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Purpose of the Plan

The Christchurch Transport Plan provides the strategic direction for transport in Christchurch over the next 30 years, focused on issues and challenges that are a priority for the city and its communities. It includes actions driving a 10-year investment plan, to direct our transport programme through the Long Term Plan 2024-34 and subsequent iterations.

The Plan describes a future vision through the identification of core goals and outcomes, and identifies a range of policies to reduce our carbon emissions and ensure our travel network is accessible, supports sustainable urban growth, and reduces harm on our roads.

The Plan is responsive to the dynamic, national policy landscape, which is driving towards several strategic goals. The Plan:

- aligns with the national *Road to Zero* strategy, which sets us on a path to achieve Vision Zero, a New Zealand where no one is killed or seriously injured on our roads;
- outlines what we need to do to reduce our transport emissions to meet our target of zero emissions by 2045. In doing so, it aligns to the draft national Emissions Reduction Plan, and readies us to respond to the upcoming review of the Government Policy Statement on Land Transport, which will have a strong focus on emissions reduction;
- takes into account national direction on intensification, and the Council's ongoing response to the National Policy Statement on Urban Development; and
- provides frameworks and tools, including through the national *One Network Framework,* to align our urban and transport planning.

Although the Plan will prescribe specific actions, it will also be flexible to respond to, and to guide decision-making in response to, other key strategic direction provided, for example through spatial planning initiatives for Greater Christchurch and the city.

The Council works collaboratively with the Greater Christchurch Partnership on a range of planning and strategic issues. Our transport network is an integral part of the wider sub-regional transport network serving the Waimakariri and Selwyn District centres. Ensuring that our regional connections are well-functioning, safe and efficient is an important part of providing a robust network for all residents of Greater Christchurch, and this is addressed primarily through the Greater Christchurch Partnership's programme of work.

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Vision

Our Goals

A productive and accessible low-carbon city

A zero emission transport system supports the city's greenhouse gas emissions reduction target of net zero by 2045. A compact city means more people live closer to many of their daily needs, while advances in technology reduce the need to travel. Sustainable living is achieved – where it's easy to use the bus, cycle or walk to get you to where you want to go, including for our mobility impaired and elderly residents and visitors. Our transport network is also adaptable to new modes and ways of doing things. Our transport system as a whole supports businesses and households to prosper.

Safe and liveable streets

Our city is a great place for people to live. People are healthier, as our streets make it easy for them to get their daily dose of exercise through walking or cycling. Safety considerations, alongside emissions reductions, drive our transport investment decisions and no one is killed or seriously injured in road crashes. Our streets attract people to spend time on them and are a destination in their own right, not simply a corridor to move along. There is also a significant shift towards clean air zones and reduced pollution. We have developed and implemented clear indicators to guide us on meeting our expectations for healthy, safe and liveable streets for our communities.

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Introduction

A sustainable and connected transport network is a vital part of a thriving and growing city. It supports the movement of goods and services our city needs and allows people to get to where they want to go safely and easily.

The way we travel is changing, and needs to continue to change to adapt to Christchurch's population growth. We want a low emission, safe, connected and productive city with attractive green streets, public transport, and cycleways, all of which make it safe and easy for people to get around.

Recent and upcoming changes in local and national policy direction for transport, in particular related to climate change and intensified housing development, mean we need to re-consider how we plan for, invest, deliver, operate and maintain our local transport network for the next thirty years, with an immediate focus on the next ten years. This change needs to occur in an equitable manner, where everyone has fair access to transport options and the resulting impacts do not fall unfairly on some groups more than others.[1] Equity needs to be considered across geographic areas of the city (connectivity), across different income groups (affordability), and across different mobility needs and abilities (accessibility).[2]

How the Christchurch Transport Plan will direct the Long Term Plan

The actions outlined in this Plan are strategic in nature. They are intended to be used as part of developing the transport components of the LTP 2024-34 – including the Transport Activity Plan and the capital programme for investment in transport over the next ten years. During the development of the LTP, community consultation will be undertaken, and budgets and resources will be assigned to agreed actions. Levels of service will also be set so that success can be measured and monitored consistently and effectively – the various targets outlined in this Plan will inform these.

[1] https://www.centreforlondon.org/reader/fair-access/chapter-1/#framework-and-methodology

[2] https://www.nzta.govt.nz/resources/economic-evaluation-manual/, Appendix A17

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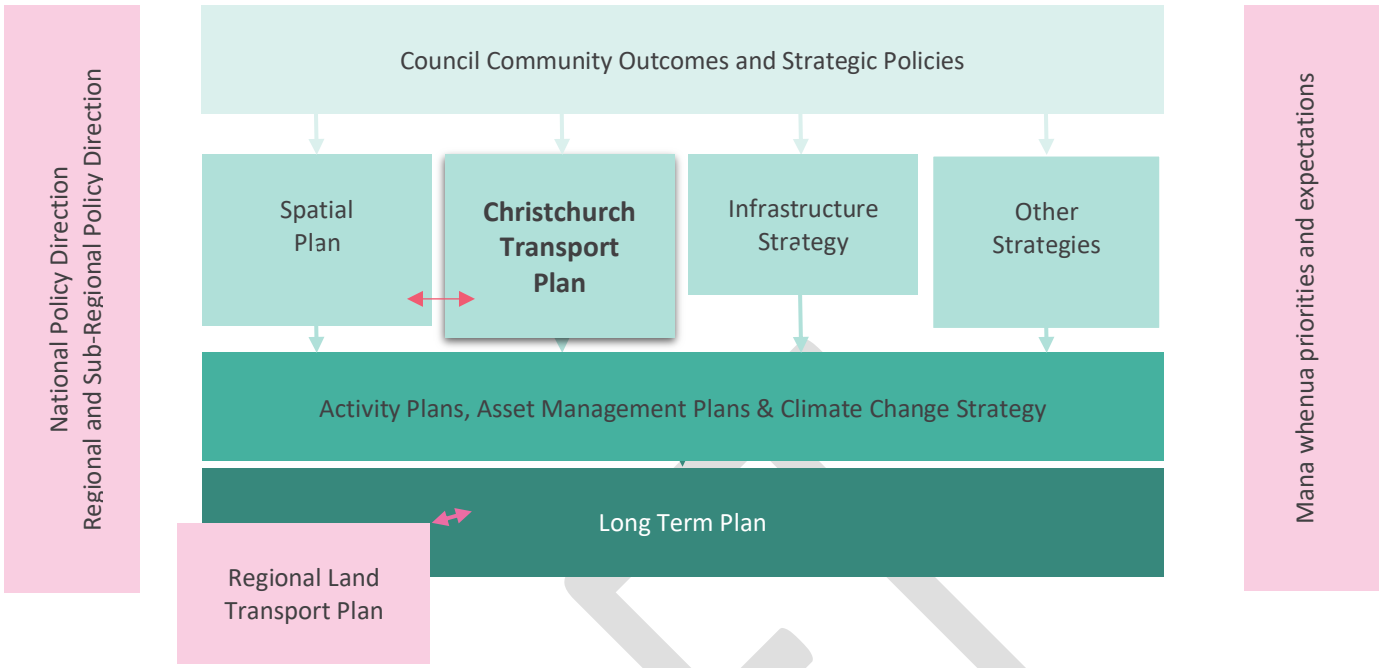

One of the strategic issues that the current Infrastructure Strategy focuses on is 'Looking after our assets'; it highlights the need to ensure sufficient investment each year in renewing, maintaining and replacing our assets, to manage the risks associated with aging and deteriorating assets.[3] This applies equally to our transport assets. While this issue will be revisited during the development of the next LTP, there is no doubt that renewals and maintenance of our transport assets will remain a business-as-usual priority for our asset management planning.

Towards a resilient city

The Christchurch earthquakes of 2010/11 have impacted our transport system throughout the last decade, resulting in continued repairs and replacements. However, the city is now moving from a recovery and regeneration focus, to more present challenges.

Natural hazards have become a pressing issue for Christchurch and Banks Peninsula. Many areas of Christchurch and the Peninsula are susceptible to coastal flooding, flooding from rivers and rising groundwater, tsunamis and earthquakes. Our roads and footpaths are exposed to the effects of climate change including sea level rise, inundation and temperature changes affecting surface quality. Greater resilience is needed to protect our infrastructure and services, and adapt to changing levels of service where required.

A well-planned and highly-functioning transport network will increase the resilience of our communities to shocks and stressors – climate-related, and others. Our Plan to provide people with greater choice about how they travel, and increase their use of sustainable transport, will be key to increasing the resilience of our city and its communities. Our city will be more resilient if we have a comprehensive network of cycleways, good public transport, and walkable neighbourhoods, in

[3] Christchurch City Council, *Our Long Term Plan 2021-31, Vol 2 – Infrastructure Strategy*, ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Long-Term-Plan/LTP-2021-final/LTP2021-Vol2/2-11-Infrastructure-Strategy.pdf

addition to a good road network. This will support the increasing density of our population, and build community cohesiveness and wellbeing so that people are able to better cope with and adapt to adverse events and changes, when they arise.

Our changing population

Our transport network needs to accommodate our growing, diverse, and aging population. We need to do our best to plan and invest in an agile way, so that our network can evolve as the world around us changes. To do this, we need to understand what trends are emerging that are likely to shape the way we travel.

Our population will increase[4]

By 2048, it is expected that over half a million people will live in Christchurch. Currently, our population is around 400,000 with 7,000 living in the Central City. Population growth will lead to more travel and in turn increased congestion

The health of our population5

With nearly 30% of people over 15 in Canterbury being classified as 'obese' the transport solutions identified throughout this Plan must also consider relative health and social benefits.

Our aging population

Christchurch has an aging population, with around 15% of the population aged over 65. An aging Christchurch community increases the need for affordable and diverse housing, linked by public transport, walking and cycling infrastructure.

[4] 2018 Census, www.stats.govt.nz/2018-census/
[5] Canterbury Wellbeing Index, www.canterburywellbeing.org.nz/our-wellbeing/health/obesity/#:~:text=The%20figure%20shows%20that%20more,Zealand%20overall%20of%2031.3%20percent

The way we travel

Christchurch's public transport network is still recovering from the effects of the earthquakes. Bus routes serve most parts of the city and connect satellite towns. We're currently developing 13 Major Cycleways and a series of local cycle connections to increase cycling across the city.

We have undertaken analysis of census data to better understand the travel behaviour of our citizens. Christchurch residents are highly dependent on private vehicles for reaching their daily needs, including work, school, retail and social activities. Our current public transport system is not sufficiently attractive for most people in terms of travel time, reliability, convenience and cost to encourage its use in preference to private vehicles. Since then, the effects of COVID-19 on the public transport system have exacerbated this issue.

Travel trends (Census 2018)

- 75% of Christchurch residents drive or are driven to work
- 96% of non-Christchurch residents working in Christchurch drive or are driven to work
- In Christchurch, approximately half of the commuter trips taken by private vehicle are less than 7km
- Only 4% of residents took the bus to work, which is significantly lower than similar-sized cities in New Zealand and internationally
- In Christchurch, 6% of commuters cycle to work and 4% walk to work

With increased investment in active transport over the last few years, cycling, walking and the use of micromobility (e.g. e-scooters and e-bikes)[6] are becoming more popular. In 2018, 17% of total daily trips in Christchurch were made using the bus, cycling or walking.

Rail transport in Christchurch consists of two main railway lines carrying largely long-haul freight, as well as two long-distance (generally tourist) passenger trains[7]. While long haul freight is not a focus of this Plan, we will continue to work with regional and South Island partners to plan for more sustainable freight movements, including greater use of the national rail network. We will also continue to work closely with Waka Kotahi and our other partners to ensure that the state highway and local networks support freight to move across the city safely and efficiently. We also need to work with and support the transition of urban freight, such as business deliveries and household couriers, to more sustainable modes.

Technological changes

Technological advances are occurring rapidly in the land transport sector. In *Arataki*, Waka Kotahi suggests that technological change (including in relation to information and data, as well as mobility-as-a-service; on-demand transport; and automated vehicles among other things), and managing the

[6] Transportation using lightweight vehicles such as bicycles or scooters, especially electric ones that may be borrowed as part of a self-service scheme in which people hire vehicles for short-term use within a town or city.

[7] Coastal Pacific and TranzAlpine trains

impacts of climate change, are the most significant drivers that will shape the future of land transport system over the next decade.[8] We need to ensure that our transport network is responsive to technological changes both large and small, and that the design of our networks can adapt to new types of mobility.

The need for change

2012 Christchurch Strategic Transport Plan

This Plan will replace the 2012 Christchurch Strategic Transport Plan. The 2012 Plan laid the groundwork for a safer, sustainable and accessible city. It addressed, in part, key challenges of earthquake damage and recovery, congestion and safety. However, as we face increasing development and a changing population, the challenges identified in the 2012 Plan are no longer the key issues facing Christchurch over the next 30 years.

Climate change is the biggest challenge of our time and will be one of the most significant drivers for changing the land transport system. Climate change, and its effects, were not a real focus of the 2012 Plan. Emissions reduction targets had not been set at the time by the Council, and therefore no clear pathway or action plan was set out to address climate change. If we are to meet our GHG emissions reduction targets, transformational and immediate action is now required. Given transport is the greatest contributor to emissions in Christchurch, a new Transport Plan that considers these targets is required. The transition to a zero emissions transport system needs to be equitable and not leave our most vulnerable people behind.

We need transport to support and shape growth

As our population grows, our reliance on cars will become increasingly unsustainable. This Plan needs to ensure that transport and urban planning are closely aligned in order to achieve good growth outcomes and our sustainable transport goals.

The transport system is linked with how the city grows and develops. How and where we live and grow will be shaped by, and will help shape, our transport networks. The current and future challenges that face our transport system, such as congestion and carbon emissions, are sometimes better solved by urban and land use planning and policy settings, than by transport infrastructure investment.

One Network Framework (ONF)

The ONF is the new national classification system for roads, replacing the One Network Road Classification (ONRC) system of 2012[9]. It plays a crucial role in guiding how we should plan our streets and prioritise different parts of the transport network to enable and support good urban growth. The classification framework also includes freight networks, which will help with the coordinated management of the freight network. The use of the ONF underpins a number of the policies outlined in this Plan.

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[8] Waka Kotahi NZTA, *Arataki*, www.nzta.govt.nz/assets/planning-and-investment/arataki/docs/key-drivers-step-changes-levers-interventions-august-2020.pdf

[9] www.nzta.govt.nz/roads-and-rail/road-efficiency-group/one-network-framework

Strategic context

National policy direction

We act according to regulations and policies set by the national government. **Appendix A** gives an overview of relevant legislation and plans, to paint a picture of the various government priorities driving our transport policies and operations.

Regional and local policy context and transport partnerships

We work with our Greater Christchurch Partners, through the Greater Christchurch Partnership, to plan transport on a regional level through various land use and transport plans and agreements. The transport directions articulated in this Plan will influence planning at a regional level, including the draft Greater Christchurch Spatial Plan. Our transport partnerships and some of the most relevant strategic plans are outlined in **Appendix A**.

The Council is developing a number of interrelated plans and strategies to respond to national direction around urban planning, climate change response, and emissions reduction. These are also described in **Appendix A**.

Transport outcomes

Reduced transport greenhouse gas emissions

The scale and urgency to reduce this contribution and to meet our emissions reduction targets is one of the driving forces behind the development of this Plan. We have local targets of a 50% reduction in gross GHG emissions by 2030 and net zero GHG emissions by 2045[10]. We also have a national target of net zero GHG emissions by 2050.[11]

Tackling the issue of transport emissions will have environmental, economic, social, health and wellbeing benefits, for our generation and future generations. Equity needs to be a central consideration in the transition to a zero carbon transport system.

Transport has a vital role to play in ensuring that the future of our city is low emission and climate resilient, and that the wellbeing of our communities is supported. In the next ten years, in order to achieve our emissions targets (as well as other targets outlined in this Plan), we need to focus on reducing our city's reliance on fossil-fuelled cars as a primary means of transport, and increase the uptake of sustainable modes of transport such as walking, cycling, and public transport.

Our transport system supports good growth

Our transport system will play an integral part in supporting and shaping the growth of our city.

[10] Our targets and associated actions to achieve them are based on the latest available scientific modelling, using the Intergovernmental Panel on Climate Change's RCP 8.5 scenario (aligning with national and regional modelling).
[11] Climate Change Response Act 2002, section 5Q. This net-zero target excludes biogenic methane (s5Q(b)), although transport emissions do not include any biogenic methane.

A good transport network helps us all to get where we need to go safely and easily. It provides people with different travel options so they do not need to rely on owning their own vehicle to move around. It also supports freight to reach people and businesses and provides resilience in the event of an emergency.

Good urban planning supports transport by reducing the distance we need to travel to access our wants and needs and supporting us to make sustainable travel choices. It also ensures that our streets are safe and vibrant and are seen as places to live, not just to move through. It can help address inequity by giving residents more options for how they travel.

Healthy streets, healthy people

Our streets are fundamental to the character and operation of the city - they are where we spend our time and meet other people. They are places where people live, shop and work, where children play, where communities connect and where businesses can thrive. Designing individual streets for people, rather than cars, and improving their experience of streets, will have a significant impact on people's quality of life. Integrating growth and transport planning at the street level will help to find the right balance between a street's transport function and how the space also caters for other uses such as pedestrians and cyclists.

Attractive and green street environments will encourage walking and cycling, lower emissions, improve safety, and strengthen communities and local businesses. This will improve health and wellbeing, and help to create attractive and connected neighbourhoods.

Safe Streets

A safe transport system protects vulnerable road users, like cyclists and pedestrians, and mitigates the risk of speed and other dangerous behaviours on our roads. It allows for inevitable, human mistakes to be made without having serious or lethal impacts. It also enables people to have choice about how they travel by ensuring it is safe to walk, cycle, bus and drive.

New Zealand's road safety strategy, *Road to Zero*, guides improvements in road safety. It sets us on a path to achieve Vision Zero, a New Zealand where no one is killed or seriously injured on our roads. The strategy sets an initial target of reducing deaths and serious injuries by 40% by 2030, from a 2018 baseline. The Council shares this vision and effectively adopted this target in the 2021 Long Term Plan.[12]

[12] Christchurch City Council Long Term Plan 2021-2031, Proposed Performance Target 10.0.6.1.

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A summary of the policies and which outcomes they contribute to

		Reduced GHG emissions	Our transport system supports good growth	Healthy streets, healthy people	Safe streets
Reduced GHG emissions	**Policy 1.1:** Plan and implement Low Traffic Zones across Christchurch	✓	✓	✓	✓
	Policy 1.2: Support investment in the transport network with an ongoing, coordinated sustainable travel choice programme to increase the uptake of low emission travel options	✓		✓	✓
	Policy 1.3: Implement road pricing if appropriate, to reduce emissions	✓	✓		
	Policy 1.4: Support the transition to zero-emission vehicles	✓			
	Policy 1.5: Implement parking pricing to reduce emissions	✓	✓	✓	
Our transport system supports good growth	**Policy 2.1:** Embed a people-centric approach to our streets, by adopting the national One Network Framework	✓	✓	✓	✓
	Policy 2.2: Prioritise investment for transport and urban realm improvements to support intensification		✓	✓	
	Policy 2.3: Collaborate with our regional partners to enhance the attractiveness of public transport	✓	✓	✓	
	Policy 2.4: Collaborate with our partners to plan for and implement rapid transit	✓	✓	✓	
	Policy 2.5: Prioritise essential vehicle trips on the road network		✓		
Healthy streets, healthy people	**Policy 3.1:** Improve our walking and cycling environment	✓	✓	✓	✓
	Policy 3.2: Future proof our transport network for shared mobility (e.g. scooters)	✓	✓	✓	✓

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Safe streets	**Policy 4.1:** Realise Vision Zero			✓	✓

Our challenges

This section of the plan describes the key challenges that we face in achieving our vision for the city's transport system. Our Policies and Actions will aim to address these challenges.

1. Our road transport greenhouse gas emissions are a significant contributor to climate change

If we do not reduce our road transport emissions, we will not meet our targets, and we will continue to contribute to climate change

On-road[13] petrol and diesel transport in Christchurch contributes to about 36% of the district's current GHG emissions.[14] Given this high proportion, a reduction of on-road transport GHG emissions is an important component in our overall plan to reduce emissions. Central government has highlighted that transport systems need to dramatically change to reach our national emissions targets, and the Government's Emissions Reduction Plan discussion document provides a road map for actions councils should take now in order to meet these targets.[15]

At our current trajectory, road transport GHG emissions in Christchurch can be expected to increase by approximately 10% between 2018 and 2030.[16] If we do not alter this trajectory, we will not achieve our targets. Our high level of vehicle emissions is caused largely by the high number and length of trips we take in single occupant[17] fossil fuel vehicles. Many factors contribute to this, including:

- Where we live, road design, and amount of free or cheap car parking, all of which make driving cheap and convenient compared with active and public transport options
- Our high rate of vehicle ownership. New Zealand has the sixth highest number of registered motor vehicles per capita in the OECD[18]

[13] As opposed to land transport, which also covers rail.

[14] We have measured our city's road petrol and diesel GHG emissions twice. In 2018/19 they accounted for 36% of our city's total gross emissions, which was a 2.3% increase from 2016/17 levels.

[15] In developing this plan, the Council has taken into account the national emissions target, and the draft emissions reduction plan as permitted by section 5ZN of the Climate Change Response Act 2002.

