

# 1 INTRODUCTION

Successful modern nations are based around thriving cities. The continued success of Auckland, as New Zealand's major commercial and population centre, and only city of international scale, is vital to our nation's long-term prospects. To ensure this success, and the future well-being of the growing Auckland region, it is essential to plan and implement world-class transport infrastructure and services.

Achieving an integrated and sustainable transport system will contribute to Aucklanders' quality of life and support economic development goals, both nationally and internationally. For Auckland to achieve a competitive advantage and to be internationally competitive, transport investments and decisions must focus on improving the flow of people, goods and services within and between urban and rural areas, and between New Zealand and overseas.

The transport system in Auckland comprises strategic, regional, arterial, local and private roads; passenger and freight rail services, freight and commercial vehicles, private vehicles; buses, ferries and taxis; walking and cycling infrastructure; and other hire vehicles. The importance of the transport connections to, from and between the Auckland airport and the port, which provide our gateways to the rest of New Zealand and the world, must be considered in the context of wider transport investment decisions. Considerations must also be given to the connections between Auckland and our regional neighbours (Northland, Bay of Plenty and the Waikato).

To ensure an integrated, safe, responsive and sustainable transport system, it is important that all elements of the system are considered in relation to each other and to the system's interaction with land use and development. Transport is not just a means in itself, but an integral component of life in 21st century New Zealand, with multiple dimensions and perspectives that affect our day-to-day lives.

The Auckland Transport Plan (ATP) unites the strategies, plans, projects and packages that have been developed by the Auckland Regional Transport Authority (ARTA), local authorities, Transit New Zealand (Transit) and ONTRACK to deliver an integrated, safe, responsive and sustainable transport system for the Auckland region. The ATP is the method by which ARTA will implement the Regional Land Transport Strategy (RLTS) and meet its legislative obligations under Section 39(8) of the Land Transport Management Act 2003.

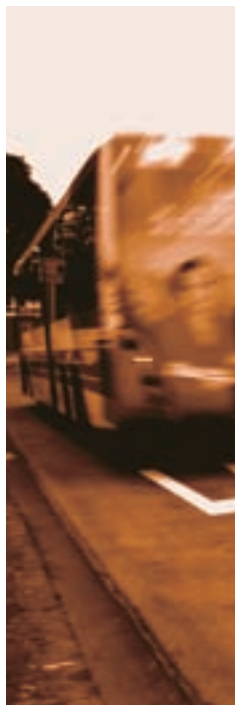
Under the Land Transport Management Act, ARTA is required to make a statement about its view of the land transport priorities in the Auckland region, including the priorities of other organisations. In doing this, ARTA must be satisfied that its priorities will contribute towards its objectives, as well as the objectives of the New Zealand Transport Strategy.

The RLTS is the overarching policy document which leads the planning for Auckland's transport system. The goal of the RLTS is:

*A transport system which enhances the Auckland region as a great place to live, work and play.*

Achievement of the RLTS will see Auckland develop a transport system where:

- > People and goods are able to move when necessary
- > Transport supports vibrant town centres
- > Streets are also community places
- > Getting around by all modes is integrated, safe and effective
- > People have choices which enable them to participate in society
- > The environment and human health are protected and enhanced
- > Transport resources are used efficiently and effectively.



The ATP is the main mechanism for transforming the RLTS policies and strategies into actions. In uniting the policies and proposals of the RLTS with a plan for implementation, the ATP establishes a multi-modal, multi-agency transport implementation plan which outlines priorities and phasing of land transport packages and projects over the next 10 years, within a long-term context.

The ATP integrates the region's transport programmes in a single place. By packaging transport proposals by area and corridor, it brings greater clarity and demonstrates the inter-related benefits of a multi-agency approach. It also provides a valuable framework for cross-boundary working within the region.

The ATP links RLTS outcomes to the physical plans of the implementation agencies which goes some way towards fulfilling the requirement of the New Zealand Transport Strategy for the integration of individual networks to deliver an overall transport system.

The ATP will provide ARTA with the framework for the development of the annual Auckland Land Transport Programme (LTP), to fulfil its legislative obligations. It also provides a reference for Transit and ONTRACK in preparing the State Highway Forecast and rail network development plans respectively. The ATP is intended to provide certainty around transport infrastructure provision and service delivery to the local community and to national, regional and local bodies. It enables forward planning, capacity building and certainty for both public and private agencies to make long-term planning and investment decisions in the Auckland region.

The ATP also highlights the transport funding challenges that Auckland faces, and the need to carefully prioritise available funds to achieve the best outcomes for the region.

ARTA developed the ATP in collaboration with Transit, ONTRACK, the Auckland Regional Council, and the seven territorial authorities in the region (Rodney District, North Shore City, Waitakere City, Auckland City, Manukau City, Papakura District and Franklin District Councils) and Land Transport New Zealand. The ATP covers the entire Auckland region, including the area of Franklin District which is located within Environment Waikato's boundary.

## 2 CONTEXT

The Auckland region represents over one third of the economy. It is home to around a third of New Zealand's population, a third of New Zealand's businesses, and contributes a third of national gross domestic product. A strong, sustainable business and economic environment in Auckland is therefore critical to New Zealand's overall growth and prosperity.

Auckland's growth and development influences not only the regional economy, but also the national New Zealand economy. The transport system has a critical role to play in Auckland's growth and development. To sustainably manage this growth and development a number of national, regional and local strategies and plans have been prepared. These have been used to establish the policy framework for the ATP.

Transport infrastructure will support sustainable economic activity through increased and improved linkages between key commercial locations (domestic and foreign), residential areas, and employment centres; and more efficient movement of goods and people.

In addition to legislative requirements, the main "top-down" influences on the ATP are:

- > New Zealand Transport Strategy (NZTS)
- > National Rail Strategy
- > Regional Policy Statement
- > Regional Growth Strategy (RGS)
- > Regional Land Transport Strategy (RLTS);

and the "bottom-up" influences are:

- > Local councils' long-term council community plans
- > Transit New Zealand's State Highway Forecast
- > ONTRACK's rail network development plans
- > District plans
- > ARTA's plans and programmes.<sup>1</sup>

These documents:

- > Set out the broad set of objectives to which the ATP must contribute; and
- > Set the scene for developing the detailed evaluation and profiling process which has guided the development of the operational aspects of the ATP.

The influence of the various national, regional and local strategies and plans to deliver an integrated, safe, responsive and sustainable land transport system is still evolving. It is shown diagrammatically in Figure 2.1.

ARTA is responsible for giving effect to the RLTS through the annual preparation of the Auckland LTP. The development of the ATP is a

critical link between the RLTS and the Auckland LTP, which will contain the transport activities that need to be undertaken each year by territorial authorities and ARTA, with comment on ONTRACK's and Transit's programmes, to deliver the RLTS objectives.

The RLTS was reviewed in 2005 to give effect to the Land Transport Management Act (LTMA), the New Zealand Transport Strategy (NZTS) and as a requirement of the Local Government (Auckland) Amendment Act 2004 (LGAAA) with the purpose of improving integration of the Auckland regional land transport system.

