



2003/2004 Annual Report on the Regional Land Transport Strategy

September 2004

Quality for Life





greater WELLINGTON
REGIONAL COUNCIL

2003/04 Annual Report on the Regional Land Transport Strategy

FOR FURTHER INFORMATION

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Highlights

- The greater Wellington region shows steady economic growth of just under 3% per annum over the last five years. However, this growth rate is lower than those of Canterbury, Auckland and New Zealand as a whole.
- Total inter-island ferry freight movements showed substantial growth of 153% between 1996 and 2003, while rail freight continued to decline significantly.
- Regional fuel consumption fell 3.5% between 2002 and 2003, driven by decreases in fuel sales in the western part of the region. Greater Wellington regional fuel consumption continues to show the lowest growth of all regions compared, with 4% growth between 1998 and 2003 (c.f. Canterbury at 19% and Auckland at 16%).
- Wellington City Council cordon counts show private car use in the AM peak increased almost 10% between 2003 and 2004.
- Harvesting of Wairarapa forestry blocks has seen a 13% increase in heavy vehicle movements over the Rimutaka Hill Road.
- Greater Wellington's congestion levels are no longer the lowest of all major Australasian cities measured. All-day average congestion levels are now higher than Canberra and Perth (2000 data) and Tauranga.
- The 2004 perception survey found a 9% decrease in the public perception of bus network reliability, bringing it to the 60% level of perceived reliability seen in the road and train networks.
- The 2004 perception survey found that 6% more people between 2003 and 2004 believed that private vehicle costs were affecting their use.
- Regional public transport patronage continues to grow, including a more than 5% increase in off-peak passenger numbers between 2001 and 2004.
- Road crash numbers continue to be too high, although regional casualties per 100,000 population figures remain the lowest of all compared regions.
- The 2004 perception survey found 71% of people feel 'safe' when walking, but only 23% think cyclists are 'safe' (c.f. 29% in 2003).
- Of the 'active' transport modes, cycling continues to have a considerably lower use level than walking.

- Implementation of the Regional Land Transport Strategy continues to be slower than anticipated, primarily due to issues relating to the Resource Management Act 1991, uncertainty about urban rail contracts and a lack of funding to enable the early construction of the Transmission Gully motorway.
- The private car continues to be the dominant mode of transportation.

2004 Regional land transport report card

The following report card has been developed to identify clearly our desired key outcomes and to show how well we are doing. It highlights that while good progress is being made in some areas, significant challenges remain unanswered.

	Desired Outcome	2004 Result	2003 Result
Improve access	Reduced road congestion	X	X
	Increased road accessibility	X	X
	Increased public transport accessibility	✓	✓
Implemented cost-efficient projects		✓	✓
Improved safety		X	X
Improve sustainability	Reduced fuel use and emissions	✓	X
	Increased public transport use	✓	✓
	Matching adjacent capacity	?	?
	Reduced emergency risk	✓	?
	Increased walking and cycling	✓	✓

✓	Significant improvement
✓	Improvement
X	Decline
X	Significant decline
?	Insufficient information

1. Background to the report

Statutory context

Regional Land Transport Strategy

The Land Transport Act 1998¹ requires every regional council to establish a Regional Land Transport Committee (RLTC). This committee must prepare a Regional Land Transport Strategy (RLTS). The current RLTS² was approved in November 1999, fulfilling legal obligations for the period 1999 to 2004 and setting out objectives, policies and plans for the 20 years to 2019.

The RLTS is a ‘living’ document and is currently under review, with an updated version due for release in draft format in 2005. Since the release of the 2002/03 Annual Monitoring Report (AMR), the Regional Cycling, Pedestrian and Road Safety Strategies have been adopted by Greater Wellington Regional Council (GWRC) and now form new chapters of the RLTS.

After submissions and hearings, the Western Corridor Implementation Plan was adopted as an addition to the RLTS in 2000, while the Hutt Corridor Plan and the Wairarapa Corridor Plan were adopted as additions to the RLTS in 2003. A corridor study for the central business district (CBD) is underway, as is a review of the western corridor.

Annual Monitoring Report

An AMR must be prepared on progress towards implementing the RLTS. It must be available within three months of the end of the financial year to which it relates; for GWRC, this is 30 June and hence this AMR is due 30 September. All indicators measured, unless otherwise stated, relate to financial years ending at 30 June.

AMR contents

Enhanced monitoring

The law offers little specific guidance on what an AMR should contain. GWRC sees value in monitoring that goes beyond minimal legal requirements, reporting on trends in a range of demographic variables that drive transportation demand, both within the region and across its boundaries.

Extensive reporting on road and public transport network performance, and on environmental measures, yields a detailed picture of regional performance, sustainability and trends.

¹ As amended by the Land Transport Management Act 2003

² The Wellington Regional Land Transport Strategy 1999-2004 (Wellington Regional Council, 1999)

Benchmarking ourselves against New Zealand’s other two largest regions with significant transport issues – Auckland and Canterbury – allows us to see how well we are doing at a national level, and gives some indication as to where regional New Zealand transport issues are heading as a whole.

A regional perception survey first carried out in 2003 added further value to the largely objective data presented in previous reports by offering an understanding of public perceptions of transport-related issues. The 1,000-person telephone survey was repeated by National Research Bureau Ltd in June 2004. This has allowed benchmarking of this information against Auckland Regional Council (ARC), which carries out similar surveys on a biennial basis.

Additions to the 2003/04 AMR include:

- 2004 short trip active mode survey results (GWRC)
- first year of direct year-on-year perception reporting comparisons with ARC (GWRC, ARC)
- car registration data (Land Transport Safety Authority (LTSA))
- fuel price index (Statistics New Zealand)
- public transport subsidy information (GWRC)
- travel time uncertainty (Transit New Zealand)
- deaths plus hospitalised data (LTSA)
- personal security data (New Zealand Police)
- preliminary data from a new transport air quality monitoring station (GWRC)
- land use patterns (GWRC).

Making this information available as a single resource will, in turn, facilitate more informed regional planning decisions. This AMR contains all information necessary to meet legal requirements; it also presents indices that encapsulate performance indicator trends to give a picture of the entire regional transportation network.

Long-Term Council Community Plan Targets

GWRC, through the development of its 2003/04 Long-Term Council Community Plan (LTCCP), has developed a series of long-term ‘LTCCP Targets’ relating to transport sustainability. The targets relate to:

- fuel consumption
- public transport safety
- road congestion
- mode of transport to work
- cycling and walking short trip use.

These targets have been included in this report as a first step towards integrating LTCCP targets with RLTS targets.

In some cases, data demonstrates that we are on the way to achieving set goals in commuter transport mode choice, active mode choice for short trips up to 1km and regional fuel consumption; but are a way off in other areas such as the use of active modes for short trips up to 2km. These will need to be dealt with if we are to achieve our LTCCP targets.

Section outlines

Section 2 presents the changing demographic variables driving regional land transport demand.

Section 3 presents measures of passenger and freight transport activity across Wellington regional boundaries.

Sections 4 to 8 describe regional transportation network performance in respect of each RLTS objective area:

- accessibility and economic development
- economic efficiency
- affordability
- safety
- sustainability/environment.

Section 9 details progress in implementing RLTS projects and policies.

Section 10 summarises progress in implementing the strategy and identifies obstacles.

Section 11 presents conclusions and recommendations.

Obstacles to collecting monitoring indicators

Most agencies co-operated in supplying information for the monitoring programme, and GWRC gratefully acknowledges this. Sometimes, however, relatively straightforward information proved very hard or impossible to obtain.

Collecting key information on air and surface water quality is expensive. The first regional transport-focused air quality monitoring station (located at the intersection of Victoria and Vivian Streets, Wellington) was commissioned in early 2004. We continue to investigate surface water monitoring options and are optimistic a programme will be established within the next few years in conjunction with the GWRC Environment Division.

2. Regional demographic indicators

This section sets out and discusses trends in the following regional demographic variables driving transport demand:

Resident population
 Occupied dwellings
 Unemployment
 Regional economic activity
 Building activity
 Vehicle ownership

Indicators

Resident population

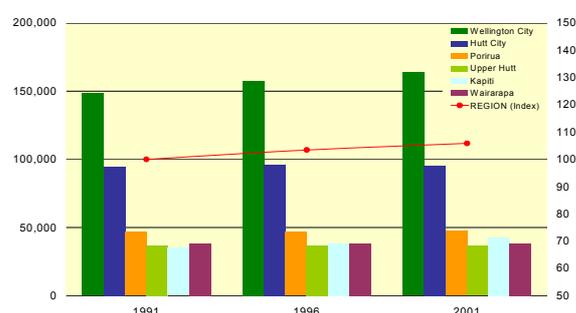


Figure 1: Resident population, by district. 1991 = 100. Source: Statistics New Zealand

Definition: The graph shows usually resident populations by district. Census data is collected five-yearly, so this indicator will next be updated in the 2007/08 AMR.

Interpretation: The total 2001 regional population was 423,700. Thirty-eight percent lived in Wellington City; 32% in the Hutt Valley; 11% in Porirua; 10% in Kapiti; and 9% in Wairarapa.

Table 1 shows a wide variation in district growth rates. Kapiti has seen at least 2% annual growth since 1991, while the Hutt Valley and Wairarapa have experienced de-population. Regional population growth has averaged 2,343 people per annum since 1991, with a slight slowing since 1996. Current growth is 0.6% per annum (2001 figures).

Comments: Population growth in the region is modest. Population growth fuels regional demand for travel. Kapiti's faster growth is partly driven by families relocating from Wellington and elsewhere in the region. This strong growth will create further demand for travel both within Kapiti and between Kapiti and Wellington, putting the existing transport networks under more strain.

District	Growth rates per annum					
	1991 – 1996		1996 – 2001		1991 – 2001	
	No.	%	No.	%	No.	%
Wellington	1,856	6.3	1,221	3.9	1,538	10.4
Hutt City	198	1.5	-79	-0.8	60	0.6
Porirua	16	0.1	149	1.6	83	1.8
Upper Hutt	-34	-0.5	-69	-0.9	-51	-1.4
Kapiti	729	10.4	772	10	751	21.5
Wairarapa	-17	-0.2	-60	-0.8	-38	-1
REGION	2,748	3.4	1,934	2.3	2,343	5.8

Table 1: Population growth rates, by district

Occupied dwellings

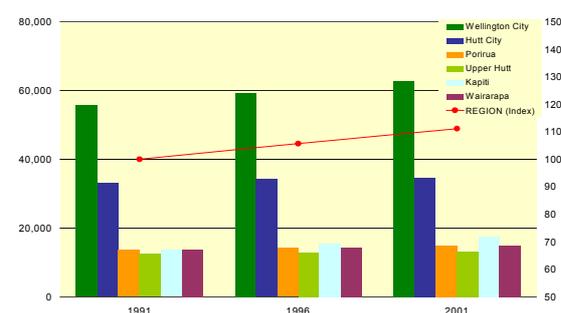


Figure 2: Occupied dwellings, by district. 1991 = 100. Source: Statistics New Zealand

Definition: The graph shows occupied dwellings by district. Census data is collected five-yearly, so this indicator will next be updated in the 2007/08 AMR.

Interpretation: Patterns of absolute and relative growth are closely linked to population. Table 2 shows movements in the average number of people per occupied dwelling, derived from the above indicators. Household size is falling across the region; the largest households are in Porirua, the smallest in Kapiti, reflecting this area's large retirement-aged population.

District	Number of persons per occupied dwelling		
	1991	1996	2001
Wellington	2.7	2.7	2.6
Hutt City	2.9	2.8	2.8
Porirua	3.4	3.3	3.2
Upper Hutt	3.0	2.9	2.7
Kapiti	2.6	2.5	2.4
Wairarapa	2.8	2.7	2.6
REGION	2.8	2.8	2.7

Table 2: Change in number of persons per occupied dwelling, by district

Unemployment

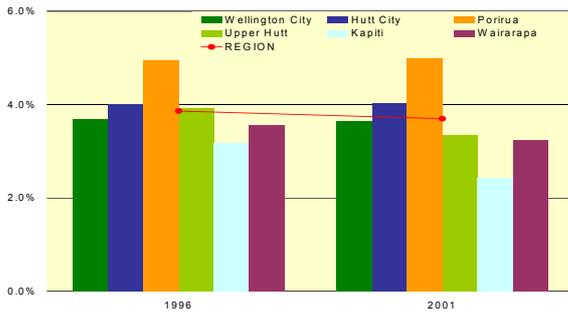


Figure 3: Unemployment, by district. Source: Statistics New Zealand

Definition: The graph shows district labour force status, with unemployment as a percentage of population. Census data is collected five-yearly, so this indicator will next be updated in the 2007/08 AMR.

Interpretation: A downward regional trend masks inter-district differences. Unemployment rates have fallen most markedly in Upper Hutt, Kapiti and Wairarapa, while Porirua has experienced a small increase. Porirua unemployment rates are the highest in the region.

Comments: Data is available for only two years, so apparent trends should be treated with caution. Transportation demand is likely to be inversely correlated with unemployment rates: the highest levels of unemployment result in the lowest levels of transportation demand.

Regional economic activity

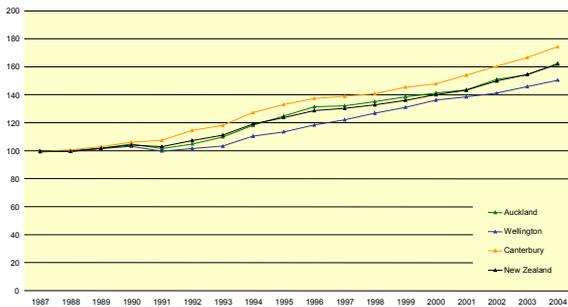


Figure 4: Regional/New Zealand economic activity. 1987 = 100. March quarter. Source: National Bank

Definition: The graph shows a composite measure of economic activity that includes: business and consumer confidence; retail sales; new motor vehicle registrations; regional exports; registered unemployment; building permits; real estate turnover; job advertisements; accommodation; and results from the Household Labour Force Survey.

Interpretation: There was steady regional growth of 51% between 1987 and 2004. However, over the past year, at 3.2%, Wellington's growth rate has been below the New Zealand average of 4.7%, and is

down on Canterbury's and Auckland's current rates of 4.6% and 5.2% respectively.

Comments: Indications are that the greater Wellington region is enjoying strong economic activity, but not at the robust level the rest of the country is experiencing. This growth can be expected to increase demands for movement of people and freight.

Building activity (number of consents, Wellington region)



Figure 5: Greater Wellington building activity. 1996 = 100. Year ended March. Source: Statistics New Zealand

Definition: The graph shows the number of residential and non-residential building permits issued. Figures are available monthly and relate to the year ended March.

Interpretation: Since 2000, the issue of non-residential permits has remained static. Significant growth of 18% in residential permits in the past year has contradicted recent declining trends. This growth is clearly demonstrated in the 'value of construction index', showing the regional housing market continues to boom, consistent with the overall national housing market.

Comments: The construction industry generates demand for transport as well as being a 'barometer' of regional economic activity. Demand for travel (both freight and passenger) is positively correlated with regional economic activity.

Vehicle ownership by household: change 1996 to 2001

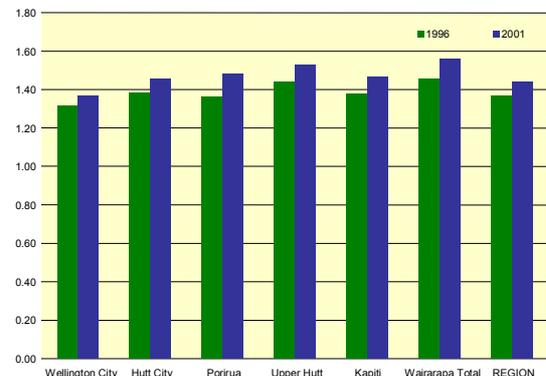


Figure 6: Regional vehicle ownership by household. Source: Statistics New Zealand

Definition: The graph shows census figures which are available five-yearly, so this indicator will next be updated in the 2007/08 AMR.

Interpretation: Over the five years from 1996 to 2001, the average number of cars per household rose from 1.37 to 1.44, or by 5%. Levels of car ownership correlate inversely with urban density: the lowest levels are in Wellington City, the highest in Wairarapa. Car ownership grew in every district, with the highest rate (9%) in Porirua and the lowest in Wellington City (4%).

Comments: Increasing car ownership leads to greater car use and more demands on the road network, and can negatively affect the environment.

Registered car ownership

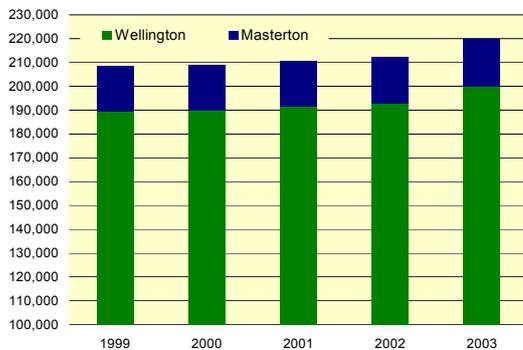


Figure 7: Greater Wellington regional car registrations. Calendar year. Source: LTSA

Definition: The graph shows car ownership figures as recorded by the LTSA car registration process and relate to the calendar year.

Interpretation: Over the five years from 1999 to 2003, the total number of cars registered rose from 208,502 to 219,673, or by 5.4%. Car registration levels correlate with regional population density: the lowest levels are in 'Masterton' (Wairarapa), the highest in 'Wellington' (the urban part of the region). Over the past five years, car registrations have grown at a similar (5%) rate in both sub-regions.

Comments: Increasing car ownership leads to greater car use and more demands on the road network and can negatively affect the environment.

Demographic summary

Demographic indices

Definition: Figure 8 shows movement in demographic indices and a composite index at a macro level. All are expressed relative to a base year of 1996.

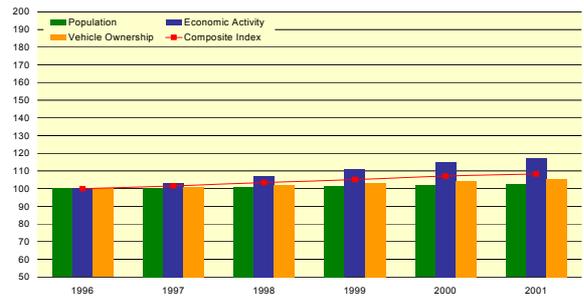


Figure 8: Regional demographic indices. 1996 = 100

Interpretation: Modest growth of 8% occurred between 1996 and 2001.

Regional level

Over the five years from 1996 to 2001, the regional population grew by 2% while vehicle ownership increased by 6%. This stems from the continuing relatively low cost of vehicle operation and increasing economic activity: 17% in the same period.

The rate of growth in the composite index (the average of three indices: population, economic activity and vehicle ownership) was 8% between 1996 and 2001.

As the focal point of economic activity, and home to 38% of the 2001 regional population, Wellington City has a strong influence on regional figures.

Sub-regional level

Population has declined in Wairarapa and Upper Hutt, while Kapiti's population has grown. There has been little change in unemployment rates, which remain highest in Porirua and elsewhere show a steady decline. Growth rates of total vehicle ownership are lowest in Wellington city, reflecting a trend for inner-city apartment living and proximity to employment. Conversely, census data indicates the highest rates and growth of vehicle ownership are in the more remote Wairarapa and Upper Hutt areas. However, recent LTSA registration data indicates that growth in car registrations is similar in both the Masterton and Wellington areas.

The highest rates of growth continue in the western corridor serving Kapiti, while Wairarapa and Hutt Valley growth remains relatively subdued. The trend towards CBD living can be expected to suppress growth in travel demand. This is offset by the desire of many to live outside the Wellington urban area, so increasing demand for peak-time commuter travel.

Outlook

These trends are, in general, expected to continue. To a large extent, however, transport demand is driven by factors over which the RLTS has no control, such as fuel prices and economic activity.

There is optimism in Upper Hutt that upcoming developments will reverse the population decline, and this might have a secondary impact on Hutt City. Porirua is having some success attracting 'high tech' industries and retailers. These trends may influence the pattern, as well as the total scale, of regional travel demands.

Implications for transportation planning

Transportation demand is expected to rise markedly, driven by modest population growth and economic activity. Current initiatives to discourage peak-period car use (Rideshare, telework etc) rely mainly on persuasion and are unlikely to affect travel behaviour more than marginally. Ultimately, tolls, congestion pricing and parking fees will be needed to give travellers direct financial incentives to change their behaviour and ensure the network can efficiently accommodate transportation demand.

