

2.3 The key problems facing our transport system

The key problems

The Committees used the process of intervention logic mapping, coupled with targeted consultation with representative groups of land transport users and providers, to identify the three key problems facing land transport in Otago Southland. The Transport Agency independently identified the problems and opportunities on the regions' state highways.

The three key problems identified by the RTCs are:

- inability to assess, plan, fund and respond to changing mobility user demands in a timely way, as this is resulting in some poor investment prioritisation and decisions, and inadequate future-proofing
- attitudes and behaviour, together with inconsistent quality of routes in the two regions, which are resulting in fatal and serious injury crashes
- parts of the network are vulnerable to closure from adverse events, which is resulting in economic and social disruptions, of which there is increased recognition.

Additionally, NZTA has identified problems on the regions' state highways.

The rest of this section summarises the evidence base for the first three problems, then lists the problems facing the state highways. The draft State Highway Investment Proposal 2018-21 and corridor management plans summarise the evidence base for the latter⁴².

Explanation and evidence base for the key problem statements

Problem 1: Inability to assess, plan, fund and respond to changing mobility user demands in a timely way results in some poor investment prioritisation and decisions, and inadequate future-proofing.

A complex set of issues continue to threaten our ability to assess, plan, fund and respond in a timely manner to changing demand for mobility and transport. With so many factors driving change in the transport activity in southern New Zealand, it is not surprising we are experiencing this problem. The nature and rate of change are making timely investment challenging. Pressure on the public funding of the transport system, coupled with the type and rate of change occurring in Otago and Southland, all challenge the ability of our transport system to keep up with demand.

The systems used in public sector transport planning are part of this challenge. For example, the RTCs are concerned NZTA's introduction of a business case approach to planning and investment decision-making, designed to deliver better investment decisions, has resulted in an even more protracted planning process. The inflexibility of the funding model means we are often looking for workarounds rather than redesigning the system to be fit-for-purpose. Inadequate integration of data sources (e.g. tourism data, transport data, and various road trauma data sets) results in sub-optimal planning and priority setting.

Additionally, there is a broader issue concerning a paucity of suitable governance structures at the South Island, regional and inter-district levels for addressing those areas that cross-over between transport and economic development (including cycleway networks and tourist travel in general).

⁴² Available at <https://www.nzta.govt.nz/planning-and-investment/201821-national-land-transport-programme/state-highway-investment-proposal/>.

Examples of when the timing of investment has raised public concern in recent times include:

- improving Queenstown's public transport services (improvements started November 2017)
- easing severe traffic congestion in Frankton Road (SH6) (extra lane provided on the BP roundabout, autumn 2017)
- allowing traffic from Quail Rise to join SH6, Queenstown (underway)
- completing the SH88 shared path between Port Chalmers and Dunedin
- delivering on the vision in Dunedin City Council's Economic Development Strategy to make Dunedin one of the world's great small cities, through attention to such matters as connectivity (e.g. transfer of goods, services, people) and services - including transport - that make a city attractive and safe for living and working
- providing safe cycleways and lanes to fulfil the latent demand for cycling in Dunedin city (underway)
- constructing the pedestrian and cyclist underpass beneath the state highway at Clyde (completed)
- making safe the intersection of SH1 and the access road to Moeraki (action now taken)
- heavy traffic issues in Invercargill: SH1 and Ellis Road, Lake Street
- safety improvements needed on state highways in the Southland region.

The result is sub-optimal investment decision-making results, which in turn causes inadequate future-proofing. This inadequate future-proofing can hinder us:

- catering to the demographic profile of our communities including the aging population
- providing for the different modes of travel sought by our communities (e.g. cycling)
- meeting visitor needs and addressing the pressures that increasing tourist numbers put on our communities and transport network
- potentially, unless we upgrade our systems, addressing the effects of sea-level rise on the transport network.

It has proved difficult to keep our planning ahead of the rate of growth of parts of Otago, given the growth in population and thus in traffic volumes described in the previous section. Traffic congestion in Queenstown is one manifestation of insufficiently rapid response to growth. Wanaka could be the next town to experience gridlock, unless we make our systems more responsive to the growth in tourist travel occurring. Current delays crossing the single-lane Albert Town bridge near Hawea could be an early warning of this.

Emerging or looming changes in mobility also pose a challenge. In Otago and Southland, our transport planning and responses are not adequately grappling with these changes and we are 'behind the eight ball' on such matters as technological advances (e.g. use of wayfinding technology using GPS and communications technology such as Bluetooth), new vehicle technologies - electric cycles and vehicles and, in time, driverless cars – or emerging demand for safe walking and cycling infrastructure and interconnected networks of medium to long distance walkways and cycleways.

The benefits of addressing this problem would be:

- improved network performance and capability and network resilience
- focus on areas of regional economic development, productivity and connectivity
- increased customer voice on connectivity, accessibility and mode shifts
- system optimised through communication technology, innovation and improved people capability
- greater value for money delivered by transport investments.

Problem 2: Attitudes and behaviour together with inconsistent quality of routes in the two regions results in fatal and serious injury crashes.

Each year, road trauma imposes a massive social cost on the Otago and Southland regions, equating to approximately 2 per cent of the GDP of each region. Statistical projection shows that unless we change how we behave on our roads, road crashes will continue to impose a collective social cost of between \$224M and \$332M each year in the two regions⁴³.

The level of fatal and serious injuries in Southland and Otago regions is shown in Table 10, and in Figure 4. Both are based on data from the Crash Analysis System (CAS) operated by NZTA (with data inputted by NZ Police). It is important to be aware that CAS is likely to be underestimating the quantum of serious injuries, and therefore the overall social cost of road trauma in Otago Southland, especially for incidents involving motorcyclists, pedestrian and cyclists.