The responsibility for implementing the RLTS is shared between a number of organisations, including Transit (state highways), territorial authorities (local roads), ARTA (passenger transport) and ONTRACK (rail network).

The ATP provides the framework for the preparation of the annual Auckland LTP by translating the vision and objectives of the RLTS into strategic outcomes on an area or corridor basis. Using this framework, the Auckland LTP will list packages and projects for implementation in the coming year that will help to deliver those outcomes.

### Regional Growth Forum

The Regional Growth Forum is currently undertaking an implementation-focused update and evaluation of the Regional Growth Strategy (RGS). The Regional Growth Forum is, at the same time, developing a Long Term Sustainability Framework (LTSF) which will provide:

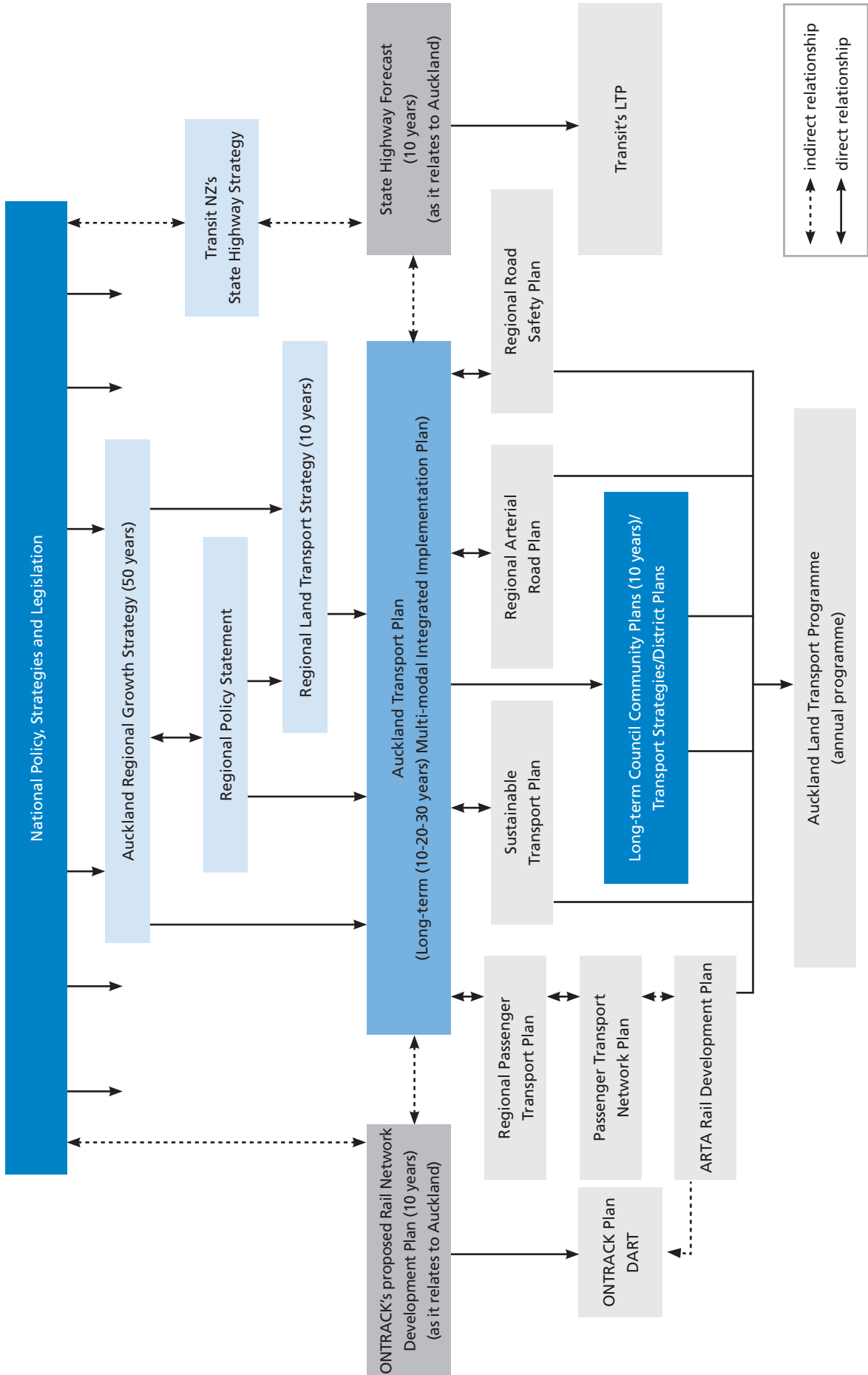
- > A shared long-term view of what is needed to make the Auckland region sustainable
- > An overarching context for developing future regional strategies and local plans
- > A clear statement of the strategic directions necessary to meet the region's long-term sustainability goals, and
- > Processes to help improve decision-making and to help decisions that are better integrated and resilient over the long term.

The RGS evaluation has reported on progress since the release of the document in 1999. The process has updated capacity information and considered new issues such as the impacts of agglomeration on productivity. The evaluation has also outlined a number of challenges that exist in meeting the region's social, economic, environmental, and cultural outcomes in a spatial context. It identifies a range of possible approaches to improve implementation.

The ATP has been developed to implement the RLTS, which in turn is one of the strategies for implementing the RGS. As the Regional Growth Forum considers the findings of the RGS evaluation work and the long-term framework, ARTA will need to ensure that reviews of the ATP are consistent with the region's strategic views and actions as articulated in these documents.

<sup>1</sup> Descriptions of ARTA's, Transit's and ONTRACK's plans and programmes are provided in Appendix C.

Figure 2.1 – Plans and Strategies Relationships to the ATP



## Transport and Land Use

Development of an international city and region is not solely reliant on the development of the transport system. While an effective transport system is vital for the local and national economy, the continued growth in road transport and the consequential environmental impacts present a major challenge to the objective of sustainable development outlined in many statutory and policy documents.

The relationship between transport and land use is complex, yet the form of the urban environment helps to determine travel patterns.

The integration of land use and transport policies is important for determining ease of access to various locations and services, which in turn improves economic development through the ability to move more people, goods and services efficiently. Quality of life also depends on a number of variables related directly to transport – easy access to jobs, shopping, leisure facilities and services is key to the daily life of most people.

The ATP needs to support and be supported by land use policies which manage demand and mitigate against adverse effects by:

- > Promoting choices for all modes of transport as safe and efficient
- > Enabling people to reach everyday destinations with less need to travel long distances by promoting accessibility to jobs, shopping, leisure facilities and services by passenger transport, walking and cycling
- > Reducing the level of traffic on the road network by reducing the reliance on the private car
- > Ensuring movement of goods between ports, economic lines and the wider Auckland region.

## The Long-Term View

The ATP must take a long-term view – longer than that in the current strategies, programmes and forecasts. For example, the RLTS has a 10-year timeframe, set by statute, yet its vision seeks to deliver a transport system that requires many years of development. The ATP must be aware of the long-term goals of the region if it is to deliver the types of transport development that support the vision. It is with this vision in mind that the ATP has adopted a long-term focus.

