QUEENSTOWN LAKES DISTRICT COUNCIL

LAND TRANSPORT

ACTIVITY MANAGEMENT PLAN 2018/19-2032/33

DECEMBER 2017

DOCUMENT HISTORY

Document History	Date	Prepared	Approved	Signature
2015/16 Review	June 2016	Polly Lambert / Alison Tomlinson	Myles Lind	
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Amendments following October 2018-21 submission	December 2017	Polly Lambert / Alison Tomlinson	Peter Hansby	

FOREWORD

This Activity Management Plan was undertaken with a view to the need for a better approach to tackling the big issues facing our region's future transportation requirements.

Queenstown Lakes District Council is pleased to have had the opportunity to work with other transportation service providers, throughout Otago and Southland in the development of this plan, to ensure the coordinated and integrated thinking required for our shared future.

This plan is a first generation in our transition to the new outcomes focused investment methodology known as a better business case approach. This process has raised some real and practical issues that must be faced by planners, policy-makers, politicians and – crucially – the general public. The District, and the wider region need to address these issues in order to deliver efficient and effective transportation services for the next 10 years and beyond.

In particular, we need to encourage more efficient use of our transportation services and provide in a timely way for future demand thereby helping Queenstown to grow.

This is in the best interests of our shared local economy and quality of life. Providing serious alternatives that encourage mode shift away from sole passenger, private vehicles will be a particular challenge that will require integrated delivery across all transportation organisations operating in our District.

To improve the efficiency of our provision the operations and maintenance programmes of our local roading network have been built 'bottom up', based on improved data practices. This has been complimented by a complete retendering of the roading maintenance contract to better understand latest market conditions and the true costs of operating our networks, leveraging the newly available field condition survey data and computer modelling.

This plan signals an increased investment in both planned capital works and operational budgets. On the surface this may appear challenging and there are practical issues to be considered. However, we believe that setting out the business case in this plan, supported by robust evidence, represents an important step in providing the information to engage the wider community and our business partners for the next stages.

Ultimately – of course – planning can only go so far. The next important stage of the plan is the implementation phase, when each of the organisations with responsibility for key components of this region-wide picture picks up the challenge and delivers the results that the people, businesses and tourists of Otago, Southland and New Zealand Inc. needs and deserve for the future.

Peter Hansby

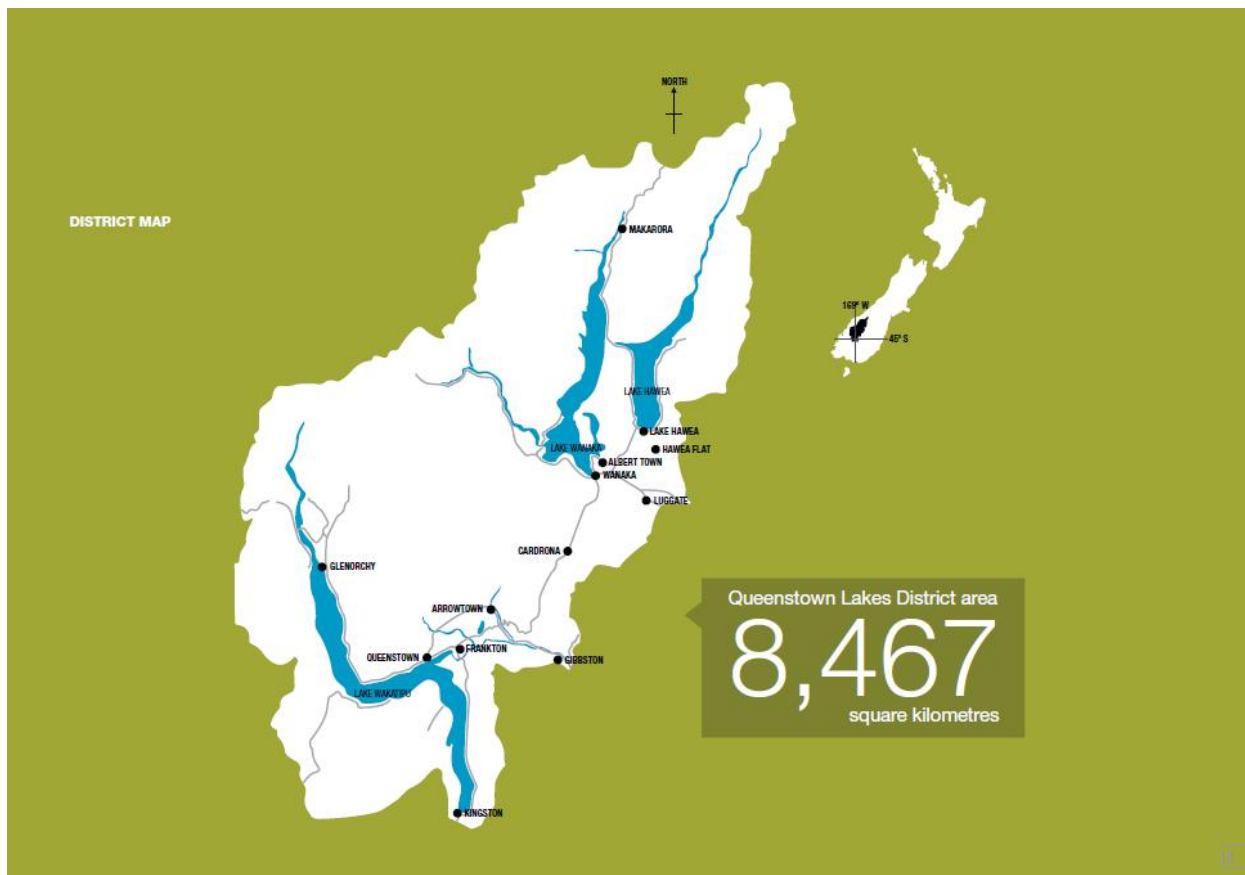General Manager, Property and Infrastructure
Queenstown Lakes District Council

