impacts of road runoff on the environment. However, sediment quality, water quality and ecological health monitoring around the region indicate that some contaminants, which can be derived from road runoff, are present at elevated concentrations.

\(^1\) Greater Wellington Regional Council, 2012/13 Annual Monitoring Report on the RLTS
Health impacts
In addition to air pollution associated with transport, discussed under the heading above, wider health impacts and benefits can be linked to the way the transport system is planned and developed.

Noise and vibration are important considerations for new transport corridors or new land use adjacent existing corridors. The volume and flow of traffic, speed of traffic, and proportion of heavy vehicles are all factors that influence the extent to which noise and vibration affect communities.

Physical inactivity is a significant issue affecting the health of communities in the region and nationally. Opportunities to engage in physical exercise as part of a trip or daily commute can have important health and wellbeing benefits for the individual. Trips made by walking and cycling, and also public transport (where walking or cycling forms part of the trip) provide this opportunity.

Transport also affects the wellbeing of people and communities by providing for social interaction and promoting social cohesion. A lack of transport options can lead to social isolation, and often impacts on young adults and the elderly in particular.

Integrated transport and land use planning
Land use patterns and integration with transport networks have a significant influence on travel demand. Historically, land use development in the Wellington region has been strongly integrated with transport infrastructure. Many communities were originally developed around tramlines and rail lines. However, over time, growth pressures have seen areas of urban sprawl within the region that are not easily served by public transport and where longer travel distances limit opportunities to make trips by walking or cycling. This has been balanced more recently with a trend for more inner city living, driven by a range of factors and facilitated by current planning documents.

The transport and land use planning framework in the Wellington region is currently fragmented, making achieving integrated planning and decision-making difficult. Transport planning is governed by the Land Transport Management Act, with this Regional Land Transport Plan providing the strategic regional direction for the transport network.

There are many other transport plans developed by GWRC, NZ Transport Agency and local councils relating to the management and operation of the various parts of the transport network. Land use planning is governed by the Resource Management Act and the Regional Policy Statement provides the strategic regional guidance on land use development issues. Below this sit a large number of statutory and non-statutory plans at the local level including district plans, structure plans/master plans, and growth strategies.

A regional spatial plan would assist in achieving an agreed plan for strategic growth across the region and improved integration between transport infrastructure and land development.

Summary
The Wellington region has a relatively compact urban layout and linear transport network with development along the region’s transport corridors.

The Wellington region has one of the highest per capita uses of public transport in Australasia.

The share of active mode trips in the Wellington region is higher than the national average.

The Wellington region has less congestion than New Zealand’s other major cities of Auckland and Christchurch.

Key trends affecting Wellington regional transport out to 2041
- Population growth is steady and expected to continue, and strongest in Wellington City and Kapiti.
- Steady economic growth is forecast throughout the region, with Wellington CBD expected to continue to dominate regional employment.
- Fuel prices are expected to continue to rise, and under a ‘high oil price’ scenario could outweigh future vehicle efficiency improvements and vehicle fleet composition changes.
- Active mode use is increasing, and is likely to continue, boosted by the growth of inner city living and other lifestyle changes.
- Public transport use and state highway VKT have been relatively flat over the past decade, but are likely to increase in line with growth in population and employment.
- Congestion on the road and rail network has been fairly consistent over the last decade. Planned and ongoing capacity and efficiency improvements to the state highway network (such as the Wellington RoNS) and the public transport network, with low traffic growth, are expected to reduce congestion.
- An ageing population and people working later in life which will impact on travel requirements, while the trend for younger people is away from reliance on travel by private car.
- The volume of freight moved nationally is expected to grow. Wellington will continue to be a major freight hub for movements between the North and South Islands.
- Road safety is improving. However, cyclist and motorcyclist casualty numbers are disproportionately high compared with other modes of transport and other parts of New Zealand.
- Transport-generated greenhouse gas emissions have been relatively static overall over the five-year period to 2013, despite growth in population, and the steadily decreasing trend in per capita emissions is expected to continue.
C. PROBLEM DESCRIPTION

A problem definition workshop was held to assist in defining the key transport-related problems in the Wellington region including identifying the causes behind these problems and the issues that result.

The process followed was:
- to identify current and future issues in the region
- to group the range of issues under common heading themes
- to develop a high level problem statement for each theme

The range of issues identified was consistent with that described in the previous section entitled ‘Transport network pressures and issues’ of this Plan. These issues were then grouped under broad theme headings.

These broad subject themes were:
- Economic growth
- Road safety
- Resilience
- Liveability

The problem statement for each theme is written to identify a cause and consequence.

The resulting problem definitions were:

**Economic growth**
Transport inefficiencies lead to suppressed regional economic growth and productivity.

**Road safety**
Transport infrastructure deficiencies and poor user behaviour leads to a sub-optimal regional road safety performance.

