Before Hearing Commissioners
In Dunedin

Under	the Resource Management Act 1991 (the Act)
In the matter of	Submissions on the Proposed Otago Regional Policy Statement 2021
Between	**Otago Regional Council** Local Authority
And	**Waka Kotahi NZ Transport Agency** Submitter 305

Evidence in chief of Peter Bernard Robinson for Waka Kotahi NZ Transport Agency on – Corporate

Dated 23 November 2022

1 Executive Summary

1.1 Waka Kotahi is defined in the Proposed Otago Regional Policy Statement 2021 ('**pORPS**') statement as being responsible for a 'Nationally Significant Infrastructure'. We have statutory obligations[1] that provide both direction and actions and influence where we can prioritise transport funding and implementation.

1.2 Waka Kotahi has an extensive state highway network in Otago that traverses through all types of natural environments. Continual planned and unplanned operation and maintenance activities are required in relation to the state highway network. There is also a pipeline of future upgrade and development works in the Otago region, most of which relate to Road to Zero and resilience.

1.3 Waka Kotahi is a funder of land transport for local authorities in Otago. This includes local road maintenance, improvement and support through emergency works.

1.4 Waka Kotahi aims to achieve great environmental outcomes through its state highway asset maintenance and upgrade work, and wants the planning framework to provide the flexibility to allow it to do that.

1.5 The Waka Kotahi assets have a functional and operational need to service communities, provide a lifeline utility, link up with existing roads (both state highways and local) and be safe, operational and reliable. The balancing of those needs with achieving positive environmental outcomes requires a flexible planning framework that allows Waka Kotahi to do so.

2 Qualifications and Experience

2.1 My full name is Peter Bernard Robinson. I am the Principal Advisor Surfacing in the Tactical Asset Investment Team of Waka Kotahi NZ Transport Agency ('**Waka Kotahi**'). I have been employed in this role for three years.

2.2 This role supports the network teams in programming and understanding the maintenance and asset renewals need of the regions and I am also responsible for the Skid resistance programme across the state highway network in New Zealand.

2.3 Prior to this role I was employed as an Asset Manager/Network Manager for Southland and Milford regions for 14 years. This role involved all areas of asset management and control including maintenance and renewals, safety, consenting, contract management of both contractors and consultants and project management of medium projects. The work involved management on a regular day-to-day basis and during emergency events, to ensure the state

[1] Under the Land Transport Management Act 2003 and Government Roading Powers Act 1989.

highway network can be relied upon to provide safe, accessible, and resilient journeys for people and products.

2.4 Prior to working with Waka Kotahi I was employed with MWH Consultants primarily working in the maintenance and project areas. For the previous 18 years I worked in various roading related roles in the Dunedin City Council.

2.5 I hold a New Zealand Certificate in Engineering (Civil).

2.6 My evidence relates to the Waka Kotahi submission points on IM-Integrated Management, CE- Coastal Environment, LF – Land and Freshwater, EIT – Energy, Infrastructure and Transport , ECO- Ecosystems and Biodiversity, and HAZ – Natural Hazards of the Proposed Otago Regional Policy Statement 2021 ('**pORPS**').

2.7 I have authority to give this evidence on behalf of Waka Kotahi.

3 Code of Conduct

3.1 While these proceedings are not before the Environment Court, I confirm that I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court's Consolidated Practice Note 2014.

3.2 As a Waka Kotahi employee, I acknowledge I am not independent; however, I have sought to comply with the Code of Conduct (and will do so in giving evidence at the hearing). In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

4 Scope of evidence

4.1 My evidence will address the following:

a) The Otago transport system;

b) Transport infrastructure in Otago;

c) The Waka Kotahi role in asset management;

d) The future upgrade and development objectives Waka Kotahi has in the Otago region;

e) Functional and operational needs of the Waka Kotahi assets; and

f) Challenges presented by the need to 'avoid' or minimise adverse effects and enhance or restore the natural environment.

4.2 I have considered the following documents when preparing my evidence:

a) Land Transport Management Act 2003;

b) Government Policy Statement on Land Transport;

c) National Land Transport Programme (NLTP) 2021-2024

d) Otago and Southland Regional Land Transport Plan;

e) Arataki – The Waka Kotahi 10-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system; and

f) Otago Lifelines Programme.

5 Otago transport system

The Transport System Context

5.1 The Land Transport Management Act 2003 ('**LTMA**') establishes Waka Kotahi and sets out its objectives to fund the land transport system and to manage and operate the state highway network. The LTMA determines how the land transport system is to be planned and funded at both a national and regional level. Specifically, it requires the development of a Government Policy Statement for Land Transport ('**GPS**').

5.2 The GPS is where the government determines how investment into the land transport system from the National Land Transport Fund ('**NLTF**') will contribute to achieving overall government outcomes. The GPS influences decisions on how money from the NLTF will be invested across activity classes, such as state highways and public transport. It also guides local government and Waka Kotahi on the type of activities that should be included in Regional Land Transport Plans ('**RLTPs**') and the National Land Transport Programme ('**NLTP**'). It identifies that the purpose of New Zealand's transport system is to improve people's wellbeing, and the liveability of places through five key outcomes:[2]

a) *Inclusive access* - enabling all people to participate in society through access to social and economic opportunities, such as work, education, and healthcare.

b) *Healthy and safe people* - protecting people from transport-related injuries and harmful pollution and making active travel an attractive option.

