



Queenstown-Lakes District Travel Demand Management Single Stage Business Case



Executive Summary

The Queenstown-Lakes District is one of the fastest growing areas of New Zealand. Between 2003 and 2023, the residential population has grown from approximately 20,000 to over 50,000 people. This residential population is also matched by domestic and international tourist numbers which can see the total population of the District approaching 100,000 people during tourist peak activity. The rapid and sustained growth of the last 20 years however has outpaced the ability of the transport network to cope. The consequences of this are being experienced through the District, and in particular on State Highway 6 / 6A, with significant congestion and delays to journey times affecting the economy as well as the visitor experience and quality of life for residents.

Figure 1.1 illustrates how traffic flows on SH6A are at, or exceeding, the theoretical road capacity. As congestion causes the capacity threshold to be reached, journey time reliability decreases, overall travel time increases and the network is less resilient to disruption e.g., a crash can result in excessive network delays as there is no capacity to absorb the impacts on vehicle flows.

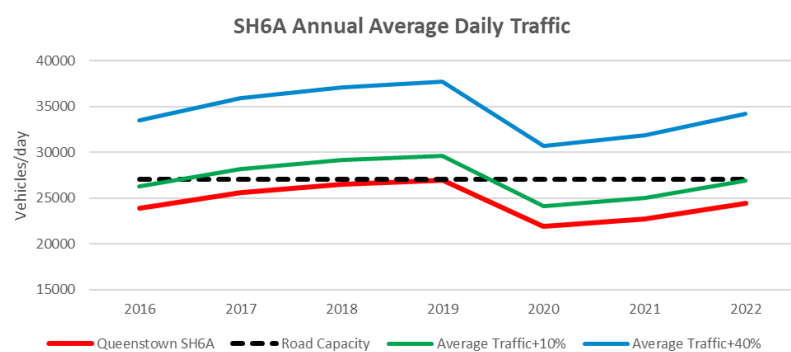


Figure 1.1 SH6A Traffic Volumes

While significant investment has been made into the roading network, complemented by improved public transport, the geographic challenges (alpine environment and mountainous terrain) mean it may not be physically possible or affordable to meet the transport demands through infrastructure and service improvements alone.

As part of the previous business case analyses, including the Queenstown Business Cases (2020), Travel Demand Management (TDM) was identified as a critical component in mitigating these issues. TDM, also referred to as Behaviour Change, seeks to encourage mode shift away from private vehicles to other modes such as walking, cycling or public transport and greater efficiency in vehicle movements through better planning and delivery. TDM does not, in general, require capital intensive infrastructure, but rather it focuses on working with individuals, communities and businesses to make smarter travel decisions. The overall goal is to improve efficiency of the existing transport network, leading to better environmental outcomes, and contributing to the health and wellbeing of the community.

Working with the investment partners and wider community stakeholders, three investment objectives were adopted:

- *To contribute towards increasing the average vehicle occupancy of vehicles along key corridors by 10% by 2033*
This objective acknowledges the specific pressure on the SH network and can provide a key baseline for measurement purposes.
- *To contribute towards increasing alternative mode share to 25% of all trips by 2033*
The geographic scope of this business case is district-wide, and this objective reflects the need to consider and provide TDM activities, and outcomes, across the district.
- *To contribute towards realising a 40% alternative mode share into Queenstown Town Centre by 2033*
SH6A, Frankton to Queenstown, is the primary route between the town centre and the wider

region including Queenstown Airport, the commercial/ industrial area of Frankton and the residential areas of Kelvin Heights, Jacks Point, Lake Hayes and others. It is of critical significance to the economy and tourist activity for the district, and the epicentre of the congestion problem.

Addressing these investment objectives will be essential to meeting national, regional and local strategies and policies with regard to delivering a viable and functional transport network that meets the needs of residents, businesses and visitors.

Economic Case

Following an analysis exercise with the stakeholders, and leveraging off the work undertaken as part of the Queenstown Business Cases, a preferred programme has been developed focusing on four key areas:

1. **Policy:** measures aimed at actively incentivising or disincentivising travel behaviours.
2. **Travel planning and behaviour change:** measures aimed at supporting or promoting travel via sustainable modes of transport, such as public transport, walking and cycling.
3. **Wayfinding improvements:** improvements aimed at making travel via sustainable modes easier. Improvements include both physical signage and online wayfinding.
4. **Travel management associations (TMA):** community-led organisations aimed at implementing a range of TDM measures.

Five different programmes were developed that reflected different approaches ranging from the do-minimum through to a do-maximum that built on specific TDM activities. The programmes were also developed with consideration of a delivery approach that recognises that community and business led TDM activities are the most successful.

Following further engagement with stakeholders and investment partners, along with a wider community engagement exercise, Table 1.1 details the Preferred Programme which was developed:

Table 1.1 Preferred Programme

Focus Area	Activity Bundle	TDM Measures	Output
Policy	Policy and Planning	Comprising of updates to codes of practice and the district plan to better provide for alternative modes. Supported by strategies and planning documents that will increase the complementary infrastructure such as cycle facilities or freight management activities.	10-15 policy and planning measures over the three-year investment period
Travel Planning and Behaviour Change	Parking Management	Aligned with the QLDC Parking Strategy, measures include increased and variable parking charges, time restrictions and enhanced support for shared use and car sharing schemes	50% penetration of delivery areas with parking management
	Travel Plans	Development and/ or revalidation of travel plans for residential areas, schools and business	50% penetration of delivery groups
	Education programmes	Delivery of complementary cycle and sustainable transport education and training	Four education programmes per annum
	Marketing and Engagement	Deliver marketing and engagement programmes per year to promote alternative modes of travel.	10 – 15 campaigns across the target delivery areas over the three-year investment period
Wayfinding	Physical signage	Increase density of wayfinding signage to ensure residents and visitors are appropriately directed to key destinations when using alternative modes.	50% of urban areas within 250m of physical signage

Focus Area	Activity Bundle	TDM Measures	Output
	Digital wayfinding	Ensure alignment of digital wayfinding	4 digital wayfinding initiatives
Travel Management Associations	N/ A	Establishment of TMAs to act as user-led groups for the delivery of TDM initiatives specific to their areas e.g., freight management or guaranteed rideshare home services for hospitality staff	50% of delivery areas to have an operating TMA

This preferred programme will also be complemented by other developments at the District, Regional or National level such as the through the Queenstown Public Transport business case or changes in legislation related to road pricing mechanisms. The proposed delivery programme provides flexibility to respond to these opportunities as they may arise.

In addition to the District wide activities such as Plan changes, nineteen geographical delivery areas have been proposed that reflect location specific requirements depending on their varying employment, educations and residential compositions.

In discussion with investment partners and in compliance with SSBC Lite guidance, it was agreed that the SP12 procedure would be an appropriate methodology to assess the efficiency of the preferred programme. Due to the novel scale of the proposed TDM interventions i.e., district wide, a very conservative approach has been taken based on a \$2 million programme costing.

Scenario	NPV Cost	NPV Benefit	BCR	FYRR
Central Case	\$2.0M	\$17.0M	8.5	17%

Overall, and based on an approximate penetration of 50% of residents and businesses within the QLDC area, the estimated BCR will be 8.5.

Commercial Case

With the TDM programme being non-infrastructure based, the required delivery mechanisms can be catered for within existing QLDC procurement procedures. The primary delivery mechanism will involve the contracting of external support to deliver the components on a fixed time and/ or output basis.

Financial Case

Affordability of the preferred programme is high with QLDC having allocated \$1.29 million from the Better Off funding initiative. Delivery of the business case is aligned to the funding profile as agreed. The packaging of the programme measures and the ability for this programme to be community-led (including harnessing the TMAs) means the programme costs are low.

Appropriate match funding is sought through the 2024–2027 NLTP period at the standard 51% financial assistance rate. We note the limited financial risks given the straightforward contractual arrangements necessary and with the \$1.29m pre-funding being applied to the TDM programme.

Management Case

The delivery of the programme will be led by QLDC with external support as required using existing Council mechanisms and procedures.

No significant delivery risks have been identified.

The benefits realisation of this programme would be measured against the baseline measurements during the pre-implementation phase and would be formally reported at the end of the NLTP period of investment (2027).

Summary

The transport challenges in the QLDC area are well understood and infrastructural improvements are not a feasible nor affordable solution. TDM has significant potential to deliver the necessary mode shift, but the challenges are significant as a programme of this scale has not been effectively delivered elsewhere in New Zealand. The proposed approach, defining discrete delivery areas based on their varying employment, educations and residential compositions will mitigate this risk, along with well-defined activities for delivery.

While the overall proposed cost of the programme is low at \$2million, the benefits are significant with an indicative BCR of 8.5, particularly when it is recognised a conservative methodology has been applied.

Successful implementation of this SSBC Lite should set a new baseline for TDM expectations in New Zealand as an important role model programme.

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Queenstown-Lakes Travel Demand Management – Single Stage Business Case

Quality Assurance Information

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1. Introduction

The Queenstown-Lakes District is one of the most rapidly growing areas of New Zealand. This population growth, combined with increasing domestic and international visitor numbers, is creating significant pressure on the transport network of the District.

While other projects have identified improvements to the District's transport network, capacity cannot be significantly increased due to geographical limitations as well as affordability issues. Therefore, the transport network must be utilised more efficiently to transport an increasing number of people and goods.

While existing transport projects do aim to more efficiently utilise the transport network (e.g., improved public transport services), these projects need to be supported by travel demand management (TDM) measures to ensure their success. TDM measures consist of softer measures, such as plans and strategies and behavioural change programmes, which either reduce demand for travel or re-distribute this demand for travel. Examples include:

- Encouraging residents and visitors to commute via alternative modes of transport, rather than in private vehicles;
- Discouraging single-occupancy private motor vehicle travel;
- Encouraging residents and visitors to commute outside periods of typical peak demand on the network.

This single-stage business case lite (SSBC) recommends a programme of TDM measures that can be delivered across delivery areas within the Queenstown-Lakes District. As an SSBC lite, the recommendations in this report are right-sized and have been developed to maximise the benefits while minimising investment costs.

2. Strategic Case

This Strategic Case:

- Outlines the strategic context and alignment of travel demand management single-stage business case (TDM SSBC) lite with the policy framework
- Identifies the key problems to be addressed
- Identifies the key investment drivers, including the outcomes and benefits that are sought, and
- Confirms the need for TDM measures.

2.1 Strategic Context

Rapid growth and urban development

The Queenstown Lakes District has experienced significant, and rapid, population growth and urban development over the last decade. This is forecast to continue and makes it one of the fastest-growing regions in the country. The resident population is expected to reach 84,750 by 2053, and while growth is particularly focused on Queenstown Town Centre, Frankton, Southern and Eastern Corridors and Wānaka and Hāwea, pressure is being experienced across the district¹. In addition to the resident growth, increasing numbers of domestic and international visitors are forecasted to take the average day population to over 120,000 people in the next 20 years².

¹ https://www.qldc.govt.nz/media/hsdjlr3/the-spatial-plan_a4-booklet_jul21-final-web-for-desktop.pdf

² <https://www.qldc.govt.nz/community/population-and-demand/>

This growth has resulted in a significant increase in demand for travel via private vehicles, especially commuter vehicles, and is putting major pressure on the transport network. There are several parts of the network that are operating at or near capacity, which see increasing delays, long journey times, and an inability to cope with unexpected events. Many parts of the network are also constrained by the district's topography and therefore cannot be expanded to increase capacity.

Future growth and transport network pressures

The Queenstown-Lakes Spatial Plan 2021 identifies various priority development areas where future growth is to occur and is shown in Figure 2.1. Except for the Wānaka Town Centre to Three Parks Corridor, all of the priority development areas are focussed on State Highways 6 and 6A, such as Ladies Mile and the Southern Transit Corridor. These areas broadly reflect the location of existing transport infrastructure and therefore will reduce the need for additional infrastructure.

The National Policy Statement on Urban Development 2020 also requires intensification of existing urban areas within the Queenstown-Lakes District, which will be realised through a change to the District Plan.

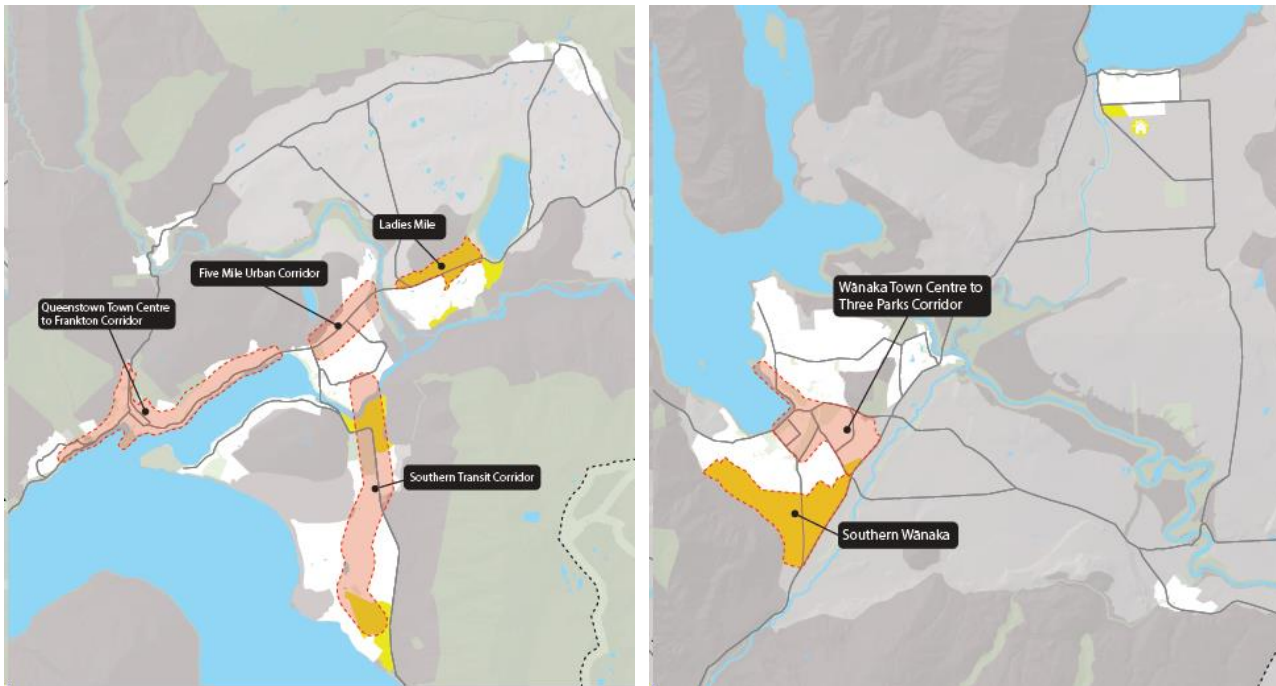


Figure 2.1 Priority development areas identified in the Queenstown-Lakes Spatial Plan 2021

The capacity of the State Highway 6 and 6A routes is already reached frequently, and under current forecasts will worsen considerably. Due to the district's constrained geography and topography, there are also limitations on any potential improvements or expansion to this transport infrastructure.

The need for mode shift

Historically, the district has been heavily reliant on single-occupancy vehicles for travel. In addition to single-occupancy vehicles, a community survey by Queenstown-Lakes District Council from November 2023 indicated that 39% of respondents also get around by foot, 39% bicycle and 34% by public transport.

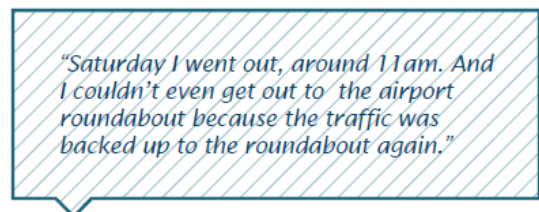


Figure 2.2 QITPBC Experience Insights 2017

While alternative mode share is increasing, it is still some distance away from where it needs to be to take pressure off the network and provide additional outcomes such as reducing transport related emissions. This reliance on single-occupancy vehicle travel, combined with a network that is at or near capacity, means that the Queenstown-Lakes District needs to use the existing transport network more efficiently to meet future transport demands.

TDM measures, also referred to as Behaviour Change, were identified as early as 2017 (Figure 2.3) in the Queenstown Integrated Transport Programme Business Case to encourage mode shift away from single-occupancy vehicles towards more sustainable modes of transport. Figure 2.3 illustrates the impact that congestion has on residents which is only deteriorating as transport demand increases on the constrained network. TDM measures were also reflected in the Queenstown Business Case 2020 (Figure 2.4), the Queenstown Public Transport Business Case 2023, and the 'Better Ways to Go' mode shift plan for the Queenstown-Lakes District. In particular, the Queenstown Business Case noted that travel behaviour change through TDM would be required in order to meet the agreed investment objectives:

- Provides more efficient and reliable access for people and goods
- Adaptable to change and disruption
- Enhanced liveability and quality of the natural and built environment
- Enhances safety with a goal of vision zero.

This TDM SSBC lite responds to this need by identifying a programme of TDM measures, which will make more efficient use of the existing transport network, leading to improved environmental outcomes, and assist in improving the health and wellbeing of the community among other benefits.

The programme of TDM measures recommended as part of this TDM SSBC are intended to be delivered alongside a range of other investments, such as improved public transport, to deliver mode shift for the district.

