# Ōtautahi Christchurch Future Transport 2024-54



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## **Executive summary**

## A well-functioning transport network is essential for a thriving, liveable city.

Our roads and streets are among our most valuable public spaces. We use them every day to get around and they are shared public spaces that influence the areas they pass through. They play a significant role in our lives.

Over the next 30 years, Ōtautahi-Christchurch and Te Pātakao-Rākaihautū Banks Peninsula will continue to grow and evolve. Our population and that of surrounding districts are projected to increase significantly. Urban environments will become more intensively developed. Mitigating the effects of climate change and addressing the resilience and adaptation challenges it presents will remain ongoing priorities.

To meet these challenges and leverage opportunities, we need to plan for transport growth that makes it safer and easier to get around, reduces carbon emissions, is sustainable, efficient, and accessible for all.

The Ōtautahi Christchurch Future Transport strategy replaces the Christchurch Transport Strategic Plan 2012-2042. Under the 2012 plan, we have made significant progress. Our network is now more resilient following substantial post-quake repairs, and there are more transport options available. Safety outcomes have improved, and our central city streets continue to regenerate.

**Ōtautahi-Christchurch Future Transport 2024-54** outlines our high-level direction for transport. The strategy's vision is:

Our transport network shapes and connects Ōtautahi-Christchurch and Te Pātaka-o-Rākaihautū Banks Peninsula

It enables everyone to move around safely, reliably and efficiently

It is central to a more vibrant, prosperous, and climate-resilient future for our district

#### The strategy sets out six transport goals to achieve this vision, including:

- 1 Continuously improving the way we look after our transport network assets.
- 2 Developing a more climate-resilient and adaptive transport network.
- 3 Ensuring everyone can travel safely.
- **4** Enhancing productivity, economic growth and essential travel through free flowing and efficient movement.
- **5** Providing genuine transport choices for everyone.
- 6 Creating a vibrant, healthy, and liveable city as we grow.

A detailed implementation plan will be developed following the adoption of this strategy. This will seek to balance looking after and maintaining our transport network assets with making the improvements required to meet our growth and climate change opportunities and challenges. It will be delivered through the Council's Annual and Long Term Planning processes. We recognise that significant funding and investment will be required to deliver the strategy. Effective partnerships with central and local government, co-funders, and the exploration of new funding and revenue sources will be essential.

Above all, we acknowledge the important role a wellfunctioning, resilient, efficent, connected and safe transport network has in the daily lives of our residents, and for the ongoing prosperity of businesses, industry and our economy.

## The role and scope of this strategy

The Ōtautahi Christchurch Future Transport strategy (the strategy) is the Christchurch City Council's (the Council) 30-year strategic direction for land transport.<sup>1</sup>

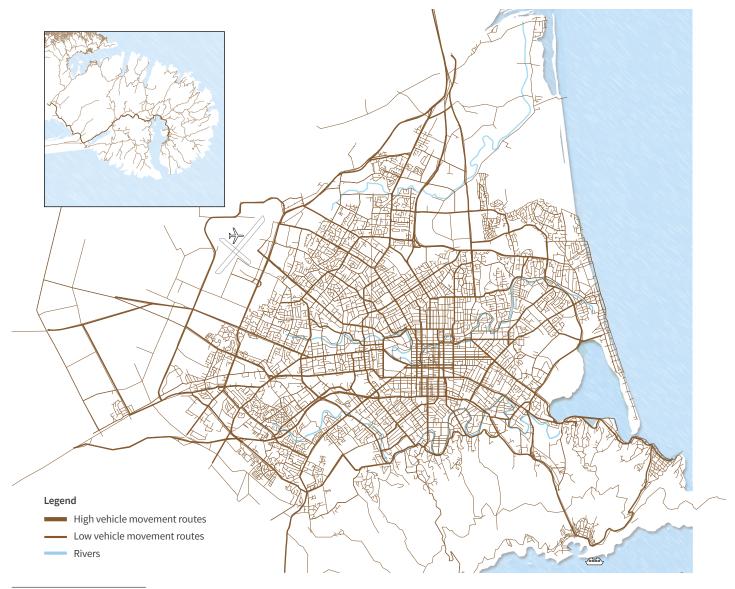
The strategy's scope is district-wide and encompasses the entire transport network. It also focuses on areas within the city where growth is anticipated, where transport initiatives play a key role in enabling that growth. The strategy considers the need for safe, efficient and timely movement on the transport network, alongside the role of streets as places for people and businesses to thrive.

This high-level, direction-setting strategy is designed to guide the Council's transport capital delivery, planning, and policy

work programmes. It gives clarity for residents, businesses, industry, local and central government partners and coinvestors about our long-term vision, goals, and directions for the transport network.

An implementation plan will be developed following the strategy's adoption. Progress will be reviewed periodically, reported on, and delivered through our ongoing Annual and Long Term Plans.

Figure 1. Ōtautahi Christchurch and Te Pātaka-o-Rākaihautū Banks Peninsula Transport Network 2024



<sup>&</sup>lt;sup>1</sup> See all endnotes on page 46

## What we are building on

This strategy replaces the Christchurch Transport Strategic Plan 2012–2042, which focused heavily on earthquake recovery and regeneration.

Actions from the previous plan have resulted in a safer and more resilient transport network, offering more choices for getting around. Our city-wide cycle network has expanded, and central city streets continue to regenerate. Meanwhile, Christchurch's population has grown by 12%.2

Investing in transport infrastructure requires long-term commitment, and factors like natural disasters, global health crises and technological change cannot always be anticipated. Many elements remain works in progress that we will continue to build on throughout the life of this strategy.

#### Achievements from 2012-2024

#### Post-earthquake recovery and rebuild

\$2.2 billion spent on repairing and rebuilding publicly-owned horizontal infrastructure.3

#### **Public transport patronage**

Public transport usage has been significantly impacted by both earthquakes and the COVID-19 pandemic. We are only now beginning to see a return to pre-quake levels, with usage in 2024 being the highest seen in more than a decade.5

#### **Public Transport Futures** A joint plan for the next stage

of public transport network development has been completed with our Greater Christchurch partners.6

#### Safety improvements

A 14% reduction in annual total deaths and serious injuries on Christchurch roads from 2012 to 2023.4

#### **Central city regeneration**

High-quality public realm improvements have contributed to the revitalisation of the central city, with 39% more residents, 39% more employees, and a 40% increase in retail spend since 2018.7

#### Cycle network expansion

More than 60% of the major cycle route network has been completed, with a 40% increase in cycle trips since 2017.8

#### New ways of travelling

Between January 2019 and July 2024, there have been 4.9 million ride-share scooter and e-bike trips, covering 8.2 million kilometres.9

## **Our strategic priorities**

We aim for all residents to actively participate in community and city life, feel a strong sense of belonging, and feel safe. We strive to create an inclusive and equitable district that prioritises wellbeing, connection, accessibility, and productivity. We also want our district to be green and liveable, with residents and businesses thriving.

> Our strategic priorities include taking a leadership role to reduce greenhouse gas emissions and build climate resilience. Climate change is one of our biggest challenges, and we have set ambitious targets to achieve a 50% reduction in gross greenhouse gas emissions (based on 2016-17 levels) by 2030 and net zero emissions by 2045. Land transport currently contributes 38% of the district's greenhouse gas emissions. 10

#### **Getting transport right is central to achieving these outcomes**

If we succeed, our transport network will:



#### **Transport infrastructure stewardship**

Managing ratepayers' money wisely is a core priority for the Council, especially in planning, delivering, and maintaining transport assets and services. The directions in our Infrastructure Strategy (2024–34) (ccc.govt.nz/assets/ **Documents/The-Council/Plans-Strategies-Policies-**Bylaws/Plans/Long-Term-Plan/LTP-2024-2034/ **Infrastructure-Strategy.pdf**) describe the balance we are seeking to achieve to manage our assets today, and over the long-term. This includes looking after what we've got and delivering what we say we will, building more resilience to climate change and natural hazards, and planning and investing for sustainable growth.

#### Partnership and collaboration

An effective transport network relies on partnership and collaboration in planning and funding. Implementing this strategy requires collaboration with mana whenua, central and local government partners, co-funders, local businesses, industry partners, and our communities.

We work closely with Environment Canterbury, neighbouring councils in Waimakariri and Selwyn, mana whenua, and central government transport and housing agencies to address strategic challenges and opportunities across the Greater Christchurch sub-region. This includes ensuring our crossdistrict boundary and transport connections are well-aligned. The Greater Christchurch Partnership (greaterchristchurch. org.nz) drives shared urban growth objectives for housing, transport infrastructure, and land use.

#### Engaging with our communities11

Most of us use the transport network ever day, so it's vital that it works well for everyone. However, people may have different views on the Council's transport priorities. It's an area where one person's 'must have' is another person's 'nice to have'. Despite this, there are areas where consensus is strong.

We conduct annual resident satisfaction surveys and have recently gathered feedback for the Long Term Plan 2024-34. Consistent themes for transport include:

- Improving road and footpath conditions: Residents often tell us that maintenance issues are a concern for them.
- **Providing good travel choices:** There is strong support for enhancing public transport and focusing housing and business development near public transport routes.
- **Exploring innovative solutions:** Recently, residents have shown support for the Council exploring lower-cost infrastructure treatments for cycleways.

However, opinions are more divided in other areas. For instance, feedback on our Safe Speeds and Neighbourhoods Programmes is split between those that support lowering speeds and others who see it as unnecessary and a hindrance to vehicle travel.

We will continue to seek and integrate community views into changes to our transport network. This includes exploring opportunities to improve early community engagement on transport works, including more than minor repairs and renewals. This will enable us to get residents feedback prior to construction and consider incorporating where feasible improvements to local environments.

#### Our partnership with mana whenua

The principles and policies in the Mahaanui Iwi Management Plan (2013) are reflected throughout this strategy, particularly regarding transport, accessibility, the environment, and climate change. The Mahaanui Iwi Management Plan is an expression of kaitiakitanga and rangatiratanga from the six Papatipu Rūnanga with mana whenua rights over the lands and waters. The takiwā extends from the Hurunui River to the Hakatere River and inland to Kā Tirititi o Te Moana, an area encompassing Ōtautahi Christchurch and Te Pātaka-o-Rākaihautū Banks Peninsula. The Iwi Management Plan outlines issues of importance to tangata whenua in terms of land transport infrastructure and resource management issues. It also provides guidance on consultation, assessment of effects and the protection of mana whenua values for transport projects and initiatives.

## The big challenges and opportunities for transport over the next 30 years

As our district grows and evolves, we aim to remain a great place to live, work, visit and do business.

This section outlines the most significant transport challenges and opportunities we need to address over the life of this strategy.

- Planning for growth
- Reducing emissions
- Enabling a resilient transport network
- Safe and healthy streets for everyone
- Transport infrastructure cost pressures and market volatility

### Planning for growth

Over the next 30 years, Christchurch is projected to grow by 85,000 people, 12 with many urban areas becoming more intensively developed. This growth will have two main effects: more people will need to travel within the same road space, and streets will be increasingly used for a greater variety of community uses.