**Resilience**
Regional infrastructure that is vulnerable to disruption by unplanned events is potentially resulting in an unacceptable cost of severance and restricted ability to recover over time.

**Liveability**
Poor delivery of transport and land use can result in a deteriorating living environment and reduced transport choices for the region’s population.
The RLTP vision is ‘To deliver a safe, effective and efficient land transport network that supports the region’s economic prosperity in a way that is environmentally and socially sustainable’.

Figure 11 shows the connection between the problems faced by the region’s transport network, the benefits of addressing the problem, and the strategic objectives and outcomes sought to move towards this vision.

This will provide an important context when considering the programme of projects/packages that we plan to invest in, particularly for new improvement activities, to ensure that they are targeted at addressing a particular problem and are based on a clear strategic case for investment.

Measures and targets have been developed for each outcome, to monitor progress. These are set out in the next chapter ‘Measuring Progress’.
Vision

To deliver a safe, effective and efficient land transport network that supports the region’s economic prosperity in a way that is environmentally and socially sustainable.

**Economic Growth**
- Transport inefficiencies lead to suppressed regional economic growth and productivity
- Efficient and reliable access and movement for people and freight to and from key regional destinations

**Safety**
- Transport infrastructure deficiencies and poor user behaviour leads to sub-optimal regional road safety performance
- A safe road system increasingly free of death and serious injury

**Resilience**
- Regional infrastructure that is vulnerable to disruption by unplanned events is potentially resulting in an unacceptable cost of severance and restricted ability to recover over time
- The transport network secure routes and good access to and within the region allowing it to recover following an unplanned event

**Liveability**
- Poor delivery of transport and land use can result in a deteriorating living environment and reduced transport choices for the region’s population
- People have a range of options to access work, education and other services
- The region is an attractive place to live, work and play

**Problem**

**Benefits**

**Strategic Objectives**
- A high quality, reliable public transport network
- An effective network for the movement of freight
- A reliable and effective strategic road network

**Outcomes Sought**
- Increased public transport use
- Improved public transport accessibility for all
- Improved quality of public transport
- Improved public transport reliability and journey times
- Reduced severe road congestion
- Improved reliability of the strategic road network
- Improved freight efficiency
- Increased proportion of freight moved by rail

- A safe system for all users of the regional transport network
- Improved regional road safety
- Increased safety for pedestrians and cyclists

- An increasingly resilient transport network
- Improved transport infrastructure resilience to disruption from unplanned events
- A transport network that supports the restoration of access and regional recovery after a major event
- Reduced regional economic risk

- A well planned, connected and integrated transport network
- An attractive and safe walking and cycling network
- An efficient and optimised transport system that minimises the impact on the environment

- Improved land use and transport integration
- Improved integration between transport modes
- Increased mode share for pedestrians and cyclists
- Improved level of service for pedestrians and cyclists
- Increased use of active modes for journeys to school
- Reduced harmful emissions from transport
- Increased private vehicle occupancy
Measures and targets have been developed for each of the desired outcomes in this plan. These enable the monitoring of progress towards the RLTP’s vision and desired outcomes.

A measure describes the ‘unit’ or data set that will be used as an indication or reflection of progress in relation to a particular outcome, - for example, number of public transport trips, volume of emissions, or number of casualties.

A target is the identified number or trend that describes the ‘magnitude’ of progress or direction that is sought in relation to that measure, - for example, whether an increase or decrease is sought, and how far/fast it is sought.

It is important that the targets are specific and measurable. The measures and targets presented are the best proxy that we currently have to monitor progress against the relevant outcome areas.

In many cases, a measure will be relevant to more than one outcome - for example, the number of cyclist casualties is a measure of both improved cyclist safety and improved regional road safety. However, to avoid duplication, the measures and targets have been structured to sit alongside the primary outcome to which they relate.

### Approach to setting targets

The 2025 strategic targets for each outcome have been developed based on a number of different factors. These include:

- Future scenarios modelling and analysis
- Past and current trends
- Future spatial distribution of population and employment
- Planned infrastructure investment
- Other variables – e.g. vehicle fleet efficiency, GDP forecasts, fuel price, public transport fares.

A number of the targets are based upon an ‘expected future’ scenario. The ‘expected future’ assumes the following by 2025:

- Bus Rapid Transit, new Wellington City bus network (outcome of Wellington City Bus Review) and bus priority measures
- Optimisation of the Golden Mile for public transport
- Rail Scenario 1 improvements (from Regional Rail Plan)
- All Wellington RoNS projects, including a solution at the Basin Reserve
- No per capita increase in trips across all modes - trip growth linked to population growth (7-8% between 2013-2025)
- Population growth focused in Wellington City and Kapiti.

