

ISSUES & CHALLENGES

PROPOSED REGIONAL LAND TRANSPORT STRATEGY 2011 – 2041



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Working Paper RLTS/02

This report has been prepared by the Canterbury Regional Land Transport Officers Group on behalf of the Canterbury Regional Transport Committee. For any enquiries, contact Environment Canterbury, phone 03 353 9007, or email transport@ecan.govt.nz

INTRODUCTION

The purpose of this report is to introduce the key issues and challenges that will underpin development of the Canterbury Regional Land Transport Strategy (RLTS) 2011 – 2041.

Identification of the issues and challenges affecting the region's transport system is a key step in the development of a new RLTS. This report highlights the key issues and challenges that need to be addressed in the RLTS and will be used to develop and assess the objectives and strategic options during the next stage of the Strategy's development.

“A regional land transport strategy will be most effective if it is underpinned by the identification, description, quantification and analysis of strategic issues and problems. The accurate identification of issues and problems is therefore a critically important step in the process leading to the identification of outcomes and strategic options” (Land Transport NZ: Regional Land Transport Strategy Guidelines January 2005).

This report is the primary output of Step 1 of the RLTS development process summarised in Figure 1.

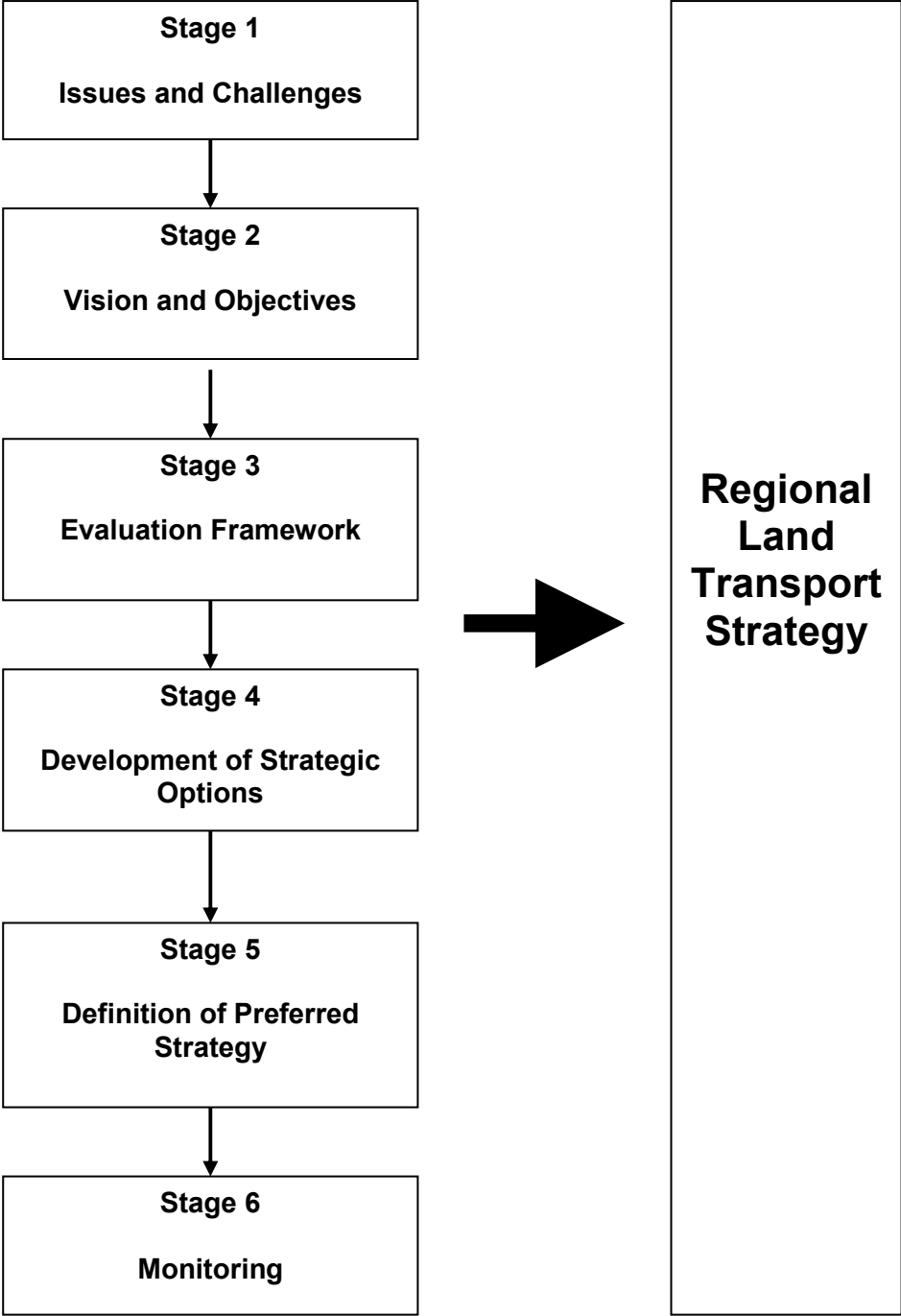


Figure 1: RLTS development process

REGIONAL ISSUES AND CHALLENGES

The key issues and challenges have been identified from a series of inputs including:

- Meetings with local authorities and other stakeholders;
- Market research¹;
- Background research;
- Public consultation² (including a review of previous consultation).

KEY ISSUES AND CHALLENGES FOR THE RLTS

The key issues and challenges affecting development of the RLTS are:

- **Maintaining and enhancing accessibility**
- **Providing options to enhance access**
- **Supporting freight, tourism and the economy**
- **Funding and affordability**
- **Managing private vehicle traffic growth**
- **Improving road safety for all road users**
- **Managing the negative impacts and supporting the positive impacts of transport on health**
- **Managing the environmental impacts of transport**
- **Network security**
- **Meeting the transport needs of low density communities**
- **Oil supply security and fuel price volatility**
- **Managing the transport impacts of anticipated population change**
- **Uncertainties about international technology trends**

Many of these issues and challenges are closely linked and interrelated.

¹ Environment Canterbury, *Canterbury Regional Land Transport Strategy 2011 – 2041 Market Research Report*, 2010.