[16] Data extracted from the Christchurch Transport Models, in conjunction with Ministry of Transport data from the Transport Outlook. The models involved use the forecast years of 2028, 2038 and 2048 (10, 20 and 20 year forecasts from 2018 Census).

[17] Note that Heavy Commercial Vehicles (HCVs) contribute to Christchurch's transport emissions but it is very difficult to allocate a precise proportion of these emissions to Christchurch due to the variability in where HCVs fill up with fuel (how we measure baseline CO2e emissions) compared to where it is burnt (producing the CO2e). This is particularly difficult due to the significant number of trucks travelling to and from Lyttelton, and to warehousing and primary producers more widely in Canterbury and the South Island. Car and light vehicle trips tend to be shorter and so the link between where the fuel is sold and where it is burnt is stronger.

[18] 0.81 vehicles per person in 2018, stats.oecd.org/index.aspx?queryid=73639

- The current cheaper upfront, capital cost of petrol and diesel vehicles compared to zero-emission vehicles
- The low level of investment in public transport compared to other cities in New Zealand (public transport investment per year is about a quarter of Auckland's and a fifth of Wellington's, on a per capita basis)
- Safety concerns, which currently defer uptake of active transport.

The consequences of not reducing our GHG emissions are increasingly severe effects on our weather, health and wellbeing, natural environment, taonga species, mahinga kai, food production, biosecurity, infrastructure, and economy. We are already feeling the effects of climate change - our summers are becoming hotter, dryer and longer, and our winters shorter and milder. We are starting to experience more extreme rain, wind, fire and flooding events, and the magnitude of these is likely to increase. Some areas will become more prone to drought while our low-lying coastal areas will be more exposed to tidal flooding.

Reaching our emissions targets will require effort from all of us – residents, decision makers, businesses, transport agencies and central government. Ultimately, we do not currently have all the regulatory drivers and significant financial incentives in place at a central government level to achieve the scale of reductions we require, for example in the area of emissions pricing and substantially accelerating the uptake of zero-emission vehicles. The Climate Change Commission and Ministry of Transport have signalled that we can expect strong action from central government in the future to rectify this. Equity needs to be a central consideration during this transition.

2. People are dying and being seriously injured on our roads

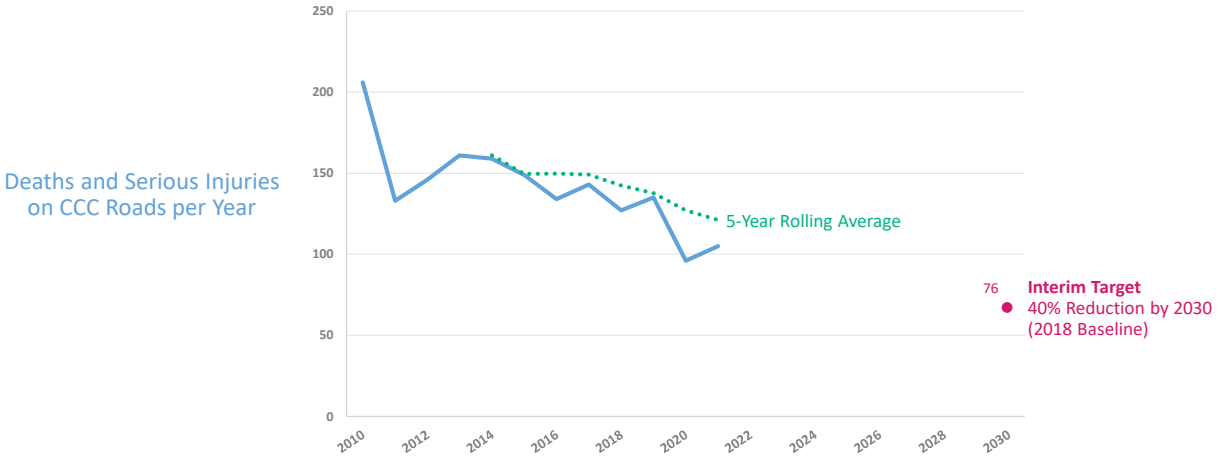
If we do not eliminate deaths and serious injuries on our roads, we will continue to pay a high social and economic cost.

Between 2017 and 2021, over 7,000 crashes on Christchurch roads resulted in 55 deaths and 606 serious injuries. On average, in 2021, someone was killed or seriously injured on Christchurch roads every three days.[19] Road crashes have a significant emotional and financial impact on individuals, families and their communities. In New Zealand, the total social cost of road crashes was estimated to be $5.7 billion in 2018.[20] Road danger is a fundamental barrier to creating streets where everyone feels safe moving around, whether they are driving, walking, cycling or using public transport.

In recent years, Christchurch has seen a decreasing trend in road deaths and serious injuries, as shown in Figure 1. While this is encouraging and reflects positively on recent safety programmes, we will need to continue to make improvements to meet our target. A coordinated and targeted investment effort will be required to ensure a 40% reduction in deaths and serious injuries is achieved by 2030.

[19] Waka Kotahi NZTA Crash Analysis System, 20 January 2022.
[20] Ministry of Transport, *Social cost of road crashes and injuries*, www.transport.govt.nz//assets/Uploads/Report/SocialCostof-RoadCrashesandInjuries2019.pdf, p.9.

Figure 1: Christchurch's Road Deaths and Serious Injuries from 2010 to 2021, with 2030 interim target



Key risk areas can change over time, but our 2021/22 Road Safety Action Plan identifies our most critical risk areas as intersections, speed, walking and cycling, motorcycling, and young drivers. In addition, alcohol/drug use when driving and older people driving (aged 75 years and older) are noted as ancillary risk areas. Distraction was noted as a common theme amongst the risk areas.

In addition to the deaths and injuries caused by crashes, people are also being injured in ways that do not involve crashes, such as by slipping and tripping on uneven footpaths. In the 2021 Life in Christchurch Survey 59% of respondents stated that the quality of our footpaths makes it difficult for them to walk around the city. Tripping on uneven footpaths is an issue particularly for elderly people.

3. Our level of access will decline under current growth and travel patterns

If our density[21] and transport connections do not increase as our population grows, then our ease of access will decrease

Christchurch's population is projected to grow to 600,000 by 2048, with household demand increased by 46,400 (over the period 2018-48). This includes the demand generated by the National Policy Statement on Urban Development[22], but may be adjusted in light of our obligations to accelerate housing supply under the new Medium Density Residential Standards.[23] By 2050, the City will provide over 85% of the employment opportunities in Greater Christchurch. If travel patterns

[21] Density is the concentration of population and activity in an urban area.
[22] Greater Christchurch Partnership, *Our Space 2018-2048*, www.greaterchristchurch.org.nz/assets/Documents/greaterchristchurch/Our-Space-final/Our-Space-2018-2048-WEB-FINAL.pdf
[23] These standards were introduced as part of the Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill.

remain unchanged, this growth would lead to an 82% increase in the number of car trips to and from the central city by 2028 (compared to 2018), 101% by 2038 and 115% by 2048.[24]

Current and historic land use and transport investment decisions, have encouraged high levels of car usage in Christchurch. Low density development, investment in state highways, and lack of investment in public transport has exacerbated this dependency on cars. If patterns do not change with population growth, we will see:

- Increasing congestion
- Decreased access to economic and social opportunities
- More cars on the road increasing pollutants, including GHG emissions
- Poor quality and design of urban environments, reducing the liveability of our city
- Increased safety risks
- Poor health and wellbeing outcomes for local communities as sedentary lifestyles are further encouraged/enabled
- Equity issues as some people are transport disadvantaged (the costs of increased car usage are borne by the community, not the user)

Access is about enabling all people to participate in society, including activities such as work, education and healthcare. The access provided by the transport system is fundamental to wellbeing. Proximity to destinations is becoming more and more important to understanding access, as our knowledge increases about the impacts of travelling.

We need to change the way we move by making sustainable transport easier for all people. We can do this by aligning our land use and transport planning. Public transport connections can make parts of Christchurch viable to build homes and create jobs for the first time, and increase the accessibility of residents in other parts of the city, and to everyday activities. Using the One Network Framework to plan new development around walking and cycling for local trips, and cycling (for those who are able) and public transport for longer ones, will enable people to live active and healthy lives – and help us to meet our emissions reduction targets.

[24] Analysis based on Christchurch Transport Model version 18

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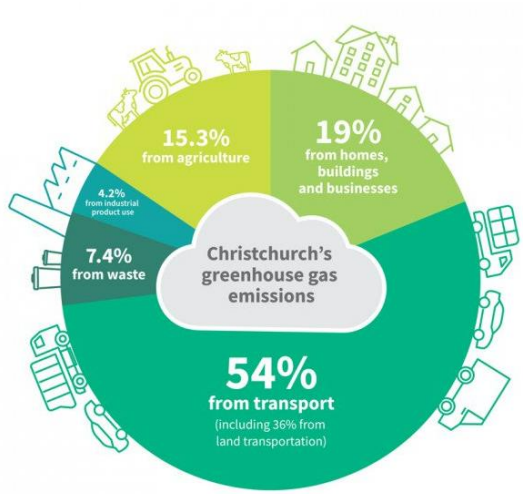
Transport directions: Action Plan

1. Reduced transport greenhouse gas emissions

We recognise that meeting our greenhouse gas emissions targets will require significant change across multiple sectors. Data for financial year 2018/19 shows our district's[25] total gross greenhouse gas emissions were 2.72 million tonnes of carbon dioxide equivalent (tCO2-e), slightly higher than two years previously.[26] This is broken down by sector in the figure below.



In developing the Plan's actions we've researched international and national best-practice methods to reduce transport emissions and identified those that will work for Christchurch. The actions outlined in this plan set out a programme of initiatives, all of which will need to be implemented in order to reduce our on-road transport emissions and to reach our target of halving emissions by 2030 and reaching net zero emissions by 2045.

We need to adopt policies and implement actions that will encourage and allow change in ways that support growth, enhance people's daily lives and improve their transport experiences. The transport targets outlined in the Government's Emissions Reduction Plan discussion document are:

- Reducing vehicle kilometres travelled (VKT) by cars and light vehicles by 20% by 2035
- Increasing zero-emission vehicles to 30% of the light fleet by 2035
- Reducing emissions from freight transport by 25% by 2035
- Reducing the emissions intensity of transport fuel by 15% by 2035

1. Reducing reliance on cars and supporting people to walk, cycle and use public transport
2. Rapidly adopting low emission vehices and fuels
3. Beginning work now to decarbonise heavy transport and freight

Reducing GHG emissions from the transport system also offers opportunities to improve the wellbeing of New Zealanders, and will contribute towards achieving the other three outcomes in our Plan – safe and healthy streets, and good growth. Air pollution, noise, crashes and traffic congestion impose a large cost on our health, environment and economy. For many people and communities,

[25] The Christchurch district includes Christchurch city and Banks Peninsula

[26] AECOM, *Christchurch Greenhouse Emission Inventories for Financial Years 2018/19 and 2016/17,* ccc.govt.nz/assets/Documents/Environment/Climate-Change/AECOM-Christchurch-GHG-Emission-Inventories-for-Financial-Years-201819-and-201617.pdf

transport is not affordable or accessible. The transition has the potential to make transport more inclusive, safe, healthy and resilient, and better able to support economic activity.[27]

Our Plan focuses on reducing the distance travelled by cars and light vehicles, which will in turn reduce overall emissions generated by road transport. This is where we have the greatest influence as a Council. We will also support the transition to zero-emission vehicles, including supporting urban freight and delivery companies to transition.

There is an opportunity for these actions to help address inequities in the transport system. Christchurch's high rate of car dependency has resulted in rapidly rising transport costs for residents.[28] Fuel costs are rising[29] and ensuring people have options to travel by other modes like walking, biking and public transport can negate the impacts of this. Any policy which could lead to an increase in the cost of driving, such as road pricing, needs to be carefully designed so that it doesn't disadvantage our most vulnerable people. Tools that could be used to address this include exemptions, discounts, targeted interventions, and recycling revenue back into improving sustainable options.

[27] Ministry for the Environment, *Emissions Reduction Plan discussion document*, environment.govt.nz/assets/publications/Emissions-reduction-plan-discussion-document.pdf.
[28] https://www.pwc.co.nz/publications/2019/citiesinstitute/cities-urban-competitivesness-christchurch.pdf
[29] (https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/weekly-fuel-price-monitoring/

Policy 1.1: Plan and implement Low Traffic Zones across Christchurch

In a Low Traffic Zone (LTZ) a range of measures are used to manage traffic, reduce emissions, grow amenity, and encourage more sustainable travel options in a specific area or neighbourhood. Over the next ten years, we are looking to transform pockets of areas across the city into a series of interconnected neighbourhoods, with the city centre as the social and economic hub. In these Low Traffic Zones streets will be redesigned to prioritise walking and cycling; and street trees, small parks, urban wetlands and playgrounds will encourage slow movement, play, and social gatherings between friends and neighbours. People will be less reliant on cars as they will no longer be the most obvious or convenient travel choice.[30]

LTZs deliver a range of benefits for the community and businesses including improved safety, cleaner air and greater visual amenity, while boosting physical activity and environmental and community wellbeing. A LTZ is a people-friendly space meaning businesses will thrive as people are attracted to the area.

LTZs have been highly effective internationally, and our analysis has shown us that such schemes could make a significant difference in Christchurch. Not only will they help us to achieve our emissions outcomes; they will contribute to creating healthy and safe streets, and encourage sustainable growth. The creation of LTZs would be an iterative process, building on what we have already done and what is planned as well as introducing new measures over time.

For a LTZ to work, everyone must work together at a community level. LTZs are transformative in nature and are intended to foster a sense of community pride and

Case study – City of London: Shoreditch City Fringe (2019)

Initiatives introduced

- The world's first Ultra Low Emission Streets; blazing a trail for Zero Emission Zones and cutting traffic in the area by 70%
- Five pocket parks
- Four new or improved cycle lanes
- Two road closures to create new public spaces
- 12 new or improved walking routes and 62 new cycle parking spaces
- 13 trees and a 26 square metre green wall

Benefits to residents and businesses

- Reduced exposure to pollution
- Improved walking and cycling routes and infrastructure
- A number of improved retail areas (on average, where a pocket park has been installed, revenue at nearby shops and cafés increased by 16%)
- More charging points to help accelerate the move to make London a zero carbon city
- Support for business through the complementary Zero Emissions Network project

Source: https://www.london.gov.uk/questions/2019/12088

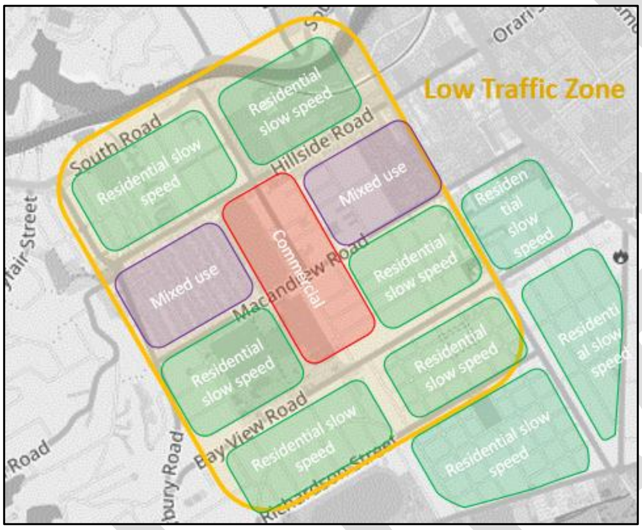
[30] Royal Town Planning Institute, *Net Zero Transport – the role of spatial planning and place-based solutions*, www.rtpi.org.uk/media/9233/rtpi-net-zero-transport-january-2021.pdf

ownership. LTZs need to be designed so that they offer a range of benefits, and in consultation with the community to maximise this full range of benefits available. It is likely that the case for public investment in a LTZ will not rely solely on the emissions savings, but will be supported by other benefits, such as the improved amenity and any associated economic uplift that is likely to follow urban design improvements.

What could this look like for Christchurch?

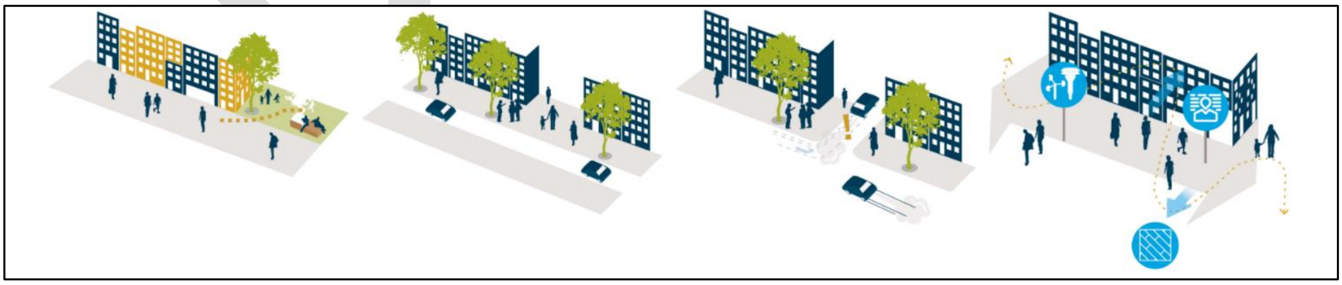
Many of the measures that will likely be implemented as part of LTZs are also separate actions throughout this Plan, for example slow speeds around schools and in residential neighbourhoods, and supporting walking and cycling. This policy is distinct from these individual actions in that it brings numerous and varied measures together for specific areas, typically where there is a mix of land uses. For example, the area could include residential and commercial activities. Below is an example of what an LTZ area could look like, which takes into account the different types of land uses that would typically be incorporated.

Example area



Examples of measures by different types of land use

- **Commercial**: priority loading for low emission vehicles, cycle and scooter parking, travel behaviour engagement, timed closures of streets, urban design improvements
- **Residential:** slower speeds, through traffic restrictions, school streets
- **Mixed use:** parking restrictions and emissions-based parking charging, pocket parks



How will our Low Traffic Zones be implemented?

A first step and an important part of developing the LTZ programme will involve developing criteria to identify suitable areas for the LTZs. The One Network Framework street classifications will provide

a basis for this. Based on international evidence we have developed an initial criteria for identifying and prioritising areas for LTZs, as follows:

- Is the area a significant source of emissions?
- Does the area provide opportunities for growth or redevelopment?
- Does the area provide opportunities for traffic and emissions reduction?
- Is the area the start and/or end point of a large number of journeys?
- Does the level of traffic make the area unattractive?
- Is there strong involvement and support from the community and businesses?

If potential areas meet some or all of these criteria, they may be considered suitable as LTZs.

We will need to build packages of interventions suitable to each area, and changes will be developed in consultation with local communities, and with principles of equity in mind. We need to ensure that the LTZ policy is applied with other measures across the city, such as the roll out of slow speeds where appropriate, to avoid creating pockets of advantage in some neighbourhoods while leaving others behind.[31]

Actions
- Develop LTZ programme and funding opportunities (including criteria, identification of areas, interventions etc.)
- Implement programme across Christchurch

[31] The Helen Clark Foundation, *Te Ara Matariki – the fair path*, helenclark.foundation/publications-and-media/te-ara-matatika-the-fair-path/

Policy 1.2: Support investment in the transport network with an ongoing, coordinated sustainable travel choice programme to increase the uptake of low emission travel options

Travel choices are influenced by many factors, such as travel time, reliability, cost, convenience, safety and flexibility. Safe and attractive transport infrastructure and services are required to enable more people to walk, cycle, scoot and travel by public transport. However, this investment must be complemented by efforts to promote and encourage active and shared travel and to make it easy and intuitive for people to change the way they travel.

A travel behaviour change programme, involving coordinated promotion and education (travel planning), can be focused on people where new or improved travel options are available, and in areas where there are already safe and convenient travel options available.

Building awareness and understanding about low emissions travel

It's important for people to understand that the way we travel has changed over time, and will continue to evolve. We need to ensure people are well informed (with easy to understand information), and are aware of their options, and the impact of their choices on the climate. This will mean that they're better equipped to make decisions on where they live, and how they want to travel now or in the near future. Not only does this type of information need to be available for people at an early stage of any new transport investment project, it should become common knowledge for Christchurch residents as increased investment occurs across the city.

We need to be focused on establishing district-wide, ongoing information and education initiatives. This will help us to achieve our emissions reduction targets, and provide accompanying benefits for our transport system and communities.

Implement behaviour change initiatives to support the introduction of new services and transport infrastructure

We've worked with our Greater Christchurch Partners to develop joint plans[32] for the delivery of promotion and outreach material to major employers, schools, and the community. The programme sets out a series of targeted packages that are to be delivered in line with infrastructure improvements and major projects. Key initiatives within the programme include:

- Travel planning such as workplace travel plans, community/household travel plans, incentives and education to encourage individuals and families to try different modes of transport
- Personalised Journey Planning, which is a highly targeted approach focused on conversations and information with individuals/households/families, aimed at tackling any barriers to using different modes of transport.
- Cycle training to educate individuals and children on safe cycling and road rules

[32] Greater Christchurch Partnership, Greater Christchurch Travel Demand Management business case 2020; *Regional Mode Shift Plan Greater Christchurch,* September 2020, nzta.govt.nz/assets/resources/keeping-cities-moving/Christchurch-regional-mode-shift-plan.pdf

- Promotional and information campaigns to increase awareness and knowledge, and help individuals make more informed decisions.