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EXECUTIVE SUMMARY

Queenstown Lakes District Council (QLDC) is in a state of transition in how it operates its transportation network. This has been led by Local Government reforms, adoption, implementation and embedding of the One Network Road Classification (ONRC) as well as ensuring the continual upskilling of in-house resources to ensure capability, capacity and continuity. QLDC is moving from a legacy business model of 'operating transport infrastructure assets' to a proactive, evidence/ risk based, and outcome focussed 'integrated transportation solution' that meets the requirements of the customer.

VISION AND FOCUS

QLDC's vision for land transport:

> *"To provide a safe, resilient, efficient transport system that supports modal choice and addresses current and future demand for economic and social opportunities."*

To meet this vision and new business model QLDC through this Business Case Approach Activity Management Plan (BCA AMP) must:

- ➢ Monitor, address and embed growth in all transport activities;
- ➢ Focus on customer journeys, from origin to destination, that span across network boundaries and modes. To this end, it will be the catalyst to more collaborative working arrangements across the Otago/Southland region, and with other transport providers such as NZ Transport Agency (NZTA) State Highways, Queenstown Airport Corporation (QAC) and Otago Regional Council (ORC);
- ➢ Enable customers to better assess service delivery options and their costs against the nationally consistent customer outcomes of the ONRC in an appropriate way for the QLDC network;
- ➢ Demonstrate where QLDC's network performance and cost of delivery sits on a comparative basis to similar networks i.e. self-benchmarking analysis;
- ➢ Use the Business Case Approach (BCA) and the ONRC framework to provide Councillors and co-investors a more consistent and coherent platform for decision making;
- ➢ Further develop robust evidence-based cases for investment, ensuring understanding of the asset lifecycle, the costs and options;
- ➢ Enhance its capability to deliver greater value for money from its existing infrastructure assets, and give greater consideration to customer focussed transport solutions for future customers;
- ➢ Demonstrate best practice activity management that addresses the principles of the business case approach supported by good practice asset management.

PHYSICAL CONTEXT

The Queenstown Lakes District covers a total area of 9,357 km² and includes a number of significant lakes (Lake Hāwea, Lake Wakatipu, and Lake Wanaka). The District is world-renown for its unspoiled natural environment and commerce-oriented tourism, especially adventure and ski tourism and has New Zealand's highest public sealed alpine pass. The natural environment of the District consists of a variety of systems including rivers, lakes, basins, wetlands, bush remnants, uplands and shorelines. During the peak periods, normal resident population of 38,048 can increase to 117,349.

Queenstown (Tahuna) is the largest town in the District, and the second largest town in Otago after Dunedin. It is situated on the eastern side of Lake Wakatipu near the outlet of the Kawarau River. Based on the 2013 Census, the resident population of the Queenstown urban area is 15,000.

Wanaka is the second largest town in the District with a resident population of around 6,000. It is situated at the southern end of Lake Wanaka, adjacent to the outflow of the lake to the Clutha River

Other towns in the district include Arrowtown, Kingston, Glenorchy, Lake Hawea, Cardrona, Makarora and Luggate.

BUSINESS CASE ACTIVITY MANAGEMENT PLAN AT A GLANCE:

This first generation of the business case approach to activity management planning has been written in-house by QLDC staff and is intended as a developing document which will change through annual reviews. It is accepted the document will mature as QLDC itself, matures and responds to best practice and industry refinements to deliver cost effective and evidence based delivery of transport services.

In this first generation BCA AMP, QLDC has delivered a comprehensive view of activity management. It discusses QLDC's transport activity management organised by outcomes, activities, assets and funding categories. The structure has led to subject matter cross overs and it is intended the generational approach will refine and mature through its development.