² Environment Canterbury, *Transport Challenges for Canterbury – Consultation Report*, 2010.

1 IMPROVING ACCESS AND MOBILITY

1.1 Maintaining and enhancing accessibility

The primary purpose of transport is to provide opportunities and choices for the movement of people, goods and services. Accessibility refers to the opportunities to reach destinations and activities and mobility represents the ability to travel to and from these destinations. Most people living in Canterbury enjoy a high level of mobility which is largely met by high levels of car ownership and use³. This mobility provides many social and economic benefits including good access to work, education and recreational opportunities.

Market research confirms that most people living in the region place a high value on their level of mobility and, furthermore, expect their future mobility needs to continue to be largely based around the motor vehicle⁴.

1.1.1 Key Challenge

- How can current levels of mobility be maintained for most Cantabrians and enhanced for those sections of society who are currently disadvantaged in terms of their mobility options?

1.2 Providing options to enhance access

The use of private vehicles is likely to dominate the way that most people meet their transport needs for the next 30 years. For the future wellbeing of the region, it is important that a range of transport options are available enabling people and businesses to access what they need in the way of goods, services and activities. Targeted public transport investments and opportunities to walk and cycle are essential for ensuring good levels of overall accessibility.

Many regard improving public transport, better utilisation of rail and increased provision of cycling and walking infrastructure as significant issues facing the region⁵. However, for many people, especially those in rural areas including rural towns, these options are not always available. Furthermore, some sectors of the community are “transport disadvantaged” in that they are faced with a lack of choices because they have limited access to a car or other transport options such as public transport.

Access to some goods and services can be enhanced through integrated land use measures, changes to the way services are provided or through communications technology alternatives. Such initiatives can play a significant role in determining levels of accessibility.

Providing for accessibility is considered more important than providing for mobility.

1.2.1 Key Challenge

- How can the region effectively provide people and businesses with a range of options to ensure the accessibility needs of all can be met?

³ Environment Canterbury, *Canterbury Regional Profile*, 2010.

⁴ Environment Canterbury, *Canterbury Regional Land Transport Strategy 2011 – 2041 Market Research Report*, 2010.