Table 10: Fatalities and injuries, by year, in Otago and Southland regions, 2013-2016

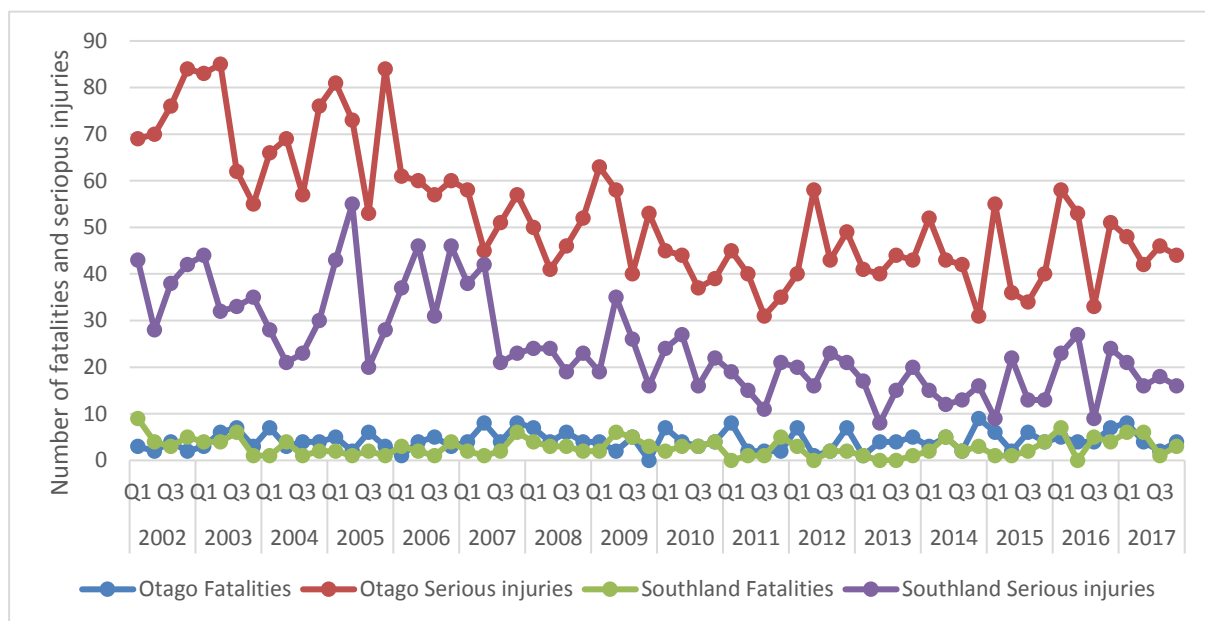
Region	Crash Year	Fatalities	Serious injuries	Minor injuries
Otago	2013	14	168	659
Otago	2014	19	168	650
Otago	2015	18	165	682
Otago	2016	20	195	708
Otago	2017	7	150	483
Southland	2013	2	60	310
Southland	2014	12	56	290
Southland	2015	8	57	320
Southland	2016	16	83	316
Southland	2017	13	61	167
Total	2013	16	228	969
Total	2014	31	224	940
Total	2015	24	222	1002
Total	2016	36	278	1024
Total	2017	30	211	650

Source: CAS data supplied by the Transport Agency, October 2017

⁴³ Based on statistical projections of crashes in the period 2010-13 (analysis available from Otago Regional Council). Note, road crashes (and their social cost) include both motorised and non-motorised incidents on the transport network. Examples of the non-motorised incidents include someone tripping on a footpath or roadway, or falling down the steps of a bus. Sometimes people refer to these types of incident as being an accident rather than a crash.

Evidence of this type of under-reporting in Otago Southland comes from statistical analysis of CAS, hospitalisation and Accident Compensation Corporation (ACC) data for 2010-13 inclusive⁴⁴. The reporting rate of crashes in CAS over that period was estimated to be 26 per cent for motorcyclists, 43 per cent for pedestrians and 56 per cent for cyclists in Otago Southland⁴⁵

Figure 4: Road fatalities and serious injuries in Otago and Southland regions, 2002 to 2016, by quarter



Source: CAS data supplied by the Transport Agency, October 2017 and (for 2017 data) May 2018

This magnitude of social costs is clearly unacceptable both in economic terms and in terms of the effect on our communities. Any number is too many.

Two types of factor are likely to be largely responsible for the extent of road trauma in Otago Southland: (1) people's attitudes and behaviour, and (2) the nature of the land transport network itself.

The Safe Systems approach, which New Zealand is using to address road trauma, recognises the role that people's attitudes and behaviour have in causing this trauma. Although this has often been labelled as 'driver error', in recent years we have come to recognise that people make mistakes and some crashes are inevitable. Those managing the land transport system need to recognise that people are vulnerable because human bodies have a limited ability to withstand crash forces without being seriously injured or killed. Thus, those who design the road system and those who use the roads must all share responsibility for creating a road system where crash forces don't result in death or serious injury.

⁴⁴ Road safety in Otago and Southland regions: the top priorities for action. Jane Turnbull and Elle Flinn. Otago Regional Council 2015. Available from <http://www.orc.govt.nz/Publications-and-Reports/Transport/Road-Safety-in-Otago/>.

⁴⁵ ACC data indicates 717 claims were filed by clients who were riding a motorcycle at the time of their crash (on a public road in Otago or Southland), for crashes taking place between 1st January 2010 and 31st December 2012. Over the same period, CAS reports only 184 injury crashes involving a motorcyclist in the key-vehicle or second-vehicle position in Otago or Southland. Moreover, ACC data tells us that claims made by motorcyclists following a crash tend to result in higher payouts to the client than claims made by any other road-user group, suggesting that their injuries tend to be more severe and require more complicated medical procedures and a more extensive recovery period (ibid, page 17).

Research undertaken in 2016/17 for the Transport Agency by The Navigators, as part of research for the Southern Road Safety Influencing Group's pilot project, has revealed valuable insights into the perceptions of road risk that exist in the communities of Otago and Southland regions. Compared to the entire New Zealand population, people from Otago and Southland are more fatalistic (considering deaths to be unavoidable) and more likely to believe that enough is being done to reduce risk. The research showed that people's perceptions of road risks tend to focus on driver behaviour, yet their preferred solutions point to the road and its environment. This suggests that when residents are not satisfied that their roads are not safe to drive on, the best solution is not necessarily an engineering one. Better conversations are needed with the community about road risk and the benefits of speed limit reductions. This need is discussed further in Section 3.4: the opportunity to make a step change reduction in serious road trauma.

Speed is widely accepted as a problem yet slowing down is a divisive solution. Compared to other regions, Otago and Southland residents are less likely to attribute serious crashes to travelling fast (60 per cent and 50 per cent) or careless driving (67 per cent and 63 per cent) but are more likely to highlight the risk associated with the road conditions, design or quality (38 per cent and 44 per cent). Those living in rural communities are more likely to rate roads (57 per cent and 67 per cent) as one of two top contributors to crashes⁴⁶.