Figure 1 One Network Road Classification Percentage
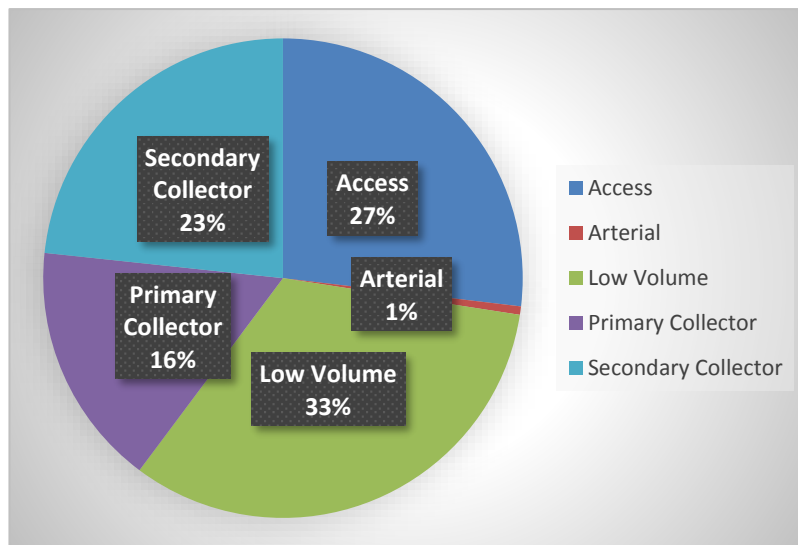
Figure 2 Overview of Programmes 2018-2012
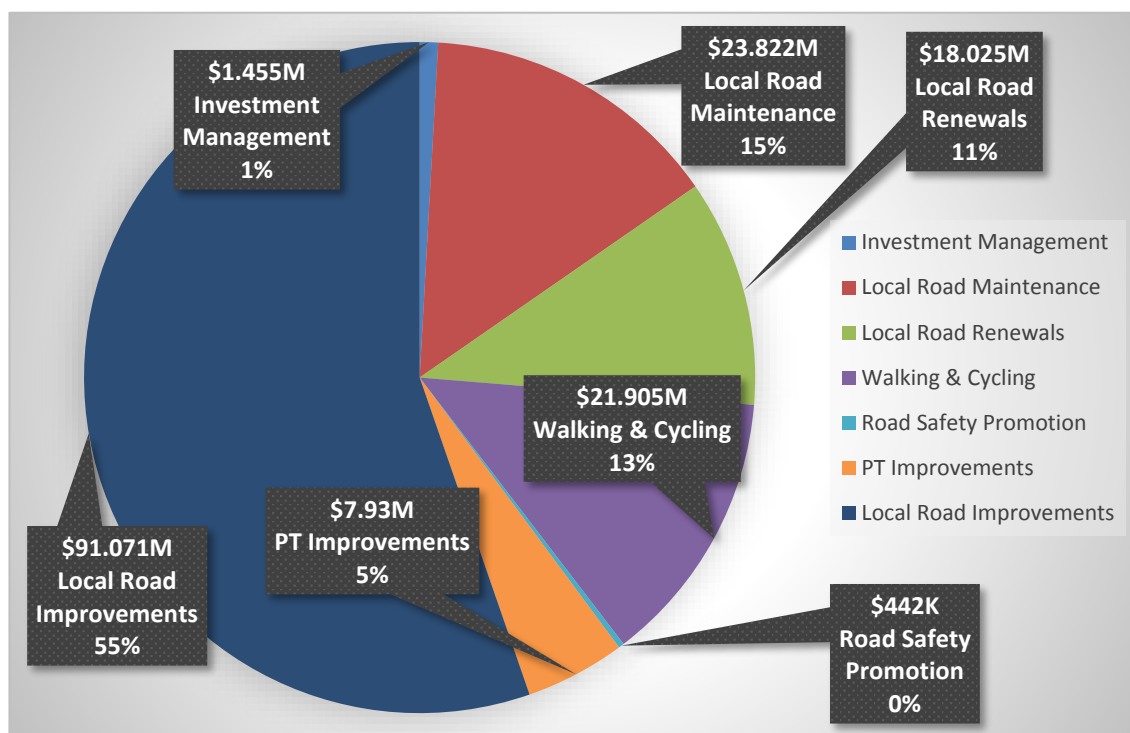
Figure 3 QLDC Cost Parameters

QLDC Network		
Number of ratepayers		24,328
Number of ratepayer per km		28
Resident Population		38,048
Peak Population		117,349
Avg Annual M&O Cost Per km		$64,882.54
Per vkt		$0.19
Avg Annual Allocaiton M&O budget		**$54,884,137**
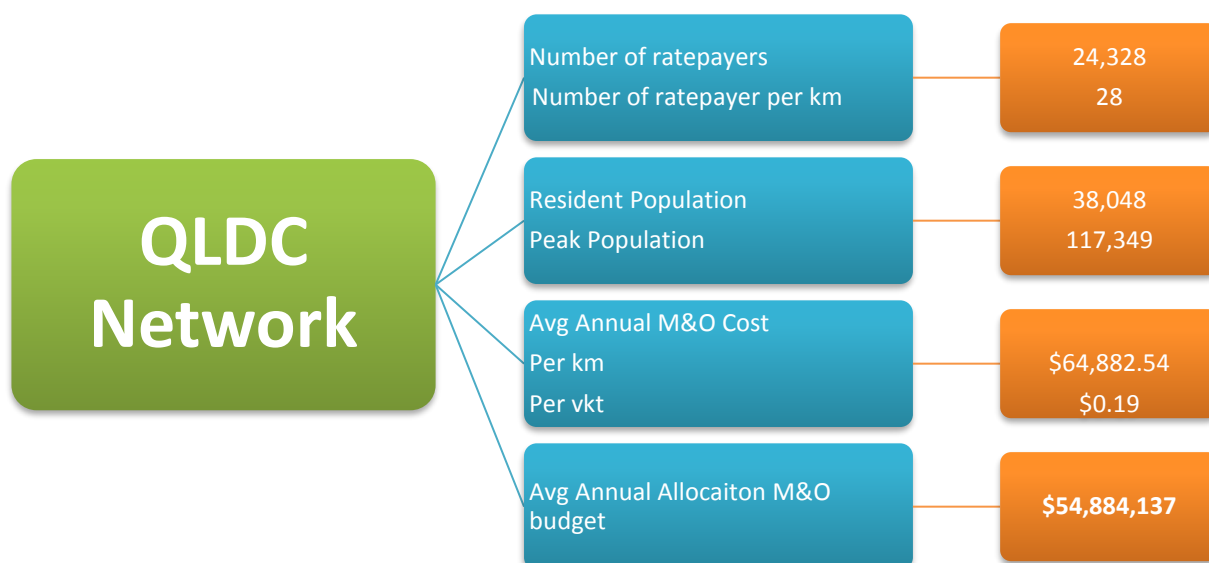
The table below summarises recent activities highlighting QLDC's maturing approach to the management of transport services.   It sets out QLDC's intended direction in the short and longer term.

