

Annual Monitoring Report for 2002/03

Canterbury Regional Land Transport Strategy 2002 - 2007

Prepared under the Land Transport Act 1998

September 2003

Report No. U03/69





Report No. U03/69

58 Kilmore Street
PO Box 345
Christchurch
Phone (03) 365 3828
Fax (03) 365 3194

75 Church Street
PO Box 550
Timaru
Phone (03) 688 9069
Fax (03) 688 9067

Customer Services
Telephone 0800 EC INFO (0800 324 636)
Website: www.ecan.govt.nz

Table of Contents

| | | |
|----|--|----|
| 1. | <i>Strategy Implementation: Key Points for 2002/2003</i> | 5 |
| 2. | <i>Overview</i> | 6 |
| | Legal Requirements | 6 |
| | Canterbury Regional Land Transport Strategy 2002 – 2007 | 6 |
| | Reporting Land Transport Monitoring Data | 8 |
| | Annual Monitoring Report Improvements | 8 |
| 3. | <i>Regional Activity Profile</i> | 9 |
| 4. | <i>Progress on Implementing the Strategy</i> | 11 |
| | Alternative Modes | 11 |
| | Roads: Infrastructure, Safety and Environment | 13 |
| | Demand Management | 19 |
| | Land Use | 20 |
| | Freight | 20 |
| 5. | <i>Implementation of Regional Land Transport Strategy Major Projects</i> | 22 |
| | Section 4.1 Alternative Modes | 22 |
| | Section 4.2 Roads: Infrastructure, safety and environment | 27 |
| | Section 4.3 Demand Management | 30 |
| | Section 4.4 Land Use | 31 |
| | Section 4.5 Freight | 32 |
| | Section 5 Funding | 32 |
| | Section 6 Implementation and monitoring | 32 |
| | <i>Appendix A</i> | 34 |

1. Strategy Implementation: Key Points for 2002/2003

Transport planning and investment

- The Christchurch Northern Roding Options Scoping Study was completed enabling Transit New Zealand and Christchurch City Council to plan for future northern access options.
- Christchurch Rolleston and Environs Transportation Study has progressed during the year with recommendations expected early next year.
- A Draft Canterbury Regional Land Transport Freight Action Plan was developed through a series of regional workshops. A Freight Working Group will be established to implement the action plan.
- A smokey vehicle campaign was run.
- Environment Canterbury progressed work in the area of regional cycling. The draft document “Cycling in Canterbury” was prepared that provides the planning framework for the development of a regional network of cycle routes.
- During the year a review was undertaken of the State Highway network and resulted in various key changes being made to the network - particularly in Christchurch City.
- Otira underpass was completed, enabling trucks with higher loads to access the West Coast via SH 73.
- Work progressed on the Fendalton Road four laning project.

Passenger transport

- Environment Canterbury and the Christchurch City Council signed off the updated Christchurch Passenger Transport Strategy in June 2003.
- Annual patronage for Canterbury equalled 15.01 million passenger trips between 1 July 2002 and 30 June 2003, a 14% increase over the same period in 2001/02.
- Northern and southern Christchurch service reviews were completed for implementation in June 2004.

Road safety

- The Canterbury region road safety report shows the total number of injury crashes was similar to last year. The total number of casualties decreased slightly. There were 40 fatal crashes resulting in 44 deaths. 1543 reported serious and minor casualties resulted from road crashes in the Canterbury region.
- The regional road safety forum on community development was convened by Environment Canterbury and attended by seventy participants.
- Social cost of crashes in the Canterbury Region in 2002 was \$406.4 million.

2. Overview

Legal Requirements

Section 182 of the Land Transport Act 1998 requires regional councils that prepare a regional land transport strategy to prepare an annual report outlining the progress in implementing its strategy. This report must be submitted to the following parties by 30 September each year:

- The Land Transport Safety Authority
- The Transfund Board
- Transit New Zealand
- The Commissioner of Police
- The Secretary of Transport

This monitoring report covers the implementation of Canterbury Regional Land Transport Strategy 2002 – 2007 (RLTS) to 30 June 2003.

Given that the RLTS was published in June 2002, the implementation of the Strategy can only be monitored where complete data sets exist for the financial year to June 2003. However, some data sets used as indicators in this report can only be obtained for the calendar year to December 2002. Where indicators use the December 2002 data sets, only baseline values are reported. All baseline data to monitor the Strategy's progress is therefore established from either June 2002 or December 2002. Based on this, the effectiveness of the Strategy will not become apparent until the next Annual Monitoring Report.

The information presented in this report is based largely on input from stakeholders throughout the region. This includes Territorial Local Authorities, Transit New Zealand, TranzRail, Transfund New Zealand, Land Transport Safety Authority, Road Safety Co-ordinators, as well as Environment Canterbury.

Canterbury Regional Land Transport Strategy 2002 – 2007

The strategy was adopted in March 2002 and sets regional land transport policy direction for the next twenty-five years. This policy framework is articulated in a vision and set of values specified in eight goal areas.

The strategy vision is to have and enjoy the best possible quality of life. Our quality of life is supported by a land transport system that:

- provides **equitable access** for all sectors of the community
- supports a thriving **economy**
- promotes a **social** environment which is safe and supportive
- is consistent with a healthy, pleasant and pollution free **environment**
- is **safe** to use
- involves community **participation** in land transport decision making
- is part of an **integrated** planning framework
- is **innovative** and responsive to change

The strategy takes this policy direction and provides an integrated package of transport measures. These measures are specified in five Key Result Areas.

Reporting Land Transport Monitoring Data

For this report, available land transport monitoring data is reported in the form of indicators. Indicators are pieces of information that announce, point out or indicate the state of some object. They are normally a variable that reflects change over time in relation to a benchmark value. The variable is usually statistical in nature and typically characterises some key aspect of the object under investigation. Indicators help determine, (but most often only aid in determining) whether or not certain stated circumstances exist. They're most useful purpose can be to highlight change from a stable or baseline state. For example, the infant mortality rate is a commonly used indicator of the health status of a community (where the health status is the 'object' under investigation). Good indicators form part of information systems and have the principle role of communicating an object's status or standing.

In this monitoring report, indicators developed over the last five years have been retained and are updated for the 2002/03 financial year. It must be noted that some data sets apply to the July to June financial year, while others, such as Land Transport Safety Authority crash data applies to the calendar year up to December 2002.

All the indicators are first and foremost descriptive in nature; that is, they simply describe or show the development of the chosen variable (i.e. indicator). Where it has been possible, the descriptive indicators have been specified as performance and efficiency indicators. Performance indicators are normally linked to a reference value or policy target, illustrating how far the indicator is from a desired level. The efficiency indicator describes the efficiency of production or consumption (e.g., energy consumption per unit of input). However there are significant issues, such as the unavailability of data or the relatively poor quality of some data sets needed to calculate these indicators, that, in many cases, precludes the inclusion of this more complex indicator.

Further analysis of additional monitoring data, including breakdowns by territorial authority boundaries and the base data to produce this annual monitoring report's regional indicators, will be presented in a supporting technical report. This technical report will be available from Environment Canterbury at the end of the financial year.

Annual Monitoring Report Improvements

Environment Canterbury is striving to improve the monitoring work it undertakes as part of its requirements under the Land Transport Act and as set out in the Regional Land Transport Strategy.

Improvements to the 2002/03 Annual Monitoring Report include:

- Alignment of indicators under the Strategy's Key Result Areas (KRA).
- Some additional indicators have been developed to give a better balance of indicators for each KRA.
- Indicators are reported as both absolute numbers and percentage change from the previous year to help track annual progress (see appendix A).
- An improved data collection programme has been implemented.

Further work is ongoing to improve the data collection programme.

3. Regional Activity Profile

The Canterbury Regional Land Transport Strategy (RLTS) aims to identify the land transport needs of the Canterbury community and how those needs are to be met by the use of roads, rail, public transport, freight transport, cycling and walking. The overall demand for land transport is a function of the households and industries that exist within and beyond the Canterbury region.

In terms of personal travel it is the *household* that generates the demand for transport. The more households, the more travel demand generated. Similarly, the more people within a household, the more travel that is likely to be generated. The choice of mode for that travel is then dependant upon the availability of various travel modes, such as access to public transport, cycle ownership or more significantly in recent times, the availability of a motor vehicle. As vehicle availability has increased, so to has the use of the private motor vehicle as a means of transport. The result of increased motor vehicle use can be seen in increasing traffic volumes, fuel use and vehicle emissions. These vehicle usage indicators will be reported later in this document.

The other aspect to travel demand is that required to support the *industries* of the region. The level of employment in the region, the amount produced and the size of the goods vehicle fleet give us an indication of what the resultant demand might be. While Canterbury is a key agricultural producing region of New Zealand, it also supports a significant manufacturing sector and other supporting services. Tourist attractions, such as Aoraki (Mt Cook), Lake Tekapo, Hanmer Springs and Banks Peninsula, also generate significant levels of activity within Canterbury.

The above activity creates the day to day need for transport within Canterbury. The following demographic profile of Canterbury therefore sets the scene for the indicators reported later.

