Arataki

Regional direction
Ōtākou – Otago
September 2023 v1.1

WAKA KOTAHI
NZ TRANSPORT
AGENCY

Te Kāwanatanga o Aotearoa
New Zealand Government

At a glance

Ōtākou Otago is the country's second largest region by land area. It has a population of just under 250,000 and is expected to grow to about 282,000 by 2048.[1] Ōtepoti Dunedin is the region's largest urban centre, but Tāhuna Queenstown is the fastest growing area.

The economy of Ōtākou is dominated by the accommodation, food service, and education sectors; this reflects the importance of regional tourism and Ōtepoti as a tertiary centre of excellence. Safe and reliable access to Port Otago and the airports in Ōtepoti and Tāhuna is important for the economies of Ōtākou and Murihiku Southland.

The region's transport network has enough capacity to meet current and future demand, although the scale of growth in Tāhuna means transformational change is needed in coming decades. While public transport use has grown in Ōtepoti and Tāhuna, private vehicles still dominate across the region.

The number of deaths and serious injuries in Ōtākou is high, with issues on high-risk rural roads, at high-risk urban intersections, and in urban areas with many deaths and serious injuries involving pedestrians and cyclists.[2]

Resilience also needs to be a focus, with coastal flooding expected to increase in the southern parts of Ōtepoti and other coastal areas.

Scale of effort to deliver outcomes in Ōtākou – Otago
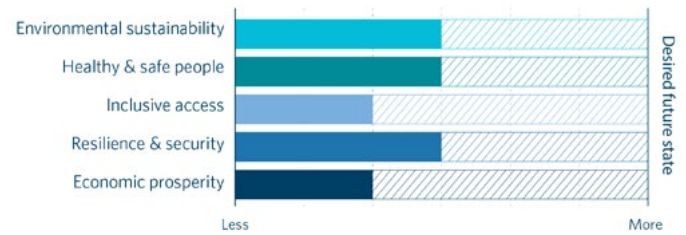
The regional ratings show how Waka Kotahi has assessed the potential scale of effort required in each region to achieve the future desired state for each outcome over the next 10 years. The ratings in each region indicate where effort can be best focused and inform conversations with partners about priority outcomes in each region.
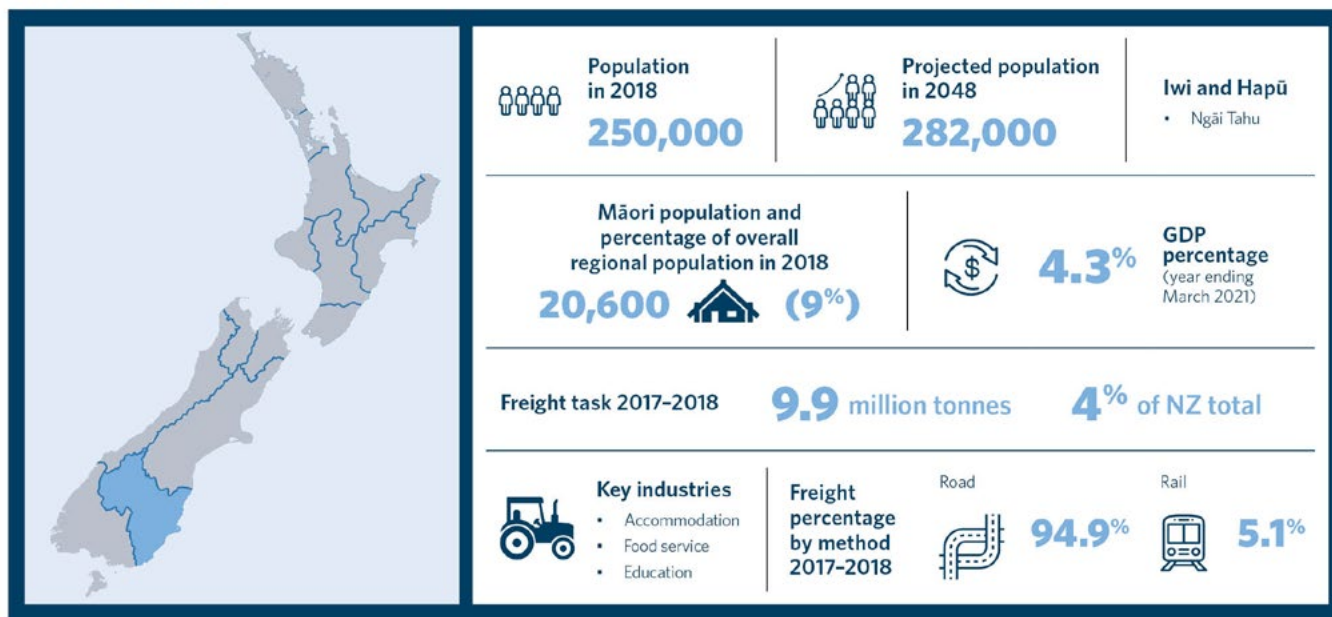
The rating assessments are based on evidence using system-levels metrics. Further details are captured in the methodology document.