Table 1 ONRC Classification by Length and Demand

	Arterial		Primary Collector		Secondary Collector		Access		Low Volume		Total	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Network Length (km)	0	5.9	22	117	58	138	76	157	103	169	259	587
	5.9		139		196		233		272		**846**	
	1.0%		16.0%		23.0%		27.0%		33.0%		100%	
Customer Demand *Vehicle km's Travelled (millions)*	15		133		88		33		15		287	
	5.4%		46.6%		30.9%		11.6%		5.4%		100%	

Focus Area	Focus since 2013/14 QLDC Restructure :	Focus for next ten years:	Focus for years 10 to 30:
Overview	Organisational restructure aimed to: • Cross pollinate disciplines • Focus on asset management, strategy and planning • Separation of operations team from strategy and planning • Building internal capability and capacity particularly in contract and asset management • Providing confidence to partners and co-investors • Understanding growth and demand • Improved asset management benchmarking	• Looking at emerging communities and their transport needs to better integrate them into the District • Improved transport links to conservation areas • Understanding the Districts wider transport system and its interconnectedness through alternate routes and crossing • Understanding environmental changes • Integrating criticality (risk and resilience) into business as usual • Continued benchmarking with an improvement focus of the performance plan	• Mobility as a Service • Maximizing new technologies • Mitigating environmental changes • Demand management • Integrated service delivery internally and with partners • Continued investment in reviewing and benchmarking
Investing in and Managing Local Roads	• Understanding investment programme and levels of service • Developing network knowledge and analysis • Delivering evidence based programmes • Understanding growth and demand • Working to understand and better integrate State Highways and local roading network • Supporting Government Policy Statement (GPS) for transport outcomes (economic growth and productivity, safety, resilience and value for money)	• Collect data and information to identify, optimise and socialise Levels of Service (LoS) policy settings developed through the BCA (i.e. trading affordability, customer expectations and benchmarking) • Identify, understand, apply and socialise current best practice for optimising life of assets • Long term growth predictions are determined and considered in the BCA for all activities • Supporting GPS for transport outcomes (economic growth and productivity, safety, resilience and value for money) • Increased maintenance for new assets	• Optimisation of existing networks and its surrounding infrastructure • Use of smart city technology
Growth and Demand	• Better monitoring and analysis of growth, i.e. annual population projections, increased traffic monitoring • Converting growth into demand	• Optimisation of existing network through infrastructure and demand management • Continued monitoring and analysis of growth	• Continued monitoring and analysis of growth • Utilisation of technologies for smart city management

Focus Area	Focus since 2013/14 QLDC Restructure :	Focus for next ten years:	Focus for years 10 to 30:
Improving Travel Choice	- Better strategy and planning - Queenstown Integrated Transport Strategy (QITS) actively pursuing modal choices - Assisting in the development of Public Transport - Queenstown Town Centre Master Planning	- Making Public Transport an attractive viable alternative - Introduction of bus priority - Increasing Park n Ride - Exploring mass rapid transport corridor between Queenstown and Frankton - New town centre arterial - Better parking management - Completing key infrastructure projects for vehicular and active modes - Wanaka Transport Strategy focus (growth, parking, active travel network and town centre/lakefront connections)	Implementing mass rapid transport corridor between Queenstown and Frankton
Working Collaboratively	- Queenstown Integrated Transport Partnership - (NZTA), ORC, QAC and, QLDC - Developing closer internal links to deliver the outcomes of the National Policy Statement on Urban Development Capacity - Section 17A – project team member on the Otago Mayoral Forum - Active participants and champion for REGional workshops - Building closer relationships with NZTA (System Design & Delivery (SD&D)) and neighbouring and regional authorities - Working with Ministry of Business, Innovation and Employment (MBIE) and NZTA on central government funding applications i.e. Housing Infrastructure Fund (HIF)and the Tourism Infrastructure Fund (TIF)	- Delivering QITS programme business case - Integrated land use planning with transport strategies - Section 17A review and application - One network approach to transport services, land, sea and air - Regional Lifelines Project - Implementing Housing Infrastructure Fund and tourism related funds - Supply chain	- Addressing land use changes - Section 17A review and application - One network approach to transport services, land, sea and air

STRATEGIC CONTEXT

As one of the premier New Zealand tourist attractions, the Queenstown Lakes Districts popularity with residents and visitors is growing spectacularly.

Figure 4 Tourism Industry Aoteoroa Regional tourism's GDP contribution March 2016
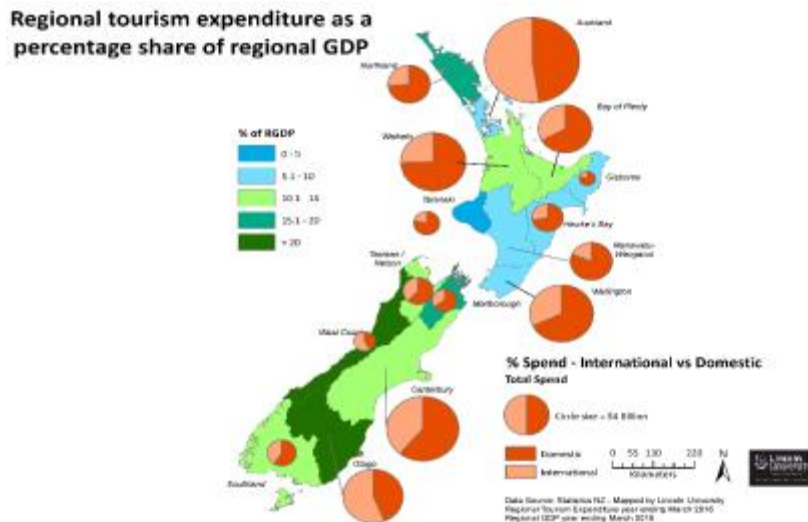
The Queenstown Lakes' economy is thriving with tourism and construction as shown below, the district contributes to over 20% of the National tourism Gross Domestic Product (GDP).