Attitudes towards speed, and how to manage the risk that speed poses, were further illustrated by the responses to research questions about speed limits. Compared to other NZ regions, those in Southland are more likely to oppose the reduction of speed limits (44 per cent oppose and 35 per cent agree); they are more likely to prefer that money is spent on improving the roads (71 per cent). In contrast, only 27 per cent in Otago oppose, and 49 per cent agree with, reducing speed limits on some roads in their area.

The second part of the problem statement is variability in the quality of roads in Otago and Southland. This variability can be seen in the varying KiwiRap ratings for state highways in Otago and Southland and in the urban KiwiRap ratings for the two regions, the latter covering roading corridor and intersections⁴⁷. The programme business case for SH1 also recognises the variable quality along SH1 between Christchurch and Dunedin⁴⁸. Variability in the quality of the road, along the route of major freight and tourism journeys can also be seen in the high-risk road mapping layer of NZTA's Safer Journeys assessment tool.

This route between Queenstown and Te Anau also varies considerably in quality and customer service along its length. There is serious concern, in many parts of the community, about the safety along this popular visitor journey, in particular the section SH94 between Te Anau and Milford Sound.

The Safer Journeys mapping layer shows that almost all of the (sections of) high risk roads in southern New Zealand are on the major freight and tourism routes shown in Figure 2: SH1, in particular, plus SH93 and parts of SH94, plus three roads around Invercargill. The same mapping tool shows the need to improve the safety of motorcycle touring routes.

For both Invercargill and Dunedin, urban KiwiRAP identifies a small number of corridors with a high collective safety risk level. In Dunedin's case, there are also a few intersections that pose this level of collective risk. There are several more corridors in Otago Southland with

⁴⁶ National quantitative research – better conversations on road risk. Southern Region Report Draft, August 2017. The Navigators. Powerpoint supplied to Southern Road Safety Influencing Group meeting.

⁴⁷ For KiwiRap data, see: <http://www.kiwirap.org.nz/> and <https://roadsafetyrisk.co.nz/>.

⁴⁸ NZTA SH1 Christchurch – Dunedin programme business case. February 2017.

medium high and medium collective risk, mainly along the east coast, including in Dunedin, Invercargill and Balclutha, plus two in Central Otago.

The main benefit of addressing this problem would be to improve safety and reduce the social impact of fatalities and injuries.

Problem 3: Parts of the network are vulnerable to closure from adverse events resulting in economic and social disruptions, of which there is increased recognition.

Roads are vital to the everyday functioning of our communities. Yet, in Otago and Southland, we face major challenges just to maintain our current transport networks. Our demanding natural environment creates many challenges.

Growth can pose a challenge to network resilience. This challenge faces the Queenstown/Wanaka/ Central Otago area. Growth can enable investment in resilient infrastructure, e.g. when investment projects provide additional redundancy in networks at the same time as providing for growth. When upgrading of infrastructure does not keep pace with growth however, this contributes to a reduction in infrastructure redundancy capacity and thus a reduction in resilience. This has been evident in Queenstown especially when major events are being held.

Road closures due to natural events or road crashes also pose a challenge to resilience. At the same time, management of the transport system is struggling to keep up with changing expectations concerning how we deal with road closures and provide detours. When natural events or crashes result in road closures, detours may not exist (e.g. for the state highway between Bluff and Awarua), or they may be lengthy. There can be an additional issue when the detour is not particularly safe or has weight restrictions on it.

The way we are now living our lives 'just-in-time' has increased our vulnerability (compared to 20 or more years ago). For example, many businesses in Otago and Southland do not keep much stock but order it in when customers request. The pressure for same-day or next-day delivery, especially of retail goods, has introduced a risk to drivers attempting to use through-routes in winter conditions, particularly on SH8 over the Lindis Pass, and SH1 over Dunedin's northern motorway.

Lack of cell-phone coverage in many parts of Otago and Southland, coupled with adverse driving conditions, has the potential to delay advice about, and response to, crashes. Although there is radio-telephone coverage, cell-phone coverage is lacking on parts of several routes, including Clarksville to Roxburgh (SH8), the Lindis Pass (SH8), SH87, and SH94 between Te Anau and Milford Sound. Large parts of the Maniototo also lacks cell-phone coverage.

Those sections of the road network along the east coast of the South Island at higher elevations (including SH1 north between Dunedin and Waitati) are susceptible to periodic closure due to snow and ice in the winter months. Winter driving conditions continue to adversely affect inter-regional state highways, creating safety risks and leading to occasional road closure. Not just SH1, immediately north of Dunedin, but also the Te Anau-Milford Sound highway (SH94), Haast Pass/Tioripatea (SH6), Lindis Pass (SH8), the Pig Route (SH85), and SH87 between Outram and Kyeburn can become inaccessible for periods in winter. Significant parts of the local road network are also at higher altitudes, especially in Central Otago. These routes are also susceptible to closure in winter months, challenging the affordability of providing accessibility to large parts of the district, and over Danseys Pass⁴⁹.

⁴⁹ See Central Otago District Council Activity Management Plan.

Rockfall poses an ongoing problem in the Kawarau Gorge (SH6), at the Nevis Bluff, threatening access to Queenstown. Both rockfall and avalanches pose a risk at the eastern approaches to the Homer Tunnel on SH94 to Milford Sound.

Climate change poses another risk. Coastal areas are at risk from sediment movement and coastal erosion include the Katiki Straight in North Otago and the Oamaru rail yards. Over time, climate change may exacerbate this risk and resultant damage. The vulnerability of lower lying parts of the transport network to sea level rise (over the medium to long term), including much of South Dunedin, also requires further investigation and planning.

We face not only the challenge of trying to predict where rain and earthquake induced landslips are likely to occur, but also the potential challenges of (1) the high costs of remediating any large landslips and (2) the economic effects of prolonged closure. An example of the latter occurred when a slip at Diana Falls closed the Haast Pass in September 2013, initially for 11 days, disrupting the usual flows of visitors around the South Island. NZTA subsequently opened one lane but it took more than 14 months' remedial work to stabilise the site and reinstate two lanes⁵⁰.

The Christchurch earthquakes in 2011, the Kaikoura earthquake in 2017, on top of the severe rain and snow events in recent years, have raised the question in many people's minds of whether the South Island is sufficiently resilient to disruptions to our land transport system. These events have stimulated discussions about how we can increase our resilience.