The September v1.1 release of *Arataki* includes updates to reflect the severe weather events of 2023 and correct minor errors.

Context

Ōtākou – Otago

Population in 2018
250,000

Projected population in 2048
282,000

Iwi and Hapū
• Ngāi Tahu

Māori population and percentage of overall regional population in 2018
20,600 (9%)

GDP percentage (year ending March 2021)
4.3%

Freight task 2017–2018
9.9 million tonnes
4% of NZ total

Key industries
• Accommodation
• Food service
• Education

Freight percentage by method 2017–2018

Road 94.9%
Rail 5.1%

The population in Ōtākou Otago is expected to grow from just under 250,000 to about 282,000 by 2048, or 5% of the country's population.[3] Ōtepoti Dunedin, the region's largest urban centre, has about 133,000 residents.[4] Tāhuna Queenstown is a nationally significant tourism destination with a relatively small resident population of 28,000.[5] The town grew a lot in the years before COVID-19 travel restrictions, with rising numbers of domestic and international visitors.

In 2018, 20,600 Māori lived in Ōtākou, making up 9% of the region's population.[6] This is lower than the national rate of 16.5%.[7] Most Māori live in Ōtepoti, where they make up 9% of the city's population.[8] The iwi in the Ōtākou region is Ngāi Tahu.[9]

Te Ōhanga Māori - The Māori Economy 2018 notes the asset base in this rohe is valued at $9.3 billion.[10] The primary sector and property are both important.[11]

The Waitaha Canterbury rohe, which includes Ōtākou, Waitaha Canterbury, Te Tai o Poutini West Coast, and Murihiku Southland, has the highest number of Māori self-employed (13%) and employers (17%).[12]

The key interregional journeys in Ōtākou are:

• along the north and south road and rail connections to Waitaha and Murihiku

• the road corridors that link Tāhuna to Piopiotahi Milford Sound and other key tourist destinations across the South Island.

In rural areas, sheep and beef farming, along with fruit growing, will likely remain important contributors to the regional economy. The main employment growth areas in Ōtepoti, Tāhuna, and other urban centres are expected to be public services, electricity, manufacturing, healthcare, service industries, education institutes, and construction.

The freight task in Ōtākou in 2017–2018 was 9.9 million tonnes, or about 4% of the country's total.[13] A total of 94.9% of the freight task tonnage in Ōtākou was moved by road and 5.1% by rail.[14]

Ōtākou –
Otago:
Outlook

Over the next 30 years, the transport system of Ōtākou Otago will need to change, particularly in Ōtepoti Dunedin and Tāhuna Queenstown, to address the challenges and make progress on the key transport outcomes.

Future growth in Ōtepoti is expected to be concentrated within the existing urban area. The city centre is undergoing a renewal, with ongoing expansion of Te Whare Wānanga o Ōtākou Otago University and the construction of a new hospital. This extended period of construction will create traffic management challenges and mode-shift opportunities in the central city.