3. Inter-regional travel indicators

This section sets out and discusses trends in total travel to and from the Wellington region according to the following indicators:

- Inter-regional passenger movements
- Inter-regional freight movements

Indicators

Inter-regional passenger movements

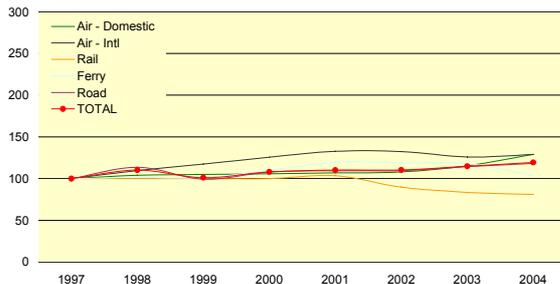


Figure 9: Inter-regional passenger movements. 1997 = 100. Sources: Wellington International Airport; Strait Shipping; Toll NZ; Transit New Zealand

Definition: The graph shows a passenger movement index. Figures relating to numbers of people crossing regional boundaries by air, sea (inter-island ferries only), rail or road (buses are excluded because information is unavailable). Because some data is commercially confidential, absolute numbers are not given and an average vehicle occupancy factor of 1.7 has been applied to road traffic counts. Wellington airport's function as a domestic network hub results in many movements not destined for or originating in the region, but counted as crossing regional boundaries.

Table 3 shows absolute numbers of travellers; figures for the inter-island ferries (operated by Strait Shipping and Toll NZ) and inter-regional passenger trains (operated by Toll NZ) have been omitted to protect commercial confidentiality.

Mode	Number of persons (million) in 2004
Air – domestic	3.9
Air – international	0.5
Rail	N/A
Ferry	N/A
Road (except buses)	10.8

Table 3: Number of inter-regional passengers, by mode (2004)

Interpretation: Road transport continues to dominate passenger movement to and from the region. The growth of air travel is volatile, affected by airline industry changes, industry competition and fuel prices. Despite these factors, domestic air passenger growth has been the highest of all modes between 1997 and 2004, showing 29% growth in passenger

movements. Rail and ferry passenger numbers continue to decline, perhaps as competition between rival inter-city airlines heats up and domestic airfare prices fall as a consequence. Overall, the trend is strong growth, with a 20% increase in total passenger trips between 1997 and 2004, and a 4% increase between 2003 and 2004.

Comments: Road-based travel is vital to the region. Despite this, the two main routes, state highways (SH) 1 and 2, offer poor service and are vulnerable to closure in the event of an earthquake. Earthquake hazard also poses a risk to the region's second largest passenger mover, air, with the main Wellington international/domestic airport being located on uplifted land.

Inter-regional freight movements

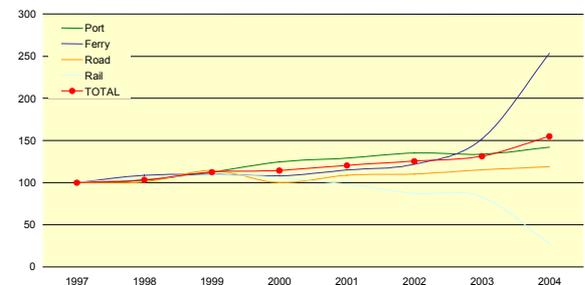


Figure 10: Inter-regional freight movements. 1997 = 100. Sources: CentrePort; Toll NZ; Transit New Zealand; Strait Shipping

Definition: The graph shows a freight index. Freight is measured in a range of non-comparable units. For this reason, and because some data is commercially confidential, absolute numbers are not given. The aggregate measure is based on several assumptions and for indicative purposes only. It is hoped that the volume and quality of available information in this area will improve. Much recorded freight does not have a regional origin or destination and is counted twice in the figures; for example, a container of logs may enter the region by road and leave by sea. Air freight figures (other than the number of non-passenger flight movements, which is considered unreliable) are also unavailable.

Interpretation: Over the past year, at 67% growth, ferry freight has continued to grow at an extraordinary rate, although much of this apparent growth can be attributed to the addition of the new Bluebridge service operated by Strait Shipping. Conversely, with a more than 200% decrease in the past year (according to best figures available from Toll NZ), rail freight has shown a continual decline since 2000. However, overall there is a positive trend, with the aggregate measure suggesting 55% growth over the measured period.

Comments: Strong freight movement growth has occurred despite accessibility problems to and from Wellington on state highways. This reinforces the need to maintain and improve the quality and reliability of the state highway network.

Demographic summary

Inter-regional travel indices

Definition: Figure 11 shows movement in indices for inter-regional passenger and freight movements and a composite index. The index is expressed relative to a base year of 1997 and has not been weighted to reflect the equal importance of both passenger and freight movements in the region.

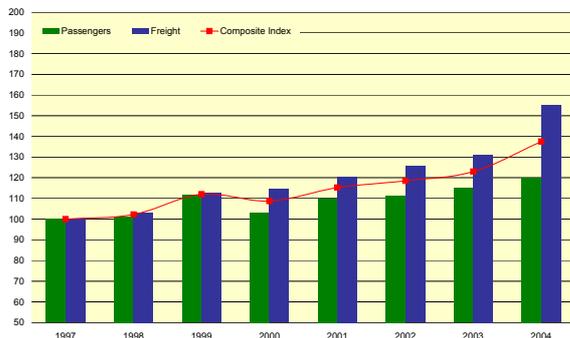


Figure 11: Total movements to/from region (indices). 1997 = 100

Interpretation: Total passenger movements grew by 20% between 1997 and 2004. Freight movements in the same period grew by 55%. The jump in 2004 reflects increased volumes on inter-island ferry services, however this data is considered indicative at best. The composite index shows growth of 38% or 5% per annum. The figures should not be taken entirely at face value: passengers and freight passing through the region and crossing its boundaries twice are counted twice.

Regional level

The main routes to and from the region, SH1 and SH2, account for around two-thirds of passenger movements across the regional boundary. SH1 accounts for approximately 85% of total movements, highlighting the road's significance to the whole region.

Road passenger movements grew by 19% between 1997 and 2004, while domestic and international air travel grew by around 29%. Ferry passenger numbers also grew but at a much slower rate of 4%, reflecting strong growth in tourism travel and more direct international air services.

Rail travel plays only a small part, with the single long-distance service being daytime and night-time trains to and from Auckland, and the Capital Connection to and from Palmerston North. The Napier service was discontinued in 2001. Rail

passenger movements declined steadily between 1997 and 2004, dropping 19% over the period.

Total freight moved through CentrePort shows strong growth of 42% since 1997. Over the same period, the inter-island ferry services have significantly increased their freight carriage, by more than 153%. Road freight has increased by around 19% over the period, although not at a constant rate. Like passenger numbers, inter-regional rail freight reduced by a significant 78% between 1997 and 2004.

Sub-regional level

The figures are, by definition, regional totals, hence disaggregation by district is impossible.

Outlook

The tourism market is expected to remain buoyant for the foreseeable future; this will contribute to growth in all passenger modes, especially the inter-island ferry services.

Road traffic and freight levels correlate strongly with regional economic activity, so steady growth is expected.

Inter-regional rail passenger and freight movements are expected to continue to decline in the face of stiff competition from highly competitive internal air passenger services and a deregulated road freight environment.

Implications for transportation planning

Demand for passenger and freight movement to and from the region is expected to grow steadily over the next few years. The predominance of road-based travel requires reliable connections, particularly the SH1 corridor to the north of Wellington. Access to the port, ferry terminal and airport will also become critical as traffic to and from these destinations increases.

4. Accessibility and economic development indicators

This section sets out and discusses items relating to the RLTS accessibility and economic development objective: *to provide a transport system that optimises access to and within the region*. It considers the following performance indicators:

- Perceptions of network reliability
- Mode use
- Short trip active mode use
- Perceptions about the ease of walking
- Perceptions about the ease of cycling
- Travel time performance indicators
- State highway screenline traffic volumes
- Wellington CBD cordon counts
- Road traffic hourly profiles
- Heavy vehicles on key routes
- State highway vehicle kilometres
- Road network use
- Road network level of service
- Vehicle occupancy on Wellington CBD cordon
- Key route travel times: public transportation
- Public transport service patronage
- Wellington CBD cycle and pedestrian movements
- Mode of journey to work
- Parking supply in CBDs

Indicators

Perceptions of network reliability

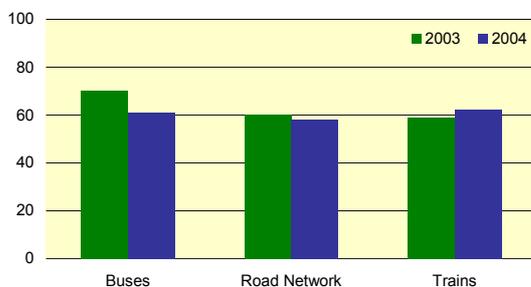


Figure 12: How many people rate regional transport networks as reliable? Source: GWRC perception survey, 2003, 2004

Definition: The graph shows the percentage of people who rate main commuter transport networks as 'reliable'.

Interpretation: Of all regional networks, the bus network reliability perception fell most significantly in 2004 to 61% (c.f. 70% in 2003); and people's perceptions of road network reliability fell 2% between 2003 and 2004 to 58%. Interestingly, the train network was the only one on which people thought reliability had improved, rising 3% to 62% in 2004, and thus being perceived as the most reliable network in the region.

Comment: Overall, about 60% of people think Wellington's transport networks are reliable. This indicates a relatively low level of service is being

provided. Despite bus reliability falling almost 10% between 2003 and 2004, over 60% of the population still see the key public transport networks in the region as reliable, yet many still choose to use private vehicles for transport. Other factors must be leading to their mode choice.

Mode use

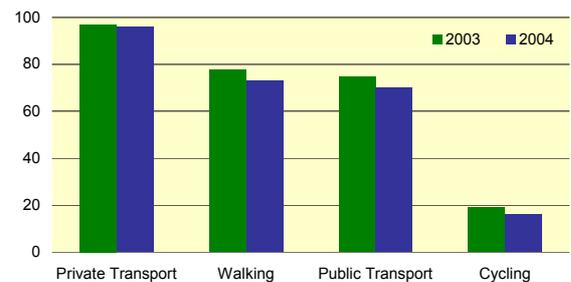


Figure 13: Over the last six months, have you made any of your trips in the region by? Source: GWRC perception survey, 2004

Definition: The graph shows how many people have used the four main forms of transport in the past six months in 2003 and 2004.

Interpretation: 96% of respondents said they had made trips in the previous six months by private transport; 73% by walking; and 70% by public transport. Only 16% said they had made a trip by cycle. Relative use of modes remains unchanged since the 2003 survey. The apparent decline in use across all modes is not supported by other survey data.

Comment: It is expected that many people will have used private transport. The Wellington CBD and indeed other regional cities are very pedestrian-friendly environments, so again it is not surprising that many people have made walking trips. It is also not surprising that many people have not cycled; this issue is discussed further in section seven.

Short trip active mode use

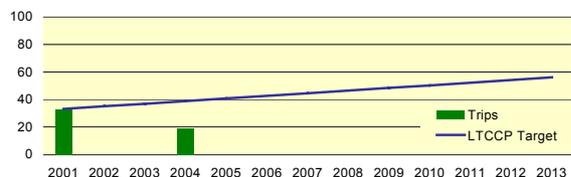


Figure 14: Percentage of trips less than 2km made by pedestrian or cycling modes. Source: GWRC household survey, 2001; GWRC active mode survey, 2004

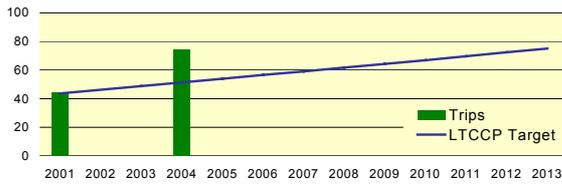


Figure 15: Percentage of trips less than 1km made by pedestrian or cycling modes. Source: GWRC household survey, 2001; GWRC active mode survey 2004

Definition: The graphs show how the percentage of short trips by the active modes of cycling and walking compare with the GWRC LTCCP targets. As the 2001 data was collected as part of an expensive model calibration survey, it was decided to instigate a new annual ‘active mode survey’ using similar methodology to that in the 2001 survey.

Interpretation: The 2004 active mode survey showed that only 19% of people made trips of less than 2km by the active modes of cycling or walking (c.f. 33% in 2001), while 74% made trips less than 1km by the same modes (c.f. 44% in 2001).

Comments: As the methodology of the 2004 active mode survey was not identical to that of the 2001 survey, it will be some years before an accurate trend will emerge. The LTCCP target is that 75% of all trips up to 1km are walked or cycled and 56% of all trips up to 2km are walked or cycled by 2013. While already a relatively high number of people make short trips by active modes, GWRC aims to encourage significantly more trips by these modes.

Perceptions of short trip active mode use

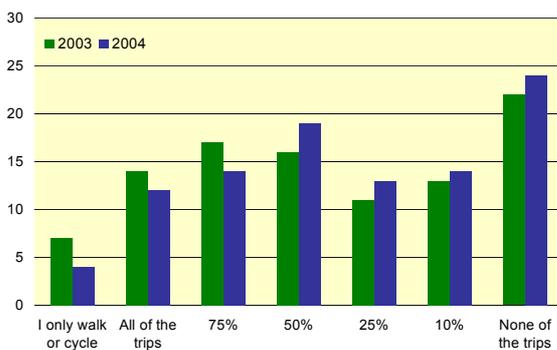


Figure 16: What amount of your current short trips could just as easily be walked or cycled? Source: GWRC perception survey, 2004

Definition: The graph shows how many short trips respondents believed they could just as easily walk or cycle.

Interpretation: 49% of respondents said that half or more of their trips could just as easily be walked or cycled (c.f. 54% in 2003), while only 24% of respondents said that none of their trips could be (c.f. 22% in 2003).

Comment: This question is designed to gather an understanding of how many short trips people are currently undertaking that by their own reckoning could just as easily be undertaken by the active modes of walking or cycling. Interestingly, almost half of people said that most (50% or over) trips could just as easily be walked or cycled, while nearly a quarter said that none of their trips could be walked or cycled. GWRC aims to encourage active mode use to reach the LTCCP targets in the above indicator.

Perceptions about the ease of walking

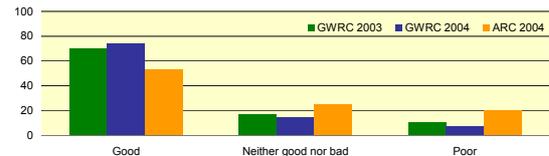


Figure 17: How ‘hassle free’ is getting around the region by walking? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how easily people find it to get around the region by walking, and this is compared with Auckland.

Interpretation: 74% of Wellingtonians believe that getting around the region by walking is easy (c.f. 70% in 2003), over 20% more than their Auckland counterparts. Twenty percent of Aucklanders believe that getting around their region by walking is difficult, 13% more than their Wellingtonian counterparts.

Comment: This question offers an understanding of how easily people see getting around the region by the active walking mode. A perception that using this mode is difficult can lead people to use less active modes.

Most Wellingtonians believe that getting around the region by walking is relatively easy, but the same cannot be said of our Auckland counterparts. This result is to be expected as Wellington’s regional cities and towns are geographically small in scale, whereas Auckland has generally sprawled over the landscape as it has grown.

Perceptions about the ease of cycling

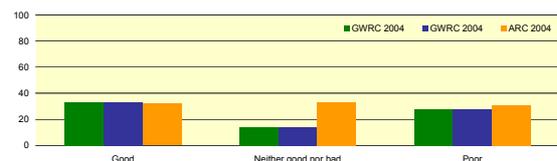


Figure 18: How ‘hassle free’ is it to get around the region by cycling? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how easily people find it to get around the region by cycling, and this is compared with Auckland.

Interpretation: Thirty-three percent of Wellingtonians believe that getting around the region by cycle is easy (c.f. 38% in 2003), just 1% more than their Auckland counterparts (c.f. 15% in 2003). Thirty-one percent of Aucklanders believe that getting around their region by cycle is difficult, just 3% more than their Wellingtonian counterparts (13% in 2003).

Comment: This question offers an understanding of how easily people see getting around the region by the active cycling mode. A perception that using this mode is difficult correlates to the low use of this mode.

Most Wellingtonians believe that getting around their region by cycling is relatively difficult. However, this year the gap between Wellington and Auckland perceptions reduced to just 1%. This is because more Aucklanders have begun to believe it is easy to get around their region by cycling, while more Wellingtonians have begun to think that getting around the region by cycling is difficult. This result clearly indicates the need for improved cycling facilities throughout the region to provide greater comfort for users of this mode.

Travel time performance indicators

Overview: Travel time performance indicators were established for Wellington in 2002 in conjunction with Transit New Zealand and the Ministry for the Environment.

Their methodology is based on the Austroads ‘travel time performance methodology’, and involves floating car travel time surveys carried out on a sample of Wellington’s strategic and regional arterial networks in May and November each year.

The performance indicators are used to monitor changes in travel time and congestion on a year-to-year basis, and to allow direct comparison with other Australasian cities using the surveys.

Travel times have been surveyed on the following representative regional routes:



Figure 19: Greater Wellington travel time performance monitoring network. Source: Transit New Zealand

- Route 1: Paraparaumu – Wellington airport
- Route 2: Upper Hutt – Wellington airport
- Route 3: Porirua – Seaview (via SH58)
- Route 4: Karori – Island Bay.

These routes differ slightly from those originally measured in May 2002, as it was identified that a number of ‘pinch points’ on the network were missed. These new routes are not expected to change in the future, so reliable trends will emerge.

This information yields congestion, measured as minutes of delay per kilometre travelled (CGI), for the morning peak period (AM), inter-peak period (IP) and afternoon peak period (PM), average network speeds and variability in travel time.

Travel time performance indicators: CGI comparison

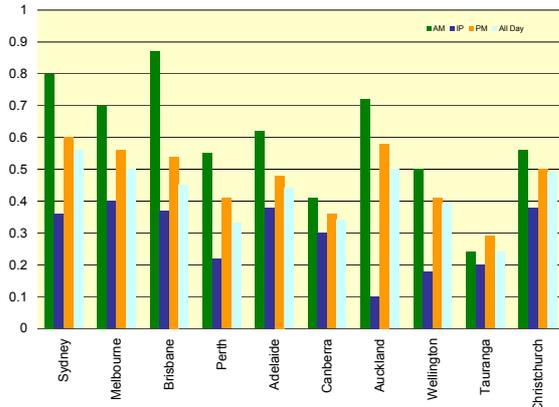


Figure 20: Comparison of Australasian cities' CGI (mins delay/km travel). Source: Transit New Zealand

Note: Data relating to New Zealand cities is for March 2004, while data for the Australian cities is the latest available, 2000. Also, data for Christchurch is not directly comparable with other New Zealand cities as the network surveyed was entirely urban.

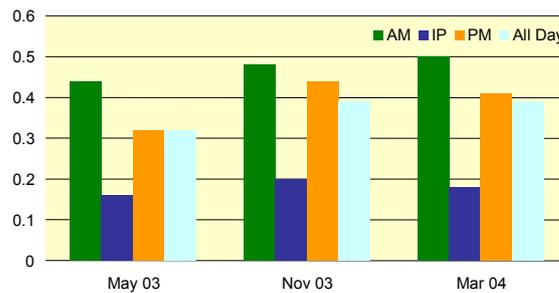


Figure 21: Wellington CGI (mins delay/km travel). Source: Transit New Zealand

Interpretation: As new routes were established in Wellington in May 2003, it will be some years before trends emerge. However, Wellington's congestion as recorded by the March 2004 travel time surveys was 0.50, AM (c.f. 0.44 in May 2003); 0.18, IP (c.f. 0.16 in May 2003); 0.41, PM (c.f. 0.32 in May 2003); and 0.39 all day (c.f. 0.32 in May 2003).

When directly compared with congestion in Auckland, Wellington's congestion is less, with Wellingtonians experiencing almost 15 seconds less delay per kilometre in the morning peak than their Auckland counterparts. The gap between the two regions is even more significant once the average journey length and the number of journeys made are considered. When directly compared with congestion in Tauranga, Wellington's morning peak congestion is over double, with Wellingtonians experiencing 16 seconds more delay per kilometre than their Tauranga counterparts. Direct comparisons with Christchurch cannot be made, as the network surveyed was entirely urban and therefore not representative of the whole roading network.

