

# TE WAIPOUNAMU SOUTH ISLAND

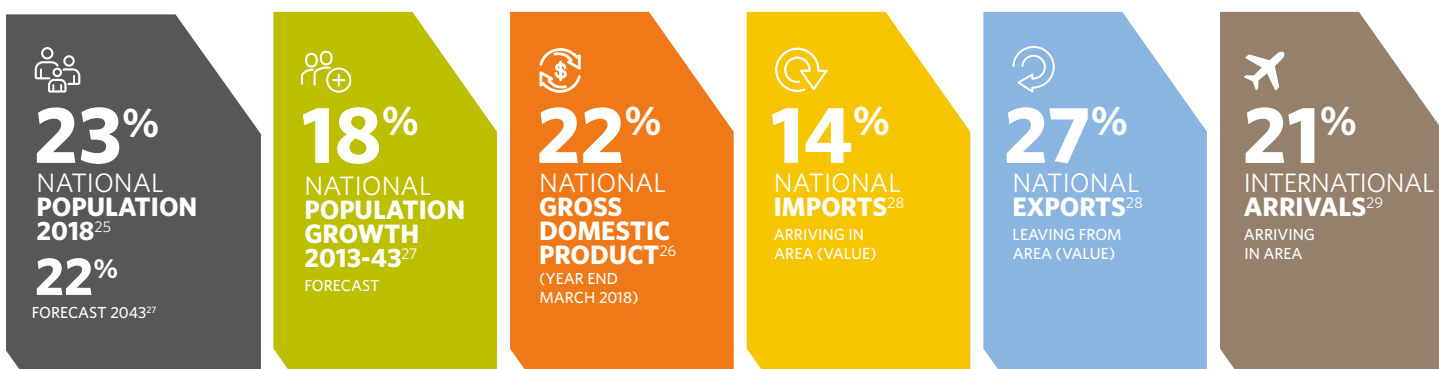
## AT A GLANCE

*Te Waipounamu, the South Island, includes Marlborough, Nelson, Tasman (Top of the South), Canterbury, West Coast, Otago and Southland. The South Island is 32% larger than the North Island and contains 23% of the total population.<sup>25</sup>*

## COVID-19 OVERVIEW

The initial effects of COVID-19 are already being felt across the South Island (SI) with an immediate decline in international tourists. While it is possible to anticipate the potential short-term (1-2 years) impacts of COVID-19, the medium and long-term impacts (3-10 years) are less clear. The effects of COVID-19 over the medium to long-term will be determined by several factors including: the duration of border restrictions, decisions and timing of a 'trans-Tasman bubble', the depth and duration of a global economic impacts, and the speed and scale of international tourism once it returns. Australia's economic performance also affects New Zealand's recovery because of the impact of migration flows and population growth between the two countries.

The SI is expected to be impacted harder compared with other pan-regions, because of the economic reliance on international tourism and expected slowdown in population growth from reduced international migration. Districts that are primarily reliant on international visitors will be hit hardest, while districts dominated by dairy, horticulture and forestry are forecast to perform better over the medium to long-term. Major urban regions are expected to recover over the long-term as service industries recover. While there is likely to be a decline in tourism's contribution to the SI economy over the medium-long-term, this will not necessarily result in significant change to how the economy is structured.



Pre-COVID-19 data

## POPULATION

The SI is home to 23% of New Zealand's population.<sup>25</sup> Christchurch is the largest urban centre, followed by Dunedin.