Census statistics on various population and demographic trends

| Canterbury Totals | 1991 | 1996 | 2001 |
|---|-------------|-------------|-------------|
| Total occupied dwellings | 162,045 | 176,256 | 187,584 |
| Usually resident population (URP) | 437,664 | 468,429 | 480,963 |
| URP aged 15yrs+ | 347,742 | 372,909 | 383,874 |
| URP aged 15yrs+ gainfully employed | 184,293 | 219,564 | 234,216 |
| Persons per household | 2.70 | 2.66 | 2.56 |
| Employees per household | 1.14 | 1.25 | 1.25 |
| % Households with access to motor vehicle | 88.5% | 88.9% | 90.5% |
| Est. Vehicles per household* | 1.45 | 1.51 | 1.58 |
| Est. Vehicles per 1000 Population* | 537 | 570 | 615 |
| *Assumes 3.1 vehicles for households with 3+ and applies the average vehicles/HH to those not specified | | | |

2001 Canterbury Activity Benchmark

| Canterbury Totals | | Trend | Comment |
|---|------------------------|------------------|--|
| Households | 2001 Census | From 1996 | <i>Includes only Waitaki within Canterbury</i> |
| Total occupied dwellings | 187,584 | Up | |
| Usually resident population (URP) | 480,963 | Up | |
| URP aged 15yrs+ | 383,874 | Up | |
| URP aged 15yrs+ gainfully employed | 234,216 | Up | |
| Persons per household | 2.56 | Down | |
| Employees per household | 1.25 | N/C | |
| Access to Motor Vehicle | 90.5% | Up | |
| Workplace Activity | 2001 Census | | |
| Workplace Jobs (ex JTW) | 191952 | Up | |
| Tourist Activity | 2001 Census | | |
| % Overseas visitors on Census Night | 2.8% | Up | |
| | | | |
| Vehicle Registrations - LTSA | As at June 2001 | From 2000 | <i>Includes all of Waitaki District</i> |
| Motor Car/Van,Camper, Motorcycle/moped | 347029 | Up | 92.2% petrol |
| Goods Vehicles | 57586 | Up | 54.5% diesel |
| Buses | 2347 | Up | |
| | | | |
| Import / Export Activity | Up to June 2001 | | |
| Regional Ports – total gross weight, import/export (tonnes) | 4104179 | Up | |
| Total cargo value (im/exported) un/loading (Million \$) | 7345 | Up | |

4. Progress on Implementing the Strategy

The following sections report progress on implementing the Strategy based upon its Key Result Areas. Appendix A includes a list of the report's indicators, including more detailed descriptions and explanations on each indicator.

Key Result Area: Monitoring Indicators Alternative Modes

Targets:

Within the greater Christchurch area the strategy seeks by 2011

- (a) 12 percent of all trips (excluding walking trips) made by cycle.
- (b) 6 percent of all trips (excluding walking trips) made by public passenger transport.

An accurate assessment of mode share of all trips requires a statistical sample of household travel patterns. In 1991 a household travel survey was undertaken for the Christchurch Transport Study and in 1997/98 the Land Transport Safety Authority (LTSA) completed a similar survey. The LTSA are planning to repeat their survey soon and a comprehensive household survey is likely to be undertaken in 2006 for the Christchurch model update. These new surveys should provide data to monitor progress against the above targets. Therefore, no progress towards these targets is reported for 2003. However, work will be undertaken to specify an alternative methodology to measure the above targets on a regular basis. The following indicators reflect progress in the policy area that support alternative modes and represents the intent and direction of the targets.

| Indicator | 2003 value | Trend from 2002 | Comment |
|---|--------------|-------------------|---------------|
| (1) <i>Alternative Mode Share – Census work trips</i> | 14% | down ¹ | |
| (2) <i>Total Length of Bus Lanes</i> | 0.4 km | - | new indicator |
| (3) <i>Total Length of Cycle Lanes</i> | 198km | - | new indicator |
| (4) <i>Urban Public Passenger Transport Trips</i> | 15 million | up | |
| (5) <i>Perception of Public Passenger Service Quality</i> | 81% | up | |
| (6) <i>Estimated Expenditure on Alternative Modes</i> | \$19 million | - | new indicator |
| (7) <i>Population Coverage by Bus Route</i> | 95% | - | new indicator |

Discussion

The first indicator, *Alternative Mode Share*, shows for the journey to work census mode-share split that 14% of people choose walking, cycling and public transport. This is down from 14.9% for 1996. To reach the targets for alternative modes, agencies involved in providing services and infrastructure in support of walking, cycling and public transport have a challenge ahead of them.

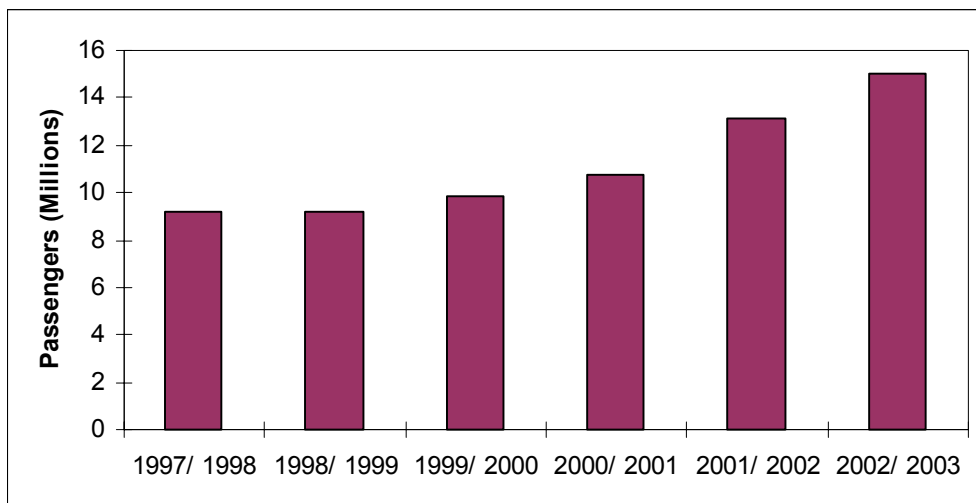
An idea of the level of infrastructure allocated for the cycle and bus modes is provided with the reporting of infrastructure provision indicators (198km for cycle lanes and 0.4km

¹ For this indicator, the national census year of 1996 is the base year. The census work trip mode share indicator shows change to 2001.

for bus lanes). These two indicators are collected for the first time in 2003 and their value as indicators will be reviewed over the next few years. It is hoped recording change in *Cycle/Bus Lane Length* over time may give an indication of relative investment in alternative mode infrastructure.

For public transport, the total number of *Urban Public Passengers Trips* is an indicator of the demand for this means of travel (see Figure 1 for a graph of public passenger transport patronage changes since 1997/1998). The total number of passenger trips taken on the Canterbury public passenger transport system (including school services) increased from 13.15 million in 2002 to 15.01 million for the year ended June 2003. This is an increase of 14% for the greater Christchurch area. South Canterbury passenger trips have also increased from 263,000 in 2002 to 281,000 for the year ended June 2003. This is an increase of 7% for South Canterbury services that include Timaru urban services, Timaru Schools and services for Geraldine, Temuka and Twizel.

Figure 1: Greater Christchurch public passenger trips by year



An understanding of public transport user experience sheds light on how passengers rate the attractiveness of the service. In fact, this indicator is a direct account of their experiences. For 2003, the user *Perception of Passenger Service Quality* indicator increased to 81%, reflecting growing user satisfaction with the bus service provision in Christchurch.

The *Estimated Expenditure* indicator reports on the relative amount of financial support for alternative modes (figures were unavailable for walking and rail, hence these two modes are excluded). For the fiscal year to 2003, an estimated \$19 million was invested in infrastructure and service provision to support cycling and public passenger transport in Canterbury. This indicator is collected for the first time in 2003 and its value as an indicator will be reviewed over the next few years.

The final indicator offers a guide to Christchurch City population's physical distance from bus routes, thus providing an indication of the relative ease (in terms of distance) to access a bus service. For 2003, the *Population Coverage by Christchurch Bus Routes* indicates that 95% of residents are within 500 metres of a route.

Key Result Area: Monitoring Indicators

Roads: Infrastructure, Safety and Environment

Targets:

For 2011

- (a) No congestion² outside Christchurch City.
- (b) No congestion² within Christchurch City outside peak periods (7-9am and 4-6pm).
- (c) The amount of congested road during peak periods is contained to 40 lane kilometres or less (1996 = 24, predicted 2011 = 78).
- (d) Carbon dioxide emissions are contained to within 10 percent of 2001 levels at 2011 (predicted growth to 2011 = 30 percent).
- (e) Maintain or improve local air quality with respect to motor vehicle emissions.
- (f) Reduce deaths from road crashes to 6 per 100,000 people or better.³
- (g) Reduce serious injuries from road crashes to 125 per 100,000 people or better.³

Targets (a) to (d) are based on computer model methodologies. The base computer model was set up using 1991 census data. The next model update is scheduled to coincide with the 2006 census. Therefore, no progress towards targets (a) to (d) is reported for 2003. Targets (f) and (g) are monitored through the indicator programme, with target (e) to be included for 2004. Work will be undertaken to specify an alternative methodology to measure the above targets on a regular basis. However, the following indicators reflect progress in the policy area that support roads, safety and environment and reflects the intent and direction of the targets.

| Indicator | 2003 value | Trend from 2002 | Comment |
|--|-----------------------------|-----------------|---------------|
| <i>(8) Estimated Registered Vehicles in Region</i> | 357,438 | up | |
| <i>(16) Perception of How Safe Are NZ Roads</i> | 78% | Down | new indicator |
| <i>(17) Investment in Canterbury Roads</i> | \$96 million | up | |
| New Base Indicator to December 2002 | Dec 2002 value ⁴ | Trend from 2002 | Comment |
| <i>(9) Average Daily Traffic on Strategic Routes</i> | 57,647 | - | new baseline |
| <i>(10) Heavy Vehicle Traffic</i> | 13.6% | - | new baseline |
| <i>(11) Annual Per Capita Fuel Use (Petrol)</i> | 727 l/person | - | new baseline |
| <i>(12) Annual Per Capita Fuel Use (Diesel)</i> | 631 l/person | - | new baseline |
| <i>(13) Estimated Carbon Dioxide Emissions</i> | 5 tonnes/person | - | new baseline |
| <i>(14) Road Deaths Per 100 000 Population</i> | 8.7 | - | new baseline |
| <i>(15) Road Injuries Per 100 000 Population</i> | 306 | - | new baseline |

²Congestion is defined as worse than level of service D for urban arterial roads and worse than level of service C for other roads. Refer to Regional Land Transport Strategy, Appendix 1 for further information and recommended levels of service.