Comments: While the data reflects the level of service the road network offers, the fact that it is averaged out over the whole measured network means localised problems are masked. Wellington compares favourably with most cities measured in Australasia. However, where in the past Wellington experienced the lowest overall congestion of all cities measured, it now has all-day congestion levels comparable with larger Australian cities such as Perth and Canberra. As freight vehicles move around the road network in a similar manner to cars, this indicator also shows that congestion is worsening for freight, which can detrimentally affect the region's economy.

Wellington's congestion pattern appears to be a short peak period over the network, with a number of pinch points such as the Paremata roundabout and the merge of SH1 and SH2 at Ngauranga. Auckland's high and continually rising congestion levels may be a result of the city's critically loaded network, which means that even small events can lead to disproportionately large effects on the network.

Travel time performance indicator: key route travel times by road

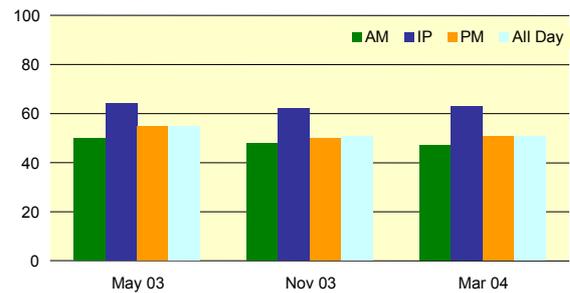


Figure 22: Network average vehicle speeds (km/h). Source: Transit New Zealand

Interpretation: As new routes were established in May 2003, it will be some years before trends emerge. The 2004 information shows the effects of morning and evening peak period congestion; average speeds are down 19-25% on the inter-peak period.

Comments: Results reflect the level of service the road network offers. These are the average results of the surveyed routes, which mask localised problem areas where congestion occurs.

Travel time performance indicator: travel time uncertainty

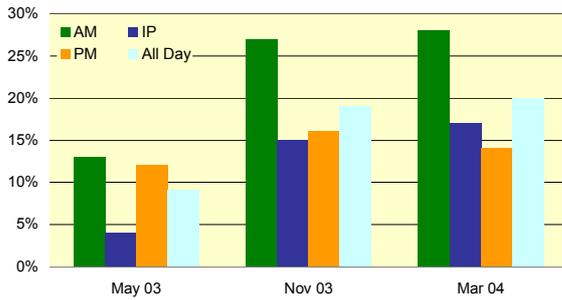


Figure 23: Variability in travel time. Source: Transit New Zealand

Definition: The graph shows a measure of the range of actual travel time results and is used to monitor the reliability of travel times. The measure is expressed as a percentage of the average travel time.

Interpretation: As new routes were established in May 2003, it will be some years before trends emerge. However, in less than a year AM peak travel time variability has increased, from 13% in May 2003 to 28% in March 2004.

Comment: The significant increase in travel time variability in such a short period of time is of concern. AM peak variability has increased 115% in 10 months, meaning that when the survey was undertaken in March 2004, on any given AM trip the average time spent travelling could vary by up to 28%.

Travel time performance indicator: Greater Wellington regional congestion

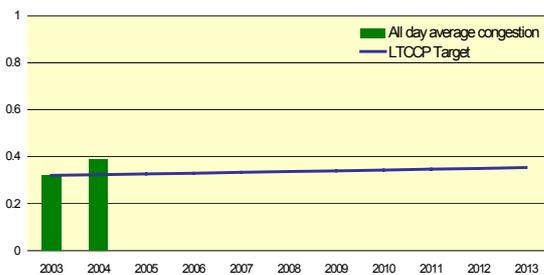


Figure 24: Greater Wellington regional congestion (mins delay/km travelled). Source: Transit New Zealand

Definition: The graph shows all-day average congestion on Wellington’s roads compared with the GWRC LTCCP target.

Interpretation: Between 2003 and 2004 all-day average congestion increased 22% to 0.39 minutes’ delay per kilometre travelled.

Comments: The LTCCP target is based on congestion not increasing by more than 1% per year from 2003, so the 22% increase experienced in the last year is of concern. The new regional Travel Demand Management Strategy and Road Pricing Study, both

due for release in mid-2005, should go some way to identifying methods for addressing this issue.

Travel time performance indicator: perceptions about the state of congestion

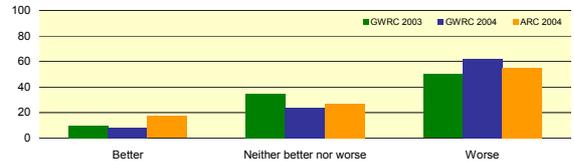


Figure 25: Do you think traffic congestion is better than it was two years ago? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how Wellingtonians and Aucklanders believe traffic congestion has changed over the past two years.

Interpretation: Sixty-two percent of Wellingtonians consider congestion has worsened over the past two years. This is 12% worse than in 2003 and means more Wellingtonians than Aucklanders (55%) think congestion has worsened in the past two years. This indicates that Wellington’s congestion is of significant concern.

Comments: While only two surveys have been carried out, anecdotal evidence suggests that both Auckland’s and Wellington’s congestion is getting worse, with more of the public perceiving that Wellington’s congestion is getting worse than Auckland’s.

State highway screenline traffic volumes

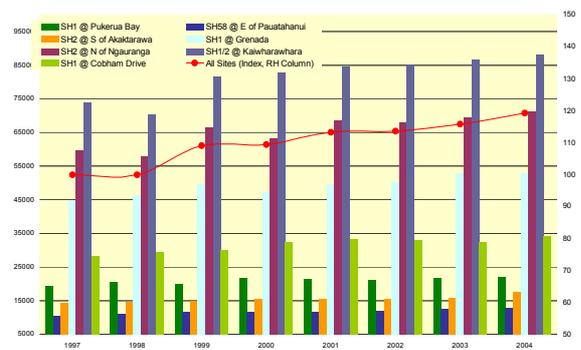


Figure 26: State highway screenline traffic volumes, AADT. 1997 = 100. Source: Transit New Zealand

Definition: The graph shows annual average daily traffic (AADT) volumes derived from automatic counters operating on each road section over a calendar year. Results must be interpreted cautiously as many vehicles are counted several times, depending on their route through the network. Counts record only vehicles on the network; vehicle trips that are avoided because of perceived congestion cannot be quantified.

Interpretation: Traffic volumes have continued to rise slightly since 1997, with traffic volumes in 2004 at

about 19% above 1996 levels, representing an annual growth rate of just under 3%.

Comments: Demands on the road network continue to grow significantly. Initiatives encouraging the use of public transport, especially for peak period commuter trips, remain important, but road travel will continue to be the region's predominant form of transport. The network requires balanced improvements in capacity and efficiency to accommodate demand properly.

Wellington CBD cordon counts

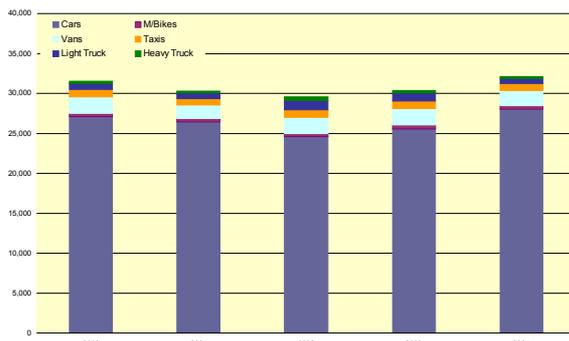


Figure 27: Wellington CBD cordon inbound traffic volumes weekday AM two-hour peak. Source: Wellington City Council

Definition: Wellington City Council commissions classified counts in March and October each year. The information displayed in this graph shows results for March only. The 'cordon' comprises Oriental Parade, Majoribanks Street, Elizabeth Street, Pirie Street, Cambridge Terrace, Buckle Street, Tasman Street, Taranaki Street, Cuba Street, Victoria Street, Willis Street, Aro Street, Abel Smith Street, Vivian Street, Ghuznee Street, Dixon Street, The Terrace, Boulcott Street, Aurora Terrace, Bolton Street, Bowen Street, Hill Street, Hawkestone Street, Murphy Street, Hobson Street, Thorndon Quay and Aotea Quay. Traffic heading into the city is counted during the two-hour morning commuter peak. Buses are not counted.

Interpretation: Total inbound road traffic volumes increased by almost 6% between 2003 and 2004. Cars alone comprised more than 87% of the total 2004 vehicle flow; heavy trucks less than 1%.

Comments: After three years of decline between 2000 and 2003, peak period commuter private car use for journeys into Wellington has begun to increase, with an almost 10% increase occurring between 2003 and 2004. This increase does not bode well for GWRC achieving its LTCCP Target of less than 45% of work trips into the Wellington CBD being made by private vehicle.

Road traffic hourly profiles, 2004

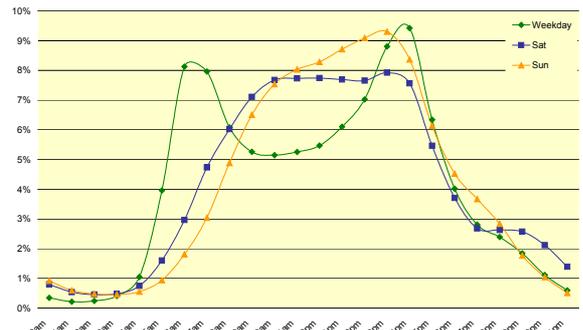


Figure 28: Hourly traffic profiles by day of week, 2004. Source: Transit New Zealand

Definition: The graph shows daily flow distribution over the course of each day, averaged across state highway network sites for which information is available. Hourly flow is presented as a percentage of daily traffic volume.

Interpretation: This analysis uses combined two-way traffic volumes. Directional volumes would show more pronounced peaks, especially in the direction of commuter traffic volumes.

Comment: At this stage, the usage pattern reflects traditional morning and evening weekday commuter peak periods, when traffic volumes are between 8% and 10% of daily flow. Weekend profiles are quite different: Saturdays show a broad peak between 10am and 6pm, while the Sunday peak occurs in the late afternoon as people return home. There was no change in the profiles between 2003 and 2004.

Heavy vehicles on key routes

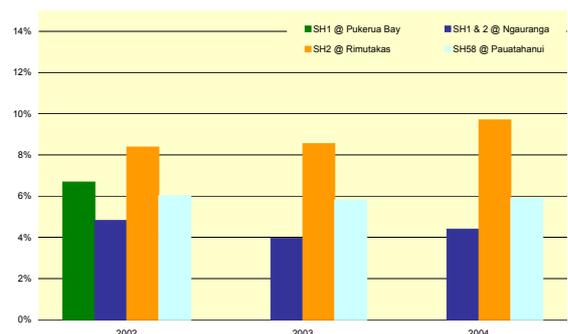


Figure 29: % heavy vehicles on major routes (weekdays). Sources: GWRC; Transit New Zealand

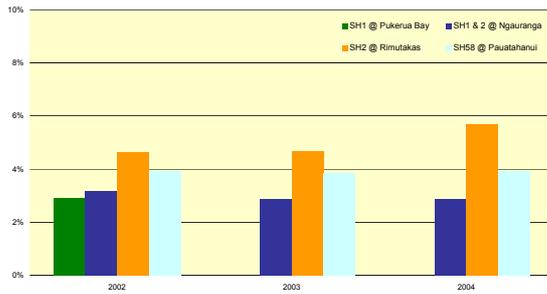


Figure 30: % heavy vehicles on major routes (weekends). Sources: GWRC; Transit New Zealand

Definition: Data for the above graphs displaying heavy vehicle percentages is obtained from permanent telemetry sites recording throughout the year. The sites record the length of each vehicle, with anything more than 5.5 metres defined as 'heavy'. Pukerua Bay site data was unavailable for 2003 and 2004.

Interpretation: Heavy vehicles as a percentage of total weekday and weekend traffic increased at all monitored sites in 2004, with heavy vehicles making up a greater proportion than light vehicles of total traffic demand at more remote locations, such as SH2 at the Rimutakas. The number of heavy vehicles using the Rimutaka route on weekdays grew by 13% between 2003 and 2004 as a result of Wairarapa forestry blocks coming into harvesting; the logs are taken by truck to the port of Wellington for export. Closer to the city and during weekends, there are more light vehicles on the network, resulting in lower absolute and percentage figures for heavy vehicles.

Comments: It is vital that the regional road network provides for heavy vehicles to support commercial activities and make accessible key destinations such as the port and airport.

State highway vehicle kilometres

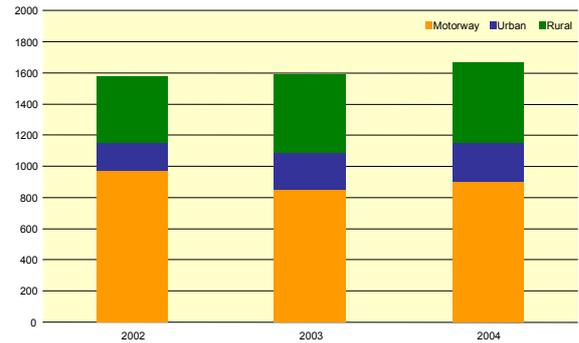


Figure 31: State highway vehicle kilometres travelled (millions). Source: Transit New Zealand. Note: Information for 2002 and 2003 is indicative only

Definition: The graph shows information that Transit New Zealand gathers from traffic counters to determine total vehicle kilometres travelled (VKT) annually on each section of regional state highway. Information for 2002 and 2003 is indicative only and should not be compared with 2004.

Interpretation: Currently available total figures show modest growth from 2002 to 2004 (5.4%). This is similar to the 4.4% growth in state highway traffic volumes, but should be taken as indicative only until future years' confirmed VKT levels can be added. Table 4 shows that over half of state highway travel is occurring on the motorway system.

District	State highway network, 2004	
	Percentage of network	Percentage of VKT
Motorway	37	54
Urban	14	15
Rural	49	31
REGION	100	100

Table 4: State highway network characteristics, Wellington region, 2004

Comments: State highway network loadings vary widely by location; rural Wairarapa requirements are very different from those of central Wellington. Continued monitoring is needed to ensure state highway network components give the best service possible within topographical and financial constraints.

Road network use

Overview: The Wellington Transport Strategic Model (WTSM) road network comprises the main arterial and some secondary roads throughout the greater Wellington region. Reporting results for this full network obscure the results for roads that have the greatest impact on results – those considered ‘critical’ in moving people and freight on the roads between the major destinations in the region.

For this reason, three strategic routes have been identified:

- Western Strategic Network: SH1 from Waikanae to Ngauranga
- Eastern Strategic Network: SH2 from Kennedy Good Bridge to SH1 at Ngauranga, Hutt Road from Hutt City to Petone, Melling Link and The Esplanade at Petone
- Southern Strategic Network: SH1 from Ngauranga through to the airport, Hutt Road, Thorndon Quay, Aotea Quay and waterfront route through Basin Reserve to Wellington Hospital via Adelaide Road.

These results are shown on the following map. Modelled results are used for the following network indicators.

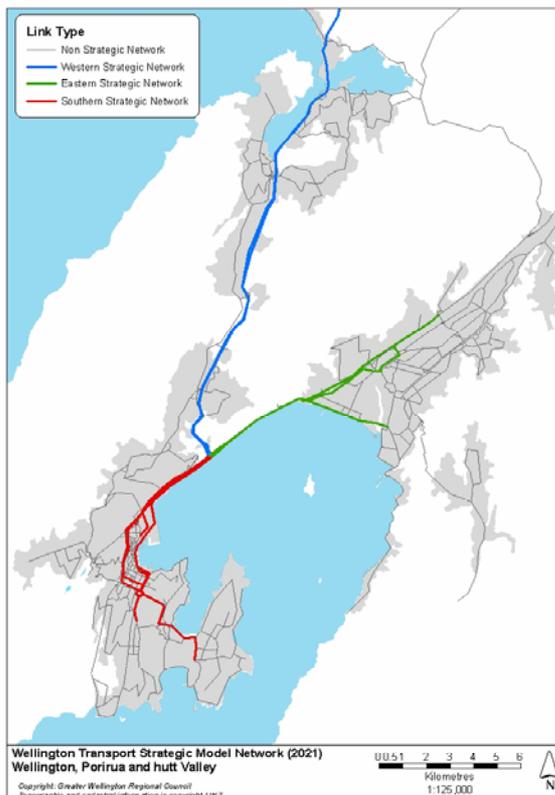


Figure 32: WTSM model network (2021), Wellington, Porirua and Hutt Valley. Source: GWRC

Expected network use

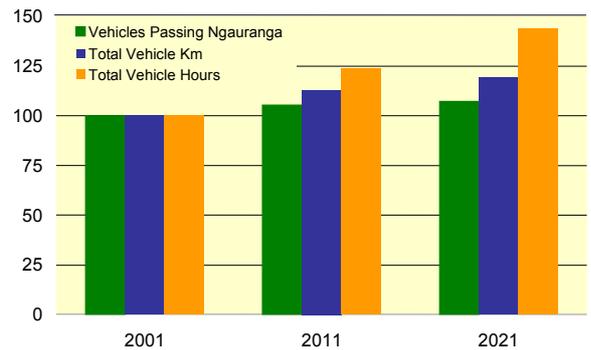


Figure 33: Modelled network use, Western Strategic Network, AM peak period (index 2001 = 100). Source: WTSM

Definition: The graph shows information derived from WTSM, which has been confirmed by observation rather than measurement or survey. Future-year forecasts should be taken as indicative only. The model comprises sub-models for the weekday morning and afternoon commuter peaks, and the period between these peaks (the inter-peak period). Totals cover the entire modelled regional network, including all principal routes. Minor local roads are not included.

Interpretation: The Western Strategic Network, comprising SH1 from Ngauranga to Waikanae, is expected to experience greater growth in the total number of trips than any other part of the strategic network. If road and traffic conditions stay as they are, changes in the number of vehicles should be matched by similar changes in VKT and hours. Forecasts indicate that, by 2021, vehicle hours (up 44%) will increase much faster than VKT (up 19%), while the number of vehicles will increase by only 7%. Total travel times are expected to increase as congestion worsens. Total travel distances will rise as a result of location changes (families moving to rural areas) and in response to congestion (seeking faster but longer routes).

Comments: The road network faces increasing demands as traffic volumes and travel distances increase. Over the next few years, higher rates of growth can be expected in inter-peak periods as commuters choose to travel outside traditional peaks.

Road network level of service

Overview: Information is derived from GWRC’s transportation strategy model, which has been confirmed by observation rather than measurement or survey. Future-year forecasts should be taken as indicative only. The model comprises sub-models for the weekday morning and afternoon commuter peaks, and the inter-peak period. It compares forecast traffic volumes with network capacity, thus identifying ‘levels of service’ (LOS). The US Highway Capacity Manual defines this term, but the assessment here is based on the following ‘proxy’ measures (the calculated volume-to-capacity ratios for each section of road):

- LOS A: primarily light traffic, free-flow conditions
- LOS B: mostly light traffic, some disruptions
- LOS C: some permanent queuing at intersections
- LOS D: high volumes, delays due to congestion
- LOS E: operation at capacity
- LOS F: over-capacity – breakdown of traffic flow.

Graphs show the percentage length of road network operating at each LOS. In general, the AM peak period has lower LOS than the PM or inter-peak period. For this reason, results for the AM peak period are shown.

Road network LOS: full strategic network

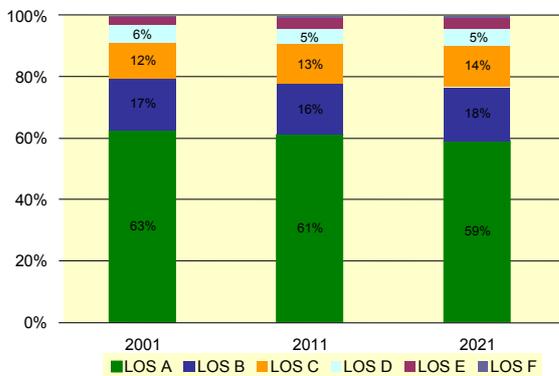


Figure 34: Road network LOS, full network, AM peak period. Source: WTSM

Definition: The graph shows the complete modelled network, which comprises the main arterial and some secondary roads throughout the greater Wellington region.

Interpretation: The percentage of the road network at LOS E or F remains below 5%. More than 75% of the modelled network operates at LOS A or B in the morning peak.