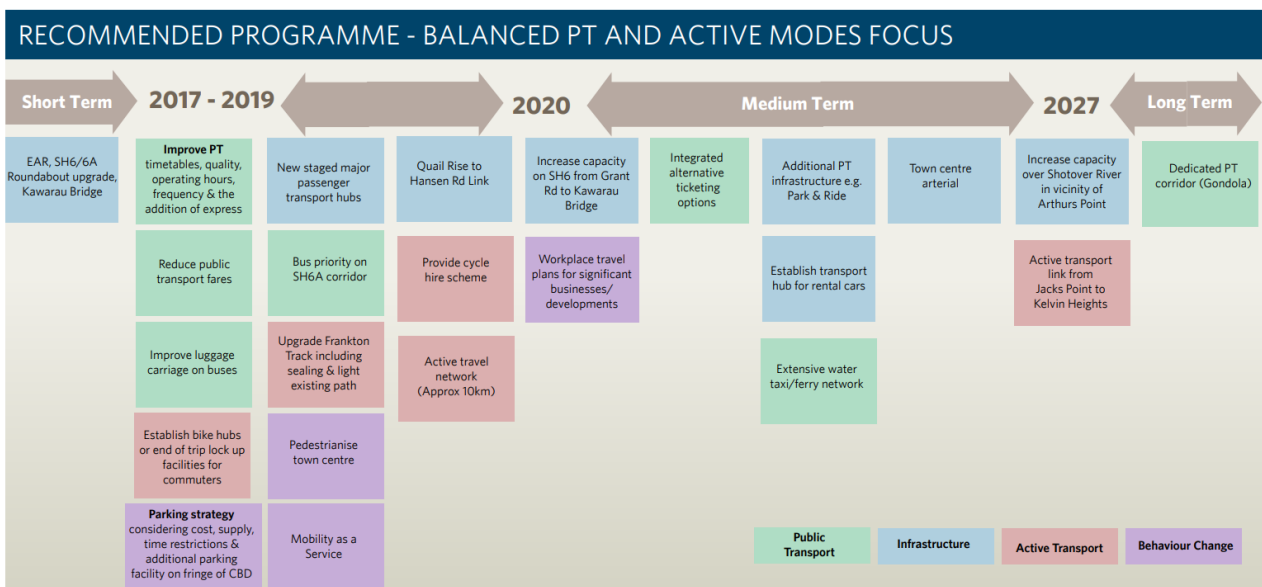


Figure 2.3 TDM within the QITPBC 2017



Figure 2.4 TDM in the Queenstown Business Case 2020

Recent and planned transport improvements

The New Zealand Upgrade Programme (NZUP) Queenstown package will support improvements to State Highways 6 and 6A to improve safety and access by active modes of transport and public transport, including the implementation of bus lanes and bus priority measures as shown in Figure 2.5. These improvements were also identified in the Queenstown Business Case.



Figure 2.5 Overview of NZUP Queenstown

The Queenstown Town Centre Arterial Road project has identified improvements to the arterial road network around Queenstown Town Centre, including linking Melbourne and Henry Streets, removing general traffic from Stanley Street and therefore allowing upgrades to improve the town centre experience for residents and visitors.

While these improvements will not provide significant capacity to State Highways 6 and 6A, they will allow for streetscape improvements and improvements in the reliability of bus services.

2.2 Problems and Opportunities

An initial stakeholder workshop was held on 1 November 2023 to develop a better understanding of current issues being faced and potential interventions. As part of this workshop, stakeholders identified and agreed the following key problems and opportunities:

1. Increasing demand for private motor vehicle use is reaching network capacity and results in poor levels of services and high costs for residents. Demand for private motor vehicle use cannot be met solely through network expansion; therefore, the existing network must be utilised more efficiently.
2. Investment in public transport and active mode improvements requires additional support to maximise community uptake and benefits.

The problem/ benefit map is attached as **Appendix B**.

The capacity of key corridors, such as State Highways 6 and 6A, is already being exceeded at peak times with travel times becoming increasingly unreliable.

Figure 2.6 shows the Annual Average Daily Traffic Volume (AADT) on SH6A as well as the theoretical road capacity³. As an average, actual daily numbers will often exceed this and a 10% and 40% projection which shows the road capacity being exceeded. This illustrates the current issue, which when considered in light of future growth, demonstrates the capacity issue being faced.

³ The theoretical capacity has been estimated using the Austroads Guide to Traffic Management (part 3) regarding interrupted flow facilities. This considers the capacity (passenger cars/ hour), travel speeds and other factors.

Furthermore, there is a wider reliance on private vehicles to move around the Queenstown-Lakes District, which delays the movement of people and goods when the network is affected by congestion. As part of the Queenstown Business Case analysis, it was identified that 83% of trips were made by private car, 9% by bus and 7% by tour coach. These findings were confirmed in a public engagement survey undertaken in November 2023, which showed almost 80% of respondents travel around the district via private vehicle.

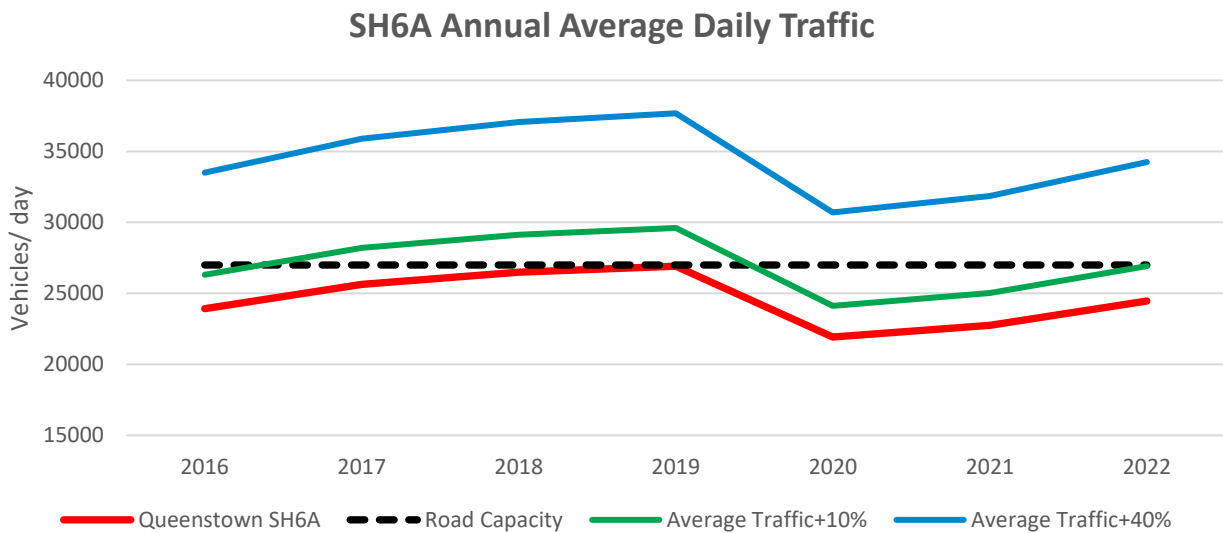


Figure 2.6 SH6A AADT

Due to topography and cost, expansions to road network capacity in the Queenstown-Lakes District is unlikely to be feasible. For example, State Highways 6A, as shown in Figure 2.7, is constrained by active slips on the hills and the lakefront.

Due to topography and cost, expansions to road network capacity in the Queenstown-Lakes District is unlikely to be feasible. For example, State Highway 6A is constrained by hill side instability and the lakefront.



Figure 2.7 SH6A Constraints

Other parts of the network, such as SH6 near Albert Town, are limited by one-way bridges which have a high capital cost if they were to be replaced as shown in Figure 2.8.



Figure 2.8 Albert Town one-way bridge

Queenstown has also had significant investment in its transport environment, not least through central government funding and supporting improvement funding through the endorsed Queenstown Business Cases. While these have greatly benefited the town centre, to fully unlock the investment i.e., enable the full pedestrian activity and related consumer spend to be realised, the transport network to and from the town centre needs to be functional and reliable. Through achieving a significant level of mode shift

out of the private car, network performance can be maintained while increasing the total throughput of goods and people that would be otherwise constrained.

2.3 Partners and Stakeholders

This SSBC lite is a joint initiative between the Queenstown-Lakes District, Otago Regional Council and the New Zealand Transport Agency with support from wider community stakeholders.

Queenstown-Lakes District Council

QLDC is the local authority responsible for the Queenstown-Lakes District. QLDC is responsible for local decision-making and action on behalf of its communities. Under the Local Government Act 2002, QLDC is tasked with promoting the social, economic, environmental and cultural wellbeing of the people that live, work and visit the district.

New Zealand Transport Agency

The NZTA is the crown entity responsible for planning and investing in the land transport system and managing the state highway network. The NZTA administers the National Land Transport Fund (NLTF), which predominantly funds investments in the transport network. Its primary objective is to contribute to an effective, efficient and safe land transport system that is in the public interest.

Otago Regional Council

Otago Regional Council (ORC) is tasked with meeting the economic, cultural and social needs of the community. One of its responsibilities of the ORC is the management of public transport services across Queenstown-Lakes District and the wider Otago region.

2.4 Defining the Benefits

The stakeholder workshop identified and agreed that TDM supports the following benefits:

Network benefits

- Reduced congestion with less cars on the road
- More consistent and reliable public transport system
- More effective and efficient use of public space for active modes
- Improved network resilience
- Improved road safety for all users
- Improved perceived safety for active modes

Environmental benefits

- Reduced noise and air emissions.
- Reduced greenhouse gas emissions.

Community benefits

- Enhanced sense of community
- Improved wellbeing, both physical and mental health
- Enhanced levels of choice
- Reduced crime
- Decreased loneliness
- Improved social cohesion and connection
- Improved attitude towards tourism

Tourism benefits

- Better visitor experience
- Fulfilment of a 'clean green' tourist image
- Increased tourism revenue from transformational change
- Reduced vehicle demand on the network reducing congestion

2.5 Investment Objectives

Based on the understood problems/ benefits and feedback received from stakeholders, three investment objectives were adopted that capture the outcomes being sought:

1. *To contribute towards increasing the average vehicle occupancy of vehicles along key corridors by 10% by 2033:*
This objective acknowledges the specific pressure on the SH network and can provide a key baseline for measurement purposes.
2. *To contribute towards increasing alternative mode share to 25% of all trips by 2033*
The geographic scope of this business case is district-wide, and this objective reflects the need to consider and provide TDM activities, and outcomes, across the district.
3. *To contribute towards realising a 40% alternative mode share into Queenstown Town Centre by 2033*
SH6A, Frankton to Queenstown, is the primary route between the town centre and the wider region including Queenstown Airport, the commercial/ industrial area of Frankton and the residential areas of Kelvin Heights, Jacks Point, Lake Hayes and others. It is of critical significance to the economy and tourist activity for the district.

2.6 Alignment of Relevant National and Local Strategies

Table 2.1 shows the strong alignment of TDM against key national and local policies and strategies. TDM also broadly aligns with the National Party’s ‘Transport for the Future’ document, recognising that TDM maximises the efficiency of the transport network and provides value for money, as outlined in this report.

Table 2.1 Alignment assessment

Policy/ Strategy	Relevant Policies/ Objectives / Outcomes	Alignment
Government Policy Statement on Land Transport 2021/22-2030/31	<ol style="list-style-type: none"> 1. Safety: developing a transport system where no-one is killed or seriously injured 2. Better travel options: providing people with better transport options to access social and economic opportunities 3. Improving freight connections: improving freight connections for economic development 4. Climate change: developing a low carbon transport system that supports emission reductions, while improving safety and inclusive access. 	<ol style="list-style-type: none"> 1. MODERATE: reduces the number vehicles on the network and congestion, which should result in fewer crashes. 2. STRONG: seeks to encourage mode shift towards alternative modes of transport. 3. MODERATE: reduced congestion will result in improved freight connections. 4. STRONG: reduces the number of vehicles on the network and increases the proportion of trips taken by alternative modes of transport. This will support emission-reduction.
Queenstown-Lakes Strategic Outcomes Framework	<ol style="list-style-type: none"> 1. All people can live healthy lives 2. Our economy is stable, and our people prosper 3. Communities are resilient to sudden natural events 4. The natural environment’s mauri is respected and enhanced 	<ol style="list-style-type: none"> 1. STRONG: promotes travel via active modes of transport. 2. STRONG: enabling mode shift will support economic growth in the district. 3. MODERATE: enabling mode shift will support a more resilient transport

Policy/ Strategy	Relevant Policies/ Objectives / Outcomes	Alignment
		<p>network that is better able to cope with sudden natural events.</p> <p>4. STRONG: enabling mode shift will</p>
Queenstown Lakes Spatial Plan 2021	<ol style="list-style-type: none"> 1. Public transport, walking and cycling is the preferred option for daily travel 2. A sustainable tourism system 3. A diverse economy where everyone can thrive 4. Consolidated growth and more housing choice 5. Well-designed neighbourhoods that provide for everyday needs 	<ol style="list-style-type: none"> 1. STRONG: seeks to encourage mode shift towards alternative modes of transport. 2. STRONG: seeks to encourage mode shift towards alternative modes of transport, especially for the tourism sector. 3. STRONG: enabling mode shift will support economic growth in the district. 4. STRONG: enabling more efficient use of existing transport network will allow for more consolidated growth. 5. MODERATE: supports well-designed neighbourhoods by supporting travel choice.
Otago Regional Land Transport Plan (2021-2031)	<ol style="list-style-type: none"> 1. Prioritise high risk areas to create a safe transport system free of death or serious injury 2. Develop a range of travel choices that are used by communities and business to connect 3. Facilitate understanding and support responses that help meet environmental and emissions targets 	<ol style="list-style-type: none"> 1. MODERATE: reduces the number vehicles on the network, such as State Highways 6 and 6A, which have significant crash history. A reduction in traffic movements should result in fewer crashes. 2. STRONG: seeks to encourage mode shift towards alternative modes of transport. 3. STRONG: reduces the number of vehicles on the network and increases the proportion of trips taken by alternative modes of transport. This will support emission-reduction.
Otago Regional Public Transport Plan 2021-2031	<ol style="list-style-type: none"> 1. Contribute to carbon reduction and improved air quality through increased public transport mode share and sustainable fleet options. 2. Deliver an integrated Otago public transport network of infrastructure, services and land use that increases choice, improves network connectivity and contributes to social and economic prosperity. 3. Develop a public transport system that is adaptable. 4. Establish a public transport system that is safe, accessible, provides a high-quality experience that retains existing customers, attracts new 	<ol style="list-style-type: none"> 1. STRONG: reduces the number of vehicles on the network and increases the proportion of trips taken by alternative modes of transport. This will support emission-reduction. 2. STRONG: seeks to encourage mode shift towards alternative modes of transport and encourage better land use planning. 3. STRONG: seeks to promote increased patronage of the public transport system through a range of measures (e.g., on demand). 4. STRONG: seeks to promote increased patronage of the public transport system through a range of measures.

Policy/ Strategy	Relevant Policies/ Objectives / Outcomes	Alignment
	customers and achieves high levels of satisfaction.	
Queenstown Lakes Climate and Biodiversity Plan 2022-2025	<ol style="list-style-type: none"> 1. Our transport system is low emission and better connected 2. Low-emission businesses thrive 	<ol style="list-style-type: none"> 1. STRONG: reduces the number of vehicles on the network and increases the proportion of trips taken by alternative modes of transport. This will support emission reduction. 2. MODERATE: seeks to support businesses to develop travel plans. This will support emission reduction.
Travel to a thriving future: A Regenerative Tourism Plan	<ol style="list-style-type: none"> 1. Place-based destination planning 2. Welcome programme 3. Carbon Zero by 2030 4. Update Queenstown brand and marketing strategies 	<ol style="list-style-type: none"> 1. STRONG: seeks to provide information and encourage mode shift for tourism. 2. STRONG: seeks to provide information to tourists on alternative transport modes. This can form part of a welcome programme. 3. STRONG: seeks to increase the share of trips by alternative modes. This will support emission reduction. 4. STRONG: alternative transport modes as a primary transport choice align with regenerative and sustainable brand and marketing strategies
Queenstown-Lakes Parking Strategy	<ol style="list-style-type: none"> 1. Encourage mode shift and reduce emissions 2. Supports a safe and efficient transport network 	<ol style="list-style-type: none"> 1. STRONG: seeks to encourage mode shift towards alternative modes of transport and encourage better land use planning. This will also support emission reduction. 2. STRONG: seeks to ease congestion through mode shift creating more efficient travel. Seeks to inform the public of alternative mode paths, this will make cycling, and walking safer and more efficient.

2.7 Interdependencies

The TDM measures identified in this SSBC are anticipated to support physical works and improvements identified in other programmes. Table 2.2 highlights the key interdependencies.