Our neighbouring districts Selwyn and Waimakariri are also experiencing growth. Within the next 30-years, the wider Greater Christchurch sub-region is expected to reach a population of over 700,000.13 In 2021, Christchurch City had 87% of the jobs in Greater Christchurch but only 78% of the residents. 14 If this pattern continues, cross-district travel will increase, with vehicle travel within Greater Christchurch forecast to rise by 30% by 2038.

A larger population also means greater demand for goods and services, leading to increased inter-regional and urban freight movement. Christchurch hosts the South Island's largest

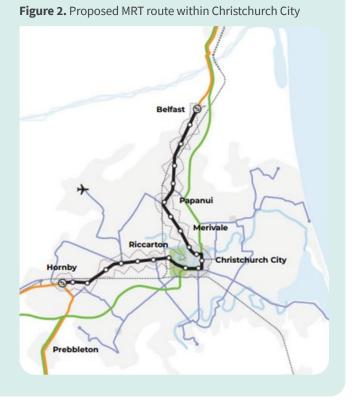
international airport and port. Around 40 million tonnes of freight is transported across the Canterbury region each year. This is projected to rise to 61 million tonnes by 2042. Currently, over 90% of freight is moved by road.15

We have the opportunity to enhance and connect our city as we grow by enabling more intensive development along public transport corridors and collaborating with our communities to create more shared street spaces as our population grows. As housing development expands, competition for street and road space will intensify both within our district and for those journeying into it. To manage this lateral growth, we need to enhance travel options on targeted transport corridors and purposefully design our transport network. By implementing more proactive measures, we can enhance and connect urban areas while managing the risk of congestion and allowing traffic to move freely.

Working closely with our neighbouring districts, mana whenua and Crown partners is at the heart of our planning for growth strategy. The Council, along with our Greater Christchurch partners,\* has developed a 30-year subregional growth plan (2023-53). The **Greater Christchurch** Spatial Plan (greaterchristchurch.org.nz/greaterchristchurch-spatial-plan) aims to shape growth over the next 30 years as the sub-regional population exceeds 700,000 and potentially reaches over a million.

Key transport directions in the Spatial Plan that are also reflected in this strategy include:

- Significantly improving public transport connections between key centres, with a proposed 'turn up and go' mass rapid transit (MRT) system.
- · Focusing growth around key urban centres and along public transport corridors.
- Protecting the effective operation of the freight network.
- Improving accessibility to Māori Reserve Land to support kāinga nohoanga.16
- · Providing safe, attractive, and connected active transport opportunities and encouraging innovative measures to enable choice for residents.

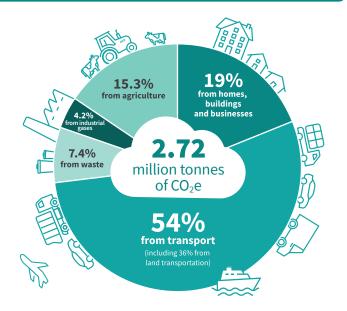


<sup>\*</sup> The Greater Christchurch Partnership is comprised of: Christchurch City Council, Environment Canterbury, mana whenua, Selwyn and Waimakariri District Councils, NZ Transport Agency – Waka Kotahi, and Health New Zealand – Te Whatu Ora

## **Reducing emissions**

Land transport contributes around 38% of the district's greenhouse gas (GHG) emissions profile.<sup>17</sup> Reducing these emissions is a critical component of the Council's **Ōtautahi Christchurch Climate Resilience Strategy** (ccc.govt.nz/the-council/plans-strategies-policies-andbylaws/strategies/climate-change-strategy) and has the potential to play a core role in how we meet our climate targets.

There is no single solution to reducing transport emissions. We need to approach the challenge from multiple angles. including transitioning our vehicle fleet away from fossil fuels and providing reliable, efficient, safe, and attractive public and active transport options. We can also design a low-carbon city where daily necessities are close to where people live.



#### Meeting our 2030 emissions reduction targets

The Council has an emissions reduction target of 50% in gross GHG emissions (based on 2016-17 levels) by 2030. There are a number of potential pathways for transport to contribute to meeting this target. The diagram below provides one example (for illustrative purposes) of what our 10 trip mix looks like on the network now alongside one scenario showing the degree of change needed for transport use to meet this target.

#### 2018 -

8 out of 10 trips in the city made in cars, virtually all being petrol or diesel

1 out of 10 walking

1 out of 10 either cycling or bussing



#### 2030 -

6 out of 10 trips in the city made in cars - 1 of these is zero-emissions

2 out of 10 walking

1 out of 10 cycling

1 out of 10 bussing



We already have many tools relating to transport at our disposal to meet our climate goals, such as, a range of low-emissions travel options. However, achieving them will require ongoing changes to how we design, improve, and use our transport network. Ensuring a just and equitable transition to a lower-carbon future is a priority for the Council.

## **Enabling a resilient transport network**

A resilient transport network can effectively respond to disruptive events. Enabling different travel options and implementing urban planning that ensures easy access to essential daily needs both contribute to resilience outcomes for our communities.

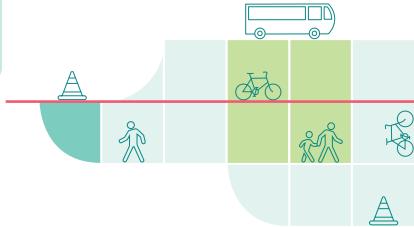
At the core of our transport resilience strategy is a thorough understanding of the risks we must plan for. Many areas of Christchurch and Banks Peninsula are particularly at risk from natural hazards, including earthquakes, tsunamis, and the effects of climate change. Our roads and footpaths face threats such as structural damage from geotechnical hazards, coastal inundation, flooding, slips, and temperature changes affecting surface quality.

#### **Examples of natural hazard risk projections factored** into our transport infrastructure planning include:

- From 1995 to 2020, the sea level rose about 10 centimetres, with a further 17-23 centimetres rise anticipated by 2050. A 20-centimetre rise in sea level could put 24% of our road network at risk of flooding or damage in a "1-in-100 year" storm event.18
- There is a 26% chance of a magnitude 8 or greater earthquake in the Hikurangi subduction zone within the next 50 years<sup>19</sup> and a 75% probability of an Alpine Fault earthquake occurring in the next 50 years.<sup>20</sup>

The replacement value of our at-risk horizontal infrastructure assets at 20 centimetres of sea level rise is assessed at \$3.2 billion.<sup>21</sup> Enhancing resilience is essential, requiring us to adapt how we manage our built environment and infrastructure and adjust our levels of service where necessary. Over the life of this strategy, we need to balance reacting to natural hazard events with proactive planning and adaptation to known risks.

As we design our transport network, it's also increasingly important to consider diverse energy sources, such as the electrification of a growing proportion of our vehicle fleet. These factors must be included in our transport network resilience planning.



## Safe and healthy streets for everyone

Between 2019 and 2023, there were over 7,500 crashes on Christchurch roads, resulting in 43 deaths and 539 serious injuries. In 2023, on average, someone was killed or seriously injured on our roads every three days.<sup>22</sup> Some forms of travel are perceived to be less safe than others. For example, sharing roads with cars, buses, and heavy vehicles is the top reason residents feel unsafe riding bikes around Christchurch.<sup>23</sup>

Recent investments in safer roads have led to a downward trend in road deaths and serious injuries.

Changes we have made are having an impact. For instance, lowering the speed limit in the central city core has contributed to a significant reduction in the number of crashes compared to pre-Earthquake figures (see Figure 3 below).

While these trends are encouraging, we need to continue investing in safety improvements to reduce actual and perceived harm on our roads.

Safe and attractive active transport options can also improve health and environmental outcomes. For example, air pollution from motor vehicles causes 316 premature deaths and more than 1,000 hospitalisations each year in Christchurch – the highest rate per capita nationally.<sup>24</sup> Green corridors that connect active transport networks offer an opportunity to link parks and open spaces, creating consistent connections across the city, increasing tree canopy and improving air quality.

## **Transport infrastructure cost** pressures and market volatility

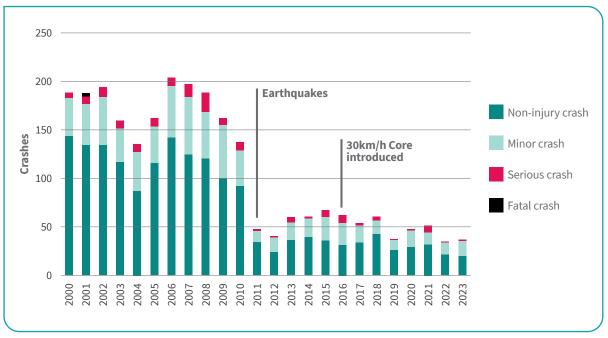
Investing in transport infrastructure requires long-term planning and, ideally, consistent funding. However, like all infrastructure investments, it is subject to global market volatility and inflationary pressures, which can be challenging to budget for.

Both local and central governments acknowledge that the current methods of funding and financing transport infrastructure are under pressure. Balancing the maintenance of our existing assets with the necessary investments to meet climate change and growth challenges will be an ongoing issue.

Alternative funding and financing methods are being actively considered by central government and councils. Over the life of this plan, these could include:

- New partnerships between local and central government to co-invest in critical infrastructure.
- Increased private sector partnerships.
- Greater use of transport pricing tools to fund infrastructure and generate revenue for reinvestment.





## **Ōtautahi Christchurch Future Transport 2024-54**

Our 30-year strategy for getting around

#### Vision

Our transport network shapes and connects Ōtautahi-Christchurch and Te Pātaka-o-Rākaihautū Banks Peninsula. It enables everyone to move around safely, reliably and efficiently. It is central to a more vibrant, prosperous, and climate-resilient future for our district.