Comments: Reporting results for this full network obscure the results for the roads that have the greatest impact on results – those considered ‘critical’ in moving people and freight on the roads between the major destinations in the region.

Road network LOS: Southern Strategic Network

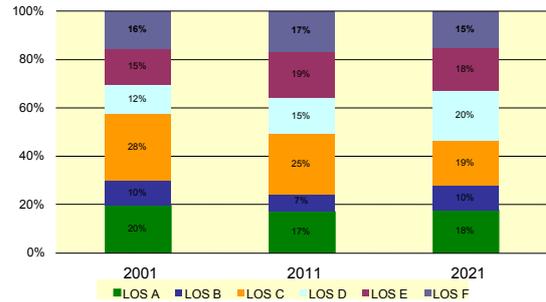


Figure 35: Road network LOS Southern Strategic Network, AM peak period. Source: WTSM

Definition: The graph shows LOS on the Southern Strategic Network (Ngauranga – Airport).

Interpretation: This part of the network, comprising the main roads from Ngauranga southwards to the airport and hospital, is expected to experience the worst LOS of any section of the region’s roading network. In the morning peak, more than 30% of the modelled network has demand close to or above its capacity. This is expected to worsen through to 2011, before getting slightly better by 2021 with the expected installation of the Ngauranga to Aotea tidal flow system on SH1. The proportion of the Southern Strategic Network that is not subject to some form of permanent queues is below 30%. Increasing traffic demands will eventually erode LOS as congestion becomes worse and affects a wider area.

Comments: Without improved efficiency or capacity, LOS will progressively deteriorate as traffic demands grow. The results will be greater congestion in existing problem areas and the spread of congestion to areas now operating satisfactorily.

Vehicle occupancy on Wellington CBD cordon



Figure 36: Wellington CBD cordon inbound traffic occupancy – weekday AM peak, two-hour. Source: Wellington City Council

Definition: Wellington City Council commissions surveys in March and October each year. Information is presented for March only. The cordon comprises Oriental Parade, Majoribanks Street, Elizabeth Street, Pirie Street, Cambridge Terrace, Buckle Street, Tasman Street, Taranaki Street, Cuba Street, Victoria Street, Willis Street, Aro Street, Abel Smith Street, Vivian Street, Ghuznee Street, Dixon Street, The Terrace, Boulcott Street, Aurora Terrace, Bolton Street, Bowen Street, Hill Street, Hawkestone Street, Murphy Street, Hobson Street, Thorndon Quay and Aotea Quay. Only traffic heading into the city is counted during the two-hour morning commuter peak, and figures show average numbers of vehicle occupants. Buses are not counted.

Interpretation: While it is too early for real trends to emerge, over the past two years vehicle occupancy has continued to fall. Typical occupancy is approximately 1.4 people per vehicle.

Comments: The high proportion of single- or double-occupancy vehicles represents an inefficient means of transportation. An emphasis on moving *people* rather than *vehicles* would significantly improve efficiency. Initiatives such as the GWRC Rideshare programme aim to address this issue.

Key route travel times: public transportation

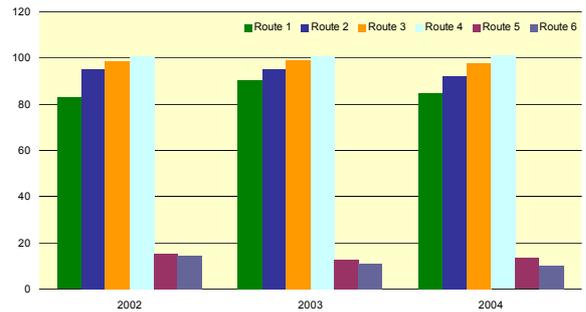


Figure 37: Public transport travel time (AM peak period, in mins). Sources: Bus/rail timetables, survey

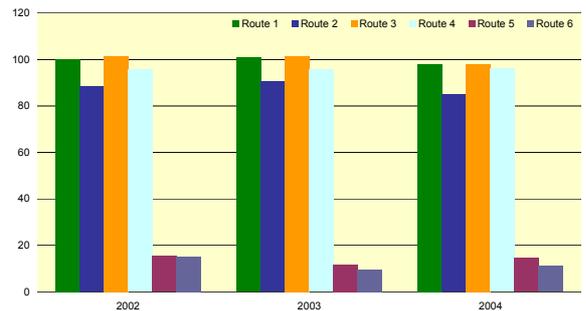


Figure 38: Public transport travel time (inter-peak period, in mins). Sources: Bus/rail timetables, survey

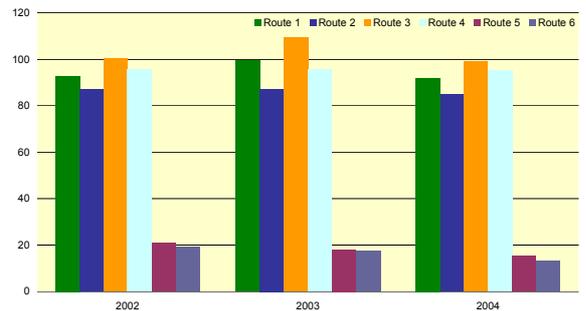


Figure 39: Public transport travel time (PM peak period, in mins). Sources: Bus/rail timetables, survey

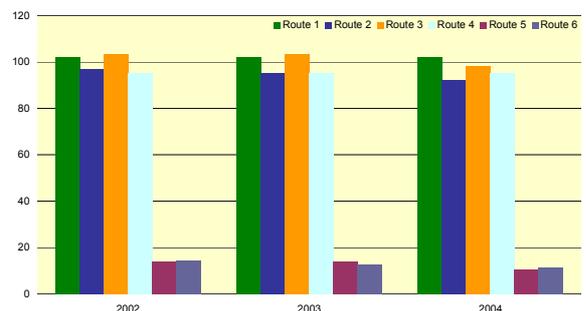


Figure 40: Public transport travel time (Saturday, in mins). Sources: Bus/rail timetables, survey

Definition: Travel times derive from timetables for routes 1 to 4. Routes 5 and 6 face congestion in the Golden Mile (Lambton Quay to Courtenay Place), rendering timetables unreliable; information on these was collected by survey. The graph shows routes covered, which are:

- Route 1: Upper Hutt – Wellington Airport (rail/bus)
- Route 2: Wellington Airport – Upper Hutt (bus/rail)
- Route 3: Paraparaumu – Wellington Airport (rail/bus)
- Route 4: Wellington Airport – Paraparaumu (bus/rail)
- Route 5: Courtenay Place – Railway Station (bus)
- Route 6: Railway Station – Courtenay Place (bus)

Interpretation: The installation of bus lanes along the Golden Mile has led to a further decrease in travel times in the PM peak between 2003 and 2004. This was driven by a decrease in the average length of bus trips starting at Wellington railway station and ending at Courtenay Place.

Comments: High LOS on the public transport network is required to encourage travellers to switch from private cars, especially for the peak-period commute to work. This requires measures to reduce bus travel time variations, and better integration between bus and rail services to minimise the ‘cost’ of interchange to many passengers.

In general, journey times are longer during off-peak and weekend periods, as there is reduced service frequency and trains stop at all stations along each route. Bus travel times along the Golden Mile are higher for the afternoon peak because of congestion at several points.

Changes in the Stagecoach Flyer bus timetable have led to decreased travel times on the Paraparaumu – Airport and Upper Hutt – Airport PM peak routes.

Public transport service patronage

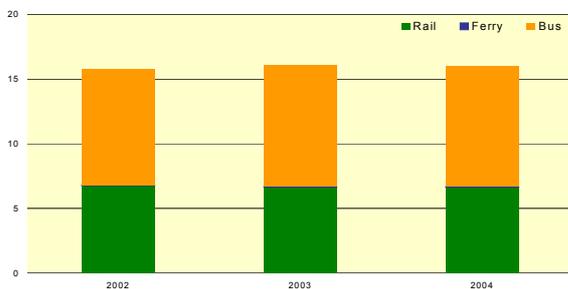


Figure 41: Public transport patronage: no. of trips (millions), by mode, combined peak periods. Source: GWRC

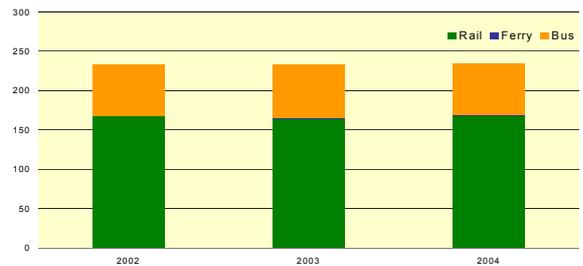


Figure 42: Public transport patronage: passenger km (millions), by mode, combined peak periods. Source: GWRC

Definition: GWRC collates information on public transport patronage for the funding system. The graph shows total distances for passengers travelling on the main public transport modes.

Interpretation: While peak passenger numbers increased by 1.3%, or over 200,000 people, between 2002 and 2003, they have remained static over the past year. Despite this, off-peak passenger numbers have continued to increase significantly during the 2002-2004 period, with passenger numbers increasing by more than 5%, or over 800,000 people. This off-peak growth has been driven by bus passenger numbers, which increased by more than 7% between 2002 and 2004.

Buses account for most journeys by public transport (58% in peak periods). However, rail trips are typically three to four times longer so account for most passenger kilometres (72% in peak periods).

Comments: Demands on the road network continue to grow significantly. Initiatives encouraging the use of public transport, especially for peak-period commuter trips, remain important, but road travel will continue to be the predominant form of regional transport. Travel demands will only be met by balanced improvements to network capacity and efficiency.

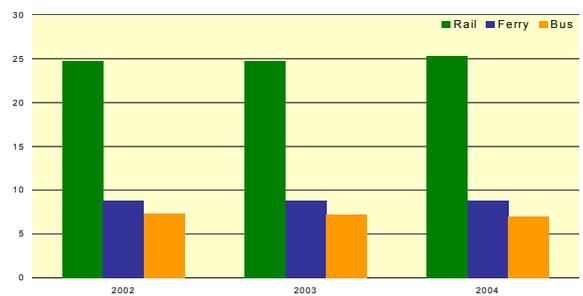


Figure 43: Public transport patronage: average trip length (km) by mode, combined peak periods. Source: GWRC

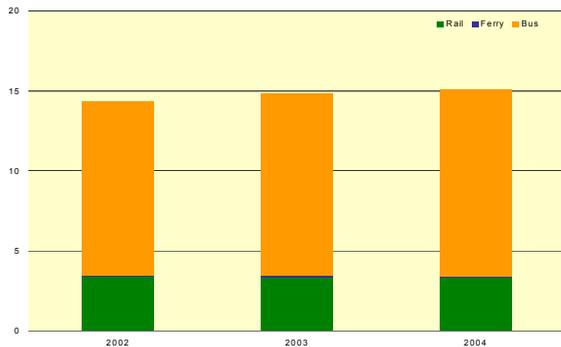


Figure 44: Public transport patronage: no. of trips (millions), by mode, off-peak period. Source: GWRC

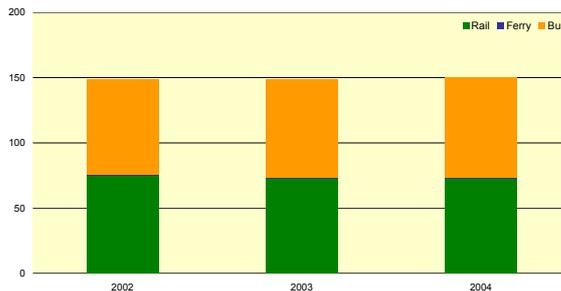


Figure 45: Public transport patronage: passenger km (millions), by mode, off-peak. Source: GWRC

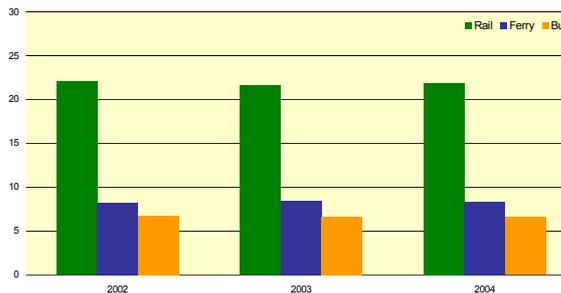


Figure 46: Public transport patronage: average trip length (km) by mode, off-peak period. Source: GWRC

Wellington CBD cycle and pedestrian movements

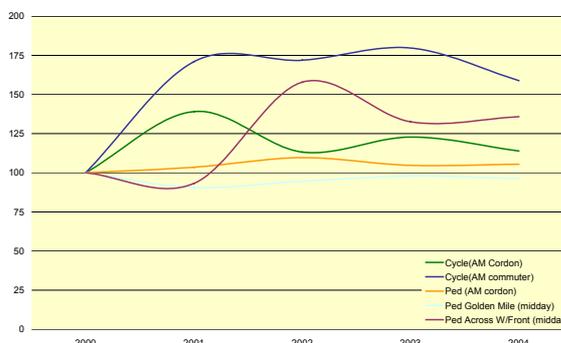


Figure 47: Wellington pedestrian and cycle movements weekday, two-hour period (2000 = 100). Source: Wellington City Council

Definition: The graph shows results from the cordon and screenline location surveys that Wellington City Council undertakes every March and October. Information here is for March only, and no

information is available for other local authority areas. The following aspects are surveyed:

- pedestrians inbound to the central city during the morning peak period
- cycles inbound to the central city during the morning peak period
- cycles at suburban locations during the morning peak period
- pedestrians along the Golden Mile during weekday lunch-times
- pedestrians between the CBD and waterfront during weekday lunch-times.

Interpretation: Cycle and pedestrian counts vary widely according to weather conditions when surveyed. More reliable trends will eventually be established.

Comments: Walking and cycling are becoming more popular means of travelling to work. Demands must be accommodated and encouraged by the provision of safe and convenient networks for pedestrians and cyclists.

Mode of journey to work

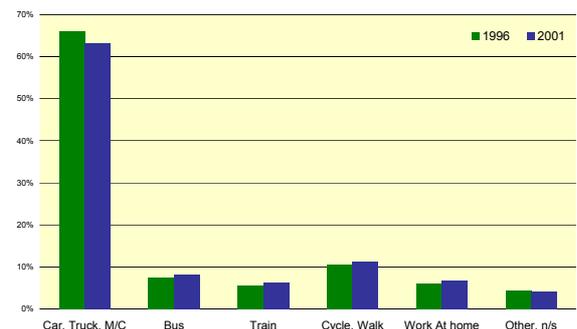


Figure 48: Main mode of journey to work, 1996, 2001. Source: Statistics New Zealand

Definition: The graph shows the main mode of travel to work for the regional population on census day. Census information is collected five-yearly and covers a single day. Data is available for 1996 and 2001, so this indicator will next be updated in the 2007/08 AMR.

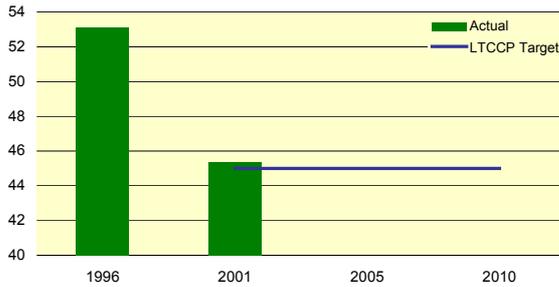


Figure 49: People travelling into Wellington CBD by private car, truck or van. Source: Statistics New Zealand

Definition: The graph shows the percentage of people travelling into the Wellington CBD on census day. Census information is collected five-yearly and covers a single day. Data is available for 1996 and 2001, so this indicator will next be updated in the 2007/08 AMR. An LTCCP Target is that ‘less than 45% of work trips into central Wellington are made by private car’.

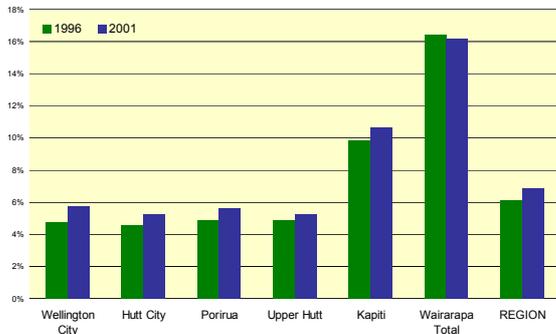


Figure 50: % of people working who work at home, 1996, 2001. Source: Statistics New Zealand

Definition: The graph shows the percentage of people working from home on census day. Census information is collected five-yearly and covers a single day. Data is available for 1996 and 2001, so this indicator will next be updated in the 2007/08 AMR.

Interpretation: These results must be interpreted with care; reliable trends cannot be established from two data points, particularly as yearly results are influenced by the weather on census day. While private cars still account for nearly two-thirds of journeys to work, the data makes it appear that there has been a shift towards public transport and active modes (walking, cycling), a trend that may be changing as indicated by the more recent Wellington City Council cordon survey. The percentage of those working from home has increased in all districts except Wairarapa.

Between the 1996 and 2001 censuses the percentage of people travelling into the Wellington CBD by private vehicle fell by 8% to 45%, thus reaching the LTCCP targets.

Comments: The decrease in numbers of car journeys to work is encouraging. Technological advances that make it easier for people to work from home or to telework at least some days each week are reducing peak period traffic demands.

Parking supply in CBDs

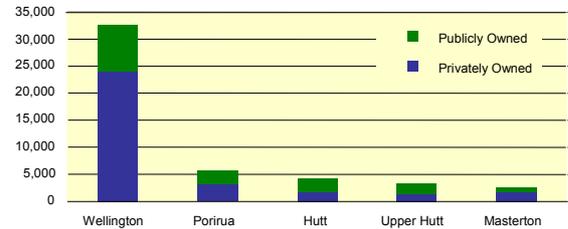


Figure 51: Greater Wellington city centre parking supply. Source: 2003 Booz Allen Hamilton parking report

Definition: The graph shows data supplied from a GWRC-commissioned Booz Allen Hamilton report on parking supply in city centres. The data should be taken as only indicative of parking supply in the region.

Interpretation: Wellington City has the largest number of carparks in the region, with a total of 32,000, of which 25,000 are privately owned. Parking supply in the other regional centres is not significant from a regional perspective.

Comments: The availability and cost of city centre parking are factors considered by residents when deciding on the mode to use to travel to work or shopping/leisure. As the city with the most employees, Wellington has the largest number of carparks available.

Parking supply in Wellington CBD: perceptions of number needed

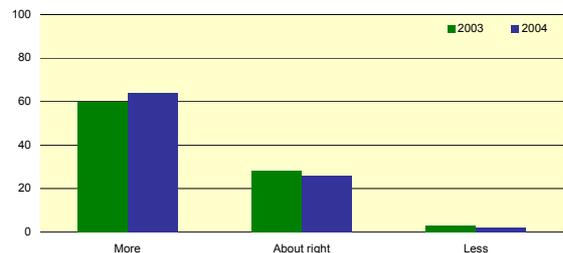


Figure 52: Perceptions of Wellington CBD parking supply. Source: GWRC perception survey, 2004

Definition: The graph shows what people think about the number of carparks available in the Wellington CBD.

Interpretation: Some 64% of respondents think there should be more carparks in Wellington (c.f. 60% in 2003); 26% think the number is about right (c.f. 28% in 2003); and only 2% think there should be fewer (c.f. 3% in 2003).

Comments: It is not surprising that people would like more carparks in the city, as anecdotal evidence suggests that finding a convenient carpark can be difficult. This result is positively correlated with the results from the survey below, asking about the cost of parking.

Parking supply in Wellington CBD: perceptions of parking prices

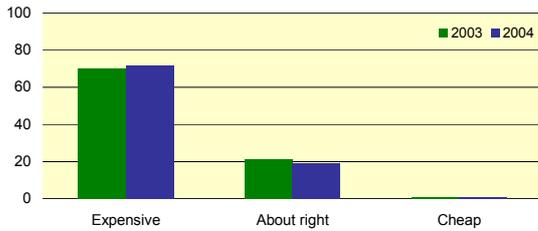


Figure 53: Perceptions of Wellington CBD parking pricing. Source: GWRC perception survey, 2004

Definition: The graph shows what people think about the cost of carparking in the Wellington CBD.

Interpretation: The graph shows that over 72% of people think that parking is too expensive (c.f. 70% in 2003); just under 20% think the cost is about right (c.f. 21% in 2003); and only 1% think it is cheap (c.f. 1% in 2003). Note this survey was conducted before parking price increases came into effect in July 2004.