Table 2.2 Key interdependencies

Project	Explanation
The New Zealand Upgrade Programme (NZUP) Queenstown package	<p>The NZUP Queenstown package has identified improvements to State Highways 6 and 6A to improve safety and access by active modes of transport and public transport, including the implementation of bus lanes and bus priority measures.</p> <p>Measures to incentivise further uptake of public transport will assist in fully realising the benefits of these investments along these corridors.</p>
Queenstown Business Case	<p>Public transport improvements are identified in the Queenstown Business Case and rely on more efficient utilisation of the transport network through TDM measures. Without the implementation of TDM measures, it will be difficult for public transport improvements to deliver significant mode shift</p> <p>Additional improvements will be made to the arterial road network around Queenstown Town Centre, including linking Melbourne and Henry Streets, removing general traffic from Stanley Street and therefore allowing improvements to improve the town centre experience for residents and visitors and improving reliability of public transport services to the Town Centre.</p>
Queenstown PT Business Case by Otago Regional Council	<p>As above, without the implementation of TDM measures, it will be difficult for public transport improvements to deliver significant mode shift.</p>

2.8 The Case for Change

The Queenstown-Lakes District is currently undergoing rapid population growth and urban development and is one of the fastest-growing regions in the country. This growth has resulted in a large increase in demand for travel via private vehicles, especially commuter vehicles, and is putting major pressure on the district's transport network. There are several parts of the network that are operating at or near capacity, which see increasing delays, long journey times, and an inability to cope with unexpected events. This was reinforced by a community survey undertaken by QLDC in November 2023 in which 53% of respondents stated that they are often affected by congestion.

SH6/ 6A are already under significant pressure and are also the corridors where significant future urban growth is anticipated in the Queenstown-Lakes Spatial Plan 2021 and Policy 5 intensification work of the NPS-UD. Capacity along these corridors cannot be easily increased to meet future demand for travel via private vehicles. The TDM SSBC therefore needs to identify a programme of measures which are aimed at using these transport corridors more efficiently. Without intervention, congestion along these corridors will result in high costs for residents and undermine recently and planned upgrades to Queenstown's town centre. Investments in improved active modes and public transport also rely on the implementation of TDM measures identified in this SSBC.

3. Economic Case

The purpose of this economic case is to identify the preferred programme. The Monetised Costs and Benefits Manual (MCBM) was used as the base methodology for determining the potential benefit for the preferred programme. The methodology in the MCBM is designed to be used for individual measures rather than a programme, thus was adapted to fit a programme-based approach.

3.1 Developing the Programme

Five different programmes of TDM measures have been developed. The section below summarises how these programmes have been developed. Further details on their development can be found in the **TDM Programme Development** supporting technical note.

Long list to short listing

A long list of TDM measures was developed prior to a workshop with key stakeholders on November 1, covering four key areas:

- **Policy:** measures aimed at actively incentivising or disincentivising travel behaviours.
- **Travel planning and behaviour change:** measures aimed at supporting or promoting travel via sustainable modes of transport, such as public transport.
- **Wayfinding improvements:** improvements aimed at making travel via sustainable modes easier. Improvements include both physical signage and online wayfinding.
- **Travel management associations (TMA):** community-led organisations aimed at implementing a range of TDM measures.

These areas and initial interventions were informed by the preceding Queenstown Business Cases and support TDM recommendations.

The initial list of TDM measures was shortlisted based on the following criteria:

- **Legislation:** Measures discarded where there is no enabling legislation.
- **Cost-prohibitive:** Any measures that had extremely high costs were discarded (i.e., where costs exceed \$1,000,000 over the 2024-2027 period).
- **Community support:** As part of this business case process, a resident's survey was conducted in November 2023 on travel behaviours and how mode shift may be achieved. This feedback was incorporated into the final list of measures (and programme development).

To be shortlisted, the TDM measure needed to meet all of the above criteria. The only measures that did not meet all criteria were:

- Regional fuel tax (not legislated)
- Rental car levy (not legislated)
- Discounting public transport (cost-prohibitive).
- Mobility as a service (cost-prohibitive)

Programme development

Five different programmes were developed which reflected different approaches. These five different approaches broadly reflect an increasing level and benefit and investment. For instance, the 'Do Minimum' option implements fewer TDM measures and to a lesser extent. The culture change approach 'Do Maximum' implements as many TDM measures as possible to the greatest extent possible. These five programmes are:

Table 3.1 Programmes and approaches

Programme	Approach
Do nothing	No TDM measures are implemented.
Do minimum	Deliver existing TDM programme
Do minimum +	Scaling up TDM measures that are already in train or planned
Do more	Encourage alternatives and reduce appeal of driving
Do maximum	Cultural change

Programme development

The scaling up of investment in TDM measures across the five different programmes is demonstrated below in Table 3.2. TDM measures have been 'bundled' into groups to more easily demonstrate how they might be scaled up.

Table 3.2 Programme development

Category	TDM bundle	Outputs	Do nothing	Do minimum	Do minimum +	Do more	Do most
Policy	Taxes/ levies					Road pricing (if legislated)	Road pricing (if legislated)
	Policy and planning measures	Number of policy and planning measures implemented		1-3	3-5	5-15	15
	Parking management	% of delivery areas with parking management		10%	15%	50%	75%
Travel planning and behavioural change	Travel plans for residents	% of residents with travel plans		10%	15%	50%	75%
	Travel plans for schools	% of schools with travel plans		10%	15%	50%	75%
	Travel plans for domestic businesses	% of domestic businesses with travel plans		10%	15%	50%	75%
	Travel plans for tourism businesses	% of tourism businesses with travel plans		10%	15%	50%	75%
	Educational programmes	Frequency of education		1	2	4	6

Category	TDM bundle	Outputs	Do nothing	Do minimum	Do minimum +	Do more	Do most
		programmes per annum					
	Marketing and engagement	Number of marketing campaigns aimed at promoting alternative modes of transport		1-5	5-10	10-15	15
Wayfinding improvements	Physical signage	% of delivery areas within 250m of physical signage		10%	15%	50%	75%
	Digital wayfinding	Number of digital wayfinding initiatives		1	2	4	6
Travel Management Association	N/A	% of delivery areas with TMAs		10%	15%	50%	75%

3.2 The 'Do Minimum' Option

The 'do minimum' option represents the lowest cost feasible option that can provide a minimum level of service on the adjacent streets. The do minimum option therefore forms the benchmark against which other options are assessed. It also contains existing or certain (funded) projects that are going to be implemented that could affect the TDM programme.

The do-minimum is not a realistic option considering Queenstown-Lakes rapidly growing population and visitor numbers. Current mode share data show that the area is heavily reliant on private vehicle travel, so future growth will likely result in key corridors, such as State Highways 6 and 6A, greatly exceeding their capacity across the day, rather than just at peak times.

To provide a clear baseline of which TDM activities are currently being rolled out by QLDC and/ or partners, a do minimum programme was also developed and is demonstrated below. Given that the next iteration of Queenstown-Lakes District Council's Ten-Year Plan is still being developed, it was not possible to determine an exact list of TDM measures that are currently being delivered or planned to be delivered by Queenstown-Lakes District Council and partners.

To gain the best understanding of current TDM activities, a review of existing plans/ strategies by QLDC and partners was undertaken. Feedback was also provided by staff of QLDC and partner organisations such as the Lightfoot Initiative.

Table 3.3 Indicative ‘do minimum’ programme

TDM bundle	Output(s)	TDM measures
Policy and planning measures	1-3 policy and planning measures	Update the Code of Practice (COP) to better provide for active modes of transport and public transport
		Review the District Plan to ensure it better provides for active travel and PT
Travel plans for domestic businesses	10% of domestic businesses with travel plans	Travel plans for workplaces (Active 8, including Guaranteed Ride Home Programme)
Education programmes	One education programme annually	Such as Biketober
Marketing and engagement	1-5 marketing and engagement campaigns	Engagement campaigns (The Lightfoot Initiative - OneBike and GoGo Electro initiatives; Wao – Biketober)
Wayfinding	1 physical signage improvement initiative	Existing signage budget in QLDC 10-Year Plan (2021-2031)
Travel management association	10% of delivery areas with TMAs	WAO and Lightfoot are two not-for-profit organisations that already deliver TDM measures, such as those listed above. <i>Note: these organisations have not been formalised as TMAs.</i>

3.3 The Preferred Programme

Preferred programme

Stakeholder feedback was sought as part of Workshop 1 from which there was a clear consensus that the Do More and Do Maximum was the preferred approach.

As part of the community engagement exercise, there was also consistent feedback about the need to make a substantive change to how people considered and realised their travel around the district.

Based on the results of the community engagement and feedback received from key stakeholders, a preferred programme was developed to meet the identified challenges.

The preferred programme consists of various TDM bundles, which are intended to consist of the outputs highlighted in Table 3.4. While road pricing has been tentatively included in the preferred programme, no behaviour change or additional mode shift has been attributed to it, given that it has not yet been legislated. If this changes in future, further analysis will need to be undertaken.

Table 3.4 Preferred programme

TDM Bundle	Output(s)	TDM measures
Taxes/ levies		Road pricing (if legislated)
Policy and planning measures	5-15 policy and planning measures	Update the Code of Practice (COP) to better provide for active modes of transport and public transport
		Update the District Plan to enable increased urban intensification, especially around public transport corridors
		Update the District Plan to require travel plans for all larger developments
		Freight transport management strategies
		Bike/ transit integration strategies
		Update the District Plan to require increased provision of cycle parking for new developments
		Update the District Plan to require larger developments to make improvements to public active mode infrastructure
Parking management	50% of delivery areas with parking management plans	Variable parking fees based on demand or location
		Shared use opportunities
		Variable time restrictions
		Create parking precincts
		Encourage car sharing schemes
Travel plans for residents	50% of residents with travel plans	Support in the development of travel plans for resident to ensure up to 50% of delivery areas have residential travel plans.
Travel plans for schools	50% schools with active travel plans	Support in the development of travel plans for schools to ensure up to 50% of schools in the Queenstown-Lakes District have a travel plan.
Travel plans for domestic businesses	50% of domestic businesses with travel plans	Support in the development of travel plans to ensure up to 50% of domestic businesses have travel plans in place.
Travel plans for tourism businesses	50% of tourism businesses with travel plans	Support in the development of travel plans to ensure up to 50% of tourism businesses have travel plans in place.
Education programmes	Four education programmes per annum	Delivery of complementary cycle and sustainable transport education and training.

TDM Bundle	Output(s)	TDM measures
Marketing and engagement	10-15 marketing and engagement campaigns	Deliver 10-15 marketing and engagement programmes per year to promote alternative modes of travel.
Physical signage	50% of delivery within 250m of physical signage	Increase density of wayfinding signage to ensure residents and visitors are appropriately directed to key destinations when using alternative modes.
Digital wayfinding	4 digital wayfinding initiatives	Implement 4 digital wayfinding initiatives.
Travel management associations	50% of delivery areas with TMAs	Set up TMAs that cover 50% of delivery areas within the Queenstown-Lakes District Council.

3.4 Delivery of the Preferred Programme and Timing

Delivery areas

While acknowledging the recommended programme considers the Queenstown-Lakes District as a whole, the different factors noted above have informed the proposed delivery programme. Most notably, TDM bundles are to be targeted at specified delivery areas only. This recognises that rural areas have very low population densities with limited travel options. Therefore, targeting specified areas, which have greater population density and increased travel options is considered to be most effective for the delivery of the TDM SSBC.

Nineteen delivery areas have been identified and are shown below in Figure 3.1 and Figure 3.2. These areas have been defined based on guidance from QLDC regarding community associations and groups and reflect StatsNZ Sa1 & SA2 groupings.

Given that different areas have varying employment, education and residential compositions, defining specific delivery catchments was considered necessary.

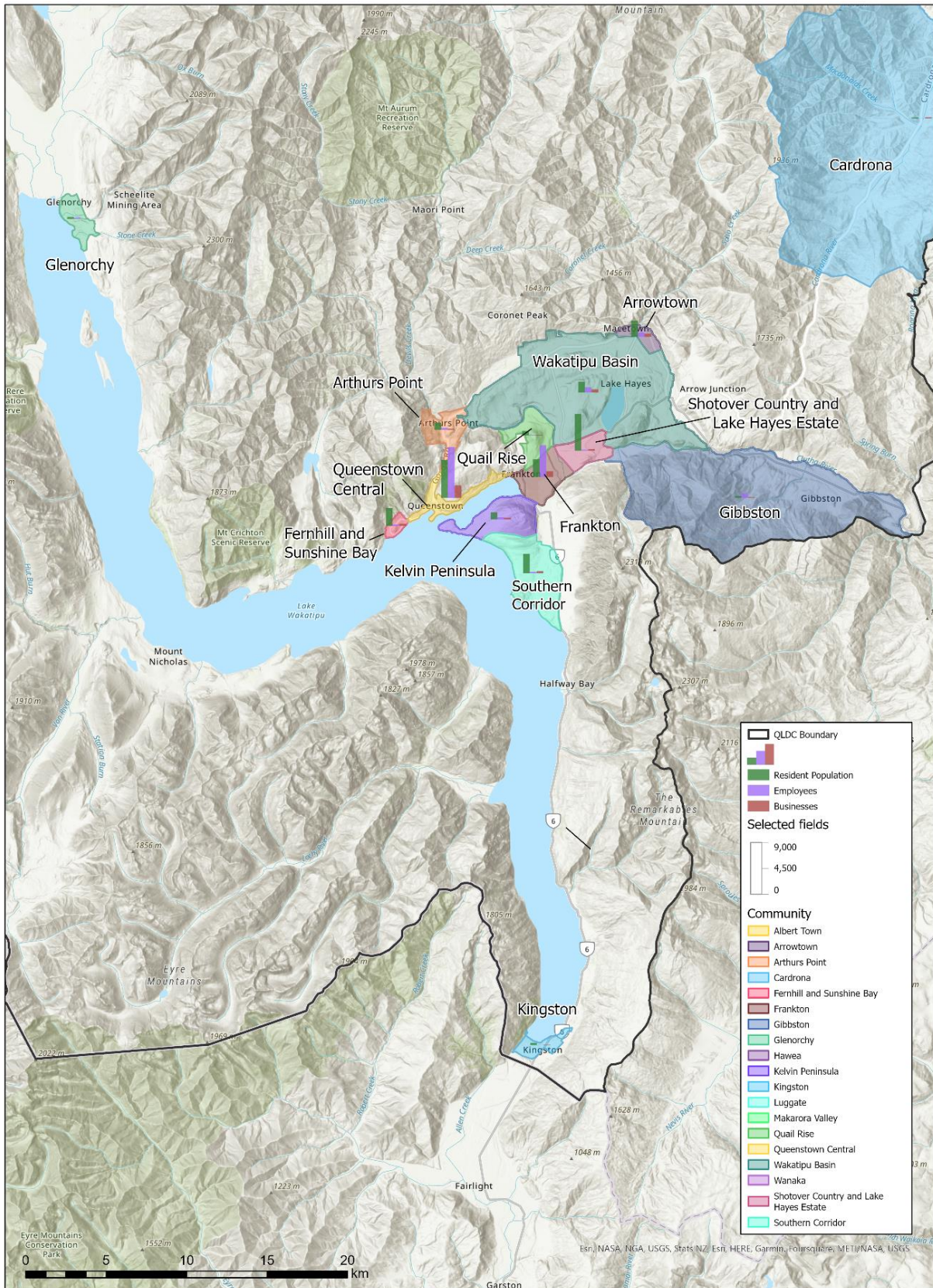


Figure 3.1 Wakatipu delivery areas to be targeted by the TDM programme

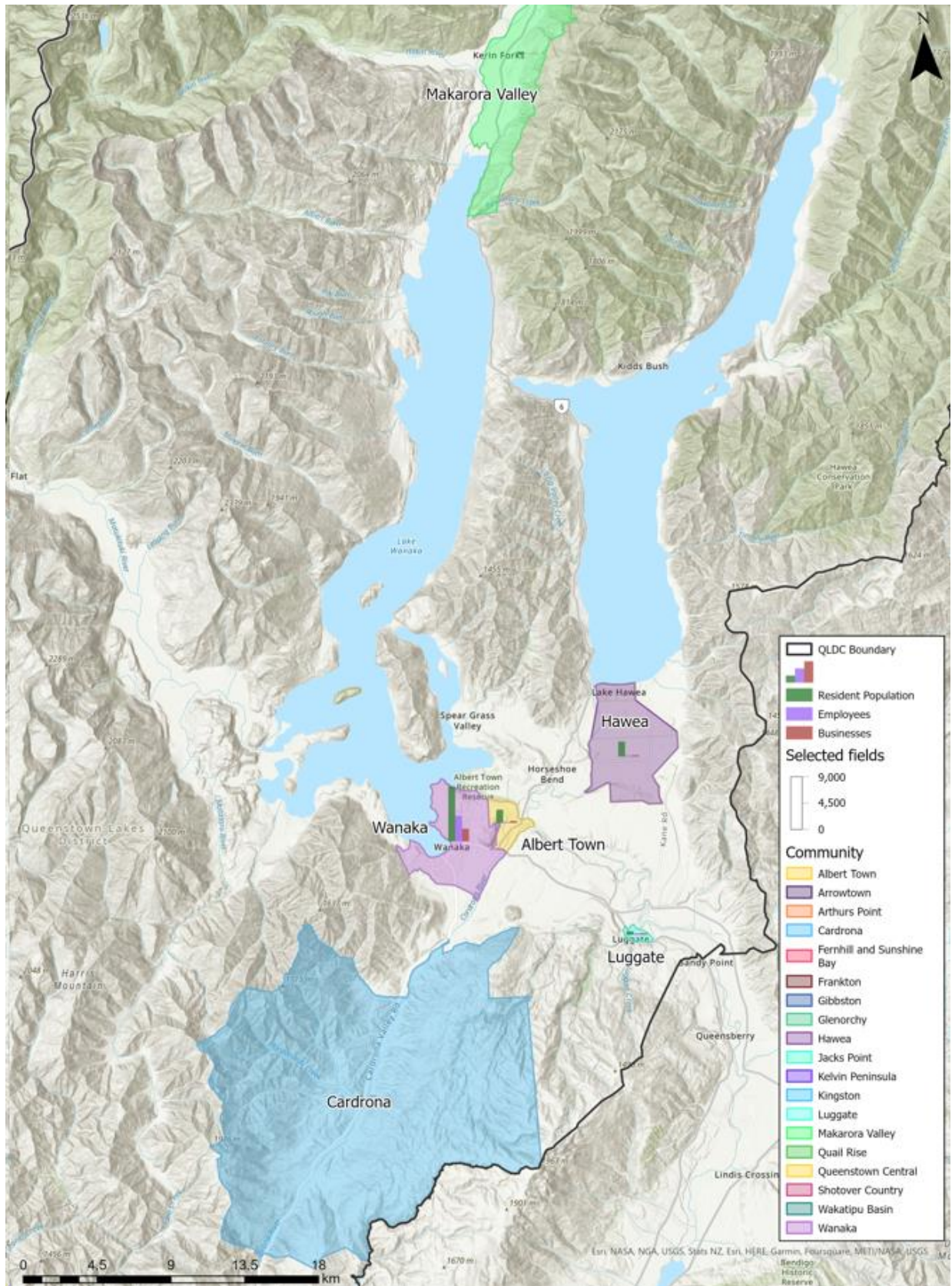


Figure 3.2 Upper Clutha delivery areas to be targeted by the TDM programme

District-wide delivery

While many of the TDM measures in the preferred programme will need to be delivered at an urban catchment level, there are some measures that best delivered across the district as a whole. These measures are listed in Table 3.5 below.