The district has seen steady and sharp rates of population and visitor growth, resulting in land use change, urbanisation and commercial development. This is placing considerable and increasing pressure on the transport network.

The Government Policy Statement (GPS) supports economic and social opportunities and the National Infrastructure Plan (NIP) seeks that New Zealand's infrastructure is resilient, co-ordinated and contributes to a strong economy. While working towards the goals of the GPS and NIP, as a District QLDC also aims to enhance the liveability of the environment for the community and its visitors.

The pressures created from intense growth and alignment to the major transport sector change through the response to the Road Maintenance Task Force Report has led to QLDC moving from a legacy business model of 'operating transport infrastructure assets' to a proactive, evidence/ risk based, and outcome focussed 'integrated transportation solution' that meets the requirements of the customer.

Over the last few years QLDC has been assessing the transportation issues within the District, the result of which has led to various strategies and business cases. QLDC needs to respond to its issues, whist protecting what makes the District special for both residents and visitors - understanding and realising the importance our customer outcomes is integral to this process. This BCA AMP intends to align its Maintenance, Operations and Renewals (Continuous Programme) and strategies and business cases (Improvement Programme) together with national, regional and local drivers.

Figure 5 Historic & Projected Population 1980 to 2060 (ref: Statistics New Zealand & Rationale Growth Projections 2017)
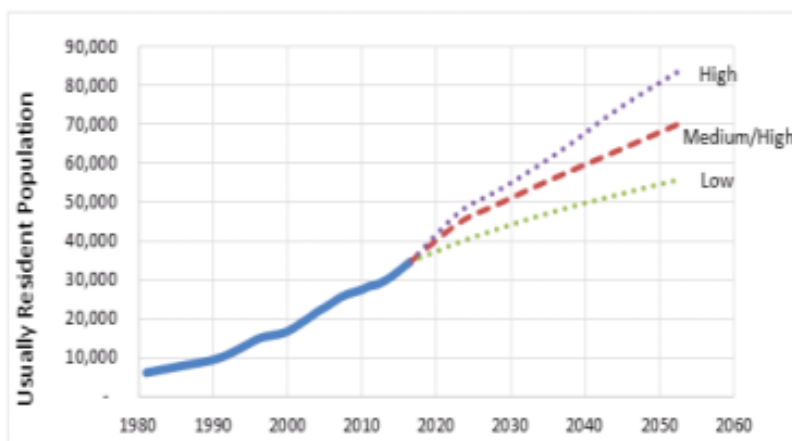
The District is entering its third population growth spurt of over 7% per annum with predictions of 7+% per annum for the next 7 to 10 years. The extent and speed of this growth means the community is facing various opportunities and problems. An increase in productivity means a thriving economy however; this also leads to lack of affordable housing, education and health facilities at capacity all of which inhibits the liveability of our District.

Transport is at the heart of accessing and delivering these services. Growing rates of land use change and urbanisation has increased our asset base which is putting pressure on QLDCs current capacity to maintain the network.

Figure 6 National and Local % Growth (ref: Statistics New Zealand & Rationale Growth   Projections 2017)
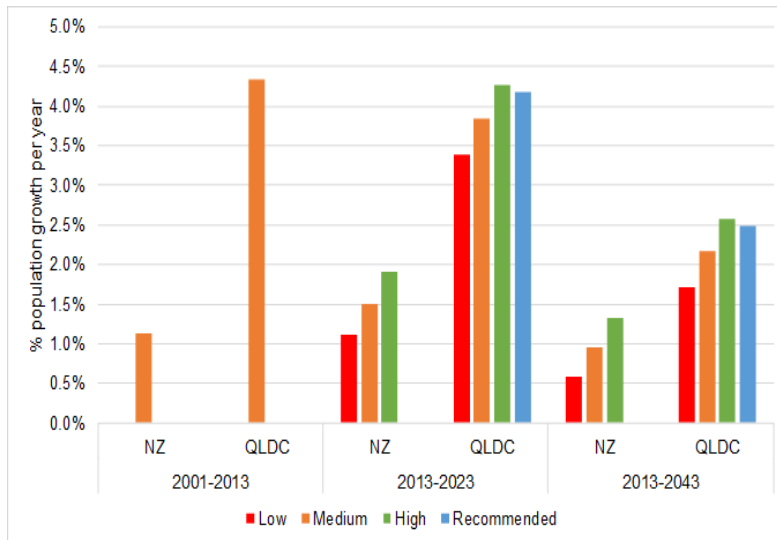
Historically, QLDC had taken a conservative approach to population projections, legacy forecasts have proven to be below actual growth rates. In 2015 QLDC undertook a review of these projections and the methodology now includes economic forecast data as well as adjusting the projections to a medium-high as opposed to a medium projection. Under the revised 2017 medium-high population growth projections, the district's population is expected to increase by 102% to 66,355 by 2048.