Comments: Parking pricing is a way of deterring people from driving into city centres. The fact that over 70% of people think parking is expensive and over 60% think parking supply is constrained demonstrates a level of parking constraint already operating in the Wellington CBD.

Demographic summary

Accessibility and economic development indices

Definition: Figure 54 shows the movement in indices for accessibility and economic development at a macro level and a composite index. All are expressed relative to a base year of 2003. The index has been weighted 3:1 for average vehicle speeds/public transport travel times versus state highway volumes/public transport patronage. This weighting reflects passenger kilometres travelled by mode on the regional strategic transport network.

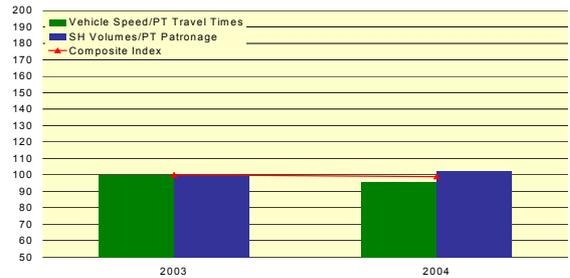


Figure 54: Accessibility and economic development (indices). 2003 = 100

Interpretation: There is insufficient data to draw any valid conclusions at present.

Regional level

State highway traffic volumes increased by around 19% between 1997 and 2004, or 5% between 2002 and 2003. VKT on the state highway network increased by a similar amount at 5.4% between 2002 and 2004.

Model forecasts indicate that by 2021 on the Western Strategic Network, vehicle hours (up 44%) will increase much faster than VKT (up 19%), while the number of vehicles will only increase by 7%. Also, more than 75% of the modelled network is anticipated to operate at LOS A or B (free-flow conditions or some minor delays) in the morning peak. There is not enough information on which to establish trends in vehicle occupancy or cycle/pedestrian movements.

Census results suggest that fewer people in the Wellington region are travelling to work by private car, although this mode still accounts for around 70% of journey-to-work trips. There have been corresponding gains in walking, cycling and public transport. More people are also now working from home, as technological advances release them from working in offices.

Sub-regional level

Trends cannot be established for many indicators, as insufficient information is available.

Wairarapa had the highest 2001 rate of home working at 16.2%, followed by Kapiti at 10.6%. The rate for all other areas was between 5% and 6%. The strongest growth in home working between 1996 and 2001 was in Wellington (26%) and Porirua (25%), and the lowest in Wairarapa (2%).

An average regional decrease of -2.7% in the use of private cars for journeys to work in proportion to total trips to work from 1996 to 2001 masks regional variations between Wellington (-5%) and Wairarapa (+1%). However, more recent Wellington City Council cordon data reveals that private car use in the AM peak period may be on the rise.

Outlook

Daily traffic volumes will continue to grow by around 3% to 4% per annum, with some decline in the proportion of private car journeys to work.

Take-up rates of home and teleworking are likely to continue, driven by demands for lifestyle change, although this will have a marginal effect on regional travel demands. Active modes will remain variable day to day, but their use is expected to increase along with a growing awareness of their potential health benefits and improvements in more cycle and pedestrian networks.

Implications for transportation planning

The Wellington region's dispersed development means the private car will be the dominant form of transport in the foreseeable future. Traffic volumes will grow alongside economic activity.

Increasing traffic demand will not be met without the construction of significant new infrastructure. RLTS proposals seek to maximise road network efficiency while encouraging travellers to use public transport for appropriate journeys. Current measures are relatively passive and rely on voluntary behavioural change. It is likely that direct incentives, such as road charges, congestion pricing and tolls, will be required in future to change travel behaviour.

5. Economic efficiency indicators

This section sets out and discusses items relating to the RLTS economic efficiency objective: *to implement the most efficient options and to ensure that all users of land transport are subject to pricing and non-pricing incentives and signals which promote decisions and behaviours that are, as far as possible, in accordance with efficient use of resources and of optimal benefit to the user.* It considers the following performance indicators:

Road network congestion costs
 Public transport user costs
 Car operating costs
 Fuel price index

Indicators

Road network congestion costs

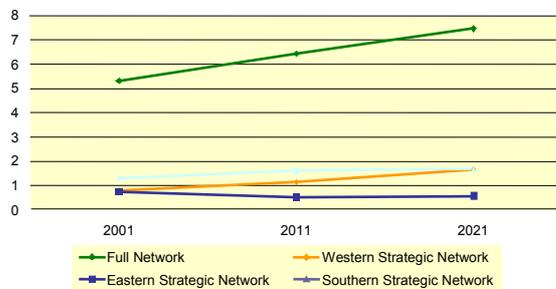


Figure 55: Annual hours of delay (millions). Source: WTSM

Definition: The graph shows delay is the difference between modelled travel time and travel time in uncongested, free-flow conditions, weighted for the volume of traffic.

Interpretation: Current estimates are that 5.5 million hours per year of vehicle delay are experienced on Wellington roads, costing around \$110 million per annum. This is expected to rise to 7.5 million hours (\$150 million) per year by 2021. Delays on the strategic network are expected to grow more slowly than delays across the entire network, indicating that increased traffic volumes are likely on non-major roads in attempts to avoid congestion on the major routes. The Eastern Strategic Network is expected to have decreased delays owing to the anticipated completion of the Dowse/Korokoro interchange by 2011.

Comments: While growing congestion is a concern, the Wellington region does not yet experience it on the scale of Auckland or Australian cities. However, there is no reason to be complacent; opportunities should be taken to pre-empt the regional financial costs of congestion by improving the roading and public transport networks' capacity and efficiency.

Public transport user costs

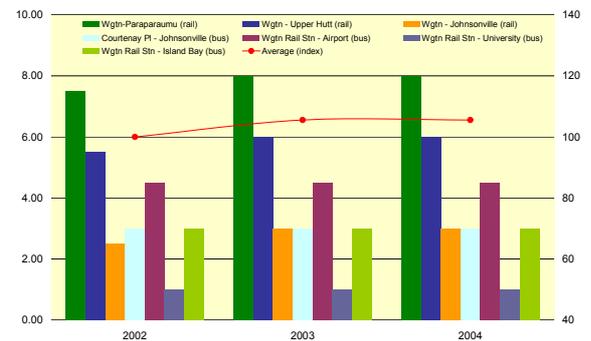


Figure 56: Public transport user costs, 2002 = 100. Source: bus/rail operators

Definition: The graph shows single adult fares on several key routes in the morning commuter peak period:

- Wellington – Paraparaumu (rail)
- Wellington – Upper Hutt (rail)
- Wellington – Johnsonville (bus)
- Courtenay Place – Johnsonville (bus)
- railway station – airport (bus)
- railway station – university (bus)
- railway station – Island Bay (bus).

Interpretation: The public transport fare index remained unchanged between 2003 and 2004, owing to no fare increase occurring on any of the measured routes.

Comments: Public transport must remain competitive to ensure travellers continue to be attracted away from private car use, especially for peak-period journeys to work. Fares are a significant element of this competition, along with perceived service quality and convenience.

Public transport user cost perceptions

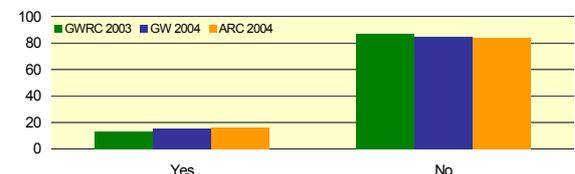


Figure 57: Perceptions of public transport costs as a barrier to mode choice. Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows whether the cost of public transport affects use.

Interpretation: The results are almost identical for Wellington and Auckland, with 85% of people saying that the cost of public transport is not hindering their use of it.

Comments: This response further strengthens comments made elsewhere that other factors such as convenience and reliability are the dominant reasons for people not using public transport more often.

Car operating costs



Figure 58: Car running costs, 1996 = 100. Source: Automobile Association of New Zealand (for 1601-2000cc car, 14,000 km/yr)

Definition: The graph shows vehicle operating costs for a two-litre, petrol-engine car for 14,000km a year. They are broken down into fixed costs (unrelated to vehicle use) and variable costs (proportional to use). Parking charges are not included.

Interpretation: The total cost of operating a two-litre car grew by just under 1% between 2003 and 2004. This was primarily driven by increases in the running costs of petrol, oil, tyres and repairs. Please note that recent significant fuel price increases were not represented, as the March 2004 petrol price of \$1.17/l was used for analysis.

Comments: The costs of owning and running a car are usually taken into account when choosing a mode of transport, but the choice is often made by comparing public transport costs with the variable, or marginal, costs of running a car only. Parking charges (not included in these figures) are a means of increasing car use cost relative to that of public transport.

Private transport perception costs

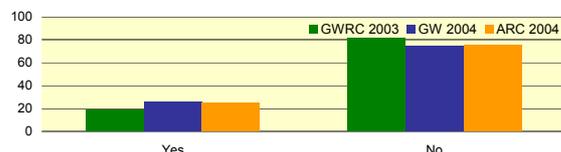


Figure 59: Perceptions of private transport costs as a barrier to mode choice. Sources: GWRC and ARC perception surveys, 2004

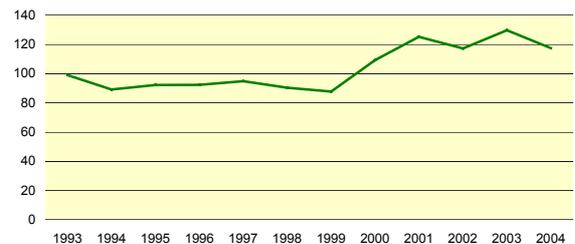
Definition: The graph shows whether the cost of private transport affects use.

Interpretation: The results are almost identical for Wellington and Auckland, with 75% of people saying that the cost of private transport is not hindering their use of it, down 5% on the 2003 survey.

Comments: While the majority of the population are not changing their private transport use because of cost, the survey results indicate a significant perception shift in the past year, with around 5% more people in both Wellington and Auckland believing that private transport costs are affecting use. This might be due to increasing fuel prices in the past year.

Fuel price index

Figure 60: Fuel component of National Farm Expenses Price



Index, March quarter, 1992 = 100. Source: Statistics New Zealand

Definition: The graph shows the March quarter measure of the fuel component of the Farm Expenses Price Index (FEPI).

Interpretation: Fuel prices have risen nearly 20% over the past 20 years.

Comment: This sub-section of the FEPI is currently the only indicator available nationally that shows fuel prices over time. While it is not ideal, it does give an indication of how fuel prices are trending over time at a national level. Oil prices are at some of their highest levels in 30 years and are continuing to show some price volatility. It is envisaged that the high prices currently being paid (September 2004) for fuel will be reflected in the index next year.

Demographic summary

Economic efficiency indices

Definition: Figure 61 shows the movement in indices for economic efficiency and a composite index. All are expressed relative to a base year of 2003. The index has been equally weighted for public transport user costs and car running costs.

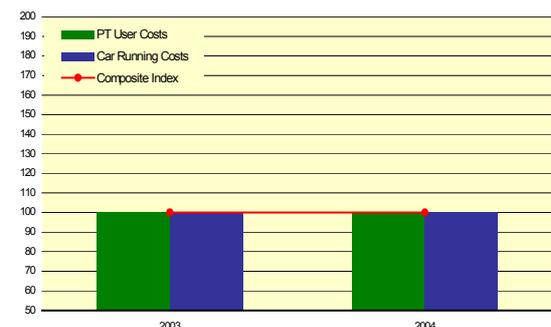


Figure 61: Economic efficiency indices, 2003 = 100

Interpretation: There is insufficient data to draw any valid conclusions at present.

Regional level

Over 5.5 million hours of vehicle time were spent on congested regional roads in 2004. GWRC and Transfund expenditure on public transport services continues to rise, up 40% since 1997.

The cost of running a private car (two-litre, 14,000km a year) has dropped by about 12% since 1996. Costs dropped in 1999 and 2002 when lower interest rates reduced the costs of borrowing money to buy a vehicle. The fuel price index also fell 9.5% between 2003 and 2004.

Sub-regional level

No sub-regional information is available.

Outlook

Time spent using the transport network is likely to increase with population growth and economic activity. While congestion is not yet on the scale of Auckland or the larger Australian cities, average times spent on the road network will rise as congestion intensifies and spreads to previously uncongested areas and times of day.

As the fuel and car running cost indicators are assessed early in the calendar year, it is anticipated that recent fuel price rises will be reflected in these indicators in the 2005/06 AMR.

Implications for transportation planning

The costs of congestion will rise as regional demand for travel increases. This situation must be pre-empted by encouraging more efficient use of the road network, use of public transport for peak-period commuter trips, use of 'active' modes for shorter trips, and an overall reduction in travel demand.

6. Affordability indicators

This section sets out and discusses items relating to the RLTS affordability objective: *to plan for a land transport system that recognises funding constraints and ability to pay*. It considers the following performance indicators:

- Capital works expenditure
- Maintenance works expenditure
- Public transport subsidy expenditure
- Household travel expenditure

Indicators

Capital works expenditure

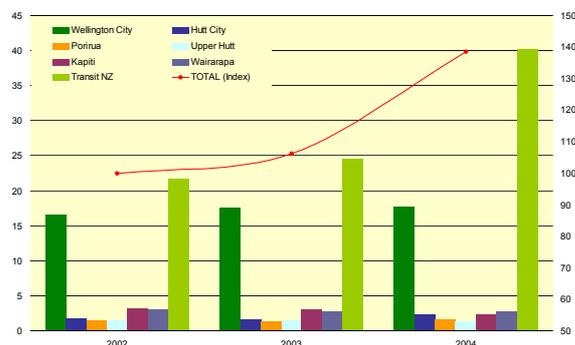


Figure 62: Capital works expenditure, by RCA, by year. 2002 = 100. Sources: local authorities, Transit New Zealand

Definition: The graph shows total annual expenditure on capital works associated with the road network, by road-controlling authority (RCA). Note that Transit's expenditure includes property purchases for new roading developments.

Interpretation: Data is not yet available for a long enough period to establish reliable trends, however the index increased 38% between 2002 and 2004, mainly driven by significant increases in Transit's capital expenditure.

Comments: It will be some years before a trend can be established.

Maintenance works expenditure

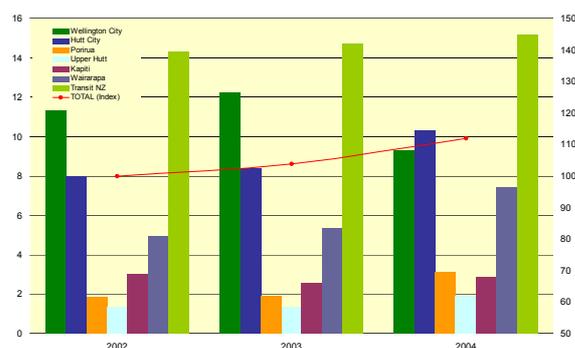


Figure 63: Maintenance works expenditure, by RCA, by year. 2002 = 100. Sources: local authorities, Transit New Zealand

Definition: The graph shows total annual expenditure on maintenance works associated with the road network. It excludes any expenditure on emergency works. Note that the 2002 figure reported for Transit is an estimate as Transit was unable to provide data in time to meet the publishing deadline.

Interpretation: Data is not yet available for a long enough period to establish reliable trends, however the index rose almost 12% between 2002 and 2004.

Comments: It will be some years before a trend can be established.

Public transport subsidy expenditure

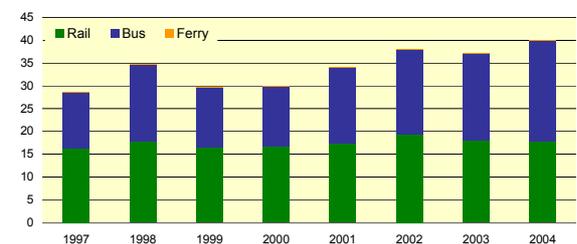


Figure 64: Public transport operating expenditure on contracted serves (\$ millions). Source: GWRC

Definition: The graph shows combined GWRC and Transfund New Zealand financial contributions to the public transport contracted services operating costs.

Interpretation: As public transport services have increased over time, so too have GWRC's and Transfund's contributions to the cost of the services. Between 1997 and 2004, operating expenditure increased 40%.

Comment: The cost of service contracts is not strictly on a per-passenger basis, so parallels between public transport expenditure and public transport patronage cannot be made. For example, factors such as community accessibility and severance are taken into account when funding services.

Household travel expenditure



Figure 65: Household travel expenditure. Source: Statistics New Zealand

Definition: The Household Economic Survey collects this information, and last did so in 2000/01. The graph shows national averages; disaggregation by region is unavailable. The next survey is due in November 2004, so data should be available for inclusion in the 2005/06 AMR.

Interpretation: The total average weekly household expenditure for 2000/01 was \$747.50, of which domestic travel accounted for \$94.50, or 13%.

Comments: Like any economic good or service, consumption is influenced by price; if the cost of travel increases relative to other costs, total travel demand is likely to reduce, and vice versa.

Demographic summary

Affordability indices

There is not enough information available to establish indices for this category.

Regional level

It will be several years before trends become apparent. Household expenditure survey results are unavailable at the regional level. National 2000 figures suggest the average household spends around \$94.50 on domestic transport, or around 13% of total expenditure.

Sub-regional level

Trends cannot be established for capital and maintenance expenditure as insufficient information is available.

Outlook

Capital and maintenance expenditure information comes mainly from Transfund New Zealand. At the national level, the 2003/04 National Land Transport Programme provides for \$1.42 billion of expenditure for 2004/05, up \$230 million from last year.

The outlook for regional Wellington expenditure is unclear. Projects such as the inner-city bypass are proceeding, and the MacKays Crossing junction is expected to do so once the tender has been awarded. The proposed Transmission Gully motorway project is longer term and unlikely to attract funding for several years.

Implications for transportation planning

The network needs ongoing investment to maintain and improve efficiency levels. Seen from a national perspective, Wellington's road congestion is not severe enough to warrant substantial funding. It will, therefore, be necessary to look at low-cost ways of improving network efficiency, discouraging peak-period commuter car trips and increasing car occupancy.

7. Safety indicators

This section sets out and discusses items relating to the RLTS safety objective: *to provide a safer community for everyone through a transport system that achieves or improves on the targets of the National Road Safety Plan through the Regional Road Safety Strategy*. It considers the following performance indicators:

- Total injury crashes
- Total casualties
- Total casualties by severity type
- Regional casualties
- Regional death plus hospitalised
- Relative risk by transport mode
- Cycle casualties
- Pedestrian casualties
- Motorcycle casualties
- Perceptions of road network safety
- Safety perceptions of public transport
- Regional personal security

Indicators

Total injury crashes

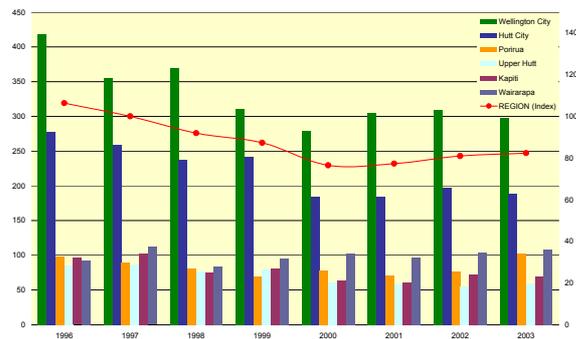


Figure 66: Total injury crashes, by district, by calendar year, index 1996 = 100. Source: LTSA

Definition: The graph shows total recorded injury crashes for all vehicle types.

Interpretation: There was a general, longer-term downward trend in most districts and across the whole region until 2000. Since 2001, total injury crashes have continued to increase, particularly in Upper Hutt, Wairarapa, Kapiti and Porirua.

Comments: Vehicle safety improvements, driver education and proactive safety engineering on local roads have all contributed to reductions in crash numbers. However, since crash numbers are now increasing from a previous downward trend, there is no room for complacency.