## Key strategic challenges and opportunities

Enabling an equitable transition to a low emissions transport system



**Building more** resilience into our transport network and adapting to a changing climate



Enabling growth as our population and that of our neighbouring districts increases

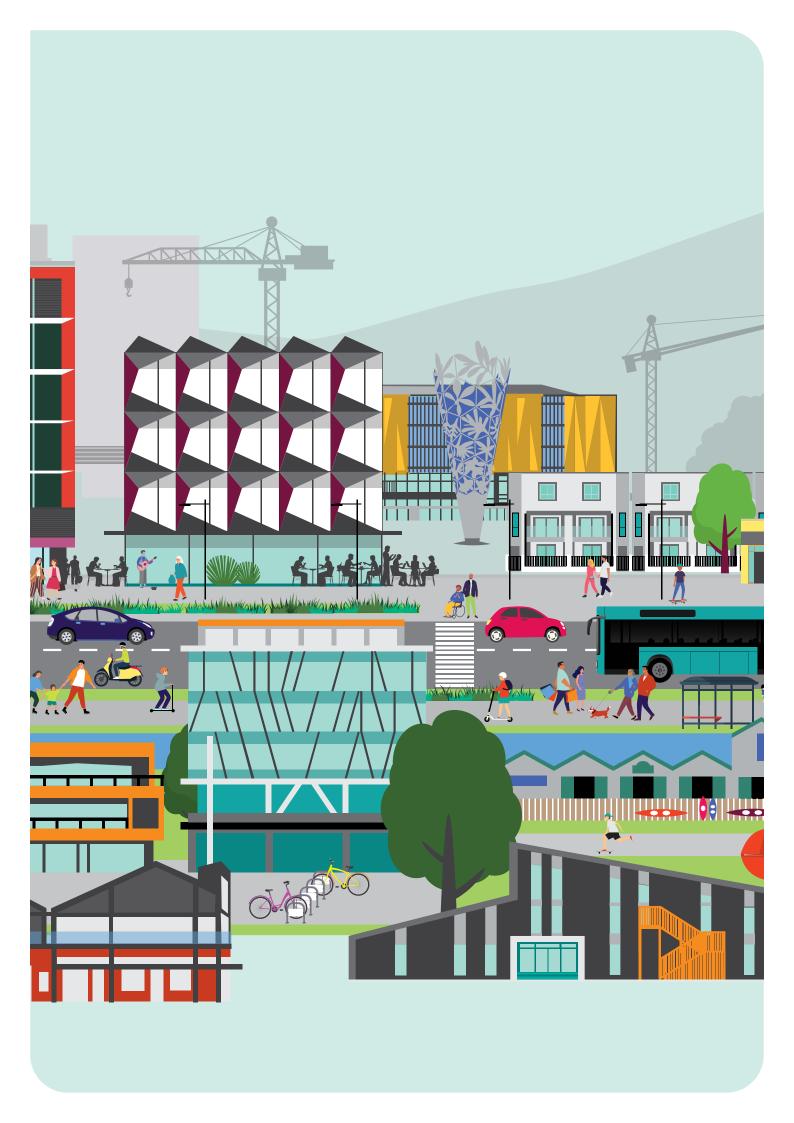


Reducing deaths and serious injuries on the transport network



#### **Cost pressures**

Getting the balance right between maintaining our assets and making the improvements needed to manage risk and support sustainable growth



## **Transport strategy goals**

To achieve our vision, we need a mix of continuous improvement and transformational changes. The following transport goals will guide our actions:

#### **GOAL 1**

#### Well managed transport assets

Look after what we've got, maximise whole of life value and adopt innovative approaches to improve value-formoney and set up our transport asset base to meet future challenges

#### GOAL 2

#### A more resilient transport network

Create a resilient transport network which is able to react and adapt to natural hazards

#### GOAL 3

#### A safer transport network

Build and maintain safer infrastructure to ensure that everyone gets where they're going safely, regardless of how they are travelling

#### **GOAL 4**

#### A more efficient transport network

Enhance productivity, economic growth and essential travel through free flowing and efficient movement; explore more proactive demand management options as our population grows

#### **GOAL 5**

#### **Genuine transport choices** for everyone

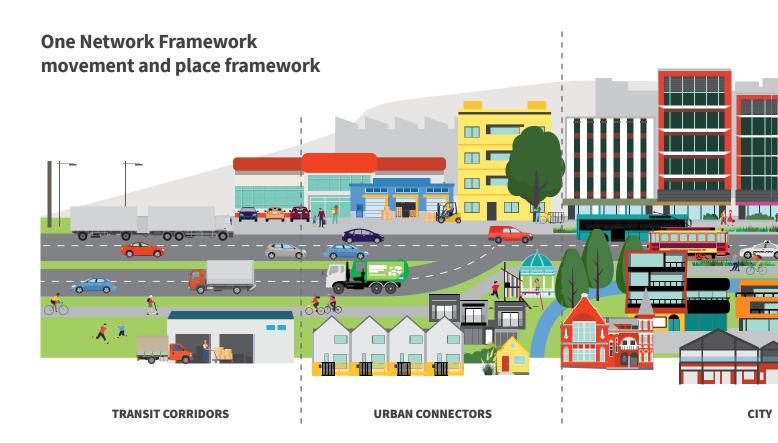
Improve alternative options to reduce transport emissions, increase road network efficiency and enable inclusive access for all transport users as our city grows

#### **GOAL 6**

#### A vibrant, healthy and liveable city

Continue to make our city a great place to live, work and visit through creating streets and neighbourhoods designed for people, businesses and communities

These goals are connected and support each other, as detailed in the following sections of this strategy.



## **Overarching goals**

The strategy has three overarching goals: equitable and inclusive access, improved transport network productivity and the right movement in the right places.

## **Equitable and inclusive access**

We want a transport system that priotitises people, ensuring everyone has access to the activities critical to their daily needs, regardless of age, ability or financial means. Our inclusive transport design approach puts the user at the forefront, addressing the needs and functions of diverse users. We pay particular attention to people with disabilities, seniors, and children to promote equity and provide the necessary support where it's most needed. Realising this goal involves the following considerations:

- Equity in infrastructure investment: making sure that underserved areas, such as lower-income communities or regions with limited transport options, receive appropriate funding and development.
- Accessibility for all: ensuring transport systems cater to people with disabilities, older adults, and those who rely on walking, cycling, or public transport.
- Affordable and reliable options: providing cost-effective and dependable transport choices so that people who don't own a car can still move around easily.
- Reducing barriers: addressing factors that make transport harder for some groups, such as unsafe walking routes, lack of cycleways, or poor public transport connections.



#### Improved transport network productivity

Our transport network is an important contributor to economic growth and productivity. It achieves this primarily by facilitating the efficient movement of people and goods. Continuing to enable free flowing movement on the network will become increasingly important as our population grows. The way we manage our transport network assets also contributes to network productivity through ensuring optimal performance and longevity.

#### The right movement in the right places

Enabling the right movement in the right places is a core principle that informs all our transport goals. The Council uses the One Network Framework (ONF) (nzta.govt.nz/ one-network-framework/), a national transport planning framework, to manage the transport network and to ensure that the transport network contributes to the liveability and productivity of our city.

The ONF recognises that streets and roads serve not only as routes for moving people and goods but are also spaces for living, working, and enjoying life. It categorises roads into different types such as transit corridors, rural roads, main streets, city hubs, civic spaces, and local streets – each designed for specific travel movements and community uses.

The ONF is multi-modal – encompassing private vehicles, freight, walking, cycling, and public transport networks. It considers how the transport network works now and how it needs to work in the future and help guide the right investment in the right place.

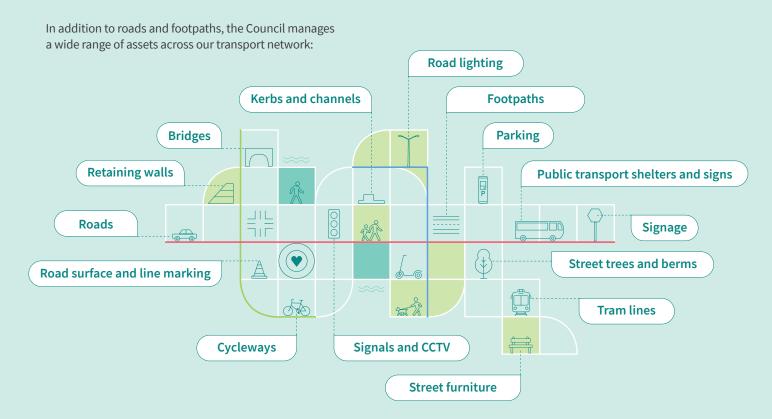
The following sections outline Transport Goals 1-6 in more detail.

## Goal 1

## Well managed transport assets



The Council owns and maintains 4,544 urban and rural roads, spanning more than 2,086 kilometres.<sup>25</sup> Improving the condition of our roads and footpaths is a priority for our residents, and enhancing community satisfaction in this area is a priority for the Council.



The Council aims to renew 5% of the road network surface each year, ensuring 100% renewal occurs long before the 30-year horizon of this strategy. Managing our transport network assets efficiently and effectively is the backbone of the Council's transport programme. If we do it well it will result in an accessible, resilient, safe and efficient transport network. This will enable us to get better value from our investments in the transport network over time and enhance productivity.

**This section** describes our approach to improving how we look after what we've got through:

- 1. More effective whole-of-life management
- 2. Cost-effective and innovative maintenance solutions

The next section, Goal 2 - A Resilient Transport Network, outlines a specific asset management challenge over the next 30 years and beyond.

### More effective whole-of-life management

We take a data-driven approach to managing our transport infrastructure assets. This involves collecting and analyising data on the age, condition, and performance of our assets to shape our renewal programmes. Understanding our infrastructure needs, and continuously improving our data collection and modelling methods is a strategic priority.

We focus on whole-of-life asset costs – considering how we operate, maintain, and dispose of assets in a cost-effective and timely way. We aim to renew assets at the optimal point in their life cycle, prioritising critical assets like arterial roads over less critical ones like cul-de-sacs.26

Continuous improvement of our processes, data, and tools is central to our strategy. We also consider community views and preferences. This helps us focus our priorities and identify critical needs in a cost-constrained environment, enabling us to shift towards proactive asset management rather than costly reactive management.

#### Cost-effective and innovative maintenance solutions

We are increasingly using innovative technologies, management approaches, and materials to save money, extend the life of transport assets, reduce emissions, and improve network efficiency and resilience. Recent examples from our maintenance and renewals programme include:

#### **Stamped concrete**

Replacing brick pavers with stamped concrete in heavy load areas to significantly increase strength and reduce maintenance.

#### Single coat chipseal re-surfacing

Using a mixed grade chipseal approach to extend the lifecycle of roads, reduce resurfacing costs, and allocate resources more efficiently.

#### Streetlighting

Converting our streetlight stock to LED lights has reduced whole-of-life costs and when completed will result in a 71% saving in energy costs and CO<sup>2</sup> emissions reduction of an estimated 1,489 tonnes.

#### Multi-speed and laser-measured deflectometer (MSD & LMD)

Christchurch has pioneered the use of the MSD & LMD in New Zealand, swiftly gathering pavement deflection data to inform

proactive road maintenance and renewals. This technology integrates data, artificial intelligence (AI) and on-board cameras and enables us to make our budgets go further by addressing failures before they escalate.

We will continue to innovate and explore new technologies, materials, and approaches as a core part of our maintenance programme, measuring and reporting on the benefits.



Chip sealing

## Goal 2

## A more resilient transport network

Transport infrastructure, including roads, bridges, bus lanes, and bus shelters, plays a vital role in our built environment. It provides essential and lifeline access for communities across our district.

A well-planned and highly functional transport network enhances community resilience, enabling people to better cope with and adapt to adverse events and changes. Our streets and roads can also mitigate the effects of extreme weather, for instance, by slowing and diverting stormwater runoff.

As we have experienced, the damage from large earthquake events can severely impact the functioning of our critical infrastructure. We are still managing ongoing repair work from the 2010-2011 Canterbury Earthquake sequence, and completing this work remains a priority. Earthquakes and tsunamis are critical risks that we must continue to plan for.

Extreme weather events are also increasingly impacting the transport network, leading to service disruptions and unplanned spending to maintain infrastructure. Climate hazards will continue to affect the transport network's condition and accessibility. This will require us to plan with affected rūnanga and communities for reduced service levels, such as, temporary road closures, changes to road surfaces or less usable road space in some at-risk areas over the next 30 years and beyond.27

#### Our strategy for creating a more resilient transport network involves:

- Building resilience into transport network assets
- Developing our transport network climate adaptation approach and plans

#### **Completing the Pages Road bridge** renewal project

This project is the Council's highest transport resilience priority and we are working with the Government to fund it. The bridge is crucial for emergency egress and access to the coastal suburb of New Brighton in the event of a natural disaster, such as a tsunami from the Hikurangi Subduction Zone. It also carries lifeline infrastructure and services, including wastewater, water supply, power, and telecommunications over the Ōtākaro-Avon River.