Looking ahead 40-50 years, when Auckland's population will be at least two million, a world-class transport system will require a completed strategic roading network, including both state highways and regional arterial roads. It will also require a passenger transport network that can carry at least 200 million passenger transport trips annually (around 15 per cent of the peak mode share) between regional centres, at high frequencies and with reliable travel times.

Over the longer term, the strategic roading network (see Figure 5.2) is expected to be given effect through a range of projects, including:

- > Completion of the motorway network including the Western Ring Route (if unfunded within the 10-year timeframe)
- > A new east-west strategic route between Onehunga and Penrose
- > An additional Waitemata Harbour crossing
- > Upgrading State Highway 1 to four lanes from north of Puhoi to north of Warkworth
- > Upgrading State Highway 22 between Drury and Pukekohe.

Complementing this in the Waikato region will be the completion of the Waikato Expressway and upgrades to the State Highway 2 connection to the Hauraki Plains.

Future development of the passenger transport network, primarily the Rapid Transit Network (see Figure 5.1), is expected to be given effect via:

- > An inner city underground passenger rail loop connecting Britomart Station and the Western Line at Mt Eden Station
- > Rapid transit connections between Avondale and Southdown; the Auckland CBD and the Auckland airport, and Manukau City Centre and the Auckland airport
- > Rapid transit connections between Orewa and Albany; between Albany, Westgate and Henderson; and between Panmure, Botany Downs and Manukau City Centre
- > Additional ferry terminals and services to provide additional capacity for connectivity by the sea.

## Constraints

To a large extent, this first ATP must rely on the outputs from Transit's State Highway Forecast (SHF), ONTRACK's rail development plans, and local councils' long-term council community plans (LTCCP). These are largely already determined, especially in the short term. The ATP can therefore influence the short-term future only to a limited extent.

Nevertheless the existing programmes are largely consistent with the direction set by the RLTS, providing a good foundation for the ATP to move forward.

With each future review of the ATP, it is intended that the relationship will reverse. The ATP will become the guiding document by which the players in Auckland's transport system set their plans.

The 10-year timeframe of the plans that form the basis of this ATP will restrict the extent to which it can be future-focused. Each new iteration will, however, expand on the objective of delivering the integrated and sustainable land transport system sought through the RLTS. The ATP will achieve this by ensuring that long-term strategy and investigation projects are prioritised, to provide the foundation of information required.

## Crown Initiatives

Crown initiatives also provide an important context for this first ATP. Transit's State Highway Forecast has been underwritten by the Crown so that Transit is able to guarantee delivery of the projects set for construction over the next six years. ONTRACK also has strategic goals for the development of the national rail network which are agreed with its shareholding ministers, within the overarching framework of the National Rail Strategy which dovetails with the New Zealand Transport Strategy. While Transit's initial six-year plan and ONTRACK's rail network development plans will act as inputs to the ATP, it is anticipated that ARTA, Transit and ONTRACK will work together to ensure that the Auckland region components of their programmes align, at a regional as well as national level.

## Land Transport Sector Review – Next Steps

The Government released the report and recommendations from the Next Steps review of the land transport sector in May 2007.

Recommendations in the report are:

- > that the Government establish the funding policy and investment priorities for the land transport sector, for the short-medium term, through a Government Policy Statement

- > that regular reviews of funding levels are undertaken to ascertain whether the balance between investment priorities are sufficient to achieve the desired outcomes. These reviews will feed into the development of the Government Policy Statement
- > Extension of the land transport planning cycle to a three-yearly basis
- > All Fuel Excise Duty, Road User Charges and Motor Vehicle Registration fees to be directed into the dedicated National Land Transport Fund, and effectively ring-fenced for land transport expenditure
- > Land Transport New Zealand and Transit New Zealand to be merged, and some policy capability to be transferred to the Ministry of Transport.

A key recommendation of the report is that regions prioritise all regional and local land transport projects, including state highways. ARTA is proud to be leading the way for the Auckland region with the ATP, which demonstrates Auckland transport agencies working collaboratively with a common purpose resulting in the first integrated multi-agency, multi-modal transport plan for the Auckland region.

### Budget 2007

Budget 2007 provides the Auckland region with the ability to raise funds through a regional fuel tax for specific transport capital projects that would not have been able to be completed through traditional funding in the time period that the region wishes to see these projects completed.

The regional fuel tax will allow the Government to support electrification of the Auckland rail network, other passenger transport initiatives such as additional buses, rail rolling stock and integrated ticketing. A proportion of the regional fuel tax may also support roading projects such as completing the Western Ring Route and Penlink.

ARC and ARTA, in collaboration with key stakeholders, are working through the requirements to establish the regional fuel tax for the Auckland region. The process, still to be finalised, will include consultation with key stakeholders and the public. With the regional fuel tax, electrification of the rail network is timetabled to be completed by 2013 or earlier. Assuming a regional fuel tax in Auckland of 10 cents a litre, the gross annual revenue raised would be in the region of \$120 million, which would support an estimated debt of \$1.5 billion<sup>1</sup>.

### Auckland Transport Strategic Alignment Project (ATSAP)

The Auckland Transport Strategic Alignment Project (ATSAP) was initiated in May 2006 by central government ministers and Auckland political leaders to establish a common strategic view on a high-level strategic plan for the long-term development of Auckland's land transport system.

The second deliverable report shows a high degree of alignment between Crown and Auckland officials, including the need for a substantial shift to Passenger Transport, starting immediately. Key points were raised in the draft report:

1. There needs to be a long-term view – 30 years
2. Substantial shift to passenger transport is required – starting now
3. Support for ARTA's rapid, quality and local transit networks, and targeted services for the passenger transport services
4. Support for development of the strategic roading network, including traffic management systems

5. Support for increased investment in travel demand management tools
6. Pricing mechanisms will need to be introduced
7. Greater direction is required on local roading (i.e. everything but state highways), including:
  - > Integrated local roading with passenger transport improvements
  - > Integrated local roading investment and management with investment and management of the strategic roading network
8. Recognition that passenger transport contributes to the non-economic objectives of the Land Transport Management Act and New Zealand Transport Strategy, in particular environmental sustainability, public health, safety and security, and access and mobility
9. Recognition of the importance of the relationship between land use and transport, accepting that change will be gradual over decades rather than years.

The common acceptance that a substantial shift to passenger transport is required led to discussion of either a rapid or steady growth scenario, both of which are aimed at a 15 per cent mode share by 2051. However, the steady growth scenario would have a nine per cent mode share by 2016, whereas the rapid growth scenario would result in an 11 per cent mode share by 2016.

Recommendations<sup>2</sup> from the ATSAP Steering Group are currently being considered by ministers and Auckland's political leaders. Once decisions are made they will need to be incorporated into the ATP.

### Auckland Road Pricing Evaluation Study

The Ministry of Transport has released the outcomes from the Auckland Road Pricing Evaluation Study (ARPES), ([www.transport.govt.nz/auckland-road-pricing-evaluation-study-submissions-analysis-1/](http://www.transport.govt.nz/auckland-road-pricing-evaluation-study-submissions-analysis-1/)). The Ministry is now working closely with ARC, ARTA and local councils to undertake further analysis on the issues raised. The analysis will investigate the extent to which additional passenger transport can address the concerns raised in some submissions that there are insufficient alternatives to the private car.