[2] https://www.transport.govt.nz/assets/Uploads/Report/Transport-Evidence-Based-Strategy.pdf

c) *Environmental sustainability* - transitioning to net zero carbon emissions, and maintaining or improving biodiversity, water quality, and air quality.

d) *Economic prosperity* - supporting economic activity via local, regional, and international connections, with efficient movements of people and products.

e) *Resilience and security* - minimising and managing the risks from natural and human-made hazards, anticipating and adapting to emerging threats, and recovering effectively from disruptive events.

5.3 The Government has identified four strategic priorities for the transport system in the GPS:[3]

a) *Safety* - Developing a transport system where no-one is killed or seriously injured

b) *Better travel options* - Providing people with better transport options to access social and economic opportunities

c) *Climate change* - Developing a low carbon transport system that supports emissions reductions, while improving safety and inclusive access

d) *Improving freight connections* - Improving freight connections for economic development.

5.4 The transport system within Otago is planned, developed, maintained, and operated within the framework and context provided by these strategic priorities.

5.5 Over the NLTP 2021-2024 period, $1.1 Billion is to be invested into the Otago and Southland Region for transport infrastructure. Of this, $636 million is forecast on maintenance and operations, $63 million on walking and cycling, and $61 million on Road to Zero. Our investment in Otago is focussed on a safer and more resilient land transport system that supports regional growth and provides appropriate levels of service, as well as prioritised investments in Dunedin and Queenstown to improve access to public transport, walking and cycling and take better account of place and movement functions of city streets.

5.6 Maintaining safe and reliable road and rail freight connections is essential to support the COVID-19 recovery, along with improving access to employment, education and training opportunities and essential services for isolated communities. See figure 1 below, illustrating the key investment areas proposed over the coming period.

[3] https://www.transport.govt.nz/assets/Uploads/Paper/GPS2021.pdf

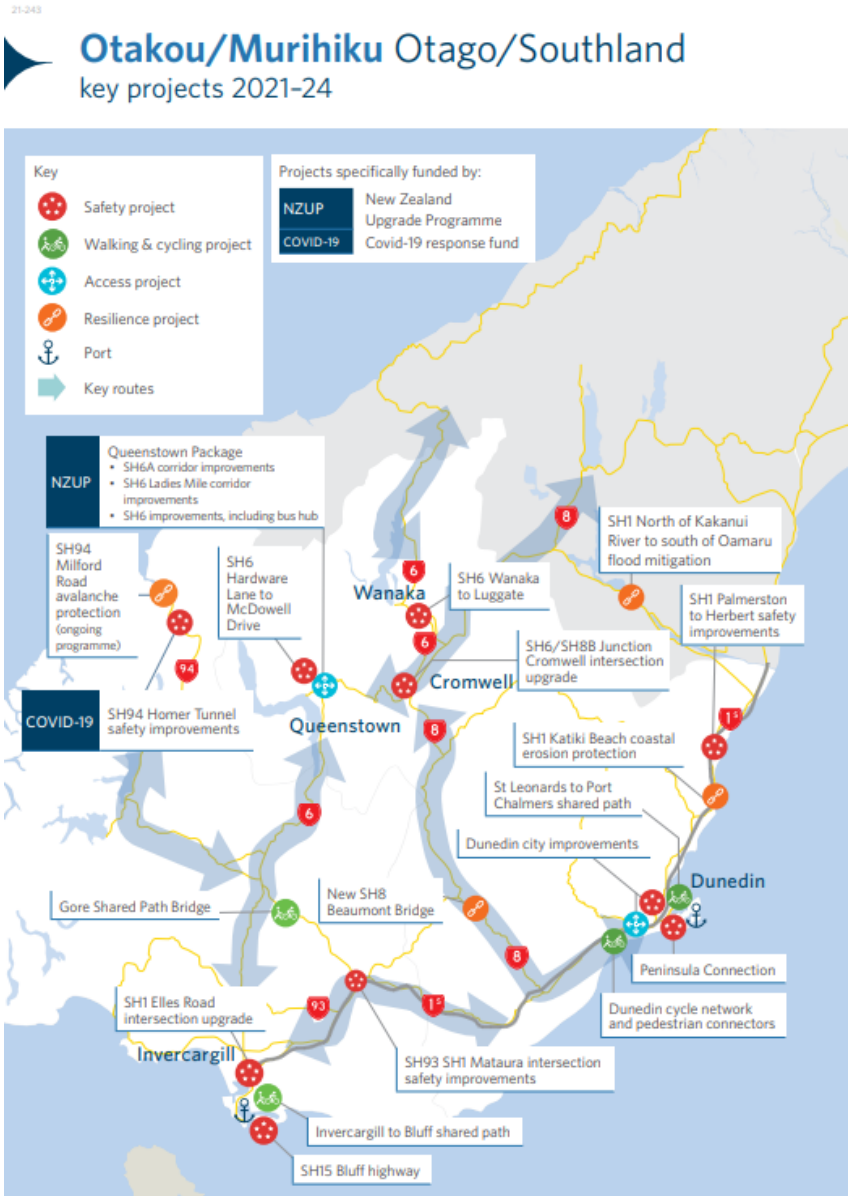

Figure 1: Map of Key Projects in Otago/Southland under the 2021/24 National Land Transport Programme