Prior to the COVID-19 pandemic, the Nelson, Tasman, Marlborough, Canterbury and Otago regions were forecast to experience population growth, while the populations in Southland and West Coast were projected to remain static and decline respectively.<sup>27</sup> The majority of growth was concentrated in the urban centres. Greater Christchurch and Queenstown were forecast to experience the highest rates of growth.<sup>34</sup>

Like the rest of New Zealand, the SI will experience future growth in the number of people aged over 65 years.<sup>27</sup>

Recent population growth has been largely driven by net migration rather than natural increase, with Canterbury and Otago, in particular, receiving large number of migrants. Border closures continue to reduce the inflow of immigrants, migrant workers, students and tourists into New Zealand. While there are high levels of uncertainty regarding the duration of these border restrictions, it is likely that there will be a significant slowing of growth in both population and visitor numbers over the short to medium-term. As international gateways, Christchurch and Queenstown are expected to be particularly impacted by a slow-down in population growth. Whether inward migration returns to pre-COVID-19 levels over the medium to long-term depends on the duration of border restrictions, and also New Zealand's relative economic performance compared to other countries.

## ECONOMY

The SI is an important contributor to the New Zealand economy and contributed \$63.7 billion, or 22%, to GDP<sup>26</sup> in 2018. Canterbury, New Zealand's largest region by land area, dominates the social and economic landscape, with just over half of the population<sup>25</sup> living there while also producing 57% of the SI GDP.<sup>26</sup>

The SI is a large producer of high-volume and value dairy products, vegetables, grains, fruits, logs, processed wood products, minerals, aggregates, seafood, livestock and meat, wine and general freight. These supply local and export markets.

Tourism is significant across the SI but is particularly important to the Canterbury, West Coast and Otago economies. Areas with a high reliance on international tourism are expected to be particularly hard hit during the post-COVID-19 slowdown. Tourism and a rapidly growing population were key drivers of the Queenstown economy prior to the COVID-19 pandemic.

Greater Christchurch is a major distribution and logistics centre with access to road and rail networks and is home to the major air and sea gateways.

Other urban centres including Nelson/Richmond, Blenheim, Dunedin, Timaru, Invercargill and Greymouth provide service centres for the surrounding communities and key industries in their regions.

Predominant industries include dairy in Canterbury, Southland and the West Coast, and viticulture, forestry, fisheries and horticulture, including growing hops, dominant in the top of the SI. While economic activity is expected to slow, the pre-COVID-19 economic drivers are expected to continue over the longer-term with growth in commercial and service sectors in the main urban centres, particularly Christchurch and rural production in Canterbury, Otago and Southland.

Overall, the SI economy is forecast to contract significantly as a result of the COVID-19 downturn. Between 2020 and 2021, the five regions with the largest percentage fall in employment are all located in the South Island (Otago, West Coast, Canterbury, Marlborough and Nelson). By 2021 employment across the SI could drop as much as 8% (approximately 50,000 jobs) compared to pre-COVID-19 projected growth.<sup>11</sup> However, the scale of downturn and speed of recovery will vary across the South Island.

By 2025, employment levels in Southland, West Coast, Nelson, Marlborough and Tasman regions are forecast to be back to near business as usual (BAU). Canterbury and Otago are expected to take longer to recover.

Employment in the hardest hit districts of Queenstown Lakes, Central Otago, Mackenzie and Selwyn is not forecast to return to BAU within the next decade, while Christchurch is forecast to be close to BAU in 2031.<sup>35</sup> By contrast, rural areas of Canterbury, Otago, the Top of the South, West Coast and Southland are forecast to recover close to (if not slightly higher than) pre-COVID-19 levels in the short to medium-term supported by a relatively stable primary sector. The strength of this recovery will also depend on international market conditions for primary sector exports.

## LAND TRANSPORT SYSTEM

The transport system in the SI is shaped by the geography, particularly the mountain ranges that run the length of the island. Transport networks tend to be long and narrow, with few alternate options in many places, particularly on the western side of the Southern Alps.

The transport system comprises 40,381km of road with 12% being the state highway.<sup>40</sup> There are 1,661km of railway<sup>41</sup> made up of two main lines (South Island Main Trunk Line (SIMT) and Midland Line), two secondary lines and a number of branch lines. Rail does not connect to the Nelson and Tasman regions.

The SI's population is concentrated in urban centres, with much of the land area sparsely populated and either used for rural production or in the conservation estate. These rural communities rely on the transport network as lifelines to access essential services and to transport products.