The rationale for each target is explained in the right hand column of the tables below.
### ‘A high quality, reliable public transport network’

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
<th>Baseline</th>
<th>2025 Target</th>
<th>Comment/Rationale</th>
</tr>
</thead>
</table>
| Increased public transport use | Annual public transport boardings per capita | 72 boardings in 2013 | Increase to at least 76 boardings | • Targets are based upon an ‘expected future’ scenario\(^1\)  
• All targets equivalent to a growth in public transport trips of around 15% between 2013 and 2025, greater than the forecast 7% population growth  
• Means limited/no growth in car trips at peak times, particularly to CBD, equivalent to a decline in per capita terms  
• Targets will be influenced by location of future residential development  
• Growth in public transport mode share is tempered somewhat by the increasing attractiveness of active modes |
| | Public transport mode share of journey to work trips (Census) | 16.6% in 2013 | Increase to at least 17.8% |  |
| | Public transport mode share of trips crossing Wellington CBD cordon (AM peak) | 33.1% in 2013 | Increase to at least 34.7% |  |
| Improved public transport accessibility for all | Population living within 500m of a core\(^2\) bus service or 1km of a rail station | 41.6% in 2013 | Improvement towards at least 50% | • Influenced by the revised Wellington City bus network (2017 implementation)  
• Will be influenced by future service reviews including Hutt Valley, Kapiti, Porirua - with likely focus on the concept of core routes and all-day network |
| | Population living within 500m of any bus stop or 1km of a rail station | 84.9% in 2013 | Improvement towards at least 88% |  |
| Accessibility to public transport network for all users | Accessibility to public transport network for all users | 2013 standards of vehicle, infrastructure, parking and facilities, as captured by the RPTP and Rail Asset Management Plan | Continual improvement in physical accessibility and standards of vehicles, infrastructure, parking and facilities | • A rolling programme of rail and bus infrastructure renewal/ upgrades is assumed, as outlined in the Regional Public Transport Plan (RPTP)  
• Higher quality infrastructure and facilities will make public transport more attractive and more accessible for all users, including the transport disadvantaged |
| Improved quality of public transport | Public transport vehicle fleet emissions | 2013 Emissions - g/km travelled – 24 g/km\(^3\) | At least a 50% reduction in vehicle fleet emissions | • Influenced by removal of oldest and least efficient diesels from the fleet\(^4\) and replacement with the most fuel efficient vehicles (Euro V/VI or better)  
• Assumes a phased introduction of next generation vehicles within the next 10 years – e.g. hybrid/electric  
• Larger buses, as part of the Bus Rapid Transit scheme, may result in a smaller vehicle fleet |
| | Overall satisfaction with Wellington region’s public transport system (all modes) | 83% (2014 Customer Satisfaction Survey) | At least 90% | • A measure designed to look at overall satisfaction with the region’s public transport network, covering fleet, facilities, on-time performance and customer services  
• An improvement in the public transport fleet, facilities and infrastructure should lead to improved levels of satisfaction and higher patronage |

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\(^1\) Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.  
\(^2\) Defined as high-capacity, frequent, all-day services within urban areas that meet all-day travel demand and reduce congestion on the major transport corridors. They operate at least every 15 minutes during the day, and often more frequently during busy periods. Currently includes routes 1, 2, 3, 11, 110, 120,130, 220. Services defined as core services will be changed depending upon services reviews.  
\(^3\) Assumes even fleet utilisation (measured in kilometres travelled per annum) across all vehicle types – trolleybuses, Euro I to Euro V buses. Whilst approximate this assumption is considered appropriate as a means of estimating current vehicle fleet emissions and providing a benchmark against which future fleet emissions can be estimated. Assumes zero emissions for trolleybuses  
\(^4\) Or refurbishment of engines with clean technology to prolong service life and reduce emissions to current Euro V standards
### ‘A high quality, reliable public transport network’

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
<th>Baseline</th>
<th>2025 Target</th>
<th>Comment/Rationale</th>
</tr>
</thead>
</table>
| Improved public transport reliability and journey times | Peak period public transport travel times on core routes | Average peak period bus travel times on core routes: 42.4 minutes (AM) 43.3 minutes (PM) | A continuous improvement in peak period public transport travel times on core routes | • Targets are based upon an ‘expected future’ scenario<sup>1</sup>  
• The 2014 GWRC customer satisfaction survey highlighted the importance of ‘reliability’ to encourage more public transport use  
• Assumes that a 100% Matangi fleet and infrastructure improvements delivered under Rail Scenario 1 will improve rail reliability and punctuality  
• Optimisation of the Golden Mile, minor bus priority measures, stop rationalisation, the Bus Rapid Transit network and the revised Wellington City bus network will help to deliver improved bus travel times and improved bus reliability |
|   | Peak period bus travel time variability along core routes | Average lateness along core bus routes: 3.5 minutes (AM) 3.8 minutes (PM) | A continuous improvement in peak period bus travel time variability along core bus routes |   |
|   | Rail service punctuality (trains arriving at final destination within 5 minutes of scheduled arrival time) | 94% in 2013 | At least 96%<sup>2</sup> of rail services reach their final destination within 5 minutes of their timetabled arrival time |   |