6.1 The state highway network is nationally significant infrastructure that, within the Otago region, comprises 1,301 km over eight designated state highways - SHs 6A, 8A, 8B, 84, 85, 86, 87, and 88, and five state highways as part of cross boundary links – 1, 6, 8, 83 (within Otago Region but under Canterbury Regional Council Jurisdiction), and 90 as shown in figure 2 below.

Figure 2: Map of Otago Regional Boundary and State Highways

6.2 Otago is a geographically and geologically diverse environment. It includes alpine mountains and glacial lakes in the west, central 'drylands' of tussock-grasslands and block mountains interspersed with highly productive agricultural basins, and a remnant volcanic and low-lying east coast. Coastal Otago's climate is relatively constant but, inland, continental extremes between hot summers and cold winters exist. This impacts on the management of state highways by limiting when works can be carried out and what resources (e.g. aggregate supply) can be used.

6.3 The existing state highway and other transport networks need to be able to be operated, maintained, upgraded and developed, in all of the environments they are located in. Transport infrastructure in the Otago Region exists in all types of environments. For example:

a) State Highway 1 north of Dunedin traverses the coastal environment, as does State Highway 88 between Dunedin and Port Chalmers;

b) State Highway 6 near Queenstown passes through Outstanding Natural Landscape areas;

c) State Highway 6 also passes through Wāhi Tūpuna areas near the Kawarau River; and

d) State highways cross a number of significant water bodies in the Otago Region, including the Kawarau and Clutha Rivers.

6.4 New transport assets are also required in order to improve safety and efficiency, improve resilience to natural hazards and a warming climate, accommodate growth and change in communities, and support the change to lower carbon transport choices.

6.5 Local environmental conditions, coupled with predicted effects from climate change, are expected to impact on sea and groundwater levels and rain events, flooding, slips, erosion, storms, and sea surge are all expected to intensify. Changes to the frequency and/or severity of weather events - snow, high rainfall, high temperatures and periods of drought – are likely, with increased risk for most parts of Otago. Waka Kotahi (and local authorities) will need to respond to ensure the Otago transport system can adapt to the changing environmental conditions..

6.6 Otago's transport system exists within complex, and in some places increasingly urban areas as well as across extensive rural environments. The state highway network is critical to the movement of rural goods to production centres and markets, as well as domestic and international visitors. Safe and reliable access to Port Otago and airports in Dunedin and Queenstown is important to the success of the wider Otago and Southland economies. They serve important community places, schools, town centres and tourist attractions.

6.7 The state highway network has a primary role in community. As well as being a major conduit for utilities infrastructure across both urban and rural areas it also has a critical role in lifelines. The resilience of communities, especially in a Regional or National emergency, is intrinsically linked to the availability of the state highway network.

6.8 The transport network must accommodate an increasing variety of transport modes, including, but not limited to, walking, cycling (both commuter and recreational), electric cycles and scooters along with the traditional cars, trucks, and buses in urban areas, irrespective to mode of power.

Cycling infrastructure

6.9 Cycling infrastructure is progressively being developed within the main urban centres and major townships. The Queenstown trails currently cover 130 km from Queenstown to Gibbston via Arrowtown, with further investment planned to upgrade and connect existing tracks and trails.

6.10 Following the completion of Dunedin's current cycle infrastructure projects, up to 50% of residential properties will be within 600 m of a cycle facility.

6.11 Cycling numbers continue to rise across the regions, particularly for recreational cycling as E-bikes ease access to this mode of transport. Good progress has also been made on developing a regional cycling network. The Otago region currently supports six of the country's Great Rides, with four new trails currently in development. A map of the Otago region's cycling network is in Figure 3. Many of the Great Ride trails link small communities and have become important commuter and journey to school routes where they provide safe off-road options.