In addition to the inter-regional corridors, the rural road network also plays an important role in the efficient movement of freight from production to processing sites, and on to domestic distribution centres or international ports. This is particularly true for the first and last kilometre of journeys.

In terms of capacity, the transport system is generally fit for purpose and provides for reliable travel times on a day-to-day basis. There are some pressure points, particularly around Christchurch and Queenstown, which were expected to increase as the result of forecast growth in population and freight movements. Reductions in visitor numbers and an expected slowing of population growth post-COVID-19 are expected to soften/reduce transport demand in these centres in the short to medium-term.

In provincial areas traffic volumes are significantly lower. Some centres such as Dunedin, experience delays particularly during peak travel times, however, these networks are generally fit for purpose and have capacity to accommodate current and forecast demand.

Some parts of the SI are vulnerable to flooding, storms, snow and ice, particularly through the alpine passes. When networks are disrupted, journeys on alternate routes are often significantly longer, with varying levels of service. Parts of the land transport system are also vulnerable to sea level rise, particularly in low-lying areas.

Seismic activity is also a key risk. The Kaikōura coast is likely to experience ongoing challenges regarding earth movement, rock fall and debris flow following the earthquake in 2016. Rail faces constraints because of the small number of trains. On some parts of the network there are also constraints because of single tracking, poor signal system and the long, steep Otira tunnel connecting Canterbury and the West Coast. Tourism and freight are major sources of traffic on the transport network, although their travel needs are different. Freight trips are time dependant, while tourists can take their time, have multiple stops and drive at slower speeds. Both journey types need to be appropriately provided for.

The South Island Freight Study (pre-COVID-19) anticipated a steady, but significant increase in freight from 12 billion tonne-km in 2012 to over 16 billion tonne-km annually in 2042. Much of this growth was linked to population growth and significant investment in major infrastructure projects, resulting in increased movement of consumer goods, waste, aggregate and construction materials.<sup>42</sup>

It is expected that COVID-19 will reduce freight volumes in the short to medium-term because of lower rates of economic activity, reduced consumption and a slowing of population growth. These impacts will be greatest in and around Christchurch (as an international gateway, distribution hub and urban growth centre) and Queenstown.

The primary sector is forecast to remain comparatively stable and will make an important contribution to New Zealand's economic recovery. Enabling freight movements to support the sector, particularly the movement of product to local and export markets remains critical.

The challenge for the sector is to identify how and where to address this shift in freight demand, including first and last mile delivery needs. Changing how freight moves region-wide is an issue that presents an opportunity to shift from the road network to rail or sea. The transportation of freight is currently dominated by road at 91.4%. Rail is 6.8%, the remainder is by sea.<sup>30</sup>

Because the movement of freight is so important to the regional economies, the future role of ports and key freight hubs will shape demand and trip patterns across the transport system. The Lyttelton Port in Christchurch, Port Nelson, and Port of Otago are the largest ports. PrimePort in Timaru is experiencing growth following a commercial alliance with Port of Tauranga (New Zealand's largest port). Inland ports located in Christchurch and at Rolleston (MetroPort and MidlandPort) are increasing overland freight flows between Christchurch, Rolleston and Timaru. Although the future may see some consolidation across the southern ports, the Christchurch-Timaru link will remain essential.

Christchurch airport is critical for distribution of high-value exports and imports and is a major entry point for international visitors into the South Island.

SH1 and the SIMT together provide the key corridors that link the SI north to south. They connect the main urban centres, centres of production and major distribution hubs along the east coast of the island. They also provide the main connection for freight and people between Christchurch and Picton, and to the North Island via the Cook Strait ferries.

Movements on the state highway and rail corridors are centred on Christchurch as the main distribution hub and urban centre. Pre-COVID-19 the road networks in and around Christchurch were experiencing pressure as a result of strong population growth and increasing travel demand. This pressure resulted in increased congestion and reduced journey reliability for inter-regional trips that originate or finish in Christchurch. In the short-term it is expected that

transport demand in Christchurch will ease as a result of fewer work trips, less discretionary travel, a slowdown in population growth and a sharp drop in international visitors. It is expected that demand will return to pre-COVID-19 levels in the medium to long term, with employment in Christchurch forecast to return to pre-COVID-19 levels around 2024.