Total casualties

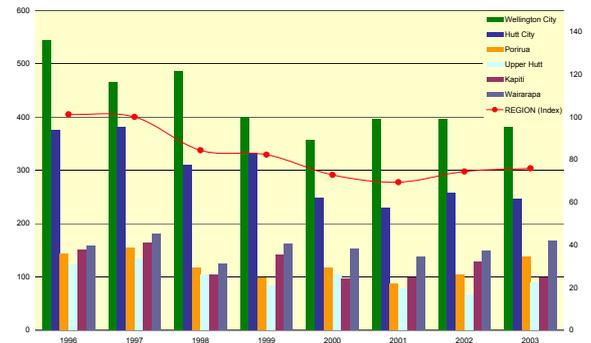


Figure 67: Total casualties, by district, by calendar year, index 1996 = 100. Source: LTSA

Definition: The graph shows total recorded casualties for all vehicle types.

Interpretation: In a similar vein to total injury crashes, total recorded casualties showed a longer-term downward trend in most districts and across the region as a whole until 2002, when a rise started.

Comments: In 1999, the RLTS set a ceiling for 2001 of 1,200 casualties or fewer; it was achieved in 2000 when the total fell to 1,054. Despite this goal having been met, there is no room for complacency, especially when the above data shows an increase in total recorded casualties for all vehicle types since 2001.

Total casualties by severity type

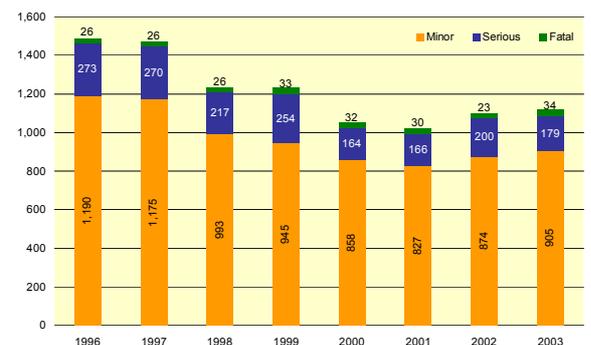


Figure 68: Total casualties, by type, by calendar year. Source: LTSA

Definition: The graph shows casualties disaggregated by severity: fatal, serious and minor.

Interpretation: Despite there being a reduction in serious injury numbers between 2002 and 2003, the 48% increase in fatalities from 23 in 2002 to 34 in 2003, along with an increase in minor casualty numbers, is cause for concern.

Comments: Improved vehicle safety, driver education and proactive road safety engineering have all

contributed to the reduction in casualties, but the effectiveness of current intervention programmes appears to be waning. A rejuvenation of proven interventions using the three 'Es' of road safety, education, engineering and enforcement, is necessary to pull the region back on target.

Regional casualties

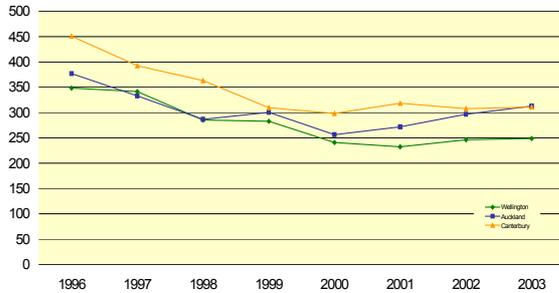


Figure 69: Casualties per 100,000 population, by calendar year. Sources: LTSA, Statistics New Zealand

Definition: The graph shows the number of casualties per 100,000 population, disaggregated by region.

Interpretation: At 248 casualties per 100,000 population, Wellington has the lowest casualty rate of all regions measured. Canterbury showed the greatest reduction in casualties per 100,000 population between 1996 and 2003, at 31%. Wellington showed a similar reduction at 29%, while Auckland managed a reduction of 17%.

Comments: While our casualty rate is considerably better than that of our peers, there is no room for complacency, especially when the above data shows an increase in total recorded casualties for all vehicle types since 2001.

Regional death plus hospitalised

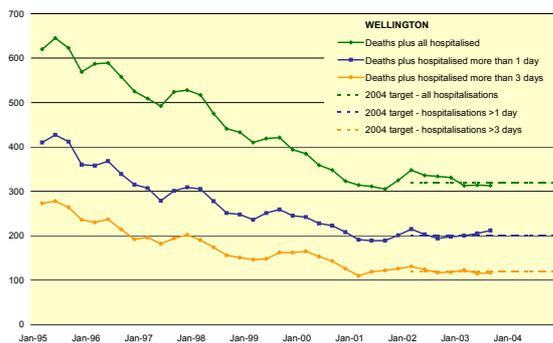


Figure 70: Deaths plus hospitalised (12-month totals) resulting from road crashes. Source: LTSA

Definition: The graph shows deaths plus hospitalised, deaths plus those hospitalised more than one day, deaths plus those hospitalised for more than three days, as well as regional targets for road casualties as set by the Regional Road Safety Strategy in line with the national *Road Safety to 2010* strategy.

Interpretation: Trends are similar to those seen in above indicators, with figures plateauing or increasing.

Comment: It might be possible for the region to achieve the 2004 interim targets, however if trends continue it will be highly unlikely that the 2010 targets are achieved unless proven road safety interventions are rejuvenated by all agencies involved in regional road safety.

Relative risk by transport mode

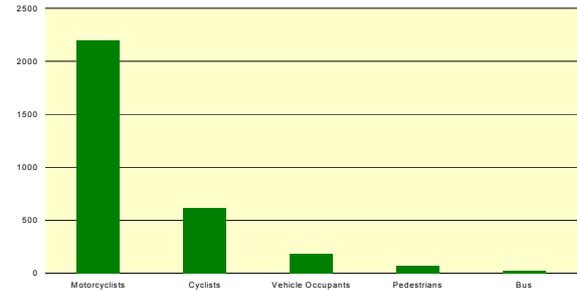


Figure 71: Relative risk by transport mode per 100 million trips. Source: LTSA New Zealand Travel Survey 1997-98

Definition: The graph shows casualties reported per 100 million trips disaggregated by transport mode.

Interpretation: The relative risk of each mode is determined using an 'exposure-to-risk' indicator of casualties per 100 million trips. A cyclist is three times as likely as a vehicle occupant on any given trip to experience a casualty, and eight times more likely than a pedestrian. Bus travel represents the least 'risky' mode.

Comments: Reducing cyclist risk is an outstanding priority for road safety initiatives. Pedestrian travel is starting from a good base and initiatives on pedestrian safety are likely to be about maintaining that momentum. Vehicular risk will likely be contained within any regional road safety initiatives.

While we can conclude that cycling is 'less safe' than other modes of transport, it is important to note that cycling in itself, as with the other modes, is not 'unsafe'. There is only one chance per 40,000 hours cycled of experiencing a casualty.

Cycle casualties

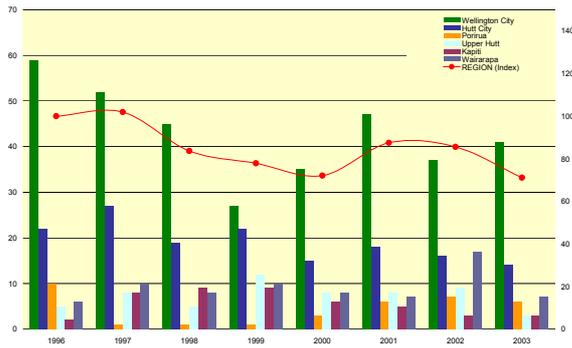


Figure 72: Cycle casualties, by district, by calendar year, index 1996 = 100. Source: LTSA

Definition: The graph shows cycle casualties, disaggregated by district.

Interpretation: Cyclist casualty numbers exhibit a slight downward trend in the region as a whole. This is driven by Wellington City, Hutt City and Wairarapa. Other areas show a static or increasing trend in cycle casualties, although actual numbers are low. Cyclist casualties are disproportionately high given the low number of trips made by cycle.

Comments: Cyclists are vulnerable road users, however cycling is a transport mode that should be encouraged. The GWRC Regional Cycling Strategy aims to encourage a cycling culture in the region.

Perceptions of cycle safety

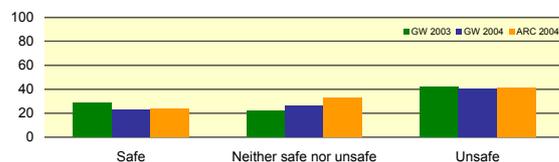


Figure 73: How safe do you think people are when using cycles? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how safe respondents think people are when using bicycles.

Interpretation: 40% of respondents said they felt 'unsafe' (c.f. 42% in 2003) while only 23% reported feeling 'safe' (c.f. 29% in 2003).

While the results are almost identical to Auckland, we clearly need improvements to help cyclists feel safer on the region's roads.

Comments: GWRC and the community must focus on providing a safe environment for all transport users. The newly appointed regional cycling coordinator will be working to improve people's perceptions of cycle safety in the region. This result also correlates well with the relatively high risk of being involved in a crash with a motor vehicle.

Perceptions of child cyclist safety

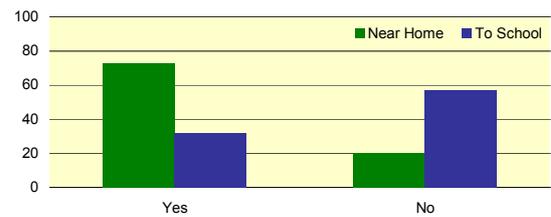


Figure 74: Would/Do you let your child (under 12) ride their bicycle unsupervised? Source: GWRC perception survey, 2004

Definition: The graph shows parents'/caregivers' perceptions of how safe they feel young children are when cycling.

Interpretation: While 73% of adults would allow their children to cycle near their home (c.f. 72% in 2003), only 32% would let them cycle to school (c.f. 34% in 2003). The main reason (over 70%) for not allowing children to cycle to school relates to road safety/engineering concerns.

Comments: GWRC and the community must focus on providing a safe environment for transport users of all ages. Many parents/caregivers now drive their children to school as they feel it is too dangerous on the roads for young cyclists. This leads to increased road congestion and less active children.

Pedestrian casualties

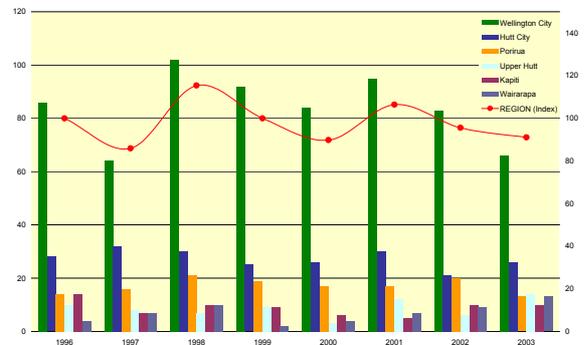


Figure 75: Pedestrian casualties, by district, by calendar year, index 1996 = 100. Source: LTSA

Definition: The graph shows pedestrian casualties, disaggregated by district.

Interpretation: Pedestrian casualty numbers throughout the region fluctuate from year to year and exhibit a flat or slightly downward trend. Regional trends are largely driven by Wellington City, where just under 50% of casualties occur. This is probably explained by the high proportion of pedestrian trips undertaken in the city. In the past year, Wellington City's pedestrian casualty numbers fell 20%, and hence the region's pedestrian casualty figures as a whole fell.

Comments: The GWRC Regional Pedestrian Strategy, published in early 2004, aims at addressing

safety issues associated with pedestrians. The risk of a pedestrian experiencing a casualty is one-third that of vehicle occupants and one-eighth that of cyclists.

Perceptions of pedestrian safety

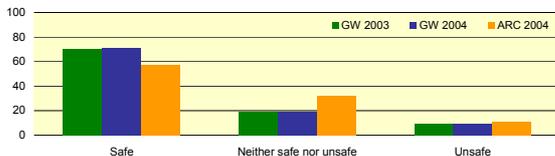


Figure 76: How safe do you think people are when walking? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how safe respondents think people are when walking.

Interpretation: 71% of respondents said they felt people were 'safe' while walking (c.f. 70% in 2003), while, like last year, only 9% said they thought it was 'unsafe'. This compares favourably with ARC's survey, with 14% more people feeling 'safe' in Wellington than in Auckland.

Comments: With such a high number of people walking in the region, it is not surprising that a large number feel safe doing so. This result correlates well with the relatively low risk of being involved in a crash with a motor vehicle.

Perceptions of child pedestrian safety

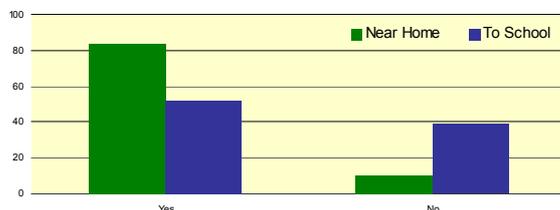


Figure 77: What percentage of people would/do let their child (under 12) walk unsupervised? Source: GWRC perception survey, 2004

Definition: The graph shows parents'/caregivers' perceptions of how safe they feel young children are when walking unsupervised.

Interpretation: The majority of adults (84%) would allow their children to walk near their homes (c.f. 84% in 2003), but significantly less (54%) would allow them to walk to school (c.f. 52% in 2003).

The main reason (just over 40%) given for not allowing children to walk to school relates to 'stranger danger' issues (c.f. just over 50% in 2003), followed by road safety/engineering concerns (16%).

Comments: GWRC and the community must focus on providing a safe environment for transport users of all ages. Many parents/caregivers now drive their children to school as they feel their communities are

unsafe. This leads to increased road congestion and less active children.

While the actual recorded occurrence of 'stranger danger' incidents is very low, the media play a large role in over-reporting such incidents, leading to a climate of fear.

Motorcycle casualties

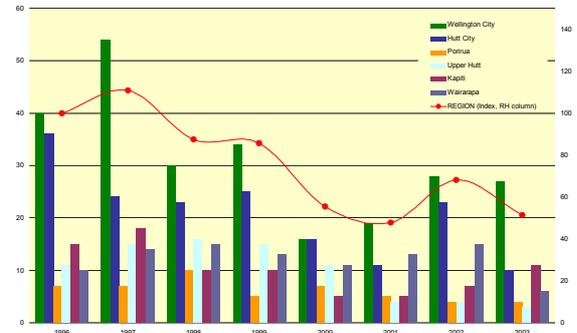


Figure 78: Motorcycle casualties, by district, by calendar year, index 1996 = 100. Source: LTSA

Definition: The graph shows motorcycle casualties, disaggregated by district.

Interpretation: Despite an anomaly occurring in 2002, there has been a clear downward trend in motorcycle casualties since 1996, leading to a near halving in motorcycle casualties between 1996 and 2003. Kapiti Coast was the only district in the region to have an increase in motorcyclist casualties in 2003, increasing from seven to 11.

Comments: The strong downward trend in motorcyclist casualty figures is the most encouraging of all regional road safety figures presented.

Perceptions of road network safety

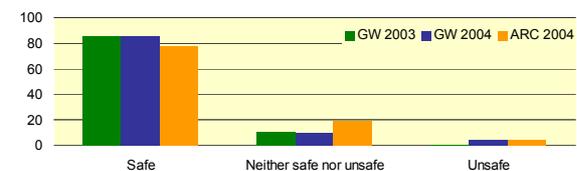


Figure 79: How safe do you feel when using a car? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows how safe respondents think people are when using a car in the region.

Interpretation: 85% of respondents said they felt people were 'safe' when using a car (c.f. 85% in 2003), while only 4% thought it was 'unsafe' (c.f. 3% in 2003).

This result is similar to ARC's survey, but 8% more people report feeling 'safe' in Wellington than in Auckland (c.f. 7% in 2003).

Comments: With such high mode use, many people perceive they are safest when in their vehicle.

Safety perceptions of public transport

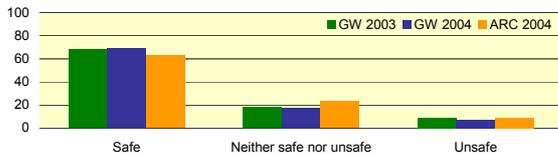


Figure 80: How safe do you feel when using public transport? Sources: GWRC and ARC perception surveys, 2004

Definition: The graph shows respondents' perceived safety when using public transport.

Interpretation: 69% of respondents said they felt 'safe' on public transport (c.f. 68% in 2003), and 7% 'unsafe' (c.f. 9% in 2003). This compares favourably with ARC's survey, with 6% more people feeling 'safe' in Wellington than in Auckland.

Comments: GWRC and the community must continue to focus on providing a safe environment for public transport users.

LTCCP safety perceptions on public transport



Figure 81: People surveyed not citing safety concerns as a reason for not using public transport. Source: GWRC perception survey, 2004

Definition: The graph shows the percentage of respondents who said they had not used public transport in the past 12 months owing to safety concerns. The GWRC LTCCP target is also represented.

Interpretation: The graph shows that of the 201 respondents who said they had not used public transport in the past 12 months, none cited safety concerns as the reason.

Comments: This is the second year GWRC has measured perceptions of GWRC residents. This year we have again achieved our LTCCP target of 'no-one cites safety as a reason why they do not use public transport'.

Regional personal security

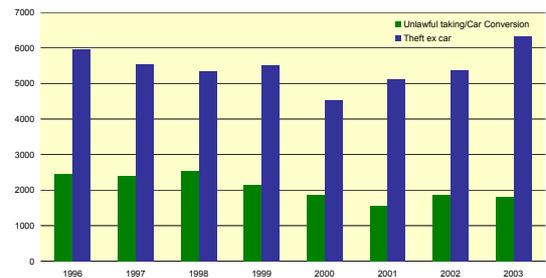


Figure 82: Wellington regional policing district car theft and conversion, by calendar year. Source: New Zealand Police

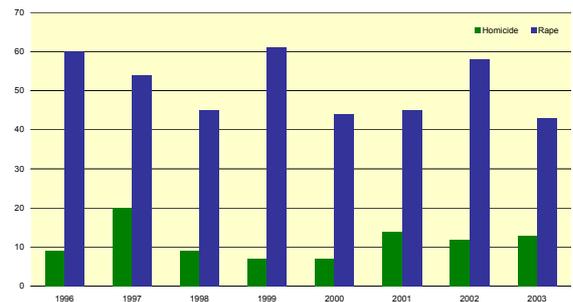


Figure 83: Wellington regional policing district rape and homicide, by calendar year. Source: New Zealand Police. Note: Homicide includes murder, manslaughter, infanticide and attempts or conspiracy to commit

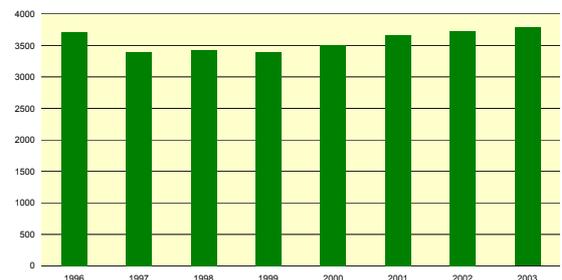


Figure 84: Wellington regional policing district all assaults, by calendar year. Source: New Zealand Police

Definition: The graphs show a selection of data relating to personal security in the greater Wellington region. The data refers to the Wellington policing district, which differs slightly from the regional boundaries. The data also relates to all reported offences, including but not limited to convictions.

Interpretation: The graphs show that personal security figures are relatively stable, with the exception of theft ex-car, which increased 40% between 2000 and 2003.

Comment: High levels of perceived personal security are required if people are to be willing to use or allow their children to use environmentally sustainable forms of transport such as walking, cycling and public transport that 'expose' them to other members of the community.

Demographic summary

Safety indices

Definition: Figure 85 shows the movement in indices for safety at a macro level. The index is expressed relative to a base year of 1996 and has been weighted 9:1 for total regional casualties versus total vehicle-related crime and assault figures. This weighting reflects confidence in LTSA road safety data and the relatively low relevance of the personal security indicators.

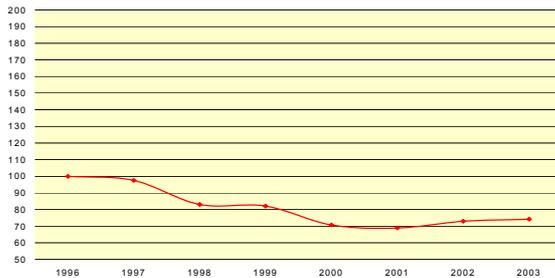


Figure 85: Safety index, 1996 = 100

Interpretation: The index reflects the fact that, after several years of improvement, both road safety and personal security have worsened since 2001.

Regional level

Since 2001, the regional road safety index has been getting worse. An increased focus on road safety issues is clearly warranted.

Sub-regional level

Wellington City accounted for 37% of total injury crashes from 1996 to 2003; Hutt City for around 25%; Porirua, Upper Hutt and Kapiti 8% to 9% each; and Wairarapa 11%. The increasing rate of regional casualties is attributable to an increase in all urban areas in 2003.