Prioritising delivery

Appendix **A3** of the accompanying technical note outlines the proposed delivery timeline of the preferred programme. The general approach was to first prioritise delivery where the programme would maximise benefits. Delivery will also depend on buy in from targeted groups (e.g., schools). For instance, where a school is responsive to implementing TDM measures, this school would ideally be targeted first.

Table 3.5 District-wide TDM bundles

TDM Bundle
Baseline monitoring of travel behaviour
Taxes/ levies
Policy audit
Educational programmes
Policy and planning measures
Marketing and engagement campaigns
Travel Plans for Schools (assume this is co-ordinated district-wide)
Digital wayfinding

3.5 Benefit-Cost Ratio (BCR)

The SP12 procedure was utilised to estimate the costs and benefits associated with the TDM SSBC. Information related methodology can be found in **Appendix D**.

Table 3.6 Preferred programme (Central Case) BCR Summary

Scenario	NPV Cost	NPV Benefit	BCR	FYRR
Central Case	\$2.0M	\$17.0M	8.5	17%

3.6 Appraisal Summary Table

An appraisal summary has been completed and included in **Appendix A**. Due to difficulties finding clear quantitative measures, the appraisal focussed on qualitative factors.

3.7 Multi-Criteria Analysis

A multi-criteria analysis (MCA) was undertaken for the five different programmes to demonstrate their alignment with the investment objectives and other factors. The full list of criteria considered in the MCA are listed below in

Table 3.7 MCA criteria

Criteria
Investment objectives (40% weighting)
To increase the average vehicle occupancy of vehicles along key corridors by 10% by 2033
To increase alternative mode share to 25% of all trips by 2033
To realise a 40% alternative mode share into Queenstown Town Centre by 2033
Other critical success factors (20% weighting)
Achieves strategic fit with relevant national and local plans/ strategies
Affordability
Opportunities and impacts (40% weighting)
Feasibility
Social and cultural impacts
Climate change mitigation
Impacts on te ao Māori

Of the three different categories considered, *investment objectives* and *opportunities/ impacts* were given a 40% weighting, while *other critical success factors* were given a 20% weighting. Each criterion was ranked on a scale from -3 to +3. -3 represents a score where a programme aligns most negatively with a criterion (e.g., hinders the feasibility of achieving an investment objective), while a score of +3 indicates a programme aligns most positively with a criterion.

The preferred programme and the do maximum ranked most favourably. The full MCA table can be found in [Appendix A](#).

3.8 Summary and Conclusions

A preferred programme has been developed that is the most appropriate for QLDC to meet future challenges on the transport network. While the majority of the outlined TDM bundles will be delivered separately across delivery areas, some bundles will need to be delivered at a district-wide level.

The preferred programme has an indicative NPV cost of \$2,000,000 and estimated NPV benefits of \$17,000,000. This results in a BCR for the preferred programme of 8.5. Further information on the BCR, including information on the methodology, can be found in [Appendix D](#).

4. Commercial Case

This section sets out the high-level procurement arrangements associated with delivering the preferred TDM programme.

4.1 What Needs to be Procured?

The work to be delivered as part of the TDM programme is expected to be delivered in-house by QLDC and externally. The programme has been packaged to allow for portions of the programme to be delivered by external delivery organisations based on their ability to engage with the key audience and capability to deliver the TDM package. The majority of the procurement activity will be routine, small-scale and low risk. Included in the procurement list is the following:

- Professional services including the following:
 - Marketing and communication advice
 - Software development
 - Web-development
 - Communication and engagement
 - Design of targeted travel plans and schemes
- Advertisement and promotional material
- Publication and printed material
- Signage material for wayfinding
- Consultants to deliver TDM measures as required
- Ongoing monitoring and community surveying.

The packaging of the TDM programme will help ensure efficiency of procurement and allow for delegated authority under the procurement policy. Where applicable the activities will be procured through preferred suppliers to ensure efficiency and quality of delivery.

Following the endorsement of the business case an assessment of the current capabilities and capacity of QLDC and identification of stakeholders to deliver and support the TDM programme will take place. However, there are no concerns about the ability of the market to deliver the programme at the time of developing this business case. Alongside this, district wide baseline monitoring and auditing of existing council policies and strategies will be implemented to support procurement.

Some stakeholders have also indicated a willingness to deliver or support some of the TDM packages.

This includes the following organisations:

- Queenstown Airport Corporation
- Destination Queenstown
- The Lightfoot Initiative
- Wao

4.2 The Procurement Strategy

The procurement strategy will work in accordance with the QLDC procurement policies, strategies and plans as approved by the NZTA effective 6 June 2023. Procurement is expected to be straight-forward on the basis of consultancy and other services listed in 4.1. Appropriate risk-sharing arrangements can be negotiated to ensure the programme tracks to schedule and with delivery milestones and targets.

5. Financial Case

This section outlines the cost and funding requirements for the TDM SSBC. The costing has been done based on the packages outlined in section 3.3.

5.1 Affordability

The funding for the initial implementation phase through to June 2026 has been funded through Better Off funding. This funding of \$1.29 million has been secured and the costing of the project will be based on funding availability. It is expected that a significant portion of the implementation of the programme will occur before June 2026. The focus of the first six months will be focused on the pre-implementation phase and the roll out of some initial packages based on the priority delivery areas and the ease of implementation. The following NLTP until 2027 period will be the primary phase of delivery for the programme packages. The ongoing and long term operation of this programme is expected to be incorporated and rolled out as part of the Asset Management Plan. The packaging of the programme measures and the ability for this programme to be community lead (including harnessing the TMAs) means the programme costs are low.

5.2 Funding Sources

The initial funding for the TDM programme is sourced through Better Off funding and confirmed as part of the NLTP 2021-24. This is \$1.29 million that is available until June 2026.

It is anticipated that the recommended programme will utilise Council funding with assistance from the 2024-2027 NLTP WC421: Travel demand management and behaviour change. Table 5.1 shows the alignment of the activity classes with the programme measures being implemented.

Table 5.1 Alignment of programme with activity classes

Activity	Related measure
Policy and planning	Travel plan bundles Policy and strategy bundle
Parking Management	Parking management bundle
Behaviour change education and promotion initiatives	Travel plan bundles Educational programmes bundle Marketing and engagement bundle
Network tools	Wayfinding bundles
Wayfinding improvements	Wayfinding bundles
Research and monitoring	Baseline monitoring
TMA's and coordination	TMA bundle

The allocation of any additional funding from council will occur following the endorsement of the TDM SSBC. The percentage funding split for both 2021-24 and 2024-27 NLTP period is summarised in Table 5.2 below.

In addition to this as part of the Climate and Biodiversity Plan there is a provisional budget of \$50,000 per annum for TDM related actions for the full ten-year period.

Table 5.2 Funding breakdown

Organisation	Proportion
New Zealand Transport Agency	51%
QLDC	49%

5.3 Project Costs

The project costs are based on the delivery areas as shown in Figure 3.1 and Figure 3.2 and the delivery bundles.

Each of these areas included the investigation design, travel plan implementation, supporting measures and ongoing upkeep. The supporting measures include the wayfinding, marketing and additional programmes that would be associated with each area. It is expected that there will be supporting cycle facilities such as bike racks, to provide wraparound support for the TDM programme. The funding for this work will be under the LCLR walking and cycling and public transport infrastructure work categories, thus capital costs are considered negligible for this business case. Table 5.2 gives a summary of the expected costs over the next three years. Included in the costing for the first six months is the baseline monitoring and policy auditing. It also accounts for the implementation of priority delivery areas as outlined in the delivery programme. The following three years account for the delivery of the rest of the programme with the target being on higher priority and higher population areas first. As such the cost is 'front loaded'.

Table 5.3 Total cost of programme per annum over 10 years (central case)

Year	Total
Year 0 – 23/24	\$ 500,000
Year 1 – 24/25	\$ 700,000
Year 2 – 25/26	\$ 550,000
Year 3 – 26/27	\$ 250,000
Total	\$2,000,000

The ongoing cost for the programme will be part of the AMP. The programme will be reviewed at the end of the Better Off funding period and the ongoing cost will be updated based on the level of success of the programme and available funding.

5.4 Financial Risk

The NLTP for 2024-27 period is not confirmed. There is a risk that there will not be funding available when this is updated. This risk is mitigated by the existing funding available and the front loading of implementation in the first two years.

The baseline monitoring during the pre-implementation phase has a risk of a higher than expected cost due gaps in the available statistical and mode share data not being not comprehensive. This can possibly be mitigated by engaging with stakeholders and to assemble an adequate data set. This programme is part of a wider business case that included a data implementation and benefits realisation plan, this will be working in tandem with this plan to build up a stronger database. Ensuring the correct baseline monitoring is done (even with slightly increased costs) will ensure that the ongoing programme is delivered effectively.

The project does not have the same degree of financial risk as other transport projects as most parts of the project can be scaled in accordance with the available funding and procurement will be on a fixed budget basis. Therefore, a P95 cost estimate is not applicable.

6. Management Case

This management case outlines the governance and management structure to ensure successful delivery of the TDM programme by QLDC. Including the following:

- Project governance and management
- Project milestones
- Communication and engagement plan
- Risk assessment and the risk register
- Benefits realisation plan.

The management arrangements will allow QLDC to deliver a TDM programme that is integrated with the existing transport and spatial plans. It will enable monitoring and engagement to adapt and re-prioritise programme measures to ensure effective delivery.

6.1 Project Governance and Management

The TDM programme is part of a wider mode shift plan for the district, 'Better Ways To Go'. The project will be managed by QLDC supported by partners with existing governance arrangements in place to ensure successful delivery. The arrangement is as follows:

- Strategy and Asset Planning Team is responsible for the success of the programme
- Strategy and Asset Planning Manager is responsible for any escalated risks
- Transport Strategy Team is accountable for the management of the programme
- Way to Go Management is responsible for the strategic decisions related to the funding, programme direction and programme delivery
- Way to Go Management will approve any significant changes as a result of ongoing monitoring and evaluation.
- Any external delegated authority will report to Transport Strategy Team.

The governance structure is summarised in Table 6.1 below.

Table 6.1 Governance structure

Structure	Responsible party
Strategy and Asset Planning Manager	Sponsor
Senior Responsible Officer	Transport Strategy Manager
Project (Programme) manager	Senior Transport Planner

6.2 Key Milestones

The key milestones for this are the completion of the business case and the inception of the programme through procurement, baseline monitoring and auditing as shown in Table 6.2. This work is expected to be ongoing. The key milestones are expected to be underway by June 2024 with procurement, baseline monitoring and audits being completed. This will ensure that the capability has been built up to deliver the programme successfully.

Table 6.2 Summary of key milestones

Task	Description	Interdependencies
Completion of Business Case	Completion of Business Case to enable funding and commencement of TDM programming	None
Pre-implementation	Commence procurement based on the programme delivery outline in the business case	Completion of Business case and the availability of the pre-implementation funding
Commence baseline monitoring and auditing	Commence baseline monitoring of existing TDM measures in Queenstown Lakes District and audit existing policies	Completion of Business case and the availability of the pre-implementation funding
Commence TDM programme	Begin implementation of TDM programme	Pre-implementation Baseline monitoring and auditing
Programme monitoring	Measurement of the programme benefits	Availability of accurate baseline data

6.3 Project Assurance Arrangements

An SSBC Lite business case only requires limited assurance arrangements. However, approval of the preferred option and full business case has gone through the QLDC Property and Infrastructure team, and the Way to Go Management group. During the business case process an NZTA assurance representative has been engaged with and has been reviewing the business case.

Throughout the programme the performance will be measured via key performance indicators to ensure the benefits of the packages are realised.

Benefits realisation

The benefits realisation of this programme would be measured against the baseline measurements during the pre-implementation phase and would be formally reported at the end of the NLTP period of investment (2027). Some measurement like % of schools with travel plans can be monitored almost continuously as the delivery agent will be aware of progress through the support offered to the schools as they go through the process. The remaining bundles, as shown in Table 6.3, utilise standard reporting metrics.

Table 6.3 Key Performance Indicators for the TDM programme bundles

TDM Bundle	KPIs
Policy and planning measures	Number of policy and planning measures implemented
Parking management	Number of parking management measures implemented % of delivery areas with parking management plans
Travel plans for residents	% of residents with travel plans
Travel plans for schools	% of schools with travel plans
Travel plans for domestic businesses	% of businesses with travel plans

TDM Bundle	KPIs
Travel plans for the tourism businesses	% of tourism businesses with travel plans
Educational programmes	Frequency of education programmes
Marketing and engagement	Number of marketing campaigns aimed at promoting alternative modes of transport
Physical signage	% of urban areas within 250m of physical signage
Digital wayfinding	Number of digital wayfinding initiatives
Transport management associations	Number of transport management associations in the Queenstown-Lakes District % of delivery areas with transport management associations

Benefits Framework

The preferred programme is primarily aligned with the following benefit framework⁴ categories:

- Mode shift from single occupancy private vehicles (8.1.2)
- People – mode share (10.2.1)
- Accessibility – public transport facilities (10.2.2).

Secondary alignment is also seen with

- Access – perception (2.1.1)
- Physical health benefits from active modes (3.1.1)
- People – throughput (10.1.6)
- Impact on community cohesion (10.4).

6.4 Work Allocation Principles and Resourcing Requirements

Work is packaged into bundles that will be delivered on a district-wide or area by area basis as required. The programme will evolve and grow in response to the changes in Queenstown-Lakes District as the project progresses. This means that the way the TDM programme is delivered can change over time.

The programme will be coordinated by the TDM programme lead. It is expected that the packages will be resourced as required through external contractors. For example, to deliver workplace travel plans across the district this could be delivered by a TMA or enabled through a chamber of commerce. This is dependent on the target area and who has the capability to deliver the package. This could also evolve over time as TMAs are established and are able to deliver more of the work.

Project partners will provide input and facilitate interventions as required. For example, there are some policy changes that ORC will need enable.

6.5 Managing Change and Reporting Arrangements

The key indicator for change will be the ongoing monitoring and evaluation of the TDM programme. This will occur on a six-monthly basis and will be compared against the key performance indicators. This is expected to be a low-cost activity.

⁴ <https://www.nzta.govt.nz/assets/resources/land-transport-benefits-framework-measures-manual/Land-Transport-Benefits-Framework-measures-manual.pdf>

Other triggers of change include:

- Change in government policy related to congestion charging – that would allow for congestion charging to be implemented.
- Changes in contractor capability – As the programme is being built up, the ability of contractors to deliver the TDM measures could change. The most likely scenario is the responsibility for delivery of a package to become part of a local TMA once they are implemented.

These triggers would require a review of the existing programme to ensure the change compliments the overall programme.

Ongoing monitoring and reporting will be through the Transport Strategy Team and shared through Way to Go partners.

6.6 Communication and Engagement Plan

The recommended communications and engagement approach is tailored to support the delivery of the TDM programme over the 2024-2027 period. This is structured in four phases:

Phase 1: January – June 2024

Phase 1 outcomes are to identify the stakeholders who will implement the TDM programme over the NLTP period (e.g., schools, work places) develop the engagement and marketing campaign and content for materials to support delivery and ongoing public awareness, and early engagement with stakeholders.

Stakeholder mapping and analysis

Identify stakeholders who will implement the TDM programme over the NLTP period, outlining the type of engagement and timelines.

Engagement and marketing campaign

Develop a tactical engagement and public awareness campaign for the NLTP period, that includes types of channels and materials, and frequency and format of communication.