The scope of the analysis will include further investigation of the social and economic impacts, including potential productivity gains for the Auckland region, and will look in more detail at the impact on the CBD and commercial road users.

Introducing road pricing will require additional passenger transport capacity over and above what would otherwise be provided. This additional capacity needs to be provided before implementation of any road pricing scheme.

### Reviews

The ATP will be reviewed on a three-yearly basis and completed prior to the development of LTCCP. While it is acknowledged that the RLTS is also being reviewed in this timeframe and that the ATP is ARTA's plan for implementing the RLTS, it is critical that the next iteration of the ATP is completed by August 2008 to inform the next review of LTCCP.

1 Assuming a 30 year repayment period and a 7 percent per annum interest rate  
 2 See Appendix 4

# 3 TRENDS, ISSUES AND CHALLENGES

The transport system is a key factor influencing the quality of life for people living in Auckland – its effectiveness in connecting people with each other, goods, services and employment is vital for the region’s well-being now and in the future. Before planning how the transport system will fulfil its role, the demands and problems hindering the system and the challenges faced in overcoming these must be identified. Following this, the required actions can be prioritised within the ATP to address needs now and in the future.

This section outlines major trends and issues, and identifies key challenges in improving transport in the region.

## Trends and Issues

### Growth

The most significant driver of the development of the Auckland region’s transport system is its rapidly growing population and economy. This is illustrated in Figure 3.1, which shows the growth of Auckland from 1986, and expected growth to 2026 compared to other New Zealand regions. It highlights the increasing concentration of New Zealand’s population in the Auckland region.

Growth brings many opportunities for the region, but also presents some serious challenges. The associated growth in employment, education, health and social services to support the population has a direct impact on the transport system, through continued growth in vehicle use.

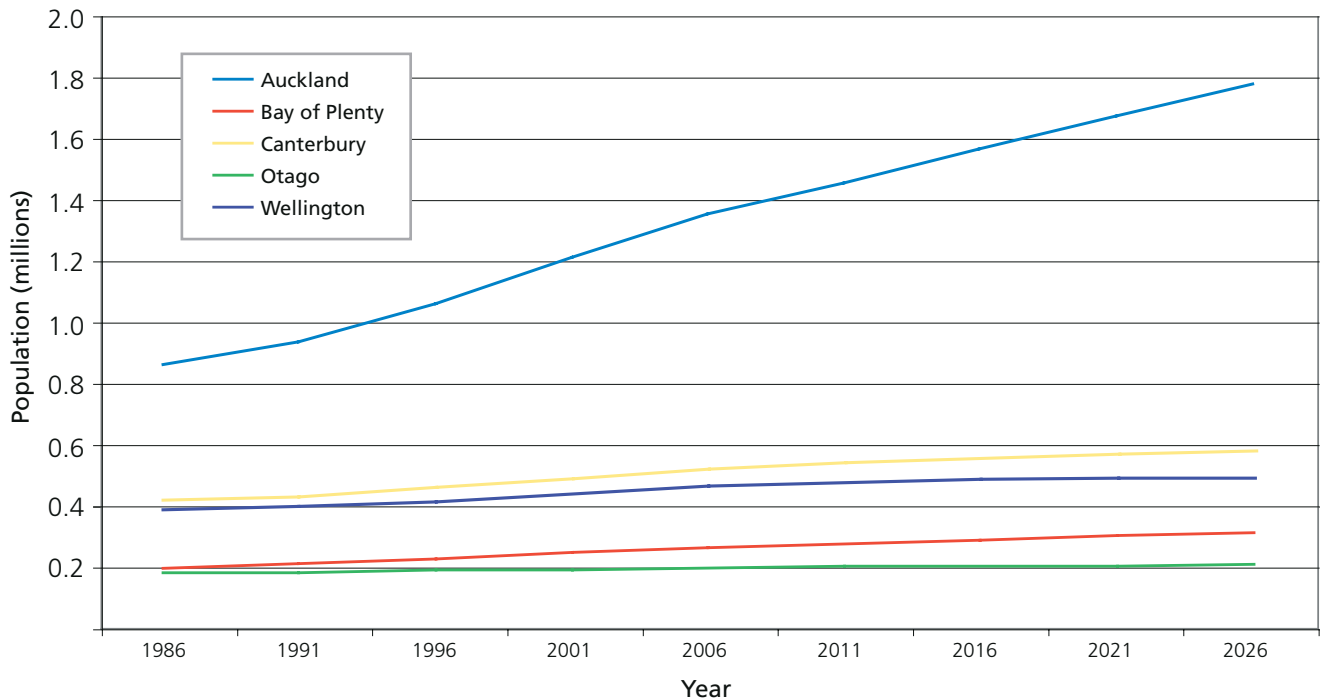
This is putting strain on our existing networks and improvements to our infrastructure and passenger transport services are needed.

In 2006, over 1.3 million people were living in Auckland, representing 32 per cent of New Zealand’s population. The Auckland region is also the fastest growing region (12.4 per cent increase from 2001 to 2006, accounting for 54 per cent of national growth).

Strong growth is expected to continue. It is estimated that by 2021 Auckland’s population will have grown by 440,000 people – the current population of Greater Wellington – and accommodate around 37 per cent of the national population. By 2041 it is expected that 2 million people will be living in Auckland.

Auckland’s growth is being increasingly driven by external migration. This has resulted in an ethnically diverse population, with 37 per cent of Auckland’s residents born overseas. The Auckland region’s population is younger than other regions’, and although it is ageing, it is doing so at a slower rate, and has the youngest median ages.

Figure 3.1 – Auckland’s Growth to 2026 Compared to Other New Zealand Regions



- > Over the next 20 years Auckland will grow by over 500,000 people
- > Over the next 40 years Auckland will grow by over 800,000 people

Population growth is dispersed throughout the region and is being increasingly accommodated in multi-unit dwellings and within growth centres. However, new housing continues to occur predominantly on vacant land (40 per cent) and by way of infill (33 per cent).

The regional economy generates just over one third of the nation's wealth, and the efficient movement of people, goods and services is vital to New Zealand's continuing economic prosperity. Two of the regional economy's largest sectors – wholesale and retail trade (23 per cent of employment), and manufacturing (17 per cent) – rely heavily on efficient freight movements, particularly by road.

While office activity is increasingly locating within some of the high density centres and corridors (particularly in the CBD), most of the growth in wholesale and retail trade and manufacturing is occurring outside the growth centres.

**Land use and urban form**

Urban form is an important determinant of travel patterns. The historical cycle of urban growth across the Auckland region has resulted in a low density urban form which has fuelled the ever-increasing demand for travel.

