Draft Christchurch Transport Plan

2012–2042

Keep Christchurch moving forward
by providing transport choices to connect people and places

Christchurch City Council

Christchurch City Council

Draft Christchurch Transport Plan

June 2012–2042

Christchurch City Council
PO Box 237, Christchurch,
New Zealand.
Tel: +64 3 941 8999
Fax: +64 3 941 8984
Web: http://www.ccc.govt.nz

ISBN *978-0-9876571-7-6*

Foreword

Foreword

Effective transport networks throughout Christchurch will not only be critical for our city to recover from the recent earthquakes but also to grow and attract new business, investment and people. The Christchurch City Council will take the lead to provide a world-class system which will support the recovery of our city.

Bob Parker
Mayor of Christchurch

The rebuild provides a rare opportunity for the city to transform the way it moves and how the transport system performs. This Plan has the vision to make Christchurch a city that is easy to access and move around. As our roads and communities are rebuilt, there will be opportunities to improve the effectiveness of our transport infrastructure: to improve travel choice by creating safe street environments; easy pedestrian crossings and attractive public transport infrastructure, while strengthening regional connections to the Central City, building increased resilience into our infrastructure and delivering reliable freight connections to the ports and freight hubs.

We also have a unique opportunity to make a strong statement about the importance of cycling in our city as it is rebuilt and to enhance Christchurch's reputation as a cycle city. By creating a connected cycle network and making it easier for our residents to use bicycles we will also be investing in the health and wellbeing of our community.

Strong, reliable connections to the Christchurch International Airport and Lyttelton Port will help stimulate the recovery and growth of our economy, both providing vital links to our export markets. Christchurch's role as the economic hub of the South Island will be strengthened with improvements to Christchurch's state highway network.

The biggest challenge facing the city is funding the rebuild. Investment in the transport system must be planned now to maximise the long-term value and benefits from investments today.

Executive summary

The vision is to keep Christchurch moving forward by providing transport choices to connect people and places.

Christchurch's transport system will provide people and businesses with travel choices which will make it easy to move around the city, to do business and to live here. The 2010–2011 Canterbury earthquakes have had a severe impact on the effective functioning of the city's transport system. There will need to be significant investment during the next decade to repair and aid the recovery of the transport infrastructure, especially in relation to roads. This rebuild presents great opportunities to improve the transport system in line with the 30-year vision in this Christchurch Transport Plan. Creating a city that is easier to move around in will improve access, provide travel choice, support a vibrant economy, help create stronger communities and a healthier environment.

This non-statutory Plan updates Christchurch's local transport policy in relation to relevant statutory plans, in particular, the Canterbury Regional Land Transport Strategy, Regional Policy Statement, Greater Christchurch Urban Development Strategy and Draft Central City Recovery Plan. The Draft Central City Recovery Plan places a strong emphasis on travel choice by establishing strong networks for all transport options during the next 20 years. This Plan places the same emphasis on offering travel choice throughout the city.

There are many challenges facing the transport system in Christchurch:

- Congestion – levels of congestion on the road network continue to increase, with 40 per cent more traffic congestion expected by 2041;
- Travel patterns – the predominant travel choice for all trips is by private vehicle;
- Earthquake damage and recovery – about 45 per cent of our roads have sustained significant damage during the 2010–2011 earthquakes and there is now significant opportunity to improve the resilience of the network in the event of future natural disasters;
- Relocation and growth areas – land and property damage from the earthquakes has resulted in many households and businesses relocating to other areas across the city. Changes in the Regional Policy Statement have accelerated the release of new housing areas in the south-west and north of the city;
- Demographics – following the earthquakes, the population of Greater Christchurch is in a state of flux. While there was a 2.4 per cent population decline during 2011, it is still expected to grow by 130,000 by 2041. The population is also ageing; by 2041 there is likely to be a 100 per cent increase in the number of people aged over 60;
- Safety – the highest proportion of road crashes and injuries involve crashes at intersections, young drivers, cyclists and motorcycles;
- Health and wellbeing – physical inactivity is growing with a huge cost to the public health system;
- Environment – transport is a significant contributor to poor air quality, water quality, adverse visual effects and noise disturbance;
- Climate change – one third of total green house gas emissions in Christchurch are transport related; and
- Peak oil – the availability and price of fuel is increasing, reducing the affordability of using cars and trucks.

Photo courtesy of James Reader

To achieve the vision and address these challenges, the Christchurch Transport Plan focuses on four goals:

1. **Improve access and choice;** delivering resilient transport networks with an emphasis on efficient road use, public transport, walking and making Christchurch a cycle city. Introducing a new road classification which recognises both the road function and the environments each road passes through.
2. **Create safe, healthy and liveable communities;** adopting a safer systems approach. Transport actions which support the recovery of the Central City, suburban centres and new growth areas. Strengthening the integration of land use and transport planning through District Plan changes.
3. **Support economic vitality;** developing local freight routes to improve access to Christchurch airport, Lyttelton Port and freight hubs. Parking and congestion management to support the growth of commercial centres.
4. **Create opportunities for environmental enhancements;** building green infrastructure and adapting to climate change and peak oil by encouraging new technology and infrastructure enhancements.

To successfully deliver each of the four goals, the draft Plan identifies a range of actions. These will be phased over a period of 30-years, moving from recovery through transition to achieving the vision.

The rebuild and recovery phase will require investment to be focused on recovery planning, infrastructure replacement and road improvements to support the new housing developments being provided to accommodate households relocating as a consequence of the earthquakes.

There will be an emphasis to embrace the opportunity to develop a cycle network during the city's rebuild, which will make it easier to use bicycles. This will include creating opportunities for shared footpaths, developing dedicated major cycleways and creating key flagship cycleways that will support Christchurch to become a cycle city.

In the medium term, there will be a *transition phase* with a greater focus on network improvements along public transport, freight, walking and cycling corridors.

In the long term and *vision phase*, the focus is on improving the efficiency of the existing network. There will be an increased focus on parking management, transport information and education, energy efficiency and green infrastructure.

Implementation of the draft Christchurch Transport Plan will help the Council deliver its community outcomes, namely to create a liveable city, prosperous economy; strong communities; and healthy environment. The implementation plan includes a list of prioritised transport actions for the life of the plan. These include:

- Development of a road classification to guide the rebuilding and future design of roads and road corridors.
- Continuation of road maintenance and renewals.
- Building local connections to link with the Christchurch Roads of National Significance and new growth areas, as well as network improvements to neighbouring districts.
- Working with UDS partners to investigate public transport, rapid transit and the protection of future public transport corridors, including investigations into potential 'park and ride' facilities.
- Investment in quality public transport infrastructure and priority measures to support public transport services.

Photo courtesy of Gehl Architects

- The creation of a connected cycle network that includes shared pathways and cycleways across the city. This will also include the creation of key 'flagship cycleways' that will make a strong statement about Christchurch's cycle city status.
- Defined freight routes and protection of major freight hubs.
- Information and education services to support network efficiency.
- Targeted safety improvements.
- Parking management plans to support network improvements.
- Streetscape improvements in suburban recovery centres and the Central City.

Funding, affordability and long-term commitment are fundamental to achieving the vision. To deliver all the actions identified in the Draft Plan with a long-term commitment from both the Council and its partner agencies. Funding is required to not only rebuild roads and provide new infrastructure but also to capitalise on the opportunities available through the rebuild to improve the transport system. The main sources of funding will be provided by the Council and Government.

The Council will work with the community to develop more detailed options as required. Funding for preferred options will be part of the Council's next Long Term Plan (LTP).

Consultation/submissions process

We are seeking the public's comments on this draft plan from 18 July 2012 to 5pm on 23 August 2012.

A submission form with specific questions is located at the end of this document for the purposes of providing the Council with feedback on the draft plan.

You can also provide your comments:

- On the internet
  Using the form provided at www.ccc.govt.nz/HaveYourSay
- By email
  Sending your submission to CTP@ccc.govt.nz
- By mail
  Posting your submission (no stamp required) to:

  Freepost 178
  Draft Christchurch Transport Plan Submission
  Christchurch City Council
  PO Box 73012
  Christchurch 8154

No anonymous submissions will be accepted.

Please note: We are legally required to make all written or electronic submissions available to the public and to Councillors, including the name and address of the submitter. The submissions may be posted electronically on the Council's website. Information will be available to the public subject to the provisions of the Local Government Official Information and Meetings Act 1987. If you consider there to be compelling reasons why your contact details and/or submission should be kept confidential, you should contact the Council's Communication's Consultation Team Leader, telephone 941-8999.

Any person who makes a submission will have the opportunity to be heard by the Council if this is requested. Hearings will be held during September/October 2012. It is envisaged the Council will meet to consider submissions received and make decisions in respect of the Draft Christchurch Transport Plan during November/December 2012.

Tell us what you think...

We have placed 'Tell us what you think bubbles' throughout the plan to indicate an area where we would like to know what you think.

Community drop in sessions

Public can ask questions of staff at the sessions:

Saturday 28 July 2012
10am - 4pm
South City Mall
555 Colombo Street

Tuesday 31 July 2012
4pm - 7pm
Cotswold School Hall
50 Cotswold Avenue

Wednesday 1 August 2012
4pm - 7pm
Wigram Manor
14 Henry Wigram Drive

Thursday 2 August 2012
4pm - 7pm
North Beach Community Centre
93 Marine Parade

Tuesday 7 August 2012
5pm - 7pm
Lyttelton Club
23 Dublin Street

Table of contents

Introduction

Keep Christchurch moving forward by providing transport choices to connect people and places.

An efficient, integrated transport system offering a range of travel choices is fundamental for Christchurch to become a globally competitive city with an excellent quality of life.

A well-connected transport system is critical to our quality of life and to build stronger communities. It is essential for a vibrant economy. Our choice of whether to walk, cycle, drive or take public transport is influenced by the urban form and functioning of the transport network, which in turn impacts on our environment. As our population has grown and the demographic composition changed (that is an increasing number of older persons and smaller household sizes), so has car ownership and the desire for increased mobility. An added consideration for Christchurch is its role as it continues to be the major freight hub for the South Island (20 million tonnes of freight move through the city each year).

Before the 2010–11 Canterbury earthquakes, Greater Christchurch's population was growing at a steady, albeit modest, rate. It was estimated the population would increase by more than 130,000 by 2041 (this increase being comparable to the current population of Dunedin). In the four-year period ended 30 June 2010, Christchurch city's population grew at an average annual rate of one per cent, with population gains from both natural increase (2200 per year on average) and net migration (1600 per year on average). Managing the effects of these changes on land use and transport activity is vital to achieving a successful and functional city.

The 2010—11 earthquakes have had a significant impact on Christchurch's population, land-use activity and transport system. The earthquakes have resulted in a population loss in Christchurch of 8900 or 2.4 per cent in the year to June 2011. The geographic distribution of households within the Christchurch area has also been affected as a result of temporary household displacement and permanent household relocations. Immediate travel patterns have also changed as the necessary relocation of businesses, homes and services has occurred. This has created pressure points within the existing transport network, particularly on key road corridors to the west and north.

While it is expected that long term there will be a return to the pre-earthquake growth patterns long term, there is a significant level of uncertainty underlying the planning and staging of the recovery and growth of the city. Nonetheless, as the city transitions from recovery and damaged infrastructure and services are restored, there is a need to incrementally develop a transport system that supports a more compact city. The community places a high value on transport and has asked for a significant change in the current transport system[1]. The community indicated its preference to move towards a pedestrian and cycle-friendly city, where walking and cycling are enjoyable, safe and there are high-quality facilities for all users, as well as an affordable public transport network. Recovery of the Central City and the suburban centres relies heavily on an effective city-wide transport system that links the city with its communities.

The Draft Christchurch Transport Plan provides the direction for transport planning to enhance Christchurch's quality of life and economic vitality through the provision of a transport system that offers choice. The Draft Plan sets out how land development and infrastructure will be sequenced and timed appropriately to ensure integrated planning and a desirable urban form is achieved. It draws together a collection of transport elements into a comprehensive plan, as illustrated in Figure 1.1.

The Draft Plan also provides the mechanism to transition this policy planning into implementation on the ground. While being a non-statutory document, it establishes an important link between statutory plans and local transport policy, in particular the Regional Policy Statement, the Canterbury Regional Land Transport Strategy and the Greater Christchurch Recovery Strategy.

The Draft Plan details the transport actions for Christchurch City, including Banks Peninsula, that are required to create a transport system to support the city's growth and community aspirations over the next 30 years (2012–2041). The immediate role is to support the rebuild and recovery of the city and the wider region, including the recovery priorities under the Recovery Strategy and Draft Central City Recovery Plan, balanced with the need to achieve the long-term objectives for the network.

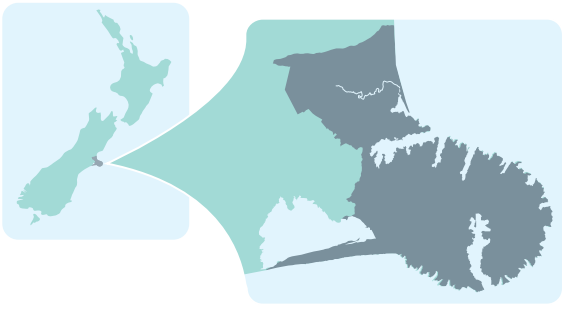


Figure 1.1 Elements of the Transport Plan

Strategic context

The Draft Plan has been developed through a process of stakeholder involvement and collaboration with the Urban Development Strategy (UDS) partners, central government, technical experts and others.

It sits within a complex framework of national, regional and local strategy and policies as illustrated in Figure 2.1, which details both the influencers for the Plan and the policies that the Plan itself will influence. The longer term outcome of the Plan is to create an integrated transport and land-use system that aligns with, and delivers the Regional Policy Statement, Regional Land Transport Strategy (RLTS) and Greater Christchurch Urban Development Strategy. Together, these documents set a direction for transport which supports an accessible, affordable, integrated, safe, resilient and sustainable transport system, within a consolidated urban form. The Draft Plan also integrates a number of existing Council transport strategies, including the Cycling Strategy, Pedestrian Strategy, Road Safety Strategy and Parking Strategy.

Greater Christchurch cross boundary activities have been integrated into the Draft Plan to increase coordination while recognising that each activity is subject to planning and funding processes relevant to individual organisations. Particular regard has been given to the:

- Greater Christchurch Urban Development Strategy – a strategic direction for growth in the Greater Christchurch area, covering the location of future housing, development of social and retail activity centres, areas for new employment and integration with the transport system.
- Recovery Strategy – sets out the way forward for the rebuilding and recovery of Greater Christchurch.
- Draft Central City Plan – sets the framework to guide the redevelopment of the Central City.
- Greater Christchurch Metro Strategy – sets out a range of targets to improve public transport, based on community suggestions.
- Greater Christchurch Travel Demand Management Strategy – a strategy for managing the increase in traffic growth, through encouraging making the most of the existing transport network and increasing the use of walking and cycling options, public transport and car pooling.
- Canterbury Regional Passenger Transport Plan – sets out the policy within which all public transport services operate and includes policies on fares, funding, vehicle and service standards, infrastructure and monitoring.
- Christchurch Rolleston and Environs Transportation Study (CRETS) – a programme of works to reduce traffic congestion to the west and south of Christchurch during the next 10 to 15 years.
- Draft Roads of National Significance Network Plan – identifies key supporting projects for the Roads of National Significance and the role New Zealand Transport Agency (NZTA) can play in the development and funding of transport improvements within Greater Christchurch.
- The Council and NZTA are signatories to the Urban Design Protocol (MFE) which provides a platform to make New Zealand cities more successful through quality urban design.

All these joint strategies, plans and studies are currently under review as a result of the recent earthquakes. The Council is working with the Urban Development Strategy partners to assess the impacts on the transport system as a result of the rapid development of new residential housing areas and communities to determine priorities for public transport and infrastructure development. Environment Canterbury is updating the Regional Passenger Transport Plan with planned completion in January 2013; and the UDS partners are working on a passenger transport study for the Greater Christchurch area. This Draft Plan is designed to be flexible enough to work with any new thinking in transport and land use that will occur of the life of the Plan.

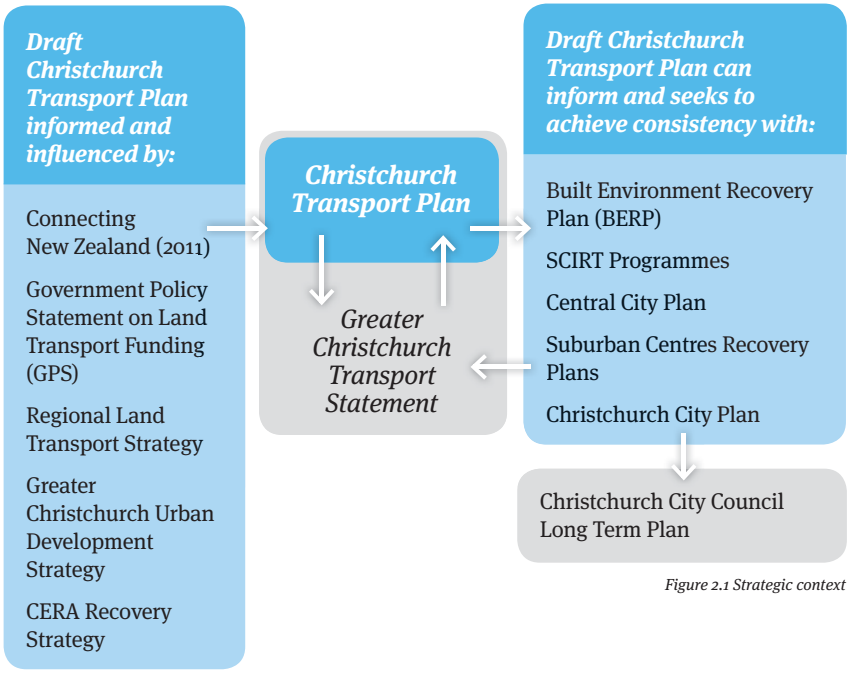


Figure 2.1 Strategic context

Vision, goals and outcomes

Vision

Keep Christchurch moving forward by providing transport choices to connect people and places.

Christchurch will have an efficient, integrated transport system offering accessible travel choices for everyone. The system will create vibrant commercial centres and thriving communities connected by a safe, resilient, affordable, healthy and sustainable transport network.

In the short-term, investment will be prioritised on recovery repairs and improvements to the road network. Improvements will provide better access by ensuring there is a well-connected, accessible cycleways and efficient road network. In the medium to long term, this investment will shift to deliver enhancements and changes to all networks; providing more attractive and safe transport choices for people of all ages and abilities. The Central City, commercial centres and neighbourhoods will be well connected by public transport, walking, and cycling routes and a network of roads.

Local, regional and national economies will be supported by efficient public transport corridors, strategic road corridors and clearly defined freight routes and hubs. Active travel will become an attractive alternative and a natural part of daily life. In the long term, with more choices, the transport system will become more resilient and able to address global, economic and environmental factors. The Draft Plan is a 30-year vision for integrated transport and land-use development and redevelopment. Improvements to all of the transport networks will allow easy movement between residential, employment, commercial, recreational and freight areas, as well as across the region.

Tell us what you think about the overall direction of the draft Christchurch Transport Plan.

Goals

To achieve the vision, the Draft Plan focuses on four goals:

Goal 1. Improve access and choice:

Delivering resilient transport networks with an emphasis on efficient road use, cycling, public transport and walking. Introducing a new road classification which recognises both the road function and the environments that the road passes through.

Create opportunities to develop a cycle network during the city's rebuild, to make it easier to use bicycles. This will include creating shared footpaths, developing dedicated major cycleways and key flagship cycleways that will support Christchurch to become a cycle city.

Goal 2. Create safe, healthy and liveable communities:

Adopting a safer systems approach. Transport actions which support the recovery of the Central City, suburban centres and new growth areas. Strengthening the integration of land use and transport planning through District Plan changes.

Goal 3. Support economic vitality:

Developing local freight routes to improve access to the airport, Lyttelton Port and freight hubs. Parking and congestion management to support the growth of commercial centres.

Goal 4. Create opportunities for environmental enhancements:

Building green infrastructure and adapting to climate change and peak oil by encouraging new technology and infrastructure enhancements.

Illustrative concept for the Christchurch Transport 30 year vision

Outcomes

The Draft Plan contributes to achieving a number of the draft 2013 Community Outcomes[2]. The relationship between the plan's vision, goals, objectives and outcomes is outlined in Appendix B.

Liveable City Community Outcomes

There are a range of travel options that meet the needs of people and businesses.

The transport system provides people with access to economic, social and cultural activities.