With the development of the engagement campaign, it will be important to clearly identify the specific target groups for any messaging. At the high level, the programme identifies workplaces, schools and resident groups, but there are a range of sub-groups that will need to be identified and engaged with e.g.,

- Peak time commuters
- Non-traditional shift workers e.g.
- Target schools and businesses to track TDM progress.

Develop materials for TDM delivery

Develop materials that are fit for purpose across multiple channels supported by programme and stakeholder specific focused messaging. Examples include a TDM toolkit, workshop materials (PowerPoint), and key messages. To raise public awareness about the QLDC TDM programme and to build on previous communications and engagement, examples include updated TDM web page content and Frequently Asked Questions (FAQs), digital newsletter, and social media content.

Early engagement with stakeholders

Introduce the TDM programme to identified stakeholders outlining the benefits, delivery timelines, and roles.

Outcomes:

- TDM stakeholders, including layers within organisations like schools, workplaces, are identified
- A suite of materials can be picked up and used for delivery to multiple stakeholder groups
- Ongoing public awareness
- Early engagement with stakeholders to build awareness and buy-in.

Phase 2 – 4: July 2024 – June 2027

It is anticipated an iterative approach will be taken across the phases with outputs being regularly adapted from lessons learned.

From phases 2-4, activities include updating materials, refining the stakeholder audience, and supporting ongoing engagement.

- Phase 2: 1 July 2024 – 30 June 2025
- Phase 3: 1 July 2025 – 30 June 2026
- Phase 4: 1 July 2026 – 30 June 2027

6.7 Risk Management Arrangements

The risk register is summarised in Table 6.4. The table outlines the risks associated the delivery of the TDM programme along with proposed mitigation actions. This table will continue to be updated during the pre-implementation phase.

Table 6.4 Risk register

Current Key Risks	Risk Description	Consequence Rating (H/ M/ L)	Comments/ Mitigation Actions
Ineffective Stakeholder Engagement	Stakeholders not engaged with can lead to reduced buy-in of programme and ineffective delivery	Medium	Early stakeholder engagement through development of SSBC and ongoing reporting
Project success is reliant on Council support/ buy in.	Time and resource from Council SMEs to support the TDM	Medium	Needs sufficient support from Council on the TDM objectives.
Programme delivery being significantly delayed	Pre implementation stage delaying the implementation of programme. programme not being delivered prior to June 2024 resulting in loss of funding opportunity	High	Packaging of measures to make procurement more efficient
Community acceptance	Lack of community support will result in lack of uptake of programme measures	Medium	Well-developed community engagement plan with implementation
Major changes in the regional/ national transport policy	Political priorities change impacting ability to deliver	Low	Wide stakeholder engagement developing consensus across community. Majority of funding is already secured

Current Key Risks	Risk Description	Consequence Rating (H/ M/ L)	Comments/ Mitigation Actions
Resourcing Availability	Only one FTE to coordinate delivery of programme. Reliant on contractor availability and capability of contractors to deliver within the short time frame.	High	Advocacy group to support and ensure delivery of programme remains on track. Bundling of programme to enable external resourcing and increasing of capability
Lack of evidence of success of TDM measures	There is minimal evidence of the success of TDM in NZ. This makes it difficult to measure the benefits.	Medium	The BCR calculations have a high level of conservatism built in.
Tourist uptake of TDM measures	Engagement with tourists, especially before they arrive in Queenstown Lakes District is difficult.	Low	The tourist benefit has not been included in the economic case. It is based on the resident population therefore any benefits of tourist uptake are in addition to what is mentioned in this business case.
BCR assumes no population growth	The programme development is based on existing population and does not account for growth.	Low	TDM packages are measured based on % of population/ employees so its flexible to growth.
Baseline measurements	Baseline data is not comprehensive and shows variability among available surveys	High	Measurement of the baseline at the outset of the programme and liaison with stakeholders to verify the baseline.
Lack of domestic and international role models	Peer projects are hard to find especially in relatively rural and sparsely populated areas.	High	Carry out research and identify NZ and international peer projects to assist the progress of the project, identify TDM techniques and improve outcome KPIs.

7. Next Steps

The TDM SSBC has been submitted to the NZTA for endorsement. Regardless of this, QLDC is committed to ensuring the success of the preferred programme and will start the delivery of the programme in early 2024.

Appendix A.
Multi-Criteria Analysis and Appraisal Summary

Programme details	Do-nothing	Do minimum	Do minimum+	Preferred programme	Do maximum	Scoring system key
		Limited travel planning activities Cycling encouragement programmes Cycling education programmes	Scale up support for travel planning activities to cover more than 15% of	Scale up travel planning activities to cover up to 50% of schools, businesses	Deliver all policy and planning measures	
Critical success factors: investment objectives 40%						3
To increase the average vehicle occupancy of vehicles along key corridors	0	1	1	2	3	0.4 2
To increase alternative mode share to 25% of all trips by 2033	0	1	1	2	3	0.4 1
To realise a 40% alternative mode share into Queenstown Town Centre	0	2	2	2	3	0.4 0
Other critical success factors 20%						-1
Achieves strategic fit	0	1.5	2	3	3	0.4 -2
Affordability	0	2	2	2	2	-3
Opportunities and impacts 40%						
Feasibility	0	3	3	2	2	0.4
Social and cultural impacts	0	1	1	2	3	0.4
Climate change mitigation	0	1	1	2	3	0.4
Impacts on te ao Māori	0	0	0	2	2	0.4
Overall score	0.0	1.3	1.4	2.1	2.7	

Appraisal Summary Table Template					
Date:	7/12/2023	Evaluation Period: (baseline and forecast year) e.g 2020 - 2060	- Year zero is 2023 - Appraisal period is 10 years, - TDM implementation commences early 2024 - Benefits start in 2025	QLDC Preferred Option TDM programme	This is the preferred option <input checked="" type="checkbox"/>
Problem/opportunity statement:	(1) Increasing demand for private motor vehicle use is reaching network capacity and results in poor levels of services and high costs for residents. (2) Demand for private motor vehicle use cannot be met solely through network expansion; therefore, the existing network must be utilised more efficiently. Investment in public transport and active mode improvements requires additional support to maximise community uptake and benefits.	Investment objectives:	(1) To contribute towards increasing the average vehicle occupancy of vehicles along key corridors by 10% by 2033 (2) To contribute towards increasing alternative mode share to 25% of all trips by 2033 (3) To contribute towards realising a 40% alternative mode share into Queenstown Town Centre by 2033	How project gives effect to GPS:	QLDC TDM SSBC makes a contribution to Better Transport Choices through mode shift away from single-occupancy private car use. Various measures encourage the use of public transport and active modes in Queenstown. Modes shift from private car use also contributes towards a low carbon transport system. There is a minor contribution to safety through the mode shift to safer modes like public transport. It is recognised that the draft GPS 2024 may be subject to change.
				How project gives effect to local community outcomes:	TDM measures such as school travel plans, work travel plans and residential travel plans are implemented at the local level via consultation processes. Local outcomes include less private car use, lower congestion, greater social connectedness and improved air quality.

1. Summary of Non-Monetised Impacts (Description)	2. Summary of Financial Impacts (nominal, non-discounted)	3. Summary of Monetised Option Impacts (present value, discounted)
(1) To contribute towards increasing the average vehicle occupancy of vehicles along key corridors by 10% by 2033 (2) To contribute towards increasing alternative mode share to 25% of all trips by 2033 (3) To contribute towards realising a 40% alternative mode share into Queenstown Town Centre by 2033	Capital Costs (limited to physical wayfinding improvements only)	\$150,000 Total Monetised Benefits
	Operating Costs	\$2,000,000 Present Value Costs (undiscounted costs)
	Total year one Costs	\$649,173 BCR
		\$18,716 \$1,985,000 8.50

Transport Outcomes Name of Benefit	Non-Monetised Impact: (description in numerical or narrative terms)				Monetised Impact: (description in dollar terms in real terms, non-discounted)
	Name of Measure:	Baseline:	Do Minimum Impact:	Option Impact (non-monetised):	Option Impact (monetised):
<i>Healthy and safe people (Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)</i>					
1.1 Impact on social cost and incidents of crashes	1.1.3 Deaths and serious injuries	45 deaths and serious injuries 2022-2023 period.	Minimal impact. Current do minimum option is not resulting in any significant mode shift. Therefore, there will be no significant reduction in deaths and serious injuries on the transport network.	Mode shift to public transport and away from private car use brings about lower deaths and serious injuries. We have not measured this benefit.	n/a
3.1 Impact of mode on physical and mental health	3.1.1 Physical health benefits from active modes	Based on 2019-2022 NZ Household Travel Survey data: 82% drive car / passenger in car, 2% cycle, 10% walk, 5% use public transport, 1% travel via other means.	Minimal impact. Current mode share of active modes is less than 15%	The TDM SSBC for Queenstown-Lakes will encourage and promote uptake of active modes of transport. This will improve physical health of residents and visitors.	Cycling Health Benefit: No cycling or walking benefits estimated
3.2 Impact of air emissions on health	3.2.1 Ambient air quality - NO2	The National Environmental Standards for Air Quality (NESAQ) for 24-hour PM10 (Particulate Matter with a diameter of 10 micrometres or less) is than 50 µg/m³	Minimal impact. Current mode share of alternative modes is less than 20%.	Small impact on air quality - reduction in NO2 emissions.	Not measured in this programme
3.2 Impact of air emissions on health	3.2.2 Ambient air quality - PM10	The National Environmental Standards for Air Quality (NESAQ) for 24-hour PM10 (Particulate Matter with a diameter of 10 micrometres or less) is than 50	Minimal impact. Current mode share of alternative modes is less than 20%.	Small impact on particulate matter (PM10) leading to lower smog rates	Not measured in this programme

Environmental sustainability (Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)

<p>8.1 Impact on greenhouse gas emissions</p>	<p>8.1.1 CO2 emissions</p>	<p>Domestic targets under the Climate Change Response Act (CCRA) Net zero emissions of all greenhouse gas (GHG) emissions other than biogenic methane by 2050. 24 to 47 per cent reduction below 2017 biogenic methane emissions by 2050, including 10 per cent reduction below 2017 biogenic methane emissions by 2030.</p>	<p>Minimal impact. Current mode share of alternative modes is less than 20%.</p>	<p>Small effects from mode shift away from private car use</p>	<p>The programme did not measure this in our economic analysis</p>
<p>8.1 Impact on greenhouse gas emissions</p>	<p>8.1.2 Mode shift from single-occupancy vehicles</p>	<p>Based on 2019-2022 NZ Household Travel Survey data: 82% drive car / passenger in car, 2% cycle, 10% walk, 5% use public transport, 1% travel via other means.</p>	<p>Minimal impact. Current mode share of alternative modes is less than 20%.</p>	<p>Small effects from mode shift away from private car use</p>	<p>The programme did not measure this in our economic analysis</p>
<p>9.1 Resource Efficiency</p>	<p>Impact on resource efficiency</p>	<p>Current transport network</p>		<p>TDM involves encouraging use of the existing transport network and therefore improves resource efficiency. It is also links to other programmes such as future Public Transport improvements and congestion charging. These programmes reinforce each other with benefits that are greater than the sum of the parts.</p>	<p>The programme currently does not measure this but it is a potential future outcome measurement,</p>
<p>10.2 Impact on Mode choice</p>	<p>10.2.10 Traffic - mode share (number); all modes</p>	<p>Based on 2019-2022 NZ Household Travel Survey data: 82% drive car / passenger in car, 2% cycle, 10% walk, 5% use public transport, 1% travel via other means.</p>	<p>Minimal impact. Current mode share of alternative modes is less than 20%. Realliance on vehicle travel exacerbates existing congestion in the Queenstown-Lakes District.</p>	<p>To contribute towards increasing alternative mode share to 25% of all trips by 2033 and to contribute towards realising a 40% alternative mode share into Queenstown Town Centre by 2033</p>	<p>n/a</p>

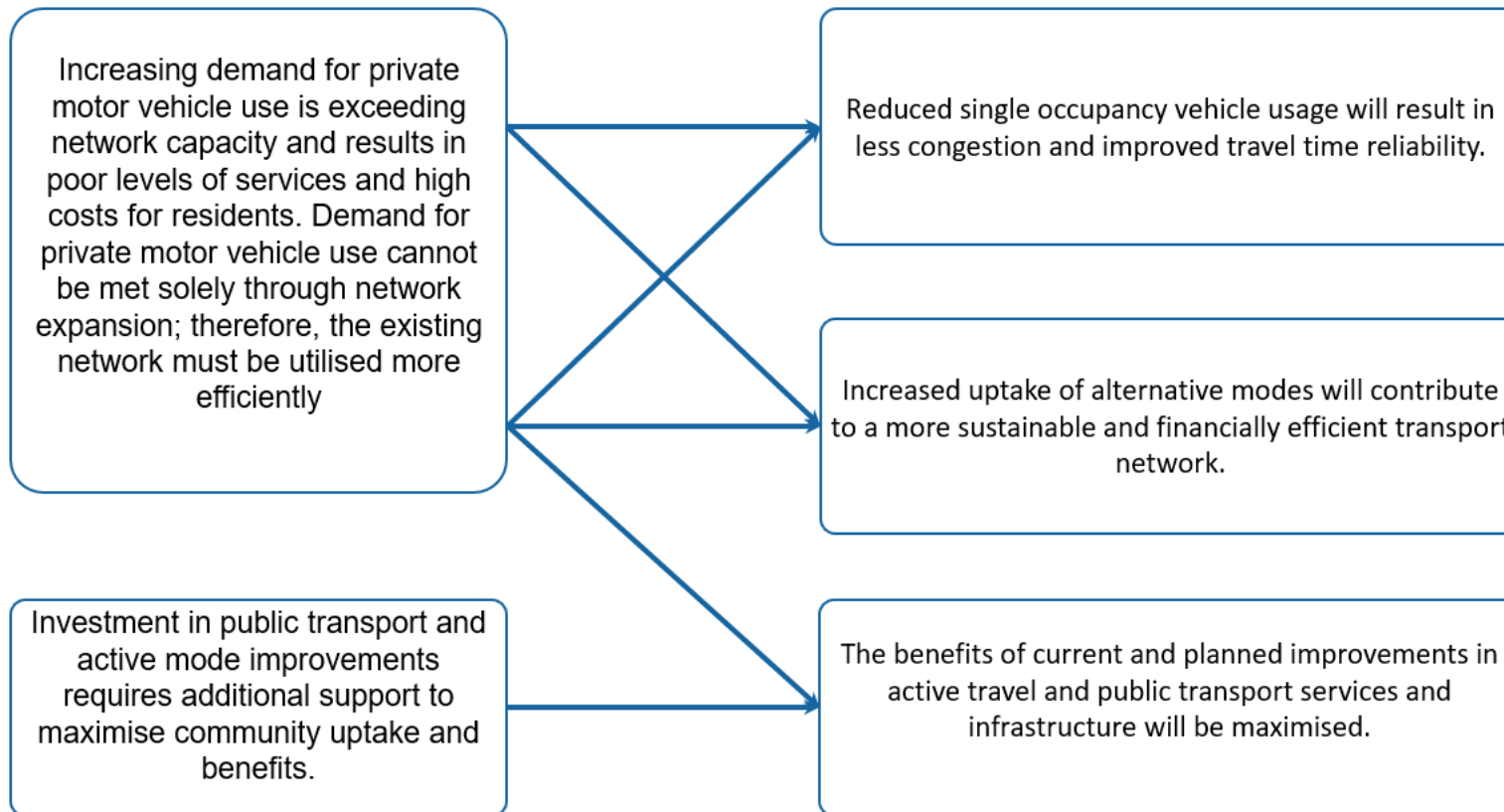
<p>10.2 Impact on Mode choice</p>	<p>10.3.1 Access to key social destinations (all modes)</p>	<p>Current transport network</p>	<p>Current transport network and existing TDM measures</p>	<p>TDM programme highlighting access to key destinations via other modes aside from private vehicles where awareness of the options might be weak at the moment.</p>	<p>None</p>	
<p>12.1 Effect on Te Ao Māori</p>	<p>12.1.1 Te Ao Māori</p>	<p>Current cultural programmes</p>		<p>Larger programmes will touch all communities and involve the consideration of cultural factors in promoting TDM outcomes.</p>	<p>None</p>	
<p>Travel Behaviour Change (Composite Benefits)</p>	<p>-</p>	<p>TDM in place includes existing TMAs such as Lightfoot that are already encouraging other modes aside from private car travel</p>	<p>Do minimum includes Transport Management Approach as and existing mode shares (according to the best information that we have)</p>	<p>n/a</p>	<p>MBCM composite TDM values per pop per annum, totalling \$18.7m for the programme over 10 years. Programme benefits are measured only over the 10 period according to NZTA methodology.</p>	

Rationale for selecting preferred option

The Preferred Option was set to achieve implementation of Preferred Option through a realistic level of policy and local community coverage of travel plans and other supporting measures.

Appendix B.
Problem/ Benefit Map

Problem / Benefit Map



Appendix C. Engagement Summary

C1. Introduction

Abley was engaged by Queenstown Lakes District council to develop the SSBC lite to inform the development of a Travel Demand Management Programme. Part of this included engagement with stakeholders and the public to identify and validate low-cost actions, that will help the community, businesses, and residents to consider transport choices, optimising the efficiency of the transport network and achieving more sustainable outcomes in the Queenstown Lakes District.