The traditional approach to transport planning of "predict and provide" cannot indefinitely support the forecast levels of growth in the Auckland region. The conventional methods of building new roads, upgrading and mitigating existing highways, or continued high levels of passenger transport subsidies are unsustainable in the long run as:

- > Improvements in the road system reinforce the tendency for people and businesses to move further out from the centre, leading to increased traffic levels
- > Road controlling authorities are unable to create enough new road capacity to meet demand as the financial, social and environmental costs of road building become unsustainable, especially in urban areas
- > Dispersed development patterns make it increasingly costly to provide passenger transport for people who are unable to, or choose not to, use private cars

- > It becomes difficult for people to walk or cycle because of distances between trip origins and destinations, and the dominance of the motor car in the use of the transport network, and
- > Dispersed land use patterns are difficult to reverse.

**Reliance on private vehicles**

A key issue for the region is finding ways to respond to the growing demand for vehicle travel in ways that are sustainable, safe and cost-effective.

There are 870,455 private cars registered in the Auckland region, up from 747,584 in 2001.

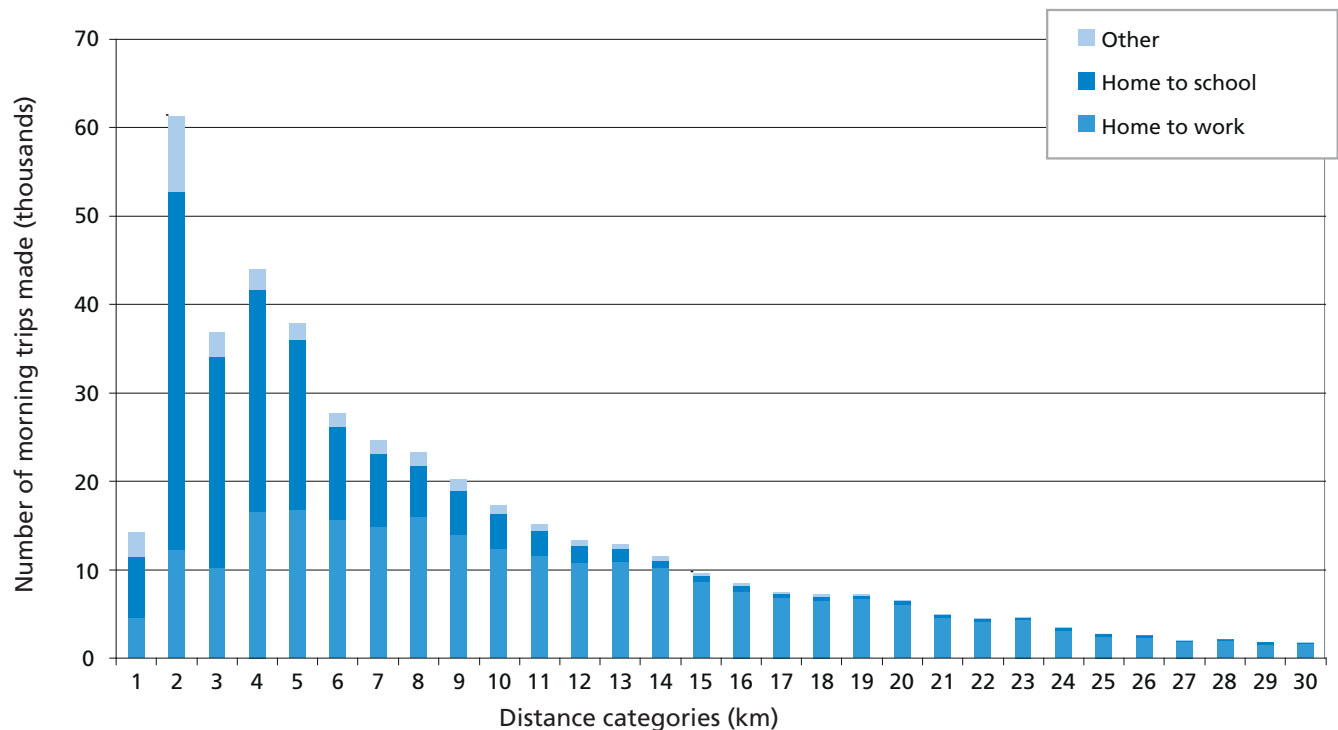
Census data reflects the overriding dominance of car use for journey to work trips that require leaving the home, with cars being used for 86 per cent of all journey to work trips in 2006.

Census data also highlights the low and declining share of passenger transport (seven per cent in 2006) and walking and cycling (five per cent in 2006).

Cars are also increasingly being used for short trips that were traditionally made by walking and cycling (see Figure 3.2). Approximately 64 per cent of all trips less than two kilometres during the morning peak are by car and most of these are to drop children off at school.