During the 2011 Christchurch earthquakes, Pages Road bridge suffered significant damage and is currently classified as earthquake-prone, operating at 15%-20% of the New Building Standard. Replacing the bridge and ancillary works will improve resilience to earthquakes, floods, tsunamis, and rising sea levels. The proposed redesign focuses on improving transport connectivity between New Brighton and the city, alongside enhancing emergency egress and the reliability of lifeline infrastructure.



An artist's impression of the new Pages Road bridge

## **Building resilience into transport** network assets

Creating a more resilient transport network requires us to constantly enhance our understanding of projected risks and impacts.

Following the 2010-11 Canterbury Earthquake sequence, a considerable amount of work has been done to build earthquake resilience into everything we do. For example, seismic risk infrastructure assessments have been conducted on key roads, bridges, and tunnels to identify those most vulnerable to damage from major earthquakes. This enables the prioritisation of work to enhance their resilience.

The increased occurrence of extreme weather events has also accelerated the deterioration and premature failure of retaining walls and slopes adjacent to road corridors. These failures can cause road closures, access and traffic disruptions, and property damage.

We're focused on understanding these risk areas and embedding that knowledge into our maintenance and renewals programme. For instance, we're investigating better water-resistant materials for road renewals to protect critical parts of the transport network from flooding during storms or tidal events. We're also incorporating rain gardens and swales to manage water flow and quality.

Our ability to identify and understand at-risk areas is improving all the time. In particular, our climate risk screening tools are constantly being improved and updated. The Council has also installed a network of 160 seismic sensors to provide real-time shaking data. This system enables a clear and rapid understanding of where damage is likely to have occurred, allowing engineers to prioritise inspections and assessments efficiently after an earthquake.

We aim to adopt a more proactive approach to managing natural hazard risks and identifying the ways that we might adapt our transport assets to be more resilient. Developing a transport system that is both climate resilient and equitable and ensuring that historically underserved communities receive targeted investment and support are key implementation considerations.

## **Developing our transport network** climate adaptation approach and plan

Communities across Ōtautahi-Christchurch and Te Pātaka-o-Rākaihautū Banks Peninsula will be affected by climate change in various ways. Banks Peninsula, with its coastal extent and hilly terrain, is particularly vulnerable to climate risk. Climate adaptation is also a pressing concern for Papatipu Rūnanga across our district.

Transport network assets will be impacted by specific climate hazard risks, including:

- Flooding, extreme rainfall events, landslides, and soil erosion affecting roads and bridges, public transport systems, rail infrastructure, marine facilities, and ports.
- Rising groundwater in low-lying areas degrading roads and bridges.
- Coastal erosion damaging coastal barriers, roads, and bridges.
- High wind events damaging above-ground assets such as street lighting poles, trees, and other overhead utilities.

#### Main climate hazards to plan for<sup>28</sup>



Soil erosion, landslides, extreme rainfall, and flash flooding pose the highest risks.



Coastal hazards, including coastal flooding, coastal erosion and rising groundwater will increase risks as sea-levels rise, but soil erosion, landslides, rainfall, and flash flooding risks also remain high.

#### Climate hazard risk profile for Christchurch city and Banks Peninsula

#### **Inland Christchurch**

- Increase rainfall and flash flooding
- Hail

#### **Port Hills**

- Soil erosion and landslides
- Hail



#### **Inland Banks Peninsula**

- Extreme rainfall and flash flooding
- River flooding
- Hail
- Soil erosion and landslides

#### **Coastal Banks Peninsula**

- Coastal flooding and tidal shifts, more frequent storm surges reaching further inland
- Sea level rise and rising groundwater
- Tsunami
- Coastal erosion
- · Extreme rainfall and flash flooding, high winds and hail

#### Akaroa

- Coastal flooding and tidal shifts, more frequent storm surges reaching further inland
- Sea level rise and rising groundwater
- Tsunami
- Coastal erosion
- Extreme rainfall and flash flooding, high winds and hail
- Soil erosion and landslides

Climate adaptation has significant cost implications. As noted earlier, \$3.2 billion of our horizontal infrastructure is at risk from climate hazards in a 20cm sea level rise scenario. Our initial priority is to better understand risks, planning ahead to minimise long-term costs.

While we need to plan for an increasingly resilient transport network, we also need to consider and communicate the compromises we may need to make. The Council has started a phased programme of coastal hazards adaptation planning (ccc.govt.nz/our-coastal-hazards-adaptation-planningprogramme) with affected rūnanga and communities. Outcomes from this planning will include recommendations

from rūnanga and the community with options for adapting low-lying and coastal transportation networks and systems.

This is just the beginning – adaptation planning for all climate risks across our district and for the transport network will be phased and costed over time. Access may look very different for some communities in the future. We will need to assess and adjust our levels of service in some at-risk parts of the network. This will be a significant and ongoing programme of work over the life of this strategy.

## Goal 3

## A safer transport network

Improving safety for all transport users is a high priority for the Council. We want everyone to get where they are going safely, regardless of how they are travelling – every time. We also want people to feel safe while using our streets.

The Council has a road safety target of a 40% reduction in deaths and serious injuries (DSIs) by 2030, from a 2018 baseline. Since 2012, DSIs on our network have decreased by 14%, which is encouraging, but there is still much work to do to meet our target.

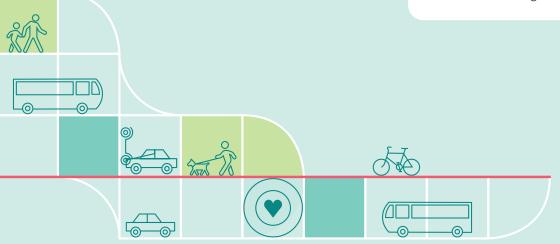
To maintain this positive trend, we will focus our road safety programme on areas with the highest risk of harm and deliver infrastructure improvements that provide the most impactful safety outcomes. Strong and effective partnerships with other road safety agencies, particularly in enforcement, are also crucial to achieving our goal of reducing harm on our roads.

**This section** describes how we will continue to prioritise, deliver and improve our road safety programme through:

- Focusing on high-risk areas
- Implementing and maintaining safe infrastructure
- Collaborating with road safety partners

While the scope of Goal 3 is focused on reducing deaths and serious injuries, health, safety and wellbeing outcomes are also features of other Goals in this strategy. This includes:

- Goal 5 Genuine transport choices for everyone and its focus on building a safer, more connected environment for walking, cycling and micro-mobility and safe school travel; and
- Goal 6 A vibrant, healthy and liveable city and its focus on enhancing our streets and neighbourhoods.



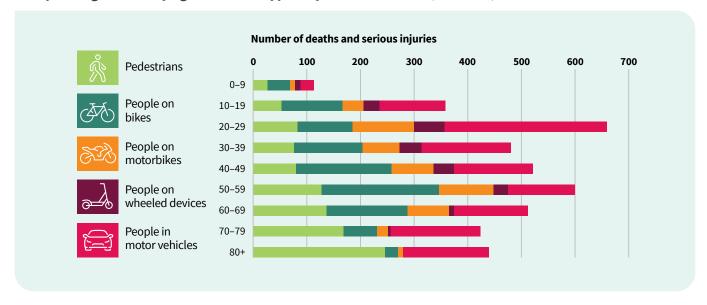
## Focusing on high risk areas

The Council uses crash and accident data from NZ Transport Agency – Waka Kotahi and the Ministry of Health – Manatū Hauora to identify where accidents occur, the types of transport involved, and the affected individuals. Feedback from communities and schools also informs our road safety priorities.

For example, around half of the crashes in Christchurch occur at intersections.<sup>29</sup> We also know that different age groups are at higher risk of harm using different types of travel.

We will continue to take a data-led approach to identify highrisk areas and user groups, with a specific focus on ensuring safe and inclusive access for vulnerable road users, such as school children, those with disabilities and older people.

#### Groups being harmed by age and travel type July 2017–June 2023 (MoH data)



### Implementing and maintaining safe infrastructure

We adopt a safe system approach across the transport network, acknowledging that people make mistakes but those mistakes should not result in loss of life or serious injuries. Speed is a critical factor in determining the outcome of crashes.

Well-designed transport infrastructure, coupled with safe and appropriate speeds, can reduce both the number and severity of crashes. By designing for safety and actively monitoring crash locations, we can make targeted engineering improvements to make our streets safer. Our maintenance and renewals programmes also contribute by addressing footpath quality and wider safety issues as they arise.

We will continue to take an evidence-based approach to identifying the most effective safety solutions for parts of the transport network identified as high-risk. And, we will consult with our communities and road safety partners on proposed solutions.

## **Collaborating with** road safety partners

We work with New Zealand Police, NZ Transport Agency -Waka Kotahi, and others on programmes to promote safer choices on our roads. These include road safety education campaigns, initiatives with schools to reach new drivers, and motorcycling safety programmes. Together, we develop a Road Safety Action Plan (ccc.govt.nz/road-safety) to monitor and respond to emerging road safety issues and risks.

We also plan to collaborate with New Zealand Police and NZ Transport Agency – Waka Kotahi to increase the number of safety cameras across the city.<sup>30</sup> Automated enforcement is expected to reduce speeding and red-light running, key factors in serious crashes, and free up police resources for other priority areas.

#### **Examples of safer infrastructure upgrades include:**



The Clyde Road / Ilam Road roundabout



A pedestrian crossing on a safe speed platform, outside He Tīwai Mātauranga Heaton Normal Intermediate School on Heaton Street

## Goal 4

## An efficient transport network

Balancing different types of movement on our transport network is crucial for its efficient functioning. Journey time reliability is particularly important for economic and other priority activities, such as public transport and emergency services.

Managing congestion will become increasingly challenging over the next 30 years as our population and that of neighbouring districts grow. This will likely require more proactive demand management approaches and working with Government levers that are enabled over time.

Our strategy to create greater efficiencies on the network as we grow is two-fold:

- Enabling economic and other priority activities
- Developing proactive network management approaches

The next section, Goal 5 - Genuine Transport choice for everyone, also aims to improve network efficiency. For instance, good alternative travel choices are a particularly important part of our strategy for managing commuter and school pick-up peaks.

## **Enabling economic productivity and other priority activities**

Journey time reliability is vital for the smooth running of freight, public transport, and essential activities such as emergency services. Enabling these functions, in collaboration with our partners, is a priority.