C2. Engagement Approach and Target Groups

Workshops

Two workshops took place on 1 November and 1 December. The purpose of workshop one was to identify problems and benefits, understand investment objectives and present a long list of TDM measures to the group to short list preferred measures. The purpose of workshop two was to confirm the preferred programme, agree on proposed commercial, financial and management cases and play back public sentiment on what drives behaviour change and preferred TDM measures. Workshop attendees included QLDC project teams, Otago Regional Council, Waka Kotahi, Queenstown Trails Trust, Destination Queenstown, Ministry of Education, Queenstown Airport Corporation, Age Concern Queenstown, The Lightford Initiative and Wao.

Public Consultation - Survey

To engage with the wider public, a survey was shared on multiple QLDC channels seeking feedback on how people choose to travel around the district, why they travel that way, and what might make it easier for them to try a different form of transport. The survey opened 8 November and closed 29 November. The Travel Demand web page was created on the QLDC website with the purpose of sharing information about the programme, including a link to the survey and aligned programmes. The survey was also shared on the QLDC Face book page and featured in the Lakes Weekly Bulletin, Wānaka Sun, and Let's Talk Newsletter.

C3. Workshop Summary

Workshop 1

The workshop held on Wednesday 1 November focused on: understanding the problems and challenges; investment objectives; long/ short-listing of interventions and initial programme development.

A draft of the key problem, challenges, benefits, problem statements and investment objectives were presented to the stakeholders in attendance. This was presented for feedback and amendments.

A TDM long list was presented along with the feasibility and programme options for stakeholder feedback.

Problems, benefits, and investment objectives

An initial list of problems, challenges and benefits were presented to the stakeholders to provide feedback. These were presented in draft form to stimulate debate. Three draft investment objectives were presented to the workshop stakeholders for feedback.

The workshop attendees agreed that the information presented was well-aligned with the problems, benefits, and investment objectives. The suggested updates are reflected below with the key update being to the investment objectives.

Significant discussion occurred regarding the investment objectives whether the main contributors to the congestion and where the focus of activity should be, was understood. It was noted that as the business case is district wide, there will be a number of different contributing factors and, within the business case context, we were trying to isolate them to key, quantifiable issues, that will deliver both specific and wider benefits. For example, school term time was suggested as a key contributor to peak congestion. While it was acknowledged that this is a factor, overall traffic volumes, particularly on the key monitored corridors such as SH6A, are reaching (or exceeding) their limits both during and outside of term time. Further discussion focused on the distinction between peak and total traffic volumes was also raised, it was commented that if nothing were done then the peak would become the typical traffic volume.

Problems and challenges updates

- Include climate change in some capacity
- Tourists like the freedom and flexibility the car provides
- Safety concerns and perceived safety of the network at key points such as schools and crossing state highways
- TDM measures are more successful if they support infrastructure improvements
- Lack of alternative to private vehicles for those commuting from smaller towns into the main centres
- Existing car-centric culture and challenge encouraging active travel choices more often

Benefits updates

- Better visitor experience
- Increasing active travel aligns with New Zealand's 'clean, green' image
- Social cohesion

Investment objectives update

- Is a focus on single occupancy vehicles too narrow for the investment objectives
- Review the high-level objective and add some sub-investment objectives to reflect the diversity of traffic patterns and users.

Long list and programme development

A longlist of potential TDM measures was circulated under four key focus areas. These focus areas were informed by the preceding Queenstown Business Cases work from which this TDM SSBC lite is aligned.

Of the four key areas for TDM measures, there was a mix of opinions about where the focus should be initially. A show of hands indicated travel planning and behaviour change, and a TMA should be the initial focus. However, the discussion highlighted that putting policies in place would allow for the other measures to be implemented as it supports funding applications and incentivises change. There was also a discussion that the four areas are interlinked and act as pillars to deliver a TDM programme.

The overall purpose of the business case process is to define and evaluate different approaches by which a problem or opportunity may be addressed. While this may be a specific intervention i.e., a singular project, in most cases the approaches will involve a range of different interventions which when combined, provide a programme of activity.

To help facilitate this process, five indicative programmes were proposed that reflected different approaches to their scale and level of investment and include a combination of different TDM measures. These are:

1. Do nothing – doing nothing is always an option
2. Doing a little bit (Koala Bear)⁵ – encouraging modal changes through small interventions
3. Doing a little bit more (Panda Bear) – looking to actively discourage the appeal of driving
4. Almost everything (Winnie-the-Pooh) – balancing out what is in options 2 & 3
5. Do maximum (Grizzly Bear) – realising a widespread cultural change to car culture

These programmes were for initial framing and used to represent different philosophical approaches.

This list was reviewed by the workshop attendees to assess the feasibility of the measures and where they aligned in the programme development. The following additions and changes to the list and programmes were suggested by stakeholders.

TDM measures updates

- EV-charging strategy as a low-cost, medium-term measure
- Some of the measures could be more ambitious when looking at district-wide plans and strategies. For example, developing car share or micro-mobility share policies.

Programme development

- The do-minimum programme for TDM measures should only include measures already implemented
- Grizzly bear should have all and more than the Pooh bear option

Further notes primarily related to identifying existing measures and actions were made. This included actions in the Queenstown Lakes Climate and Biodiversity Plan, updates to the district plan that are already happening, and existing travel behaviour change schemes. These will be considered and will be used to create a preferred programme and inform the 'do minimum' programme.

Funding

While it was acknowledged that QLDC, ORC and Waka Kotahi are likely to be the organisations responsible for funding any TDM activities, it was also noted that there was no guarantee to the extent or magnitude of this funding. Stakeholders also suggested the following potential sources of funding:

- Match funding with community grants
- Central Lakes Trust
- Airport sustainability master plan has opportunities related to promoting active modes
- Businesses and business groups

The project team will follow up with the different organisations as appropriate to understand the opportunity or otherwise.

Summary

Overall, there was a good discussion regarding the problems/ challenges and benefits that a TDM programme can address.

⁵ For the purposes of the workshop, the indicative programmes were given thematic names that reflected the progression from a low impact approach e.g., Koala bear, through to a more dynamic and substantial approach i.e., Grizzly bear. This helps differentiate the programmes during the discussion and formulation stages.

Workshop 2

The workshop held on Friday 1 December focused on: confirming the updated problems, challenges investment objectives and programme approach based on workshop 1; developing the programme delivery based on community areas, TDM packages and priority of implementation for the first six months and following three years.

There was a recap of workshop 1 with some additions made to the problem and benefit statements. Based on the discussion and subsequent further consideration by the investment partners the final proposed investment objectives were as follows:

- To increase the average vehicle occupancy of vehicles along key corridors by 10% by 2033
This was amended to reflect the discussion about how single occupancy vehicles (SOV) was a quite specific term and that focusing on increasing average vehicle occupancy can be achieved through both reducing SOVs or increasing overall occupancy e.g., car sharing or public transport usage
- To increase alternative mode share to 25% of all trips by 2033
- To increase the alternative mode share of trips into Queenstown Town Centre by 40% by 2033.

There was discussion around the ambition of the investment objectives and reordering them to ensure clarity. There was discussion that the use of 'alternative mode' could indicate private vehicles are the 'default' means of travel.

The preferred programme presented to the stakeholders fell between the 'Winnie-the-Pooh' and 'Grizzly Bear' programmes shown in the first workshop. There was agreement that this was the correct approach given it is currently unfeasible to implement congestion charging and the emphasis on encouraging behaviour change.

Programme Delivery - Geography

The maps for the district were divided based on the community associations as shown in Figure C3.1 and Figure C3.2, this was assessed by the stakeholders. Feedback was provided on what areas needed changing, added, or removed to give a good representation of the district and ability to deliver the programme packages.

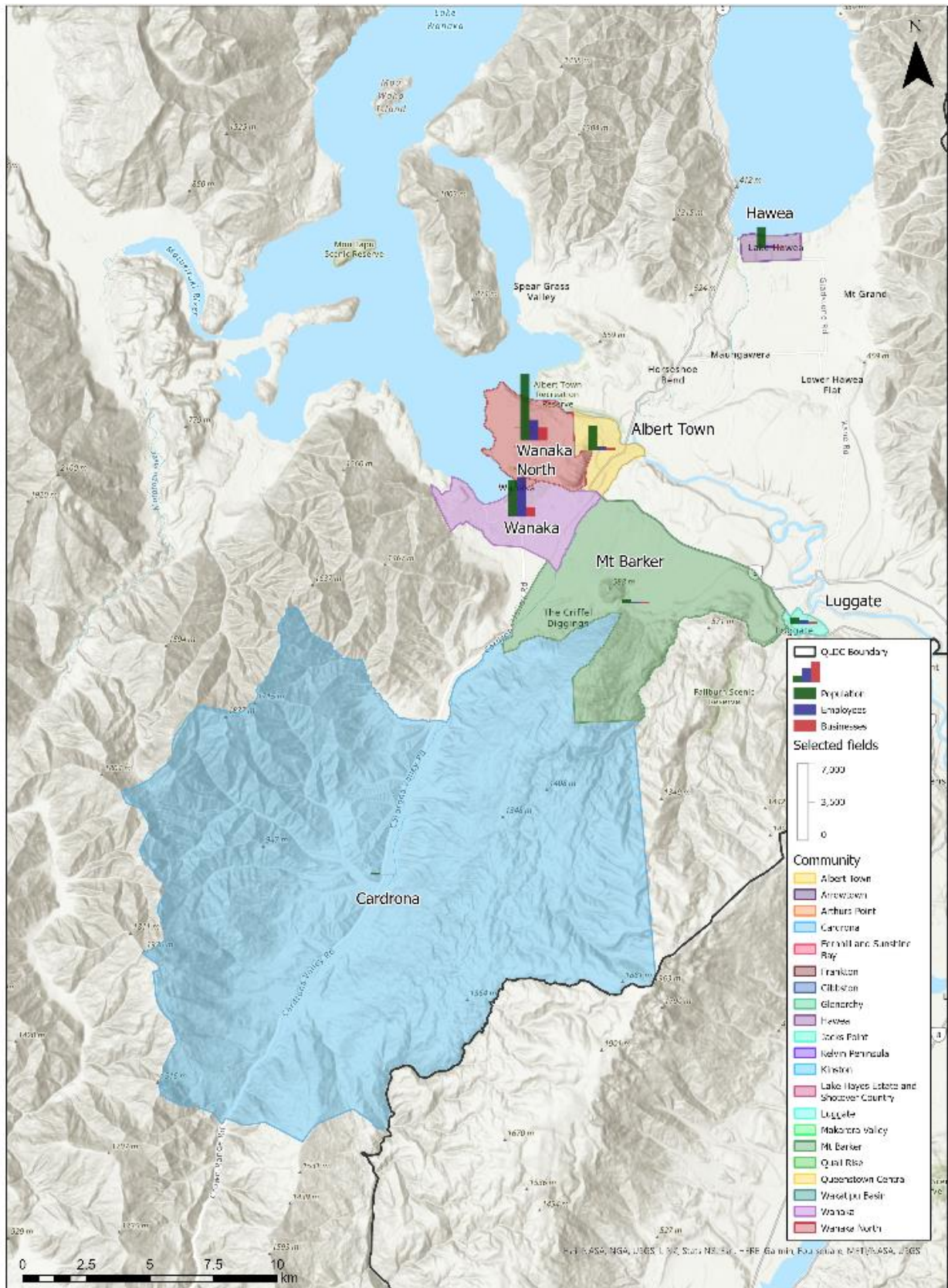


Figure C3.1 Upper Clutha division of areas as presented to the stakeholders

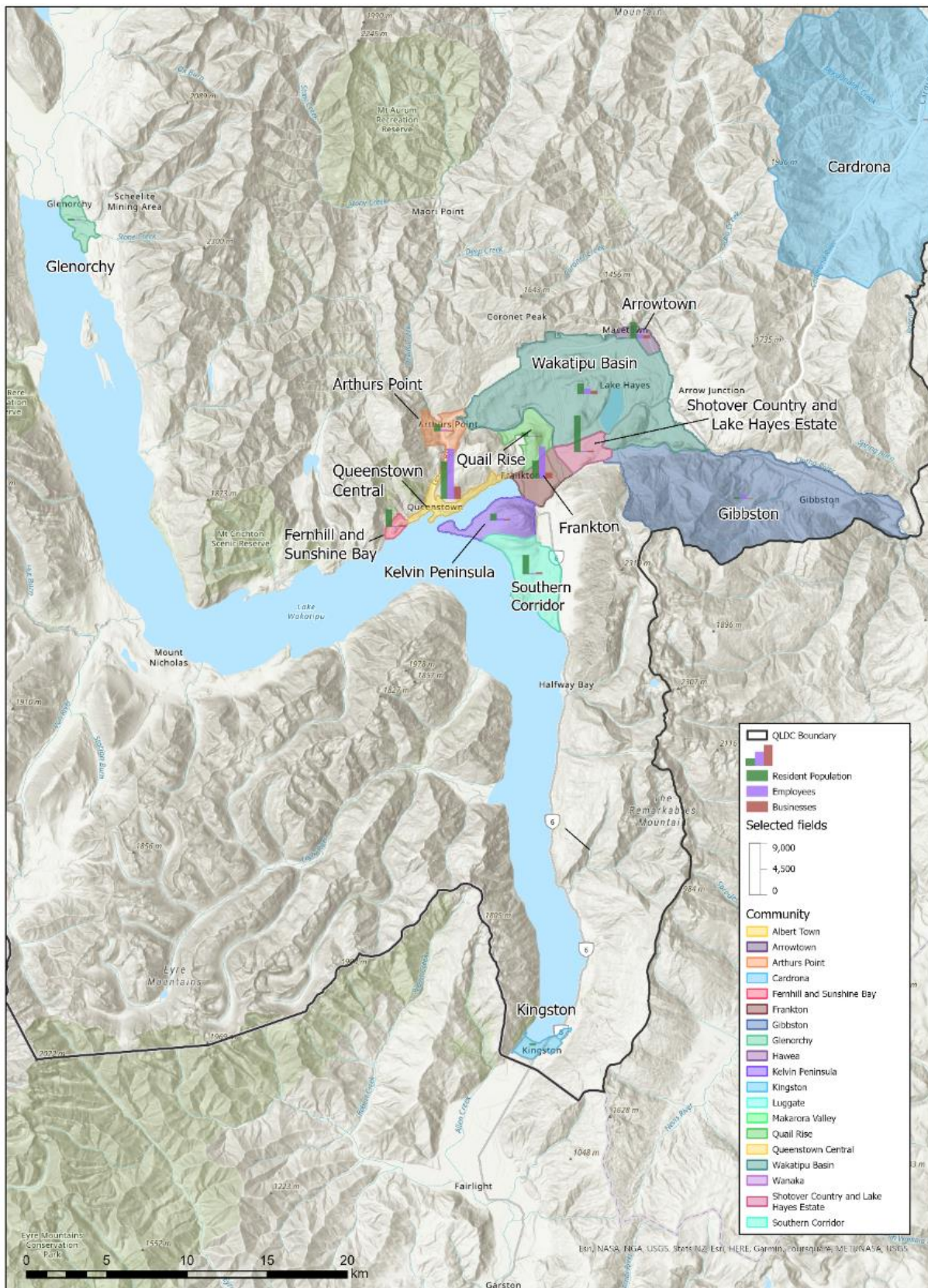


Figure C3.2 Wakatipu division of areas as presented to the stakeholders

The following changes were suggested:

Upper Clutha:

- Add Hawea flat
- Combine Wānaka and Wānaka North (and extend slightly to cover Cardona Valley Road and Orchard Road)
- Exclude Mt Barker area
- Reduce Cardrona valley to just Cardona Village
- Include the smaller more distant communities. i.e., Glendhu Bay and Makarora Valley
- Include Wānaka Airport and ski fields.

Wakatipu:

- Adjust the split between Queenstown Central and Frankton areas to be closer to the BP roundabout
- Lake Hayes/ Shotover area should be reduced to the area south of the Lake, the rest can be absorbed into Wakatipu Basin area
- Extend Jacks point area towards Frankton and change the name to Southern Corridor
- Slightly extend the Wakatipu Basin area to cover remaining SH6 and Road near Coronet peak
- Include smaller communities such as Bobs Cove and others along the lake front on the road to Glenorchy and to Kingston.
- Include ski fields.

Some changes could not be captured due to the constraints of SA files in GIS such as the extension of existing areas. The Wānaka Airport and ski fields can be captured through TMAs or the tourism business bundle.

Programme delivery – Delivery prioritisation and approach

The programme delivery was developed as part of the workshop. Stakeholders were asked to prioritise the delivery approach based on the areas developed above and when the TDM bundles should be delivered. The packages presented to the stakeholders are summarised in Table C3.1 below.

Table C3.1 TDM bundles

TDM category	TDM bundle	Definition
Policy	Taxes/ levies	Includes road pricing only. Will only be feasible if legislated.
	Policy and planning measures	Includes changes to the District Plan, Code of Practice as well as any other new plans, strategies or policies implemented by QLDC.
	Parking management	Any parking management measure, such as variable pricing.
Travel planning and behavioural change	Travel plans for residents	Travel plans for communities to assist in encouraging travel by alternative modes of transport to a variety of different destinations (e.g., retail destinations).
	Travel plans for schools	Travel plans for public primary and secondary schools to assist in encouraging students to travel to/ from school via alternative modes of transport.
	Travel plans for domestic businesses	Travel plans to encourage employees of domestic businesses to travel to/ from their workplace via alternative modes of transport (e.g., offices workers).