The West Coast relies heavily on its road and rail connections to Canterbury via Arthurs Pass. Arthurs Pass has significant resilience challenges tied to high seismic risk on the Alpine Fault, with potential for extended network closures. Ensuring appropriate alternate routes (via the Lewis Pass and Murchison) are available for the movement of freight and tourists is critical to supporting local communities and the regional economies.

For tourists travelling overland, the trip around the SI usually includes Nelson, West Coast, Queenstown/Milford Sound, Mackenzie Basin/Aoraki, Christchurch and Kaikōura. Demand on the corridors linking these locations is expected to fall in the short to medium-term, because of the sharp decline in international visitors.

Pre-COVID-19, Queenstown was experiencing growing congestion issues because of the limited transport options to the township, coupled with geographical constraints and increasing numbers of residents and tourists. These pressures are expected to be significantly reduced in the short to medium-term because of the impact of border closures on migration and international visitors. Longer-term it is expected that demand will increase (particularly between the airport (Frankton) and Queenstown town centre) although numbers may not return to pre-COVID-19 levels in the foreseeable future. As one of New Zealand’s premier tourist destinations, transport issues in Queenstown risk negatively impacting on visitor’s experience and the country’s reputation as a holiday destination.

During peak holiday periods, domestic tourism in the South Island adds further pressure to destinations such as Abel Tasman, Nelson and Wanaka. This is expected to continue, and even increase in the short-term as more New Zealander’s holiday domestically.

## SOUTH ISLAND: STRATEGIC CONNECTIONS

PORT/AIRPORT <sup>28</sup> (2018)	Imports (VALUE \$M)	Exports (VALUE \$M)	Imports (VOLUME TONNE 000)	Exports (VOLUME TONNE 000)
Port Nelson	334	1,334	119	2,654
Lyttelton Port	5,073	5,007	2,492	3,079
Primeport Timaru	419	1,207	861	826
Christchurch International Airport	966	2,174	N/A	N/A
Port Otago	514	4,726	297	2,078
South Port (Bluff)	854	1,689	1,525	1,471

AIRPORT (2018)	Passengers (000)
Nelson	1,077 <sup>43</sup>
Christchurch	6,930 <sup>44</sup>
Dunedin	1,030 <sup>45</sup>
Queenstown	2,332 <sup>46</sup>



**LEGEND**

**CONNECTIONS**

- Nationally significant
- Regionally significant

**KEY FLOWS**

- Freight & tourism
- Alternate route from SH1
- Freight
- Tourism
- International & domestic airport
- Domestic airport  
Top ten by passenger numbers
- Cruise ship port only
- Main sea port
- Freight hubs
- Visitor destinations

## STRATEGIC AREAS OF FOCUS: 2021-31

(Numbers relate to locations shown on following map)

LOCATION	KEY INSIGHTS	WHY IT'S IMPORTANT	POTENTIAL COVID-19 IMPACT	FOCUS
1 <b>Christchurch to Picton</b> (SH1 and rail)	The primary road and rail corridors linking Canterbury to the upper SI (and on to the North Island) are subject to significant resilience risks, particularly along the Kaikōura coast.	These corridors support the primary land-based link enabling the movement of people and freight between the North and South Islands via the Cook Strait ferry services. The corridors are also an important connection for visitors and support the economies of communities along the east coast, particularly Kaikōura and Blenheim.	Lower tourism demand, but connection with North Island remains important to support local communities and domestic tourism, primary production and for the movement of domestic and export freight.	Deliver safe, resilient and reliable road and rail journeys between Christchurch and Picton. Support efficient access to Picton port.
2 <b>Alternate routes to West Coast and upper SI</b> (SH6, SH7, & SH65)	The primary road and rail corridors linking Canterbury and the West Coast (SH73) and Canterbury to the upper SI (SH1) are subject to significant resilience (seismic and extreme weather such as storms, flooding and snow) risks.	The connections from Canterbury to the upper SI, especially Nelson, are critical in enabling the movement of people and goods within the region and supporting the land-based connection to the North Island via the Cook Strait ferry services. The West Coast's economy and communities rely heavily on tourism and primary production, both of which depend on reliable connections to neighbouring regions, particularly Canterbury but also along the West Coast. These connections are also lifelines for residents.	Lower tourism demand, but connections remain important to ensure wider network resilience, support local communities and domestic tourism, and for the movement of freight.	Ensure that viable alternate routes (such as SH6 and SH7) are available if the primary corridors are closed, to enable the ongoing movement of people, goods and visitors around the SI. Ensure isolated communities are prepared for major disruptive events including alternative freight options for essential supplies such as coastal shipping.