#### Work with our partners to prioritise regional freight routes

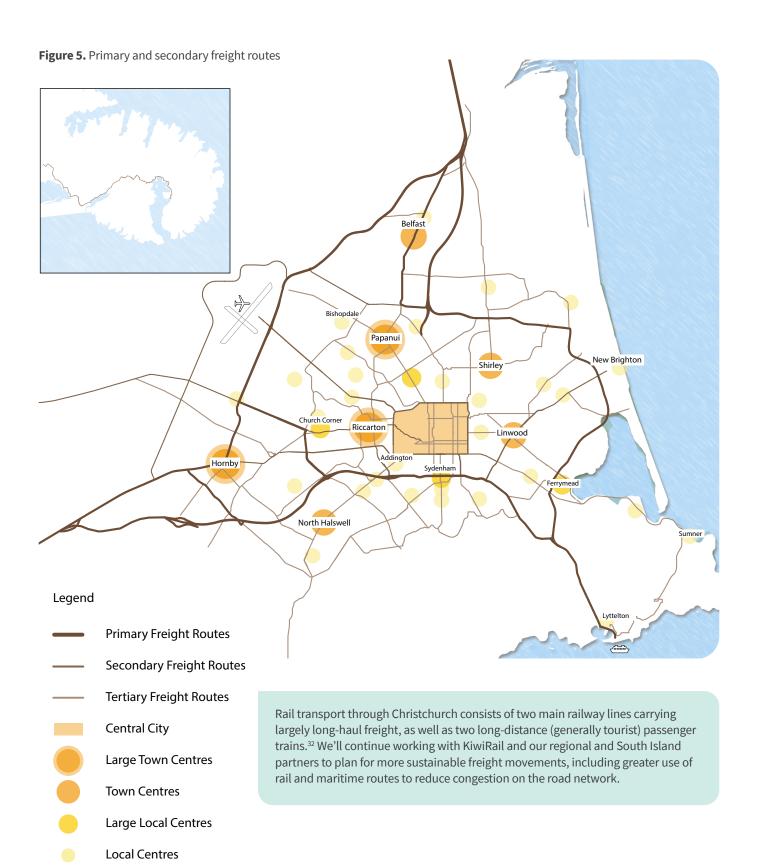
Regional freight involves long-distance movement between regions, inland ports, the seaport, the airport, and through metropolitan areas, mostly on the State Highway network managed by NZ Transport Agency – Waka Kotahi. With Lyttelton Port and Christchurch International Airport as key South Island freight destinations, maintaining good freight links to the inland port in Rolleston and the wider regional network is essential.

The primary and secondary freight routes across the city and Banks Peninsula are shown in Figure 5 on the next page. These routes are also a key consideration for civil defence and emergency management resilience planning and operations.

Brougham Street (State Highway 76 controlled by NZ Transport Agency – Waka Kotahi) is one of our most important regional freight routes with about 2,500 heavy vehicles and 36,000

light vehicle movements per day.31 It's also one of our most congested roads. The Council is working with the NZ Transport Agency – Waka Kotahi on planned improvements to the Brougham Street corridor.

On primary routes we will continue to explore, with our partners, the prioritisation of freight through interventions such as managed lanes and transport programmes of wider benefit to the city. For instance, NZ Transport Agency -Waka Kotahi is developing a programme of improvements to the state highway network through Hornby and the airport surrounds to manage growth and increased freight movements



#### Prioritising urban freight, public transport, and emergency services movement

A city relies on delivery vehicles, tradespeople, and emergency services moving efficiently. More reliable travel times also encourages more people to use public transport. Traffic congestion affects how well these work.

The Council has a range of tools to prioritise movement on the transport network, including corridor and priority lane design, signal prioritisation, and parking management. Goal 5 -**Genuine Transport Choice for Everyone** also aim to improve road use efficiency through mode shift.

#### How we're prioritising economic and essential movement on the local network

Local freight	Public transport	Emergency vehicles
Mode shift Parking policies – provision of loading	Priority lanes Parking enforcement	Mode shift To explore: the role of traffic signals and priority road
zones for freight	Priority traffic signals	allocation options for emergency services

Urban freight, such as last-mile goods and hospitality deliveries, represents a significant volume of vehicles on our roads, and are likely to increase with population growth. Trends in managing urban freight logistics in more densely developed cities include logistics hubs and low-emission options like e-cargo bikes.33

Another way urban freight could develop is through emerging non-vehicle technologies. For instance, trials around the world have been undertaken using drones and wheeled robots for urban deliveries. We need to be responsive to this change while ensuring any risks (such as, noise or pedestrian safety) are managed.

We plan to engage more with industry to better understand how emerging technologies and freight logistics are evolving and determine what the Council's role could be to enable greater economic efficiencies on the local transport network.

## **Proactive network management**

If growth continues at current rates and travel patterns don't change, congestion will increasingly become a serious issue. As noted earlier, the total amount of vehicle travel within Greater Christchurch is forecast to increase by 30% by 2038.

Our technology for monitoring network movement in real-time is becoming more refined. We plan to better integrate growth triggers (such as housing and population growth) with network movement monitoring. This will enable us to understand how growth affects the transport network and allow us to manage it more effectively.

#### Investigating pricing tools to manage travel demand

Transport pricing tools can motivate people to travel in different ways and at different times, helping to balance demand. Implementing pricing changes alongside improvements to public and active transport can support quality alternative travel choices. Revenue from these schemes is often reinvested in transport developments or services.<sup>34</sup>

We will monitor national developments when initiated by central government, collaborate with our Greater Christchurch partners, and engage closely with our communities to implement any changes in this area.

## Goal 5

## **Genuine transport choices** for everyone



Improving the quality of alternative low-emission transport options on our transport network is one of the most important actions we can take over the next 30 years.

This will help reduce transport emissions, manage congestion as we grow, and enable inclusive access for all transport users. Public and active transport networks are also city-shaping investments. Getting them right can enhance residents' well-being and be a major selling point for the city.

#### How are getting around now?



Currently, we are highly dependent on private vehicles.

Neighbouring districts also generate significant vehicle movements into and out of Christchurch.<sup>37</sup>

On average:

of trips taken in Ōtautahi Christchurch are by private vehicle.35

**65%** 

of primary school children are driven to school.35

of non-Christchurch residents who work in the city travel to work by car. 37



of commuters cycle to work.39



of commuters walk to work.39 **4%** of residents take the bus



This is significantly lower than in other New Zealand cities. Of the 2 million trips a day on our transport network, just 23,000 are on public transport.39



Between 2017-2025 the proportion of zeroemission electric vehicles went from 0.16% of the fleet to 2.65%.38

Many people and communities across our district have limited transport options. 7% of households in Christchurch have no car,40 13% of adults do not hold a driver's licence, 41 and 36% of people don't live within 400 metres of a bus stop on a frequent-service route.

Residents have expressed a desire for more frequent, reliable, and direct public transport to reduce car usage.36

Our strategy for improving access to genuine transport choices for everyone is:

- Significantly improve our public transport system
- Continue to build a safer, more connected, and attractive network for walking, cycling and other micromobility
- Support residents and schools to try new ways of travelling
- Enable the transition to low emissions vehicles

## Significantly improve our public transport system

Great public transport systems shape and connect cities. One barrier to using public transport in Christchurch is its reduced efficiency and competitiveness compared with other ways of travelling. For public transport to be a genuine alternative to car travel, it must be more appealing and convenient.

We're working with our Greater Christchurch partners to plan for future growth in the city and across the sub-region. This includes transforming our public transport system over the next 30 years. Different organisations have different roles within our district, we deliver public transport infrastructure, while our partners at Environment Canterbury deliver contracted public transport services.

Our integrated programme includes the **Public Transport** Futures (greaterchristchurch.org.nz/public-transport**futures**) programme and planning for future growth with the Mass Rapid Transit (greaterchristchurch.org.nz/ urbangrowthprogramme/transport) project.

#### **Public Transport Futures**

This investment programme aims to reduce travel times, increase reliability, and achieve a threefold increase in patronage by 2048 across Greater Christchurch. The programme includes more high-frequency services, supporting infrastructure, and new connections, including improved links with Selwyn and Waimakariri. Implementation has begun with the implementation of the Route 8 service uplift which includes higher frequency bus services to Christchurch International Airport from the central city, with plans to complete the programme over the next 10 years.

#### **Mass Rapid Transit**

This proposed 'turn up and go' rapid transit service would run along a city spine from Hornby to Belfast, via the central city. It will increase central city accessibility and incentivise more intensive urban development along the corridor. This project builds on the goal of increasing patronage from the Public Transport Futures programme. The next stage of the MRT project includes commencing route protection for the corridor.

You can find more detailed information about the Greater Christchurch shared public transport programme and business cases in the Canterbury Regional Public Transport Plan (ecan.govt.nz/canterbury-transport-plans/) and the Greater Christchurch Partnership transport programme (greaterchristchurch.org.nz/).

#### Our role: Enhancing public transport infrastructure

We play a key role in improving public transport infrastructure. Our core bus routes need to be designed to accommodate high-frequency, high-quality services through areas with high pedestrian numbers connecting key employment, education and economic centres and recreational activities.

Buses need priority to ensure reliability isn't compromised by traffic congestion. Our programme includes several components. We'll have on-road infrastructure (such as dedicated lanes) to prioritise buses in high-congestion areas. There will be signal pre-emption at intersections and enforcement to keep dedicated lanes clear at peak times. Additionally, there will be better real-time information for customers, bus stop enhancements, and infrastructure to improve the experience of bus users who walk or scooter to catch the bus.

Improving the accessibility of public transport infrastructure is a priority. For example, on-demand text-to-speech devices are being installed at bus stops to communicate bus routes and arrival times to blind and low-vision passengers. These are installed in accessible locations and at accessible heights.





## Continue to build a safer, more connected, and attractive network for walking, cycling and other micromobility

#### Safe and connected walking environments

We want walking to be a safe and attractive option for short trips. Poor footpath condition presents trip hazards, especially for children walking or scooting to and from school, the elderly, and those with disabilities or mobility impairments. Improving footpath condition and safety is a priority.

One of our areas of focus will be ensuring that new housing developments have adequate footpath connections with amenities on the wider network.

Designing walkable catchments<sup>42</sup> around local and commercial centres promotes walking. Slower speeds, attractive and green streets, safe pedestrian crossing infrastructure, and places to sit and rest all incentivise walking. The priorities outlined in Goal 6 - A Vibrant, Healthy, and Liveable City explore this direction in more detail.

While outside the scope of this strategy, there are also many recreational walking paths and tracks throughout the district, managed by the Council's Parks Team. These can be found on the online Walking Track Map (ccc.govt.nz/walking-trackmap).

#### Developing and expanding our dedicated cycle network

We want to make cycling an easy and safe choice, particularly for trips of less than five kilometres. Our residents have indicated support for more innovative, quick-to-build, and lower-cost infrastructure as we continue to design our dedicated cycle network. These treatments will be considered in the next phases of development.

By the end of 2022, 549 kilometres of cycle connections were completed across Christchurch, including 342 kilometres of cycle lanes, 20 kilometres of dedicated cycle paths, and 207 kilometres of shared paths. 43 With an increase in cycling infrastructure, we are seeing an increase in cycling. Our network of electronic counters have recorded strong growth as the cycleways network has been rolled out, with a 40% growth in cyclists between June 2017 and June 2023.44 From an emissions reduction perspective, completing the major cycleways network is projected to result in around 14,000 fewer vehicle trips each day.45

We're working to complete the last third of the major cycleway network and then plan to focus more on building local connections. Work on local cycleway routes will continue to connect our major cycleway routes, centres, schools, community facilities, and public spaces. As we continue to develop our cycle network we'll also look to prioritise connections to underserved areas and fill network gaps, in areas of the city such as, eastern Christchurch.