TDM category	TDM bundle	Definition
	Travel plans for the tourism businesses	Travel plans to/ from tourism businesses to encourage both employees and customers to travel via alternative modes of transport. Tourism businesses have been differentiated from domestic businesses, as they are more likely to focus on experiences that attract large groups of tourists to locations, which are sometimes are difficult to travel to without a car (e.g., Kawarau Bridge Bungy).
	Educational programmes	Any programmed aimed at upskilling the public with the aim of making travel via active modes of transport easier.
	Marketing and engagement	Any measure aimed at promoting travel via sustainable modes of transport.
Wayfinding improvements	Physical signage	Any improvement of physical signs.
	Digital wayfinding	Any digital measure aimed at improving wayfinding for the public.
Transport Management Associations	N/A	Community-led organisations aimed at implementing a range of TDM measures and finding solutions to transport problems.

There was agreement that prioritisation should be done based on ‘low hanging fruit’, areas with higher population and existing infrastructure. The following suggestions were made:

- School travel plans should be delivered in a district-wide approach and targeted first as there is already precedent for this for new schools. There was consensus that this should be a priority for the first six months.
- Residents should be targeted area-by-area. High population areas closer to the main centres such as Arrowtown, Frankton, Lake Hayes Estate and Shotover Country, and Wānaka should be prioritised in the first six months before the areas with more limited travel options such as Glenorchy, Luggate and Gibbston.
- Community Associations should be engaged with early to determine their ability to assist with the delivery of TDM packages.
- Businesses was prioritised below schools and residents for delivery. Stakeholders indicated priority for Frankton for domestic businesses and Queenstown Central for tourism businesses.
- Marketing and Engagement should tie in with local initiatives.
- Wayfinding improvements are a lower priority, however physical wayfinding at the Airport should be implemented first and align with existing infrastructure.
- Digital wayfinding should be delivered at a district-wide approach but be destination specific for Queenstown Central.

Programme Evaluation

The programme is evaluated using multi-criteria analysis based on the investment objectives, success factors, feasibility, and other general considerations. There was a consensus at the workshop for the evaluation approach.

C4. Survey Summary

The survey included multi-choice and open-ended questions, such as:

- On average, how many trips do you take each week?
- Which mode of transport do you use most often to get around?
- Why do you choose to travel this way?
- Which other modes of transport do you use to travel around?
- How often have your trips been impacted by delays of congestion each week?
- A series of questions were asked about activities or measures that would help in considering using a bike or scooter, walking, catching public transport to get to/ from a destination?

There were 176 responses to the survey. Overall reach from the Facebook post was 7426 with 431 likes and clicks.

Survey summary:

In response to on average, how many trips do you take each week for work, for school, for shopping/ leisure?

- Almost all (89%) travelled for work, of that proportion 45% travelled 3 – 5 times and a further 45% travelled 6 - 10+ times a week.
- Around a third of the sample travelled for school, of that third (45%) almost half did 3 – 5 trips and a further third did 10+ trips.
- Everyone travelled for shopping/ leisure, (79%) almost all did 1 – 5 trips a week to shop.

How people travel

In response to the mode of transport used most often.

Options were: Private vehicle (driver), private vehicle (passenger), bicycle or e-scooter, public transport, walk/ run, motorcycle or motor scooter, wheelchair or mobility scooter, taxi, uber or other driving service.

The majority of respondents use a private vehicle (77%) as the mode of transport used most often, while bicycle accounted for 7%, and public transport with 6%.

The primary reasons for the respondents' main mode of transportation:

- time (62%)
- convenience (54%)
- public transport not being available (40%).

In response to what other modes of transport do you use to get around.

Options were: Private vehicle (driver), private vehicle (passenger), bicycle or e-scooter, public transport, walk/ run, motorcycle or motor scooter, wheelchair or mobility scooter, taxi, uber or other driving service.

In response to other ways people get around other than their primary mode of transport

Walk or run (39%), bicycle (39%), and public transport (34%).

Travel delays

In response to how often have your trips been impacted by delays or congestion each week.

Options were: Often, sometimes, not often, never.

Delays were experienced by all respondents and occurred often (50%), sometimes (31%) or not often (18%).

Understanding travel behaviour and what motivates travel choices

Respondents were asked which activities or measures would help them consider using a **bike** or **scooter** to get to/ from their destination. The options were:

- Help planning a suitable route to cycle
- Better signage
- Secure covered parking for bikes at my destination
- More cycleways on the route to my destination
- Safer routes
- Cycling encouragement programme/ promotional schemes
- Increased awareness of bike/ scooter availability
- More choice through travel plans
- Nothing would encourage me/ make this easier
- Anything else that would help you consider a bike or scooter to get around?

The primary three measures where respondents agree/ strongly agree:

- Safer routes (68%)
- More cycleways on the route to my destination (60%)
- Secure covered parking for bikes at my destination (51%).

The primary three measures where respondents disagreed/ disagreed strongly:

- Nothing would encourage me (52%)
- Cycling encouragement programme/ promotional schemes (53%)
- Better signage (48%)
- Increased awareness of bike/ scooter availability (37%).

Commentary from open ended questions in the survey include:

“More on road cycle lanes in the district i.e., along Lake Esplande”

“A cycleway or increased shoulder between Jacks Point and Kelvin (from there it’s fine), but I don’t feel safe taking my kids on the rear of my bike on the State Highway with it having such a narrow shoulder, especially near Boyd Road”

“Subsidised e-bikes or just a place to shower at my work...there’s a lot of steep hills in Queenstown, you get sweaty riding a bike to work and there’s nowhere to shower at my work. I need to be presentable for my work so this is always an issue for me.”

“Safety, people can’t cycle safely from Hanleys/ JP to Frankton currently as the half-job cycle path is completely unsafe on such a high-speed road”

“Be great to have a safe, AFFORDABLE lock up area in the CBD for my e-bike. I need to pick up my daughter from Queenstown Primary School each day, we would both consider riding our bikes more if there was a SAFE bike path through the CBD to get from the Frankton track through town to QPS (no access way for bikes through the CBD that is safe - it's VERY busy and dangerous for adults on bikes through town let alone kids!)”

Respondents were asked which activities or measures would help them consider walking to get to/ from their destination. The options were:

- Help planning a suitable route to my destination
- Better signage
- More/ better maintained roads/ footpaths
- Increased awareness of walking routes
- Safer routes
- More choice through travel plans
- Nothing would encourage me/ make this easier
- Anything else that would help you consider walking to get around?

The primary two measures where people agree/ strongly agree:

- More/ better maintained roads/ footpaths (58%)
- Safer routes (55%).

The primary measures where people disagree/ strongly disagree:

- Help planning a suitable route to my destination (54%)
- Better signage (54%)
- Increased awareness of walking routes (41%)
- More choice through travel plans (36%).

NB: 30% also agree/ agreed strongly with more choice through travel plans

Commentary from open ended questions in the survey include:

“Better crossings. I work at Terrace Junction, and it is a long path to get over to the gym at lunch time. It's too dangerous to cross the main road”

“Lighting, i live in kelvin heights and there is literally one streetlight in willow place and then nothing until the Kawarau bridge”

“There have never been enough footpaths in Queenstown let alone decent ones! I see this is now finally improving but there is still a lot to be done. Also trying to cross Frankton Road for us on Queenstown Hill to get to buses and the walking track + footpath is VERY dangerous and a nightmare with all the traffic. There is barely a break in the constant traffic to get halfway across! There should be an overpass for pedestrians to use.”

“Better walking environment, wider paths, more signalled crossings, more street trees and street amenity, less vehicle priority areas within town centres, better path networks to provide options, better urban design and building interface with street i.e., avoid parking areas fronting on to streets and replace with active building frontages, remove street parking areas in some locations and put in pocket parks, reduce traffic speeds with traffic calming design.”

Respondents were asked which activities or measures would help them consider using public transport to get to and from their destination. The options were:

- Help planning a suitable route to my destination
- Public transport service is more reliable
- Public transport service is more frequent
- If I knew I could get a seat
- Public transport is cheaper
- Promotional schemes (e.g., free travel on weekends)
- Increased awareness of public transport options
- I live in an area without public transport services and would consider if available
- More choice through travel plans
- Nothing would encourage me/ make this easier
- Anything else that would help you consider public transport to get around?

There was an overwhelming response to the public transport options, The primary measures where people agree/ strongly agree were:

- Public transport service is more frequent (83%)
- Public transport service is more reliable (82%)
- Promotional schemes (e.g., free travel on weekends) (61%)
- Public transport is cheaper (50%)
- Increased awareness of public transport options (49%)
- More choice through travel plans (47%)
- I live in an area without public transport services and would consider if available (33%).

Commentary from open ended questions in the survey include:

“Better planned routes so all busses are not travelling down Frankton Road. and more frequency. At the moment there is one in the morning that works, but not for the return journey.”

“I live on Qt hill and work in 5 miles. I have to take 2 buses or 1 bus and walk for 20 mins just to get to 5 mile - a journey that takes less than 10 mins in the car.”

“I commute by bus twice a week. Yesterday it took me 54min from Stanley Street to Sylvan Ave, Lake Hayes!!!stuck in the traffic on Frankton Road then stuck again around PackNSave. I left work 30min before my neighbour who arrived 2 min earlier than me...Dedicate bus lane to improve the flow, add connections between bus routes...”

“Better and more bus shelters i.e., heated seats, rubbish bin and a shelter by the wharf/ Crowne place for example.”

“I live in Kelvin heights and the cost of the Queenstown ferry at \$10each way is extreme. They need more support from council and govt with a better subsidy or encouraged to upgrade to more fuel-efficient boats.”

Respondents were asked what would encourage them to drive less. The options were:

- Lack of parking
- Better public transport and walking and cycling routes
- Available carpooling and car share schemes
- High private vehicle costs
- More choice through travel plans
- Nothing would encourage me/ make this easier
- Anything else that would encourage you to drive less?

The primary two measures where people agree/ strongly agree:

- Better public transport and walking and cycling routes (78%)
- More choice through travel plans (37%).

The primary measures where people disagree/ disagree strongly:

- Nothing would encourage me (47%)
- Higher private vehicle costs (58%)
- Lack of parking (47%)
- Carpooling and car share schemes (43%).

Commentary from open ended questions in the survey include:

“Public transport being more frequent during peak times & public transport that can get me to my destination quicker than I can get there myself. I won't walk or bike as I need to get kids and shopping etc on a regular basis and I am time poor, I can't do things that make getting from a-b 2/ 3/ 4 times longer.”

“Reliable, consistent, public transport option.”

“No as no other options for us to get to our workplace - public transport makes the trip longer - biking or our car is easier and on our timetable for work.”

“Having a sense that others in the community appreciated the effort I'm making to leave my car at home. Generally, people seem to be perplexed when I take the bus - why would I when taking the car would get me there in half the time? It would be nice to get more people feeling it's worth making the effort to benefit not just themselves but the wider community.”

“Water Taxi subsidies for commuters & a park-and-ride scheme - from Sunshine Bay and Frankton. why on earth don't we use the lake as a transport resource? It's huge and not congested??”

Taking the lead in transport behaviour change

Respondents were asked who should take the lead in achieving transport behaviour change? Options were:

- Council
- Council and businesses
- Community and businesses
- Individuals.

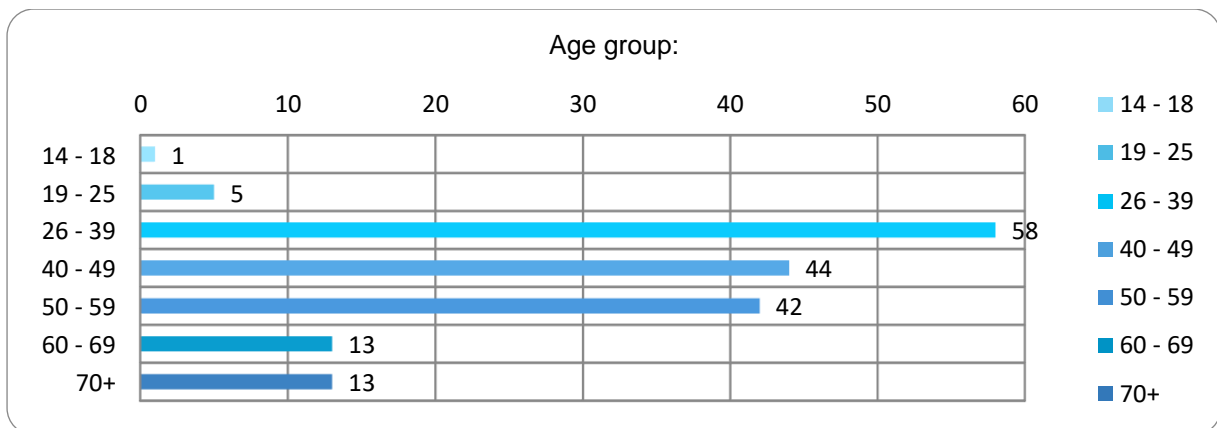
Council was cited as most appropriate to take the lead in achieving transport behaviour change and all resulted listed.

- Council (79%)
- Individuals (69%)
- Community and businesses (67%)
- Council and businesses (66%).

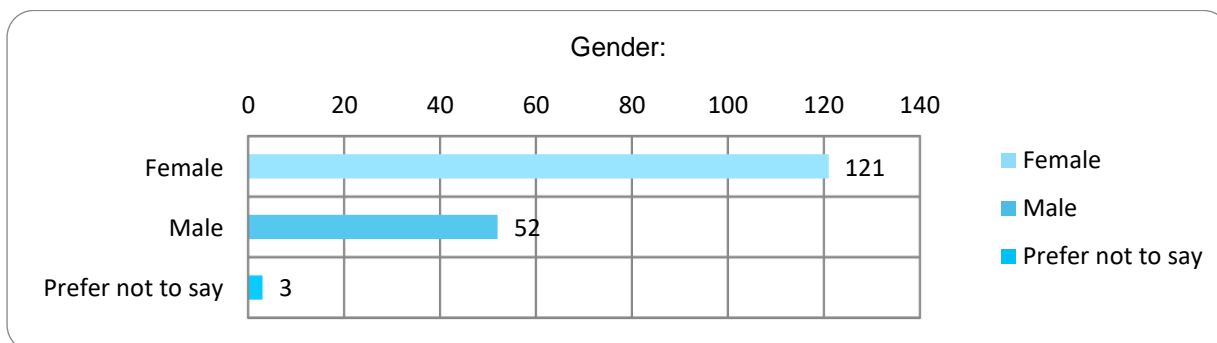
Some demographics were collected through the survey responses.

- The majority of respondents were aged between 26 – 59.
- There were 121 female respondents and 52 male respondents.
- A large majority of respondents were from Queenstown/ Whakatipu or ‘other’ areas such as Fernhill, Shotover, Jack’s Point, Kelvin Heights, Lake Hayes, Bob’s Cove, Hanley’s Farm, Arthur’s Point, Speargrass Flat, Kawarau Falls, Quail Rise.
- Many respondents identified as NZ European/ Pakeha or ‘other’ such as European, Japanese, South American, Sri Lankan, Australian, American.