Alongside this, we have a programme supporting schools to create their own travel plans. School travel plans are a practical approach to improving road safety and encouraging the whole school community to use active modes of transport to get to and from the classroom. It can be used to address congestion at the school gate, and by promoting walking, scooting and cycling, contributes to students' health and wellbeing. These plans are living documents that can be adapted by the school as required, to address relevant concerns.

Further development of the programme will involve the engagement of more teaching staff, expanding into schools that have not yet created a school travel plan, and revisiting schools with older school travel plans to help them refresh their plans.

Actions

- Build awareness and understanding about low emission travel through district-wide, ongoing information and education initiatives
- Implement behaviour change initiatives to support the introduction of new services and transport infrastructure

Policy 1.3: Implement road pricing, if appropriate, to reduce emissions

The Emission Reduction Plan discussion document has proposed a target to reduce distances travelled by cars and light vehicles by 20% by 2035, to be achieved by offering better travel options and managing demand. It recognises that road pricing will play a key role in reducing emissions, alongside changes to land use and investment in public transport.[33]

Road pricing means that motorists pay directly for driving on a particular roadway or in a particular area, for how much they drive and when. Road pricing can reduce congestion by encouraging people to travel in different ways and at different times, and choose alternatives to the car. Although congestion is not currently a major problem in Christchurch, it will become an issue if our growth continues at the same rate and our travel patterns do not change. While helping to mitigate this risk, road pricing will also contribute towards reduced emissions as one tool to incentivise changed travel behaviour, away from cars and towards public and active transport.

Road pricing can take the following four basic forms, with variations possible in all cases

Area or congestion charging: vehicles are charged for crossing a ring road or driving within that ring road at specific times of day (implemented in London)

Emissions charging: designed to charge different types of vehicles in relation to how high a level of emissions they emit. London has been the pioneer of such schemes with Low Emission Zones and Ultra-Low Emission Zone.

Cordon or road toll charging: vehicles are charged for crossing a ring or line of charge points across a series of roads at specific times of day, and/or are charged to use one or more roads in a specific congested corridor(s) (main highways and secondary routes). Examples include Stockholm, Gothenburg (cordon), Singapore and Dubai (tolls).

Network Charging: vehicles on a road network are charged based on a combination of the time of day, location and distance travelled. This may require in-vehicle Global Navigation Satellite System hardware. This is proposed for Singapore.

Although some transport users pay specific user fees such as parking charges and public transport fares, many people using local roads do not contribute to the cost of providing them. People pay for roads based on how much fuel they use (fuel excise) and how many cars they own (vehicle registration), not based on how far and when they drive. This means that there is currently no price

[33] *Emissions Reduction Plan discussion document*, pp.59, 76. See page 59 regarding steps in the first budget period: "Reduce congestion and support emission reductions by enabling congestion pricing, and work with Auckland Council to implement it. Create a model that other councils can adopt, with emphasis on Wellington in this emissions budget period. Look at using other pricing tools to reduce emissions. Ensure regulation enables and encourages local government to use these tools. Investigate ways to raise revenue for transport in future, including to replace the land transport funding system. This will include revenue, funding, and pricing options, and how these may be used together." Regarding steps in the second budget period: "Work with other centres with large populations on congestion pricing or other pricing tools."

signal for when roads are being overused and underused, to manage road demand or encourage people to travel differently to reduce emissions.

At present, local councils lack any direct mechanism to cover the cost of providing local roads. The Land Transport Management Act 2003 allows for tolls to be imposed on new roads but not on existing ones. New legislation will therefore be required for the full implementation of road pricing. The Emissions Reduction Plan discussion document proposes using pricing tools to reduce emissions, and this will involve ensuring that regulation enables and encourages local government to use these tools.

There are a number of different types of road pricing schemes, and an 'ideal' scheme could vary charges according to location (e.g. more expensive in the city centre), time of day (e.g. more expensive at peak) and type of vehicle (e.g. more expensive for large and polluting vehicles). New technologies will increasingly make this possible. The revenue from road pricing would ideally be allocated back into transport (typically public transport) improvements.

Cities around the world have introduced road user pricing in different ways with a number of obvious benefits, as described in the figure adjacent. Auckland Transport considers that road pricing could significantly help to address Auckland's transport challenge, particularly congestion.[34]

Where has it been implemented?

LOCATION	OUTCOMES
Oregon *Pay per mile*	• Opt-in trial participants pay per mile • 22 per cent less driving in peak periods • 91 per cent would rather continue to pay per mile instead of fuel tax
London *Pay to drive in zone*	• 14 per cent fewer trips in charging zone. • 10 years of stable congestion while population grew by 1.3 million. • Enabled public realm improvements.
Singapore *Pay to enter zone*	• 20 per cent reduction in delays within the charging area. • Prices adjusted regularly based on conditions and average speed targets
Milan *Pay to enter zone*	• 15 per cent reduced emissions in 4 years • 16 per cent reduction in traffic volumes • 21 per cent reduction in road collisions • 12 per cent less public transport delay

Internationally, some proposed cordon charging systems have been rejected largely because they were perceived to be unfair to some road users. To mitigate the equity impacts of road pricing, it is important to create a transport system that provides realistic options for everyone. Our public transport system will play a key role in this. Other ways in which equity concerns can be addressed include exemptions, discounts, targeted assistance and subsidies, and detailed assessment of charges by location and time.[35] In addition, building public understanding and acceptance will be critical to successfully implementing any road pricing scheme.

While the Emissions Reduction Plan discussion document states that a pricing model will be created for councils to adopt, there is much work for us to do in the initial years to understand what type of road pricing policy is suitable for Christchurch. This process will require trade-offs and judgements to

[34] *The Congestion Question – Phase One Report*, November 2020, www.transport.govt.nz/assets/Uploads/Report/The-Congestion-Question-Report.pdf
[35] *The Congestion Question – Phase One Report*, November 2020, www.transport.govt.nz/assets/Uploads/Report/The-Congestion-Question-Report.pdf, page 60

be made. Decision making for Christchurch will need to adhere to any national model that is developed, with a particular focus on ensuring an equitable system that targets the right people at the right time, and is technologically achievable, cost effective and efficient.[36] We will also need to work with our Greater Christchurch Partners to address cross-boundary issues.

Actions

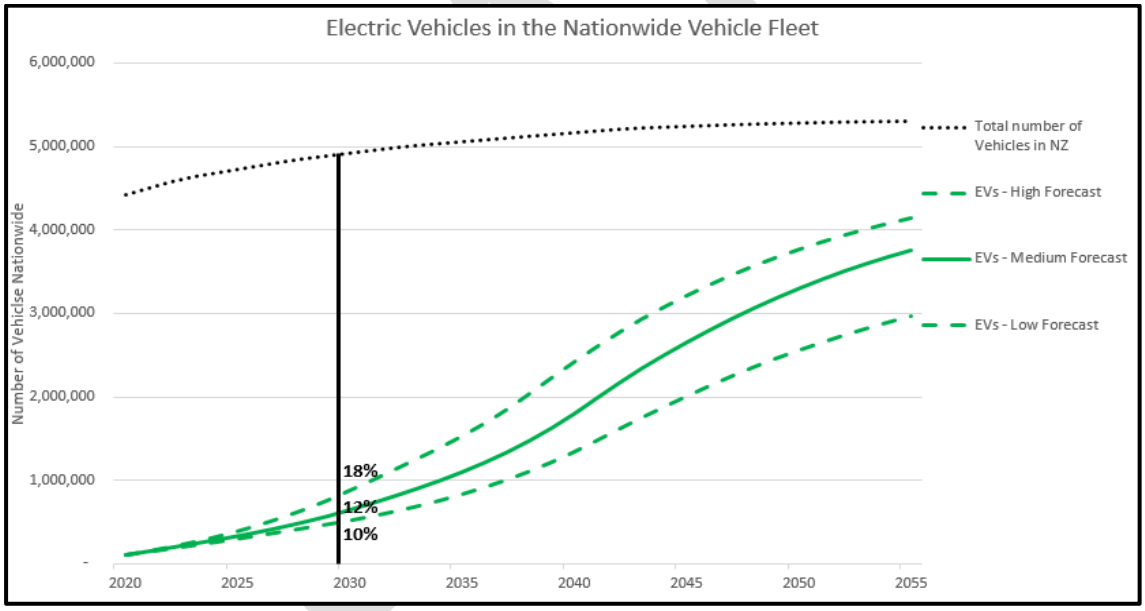
- Investigate options for road pricing and support necessary changes to legislation
- Trial, monitor and review preferred option, pending legislation changes
- Implement preferred option, pending legislation changes

[36] International Transport Forum, *The Social Impacts of Road Pricing – Summary and Conclusions*, www.itf-oecd.org/sites/default/files/docs/social-impacts-road-pricing.pdf

Policy 1.4: Support the transition to zero-emission vehicles

It is critically important that the vehicle fleet shifts from fossil fuel to zero-emission technology if we are to reduce our emissions from transport to the required levels. Even with the expected shift from cars to walking, cycling and public transport, the majority of trips in Christchurch are still expected to be undertaken in cars[37], and our transport policy needs to account for this. We can assist the uptake of zero-emission vehicles through a number of policies throughout this Plan such as providing allowances for zero-emission vehicles in road pricing and parking policies and encouraging the installation of charging infrastructure through our Take Charge Christchurch programme.

Central government is influencing the uptake of zero-emission vehicles through incentives like the clean car discount scheme, introduced in 2021[38], and the Emissions Trading Scheme, introduced in 2012 and significantly restructured in 2020.[39] The Ministry of Transport has forecast electric vehicles (plus hybrids) making up 10-18% of the national vehicle fleet by 2030[40] based on existing policies[41] (see Figure 2 below). The Emissions Reduction Plan discussion document specifies a target of increasing zero-emission vehicles to 30% of the light fleet by 2035.[42] This is significantly higher than the Ministry of Transport's estimates, and would require additional government incentives to achieve.



[37] CCC analysis indicates a pathway where car mode share reduces from 83% of all trips in 2018 to 59% of all trips by 2030.
[38] www.nzta.govt.nz/vehicles/clean-car-programme/clean-car-discount/
[39] www.epa.govt.nz/industry-areas/emissions-trading-scheme/changes-to-the-ets/
[40] Ministry of Transport, Future state model results, www.transport.govt.nz/statistics-and-insights/transport-outlook/sheet/updated-future-state-model-results
[41] The medium forecast of 12% has been assumed for the purposes of the CCC's emissions tool
[42] *Emissions Reduction Plan discussion document*, p.59

Figure 2: Forecast uptake of electric vehicles to 2055 (Ministry of Transport), compared to total number of vehicles in New Zealand

The Council will advocate to Government to continue to strengthen incentives to increase the uptake of zero-emission vehicles, for example battery electric vehicles. Environment Canterbury's 2018 Regional Public Transport Plan includes a policy for all buses to be fully electric by 2028.[43] The Regional Land Transport Plan 2021 includes a policy to see more sustainable regional freight movements, including greater use of the rail corridor.[44] We would support these shifts.

Compared to petrol and diesel vehicles, zero-emission vehicles currently cost more upfront but have lower operating costs. However, this is likely to change over the next few years, with price parity likely before the end of the decade. City buses are expected to be the first vehicles to reach price parity, followed by urban and regional trucks, then passenger cars.[45]

The transition of urban freight to zero emissions

Urban freight is a good example of where transitioning to zero-emission vehicles is already a viable option, as small goods are picked up from multiple locations around a city and taken to a distribution warehouse, and vice versa. Internationally, urban freight is predicted to be one of the earlier vehicle sub-sets to transition to zero-emissions vehicles. Many countries also have legislative requirements for zero-emission deliveries.

We are beginning to see initial steps in New Zealand. For example NZ Post currently has 400 electric vehicles, and is aiming to fully electrify their fleet by 2025. In 2019 Foodstuffs had 28 electric delivery vans and four electric trucks.

[43] Environment Canterbury, *Canterbury Regional Public Transport Plan - 2018*, www.ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-transport-plans/, p.64
[44] Environment Canterbury, *Canterbury Regional Land Transport Plan 2021-31,* https://www.ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-transport-plans/
[45] Ministry for the Environment, *Marginal Abatement Cost Curves Analysis for New Zealand 2020* *https://environment.govt.nz/publications/marginal-abatement-cost-curves-analysis-for-new-zealand-potential-greenhouse-gas-mitigation-options-and-their-costs/*, page 49

On the local network, urban freight represents a significant volume of vehicles, and this is only likely to increase with population growth. We're currently working with a number of urban freight/delivery companies and service providers to Council that operate in Christchurch to assist them in their transition to zero-emission vehicles. We will continue to support companies to make this shift. As well as zero-emission vans and trucks, urban freight companies are also beginning to switch to electric cargo bikes for urban delivery of small goods. Auckland, Wellington and Christchurch all have cargo bike deliveries in their city centres. Auckland Council has supported this shift through providing overnight storage and charging facilities for the bikes.[46]

Another way urban freight could transition is through emerging non-vehicle technologies. Various trials around the world have been undertaken using drones and wheeled robots to deliver food, healthcare supplies and post. None of these have yet developed into a mainstream urban freight solution, but this may happen in future. We will need to be responsive to this.

Actions

- Advocate to central government for continued and increased incentives for zero-emission vehicles
- Support the shift to zero emission urban freight/delivery vehicles, including smaller vehicles such as e-cargo bikes and e-mopeds

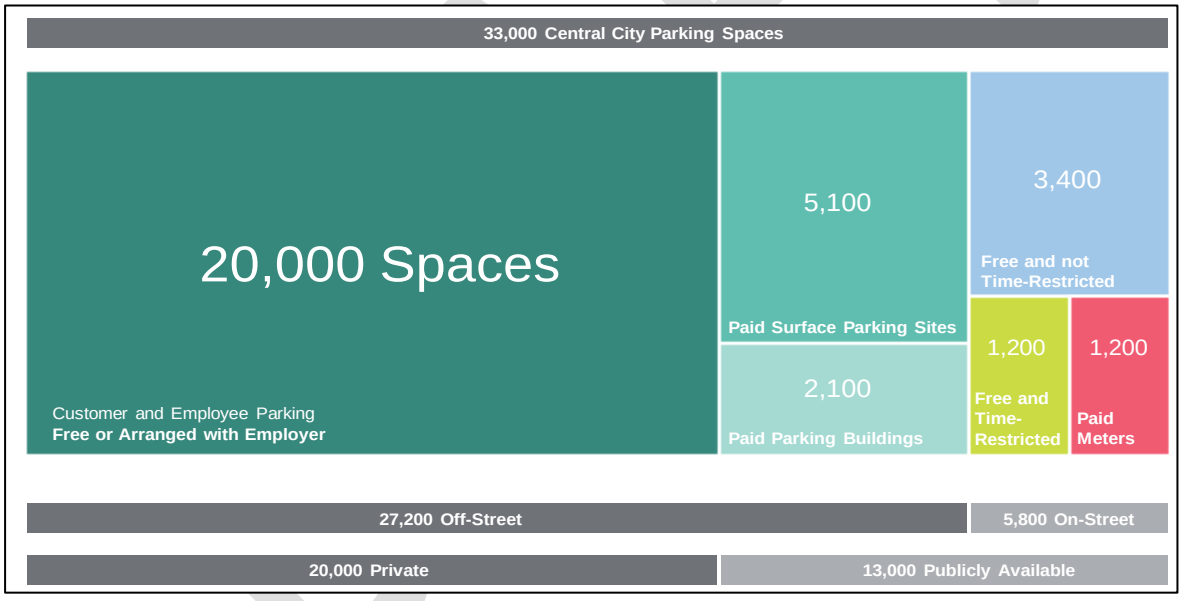
[46] RNZ, *Courier firm replace vans with ebikes*, November 2021 www.rnz.co.nz/news/business/455471/courier-firm-replaces-vans-with-ebikes

Policy 1.5: Implement parking pricing to reduce emissions

Parking pricing is an important tool in influencing travel behaviour. Implementing more comprehensive parking pricing will result in a fairer system, with more efficient and effective use of parking space. This will help to create a shift to more sustainable modes of transport for those that can use them, while at the same time making our roads easier to drive on for those who need to. This will help reduce emissions and contribute to the transformation of urban environments into safer, more vibrant, sustainable, and equitable places with better housing and travel choices.

Parking pricing refers to users being directly charged for using a parking space, either through parking meters or a parking levy. The majority of parking in Christchurch is free, or not priced. This means the true cost of providing the parking is not paid for by the user and is paid for by the rest of the public. This is inherently inequitable and also results in more demand for parking spaces than there would be if there were a direct charge for it.

In 2020, we estimated there were about 33,000 parking spaces within the central city, excluding residential spaces. The chart below shows the numbers of different parking spaces located within the central city (four avenues).[47]



Approximately 82% of central city parking is off-street, of which 74% is free or arranged with employers. The remaining 18% is located on-street, of which 79% is free. We do not have this level of detail for numbers of parking spaces outside the central city, but it is estimated that an even higher proportion of suburban parking is currently provided free of charge.

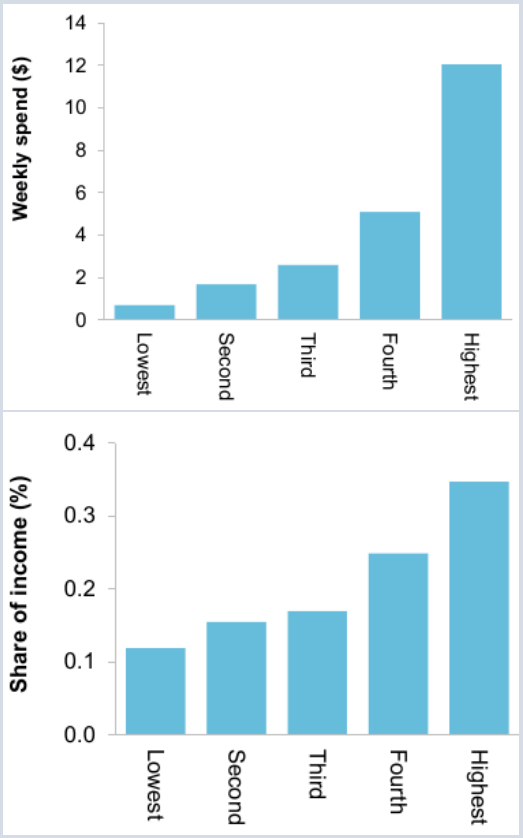
[47] ccc.govt.nz/assets/Documents/Consultation/2021/01-January/STR3781-CCP-Policy-Supporting-info-2021-WEB.pdf, p.7

Parking pricing needs a multi-pronged approach due to the range of different parking types and ownership models. The Christchurch Central City and Suburban Parking Policies provide a framework to manage, plan for, and address parking-related demand issues. These existing policies provide direction for more parking spaces to be priced using meters, but they only cover on-street parking and council-controlled off-street parking.

The majority of parking in the central city is privately owned and operated, and is not covered by these policies. A parking levy is the mechanism through which these spaces can be priced.

This Policy is focused on moving closer to a user-pays approach to parking through reducing the amount of free parking in the central city and other key growth areas in a way that helps to encourage a shift to the use of sustainable modes of transport. Commuters who park in the central city typically have a higher ability to pay and higher likelihood of alternative travel options. Lower-income people often use cars, but less frequently park them in costly and busy central city locations so would be less impacted[48]. Where we do provide free parking, we need to ensure it is located in the right places, for example next to parks and green spaces outside the central city, rather than in densely populated areas to be filled by commuters.

Car-parking costs fall mainly on higher-income users



Parking levies

The availability of free parking is a key determinant of whether an employee will drive to work. Research suggests that 25% fewer vehicles are driven to work when drivers have to pay to park.[49] The 2021 Life in Christchurch Survey found that of those who commute by car to the central city and park, 51% have free or employer-provided parking.[50]

[48] https://www.pc.gov.au/research/completed/public-transport/public-transport.pdf, page 11
[49] Richard W. Wilson, *Estimating the travel and parking demand effects of employer-paid parking* (Regional Science and Urban Economics, Volume 22, Issue 1, 1992)
[50] Internal analysis based on the Life in Christchurch Survey, ccc.govt.nz/the-council/how-the-council-works/reporting-and-monitoring/life-in-christchurch

Parking levies can take many different forms. Internationally, they are increasingly considered an effective way to price privately-owned/operated parking. These typically charge a cost to the owner/lease of the parking and are designed so the owner can pass on that cost directly to the user of each parking space. Some schemes cover only parking provided by employers, while others also include publicly-available parking provided in purpose-built parking facilities. Geographic extents vary, with some schemes only applying in central cities while others are more widely applied.

Evidence

Central Perth, Australia: parking levy has funded a free downtown public transport zone, free central city shuttle, better bus infrastructure and more cycleways and footpaths.

Nottingham City, UK: The Nottingham City parking levy has funded two tram line extensions and a fleet of new electric buses

Let's Get Wellington Moving: the report found that such a scheme would generate $28 million per annum in revenue, which would be spent on improving sustainable transport (*Wellington Commuter Parking Levy – Final Report*, pg.12).

The revenue raised from parking levies is typically used to improve sustainable travel options for commuters. A Christchurch scheme could fund improvements to our bus network and walking and cycling infrastructure[51] [52].