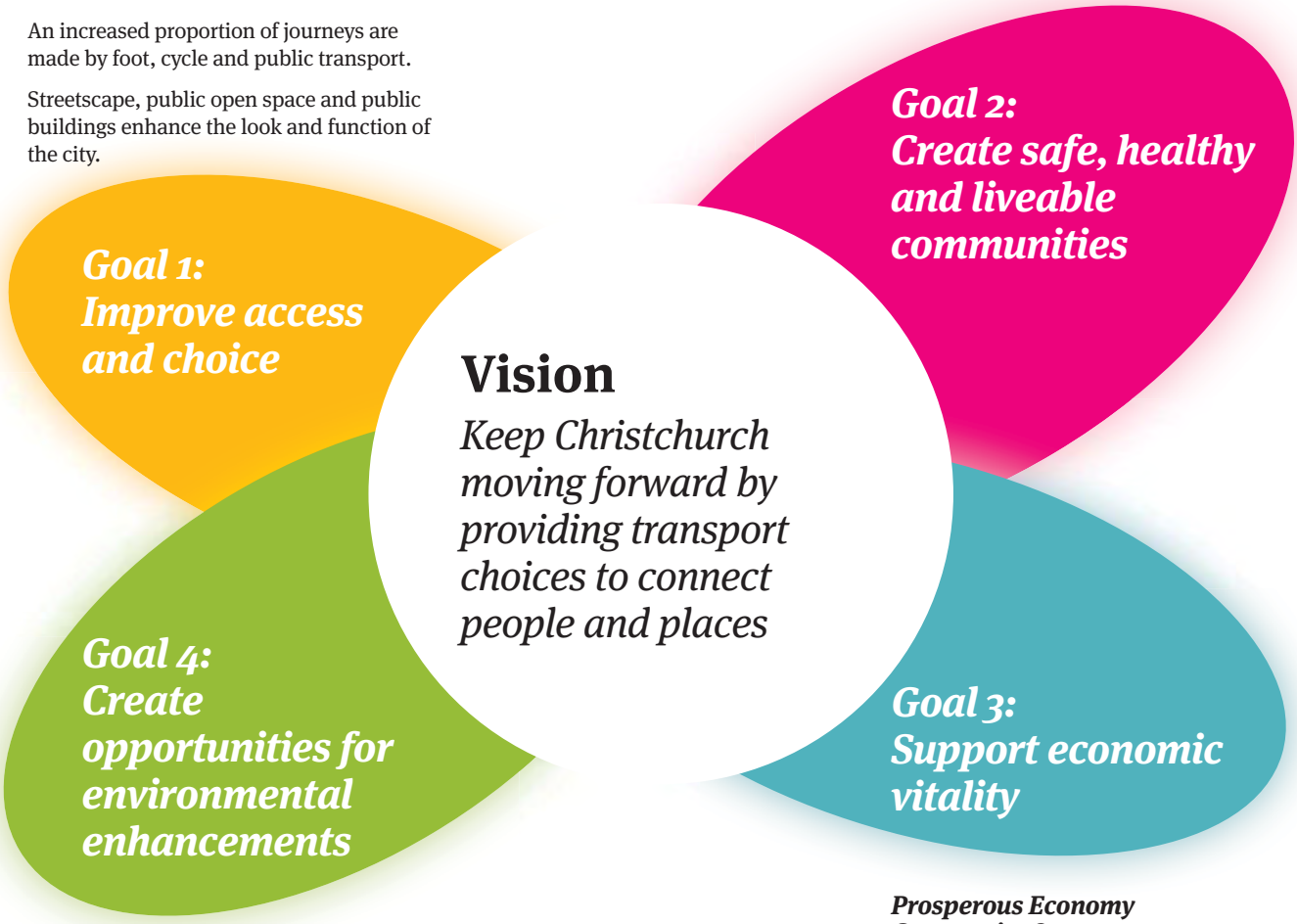
An increased proportion of journeys are made by foot, cycle and public transport.

Streetscape, public open space and public buildings enhance the look and function of the city.

Strong Communities Community Outcome

Transport safety is improved.

Risks to public health are minimised and injury are minimised.



Healthy Environments Community Outcome

Energy is used more efficiently.

Christchurch is prepared for the future challenges and opportunities of climate change.

Christchurch's landscapes and natural features are protected and enhanced

Water quality in rivers, streams, lakes and wetlands is maintained and improved

Existing ecosystems, indigenous vegetation and habitats are protected.

Prosperous Economy Community Outcome

Christchurch's infrastructure supports sustainable economic growth.

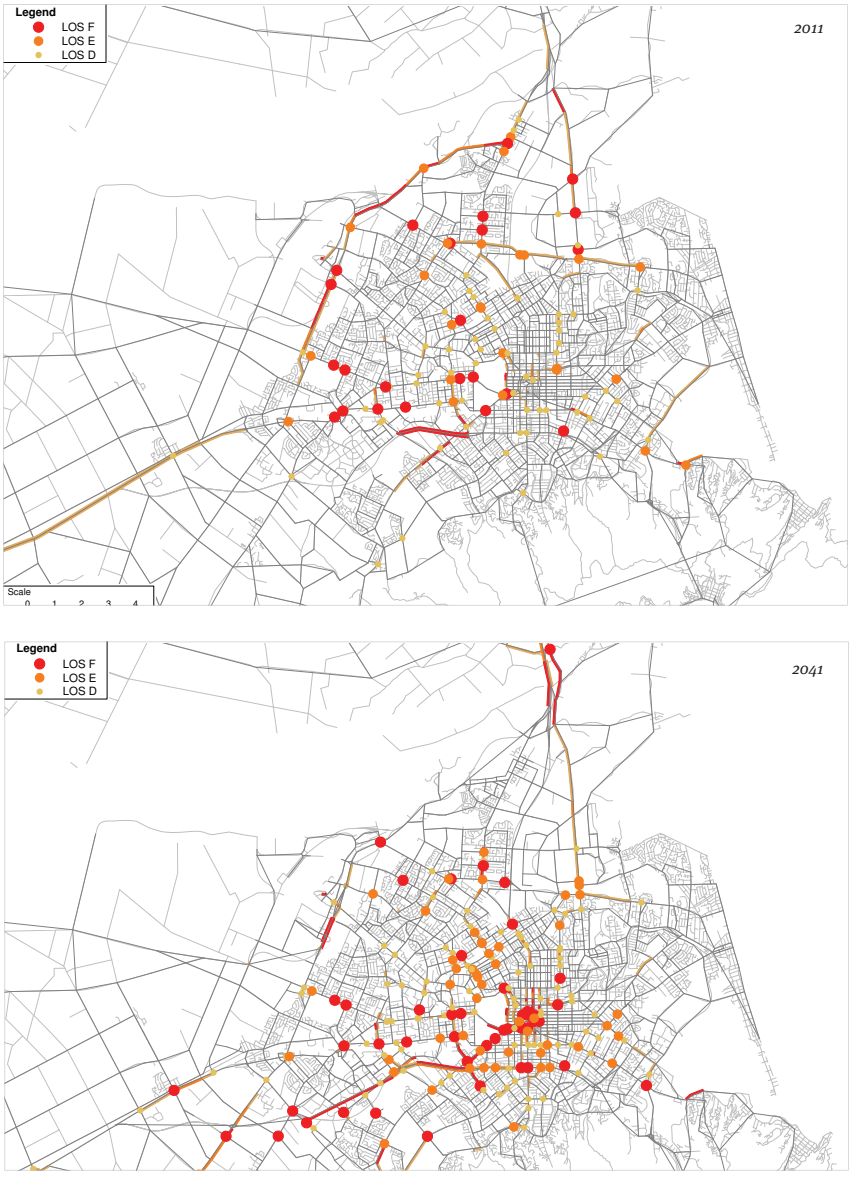
Tell us what you think about the 30 year vision and goals for transport in Christchurch.

Challenges

There are many challenges to achieving the vision for Christchurch's transport system. The earthquakes and changing land use travel patterns have increased congestion and a greater reliance on movement by private vehicles and trucks. In the future, the transport system needs to respond to population change, increasing travel demand, economic growth and environmental challenges.

Congestion

Private vehicle trips are growing at one per cent a year and freight trips at twice this rate. If current trends continue, by 2041 there could be a 30 per cent growth in the volume of traffic compared with 2010 levels (this assumes that the Greater Christchurch population recovers quickly to pre-earthquake levels). This will put pressure on the same areas of the network and result in delays similar to or worse than those experienced after the February 2011 earthquake, Figure 4.1. As areas of the city are rebuilt and traffic is diverted, more congestion is expected. Reducing congestion can provide a range of benefits, in particular savings in travel times and a reduction in vehicle operating costs. This will assist the economy to recover and function more efficiently and help achieve economic growth and improved productivity[3].



Predicted delay on roads 2041 compared to 2011 levels, afternoon peak (Christchurch Transport Model 2011)

Figure 4.1 Traffic Delay Maps

Legend

Level of Service D=Traffic is no longer free-flowing, with increasing delays

Level of Service E=Traffic flow is nearly at capacity and conditions unstable – potential for large delays

Level of Service F=Traffic demand exceeds capacity, very large delays

Travel patterns

Christchurch has developed as a lower density, radial city, with many communities having only 10 households per hectare. This type and form of land use development has significant impacts on the transport system. The Greater Christchurch Urban Development Strategy recognises this and supports a move towards a more compact urban form. Dispersed land use patterns are typically linked with high levels of vehicle ownership/use or vehicle dependence, while compact land use is more commonly linked with lower levels of car ownership/use and higher levels of active transport and public transport patronage[4]. The use of the private vehicles is the dominant travel option in Christchurch (72 per cent of all trips in 2009[5]) for the majority of people and businesses. Walking and cycling make up 24 per cent of all trips with public transport three per cent of all trips.

The purpose of trips influences the travel choice made. Of all the trips being made by residents the majority are for shopping or personal trips (32 per cent), and for social trips (31 per cent)[6]. The car is the main travel choice for these trips (85 per cent choose to drive). When the purpose of the trip is for work (18 per cent of journeys), 64 per cent drove or were a passenger in a car to work[7].

For the future wellbeing of the city, it is important that a range of attractive and efficient travel options are easily accessible to give people and business choice in the way they travel. Of all the trips made by residents, 40 per cent are less than 2 km in length, making these journeys ideal for walking and journeys of 1 to 5 km ideal for cycling. There are areas of the community, especially rural, for which the private vehicle is the only viable option.

Earthquake damage, recovery and resilience

A total of 1019 km (45 per cent) of the city's street network (carriageways, kerbs and channels, footpaths and cycle paths) has sustained significant damage; 42 kms of these are severely damaged. In addition, about six bridges are beyond economic repair, 15 require major refurbishment and another 50 medium to minor repair to make them serviceable. Load and speed restrictions are in place and some road bridges and foot bridges are closed. The most severe damage is generally located in the Central City, and eastern and southern suburbs. The repair or replacement of infrastructure is a priority for recovery. There are unique opportunities through the rebuild to learn from the earthquakes and improve the future resilience of the transport network.

Household and business relocation and growth

The earthquakes have affected the suitability of some existing urban areas to continue to be used for residential, community and business purposes within the short to medium term. The Red Zone includes land that is so badly damaged by the earthquakes it is unlikely it can be rebuilt on for a prolonged period. Damage and closure of the Central City has affected the 6000 businesses which were based there[8].

Accelerated growth of population and business activity has occurred in western Christchurch as people and businesses have, out of necessity, moved from the Central City and eastern suburbs where the earthquake damage has been most severe. An increase in business activity has been observed, particularly along Blenheim Road and in Addington, Riccarton, Hornby and at the airport. It is not yet known the extent to which such shifts will continue over the medium to longer term, or what the long-term impact of the earthquakes will have on the sub-regional economy and population growth. However, the settlement area (existing and planned) will not significantly change as, with the exception of Red Zone properties, most of the damaged homes are able to be repaired or rebuilt on their existing sites. Serious damage to land and built infrastructure has not been widespread and major parts of the Christchurch area are continuing to function well, although with heightened levels of activity.

The relocation of businesses and homes has impacted on travel patterns and the disruption of public transport services and damage to infrastructure has increased individual car use. Trip distances in the east have extended, while those in the west have reduced. There has also been an increase in cross boundary trips to the Selwyn and Waimakariri districts with more people having chosen to live in these districts, particularly following the earthquakes. These changes have resulted in a level of congestion on

the network similar to those predicted by 2041, especially in the west of the city. The loss of households in some areas will have implications on where and how roads are reinstated.

Since the earthquakes, land for some 9100 households has been rezoned in Christchurch. The recently operative Chapter 12A (Figure 4.2) of the Regional Policy Statement (RPS) provides for further greenfield growth, specifically the development of 41,370 households in greenfield locations within Greater Christchurch during the next 30 years. Major new growth areas are primarily located in the north/north-east and south-west of Christchurch. A recent review of the Christchurch Growth Model (which underpins the Urban Development Strategy and Chapter 12A of the RPS) suggests that short-term permanent household demand within Greater Christchurch area may be more in the range of 4000 to 5000. However, there is a clear need to provide for displaced households, given the uncertainty around longer term household demand, there are inherent risks and costs associated with an over supply of serviced land. Investing in infrastructure for new greenfield growth areas must also be balanced against investment that supports intensification of the existing urban area, including brownfield sites and within the Central City.

The location and pace of development will change travel patterns in the city. Travel patterns are already influenced by the urban form especially: increasing consolidation, new developments (Greenfield areas); changes in the Central City; access to key activity centres and commercial centres; and regional freight movement between industrial zones and the airport and Lyttelton Port.

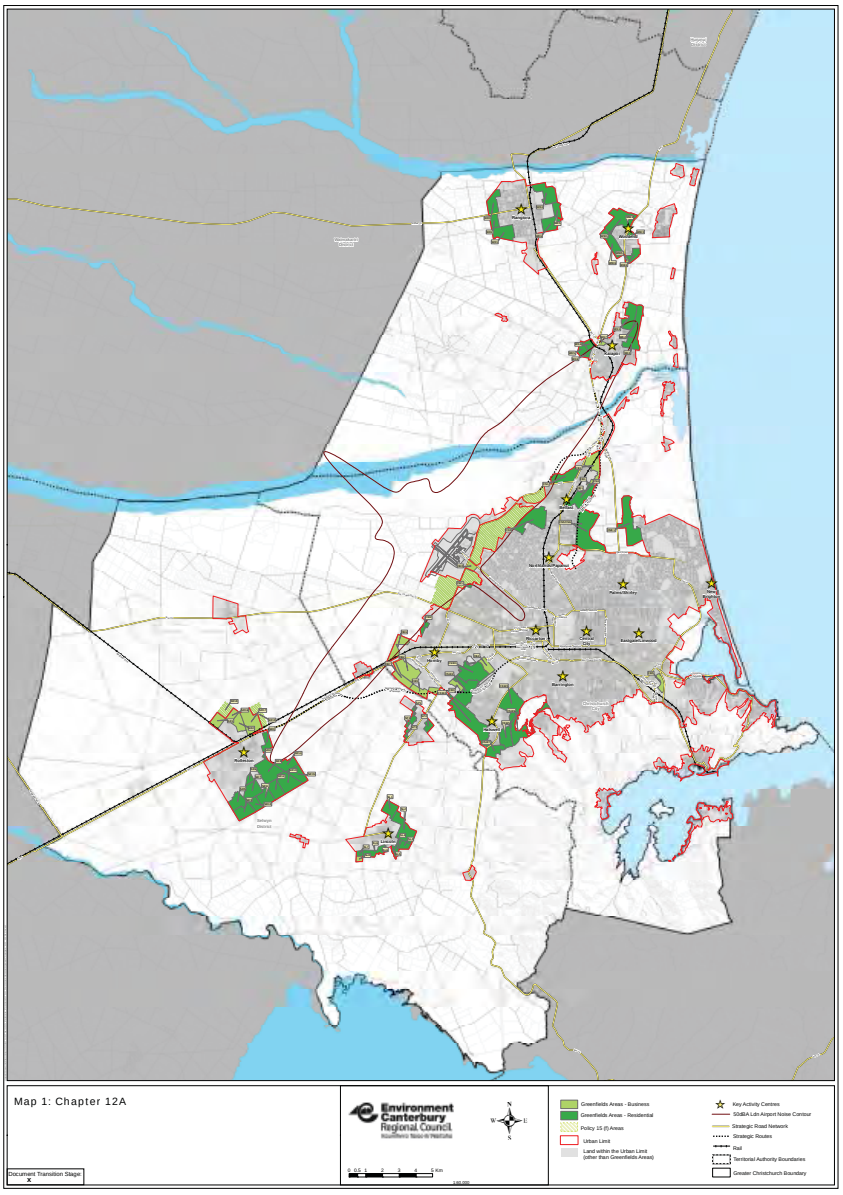


Figure 4.2 Growth areas, Regional Policy Statement Chapter 12A, October 2011

Planning for changing demographics

Christchurch's population and demographic composition is projected to change significantly during the next 30 years, which will present significant challenges to the transport system. Overall, the size and projected growth of the resident population has been affected by the earthquakes. Before the 2010–11 earthquakes, Christchurch's population was growing at a steady, although modest, rate. For example, in the four-year period ended 30 June 2010, Christchurch's population grew at an average annual rate of one per cent, with population gains from both natural increase (2200 per year on average) and net migration (1600 per year on average). The latest estimates for Christchurch indicate that the population has decreased by 8900 (2.4 per cent) in the June 2011 year (due to a net migration loss of 10,600, partly offset by a natural increase of 1700). The Waimakariri and Selwyn districts however continued to grow by 2 per cent and 3.9 per cent respectively. Overtime however, it is expected that the population growth and distribution will return to, or begin to head towards, the pre-earthquake projections.

Understanding the age structure of the city's population is important for the Council to plan for the services that will be required by the community. Christchurch's population is ageing and by 2041 more than 31 per cent of the population is expected to be aged over 60[9] (a 100 per cent increase). This will require changes to how the transport infrastructure and services are designed and provided, as with an ageing the number of people with disabilities is also likely to increase[10].

Christchurch has a diversifying population – culturally, economically and socially, partly due to the effects of the earthquake, and also to pre-existing and ongoing demographic changes.

Integrating new arrivals into the city, the shifting settlement patterns and the quality of life of its residents will be some of the issues that transport impacts on. Māori are the second largest ethnic group in Christchurch (7.2 per cent) and are often over-represented in low income and the most deprived areas. There are currently 161 other ethnic groups in Christchurch of which the Chinese, Samoan, and Korean communities are the largest, with a growing refugee community. These groups often have high rates of unemployment and are transport disadvantaged in comparison to the rest of the population. Population growth, ageing and growing cultural diversity will place increasing demand on the transport system in terms of providing accessible new infrastructure and desirable services.

Safety for all road users

People in the community regard improving road safety as a priority[12]. The number of fatal and serious crashes in Christchurch has fluctuated between a low of 159 in 2001 to a high of 222 in 2010. There are similar fluctuating trends in minor injury crashes[13]. In Canterbury, Māori (14 per cent) are more likely to be involved in road fatalities than non-Māori (9.7 per cent)[14]. In New Zealand fatalities and injuries are also disproportionately borne by those in lower socio-economic circumstances[15].

In 2010 there were 855 reported injury crashes in Christchurch City, of which 222 were fatal or serious, on local roads. In addition, on state highways there were 212 reported injury crashes of which 23 were fatal or serious. The number of urban injury crashes is significantly higher than those that occurred on rural roads. More than 80 per cent of all fatal crashes, 90 per cent of all serious injuries and 94 per cent of minor injuries, were the result of crashes in urban areas of the city. The social cost of all crashes in 2010 was $285.03 million.

Christchurch has several road safety issues which are of national priority[16]:

- Intersection crashes: During the five-year period 2005 to 2009, there were a total of 2643 fatal and injury crashes at intersections. In 2009 there were 105 intersection sites which have had more than five crashes resulting in injury over the last five years, including 30 sites with 10 or more injury crashes in the past five years[17].
- Young drivers: (those aged from 15 to 24 years) represent 36 per cent of injury crashes between 2005 and 2009. These resulted in 22 deaths, 375 serious injuries and 2290 minor injuries. Although alcohol and speed are recognisable issues with young drivers, the main issues involve crashes at intersection where young drivers are at fault (35 percent of crashes involving young drivers).
- Cyclists: Although cyclist injuries do not feature highly in the overall crash numbers at 12 per cent of all casualties, they made up 16 per cent of fatal and serious casualties in the last five years. The crash rate rose to a high of 174 in 2007 but has since reduced. A total of 96% of cyclist crashes were on urban roads.
- Motorcyclists: Casualties do not feature highly in the overall statistics with only 10 per cent of all casualties. However, they make up 20 per cent of fatal and serious casualties. The current trend of increasing levels of motorbike ownership is also likely to increase exposure to risk.

Health and wellbeing

A Health and Sustainability Impact Assessment conducted for this Draft Plan, Appendix A, identified that the most significant issues for transport is physical inactivity. Active travel, such as cycling and walking, has significant benefits for health by increasing physical activity. In Christchurch, only 39 per cent of residents are active every day[18]. Physical inactivity accounts for almost 10 per cent of New Zealand's 20 leading causes of death. Physical inactivity increases the risk of many chronic diseases, especially type 2 diabetes, cardiovascular disease, colon cancer and depression. Together, obesity and type 2 diabetes cost the health system more than $500 million per year. A five percent increase in physical activity can net a reduction of $25 million annually for health care cost (NZ Ministry of Health). Air and noise pollution from vehicles also have significant health impacts when people are exposed to them for long periods[19].

Environment

The use of vehicles and the development of transport infrastructure have significant impacts on the natural environment. Impacts include air pollution, dust, stormwater runoff, loss of productive land (soils), loss of flora and fauna, visual, noise and vibration intrusion. Vehicles are the largest emitters of carbon monoxide and nitrogen oxides. They also emit sulphur oxides, benzene and particulate matter, Figure 4.3. Given recent improvements in air quality as a result of reducing pollutants from home heating, in the future there is likely to be a greater proportion of particulate matter from vehicle emissions affecting air quality, especially during times of congestion and when vehicles are idling. High concentrations of transport-related heavy metals (which are toxic at low levels) have been found in the Heathcote, Avon and Styx rivers[20] after stormwater-run off. Transport-related noise is highest in the urban areas, prolonged noise exposure can impact on amenity values and health[21]. There are also significant opportunities for transport to enhance the environment, for example, to increase biodiversity transport corridors can also act as ecological corridors.

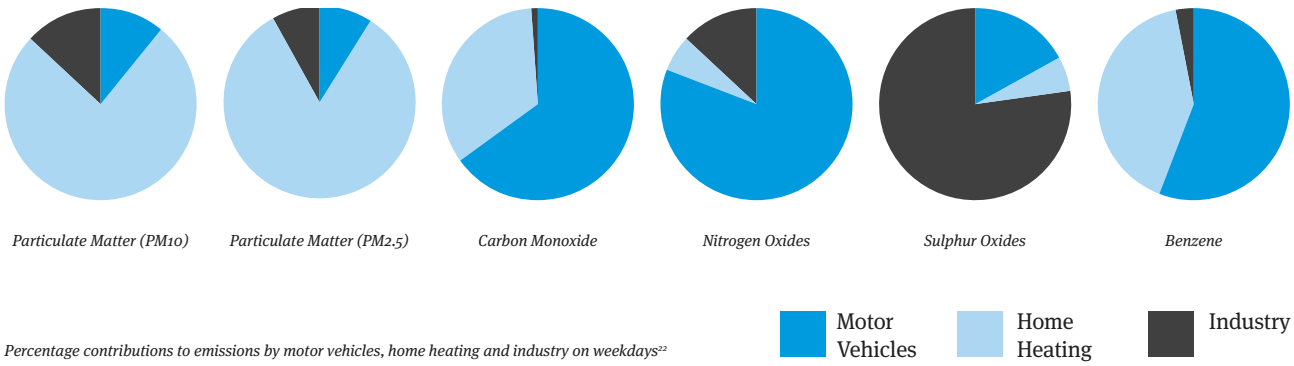
Climate change

New Zealand is one of the largest per capita emitters of greenhouse gases, only just behind the United States and Australia. In 2008, about 3.6 million tonnes of greenhouse gases were emitted from Christchurch. This is about 10 tonnes per person per year. Transport fuels make up around 67 per cent of these emissions. Changing the way we move around can make a significant contribution to reducing Christchurch's total greenhouse gas emissions[23]. The effects of climate change include rising temperatures, increased rainfall, sea level rise and storm events which in turn affect the resilience of transport infrastructure.