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1. Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.  
2. To be confirmed following rail contract discussions

### ‘A reliable and effective strategic road network’

<table>
<thead>
<tr>
<th>Outcome</th>
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</tr>
</thead>
</table>
| Reduced severe road congestion | Average peak period travel speed on selected strategic routes | Rolling average speed of 46.2 kph (2012 to 2014) | A 10% increase in 3 year rolling average travel speeds | • Targets are based upon an ‘expected future’ scenario<sup>3</sup>  
• The six strategic routes for the monitoring of this target are as follows:  
  - 1 – Waikanae to Wellington Airport (SH1)  
  - 2 – Upper Hutt to Wellington CBD (SH2)  
  - 3 – SH58 – Paremata to Haywards Road  
  - 4 – Karori to Bowen Street  
  - 5 – Wellington Railway Station to Island Bay  
  - 6 – Wainuiomata to Petone  
• New Bluetooth technology is likely to present the opportunity to expand the coverage of the monitoring programme, to include areas of the region such as Wairarapa, whilst also improving the quality and reliability of the data  
• Targets are influenced by:  
  - Capacity improvements delivered by the RoNS projects  
  - Increased public transport patronage and active mode trips in urban areas  
  - Minor safety improvements and optimisation of the existing road network |
|   | Average peak period travel speed variability on selected strategic routes | The rolling average peak period day-to-day variability was +/-13.7%<sup>4</sup> (2012 to 2014) | A 25% reduction in the 3 year rolling average day-to-day travel speed variability |   |
|   |   | This means that peak period travel speeds across the surveyed routes ranged from 13.7% faster than the average to 13.7% slower than the average |   |   |

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3. Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.  
4. The comparable inter-peak variability figure, generally taken as being a benchmark for relatively uncongested conditions, was around 5% between 2012 and 2014
### Outcome: Improved freight efficiency

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline</th>
<th>2025 Target</th>
<th>Comment/Rationale</th>
</tr>
</thead>
</table>
| Average all day travel speed on important regional freight routes      | Rolling average speed of 54.9 kph (2012 to 2014)                          | **A 10% increase in 3 year rolling average travel speeds**                                    | • Targets are based upon an ‘expected future’ scenario
• The three assessed freight routes are:
  - 1 – Paremata to Seaview (via SH58)
  - 2 – Paremata to Seaview (via Ngauranga)
  - 3 – Seaview to CentrePort
• The surveyed routes are reflective of both the core freight routes within the region and the areas of the network where freight trips are most likely to experience delays that will affect trips beyond the core routes
• New Bluetooth technology is likely to present the opportunity to expand the coverage of the monitoring programme, to include areas of the region such as Wairarapa, whilst also improving the quality and reliability of the data
• The future Wellington RoNS schemes should improve travel speeds and reduce travel speed variability along SH1 between Waikanae and Ngauranga
• The future Petone to Grenada link road should improve travel speeds and improve reliability between Porirua and Seaview and between Seaview and CentrePort
• Whilst minor network optimisation projects may generate small improvements in travel speeds and reliability, achieving these targets is largely dependent upon the Wellington RoNS projects and Petone to Grenada link road projects

<table>
<thead>
<tr>
<th>Average all day travel speed variability on important regional freight routes</th>
<th>The rolling average peak period day-to-day variability was +/-10.6% (2012 to 2014)</th>
<th><strong>A 25% reduction in the 3 year rolling average day-to-day travel speed variability</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improved proportion of freight moved by rail</strong></td>
<td>Percentage of long distance freight volumes moved by rail (Ministry of Transport Freight demand studies (5 yearly))</td>
<td>Freight travelling to/from the region by rail in 2012 was 18.33 million tonnes</td>
<td>• Assumes that ongoing investment by KiwiRail and GWRC, including elements of the Regional Rail Plan – Rail Scenario 1, will remove some rail capacity constraints and improve the efficiency of the rail freight network, enabling more long distance freight to be moved by rail.</td>
</tr>
</tbody>
</table>

1 Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.

2 The comparable inter-peak variability figure, generally taken as being a benchmark for relatively uncongested conditions, was 4.5% between 2012 and 2014
### ‘A safer system for all users of our regional road network’