Thanks to recent scientific research, we now know the Alpine Fault, which runs 400 km up the South Island, poses a large risk to many southern South Island communities. Historical patterns of earthquake activity suggest that this fault is likely to rupture sometime in the next few decades, with devastating consequences. In the scenario modelled for the Alpine Fault Study Project AF8, which has an expected return period of 300 years, tens of thousands of landslides are expected, isolating many areas by road, including Queenstown, Wanaka and surrounding settlements, and damaging most if not all lifelines. These growth areas remain geographically distant from their major sources of food and fuel, and are totally dependent on trucked fuel.

The main benefits of addressing this problem would be:

- improved network performance and capability, and network resilience
- improved safety and reduced social impact of fatalities and injuries
- focus on areas of regional economic development, productivity and connectivity
- system optimised through communication technology, innovation and improved people capability
- greater value for money delivered by transport investments.

Problems on the regions' state highways

In 2017, NZTA identified the key problems for the state highway corridors within, and connecting with, the Otago and Southland regions, as set out below. These problems mainly concern safety, but also accessibility, connectivity, resilience and regional development. NZTA's problem identification forms the bulk of the issues, listed below, for each state highway in Otago Southland; RLTP submissions identified some further issues which are included below.

⁵⁰ See: <https://www.nzta.govt.nz/planning-and-investment/2015-18-national-land-transport-programme/case-studies/diana-falls/> . Accessed 15 September 2017.

Wanaka to Nelson (SH6)

- This route has safety hotspots: run-off road, head-on, mix of traffic.
- This is a tourist route and many drivers on it are unfamiliar with the route.

Queenstown to Rangitata (SH6, SH8)

- This route has safety hotspots: run-off road, head-on, mix of traffic.
- This is a high-volume tourist route and many drivers on it are unfamiliar with the route.

Cromwell to Milton (SH8)

- This is the main tourist link between Dunedin and Central Otago/Queenstown Lakes.
- Increasing traffic volumes from tourists and recreational travellers and infrequent/substandard passing opportunities.
- There are isolated resilience issues.

Queenstown to Milford Sound (SH6, SH97, SH94)

- There is a safety risk due to challenging and unforgiving terrain and a large portion of first time route users (Otago section i.e. Devils Staircase)
- Development between Frankton and Jacks Point is likely to result in an additional 8,000-10,000 daily trips which has the potential to affect speeds/efficiency of the northern section of SH6.
- There is a safety risk due to challenging and unforgiving terrain and a large portion of first time route users.
- RLTP submitters identified several major safety problems on this journey, particularly the stretch between Te Anau and Milford Sound (including outside the school in Te Anau). Submitters also highlighted the paucity of suitable facilities at key sites along this journey, and at Milford Sound itself which has become too congested. These problems are being compounded by the growing number of visitors making this journey.
- Resilience issues relating to natural hazards (rockfall, avalanche), weather, incident and preventative maintenance events.
- There is no alternate route and limited communications (e.g. cell reception).

Dunedin to Christchurch (SH1, key local routes, and the Main South Line (rail))

- Travel time is unreliable: increasing traffic, mix of traffic with speed differentials and peak event demands.
- There are safety hotspots: intersections, run-off road, head-on and unforgiving environment.
- Safety and access issues in the urban area of North Oamaru, including for pedestrians and cyclists.

Port Chalmers to Bluff (SH88, SH1, SH93)

- This is the main economic enabler for the region, connecting Dunedin and Invercargill, industry and ports.
- SH88 from Ravensbourne to Port Chalmers is narrow, windy and lacks adequate shoulders over a significant portion of its length for a national route.
- There are accessibility issues for HCVs, particularly the SH88/SH1 intersection and the Sawyers Bay overbridge.
- Safety issues include SH93 between Clinton and Matakana, which is only two-star rated, with challenging topography and sub-standard passing opportunities.
- The intersection of SH1 and SH93 at Matakana needs to be reconfigured to improve safety and avoid stock trucks straddling the Main Trunk Railway Line, immediately adjacent to the intersection.
- There are industrial development pressures south of Invercargill and in south of Dunedin in Clutha.

Southern Cluster, Otago (SH85, SH87, SH90)

- These provide connectivity and links into Central Otago from Dunedin/Mosgiel.
- SH87 is affected by snow and both are susceptible to ice/winter driving conditions.
- Current and projected population growth in Mosgiel is having an impact on the transport network and the town centre, particularly in afternoon peak.

Southern Cluster, Southland (SH6, SH90, SH94, SH96, SH98, SH99)

- These provide important connectivity with local roads for visitors, local communities and freight movement.
- SH99 forms part of the Southern Scenic Route, an important and popular tourist route. Visitor expectations of a consistent and reliable journey experience on both state highways and local roads e.g. consistent signage and road conditions.
- The focus is on maintaining connectivity through maintenance and operations and event response planning to facilitate reliable and efficient access for freight.

2.4 Opportunities

In addition to the key problems in the previous section), the RTCs have identified five key opportunities that they wish to pursue. Each of these five opportunities is described in this sub-section:

1. the opportunity to take a South-Island wide approach to transport
2. the opportunity for mode integration and mode shift
3. the opportunity to support tourism and the regional dispersal of tourism benefits
4. the opportunity to create a network of cycle rides and cycling facilities.
5. the opportunity to a step change reduction in serious road trauma.

The main benefits of realising the first four opportunities, above, would be:

- improved performance and capability of the transport network, and network resilience
- regional economic development, productivity and connectivity
- increased customer voice on connectivity, accessibility and modality shifts
- greater value for money.

The main benefit of realising the fifth opportunity would be improved safety and reduction in the social impact of fatalities and injuries:

The opportunity to take a South Island-wide approach to transport

Freight and visitor journeys do not begin or end at our northern boundaries with Canterbury and the West Coast. There is an opportunity to take a South Island perspective on transport journeys, to better meet customers' needs.

As discussed in the foreword, the chairs of the seven Regional Transport Committees in the South Island have recognised the opportunity to help drive our economy and better serve our communities, through collaboration and integration. The Chairs' Group has three key priorities:

1. Identify and facilitate integrated freight and visitor journey improvements across the South Island.
2. Advocate for an enabling funding approach which supports both innovative multi-modal (road, rail, air, sea) solutions to transport problems, and small communities with a low ratepayer base to maintain and enhance their local transport network.
3. Identify and assess options for improving the resilience and security of the transport network across the South Island, as well as vital linkages to the North Island.

The group has committed to working collaboratively to planning work across the South Island in these key areas (including resilience, the importance of which has been highlighted in the aftermath of the recent Kaikoura earthquake). This initiative has already led to two South Island-wide projects being initiated in mid-2018: the visitor flows investigation described in the Section 2.2 (at the bottom of page 34) and the freight mode shift investigation described in the next sub-section.