Peak oil

Transport is highly reliant on oil. New Zealand relies on imported oil which is vulnerable to fuel price volatility. Oil is a finite resource, as international oil supplies are limited, and in the long term as supply reduces oil prices will rise. This will have a significant impact on the affordability of oil-based transport options in the future, especially for private transport. The current cost to a household of owning and operating motor vehicles costs the region around $1.3 billion each year[24].

Figure 4.3 Air emmissions



Percentage contributions to emissions by motor vehicles, home heating and industry on weekdays[22]

Achieving goals

A transition from infrastructure repair and recovery to a more balanced system providing good transport choices to keep Christchurch moving forward.

To achieve the Plan's goals there must be a strategy for transition. The current focus is to replace and repair the existing transport system to support earthquake recovery and our commitment to improve the efficiency of our strategic road network and support the Roads of National Significance. Over time, the Council will lead the way with strong investment in public and active transport networks. To create vibrant, healthy and liveable communities a new road classification will be introduced that recognises the environment that surrounds a road. Network improvements will be promoted to reshape travel demand. Providing a balanced transport system will leave a positive impact on the environment and enable communities to respond to future changes in the economy, climate, oil prices and demographics. By investing in a broad range of transport options over time, the system can become more efficient and resilient. The illustrative concept below, demonstrates how the move from recovery to transition and then the long-term vision may occur. The goals will be achieved through delivering on the following objectives.

Goal 1: Improve access and choice

Objective 1.1: Use the existing road network more efficiently

Objective 1.2: Balancing the networks

Objective 1.3: Deliver high-quality information and education services

Goal 2: Create safe, healthy and liveable communities

Objective 2.1: Supporting recovery

Objective 2.2: Integrated transport and land-use planning

Objective 2.3: Safer Systems

Goal 3: Support economic vitality

Objective 3.1: Easy movement of and access to goods and services

Goal 4: Create opportunities for environmental enhancement

Objective 4.1: Reduce emissions and invest in green infrastructure and environmental enhancements

Short Term: Rebuild and recovery

Replacing damaged infrastructure, realising opportunities for enhancements, improving resilience, planning for and providing new infrastructure to connect growth areas and protecting future corridors. Short-term investments will support both recovery and, the move towards achieving the Plans vision. Planning and investigation for larger projects to enable implementation in the medium term.

- Replacing damaged infrastructure
- Prioritise essential connections
- Opportunities for enhancement
- Protect future corridors
- Investments support vision
- Planning for long term vision
- Embracing the opportunity to develop a cycle network

2012

Medium Term: Transition

Stronger focus on improving the safety, functioning and efficiency of the existing networks, while increasing investment in a broad range of travel options. Increasing parking management coupled with network efficiency services. Encouragement of more efficient and sustainable energy use and green infrastructure.

- Focus on efficient network
- Strong investment and choice
- Stronger parking management
- Encourage network efficiency and efficient vehicle use
- Improved level of resilient infrastructure

Long Term: Vision

Implementing improvements to public transport, walking and cycling. Building on the foundations set in the medium term. The efficiency of the existing network will be improved for the reliable movement of goods and people. Increasing focus on parking management, transport information and education, energy efficiency and green infrastructure.

- Strong focus on investment to improve public and active transport
- Network efficiency services
- Increased focus on management of parking and travel demand
- Energy efficiency and green infrastructure
- Increasing network resilience

The phasing of this transition also reflects the priorities identified in the Regional Land Transport Strategy and draft Central City Plan. The timing of actions for each phase will be informed by future monitoring and review of the Plan's implementation. Reviews will be scheduled to coincide with each Long-Term Plan.

Illustrative concept for achieving goals

2020 — 2042

Goal 1. Improve access and choice

Introduction

Goal 1: Improve access and choice

Increasing the availability of transport choices and carefully targeting improvements to strategic freight and traffic networks will improve the access and efficiency of the entire transport system.

The transport network has been challenged with the recent changes in travel patterns and demand. To improve and maintain connectivity and access across Christchurch, all of the networks (freight, road, walking, cycling, and public transport) need to respond to changes in population and employment, potential retreat areas, new development, rising energy prices and limited road capacity. The approach in this Draft Plan is to move towards one integrated transport network which provides optimum connectivity, good access to land and services and better transport choice within the constraints of available budgets. The challenge is to gain optimum value from these budgets for existing and new transportation networks and assets. These approaches in turn will improve the resilience of the network to future local and global events.

Christchurch currently has road assets consisting of: 2283 kms of roads, 413 bridges and 118 foot bridges[25]. This is a huge public resource which needs to be managed effectively.

The strategic road and freight network:

To ensure the longevity and efficiency of this network, the key is to protect, maintain and enhance the existing asset and, where appropriate, reprioritise the use of road space.

The cycle network:

To make Christchurch a cycling city and attract new users. The priority is to develop initiatives that ensure cycling is more attractive, safe and accessible transport option. This will include creating opportunites for shared paths, 'flagship', off-road cycleways and local cycleways.

The public transport network:

To increase reliability and attractiveness and support the recovery of the public transport network and protect corridors for the long-term is critical.

The walking network:

Greater importance has been placed on improving the quality of street environments, especially in the Central City, where evidence has shown the economic benefits of creating people-friendly environments. There is a significant opportunity to improve the connectivity and attractiveness of the walking network and improve accessibility of our commercial centres, services, schools and public transport.

What we plan to do:

- Develop a new road classification system
- Develop a new road priority tool
- Protect and enhance the strategic and freight network
- Develop a cycle network that makes Christchurch a cycle city
- Develop attractive and efficient public transport corridors
- Develop attractive and safe street environment for walking

Use the existing road network more efficiently

Objective 1.1: Use the existing road network more efficiently

One network for all users which uses road space more effectively.

A key focus for the Draft Plan is to find more efficient ways to use the existing road space to move more people and goods and services. Improving the efficiency of the entire road network will improve connectivity, access, choice and support economic vitality, while better recognising the importance of the communities which roads connect and sometimes pass through. Road space is a scarce public resource and one of the most valuable assets owned by the Council. This Plan recognises that road space needs to continue to support car travel and goods movements, while also better accommodating public transport, cycling, walking and reflecting adjacent land uses. In these ways, road space can positively contribute to the recovery of centres and communities to help make Christchurch a better place to live.

Christchurch's existing road space[26] has a limited capacity for growing car-based travel in the future, as was seen with growing congestion and increasing journey time uncertainties before the earthquakes. The earthquakes further highlighted these problems. There are opportunities to begin to make more of the existing road space by changing the way we think about and manage our roads and transport networks.

The actions to achieve greater efficiency on the road network are:

1.1.1 New road classification

1.1.2 Priority tool

1.1.3 Protect and enhance the road network

Illustrative concept of using the road space more efficiently

Action 1.1.1 New road classification

A new road classification will be introduced to change the way the Council manages road space. New road designs and ongoing operational management will integrate better with the surrounding land use and recognise that roads and streets have a wider function than just moving vehicles. This will give greater priority to people in the design of new streets.

The new classification will replace the road classification in the District Plan, guiding the design of streets to reflect the local environment, and placing emphasis on both people and vehicle movement. Streets will be designed to reflect this relationship, balancing the different needs and demands that users place on them. For example, where streets pass through commercial centres, there will be an increased emphasis on people; street designs could also be used to reduce speed, increase crossing facilities and pedestrian priority measures.

The new classification will give guidance to how the network should function, be designed and used. Figure 5.1 is an example of what the new classification framework could look like and more detail is provided in Appendix B. This example identifies both the link (movement function) and place types of streets in Christchurch. The classification would be used to influence the design and then operational management of road space, so that it reflects both the link and place types identified on the classification. The new road classification builds on the concepts already developed in the Draft Central City Plan. This introduces four extra local road categories to represent the local environment better. Similar road hierarchies have been developed overseas such as Link & Place in the UK and Smart Roads in Melbourne. Technical Appendix C provides more detail into the road classification and draft levels of service.

Tell us what you think about a new road classification that aims to create roads and streets that will better cater for both people and vehicle movement?

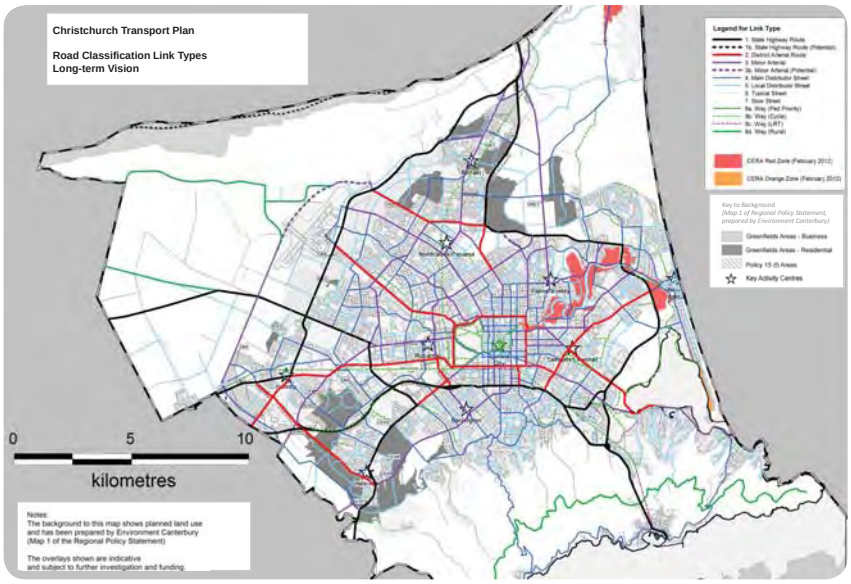


Figure 5.1 Examples of new road classification, map of link type classification

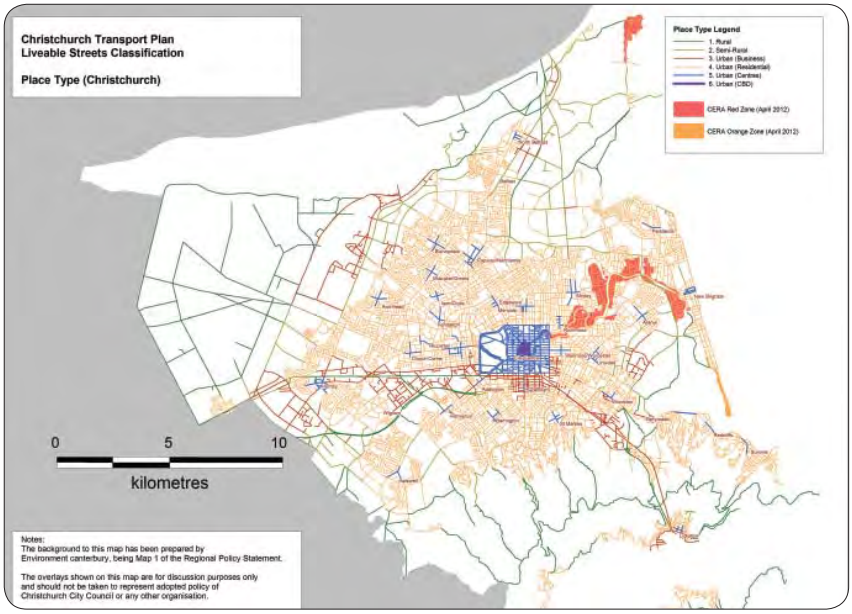


Figure 5.1 Examples of new road classification, map of place type classification

The principles for the road classification are:

Journey reliability on strategic roads, reducing conflict with adjacent land uses and other modes

Attractive streetscapes for walking, improving safety and reducing conflict with all other modes

Freight journey reliability on designated freight routes reducing conflict with adjacent land uses

Attractive cycling network, improving safety, connectivity, visibility and reducing conflict with all other modes

Attractive and efficient public transport corridors to enable journey reliability and provide good connectivity with other modes

Attractive commercial centres for people and business with good connections by all modes

To make more of the existing road space the activities are to:

Develop and adopt a new road classification; a new road classification will be developed further and incorporated into the District Plan and Infrastructure Design Standards. This will ensure future developments recognise the new classification and give guidance for road and intersection operational management and renewals across the city. The draft Central City Plan has already used the concepts of the new classification in the associated plan changes.

Streetscape Improvements; the Council will take leadership in implementing the new classification during infrastructure planning, rebuild, renewal and improvements. Where appropriate, streetscape improvements will be prioritised in the Central City, activity centres, suburban centres and new growth areas.

Tell us what you think... how important is the new road classification to guide the rebuilding and future design of roads?

Action 1.1.2 Priority tool

On some corridors and sections of corridors there are competing demands for road space – for movement (by trucks, cars, buses, cycles or by foot) and for place (frontage business, recreation and play). These competing demands can create conflicts within the road space. The corridors with the greatest conflicts are often on the busiest arterial routes, especially where they approach and pass through commercial centres or residential areas.

The priority tool is a mechanism for network planning that helps to alleviate conflict by assigning a greater priority to one type of movement (freight, public transport, general vehicles or active transport) while recognising the importance of other demands on that road, Figure 5.2. The network plans (strategic road, freight, public transport, cycling and walking) in objective 1.2 of this Draft Plan, the aim is to identify priority corridors for each movement type. Where a greater priority has been given to one type of movement, good alternative routes will be identified for other modes. In some cases, a mix of priorities might be identified; in these instances further corridor planning will determine the best design for these roads.

Figure 5.2. Concept of an intergrated transport network. Each mode will travel on a designated road - different roads for different purposes.

To manage conflict the activity is to:

Develop and adopt a priority tool; to assign a greater priority to one type of movement on busy corridors. The priority tool will be adopted to support the new road classification and changing road spaces on busy roads, and will be developed following adaptation of recognised international best practice approaches, such as Smart Roads in Victoria, Australia and Link and Place (Manual for Streets), United Kingdom.

Shared priority streets studies; further detailed corridor investigations will be undertaken to determine how a street should function to accommodate all of the user needs – public transport, cycling, people and vehicle movement.

Action 1.1.3 Protect and enhance the road network

Maintenance and operational management of the road network in Christchurch is essential to make it easy to move around, maintain efficiency and connectivity and to improve resilience. Activities will continue to focus on:

Road maintenance, rebuild, renewals and parking management; road maintenance and renewals are essential to ensure the quality and level of service on the existing network is retained where it is consistent with the role of that road in the new road classification. Traffic control systems and parking controls will be reviewed to support the vision by gradually placing less emphasis on efficiency for vehicles on all roads across the hierarchy, but instead efficiency improvements will focus on the strategic road and freight networks. The management of parking on our busiest strategic roads has a significant role to play in the efficiency of our total network. Where appropriate, local parking is a key part of network management and essential for the economic vitality of our commercial centres; however this does need to be better balanced against the vital movement efficiency needs of the strategic road and freight networks. Taxi priority parking space will be provided by taxi stands at key destinations around the city, including the airport, hospitals, public transport interchanges, commercial centres and at large community facilities. The new road classification and priority tool will be applied to change the way road space is managed, especially in commercial centres that adjoin key arterial routes. In some commercial centres, on-street parking may need to be better managed to ensure that short-term visitor parking is easily available but that commuter parking and expensive use of vital arterial corridor space is better controlled.

Tell us what you think... how important is the continuation of road maintenance and renewals?

Road upgrades; to keep Christchurch moving, new infrastructure is essential to improve access to the airport and Lyttelton Port, cross boundary connections and to connect new commercial and residential growth areas in the city. Upgrading road infrastructure with some long-awaited improvements to key strategic routes will be needed early in the Plan's implementation to relieve communities of through-traffic and improve access to commercial centres. The need for new infrastructure in growth areas and to support growth is recognised within the Urban Development Strategy, Christchurch Rolleston and Environs Transportation Study, the South-West Area Plan and Belfast Area Plan and is reflected in the New Zealand Transport Agency (NZTA) Roads of National Significance (RONS) programme. Increasing electronic messaging on the road network will also help to improve efficiency of vehicle movement.

Improving resilience and reducing risk; a programme of natural hazard mitigation and improvements to the transport infrastructure will improve the future resilience of the network. The programme will identify the vulnerabilities of infrastructure and strategies for reducing risk, improving readiness, response and recovery.

Balancing the network

Objective 1.2: Balancing the network

Creating one network with investment in strategic roads, cycling, public transport and walking.

The network will improve access and choice by rebuilding and maintaining our existing networks, adding to strategic network capacity for traffic and freight, while at the same time looking to capitalise on opportunities to improve the public transport, cycling and walking networks. Some of these improvements will happen on the state highway network, while many will take place on the Council-controlled local roads. During the 30-year implementation of this Plan, the aim is to create a more balanced network that offers travel choices and a greater efficiency for the movement of goods and services. Freight connections will be made more reliable between the airport and Lyttelton Port and the state highways. Christchurch will have a high quality, reliable and affordable public transport network, the increased reliability of services offering residents genuine choice. The Council will investigate the potential for rapid transport services to compliment bus-based services across the city and beyond. Christchurch will also become a top cycling city, offering a transport choice which is attractive, safe and an accessible. A culture of walking will develop with integrated, connected and inviting infrastructure, and the Council will deliver better connectivity and accessibility for people with mobility impairments. It is recognised that a good transport system supports tourism, making is easier for visitors to move around the city. The future network for roads, public transport, cycle and walking are in Figures 5.5 to 5.9. These indicate the long term vision for the transport network. The routes illustrated are indicative and the exact location, street design and delivery of these will be part of further detailed design and subject to public consultation as part of the implementation of this plan.

The actions for one network are to integrate the:

1.2.1 Strategic road network and freight network

1.2.2 Cycle network

1.2.3 Public transport network

1.2.4 Walking network

Strategic road network and freight network

Action 1.2.1 Strategic road network and freight network

Designated strategic roads and freight routes will improve journey reliability and efficiency; and reduce conflict with adjacent land-use.

Christchurch has a strong strategic road and freight network that serves an important role for inter-regional and longer distance trips. The network provides both access to key destinations across the city and connectivity for freight to the ports, airport and commercial centres for the distribution and delivery of goods by air, sea and rail. The concept of the strategic network is illustrated in Figure 5.3. The network of major arterial routes will be planned, designed and managed to maximise journey efficiency and reliability while supporting the land uses that surround the network.

A core part of the strategic road network, Figure 5.4, are the state highways, which during the life of this Plan, are expected to undergo significant expansion and enhancement to the south, north and west of the city. To support the state highways, there will be accompanying enhancements to the local roads managed by the Council. Significant improvements are needed to these strategic networks to mitigate growing network congestion and journey reliability problems, some of which have been exacerbated by changes in travel patterns as a result of the Christchurch earthquakes. The state highway network also has a focus on providing national and regional access to Lyttelton Port and the Christchurch international airport. The strategic freight network is shown in Figure 5.5. The actions for the freight network are in Goal 3: Supporting Economic Vitality.

The Government is investing in improvements to the state highways through the Roads of National Significance programme. The programme will improve the reliability of journey times by increasing the capacity and safety of State Highway 1, extending the southern motorway to the south west and building a new northern arterial road, offering relief to the busy Main North Road through Belfast. The Council is committed to enhancing the arterial connections to the state highways to complete the overall strategic network.

There will be a seamless management of the strategic road network between the Council, NZTA and UDS Partners. This will be founded on a one-network approach to network management.

A set of principles provide guidance for the Council to plan, fund and implement strategic road projects. In summary these are:

- Land use and transport planning will be integrated wherever possible to achieve optimum integration with the Roads of National Significance, ensuring these offer maximum value for money and support for the Christchurch economy. A Freight Management Package will be developed to ensure that strategic freight movements to the port, airport and key freight hubs make maximum use of the available strategic network, minimising wherever possible the effects of unnecessary and undesirable freight traffic on the most unsuitable local road networks;
- Travel demand will be managed on and near the Roads of National Significance. A Travel Demand Management Programme will be implemented jointly between the Council, NZTA and UDS partners to ensure maximum effectiveness and efficiency is gained from the planned programme of strategic network capacity enhancements.
- The Roads of National Significance will be designed and managed as safe multi-modal corridors. The completion of the current package of proposed improvements is an early priority for this Plan; and
- Roads of National Significance will exemplify best practice environmental planning and context sensitive urban design.

To deliver the strategic road network, activities will focus on:

Local connections; local road and intersection improvements to provide reliable connections to the motorways and key activity centres. While the main function of the arterial roads is efficient movement of vehicles and freight, it is also important that these are well integrated with local walking, cycling and public transport connections to avoid community severance and promote wherever possible, improved modal choice. Careful management of the local connections to the arterial road networks will help to ensure that the downstream effects of strategic road improvements are minimised and/or mitigated.

Cross boundary connections; work with UDS partners to ensure a one network approach and that efficient connections are maintained and enhanced between Christchurch and its adjoining neighbours (Selwyn and Waimakariri districts) to provide one network that supports the Greater Christchurch area and its economy. This includes strategic connections by road, walking, cycling and public transport and progress with the implementation of key projects in the Christchurch Rolleston and Environs Transportation Study (CRETS).

Directional signage; standardise the hierarchy and placement of transport signage to improve the legibility of the strategic transport network for freight and inter-regional movements, as well as for major events. This is discussed further in the economic vitality goal.

Travel demand management; the motorways and key arterial routes should be supported with measures to reduce the reliance on single occupancy vehicles. A programme of measures will be jointly established by the UDS partners and implemented to commence with the planned extensions and enhancement of the local motorways network. Measures may include both operational and infrastructure projects linked to behaviour change programmes; for example intelligent transport systems, variable messaging system, high-occupancy vehicle lanes, improved parking management, pricing, park and ride and area wide information services.