<table>
<thead>
<tr>
<th>Outcome</th>
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</thead>
</table>
| Improved regional road safety | Killed and seriously injured totals, measured on an annual basis against a 5 year rolling average (CAS data) | 5 year average between 2009 and 2013 = 183.4 | **At least a 50% reduction in 5 year average** | - A continuous focus on safety, both in terms of infrastructure and education, improved road safety considerably between 2005 and 2013 and it is envisaged that this focus will continue into the future  
- The 2025 targets are similar to the rates of improvement seen between 2005 and 2013  
- The 2025 targets align well with similar NZ Transport Agency national targets which seek a similar reduction over a similar period  
- New Zealand’s per capita road traffic casualty rates are still elevated compared to other western countries such as Sweden and Great Britain, suggesting that further progress can be made  
- The 2025 targets signal a step towards a ‘Vision Zero’ scenario  
- These challenging targets can be achieved through:  
  - Continued implementation of the government’s ‘Safer Journeys’ strategy and application of the safe systems approach  
  - Targeted infrastructure safety improvements  
  - Education and training programmes  
  - An increasingly modern and safe vehicle fleet  
  - Legislative changes  
  - Speed management  
  - More public transport use and less car use  
  - Investment in safe cycle facilities and more pedestrian and cycle friendly urban centres |

| | Total casualties on an annual basis against a 5 year rolling average (CAS data) | 5 year average between 2009 and 2013 = 1079.8 | **At least a 50% reduction in 5 year average** |

| Increased safety for pedestrians and cyclists (vulnerable road users) | The number of vulnerable road user casualties (cyclists and pedestrians) killed and seriously injured annually against a 5 year rolling average (CAS data) | 5 year average between 2009 and 2013 = 56.5 | **At least a 50% reduction in 5 year average** |
**An increasingly resilient transport network**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
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<th>2025 Target</th>
<th>Comment/Rationale</th>
</tr>
</thead>
</table>
| Improved transport infrastructure resilience to disruption from unplanned events | Proportion of the region covered by an adopted regional risk register | 0% in 2014 (separate council risk registers exist but not a regional register) | 100% (agreed risk register by 2017, agreed prioritisation methodology by 2019). | • In the shorter term, the region will be heavily reliant upon restoration and emergency plans to recover from a major event. However, the goal over the medium/longer term is an increasingly resilient transport network that involves reduced time to restore critical access and places less reliance on any restoration and emergency plan.  
• A more resilient transport network relies on a comprehensive understanding and assessment of the relevant risks. An agreed, prioritised regional resilience risk register is sought to influence project prioritisation and ensure a coordinated approach to improving resilience.  
• A clear list of regional priorities for addressing identified transport network risks is expected to assist with unlocking central government funding support for projects with resilience benefits. |
| A transport network that supports the restoration of access and regional recovery after a major event | Estimated time to reopen key road connections to and within the region and to key recovery facilities | Existing (2014) emergency plan estimates | Continuous reduction in the number of estimated days to reopen the transport network following a major event | • A number of planned infrastructure projects will contribute significantly to improved network resilience by providing alternative routes designed and located to be more robust in a major event.  
• Ongoing preventative maintenance and seismic strengthening of the transport network also contributes to improved resilience.  
**Note:** The Wellington Lifelines Group (WeLG) and the Wellington Region Emergency Management Office (WREMO) set the deliverables and levels of service in relation to major event recovery. |
| Reduced regional economic risk | Proportion of the region covered by an adopted and comprehensive regional restoration and emergency plan | Existing (2014) regional restoration and emergency plan(s) | 100% | |

**A well planned, connected and integrated transport network**

<table>
<thead>
<tr>
<th>Outcome</th>
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<th>Comment/Rationale</th>
</tr>
</thead>
</table>
| Improved land use and transport integration | Population living within 500m of a bus stop or 1km of a rail station | 84.9% in 2013                                | Continual improvement towards 88% | • Targets are based upon an ‘expected future’ scenario.  
• The number of people living in areas well served by public transport (for example - along the Wellington City growth spine) has increased over recent years. This trend is likely to continue into the future under the framework of current local growth and land use planning documents.  
• Bus services may be refined in the future to serve new residential developments, subject to funding, where the density and demand support this. |
| Improved integration between transport modes | Number of secure cycle parking spaces at railway stations | 100% increase in cycle parking spaces at stations over the five year period 2009 - 2013 | Increase by 50% | • Encouraging more people to cycle to train stations will extend the reach of rail services throughout the region. Provision of good cycle parking (secure, convenient, sheltered, well lit) at stations is important to support an increased uptake and supply needs to keep up with potential demand.  
• The 100% growth over the 5 year period to 2013 should be viewed in the context of a relatively low base provision. The significant growth is the result of a new approach to cycle parking which has seen a mix of cycle racks, cages, and lockers provided – rather than just lockers which were more expensive and needed more space. |

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1 Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.