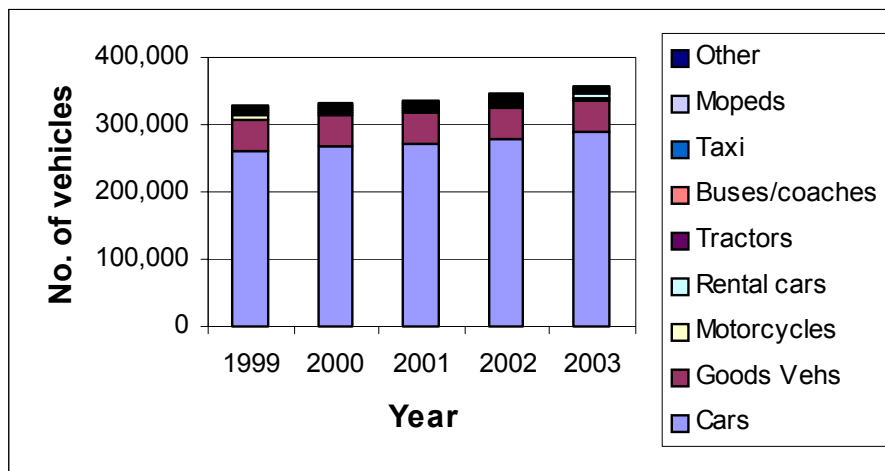
³ See Regional Land Transport Strategy, Appendix 5 for further information on historical road safety trends.

⁴Data on traffic counts, fuel consumption and road crashes is only available for the calendar year to December 2002, therefore no trends can be reported for 2003. This 2002 data is reported to provide baseline values for future Annual Monitoring Reports.

Discussion

The indicator programme for the key result area Roads: Infrastructure, Safety and Environment sets out a series of indicators that encompass key vehicle based statistics and extends to reporting vehicular effects on the community and environment. The first indicator, *Estimated Registered Vehicles* draws on an annual measure of change in Canterbury’s vehicle fleet composition (see Figure 2 for a graph showing this change over the last 5 years). This is a course indicator that presents gross changes in total vehicle availability. For 2003, 4% more vehicles were licensed than the pervious year.

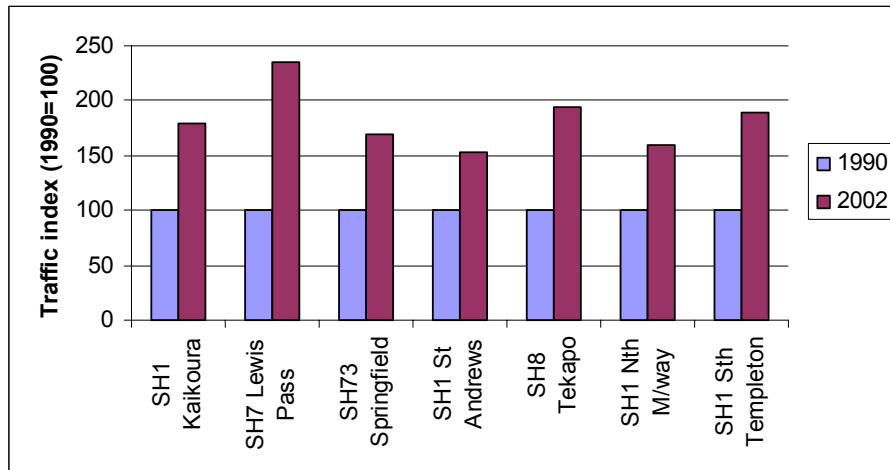
Figure 2: Licensed vehicle numbers by type for Canterbury



While the first indicator shows greater vehicle availability, the next two indicators shed light on actual vehicle use. The *Average Daily Traffic on Strategic Routes* indicator gives a measure of growth in vehicle numbers on different parts of the road network. It is reported as an average change in a base year volume set at 2002 to reflect traffic growth over the life of the Strategy. Because traffic data is not available for 2003, only the baseline data is reported for this annual monitoring report. The seven locations included are the same roads shown on Figure 3. This figure is included to give an indication of the previously reported historical trends in traffic volumes on the region’s State Highways against a base year 1990⁵.

⁵ It is important to note there was a significant increase in traffic volumes measured at the SH7 Lewis Pass station between 2001 and 2002 (from less than 1000 vehicles per day to 1500). An increase in heavy vehicles was also recorded; this may account for part of the growth. It is noted a significant amount of coal was trucked from the West Coast at this time. This change will be monitored in future reports.

Figure 3: Traffic count indices for selected Canterbury State Highways (base 1990 = 100)

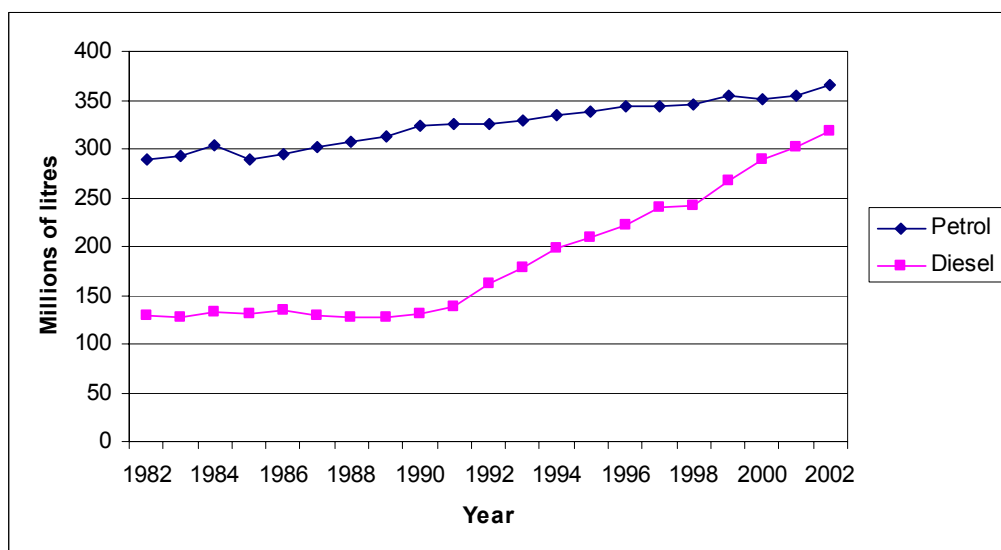


The changing mix of the region’s vehicle fleet type reflects both personal choices in vehicles and levels of economic/business activity. The *Heavy Vehicle Traffic* indicator, will show the annual change in the proportion of heavy vehicles on Canterbury’s strategic road network. The baseline data is collected for the first time in 2003 and its value as an indicator will be reviewed over the next few years.

Fuel consumption is a good indication of changing demand for transport. Previous annual monitoring reports have reported fuel consumption as shown in Figure 4 (updated with 2002 figures). It is worth noting the consumption of diesel is growing significantly faster than petrol.

The new indicator, *Annual Per Capita Fuel Use* provides an indication of average resource use per person. In 2002, it is estimated that 727 litres of petrol and 631 litres of diesel were consumed for every person in Canterbury.

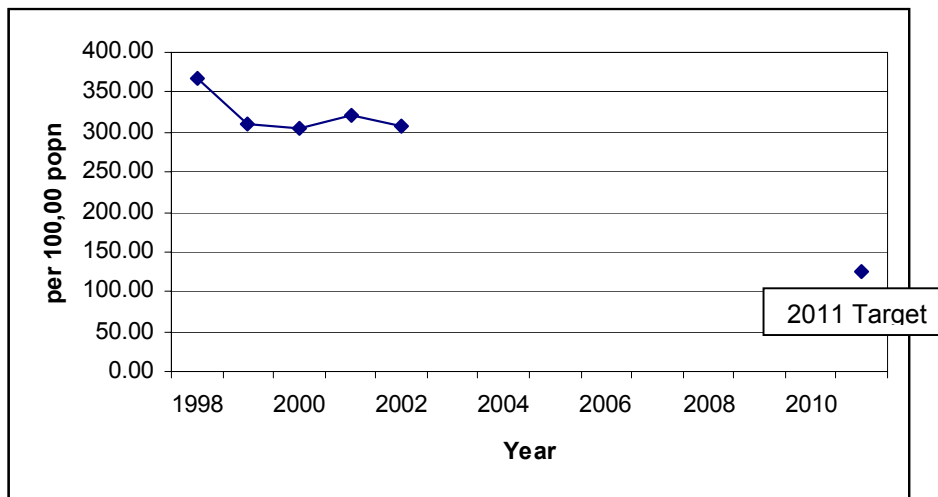
Figure 4: Canterbury land transport fuel consumption for petrol and diesel



An understanding of the pressures on the environment resulting from the transport system can be gained from monitoring key indicators. One such indicator, *Vehicle Emissions of Carbon Dioxide* quantifies the contribution land transport has to the production of greenhouse gas. In 2002, it is estimated that almost 5 tonnes of Carbon Dioxide was produced as vehicle emissions for every person in Canterbury.