The Wellington policing district (Chatham Islands, Kilbirnie and eastern suburbs, Wellington central and Johnsonville) was largely accountable for the region's 8% increase in AMR-measured reported crime. This was largely driven by large increases in reported theft ex-car (44% between 2002 and 2003) and all assaults (14% increase between 2002 and 2003). The Kapi-Mana policing district also experienced a 17% increase in theft ex-car between 2002 and 2003.

Outlook

The aim of improved safety will depend on concerted efforts across engineering, education and enforcement, as signalled in the Regional Road Safety Strategy, and improving vehicle safety standards. The outlook is for continuing reductions, but at a lower rate than in the past.

Implications for transportation planning

Efforts are required to improve road safety through engineering, enforcement and education programmes. The number of pedestrian and cyclist casualties in urban centres must also be addressed. These issues have been addressed in the new Regional Road Safety Strategy, which was released in September 2004.

8. Sustainability/environment indicators

This section sets out and discusses items relating to the RLTS sustainability objective: *to provide a land transport system that recognises the needs of the community; avoids, remedies or mitigates against adverse effects; uses resources in an efficient way; supports an optimal demand for energy.* It considers the following performance indicators:

Fuel consumption
 Air quality
 Noise adjacent to arterial routes
 Surface water quality.
 Land use patterns

Indicators

Fuel consumption

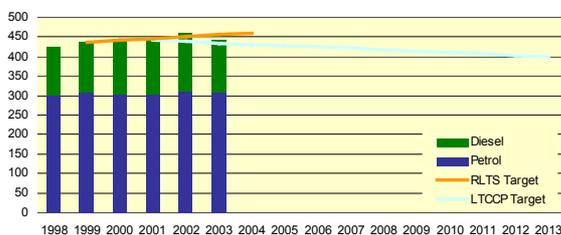


Figure 86: Greater Wellington fuel (diesel and petrol) consumption (million litres). Calendar year. Sources: local authorities

Definition: The graph shows calendar-year total petrol and diesel sales in each local authority, as collected monthly for the local body fuel tax. Although some non-retail sales occur, and some fuel is purchased outside the region but used in it (and vice versa), this is nevertheless a reliable measure of total regional fuel consumption. Sub-regional disaggregation adds little value to the data as fuel is not necessarily used in the area in which it is bought.

Interpretation: Regional petrol and diesel sales fell by 3.5% between 2002 and 2003, down to 442 million litres consumed. This fall was driven by the western part of the region (where over 86% of regional fuel is sold), where total fuel sales fell by 4.4%. It was the opposite for Wairarapa, where fuel sales increased by 2%.

Comments: Transport-produced ambient vehicle emissions are linked to fuel consumption. Total fuel sales are, therefore, a reasonable proxy measure for total air pollution attributable to motor vehicles.

At present, fuel sales continue to demonstrate slow growth. Work will be required if we are to meet our LTCCP Target.

Regional fuel consumption

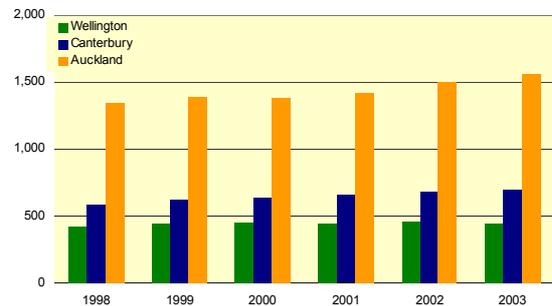


Figure 87: Regional fuel consumption (million litres). Sources: GWRC, ARC and ECan (Environment Canterbury). Note: Financial years used for ARC and ECan data and calendar year used for GWRC data

Definition: The graph shows total petrol and diesel sales in the Wellington, Canterbury and Auckland regions, as collected monthly for the local body fuel tax. Although some non-retail sales occur, and some fuel is purchased outside the region but used in it (and vice versa), this is nevertheless a reliable measure of total regional fuel consumption. Sub-regional disaggregation adds little value to the data as fuel is not necessarily used in the area in which it is bought.

Interpretation: Canterbury fuel sales show the highest growth rate between 1998 and 2003, at 19%. Auckland's growth rate is 16%, while Wellington compares very favourably at 4%. In the past year, Wellington fuel consumption actually fell by 3.5%, compared with rises in both Auckland (3.6%) and Canterbury (2.7%).

Comments: Transport-produced ambient vehicle emissions are linked to fuel consumption. Total fuel sales are, therefore, a reasonable proxy measure for total air pollution attributable to motor vehicles. Both Canterbury and Auckland have high levels of air pollution attributable to vehicle emissions. As Wellington has only recently set up monitoring, comment cannot be made on its level of air pollution directly attributable to vehicle emissions. However, it is thought to be relatively low compared with Auckland and Canterbury.

Air quality

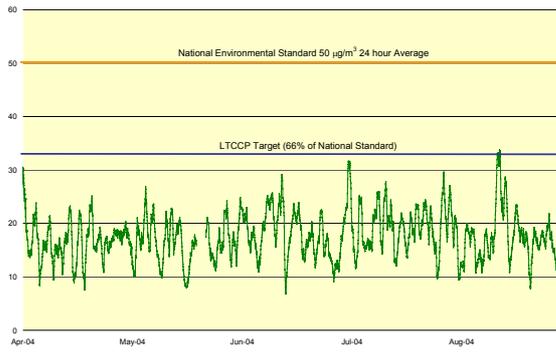


Figure 88: 24-hour average PM₁₀ concentrations at Vivian/Victoria Streets intersection, Wellington City. Source: GWRC

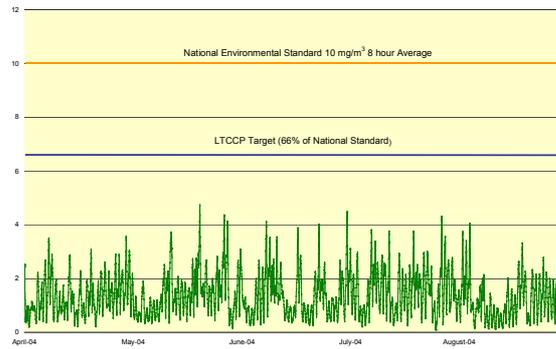


Figure 89: Eight-hour average CO concentrations at Vivian/Victoria Streets intersection, Wellington City. Source: GWRC

Background: Motor vehicle emissions are one source of pollutants impacting on the greater Wellington region's air quality. Motor vehicle emissions have been attributed to causing premature death in human populations in the form of cancer and cardiovascular and respiratory diseases, to name but a few.

Between May and September 1998, research by the GWRC Environment Division identified the intersection of Vivian and Victoria Streets, Wellington City as a location where air quality is likely to be degraded owing to motor vehicle emissions. This is primarily due to the intersection being part of a busy arterial route to and from the central city as well as the canyoning effect caused by the multi-storeyed buildings lining the route. GWRC's first permanent transport air quality monitoring station (TAMS) was established at this site in April 2004.

The location was also favoured because, once the inner-city bypass is built, a similar number of vehicles (approximately 40,000 on weekdays and 30,000 during weekends) will continue to travel along the route, the only difference being that Vivian Street's one-way system will be flow one-way in the opposite direction.

The station constantly monitors two key pollutants, particles (PM₁₀) and carbon monoxide (CO) along with a variety of environmental indicators including

temperature, wind speed and direction. Wellington City Council also provides data on vehicle movements through the intersection.

Definition: The graphs show 24-hour average PM₁₀ and eight-hour average CO readings from the TAMS located at the intersection of Vivian/Victoria Streets. The graphs also show the relevant national standard and GWRC 2013 LTCCP maximum target for each pollutant.

Interpretation: As only five months of data is currently available, no real trends have emerged and few conclusions can be reached. However, it appears from the limited data available that CO is well below national and LTCCP targets, while PM₁₀ is well below national standards and reached the LTCCP maximum target once in the past five months.

Comment: As only five months of data is currently available, no real trends have emerged and few conclusions will be reached for some years. GWRC Transport is committed to monitoring the effects of motor vehicles on air quality in the region, and is commissioning two mobile air quality monitoring stations over the next two years.

Noise adjacent to arterial routes

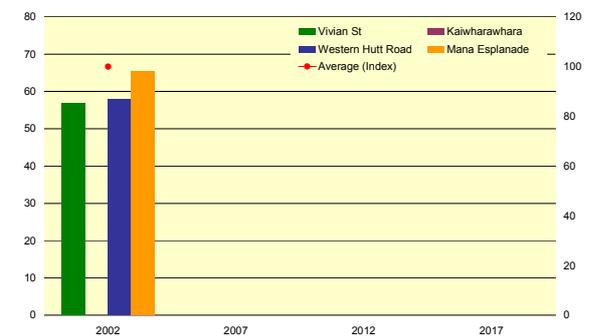


Figure 90: Noise adjacent to arterial routes (noise level 24hr L_{eq}, dBA, one-week average). Source: GWRC survey, 2002

Definition: The graph shows noise measurements (at 24-hour L_{eq}³) for one week at several sites next to the following arterial roads:

- Vivian Street, Wellington
- urban motorway, Kaiwharawhara, Wellington
- Western Hutt Road, Lower Hutt
- Mana Esplanade, Porirua.

Interpretation: These are noise levels from 2002 surveys only, so no trend can be established. A fault in the Kaiwharawhara monitoring equipment meant

³ This is a decibel figure with which the total loudness-equivalent noise averaged over the 24-hour day can be compared with that calculated by the same method for another point of interest. This gives a decibel guide to noisy versus quiet situations and can only be arrived at by 24-hour continuous monitoring of each site.

no data was collected. Noise levels vary at different sites according to the equipment's precise location, and are therefore irrelevant here.

Comments: No conclusions can yet be drawn from this information. This indicator will be measured every five years. There are currently no guidelines for noise levels adjacent to arterial roads in the greater Wellington region.

Surface water quality

Measurement of this indicator has been suspended pending the establishment of a joint monitoring programme with other agencies.

Land use patterns

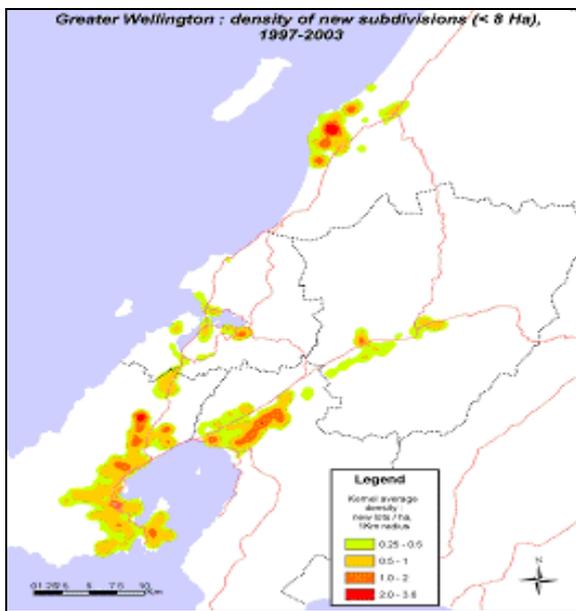


Figure 91: Density of new subdivisions in greater Wellington, 1997-2003. Source: GWRC

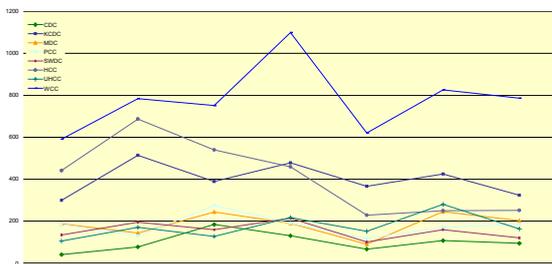


Figure 92: New lots in greater Wellington region, 1997-2003. Source: GWRC

Definition: The map and graph show the location and number of new lots in the greater Wellington region between 1997 and 2003.

Interpretation: Land use densification and infilling are occurring in central Wellington and in Hutt City, especially around the rail corridor. New subdivisions, turning what were once 'green spaces' into new urban areas are happening on the Kapiti Coast and in

Porirua East, Whitby, northern Wellington and some parts of Upper Hutt.

Comment: The type of central densification and infilling happening in central Wellington and Hutt City is good for environmental sustainability as it does not put extra pressure on the environment by turning what was once 'green space' into new urban areas. The same cannot be said for the new subdivisions being created on the Kapiti Coast and in Porirua East, Whitby, northern Wellington and some parts of Upper Hutt, where urban sprawl is evident.

Overall, new lots created in the region increased 7% between 1997 and 2003. This was led by Wellington City, where 5,457 new lots were created between 1997 and 2003, followed by Hutt City and the Kapiti Coast on 2,856 and 2,794 respectively.

Such urban sprawl can often lead to an increased dependence on private vehicle use, as subdivisions are often located away from public transport networks and have long cul-de-sacs, leading to very long walking and cycling distances to main amenities.

Sustainability/environment indices

There is not enough data to establish indices for this category this year. Once the TAMS has been operational for a year, it should be possible to establish an index with a 2004 base year for inclusion in the 2004/04 AMR. Of data currently available, fuel consumption has shown modest growth of 4% over the past four years

Regional level

It is impossible to comment until information has been collected on all indicators in this category.

Sub-regional level

No currently available information is disaggregated at the sub-regional level.

Outlook

Fuel sales are likely to grow with more private vehicle ownership and use, although growth is expected to be offset by improved engine efficiency and the introduction of hybrid vehicles.

Implications for transportation planning

Transport activity, and especially private vehicle use, significantly affects the environment. Measures to reduce overall car use and improve car travel efficiency will reduce fuel consumption, air and water pollution, and noise levels adjacent to arterial routes.

9. RLTS project and policy implementation progress

Context

To deliver the RLTS, the region's agencies must co-operate to deliver the best integrated transport network possible with limited resources.

This section reports on the progress key agencies have made in the year to 30 June 2004.

Responsibility matrix

Charts 1 to 4 identify RLTS policy and project proposals, and indicate the Wellington region agencies responsible for implementing them.

Chart 1: Responsibility matrix for Objective 1: Accessibility and economic development											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
A: Policies											
1.1.1: Improve accessibility of public transport		●	○	○	○	○	○	○		●	●
Extensions of bus/rail services where reasonable demand exists											
Provide facilities for parking and carrying cycles where demand exists		●	○	○	○	○	○	○		●	●
Enhance physical access onto buses and trains		●	●	●	●	●	●	●			
1.1.2: Maintain urban rail as an arterial priority in the public transport network		●									●
1.1.3: Allow commercial bus and ferry services on parallel routes to rail services where they complement and increase overall public transport use		●									
1.1.4: Enhance the quality, reliability and priority of public transport facilities and services		●								●	●
Refurbishment/renewal of bus/rail units		●								●	●
Bus services given priority in congested areas		●	○	○					●	○	●
1.1.5: Improve the interchange between bus, rail, car and cycle											
Improve Wellington rail/bus interchange		●	●							○	
Provide commuter car and cycle parks at rail stations		●	●	●	●	●	●	●			○ ○
1.1.6: Improve pedestrian and cycle access to key public transport nodes		●	●	●	●	●	●	●			
Provide safe, convenient and sheltered pedestrian access to/from public transport											
1.2.1: Improve the existing road network to attain inter-peak efficiency		○	●	●	●	●	●	●	●		
1.2.2: Provide heavy traffic bypasses of local communities on the strategic roading network		○	●	●	●	●	●	●	●		
1.2.3: Increase the flexibility of the strategic roading network											
Provision of strategic links		○	●	●	●	●	●	●	●		
Traffic management		○	●	●	●	●	●	●	●		
1.2.4: Provide for freight movement		○	●	●	●	●	●	●	●		
1.2.5: Promote the need to provide for increased tourist movement		●	●	●	●	●	●	●	●		

Chart 1: Responsibility matrix for Objective 1: Accessibility and economic development											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
1.3.1: Promote land development that minimises the total demand for travel		●	●	●	●	●	●	●			
1.3.2: Promote land development that ensures that public transport, walking and cycling are convenient and safe alternatives to the private car		●	●	●	●	●	●	●			
1.4.1: Develop and enhance safe and attractive walking and cycling routes		○	●	●	●	●	●	●			
B: Projects											
Construct the first stage of the Kapiti Western Link Road		○					●		●		
Implement the Active Traffic Management System at Ngauranga Gorge									●		
Construct improvements on the Kaitoke Hill Road		○							●		
Maintain continuous improvements on the Rimutaka Hill Road		○							●		
Construct the Ngauranga – Aotea tidal flow system		○							●		
Design and construct an upgrade of the Korokoro/Dowse intersections on SH2				○					●		
Construct next phase of the inner-city bypass through Buckle and Arthur Streets		○	●						●		
Enhance traffic management to improve pedestrian, cycle and vehicle flows		○	●	●	●	●	●	●			
Upgrade the route through Newtown on Adelaide Road from the Basin Reserve to John Street		○	●						○		
Develop a Western Corridor Implementation Plan (Otaki – Ngauranga Merge)		●	●			●	●		●		
Continue land purchase on the Transmission Gully route		○							●		
Provide additional commuter car and cycle parks at major railway stations		●	○	○	○	○	○	○			●
Build a new railway station at Raumati		●					○				●
Extend the urban electric rail service to Waikanae		●					○				●
Increase weekday urban rail service frequency from the Kapiti Coast, Hutt Valley and Wairarapa to Wellington		●									●
Allow commercial commuter bus and ferry services to operate from Porirua and the Hutt Valley to Wellington CBD		●								●	
Increase local bus services to connect with increased rail services		●								●	●

Chart 1: Responsibility matrix for Objective 1: Accessibility and economic development											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
	Improve bus/rail connection at Porirua railway station	●				●				●	●
	Investigate the construction of a bus lane from Petone to Ngauranga on SH2 without compromising cycling on this route, construct if possible	●		○					●		
	Improve bus priority through CBD traffic	●	●	●							
	Enhance bus/rail interchange at Wellington railway station	●	●							●	●
	Establish priority routes for Newtown buses servicing the southern and eastern suburbs	●	●							●	
	Establish an integrated ticketing system	●								●	●
	Improve pedestrian linkages from Wellington railway station to the CBD	●	●								
	Establish additional cycle parks at major railway stations	●									●
	Enhance traffic management to improve pedestrian, cycle and traffic flow	○	●	●	●	●	●	●	●		

Chart 2: Responsibility matrix for Objectives 2 and 3: Economic efficiency and affordability											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
A: Policies											
2.1.1: Provide for additional pricing for the use of the roading network as a step towards ensuring all users pay the cost of their use, including externalities		●							●		
2.1.2: Provide for pricing on major new roads to manage the demand on the road network and to help pay for additional projects and services		●							●		
2.1.3: Advocate for levies on the price of long stay parking in publicly and privately owned facilities in the Wellington CBD		●	●								
2.1.4: Undertake a more detailed investigation of the role of road pricing in the region		●									
2.2.1: Balance the capacity of the existing strategic transport network		●	○	○	○	○	○		●		
2.2.2: Influence management of the number and distribution of long stay parking spaces in major urban centres and encourage short stay parking		●	●	●	●	●	●				
2.2.3: Provide for pricing at peak times to manage road demand and reduce road congestion		●							●		
2.2.4: Promote supporting measures which will help reduce peak road demand		●	○	○	○	○	○		○	○	○
2.2.5: Investigate and plan for the growth in major recreational traffic flows		●	○	○	○	○	○		○		
2.2.6: Introduce traffic calming in residential areas		○	●	●	●	●	●	●			
B: Projects											
Detailed investigation of road pricing in the region		●							○		

Chart 3: Responsibility matrix for Objective 4: Safety											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
A: Policies											
4.1.1: Develop programmes that improve skills and behaviour of people using the transport system		○	●	●	●	●	●	●			
4.1.2: Plan development and design to improve road infrastructure and safety		○	●	●	●	●	●	●	●		
4.1.3: Develop a safety culture with respect to travel assisted by more effective co-ordination of the planning and implementation of road safety programmes		●	●	●	●	●	●	●			
4.1.4: Encourage greater use of cycling and walking for local trips		●	○	○	○	○	○	○	○	○	○
B: Projects											
Complete safety improvements at MacKays Crossing									●		
Complete safety improvements on SH1 north of Paremata									●		
Provide safety improvements to SH58									●		

Chart 4: Responsibility matrix for Objective 5: Sustainability											
KEY		GWRC	WCC	HCC	UHCC	PCC	KCDC	Wairarapa	Transit NZ	Bus Operators	Toll NZ
●	Lead Responsibility										
○	Secondary Responsibility										
	Project Completed										
A: Policies											
5.1.1: Promote environmentally benign transport mechanisms		●	○	○	○	○	○	○	○	●	●
5.1.2: Make cycling and walking more attractive		●	●	●	●	●	●	●	●		
5.1.3: Price at peak times on the road network to mitigate adverse impacts of road use		●	○						●		

Project status explanation

EXPLANATION	STATUS				
	1	2	3	4	5
Work has not begun on this project					
Initial Design Stage – Initial groundwork conducted (several variations of the project being considered)					
Detailed Design Stage – Preferred option selected and agreed on by transport technicians					
Public Consultation Stage – Project presented to public					
Project Implementation Stage – Work has begun on the project					
Project fully implemented (Year completed)					2003/04

Greater Wellington Regional Council

The chart below reports GWRC progress in implementing its own areas of responsibility.