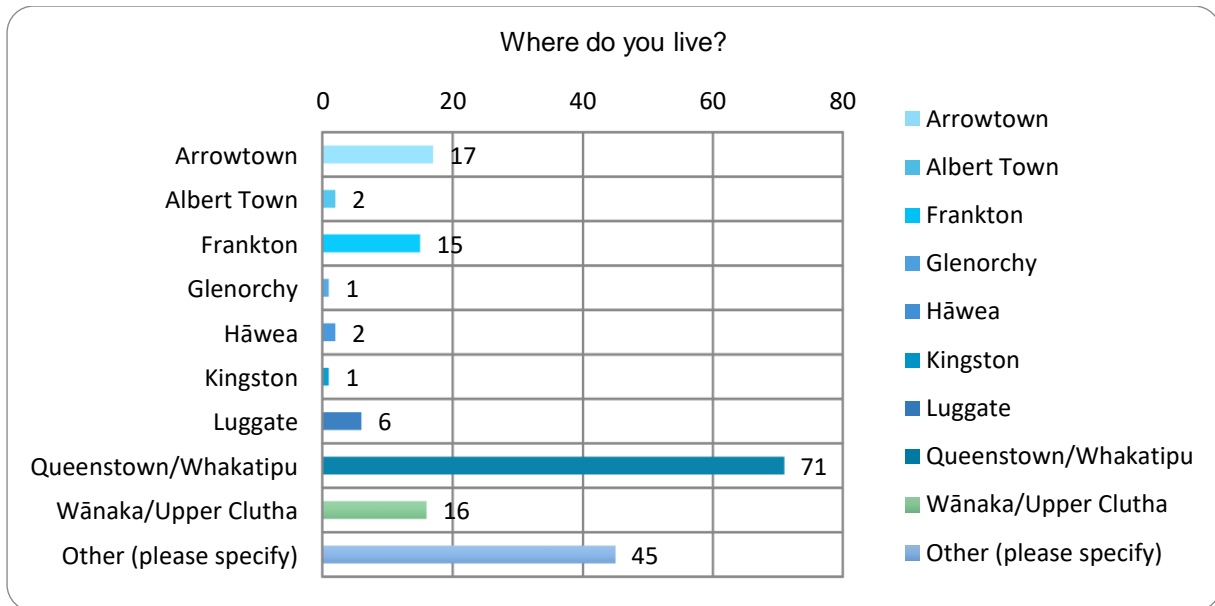
C4.1 Age



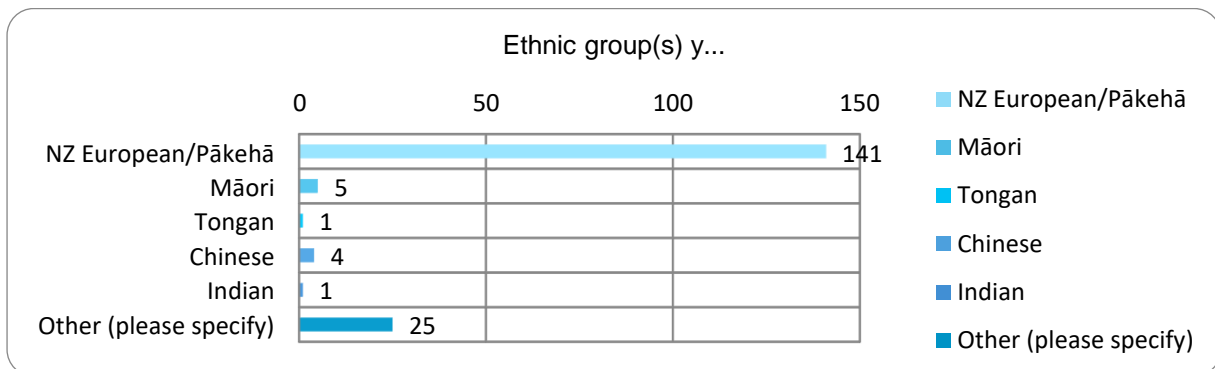
C4.2 Gender



C4.3 Area



C4.4 Ethnicity



C5. Conclusion

Feedback from stakeholders and the public resulted in a wide range of information collected to identify and validate low-cost actions. The survey also raised awareness of the Travel Demand Management programme, helping the community, businesses, and residents to consider transport choices. This information will be used to validate the development of the Queenstown Lake District Council (QLDC) Travel Demand Management programme.

Appendix D.
Economic Appraisal Summary

D1. Introduction

This technical note documents the economic appraisal process undertaken to assess the potential impacts of a Travel Demand Management (TDM) and Travel Behaviour Change investment programme in Queenstown Lakes District.

This analysis forms the basis of the economic appraisal contained in the QLDC Travel Demand Management SSBC Lite. The main method of the analysis is an implementation of the SP12 simplified procedure, with adjustments for suitability as discussed in Section 2. SP12 (Simplified Procedures number 12) is entirely consistent with the SSBC Lite structure being used for this Business Case. We discuss the use of Simplified Procedures in the conclusions to this note.

Section 3 discusses the population data utilised and any updates or alterations for the analysis.

Section 4 and 5 cover the calculation of SP12 costs and benefits, respectively, and the central case BCR is reported in Section 6. Section 7 summarises sensitivity testing undertaken.

D2. SP12 Procedure Assumptions and Sources of Inputs

The application of the SP12 methodology has been agreed with Waka Kotahi Investment Assurance representatives. It is important to note that there is a limited evidence base for TDM implementations in the New Zealand context, and to address this several conservative adjustments to the SP12 methodology have been included to match the expected programme rollout:

- Costs incurred in Year 0 with no discounting.
- Benefits calculated by year for Year 1 – Year 10, rather than with a single discount factor, to allow for less than 100% programme implementation in Year 1, benefit ramp profile is discussed further in Section 5.
- Stats NZ Medium growth projections used to account for population change over the lifespan of the programme, with the following adjustments:
 - Community TDM – affected population grown by the relevant SA2 growth projection
 - Workplace TDM – affected employees grown by the overall district growth projection
 - School TDM – affected student rolls grown by the overall district growth projection.
- Conservative assumptions with regards to benefit profiles as discussed in Section 5, lowest per person SP12 benefit rate adopted for each activity class.
- The SP12 procedure does not allow for the calculation of benefits arising from demand management and behaviour change activities for non-resident population, i.e. visitors and tourists. Trips arising from visitors and tourists are anticipated to comprise a significant benefit as part of the proposed TDM programme, and discounting this is a significantly conservative assumption to maintain basic alignment with SP12.
- There are significant potential overlaps in benefit profile, as well as additional programme synergies, between the proposed TDM activities, ongoing public transport improvement activities, and the potential future introduction of congestion / road pricing. The SP12 procedure does not allow for road pricing appraisal, as this would necessitate appraisal using full procedures, and any additional mode shift through improvements to PT systems are excluded as they are expected to be captured in the relevant business case process. As with tourist benefits, excluding road pricing and wider PT impacts is a conservative assumption which maintains alignment with the SP12 procedure.

D3. QLDC Data by Community Area for Analysis

- The main data sets used as part of this appraisal have been retrieved from Stats NZ and the Ministry of Education, representing the most current publicly available information at the time of the analysis.
 - Baseline population counts adopted from Census 2018 Usually Resident Population data, updated to 2023 using Stats NZ sub-national population estimates data release
 - Baseline employee counts adopted from Census 2018 data by workplace address, updated to 2023 by factoring job growth by overall QLDC district growth as an approximation of total employment change
 - Forestry and agricultural employment excluded due to low potential for TDM impacts
 - Employment numbers adjusted to reflect expected share of employees working from home using Census 2018 SA2 arrival mode share obtained from Waka Commuter data set
 - School roll data obtained from Ministry of Education rolls by school for 2023 and manually coded to relevant SA2 area.
 - Tertiary and pre-school rolls which are not reported by MoE have not been included in this analysis.
- Population, employee, and student demographic data sets have been estimated by allocating applicable SA2 areas to each Community Association area. Additional sub-areas have been included as requested by QLDC advisers, including Quail Rise and the Southern Corridor (Jacks Point) area.
- It is assumed that activity outside of these Community Areas will not be impacted by TDM activities, as the areas are mostly rural in nature.
- Population data used for this analysis is shown in Table D3.1 by Community Area.

Table D3.1 2023 demographic totals used for analysis

Area	Residents	Employees (net of WFH)	Students	Resident District Share	Employee District Share	Student District Share
Albert Town Community Association	2,259	178	0	5.0%	0.8%	0.0%
Arrowtown Village Association	2,861	750	486	6.3%	3.3%	7.4%
Arthurs Point Community Association	1,324	361	0	2.9%	1.6%	0.0%
Cardrona Valley Residents and Ratepayers Society	173	19	0	0.4%	0.1%	0.0%
Fernhill and Sunshine Bay Community Association	3,119	254	0	6.9%	1.1%	0.0%
Frankton Community Association	3,046	5,504	1,913	6.7%	24.3%	29.0%
Gibbston Community Association	289	765	0	0.6%	3.4%	0.0%

Area	Residents	Employees (net of WFH)	Students	Resident District Share	Employee District Share	Student District Share
Glenorchy Community Association	369	255	35	0.8%	1.1%	0.5%
Hāwea Community Association	2,576	202	319	5.7%	0.9%	4.8%
Kelvin Peninsula Community Association	1,218	339	0	2.7%	1.5%	0.0%
Kingston Community Association	374	13	0	0.8%	0.1%	0.0%
Lake Hayes Estate and Shotover Country Community Association	6,434	212	590	14.3%	0.9%	8.9%
Luggate Community Association	583	243	0	1.3%	1.1%	0.0%
Makarora Valley Community Incorporated	409	48	9	0.9%	0.2%	0.1%
Quail Rise	800	84	0	1.8%	0.4%	0.0%
Southern Corridor (Jacks Point)	3,342	202	239	7.4%	0.9%	3.6%
Queenstown Central	6,615	8,852	779	14.7%	39.1%	11.8%
Wānaka Central	9,347	4,357	2,231	20.7%	19.2%	33.8%
District Total	45,136	22,637	6,601	100.0%	100.0%	100.0%

D4. Cost Calculations

- Costs adopted as estimated in the supporting technical note 'TDM Programme Development', please refer to this note for further detail on programme composition, long listing, and short listing processes.
- Recommended programme costs have been estimated at \$2.0M, with the full long-list costs of \$2.9M used as a sensitivity test.
- For the BCR calculation the full undiscounted cost has been used to be conservative, as programme timing not confirmed. This is not anticipated to have a significant impact on the reported BCR due to the significant portion of secured funding (\$1.29M to 2026) which will need to be utilised in the first three years of the programme implementation.

D5. Benefit Calculations

- Benefit rates adopted directly from SP12 for workplace, community, and school travel demand management.
 - Lowest per person benefit rate adopted for each as appropriate, generally Other / Non-CBD Low rates as listed in Table D5.1.
 - Update factor of 1.32 has been used to convert benefit rates to 2022\$.

Table D5.1 Per annum benefit rates adopted from SP12

	Workplace	Community	School
Rate	Other Composite Non-CBD Medium	Other Low	Other Primary
Benefit Rate (2008\$)	\$58.21 per employee	\$39.19 per resident	\$74.83 per student
Updated to 2022\$	\$76.84	\$51.73	\$98.78

- High-level assumptions around the TDM rollout have been adopted to conservatively adjust the SP12 method for a multi-year programme.
- Assumed that the TDM rollout has the capacity to interact with around 50% of affected populations for each workstream, at the rate of 15% annually in Year 1 and Year 2 and 20% in Year 3.
- Sensitivity tests included for a low uptake/ slow rollout, as well as a high uptake/ fast rollout, the central case and sensitivity testing profiles are shown in Figure D5.1.

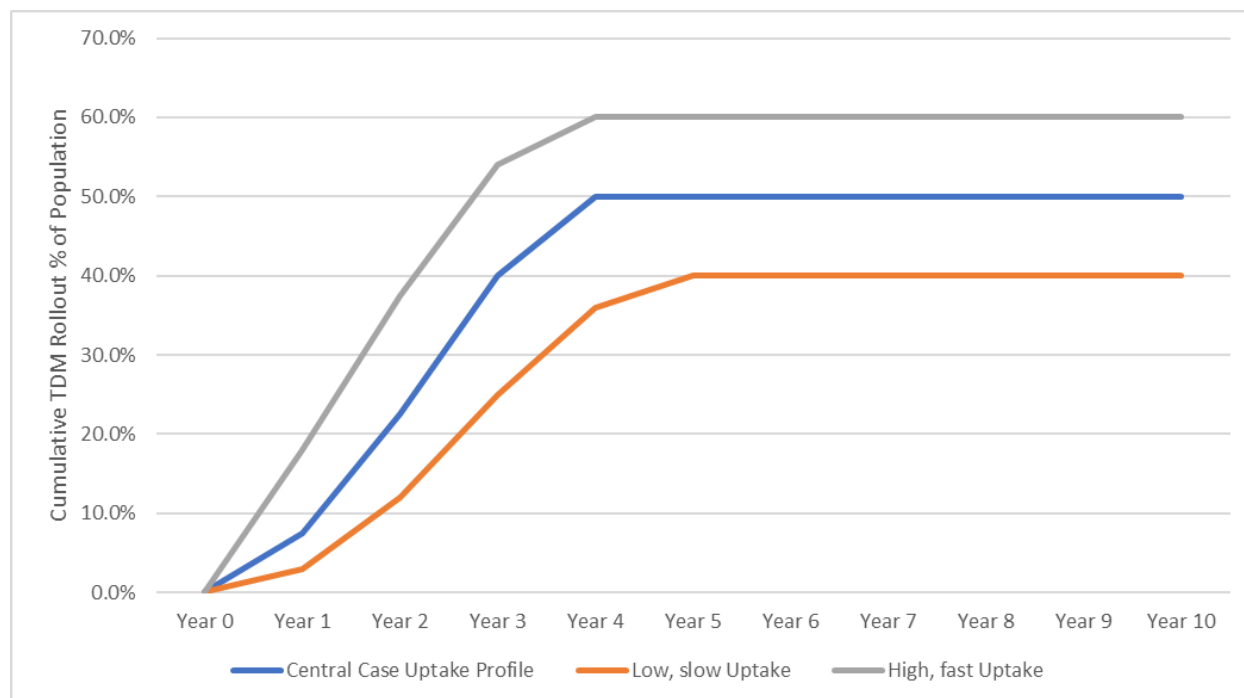


Figure D5.1 Central Case and Sensitivity Test TDM Uptake Profiles

- Benefits for each TDM work stream are calculated at the district total level and then apportioned to each Community Area pro rata using the Community Area share of the relevant activity.
- No additional mode shift is assumed due to wider PT or active mode infrastructure and/ or service improvements.
- No behaviour change or additional mode shift is assumed to result from road pricing implementation. Although these programmes may be implemented in the future, they do not form part of the preferred option in this business case.

D6. Central Case Benefit Cost Ratio

- Central Case and Sensitivity Test results are presented for the programme totals. Disaggregation by programme year and Community Area are included as Appendix A.
- Programme cost is calculated as \$2.0M, with the assumption that all cost is incurred immediately and undiscounted.
- Undiscounted programme benefits total \$22.1M, comprising of:
 - \$8.2M from workplace travel planning and associated interventions
 - \$10.9M from community travel planning and associated interventions
 - \$3.0M from school travel planning and associated interventions.
- The net present value of these benefits totals \$17.0M for the 10-year programme.
- The Central Case benefit cost ratio is 8.5, as summarised in Table D6.1.

Table D6.1 Central Case BCR Summary

Scenario	NPV Cost	NPV Benefit	BCR	FYRR
Central Case	\$2.0M	\$17.0M	8.5	17%

D7. Sensitivity Testing Summary

- There is significant uncertainty around the benefit rates utilised in SP12, as there is a low evidence base currently for application in a non-metro, non-CBD environment.
- Additional sensitivity tests have also been included to demonstrate the volatility of the analysis with respect to key parameters.
- The sensitivity tests undertaken as part of this analysis are:
 - High Programme Cost – inclusion of estimated \$2.9M cost to undertake full programme as a sensitivity on higher than anticipated implementation costs
 - High and Low Discount Rates – standard MBCM sensitivity test to check sensitivity of cost and benefit timings using a 3% and 6% annual discount rate compared to the 4% annual central case rate
 - Low Benefit Rate – test on lower than anticipated benefit realisation per person, as this analysis adopted the lowest applicable SP12 rates in the central case, this test reduces rates by a further 20%
 - High Benefit Rate – as above, but adopting the SP12 non-CDB standard high rate for each workstream
 - Workplace @ \$259.39 per employee per year
 - Community @ \$254.03 per resident per year
 - Schools @ \$98.78 per student per year (unchanged)

- Slow + Low Uptake – overall uptake rate decreased by 20% (to 40% of population) and the rate of uptake delayed by 6 months, as shown in Figure D5.1
- Fast + High Uptake – overall uptake rate increased by 20% (to 60% of population) and the rate of uptake brought forward by 6 months, as shown in Figure D5.1
- Low Population Growth – test of the impact of population growth on the benefit calculation utilising the Stats NZ Low projection for the period 2023–2033
- High Population Growth - test of the impact of population growth on the benefit calculation utilising the Stats NZ High projection for the period 2023–2033.
- Additionally, a ‘Conservative’ test was undertaken which combined several of the sensitivity tests to demonstrate a lower bound of expected programme performance, the included parameters were:
 - High Programme Cost
 - Low Benefit Rate
 - Slow + Low Uptake
 - Low Population Growth.
- Sensitivity test results are summarised in Table D7.1, returning BCR range of 5.9 – 32. The ‘Conservative’ test returned a BCR of 3.4, indicating that the programme is expected to return strong value for money, even with a pessimistic outlook for growth and benefit realisation.

Table D7.1 Sensitivity Test BCR Summary

Scenario	NPV Cost	NPV Benefit	BCR
Central Case	\$2.0M	\$17.0M	8.5
High Programme Cost	\$2.9M	\$17.0M	5.9
3% Discount Rate	\$2.0M	\$18.1M	9.1
6% Discount Rate	\$2.0M	\$15.0M	7.5
Low Benefit Rate	\$2.0M	\$13.6M	6.8
High Benefit Rate	\$2.0M	\$64.7M	32
Slow + Low Uptake	\$2.0M	\$12.7M	6.4
High + Fast Uptake	\$2.0M	\$21.5M	11
Low Population Growth	\$2.0M	\$16.3M	8.1
High Population Growth	\$2.0M	\$17.7M	8.8
Conservative Test	\$2.9M	\$9.8M	3.4

D8. Conclusions

The proposed TDM programme for QLDC has been appraised using an adjusted SP12 process. The central case appraisal returns at estimated \$17.0M in present value benefits with an estimated cost of \$2.0M, representing a BCR of 8.5.

Sensitivity testing has been undertaken on key appraisal parameters, with a conservative test combining several low value parameters returning a BCR of 3.4.

The robust BCR returned by the combined conservative sensitivity test indicates that the TDM programme is economically efficient if delivered according to the assumed uptake rates.

It should be noted that this analysis is also conservative in that benefits are only derived from the usually resident population. It would be expected that reducing the private car travel demand of visitors and tourists would also return significant benefits in the Queenstown context, and these have not been quantified as part of the SP12 appraisal.

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