Figure 5.3

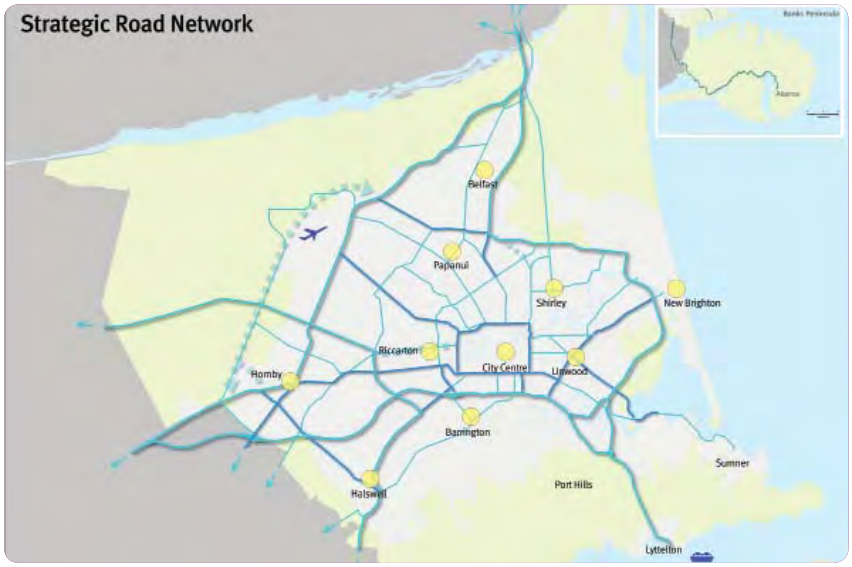


Figure 5.4

Legend

- State Highways
- District Arterial routes
- Minor Arterial routes
- Key activity areas
- Neighbouring Districts
- Future Christchurch urban limits
- Future route to be investigated

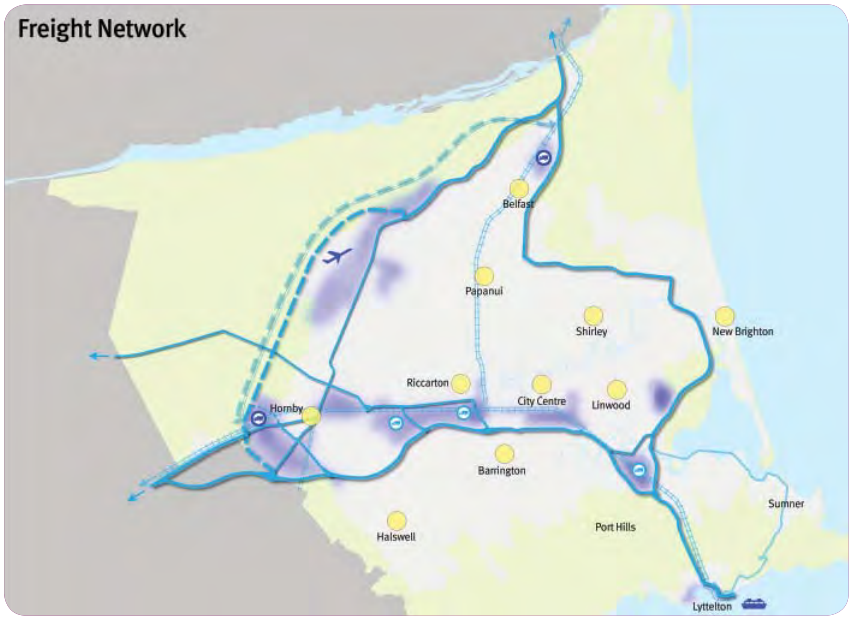


Figure 5.5

Legend

- Strategic Freight route
- Potential Strategic Freight route
- Local Freight route
- Potential Strategic Freight route
- Freight-supporting route
- Existing rail
- Potential Future Freight route (rail)
- Existing/Future industrial area
- Existing freight hub
- Future freight hub
- Key activity areas
- Neighbouring Districts
- Future Christchurch urban limits

What we plan to do:

- **Local connections;**
  improve local road and intersections to provide good connections to the Roads of National Significance (State Highways) and improved access to the key activity centres
- **Cross boundary connections;**
  work with neighbouring districts to improve connections between Christchurch, Selwyn and Waimakriri by vehicle, public transport, cycle and walking
- **Directional signage;**
  improve signage to make it easier to move around the city
- **Travel demand management;**
  a programme to improve the operation and use of the roads which reduces the need for future road upgrades

Tell us what you think... how important are new roads to connect state highways and new residential areas?

Making Christchurch a cycle city

Action 1.2.2 Cycle network

The Council has a unique opportunity to foster a cycling culture in the city and to develop a connected cycle network following the earthquakes.

Christchurch is an ideal city for cycling. It is flat and its grid network is a key feature. After the February 2011 earthquake in particular many Christchurch people found cycling was a convenient way to get around the city. The Council now has a chance to build on this shift in attitude by making some fundamental changes to the city's cycling infrastructure as the city is rebuilt. Ensuring the city is more cycle-friendly is also a positive way the Council can make a difference to the health and wellbeing of its residents.

The Council's priority will therefore be to develop initiatives that ensure cycling is a more attractive, safe and accessible transport option for residents. The focus of this Plan is to encourage more people to cycle for trips less than five kilometres, to encourage more people to begin cycling and to make it easier for people who already cycle to continue to do so.

The Te Rewa Rewa bridge on the New Plymouth award winning coastal pathway.

This will include:

- Creating safe cycleways that will encourage new users.
- Embracing the opportunity to develop a cycle network during the city's rebuild, which will make it easy for people to use bicycles.
- Creating opportunities across the city for shared footpaths. These could be shared by a number of users, for example people cycling and walking, and will provide improved access for cycling to key community facilities such as schools.
- Developing a cycle network with different types of cycleways to cater for all cycling abilities.
  - Developing dedicated major cycleways across the city, which cater for all abilities and provide a link to popular destinations.
  - Creating key 'flagship cycleways' that will make a strong statement about Christchurch's cycle city status and will encourage people to return to cycling.
  - Improving local cycleways across the city so they are continuous and people cycling are more visible among other traffic, increasing their safety.
  - Providing recreational cycleways for people of all abilities.
- Supporting a cycling culture by providing bicycle parking facilities, cycle hire schemes and a targeted education and promotion programme.

Park to Pier cycling event Christchurch

Encouraging Christchurch residents to cycle

The importance of cycling during the rebuild of Christchurch was a strong theme raised during public consultation on the draft Central City Plan.

As a transport choice, people cycling can travel faster and further than walking. Cycling offers more reliable journey times than motorised transport for short journeys[27]. Fifty per cent of all car journeys in Christchurch are under five kilometres[28].

There are many reasons why Christchurch residents should be encouraged to cycle for short trips and for recreation. These include improved health and wellbeing through increased physical activity; reduced congestion and energy dependence; reducing the need to build new roads; reduced parking problems and costs; greater and more equitable transport choice; increased social interaction; and community resilience. The health benefits of active travel are well recognised and documented in the Health Impact Assessment (Appendix A).

Around 2.2% of all household trips in Christchurch are by bicycle[29]. Figures show that 15% of people regularly cycle, and a further 32% are seriously thinking about cycling[30]. In a nationwide study, potential cyclists strongly stated that they wanted to travel separately from motor vehicles and to be able to cross safely at intersections[31]. Improving the visibility of cycling and providing good cycling infrastructure is needed to achieve high levels of cycling.

Development of the cycle network will be prioritised during the 30 year period of the Plan.

Creating an effective cycle network will require:

- Implementing the three parts of the cycle network (major cycleways, local cycleways and recreational cycleways).
- Improving cycling facilities.
- A targeted education and promotional campaign.

The Council will work with the community to develop more detailed options for the networks. Funding for preferred options will be part of the Council's next Long Term Plan (LTP).

Major cycleways - separated and off road cycleways

Major cycleways will be designed for bicycle users of all abilities, offering a safe, enjoyable experience that will encourage people to continue cycle.

These cycleways will ensure people cycling are separated from high volumes of traffic, increasing their safety, and showcase the city's many attractive green spaces.

The North Railway to City Route is an obvious example of a major cycleway but other routes could include a cycleway from the city to Sumner and along the Avon River. Cycleways may also offer direct links between popular destinations including the university and key activity centres such as Papanui. They will be well lit, the pathways will be wider and there will clear signage. People using the cycleways will also have access to bicycle parking facilities at all destinations.

A number of these cycleways will be identified as 'flagship cycleways' and will make a strong statement about Christchurch's commitment to cycling.

The concept for these cycleways is illustrated in Figure 5.8.

Given the layout of Christchurch's road network there will inevitably be places where cycleways will need to cross arterial roads. Safety measures will be implemented where this occurs.

Residents will be encouraged to use major cycleways through targeted education and promotion. Some routes may undergo transitional improvements before more permanent improvements occur to ensure cycling is more visible in those areas.

Tell us what you think... how important are major cycleways with a higher level of separation and safety and where should they be?

Photo courtesy of Tim Church

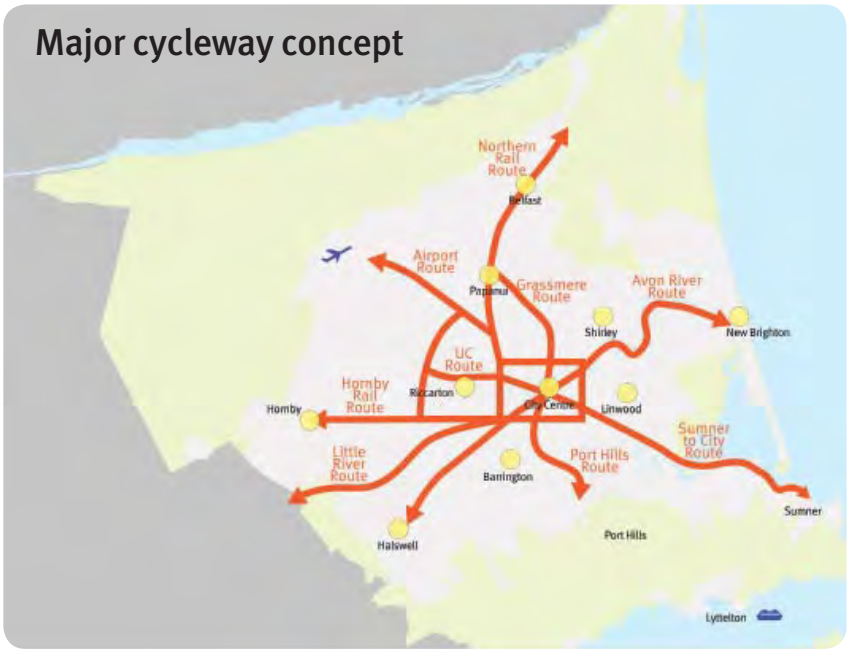


Figure 5.8

Local cycleways - shared paths and cycle lanes

Local cycleways will provide safe connections for people who want to access the major cycle routes and will offer most school pupils in Christchurch a safe environment in which to cycle.

Routes will be either off-road shared walking and cycling paths, on-road cycle lanes or follow quiet local streets. Greater consideration will be given to international best practice standards to make them safer. Shared paths will make the best use of the road space, providing safe connections off the road, making it easy for children to cycle to school and to other destinations around the city.

Other improvement works will focus on completing existing cycle lanes and filling in the gaps in the network, safety improvements at pinch points and upgrading sections with international safety and design standards. In the future, new cycle lanes could be located between footpaths and parked cars rather than between parked cars and carriageways, cycle lanes will be more visible and in some places there will be intermittent rumble strips between cycle lanes and traffic to stop vehicle encroachment. Some bicycle users who are confident cycling on the road will prefer the quiet local streets to reach their location.

To reduce dangers to cycle users at intersections appropriate safety measures will be introduced at crossing points. The local cycle network will allow people to cycle more safely with clear signage to make moving around easy.

How local cycleways will fit into the transport network is illustrated in Figure 5.9. The exact location of these routes are indicative and will be further investigated through the implementation of this Plan.

Photo courtesy of Damon Rao

Figure 5.9

Key recreational cycleways - off-road paths

Recreational cycleways (shown in Figure 5.10) will be visually attractive, mostly off-road routes that will take bicycle users through parks and along the coast. They will connect some of the city's recreational areas and will be wide enough to ensure they are safe for people of all cycling abilities, including those who cycle for sport and those who cycle for leisure. These cycleways will encourage new people to cycle and others to return to cycling.

There will also be some on-road recreational cycleways, for example Summit Road and the Halswell to Tai Tapu route. Safety improvements will be made to these cycleways and bicycle user needs will be considered in all future changes.

Supporting the cycling network

The development of the new cycle network will be supported by:

Providing facilities, education and promotion: the provision of cycle parking, cycle hire schemes and other cycle facilities will support the network development. A targeted education and promotion programme will complement infrastructure improvements to raise awareness about cycle safety and illustrate the benefits of cycling.

Infrastructure Design Standards and District Plan: The Infrastructure Design Standards and policies in the District Plan will be reviewed to reflect contemporary cycle standards. There will also be a focus on improving provision for cycling on non-designated routes. This will mainly include improved road design. Improving maintenance of cycling infrastructure is important for enhancing the network's longevity.

Auckland City bike hire

Legend

Figure 5.10

- Major cycleways
- Local cycleways
- Key recreational cycleways
- Education
- Existing rail
- Key activity areas
- Neighbouring Districts
- Future Christchurch urban limits
- Connecting to neighbours
- University and CPIT

What we plan to do:

- Develop a flagship cycleway to encourage people to cycle
- Make opportunities for shared paths during the rebuild phase
- Develop a major network of separated cycleways
- Develop a continuous network of local on-road cycleways
- Develop key recreational cycleways
- Provide cycle facilities such as cycle parking and directional signage

Public transport network

Action 1.2.3 Public transport network

Attractive and efficient public transport corridors to enable journey reliability and provide good connectivity with other modes.

Making public transport more attractive to people will enhance the efficiency of the road network and reduce the number of commuter trips by car. The earthquakes severely affected public transport services and patronage in 2011, the effect of this on the road network was evident in the severe congestion across the city as more people took to their cars. The system is recovering but further investment is needed to attract more people to use public transport, this in turn will help to improve the efficiency of our roads.

Photo courtesy of Gehl Architects

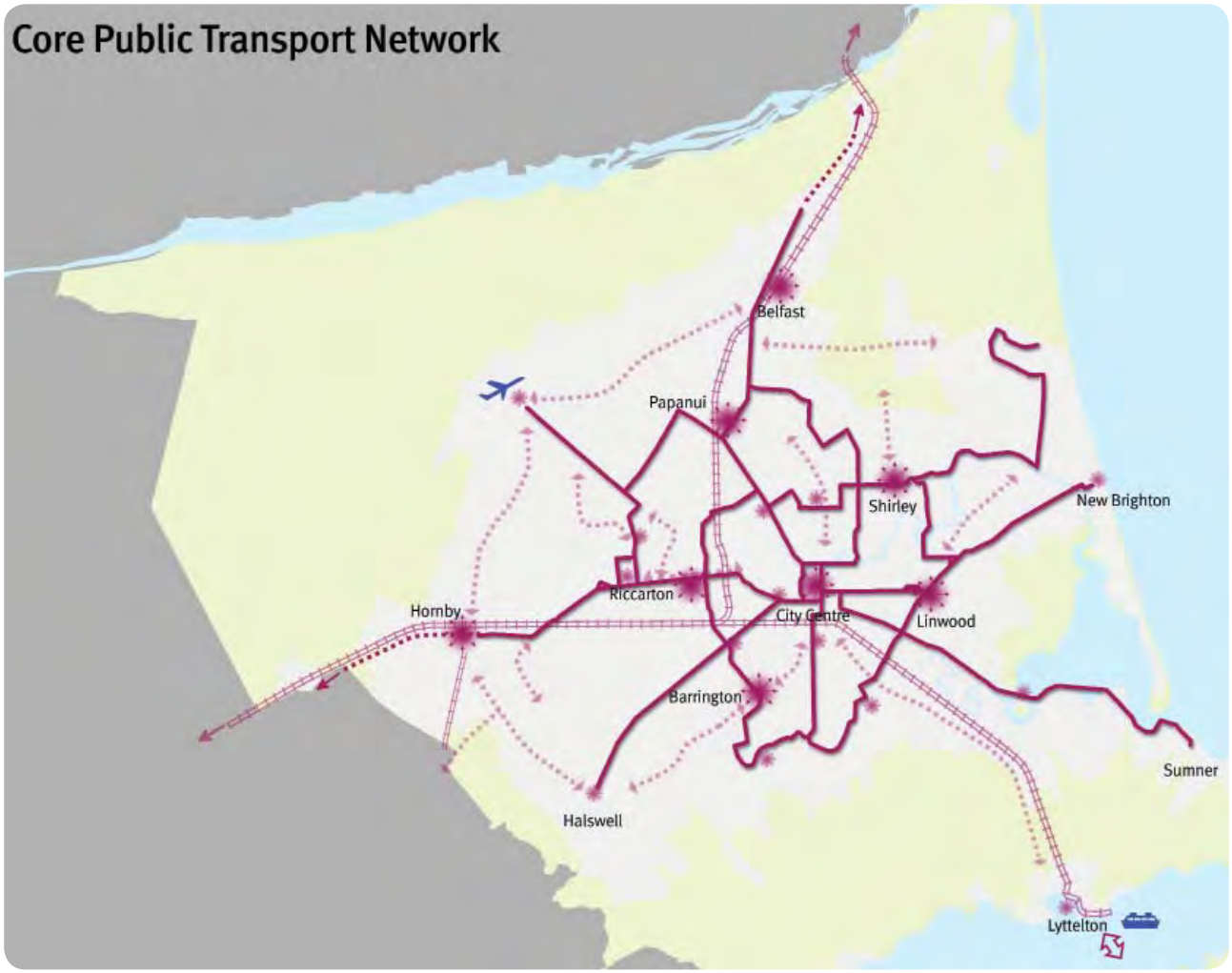
To provide attractive public transport with good connections to key activity centres, investment is needed in quality infrastructure which improves the priority and reliability of services and make it easier to change services. The concept of the public transport network is illustrated in Figure 5.6. The Regional Land Transport Strategy (2012-2042), the Regional Passenger Transport Plan (being updated in 2013) and Greater Christchurch Metro Strategy set a clear direction for public transport within Greater Christchurch. This recognises that public transport services will play a more significant, and increasingly important, role in the transport system. Focusing services and investment in developing quality infrastructure and priority measures along core corridors and strengthening cross boundary connections will make public transport an increasingly attractive option. These core services will be supported by local services through the provision of good interchange facilities.

Integrated public transport and land use planning decisions can transform the development potential of cities. While it is difficult to measure the economic benefits from investment in rapid transit (passenger rail or light rail or dedicated bus ways), research has shown that every dollar of investment could return two to three dollars in property investment[32]. Increasing the reliability and attractiveness of public transport will boost patronage, lead urban regeneration and help to manage future congestion. Further analysis into these potential benefits in the Christchurch context is essential. Public transport corridors need to be protected early to provide space and certainty for future rapid transit. Public transport will be transformed through the use of rapid transit, public transport priority measures, high-quality interchanges and super stops. The network needs to be fully integrated with walking, cycling, taxis and parking facilities. Reliable and frequent public transport is critical to providing people with access and transport choice.

The introduction of quality public transport infrastructure, such as public transport priority, will improve travel time reliability for public transport, thereby increasing its attractiveness relative to private vehicle travel. Public Transport priority measures are techniques used to give priority over general traffic.

Figure 5.6

Tell us what you think... how important is public transport infrastructure (bus stops and interchanges) and targeted priority measures (for example bus gates and bus lanes



Legend

Figure 5.7

- Core Public Transport routes
  These are the routes that provide higher-frequency services (not all public transport routes have been shown, for clarity)
- Possible Future routes
  (subject to investigation)
- Connections to neighbours
- Existing rail
- Ferry connection
- Regional services
- Neighbouring Districts
- Future Christchurch urban limits
- Connection points

To transform public transport the activities are:

Rapid Transit:

The UDS partners will develop a Public Transport for Greater Christchurch Study, including heavy rail, light rail, bus ways and bus. The study will consider alternative land use scenarios, such as increased density, to support the greater uptake of public transport, as well as the economic benefits of different forms of public transport. The study will consider if public transport has a role to support the regeneration and economic development of the Central City and recovery of Greater Christchurch. The investigations will take into consideration all previous UDS studies.

Protect corridors:

Identify and prioritise corridors to be designated and protected now to provide direct connection for rapid transit to the Central City, growth areas, commercial centres and to surrounding districts. The core public transport corridors are indicated in Figure 5.7. Once the rapid transit investigation has progressed, the next priority is to protect the future corridors. The planning and development of new growth areas should integrate the corridors into their design. Future growth will influence the phasing of infrastructure so that public transport services can be provided as new demand areas grow.

Quality public transport infrastructure and priority:

The Council will work with Environment Canterbury (Regional Public Transport Plan) to support the recovery of frequent, reliable and attractive public transport services. Investment in quality measures, like public transport priority, will improve the reliability of cross boundary connections and connections to the Central City and other commercial centres. Priority measures are the collective term used for a range of traffic management measures where the delays and unreliability of public transport caused by physical constraints and other vehicles are removed or reduced. A variety of such internationally tested measures include bus lanes, bus borders, bus gates, bus signals and bus stop improvements. Priority measures could precede the transition from bus transit to rapid transit.

Connection points (super stops, interchanges and bus stops):

A network of connecting points such as super stops (on-street stops where you can transfer between services) and interchanges (larger, off-street, high-quality transfer points) will be established where shuttle services meet with core services. The location of connection points are indicated in Figure 5.7. In the short term, super stops will be implemented to support the recovering bus system. The location of interchange sites will be reviewed before interchanges are developed in the medium to long term. The interchanges will ensure easy transition between bus services. High demand bus stops (on-street stops) will be gradually upgraded with real-time information (talking and visual), quality shelters and seating. Accessibility will be an integral component of public transport with improved walking and cycling access to stops and cycle parking facilities at stops.

Park and ride, parking and taxis:

Strategically located park-and-ride sites will be identified and established, working with UDS partners and neighbouring districts to provide sites in the Greater Christchurch area which support core public transport routes. Parking management will be used, where appropriate, to support the implementation of public transport corridors (parking actions are covered in Goal 2). Taxi priority parking space will be provided for taxi stands at key destinations around the city including the airport, hospitals, public transport interchanges, commercial centres and at large community facilities.