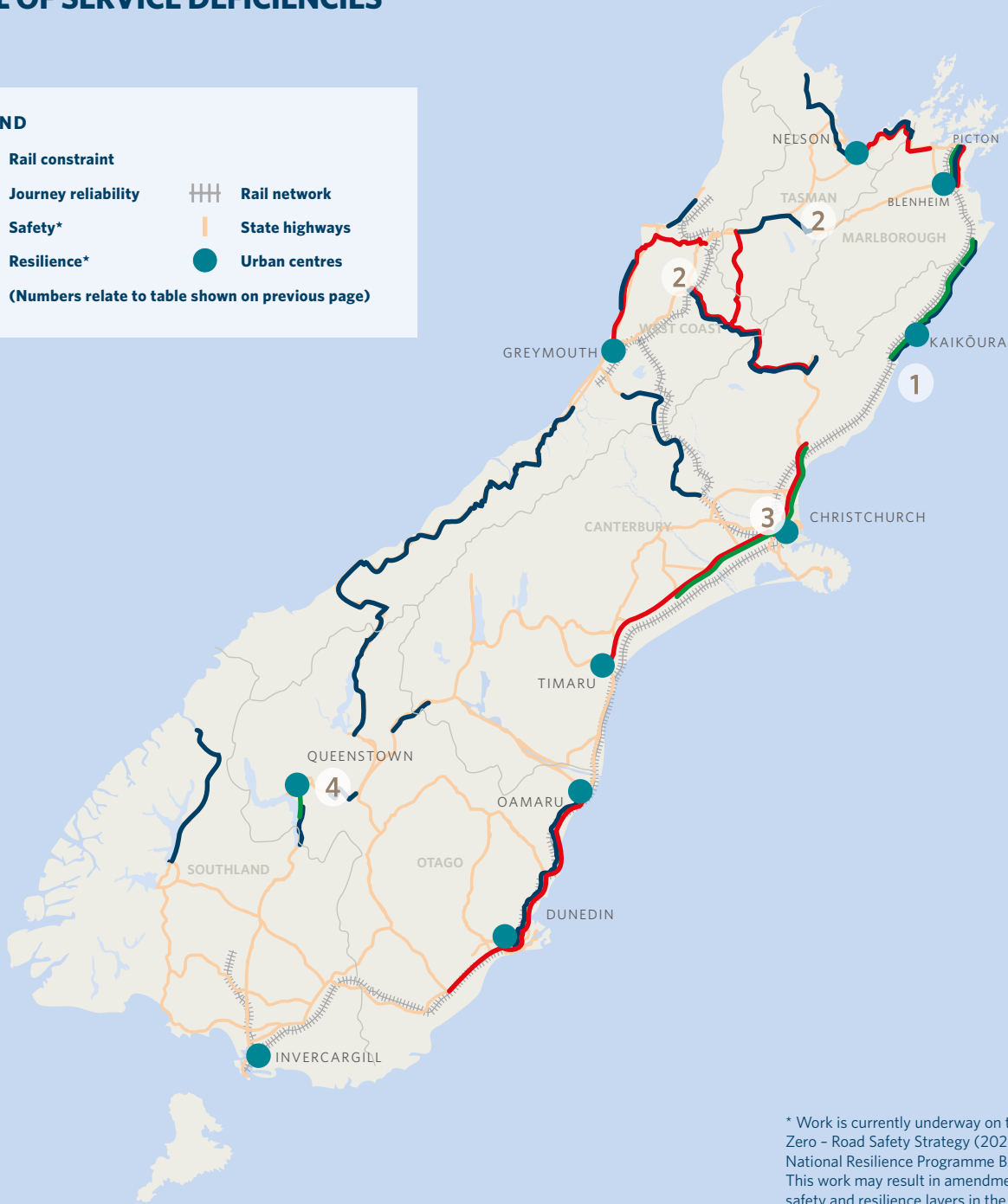
LOCATION	KEY INSIGHTS	WHY IT'S IMPORTANT	POTENTIAL COVID-19 IMPACT	FOCUS
3 <b>Greater Christchurch</b> (multi-modal)	<p>The Greater Christchurch strategic road network experiences significant congestion at peak periods, negatively impacting travel time reliability.</p> <p>Forecast growth in population and freight volumes will worsen this issue.</p>	<p>The unpredictability of journey times on Christchurch's strategic road network impacts on inter-regional journeys of people and goods to and from key gateways including Lyttelton Port and Christchurch International Airport, to distribution hubs, inland ports, and final destinations.</p> <p>The focus is on improved freight access, integrated land use, improved travel choice and improved safety</p>	<p>Expected reduction in overall travel demand in the short to medium term, with associated improvements in journey reliability. The nature, scale and location of demand is expected to return to near pre-COVID-19 levels around 2025, followed by growth in subsequent years, increasing pressure on network capacity. Numbers of international visitors may not return to pre-COVID-19 levels in the foreseeable future.</p>	<p>Support inter-regional movement of people and goods to key hubs and destinations.</p> <p>Contribute to managing growth across by providing residents with safer and better travel choices, as well as improving freight links to support economic growth and the opening of the Christchurch Southern Motorway through to Rolleston.</p>
4 <b>Urban Queenstown</b> (multi-modal)	<p>Pre-COVID-19, Queenstown was experiencing rapid growth in population and visitor numbers. Queenstown is dependent on the road network for the movement of visitors into and around the town. This presents challenges such as congested roads, parking issues, pressure on the environment and overcrowding. A significant reduction in visitor numbers is forecast over at least the short to medium-term, because of the border closure and the sharp decline in international visitors.