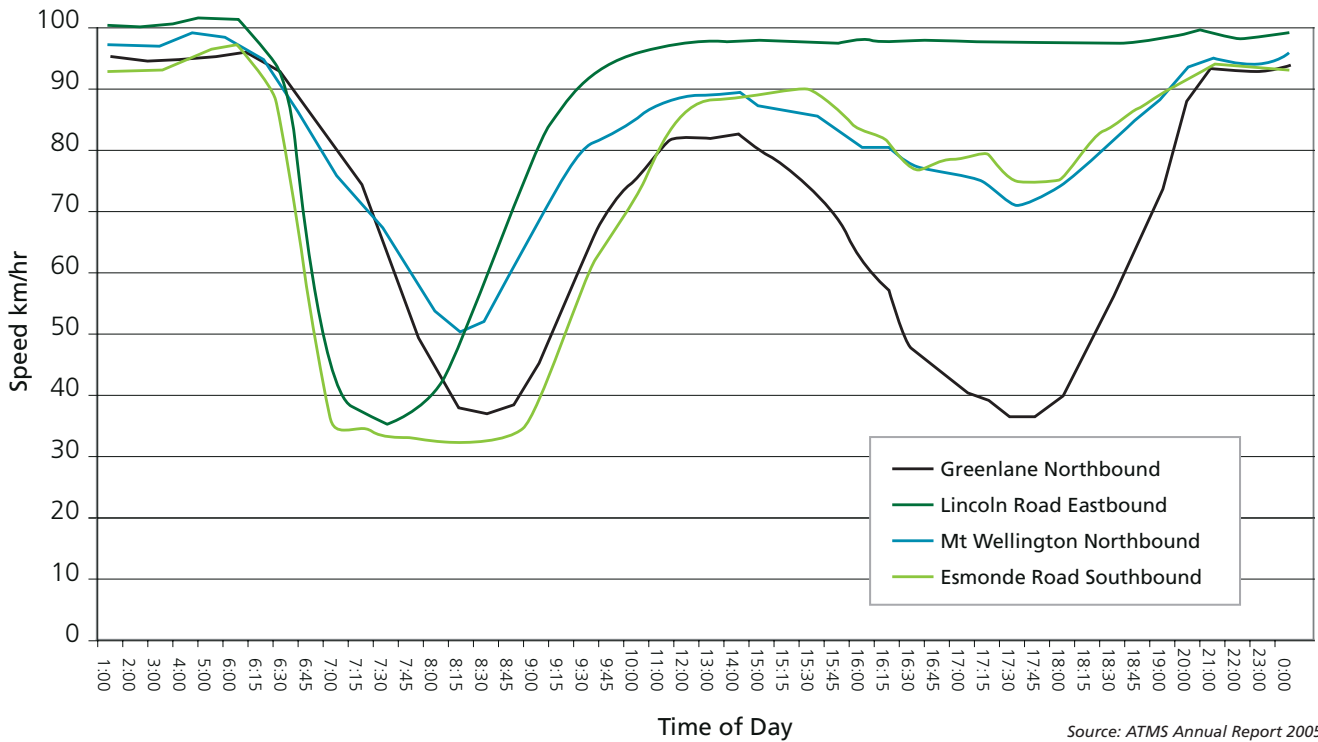


**Figure 3.2 – Morning Peak Trips by Trip Purpose Auckland Region 2001**





**Figure 3.3 – Average Speeds on Motorways**



Source: ATMS Annual Report 2005

**Congestion and unreliable travel times**

Increased traffic volumes have resulted in congestion problems at a number of locations throughout the Auckland region. Figure 3.3 shows the average city-bound travel speeds at selected locations on the urban motorway network in 2005. It highlights differences in the scale and duration of congestion in different parts of the network. It also reveals that some parts of the network, particularly those closer to the CBD, experience significant delays in both the morning and evening peaks, and increasingly during the interpeak period as well.

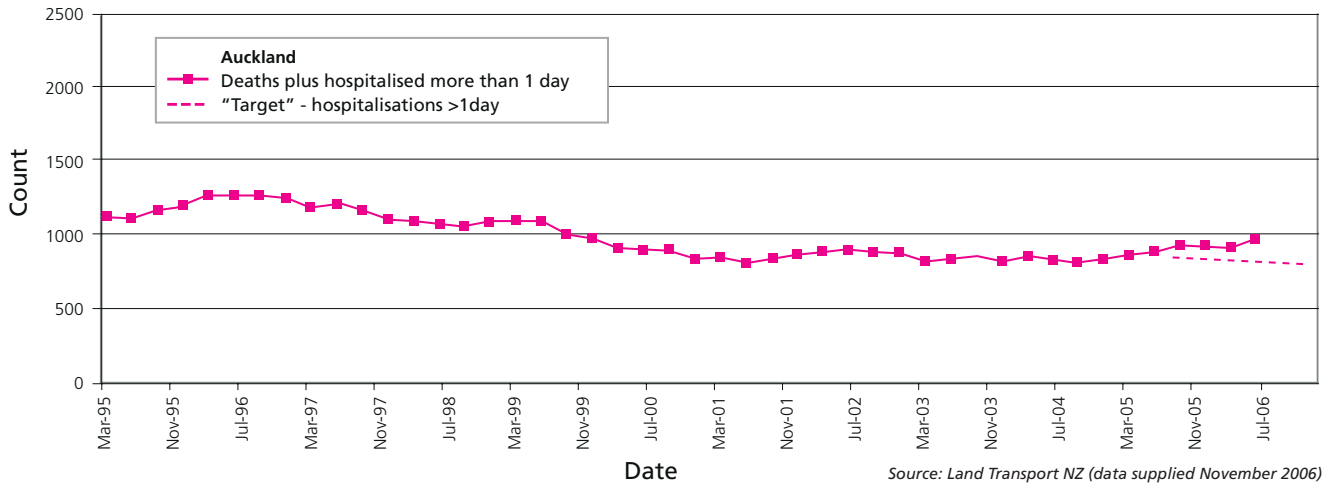
While increasing congestion is clearly an important issue in Auckland, it is also important to put this trend in the context of congestion experienced in other cities. Each year, a congestion indicator survey compares Auckland with other Australasian cities and shows that recent congestion levels in Auckland are similar to comparable Australian cities, and lower than some.

A significant determinant of economic well-being is the ability of the transport system to efficiently move goods and services. The level of commercial traffic in Auckland is very significant, with approximately 20 per cent of all trips made by heavy and light commercial vehicles carrying 600,000 tonnes of goods that have an origin and destination within the region.

The ability to continue to accommodate important economic freight movements on the roading system (particularly during peak hours) is limited by the large and growing numbers of non-commercial vehicle trips. As a result, network level congestion and unreliable travel times can have a particularly negative impact on the economic viability of key transport terminals such as the port and airport.



**Figure 3.4 – Auckland Region’s Road Deaths and Hospitalisations Resulting from Road Crashes (12-month Totals)**



**Crashes**

The number of road related deaths in the Auckland region has steadily declined over the last decade while the number of injuries for the same time period has been increasing.

In 2003, the Government set an ambitious national goal of an overall reduction in road casualties to no more than 300 deaths and 4,500 hospitalisations a year by 2011. In 2004, the Auckland Regional Road Safety Plan reflected this ambitious target by setting a regional goal of no more than ‘670 road deaths and hospitalisations of more than one day’ on the Auckland Region’s roads by 2010.

Figure 3.4 above shows the trend in the number of ‘deaths plus hospitalisations of more than one day’ in the Auckland region resulting from road crashes. The graph indicates an overall reduction in deaths and hospitalisations from 1995 to 2006. While the overall trend is positive, the graph also shows that, as a region, we are more recently tracking away from our target. This is primarily due to an increasing trend in injuries from road crashes and is of concern.

**Environmental and public health issues**

Transport activities can have adverse impacts on water quality, greenhouse gas emissions, local air quality, cultural and natural heritage sites, noise, amenity and community severance. These impacts are generated from both the use of the transport system and the implementation or construction of transport infrastructure.

The transport system is a high user of energy and relies on the consumption of non-renewable resources in terms of fuel, materials and land. The domestic transport sector in 2003 accounted for over 40 per cent of the national consumer energy use and 45 per cent of CO<sub>2</sub> emissions. Regional fuel use overall as well as per capita is increasing, as average trip length, vehicle engine size and congestion levels increase.

Motor vehicles are the single largest contributor to air pollution in the Auckland region. It is estimated that between 60 and 80 per cent of all air contaminants come from motor vehicles. A report to the Ministry of Transport (completed in March 2002) estimated that more than 250 people aged 30 and over die each year from exposure to microscopic particles in motor vehicle emissions in the Auckland region.

**Key Transport Challenges**

In response to the trends and issues outlined above, ARTA has identified a number of challenges that need to be faced in planning and delivering Auckland’s future transport system.

**Tackling congestion and unreliable travel times**

Missing links in the strategic and regional arterial network and a general lack of road and people carrying capacity lead to delays in the movement of people and goods. They also lead to high traffic volumes on local roads, often of heavy commercial vehicles. This results in a greater risk to the efficient function of the transport network when incidents, such as crashes or breakdowns, occur on strategic routes and affect travel times in an unpredictable fashion.

Reliable travel times on the roading network for the movement of people and goods is key to supporting economic development and the viability of key transport terminals. By improving the reliability of travel times, new developments will be encouraged and businesses that may have been considering other locations may choose to remain in Auckland.