2 Secure cycle parking is defined as either bike lockers or covered bike racks in well-lit, visible areas within close proximity to stations entry / exits points, preferably covered by CCTV cameras.
<table>
<thead>
<tr>
<th>Outcome</th>
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<th>Baseline</th>
<th>2025 Target</th>
<th>Comment/Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased mode share for pedestrians and cyclists</td>
<td>Proportion of journey to work trips (Census) by walking</td>
<td>Walking 11.6% in 2013&lt;br&gt;Steady increase between 2001 and 2013</td>
<td>13.6% of journeys to work will be made by foot</td>
<td>• The targets are based upon an ‘expected future’ scenario, together with analysis of past and future active mode trends and influencing factors. • Wellington City currently accounts for 75% of active mode trips within the region and accounted for nearly all recent growth in active mode journey to work trips. • It is likely that Wellington City will continue to be the main driver of growth in active mode trips, however the popularity of active modes is likely to increase elsewhere in the region in the future.</td>
</tr>
<tr>
<td></td>
<td>Proportion of journey to work trips (Census) by bike</td>
<td>Cycling 2.9% in 2013&lt;br&gt;Steady increase between 2001 and 2013</td>
<td>4.6% of journeys to work will be made by bike</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of urban trips (Wellington CBD Cordon Survey) by walking</td>
<td>Walking 18.4% in 2013&lt;br&gt;Steady increase between 2001 and 2013</td>
<td>20.1% of trips crossing the CBD cordon are walking trips</td>
<td>• Significant planned investment in cycle infrastructure in Wellington City and other parts of the region over the next three years to align with national funding available through the Urban Cycleway Fund is expected to generate good increases in cycle use. • The increasing popularity of inner city living may see growth in active mode trips come at the expense of growth in PT trips. • The 2025 targets for increasing walking/cycling mode share are equivalent to the following percentage increases in trips: - Journey to work trips (Census) - 26% increase in walking trips and 75% increase in cycling trips - Urban trips (Wellington CBD cordon) - 19% increase in walking trips and 75% increase in cycling trips. • Because the Census only takes place every 5 years, the comprehensive Wellington CBD cordon survey, covering all modes, is used to provide an indication of progress towards Census based targets in the interim years. • Opportunities to gather similar cordon data for other urban areas in the region will be investigated to gain a better understanding of changes in journey to work travel patterns in these areas between Census years.</td>
</tr>
<tr>
<td></td>
<td>Proportion of urban trips (Wellington CBD Cordon Survey) by bike</td>
<td>Cycling 2.6% in 2013&lt;br&gt;Steady increase between 2001 and 2013</td>
<td>4.6% of trips crossing the Wellington CBD cordon are cycling trips</td>
<td></td>
</tr>
<tr>
<td>Improved level of service for pedestrians and cyclists</td>
<td>Perceptions of level of service (annual GWRC perceptions survey)</td>
<td>Walking = 90% in 2013&lt;br&gt;Cycling = 50% in 2013&lt;br&gt;Little change between 2001 and 2013</td>
<td>95% and 60% level of service rating (pedestrian and cycling respectively)</td>
<td>• Wellington City is by far the biggest market for walking and cycling, thus its performance has a major influence on this strategic outcome. • Wellington City Council’s plans to invest in cycling infrastructure, combined with urban speed limit reductions, make the road environment more attractive for pedestrians and cyclists. This is likely to be reflected positively in the perception of active mode levels of service in future.</td>
</tr>
<tr>
<td>Increased use of active modes for journeys to school</td>
<td>Use of active modes in journeys to school at schools participating in the regional school travel plan programme (annual GWRC survey)</td>
<td>27% - foot, 13% - cycle, scooter or skateboard (4 year rolling average 2010-2013)</td>
<td>Continually increasing use of active modes</td>
<td>• The long term trend has seen a significant reduction in the proportion of school children walking and cycling to school over time. However, over recent years, the percentage of school children using active modes to travel to school has increased. • This recent increase is thought to be due in part to targeted school travel planning programmes, cycle skills courses and safety improvements targeted at children walking and cycling to work. • The school travel plan programme currently covers around 25% of schools in the region and seeks to continually increase this year on year, into the future. • Combined with planned investment in cycle infrastructure, an increase in use of active modes for children travelling to school is sought between 2013 and 2025.</td>
</tr>
</tbody>
</table>

1 Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.
### ‘An efficient and optimised transport system that minimises the impact on the environment’