It is likely there will be other projects in this space that will progress over the next three years (2018-2021) or so – the next one is likely to focus on improving resilience. Both ES and ORC have made funding provision for this work, as part of their transport planning activities.

The opportunity for mode integration and mode shift

There is potential to better integrate rail and coastal shipping into the transport network. The South Island RTCs Chairs' Group has been advocating for this. The projected 68 per cent increase in freight volumes by 2042 is one of the key challenges facing the South Island⁵¹. Most freight in the South Island is moved by road (over 90 per cent), and only a small percentage by rail, coastal shipping or air. The freight modes that perform this task today are forecast to largely perform similar roles in the future, with a slight increase anticipated in the proportion of freight shifted by road.

This reliance on road freight raises questions given that:

- the South Island has been significantly impacted by network disruption caused by seismic events and other natural disasters, and there is a present and ongoing risk to supply chains
- the potential effects of a significant increase in road freight, including road condition and maintenance costs, travel time reliability, road safety, and visitor experience
- the increasing demand for more sustainable, low CO² supply chains.

The availability of effective transport alternatives is a core component of a resilient, multi-modal transport system for the South Island including wider consideration of the role that rail and coastal shipping should play, or at more local scale. Other ways of increasing resilience at a local scale include:

- good quality walkways and footpaths and cycling infrastructure that enable connectivity (particularly considering the aging population)
- reliable and efficient public transport services that reduce dependency on single occupancy vehicles.

The Otago and Southland RTCs will continue to seek much better integration among the modes of transport. This includes planning to achieve this in a way that best suits community and commercial interests. There are several projects proposed in this update of the RLTPs for walking, cycling and public transport as part of integrated programmes in Dunedin and Queenstown.

Such alternatives to road transport also support emission reductions in the transport sector. New Zealand has one of the highest rates of car ownership among members of the Organisation for Economic Co-operation and Development (OECD) and a relatively old vehicle fleet, with most freight being transported by emission-intensive trucks rather than by train or coastal shipping⁵².

⁵¹ South Island Draft Freight Plan (2015) <http://www.nzta.govt.nz/assets/resources/draft-south-island-freight-plan/docs/draft-south-island-freight-plan.pdf> .

⁵² Ministry for the Environment (2016), New Zealand's Greenhouse Gas Inventory 1990-2014.

There is also an opportunity to shift mode from road to rail and coastal shipping. Road freight creates significantly greater environmental and social impacts than the alternative modes of rail and shipping: for example, traffic congestion, crashes, reduced air quality, greenhouse gas emissions and degradation of local roads. In pursuing this opportunity, the seven South Island regional and unitary councils are jointly funding, in 2018, an investigation into the opportunities for shifting freight from rail to road in the South Island. This investigation will identify the barriers that have been preventing this mode shift. The intention is to develop an action plan for freight mode shift on a South Island scale.

At the regional scale, there is also an opportunity to update the current strategic transport model in order to analyse the feasibility of shifting the carriage of logs (or other goods) from road to rail in Southland and Clutha.

The opportunity to support tourism and the regional dispersal of tourism benefits

The New Zealand Tourism Strategy has the overall aim of increasing the contribution made by tourism at a national and regional level. There is scope to increase the contribution of tourism to the economies of Otago and Southland. There is also scope to better disperse the benefits of tourism across our two regions. The New Zealand Tourism Strategy seeks to disperse visitors across regions, in order that tourism benefits all regions⁵³. Tourism provides an opportunity for growth, not just in the growing areas of Queenstown Lakes and Central Otago, but also in districts such as Southland, Clutha and Waitaki.

To fully reap the benefits of the projected tourism growth – including the benefits to smaller communities from dispersing visitors throughout Southern New Zealand – requires a good understanding of current visitor travel patterns and flows. The desktop assessment of visitor flows into, through and out of the South Island, described in section 2.2 and being done as part of the South Island transport and tourism project, is the first step towards acquiring this understanding. Future work may include developing a visitor flows model for the South Island.

At present, the road environment along tourist routes provides a poor journey experience for visitors in several parts of Otago and Southland (e.g. in Queenstown Lakes and Clutha districts). This is of concern, as more and more tourists chose to self-drive. Fully reaping the benefits of the projected tourism growth also requires a well-managed response to such issues. It also requires better understanding of visitors' expectations.

While we do not have a great understanding of visitor expectations concerning their journeys in southern New Zealand, we do know there is an opportunity to improve the journey experience for visitors. The question is: what investment is needed in state highways and on local roads, and more generally, in transport management, to support tourism, including the aims of the national strategy. The rest of this sub-section highlights opportunities for investment.

A well-managed approach is particularly needed on those key journeys that are characterised by long travelling distances with limited amenities and unfamiliar and challenging road conditions⁵⁴. Many of the tourism journeys in southern New Zealand fall into this category including: Christchurch to Queenstown over the Lindis Pass, Queenstown to Te Anau and Milford Sound, SH6 connecting Nelson and the West Coast with the Southern Lakes area, via Haast Pass, the Southern Scenic Route via the Catlins, SH1, and even large parts of SH1, from the Waitaki River to Bluff.

⁵³ See <http://www.mbie.govt.nz/info-services/sectors-industries/tourism/tourism-strategy>

⁵⁴ Queenstown to Rangitata Corridor Management Plan. NZTA 2017.

There is an opportunity to recreate the Southern Scenic Route as a tourist loop. At present, this corridor, along SH6 and SH99, is positioned as a one-way journey, typically from Queenstown to Dunedin. A loop route would utilise SH85, SH87 and parts of the adjoining corridors (Queenstown to Rangitata; Frankton to Te Anau). To make this work, the loop route would need to be upgraded to provide a consistent level of service along the entire loop, particularly in terms of journey information, safety and road conditions⁵⁵.

The state highway corridor between Frankton and Milford Sound is unique in that its predominant demand comes from tourism. Increasing tourist numbers and the increasing demand for the road to remain open are creating increased pressure on this corridor. The strong year-round tourism market is largely driving the increasing demand for the road to remain open with minimal disruption. As self-driving increases – the tourism sector has been actively promoting this experience – the increasing conflict between slower sightseeing journeys and the time-constrained through journeys to Milford Sound and back in one day needs to be managed. More safe stopping areas and slow vehicle bays are likely to be needed to accommodate this mixed purpose use, and to ensure safe, reliable journeys. The predicted growth will also place pressure on assets already at capacity, such as the Homer Tunnel, or those nearing capacity⁵⁶.