No cities in New Zealand have yet enacted a parking levy. It is not evident that current legislation would provide for any form of parking levy, including under current local government rating legislation. Let's Get Wellington Moving's investigation into a commuter parking levy for Wellington concluded that the implementation of a comprehensive scheme that maximises benefits in an equitable way would require legislative change, and that bespoke legislation in the form of a Parking Levy Act would be the preferred pathway - providing the greatest legal certainty.[53]

A form of parking levy for Christchurch would be a significant tool in reducing the use of cars where they are not necessary, and in meeting our emissions reduction targets. We will investigate what form of parking levy would be most beneficial for Christchurch, work with central government through any legislative changes required, and engage with our communities.

On-Street Parking

The Christchurch Central City and Suburban Parking Policies include directives to progressively expand the coverage of paid and time-restricted on-street parking, focusing on locations where

[51] www.nzta.govt.nz/assets/userfiles/transport-data/Parking%20Management.pdf, p.8
[52] www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_FAQ_PerthParkingPolicy.pdf
[53] Let's Get Wellington Moving, *Wellington Commuter Parking Levy – Final Report*, lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Nov-1-MRT/2021-04-12-LGWM-Commuter-Parking-Levy-Final-Report.pdf, p.15, 152

occupancy rates are high during peak periods (where peak occupancy exceeds 85% for the central city, 75% for the suburbs)[54,55].

Currently 79% of on-street parking in the central city is free, or not priced. We will use the Central City Parking Policy to progressively expand time restrictions and pricing within the four avenues, working towards an aspiration of having no unpriced parking in the central city. An interim step towards achieving this will be to expand time-restrictions throughout the central city.

We will apply the same approach to our suburban Key Activity Centres[56] and other high-demand areas (places where occupancy exceeds 75% at peak times). However, before we can do this, we need to improve the quality of our data on parking supply and demand in suburban areas.

Parking data

We will work to improve our understanding of parking demand and supply in Christchurch to support all actions identified in this Policy. A better understanding of our parking demand and supply, particularly in suburban areas, will help inform future parking-related decisions and policies. We plan to harness improvements in technology to help us with our monitoring, such as utilising and improving our Central City Parking Database.

Temporary parking sites

We've committed to reviewing the role of temporary surface parking sites in the central city. Temporary off-street parking sites were introduced into the Christchurch District Plan following the Canterbury Earthquakes to support recovery in the central city and to provide a practical solution for land owners with otherwise vacant land. While this temporary provision has now expired, applications can still be submitted for a general parking site (whether temporary or permanent). A survey for the Vacant Sites Programme in January 2020 found that 19.7ha (29%) of Central City vacant land was used for parking.[57]

This review will determine if temporary parking sites remain fit-for-purpose and if they continue to align to our broader strategic goals and priorities, including our emission targets.

[54] Christchurch City Council, *Central City Parking Policy*, ccc.govt.nz/assets/Documents/Transport/Parking/Central-City-Parking-Policy-2021.pdf, pg. 10, Policy 2
[55] Christchurch City Council, *Suburban Parking Policy*, ccc.govt.nz/assets/Documents/Transport/Parking/Suburban-Parking-Policy.pdf, pg.7, Policy 4
[56] Key existing and proposed commercial centres identified as focal points for employment, community activities and the transport network, and which are suitable for more intensive mixed-use development, as identified in the *Canterbury Regional Policy Statement* and the *Christchurch District Plan*
[57] ccc.govt.nz/culture-and-community/central-city-christchurch/develop-here/vacant-sites

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Actions

- Investigate the feasibility of parking levies for Christchurch
- Implement parking levy (pending outcome of feasibility study)
- Expand paid and time-restricted on-street parking by applying the Christchurch parking policies in the central city and suburban areas
- Review the role of temporary off-street surface parking sites in the central city
- Improve parking monitoring

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Transport directions: Action Plan

2. Our transport system supports good growth

Our transport system will play an integral part in supporting and shaping the function and growth of our city, both as our urban areas are developed and intensified, and new greenfield neighbourhoods and business areas are fully established. Making safe and sustainable travel options readily available in targeted areas will mean that:

- Our neighbourhoods are accessible, linked, and provide for people's daily needs
- Our larger centres and central city are accessed easily by active and public transport options
- Less vehicle kilometres are travelled, and journeys are shorter and more active for those who are able

Good growth will mean that housing, employment and business are located in the right areas with sustainable travel options, and that local living is supported

As Christchurch grows, and competition for street space increases, it is important that the planning and design of our streets supports quality, vibrant urban places and good living environments. This means we need to find the right balance between a street's transport function and how it also caters for other uses, such as pedestrians. The Government's One Network Framework's (ONF) integration of transport and land use at various scales is a crucial tool to help us treat our streets and roads in a way that supports good growth. While we are already planning in accordance with the ONF in many instances, we now have a national mandate and direction to implement this for all streets.

Figure 3: The ONF street classifications

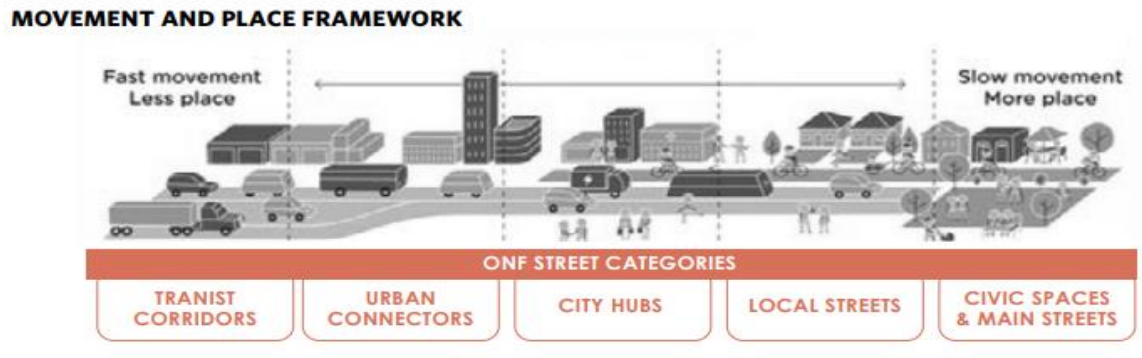

Figure 11: ONF Street Categories within the Movement and Place continuum.
Source Graphic NSW Future Transport Strategy 2056

Achieving good growth through the integration of transport and land use will reduce our emissions and enhance equality of opportunity for all our residents. It will also support freight and other essential vehicles to move efficiently around the city and improve resilience in the event of an emergency.

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Policy 2.1: Embed a people-centric approach to our streets, by adopting the national One Network Framework

During the last decade in Christchurch, a comprehensive approach to street upgrades that supports the more effective use of street space, particularly in areas identified for medium and high levels of residential development, has been limited. As our urban form changes, it is increasingly important that we transform our places and neighbourhoods to be resilient to environmental stressors; to be functional and sustainable; and to better utilise valuable public space.

The ONF represents a shift in national policy and guidance, which acknowledges that streets are integral to the land transport system as well as to the provision of housing and development.

The ONF identifies seven street classes within the Urban Street Family. Each class has a different role based on its movement and place function (see Figure 4 below):

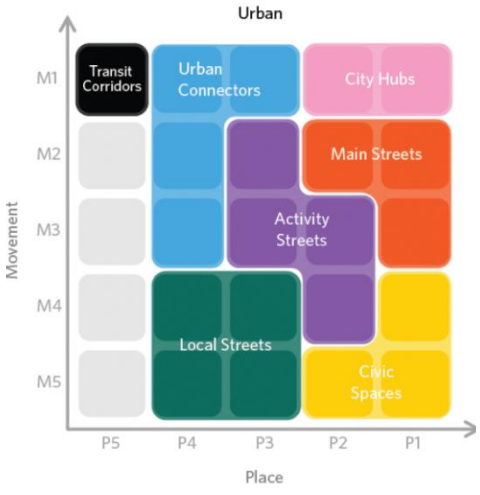
- The movement function relates to the intended purpose of a corridor for moving people and goods by any mode
- The place function is the extent to which a road or street is a destination in its own right.

This will inform the setting of future levels of service and other success measures, and therefore the requirements for the design of the street and prioritisation of interventions. The use of the ONF informs many of the policies in this Action Plan.

What has changed from our previous road classification hierarchy?

- The 'movement' emphasis has shifted from the volume of vehicles on roads to the road network's functional importance for moving people and goods, by any mode
- The new framework takes into account adjacent land use, and the role the transport network plays as part of the wider public realm (its 'place' function)
- The framework (when fully implemented) considers both the current and desired future function of the network, to allow gaps to be identified and guide investment decision-making
- The framework has become multi-modal and (when fully implemented) includes freight, walking, cycling and public transport networks

Figure 4: Urban street classes under the ONF



One Network Framework – street classes

Local streets: Serve as the fabric of a neighbourhood by facilitating local community access supported by active modes.

Urban connectors: Facilitate safe, reliable and efficient movement of people and goods between centres.

Activity streets: Provide sustainable access to shops and services as well as ensuring a high quality public realm is achieved.

Civic spaces: Places people are encouraged to spend time in, and where people on foot can relax and move freely.

Main streets: Support businesses and public life while ensuring connections with the wider transport network.

City hubs: Dense and vibrant places that reduce the impact of high traffic and facilitate sustainable transport movement.

Transit corridors: Provide for fast and efficient long distance movement of people and goods within the urban realm.

How do we implement the ONF in Christchurch?

We have reclassified our roads according to the above ONF street classifications. We have identified our future state to help shape our transport network and support a consolidated urban form around our central city, Key Activity Centres, and other centres. Interventions will centre on at least four specific urban environments, and their associated ONF street classifications:[58]

- **Central city** - our future central city is structured around both very high movement and very high place value streets, including City hubs (high movement function focused on efficient public transport and active modes); Activity streets and Main streets (allow for general traffic and business delivery access to the centre); and Civic Spaces (low movement function prioritising place value, local business activity, and walking). All of our street families should also accommodate easy and safe walking and cycling connections to and through the city centre
- **District Centres (Key Activity Centres (KACs))** - the future street network for our KACs consists of one or more of Main streets and City Hubs as well as a network of smaller Civic Spaces. Main streets will generally be a continuation of an Urban Connector, but within the KAC the function of the street changes to reflect the greater place function with lower speeds and more dedicated spaces for pedestrians, cyclists, and the public realm.
- **Neighbourhood Centres (including two KACs)**- the future street network for our Neighbourhood Centres consists mainly of Activity Streets**.** These streets are often interconnected with Urban Connectors, however they have a higher movement and place function. These streets should be prioritised for buses, and cycling should be safe.

[58] These urban environments line up with those specified in the National Policy Statement on Urban Development

- **Local Centres –** these local neighbourhoods are predominantly residential areas with supporting land uses such as neighbourhood shops, schools, community facilities, parks and green spaces. Streets in Local Centres should be spaces where residents can connect and socialise while children can play safely due to low traffic volume and speeds. Our Local Centres primarily consist of networks of Local Streets, providing slow vehicle access to residential properties, bounded by Urban Connectors or other higher order streets like Activity or Main streets, where the neighbourhood borders a larger centre.

Reprioritising street networks to better reflect the ONF place/movement values and the function of centres will improve the liveability of neighbourhoods, creating a stronger sense of vibrancy and social connectedness. Our central city and KACs that are experiencing the highest growth will require an immediate focus to improve the urban realm and the transport infrastructure that services them.

Policy 2.2: Prioritise investment for transport and urban realm improvements to support intensification

The National Policy Statement on Urban Development (NPS UD) requires councils across New Zealand to enable more housing across their jurisdictions.[59] Further to this, the new Medium Density Residential Standards will make it easier for new housing to be built across all urban residential areas, and this is likely to affect particular areas of growth.

The NPS UD facilitates responsive planning to enable growth and development in areas with good access to the things people want and need, such as jobs and community services, and good public transport services. These factors are indicators of the best areas for development, and the NPS seeks to reduce constraints on

What is a walkable catchment?

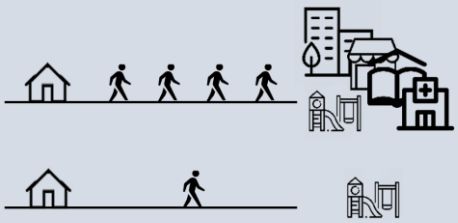
The general rule used by many organisations, including the Ministry for the Environment, is that a walkable catchment is often around 800 metres.

The 800-metre distance was determined by assuming most people would be happy to walk 10 minutes to access services and amenities, and on the basis of a walking speed averaging 1.3 metres per second across the journey

This distance is also affected by factors such as land form (e.g. hills), connectivity or severance (e.g., the lack of ease and safety of crossing roads, highways and intersections), and the quality of footpaths.

15 minute neighbourhoods

This fits in with the concept of a '10 or 15 minute neighbourhood', in which people are able to access most of their daily needs via a short walk. Census data from Christchurch shows that people who live within a 15 minute walk of food shopping, education, open spaces and medical needs, are four times more likely to walk to work than people who live in neighbourhoods with only one of these services within a 15 minute walk.



Sources:
https://environment.govt.nz/assets/Publications/Files/Understanding-and-implementing-intensification-provisions-for-NPS-UD.pdf

Urban-design-toolkit-third-edition.pdf (environment.govt.nz)

Census 2018 Travel to Work Data

[59] The Council is defined as a "Tier 1" urban environment under the NPS UD. The NPS UD applies to all urban environments, categorised into the three tiers. The three tiers were informed by population size and growth rates. This approach allows the most directive policies to be targeted towards the largest and fastest growing urban centres, where the greatest benefits will be realised

development in these locations.[60] Although the Council is still in the process of confirming where the city's housing intensification areas will be, this Plan will set up our transport system to respond with the interventions needed, as such decisions are made.[61]

Evidence from across the world shows that concentrating developments in urban areas, and planning compact, dense, diverse settlements with good walking, cycling and public transport access are key to reducing distances travelled by car. Focusing transport investment on these areas of intensification will attract further growth in these areas, and ultimately benefit the whole of the city.

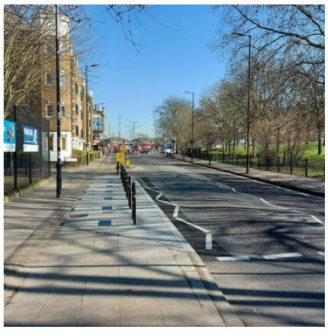
How can our Transport Plan support the redevelopment and intensification of our urban areas?

Spatial planning will outline our desired growth plan and specify where growth is enabled and incentivised across the city. This Plan outlines a process to identify what transport interventions are required to support our desired urban form, focused on the improvements needed within 'walkable catchments' around the CBD and commercial centres.

To support the development of walkable catchments we will apply the ONF street classifications to understand what that street should look and feel like. A set of urban streets indicators can then help to evaluate options for transport and urban realm improvements. For example, the Healthy Streets Indicators developed by Transport for London. The Healthy Streets assessment embeds public health in transport and land use planning and focuses on the human experience needed on all streets, everywhere, for everyone.[62]

We are already undertaking healthy streets assessments across Christchurch to understand what improvements are needed for active travel. Examples may include streetscaping and planting of trees, with a particular focus on improving the walkability of the local environment. We will continue to undertake this assessment to help evaluate what interventions are required in our walkable catchments. The images depict before and after improvements to Southwark, London as a result of the healthy streets assessment and implementation of associated measures.


Before


After

Intensification will put pressure on on-street car parking, particularly now that we cannot require

[60] Ministry for the Environment, *Introductory Guide to the NPS UD 2020*, environment.govt.nz/assets/Publications/Files/Introductory-Guide-to-the-National-Policy-Statement-on-Urban-Development-2020.pdf, p.6
[61] Relative provisions in the NPS UD relating to infrastructure (including transport infrastructure) include: Objectives 3(b), 6(a), and 8; and Policies 1(c)(e)(f), 6(a), and 11; and Parts 3.2(2), 3.4(3), and 3.38
[62] www.healthystreets.com/

developers to include car parking.[63] Our existing parking policies provide for a demand-driven approach to parking management: when parking is observed to regularly have high occupancy rates a mixture of time restrictions and parking meters can be installed, in combination with exemptions for residents if appropriate. Existing policies also allow more space to be dedicated to people with restricted mobility, motorcycles, bicycles, micromobility, zero-emission vehicles, car share, and park-and-ride in certain locations.

Initially we will use these existing policies to resolve issues in areas of high growth as they intensify. We will review these policies in the future, in light of the NPS UD direction, the impacts of the removal of minimum parking requirements, and changes in travel demand for all modes.

Actions

- Deliver a programme of transport interventions that support quality infrastructure within walkable catchments, particularly for public and active transport
- Review the existing Council parking polices as the city grows

[63] Christchurch City Council, *Newsline – Car parking requirements removed from district plan*, February 2022, newsline.ccc.govt.nz/news/story/council-removes-car-parking-requirements

Policy 2.3: Collaborate with our regional partners to enhance the attractiveness of public transport

We need to work with our partners, and particularly Environment Canterbury, to increase the attractiveness and convenience of public transport to support and shape sustainable growth in Christchurch. A transformational approach to public transport is needed to ensure we are providing real alternatives to car travel that cater for everyone.

Since 2011, much of Christchurch's growth has been located in areas of new development on the fringes of the city. Combined with significant highway investment, this has resulted in travel times by car being more reliable than public transport. In these areas, there are fewer people within walking distance of public transport stops, reducing patronage and making it more difficult to operate an efficient and attractive public transport system.

Public transport objectives for Canterbury

- Grow patronage by progressively improving the attractiveness of public transport, to achieve a threefold increase in patronage by 2048.
- Improve journey times and the reliability of public transport services to Key Activity Centres, so that they are comparable to journeys by car
- More people can access Key Activity Centres by public transport, so that 90% of households can access a Key Activity Centre within 30 minutes, by 2028.

Source: Canterbury Regional Public Transport Plan 2018-2028

At the same time, as we plan to further intensify many areas of the city, a lack of convenient and attractive public transport to support this development will lead to poor quality, disconnected neighbourhoods that suffer from heavy congestion.

As part of the wider Greater Christchurch programme to improve public transport, the Council has committed to invest $76 million in our public transport system over the next decade, to make it more convenient and attractive. This investment is a part of the Public Transport Futures business case, an integrated investment programme jointly developed with our partners Waka Kotahi, Environment Canterbury, Selwyn District Council and Waimakariri District Council. It will bring our public transport system up to a standard that is more typical for a city of Christchurch's size, through a range of interventions. These include:

- more bus services and frequency of buses
- more bus lanes
- better real-time information for customers
- increased reliability through active GPS management system
- improved customer experience through more bus shelters and seats and higher quality vehicles
- park-n-ride facilities in the satellite towns, and integrated bike hangars within Christchurch.

With co-investment from our partners, this investment will provide 123,000 more households access to the city centre within 30 minutes by bus, and 52,000 more people living within a five minute walk of a high frequency bus route (across Greater Christchurch).

However, this investment is merely a starter. In order to address our current challenges and prepare ourselves for further, future growth, we need to invest more and smarter as a region. It is important that our public transport system enables growth and development to be accommodated in a way that creates high quality, integrated communities and attractive streets and centres.

Transforming our public transport system

To achieve real change and make public transport attractive, we need to change the way our roads operate and prioritise public transport on key routes (that already have high frequencies), while creating an environment where active travel is safe to and from these routes. Our public transport system needs to support a consolidated and intensified urban form, connecting key centres, neighbourhoods, and the central city.

Dense developments around public transport corridors and hubs are evidence of good integration between urban development and the transport network. This makes it easier for people to use sustainable transport and reduces the need to own a car.[64]

The 2021 Life in Christchurch Transport Survey revealed barriers to the uptake of public transport, particularly around efficiency and competitiveness with other modes.[65] Our core bus routes should be public transport corridors that are designed to accommodate high-frequency, high-quality public transport services through areas with high pedestrian numbers and the densest concentration of activities. These corridors need to maximise space for people, creating places where people want to visit, support local businesses, and gather together.

Definitions

Public Transport Corridor: traffic lanes are dedicated bus lanes in which cycling is allowed and parking is removed. Speed limits and other interventions will vary along the corridor, dependent on ONF street family, and part of the route will be dedicated to sustainable travel, mainly through Key Activity Centres.

Multimodal stops: Active travel is well connected, designed and is the dominant mode of transport to local bus stops near Key Activity Centres and other destination areas.

Interchanges: A bus interchange is a structure where city or intercity buses stop to pick up and drop off passengers.