While private vehicle use is dominant in Ōtepoti, trips by public transport, walking, and cycling make up a significant contribution in some locations, particularly the city centre and northern Ōtepoti.[15] Ōtepoti has a relatively young demographic with university students contributing to a high level of walking in the inner city.

The new hospital in Ōtepoti, investment in Te Whare Wānanga o Ōtākou infrastructure, and the central city upgrade will:

- support renewal of the central city
- influence transport connections and travel in the wider urban area.

The geographical layout of Tāhuna has limited the size of the main centre and access roads. Limited transport options have created a heavy dependency on private vehicles. This means increasingly restricted access to the town centre and difficulties moving freight along SH6/6A. Ensuring the effective movement of people and goods in and around Tāhuna is important to the region and Aotearoa New Zealand.

International tourism has dropped sharply and visitor numbers are likely to remain low in the near future.[16] However, Tāhuna remains an internationally renowned tourist destination and visitor numbers are expected to rebound over time.[17] The population of permanent residents is expected to keep growing.

It will be challenging to fund the new infrastructure and services required to keep pace with expected growth in Ōtākou. Low incomes in parts of the region, combined with climate change, will make it harder for local government to maintain existing networks.

Steps to make progress towards transport outcomes in a more efficient and cost-effective way include:
- renewing the focus projects relating to small-scale and area-wide safety, public transport, and active travel, along with getting more from existing infrastructure
- reallocating existing road space and making temporary or lower-cost improvements to reflect the One Network Framework approach
- delivering current mode shift programmes – for example, bus priority upgrades to SH6 at Ladies Mile in Tāhuna, to serve an existing employment hub and new development
- influencing travel behaviour, particularly through parking management plans
- focusing on urban outcomes, such as progressing priority development areas identified in the Queenstown Lakes Spatial Plan.[18]

Even with these steps, more investment from a wider range of finance and funding sources, is required to achieve key goals. New sources should be investigated, especially where these incentivise growth or transport outcomes.

This section uses the *Transport Outcomes Framework* from Te Manatū Waka Ministry of Transport to support a 'decide and provide' approach to proactively plan the desired future state we want to achieve. Key challenges and opportunities are identified and discussed. Then we highlight the most important actions to be taken to make progress on each outcome.

Environmental sustainability

Challenges and opportunities

Ōtākou Otago will need to contribute to reducing transport emissions and light vehicle kilometres travelled (VKT), to reach the 2035 targets set in the government's *Emissions Reduction Plan* and net-zero emissions by 2050.[19]

As the main urban centres, Ōtepoti Dunedin and Tāhuna Queenstown present the greatest opportunities to support national emissions reductions by providing alternative transport options and reducing the need to travel. This will require a significant change to how people travel in cities with high levels of private vehicle use and low but growing public transport usage. In these cities, there are opportunities to:

- deliver greater travel choice
- support increased use of public transport, walking and cycling
- move away from travel by single-occupancy vehicles.

Care is required to ensure efforts to reduce VKT don't unfairly impact specific communities or groups.

We need to reduce freight transport carbon through:

- adopting lower-emitting fuels
- increasing mode share for rail and coastal shipping.

We must also reduce the impact of the region's transport system on the local environment, especially its impacts on air pollution, waterways, and ecological systems. Contaminated stormwater runoff from roads must be treated before entering waterways. The impact of new and improved transport infrastructure on the natural environment must be appropriately managed.

Making progress

Key actions over the next 10 years to make progress on this outcome are:

- planning work to encourage compact, mixed-use urban form that reduces trip length and car dependency, particularly through implementing the Queenstown Lakes Spatial Plan
- planning what interventions, activities, and investments are needed to achieve vehicle kilometres travelled (VKT) and emissions reduction
- making changes to the allocation of space on existing roads and streets to enable and encourage mode shift to public transport, walking, and cycling
- continuing the expansion of the cycleway network in Ōtepoti through delivery of its active travel network by completing separated cycling lanes on SH1, making improvements to walking and cycling, and improving crossing facilities in Tāhuna
- completing public transport projects in Tāhuna, on SH6 between Ladies Mile and Kawarau Falls Bridge and SH6A
- making improvements to public transport hubs in Te Kirikiri Frankton and Tāhuna
- improving safety and access at key intersections for all modes
- exploring ways to use technology to deliver better services at lower costs
- more actively managing carparking at major destinations and employment areas to increase use of public transport, walking, and cycling for trips to these locations
- ensuring appropriate standards, policies, and regulations are in place to reduce the impact of the transport system on the local environment
- supporting the implementation of key policies, such as vehicle fleet transformation.