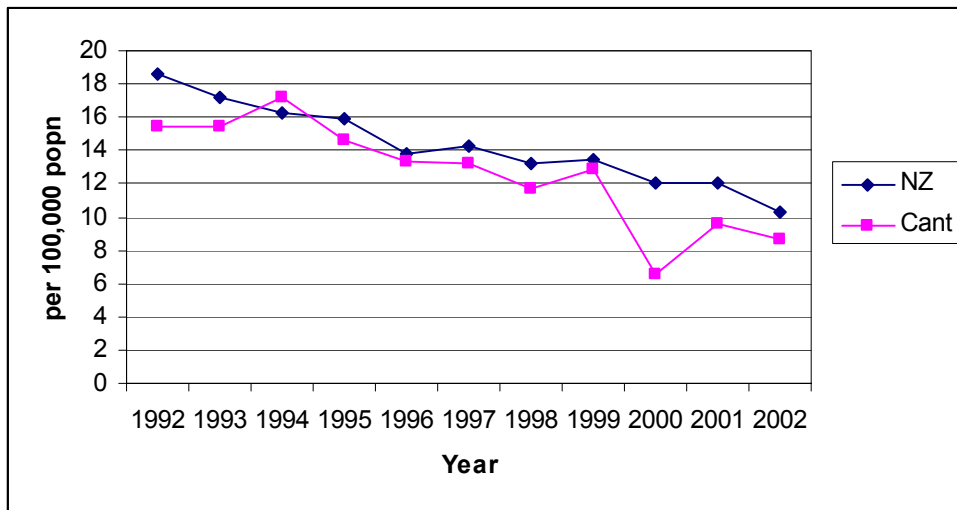
Road crashes and its associated costs is another area of significant effects resulting from the transport system. The Strategy has two targets that measure progress towards reducing the costs (both human/social and economic) of road crashes. Both indicators for *Road Crash Deaths and Injuries* are continuing the downward trend with under 9 deaths and slightly over 300 injuries per 100,000 people in Canterbury for 2002. However, the injury trend line is tracking significantly higher than that required to meet the Strategy target of 125 injuries per 100,000 population. It is anticipated that additional effort will be required in this area (see figure 5).

Figure 5: Canterbury road crash injuries per 100,000 people



Canterbury’s fatality rate, measured as fatalities per 100,000 population, has followed a downward trend over recent years and is still tracking below the New Zealand average (see Figure 6).

Figure 6: National comparison of road deaths per 100,000 people



The first two road safety performance indicators report outcomes. The third road safety indicator gives insight on how road users perceive the *Level of Road Safety*. This indicator is a direct gauge of the road user experience and is reported at the national level. Based on the question “How safe or unsafe are New Zealand roads to travel on?,” 78% of survey respondents agreed New Zealand roads were safe or very safe⁶. This is down 1% point from 2002, but reflects a very high proportion of respondents indicating that New Zealand roads are fairly or very safe.

The cost to society of regional road crashes was estimated by the Land Transport Safety Authority to be \$406.37 million in 2002. This is a slight decrease from the 2001 figure of \$417.6 million. When looking at the rural-urban split for 2002, crashes on rural roads had a social cost of \$212 million and urban roads a social cost of \$194.4 million.

Table 2: Public investment in roads for Canterbury

| Public Investment in Roads in \$ Millions (not adjusted) | | | |
|---|--------------------|-----------------------|--------------|
| Year | Local roads | State Highways | Total |
| 1997/98 | 50 | 23 | 73 |
| 1998/99 | 51 | 19 | 70 |
| 1999/00 | 51 | 30 | 80 |
| 2000/01 | 56 | 42 | 98 |
| 2001/02 | 61 | 26 | 87 |
| 2002/03 | 64 | 32 | 96 |

The public investment in transport infrastructure and passenger transport services is vital to support an efficient and sustainable transport system. *Investment in Canterbury*

⁶ This is based on a national survey of 1640 people, including 135 Canterbury residents. Of the Canterbury respondents, 78% (the same percentage as the whole sample) agreed that New Zealand roads are safe / very safe. It is important to note the survey question refers to all New Zealand roads; however, it is likely most answers by the Canterbury respondents would reflect experience on Canterbury roads.

Roads is reported as an indicator of historical trends in public investment in roading. (The figures in Table 2 include local rates for roading projects but do not include any unsubsidised work that local authorities undertook using their own funds). Total public expenditure on roads is up 10% on the pervious year to \$96 million.

Key Result Area: Monitoring Indicators

Demand Management

Targets:
for 2011:

- (a) Reduce motor vehicle travel by an average of 10 percent by organisations or households where demand management programmes are applied.
- (b) A reduction in the proportion of motor vehicles travelling during peak periods in greater Christchurch.
- (c) Reduce the number of single occupancy vehicles during peak periods.

No progress towards these targets is reported for 2003. Work will be undertaken to specify a methodology to measure the above targets on a regular basis. However, the following indicators reflect progress in the demand management policy area that reflects the intent and direction of the targets.

| Indicator | 2003 value | Trend from 2002 | Comment |
|---|------------|-----------------|---------------|
| <i>(18) Number of Households Participating in TDM</i> | 160 | - | new indicator |
| <i>(19) Number of Organisations in Business TDM</i> | 4 | - | new indicator |

Discussion

The indicator programme for the key result area Demand Management directly reflects the work undertaken as identified in the Strategy major project area. Both indicators are simple descriptive records of individual or organisation participation in travel demand management (TDM) programmes. These programmes are new to New Zealand.

The number of households participating in TDM in the last year is an indicator of participation rates in community based programmes. This indicator is collected for the first time in 2003 and records a base number of 160 households. Future reports will specify this indicator as a change from previous years. Its value as an indicator will be reviewed over the next few years.

The second indicator for this section focuses on a business based TDM programme. This indicator is similar to the first and is also collected for the first time in 2003. It records a base number of 4 organisations implementing business travel plan measures⁷. This indicator will also be evaluated over the next few years.

A web site called www.gosmarter.org.nz supports these programmes. As well as the participants specified above, other people have been accessing this site, with an approximate average of 1400 'hits' per month and an average viewing time of 4 minutes.

⁷ It is likely that there are other organisations also implementing business travel plan like measures that are not reported here.

Key Result Area: Monitoring Indicators Land Use

Targets:

No targets specified:

Discussion

The land use section in the RLTS is intended to provide better integration between land use planning and transport planning. While transport planning is currently based upon a given pattern of land use, it is hoped that over time measures will be introduced to plan land use to make better use of the existing transport system. This process will take time to evolve and at present there are no indicators offered to monitor this section.

Indicators and measures will be developed in future updates of the Regional Land Transport Strategy.

Key Result Area: Monitoring Indicators Freight

Targets:

No targets specified:

The following indicators reflect progress in the policy area that supports the key result area of freight movement.

| Indicator | 2003 value | Trend from 2002 | Comment |
|---|-------------------|-----------------|---------------|
| <i>(22) Total Number of Registered Goods Vehicles</i> | 47,121 | +3% | |
| Baseline Indicator | Value to Dec 2002 | Trend from 2002 | Comment |
| <i>(20) Regional Ports Activity - Gross Weight</i> | 4.64M tonnes | - | new indicator |
| <i>(21) Regional Ports Activity - Cargo Value</i> | M\$7407 | - | new indicator |
| <i>(23) Total goods vehicle RUC tonne kilometres</i> | 6141M | - | new indicator |
| <i>(23) Total Rail Freight Tonnes</i> | not available | - | new indicator |

Discussion

The indicator programme for the key result area of freight is based around four indicators that reflect movement of goods in and out of the region (specifically import and export) and the physical transportation and therefore distribution of goods throughout the region. A key component of this is the distribution of goods via the region's export ports. The flow of import and export goods through the two seaports and Canterbury's international airport also provides an indication of regional economic activity. This activity, specified in terms of gross weight of 4.6 million tonnes and cargo by value of 7.4 thousand million dollars, has been identified for 2002 using the latest available figures from Statistics New Zealand.

A base indicator for goods vehicle activity can be based upon the availability of these vehicles. An indication of changing numbers can be derived from Land Transport Safety Authority records. At June 2003, the goods vehicle fleet for Canterbury was 47,121 registered vehicles.

An indication of freight movement can be gathered from the tonne kilometres purchased by diesel powered goods vehicles for their road user charges (RUC). The total tonne kilometres purchased in Canterbury during 2002 was 614.8 million, an increase of 8% from 2001.

The final freight indicator looks to track the amount in tonnes of goods transported in the region by rail. This is a new indicator, so no trend comparison can be offered.

The draft Canterbury Freight Action Plan 2003 has an associated freight-monitoring programme that will contribute to the understanding of freight movement in Canterbury. Work in this area will be included in future Annual Monitoring Reports. This could include additional indicators or the re-specification of the current ones.

5. Implementation of Regional Land Transport Strategy Major Projects

A core function of this annual monitoring report is to record progress on implementing the Strategy. Although this section does not identify any quantitative measures for this, a descriptive record of progress towards achieving the Strategy’s major projects is provided in the form of reports against each project. Further work will be undertaken to identify better ways to assess progress against these projects.

The following section provides brief updates on the major project as stated in the policy sections of the RLTS. These projects are a mix of investigations, construction projects and general on going activities.