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
<th>Baseline</th>
<th>2025 Target</th>
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</tr>
</thead>
</table>
| **Reduced harmful emissions from transport** | Transport generated emissions (per capita) | 2.31 tonnes transport generated CO₂ per capita in 2013 | **15% reduction** in annual per capita CO₂ emissions | • Targets are based upon an ‘expected future’ scenario where future growth in vehicle trips is broadly linked to population growth  
• Government policies are targeted at regulating emissions and providing incentives for people who drive cleaner, more fuel efficient vehicles  
• Assumes vehicle efficiency improvements of up to 20% over the 10 year period to 2025  
• Policies to encourage more public transport use and seeking a low emission public transport fleet will contribute to these targets  
• Projections suggest a decrease in transport-generated CO₂ emissions, expressed in both per capita and absolute terms |
|  | Transport generated emissions (absolute) | 1,061 kilotonnes transport generated CO₂ in 2013 | **10% reduction** in total annual CO₂ emissions | |
|  | Concentrations of harmful transport generated pollutants | 5 year rolling average (2009 to 2013) for NO₂ across the regional automatic monitoring stations | **A reduction** in the average concentration (measured as a 5 year rolling average) of harmful transport-generated emissions (NO₂ + others) at automatic monitoring stations | • Harmful pollutant emissions generated by transport are likely to decrease as vehicle standards improve and cleaner engine technologies focus on removing harmful particulates from emissions  
• GWRC will continually improve its monitoring framework to allow monitoring of the pollutants CO, PM₁₀ and PM₂.₅ |
| **Increased private vehicle occupancy** | Peak period private vehicle occupancy. | 1.39 people per vehicle in 2013 (Wellington CBD cordon) | Gradual increase in private vehicle occupancy to **1.45** | • Assumes increases in parking costs above inflation rates, as has historically been the case  
• Incentives and initiatives to promote car sharing/carpooling along with increasing fuel and parking costs are likely to have some small positive influence on this target |

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1 Refer to the description of ‘expected future’ scenario at the beginning of this chapter, under the heading ‘Approach to setting targets’.
## F. POLICIES

### Strategic Objective: A high quality, reliable public transport network

<table>
<thead>
<tr>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PT 1.</strong> The wide benefits of public transport will be recognised when planning the transport network including network efficiency, land use and transport integration, and contribution to environmental, social, economic and health outcomes.</td>
</tr>
<tr>
<td><strong>PT 2.</strong> The public transport network will be continually improved to ensure that public transport services:</td>
</tr>
<tr>
<td>a. go where people want to go, at times they want to travel</td>
</tr>
<tr>
<td>b. provide competitive journey times</td>
</tr>
<tr>
<td>c. provide value for money</td>
</tr>
<tr>
<td>d. are easy to understand and use</td>
</tr>
<tr>
<td>e. are safe, comfortable and reliable</td>
</tr>
<tr>
<td>f. provide flexibility, allowing people to change their plans.</td>
</tr>
<tr>
<td><strong>PT 3.</strong> The public transport network will include core, local, and targeted services.</td>
</tr>
<tr>
<td><strong>PT 4.</strong> Public transport will be increasingly accessible through the provision of improved information, facilities, and services that are available to all members of the public.</td>
</tr>
</tbody>
</table>

### Strategic Objective: A reliable and effective strategic road network

<table>
<thead>
<tr>
<th>Policies</th>
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</thead>
<tbody>
<tr>
<td><strong>SR 1.</strong> Network management tools will be promoted to optimise the efficiency of the transport network and address traffic congestion.</td>
</tr>
<tr>
<td><strong>SR 2.</strong> Legislation changes will be sought through advocacy to central government to allow consideration of road pricing as a tool to manage demand.</td>
</tr>
<tr>
<td><strong>SR 3.</strong> Key strategic corridors will be developed, maintained and protected in a manner consistent with their role and function.</td>
</tr>
<tr>
<td><strong>SR 4.</strong> Arterial and local road traffic will be separated where practicable.</td>
</tr>
<tr>
<td><strong>SR 5.</strong> East-west transport links between the Western and Hutt Corridors will be improved.</td>
</tr>
</tbody>
</table>
Strategic Objective: **An effective network for the movement of freight**

<table>
<thead>
<tr>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>F 1. The transport network will be maintained and developed to provide efficient and effective freight movements.</td>
</tr>
<tr>
<td>F 2. Effective and efficient connections will be provided to the region’s principle economic growth and productivity areas, such as the Wellington City CBD and regional centres, Wellington’s port and international airport.</td>
</tr>
<tr>
<td>F 3. Freight routes for the movement of high productivity vehicles will be identified.</td>
</tr>
<tr>
<td>F 4. The regional rail network will be developed to support transportation of freight by rail.</td>
</tr>
</tbody>
</table>

Strategic Objective: **A safe system for all users of the regional transport network**

<table>
<thead>
<tr>
<th>Policies</th>
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</thead>
<tbody>
<tr>
<td>RS 1. Regional road safety will be continuously improved based on a safe system approach involving a package of measures targeting safer road users, safer vehicles, safer roads and roadsides, and safer travel speeds.</td>
</tr>
<tr>
<td>RS 2. Existing road network safety standards will be maintained or improved.</td>
</tr>
<tr>
<td>RS 3. Improved safety for vulnerable road users (including pedestrians, cyclists, and motorcyclists) will be prioritised.</td>
</tr>
<tr>
<td>RS 4. Safety will be an important consideration when prioritising the maintenance and improvement of the transport network.</td>
</tr>
<tr>
<td>RS 5. Public transport will be promoted as a safe mode of travel.</td>
</tr>
</tbody>
</table>