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Healthy and safe people

Challenges and opportunities

During the past three years, the roads of Ōtākou Otago have had around 140 annual deaths and serious injuries.[20] Crashes in the region highlight the need to focus on:

- Ōtepoti Dunedin and surrounding townships
- Tāhuna Queenstown and Wānaka
- SH1 between Ōtepoti and Oamaru
- high-risk rural roads.[21]

Efforts to improve road safety are guided by the *Road to Zero: New Zealand's Road Safety Strategy 2020–2030* and associated *Action Plan 2020–2022*, and regional safety strategies.[22]

There is a significant opportunity, and need, to increase walking and cycling rates in Ōtākou, especially in Ōtepoti and Tāhuna. Active mode use has fallen substantially in recent decades, contributing to many health problems around lack of physical activity. These health issues, like obesity and diabetes, disproportionately affect some demographics. The harmful impacts of vehicle tailpipe pollutants on health, especially on the respiratory systems of our youngest, oldest, and most vulnerable, are much greater than previously realised.[23]

Significant progress on the healthy and safe people outcome will support environmental sustainability and inclusive access. Providing extensive networks of safe walking and cycling facilities will encourage more people to use these healthy and sustainable travel options. Similarly, a focus on reducing deaths and serious injuries for vulnerable road users will also encourage more people to walk and cycle.

Making progress

Continuing to realise safety plans and supporting dramatic changes to encourage walking and cycling will help the urban areas of Ōtākou Otago. New approaches to planning, design, and delivery, along with significant investment, are needed to accelerate progress.

Key actions over the next 10 years to make progress on this outcome are:

- completing safety improvements, notably on SH1, with an initial focus between Oamaru and Ōtepoti Dunedin
- completing intersection upgrades to address safety issues on SH6 and SH8B in Tīrau Cromwell
- rapidly rolling out well-connected, separated cycling networks in Ōtepoti, Tāhuna Queenstown, and other towns across the region, predominantly through reallocating existing street space
- requiring high-quality active mode infrastructure to be part of new developments
- encouraging and implementing regulatory changes that reduce harmful vehicle emissions and encourage the use of zero-emissions vehicles
- continuing to manage transport system noise through planning and mitigation
- targeting road policing and behaviour change programmes with a focus on alcohol and drug impairment, speeding, and people not wearing seatbelts
- managing safe and appropriate speeds on high-risk rural roads – this includes targeted use of safety cameras to reduce speeding
- advocating for robust mobile network coverage in rural and regional areas.

Continuing to realise safety plans and supporting dramatic changes to encourage walking and cycling will help the urban areas of Ōtākou.

Inclusive access

Challenges and opportunities

The Ōtākou Otago transport system struggles to provide for people of all ages, abilities, and income levels with safe, sustainable, and reliable access to a variety of social and economic opportunities.

A high reliance on private vehicles creates several access challenges, including:

- creating difficulties for those without easy access to, and use of, a private vehicle to fully participate in society
- placing significant pressure on household budgets to meet the high costs of car ownership and use
- limiting people's ability to travel in a way that best meets their needs because of poor travel choice.

Rural communities need improved connections to centres such as Tāhuna Queenstown and Ōtepoti Dunedin. Young people need access to education and increased employment opportunities. Older residents need access to physical and social activities, as well as health and social services.

Emerging technologies, such as on-demand shuttles, could provide a shared-transport option. These would help people get around smaller centres and improve access to services in Ōtepoti and Tāhuna. Improved access to high-quality data and information will allow better management of the transport system to get the most out of existing infrastructure. The growing popularity of online purchasing and home delivery will impact on-demand travel, including the movement of freight.