Section 4.1 Alternative Modes

Major Walking Projects Work for 2002 - 2003

| Policy 4.1.1: Support greater use of walking | Progress to June 2003 |
|--|--|
| Develop strategic principles for pedestrian strategies. | Project not started. |
| Implement Christchurch City Council pedestrian strategy including safe routes to schools and pedestrian crossing facilities and signals. | Simplified procedures for the evaluation of walking and cycling projects developed by Transfund and used by Christchurch City Council to justify a number of projects. Christchurch City Council report Safe Routes To Schools an ongoing and developing programme. |

| | |
|---|--|
| <p>Promote the development and implementation of pedestrian strategies.</p> | <p>Transfund New Zealand advises that a higher financial assistance rate is available to incentivise TLA's to develop strategies.</p> <p>Transit New Zealand report pedestrian requirements considered in all Strategy Studies. Pedestrian requirements were considered in the development of all project proposals as far as possible.</p> <p>Timaru District Council advise Terms of Reference for Pedestrian Strategy being drafted.</p> <p>Selwyn District Council states that being a predominately rural TLA there is no need for a formal pedestrian strategy. The required Level of Service for footpaths are outlined in Council's agreed Asset Management Plan. Where possible new or enhanced pedestrian and cycle opportunities are maximised where possible in conjunction with new subdivisions and similar urban development individual plan change approvals.</p> <p>Waimakariri District Council have approved funding for the development of a strategy in 2003/04.</p> <p>Christchurch City Council report they have a Pedestrian Strategy from 2001 pending for an update and progress push.</p> |
|---|--|

Major Cycling Projects Work for 2002 - 2003

| <p>Policy 4.1.2: Support greater use of cycling</p> | <p>Progress to June 2003</p> |
|--|--|
| <p>Develop strategic principles for cycling strategies.</p> | <p>Environment Canterbury have developed a Model Cycling Strategy that incorporates those principles.</p> <p>Transit New Zealand report that they have actively participated in liaison with cycling advocacy groups. Also participated in the development of a model cycling strategy developed by Ecan, as have many other Councils and organisations.</p> |
| <p>Promote the development and implementation of cycling strategies.</p> | <p>Transfund New Zealand advises that a higher financial assistance rate is available to incentivise TLA's to develop strategies.</p> <p>Cycling requirements are considered in all Strategy Studies, report Transit New Zealand. Cycling requirements were considered in the development of all project proposals as far as possible. Commenced investigation of cycling needs in Christchurch and other key areas in Canterbury and secured funding for further development of these proposals in 03/04.</p> <p>Timaru District Council advise Terms of Reference for Cycle Strategies being drafted.</p> <p>Selwyn District Council advise involvement in the Prebbleton - Little River Proposed Cycleway, with the formation of ECan</p> |

| | |
|---|---|
| | <p>initiated Interest Groups. Currently Council has not agreed to provide any funding until the project viability is proven and other funding sources can be utilised eg Transfund NZ.</p> <p>Christchurch City Council report implementation of their cycling strategy is ongoing.</p> |
| Plan a regional network of cycle routes to link districts and provide connections with surrounding regions. | <p>Environment Canterbury undertook work to develop “Cycling in Canterbury”, a framework document for a regional network of cycle routes. Further work is ongoing.</p> <p>Transit have actively participated in liaison with cycling advocacy groups. Actively worked with other key local authorities to incorporate local policy on provision of cycling facilities e.g. in Christchurch City.</p> <p>Selwyn and Waimakariri District Council participation in the formulation of any Ecan initiated network development.</p> |
| Commence construction of regional network of cycle routes. | No construction commenced to date. |
| Implement Christchurch City Council Cycle Strategy including construction of on-road cycle facilities and off-road cycleways. | Christchurch City Council report implementation is ongoing. |

Major Public Transport Projects Work for 2002 - 2003

| Policy 4.1.3: Support greater use of public transport. | Progress to June 2003 |
|---|--|
| Implement Christchurch Passenger Transport Strategy including construction of bus priority street works and bus stop/shelter installation and upgrades. | <p>Christchurch City Council state currently 323 shelters installed and rolling programme of installation and upgrade ongoing. A target of 500 shelters is set in the Christchurch Public Passenger Transport Strategy, to be achieved by June 2006. Scoping study for bus priority street works is complete and the Christchurch Public Passenger Transport Strategy requires 3 bus priority corridors to be in place by June 2006.</p> <p>133 super low floor buses.</p> |
| Development of the Christchurch Real Time Information system. | Development work complete with 200 units installed at bus stops. Target of 250 units installed by June 2006. Real time information display screens and monitors also installed at the bus exchange. |
| Improve services and related infrastructure in Timaru, Waimakariri and Selwyn. | <p>Timaru District Council report ongoing participation in ECan/TDC committee.</p> <p>281,000 passenger trips in South Canterbury, up 7% from the previous year.</p> <p>Selwyn District Council have upgraded bus service infrastructure on a project by project basis as agreed between Communities and Council in the formulation of Annual Budgets. New bus shelters have been installed in Rolleston with another planned for Lincoln.</p> |

| | |
|--|--|
| Implement the Passenger Transport Plan for Canterbury. | <p>See above for Timaru and Selwyn District Council.</p> <p>Participation in the formulation of any Ecan initiated Transport Plan, report Selwyn District Council.</p> <p>Christchurch City Council state Policy 1.7 of the RPTP requires the provision of passenger transport infrastructure to at least minimum standards and this is being achieved on an ongoing basis through the Christchurch Public Passenger Transport Strategy targets and rolling programmes of shelter, seat and real time information installation at bus stops. Policy 1.8 is achieved through publication in August of the Christchurch Public Passenger Transport Strategy update 2003, which details the achievements since 1998. Policy 2.11 is being addressed through bus priority studies and designs now in progress. Policy 2.12 requires minimum standards to be set for infrastructure and this is underway as bus stop design standards are developed. Policy 5.6 and 5.7 requires a supportive system of infrastructure, traffic management and land use, and this is being developed on an ongoing basis towards the targets and timelines set by the Christchurch Public Passenger Transport Strategy update 2003.</p> |
| Strategic investigation of options for the enhancement to the public transport system linking urban areas. | Project not started. |

Major Public Total Mobility Work for 2002 - 2003

| Policy 4.1.4: Provide for people with special transport needs | Progress to June 2003 |
|--|---|
| Provide total mobility services. | <p>Service running in Christchurch, Ashburton, Timaru and Waimate. 2002/03 financial year operating expenditure of \$1.07 million.</p> <p>252,295 passengers transported.</p> |

Major Public Rail Projects for 2002 - 2003

| Policy 4.1.5: Promote rail as an integral part of Canterbury's strategic land transport system. | Progress to June 2003 |
|---|--|
| Investigate the use of rail for commuter travel within greater Christchurch, including links to Kaiapoi, Rangiora, Rolleston, Lyttelton and beyond. | Environment Canterbury has commenced a project to look at the potential demand for a rail system in Christchurch. |
| Investigate greater use of rail for transportation of freight, dairy, forestry products and waste in the region. | Stage 2 investigation for a rail branch line to the Clandeboye Dairy Factory is complete. A brief for stage 3 is being prepared. |

| | |
|--|--|
| <p>Improve safety infrastructure at level crossings, including grade separation at critical locations.</p> | <p>Regular liaison meetings held between TranzRail and Transit New Zealand. Safety of all railway crossings reviewed in SH Strategy Studies. Grade separation projects investigated wherever possible. Lighting of crossings proposed where grade separation not viable e.g Selwyn Railway Crossing.</p> <p>Timaru District Council advise crossing safety review recommendations all implemented except for bells/lights at two sites.</p> <p>Selwyn District Council completed a comprehensive signage upgrade with Tranzrail approx. 3-4 years ago on all level crossings, including the construction of a new crossing at Rolleston. Any other major improvements are subject to consultation and project viability and funding on a case by case basis as required.</p> <p>All Waimakariri District Council input to upgrading Chaney's complete – awaiting Tranz Rail completion of active control upgrades.</p> <p>Christchurch City Council report scheme complete at Waterloo Road / Halswell Junction Road to change priorities and improve safety at level crossing. Consultation underway for a scheme at Harewood Road / Restell Street to ban right turns from Restell Street across level crossing, following a fatality.</p> |
|--|--|