Many of our Key Activity Centres and the central city are experiencing growth and this is likely to increase. We should work with our partners to plan for this increase through public transport hubs (interchanges and multimodal stops) across the city, located in areas that a high number of bus services frequent. We already have an existing bus interchange in the central city, however we need to plan beyond this and anticipate where our demand will be in the future, in the context of an

[64] Guzman L.A. & Cardona S.G. *Density-oriented public transport corridors: Decoding their influence on BRT ridership at station-level and time-slot in Bogotá*, March 2021, www.sciencedirect.com/science/article/pii/S0264275120314190

[65] Life in Christchurch 2021 Transport Survey results, ccc.govt.nz/the-council/how-the-council-works/reporting-and-monitoring/life-in-christchurch/transport

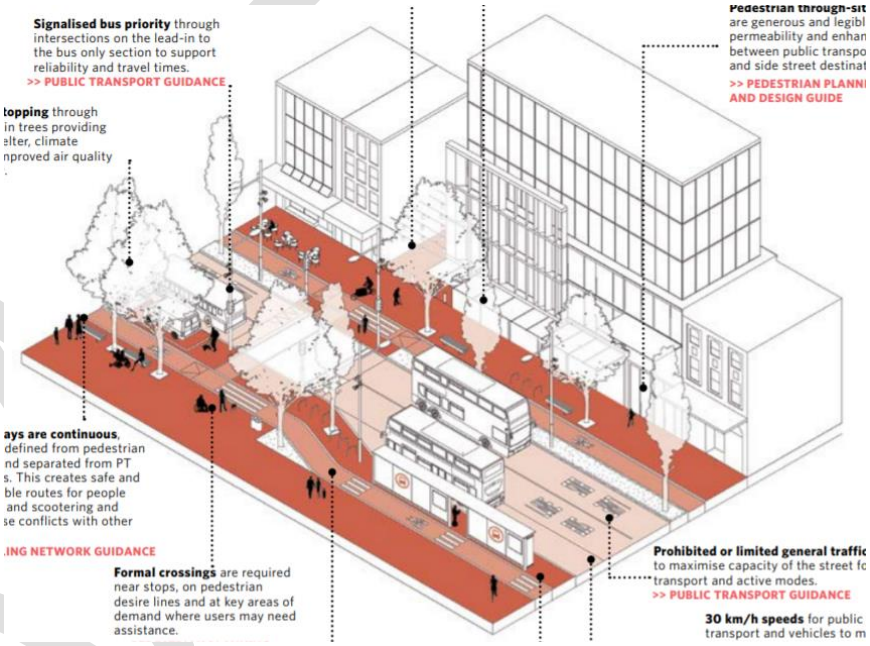
increase in services. Our future multi-modal stops will be located within our Key Activity Centres alongside key destination areas such as the University of Canterbury and Christchurch Airport.

How do we do this?

The ONF will help us to identify infrastructure interventions that are suitable for our core bus routes in order to strengthen our public transport system and ensure that it properly supports development in the right places. Examples of what these interventions may look like for a public transport corridor (under any of the below street classifications) are:

Urban Connector and Activity Streets:

1. Movement: Bus priority lanes, signalised bus priority at intersections, cycle priority, service and delivery parking, P5/ short stay parking, 40km/hr speed limits on Activity Streets
2. Place: Spaces for trees, painted infrastructure to support walking, cycle and scoot, bus stops



Main Streets:

1. Movement: Disabled parking, bus priority lanes, 30km/hr speed limits, cycle and scoot parking near services, parking management through timing restrictions and pricing
2. Place: Active street frontages, spaces for trees

Using the ONF to understand what investment is needed is a step change from the way we are currently planning. We can now plan and implement specific infrastructure improvements to shape and support an attractive public transport system, while at the same time supporting development. The roll out and development of these corridors, multi-modal hubs and interchanges will be dependent on the delivery of the services that are committed.

The role of micromobility (e-scooters)

The use of e-scooters often compliment public transport as a transport choice due to the flexibility and efficient door to door accessibility it offers. It often provides first- and last-mile access to and from public transport. This combination of transport choices has a significant potential to contribute to more liveable cities, less congestion, and reduced levels of air and noise pollution.

Evidence suggests that it is important to consider the type of infrastructure when planning and designing for these trips. In the context of Christchurch city our shared micromobility scheme covers most of the city. We need to consider the availability of free docks or designated areas to park free-floating shared e-scooters which is the most pertinent requirement to cater for these trips.[66]

Evidence

One of the main deterrents to the uptake of public transport is how people get from the start of their trip to the public transport pickup point and/or from the public transport drop-off point to their final destination. Reducing this deterrent – by providing a quicker trip to/from public transport or by increasing the distance that people are willing to travel to/from public transport when compared to walking – would likely increase public transport patronage.

Seattle

The Micromobility Coalition (2019) reported that widespread availability of micromobility services, particularly for first/last mile connections, would increase access to 35% more jobs for Seattle city residents while shortening commute time and reducing reliance on cars.

Source:
https://www.nzta.govt.nz/assets/resources/research/reports/674/674-Mode-shift-to-micromobility.pdf

Actions

- Work with Environment Canterbury to ensure services support 'Public Transport Phase 2' (extend the PT Futures corridors)
- Transform public transport lanes to accommodate many, varied modes of transport
- Identify and implement shared e-scooter parking on our core bus routes where the demand is high

[66] https://www.sciencedirect.com/science/article/pii/S1361920920308130

Policy 2.4: Collaborate with our partners to plan for rapid transit

The Council is working with its Greater Christchurch Partners to complete the rapid transit business case for Greater Christchurch. Rapid transit is a subset of public transport that is defined by five key attributes:

1. Dedicated right of way – is unaffected by traffic congestion on the roads
2. Speed – offers travel times at least as fast as driving
3. Frequency – users can 'turn-up-and-go' without needing to plan their trip around a timetable
4. Reliability – more consistent travel times than other public transport
5. Capacity – can move large volumes of people using little space

Because it provides such a significant step-change in the level of service it provides, rapid transit has the capacity to shape cities. International evidence shows that land around rapid transit stations becomes more attractive for people looking to live and work, and as such tends to attract more intensive development that has higher sustainable transport use and less car use.[67] It substantially increases the accessibility of the central city, making it more attractive to employers and benefiting the city's economy.

Rapid Transit findings to date

Interim reporting on the rapid transit feasibility study has described the likely outcomes that could be achieved through investment in rapid transit. It assessed three possible schemes, all of which went from Rolleston to Rangiora via the central city, but taking three different routes. It assessed these on top of four land-use scenarios with varying levels of growth within the rapid transit corridor.

The report concluded that forecast land-use by 2048 will generate enough demand to warrant further investigation into some form of high capacity transit system.

Further investigations are now proceeding to determine the preferred route and mode, and identify first steps.

Source:
http://greaterchristchurch.org.nz/assets/Documents/greaterchristchurch/Mass-Rapid-Transit/Greater-Christchurch-Mass-Rapid-Transit-Interim-Report-June-2021.pdf

The Regional Land Transport Plan 2018 identified a need for rapid transit connecting Christchurch's city centre with high growth areas to the north and southwest. This is now being investigated through the sub-regional business case, led by Waka Kotahi. This business case will provide further insight into the preferred mode, route and timing.

A rapid transit scheme would necessitate changes to street networks around stations to accommodate the rapid transit and associated changes to bus routes, cycleways, traffic routes and new pedestrian connections; and respond to intensification of development around stations. This may include new bus stops and shelters, bus priority, new pedestrian connections to link to stations, footpath upgrades, and general street upgrades to support a higher density of people living in the area. These street changes would need to be agreed with the Greater Christchurch partners to ensure they are well integrated with station designs and that they support bus route changes made

[67] Higgins C, Kanaroglou P. *Rapid transit, transit-oriented development, and the contextual sensitivity of land value uplift in Toronto*, July 2017

by Environment Canterbury. Streets would be reclassified under the One Network Framework to reflect their new roles.

Depending on the outcomes of the draft business case, the Council may designate and protect corridors identified for rapid transit, to ensure construction can occur when appropriate.

Policy 2.5: Prioritise essential vehicle trips on the road network

Our road network is an enabler of economic activity. The successful functioning of the city is reliant on delivery vehicles being able to move goods around nimbly, tradespeople being able to easily access sites, emergency vehicles getting to incidents rapidly and people with mobility impairments having fair access to opportunities. The ability to do this efficiently can be affected by traffic congestion.

Users do not pay a direct fee for occupying road space, which means that roads do not always get used for the trips that are the most important.[68] As a result, vehicles performing more essential functions (e.g. goods delivery) get delayed because roads are congested with less essential trips. Brougham Street is one of our city's most important freight routes, but is also one of our most congested roads. It carries around 45,000 vehicles per day, with over 90% of them being light vehicles[69]. The challenge is ensuring that the city's finite capacity for traffic is utilised for the highest value trips, which we will prioritise according to the hierarchy below. Planning according to this hierarchy will ensure that our transport network supports the sustainable growth of our city by allowing those with the highest need to travel efficiently.

[68] Ridder, Z.J., *The efficacy of congestion pricing*, 2016, scholar.utc.edu/cgi/viewcontent.cgi?article=1060&context=honors-theses
[69] https://www.nzta.govt.nz/resources/state-highway-traffic-volumes/

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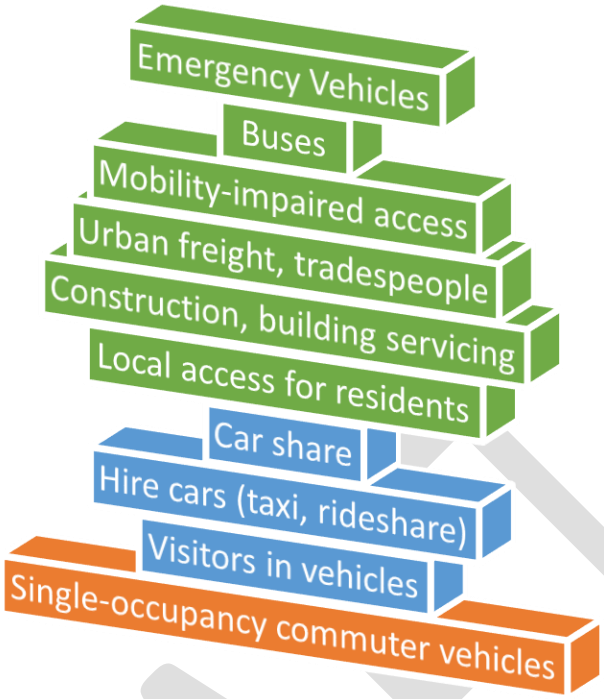

This prioritisation tool will be used to implement other actions contained in this Plan, such as slow speed neighbourhoods, Low Traffic Zones, road pricing, and parking management. The success of the prioritisation tool will depend on how we provide genuine alternatives to travel by car, to the greatest number of people possible. This includes high-frequency public transport, physically-separated cycleways, and neighbourhoods that are safe and attractive to walk around.

Prioritising key freight routes

Freight movements on Christchurch roads can be broadly categorised into two types:

1. Regional Freight – long-distance freight moving between regions, the sea port, the airport, and along metropolitan areas. Regional freight mostly travels on the State Highway network managed by Waka Kotahi. We will support Waka Kotahi to provide efficiently for these freight trips.
2. Urban Freight – shorter-distance freight moving around the city, being picked-up or delivered to and from local homes and businesses. This freight is handled largely by the network of arterial and local roads.

The One Network Framework specifies routes where the movement of freight is a high priority. On these routes we will prioritise essential trips over single-occupancy commuters, through interventions such as managed lanes where appropriate.

Allowing urban freight to move safely and efficiently around the city is essential to the functioning of the city. Balancing this with community safety and amenity is a key challenge. This can be best achieved through close working relationships between government, industry and transport providers. We will engage more with businesses and industry to better understand freight logistics in Christchurch and how we can enable them to be more efficient.

Emergency vehicles and traffic signal prioritisation

We are working with Environment Canterbury to upgrade intersections along key bus routes to allow traffic signals to automatically turn green when they detect buses approaching, meaning buses get a clear run and are faster and more reliable. We will also investigate the viability of extending this to other essential trips, such as emergency vehicles.

Actions

- Investigate upgrading local network traffic signal prioritisation system to include emergency vehicles
- Work with industry and partners to develop a greater understanding of the future growth and movement of urban freight on the local network
- Support the national and regional goals to move freight to rail

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Transport directions: Action Plan

3. Healthy streets, healthy people

Christchurch needs appealing walking environments in every neighbourhood, so that everyone has the option to walk to local schools or shops in comfort and safety. We need an appealing cycling environment and a strategic cycling network across the whole city in order to make cycling attractive and easy for people, regardless of where they live or are travelling to.

Walking and cycling for transport helps people integrate physical activity into their everyday lives and reduces time spent being sedentary. Just 20 minutes a day of moderate physical activity is often enough to stay physically and mentally healthy and this can be achieved, for those who are able to, through shorter trips undertaken by bike, scooter or on foot.[70]

Active travel, including walking, cycling, and e-scooters, is integral to the development of cities. It is one of the main ways people can experience the city and their neighbourhoods and connect with each other. Good active travel environments will encourage people to walk and cycle more, improve the quality of these journeys, and enable everyone to make the most of their local area. This is particularly important in centres, around homes, workplaces and schools, and for links to and from public transport.

Attractive streets, supported by quality urban design, will encourage active travel (contributing to lowering emissions), attract development, improve the city's resilience to climate change, increase safety and improve community connectedness and wellbeing. Well-designed streets help older people and people with disabilities access the city, and better centres strengthen communities and attract businesses. We will use the ONF and the healthy streets assessment, to ensure that the improvements and interventions we are planning will best optimise public health and community wellbeing.

If 50% of short urban car trips shifted to walking or cycling

$1.3 billion

savings each year to the healthcare system nationwide

If 30% of short urban car trips shifted to cycling

716 deaths

prevented each year nationwide due to better health

[70] Environmental Health Intelligence New Zealand, www.ehinz.ac.nz/indicators/transport/about-transport-and-health/#ref12

Policy 3.1: Improve our walking and cycling environment

Over the last decade we have invested in designing and building our streets for people. In the Central City in particular, we have implemented slower speeds and created opportunities for business development, resulting in a more vibrant city centre. Our neighbourhoods and Key Activity Centres have also undergone transport improvements. We need to continue this momentum as our population grows and residential density increases, to ensure we are creating an urban environment that encourages active transport as a first choice of travel, especially for short trips.

Our Life in Christchurch Transport survey from 2021 revealed some of the issues we still face in encouraging active travel. Some people perceive that our roads are still unsafe to cycle on and better infrastructure (particularly around bus shelters) is needed to improve the connection between active and public transport.[71] The active travel network, including our walking network to public transport stops, was seen as failing to provide sufficient connections and route choices, including road crossings.

A focus on the central city

After the earthquakes Christchurch developed a Central City Recovery Plan that identified the key anchor projects needed to promote recovery, and outlined plans to show what the city could look like in the future. The redevelopment of central Christchurch was a significant opportunity to address accessibility. *An Accessible City* was developed in 2013, which provided the strategic direction on transport within the central city. As a result, our central city is relatively accessible by foot and bike, however there are still some barriers including the safety and quality of the environment.

An Accessible City – Oxford Terrace, Central City, before (top) and after (bottom)

A number of key anchor projects in the central city are underway or have been completed recently, such as Te Pae Christchurch Convention Centre, Parakiore Recreation and Sport Centre, and Te Kaha/Canterbury Multi-Use Arena (CMUA). As these facilities develop they will attract more people to the central city, stimulate development around them, and contribute to our residential target of 20,000 people living in the central city by 2028.

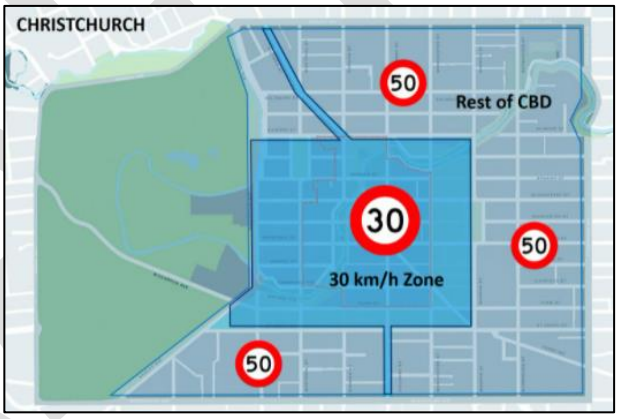
[71] https://ccc.govt.nz/assets/Documents/The-Council/How-the-Council-works/Life-in-Christchurch/LiCTransportHousingSummaryReport2021.pdf

We need to ensure that our transport system supports development by improving the urban environment and local connectivity. A number of further projects are planned through *An Accessible City.* However, we need to plan beyond this to ensure our entire central city is a compelling place to live, work and play.

In the future we will see more city hubs, civic spaces and main streets throughout the central city, which are intended to be places for people, where active travel is prioritised and safe. Whilst we already have some interventions to support this change such as the 30kmph within the core CBD and the shared street design of Oxford Terrance we need to consider further interventions to enable this change. Given that our civic spaces, city hubs and main streets are intended to be areas where people want to dwell in we need to ensure we are prioritising interventions to support this.

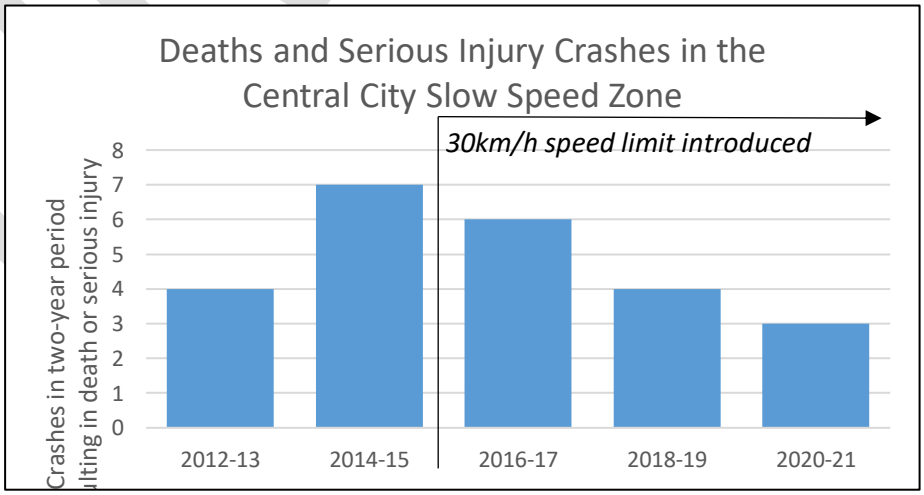
A focus on our Key Activity Centres

We will also focus on supporting development in our Key Activity Centres (KAC) by creating safe and healthy streets for walking and cycling. The KACs are likely to be closely aligned with the future growth areas for housing and redevelopment that will be identified through our spatial planning work. We will also support development in walkable catchments around the city, which are likely to fall within our future growth areas.



Slow streets

There is growing evidence from around the world that lowering speeds delivers important safety and amenity benefits. Slower streets are less noisy and easier for pedestrians and cyclists to get across. They can help to improve street design, as they require less space for turning, and fewer signs and barriers. There are also additional opportunities for greenery and street trees when there are lesser requirements for sightlines to manage fast-moving traffic.[72]



In 2016, Christchurch introduced a 30 km/hr zone within the central city core. Since its introduction the number of crashes resulting in deaths or serious injuries has reduced: in the two-year period 2020-21

[72] Monash University Accident Research Centre, *The impact of lowered speeds in urban and metropolitan areas*, January 2008, www.monash.edu/__data/assets/pdf_file/0007/216736/The-impact-of-lowered-speed-limits-in-urban-and-metropolitan-areas.pdf

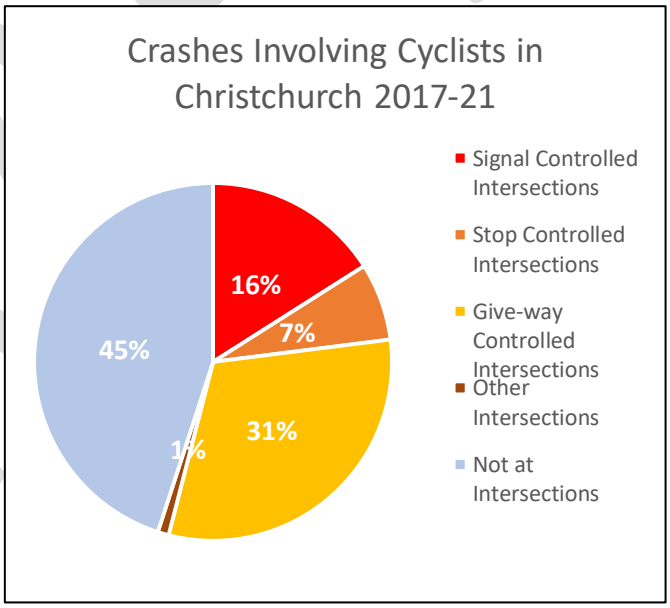
there were 60% fewer serious crashes than there had been in the two-year period 2014-15, prior to the lower speed limits being introduced.[73]

Due to the multiple benefits slower speeds bring, we are proposing to expand the 30km/hr zone to cover all of the city that is bounded by the four avenues. Additionally, we are seeking to introduce 30km/hr speed limits in our Key Activity Centres, and to adjacent streets. The setting of any new speed limits will be undertaken in line with any processes set out in the Ministry of Transport's new Setting of Speed Limits Rule 2022.

To support the implementation of 30km/hr speed limits in our Key Activity Centres, we will introduce modal filters (where appropriate) on some of our adjacent local streets. Modal filters are small-scale infrastructure – such as planters or bollards - that can limit through-journeys along a certain street by allowing some modes - e.g. bikes, pedestrians - but not others. Research shows that modal filters enable neighbourhoods to become more active, and have a positive contribution in terms of increasing walking and cycling and decreasing car journeys.[74] Internationally, modal filters have become increasingly popular due to their relative low cost.