In Tāhuna, a range of travel choices are needed to help tourists of all abilities get to where they're going, without using a private vehicle.

Making progress

Improving inclusive access will often align with making progress on other outcomes, especially where travel choice is improved, and car dependency reduced. However, there may be challenging trade-offs to consider, such as balancing increased travel costs to reduce emissions while ensuring lower-income families aren't unfairly impacted.

Key actions over the next 10 years to make progress on this outcome are:

- working with urban developers to shape planning rules and decision-making to encourage more people to live in areas with better existing access to social and economic opportunities, especially in Ōtepoti Dunedin and Tāhuna Queenstown
- improving public transport services, and expanding on-demand services where appropriate
- exploring opportunities to improve the affordability of public transport for lower-income households
- expanding and improving walking and cycling, so low cost, sustainable, healthy travel options are safe and attractive for more journeys – this includes the completion of cycling networks in Ōtepoti and Tāhuna, and improved active-mode facilities in smaller towns
- ensuring transport infrastructure and services are designed and provided to meet the needs of people of all ages and abilities
- improving access to opportunities for iwi Māori, including access to sites of cultural significance
- exploring opportunities to support the mobile or digital delivery of essential services.

Rural communities need improved connections to centres such as Tāhuna Queenstown and Ōtepoti Dunedin.

Economic prosperity

Challenges and opportunities

The region's economy is dominated by the accommodation, food service, and education sectors. This reflects the importance of tourism and the role of Ōtepoti Dunedin as a tertiary centre of excellence. The Te Whare Wānanga o Ōtākou Otago University contributes around 15% of the city's GDP.[24]

In rural areas, primary production and processing continue as key economic drivers. Ōtākou Otago region has the second highest tourism spend in the country, with 55% total spend from international visitors, rising to 63% in Tāhuna Queenstown Lakes District.[25]

International travel restrictions during the COVID-19 pandemic had a significant impact on the economy of Tāhuna Queenstown, because of its dependence on international tourism.

The key interregional journeys in Ōtākou are:

- along the north and south road and rail connections to Waitaha Canterbury and Murihiku Southland
- road corridors that link Tāhuna to Piopiotahi Milford Sound and other key tourist destinations across the South Island.

An increasing number of residents on fixed incomes will likely make it harder to:

- maintain existing infrastructure
- fund new infrastructure
- provide appropriate services.

Technological change is also likely to have significant impacts on the region's economy and on travel demand, in the coming decades. The COVID-19 pandemic has accelerated working from home, while future developments in artificial intelligence and increased automation could have profound implications for the type and location of work people undertake. Transport planning will need to respond to these changes, recognising high levels of uncertainty around the nature and location of future jobs and the impact of this on travel patterns.

Making progress

Economic productivity and business competitiveness in the region can be improved by a transport system that provides:

- a range of travel options with wide capacity
- reliable journey times
- safe and low-cost ways of getting around.

Key actions over the next 10 years to make progress on this outcome are:

- improving access to social and economic opportunities, especially by public transport, walking, and cycling in Ōtepoti Dunedin, Tāhuna Queenstown, and other regional towns
- supporting resilient, reliable, and efficient freight travel around key parts of the network, especially around interregional road and rail connections to Ōtautahi Christchurch and Waihōpai Invercargill, to Port Otago, and airports in Ōtepoti and Tāhuna
- exploring opportunities to move to a more multimodal freight system with greater use of rail and coastal shipping
- managing increased transport costs in a way that doesn't negatively impact economic activity
- supporting the continued development of key economic centres by improving access and amenity (attractiveness) for residents
- improving accessibility in local and town centres to allow these areas to flourish and better provide for the needs of residents.

The region's economy is dominated by the accommodation, food service, and education sectors.

Resilience and security

Challenges and opportunities

Ōtākou Otago faces a range of effects from climate change and natural hazards. The most significant natural hazard risks, especially along state highways 6, 8, and 88, are:

- rockfall
- landslips
- flooding
- ice and snow.

The region's steep and unstable terrain also creates significant risk when hazards happen.