Section 4.2 Roads: Infrastructure, safety and environment

Major Roads Projects Work for 2002 - 2003

| Policy 4.2.1: Support the maintenance and balanced development of the region's strategic road network. | Progress to June 2003 |
|---|--|
| <i>Proposed Physical Works</i> | |
| Upgrade access to Clandeboye dairy factory. | Funding applied for. Also rail branch line investigations at status code 2. |
| Construction of stage one of Christchurch southern motorway. | Further development of this project has been deferred until 2008/2009 according to Transit New Zealand's National Priority Ranking. |
| SH 74 Woolston Burwood Expressway Stage II. | Construction of this project which was managed by Christchurch City Council and was completed in August 2003. |
| Upgrade access to Lyttelton via Opawa and Port Hills Road. | Christchurch City Council actively purchasing remaining property required. Construction programmed to begin in 2004/05 Ongoing liaison between Transit New Zealand and CCC and it has been agreed that CCC will actively develop the design of these improvements in 2003/04. |
| Upgrade access to airport via Fendalton Road. | Christchurch City Council report project due for completion September 2003. |
| Upgrade State Highway 1 bypass west of Christchurch (Russley). | Detailed design of the Buchanans and Yaldhurst Road intersections commenced. (Status 2 & 3) |
| SH 73 Thomas River Bridge. | The detailed design was completed but construction has been deferred for some years due to the low economic viability of this realignment. |
| SH 1 Normanby Realignment. | The detailed design was completed, land purchased and a designation obtained. |
| <i>Investigation Projects</i> | |
| Establish a hierarchy and standards for Canterbury's strategic road network | The Land Transport Safety Authority are undertaking a national study of road hierarchies. |
| Complete investigations into access options for northern Christchurch. | The study was completed and its recommendations are to be considered shortly by the Transit Board. Christchurch City Council about to commence more detailed investigation of projects carried forward. |
| Investigate access options for south and west of Christchurch incorporating Rolleston. | The Christchurch Rolleston and Environs Transportation Study has progressed through the year. The Interim Assessment Report is pending. |
| Investigate north-west and west sections of the Christchurch ring | No work to date. Initial investigation is anticipated as part of development of Metropolitan Christchurch Transport |

| | |
|--|--|
| road. | Statement (MCTS). |
| Confirm roading needs for SH 73 Klondyke – Arthurs Pass. | A risk study was completed and will be considered shortly by the Transit Board. |
| Investigate replacement of Hurunui River Bridge. | Investigations have been completed but further development of the project has been deferred for some years due to the low economic viability of the project. |
| Investigate improvements for Hundalees, State Highway 1. | Further development of Okarahia realignment has been deferred due to its National Priority Ranking. Development of the Limestone Creek slow vehicle bay continued. |
| Complete strategy studies for the State Highway network. | Strategy studies have now been completed for the entire Canterbury network excluding Christchurch City. |
| Undertake an assessment of natural hazard risks to the regional network. | Project not started. |

Major Road Projects for 2002 - 2003

| Policy 4.2.2: Support the maintenance and enhancement of non-strategic local roads | Progress to June 2003 |
|---|--|
| Implementation of “Living Streets” project in Christchurch. | Living Streets more of a policy for direction and still a pilot scheme. More accurate to talk in terms of kerb and channel works that improve conditions for walking and cycling. In 2002/2003 this was a total of 50.5km (20km new construction, 17.5km renewal, 10.5km safety works, and 2.5km other works). |
| Prepare and implement asset management plans for transport infrastructure. | <p>Review of Asset Management Plan impending, report Timaru District Council.</p> <p>Hurunui District Council advise their AMPs for district roads are continually being updated and refined.</p> <p>Draft Version 3 of Councils Roding Asset Management Plan (RAMP) has just been released. Further versions will be released, report Selwyn District Council.</p> <p>Waimakariri District Council report their Asset Management Plan to be reviewed in 2003/04.</p> <p>Christchurch City Council report implementation is ongoing.</p> |

Major Road Safety Projects for 2002 - 2003

| Policy 4.2.3: Progressively reduce the number and severity of crashes in Canterbury | Progress to June 2003 |
|--|---|
| Road safety campaigns for the target areas outlined above. | The Land Transport Safety Authority advise the programmes for the RLTS have been completed and evaluated as part of |

| | |
|--|--|
| | <p>the LTSA requirement.</p> <p>Transit New Zealand report continued participation as a member of various road safety committees. Constructed a number of minor safety projects throughout the region.</p> <p>Regional Road Safety Work: Displays were staged at 11 agricultural and pastoral shows from Kaikoura to Waimate. 5230 people entered a competition associated with displays (an increase of 44% on the previous year; 1 in 3 people visiting the tent entered the competition). Displays were also mounted at Culverden and at a youth expo in Rangiora. A forum on developing road safety issues in the community was held in June. Some 60 people from throughout the region, including representatives from local authorities and Government agencies, attended the forum.</p> <p>Selwyn District Council employs a full time Road safety coordinator, undertakes and coordinates safety programs and initiatives for Selwyn and Banks Peninsula District Councils.</p> <p>Christchurch City Council report implementation is ongoing.</p> <p>Mackenzie District Council report monitoring of crash records and making safety improvements to roads is an ongoing process.</p> |
| <p>Improved crash reporting including the establishment of a robust monitoring programme for crashes involving pedestrians, cyclists or overseas visitors.</p> | <p>A specific evaluation of pedestrians was completed by the Land Transport Safety Authority for this project and a programme established in Canterbury to target this group. Work on cyclists and overseas visitors is ongoing with the district councils, ACC and LTSA.</p> |
| <p>Implement Territorial Authority Road Safety Strategies.</p> | <p>Timaru District Council report stage 1 rural road safety review recommendations being implemented. Ongoing safety monitoring and safety works being done. Recommendations from last crash reduction study implemented.</p> <p>Hurunui District Council has an active Road Safety Co-ordinating Committee which meets six times per year and oversees programmes.</p> <p>Selwyn District Council annually undertakes approx. \$200,000 of minor safety roading works in conjunction with the NLTP and any other major roading projects under the NLTP</p> |

Major Environmental Effects Projects for 2002 - 2003

| Policy 4.2.4: Ensure adverse environmental effects from transport are monitored and are reduced to levels that are equal or better than national and regional guidelines. | Progress to June 2003 |
|--|--|
| Environmental monitoring and investigations of motor vehicle emissions. | Initial scoping work undertaken to develop a Christchurch site to monitor motor vehicle emissions. |
| Install a network of stock truck effluent disposal sites. | Investigation into various stock effluent disposal sites was completed and detailed design commenced. Three sites are proposed for 03/04. |
| Promotion and introduction of pollution-free technologies for public bodies to provide leadership by example. | Transit New Zealand is currently investigating such initiatives with its adoption of Triple Bottom Line reporting. |
| Enforcement of “10 second rule” for smoky vehicles. | Environment Canterbury and the Police undertook an active enforcement/promotion campaign. The rule is difficult to enforce, only 27 infringements in 2002. |

Section 4.3 Demand Management

Major Demand Management Projects for 2002 - 2003

| Policy 4.3.1: Undertake demand management education and marketing measures to reduce the use of private motor vehicles, especially in areas of traffic congestion. | Progress to June 2003 |
|---|--|
| Undertake trials of demand management initiatives, leading to the establishment of an on-going demand management programme. | Environment Canterbury continued with its demonstration projects in the area of household and business travel plans. |

Major Demand Management Projects for 2002 - 2003

| Policy 4.3.2: Encourage use of parking controls to manage travel in and around urban areas . | Progress to June 2003 |
|---|--|
| Complete a city-wide parking strategy for Christchurch. | The City-wide parking strategy was adopted by Council at its meeting on 26 June 2003 and is now being finalised to go to the printers. This will be released as a final version in October 2003. |

Major Demand Management Projects for 2002 - 2003

| Policy 4.3.3: Enhance understanding of methods and outcomes of further demand restraint measures. | Progress to June 2003 |
|--|---|
| Investigations into road pricing options and outcomes, particularly for Christchurch. | Transit has continued to look at alternative funding models for roading, at a National level. |

Section 4.4 Land Use

Major Land Use Projects for 2002 - 2003

| Policy 4.4.1: Promote housing, jobs, shopping, leisure, education and community facilities and services in locations that support more sustainable transport choices and reduce the need to travel, especially by car. | Progress to June 2003 |
|---|---|
| Develop a long-term land use development strategy to enable enhanced transport planning in central Canterbury. | <p>Work progressed on the Future Path Canterbury project.</p> <p>The formulation of the Selwyn District Plan which includes future land use and consultative processes, can drive what transportation planning maybe necessary. Where possible other opportunities are maximised in conjunction with any new subdivisons and similar urban development and other plan change approvals. A strategy study of Rolleston is being completed which looks at social and planning issues in conjunction with interaction with transportation issues.</p> <p>Christchurch City Council report the long term land use strategy is on our work programme to be done but hasn't progressed further than to be started in October/November 2003.</p> |

Major Land Use Projects for 2002 - 2003

| Policy 4.2: Design and programme developments and related infrastructure to support more sustainable transport choices, improve interchange between modes and to reduce the need to travel, especially by car. | Progress to June 2003 |
|---|------------------------------|
| Production of planning guidelines to support the above methods. | Project not started. |

Section 4.5 Freight

Major Freight Projects for 2002 - 2003

| Policy 4.5.1: Provide for the effective, efficient and sustainable movement of freight. | Progress to June 2003 |
|--|--|
| Develop a regional freight strategy with specific targets and methods for the movement of freight in the region. | <p>Environment Canterbury, in conjunction with agencies and organisations with an interest in freight, developed the draft Freight Action Plan.</p> <p>Timaru District Council participated in the Regional Freight Action Plan process.</p> <p>Transit New Zealand report the Otira Underpass structure has been replaced thus eliminating the height restriction that previously existed for large vehicles. Liaison has continued with RTA on various aspects of heavy vehicle haulage.</p> <p>Selwyn District Council participation in the formulation of the ECan initiated Strategy.</p> <p>Waimakariri District Council report they were involved in Freight Action Plan workshop process – full support.</p> <p>Hurunui District Council – not a major issue as SH network carries most of the freight</p> |

Section 5 Funding

Major Funding Projects for 2002 - 2003

| Funding – (No specific policy) | Progress to June 2003 |
|--|------------------------------|
| Develop a funding plan for future Regional land transport strategies including sources of funding. | Project not started. |

Section 6 Implementation and monitoring

Major Implementation and monitoring Projects for 2002 - 2003

| Implementation and monitoring (No specific policy) | Progress to June 2003 |
|---|--|
| Develop an implementation programme for the RLTS. | Project not started, although implementation underway. |
| Identify relevant transport indicators that can be measured (in consultation with other regional councils). | A base set of indicators has been identified. Further development and refinement is ongoing. |
| Set up a monitoring programme of key transport indicators. | The framework has been established. Data gathering programme started. |
| Carry out monitoring of key transport | Traffic volumes and accident rates are continuously |

| | |
|---|--|
| <p>indicators.</p> | <p>measured, monitored and assessed for the entire network, report Transit New Zealand. Similarly, Timaru District Council advise their comprehensive traffic classifier data recording programme is ongoing.</p> <p>As required by Level of Service performance targets outlined in the RAMP, report Selwyn District Council.</p> |
| <p>Initiate a programme of analysis of the key transport indicators for inclusion into the RLTS annual implementation report.</p> | <p>Project started, see above comments.</p> |
| <p>Devise new targets for those areas of the RLTS requiring further work.</p> | <p>Freight targets will evolve from the Action Plan. Other targets will be established as the strategy is reviewed.</p> |

Appendix A

This appendix includes a list of the base indicators for the Annual Monitoring Report. Each indicator is described and a brief comment on why it was chosen is given, along with the agency that supplied the data. More comprehensive data will be made available in the supporting technical report that will be published by Environment Canterbury at the end of the financial year.