⁵ Environment Canterbury, *Transport Challenges for Canterbury – Consultation Report*, 2010.

2 ASSISTING ECONOMIC DEVELOPMENT

2.1 Supporting freight, tourism and the economy

The efficient movement of goods and people is essential to support the region's economic wellbeing. Although the region's economy is expected to continue to diversify over time, industries such as agriculture and forestry that have significant freight requirements will continue to play major roles⁶. Additionally, tourism is expected to continue to be a growth industry which will have some localised impacts on the transport network.

Over the next 25 years, freight volumes to, through and from Canterbury are expected to double⁷. Much of this increase will come from dairy, forestry and coal. The majority of freight will continue to be moved on the state highway and local roading network. However, over the life of the RLTS freight transport growth will need to be managed in a number of ways via a number of modes including the accommodation of significant increases in the movement of freight by rail and coastal shipping⁸.

There is a lack of integration between the road, rail and shipping sectors which can make it difficult to effectively plan for the region's future transport needs, particularly in light of the forecast increase in freight movements.

2.1.1 Key Challenge

- How can the region's transport system best support economic development?

2.2 Funding and affordability

Financial investment is essential for maintaining existing transport infrastructure and delivering improvements to the region's transport system. The Government has highlighted the need for investment in transport infrastructure as a key area to boost the nation's economic productivity⁹. However, some of the region's transport plans have not been fully realised because of funding constraints. Additionally, some parts of the region have relatively small populations that find it difficult to raise sufficient revenue to afford the levels of transport investment desired by the community.

Market research and discussions with key stakeholders has identified affordability as a key issue facing the region's transport system¹⁰. Private individuals and businesses have a significant investment in the region's vehicle fleet. The affordability of purchasing and running vehicles is a key consideration when determining how transport outcomes will be delivered. Given that the cost of motoring is expected to increase, this could mean that current levels of mobility become unaffordable for some people¹¹.

2.2.1 Key Challenge

- What are the transport options that can be delivered with the funding available?

⁶ Dalziel, P & Saunders C, *Canterbury Regional Economic Development Strategy*, 2009.

⁷ Ministry of Transport, Ministry of Economic Development & Land Transport New Zealand, *National Freight Demands Study*, 2009.

⁸ Environment Canterbury, *Potential for Increased Use of Rail and Coastal Shipping for Freight in Canterbury*, 2009.

⁹ New Zealand Treasury, *National Infrastructure Plan*, 2010.

¹⁰ Environment Canterbury, *Canterbury Regional Land Transport Strategy 2011 – 2041 Market Research Report*, 2010.

¹¹ NZ Transport Agency Research Report, *Managing Transport Challenges when Oil Prices Rise*, 2008.

2.3 Managing private vehicle traffic growth

Projected increases in household numbers¹² coupled with the trend of increased car ownership¹³ is contributing to an increase in the demand for travel and the use of private cars, particularly in Greater Christchurch. While traffic congestion can cause delays which impose an economic cost to the region, it can also help manage travel demand by influencing trip timing, land use decisions and encouraging the use of a mix of transport modes such as public transport, car-sharing, cycling and walking.

2.3.1 Key Challenge

- How can traffic growth be effectively managed to ensure that accessibility is maintained and that the region's economic performance is not adversely affected?

3 ASSISTING SAFETY AND PERSONAL SECURITY

3.1 Improving road safety for all road users

Approximately 40 people die on Canterbury roads and more than 300 people are seriously injured every year. Although the number of fatalities arising from road crashes has generally decreased since the 1970s, crashes resulting in hospitalisation and injury have increased. These two contrasting trends suggest that whilst improving vehicle technology is reducing fatalities, driver behaviour is not preventing high numbers of accidents occurring. These crashes impose a considerable social and economic cost on the region. The current trend of increasing levels of motorbike ownership will also tend to increase overall exposure to risk.

Analysis of road safety data confirms that many of the issues faced in Canterbury reflect national trends. However, the region faces particular issues with high numbers of casualties associated with:

- Loss of vehicle control or head on crashes (33% of all fatal and injury crashes);
- Intersection crashes (47% of all fatal and injury crashes);
- High and growing numbers of cycle crashes, largely caused by vehicle drivers (9% of all fatal and injury crashes)¹⁴.