What we plan to do:

- Investigate rapid transit
- Protect potential public transport corridors
- Provide quality public transport infrastructure and priority
- Develop a network of connection points (superstops, interchange and bus stops)
- Develop park and ride and parking for taxis locations

Walking network

Action 1.2.4 Walking network

Attractive streetscapes for walking, improving safety and reducing conflict with all other modes.

The Council will take leadership to build a culture of walking with a focus on creating vibrant commercial centres which are attractive to spend time in. Twenty-two percent of all trips in Christchurch already involve walking. In the future walking will become the easiest and most attractive choice for short trips (less than 2 km), especially for walking to and around the commercial centres. The concept for walking is illustrated in Figure 5.11.

All trips start or end with walking, whether it is from the car or bus stop. Walking is a healthy and affordable choice for everyone. Safe, attractive and connected walking facilities will make walking a more inviting choice. Walking facilities need to be legible and well integrated with street environments. Connectivity with commercial centres, neighbourhoods, public transport and parking facilities is important to enable door-to-door journeys. There will be an increased focus on building and maintaining partnerships with leaders in pedestrian design, safety, planning and programming. Priority will be given to improving connections between communities and schools, super stops, commercial centres and car parks.

To build a culture of walking the activities will focus on:

Design criteria and streetscape plan:

Will be developed and used to identify where improvements to existing facilities are needed. The design criteria will enable walking to be embedded into the design of new growth areas and developments. A streetscape plan will be developed to guide streetscape improvements across the city, in line with the Central City Streetscape Plan.

Walkable centres:

The Council will seek opportunities to lead innovative walking initiatives to create vibrant commercial centres. The focus will be to support the recovery of suburban centres. Commercial centres will be designed for people. Streetscapes will have attractive footpaths, traffic will be slowed and pedestrians will be encouraged to linger and relax. Infrastructure improvements will be implemented within a one to two kilometre radius of commercial centres to improve the walking environment, as indicated in Figure 5.12. The walking links radiating from these centres can then be improved based on walking demands, other transport functions and purpose.

Core walking routes:

A programme will be developed to improve connectivity and implement core walking routes which will be separated from cycle facilities. The first step will be to focus network planning on walking. A map of existing core routes and quality information will inform the improvements and development of future connections. The programme will include a network of routes connecting commercial centres, greenspaces, parks and urban spaces. All routes will be attractive, appropriately signposted and well lit to ensure pedestrian safety.

Photo courtesy of Gehl Architects

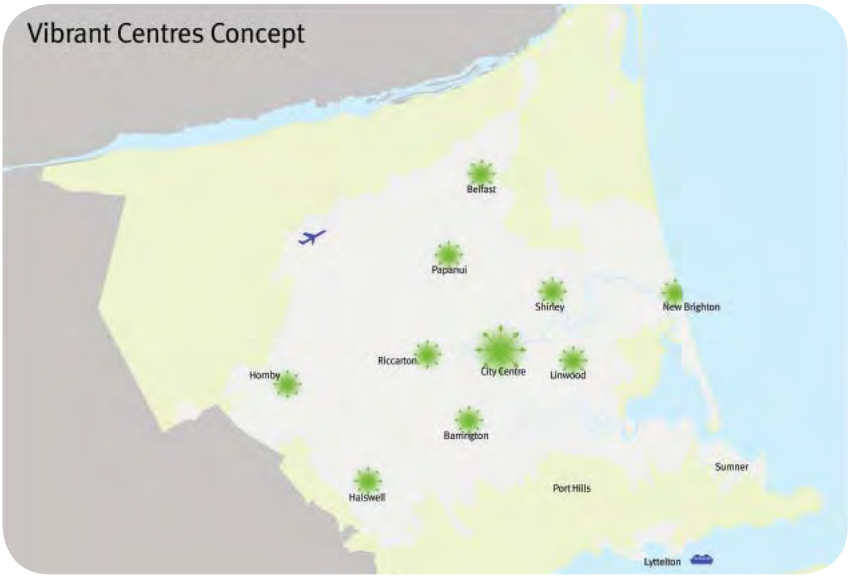


Figure 5.11

Local safety improvements:

Will focus on the safety of vulnerable road users, ensure ease of walking, especially to cross roads and identifying, improving and enforcing access for all, especially for those with lower levels of mobility. The first priority will be to improve local connectivity to bus stops, places of work and shops in the growing employment areas to the west of the city. The safe routes to school programme places emphasis on safe, convenient walking routes to schools to create a culture of walking at an early age.

Tell us what you think... how important are streetscape improvements in commercial centres?

What we plan to do:

- Develop a walking design criteria and streetscape plan
- Develop walkable centres
- Develop a network of core walking routes
- Improve the level of safety on local walking routes

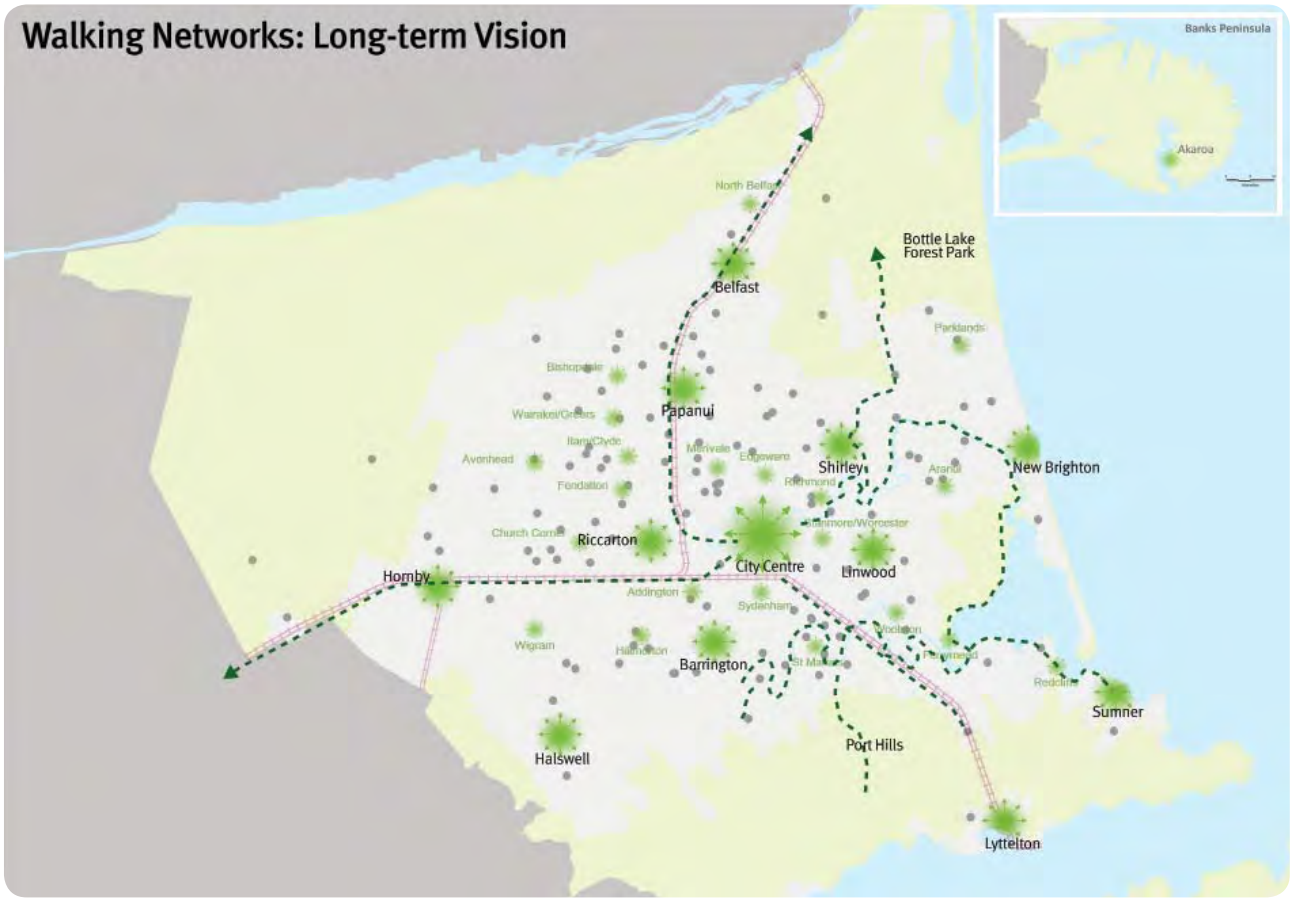


Figure 5.12

Legend

- Walkable centres
- Recreational routes
- Education
- Existing rail
- Future Christchurch urban limits
- Neighbouring Districts

Deliver high quality information and education services

Objective 1.3: Deliver high-quality information and education services

Providing travellers with information and education to help them choose more efficient and healthier ways to travel.

A network which provides a variety of attractive travel options is the first stage of establishing an effective transport system. Equally important is enabling people to make good transport choices by providing them with information and options on how and when to travel. By encouraging people to travel differently - by public and active transport, car pooling, travelling at different times, and shortening or combining trips – the roads will carry more people with less congestion.

Access to accurate and up-to-date information and promotional services will help travellers select the most efficient travel routes (avoiding road closures and construction zones), travel modes (driving, car pooling, cycling, walking or taking the bus) and times of travel. The delivery of these services is closely linked to the availability of travel choices and will leverage off and enhance network and service improvements to increase overall efficiencies.

Through the more immediate short-term rebuild and recovery period, the primary focus for information and educational services is for a service-oriented approach to support travellers with the best available transport information in order to maximise access to businesses, institutions, shops and other key destinations.

Tell us what you think... how important is education to inform people on the different travel options?

Over time, as network and service enhancements take place and new infrastructure in established, information and educational services will play a greater role in encouraging people to think about the way and when they travel. There are many challenges facing the Christchurch transport network, along with an equal number of opportunities to deliver higher-value services. However, there are limited resources to tackle all opportunities at once. A key principle will be to focus on the delivery of these services to strategic geographical locations and achieve clear results rather than build momentum for future growth.

As the city evolves, there will be a continuous shift in the focus of these services to meet the needs of the city and look for opportunities to leverage existing programmes, tools and expand funding opportunities. The aim of these services will move to support the broader strategic objectives of this Plan and the Greater Christchurch Travel Demand Management Strategy, such as reducing dependence on private car travel and adapt to meet new priorities as regional land use patterns change.

The delivery approach for these services includes city-wide information services and more in-depth educational programmes targeting strategic geographic locations, such as the Central City (offering proactive support for returning businesses, workers and shoppers), strategic corridors (within the transport network experiencing the greatest strain) and areas of new residential and commercial growth and recovery areas.

The actions for information and educational services:

1.3.1 Improve travel information

1.3.2 Travel planning

Action 1.3.1 Improve travel information

Transport for Christchurch regional information tool: The Transport for Christchurch website is a travel information tool that provides real-time, map-based updates on the status of the regional road network, such as road closures, current road works, roads re-opening and upcoming special events. Over time the information tool will evolve and expand its services to include:

(1) real-time information updates on bus route and bus stop changes, current status of key cycling corridors, car park locations and status and more,

(2) multi-modal journey planning to provide users with comparative information on ways to travel between point A and B, along with supporting resources, such as car pool matching tools; and

(3) communication avenues beyond the website platform, such as real-time e-mail and/or SMS/phone apps with network information alerts sent to users of specific transport corridors.

The Transport for Christchurch regional Information tool will also serve as the foundation for the delivery of targeted geographical services.

Technology services:

Information technology offers tools to reduce costs and improve decision-making. Smart cards, e-business portals and intelligent transportation systems are some of the existing technology available. These bring significant improvement in transportation system performance, including reduced congestion and increased safety and traveller convenience. More technology options will emerge over time and making better use of these is a key service to be delivered through this Plan.

Wayfinding plan:

Consistent signage and mapping will enable easy wayfinding around the city for all transport options. The wayfinding plan will be consistent with the Draft Central City Plan and will be used as a template to establish protocols for a city-wide wayfinding project. Signage will be implemented in association with the development of public and active transport corridors and commercial centres. The wayfinding plan will consider the use of Te Reo and recognise the places significant to Māori.

Action 1.3.2 Travel planning

Central City services:

Support for returning business and workers returning or relocating to the Central City. Services will include location-specific guidance on building facilities for developers, property managers and businesses before the move, development of tailored information outlining all transport and parking options, on-site commute consultations with returning staff members, and a programme of promotions and events.

Strategic corridor services:

Programmes involving travel choices information and marketing will be implemented to improve network efficiency and reduce congestion by highlighting travel choices on key transport corridors throughout Christchurch. This will include tailored information provided directly to adjacent households and businesses outlining available public transport links and quality cycling routes to key destinations, as well as real-time alerts on network disruptions or enhancements for the corridor, delivered as part of the Transport for Christchurch regional information tool.

In addition, access planning services will be offered to major trip-generating destinations, such as universities, hospitals, large employers, and/or dense clusters of workplaces and schools. These access plans will be tailored to the requirements of each organisation and will include recommendations for improving walking and cycling facilities on site as well as corridor-wide promotions and linkages to Transport for Christchurch information services.

Area-wide services:

Programmes involving information and marketing and travel planning to target specific residential and commercial areas will be implemented as new developments and transport infrastructure and services come on stream. The programmes will be targeted and the actions specific to the needs and opportunities for each geographical area.

What we plan to do:

- Improve travel information
- Improve wayfinding
- Travel planning

Goal 2. Create safe, healthy, liveable communities

Introduction

Goal 2: Create safe, healthy, liveable communities

Transport can shape communities by providing safe, attractive streets, healthy travel options and accessible networks

The planning and building of new communities and the recovery and revitalisation of existing communities needs to be well connected and integrated into the transport system to reduce the reliance on private vehicles and improve safety. There is significant opportunity to improve safety on our local roads; this is essential to providing real transport choices. Transport is also an important component of social inclusion and requires fair and equal access. Good design can reinforce a sense of place, streetscapes reflecting the diverse communities in which they are located. To encourage more local walking and cycling trips (trips less than 2 km for walking and 5 km for cycling), land use and transport planning needs to be integrated to reduce trip lengths and enable healthier travel choices. A connected and healthy population is the key to a productive economy. A five per cent increase in physical activity levels can net a reduction of $25 million annually for health care costs[33].

Photo courtesy of Gehl Architects

To create vibrant, healthy, liveable communities the objectives are to:

Objective 2.1: Support recovery

Objective 2.2: Effective and integrated land-use policy and plans

Objective 2.3: Safer systems

Support recovery

Objective 2.1: Support recovery

The transport system will support the recovery of Christchurch. Transport improvements will be prioritised in recovery and growth areas of the city.

Transport can support the recovery of the communities which have been significantly impacted by the earthquakes through the replacement and enhancement of infrastructure. As streets are repaired, improvements can make an area more attractive and resilient. In growth areas, new streets can help to define communities. Transport improvements will support the recovery programmes for the Central City and suburban centres and new growth areas in the short to medium term.

The actions for transport to support recovery are:

2.1.1 Connecting and delivering Central City transport recovery

2.1.2 Rebuilding suburban centres

2.1.3 Supporting new growth areas and intensification

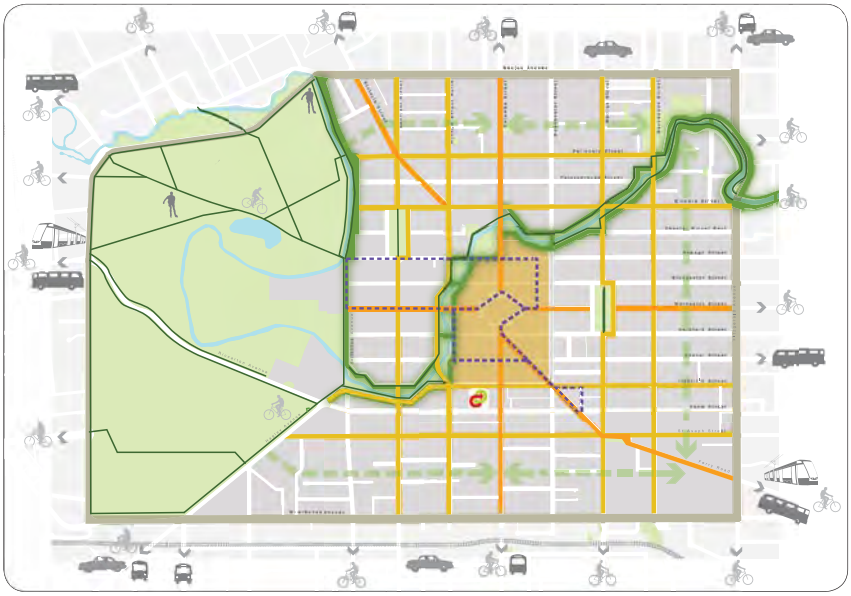
Construction of the Southern Motorway

Action 2.1.1. Connecting and delivering Central City transport recovery

The draft Central City Plan sets out how the Central City will be rebuilt following the earthquakes. The Plan gives the Central City a new look, vibrancy and confidence for increasing investment in the heart of Christchurch. A key principle of the Plan is that the Central City will be easier to get to and move around. To do this, the central transport network will be designed to create a safer and more pleasant environment in which to walk, cycle, use public transport or drive and park with ease. This will change the way people travel to and from the city, with a huge shift towards walking, cycling and public transport. Changes to the transport network are illustrated in Figure 5.13. The Central City Plan also supports residential growth in the Central City. Transport projects include; public transport investigations; bus and street stations; slow core; main streets; cycling streets; enhancing the avenues; one-way to two-way; parking and servicing; and wayfinding.

The activity will focus on:
One transport system:

To improve access to the Central City a coordinated programme of city-wide network improvements (as outlined in Goal 1) are required. The programming of these will align with the implementation of transport projects in the Central City.



The integrated transport network draft Central City Plan. *Figure 5.13*

Action 2.1.2 Rebuilding sub urban centres

The recovery of the most damaged suburban centres is being supported by the Suburban Master Plan Recovery Programme. Recovery Master Plans are being developed with the community for Sydenham, Lyttelton, Ferry Road, Linwood, Sumner, Selwyn Street and New Brighton. The Master Plans consider transport improvements alongside other aspects such as the urban form, natural environment, heritage and economics to develop a future vision for the centre to aid recovery and improve future resilience of the centre.

The activity for transport in suburban recovery centres is to support recovery:

Through streetscape improvements on damaged streets. The implementation of the Master Plans will help to coordinate actions for all agencies involved including NZTA, Environment Canterbury and the Canterbury Earthquake Recovery Authority.

Action 2.1.3 Supporting new growth areas and intensification

Recovery of the transport system will be undertaken in a manner that first identifies changes to short, medium and long-term travel demands created by changes in land-use patterns (through a re-run of the Christchurch Transport Model). This new understanding of travel demands will inform the short and medium term infrastructure rebuild so that greenfield and brownfield development during that time is appropriately supported. It will also recognise long term needs so that enhancement and future-proofing opportunities can be taken when and where possible, provided that they are affordable, offer good transport outcomes and are cost effective. In so doing, the way in which short, medium and long term needs are met shall recognise the long-term strategic goals for transport in Greater Christchurch, as those detailed in the Regional Land Transport Strategy, which includes more balanced modal use that improves the safety, efficiency, effectiveness and resilience of transport networks.

Build Environment Recovery Programme:

The Council is working work with the UDS partners and Canterbury Earthquake Recovery Authority (CERA) to develop and implement a Built Environment Recovery Programme to support the Earthquake Recovery Strategy. Greater Christchurch transport programmes and plans play a key role in the recovery programme. An overarching strategic statement for transport has been developed:

"The transport network and services will be developed and operated as a 'one (balanced and integrated) system' to offer travel choice for all people and businesses. Priority will be given to works that restore strategic transport links damaged by the earthquakes, provide access to affected communities and facilitate the development of land to meet short-term housing demands and business needs. A reduced level of service is to be accepted across the transport network until priority work is completed and funding becomes available to improve accessibility and travel choice."

In Christchurch, many residential suburbs have low densities of 10 households per hectare. The dispersed growth increases travel distances and the costs of providing infrastructure. Since the earthquakes, the UDS and Regional Policy Statement have been updated to take into consideration the needs of the rebuild along with future growth. Existing area plans for the south-west are being reviewed and area planning in the north is being expanded to incorporate new development areas that have been accelerated as a result of an update to Chapter 12A of the Regional Policy Statement. The reviews will look at how best to connect the transport infrastructure to the new developments and into the wider system, as well as providing local opportunities for cycling and walking and public transport.

These growth areas, continued growth of the Central City, future plan changes and development in the Selwyn and Waimakariri districts must be connected by a resilient transport system with good public transport, and walking and cycling connections, coupled with travel demand management actions. These are essential to create sustainable communities which are not reliant on private vehicles, especially commuter trips.

Effective and integrated land-use policy and plans

Objective 2.2: Effective and integrated land-use policy and plans

At all stages, planning and development decisions have a crucial role in providing a variety of transport choices and managing network efficiency and resilience.

Planning can open up opportunities to increase the use of active transport, lessening the need to travel and to shortening trip distances. Higher density urban development reduces car dependence by providing access to affordable travel choices. This will improve the efficiency and reduce the environmental effects of the transport system. Effective, consistent and integrated decision-making is required at all stages of the land and infrastructure development process.

The actions for effective and intergrated land-use policy and plans are:

2.1.1 Right location, right design, right function, right time

2.2.2 Transit-orientated development (mixed used development along core public transport corridors)

2.2.3 Addressing inequality

Action 2.2.1 Right location, right design, right function, right time

Businesses and services should be in the right location to best support transport choice and increase opportunities for multi-purpose trips, reducing travel demand and distances travelled, especially by car. Vibrant, accessible, mixed-use centres, such as transit oriented development, are associated with public and active transport networks. The right design and right function of buildings, subdivisions and streets is also important to improve access to housing, jobs and services by walking, cycling and public transport; reduce dependence on cars; support the efficient and viable operation of public transport services; and provide for the efficient movement of freight. Right time requires that land development and infrastructure is sequenced and timed appropriately to ensure integrated planning occurs and the true costs of growth are recovered equitably. New residential areas provide an opportunity to get it right from the start. They can be designed to promote viable public and active transport options to maximise access to the transport system and reduce car dependence.