6.12 Future development in this area will focus on regional gaps in the network, for example linking

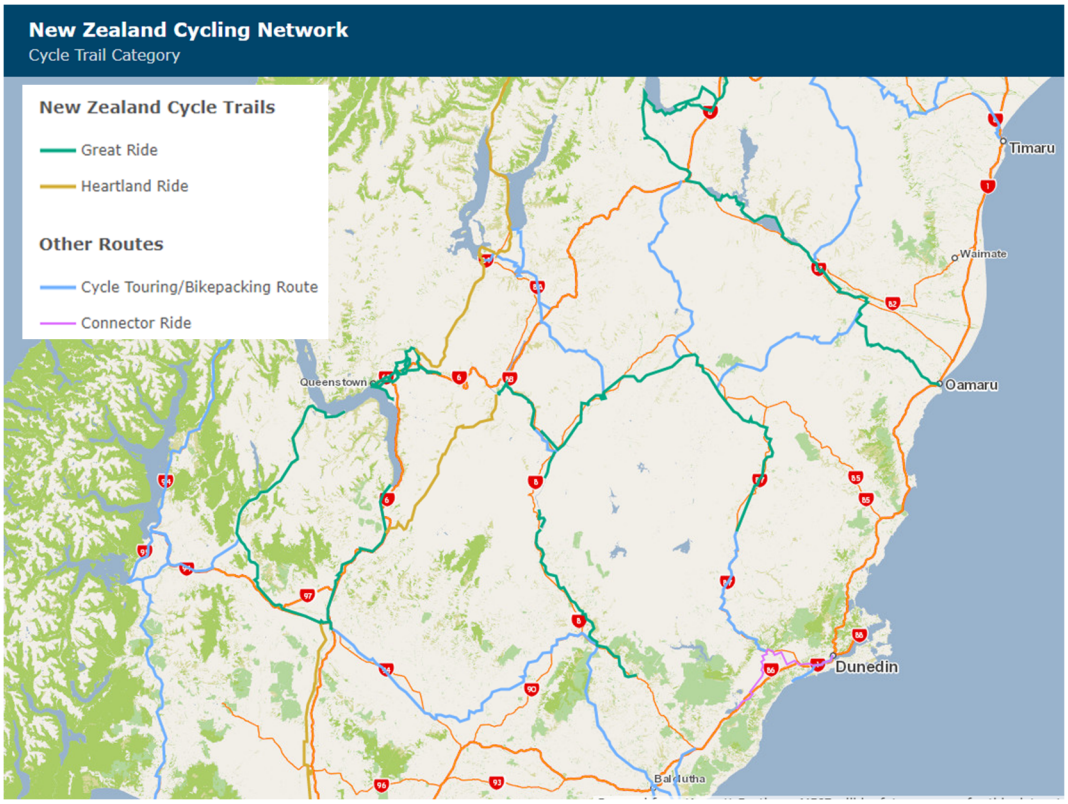

Figure 1: New Zealand Cycle Network

Dunedin to the south, west and north, and linking the Otago Central Rail Trail and the end of the Roxburgh Gorge trail.

6.13 Waka Kotahi is increasingly looking beyond the roading environment to consider the integration of the movement function provided by transportation infrastructure with the wider place or land-use setting. This is reflected in the One Network Framework approach which has recently been developed.[4]

[4] https://www.nzta.govt.nz/roads-and-rail/road-efficiency-group/one-network-framework/about-the-onf/.

7 The role of Waka Kotahi in asset management

7.1 Waka Kotahi is responsible for maintaining all assets either directly in the case of state highways or by funding assistance for local authorities to prescribed levels of service along the road corridor.

7.2 Asset management of the road infrastructure occurs through – planned (including routine and asset improvement) and unplanned activities.

7.3 Planned activities include routine activities and asset improvement. Routine activities are maintenance and inspections that occur as needed. They are identified by inspection or prior to operational failure. Asset improvements are generally works that include an element of design and are programmed to either enhance an existing asset or developed to broaden its use or make it more resilient.

7.4 Routine activities maintain a constant level of service. Generally, these occur under generic consenting or do not require consenting (permitted activities). Although often planned in detail in advance, programmes for routine work are subject to variation due to funding or prioritisation changes. Examples of routine activities include, but are not limited to:

a) repairs and maintenance on the physical road (defect repairs, general maintenance like road surface sweeping, road marking, etc.).

b) repairs and maintenance to areas around the physical road (mowing, signs, guardrails).

c) pavement repairs which are more extensive than a defect repair,

d) drainage pathway maintenance and reinstatement parallel to the roadway,

e) drainage infrastructure; culverts, soak pits, subsoil drainage and bridges.

f) road renewals - reseals and road reconstruction, sign installation.

7.5 Asset improvement activities involve those interventions where the infrastructure is being modified to meet change in demand or an improved level of service. The size and complexity of these programmed works can range from small to major projects. Generally, these interventions require completing consent procedures in advance. Examples of asset improvement includes, but not limited to:

a) Drainage - including culvert or bridge installation as a replacement or a new installation.

b) Stock underpass or similar infrastructure to facilitate the operations of landowners adjacent to the road corridor.

c) Ancillary equipment, traffic lights, weather stations, traffic usage monitoring, electronic feedback signage, monitoring equipment.

d) Corridor usage, including cycle lanes, or other modal use facilities, passing lanes, installation of infrastructure by others including all major utility groups.

e) Modification of the road for safety including road widening, facility installation (e.g., guardrail, roundabouts, etc.)