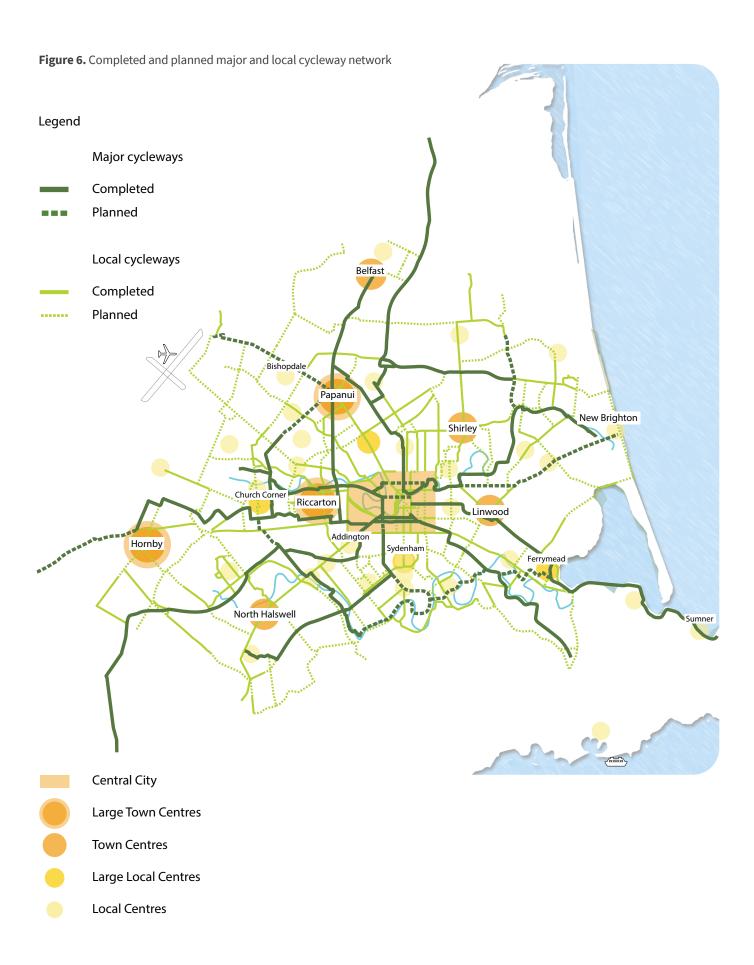
#### Safe and equitable access to micromobility

Shared service micromobility trips have steadily increased in recent years. As of July 2024, people have made 4.9 million shared service scooter and e-bike trips, travelling 8.1 million kilometres on our transport network.<sup>46</sup> These services provide a quick, convenient way for people to get around, helping to increase the share of active travel. Building on the success of micromobility, we plan to continue working with shared service micromobility operators to increase ridership.

Part of our focus will be on growing equitable access to micromobility. Our shared micromobility operators already have equity programmes offering discounts to qualifying riders based on certain criteria. We're interested in supporting these programmes and developing others to improve access to affordable micromobility options.

Developing our cycle network will also improve safety for all other micromobility users and make it easier for more people, including those on mobility trikes, to get around. This will also help free up footpaths for pedestrians.

We aim to balance increasing ridership with keeping footpaths clear of too many parked micromobility devices. Dedicated parking zones or corrals are emerging as a solution to reduce clutter and ensure devices are available where people expect them. We'll continue to investigate these approaches.



## Support residents and schools to try new ways of travelling

Travel planning can influence travel decisions, reduce congestion, and result in measurable transport emission reductions.

As we strive to meet our emissions targets, plan for a growing population and prioritise the efficient use of our transport network we'll continue to develop proactive travel demand management approaches across our transport network.

#### **Building awareness and understanding about** active, public and shared travel options

Safe and attractive transport infrastructure and services encourage people to walk, cycle, and use public transport. Investment in transport infrastructure needs to be supported through education and promotion campaigns to encourage active and shared travel.

Proactive travel planning services and initiatives help inform people about their travel options and the effects of their choices. We're focused on delivering district-wide, ongoing information and education initiatives to support greater uptake of active and public transport options.

#### **Support new transport services and infrastructure**

To support the introduction of new services and infrastructure, we work closely with our Greater Christchurch partners. This includes a programme of initiatives to be implemented alongside infrastructure improvements and major projects. Key initiatives include: travel planning services for workplaces, communities, and schools; personalised journey planning; and safe cycle training for children and adults.

#### How children get to and from school significantly affects our transport network

We're continuing to support schools to create their own travel plans and encourage active travel.

School travel plans are a practical approach to improving road safety and encouraging the whole school community to use active modes of transport. These plans can be adapted by the school to address relevant concerns as they emerge.



#### **Enable the transition to zero-emission vehicles**

Transitioning the national vehicle fleet from fossil fuels to zeroemission technology is a crucial part of achieving our transport emissions reduction targets. Even with shifts from private vehicles to walking, cycling, and public transport, most trips in Christchurch and Banks Peninsula are expected to be by car, and our transport planning needs to account for this.47

The uptake of zero-emission vehicles will be primarily influenced by industry developments, consumer preferences, and central government policies, including incentives, targets, and fossil fuel pricing.<sup>48</sup> At the local government level, we can contribute through procurement processes and by supporting and enabling infrastructure and services and that of other network utility providers where appropriate. For example, Environment Canterbury is transitioning the city's bus fleet to zero-emission,<sup>49</sup> and the Council uses, supports, and encourages zero-emission car share schemes.

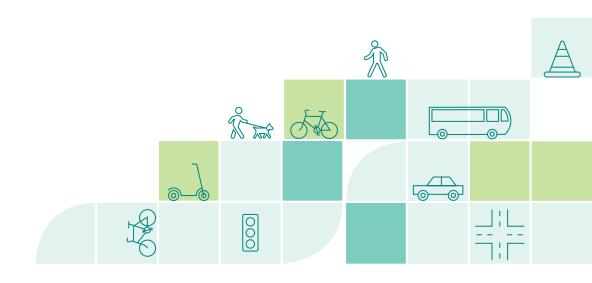
Electric vehicle (EV) charging infrastructure has been installed at some Council properties, with more planned. With a heightened focus on implementing EV charging infrastructure nationally, in the short-term the Council is scheduled to review its EV and Carshare Policies to ensure they are fit-for-purpose in a rapidly evolving area.

#### Monitoring developments in technology, infrastructure, and services

Vehicle technologies will continue to evolve over the next 30 years, and we can anticipate significant change during this period. While light vehicle fleets are largely transitioning to battery electric technology, the heavy freight and aviation sectors are exploring different fuels and propulsion methods, such as hydrogen fuel cells and biofuels.

Changing vehicle formats (such as delivery drones, wheeled robots, and autonomous vehicles) and different ownership and usage models (such as mobility as a service and the evolving role of shared mobility schemes) are also becoming increasingly important, particularly in support of more intensive urban environments.50

We will continue to monitor broader technological developments and remain open to enabling opportunities for our city in a rapidly evolving transport sector. These advancements could play a crucial role in decarbonising transport and supporting local industry.



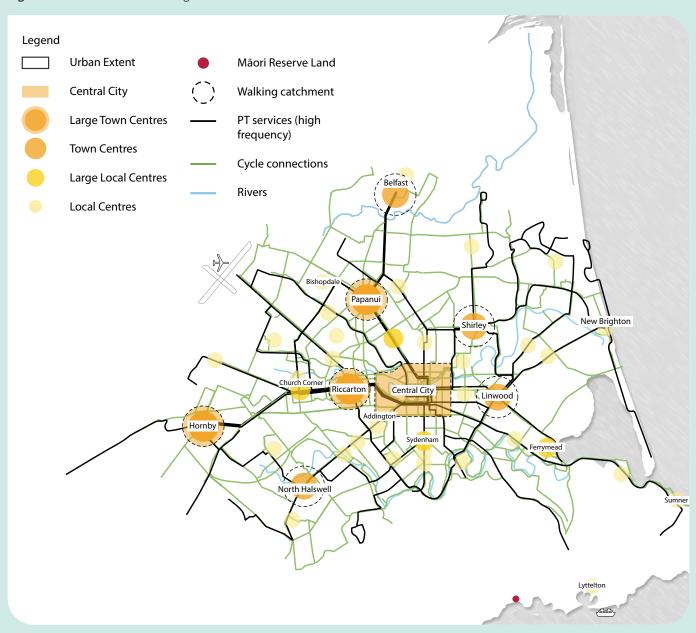
# Goal 6

## A vibrant, healthy and liveable city

Our transport network plays an integral role in supporting and shaping our future urban form. As our urban population grows and competition for street space increases, a well-planned transport network is crucial for city development.

The urban form of Ōtautahi Christchurch comprises the central city – the heart – and local centres linked to this heart and to each other.

Figure 7. Ōtautahi Christchurch high-level urban form



Over the past decade, there's been an increasing focus on designing and building better streets and neighbourhoods for people. Notably, in the central city, we have implemented slower speeds and shared spaces, resulting in a safer, more vibrant, and attractive city centre.

We will continue this approach as our population grows to ensure we create urban environments that enhance our city's reputation as a great place to live, work and play and to create a more climate-resilient urban form.

Previous sections of this strategy have described our approach to developing networks that support and prioritise movement on our transport network. The actions in this goal focus on the role streets have in shaping our urban environment, and what we need to keep working on as we grow. This includes:

- Continue to prioritise the central city
- Planning for growth along core public transport corridors
- Enhancing our streets and neighbourhoods as our city becomes more intensively developed

### Continue to prioritise the central city

Christchurch's central city is the primary economic hub for our city and the wider Canterbury region. The post-earthquake Christchurch Central Recovery Plan<sup>51</sup> has guided recent public and private investment. Anchor projects, aimed at attracting people to the central city, have supported private investment in workplaces, retail, and hospitality. The Recovery Plan also encourages residential development, with the aim of growing the population to in the central city to 20,000 people during this decade.

The transport section of the Christchurch Central Recovery Plan, An Accessible City, has guided the upgrade of the central city transport network. Retaining the existing street grid pattern, it balances streets as movement corridors and places for people – facilitating convenient access via various modes and helping to establish vibrant urban spaces that attract people and new business investment. Work is ongoing, and implementation to date means our central city is now more accessible for pedestrians, cyclists, and micromobility.

We are focused on completing planned transport projects around the remaining central city anchor projects.



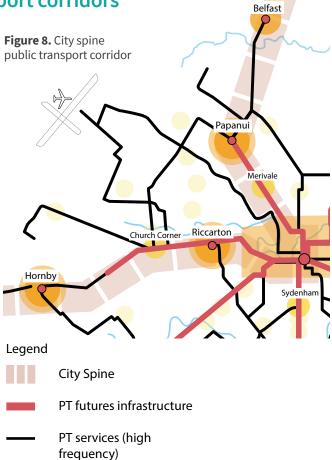
Te Kaha Surrounding Streets design illustration

## Plan for growth along core public transport corridors

Over the next 30 years, we can anticipate significant intensification around key activity centres and along core public transport corridors. As detailed in Goal 5, the Council and its Greater Christchurch partners have signalled the city spine MRT public transport corridor as a priority. Route protection is the next step for this project ahead of developing a more detailed business case.