PROJECT	STATUS				
	1	2	3	4	5
Western Corridor Review (from Peka Peka to Ngauranga Merge)					
Western corridor	The project steering group is due to award the professional services consultant contract in September 2004.				
Provide additional commuter carparks at major railway stations					
All rail corridors	Forty new carparks were built at Carterton railway station in 2003/04.				
Build a new railway station at Raumati					
Western corridor	This project has been suspended until a long-term contract has been established with the new urban rail provider, Toll NZ.				
Extend the urban electric rail service to Waikanae					
Western corridor	Details of the agreement between the government and Toll over the sale of the rail network show that none of the \$200 million set aside for urgent track maintenance and replacement has been earmarked for the Waikanae project. This means GWRC will need to seek having this work done as a separate item funded through future track access charges.				
Increase weekday urban rail service frequency from the Kapiti Coast, Hutt Valley and Wairarapa to Wellington					2003
All rail corridors	New increased urban rail services started on 5 August 2001 on the Paraparaumu, Hutt and Melling lines. A third peak Masterton to Wellington service commenced on 13 October 2002. Investigations into increasing the Paraparaumu service to 15 minutes are pending decisions on infrastructure improvements and outcomes of the long-term rail contract with Toll NZ.				

PROJECT	STATUS				
	1	2	3	4	5
Improve bus/rail connection at Porirua railway station Western corridor					
	A consultancy brief to undertake a review of the future options for Porirua station is being developed and proposals will be called for shortly to undertake the work.				
Integrated ticketing All corridors					
	Hutt Plus monthly train/bus tickets are to be introduced in November 2003. A new full-time position has been created to manage the development of integrated ticketing on all corridors, which is at an initial design stage.				
Promote additional cycle parks at major railway stations All rail corridors					
	Additional cycle lockers have been provided at Wellington and new ones added at Petone and Upper Hutt in 2004.				
Detailed investigation of road pricing in the region All corridors					
	Information on the world-wide experience of road pricing, a survey on the community response to transport pricing mechanisms and a summary of the modelling technical work have been gathered. A new study is to commence in 2004/05 to determine the optimal package for the greater Wellington region under the Land Transport Management Act, 2003.				
Develop proposals for the future of the existing state highway with appropriate agencies for when Transmission Gully is built Western corridor					
	Under investigation.				
Increase rail feeder services Hutt corridor					2003
	The improved bus services in the Hutt Valley have significantly increased bus service kilometres.				
Refurbish Petone railway station Hutt corridor					2004
	A completely new Petone station and associated bus access area were opened with a ceremony on 3 May 2004.				
Improve bus priority through CBD Wellington CBD corridor					2004
	The bus priority measures previously put in place have been confirmed as successful. This has led to overhead trolley wire upgrades and bus lane refinements in 2004. Further bus lane extensions are planned for 2005.				
Upgrade Upper Hutt railway station building Hutt corridor					2003
	The Upper Hutt railway station upgrade is expected to start once the Toll contract has been settled.				
Develop a Wairarapa Corridor Implementation Plan Wairarapa corridor					
	A Wairarapa Corridor Implementation Plan was adopted by the RLTC in November 2003.				
Develop a Hutt Valley Corridor Implementation Plan Hutt corridor					2003
	A Hutt Valley Corridor Implementation Plan was adopted by the RLTC in November 2003.				

PROJECT	STATUS				
	1	2	3	4	5
Develop a Wellington CBD Corridor Plan					2003
Wellington CBD corridor	A steering group was established in early 2004 to start investigations into the development of a plan.				
Development of rail business plan					
All rail corridors	A business plan is being agreed between GWRC and Toll NZ and includes significant rolling stock, track work, signals and systems.				

GWRC is making good progress in providing more public transport, but is continuing to have difficulty implementing capital projects owing to delays in completing a long-term contract with the new rail owner, Toll NZ. Current negotiations suggest a contract will be ready in June/July 2005.

The RLTS lists many public transport projects due for completion by 2004 that are either already operating or about to be implemented.

Wellington City Council

The chart below reports progress Wellington City Council has made towards implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Enhance bus/rail interchange at Wellington railway station					2003
	The new Lambton interchange was operational at the end of March and officially opened on 2 April 2003.				
Improve bus priority through CBD traffic					
Wellington CBD corridor	In November 2003 new bus priority measures were implemented in Dixon, Victoria and Manners Streets. In August 2004 the three bus lanes in Adelaide Road, Kaiwharawhara Road and Chaytor Street were extended and a new evening peak lane in Glenmore Street between the Rigi and Upland Road added. Further bus lanes are under investigation for the Hutt Road from Onslow to Kaiwharawhara, Kent Terrace and an evening peak lane in Adelaide Road.				
Wellington CBD corridor study					
	A new study is underway looking at the transport improvements required following the opening of the inner-city bypass.				
Establish priority routes for Newtown buses servicing the southern and eastern suburbs					
Wellington south corridor	The morning peak bus lane, northbound on Adelaide Road, was extended to John Street in August 2004. An evening peak bus lane southbound is currently being investigated. This is only part of the whole exercise, and is awaiting a Wellington south corridor plan before anything else is put in place.				

PROJECT	STATUS				
	1	2	3	4	5
Enhance traffic management to improve pedestrian, cycle and vehicle flows Wellington CBD corridor					
This is currently part of a joint Wellington City Council/GWRC investigation.					
Improve pedestrian linkages from Wellington railway station to the CBD Wellington CBD corridor					
Further work is envisaged on these routes as opportunities arise and work on the Central City Urban Design Strategy is complete. Improvements to the Featherston Street route are expected to come from the completion of a development on the old Defence site between Bunny Street and Whitmore Street.					
Upgrade the route through Newtown on Adelaide Road from the Basin Reserve to John Street Wellington south corridor					
This is currently part of a joint Wellington City Council/GWRC investigation and awaiting the Wellington south corridor plan.					

Hutt City Council

The chart below reports progress made by Hutt City Council on implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Traffic calming schemes					2003/04
One scheme has been installed in Raymond Terrace.					
Improve cycle linkages					
\$100,000 has been invested in cycleway improvements including a 1.1km path on the eastern Hutt River stopbank between the Estuary Bridge and the Ava Bridge, 3.4km of cycle lane painted in Wainuiomata and \$9,000 contributed towards the construction of a cycle/pedestrian bridge at the foot of Stokes Valley.					
Upgrade existing pedestrian crossing					2003/04
Ten crossings upgraded.					
Install Kea crossings					2003/04
22 Kea crossings installed.					
Street lighting					
Main road street lighting upgraded in Marsden, Mitchell, Myrtle, Birch and Jessie Streets. Also all of Wainuiomata's and part of central Hutt's minor road lighting has been upgraded.					
Valley Floor Connector study					2003/04
The study is complete.					

Porirua City Council

The chart below reports progress made by Porirua City Council on implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Countdown bus shelter extension					
	This has been deferred pending a city centre traffic study that may influence the position of the bus shelter extension.				
Plimmerton station carpark upgrade					
	The project is delayed owing to difficulties with land definition. GWRC's property consultants are addressing this.				
New bus shelters					2003/04
	Two new shelters were scheduled for construction in 2003/04 and eight were built.				
Infrastructure for new bus routes					2003/04
	Infrastructure has been provided for the Ranui bus route.				
Bus/Rail interchange Mungavin Bridge					
	A consultancy brief to undertake a review of the future options for Porirua station is being developed and proposals will be called for shortly to undertake the work.				
Promote cycle parks at major railway stations					2003/04
	Lockers have been installed at Porirua, Paremata and Plimmerton stations.				
Pukerua Bay Cycle Bridge (over railway)					
	Construction commenced in June 2004.				
Porirua station carpark lighting					
	GWRC is investigating security measures at station carparks along the Paraparaumu line.				

Kapiti Coast District Council

The chart below reports progress made by Kapiti Coast District Council on implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Western Link Road					
Western corridor	This is a joint project with Transit. Three appeals against the Environment Court decision have been lodged with the High Court. The High Court hearing is currently scheduled for mid-September 2004. Transit's 10-year plan indicates that the first stage of this project could be designed in 2005/06 with construction starting in 2006/07.				

Upper Hutt City Council

The chart below reports progress made by Upper Hutt City Council on implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Norana Road traffic calming					2003/04
	Completed.				
Silverstream Bridge seismic strengthening					
	Expressions of interest are currently being invited from appropriate consultants. Once a short list has been prepared professional services tenders will be invited. Due for detailed design and construction 2004/05.				
Totara Park Bridge widening at access to SH2					
	The project is not proceeding as a review of its economics could not justify funding.				
Cycle network review					
	A draft report has been received. The Council will be applying for Transfund funding towards a strategy in 2005/06.				
River Road Transportation Study					
	A consultant has appraised several options for improving safety and traffic flow on this section of highway. The options are now being advertised for public comment.				
Land Transport Strategy					
	This is on hold pending other work with higher priority. The Council will be applying for Transfund funding in 2005/06.				
Akatarawa Road economic development study					
	The study is complete and public comment has been received. It has been considered by Council but is on hold pending further information.				
Hillside Drive traffic calming					
	This has been approved by Council but construction delayed to 2004/05 owing to the need to fund flood damage from the February storms.				

Wairarapa councils

The chart below reports progress made by Wairarapa councils on implementing actions for which they are responsible.

Masterton District Council

PROJECT	STATUS				
	1	2	3	4	5
Eastern bypass investigation					
	To investigate options for heavy vehicles to bypass the Masterton urban area on the east, with future logging traffic particularly in mind. Work has not yet begun on this project.				
Review of forestry logging impacts					
	To review harvesting projections and forecast the impact on the pavements on the various logging routes. Work has not yet begun on this project.				
Cycle strategy					
	A statement of actions on encouragement, education, engineering and enforcement for cycling in Masterton District. A draft strategy has been prepared and public consultation undertaken. Stage one implementation is anticipated in the 2004/05 financial year.				

Transit New Zealand

The chart below reports on progress made by Transit New Zealand on implementing actions for which it is responsible.

PROJECT	STATUS				
	1	2	3	4	5
Construct improvements on the Kaitoke Hill Road					
Wairarapa corridor	Construction of the new road began in late October 2002. Work is well underway and expected to be completed by autumn 2005.				
SH2 Rimutaka corner easing					
Wairarapa corridor	The Transit Board has approved a scheme to provide a 60km/h speed environment along this section of the highway. The professional services contract has been awarded to Opus International, which will progress obtaining resource consents and designation following detailed geotechnical investigations. Expected date for lodgement is September 2004.				
Construct the Ngauranga-Aotea tidal flow system					
Western corridor	Included as a potential project in Transit New Zealand's 10-year plan.				
SH2 Dowse to Petone upgrade					
Hutt corridor	All appeals have now been resolved. Design work is complete. A number of properties have still to be acquired and compulsory acquisition may be necessary for some of these. Construction is expected to commence in 2005/06.				

PROJECT	STATUS				
	1	2	3	4	5
SH1 Wellington inner-city bypass					
Wellington CBD corridor	Construction funding was sought and approved in May 2004. Tenders have closed, with an award likely to be made in October.				
Transmission Gully motorway					
Western corridor	Transit is continuing planting along the motorway corridor in advance of construction to help mitigate adverse environmental effects associated with large earthworks, and as a condition of the designation. An additional 40,000 native plants were planted during August and September 2003. Small infill planting is being carried out this winter. The designation has been cleared of appeals.				
Complete the safety improvements at MacKays Crossing junction					
Western corridor	Tenders closed on 6 July 2004 and the contract is expected to be awarded in September 2004. As it is a design and build contract, the construction start date will be dictated by the contractor, however work is expected to begin before the end of the year.				
SH1 Plimmerton to Paremata					
Western corridor	All physical works are now underway. The duplicate bridge has been completed and is now open to northbound traffic.				
SH1 Kapiti Western Link Road					
Western corridor	This is a joint project with KCDC. Three appeals against the Environment Court decision have been lodged with the High Court. The High Court hearing is currently scheduled for mid-September 2004. Transit's 10-year plan indicates that the first stage of this project could be designed in 2005/06 with construction starting in 2006/07.				
SH1 Otaihanga Road intersection improvements					
Western corridor	This intersection will be reconsidered as part of the Western Corridor Study: Peka Peka to Ngauranga.				
SH1 Lindale to Nikau Palms Drive					
Western corridor	Construction of the new road began in June 2003. Work was suspended in late 2003 following the discovery of unexpected ground conditions. This was lifted prior to Christmas and bridge construction restarted in January. The project is expected to be completed by Christmas 2004. The bridge is complete, and it is expected to be in use by state highway traffic by October this year.				
SH2 Te Marua curve improvements					
Hutt corridor	The applications for non-notified resource consent and designation have been confirmed. Design and property purchases are in progress. Transit New Zealand's 10-year plan has construction starting in 2004/05.				

PROJECT	STATUS				
	1	2	3	4	5
SH2 Waiohine Bridge replacement					
Wairarapa corridor	<p>Approval has now been given to proceed with this project. All non-notified designation and resource consents have been obtained. The cost-sharing agreement with GWRC and the two district councils has now been signed off.</p> <p>Design of the bridge and approaches as well as the preparation of the contract and tender documentation have been completed and funding is now being sought. The bridge replacement contract is due to be advertised in September with construction expected to begin before Christmas 2004.</p>				
SH2 intersection improvements and SH58 summit to SH2 four-laning					
Porirua to Hutt Valley corridor	<p>Both the intersection improvements and four-laning projects are clear of appeals on their resource consents and notices of requirements. Property acquisition is almost complete on the intersection improvements project. Neither project is included in Transit's 10-year plan.</p>				

Transit New Zealand reports good progress in implementing RLTS projects, although long Environment Court delays and property acquisition processes pose a major risk. These projects implement the RLTS by ensuring a balanced provision of increased capacity.

10. Strategy implementation

Overall progress achieved

RLTS implementation continues to be slower than anticipated. Uncertainty and delays result from:

- issues over the long-term rail contract with Toll NZ
- processes involved in the Resource Management Act 1991
- financial constraints.

Highlights of the 2003/04 year include:

- a significant increase in bus feeder services to Hutt Valley railway stations
- the refurbishment of Petone railway station
- the completion of the regional Pedestrian and Safety Strategies, which form chapters in the RLTS
- the engagement of a new regional cycling coordinator to assist in the implementation of the Regional Cycling Strategy
- the completion of the Hutt and Wairarapa Corridor Plans and reviews
- the completion of the Valley Floor Connector feasibility study
- the start of the Wellington Corridor Plan development
- The Dowse to Petone upgrade design work.

Major 2004/05 actions programmed

Major programmes anticipated to be completed in 2004/05 include:

- resolution to appeals lodged against the Western Link Road
- Kaitoke Hill Road improvements
- Mana Esplanade improvements
- Lindale to Nikau Drive safety improvements
- a decision on the Transmission Gully/Coastal Highway feasibility
- a Regional Travel Demand Management Strategy
- integrated Hutt monthly train/bus tickets.

Major programmes anticipated to commence in 2004/05 include:

- construction of the Wellington inner-city bypass
- safety improvements at MacKays Crossing junction
- the Western Corridor Review
- the Regional Road Pricing Study
- the Upper Hutt railway station refurbishment
- the Wellington Regional Strategy.

Obstacles to implementing the RLTS

Several projects have fallen behind the RLTS implementation programme:

Kapiti Western Link Road

Extensive appeals under the Resource Management Act 1991 continue to delay this project.

Rail service improvements

Some improvements to the regional rail service have been delayed by the negotiation of a long-term rail contract with Toll NZ.

General impediments

The Wishbone Study Report⁴ identifies two categories of general impediment to implementing the RLTS:

Legislative/institutional: a weak requirement for agencies to act simply in a manner 'not inconsistent' with the RLTS, which results in little commitment by some agencies to RLTS provisions.

Financial: a funding regime that does not recognise the importance of single projects within an overall strategy, that gives priority to short-term benefits, and that promotes incremental improvements over longer-term strategic investment.

Necessary reform in these areas would provide a framework for implementing the RLTS more successfully.

⁴ The Wishbone Study; Delivering Land Transport Outcomes in the Wellington Region (Greater Wellington Regional Council, October 2000).

11. Conclusions

This report's main conclusions are:

- The greater Wellington region shows steady economic growth of just under 3% per annum over the last five years. However, this growth rate is lower than those of Canterbury, Auckland and New Zealand as a whole.
- Total inter-island ferry freight movements showed substantial growth of 153% between 1996 and 2003, while rail freight continued to decline significantly.
- Regional fuel consumption fell 3.5% between 2002 and 2003, driven by decreases in fuel sales in the western part of the region. Greater Wellington regional fuel consumption continues to show the lowest growth of all regions compared, with 4% growth between 1998 and 2003 (c.f. Canterbury at 19% and Auckland at 16%).
- Wellington City Council cordon counts show private car use in the AM peak increased almost 10% between 2003 and 2004.
- Harvesting of Wairarapa forestry blocks has seen a 13% increase in heavy vehicle movements over the Rimutaka Hill Road.
- Greater Wellington's congestion levels are no longer the lowest of all major Australasian cities measured. All-day average congestion levels are now higher than Canberra and Perth (2000 data) and Tauranga.
- The 2004 perception survey found a 9% decrease in the public perception of bus network reliability, bringing it to the 60% level of perceived reliability seen in the road and train networks.
- The 2004 perception survey found that 6% more people between 2003 and 2004 believed that private vehicle costs were affecting their use.
- Regional public transport patronage continues to grow, including a more than 5% increase in off-peak passenger numbers between 2001 and 2004.
- Road crash numbers continue to be too high, although regional casualties per 100,000 population figures remain the lowest of all compared regions.
- The 2004 perception survey found 71% of people feel 'safe' when walking, but only 23% think cyclists are 'safe' (c.f. 29% in 2003).
- Of the 'active' transport modes, cycling continues to have a considerably lower use level than walking.

- Implementation of the Regional Land Transport Strategy continues to be slower than anticipated, primarily due to issues relating to the Resource Management Act 1991, uncertainty about urban rail contracts and a lack of funding to enable the early construction of the Transmission Gully motorway.
- The private car continues to be the dominant mode of transportation.

Glossary

AADT	Annual average daily traffic
AMR	Annual Monitoring Report
ARC	Auckland Regional Council
CBD	Central business district
CDC	Carterton District Council
c.f.	Compared with
CGI	Congestion indicator
FEPI	Farm Expenses Price Index
Golden Mile	Lambton Quay to Courtenay Place
GWRC	Greater Wellington Regional Council
HCC	Hutt City Council
KCDC	Kapiti District Council
LOS	Level of service
LTCCP	Long-Term Council Community Plan
LTCCP Target	GWRC 2013 sustainability targets
LTSA	Land Transport Safety Authority
MDC	Masterton District Council
PCC	Porirua City Council
Police	New Zealand Police
RLTC	Regional Land Transport Committee
RLTS	Regional Land Transport Strategy
SH	State highway

SWDC	South Wairarapa District Council
TAMS	Transport Air Quality Monitoring Station
UHCC	Upper Hutt City Council
VKT	Vehicle kilometres travelled
WCC	Wellington City Council
WTSM	Wellington Transport Strategic Model

Water, air, earth and energy: elements in Greater Wellington's logo that combine to create and sustain life. Greater Wellington promotes **Quality for Life** by ensuring our environment is protected while meeting the economic, cultural and social needs of the community.

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