Recent surveys<sup>1</sup> suggest that the overall level of congestion across the region has stabilised recently, due to increased capacity in some key sections of the network, such as the Central Motorway Junction improvements to passenger transport i.e. the Northern Express and improved rail services. However, the surveys also indicate that congestion levels are getting significantly worse on some key corridors and, are spreading outside of the morning and evening peak periods, with adverse impacts on economic activity.



### ***Increasing choice and reducing reliance on private cars***

Underdeveloped passenger transport networks and services and poor facilities for walking and cycling lead to private cars often being the only transport choice for a large proportion of the region's population. For people who choose not to, or are unable to own or drive a car, a lack of other transport choices may result in social exclusion. Providing attractive alternatives to the private car can broaden transport choices, and result in people of all ages and abilities having access to employment, education, leisure and social services, and being able to participate in their local communities.

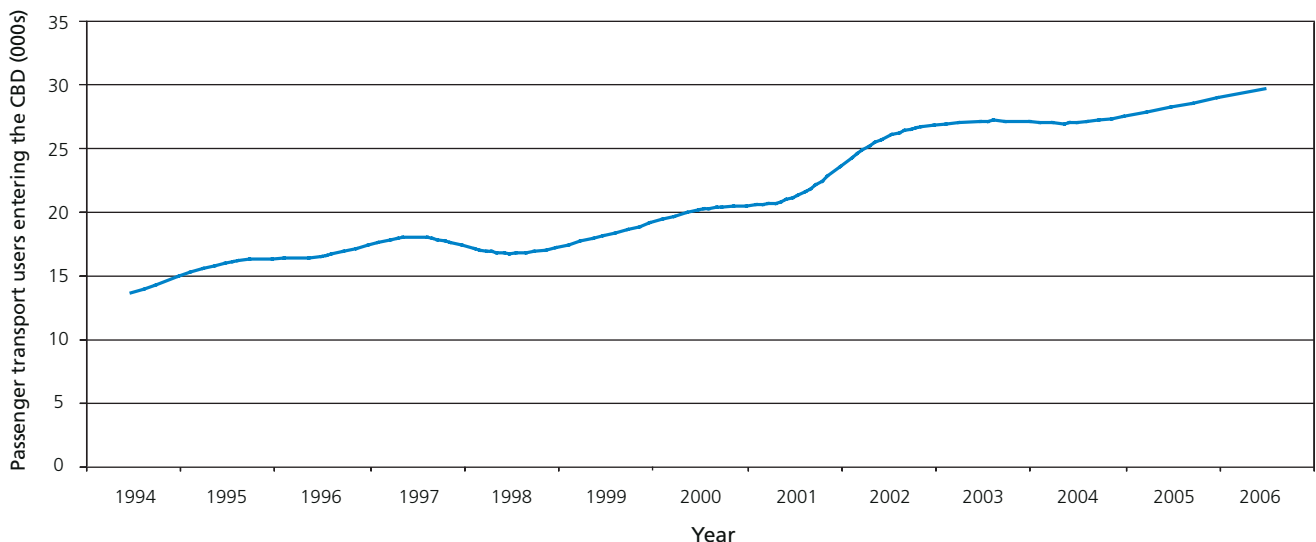
Improvements to the rapid transit network (the Northern Busway and rail network) have resulted in a sustained increase in passenger transport use to the CBD, which is served by the most congested road corridors in the region. Figure 3.5 shows patronage increase has averaged over 12 per cent per annum over the last seven years.

A survey of the uncompleted busway component of the Rapid Transit Network has shown over 40 per cent of users of the Albany and Constellation park and ride stations and the Northern Express busway services previously drove their cars to the CBD during peak periods.

Providing car users with an attractive rapid transit alternative and relieving congestion on key routes through network improvements addresses a number of the key challenges that the region faces as outlined in Section 3.

These improvements in the transport system enhance the economic vitality of the CBD, the country's largest single concentration of economic activity, improve safety and security, provide choice, enhance opportunity for access and mobility, improve environmental sustainability and provide opportunities for improved public health outcomes.

**Figure 3.5 – Passenger Transport Users Entering the Auckland CBD During the Morning Peak Period (07:00-09:00)**



### ***Ensuring integrated land use and transport***

The RGS aims to manage population growth and to integrate the provision and development of transport with growth centres and corridors. This development is often impeded, however, by poor performance of the transport system. The transport system needs to be designed to support the RGS.

Phasing of passenger transport service and infrastructure improvements needs to be integrated with planned land use development, and commercial and residential developments need to be designed with consideration of all transport modes. In particular, high density, mixed use development must be associated with quality passenger transport facilities and measures that encourage walking and cycling, while still providing for the private vehicle, where appropriate.

### ***Encouraging and facilitating economic development***

The economic development of the region relies on an efficient and effective transport system, especially for the movement of goods and services to and from key locations of business activity. The transport system needs to support economic development opportunities in the region by contributing to the accessibility and efficiency of business activities and employment. Without ongoing transport system improvements, the region's economic productivity will suffer through increased transport costs which in turn will constrain economic development opportunities.

To fulfil its key role in the economic development of Auckland, transport must focus on the movement of goods as well as people and recognise that commercial vehicle access to key areas of economic activity – especially the port and airport – is vital. In addition, the region faces a specific challenge to ensure that its transport system is able to contribute to the economic development opportunities that are presented by the Rugby World Cup 2011.

### ***Providing a transport system that is safe to use***

Safety and security for people using the transport system is a critical, baseline issue. Regional statistics for road deaths and serious injuries are still above targets set in the Government's strategy, *Road Safety to 2010*. If current trends continue, the region's safety targets for 2010 will not be achieved. Also of concern is ensuring that any personal security concerns around the use of the passenger transport system, and walking and cycling options are addressed to ensure that there are no impediments, real or perceived, to the uptake of these modes.

### ***Promoting environmental sustainability***

The transport system uses increasing volumes of non-renewable resources such as land, fuel and aggregates, which if not managed appropriately will become unsustainable. Equally, the development and use of the transport system can have an impact on the surrounding environment through issues such as community connectivity and/or severance.

### ***Promoting public health outcomes***

It is important to ensure that vehicles' contribution to air pollution is appropriately addressed. Also, increasing reliance on the private car rather than active modes such as walking and cycling for short trips could lead to health problems. Therefore, promoting travel choices, including active choices, also promotes better health outcomes.



# 4 RESPONDING TO THE CHALLENGES

To respond to the challenges outlined in the previous section, the Auckland region has developed two key strategies: the Regional Growth Strategy (RGS) and the Regional Land Transport Strategy (RLTS). To implement these strategies, the Auckland transport agencies have undertaken several key developments and improvements to the transport system which address the challenges.

### The Regional Growth Strategy (RGS)

Auckland's RGS and the Growth Concept, contained within the RGS, aim to manage population growth and integrate the provision and development of transport with growth centres (Figure 4.2) and corridors. This assists transport agencies to respond in a structured and timely manner.

Even with the RGS and Growth Concept, however, there are clear lags between providing transport infrastructure and changing land use to support the growth.

Some aspects of the transport system can respond to changes in population and employment growth more easily than others.