The larger centres along the corridor, Papanui, Riccarton, and Hornby (along with the central city), have also been identified as Priority Development Areas (PDAs) in the Greater Christchurch Spatial Plan. PDAs are defined as areas where there is potential to accelerate the growth of a sustainable, compact urban form.

To support good future growth, the Council is about to initiate longer-term transport planning along the corridor and in the walkable catchments around these centres through its Local Area Planning programme.



## **Enhance our streets and neighbourhoods** as our city becomes more intensively developed

We want local streets and neighbourhoods to be safe, vibrant, and welcoming places. In more intensively developed urban environments, street space becomes much more of a shared and actively utilised space. As urban density expands over the next 30 years, we will need to design and manage our street space in different ways.

#### Enable liveable and more climate-resilient neighbourhoods as we grow

Neighbourhood design can contribute to creating a more liveable, climate-resilient urban form. From a transport planning perspective, this can include creating safe, inviting walking and cycling environments, as well as shared green spaces. It can also involve directing vehicle flow around areas with high local activity instead of through them and incentivising low-emissions transport. Internationally, these sorts of initiatives are often area-based developments, such as Barcelona's Super Blocks.52

Where they have been successful, they are designed with pedestrians in mind, are well serviced by public transport, retain accessibility for business deliveries, and feature a mix of residential and commercial land uses. There needs to be a sufficient density of population and activity, and the greatest benefits occur where areas are undergoing growth and transition.

We're already applying some of these urban design elements to the regeneration of the central city. Creating walkable, climatefriendly neighbourhoods will be an evolving process. The Council will work closely with mana whenua, communities, and developers through our planning programmes. We will build on our existing initiatives, such as safe speeds around schools and supporting walking and cycling, while introducing new measures over time.



#### **Green our streets**

Greening our city offers numerous benefits for human health, ecological biodiversity, and climate change mitigation. It also significantly enhances our urban environments. Connecting through open and green spaces supports the greening of our transport network. As our city grows, we will increasingly rely on trees in public places, including streets, to provide benefits by absorbing and dissipating heat, clean the air, and improve neighbourhood liveability.

The Council treats street trees as core infrastructure, prioritising them similarly to other infrastructure like footpaths, pipes, and cables when planning, designing, and developing transport corridors. Prioritising green infrastructure, such as rain gardens, also enhances resilience during extreme rain events.53

Currently, tree canopy cover in our streets is around 8% (2018/2019) of the total street area. The Council aims to increase this to 15% by 2070, as outlined in the Ōtautahi-Christchurch Urban Forest Plan. Increased planting, focusing on the right types of trees in the right places, will be incorporated into planned projects and renewals. More green corridors along transport routes will link parks, sports and recreation facilities, and open spaces, creating consistent connections throughout the city.

#### Develop a coordinated kerbside and parking management approach for higher urban density areas

The 2020 National Policy Statement on Urban Development (NPS-UD) removed the ability to set car parking minimums for residential developments. Instead, local authorities are encouraged to manage the effects associated with car parking supply and demand through comprehensive parking management plans.54 To date, the Council has not implemented a proactive, comprehensive parking management approach.

The Christchurch Central City and Suburban Parking Policies<sup>55</sup> (ccc.govt.nz/christchurch-parking-policies) guide how we manage paid and time-restricted on-street parking, focusing on high-occupancy locations during peak periods for publicly owned parking spaces. While the Council takes into account private parking provision in our demand management planning, the Council accepts the concept of private property rights.

The effective allocation and management of public parking space plays a crucial role in supporting a vibrant and accessible central city. These policies provide for a demand-driven approach, applying time restrictions and parking meters where parking in public places is in high demand, with exemptions for residents if appropriate. We also allocate more space for people with restricted mobility, motorcycles, bicycles, micromobility, zero-emission vehicles, car share, and park-andride in certain locations.

We are investigating using technology to obtain better baseline parking occupancy data in more intensively developed parts of the city. This will enable us to respond more effectively to residents' concerns and design a comprehensive parking management approach suitable for our city.

## Implementation approach

This strategy will guide investment and work programme prioritisation through the Council's annual and long-term planning processes, shaping the Council's strategic transport investment, planning and policy work programmes.

A detailed implementation plan, along with monitoring and reporting mechanisms, will be developed following the adoption of this strategy.

This section provides an overview of the 10-year supporting strategic transport work programme and discusses key implementation considerations:

- · Action to meet climate change targets
- Funding and investment for implementation
- Engaging with our communities
- Partnerships for implementation
- Improved data management as a cross-cutting implementation theme

### 10-year strategic transport work programme overview

The following provides an overview of the 10-year implementation work programme based on the goals and high-level directions in this strategy.

#### The 10-year programme consists of three different types of programme activities:



#### **Continuous improvement**

Doing the basics better, enhancing our transport network assets to achieve better value for money and improved safety, resilience, productivity and efficiency outcomes.



#### **Strategic foundations**

Delivering the strategic transport programmes that will underpin our growth, resilience and climate change response.



#### On the horizon

Planning ahead to grow well as a district, manage emerging risks and shape our future delivery pipeline.

	Continuous improvement	Strategic foundations	On the horizon
GOAL 1 Well managed transport assets	More effective whole-of-life management Cost-effective and innovative maintenance solutions		
GOAL 2 A more resilient transport network	Build more resilience into our transport network assets	Deliver the Pages Road bridge renewal project	Develop our transport network climate adaptation response
GOAL 3 A safer transport network	Deliver safe system infrastructure improvements to high-risk areas to reduce harm		
GOAL 4 An efficient transport network	Work with our partners to prioritise the movement of freight, public transport and emergency services*		Monitor developments in urban freight provision
GOAL 5 Genuine transport choices for everyone	Address the quality of road and footpath surfaces, bus and cycle infrastructure, and safety issues Enable safe and equitable access to micromobility	Deliver the Public Transport Futures programme*  Continue to develop and expand the dedicated cycle network and explore low-cost approaches to delivery  Deliver travel demand management services that support residents and schools to try new ways of travelling  Enable the transition to zero-emission vehicles	Protect the mass rapid transit (MRT) route*  Monitor developments in zero-emissions technology, infrastructure and services
GOAL 6 A vibrant, healthy and liveable city	Green our streets	Continue to prioritise the central city – complete planned transport projects around the remaining central city anchor projects  Develop a coordinated kerbside and parking management approach for higher density urban areas	Plan for growth along core public transport corridors Enable liveable and more climate-resilient neighbourhoods as we grow through our local area planning programme

<sup>\*</sup>denotes projects to be delivered with Greater Christchurch partner agencies

#### Action to meet our climate targets

As described earlier, the Council has set ambitious targets for reducing GHG emissions at both district and organisational levels. As transport is the largest contributor to our district emissions profile, our strategy to reduce transport emissions is multi-faceted, with actions across this strategy contributing.

In the short to medium term, priorities include:

- · completing foundational investments to improve public transport and develop our cycle network
- delivering travel demand services that support school children and residents in trying low-emission travel methods
- working with the private sector to enable the transition to low-emission vehicles, and
- integrating nature-based solutions and climate-resilient design into our neighbourhood and local area planning programmes.

We will actively monitor and report on progress towards our emission reduction targets and adjust our implementation actions as required.

#### **Funding and investment for implementation**

The funding and revenue sources for implementing this strategy will evolve over its life. We know that the required funding will be significant, particularly for improving our public transport system and adapting to climate hazards.

Applying an affordability and value-for-money lens to all our transport activities and seeking innovative solutions to reduce costs will underpin all that we do. Currently, our transport infrastructure is funded from several sources, including rates, NZ Transport Agency - Waka Kotahi funding subsidies, assets vested in the Council from developers, development contributions, parking fees, infringement fees, and other minor funding sources.

New funding and revenue sources will be required to achieve our goals. The Council will review the role of existing tools, monitor policy and legislation changes led by central government to provide more revenue-gathering tools to local government, and investigate alternative revenue streams as part of this strategy's detailed implementation plan. The Council will continue to respect private property rights.

The detailed timing for implementing proposed initiatives and the estimated costs will be updated every three years through our Long Term Plan process. This will consider the available funding, progress towards our goals and targets, and any wider trade-offs required for the effective stewardship of the city's transport network.

#### Partnerships to implementation

We cannot deliver this strategy on our own. Evolving our transport network to grow and adapt our district will rely on strong partnerships and engagement at all levels, including with mana whenua, our local partners, central government funders and decision-makers, private industry, and our communities.

We will continue to provide certainty, acknowledging the role that shared planning had in guiding the billions of dollars invested in Christchurch following the earthquake sequence. We plan to strengthen our future transport partnership with mana whenua, in particular, through ongoing climate adaptation planning processes and the work underway within the Greater Christchurch Partnership to identify opportunities for improving accessibility to Māori Reserve Land to support kāinga nohoanga.

#### **Engaging with our communities**

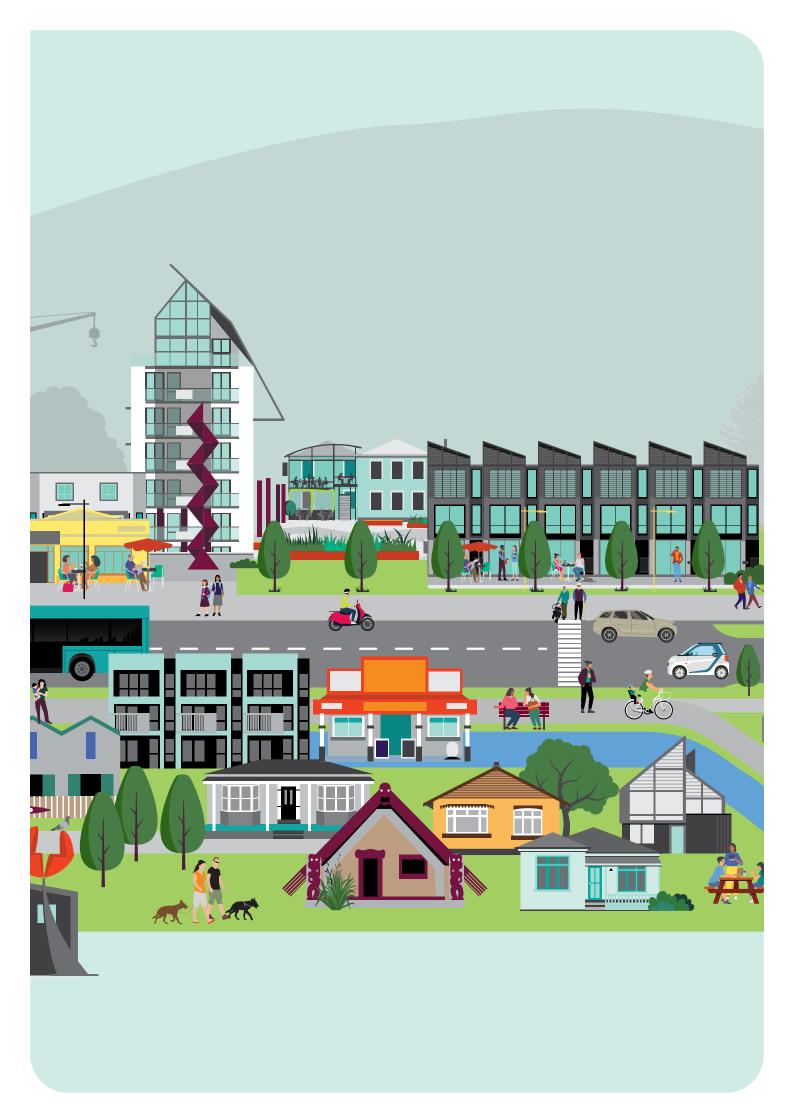
Ongoing public and community engagement will be at the heart of this strategy's implementation. Responding to the challenges and opportunities outlined here will require ongoing changes to our transport network. Ensuring that businesses, communities, and individuals have opportunities to voice their perspectives will be critical to the strategy's success.