Central Government has identified Queenstown as a 'high growth urban area' with 14% projected population growth between 2013 and 2023.   QLDC has responded with applications for the new Special Housing Areas (SHA) as well as the HIF. In the National Policy Statement (NPS) on Urban Development Capacity QLDC is identified as one of five high growth urban areas in New Zealand, along with Auckland, Tauranga, Hamilton and Christchurch.

Employment growth is increasing at 10% however with a 7% population growth this indicates a number of workers are commuting from outside the District, placing additional pressure on an already congested network.

MBIE has predicted visitor arrivals into New Zealand to grow at 5.4% per annum, reaching 4.5 million visitors in 2022 from 3.1 million in 2015. Queenstown's reputation as an international destination has led the rise in the NZ tourism economy.   Queenstown Airport Corporation has released its growth figures for end June 2017 with an overall 15% increase on the previous year's record: 12% for international passengers and 16% for domestic passengers.

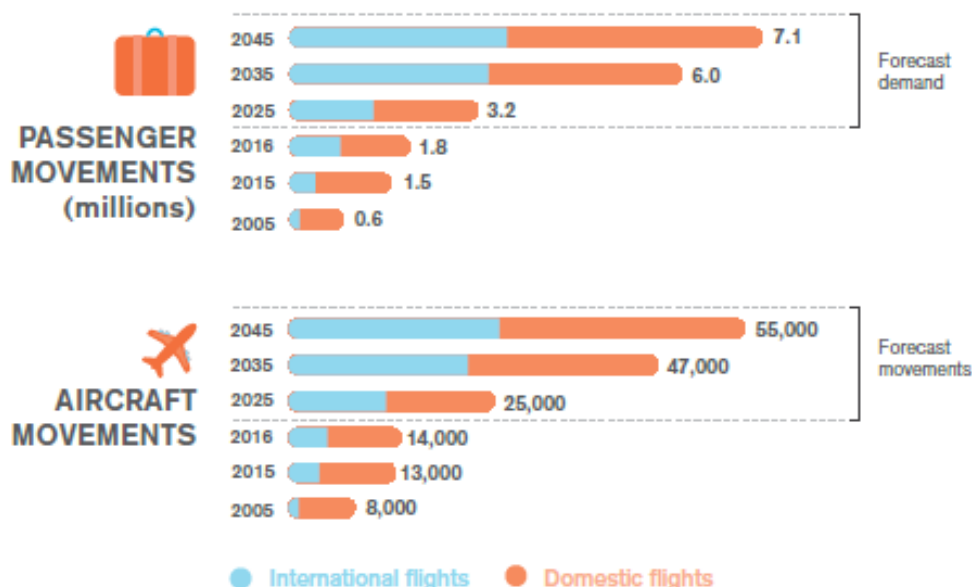**Figure 7 Queenstown Airport Corporation Master Plan Options 2017**

Figure 8 Tourism Industry Aoteoroa – Tourist Driving Choices 2016

New Zealand a driving destination

	2016	
	Overseas Visitors	% of Total Visitors
Total Self Drive	2,155,016	69%
Rental Car	1,281,796	41%
Private Car	902,791	29%
Rental Campervan	162,780	5%
Private Campervan	29,868	1%
Motorcycle	18,208	0.5%

In addition to an increase in visitors there has been a change in tourist travel mode choice, with increasing numbers of tourists self-driving, with 69% of visitors self-driving in 2016.

There is anecdotal evidence to support Queenstown as the second largest rental fleet pick up in NZ.

This visitor growth has led to an increase in customer concerns around congestion, travel time reliability and safety.

Figure 9 NZTA Traffic Count Growth 2014-2016

Site	Location	2014	2015	% growth	2016	% growth
ID 00600947	Cromwell	3523	3886	10.3	4434	14.1
ID 00600970	Gibbston - before Gibbston Back Rd	3561	3868	8.6	4406	13.9
ID 00600980	Swiftburn - past Swiftburn Culvert	4260	4580	7.5	5287	15.4
ID 00600984	Crown Range on Arrow River Bridge	6645	6625	-	8318	25.6
ID 00600988	East of Strains Rd	9102	9733	6.9	11390	17
ID 00600991	Shotover - before Lower Shotover Rd	12110	12622	4.2	14062	11.4
ID 00600994	Frankton - north east of junction	17910	19654	9.7	23468	19.4
ID 00600996	Junction - Airport - betweem SH6&6A & Airport	17723	19180	8.2	19212	0
ID 00600997	North of Humphrey St	8303	9054	9.1	9987	10.3
ID 00690997	Between Southberg Ave & Bridge	7113	7626	7.2	8640	13.3
ID 00600999	South of Peninsula Rd	4049	4506	11.3	5605	24.4
ID 00601000	Remarkables after skifield	3476	3910	12.5	4768	21.9
ID 00601005	Between Jacks Point & Lakeside Estate	2399	2520	5	3085	22.4
ID 06A00001	Frankton - Telemetry Site 90	19811	21472	8.4	23925	11.4
ID 06A00006	Stanley St - Millenium Hotel	16467	17402	5.7	17829	2.5

The growth in population and visitor numbers is supported by traffic count evidence from the NZTA. On the key State Highway corridors, there has been an up to 25% increase on the number of vehicles visiting the District in the past 12 months. This current rate of growth will lead to a doubling of traffic every 5 years, leading to additional pressure on

traffic movements and a faster rate of deterioration on the network .