This approach must cascade through higher level planning and policy documents to actual physical works and activities.

The *Regional Policy Statement*, specifically Chapter 12A, already reflects this approach, as do the Council's *Area Plans* (Belfast and South-West Christchurch) which provide the framework for managing urban and business growth during the next 35 years. These documents integrate land-use development with key transport infrastructure projects, such as state highways, cycleways and arterials.

Transport will be integrated into the next full review of the *District Plan*. Changes should encourage the design of new urban development to promote local trip making with high-quality provision for walking, cycling, public transport and less space for private parking. Changes will promote mixed use development to achieve pedestrian-friendly environments and connected growth areas.

Outline Development Plans prepared as part of greenfield land developments are also effective mechanisms to promote and achieve a wider choice and use of transport modes.

Integrated Transport Assessment, the NZTA Research Report 422 will be integrated into the District Plan changes to ensure all resource consents and plan changes review trip generation and access to all travel options. To manage demand, large developments may require travel plans as an outcome of the assessment process.

Action 2.2.2 Transit-orientated development

Integrating transport and higher-density developments can help to boost public transport patronage and reduce the reliance on private vehicles, as well as move the city towards a more compact urban form. The public transport network (Goal 1) can help to have a transformational effect on a city's image, helping to generate business growth and confidence. Public transport-focused development activities will focus on:

Development guidelines:

Produce guidelines on good transport design integrated into developments.

Land value capture, incentives and promotion of development or near public transport:

Protecting corridors, developing incentives and making appropriate changes to the District Plan will encourage higher density development around public and active transport corridors. Investment in transport networks can also increase adjacent land values and add value for private developers and property owners along the networks. Land value capture may involve the investment in corridors for rapid transit before the infrastructure is built to provide certainty to developers around investment.

Action 2.2.3 Addressing inequality

Transport is an important component of social inclusion and requires fair and equal access for all. Street designs can incorporate cultural values and reduce inequality. A key finding of the Health and Sustainability Assessment is that affordability, availability and accessibility are key issues in planning. The needs of some population groups should be given greater consideration in transport planning, especially older people or Kaumātua; lower socio-economic groups; people with disabilities; ethnic groups and refugees; and children. To address inequality the activity focus is on:

Access for all and non-motorised user audits:

Streets will be designed for all users. Audits of new infrastructure designs will be undertaken. Mobility improvements to existing streets will be made where issues arise. Through the audits major projects must consider:

- those with greatest social and economic needs;
- partnership principle of the Treaty of Waitangi and other needs of Māori;
- accessibility for all, particularly for those that face the greatest difficulties;
- whether transport disadvantaged people can access services and work; and
- providing affordable transport options.

Safer systems

Objective 2.3: Safer systems

A safer system that contributes to network efficiency, saves lives and reduces injuries.

Safety has been, and will continue to be, an essential component of the transport system in line with the National Road Safety Strategy. Safety is integrated across all Council activities requiring the coordination of a large cross section of people, including urban designers, engineers, educators, communicators, planners, academics and the community. Christchurch has priority safety issues that need to be addressed during the next three to five years: intersection safety, young drivers, cycling and motorcycle crashes. While these are issues today, the city's concerns will change over time and our priorities will be adjusted accordingly.

The actions to create a culture of safety are for a safer system.

Action 2.3.1 Safer system

The framework for safety is set nationally by the Safer Journeys Strategy. The vision is for a safe system in which all components of safety contribute. For Christchurch, a safer systems approach involves addressing the components of:

Safer road use:

Safety is integrated into all information and communication relating to travel, travel planning and demand management initiatives. A robust programme of targeted road-user education will aim to improve skills and the understanding of all road users.

Safer speeds:

Ensuring the levels of speed support the design, function and the level of safety of our transport network. The new road classification will assist in creating safer road environments as the design of the roads and streets will reflect the local environment. Neighbourhood streets will be slower with good walking and cycling design and traffic calming initiatives. Local arterials, rural roads and freight routes will be designed for journey time reliability and resilience.

Safer roads and roadsides:

Provide roads that by the design, reflect function and place to make them physically safer, particularly for pedestrians and cyclists. Safety improvements are targeted on hot spots, especially intersections where significant safety issues exist. Crime Prevention Through Environmental Design (CPTED) principles will be considered as part of all major infrastructure projects. To support safer systems, the Council will be working to improve policing, enforcement and penalties to support road safety objectives.

Safer vehicles:

Improving the safety of the New Zealand vehicle fleet (by warrant of fitness improvements) is a central Government initiative which will have benefits for safer vehicle movements in Christchurch.

Tell us what you think... how important are the safety improvements?

Photo courtesy of Tim Church

Photo courtesy of Tim Church

Goal 3. Support economic vitality

Easy movement of and access to goods and services

Objective 3.1: Easy movement of and access to goods and services

Easy movement of and access to goods and services will support the economic recovery and growth of the city.

Christchurch's transport infrastructure must be fit to grow the economy. The Canterbury Economic Development Strategy[34] sets a goal to double the growth rate of gross domestic product (GDP in 2020 to be $25.1 billion rather than the current prediction of $19.5 billion) and to double the value of exports from $3.5 to $7 billion. The movement of freight to, from and through Christchurch is fundamental to the economy of the city, region and New Zealand. Currently, about 20 million tonnes of freight passes through Canterbury each year (2006/07). Freight volumes in Canterbury are expected to double by 2031[35].

The rebuild presents a unique opportunity for the city to strengthen the roles of the airport and port; both have the potential to drive the recovery of Christchurch's economy, becoming economic generators by providing vital international connections to export markets. International cruise liners and international flights will play an increasing role in boosting visitor numbers and growing the tourist industry in Christchurch. Christchurch's role as the economic hub and tourist gateway to the South Island will be strengthened by reliable transport connections.

Tell us what you think... how important are defined and signed freight routes to support the economy and avoid sensitive areas?

Transport can support economic growth by making it easier for people, visitors and organisations to be connected with each other. While all transport options support economic vitality, this goal focuses on the role of freight movement, parking and congestion management. The challenge for Christchurch is to establish and manage a network that will help to improve access to goods and services, increase the reliability of journey times for regional and national freight travel and protect the network for future growth, at the same time balancing this with the need for safe and attractive communities and neighbourhoods. Managing congestion is important to ensure both reliable journey times and reduced transport operation costs, it also contributes to productivity gains from a reduction in time and costs involved with transport. Investment in congestion management will assist the economy to recover and function more efficiently and help achieve economic growth and improved productivity[36].

The actions to deliver easy movement and access are for:

3.1.1 Freight reliability

3.1.2 Freight hubs

3.1.3 Parking

Container Terminal, photo courtesy Lyttelton Port of Christchurch

Action 3.1.1 Freight reliability

Freight journey reliability on designated freight routes reducing conflict with adjacent land uses.

Christchurch is increasingly becoming the major freight centre for most of the freight movements within the South Island. For many products, Christchurch acts as a distribution centre for the South Island. This puts pressure on Christchurch's transport network. With the Government's investment in the Roads of National Significance Programme, Christchurch will have an increasingly reliable state highway network, which will improve the journey time reliability for national and regional freight trips (Goal 1), especially freight travelling to the Christchurch International Airport and Lyttelton Port.

The airport and port contribute significantly to economic vitality by providing vital international connections for goods and visitors and driving our export business. Lyttelton plays an essential role, not only in international exports but also coastal shipping and hosting cruise liners. Coastal shipping is used for the movement of bulk commodities, primarily cement and petroleum products, and also general manufactured and retail goods, typically between Auckland and Christchurch. Coastal shipping is vital for the rebuild with the sustainable movement of construction material to the city.

Freight traffic is predicted to increase to 40 million tonnes by 2031. The growth in freight movements will increase the flow of goods through both the port and through the key warehousing and distribution centres. The freight task for commodities is expected to increase by about 70 to 75 per cent in terms of tonnes lifted by 2031[37] and a 100 per cent increase is likely by 2040. Canterbury has been identified as one of the fastest growing regions in New Zealand in terms of freight growth. This, along with the potential for port rationalisation, will significantly increase the amount of freight transported through Lyttelton Port. Likewise Christchurch International Airport has plans for expansion.

The activities for improving freight reliability are:

South Island freight picture:

New Zealand Transport Agency is currently working with airports, ports, freight organisations, KiwiRail and councils across the South Island to develop a picture of South Island freight. The Council will assist NZTA to develop this picture and understand the impacts on Christchurch's network and what improvements are required to strengthen the roles of the ports and improve the movement of goods in Christchurch.

Define and protect routes:

A dedicated freight network, as indicated in Figure 5.5, will be designed to encourage freight to travel through industrial, rather than residential areas. This will include the Roads of National Significance, as well as other sections of the state highway and local road network that connect the port, airport, freight hubs and the key routes to the rest of the Canterbury region-South Island. The freight network will also include the rail network. The Council will work with NZTA and freight organisations to ensure that local roads forming the freight network are clearly defined and protected to improve access. This will include resilient route provisions for over-dimension, overweight loads and hazardous goods. District Plan provisions will be introduced to protect freight routes from the effects of unsuitable surrounding development.

Management of freight in local neighbourhoods:

With the provision of a reliable, defined and protected freight network, freight will be encouraged to use the freight network rather than other streets, unless they are specifically serving those areas. This will help control and avoid the movement of heavy vehicles in sensitive residential areas and streets.

Signed routes:

The provision of well-signposted local and strategic freight routes will help secure the safe and reliable movement of road freight.

Local Freight Management Plans for commercial centres:

The development of Local Freight Management Plans will improve access for freight vehicles servicing commercial centres. Issues relating to queuing space and turning space for freight vehicles affect the efficiency of the freight task and create road safety and amenity (noise, visual) concerns. Similarly, the timing of freight movements has significant impacts on other activities in commercial centres.

Encouraging best practice:

The Council will work with freight organisations to update and distribute guidance material on ideal development layouts for handling freight. The Council will also promote best practice in freight management.

Encouraging sustainable freight choices:

It is important to ensure the transfer of goods to rail is easy and cleaner fuels for freight vehicles are encouraged. The consolidation and rationalisation of freight movement in the city should also assist in this area as well as driving efficiency. Rail enables more sustainable long distance movement of bulk goods, while options such as cycles and small electric vans can be used to distribute small volumes of goods within a local area. These options will be encouraged and promoted by the Council to reduce the reliance on trucks in the long term, in particular Council will encourage work with Kiwi Rail and CIAL to scope out a potential regional freight route west of the airport.

Action 3.1.2 Freight hubs

Freight hubs are an area where a variety of goods are transported in and out by multiple vehicle types (both road and rail) and operators for a variety of suppliers or producers. Freight hubs typically generate more than 100 heavy vehicle equivalent movements per day[38]. Freight hubs play a key role in the regional and local freight network and have the potential to enable better freight management. Accessible freight hubs are important for the efficient transfer of goods. The key freight hubs[39] in Christchurch are: Lyttelton Port, Christchurch International Airport, Middleton Rail Yard, and the Sockburn and Woolston freight areas (Figure 5.5).

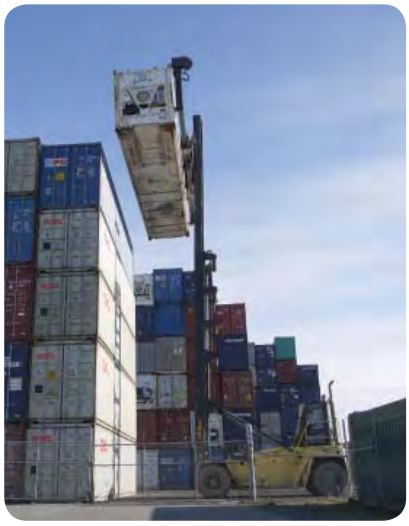
Activity for freight hubs will focus on:

Protecting hubs:

Hubs and infrastructure require protection from encroachment of urban development and other land uses that could compromise an efficient operation. The location, number and efficient operation of freight hubs will be reviewed with freight groups to ensure the optimum locations are protected. While the District Plan has policies to protect the operation of these hubs, achieving adequate protection is long, complicated and constantly challengeable through planning processes for example resource consent applications, the Environment Court and High Court. A stronger District Plan is needed to protect our freight hubs.

Establishing new freight hubs:

Chapter 12A of the Canterbury Regional Policy Statement has identified new greenfield business areas. These areas could be established as new freight hubs. There is a possibility that parts of these areas could be developed as inland ports – locations where goods are off-loaded and then transferred to the port (usually by rail).This reduces heavy vehicle movements on the Christchurch roading network and improves freight reliability by enabling freight to bypass road traffic and congestion. Areas that are located at the entrance of the city and have good road and rail access, such as Islington will be ideal locations for inland ports. The Council will further assess the feasibility of an inland port with freight organisations, NZTA, ECAN, Lyttelton Port and KiwiRail.



3.1.3 Parking

Parking is a valuable asset to the network. The provision of parking is a key part of the overall transport network. A good supply of convenient, secure, well placed and easy to find parking will support economic recovery and the future prosperity of the city. Conversely, the management of parking is essential for network efficiency and maximising the use of parking assets:

- Network efficiency - reallocating some on-street parking to convenient off-street locations will enable the network to work more efficiently and cater for more travel choices. This will be undertaken in a way that recognises parking is important for the economic vitality of business centres. It is about balancing the need for more efficient road space with the need to support the land use along the network.
- Maximise the usage of parking assets and get a return on the investment. Providing parking can be costly. However, a flexible approach to parking management can enable the Council to respond to changes in supply and demand, thereby making the most efficient use of the city's parking assets.

Parking management activities will focus on:

Reallocating on-street parking:

Where a shared priority corridor (Goal 1 priority tool) is identified, there may be a need to reprioritise road space for public transport and active transport on priority corridors or landscaping where road space is limited. Where there remains a need for parking in the area, parking will be reallocated to convenient off-street locations.

Process changes:

More flexible process to increase the Council's ability to respond to change in supply and demand from the market place. The Council will continue to monitor parking supply and demand to ensure an appropriate level of parking is provided.

Tell us what you think... how important are parking management plans to support network improvements and residential areas?

Parking management plans:

The introduction of localised planning and monitoring schemes for commercial centres and residential areas to manage the efficiency of parking in and around commercial centres, to support the vitality of business and reduce the associated impacts on surrounding communities.

Technology:

The Council will endeavour to install the latest parking technology, to ensure parking is as customer-friendly, energy-efficient, cost-effective and sustainable as possible.

***Pricing*:**

Flexible pricing mechanisms can be used to encourage more efficient use of short-term parking spaces and reduce demand for commuter parking. In the long term, charges will reflect the true cost of providing land and the lost productive potential of the land. New pricing regimes supported by increased parking enforcement, will over time through mechanisms such as ticketing, gradually be introduced to match infrastructure improvements to offer better travel choices. In some places, time limits rather than pricing may be considered to offer free parking to support the recovery of the city and the economy.

District Plan:

Greater flexibility will be incorporated into off-street parking requirements for private developments to make better use of parking spaces through encouraging shared use. The new requirements will encourage a more efficient use of land, better urban design and mitigate the negative effects of an oversupply of parking.

Park and Ride:

Park and Ride sites provide parking solutions which increase accessibility to centres, while avoiding some of the traffic issues that can be created from having parking facilities within centres. The Council will consider the development of Park and Ride sites in locations of high-quality public transport services. Potential Park and Ride sites will be protected and developed when required.

Goal 4. Create opportunities for environmental enhancement

Objective 4.1: Reduce emissions and invest in green infrastructure and environmental enhancement

The rebuild and design of transport networks and infrastructure presents real opportunities for the transport system to enhance the environment.

Investing in green transport infrastructure can reduce emissions (to air, noise and water) while enhancing water quality, biodiversity, landscapes, heritage and public health. Transport corridors (roads, rail and streets) can create unique opportunities to conserve and restore Christchurch's and Banks Peninsula's indigenous biodiversity[40], especially by creating green corridors. The transport system not only provides access to public open space and recreation but also contributes to public and environmental health, amenity and district identity[41]. This goal specifically focuses on creating opportunities for environmental enhancements through the transport system by reducing emissions, investing in green infrastructure and planning for future changes in our climate.

The actions are to:

4.1.1 Reshape travel demand to reduce emissions

4.1.2 Invest in green infrastructure and enhancements

Photo courtesy of Tim Church

Action 4.1.1 Reshape travel demand to reduce emissions

The Council has already adopted a goal for "a 50 per cent reduction of greenhouse gas emissions from domestic transport by 2040 from a 2008 baseline[42]" through the Climate Smart Strategy. To meet this commitment a significant shift is needed in the way people travel. To achieve this, there will be increasing emphasis on increasing vehicle occupancy, developing intelligent transport systems, investing in attractive networks to increase the numbers of people walking, cycling and using public transport (Goal 1). In addition, overall greenhouse gas emissions can also be reduced by increasing the movement of freight by rail (Goal 3).

To reduce emissions, activities will focus on:

Energy innovation:

Oil price volatility will increase uncertainty of fuel costs, especially for businesses. In the long term, this plan supports investment in infrastructure to increase the uptake of new technologies, new energy sources and more efficient use of fossil fuels. For example, all new public off-street parking facilities will have flexibility in design to adapt to meet the needs of future generations of electric vehicles.

Photo courtesy of Tim Church

Invest in technology:

Particularly information technology which will become an important part of our future network. Technology will continue to evolve during the 30 years of this Plan. Many of the emerging technologies are not yet available or known and cannot reasonably be included in this Plan at this time. The Council does need to be forward looking and progressive by considering how new technologies can be accommodated, where possible, in the existing network and new developments.

Encourage increased vehicle occupancy:

More people sharing private vehicles will be encouraged by working directly with major employers. This could be through travel plans and supported by tools, such as a car pooling website and priority parking for car pooling. Priority actions for this are covered under the objective to: Deliver high quality information and education services (Goal 1).

Tell us what you think... how important is green infrustructure, increasing vehicle occupancy and investing in new technologies?

Action 4.1.2 Invest in green infrastructure and enhancements

Green infrastructure is the living network of green spaces, water and environmental systems in, around and beyond urban areas (CABE January 2011). Achieving the most value from green infrastructure comes from having connected and complementary systems. This means streets which are comprehensively designed for people, as well as the environment using street trees and/or gardens and environmentally sensitive stormwater management. Overall, better connections for people between open spaces, along streets and to rivers and parks are vital to achieve an attractive and liveable city. The repair and future replacement of streets provides an opportunity to implement new green infrastructure. Green infrastructure in our streets will improve water and environmental quality through planting of trees, the installation of permeable surfaces, swales and rain gardens.

Green infrastructure activities will focus on:

Rain gardens, swales and permeable surfaces:

These treatments intercept stormwater runoff, slowing it temporarily or reducing its volume and filtering pollutants through soil and plants. Increasing permeable surfaces and adding native vegetation also help to manage stormwater. Green infrastructure will be introduced through new road designs, road renewals and replacement. The Infrastructure Design Standards will be updated to recognise the importance of such mechanisms.

Green corridors:

Transport corridors (roads, rail and streets) can create unique opportunities to conserve and restore Christchurch's and Banks Peninsula's indigenous biodiversity[43], especially by creating green, ecological corridors. There are significant opportunities for enhancing green corridors as an integral part of the implementation of the transport networks as identified in Goal 1.

Waste management:

The construction, renewal and maintenance of assets should use reused or recycled materials, where possible.

Photo courtesy of Gehl Architects

Effects on Papatūānuku (Earth) and recognition of the Treaty of Waitangi:

Central to the principles of the Treaty is that Māori have a special relationship with their lands and other natural taonga[44]. Decisions about transport affect the sustainable use of natural resources and the inter-connection between the natural environment and people. This is one of the key tenets of kaitiakitanga, a concept of deep spiritual significance for Māori by which the mauri (or life force) of a resource is nurtured, managed and protected. The intensification of urban areas has contributed to decreased access for Māori to Papatūānuku. This situation was exacerbated by ongoing development of roads, highways and other transport infrastructure. The transport system should recognise Papatūānuku and improve access to these areas. To achieve this there is a need to continue to build and foster relationships, develop Māori capacity to contribute to land transport processes and involvement with iwi in planning, implementation and monitoring of transport interventions[45].

Implementation

The actions identified in this Draft Plan have been prioritised for their contribution towards delivering the 30-year vision.

There is a focus on those actions that are a priority for later funding consideration against the Council's next Long-Term Plan (2013-2022) and the draft 2013 Community Outcomes of that Plan.

The prioritisation process has also reflected the critical alignment of early activities and projects with CERA's recovery strategies, the Regional Land Transport Programme, and partnership projects with the NZTA and ECan. Each action identified has been prioritised against the Plan's goals and objectives by a multi criteria assessment.

This Draft Implementation Plan will be subject to submissions on the Plan and will take account of further detailed investigations and costings with partner agencies, notably CERA and the UDS Partners. The Greater Christchurch activities have been integrated into the Draft Plan to increase coordination whilst recognising that each activity is subject to planning and funding processes relevant to each organisation. There are a number of methods which will be used to implement these actions, including regulatory changes, District Plan changes, consents, designations, bylaws, changes to infrastructure design standards and setting new levels of service in activity management plans.