7.6 Unplanned activities are those that present an immediate risk to safety, environment and/or infrastructure. They are reactive and may range from simple or complex, local to regional. These events require agility for operations to respond in the most appropriate way to deal with the risks. For major events at a regional level where emergency provisions are implemented, provisions allow for retrospective consenting, but at times operations are decided by Incident controllers such as Civil Defence, Police or FENZ. Examples of unplanned activities include, but are not limited to:

a) Callouts, vehicle crashes or spillage which may include dangerous, environmental or health risk components, fuel and oil management, wandering stock, etc.

b) Effects of heat, excessive water, ice or snow in the road corridor.

c) Infrastructure failure or damage, this includes third party works, Utilities for example.

d) Geotechnical events. Where the road drops away or rocks/debris drop onto the road surface or complete failure like a massive slide movement that includes and dissects the road.

7.7 Waka Kotahi has developed a number of processes and systems to instigate work programmes, (including management of reactive interventions) cognisant of its responsibility to protect the interests of Mana Whenua, heritage values, the environment and requirements from the various governing bodies. These processes are reviewed regularly and adapted based on national and regional influences. Regular liaison meetings are held with a national approach and within individual regions seeking to identify and protect local influences.

7.8 **Appendix 1** shows the list of resource consents held with the various Councils needed to facilitate undertaking our statutory requirements under the current statutory framework. 13 of these consents are set to expire within the next 10 years. These consents cover activities such as:

a) discharging contaminants to water;

b) works relating to water courses crossing the state highway network;tdiverting water from a wetland for the purposes of maintaining state highway assets;

c) excavating material from rivers for flood control and bridge protection,

7.9 Wherever possible Waka Kotahi seeks to undertake works within the permitted activity framework. It is acknowledged that some elements of the work require more specific controls, and these are affected under either a site specific, or process specific Resource Consent.

8 The future upgrade and development objectives of Waka Kotahi in the Otago region

8.1 There are a number of programmes relating to the development of upgrades to address likely and potential issues along the road corridor. Some of these relate to modal use, to community expectation, carbon emission reduction, and government direction. These issues may be safety related in line with Road to Zero or similar projects, resilience based on pre-empting network vulnerabilities or general maintenance/road user experience improvements (improved levels of service).

8.2 To indicate the wide range of upgrades and developments works currently in the draft list of projects (unfunded):

Number	Type	Scope
4	Efficiency	3 variable messaging sites, one freight improvement.
1	Environmental	Low noise surfacing
14	Resilience	2 drainage improvement, 2 intersection, 3 road width, 1 coastal protection, 3 for flood controls, 3 rockfall, 2 scour and culvert,
30	Safety - Road to Zero	3 level crossing improvements, 12 Speed management, 8 intersection improvements, 1 safety signage, 3 guardrail and 3 infrastructure projects
1	Safety – other than Road to Zero	Improve township lighting.
3	Walking and cycling	Improvements to existing facilities

8.3 These are principally sites where a deficiency has been identified that needs to be resolved rather than sites where issues can be anticipated.

8.4 Waka Kotahi has a critical role in the planning and developing of the land transport system to transport systems operational. This is principally achieved through a long-term vision through a 30-year plan. This has been progressed through initial stages with the establishment of the Baseline Network plan. This is developed into five outcomes: Healthy and safe people, environmental sustainability, inclusive access, economic prosperity and resilience and security. This vision is critical in identifying future needs to ensure government determined levels of service are maintained.

8.5 Six key areas have been identified where drivers for change will result in the programming of future investments.

a) Demographic change

b) Climate change

c) Technology and data

d) Customer desire

e) Changing economic structure

f) Funding and financing challenges.

8.6 Climate change will have a direct implication to future projects nominated in or about Coastal areas and within freshwater reserves. Either through shoreline protection from elevated sea level and increased storm intensity, rivers from increased annual rainfall and rain intensity exceeding current capacity or geotechnical interventions due to higher freezing levels and more freeze thaw actions.

8.7 Examples of this issue is at Katiki Beach, north of Palmerston. where both road and rail are at risk if coastal embankment erodes through failure to maintain existing protection. It would be difficult to manage the environmental effects of any improvements to sections of roads such as this, due to their proximity to the coast.

Figure 2: Coastal Protection Katiki Beach

8.8 If the road has to close because of erosion, there is no detour for rail and the only road (Horse Range Road) to utilise as an alternative to the Katiki coastal road corridor. For Highway traffic the diversion would be through Central Otago (extra 280km and 3.5 hours journey). Also noted the Horse Range Road option is single lane and would queue traffic at each end (see figure 5).

Figure 3: Horse Range Road alternative to SH1 at Katiki

8.9 As per the example above, resilience will also be a main driver for projects, Resilience in areas like Katiki where there is no, or limited detour options and these will be given higher priority for funding than other sites. Further projects will be developed through consideration of capacity, efficiency, and Customer expectations.

9 Functional and operational needs of the Waka Kotahi assets

9.1 The total length of roads in New Zealand (2019/20[5]) is 94,000km with 85,796 being local authority (63% sealed roads) and 11,021km of state highway. For Otago the length of local roads is 9,418 (40% sealed) and state highways are 1,300km.

9.2 Vehicle Kilometres travelled (VKT) in 2017 were 45,327M VKT's with 2,434M VKT for the Otago portion (5.4% of national travel). Of this total 924M VKT are on local roads and 1,511M VKT are on state highways. Although the state highway network is 13.8% of the total physical road length in Otago it carries 62% of the traffic movements. Of the total VKT's on the Otago state highways 10% are heavy commercial vehicles.