Figure 10 Local Traffic Growth 2008-2017
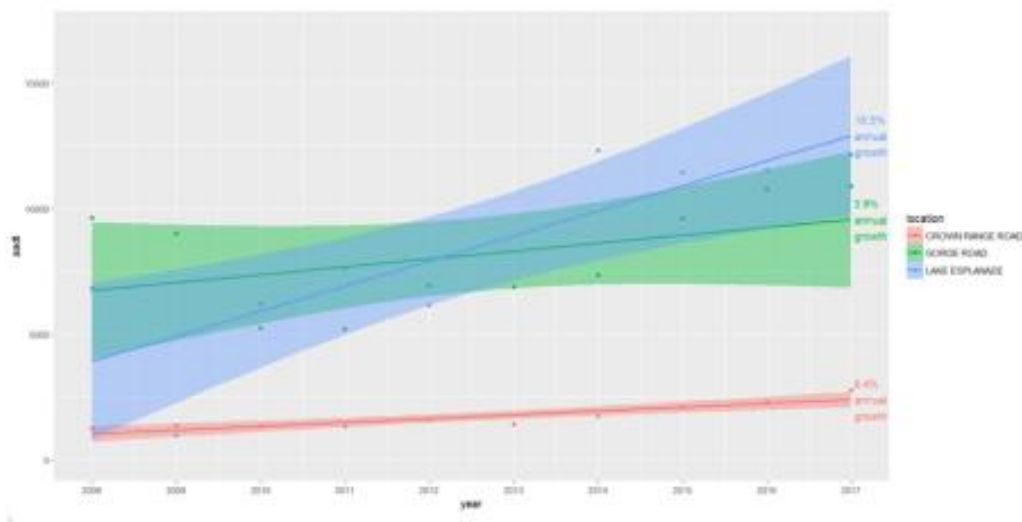
Local roads have also shown growth across the network, estimated Average Annual Daily Traffic (AADT) growth from our three permanent sites ranged from 3.9% to 16.5% / year.

When considering the historic response to growth the new capacity of any upgraded corridors could be consumed well before physical works are actually completed. This is exemplified on State Highway 6a between Frankton and Queenstown Town Centre operating at 88% of its theoretical capacity of 28,500 vehicles per day, a figure that is expected to reach 100% by 2026.

Figure 11 Queenstown Congestion-2017

Residents and business operators travelling within Queenstown experience frustratingly unpredictable journey times and report it is difficult to plan and avoid congestion. People are now making decisions about where they live and work based on the current state of the transport network.

Figure 12 Queenstown Integrated Transport Strategy Projected Traffic Growth Flows October 2016

The State Highway and connecting local roads are under pressure in an expanding peak period, which has led to increased congestion and unreliable travel time. The district has gone from having distinct summer and winter peak seasons to year round peak periods with no distinct shoulder seasons. The backbone of the land transport network in the district is a State Highway over which QLDC has no direct control. This places the customer experience at greatest risk. QLDC's lack of direct influence over the consequences of travel time reliability particularly has frustrated the community in the Wakatipu Basin, this has been evidenced through social media and community engagement.

NZTA's drive for the One Network Approach is beginning to address these concerns through the formation of the QITS and the supporting governance structure. This sees QLDC, NZTA, ORC and QAC working closely together through the integrated strategy and programmes.
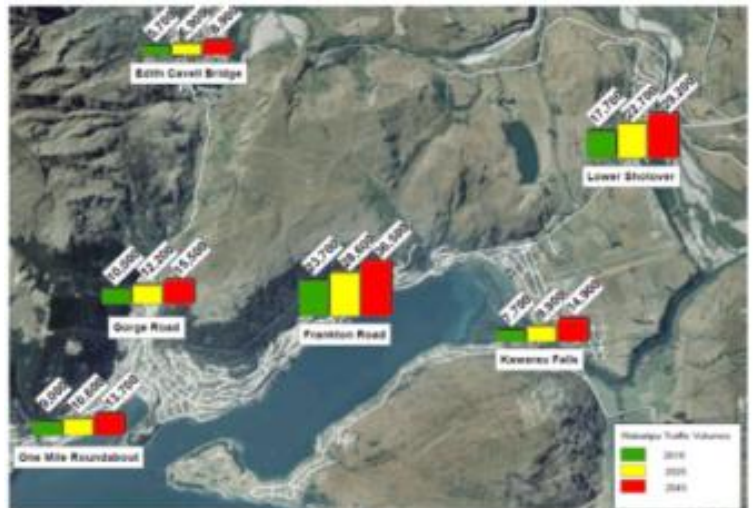
Figure 13 Demonstrates efficiencies in TTR following Hawthorne drive and BP roundabout
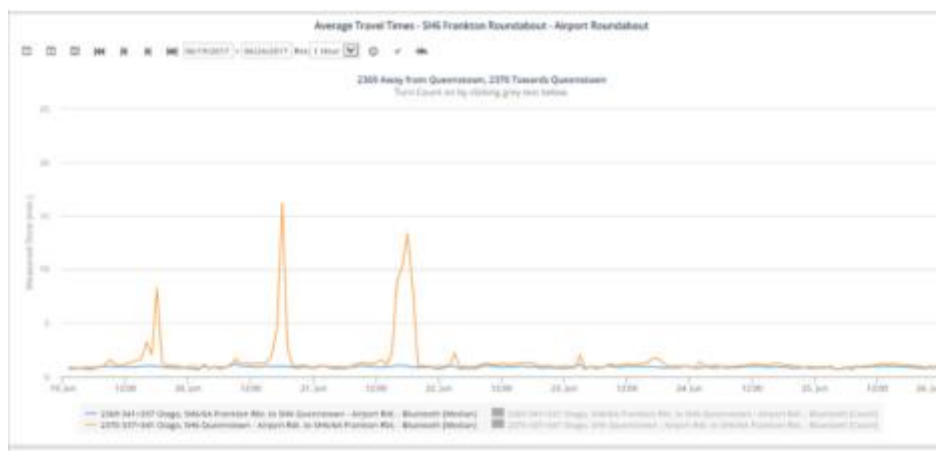
QLDC is working with NZTA to monitor and understand travel time reliability and journey movements.