Sections of the interregional coastal corridor are at risk from the impacts of climate change. This corridor contains major rail line and state highway connections to the north and south of Ōtepoti Dunedin. The southern part of Ōtepoti, the most densely populated part of Ōtepoti, is particularly at risk of rising sea and groundwater levels. Surface flooding is also expected to increase around Dunedin International Airport.

More than ever, there must be a greater focus on maintaining existing assets at current levels of access and connectivity. There is a major opportunity to progress multiple outcomes by investing in maintenance and renewals, but this requires changes to current practices and increased funding.

To be resilient, the region's transport system must be able to adapt to uncertainty and rapid change. For example, in recent years the introduction of e-scooters in Ōtepoti and then the need for social distancing during the COVID-19 pandemic highlighted:

- a need for more adaptable approaches to road space management
- unexpected benefits from past improvements to walking and cycling facilities.

Rapidly fluctuating fuel prices throughout 2022, caused by international events, also emphasised the need to reduce dependency on fossil fuel.

Making progress

The transport system needs an ongoing focus on maintaining existing assets along with targeted improvements to reduce risks. We also need to expand our understanding of resilience in urban environments, to ensure planning work is flexible and adaptable to change.

Key actions over the next 10 years to make progress on this outcome are:

- continuing design and planning work to identify and prioritise responses to natural hazards in high-risk areas – this includes working with communities to identify plans for when to defend, accommodate, or retreat
- better understanding routes that provide critical connections, the conditions of these, the pressures, and the level of investment needed to address impacts – this includes identifying priorities for network resilience
- engaging in local planning processes to avoid infrastructure and development in areas at risk of natural hazards and climate change
- seeking continuous improvement in network resilience through maintenance, renewals, and 'low cost/low risk' investments
- improving operational responses to events to support quick recovery following disruption to the land transport system
- shifting to more adaptable 'scenarios-based' planning
- improving personal security for people using the region's transport system.

To be resilient, the region's transport system must be able to adapt to uncertainty and rapid change.

Ōtākou – Otago: Focusing our efforts

For efficient and effective progress, transport challenges in Ōtākou Otago must be tackled in a cohesive way.

The directions below identify the most important issues to be resolved over the next 10 years to make progress towards transport outcomes.

- Begin to reduce vehicle kilometres travelled, focusing on Tāhuna Queenstown and Ōtepoti Dunedin, in a way that's equitable and improves people's quality of life.

- Plan and deliver growth and urban development, especially in rapidly growing Tāhuna, in an affordable and cost-effective way that aligns with emissions-reduction goals.

- Maintain and improve the resilience and efficiency of road and rail connections to surrounding regions and the Port Otago.

- Improve access to social and economic opportunities, especially by public transport, walking, and cycling.

- Provide better access for tourists in Tāhuna and opportunities created by the new Dunedin Hospital.

- Significantly reduce the harm caused by the transport system of Ōtākou, especially through improved road safety and reduced pollutants dangerous to health.

- Encourage growth and development in areas that already have good travel choices and shorter average trip lengths, like working with Queenstown Lakes District Council (QLDC) and central government to implement the *Queenstown Lakes Spatial Plan*.

- Rapidly accelerate the delivery of walking and cycling networks, predominantly through reshaping existing streets, to make these options safe and attractive.

- Improve and expand public transport services, including exploring the potential for new and emerging technologies, such as on-demand services, to improve access to social and economic opportunities.

- Better understand the impact of future economic transformation on travel patterns and freight volumes.

- Explore opportunities to move to a multimodal freight system with greater use of rail and coastal shipping.

- Continue support of the Milford Opportunities Project to encourage resilience, tourism, safety, and mode shift for the Milford corridor, and surrounding region.

- Confirm how resilience risks will be addressed over time, and work with communities to plan for when to defend, accommodate, or retreat.

- Continue to implement road safety plans and programmes including those focused for iwi Māori.

- Improve or maintain, as appropriate, physical access to marae, papakāinga wāhi tapu, and wāhi taonga.

These will be updated over time to focus effort on the most critical matters.

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