9.3 This data validates the critical role of the state highway network and the need to maintain a robust connectivity across the region. This means Waka Kotahi needs the ability to undertake works to protect, manage, and maintain infrastructure. Connectivity is a lifeline to the communities where the highway is located, and the main centres rely on this access for supply of daily resources. For example, state highways are the only efficient route into the following main centres:

a) Central Otago: Queenstown, Cromwell, Wanaka and Alexandra

b) Southern Route: Invercargill to Dunedin

c) Northern Route: Dunedin to Christchurch (including Timaru, Oamaru, Ashburton)

d) Southern areas to International Airport at Queenstown and Christchurch, and to domestic airports at Dunedin, Invercargill and Christchurch.

e) Southern areas to Picton Ferry.

9.4 The state highway network must service communities that would not otherwise have vehicle access as well as going through main centres. The state highways also have to link up with other state highways and local roads, while also being safe, operational, efficient and reliable.

10 Challenges presented by the need to 'avoid' or minimise adverse effects and enhance or restore the natural environment

10.1 Section 96(1)(a) of the LTMA requires that Waka Kotahi exhibit a sense of social and environmental responsibility. Waka Kotahi promotes an accessible and safe transport system

[5] https://www.transport.govt.nz/statistics-and-insights/road-transport/length-of-road/

that contributes positively to New Zealand's economic, social, and environmental welfare, and we are committed to acting in an environmentally and socially responsible manner[6].

10.2 Waka Kotahi will operate and develop programmes for the Otago area cognisant of the environmental impact. To achieve this effectively Waka Kotahi require allowance for balancing the implementation of economic, social, and environmental welfare concerns. Waka Kotahi needs the planning provisions to give it some flexibility in undertaking its statutory obligations.

10.3 New Zealand's roads were mostly developed from original bullock tracks. However, our ancestors took the line of least resistance – going around swamps, hills and sometimes alongside rivers until they found good points to cross, because it was easier, even though it took a while. This means many New Zealand roads are far from being straight lines – they reflect our topography and the changing patterns of economic and social development.[7] A number of the routes are now in recognised areas of 'high or significant natural character'.

10.4 Our programmes are required to, and have a proven history of, working to incorporate design and implementation sympathetic to the area it is being constructed in. This can be as simple as vegetation restoration where local plants are grown specifically to repopulate disturbed ground (Leptospermum on SH1 at Terapuka River bridge, Katiki), to the enhancement of concrete structures (e.g. to tell the story of Local Māori traditions depicted on the wall of SH88) and the relocation of rare worms on the SH1 project through Caversham.

10.5 If the pORPS is too restrictive with wording like 'avoiding' (EIT-INF-P11, EIT-INF-13 and EIT-INF-PR2) adverse effects, it will result in restrictions to business-as-usual activities. These may include:

a) Maintenance activity – queues or detours increasing carbon emissions. Carbon generation through repairs, including transportation of plant, equipment and materials.

b) Access to rivers for flood clearance, especially around bridges.

c) Cycling and walking in the context of mixing with motorised vehicular transport may be defined as mixing incompatible activities.

10.6 Use of the specific noun to 'avoid', even where tempered with 'mitigate' requires an action to a level of exclusion. 'Minimising' effects is much more realistic, practical and allows for operational activities (in relation to regionally significant infrastructure which is already in place) to be managed to reduce the impacts. For example:

[6] Waka Kotahi Policy/ Environmental and Social responsibility: https://www.nzta.govt.nz/assets/resources/environmental-and-social-responsibility-manual/docs/environmental-and-social-responsibility-policy.pdf
[7] https://www.nzta.govt.nz/roads-and-rail/research-and-data/state-highway-frequently-asked-questions/

a) planning of road repairs can select options best suited for emission reductions including timing for shortest queuing delays, requiring vehicles to turn off engines or upgrading alternative routes for efficient detouring may impact the generation of carbon emissions.

b) Use of alternative materials: Currently research and trials are being done to reduce the carbon in the roading materials, but these are not yet commercially available.

c) Drainage quality is influenced by the contaminants that are generated by vehicular use, without restricting road use to only 'clean' vehicles to avoid or mitigate the generation of these contaminants, we can only minimise the effects through improvement of water quality through natural or artificial filtration processes.

10.7 The word 'avoid' creates practical difficulties where it is not possible to undertake the work without potential for adverse environmental effects (such as on waterways), which can be controlled (minimised) but not eliminated (avoided).

10.8 For example, if we have to clear a culvert to provide more resilient fish passage or do work in a stream bed for resilience against flooding, it would lead to better environmental outcomes if we were able to undertake these works before they were required out of necessity (when it's flooding etc), i.e. 'minimising' effects of these works rather than 'avoiding' effects (which would be very difficult).

10.9 Vegetation control is necessary to maintain an efficient and safe flow of water in waterways. This work cannot be undertaken remotely and requires machinery to be able to access the growth to clear the vegetation. This operation requires machinery in or near waterways or coastal environments. Effects can be minimised but not avoided.