Redesigning select intersections to prioritise cycling

Intersections in urban areas are the highest risk areas for people on bikes; in Christchurch 55% of cycle crashes in the five-year period 2017-2021 occurred at intersections.[75] Land designated for new roads often does not make allowance for safe cycling infrastructure.[76]



[73] Christchurch City Council analysis using Waka Kotahi's Crash Analysis System (cas.nzta.govt.nz/)
[74] University of Salford Manchester, *Active neighbourhoods in Greater Manchester: qualitative insights into resident experiences across four case study interventions,* 2021 usir.salford.ac.uk/id/eprint/62322/1/Active%20Neighbourhoods%20in%20Greater%20Manchester%20USIR_theone.pdf
[75] Christchurch City Council analysis using data from Waka Kotahi's Crash Analysis System
[76] *Safer journeys for people who cycle*, December 2014, www.nzta.govt.nz/assets/Walking-Cycling-and-Public-Transport/docs/Cycling-safety-panel-final-report.pdf, p.23

Evidence based on *Safer journeys for people who cycle* revealed that designing intersections to cater to the interaction between cyclists and other road users is key to a successful cycle network. The report concludes that such interventions at intersections would achieve large safety benefits (and therefore an overall uptake in cycling across the network).[77]

In Christchurch, cycle lanes often end before intersections, creating gaps on the road and compromising cyclists' safety. Whilst we have created some more 'forgiving' intersections (image on right) for cycling, we need to go further and put cyclists first in our design process.

The Cycling Safety Panel's report for New Zealand recommends trialling European design guidelines and other innovative treatments, to ensure that intersections are safe for cyclists. Our current cycleway design guidelines already promote a range of design features such as the 'Dutch intersection', however we are yet to see this implemented.[78]

Research has indicated that the Dutch design or cycle Barnes Dance, as depicted below, may offer the highest level of protection to cyclists. These designs reduce speeds and high speed collisions. Any interventions should reduce conflict between cyclists (and other vulnerable road users) and vehicles by heightening the level of visibility, identifying a clear right-of-way, and facilitating eye contact and awareness between both modes.[79]

Dutch Intersection

Cycle Barnes Dance

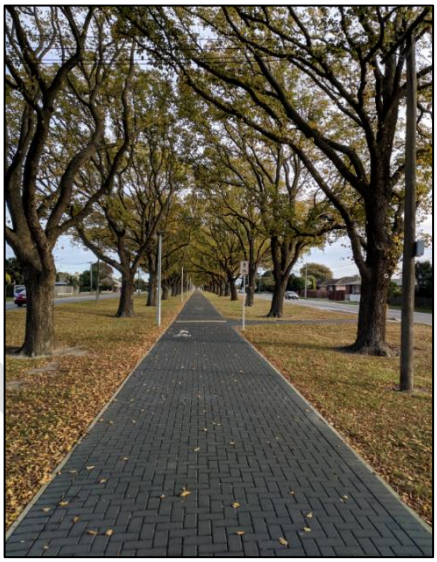
A number of factors will determine what interventions are used to improve an intersection, including the type of intersection, the number of cyclists using it, whether there are cycle routes

[77] Ibid.
[78] Christchurch City Council, *Christchurch Cycle Design Guidelines 2013*, www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Strategies/ChristchurchCycleDesignGuidelinesWEB.pdf, pp. 32-39
[79] https://eprints.qut.edu.au/120431/1/SchepersetalTheDutchroadtoahighlevelofcyclingsafety.pdf

intersecting with it and the adjacent street function. The highest priority for this action will be on routes with large numbers of current and potential cyclists. Trials will be reviewed in partnership with the community and key stakeholders to inform future intersection designs.

Support the continuation of our cycle network

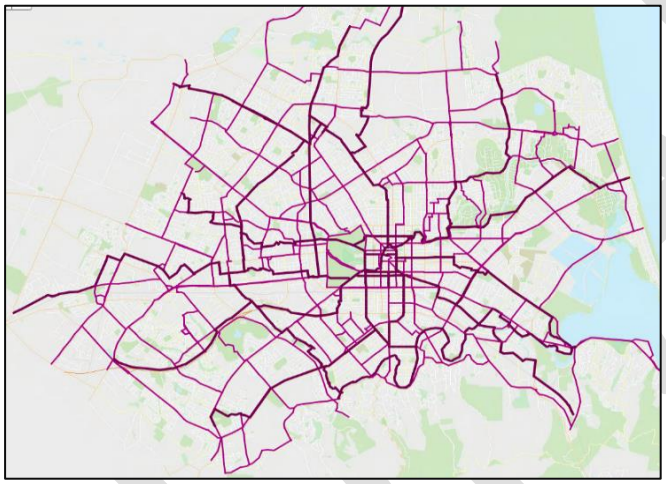
Over the next 10 years we will spend over $250 million on a range of cycleway projects to continue building our strategic cycling network, which consists of our Major Cycleway and local cycleway routes. Our analysis shows that the completion of the network by 2031 will result in a total of 63,500 fewer vehicle trips each day.



Christchurch: Completed Rapanui-Shag Rock Cycleway MCR

There has been significant effort to make Christchurch a cycle-friendly city, though more work is needed for cycling to become a more dominant mode of travel across our transport network. Our proposed strategic cycling network is depicted below.

Proposed strategic cycling network – Major Cycleways and local cycleways



The proposed strategic cycling network will deliver more direct and local bike routes to cater for long and short distance trips. This will increase connections to and from key services as well as increase neighbourhood connectivity and neighbourhood-scale trips, such as those to schools, shops and community facilities. Our local cycleway routes will make it possible for cycling to become an easy choice for people as an alternative to car travel, particularly for journeys of fewer than five kilometres, and will act as a connector to our Major Cycleway routes.

Prioritising the delivery of our proposed cycling network using the One Network Framework

In light of the new One Network Framework both our planned major and local cycleway routes will need to take into consideration the future street family classification and the supporting environment. This will shape the implementation of the planned routes, including the reprioritisation of some routes if needed.

Modal filters to support our cycleways

The interventions used to deliver our cycling network are in line with best practice standards, however they are often costly. In order to create a more fine-grained network of active streets throughout the city, we need to use treatments that can be implemented faster and at less expense, such as modal filters.

A modal filter is a feature used to limit through-journeys along a street by certain modes of transport. In a cycling context, a 'filter' generally limits access to just walking and cycling. They are placed at strategic locations, normally at point of entry or halfway down a residential street.[80] This particular type of modal filter is not present in Christchurch.

Evidence has shown that the use of these modal filters has the potential to increase cycling, as we achieve a shift from car use to more sustainable forms of transport. This will have public health and environmental benefits and create more liveable, people-centred neighbourhoods.[81]

Evidence: Waltham Forest, Low Traffic Neighbourhood (LTN) – London (2015)

As part of Waltham's Forest Mini Holland LTN a series of modal filters, road closures, landscape, and pedestrian priority crossings were implemented to reduce traffic and improve walking and cycling, resulting in:

- 28% of residents stating walking was their main mode of transport for regular journeys
- Overall 56% reduction in traffic across the whole area
- The number of cyclists counted on Orford Road (2014 - 2016) increasing by 124%

To accelerate the delivery of some of our planned cycling routes we are seeking to trial different forms of modal filters, and roll them out across the city where appropriate. As a starting point, we would prioritise the rollout of modal filters on some of our low traffic Local Streets (as classified in the ONF), and where parts of the network are suffering from poor safety outcomes.

[80] Waltham Forest Mini-Holland design guide, 2015, www.enjoywalthamforest.co.uk/wp-content/uploads/2015/01/Waltham-Forest-Mini-Holland-Design-Guide.pdf, p.43
[81] Goodman, A., *Examining the impact on cycling levels of Streetspace modal filters: a controlled before-and-after study in Dulwich Village, London*, December 2020, www.transportforqualityoflife.com/u/files/1_DulwichReport_FINAL2.pdf

Greenways for our neighbourhoods

While Christchurch has some large areas of greenspace it is not distributed evenly throughout the City and some neighbourhoods have been identified as having significant green space deficits. Furthermore, as our population grows and housing density increases, traditional suburban areas of local green space that are presently largely provided by private gardens will no longer be adequate. This will place even more emphasis on the need for local greenspace.

Moving forward we want to ensure that our greenspace is well connected with our active travel network to increase amenity in our neighbourhoods and create environmental benefits including increased tree canopy cover and biodiversity habitat. In the urban context, greenways aim to open up new areas for walking and cycling, such as parks and waterways, and are designed to encourage new and less confident cyclists.[82] To achieve this, greenways may cross existing areas of parkland, and follow street connections between parks.

We want to ensure our neighbourhoods are well connected by local greenway routes and by placing greater emphasis on green infrastructure. The appearance of greenways will vary depending on their location, for example a connection that runs through parkland may look and function differently to a connection adjacent to a road, or in a built up urban area.

Actions

- Expand 30km/hr zone to the four avenues from the central city core
- Prioritise pedestrian and cycle priority in civic spaces, city hubs and main hubs within the four avenues
- Accelerate An Accessible City projects that prioritise Te Kaha/Canterbury Multi-Use Arena and Parakiore Recreation and Sport Centre interventions
- Investigate and test protected intersections; implement if and where appropriate
- Implement 30km/h speed limits in our Key Activity Centres and implement measures to support this
- Expand 30km/hr zone to adjacent streets around our Key Activity Centres, with modal filters and speed treatments
- Review the local cycleway network to align with the One Network Framework
- Trial and deliver modal filters to support a better cycling environment across the city
- Plan and deliver greenways in our neighbourhoods

[82] Salici, A., *Greenways as a sustainable urban planning strategy*, July 2013, www.intechopen.com/chapters/45409

Policy 3.2: Future proof our transport network for shared mobility

The National Policy Statement on Urban Development is requiring the removal of minimum car parking requirements. The purpose of this direction is to enable more housing and commercial developments, particularly in higher density areas where people do not necessarily need to own or use a car to access jobs, services, or amenities.[83]

As a result of this change we need to consider the role of shared mobility and how this will reduce the need for parking. Housing developments that incorporate car share vehicles on-site can reduce the amount and demand of parking required by the residents .[84]

As of March 2022, people have used shared scooters and e-bikes for 3.2 million trips and have travelled 8.1 million kilometres.[85] It has become an increasingly popular way for people to complete shorter trips across the network, often to access public transport. However, there is a level of uncertainty from residents about the rules and regulations governing the use of e-scooters. We will seek to establish a firm position on these issues and guide future decision making around the use of micromobility on Christchurch streets, in line with national policy.

Definitions

Shared mobility is the shared use of a vehicle, motorcycle, scooter, bicycle, or other travel mode. Shared mobility provides users with short-term access to one of these modes of travel as they are needed.

Micromobility refers to a range of small, lightweight vehicles operating at speeds typically below 25 km/h (15 mph) and driven by users personally (unlike rickshaws). Micromobility devices include bicycles, e-bikes, electric scooters, electric skateboards, shared bicycle fleets, and electric pedal assisted (pedelec) bicycles.

Source: https://www.itdp.org/wp-content/uploads/2019/12/ITDP_The-Electric-Assist_-Leveraging-E-bikes-and-E-scooters-for-More-Livable-Cities.pdf

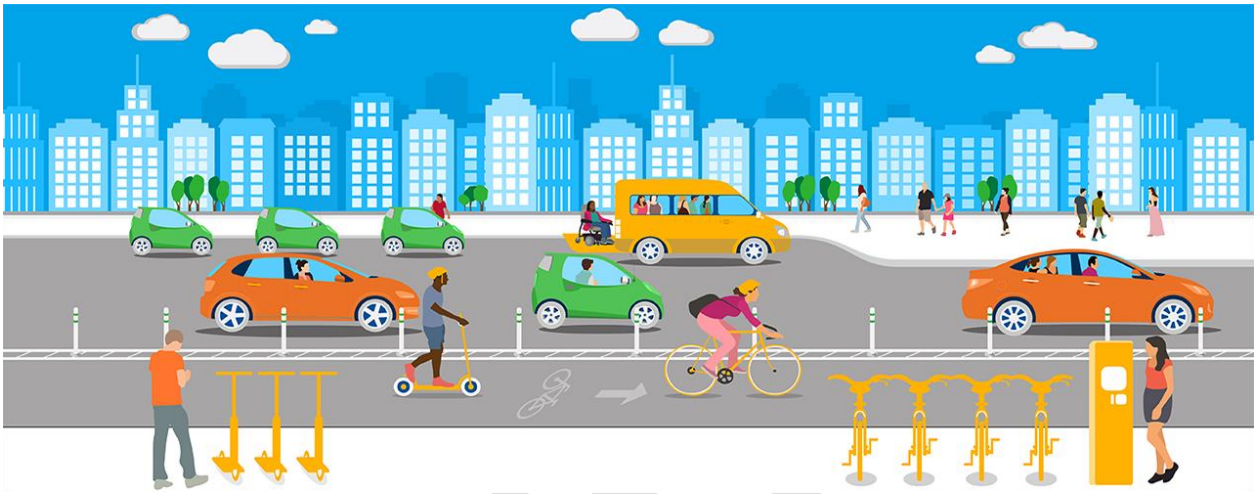
[83] https://environment.govt.nz/assets/Publications/Files/car-parking-factsheet.pdf
[84] https://www.vtpi.org/filosa_carsharing.pdf
[85] https://smartview.ccc.govt.nz/travel/escooters

How will we encourage shared mobility in our planning?

To balance micromobility, walking and cycling with buses, logistics and freight, different streets will serve different purposes. Street design is an important factor in ensuring that shared-mobility is safe convenient and attractive. Specific interventions, such as traffic calming or shared-mobility parking will depend on the particular street function and surrounding urban environment.[86]

How will we encourage shared mobility in our design?

When designing streets for shared mobility, we should consider the following in all guidance and



planning:[87]

- Prioritise street uses based on street function and movement priority
- Design for safety (regardless of the transport choice)
- Assume point- to-point access for micro-mobility and shared vehicles
- Assume trips take form by more than one transport choice
- Plan (and design) for complete networks
- Leverage digital infrastructure
- Choose nimble and movable components whenever possible
- Commit to an outcomes-based approach to planning, design, and engineering

[86] https://planhillsborough.org/wp-content/uploads/2019/02/Shared-Mobility-Design-Policy-Guidance-Final-Report-November-2019.pdf
[87] https://planhillsborough.org/wp-content/uploads/2019/02/Shared-Mobility-Design-Policy-Guidance-Final-Report-November-2019.pdf

We will continue to support and encourage zero-emission car share schemes, to help reduce emissions and support the removal of minimum car parking requirements in our higher density areas. The Council initiated, researched and developed the concept for a 100% battery electric car sharing scheme for Christchurch residents and businesses and then went to market for a service provider. Zilch was the successful selected service provider of this 100% battery electric car share scheme in Christchurch, which was launched in February 2018.

Accessible Streets Package

The Associate Minister of Transport has proposed a collection of rule changes known as the Accessible Streets Regulatory Package. Accessible Streets will create a national framework clarifying the types of vehicles and devices that are allowed on footpaths, shared paths, cycle paths and cycle lanes, and how they can use these spaces. This will include a 15km/h speed limit on the footpath and a requirement for all other footpath users to give way to pedestrians. The rules also clarify how road controlling authorities may regulate spaces like the footpath and their various users; and propose changes to the priority given to a range of road users, to remove barriers to walking, cycling, and micromobility

Source: https://www.nzta.govt.nz/assets/consultation/accessible-streets/accessible-streets-overview-summary.pdf

Actions

- Produce a best practice guidance note for planning and designing new infrastructure for shared mobility, with an emphasis on micromobility
- Work with developers in our higher density areas to implement electric vehicle charging infrastructure to encourage shared mobility

Transport Directions: Action Plan

4. Safe Streets

The national *Road to Zero* strategy sets us on a path to achieve Vision Zero: a New Zealand where everyone, whether they're walking, cycling, driving, motorcycling or taking public transport, can get to where they're going safely, and no one is killed or seriously injured on our roads. Vision Zero puts people first, creating a transport system that acknowledges that people make mistakes, so the system should accommodate human error. We know that people dying and being seriously injured on our roads is preventable, and we must address this problem.

To get to the ultimate vision of zero deaths and serious injuries, the national Road to Zero strategy sets an intermediate target of a 40% reduction by 2030, from a 2018 baseline. The Council shares this vision and effectively adopted this target for Christchurch in the 2021 Long Term Plan.

We've been investing in improving transport safety for many years. We have a strong community safety education programme to engage people of all ages, but particularly younger people, about the dangers of driving under the influence of drugs and alcohol, as well as about speed and distraction. We have cycling safety programmes to accompany our continued investment in our cycleways. Our safety programme focuses on improving infrastructure that will have the highest death and serious injury savings for our road network. This has been successful and the number of deaths and serious injuries occurring in the five-year period 2017-2021 is 26% less than the previous five year period. However, we cannot simply continue our current programmes and expect these numbers to continue to fall. Achieving the next level of reduction will require a step change in our focus.

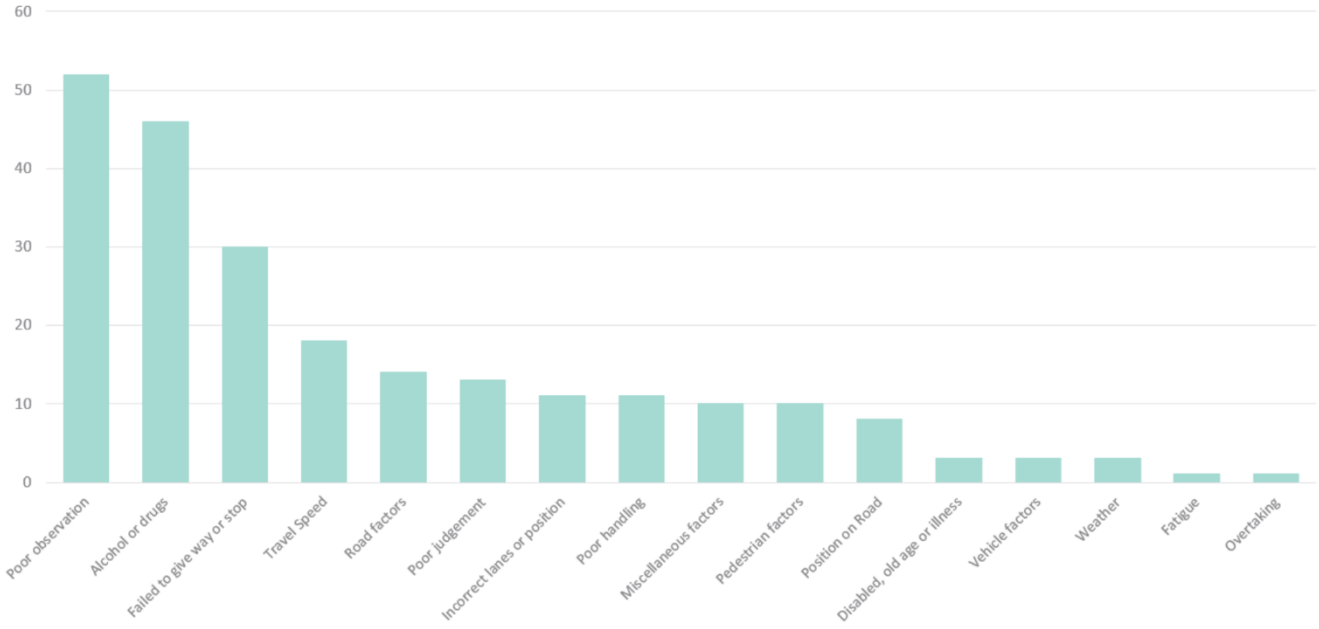
As the city grows and intensifies, a higher proportion of trips are expected to be made on foot, scooter, bike or public transport. These and other changes mean we must continuously adapt and improve our approach to transport safety. We intend to target investment in an increasingly proactive and inclusive approach to continuously work towards eliminating deaths and serious injuries across all modes. We will also plan to increase our ability to respond to community-led safety initiatives.

Tackling transport safety and road danger is an integral part of achieving healthy and human-focused streets and spaces that contribute to a transport system that is healthier, more sustainable, and more equitable.

Policy 4.1: Realise Vision Zero

There are many different contributing factors to death and serious injury crashes. In 2021 in Christchurch, the most frequent contributing factor was poor observation, which includes factors like distraction and failing to notice vehicles or road markings. Other key factors include driving under the influence of alcohol or drugs, failure to stop or give way, and travel speed. The road safety problem is complex, and we need a shift in thinking. We need a safe road system that is designed for people. We know from overseas experience that a focus on improving driving skills and addressing risk-taking behaviours will not solve the transport safety issue by itself; people make mistakes, and we need a transport system that is forgiving enough so that people don't lose their lives.

Chart: Number of death and serious injury crashes in Christchurch by contributing factor, in 2021



By implementing the *Road to Zero* strategy, we are adopting an all-encompassing approach to transport safety in order to realise Vision Zero. *Road to Zero* is guided by seven principles:

1. We promote good choices but plan for mistakes
2. We design for human vulnerability
3. We strengthen all parts of the road transport system
4. We have a shared responsibility for improving road safety
5. Our actions are grounded in evidence and evaluated
6. Our road safety actions support health, wellbeing and liveable places

7. We make safety a critical decision-making priority

We plan to rely on these principles as we implement the local government aspects of *Road to Zero*. The five *Road to Zero* focus areas are infrastructure improvements and speed management; system management; vehicle safety; road user choices; and work-related road safety. Many of our strategic actions will target infrastructure improvements and speed management, as these are key responsibilities for us as a local authority.

Collaborating with our road safety partners

We need to continue efforts to encourage safer choices and behaviours on our roads. A key principle of *Road to Zero* is that we all have a shared responsibility for road safety, and eliminating deaths and serious injuries will require buy-in from multiple parties, including everyone who uses the transport system.