Results from some market research carried out as part of the RLTS development process confirm that the community regards improving road safety as a priority¹⁵. Additionally, public consultation highlighted safety improvements as a significant factor for enhancing cycling and walking¹⁶.

In some cases, measures that have improved safety for motorists have had unintended consequences by reducing the safety of people using other transport options such as walking and cycling. Antisocial use of motor vehicles is also an issue that has received much media attention. This can lead to fear for other road users and act as a barrier to travel at certain places or times of day.

3.1.1 Key Challenge

- How can the region improve safety outcomes for all road users?

¹²Statistics NZ, *Subnational Family and Household Projections 2006 (base) – 2031*, 2009

¹³Environment Canterbury, *Canterbury RLTS Annual Monitoring Report*, 2008.

¹⁴NZTA, *Crash Analysis System data*, 2004 - 2010

¹⁵Environment Canterbury, *Canterbury RLTS 2011 – 2041 Market Research Report*, 2010.

¹⁶Environment Canterbury, *Transport Challenges for Canterbury – Consultation Report*, 2010.

4 PROTECTING AND PROMOTING PUBLIC HEALTH

4.1 Managing the negative impacts and supporting the positive impacts of transport on health

Use of the transport system has implications for the population's health¹⁷. While high levels of car ownership and mobility provide people with many health benefits, motor vehicle dependence has been linked to increased levels of physical inactivity and obesity. Air and noise pollution from vehicles can also have significant health impacts on people that are exposed to them for long periods¹⁸.

Although there are demonstrable health benefits of active modes of transport such as cycling and walking, market research carried out for the RLTS indicates that most people do not see a strong link between transport policies and public health issues¹⁹.

4.1.1 Key Challenge

- How can transport best support positive public health outcomes?

5 ENSURING ENVIRONMENTAL SUSTAINABILITY

5.1 Managing the environmental impacts of transport

The use of motor vehicles and development of transport infrastructure has significant impacts on the environment including air pollution, dust, greenhouse gas emissions, visual intrusion, polluted stormwater run-off, noise and vibration.

Transport is responsible for approximately 20% of New Zealand's greenhouse gas emissions which contributes to climate change and is one of the sectors that has seen ongoing growth in emissions over the past 10 years²⁰. As a consequence of the close links between population increase, economic growth and transport demand, Canterbury has experienced an increase in transport related carbon dioxide emissions from transport sources²¹.

The Government has committed to reducing the country's greenhouse gas emissions through the New Zealand Emissions Trading Scheme. This scheme is expected to encourage the use of more energy efficient and low-carbon transport modes.

5.1.1 Key Challenge

- How can the region maintain levels of access and mobility in a more environmentally sustainable manner?

¹⁷ Canterbury District Health Board, *Wider Health & Wellbeing Impacts of Transport Planning*, 2010.

¹⁸ Health Research Council of New Zealand, Ministry for the Environment & Ministry of Transport, *Health and Air Pollution in New Zealand*, 2007.

¹⁹ Environment Canterbury, *Canterbury Regional Land Transport Strategy 2011 – 2041 Market Research Report*, 2010.

²⁰ Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990–2007*, 2009.

²¹ Environment Canterbury, *Monitoring Progress Towards the Targets of the RLTS 2008 – 2018*, 2009.

5.2 Network security

The ability of the region to withstand a hazard, such as flooding or a seismic event is an important consideration for maintaining the integrity of the region's transport system. A number of transport links in Canterbury face extremely challenging construction and maintenance issues particularly along the Kaikoura Coast, through the alpine passes and across some of the major rivers. Many of these links provide lifelines to neighbouring regions and are of national social and economic importance.

Canterbury has a high number of ageing bridges which are susceptible to damage and will require upgrades over the next 30 years. Given the region's extensive local road network, the increasing size, capacity, and frequency of heavy vehicles also presents road maintenance issues.

Global climate change is expected to have impacts on the region's transport infrastructure, particularly by generating more severe weather events such as flooding²². In the long term, sea level rises could impact on land use and transport infrastructure, particularly in low-lying coastal areas.

5.2.1 Key Challenge

- How can the region ensure the security of key transport routes?