11 Provision of Infrastructure

Use of the term 'limits'

11.1 I understand that the pORPS proposes to provide for infrastructure "within limits".

11.2 As noted in section 11 above, Waka Kotahi has limited ability to avoid some aspects of state highway maintenance and use and it is unclear how Waka Kotahi could do so "within limits".

11.3 As indicated above the state highway system is lineal and linking. As per the example of Katiki beach, sections 9.7-9.8 above, any unachievable or unaffordable 'limit' put in place has the potential to restrict the state highway operation. Alternative routes result in increased travel distance which has significant cost and efficiency implications and may sever access to local communities.

11.4 An example of this could be if the 'limit' imposed is that there is no waterway contamination in wetland areas. Waka Kotahi already has a consent (RM11.209.02, expiring in 2032) acknowledging that some contamination to water will occur when undertaking maintenance of state highway bridges, culverts and other structures. If a new consent cannot be granted for this maintenance, then the structures become a risk and are no longer able to be used.

Reduction in adverse effects

11.5 I understand that there is proposed to be a requirement to reduce adverse effects of existing infrastructure as part of a substantial upgrade proposal (EIT-INF-P14). This is a strong direction that would be difficult for Waka Kotahi to achieve in all instances due to the functional nature of its assets.

11.6 Waka Kotahi aims to balance environmental values and reduce adverse effects when undertaking substantial upgrades and would prefer the flexibility to be able to achieve this where it is reasonably practicable to do so. Because of the need for state highway assets to exist in certain locations as well as being safe and operational, occasionally it can be impracticable to reduce existing adverse effects, and there are more effective ways to achieve better environmental outcomes.

Peter Bernard Robinson

23 November 2022

Appendix 1

Current list of Resource Consents for Otago Operations team with Otago and Canterbury Regional Councils

Consent	Location	Description	Issue Date	Expiry Date
CRC133095	Waitaki River near SH1 Bridge, Glenavy	To discharge contaminants to water (Sediment from works)	29/04/2013	29/04/2048
RM11.209.01	Various watercourses crossing the state highway network throughout the Otago Region	To place, replace, alter, extend, reconstruct, demolish, remove structures that are fixed in, on, under or over the bedding including the associated disturbance and deposition of materials; and to clear debris and redistribute alluvium from within, or immediate surroundings of any structure in order to safeguard the function or structural integrity of the structure and to drill the bed of various watercourses for the purpose of maintaining State Highway bridges, culverts and other structures.	22/02/2012	22/02/2032
RM11.209.02	Various watercourses crossing the state highway	To discharge contaminants to water for the purpose of maintaining State Highway Bridges, culverts and other structures	22/02/2012	22/02/2032
RM11.209.03	Various state highways throughout the Otago Region	To place, extend, alter replace, reconstruct,	22/02/2012	22/02/2032

Consent	Location	Description	Issue Date	Expiry Date
		demolish, or remove structures fixed in, on, under or over any foreshore or seabed, and to remove and deposit sand, shell, shingle or other natural material from the coastal marine area. To redistribute alluvium, and to disturb the foreshore and seabed of coastal marine ae for the purpose of maintaining State Highway bridges, culverts, and other structures throughout the Otago region.		
RM11.209.04	Various state highway network throughout the Otago Region	To occupy the coastal marine area throughout the Otago region for the purpose of maintaining State Highway Bridges, Culverts and other Structures.	22/02/2012	22/02/2032
RM11.209.05	Various state highway network throughout the Otago Region.	To temporarily Divert Coastal water throughout the Otago Region for the purpose of maintaining State Highway Bridges and other structures.	22/02/2012	22/02/2032
RM11.209.06	Various state highways throughout the Otago Region	To discharge Contaminants to coastal waters throughout the Otago Region for the purpose of maintaining State Highway bridges,	22/02/2012	22/02/2032

Consent	Location	Description	Issue Date	Expiry Date
		culverts and other structures		
RM11.209.07	Various state highways throughout the Otago Region	To remove plant material from regionally significant wetlands throughout the Otago Region for the purpose of maintaining State Highway Bridges, culverts and other structures.	22/02/2012	22/02/2032
RM11.209.08	Various state highways throughout the Otago Region	To temporarily divert the flow of a waterbody, water from or within any regionally significant wetland, or water that affects the water level of any regionally significant wetland for the purpose of maintaining State Highway Bridges, culverts and other structures throughout Otago.	22/02/2012	22/02/2032
RM11.209.09	Various state highway network throughout the Otago Region	To discharge contaminants to air from abrasive blasting for the purpose of maintaining State Highway Bridges, culverts and other structures throughout the Otago Region	22/02/2012	22/02/2032
RM11.209.10	Various state highway network throughout the Otago Region	To place, replace, alter, extend, reconstruct, demolish and remove structures within a regionally significant wetland and to disturb and deposit any	22/02/2012	22/02/2032