Key Result Area – Alternative modes

Indicator 1: Alternative Mode Share – Census work trip

For a majority of the working population, the journey to work trip usually occurs in the morning peak hour periods. In urban settings where there is high demand for limited road space, the journey to work (JTW) mode share statistic can provide important information on the choice of travel mode made by workers. This JTW statistic is collected every five years in the national Census and although it only provides a ‘snapshot’ of the way people travelled to work on one particular day, it is an empirical finding that provides a robust indicator of travel choice.

The JTW census alternative mode share indicator is presented as a sum of the alternative modes (this includes cycle, walk and bus) as a proportion of all modes of travel to work. Therefore it sheds light on the proportion of workers travelling to work by means other than by car or van. In fact, it is a direct measure of personal travel decisions, reflecting the aggregated travel mode preferences of individuals. Policies that promote alternative modes, especially for morning peak or commuter travel, affect this mode share, however it is difficult to attribute or quantify their impact in terms of the JTW mode share statistic. This indicator is more useful as an indication of general trends in travel mode choice resulting from various travel-related factors, rather than any policy specific outcomes.

| (1) Journey to Work Census Mode Share | 1996 | 2001 |
|--|-------|-------|
| Percent of alternative mode of all journey to work | 14.9% | 14.0% |
| Percent change from previous census | -7.6% | -1.7% |

This is a descriptive indicator provided by Statistics New Zealand. The indicator is calculated from Census statistics for the employed census usually resident population aged 15 years and over.

Indicator 2 & 3: Total Lane Length (Bus Lanes and Cycle Ways)

There are a number of different infrastructure initiatives that can support alternative modes. The provision of dedicated cycle/bus lanes is one way to make this means of transport more attractive to users. For public transport trips along congested corridors, dedicated right-of-way road provision for buses can provide travel-time savings that

make public transport a more appealing option. Similarly cycle lanes, and particularly separated cycleways, increase the ability or perceived ease to cycle by allocating specific space for cyclists.

It is noted that the type of facility can differ greatly in quality, however, these two indicators only report total additional lane length. In simple terms, this indicator is a course measure that reflects the degree of annual investment in this type of initiative.

| (2) Total Length of Bus Lanes in Region at | 2003 |
|--|--------|
| Total length of bus lanes as at 30 June | 0.4 km |
| Percent change from previous year | - |

| (3) Total Length of Cycle Lanes in Region at | 2003 |
|--|--------|
| Total length of cycle lanes as at 30 June | 198 km |
| Percent change from previous year | - |

This is the first year this indicator has been collected. Future Annual Monitoring Reports will report these two indicators as annual change over the life of the current Strategy. Data supplied by Transit New Zealand and Territorial Authorities.

Indicator 4 & 5: Urban Public Passenger Transport

For a number of people, public passenger transport is their preferred or main way to travel. As an alternative to urban travel by car, public transport can offer transport along defined corridors and across a network of routes to access most places people want to go. A simple yet effective measure of the utilisation of public transport is the total number of passengers carried on all services over a year. Over time this indicator can be used to track changes in demand for public transport services. In fact this indicator represents, to varying degrees, both supply and demand factors on public transport. For example, supply side effects are reflected through total numbers as a function of how well the services (such as provision of seats or location of routes) are aligned with travellers' needs.

The number of urban public passenger trips indicator accurately reports growth in urban bus patronage. As this is a significant proportion of alternative mode travel, this indicator contributes to an understanding of the role of alternative modes. This indicator is reported as an annual total for the financial year.

| (4) Urban Public Passenger Transport Trips at | Jun-02 | Jun-03 |
|---|---------------|---------------|
| Canterbury (total trips million) | 13.15 million | 15.01 million |
| Percent change from previous year | - | 14% |

There are many aspects that contribute to the successful delivery of a public transport service. For example, this may include high quality buses, friendly and helpful drivers, routes that meet the needs of users etc. The effective delivery of these is an important part to providing a public transport system that is attractive, viable and meets the needs of users. Each year Environment Canterbury commissions a survey of bus passengers.

As part of this survey an overall system rating is derived from questions asked on a range of service quality performance criteria. This 'system rating' is used as an indicator of passenger experience of the Christchurch and Timaru services.

The passenger service quality indicator for public transport highlights user experience of the system. It asks the user how they rate the public bus system for overall service including friendly and helpful drivers, punctuality and quality of buses plus bus travel time, frequency, reliability, comfort and value for money. This indicator reflects a generalised measure of the quality of the service. It should therefore be understood as a comparative indicator showing change from previous years.

| (5) Perceptions of Public Transport Service Quality | Jun-02 | Jun-03 |
|---|--------|--------|
| Christchurch responses (Excellent / v. good) | 79% | 81% |
| Percent change from previous year | - | +3% |

This indicator is taken from the Bus User Survey Reports for Christchurch.

Indicator 6: Alternative Mode Public Expenditure (Cycle & Public Transport Only)

Like most forms of transport the provision of infrastructure, and for bus/ferry based public transport, the provision of services is vital to the viability of alternative modes. Infrastructure to support these modes may vary from on-street fixtures such as bus shelters and traffic signal pre-emption to on-board technology like electronic ticketing. For walking and cycling, it could be the construction of dedicated path/cycle ways. Through their works programmes, central and local government authorities allocate money to a large number of projects that support and contribute to alternative modes. This expenditure in dollar terms can be used as an indicator.

The alternative mode public expenditure indicator sheds light on the relative amount of fiscal support for two alternative modes. The indicator is reported as the estimated total public expenditure on cycle and public passenger transport in Canterbury.

| (6) Estimated Expenditure on Alternative Modes at | Jun-03 |
|--|--------------|
| Public transport expenditure (cycle and public transport only) | \$19 million |
| Percent change from previous year | - |

This is the first year this indicator has been collected. Future Annual Monitoring Reports will report this indicator as a trend over the life of the current Strategy. Data supplied by Transit New Zealand, Territorial Authorities and Environment Canterbury.

| |
|---|
| <i>Indicator 7: Population Coverage by Bus Routes</i> |
|---|

This indicator provides a guide to Christchurch City population's physical distance from bus routes, thus providing an indication of the relative ease (in terms of distance) to access a bus service.

The population coverage by Christchurch bus routes indicator is presented below as a percentage of the population within 500m of all bus routes at June 2003.

| (7) Population Coverage by Bus Routes at | Jun-03 |
|--|--------|
| Percentage of people within 500m of routes | 95% |
| Percent change from previous year | - |

Data supplied by Environment Canterbury.

Key Result Area – Roads, Safety & Environment

Indicator 8: Estimated Registered Vehicles in Region

Vehicle ownership has a direct relationship to vehicle kilometres travelled. As vehicle ownership rises people are able to travel further. This can result in some adverse effects such as traffic congestion pressures on the roading network and its associated social and environmental impacts.

The registered vehicles indicator provides an annual measure of change in Canterbury's vehicle fleet composition. This indicator is specified as total number of vehicles.

| (8) Estimated Registered Vehicles at | Jun-02 | Jun-03 |
|--|--------|--------|
| Canterbury Postal Area (total vehicles) | 345256 | 357438 |
| Percent change from same month previous year | +2% | +4% |

The Land Transport Safety Authority, Registry Centre provides data for this indicator.

Indicator 9 & 10: Vehicular Traffic on Strategic Routes

If the previous indicator sheds light on the number of vehicles potentially available for use, the following indicators report actual vehicle use. Road Controlling Authorities monitor the use of their roads through counting the number of vehicles crossing certain parts of their network. This information is used to manage the road infrastructure asset. As a simple descriptive record of road use, average daily traffic numbers can be used to reflect demand for vehicular transport.

The daily traffic on Canterbury strategic routes indicator gives a measure of growth in vehicle numbers on different parts of the road network. The seven locations reported in previous monitoring reports have been chosen as those locations. Note annual average traffic data is not yet available for 2003. The 2002 baseline figure is given but the indicator will be first reported in 2004.

| (9) Average Daily Traffic on Strategic Routes | 2002 | |
|---|----------------|--------------|
| Average change in volumes from base year (2002) | 57647 vehicles | New baseline |
| Percent change from previous year | - | |

The changing mix of the region's vehicle fleet type reflects both personal choices in vehicles and levels of economic/business activity. For example, in some sectors growth in economic activity is directly reflected in growth in specific types of vehicle (for instance, tourism growth through more tourist coaches or dairy production growth through demand for more milk tankers to service farms). Therefore, changes in vehicle fleet composition gives an indication of underlying economic changes. It is also a direct measure of heavy vehicle effects on the road network and surrounding social and natural environment.