In addition to providing feedback on this draft strategy before its adoption, there will be many future opportunities for public engagement after its adoption. This engagement will focus on specific issues, such as detailed design elements, as implementation work programmes are developed and reviewed, and as individual projects move through the investigation, planning, design, and construction phases.

#### Improved data management as a cross-cutting implementation theme

Improving the way we gather and use data is a theme woven throughout this strategy. This includes the technology we use to generate data for several purposes. We prioritise our maintenance and renewals programmes, inform better wholeof-life asset management, and focus our safety programme using crash and accident data. Additionally, we develop riskbased projections for natural hazards management and seek to improve how we gather information at a network and kerbside levels to manage the effects of growth on the network.

Exploring opportunities to further improve and integrate our data management will be an ongoing implementation priority.



## **Measuring our progress**

Our success in implementing this strategy will be measured through a monitoring and reporting framework.

Targets are noted where there is alignment at time of publication with broader Council strategies or related Long Term Plan Levels of Service. This will be developed in greater detail and further refined as part of the detailed implementation planning.

Measures we will be monitoring our strategy goals against include:

Goals	Measures	Targets	
GOAL 1 Well managed transport assets	<ul> <li>Percentage of roadway, footpaths and cycleways meeting national smoothness and condition standards</li> <li>Resident satisfaction with the condition of the transport network</li> </ul>	% target of sealed road re-surfaced each year (LTP Level of Service – 16.0.1) % target of sealed road network meets the appropriate national standard (LTP Level of Service – 16.0.2) >% target of surveyed residents satisfied (LTP Level of Service 16.0.3)	
GOAL 2 A more resilient transport network	<ul> <li>Percentage of maintenance budget spent responding to emergency events</li> <li>Extent and location of permeable surface in our streets</li> </ul>	Baseline target to be developed	
GOAL 3 A safer transport network	<ul> <li>Deaths and serious injuries on our roading network</li> <li>Perceptions of safety of walking, cycling and micromobility</li> </ul>	% target DSI reduction (LTP Level of Service 10.0.41)	
GOAL 4 An efficient transport network	<ul> <li>Reliability of travel times for freight</li> <li>Reliability of travel times for public transport</li> <li>Reliability of travel times and traffic flow for general traffic</li> <li>Congestion created by our own designs</li> <li>Vehicle-kilometres travelled by light vehicles</li> </ul>	Baseline target to be developed	
GOAL 5 Genuine transport choices for everyone	<ul> <li>Transport emissions and air quality</li> <li>Average household transport costs per week</li> <li>Public transport patronage</li> <li>Number of people cycling and taking scooter trips</li> <li>Commuter and school travel choices</li> <li>Residents' satisfaction with walking, cycling and public transport infrastructure</li> <li>Percentage of low-emission vehicles in the local fleet</li> <li>Accessibility of EV charging infrastructure</li> </ul>	% target emissions reduction (Climate Resilience Strategy) % target public transport patronage uplift (Regional Public Transport Plan) >% target of surveyed residents satisfied with footpath and PT infrastructure (LTP Levels of Service 16.0.9 and 10.4.4)	
GOAL 6 A vibrant, healthy and liveable city	<ul> <li>Foot traffic in the central city and key activity centres</li> <li>Proportion of new growth in residents and jobs occurring on core public transport network</li> <li>Percentage of population within 15-minute walking distance of amenities</li> <li>Accessibility to employment</li> <li>Tree canopy cover on our streets</li> <li>Healthy streets assessment scores</li> </ul>	% target of population within 15 minute walking distrance of amenities (LTP Level of Service 10.5.41) % target street tree canopy cover (Urban Forest Plan)	

### **Endnotes**

- 1 The scope of 'land transport' in this strategy includes the local network (roads, streets and shared paths that make up the road reserve) – it does not include rail, maritime or aviation transport.
- 2 Statistics NZ Population Estimates
- 3 scirtlearninglegacy.org.nz
- 4 NZTA Waka Kotahi Crash Analysis System
- 5 Environment Canterbury bus boarding data
- 6 Public Transport Futures: Greater Christchurch greaterchristchurch.org.nz/public-transport-futures
- 7 Christchurch City Council Tracking the progress of our Central City dashboard and Statistics NZ Subnational Population Estimates – June 2023
- 8 Cycle Counters smartview.ccc.govt.nz/data/cycle-counters
- 9 Christchurch Micromobility Dashboard <u>public.ridereport.com/christchurch</u>
- 10 Ōtautahi Christchurch Greenhouse Gas Emissions Inventory, FY23
- 11 Community feedback in this section is sourced from: 2023-24 Residents' Survey; What matters most survey ahead of 2024-34 LTP; 2024-34 LTP Submission Analysis Report; and the Greater Christchurch Hui Hui Mai Community Engagement Report (2023)
- 12 From Otautahi Christchurch Plan. This includes the demand generated by the National Policy Statement on Urban Development but may be adjusted in light of our obligations to accelerate housing supply under the Medium Density Residential Standards.
- 13 Greater Christchurch Spatial Plan: Greater Christchurch greaterchristchurch.org.nz/greater-christchurch-spatial-plan
- 14 Greater Christchurch Spatial Plan option evaluation report, pg 7-10
- 15 Freight | Environment Canterbury (ecan.govt.nz) nzta.govt.nz/assets/resources/draft-south-island-freight-plan/docs/ draft-south-island-freight-plan.pdf
- 16 Ngāi Tahu use the term kāinga nohoanga to describe their traditional areas of communal living on tribal lands.
- 17 Ōtautahi Christchurch Greenhouse Gas Emissions Inventory, FY23
- 18 Christchurch coastal hazards online portal gis.ccc.govt.nz/hazard-viewer/
- 19 Technical advice prepared for CCC for the Pages Road Bridge renewal project
- 20 <u>af8.org.nz/</u>
- 21 Projection using data from the CCC Risk Explorer tool
- 22 NZ Transport Agency Waka Kotahi Crash Analysis System Dataset (accessed 30 September 2024)
- 23 Feedback sourced from Life in Christchurch annual surveys
- 24 environment.govt.nz/publications/health-and-air-pollution-in-new-zealand-2016-findings-and-implications/
- 25 Council transport asset ownership data as of September 2024
- 26 Christchurch City Council 2024-34 Infrastructure Strategy
- 27 Christchurch City Council draft Coastal Hazards Adaptation Plan planning for sea-level rise in Whakaraupō Lyttelton Harbour and Koukourarata Port Levy pg. 20
- 28 ccc.govt.nz/assets/Documents/Environment/Climate-Change/Risk-Screening.pdf
- 29 NZTA Waka Kotahi Crash Analysis System showed 50% of crashes on CCC roads in 2018-22 occurred at intersections (accessed on 9 November 2023)
- 30 Safety cameras | NZ Transport Agency Waka Kotahi nzta.govt.nz/safety/driving-safely/safety-cameras/

- 31 nzta.govt.nz/state-highway-traffic-volumes/
- 32 Coastal Pacific and TranzAlpine trains
- 33 Mapping the cycle logistics sector in London (March 2023) Cargo Bikes – <u>crossriverpartnership.org/wp-content/uploads/2023/04/</u> <u>Mapping-the-Cycle-Logistics-Sector-in-London-Apr23.pdf</u>
- 34 Ministry of Transport, The Congestion Question Revenue
  Discussion Paper, 2019 <a href="mailto:transport.govt.nz/assets/Uploads/Paper/RevenueDiscussion.pdf">transport.govt.nz/assets/Uploads/Paper/RevenueDiscussion.pdf</a>
- 35 Data sourced from Census 2018 and the Council's Strategic Transport Model.
- 36 Huihui Mai Engagement: Greater Christchurch February 2023 greaterchristchurch.org.nz/urbangrowthprogramme/greater-christchurch-spatial-plan/huihui-mai
- 37 Data sourced from Census 2018 and the Council's Strategic Transport Model.
- 38 Electric Vehicle Database evdb.nz/ev-stats (accessed 11 March 2025)
- 39 Ecan patronage figures for FY21-22
- 40 Census 2018 data, Statistics NZ
- 41 Motu NZ research note #44, 2021, Rates of driver licence holding in Aotearoa New Zealand <a href="matu.nz/rates-driver-licence-holding-nz/">motu.nz/rates-driver-licence-holding-nz/</a>
- 42 A walkable catchment is the area that an average person could walk from a specific point to get to multiple destinations. A walkable catchment of 400 metres is typically associated with a five-minute average walk and 800 metres with a 10-minute average walk environment.govt.nz/assets/Publications/Files/Understanding-and-implementing-intensification-provisions-for-NPS-UD.pdf
- 43 ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Long-Term-Plan/LTP2024/Activity-Plans/ Transport-Activity-Plan-LTP-2024-34.pdf
- 44 Cycle counter online dashboard published here: ccc.govt.nz/cycle-counters/
- 45 Christchurch Major Cycleways Routes Updated Funding Assessment, QTP, 2015 (number taken from Table 5-3 "Vehicle trips avoided due to cycling" on page 48) – <a href="mailto:christchurch.infocouncil.biz/Open/2015/03/">christchurch.infocouncil.biz/Open/2015/03/</a> ITEC 05032015 AGN SUP.PDF
- 46 Ride Report Statistics ridereport.com/
- 47 CCC analysis indicates a pathway where car mode share reduces from 83% of all trips in 2018 to 59% of all trips by 2030.
- 48 <u>nzta.govt.nz/clean-car-discount-ended-on-31-december-2023/</u>
- 49 At the time of publication 20% of the Metro urban fleet is zeroemissions with a commitment to provide a fully zero-emissions fleet by 2035 at the latest.
- 50 nzta.govt.nz/planning-and-investment/planning/arataki/
- 51 Central City Recovery Plan : Christchurch City Council ccc.govt.nz/central-city-recovery-plan
- 52 Barcelona Superblock | Barcelona City Council ajuntament.barcelona.cat/ecologiaurbana/ca
- 53 Sponge Cities: Can they help us survive more intense rainfall? The Helen Clark Foundation – <u>helenclark.foundation/publications-and-medias/sponge-cities/</u>
- 54 National policy statement on urban development | Ministry for the Environment environment.govt.nz/national-policy-statement-urban-development/
- 55 The Council's parking policies will be reviewed on a semi-regular basis over the life of the strategy to ensure that they remain fit-for-purpose.

# Ōtautahi Christchurch Future Transport 2024-54

Our 30-year strategy for getting around

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