6 INTEGRATED TRANSPORT AND LAND USE

6.1 Meeting the transport needs of low density communities

The type and form of land use development that has taken place in the region has significant impacts on the transport system. Dispersed land use patterns are typically linked with high levels of vehicle dependence. Conversely, concentrated land use is more commonly linked with lower levels of car use and higher levels of public transport patronage²³. The Canterbury region, particularly outside Christchurch, is characterised by a relatively dispersed population with low density communities that are often more reliant on motor vehicles to travel.

6.1.1 Key Challenge

- How can the region ensure that future land use development enables transport needs to be met efficiently?

7 RESPONSIVE TRANSPORT SYSTEM

7.1 Oil supply security and fuel price volatility

The transport sector is highly reliant on imported oil supplies. Over the next 30 years it is expected that oil prices will rise as access to relatively cheap oil supplies diminish²⁴. The resulting fuel price increases and volatility are likely to have significant social and economic impacts, especially for businesses dependent upon transport, and in rural areas, where there are currently few alternatives to travelling by motor vehicles. Although an increase in oil

²² NZTA, Climate change effects on the land transport network, 2009.

²³ Land Transport New Zealand Research Report, *Integrating Land Use and Transport Planning*, 2007.

²⁴ International Energy Agency, *World Energy Outlook*, 2009.

prices is expected to accelerate change, the transition from petroleum-based vehicles to alternative fuels and engine types is expected to take decades²⁵.

7.1.1 Key Challenges

- In the short term (up to 10 years), how can the region ensure that it is resilient to energy supply and fuel price volatility?
- Over the long term (10 – 30 years), how can the region move towards a transportation system that is less reliant on oil?

7.2 Managing the transport impacts of anticipated population change

By 2041, the region's population is expected to grow from approximately 550,000 to 650,000. Most of this population growth is expected to occur within Greater Christchurch. This growth will create additional demands on the transport system. However, some parts of the region that already have relatively low populations are not experiencing population growth such as parts of South Canterbury²⁶.

New Zealand is also experiencing a demographic shift. In Canterbury, the proportion of people aged 65 and over is expected to increase significantly over the next 10 to 30 years²⁷. An ageing population is expected to increase demand for public transport services and raises some road safety issues, particularly as older people have a higher risk of being injured on our roads. The Government's Road Safety Strategy, *Safer Journeys*, has identified increasing road safety for older New Zealanders as an area of concern that will be addressed in future action plans.

7.2.1 Key Challenge

- What needs to be done to ensure that the transport needs of a changing population can be met?

7.3 Uncertainties about international technology trends

Technological innovations have the potential to change transport demand and the way that people travel through for example wider availability of electric cars, electric buses and trains, alternative fuels, and continued improvements in vehicle safety, telecommunications and traveller information.

Further development of electric or alternative fuel vehicles would help significantly reduce the country's dependence on imported oil supplies²⁸. However, the mass introduction of electric vehicles is dependent upon the global car industry supplying compatible vehicles in sufficient numbers and a change in purchasing habits by New Zealand motorists. Large scale adaption would also require a significant increase in domestic energy production. These factors present other significant social, economic and environmental challenges²⁹.

²⁵ Hirsch R, *Peaking of World Oil Production: Impacts, Mitigation and Risk Management*, 2005

²⁶ Environment Canterbury, *Canterbury Regional Profile*, 2010.

²⁷ Ibid

²⁸ Energy Efficiency and Conservation Authority, *New Zealand Energy Efficiency and Conservation Strategy*, 2007.

²⁹ Electricity Commission, *Impact of Plug-in Hybrid Vehicles on the NZ Electric Grid*, 2008.

Market research carried out as part of the development of the RLTS revealed a high level of public confidence that technological developments such as electric cars and alternative fuels would alleviate some, if not all, of the other transport challenges faced by the region³⁰. This confidence creates a challenge for transport providers to manage expectations as technological advancements occur and to put in place policies that maximise uptake of opportunities as they arise.

7.3.1 Key Challenge

- How aggressively should the region position itself to take advantage of the introduction of new technologies?

³⁰ Environment Canterbury, *Canterbury Regional Land Transport Strategy 2011 – 2041 Market Research Report*, 2010.