We will continue to actively collaborate with our community and government stakeholders on *Road to Zero*. We will work with the Police, Waka Kotahi, and others on programmes to help people make safer choices on our roads. For example we will run road safety education campaigns, work with schools to reach new drivers, and run motorcycling safety programmes, among other programmes. We plan to continue developing our Road Safety Action Plan to ensure collaboration with our partners and to respond to emerging road safety issues. The Road Safety Action Plan is continuously developing, and we plan to adapt our efforts to encourage safer choices over the coming years based on changes in key road safety risk areas. Through this work we will also encourage and promote safer vehicles and work-related safety.

Actions

- Collaborate with our road safety partners to encourage safer choices and safer behaviour on our roads, to deliver a safe system

Safe and appropriate speeds[88]

In 2016, travelling too fast for the conditions was the second highest contributing factor to fatal and serious

Benefits of slower speeds

- Support place making by local communities
- Enhance the 'liveability' of streets
- Increase economic activity or development in an area
- Increase active travel
- Improve local perceptions of safety
- Reduce accidents

[88] The safe and appropriate speed is the travel speed that is determined to be safe for the road based on the road's function, design, and level of safety. The safe and appropriate speed for every road in New Zealand has been calculated; it's an important tool that informs the speed limit setting process. In 2020, only 13% of the speed limits in New Zealand were aligned with the safe and appropriate speed.

injury crashes in New Zealand.[89] Speed continues to be a key contributing factor to deaths and serious injury crashes in New Zealand.

One of the best ways to immediately bring down the high rate of deaths and serious injuries on our roads is to set safe and appropriate speed limits.[90] In many cases the default 50km/hr for urban roads and 100km/hr for rural roads is not safe or appropriate. Many of our communities have been actively requesting lower speeds across our city: 88% of Christchurch survey respondents agreed that driving at safer speeds would improve road safety.[91]

In 2020, only 27% of speed limits in Christchurch aligned to the designated safe and appropriate speed, with the remaining 73% of our speed limits considered to be higher than is safe. In order to ensure we reach our road safety target, we aim to align 70% of our network with the safe and appropriate speeds by 2030. Our modelling shows that doing this could save approximately 12 deaths and serious injuries in Christchurch per year. This action will broadly drive a network-wide reduction in speed limits, which includes lowering a number of speed limits to 30km/h and 40km/h.

Actions

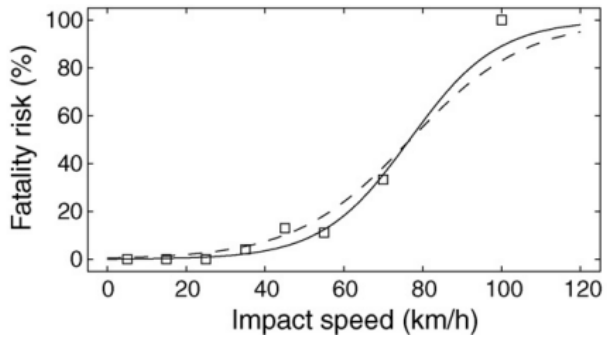
- Establish safe and appropriate speeds across our road network

Speed limits around schools

At the time when children are arriving at or leaving school and crossing the road there can be high volumes of traffic, manoeuvring vehicles, parked vehicles obscuring visibility, and vehicle speeds are often too high. In addition, current speed limits outside most urban schools do not make walking, cycling and scooting appealing modes of transport, either for children or their parents.

Research has shown that reducing vehicle speeds to less than 40km/hr significantly reduces the risk to children in this environment.[92] The probability of a pedestrian being killed rises as impact speed increases, and it approximately doubles between 30km/h and 40km/h, and doubles again from 40km/h to 50km/h (see figure below). The risk to vulnerable pedestrians, such as the elderly and young children, is even higher.[93]

[89] Ministry of Transport, *Overview of Road Safety in New Zealand*, August 2018, www.transport.govt.nz/assets/Uploads/Presentation/Overview-of-Road-Safety-in-NZ-Data-packs-for-reference-groups.pdf, p.74
[90] New Zealand Government, *Road to Zero*, December 2019, www.transport.govt.nz//assets/Uploads/Report/Road-to-Zero-strategy_final.pdf, p.39
[91] Research First, Road Safety in Canterbury, November 2018 www.ecan.govt.nz/your-region/living-here/transport/regional-transport-planning/road-safety/, p.31
[92] Waka Kotahi, Traffic Note 37, May 2011, www.nzta.govt.nz/assets/resources/traffic-notes/docs/traffic-note-37-rev2.pdf
[93] Rosén E., Stigson H., Sander U., *Literature review of pedestrian fatality risk as a function of car impact speed*, 2011, transportsafety.ir/wp-content/uploads/Courses/UrbanRoadsafety/Literature-review-of-pedestrian-fatality-risk-as-a-function-of-car-impact-speed.pdf, p.28, Figure (c)



Proposed Setting of Speed Limits Rule 2022

Speed Limits around Schools: Road Controlling Authorities will be required to introduce safer speed limits around schools, with an initial 40% of changes to be completed by 30 June 2024 and use reasonable efforts to complete the remaining by 31 December 2029. Speed limits will be reduced to 30 km/h (or 40 km/h in some circumstances) around urban schools and a maximum of 60 km/h around rural schools. These speed limits can either be permanent or variable.

National surveys have indicated high levels of public support for lower speed limits around schools, with 74% of respondents saying that speed limits should be 20-30km/hr.[94] In New Zealand, 40km/hr variable speed limits in school zones have been operating successfully since they were first installed on a trial basis in Christchurch in January 2000.

One of the action items in *Road to Zero* is the transition to safer speed limits around all schools by 31 December 2029, through the Ministry of Transport's Setting of Speed Limits Rule 2022. The draft rule will enable an improved approach to speed management planning and require us to set new speed limits around all schools in Christchurch.[95] This rule will require us to set 30km/h speed limits around urban schools and a maximum 60km/h speed limit around rural schools by 2030.

Reducing speed limits around schools is likely to have co-benefits, such as reducing perceived road safety concerns and improving overall neighbourhood safety. This is expected to help improve the rates of children walking and cycling to school and in turn contribute to healthier communities.

It is important to acknowledge that reducing speed limits is not the only option to improve safety around schools or improve rates of walking and cycling. Lower speed limits used in conjunction with other measures, such as traffic calming and modal filters, will achieve better safety outcomes for vulnerable users. Broader changes will also therefore need to be considered as we align our speed management plan with the targets set in the upcoming Speed Limits Rule.

Slower speed limits around schools will be rolled out progressively, with the highest priority schools being those with poor crash records, high-speeds, high community support, and a low school decile.

Actions

- Implement 30km/h where possible around all our urban schools
- Implement safe speed limits rural schools

[94] Waka Kotahi, *Public attitudes to road safety*, February 2022, www.nzta.govt.nz/resources/public-attitudes-to-road-safety/

[95] Waka Kotahi, *Land Transport Rule: Setting of Speed Limits 2021 – overview for consultation,* April 2021, www.nzta.govt.nz/assets/consultation/land-transport-rule-setting-of-speed-limits-2021/Setting-of-Speed-Limits-2021-overview-and-summary-of-proposals-for-consultation.pdf

School deciles are used to target funding for state schools to help them overcome any barriers to learning that students from lower socio-economic communities might face. By prioritising safe speed investment and infrastructure around low decile schools first, we can improve safety and health outcomes for these communities sooner.

Slow speed neighbourhoods

Our safety programme for 2021-24 (in the current LTP) includes 15 slow speed neighbourhoods. The slow speed neighbourhood programme aims to improve safety for everyone by reducing vehicle speeds. The primary measure for the current programme is a reduction in speed limits from 50km/hr to 40km/hr or 30km/hr. As we plan for more safe and appropriate speeds we will roll out slow speed neighbourhoods in more areas across the city.

As of March 2022, three slow speed neighbourhoods had been implemented in Christchurch - in Scarborough Hill, Shirley and Avondale. The remainder of the current programme will be implemented through a prioritisation process. Feedback and interest from residents is an important factor in initiating the programme, and other factors are investigated, such as road safety performance and whether street design is appropriate for lower speeds.

What do we want our slow speed neighbourhoods to look like?

It is essential that we incorporate a range of interventions alongside slower speeds in order to realise the full range of benefits for our communities and neighbourhoods, including promoting active travel, a sense of place and community liveability. Addressing these wider issues will positively impact speeds and perceptions of speed and safety.[96]

Currently, our slow speed neighbourhood programme focuses primarily on reducing speed limits, with minimal traffic calming measures. Moving forward, we will consider a broader range of traffic calming measures such as speed humps or kerb bump-outs, to support the implementation of slower speeds. We will also work with our communities to implement play streets and open streets, which involves temporarily restricting traffic on a street to allow children's play events, community gatherings, and small festivals and fairs.

Different types of modal filters

- Bollard or planter - people can travel through the area by walking or cycling, but not by car
- Pocket parks - two sets of filters spaced slightly apart to create a new area through which people can only travel by walking or cycling
- Diagonal filters: Bollards or planters placed diagonally through a cross-roads. These minimise the need for reversing, facilitating refuse collection or other large vehicle movements.

Modal filters (a type of traffic calming feature) have become a popular intervention to reduce traffic, support lower speed limits and improve the overall amenity within an area. We are proposing to roll

[96] Living Streets Scotland, *20mph more than signs – a toolkit*, www.livingstreets.org.uk/media/3514/low-speed-communities-toolkit.pdf

these out to support the continuation of our cycling network and they should also be considered when implementing slower speeds limits.

Modal filter example – pocket parks

Modal filter – diagonal filter

Actions

- Roll out slow speed neighbourhoods across the city, utilising reduced speed limits, modal filters and other traffic calming measures

Safe system interventions

Most crashes in Christchurch occur at intersections.[97] Compared to other local authorities, Christchurch has the fourth highest road safety risk at intersections.[98] Slowing down traffic through intersections using raised platforms reduces both the number of crashes that occur and the severity of those that do occur. It is estimated that they typically reduce the number of deaths or serious injuries at an intersection by approximately 40%.[99]

[97] Waka Kotahi Crash Analysis System showed 55% of crashes in 2017-21 occurred at intersections
[98] Waka Kotahi, Communities at risk register 2020, www.nzta.govt.nz/assets/resources/communities-at-risk-register/docs/communities-at-risk-register-2020.pdf, p.7
[99] Waka Kotahi, *Standard Safety Intervention Toolkit*, September 2021, www.nzta.govt.nz/assets/resources/standard-safety-intervention-toolkit/standard-safety-intervention-toolkit.pdf, p.51

We have a number of raised safety platforms in Christchurch already but these are located on smaller local streets, rather than across our busier traffic lanes.

We will expand the coverage of these to include our busier and more dangerous intersections, where they are likely to have the greatest impact. Our modelling shows that our current investment in raised safety platforms will reduce roughly a quarter of the deaths and serious injuries needed to reach our target. Raised safety platforms and other safe system interventions such as roundabouts will play a critical role in achieving our safety target. We are setting strategic direction to ensure we deliver safe system interventions across our network in areas that have high crash statistics and meet national criteria for priority intervention. Our safety programme will involve site-specific investigations and will utilise different interventions as needed.

Raised Safety Platforms

Raised Safety Platforms are increasingly used to reduce the maximum comfortable operating speed for vehicles to Safe System collision speeds, particularly at intersections. They could be in the form of '**approach platforms**' where vehicles ascend a platform before entering the intersection (pictured), or a '**raised intersection'** where the entire central intersection area is raised. RSPs can be designed for a range of speeds and contexts. The aim is that average speeds at these intersections are close to 30km/h.

Source: https://www.vicroads.vic.gov.au/-/media/files/technical-documents-new/road-design-notes/road-design-note-0307--raised-safety-platforms-rsp-version-c2.ashx

(Image credit: Vicroads)

Actions

- Implement site-specific safe system interventions such as raised safety platforms and roundabouts

Enforcement cameras

Automated speed cameras are shown to be highly effective at reducing speeding and therefore reducing deaths and serious injuries on our roads.[100] Christchurch has two red light running cameras

[100] Pilkington P., Kinra S., *Effectiveness of speed cameras in preventing road traffic*

and zero speed cameras on our roads. This is fewer than Auckland and Wellington, where there are 23 and six speed cameras respectively, and six and one red light cameras respectively. New Zealand ranked 70th (of 90 countries with speed cameras) for the amount of speed cameras per road kilometre, in 2018.[101] Christchurch has a significant issue with red-light running at its signal-controlled intersections. A 2019 survey of 15 intersections recorded 8,170 instances of vehicles progressing through red lights within a 24-hour period.[102]

We plan to work with the Police and Waka Kotahi to increase the number of speed and red light running cameras in Christchurch. Using automated enforcement is expected to reduce speeding and red light running, both of which are key factors in serious crashes. It will also free up the Police to reallocate some resource away from traffic management and towards other valuable efforts.

Actions

- Work with the Police and Waka Kotahi to increase the use of cameras for automated enforcement

Improving our footpaths

Incorporating universal design into our walking network means that it can be accessed and understood by the greatest number of people regardless of ability or disability. Everyone should be able to travel from place to place on our walking network without barriers or inconvenience.

Footpaths in poor condition can present trip hazards for pedestrians, especially for the elderly, and those with mobility impairments.

A recent Auckland Transport study used hospital records to estimate that approximately 470 people a year in Auckland suffer slips and trips on public footpaths serious enough to require hospitalisation. The vast majority of these are not included in road safety statistics.[103] Around 60% of these were caused by uneven pavement, and approximately 70% of those injured were 70 years of age or older.

We need to provide smooth, high quality footpaths that everyone, and particularly older people, can walk on without tripping over and potentially being hospitalised. Currently the data we collect on the smoothness of footpaths is good quality but limited in scope, and the data we collect on road

Actions

- Ensure we have safe and comfortable footpaths for everyone, by improving data on footpath network condition

collisions and related casualties: systematic review, February 2005, www.bmj.com/content/bmj/330/7487/331.full.pdf

[101] Budget Direct, *Which cities have the highest speed camera density?* www.budgetdirect.com.au/car-insurance/research/speed-camera-density.html and https://www.scdb.info/en/stats/

[102] Stuff, *Red light running rampant in Christchurch*, January 2019, www.stuff.co.nz/national/crime/109855166/red-light-running-rampant-in-christchurch

[103] The same study estimated only 1 in 7 of these are reported to police and entered into the Waka Kotahi Crash Analysis System.

casualties does not include trips and slips. This means our current footpath maintenance may not always be prioritised towards the highest need areas. We will work to improve the extent of the data we collect, so that footpath maintenance budgets can be better directed towards areas where footpaths are in the worst condition, and repairs completed within a reasonable timeframe.

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Making it happen

Implementation framework

This Plan will guide transport decision-making and investment over the next 10 years, to ensure that Christchurch's transport network supports and adapts to our city's needs. The Plan identifies the challenges and opportunities facing Christchurch and provides future direction for transport by articulating desired outcomes under four citywide themes —reducing GHG emissions; healthy streets, healthy people; good growth; and safe streets. The integrated set of Policies is intended to guide and direct transport decision-making to achieve these citywide outcomes, and is supported by a wide range of actions to be implemented at various stages across the life of the 10-year plan.

Our approach for delivery will focus on:

- Completing what we have started, while ensuring investment is aligned to this Plan.
- Prioritising our response to climate change and safety imperatives
- Planning and policy development, including trials on the new and transitional initiatives, particularly around emissions reduction
- Revising our existing funding and programmes where possible and desirable, to implement initiatives that can be undertaken with relative ease, and are effective
- Working with our partners; this includes working with central government agencies to integrate with the programmes of work that they are initiating.

Summary of Action Plan

The table below lists the Policies and associated Actions described throughout the Plan, and indicative timing for implementing each Action.

While we will be able to move quickly on some of the actions, some will require significant planning and others will require new policies and legislative changes. In addition the implementation of some actions within the Plan will rely on our partnerships with regional and central government agencies.

The detailed timing of actions and their estimated cost will be developed every three years through the Council's Long Term Plan process, taking into account the amount of funding available locally, regionally and nationally.

Action / Policy	**Years** **1** ——————————► **10**
Outcome 1: Reduce our transport greenhouse gas emissions	
Policy 1.1: Plan and implement Low Traffic Zones across Christchurch	
Action: Develop LTZ programme and funding opportunities (including criteria, identification of areas, interventions etc.)	
Action: Implement programme across Christchurch	
Policy 1.2: Support investment in the transport network with an ongoing, coordinated sustainable travel choice programme to increase the uptake of low emission travel options	
Action: Build awareness and understanding about low emissions travel through district-	

wide, ongoing information and education initiatives	
Action: Implement behaviour change initiatives to support the introduction of new services and transport infrastructure	
Policy 1.3: Implement road pricing, if appropriate, to reduce emissions	
Action: Investigate options for road pricing and support necessary changes to legislation	
Action: Trial, monitor and review preferred option	
Action: Implement preferred option	
Policy 1.4: Support the transition to zero-emission vehicles	
Action: Advocate to central government for continued and increased incentives for zero-emission vehicles	
Action: Work with developers and other stakeholders including local businesses to encourage the uptake of zero-emission vehicles	
Action: Support the shift to zero-emission urban freight/delivery vehicles, including smaller zero-emission delivery vehicles such as e-cargo bikes and e-mopeds	
Policy 1.5: Implement parking pricing to reduce emissions	
Action: Investigate the feasibility of parking levies for Christchurch	
Action: Implement parking levy (pending outcome of feasibility study)	
Action: Expand paid and time-restricted on-street parking by applying the Christchurch parking policies in the central city and suburban areas	
Action: Review the role of temporary off-street surface parking sites in the central city	
Action: Improve parking monitoring	
Outcome 2: Ensure our transport system supports good growth	
Policy 2.1: Embed a people-centric approach to our streets, by adopting the national One Network Framework	
Policy 2.2: Prioritise investment for transport and urban realm improvements to support intensification	
Action: Deliver a programme of transport interventions that support quality infrastructure within walkable catchments, particularly for public and active transport	
Action: Review the existing Council parking polices as the city grows	
Policy 2.3: Collaborate with our regional partners to enhance the attractiveness of public transport	

Action: Work with Environment Canterbury to ensure services support 'Public Transport Phase 2' (extend the PT Futures corridors)	
Action: Transform public transport lanes to accommodate many, varied modes of transport	
Policy 2.4: Collaborate with our partners to plan for rapid transit	
Policy 2.5: Prioritise essential vehicle trips on the road network	
Action: Investigate upgrading local network traffic signal prioritisation system to include emergency vehicles	
Action: Work with industry and partners to develop a greater understanding of the future growth and movement of urban freight on the local network	
Action: Support the national and regional goals to move freight to rail	
Outcome 3: Healthy streets, healthy people	
Policy 3.1: Improve our walking and cycling environment	
Action: Expand 30km/h zone to the four avenues from the central city core	
Action: Prioritise pedestrian and cycle priority in civic spaces, city hubs and main hubs within the four avenues	
Action: Accelerate An Accessible City projects that prioritise Te Kaha/Canterbury Multi-Use Arena and Parakiore Recreation and Sport Centre interventions	
Action: Investigate and test protected intersections; implement if and where appropriate	
Action: Implement 30km/h speed limits in our Key Activity Centres and implement measures to support this	
Action: Expand 30km/hr zone to adjacent streets around our Key Activity Centres, with modal filters and speed treatments	
Action: Review the local cycleway network to align with the One Network Framework	
Action: Trial and deliver modal filters to support a better cycling environment across the city	
Action: Plan and deliver greenways in our neighbourhoods	
Policy 3.2: Future proof our transport network for shared mobility (e.g. scooters)	
Action: Produce a best practice guidance note for planning and designing new infrastructure,	

particularly cycle infrastructure, to consider the demands of micromobility	
Outcome 4: Safe streets	
Policy 4.1: Realise Vision Zero	
Action: Collaborate with our road safety partners to encourage safer choices and safer behaviour on our roads, to deliver a safe system	
Action: Establish safe and appropriate speeds across our road network	
Action: Implement safe speeds around all urban and rural schools	
Action: Roll out slow speed neighbourhoods across the city, utilising reduced speed limits, modal filters and other traffic calming measures	
Action: Implement site specific safe system interventions such as raised safety platforms and roundabouts	
Action: Work with the Police and Waka Kotahi to increase the use of cameras for automated enforcement	
Action: Ensure we have safe and comfortable footpaths for everyone, by improving data on footpath network condition	

Ongoing public participation

This Transport Plan will help inform the selection and timing of transport projects in the 2024-34 Long Term Plan (LTP), on which the public will be given opportunity to provide feedback. Once the 2024-34 LTP has been adopted, the Council will begin to implement some of the agreed activities. As each individual project moves through the investigation, planning, design and construction phases there will be further opportunities for specific public engagement on issues, such as detailed design elements. This will provide opportunity for public input on the many detailed aspects of implementing this strategic Plan.

In addition to providing input on this Plan, our communities will therefore also have their say on implementing specific actions through:

- The Council's Long Term Plan (2024) – an integrated investment plan showing how the Council and its funding partners, such as Waka Kotahi, will fund the prioritised programmes from the different areas of the Council (parks, transport, water services, etc.) in a way that maximises return on investment but is also realistic about the financial burden that ratepayers and other investors can sustain.
- Detailed project engagement – specific engagement on the detailed implementation of named projects within the LTP. This covers design details, alignment with strategic direction and specific local requirements to deliver good outcomes for local communities within the context of the overall vision and goals of the Christchurch Transport Plan.

Partnerships to implementation

Evolving Christchurch's transport network to meet the needs of our growing city is reliant on strong partnerships and engagement at all levels, including our local government partners, central government, private industry and the community.