Consent	Location	Description	Issue Date	Expiry Date
		substance within a regionally significant wetland throughout the Otago region for the purpose of maintaining state highway Bridges, culverts and other structures.		
CRC952308	Otematata River	To excavate Gravel, sand and other natural material from the bed of the Otematata River, to deposit Gravel, sand and other natural material on the bed, and to disturb the bed by operating vehicles and machinery, at or about map reference NZMS 260 H40:879-187 for bridge protection and flood control purposes.	02/08/1995	02/08/2030
1081	Trotters Creek Palmerston	To divert Trotters Creek for the purpose of State Highway Reconstruction	15/08/1972	01/10/2026
1464	Waitahuna River, Waitahuna	To divert flood flow of the Waitahuna river through the Waitahuna bridge sections	21/06/1977	01/10/2026
CRC000027	Longslip Creek, Dalrachney Station	To permanently divert spring fed tributaries of Longslip creek at or about Map reference NZMS 260 G39:4952-2653 for road realignment works	06/09/1999	06/09/2034
CRC000868	Longslip Station, Omarama	To reshape the channel, alter existing rock protection works, deposit	30/01/2000	31/01/2035

Consent	Location	Description	Issue Date	Expiry Date
		additional rock rip rap on the bed and banks of Longslip creek and maintain these riverbank protection works at or about Map reference NZ 260 H39:5113-2838		
CRC80887	Waitaki River Bridge, State Highway 1	To divert water	01/02/2008	01/02/2043
CRC121817	Waitaki River Glenavy	To install and maintain structures within the bed and banks of a river	22/03/2012	22/03/2047
CRC001851	State Highway 8 Killermont Station	To construct and reconstruct bank protection work, and to disturb the bed of the Ahuriri River by erecting a diversion structure, at or about Map reference NZMS 260 H39:563-277	07/06/2000	07/06/2035
CRC0808840	Waitaki River Bridge, State Highway 1	To construct a groyne	01/02/2008	01/02/2043
2008.200	Various locations along Katiki Beach from Tarapuka Creek approximately 2.5 Kilometres south of the intersections of McLeods Road and Horse Range Road, Moeraki, continuing for 6 kilometres south to Shag Point East Otago.	To deposit, erect and maintain erosion protection on Katiki beach for the purpose of erosion protection	22/06/2009	22/06/2044
2008.201	Various locations along Katiki Beach from Tarapuka Creek approximately 2.5 Kilometres south of the intersections of McLeods Road and Horse Range Road, Moeraki, continuing for 6	To disturb Katiki Beach embankment for the purpose of erosion protection.	03/07/2009	03/07/2044

Consent	Location	Description	Issue Date	Expiry Date
	kilometres south to Shag Point East Otago.			
2008.202	Various locations along Katiki Beach from Tarapuka Creek approximately 2.5 Kilometres south of the intersections of McLeods Road and Horse Range Road, Moeraki, continuing for 6 kilometres south to Shag Point East Otago	To occupy the Katiki beach embankment for the purpose of erosion protection.	03/07/2009	03/07/2044
RC04004	State Highway 90 Raes Junction	For the establishment and operations and maintenance of a stock effluent disposal site.	25/03/2004	
CRC133009	River near SH1 Bridge Glenavy	Vegetation clearance on the gravel islands and associated disturbance in the bed of the Waitaki river	29/04/2013	29/04/2048
2008.515	Various locations along Katiki Beach from Tarapuka Creek approximately 2.5 Kilometres south of the intersections of McLeods Road and Horse Range Road, Moeraki, continuing for 6 kilometres south to Shag Point East Otago.	To discharge contaminants to the coastal marine area for the purpose of depositing and maintaining erosion protection.	03/07/2009	03/07/2044
2008.476	Pipson Creek and Makarora River	To alter and disturb the beds of Pipson Creek and Makarora River fro removal of bedload from Pipson Creek and deposition of material adjacent to Pipson Creek and Makarora River.		16/12/2044

Consent	Location	Description	Issue Date	Expiry Date
2008.477	Pipson Creek and Makarora River	To discharge sediment and debris to Pipson Creek and Makarora River associated with removal of bedload From Pipson Creek and deposition of material adjacent to Pipson Creek and Makarora River		16/12/2044
2008.478	Pipson Creek and Makarora River	To temporarily divert Pipson Creek and Makarora River associated with removal of bedload from Pipson Creek and deposition of material adjacent to Pipson Creek and Makarora River		
RM081292	Pipson Creek and Makarora River	To carry out earthworks associated with the clearance of debris flow material upstream and downstream of the bridge; and deposit material adjacent to Pipson Creek and Makarora River.		27/01/2045
RM140942	Boundary Creek Reserve	To deposit clean fill within the Boundary Creek Reserve.		No expiry, Maximum Volume 17,600m³
2001.6404	Pidgeon Rock Discharge	Discharge sediment to watercourse associated with landslip stabilisation.		10/08/2036
2007.358	Nevis Bluff	To discharge rock debris, sediments to Kawarau		20/07/2042

Consent	Location	Description	Issue Date	Expiry Date
		River associated with stabilisation and blasting.		
2007.393	Nevis Bluff	To deposit rock and disturb the bed of Kawarau River associated with stabilisation and blasting.		20/07/2042