Goal 1: Improve access and choice

Objective 1.1: Use the existing road network more efficiently

Objective 1.2: Balancing the networks

Objective 1.3: Deliver high quality information and education services

Outcome: Liveable City

Goal 2: Create safe, healthy and liveable communities

Objective 2.1: Supporting recovery

Objective 2.2: Integrated transport and land use planning

Objective 2.3: Safer Systems

Outcome: Strong Communities

Goal 3: Support economic vitality

Objective 3.1: Easy movement of and access to goods and services

Outcome: Prosperous City

Goal 4: Create opportunities for environmental enhancement

Objective 4.1: Reduce emissions and invest in green infrustructure and environmental enhancement

Outcome: Healthy Environments

Priority actions for consideration in the next Long Term Plan

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
1.1.1 1.1.2	New Road Classification and Priority Tool	**Develop and adopt a new Road Classification and network prioritisation tool:** ***implement as opportunities arise through recovery plans. Apply classification to recovery projects and plans. Link to Action 2.2.1.*** · Initiate a District Plan change and Infrastructure Design Standards amendments. · Develop a network prioritisation tool in partnership with NZTA and UDS partners. · Streetscape Improvements; apply classification to planning and design of Streets and Transport projects, rebuild/recovery projects and streetscape improvements · Apply classification as opportunities arise through other related plans and programmes	2012 /13 2012 onwards 2012 onwards 2013 /14	$	Built Environment Recovery Programme Greater Christchurch Transport Statement Central City Development Unit Suburban Master Plans Stronger Christchurch Infrastructure Rebuild Programme
1.1.2	Priority Tool	**Shared priority streets studies:** ***Corridor investigations where there is greatest conflict between different road users or with surrounding land uses.*** · Corridors to be determined based on the Networks Plans (in Section 5), shared priority streets are those which have more than priority mode identified. · Studies to deploy newly agreed network hierarchy prioritisation tool · Proposed corridor studies for Riccarton Road, Brougham Street, Halswell, Sydenham.	2012 /13 2013–15	$	Greater Christchurch Transport Statement Greater Christchurch Public Transport Investigation

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
1.1.3	Protect and Enhance the Road Network	**Road maintenance, earthquake rebuild programmes, renewals, corridor traffic management** ***practices and parking management will apply Road Network Management Practices to:*** · Maintain level of service on the network for strategic roads and ensure freight routes are retained. Where possible maximise levels of service within existing corridor boundaries. · Review traffic control and parking management systems to support the Plans vision, goals and objective. Increased emphasis on enhancing the efficiency of existing transport network asset for all road users. ***Road upgrade programmes will be informed by:*** · **Local improvements;** prioritising, planning and constructing local road improvements to support the earthquake rebuild, new growth areas and economic growth priorities. · **Rebuild;** maximise whole of life costings associated with recovery programmes by providing added value solutions that deliver against the Plans goals and objectives. · **New Classification;** provide quality networks that reflect the new road network classification system and are informed by the forthcoming network prioritisation tool. · **Resilience;** seek to improve network resilience to both emergency events and any future fuel supply shortages.	2013 onwards	$$$	Greater Christchurch Transport Statement Built Environment Recovery Programme Area Plans Stronger Christchurch Infrastructure Rebuild Programme
1.2.1	Strategic road network and freight network	**Development of strategic road network using a One Network Management Approach** working with the NZTA and UDS partners to agree a 'One Network' approach to strategic network management (integrating motorways and local roads by all modes). This will include detailed network investigations and modelling analysis of the future networks identified in this Plan.	2012/13	$	Greater Christchurch Transport Statement Roads of National Significance Network Plan

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
		Local connections to the Roads of National Significance (RONS) programme and neighbouring Districts: · **Connections;** planning and construction of connections to the strategic road network to maximise the benefits of the state highway investment programme in the north, south-west and south of the city. · **Cross boundary connections;** plan and align strategic network cross boundary connections in line with recovery plans and Christchurch Rolleston and Environs Transportation Study. · **Travel demand management;** improve the efficiency and whole of life value from strategic network investments by implementing demand management measures to reduce the reliance on single occupancy vehicles. · **Directional signage;** hierarchy of transport signage. · **Freight routes;** are included in Action 3.1.1.	2012 –20	$$$	Recovery Plans Roads of National Significance: Northern Arterial package, Western Corridor, Southern Motorway. Christchurch Rolleston and Environs Transportation Study
1.2.2	Cycle network	**Planning, development and management of:** · **Major cycleways;** develop a programme for the implementation of major cycleways. For priority routes, complete detailed design through to implementation. · **Local cycleways;** complete planned local cycle improvements, path maintenance and renewals to enhance safety and local connectivity · **Key recreation routes;** influence park plans to improve shared paths on the Avon River, Estuary edge, Heathcote River and links to Little River Rail Trail. · **Facilities, education and promotion;** the major cycleways are supported by end of journey facilities. Targeted education and promotion to encourage new users. · I**nfrastructure Design Standards;** update to reflect new standards.	2013–20	$$$	Central City Development Unit "Blueprint" Built Environment Recovery Programme Stronger Christchurch Infrastructure Rebuild Programme

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
1.2.3	Public transport network	**Development and management of public transport by:** · **Rapid transit;** the UDS partners will undertake a Greater Christchurch Public Transport Study, options will be consider all forms of public transport, including heavy rail, light rail, bus ways and bus. The study will inform network and corridor protection options. · **Protect core public transport corridors;** where justified, and as identified through a rapid transit investigation, designate and protect future strategic public transport corridors and infrastructure. · **Park and Ride;** investigate and plan necessary Park and Ride facilities connected to the core public transport network.	2012–14	$$	Central City Plan
		Quality public transport infrastructure and priority: · **Priority;** plan, design and implement infrastructure and corridor priority measures to support the core public transport services. · **Super stops and interchanges;** establish suburban super stops with interim facilities to support ECan's Public Transport Recovery Plan and Draft Regional Public Transport Plan (2012). Review location of future transport interchange sites and protect. · **Bus stop;** improvements, renewals and replacements prioritised on core corridors (high frequency service routes). · **Information;** improve and extend real time passenger information services (talking and visual). · **Taxis;** take account of the needs of taxis at key destinations.	2013 onwards	$$$	ECan Public Transport Recovery Plan and Draft Regional Public Transport Plan (2012)

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
1.2.4	Walking network	***Plan, develop and manage an improved walking environment by:*** · **Walkable centres;** prioritising walking improvements in centres (commercial and retail) with investment in quality streetscapes incorporating pedestrian facilities. Priority recovery centres include: Central City, Woolston, Sydenham, Lyttelton, Linwood/ Stanmore, Linwood, Selwyn Street and Sumner. · **Design criteria;** all new pedestrian infrastructure meet enhanced standards of accessibility for all. Greater emphasis on management of vehicle speeds throughout the city, with priority placed on centres and streetscape enhancement. · **Local safety improvements;** prioritised to focus on safety and ease of walking, especially at busy intersections and as associated with routes to schools, bus stops and commercial centres.	2014 onwards	$$	Central City Development Unit Suburban Centre Programme
1.3.1 1.3.2	Improve travel information and travel planning	***Develop and implement network efficiency services:*** · **City-wide information;** Transport for Christchurch regional information centre and website. · **Wayfinding plan;** develop a wayfinding plan. · Central City information and education services: services to support returning businesses and workers – develop, promote and implement – along with access plans for Central City workplaces. · **Strategic corridor and area-wide information and education services;** promotion of public transport; walking; and cycling corridors. – develop, promote, implement and then expand. · **Develop, promote implement and provide ongoing support;** for access plans for institutions, workplaces and schools.	2013 onwards	$$	Greater Christchurch Travel Demand Management Strategy
2.1.1	Connecting and delivering Central City transport recovery	**Draft Central City Plan;** deliver Central City Plan network and provide connections to the Central City. **One transport system;** to improve access to the City Centre, a coordinated programme of city-wide network improvements (as outlined in Goal 1) are required. The programming of these will align with the implementation of transport projects in the Central City.	2013 onwards	$$$	Draft Central City Plan

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
2.1.2	Suburban centres	**Suburban recovery;** replace transport infrastructure in line with Liveable Streets hierarchy approach.	2014	$	Suburban Master Plans
2.1.3	Supporting new growth areas and intensification	**Built Environment Recovery Plan;** support Greater Christchurch transport planning for recovery. **Area plans;** continue for new growth areas.		$	Built Environment Recovery Programme
2.2.1 2.2.2 2.2.3	Right location, right design	**District Plan;** road classification applied in recovery to assist integrating land use and transport. **Integrated transport assessment;** guidelines required and applied for new developments. **Transit-orientated development** · **Developer guidelines;** develop guidelines and incentives for successful transit-orientated development. · **Land value capture, incentives and promotion of transit orientated development;** protecting corridors. **Addressing inequality, access for all users;** mobility audits and non-motorised audits (NMU) principles are considered in recovery planning. Continued use of quality tactile path markings to assist pedestrian movement for all. Provision for kaumātua (elders).		$	Draft Central City Plan Built Environment Recovery Programme District Plan
2.3.1	Safer systems	**Safe road use;** targeted pedestrian safety education programmes. · Cycle Safe programme for schools and school safety improvements aligned with school travel plans. **Safer roads and roadsides;** Targeted safety improvements on black spots and known issues. · Local safety improvements: at priority locations, for example around school and super stops, to enhance accessibility. · Develop and implement a Safety Management System. · Crime Prevention through Environmental Design (CPTED) and audits on major infrastructure projects. · Policing and penalties for offences as at present. Through the Regional Land Transport Strategy establish a regional position on penalties and fines for motoring offences to enable effective lobbying. Increase over time. · Current speed and monitoring cameras. **Safer speeds;** implement slow speed environments in the Central City and suburban centres. Liveable Streets classification adopted. Gradually new designs recognising liveable streets classification.	2014 onwards	$$$	Safer Journeys

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
3.1.1	Freight reliability	***Development and management of freight routes for journey reliability by:*** · **Freight journey reliability;** and efficiency to the Port of Lyttelton, Christchurch International airport, freight hubs within Christchurch and neighbouring districts · **South Island freight picture;** assist NZTA to understand and meet the impacts on Christchurch's strategic freight and road networks and what improvements are required to strengthen the roles of the port and airport, and to improve the movement of freight within a South Island context. · **Define, protect and sign freight routes;** through network signage and improved engagement with the freight sector. · **Management of freight;** in local neighbourhoods through measures to encourage freight to use the defined network. In commercial centres undertake Local Freight Management Plans to improve access of freight servicing commercial and commercial centres. · **Encouraging best practice;** update and distribute guidance on development layouts for handling freight. · **Encouraging sustainable freight choice;** freight fleet and product management systems are promoted to support efficient goods movement. Promote and identify measures to enable business to make the more sustainable and efficient choices for freight movement.	2014 onwards	$ $	South Island Freight Picture (NZTA) Regional Land Transport Strategy
3.1.2	Freight hubs	**Protecting hubs;** protection from encroachment of urban development and other land uses that could compromise their efficient operation. More effective District Plan policy. **Establishing new freight hubs;** assess the feasibility of an inland port with freight organisations, NZTA, ECan , Lyttelton Port and KiwiRail.	2014 onwards	$	South Island Freight Picture (NZTA) Regional Land Transport Strategy

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
3.1.3	Parking	***Parking management to enable access to business while supporting the development of strategic roads, freight routes, public transport, walking and cycling streets through:*** · Reallocating on-street parking: on some core corridors, especially walking and cycling streets, there may be the need to reprioritise road space in favour of that corridor's priority function. · Where there remains a need for parking in the area, parking could be reallocated to convenient nearby locations or in off-street car parks. · Technology improvements will be applied to maximise the efficiency of both on and off-street car parking infrastructure · Flexible pricing mechanisms introduced to encourage more efficient use of short-term car parking spaces and reduce demand for commuter parking. · Monitoring parking supply and demand to ensure that an appropriate level of parking is provided. · District Plan changes to encourage greater flexibility and use of off-street parking requirements for private developments through measures such as encouraging sharing of parking between developments. · Parking management plans; for localised planning and monitoring schemes for commercial centres and residential areas. · Park and Rides; consider the development of Park and Ride sites in locations of high quality public transport services. Potential Park and Ride sites will be protected and developed when they are required.	2014 onwards	$$	Suburban Master Plans Draft Central City Plan

Action No.	Action	Activities	Timescale	Rough Cost $= < 1 million $$ = < 20 million $$$= > 20 million	Recovery project or relationship to other Plans
4.1.1	Reshape travel demand to reduce emissions	· **Energy innovation;** promote and encourage energy efficient travel choices. · Encourage new developments to support uptake of alternative fuelled vehicles. · Work with the RLTS to lobby for increased national energy security through investment in local energy supplies and increased renewable electricity generation. · **Invest in technology;** investigate how new technologies can be accommodated (where possible) in the existing network and within new infrastructure projects. · Transport network operators support rapid roll out of broadband/telecommunications infrastructure as an integral function of transport corridors. · **Encourage increased vehicle occupancy;** investigate value of associated infrastructure to support increasing vehicle occupancy such as HOV lanes. Implement initial car-pooling programme, including parking incentives for carpooling.	2015 onwards	$	Climate Change Strategy
4.1.2	Invest in green infrastructure and enhancements	**Rain gardens, swales and permeable surfaces;** update Infrastructure design standards on green infrastructure. Green infrastructure in road renewals. **Green corridors;** recognise transport corridors. **Waste management;** the construction, renewal and maintenance of assets should utilise reused or recycled materials. **Effects on Papatūānuku (Earth) and recognition of the Treaty of Waitangi;** recognise that decisions about transport affect the sustainable use of natural resources and the inter-connection between the natural environment and people. Improve access to Papatūānuku these areas.	2013 onwards	$	Draft Central City Plan

Funding and affordability

The short term implementation of this Plan (the Recovery phase) seeks to achieve consistency with the Government's Policy Statement on Land Transport Funding (GPS 2012/13 to 21/22), which primarily focuses investment on strategic road improvements to support economic efficiency and growth.

Three of the Roads of National Significance (RONs) state highway projects are being developed in Christchurch and represent a strong commitment by the Government and NZTA to essential improvements of local strategic road and freight state highway networks. The Council, in turn, has made a commitment to improve strategically important local arterial networks intended to both complement and further improve the effectiveness of the RONs. Major schemes featuring in the Council's programme include such improvements as the proposed Wigram–Magdala Link, Northern Arterial Extension and improvements to Cranford Street. These key commitments by NZTA and the Council will deliver the enhanced freight and strategic vehicle corridors required to meet the 30-year vision of this Plan. Each project, however, represents significant funding commitments through both the National Land Transport Programme and the Council's own Long-Term Plan. This means the ability to significantly enhance the funding available for public transport, cycling and walking networks as outlined in this Plan will be heavily constrained for much of the early Plan recovery period.

At the same time, and largely as a consequence of the earthquakes, there is also significant pressure on funding in the short term for the renewal, replacement and repair of the city's damaged transport infrastructure. Where supplementary funding is available, opportunities will be sought to enhance the transport infrastructure as part of the earthquake rebuild programme, ensuring maximum value for money, improved whole of life benefits and the delivery of some short-term Christchurch Transport Plan priorities. Such measures might include achieving better use of road space in reconstructed carriageways, and enhancing pedestrian, cycleway and public transport opportunities where feasible in the short term. In some cases, these changes might not add significantly to overall costs but simply maximise opportunities to improve whole of life benefits by early implementation of strategic network enhancement and travel choice opportunities signalled by this Plan.

Setting priorities to inform the Long-Term Plan

This Plan takes into account the public funding that is likely to be available for implementation during the 30 years. There are many uncertain factors influencing both the sources and available funding for transport over that timeframe. The purpose of this Plan is not to outline in any detail individual transport programmes for given years or expected funding allocations from a number of sources. A key role of this Plan is to offer clarity about funding implications, over the short (recovery), medium (transition) and longer term (vision) of this Plan, with programmes that are both realistic and affordable. At this time, it has been assumed that the total amount of transport funding available to the Council on an annual basis will not change significantly from the historical annual levels received in recent years, as detailed in the Council's Annual Plan and Long-Term Plan Streets and Transport Programmes.

The Council's current annual capital and operational funding proportions for transport infrastructure as reflected in the Long Term Council Community Plan (LTCCP pre-earthquake), is shown in Figure 7.1. The figure shows that road renewals and new infrastructure were almost two thirds of annual spend. These activities were mostly made up of road widening and intersection improvements, as well as signs, signal optimisation, landscaping and lighting upgrades. Renewals were the next highest spend, largely made up of carriageway and footpath resurfacing, kerb and channel replacement and bridge renewals. Active travel and public transport take a roughly equal share, representing about a third of annual budget spend and mostly rating to new cycleways, bus stops, and bus priority measures. Only a small proportion of funding was specifically targeted at primarily safety justified projects.

The main sources of funding for transport infrastructure are provided from Government subsidies and the Council (rates and development contributions). Every three years, the priority of individual transport projects must be weighed by the Council against other Council priorities in the Long Term Plan before local funding is secured. A key role of this Plan is therefore to inform that Annual Plan and Long-Term Plan funding prioritisation process, not to replace it. The delivery of the Plan's vision will only be achieved with a long-term commitment (including adequate funding) from both the Council and UDS partner agencies to the Plan's objectives, goals, networks and priority actions as outlined in this Plan. With this expected annual funding, there will need to be a significant shift in the way transport funding is prioritised. The commitments that exist in the early Plan period to strategic roading network capacity and the Central City mean the change to funding proportions will increase over the medium to long term. Figure 7.2 shows the transition from current spending priorities to a new proportions of transport spend over the full Plan period of 30 years.

In the short term there will be a large focus on funding for safety related infrastructure, primarily from the roading allocations. Funding for both earthquake rebuild activities and the transport projects contained in the Draft Central City Plan (2011) would be over and above the previous quantity of annual transport budget allocations typically made by the Council. However, there may be some reduction in the required renewals and public transport projects where these might offer efficiency savings when implemented as part of recovery programmes.

In the medium term there will start to be a significant shift in funding towards active travel. Roading budgets will focus much more on network management by making better use of existing infrastructure rather than adding to network assets. Significant Draft Central City Plan transport projects would be expected to be largely complete and the earthquake rebuild would be nearing completion. Extra funding would, however, be required if the future public transport network of rapid public transport services, possibly including rail based options, were to begin to be implemented. In the long term, the funding share would stabilise, with the largest slice for renewals as the earthquake rebuild will completed. Any future rapid public transport system costs to support a possible rail solution would continue to require substantial extra funding over and above typical transport funding levels.

Securing additional funding support

The main sources of public funding are:

- Local government (principally rates and development contributions)
- Central Government through the National Land Transport Fund – either directly or through guarantee
- Any separate Central Government support for rapid transit through Treasury
- CERA funding for the recovery plan.

In the short term, there is a marked funding gap between aspirational and growth programme costs and likely levels of available transportation funding. Early programme affordability is heavily influenced by the costs of Central City transport projects, excluding light rail which is shown as a separate programme. Significant early progress in achieving the 30-year vision and delivering an alternative shape of transport networks will be curtailed because of affordability issues in the early/mid stages. Therefore, securing adequate funding over the life of this Plan is a potentially significant barrier to its full delivery (that is achieving all the framework networks). Funding decisions on the implementation of priorities in the Plan will be influenced by the Government's Policy Statements on Land Transport Funding (as a major contribution to the delivery of those networks) and, in turn, by the Council's ability to allocate additional local transport funding.

In order to deliver across all of the desired outcomes during the 30-year timeframe, the Council will work with ECan to advocate to the Government for a change in the distribution of central Government funding, with more emphasis in the longer term National Land Transport Plan for public transport, active travel networks and network operational priorities when early commitments to the strategic roading network asset (state highways, RONS and other strategic road and freight network enhancements) near completion.

Figure 7.1 Historical funding proportions

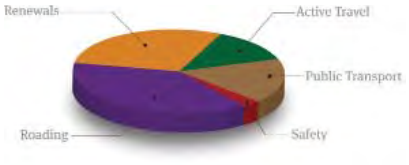
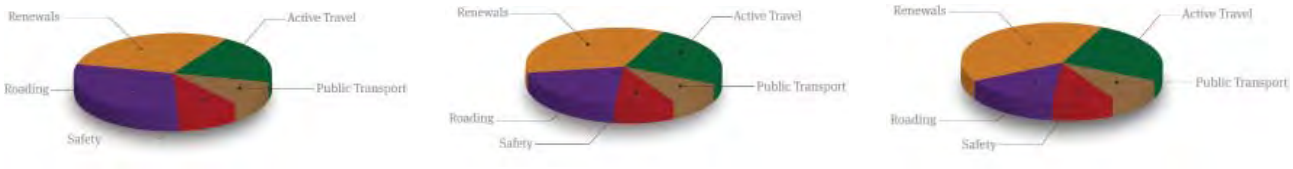


Figure 7.2 Proposed funding proportion to achieve the vision



Short term – Recovery *Medium term – Transition* *Long term – Vision*

Monitoring and review

The monitoring and review process will provide an understanding of what has been achieved through the successful implementation of the Plan. Monitoring will also identify what actions have been completed and how these have helped achieve the Council's Community Outcomes (Chapter 3). This will determine if changes are needed in the priorities and actions to ensure that the city is on track to meeting the desired outcomes in the Long-Term Plan.

The monitoring process consists of two key actions:

1. Outcomes monitoring – how are we progressing towards our vision; and
2. Tracking, reporting, and review

1. Outcomes monitoring

The outcomes and indicators represent the desired end result of implementing the Plan. The Plan's monitoring programme will focus on the outcomes and indicators for transport. The outcomes and indicators are listed in the table. Many of these indicators directly relate to the Draft Regional Land Transport Strategy 2012 to enable regional monitoring. This monitoring will also be complemented by the Council's Community Outcomes Monitoring Programme and the Big Cities Quality of Life Report. Public reporting will cover primary indicators only.

Outcomes, targets and measures

CTP Goals	Draft 2013 Community Outcomes	RLTS outcome	Example Performance Indicator
1. Improve access and choice	Liveable Cities There are a range of travel options that meet the needs of people and businesses	Connectedness is enhanced	Percentage of households within a 10-minute walk of key activity centres. Accessibility modelling.
		Improved transport and land use integration.	Average trip lengths for all trips.
		Improved mobility for the transport disadvantaged.	Number of people reporting that they experienced transport disadvantage due to disability or mobility.
			Number of people that do not have access to at least one mode of transport on a regular basis – residents' survey.
	The transport system provides people with access to economic, social and cultural activities.	Increased travel choices for households to access Key Activity Centres.	Percentage of households within 30-minute public transport trip or 10 min walk or cycle to Key Activity Centres.
	Streetscape, public open space and public buildings enhance the look and function of the city.	Improved streetscapes in Commercial centres (local outcome).	Satisfaction with the appearance, quality and function of the Central City's and suburban commercial centres public places and buildings (local indicator).
	An increased proportion of journeys are made by foot, cycle and public transport.	Increased use of walking, cycling and public transport for trips to and within the City.	Pedestrian, cycle counts and public transport patronage figures.