Strategic partnerships

Council will continue to explore and develop strategic partnerships with business, non-government agencies, community groups and individuals to develop and manage the city's transport networks, particularly around climate change.

We will continue collaboration with universities, and research agencies (MOT, MFE, Waka Kotahi etc) to improve our knowledge and gain access to research, advancements and transport planning and design expertise.

We will also continue working with the Lyttelton Port Company and Christchurch International Airport, both of whom are key partners as we plan our strategic transport network for the future prosperity of our city and wider region.

Government partnerships

Central and local governments contribute significantly to the planning, funding, development and operation of the City's transport network.

The Council is part of the Greater Christchurch Partnership (GCP), which comprises the councils in the Greater Christchurch area (Christchurch City Council, Environment Canterbury, Selwyn District Council, and the Waimakariri District Council), Te Rūnanga o Ngāi Tahu, Waka Kotahi, and the Canterbury District Health Board. The GCP provides a forum for collaboration on land use and transport planning for the sub-region.

We will work to maintain and strengthen our relationship with Waka Kotahi, the national funding agency for transport. We will work collaboratively to streamline funding processes and ensure national guidelines are met.

Community engagement

Education and engagement will help us to involve stakeholders and the wider community in developing initiatives to support the Plan. The Council will continue its engagement activities to ensure the opportunity for all community members to be involved. Everyone has a part to play in the enhancement of the city's transport network.

Private sector innovation

The private sector is becoming increasingly responsible for the delivery of transport innovations and alternative solutions, particularly in the area of new technologies. Innovative transport options such as drones are the result of private industry initiatives. Expanding opportunities to embrace and work with private industry will be important for the city.

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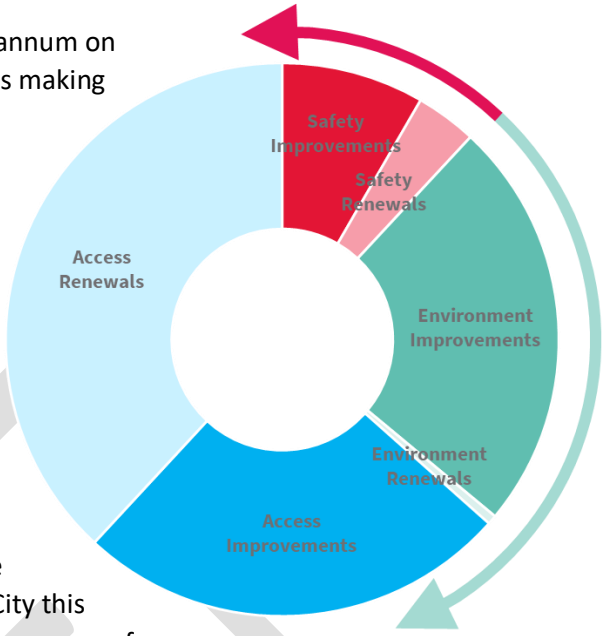
Funding approach



The Council currently spends approximately $150 million per annum on transport. Renewals makes up 43% of this, with improvements making up the remaining 57%. Investments aimed at improving environmental outcomes make up 25% of the budget: these include cycleways, public transport infrastructure and pedestrian improvements. Safety investments make up 12% of the budget, which include intersection upgrades and guardrails. Investment focused on access makes up the majority 63%, and includes road upgrades and extensions, parking, accessible city projects, and road bridges.

Most of our transport projects are delivered through the National Land Transport Programme (NLTP). Projects in this programme are co-funded by Waka Kotahi and council, with the rate generally being determined by the funding assistance rates applicable to approved organisations. For Christchurch City this is 51%. This portion is funded by Waka Kotahi and comes from a range of sources including petrol duties, road user charges, various Crown top-ups, and a portion of annual vehicle licensing fees. The remaining 49% must be raised locally from rates revenue, debt, developer contributions or other financial contributions and revenue. Every three years, we bid for national funding as part of the NLTP. In order to gain funding, projects must demonstrate they align with the Government Policy Statement on Land Transport.

Additional to the NLTP, we occasionally receive funding from other sources. This can include Crown funds and loans, private developer agreements, and contributions from community groups or other government agencies to community programmes.

Funding this Transport Plan will require a blend of approaches:

1. Reshaping projects that already have committed funding, to better achieve the outcomes of this Plan
2. Redirecting funding from projects that no longer meet our strategic direction
3. Securing additional transport funding.

Policies that are expected to have significant costs additional to what is already committed include investment for transport and urban realm improvements to support intensification, improving public transport infrastructure, implementing Low Traffic Zones, improving our walking and cycling environments, and safety improvements.

Two policies are likely to result in significant new revenue streams: road pricing and parking pricing.

Delivering the Plan will require more co-investment from central government. The government is signalling its aspirations through emerging policy documents, such as the draft Emissions Reduction Plan discussion document, which has a strong focus on changing the way we travel to more sustainable modes and zero-emission vehicles, improving public transport, and a cleaner freight system. This Plan is putting us ahead of the game, so that as government policy develops we will

have a robust strategic foundation on which to put forward a strong case for more government investment.

Current legislation requires this be done at a city council level. There is an intention to develop a Greater Christchurch Transport Plan with a broader scope at some point in future. This Christchurch Transport Plan will be one input.

Monitoring

Monitoring and reporting on the progress of the Plan is critical to achieving our ambitious targets. Keeping track of the Plan's performance helps us to understand the impact of our proposed actions and policies. We plan to measure the implementation of interventions as well as the progress towards the outcomes through a set of indicators.

The Council already sets a number of key transport indicators and targets in the Transport Activity Plan, such as the percentage of residents who are satisfied with footpaths, the amount of GHG emissions from transport, and the number of people who ride the bus. Ultimately, this Plan seeks to direct the development of future Long Term Plans and their associated Activity Plans and Levels of Service for Transport.

We anticipate that progress towards the outcomes below will be monitored through the setting of specific and measurable key performance indicators, through upcoming and ongoing activity planning and long term planning processes. The table below outlines the targets we will use to measure the success of our outcomes. These targets, and those associated with specific actions, will be further refined during the long term planning process.

Outcome	Key Performance Indicator/Target
Reduce our transport greenhouse gas emissions	Greenhouse gas emissions from road transport will fall by 50% by 2030, in line with Kia tūroa te Ao Ōtautahi Christchurch Climate Resilience Strategy. This will be achieved through a combination of more zero-exhaust emission vehicles, and reduced car mode share (83% in 2018 to 59% in 2030)
Ensure our transport system supports good growth	The proportion of household expenditure our residents spend on transport will stop climbing as people have more choices to travel in ways that minimise their costs, as measured in the Household Economic Surveys.
Healthy streets, healthy people	More people will be sufficiently active to stay healthy through their regular travel around the city. By 2030, 30% of people will be reporting at least 20 minutes of active travel per day through the Life in Christchurch survey.
Safe streets	Deaths and serious injuries occurring on our streets will fall by 40% by 2030, on the way towards our vision of eliminating these altogether.

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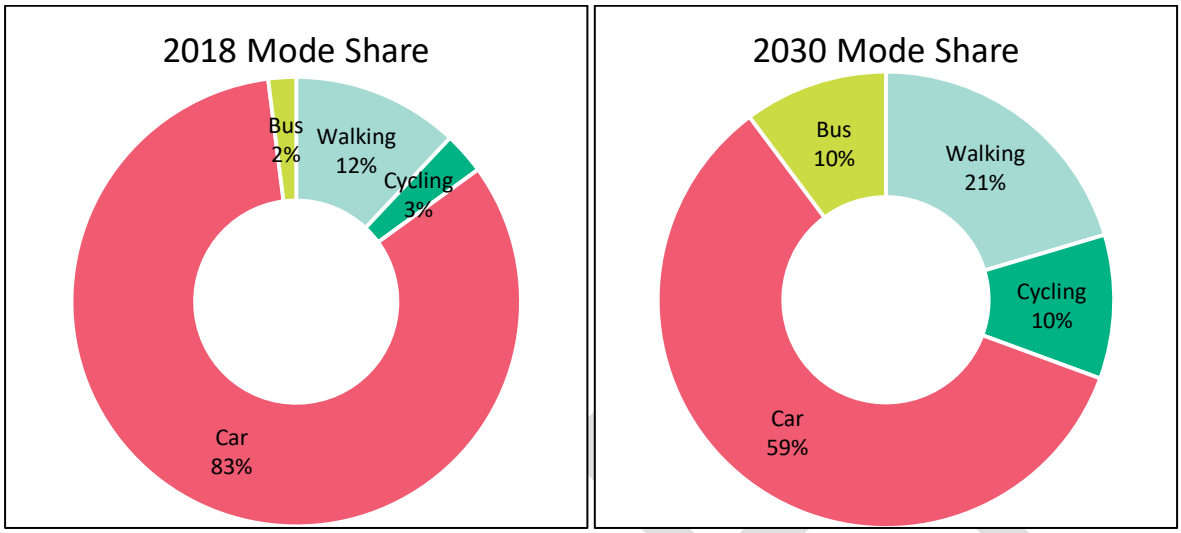
People shifting their travel from cars to walking, cycling and public transport, is a principle underpinning all four of these outcomes. The 2018 mode share is shown below, together with the expected 2030 mode share.



Appendix A: Strategic context

National policy context

Climate Change Response (Zero Carbon) Amendment Act 2019

This Amendment Act amends the Climate Change Response Act 2002 (CCRA) and provides a framework for New Zealand to develop and implement climate change policies that contribute to the global effort under the Paris Agreement. The CCRA now enables New Zealand's implementation of the Paris Agreement, with a view to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels; and allow New Zealand to adapt to the effects of climate change.[104]

The CCRA sets a new GHG emissions reduction target for New Zealand, which means that the Government must implement policies that[105]:

- reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050
- reduce emissions of biogenic methane to 24–47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030
- establish a system of emissions budgets to act as stepping stones towards the long-term target.

Emissions Reduction Plan

This is the first national emissions reduction plan, and will set the direction for climate action for the next 15 years, placing us on the right trajectory to meet our national emissions reduction targets. The final plan is due to be delivered in mid-2022 and will set the first three emissions budgets out to 2035. The plan will guide the implementation of policies and strategies for specific sectors, including transport.

Importantly for the Council, section 5ZN of the CCRA provides:

> If they think fit, a person or body may, in exercising or performing a public function, power, or duty conferred on that person or body by or under law, take into account—
>
> (a) the 2050 target; or
>
> (b) an emissions budget; or
>
> (c) an emissions reduction plan.

In light of the impact of transport policies on GHG emissions, it is appropriate to take into account the 2050 target, emissions budget and emissions reduction plan when setting transport policy. While the emissions budgets and emissions reduction plan are currently only in draft, it is anticipated that the final versions will be similar to the draft. Any amendments that are made in the finalised versions can also be taken into account with the Council's transport policy.

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[104] Climate Change Response Act 2002, section 3(1)(aa)

[105] Note that the target is a legal obligation in the sense that the targets have been enacted, however, the enforceability of the target is limited to section 5ZM of the CCRA, namely that a court may make a declaration that the 2050 target or interim emissions budgets has not been met. The Minister for Climate Change must then present that to Parliament with advice on how to respond to the failure to meet the target/budget

Ministry of Transport Outcomes Framework

The Transport Outcomes Framework sets a purpose for the transport system centred on the wellbeing of New Zealanders and the liveability of places. It outlines 5 outcome areas to contribute to this purpose: inclusive access, healthy and safe people, economic prosperity, environmental sustainability, and resilience and security.

The Transport Outcomes Framework does not set out the specific interventions the government will pursue to deliver the outcomes, but it helps the transport sector work together, provides a framework for assessing the effectiveness of policy, and ensures all forms of transport are considered when planning, investment and regulatory decisions are made.[106]

Road to Zero

Road to Zero 2020-2030 is New Zealand's strategy to guide improvements in road safety. As a step towards Vision Zero, the *Road to Zero* strategy sets an initial target of reducing deaths and serious injuries on our roads by 40% by 2030, from a 2018 baseline. Ultimately, the goal is to reach Vision Zero, a New Zealand where no one is killed or seriously injured on our roads.

Vision Zero is a global movement that has seen significant decreases in road trauma in Sweden, New York and parts of Australia that says:

- No loss of life on the roads is acceptable
- Road deaths and serious injuries are preventable
- People make mistakes and are vulnerable – we need to stop simple mistakes turning into tragedies
- Safety should be a critical decision-making priority in our transport decisions
- We need to focus on shared responsibility between road users, and the people who design and operate our roads.

The strategy focuses on areas that will have the greatest impact, including infrastructure improvements and speed management; vehicle safety; work-related road safety; road user choices; and system management. We have adopted the *Road to Zero* targets.

Government Policy Statement on land transport (GPS)

The GPS sets out the government's priorities for investment in the transport network. A new GPS is released every three years and provides direction over 10 years. It guides Waka Kotahi and local government on the types of activities that should be included in Regional Land Transport Plans and the National Land Transport Programme (NLTP). GPS 2021 came into effect on 1 July 2021. Its four strategic priorities are:[107]

- Safety - developing a transport system where no one is killed or seriously injured
- Better travel options – providing people with better transport options to access social and economic opportunities
- Climate change – developing a low-carbon transport system that supports emissions reductions while improving safety and inclusive access

[106] https://www.transport.govt.nz/area-of-interest/strategy-and-direction/transport-outcomes-framework/
[107] New Zealand Government, Government Policy Statement on land transport 2021/22-2030/31, www.transport.govt.nz//assets/Uploads/Paper/GPS2021.pdf

- Improving freight connections – improving freight connections for economic development

Resource management system reform and Strategic Planning Act and Climate Adaptation Act

The Government's resource management reforms will impact land use and transport planning, as well as adaptation planning – through the new Natural and Built Environments Act, Strategic Planning Act, and Climate Adaptation Act. This will particularly affect transport infrastructure in areas at risk of coastal and other hazards, and is likely to place other obligations on our transport operations.

The integration of land use and transport planning is being pursued through resource management reforms to a certain extent, for example the new Strategic Planning Act is likely to require regional spatial strategies.

NPS UD and RMA Amendment Housing Bill

The Resource Management (Enabling Housing Supply) Amendment Act 2021 requires us to enable medium density housing in most existing residential areas across the city. These standards enable the development of up to three houses of up to three storeys (or 12m high) as of right – without the need to apply for a resource consent.

The National Policy Statement on Urban Development 2020 also requires us to enable more housing across the city. It requires us to identify areas of Christchurch where more homes can be built on the same footprint, even higher than three storeys – but these should be near existing services, public transport networks and infrastructure.

Regional policy context

Regional Land Transport Plan

The Regional Land Transport Plan 2021-31 was formally adopted by Environment Canterbury in June 2021. The Plan places a greater focus on resilience to extreme events and emissions reduction than previous plans. It outlines $5.5 billion worth of investment in the Canterbury region's network over the next decade.

Greater Christchurch Mode Shift Plan

The Mode Shift Plan: Greater Christchurch 2020 supports development that protects the environment, improves transport links, creates liveable areas, and sustainably manages population growth. It focuses on shaping urban development; making public and active transport more attractive; and influencing travel demand and behaviour in order to achieve this. The plan has been informed by principles provided in *Keeping cities moving*, the national mode shift plan.

Greater Christchurch Spatial Plan

The Greater Christchurch Spatial Plan is a 50-year plan being jointly developed by the GCP and central government. It will identify a preferred urban form for Greater Christchurch, which will identify long-term growth areas for the sub-region. Any future rapid transit system is likely to play a key role in shaping the urban form, and the GCP is advancing feasibility and planning work on potential rapid transit transport as part of the spatial plan programme.

DISCLAIMER

This Christchurch Transport Plan is in draft. The current draft has not yet been endorsed by Christchurch City Council elected members. Further engagement is planned on this draft with mana whenua partners. We expect a finalised draft to be endorsed by the incoming Council and put out for full public consultation in early 2023 but are yet to finalise details around this process. This draft may be subject to change prior to it being released for public consultation.

The Christchurch Transport Plan, while focused on delivery for the next 10 years, will be responsive to any significant changes in the transport network and urban development that occur through this work.

Council policies

Climate Resilience Strategy

The Ōtautahi Christchurch Climate Resilience Strategy 2021 was adopted in June 2021. The Strategy sets four goals and ten action programmes to achieve these goals. These include - emissions reduction, the resilience of our infrastructure and communities to the impacts of climate change, reducing embodied carbon and others. The CTP supports this strategy by proposing actions we can take for a low-emission transport system.

Appendix B: Plan development process

The Christchurch Transport Plan was developed through a three-phase process involving internal and external stakeholders. It was developed with the Christchurch Transport Plan Working Group, formed of eight Elected Members. We had seven workshops/briefings with the Working Group at various stages of the Plan's development, to ensure a strong co-development process.

We undertook an Investment Logic Mapping exercise up-front, to define our issues. This ensured that robust initial discussion and analysis resulted in a sound problem definition. We sought to maintain a disciplined, objective and evidence-based strategic lens throughout by:

- Identifying the significant issues relating to transport
- Assessing a range of options to address these issues and identifying the most feasible actions for the Plan
- Compiling it all together to provide high level direction for investing in the next LTP

Phase 1 – The front end (identifying challenges and overall direction setting)

- Task 1: Establish strategic direction and gather evidence – inputs to the Plan were gathered and integrated from a range of internal and external sources.
- Task 2: Investment Logic Map (problem definition) – workshop with internal and external stakeholders / subject matter and technical experts to define the challenges for the Christchurch Transport Plan.
- Task 3: Front end of the Christchurch Transport Plan – a direction-setting document that summarised the challenges, goals and outcomes, and developed the overall direction for the Plan.

Who and what was involved?

- 2018: The need for change was identified internally through a series of workshops. It was recognised that the 2012 Christchurch Strategic Transport Plan needed a refresh and a stronger strategic direction was needed, to respond to the challenges we are facing nationally and locally
- 2019: Four workshops with internal and external technical experts to identify the future direction of the Plan alongside the identified challenges. We used the Council's strategic framework to develop the format of these workshops and to ensure alignment with our Community Outcomes
- 2020: the introductory contents developed was sent internally for staff feedback and comments were received and incorporated.

Phase 2 – Developing the policies

A deep dive into the outcomes, broken down by the four desired outcomes of the Plan, to understand the relationship between the proposed strategic direction and the directives needed to achieve this. We worked with external and internal stakeholders to understand what our priorities are (including our current investments). We adopted a strong evidence-based approach to developing the policies.

- Task 4: Established a strong evidence base, particularly around the emissions and safety outcomes, to inform our policy direction

Who and what was involved?

- 2021: Undertook four internal workshops to seek feedback on our draft policy direction and held a multi-criteria session to develop an initial short list of policies
- 2021: Undertook pre-engagement with external stakeholders to seek feedback on draft policy directions and actions.

Phase 3 – Developing the Action Plan

A deep dive into the policies and their associated actions. Where relevant, an assessment of each action was then undertaken from a long list of actions, resulting in the draft Christchurch Transport Plan Action Plan.

- Task 6: Emissions reduction literature review (national and international) – this task had never been undertaken before and involved a literature desktop study to understand what actions are required for road transport, to meet our emissions targets. This was followed by a dashboard assessment and preferred programme options assessment for the 10 years
- Task 7: Transport specific issues and options analysis for safety, healthy streets and good growth – this involved transport and urban growth-focused working groups of subject matter experts to first identify specific issues, and then develop and assess action options to address these

Who and what was involved?

- 2021: A team of technical staff across Council reviewed the emissions literature, developed a criteria and a short list.
- 2022: Undertook four internal workshops to seek feedback on the draft actions alongside ongoing conversations with technical staff members to inform the final Action Plan. Draft Plan sent out to a small number of technical staff for further refinement and alignment across key areas of work.

List of external stakeholder involvement

External Engagement List – Phase 1

- Canterbury District Health Board
- Ministry of Transport
- Waka Kotahi NZ Transport Agency
- Ministry of Education
- Te Rūnanga o Ngāi Tahu
- Youth Council
- Christchurch Multicultural Council
- ChristchurchNZ
- Development Christchurch Limited
- Central City Business Association

- Kāinga Ora
- Accessibility Christchurch
- Ara
- University of Canterbury/Te Putahi
- University of Otago
- Urban Design Forum
- Matapopore Charitable Trust
- Canterbury Housing and Transport
- GenZero
- Massey University
- Environment Canterbury
- Chamber of Commerce

External Engagement List – Phase 2

List of stakeholders for pre-consultation engagement, run through a mix of group workshops and one-on-one engagement.

Workshop invitees:

- Ministry of Transport
- Waka Kotahi NZ Transport Agency
- Ministry for the Environment
- Environment Canterbury
- ChristchurchNZ
- Christchurch Employers Chamber of Commerce
- Central City Business Association
- Ministry of Education
- Canterbury District Health Board
- Kāinga Ora
- Police
- Fire and Emergency
- St John
- Urban Design Forum Canterbury
- Go Bus
- Richies
- Black Cat
- Spokes Canterbury
- Cycling Christchurch
- Automobile Association
- CCS Disability Action
- Blind Foundation
- Christchurch Multicultural Council
- Civic Trust
- Ara

- University of Canterbury
- University of Otago
- Matapopore
- Generation Zero
- Youth Council
- Two residents representatives

Engagement approach advised to Te Rūnanga o Ngāi Tahu

One-one meetings: Kiwirail; Lyttelton Port Company; Christchurch International Airport Limited