The nature of journeys between Queenstown and Milford Sound could be reshaped to better integrate Te Anau into them. Furthermore, the airport at Te Anau could be upgraded to enable visitors to use it as an access point for travel to the southern South Island (e.g. with connections to Auckland and Christchurch). These both present opportunities for Te Anau to increase its share of the visitor market.

There is also potential in the future to use Alexandra airport as an access point for southern New Zealand. Use of this district council-owned airport, owned by the district council has increased to the point that the first stage of a development plan has started with construction of a hangar/accommodation precinct with space for 22 lessees, plus a private hangar⁵⁷.

Local roads could also cater better for their tourist customers, especially local roads that tourists use to access either tourist attractions along the road or at the road end, or to access the back country. The Southland Regional Development Strategy (SORDS) Action Plan identifies the need to improve signage across roads in Southland and the Catlins, to cater better for international tourists. The SORDS action plan also highlights the need to seal local roads that access key tourist sites⁵⁸.

Some districts have proposed low cost / low risk projects that are intended to support the tourism industry through such matters as tourist car parks and upgrades to tourist routes such as Danseys Pass in Waitaki district.

The opportunity to create a network of cycle rides and cycling facilities

The Otago and Southland RTCs have two objectives for cycling: to expand cycle tourism, and to see much larger numbers of people travelling by cycle in urban and peri-urban areas. They seek two key results:

- The number of people choosing to cycle is sufficient to make a positive contribution towards ensuring a sustainable and accessible transport network.

⁵⁵ Southern Arterial & Primary Collection Cluster Corridor Management Plan 2018-2028. NZTA 2017.

⁵⁶ Frankton to Milford Sound Corridor Management Plan 2018-2028. NZTA 2017.

⁵⁷ See <http://www.codc.govt.nz/your-council/project-updates/alexairport/Pages/default.aspx>, accessed 6 November 2017.

⁵⁸ The Southland Regional Economic Development Strategy (SORDS) Action Plan.

- The number of people using cycle trails boosts the economy of Otago and Southland.

The Committees see the potential to expand Otago and Southland's network of off-road cycle trails and Heartland Rides (e.g. by using secondary roads for the latter). Growing the trail network has the potential to draw an increasing number of visitors, both domestic and international.

The Committees support the long-term objective of connecting the Great Rides with the rest of New Zealand through the creation of a nationwide cycling network, an objective shared with the Transport Agency and The New Zealand Cycle Trail.

Initial priorities for expanding the cycle network in Otago and Southland are:

- completing the Around the Mountain trail
- connecting Queenstown and Dunedin with a cycle trail by completing the missing sections including extending the Clutha Gold Trail from Lawrence to Waihola
- new trails connecting Queenstown, Wanaka and Cromwell with the Central Otago trails network at Clyde
- connecting the Queenstown Trails with commuter cycling routes in the Wakatipu Basin
- completing Dunedin's cycle network for use by visitors as well as locals.

The growing network of cycle rides and trails in Otago Southland is summarised in Section 2 and mapped on Figure 5 below. This figure shows existing Great Rides and Heartland Rides. Note there are further cycle trails not shown on the map e.g. the Lake2Lake Trail in Te Anau, and mountain biking trails around Dunedin.

There are opportunities to further expand the cycle network by creating several more Heartland Rides. Suggestions for an inter-linked cycle network in southern NZ are shown on Figure 5 to illustrate what could be created.

Looking more broadly than just cycle trails: the multi-agency Ride Southland group is preparing a strategy and business case for cycling facilities in Southland. This should lead to individual Approved Organisations preparing detailed business cases for individual facilities.

There is an opportunity to build on this Southland work, and to develop a parallel cycling strategy for Otago.

Possibilities include:

- Dunedin – Oamaru and north beyond Timaru.
- Balclutha – Invercargill via the Catlins.
- Bluff – Invercargill – Lumsden.
- Invercargill – Manapouri – Te Anau via Tuatapere.
- A loop connecting Queenstown – Cromwell, Cromwell – Clyde, Alexandra and Wanaka.
- Danseys Pass.

Some of these suggestions may require 100 per cent government funding if the existing roads are to be upgraded to a suitable standard (e.g. Danseys Pass, an alpine route).

The 2013 Dunedin City Integrated Transport Strategy identified a proposed strategic cycle network for the city. Some parts of Dunedin's transport network already have cycle facilities, e.g. a shared path along the western harbour, off-road facilities from the inner harbour to St Kilda beach, as well as some on-road cycle lanes.