CTP Goals	Draft 2013 Community Outcomes	RLTS outcome	Example Performance Indicator
2. Create safe, healthy and liveable communities	Liveable Communities Transport safety is improved.	Reduction in fatal and serious injuries for all modes.	Deaths per annum on roads. Casualties per annum for car, truck, bus (deaths plus serious injuries). Casualties per annum for cycles (deaths plus serious injuries). Casualties per annum for motorcycles (deaths plus serious injuries). Casualties per annum for pedestrian (deaths plus serious injuries).
		Improved personal safety and reduce security risks to all transport users.	Perception of safety by all transport modes (How safe do you feel people are when travelling by car/ public transport/walking cycle or motorcycle?).
		Improved resilience of the transport network to infrastructure damage, emergencies and external changes.	Projects completed per annum that increases network resilience, e.g. life lines. Percentage of Greater Christchurch population who can reach work or education by active modes.
	Risks to public health and injury are minimised.	Increased time spent travelling actively.	Time spent walking and cycling (hours per capita per annum).
			Number of residents who walk/cycle for 30 minutes or more each day.
		Reduced community exposure to vehicle pollutants, noise and vibration (CCC outcome).	Proportion of transport emissions in air quality monitoring.
3. Support economic vitality	Economic Prosperity Christchurch's infrastructure support sustainable economic growth	Improved journey time reliability on strategic transport network.	Travel time variability on strategic road network within Greater Christchurch (AM Peak, inter peak and PM peak).
4. Create opportunities for environmental enhancements	Healthy Environments Energy is used more efficiently.	Increased energy efficiency per trip.	Total petrol sales per capita. Total diesel sales per regional GDP. Number of alternative fuel supply sites (e.g. retail sites offering low biofuel blends or wholesale sites with high biofuel blends). Number of vehicles which can use high biofuel blends. Number of electric vehicles.
			Percentage of single occupancy vehicle trips in Greater Christchurch.
	Christchurch is prepared for the future challenges and opportunities for climate change.	Reduced greenhouse gas emissions from use of domestic transport system.	Tonnes of CO_2 from domestic land transport per capita.

2. Tracking, reporting and review

Projects identified in this Plan will be tracked to enable reporting on the progress of the Plan's implementation. Reporting will be undertaken on progress towards achieving the draft 2013 Community Outcomes and indicators in this Plan, along with progress on project delivery. The priority projects within this Plan will be reviewed every three years, before each Council Long-term Plan, as required.

Footnotes

[1]Indicated through the 'Share an Idea' consultation on the Central City Plan, and submissions to the Council's Long Term Plan 2009–2019.

[2]Draft 2013 Community Outcomes currently adopted in principle by the council and will be formally adopted in the next Long Term Plan.

[3]New Zealand Transport Agency (2010) Frequently Asked Question Roads of National Significance online resource

[4]Land Transport New Zealand (2007) Research Report: Integrating Land Use and Transport Planning.

[5]Ministry of Transport (2009/10) Household Travel Survey

[6]Ministry of Transport (2009/10) Household Travel Survey

[7]Statistics New Zealand (2006) Census Data

[8]Christchurch City Council (2011) Central City Plan

[9]Greater Christchurch Urban Development Strategy (2009) Demographic Update

[10]Christchurch City Council (2010) Health Impact Assessment: Christchurch Transport Plan

[11]Christchurch City Council (2010) Health Impact Assessment: Christchurch Transport Plan

[12]Environment Canterbury (2010) Market Research Report for the RLTS

[13]New Zealand Transport Agency (2011) Briefing Note Crash Analysis Canterbury Region 2010

[14]Christchurch City Council (2010) Health Impact Assessment

[15]Christchurch City Council (2010) Health Impact Assessment

[16]New Zealand Transport Agency (2010) Safer Road Journeys Strategy

[17]New Zealand Transport Agency (2010) Road Safety Issues 2010

[18]Christchurch City Council (2006) Quality of Life Survey

[19]Health Research Council of New Zealand, Ministry for the Environment, Ministry of Transport (2007) Health and Air Pollution in New Zealand

[20]Christchurch City Council (2009) Surface Water Strategy, p16, p.89

[21]Land Transport New Zealand (2010) Guidance Note: Managing land transport noise under the RMA

[22]Environment Canterbury (2006) Inventory of emissions to air in Christchurch.

[23]Christchurch City Council (2010) Climate Smart Strategy

[24]Statistics new Zealand (2007) Household expenditure survey

[25]Christchurch City Council (2011) Activity Management Plan: Road Network

[26]For the purposes of this Plan, road space refers to the entire width of the road corridor

[27]McClintock (2002) The mainstreaming of cycling policy

[28]Ministry of Transport (2010) Christchurch Household Travel Survey 2009/10

[29]Ministry of Transport (2010) Christchurch Household Travel Survey 2009/10

[30]Land Transport New Zealand (2006) Research Report 294: Increasing Cycling and Walking: an analysis of readiness to change

[31]New Zealand Transport Agency (2011) Research Report 449 Assessment of the type of cycling infrastructure required to attract new cyclists

[32]Parsons Brinckerhoff (2011) Rapid Transit Economic Impacts Research (Unpublished research for Central City Plan)

[33]Christchurch City Council (2010) Christchurch Transport Plan: Health Impact Assessment

[34]Christchurch Development Corporation (2010) Canterbury Economic Development Strategy

[35]Christchurch City Council (2010) Freight Review and Study

[36]New Zealand Transport Agency (2010) Frequently Asked Question Roads of National Significance online resource

[37]Ministry of Transport (2008) National Freight Demand Study

[38]Environment Canterbury (2005) Canterbury Regional Land Transport Freight Action Plan

[39]Environment Canterbury (2005) Canterbury Regional Land Transport Freight Action Plan and Regional Land Transport Strategy (2012–2042)

[40]Christchurch City Council (2008) Biodiversity Strategy 2008–2035, Goal 1

[41]Christchurch City Council (2010) Public Open Space Strategy, objective 1.5

[42]Christchurch City Council (2010) Climate Smart Strategy

[43]Christchurch City Council (2008) Biodiversity Strategy 2008-2035, Goal 1

[44]Environment Canterbury (2010) Wider Health and Wellbeing Impacts of Transport Planning

[45]Environment Canterbury (2010) Wider Health and Wellbeing Impacts of Transport Planning

Glossary

Active travel — modes of travel which involve a level of physical activity (walking or cycling).

Air Pollution — contamination of the atmosphere by gas, liquid or by-products that can endanger human health and the health and welfare of plants and animals.

Brownfield Site — a previous industrial or commercial site, often located within an urban area that has redevelopment potential.

Bus Borders — bus stops incorporating walkway build-outs into traffic lane. The being that it allows buses to pickup up and drop off passengers without having to leave the traffic lane.

Bus Gates — a signposted stretch of road, along which use is restricted to public transport.

Bus Lanes — a lane restricted to buses on certain days and times, used to speed up public transport that would be otherwise held up by traffic congestion.

Bus Priority Measures — measures used to give buses priority at areas of congestion, these include priority at intersections, bus signals, busways and bus lanes or any other measure that improves bus efficiency.

Bus Signals — traffic lights that have a separate signal to allow buses to go before all other traffic thus allowing bus priority at traffic lights.

Busways — buses steered for part or all of their route by external means, usually on a dedicated track. This track, which often parallels existing roads, excludes other traffic, permitting the maintenance of reliable schedules on heavily used corridors.

Canterbury Regional Land Transport Strategy — an Environment Canterbury document which sets the strategic direction for land transport within the Canterbury region over a 30 year period.

Car Pooling — the sharing of car journeys so that more than one person travels in a car. This can be done on an informal basis or as part of workplace or residential scheme.

Central City Recovery Plan — a Council plan to guide the rebuild in Christchurch central city after the 2010/11 earthquakes.

Christchurch Growth Model — a forecast of how Christchurch is likely to grow to 2041

Climate Smart Strategy — is a Christchurch City Council strategy giving direction for community and Council responses to the impacts and opportunities presented by climate change.

Commercial Centres — All commercial and retail centres in Christchurch.

Draft Community Outcomes — the communities aspirations for Christchurch adopted in principle and to be adopted formally through the 2013 Long Term Plan.

Connectivity — How well connected an area is, this relates to the transport link to and from the area and where those links serve.

Corridor — a geographical area usually defined by the route of a railway, motorway or road and its immediate surrounding area.

Cycling Streets — street that are designed to give cyclists priority.

Distribution Centres — sites where freight is transferred from the strategic freight network to local distributors for delivery.

District Plan — a legally required document that the Council is obliged to produce. The plan is a regulatory document outlining how the Council envisages the city developing in the future.

Ecological Corridors — areas which allow wildlife to travel between natural environments in safe and familiar surroundings. These are often strips of vegetation and plants.

Electronic Messaging — electronic signage to inform transport users of latest information, e.g. delays expected on roads or bus arrival times.

Environment Canterbury Regional Council — an organisation involved with monitoring and improving environmental issues in Canterbury, these issues include air, land and water quality, hazardous materials, waste etc. They are also the lead agency for the provision of public transport services.

Fauna — animals of a particular region, habitat, or geological period.

Feeder Streets — describes streets in the road hierarchy that are of lesser strategic importance, used by vehicles as a way of accessing the main arterial road network.

Flexible Price Mechanisms — a way in which parking charges can easily be changed and adapted in order to easily respond to local factors.

Flora — plants of a particular region, habitat, or geological period

Freight Hubs — a facility where a variety of goods are transported in and out by multiple vehicle types (both road and rail).

Greater Christchurch — comprises the Christchurch City Council area including Lyttelton Harbour but not the remainder of Banks Peninsula, and parts of Waimakariri and Selwyn district Councils.

Green Corridors — an area of habitat connecting wildlife populations separated by human activities

Greenhouse Gas — The collective name for a variety of gases, such as carbon dioxide, methane, water vapour, nitrous oxide, ozone and halocarbons in the atmosphere, that trap heat from the sun and cause warming of the earth.

Green Infrastructure — infrastructure that limits the impact of urbanisation on the natural environment, examples of this include making traditionally hard, impermeable surfaces such as road more permeable in order to reduce the time it takes for storm water to reach the main waterways, thus reducing the risk of flooding.

Greenfield — an area of land outside the current urban boundary which is used for agricultural purposes and has potential for urban development.

Growth Areas — pockets of the city which have been earmarked to accommodate new development. The northern and south-western suburbs have been highlighted as major growth areas.

Growth Domestic Product (GDP) — the market value of all the goods and services produced by labour and property located in a region.

Heavy Rail — traditional high platform subways which usually have stations approximately every mile and are completely separated from all other modes.

High-Occupancy Vehicle — a vehicle carrying a high number of occupants, usually a driver with two or more passengers.

Infrastructure Design Standards — a Christchurch City Council document which outlines standards for the creation or enhancement of infrastructural assets in Christchurch City.

Integrated Planning — combining the disciplines of land use, environmental and transport planning in order to provide a coordinated, sustainable approach for infrastructure development.

Integrated Transport System — making sure that all modes of transport are integrated in a single network, this allows for better connectivity and allows people more choice when planning their journey.

Intelligent Transport Systems — the application of advanced information processing, communications, technologies and management strategies, in an integrated manner, to improve the safety, capacity and efficiency of the transportation system.

Interchanges — places where people or goods transfer between vehicles or from one mode to another.

Kaumatua — respected tribal elders within the Maori community

Key Activity Centres — The key commercial and retail centres in Greater Christchurch. These are constitute the Key Activity Centres within Greater Christchurch: Central City, Papanui/ Northlands, Shirley, Linwood, New Brighton, Belfast, Riccarton, Halswell, Barrington, Hornby, Kaiapoi, Rangiora, Woodend / Pegasus, Lincoln, Rolleston.

Level of Service — a qualitative measure that describes the operational conditions of a road or intersection.

Light Rail — a form of urban rail that has a lower capacity and lower speed than heavy rail, but higher capacity and higher speed than traditional street-running tram systems.

Link and Place — a project developed in the United Kingdom aimed at combining the needs of streets to be both transport corridors and places for people to shop, live and work.

Long Term — a 15 to 30 year planning timeframe.

Long Term Plan — a Council document outlining the long term vision for how the Council envisages the city developing. The plan covers all aspects of Council responsibilities not only urban development.

Major Cycleways — routes which have been identified as being key routes for cyclists, linking residential areas with commercial centres. Routes will be direct, of high quality and where possible separated from traffic.

Medium Term — a 4 to 14 year planning timeframe.

Mode — A categorisation of transport methods, e.g. private motor vehicle, walking, cycling, rail, public transport.

Motorways — high capacity, high speed roads for traffic only.

Multi-Modal — used to describe travel or transport of goods and people involving more than one form of transport.

Multi-Modal Corridors — roads that are designated and designed to accommodate more than one form of transport.

Natural Increase — an areas total birth rate minus the total death rate.

Net Migration — the difference of immigrants and emigrants of an area in a period of time, divided per 1,000 inhabitants.

Network Efficiency — how effective the transport network is at moving people. It can be measured in a number of ways with time and volume numbers often being the key factors.

Network — infrastructure or services that are connected to enable the transition of people and goods from one piece of infrastructure or service to another.

Noise Disturbance — Annoying levels of noise from a variety of sources, including traffic and rail.

Noise Pollution — harmful levels of noise from a variety of sources including, traffic, aeroplanes, rail industry.

Non-Statutory — not required by law. Not all documents Council produces are required by law but are still of importance and relevance.

Off-Street Parking — parking which is provided away from the street environment either behind buildings or in multi-storey car parks.

One Network — the concept of planning Christchurch's entire transport network for all modes in a concerted manner. In the past different forms of transport were planned in separation, by planning all modes together it creates solutions to problems on the network which previously would have been overlooked e.g. allows particular streets to be prioritised for certain modes.

On-Street Parking — parking which is provided just off the main road carriageway by the side of the road.

Orbital Corridors — routes which connect peripheral areas of the city without going through the city centre.

Over-Dimension — routes which are designed to accommodate unusually large freight movement.

Park and Ride — a facility where people can park their private vehicles and then travel by public transport to their final destination.

Parking Management — policies and infrastructure management measures aimed at managing the supply of and/ or demand for on-street and/or off-street parking. Can include time limits, pricing, space availability, location of parking or priority treatments for certain users e.g. disabled drivers, taxis or high occupancy.

Particulate Matter — extremely small objects or mass which are found in gas and can affect air quality.

Partner Agencies — organisations that the Council works alongside to develop strategies and plans for the area.

Peak Oil — the point in time when the global production of oil will reach its maximum rate, after which production will gradually decline.

Permeable Surfaces — consist of a variety of types of pavements, pavers and other devices that provide storm water infiltration while serving as a structural surface.

Pressure Points — parts of the transport network where there is a high level of congestion and multiple conflicts between modes.

Private Vehicle — motor vehicles owned, leased or hired for sole use by an individual, household or organisations.

Public Transport — passenger transportation services available to the public on a regular basis using vehicles, including buses, trains, trams, ferries and taxis, that transport people for payment of a fare, usually but not exclusively over a set route or routes from one fixed point to another.

Radial Corridors — routes which flow out from the city centre to the city periphery in a relatively direct manner.

Rain Gardens — a planted area that allows rainwater runoff from impermeable urban areas like roofs, driveways and walkways the opportunity to be absorbed. This reduces rain runoff by allowing storm water to soak into the ground.

Rapid Transit — high speed urban passenger transport system, usually consisting of a rail based mode.

Real-Time information — a system that provides current information on one or more aspects of a changing environment.

Recovery Strategy — a CERA document outlining how recovery of the Greater Christchurch area will occur following the 2010/11 earthquakes.

Regional Passenger Transport Plan — an Environment Canterbury document which sets out the policy framework of all public transport services in the region.

Regional Policy Statement — an Environment Canterbury document provides an overview of the resource management issues of Canterbury. It sets out how natural and physical resources are to be managed in an integrated way with the aim of sustainable management.

Residential Red Zone — areas severely affected by the 2010/22 earthquakes that will be demolished and not rebuilt.

Retreat Areas — areas of Christchurch in the CERA Red Zone.

Roads of National Significance — an NZTA programme which highlights seven essential state highways which are vital for New Zealand's economic success. The Christchurch motorway project is apart of the programme, it will link Lyttelton Harbour, Christchurch International Airport and the city centre.

Separated Cycleways — cycle paths which are completely separated from the road. They may be located on the same road corridor or may follow a different route.

Shared Priority Corridor — transport routes which is used by more than one mode of transport.

Short-Term — a 0 to 4 year planning timeframe.

Slow Core — an area within the city centre where vehicle speeds will be dramatically reduced in order to give create a safer environment for pedestrians.

Stakeholder — an individual or organisation who has an interest or concern about something.

State Highway — a strategically important road managed by the New Zealand Transport Agency.

Statutory Plans — documents which are required by law. The Council has a legal obligation to produce certain plans.

Street Stations — public transport stops that are provided for on street.

Streetscape — the visual elements of a street, including the road, adjoining buildings, street furniture, trees and open spaces etc, that combine to form the street's character.

Suburban Recovery Centres — commercial centres which were heavily damaged as a result of the 2010/11 earthquakes and are now being redeveloped.

Super Stops — facilities where public transport passengers can transfer from one service to another in comfort (smaller than an interchange).

Te Reo — language of the Maori.

Transport Disadvantaged — people who have a difficulty accessing transport as a result of cost, availability of services or poor physical accessibility.

Travel Demand — a variety of methods that influence whether, when, how and where we travel, with the aim to improve the effectiveness, efficiency and affordability of the transport system as a result of a change in people's travel choices.

Urban Design — the arrangement and design of buildings, public spaces, transport systems, services, and amenities.

New Zealand Urban Design Protocol — a Ministry for the Environment document which aims to promote urban design principals in towns and cities across New Zealand.

Urban Form — refers to the physical layout and design of the city (similar to urban design).

Variable Messaging System — electronic signage which can keep people up to date with the latest transport information.

Vehicle Occupancy — the number of people in a vehicle.

Vision — an overarching statement of what the strategy is seeking to achieve.

Wayfinding — signs, maps and other methods put in place to make people familiar with their surroundings.

White Zone — areas which are still un-zoned following the 2010/11 earthquakes.

Submission Form

PLEASE READ BEFORE COMPLETING YOUR SUBMISSION

The public consultation period is from Wednesday 18 July 2012 – Thursday 23 August 2012. A public hearings process will follow.

It will help us if in your submission you:

- Refer to the specific chapter(s) (and goal if appropriate) of the Draft Transport Plan.

Please note: We are legally required to make all written or electronic submissions available to the public and to Councillors, including the name and address of the submitter. The submissions may be posted electronically on the Council's website. Information will be available to the public subject to the provisions of the Local Government Official Information and Meetings Act 1987. If you consider there to be compelling reasons why your contact details and/or submission should be kept confidential, you should contact the Council's Communication's Consultation Team Leader, telephone 941 8999.

You may send us your submission:

On the internet
You may enter your submission using the form provided on the Council's website at www.ccc.govt.nz/HaveYourSay
Please follow all the instructions on the website.

By email
Please email your submission to CTP@ccc.govt.nz

Please make sure that your full name and address is included with your submission.

By mail
(no stamp is required) to:
Freepost 178
Draft Christchurch Transport Plan Submission
Christchurch City Council
PO Box 73012
Christchurch 8154

No anonymous submissions will be accepted.
Whether you use this form or not, you must provide your full name, address and telephone number. If you are submitting on behalf of an organisation, please state this and your role within that organisation.

Submissions must be received (NOT postmarked) at the Hereford Street Civic Offices no later than 5pm on Thursday 23 August 2012. To ensure receipt, hand deliver last-minute submissions to the Civic Offices, 53 Hereford Street.

Your submission

If you wish, you can present your submission at a hearing. If that is the case, please tick the appropriate box below.
The hearings will be held during September/October 2012. Five to ten minutes will be allocated for speaking to your submission, including time for questions from the Councillors. The Council will confirm the date and time of your hearing in writing, by email or by telephone call.

TICK ONE

☐ I do NOT wish to discuss my submission at the hearing, and ask that this written submission be considered

OR

☐ I wish to discuss the main points in my written submission at the hearings to be held during September/October 2012

I am completing this submission: ☐ For myself ☐ On behalf of a group or organisation

If you are representing a group or organisation, how many people do you represent? _____

My submission refers to Chapter(s): _____ Goal (if appropriate): _____

Your Name: _____

Organisation name (if applicable): _____

Organisation role (if applicable): _____

Contact Address: _____

_____ Postcode: _____

Phone No (day): _____ Phone No (evening): _____

Email (if applicable): _____

Signature: _____ Date: _____

Submission Form

1. Overall, do you support the direction of the draft Christchurch Transport Plan?

Yes ☐ No ☐

2. How much do you agree or disagree with the 30 year vision and goals for transport in Christchurch?

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

3. How much do you agree or disagree with the main challenges identified for the transport system in Christchurch? The challenges can be found in chapter 4 of the draft Plan.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

4. How much do you agree or disagree with the core routes identified on the proposed network maps for strategic roads, freight, public transport, cycling and walking?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Strategic roads	☐	☐	☐	☐	☐
Frieght routes	☐	☐	☐	☐	☐
Public Transport routes	☐	☐	☐	☐	☐
Cycling routes	☐	☐	☐	☐	☐
Walking routes	☐	☐	☐	☐	☐

4(b) Where would you like the major cycleways to be?

5. How much do you agree or disagree with the introduction of a new road classification that aims to create roads and streets that will better cater for both people and vehicle movement?

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Submission Form

6. Which THREE actions do you think are the MOST important to achieving the overall vision for transport?

	Most Important
A new road classification to guide the rebuilding and future design of roads.	
Continuation of road maintenance and renewals.	
New roads to connect the state highways and new residential areas.	
Streetscape improvements in commercial centres.	
Quality public transport infrastructure (bus stops and interchanges) and targeted priority measures (e.g. bus gates, bus lanes).	
Major cycle routes with a higher level of separation and safety.	
Defined and signed freight routes to support the economy and to avoid sensitive areas.	
Information and education services to inform people on different travel options.	
Targeted safety improvements.	
Parking management plans to support network improvements and residential areas.	
Green infrustructure, increasing vehicle occupancy and investing in new technology	

7. What are the best aspects of the Draft Christchurch Transport Plan?

Draft Christchurch Transport Plan

Submission Form

8. What are the aspects of the Draft Christchurch Transport Plan that need the most improvement?

You may add more pages if you wish. Thank you for your submission.