The type of employment area affects how readily the transport system can respond. For example, bus-based passenger services can respond more easily to change than rail-based freight and passenger services. On the other hand, fixed transport systems such as rail are better at shaping and directing growth. In the Auckland CBD in particular, fixed rapid transport systems may lead to agglomeration benefits as a result of intensification. While employment growth is predicted to occur across the region, the most significant growth is expected in the CBD.

It is important to recognise that to fulfil its key role in the economic development of Auckland, transport must focus on the movement of goods as well as people and that commercial vehicle access to areas of economic activity is of key importance.

As noted in Section 2, the RGS is currently being evaluated to consider implementation progress. The next iteration of the ATP will need to be consistent with the region's long-term views, as will be articulated in the RGS evaluation.

### The Regional Land Transport Strategy (RLTS)

The RLTS identifies a high-level response to the transport challenges identified in the previous section.

It is designed to integrate with the broader regional growth and urban planning strategies, and provides a framework for developing a transport system to support the RGS.

The RLTS has responded to the transport challenges faced by the region by setting a policy framework that is focused on making better use of the existing transport system, managing travel demand through policies aimed at reducing the need for private vehicle travel, and investing in improving the capacity of the region's transport system, especially where this offers alternatives to private vehicle travel. As well as investments to continue the development of the region's strategic roading network, the RLTS calls for a significant increase in investment in passenger transport over the next 10 years, and also for a much stronger focus on travel demand management.

In seeking to address both individual and business transport needs (i.e. passenger and freight), the RLTS comprises a package of investment in roading (62 per cent), passenger transport (34 per cent) and travel demand management (four per cent). These allocations are illustrated in Figure 4.1. While accepting that, for the foreseeable future, the majority of the journeys in the region will continue to be made by private vehicles, the RLTS represents a step change increase in investment for passenger transport and travel demand management.

The responsibility for implementing the RLTS is shared between a number of organisations, each of which has developed its own expenditure programme.

To date, these programmes have not been consolidated into a single picture for the region as a whole. This is the role of the next section of the ATP.

Figure 4.1 – RLTS Allocation

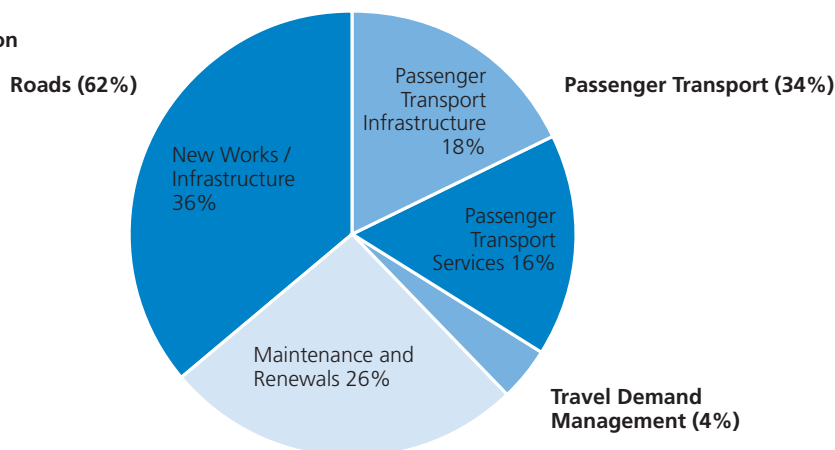
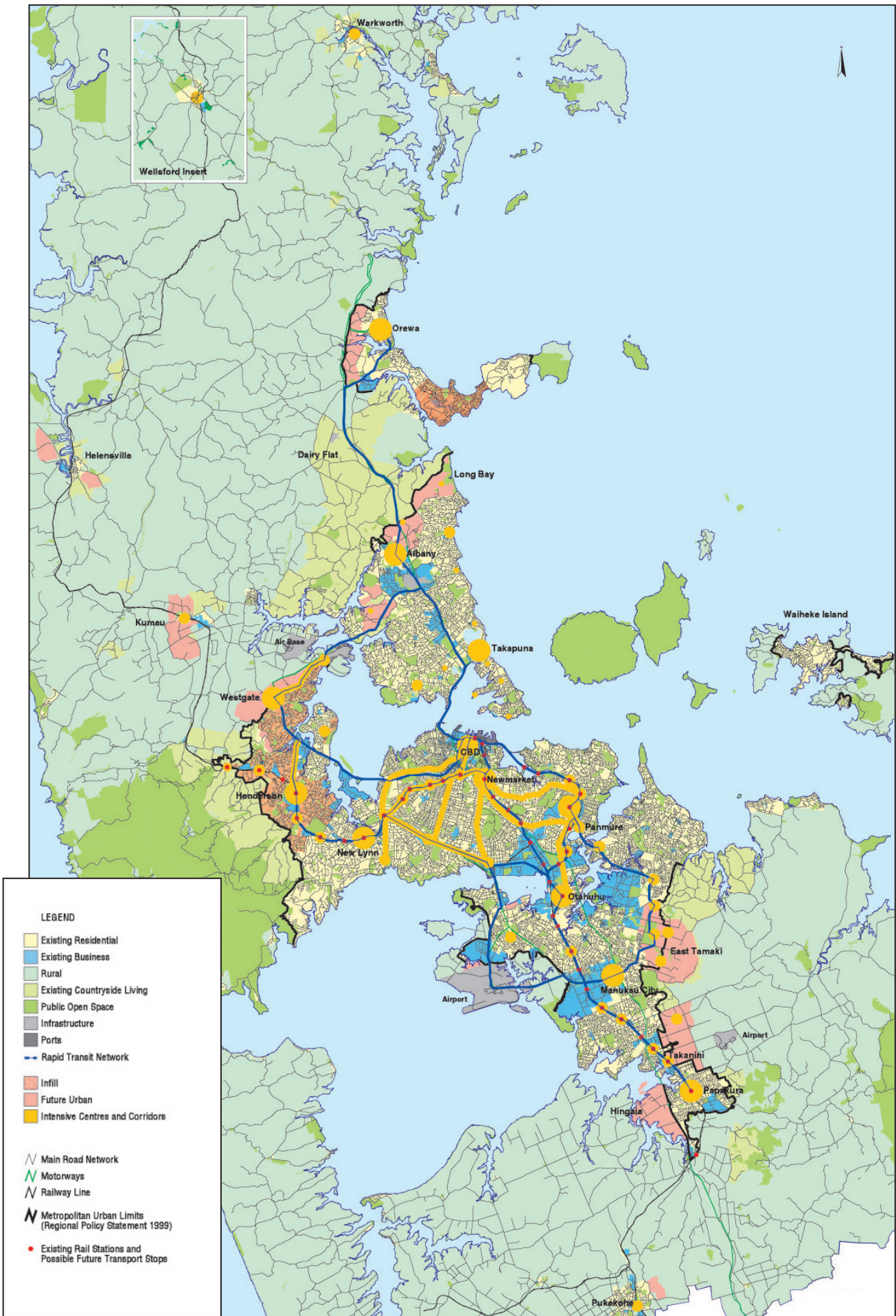


Figure 4.2 – Regional Growth Concept to 2050



Source: ARC Regional Growth Strategy 1999