Strategic Objective: **An increasingly resilient transport network**

<table>
<thead>
<tr>
<th>Policies</th>
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</thead>
<tbody>
<tr>
<td>R 1. The resilience of the regional transport network will be continuously improved by identifying, prioritising and addressing current network risks and vulnerabilities.</td>
</tr>
<tr>
<td>R 2. New transport infrastructure will be designed to be resilient to both low impact high probability (LIHP) and high impact low probability (HILP) events.</td>
</tr>
<tr>
<td>R 3. The transport network will be developed recognising the critical role it plays in providing access for communities after a major natural hazard or seismic event.</td>
</tr>
<tr>
<td>R 4. Addressing transport network security risks will include the development of alternative routes.</td>
</tr>
<tr>
<td>R 5. The transport network will be developed in a manner that improves its resilience to longer term changes.</td>
</tr>
<tr>
<td>R 6. The level of service of the regional transport network will be continuously monitored, and improved as necessary.</td>
</tr>
<tr>
<td>R 7. Adequate expenditure on road and rail maintenance will be sought to ensure an acceptable level of service on the existing transport network.</td>
</tr>
</tbody>
</table>
Strategic Objective: A well planned, connected and integrated transport network

Policies

I 1. The transport network will be managed and developed in a way that recognises and provides for all modes of transport in an integrated manner.

I 2. The current and planned future Strategic Transport Network will be identified and protected in territorial authority planning documents.

I 3. The critical role of the Strategic Transport Network in providing national and regional accessibility and supporting economic growth will be recognised when considering the impacts of new land use development.

I 4. Transport planning processes will take account of major recreational, tourist and freight traffic flows.

I 5. An integrated approach will be taken to investment in those parts of the Strategic Transport Network that cross regional boundaries, through collaboration with neighbouring regional councils and territorial authorities.

I 6. Land use development will be well integrated with transport infrastructure, including denser development located around public transport nodes and along key public transport corridors to minimise dependence on private vehicles.

I 7. New transport infrastructure will be designed and located to enhance access, be consistent with the region’s urban design principles as set out in the Regional Policy Statement, minimise community severance issues, and take account of the special values of local areas.

I 8. The regional transport network will be developed to support the growth aspirations of the Wellington Regional Strategy, including supporting a strong Wellington City CBD and regional centres.

I 9. The transport system will be managed and developed in a way that supports a compact, well designed and sustainable regional form, consistent with the policies of the Regional Policy Statement.

I 10. Walking, cycling and public transport services will be provided for as part of new land use development, consistent with relevant best practice guidance.

I 11. The social, health, environmental and economic impacts of major new transport projects will be assessed as part of the programme or indicative business case stage of the project development.

Strategic Objective: An attractive and safe walking and cycling network

Policies

WC 1. The cycling and pedestrian networks will be continuously improved so that they are safe, attractive and well integrated with other modes.

WC 2. An increased uptake of cycling and pedestrian modes will be promoted, particularly for short trips.

WC 3. The transport system will be managed and developed to improve pedestrian and cyclist safety and personal security.

WC 4. New and upgraded roads will include appropriate infrastructure design to facilitate safe and attractive walking and cycling trips.

WC 5. Gaps and deficiencies in the strategic walking and cycling networks will be continuously addressed.

WC 6. Cycling facilities will be designed to provide a high level of service on key routes to support an increase in cycling mode share.
Strategic Objective: An efficient and optimised transport system that minimises the impact on the environment

<table>
<thead>
<tr>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E 1.</strong> A set of regional transport models will be developed, maintained, and enhanced to provide robust information on the current and future transport system and support effective planning and decision making.</td>
</tr>
<tr>
<td><strong>E 2.</strong> Reduced reliance on motor vehicles, particularly single occupancy vehicles, will be supported through implementation of appropriate tools, measures and policies.</td>
</tr>
<tr>
<td><strong>E 3.</strong> Travel demand management policies and programmes will support travel patterns that smooth demand over the busiest times of the day to better use public transport and road network capacity.</td>
</tr>
<tr>
<td><strong>E 4.</strong> The use of transport modes that are not dependent on fossil fuels, including active transport modes, will be supported.</td>
</tr>
<tr>
<td><strong>E 5.</strong> Best practice design, construction and maintenance standards will be used during the implementation of transport infrastructure projects, to minimise adverse impacts on the environment.</td>
</tr>
<tr>
<td><strong>E 6.</strong> Initiatives that contribute to ongoing improvement of the vehicle fleet, to reduce greenhouse gas emissions and improve air quality, will be supported.</td>
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<td><strong>E 7.</strong> Parking provisions in district plans should be reviewed to ensure they provide flexibility and do not result in an oversupply of parking as part of new residential or commercial development.</td>
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<tr>
<td><strong>E 8.</strong> Local parking policies should be developed and reviewed to set out a clear hierarchy for the use and management of on-street space in town and city centres to prioritise active modes, public transport, special purpose and short-stay parking.</td>
</tr>
</tbody>
</table>