Figure 5: Southern New Zealand cycle network: existing and potential

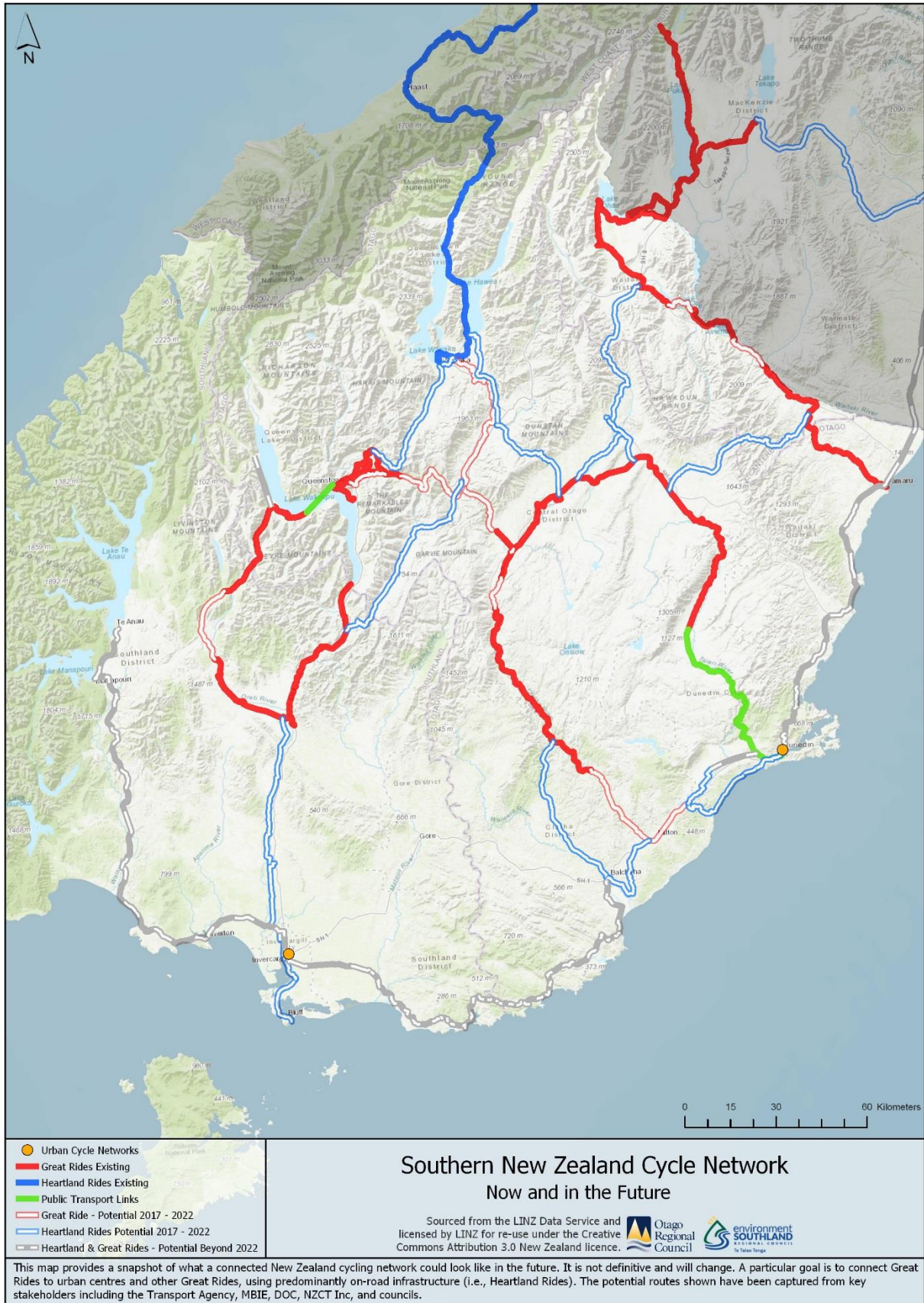
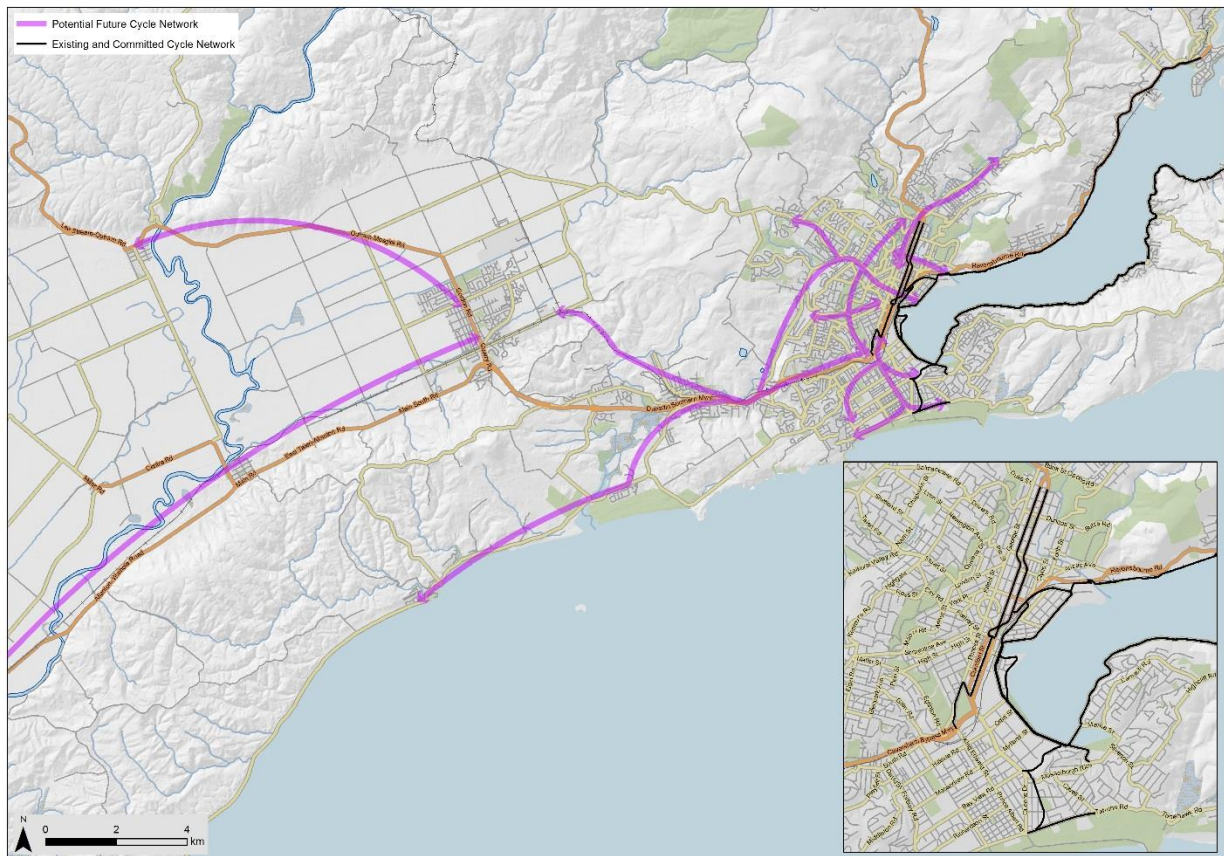