The heavy vehicle traffic indicator shows annual change in the proportion of heavy vehicles on Canterbury's strategic road network. This indicator is a derivative of the

above average daily traffic indicator and reports on heavy vehicle use as a proportion of all vehicle types. In short, it reports heavy vehicle traffic as an indicator reflecting a contribution to both regional economic activity and impacts on the community. Note traffic data is not available for 2003. This indicator will be first reported in 2004.

| (10) Percent of Heavy Vehicle Traffic for | 2002 | |
|---|-------|--------------|
| Percent of heavy vehicles on strategic routes | 13.6% | New Baseline |
| Percent change from previous year | - | |

Transit New Zealand provides data for these indicators.

Indicator 11 & 12: Land Transport Fuel Indicators

Almost one hundred percent of the Canterbury road vehicle fleet is powered by fuel oil products. Excluding the effect of vehicle engine efficiency technology and changes in driver behaviour, fuel consumption provides a direct empirical assessment of resource use by the road fleet. This indicator shows growth in the use of a primary transport resource and when compared with other indicators sheds light on demand for transport. It is useful to split this indicator by fuel product to show relative changes in demand for each of the two main fuel oils.

The land transport fuel use indicator provides a direct measure of transport use. It also provides an indication of average resource use per person.

| (11) Annual per Capita Fuel Use (Petrol) for | 2002 | |
|---|-------------------|--|
| Total annual fuel consumption (Litres/person) | 727 litres/person | |
| Percent change from previous year | +1.7% | |

| (12) Annual per Capita Fuel Use (Diesel) for | 2002 | |
|---|-------------------|--|
| Total annual fuel consumption (Litres/person) | 631 litres/person | |
| Percent change from previous year | +3.8% | |

Indicator 13: Carbon Dioxide vehicle emissions

The emission of carbon dioxide to the atmosphere is a by-product of carbon based fuels burnt in vehicle combustion engines. In Christchurch, transport emissions are responsible for approximately 50% of the carbon dioxide contribution to greenhouse gas emissions.

Carbon Dioxide emissions are related to the rate of fuel consumption. Although there are various emissions produced by combustion engines, Carbon Dioxide is reported as an indicator of transport effects on the environment. This indicator is calculated by applying an emissions factor to regional fuel consumption data. This indicator also takes account of CO₂ produced from additional fuel use as a result of traffic congestion.

The Carbon Dioxide from motor vehicles indicator sheds light on the environmental pressures resulting from the transport system. It is reported as tonnes per person.

| (13) Estimated carbon dioxide vehicle emissions for | 2002 |
|---|-------------------|
| Estimated vehicle emissions (Tonnes/person) | 4.9 tonnes/person |
| Percent change from previous year | +0.2% |

Data is provided by Territorial Authorities and compiled and reported by Environment Canterbury.

| |
|--|
| <i>Indicator 14, 15 & 16: Road Safety Indicators</i> |
|--|

There have been significant gains in road safety over recent years. The Land Transport Safety Authority gathers a wide range of quantitative data to monitor road safety. Two key regional indicators are reported against Strategy targets.

These indicators monitor progress towards reducing deaths and injuries resulting from crashes. Both indicators are reported as deaths/injuries per 100 000 population.

| (14) Road Deaths Per 100 000 Population at | Jun-01 | Jun-02 |
|--|--------|--------|
| Regional fatal casualties per 100 000 population | 9.3 | 8.7 |
| Percent change from previous year | +42.9% | -5.7% |

| (15) Road Injuries Per 100 000 Population at | Jun-01 | Jun-02 |
|---|--------|--------|
| Regional injury casualties per 100 000 population | 321.3 | 306.3 |
| Percent change from previous year | +5.7% | -4.7% |

The Land Transport Safety Authority undertakes an “Attitude to road safety and enforcement” survey each year. This survey provides an indicator on the perception of New Zealand road safety for the whole country. The indicator question is “How safe are New Zealand roads to travel on?”

| (16) Perception of How Safe Are NZ Roads at | Jun-02 | Jun-03 |
|---|--------|--------|
| Percent of responses (very/fairly safe) | 79% | 78% |
| Percent change from previous year | - | -1% |

Data supplied by the Land Transport Safety Authority.

| |
|--|
| <i>Indicator 17: Total Investment in Canterbury Roads (Infrastructure & Maintenance)</i> |
|--|

Historically there has been a significant amount of public money invested in Canterbury's road network. Prudent asset management requires ongoing investment in maintenance and the development of the network where deficiencies are identified and programmed through planning. Tracking this level of investment gives a relative indication of the amount of public money allocated to roads.

The investment in Canterbury roads indicator tracks public expenditure expressed as total dollars invested.

| (17) Investment in Canterbury Roads | 2002 | 2003 |
|--|------|------|
| Total investment on roads (million \$) | 86.9 | 96.1 |
| Percent change from previous year | -11% | +11% |

Transfund New Zealand provided the data for this indicator. Please note the figures include local rates and central Government contributions for roading projects but do not include any unsubsidised work that local authorities undertook using their own funds.

Key Result Area – Travel Demand Management (TDM)

Indicator 18 & 19: Travel Demand Management Activity

The provision of information and education and the application of behavioural/marketing methods can be employed to modify the demand for travel. Overseas experience has shown that relatively cost effective programmes can be implemented to help reduce travel (and therefore traffic congestion) and at the same time not affect or restrict personal mobility. Apart from the sound economic reasons to manage demand there are other benefits that fall on the community and the environment, such as reduced road maintenance costs and vehicle emissions.

The number of households participating in TDM in the last year is an indicator of participation rates in community based programmes. This indicator is reported as a change from previous years.

| (18) Number of Households Participating in TDM at | Jun-03 |
|---|--------|
| Number of additional participating households | 160 |
| Percent change from previous year | - |

Travel demand management activity may also be applied in the commercial or business sector. The number of organisations implementing business TDM travel plan measures is an indicator of business participation. This indicator is reported as a change from previous years.

| (19) Number of Organisations with Business travel plans at | Jun-03 |
|--|--------|
| Total number of organisations (Canterbury) | 4 |
| Percent change from previous year | - |

Figures compiled by Environment Canterbury based on known TDM projects in Canterbury. It is likely that there are other organisations also implementing business travel plan type activities.

Key Result Area – Land Use Planning

Land use and transport interaction

The relationship between land use and the transport system is dynamic and very complex. The land use section in the RLTS is intended to provide better integration between land use planning and transport planning. While transport planning is currently based upon a given pattern of land use, it is hoped that over time measures will be introduced to plan land use to make better use of the existing transport system. This process will take time to evolve and at present there are no indicators offered to monitor this section.

Indicators and measures will be developed in future updates of the Regional Land Transport Strategy.

Key Result Area – Freight

Indicator 20, 21, 22, 23 & 24: Regional Freight Activity

The efficient movement of freight around the region is vital to support the regional economy. A key component of this is the distribution of goods via the region's export ports. The flow of import and export goods through the two seaports and Canterbury's international airport provide an indication of regional economic activity. The first two indicators below are based on gross weight and cargo by value transferred through these ports. They show relative change from the previous year in import and export activity.

The regional port's activity indicator for gross weight of goods loaded and unloaded at the regional export ports is provided below.

| (20) Regional Ports Activity - Gross Weight at | Jun-01 | Jun-02 |
|--|-----------|-----------|
| Total gross weight (in/exported) un/loading (Tonnes) | 4,104,179 | 4,644,598 |
| Percent change from previous year | +12.4% | +13.2% |

The regional port's activity indicator for cargo by value of goods loaded and unloaded at the regional export ports is provided below.

| (21) Regional Ports Activity - Cargo Value at | Jun-01 | Jun-02 |
|---|--------|--------|
| Total cargo value (in/exported) un/loading (Million \$) | 7,345 | 7,407 |
| Percent change from previous year | +15.3% | +0.8% |

Although the distribution of import and export goods gives an indication of freight activity, there are considerable amounts of freight moved around and through the region. The changing balance of heavy freight vehicles in Canterbury's vehicle fleet reflects a demand to transport freight. This demand is reported through the national registry of vehicles.

The total number of registered goods vehicles indicator is reported below. The data for this indicator comes from Indicator 8: Estimated Registered Vehicles in the Canterbury Region and reports total registered goods vehicle fleet.

| (22) Total Number of Registered Goods Vehicles | Jun-02 | Jun-03 |
|--|--------|--------|
| Total number | 45,909 | 47,121 |
| Percent change from previous year | - | +3% |

Diesel powered vehicles must pay road user charges (RUC) by purchasing tonne kilometres for their amount of travel. This data is collected by the LTSA and gives a direct measure of the kilometres and tonne kilometres travelled by those vehicles. The values reported below are for diesel powered vehicles used for the purpose of transporting goods.

| (23) Total goods vehicle RUC purchased in Canterbury | 2001 | 2002 |
|--|--------|--------|
| Total tonne kilometres RUC (M) | 5669 M | 6141 M |
| Percent change from previous year | +7% | +8% |

Rail freight activity is reported annually by Tranz Rail Ltd. At the time of preparing this report, values for Canterbury could not yet be obtained. The values will be included in future reports.

Total Rail Freight Tonnes for Canterbury is reported below.

| (24) Total Rail Freight Tonnes | 2003 |
|-----------------------------------|---------------|
| Total number | not available |
| Percent change from previous year | - |

Statistics New Zealand, the Land Transport Safety Authority and Tranz Rail Ltd provide data for these indicators.