</p>	<p>Queenstown is one of the country's major visitor destinations and these issues negatively impact both the visitor experience and the reputation of the town and country in the long-term, as well as local residents.</p>	<p>The drop-off in international visitors is expected to result in a significant drop in demand over short to medium-term. While tourism numbers may not return to pre-COVID-19 levels in the foreseeable future, Queenstown is expected to remain a significant visitor destination and drawcard for domestic and international visitors. As visitor numbers rebound, the Queenstown transport system is likely to come under increasing pressure.</p>	<p>Support a well-integrated and well-designed land-use and multi-modal transport system to improve transport choice and support positive social and economic outcomes for Queenstown.</p> <p>Deliver the NZ Upgrade Programme. Review growth projections in light of COVID-19 impacts and consider investment in the transport system (particularly public transport and active modes) if capacity triggers are met.</p>



## EXISTING AND EMERGING SIGNIFICANT LEVEL OF SERVICE DEFICIENCIES

### LEGEND

- Rail constraint
- Journey reliability
- Safety\*
- Resilience\*
- 1 (Numbers relate to table shown on previous page)
- Rail network
- State highways
- Urban centres



\* Work is currently underway on the Road to Zero – Road Safety Strategy (2020-2030) and National Resilience Programme Business Case. This work may result in amendments to the safety and resilience layers in the above map.

Not reviewed as part of V2 as impacts on travel demand are too uncertain