Figure 6: Dunedin’s current and future cycle network



Source: *Dunedin City Council Transportation Planning, November 2017*

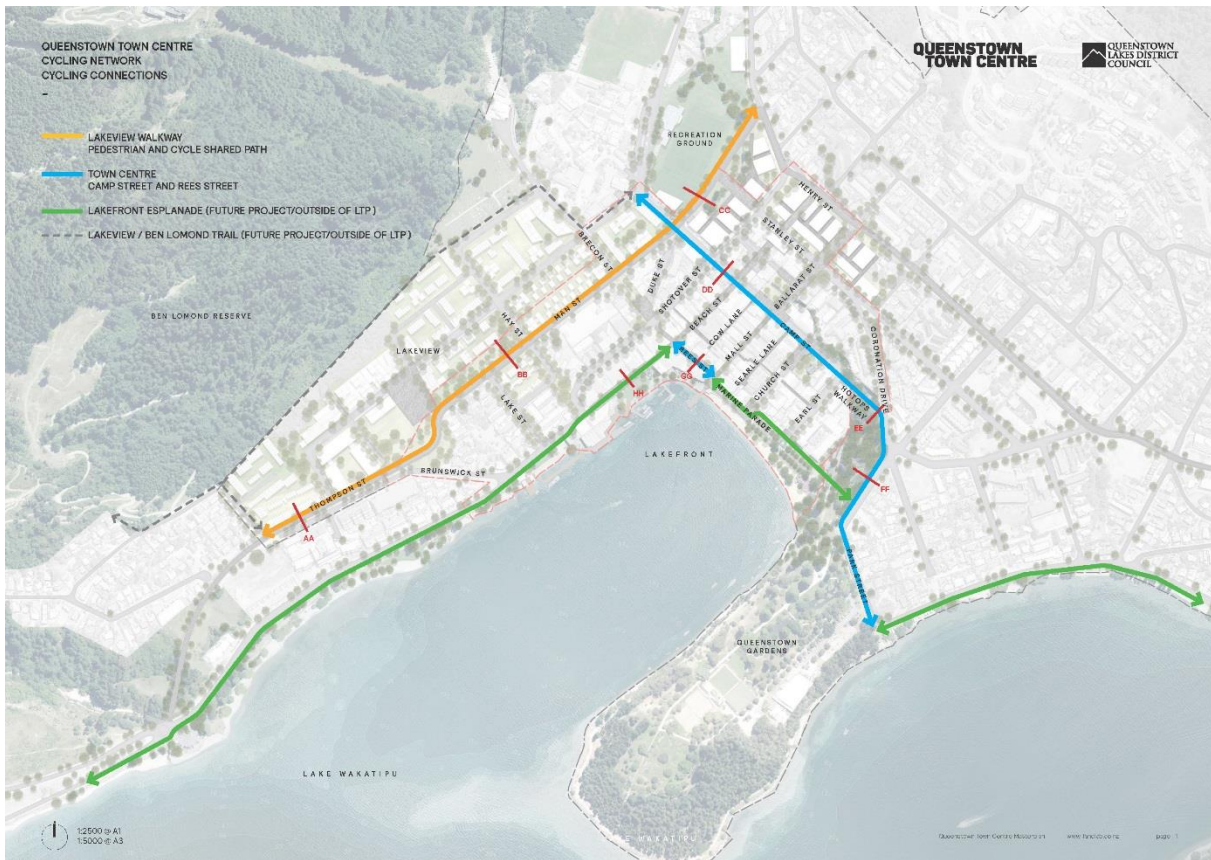
Additionally, before mid-2018, Dunedin City Council and the Transport Agency plan to complete cycleways on SH1 through the city (the one-way pair), to link NZTA’s SH1 / one-way pair cycle lanes, to connecting existing shared paths to form a harbour circuit and linking that circuit to the central business district. The extension of the SH88 walkway / cycleway to Port Chalmers is now going to be delivered as part of the Dunedin-Port Chalmers Safety Improvements Project, which has funding committed.

These improvements are designed to improve safety and to encourage increased cycling by both commuters and recreational cyclists.

Future improvements to Dunedin’s cycle network, shown on Figure 6, are likely to focus on improving access and safety from residential catchments, employment areas, and Dunedin’s key attractors to cycle facilities. Dunedin City Council plans a new cycleway along the Southern Trail corridor between Caversham and Wingatui, as well as a bridge from the inner harbour to the central business district.

Figure 7, below, shows the proposed cycle network for Queenstown’s town centre.

Figure 7: Queenstown’s proposed Town Centre cycle network



Source: Queenstown Lakes District Council, November 2017

The opportunity to make a step change reduction in serious road trauma

In October 2018, the Southern Road Safety Influencing Group⁵⁹ and NZTA partnered to launch an initiative intended to bring about a step change in reducing serious road trauma. Called *Any Number is too Many*, this new approach to road safety starts with the belief that while road deaths and serious injuries **are** preventable and we don't have to accept these as normal, our old approach to road safety is not delivering the step change needed. Instead, change needs to come from the community, because it is our families, friends and neighbours who are affected.

Any Number is Too Many provides a means of creating community commitment to increasing road safety and a means of engaging on this issue. The approach is designed to build public understanding or road risk, resulting in safer choices by communities and individuals. It does this by providing people with easy ways to emotionally connect with *Any Number is Too Many*, and to demonstrate their care, leading to enduring behaviour change. (The design is grounded in proven social marketing theory and practice.)

⁵⁹ The Southern Road Safety Influencing Group is an initiative set up by the Southland and Otago Regional Transport Committees, and includes regional council, territorial authorities, AA Southland, ACC, SDHB, the Richardson Group, Fonterra and Real Journeys.

The objectives of *Any Number is Too Many* are:

- communities are having good conversations about risk on the road
- more people know there are conversations going on
- more people are participating in these conversations
- more people 'care':
 - the concerned and disengaged' are becoming more public in displaying their concern
 - more people agree that some roads are dangerous (at the current speed)
 - more people believe speed should match risk.

The outcomes anticipated from engaging communities in better conversations about road risk and safer road safety choices are:

- Communities and individuals understand the factors that determine road risk (It's not just the driver / some roads are dangerous).
- Communities and individuals are more open to road safety changes and are making safer choices.
- Speed limit consultations are supported. Drivers are complying with speed limits.
- Death and serious injury is reduced.

The strategic approach being used is shown in the diagram below. At the time these RLTPs are being finalised (May 2018), *Any Number is Too Many* is still in Phase 2.

Strategic Approach

- Trigger declarations
- Collective voice



Thanks to the investment that the Road Safety Influencing Group partners and NZTA have made in designing and launching this initiative, and the effort invested in establishing it as a cross-agency collaborative approach, Otago and Southland regions are now well placed to build on this opportunity to make a step change reduction in road trauma.

While there is some funding for AOs to continue using the *Any Number is Too Many* brand included in the road safety promotion budgets (in the Road Safety Activity Class) in these RLTPs for 2018-21: in for each AO, NZTA has, however, announced, that it will no longer be supporting *Any Number is Too Many* project as it wants to focus on a national rollout of an accelerated programme for implementation of its Speed Management Guide instead.

Consequently, the Southern Road Safety Influencing Group is to consider (in mid-2018) how to continue *Any Number is Too Many* project in order to support better conversations around road risk and appropriate speed limits and driving behaviour.