The integrated programmes are looking at demand management as well as infrastructure solutions, this includes encouraging modal shift to walking and cycling as well as working with ORC on the public transport programme to alter behaviors through the reduction of parking and the increasing parking fees/enforcement.

Figure 14 Crown Range Road view towards Queenstown 2016

The dramatic landscape and environment that draws people to the District provides challenges in delivering transport services. The constraining nature of our physical landscape (valleys, gorges, lakes and mountains) limits viable alternatives to avoid congestion at peak times. The topological relief of the District is often steep and winding and a climate of extreme temperatures and weather patterns provides challenges to users and maintenance activities on the network. The Districts winter economy, is reliant upon the transport network being accessible, resilient and safe during and quickly after snowfall, ice and wet weather events.

This BCA AMP intends to understand levels of service to address these growth pressures, enabling us to understand what a successful integrated transport solution would look like.

Along with QLDCs Community Outcomes, there are a number of short term council priorities pertinent to the BCA AMP. In particular "improving long-term asset management planning and project delivery" as well as "improving the cost effectiveness and efficiency of core services and processes".

Understanding the problems and opportunities facing the District through this BCA AMP, strategies and business cases, is assisting QLDC to develop a meritorious investment programme. The Improvement Programme will show a step change to the level of service in the District, supported by an equally robust Continuous Programme of maintenance, operations and renewals.

FINANCIAL SUMMARY

At point of submission the Capital Investment Programme is indicative due to the complexities of multi-agency and multi-programme overlaps (QITS and Queenstown Town Centre Master Planning).

All expenditure in this document is inflated to annual plan year only.

The Local Road Maintenance Programme may see some minor amendments however, QLDC deem this programme will deliver the outcomes as outlined in this BCA AMP.

The graph below provides a high level overview of the QLDC Capital and Operational Investment Programmes. Figure 16 looks at the investment drivers based on the ONRC Outcomes, these will develop as the capital programme is finalised.

Figure 15 Transport Capital & Operational Expenditure Inflated to Annual Plan Year

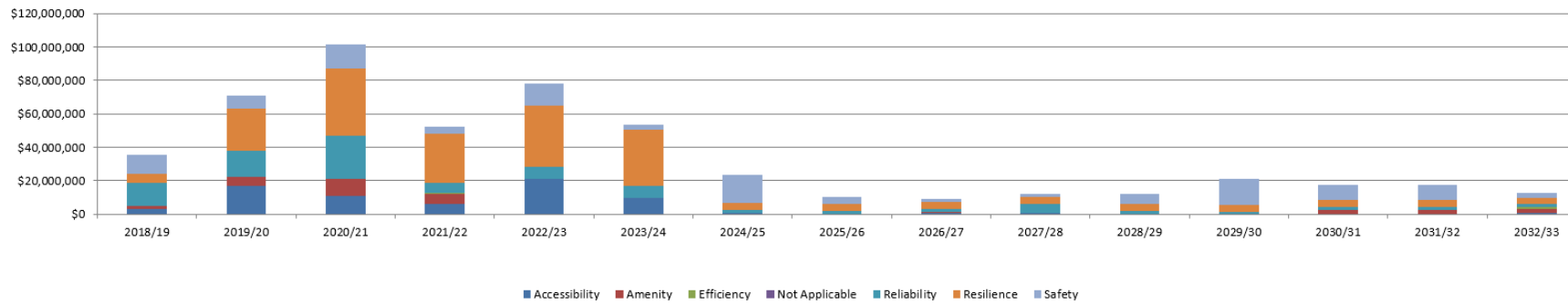**Figure 16 QLDC Transport Programme by Investment Driver to inflated to Annual Plan Year**

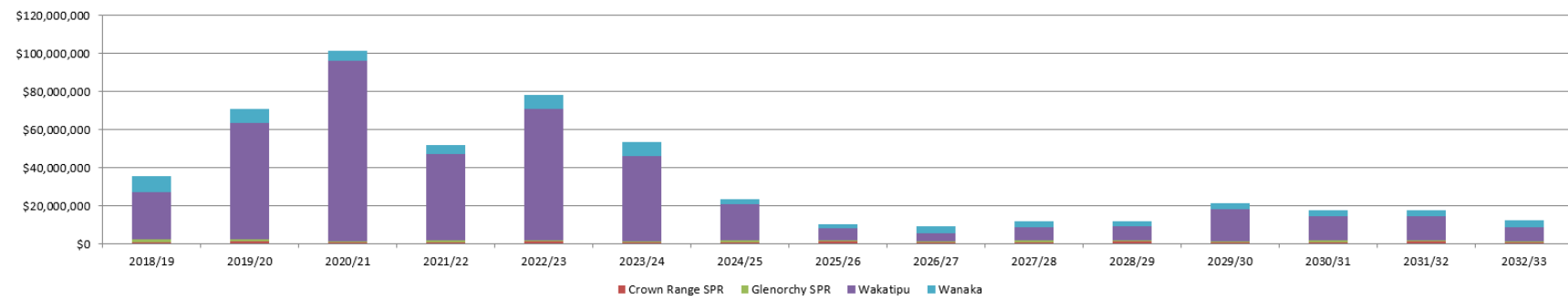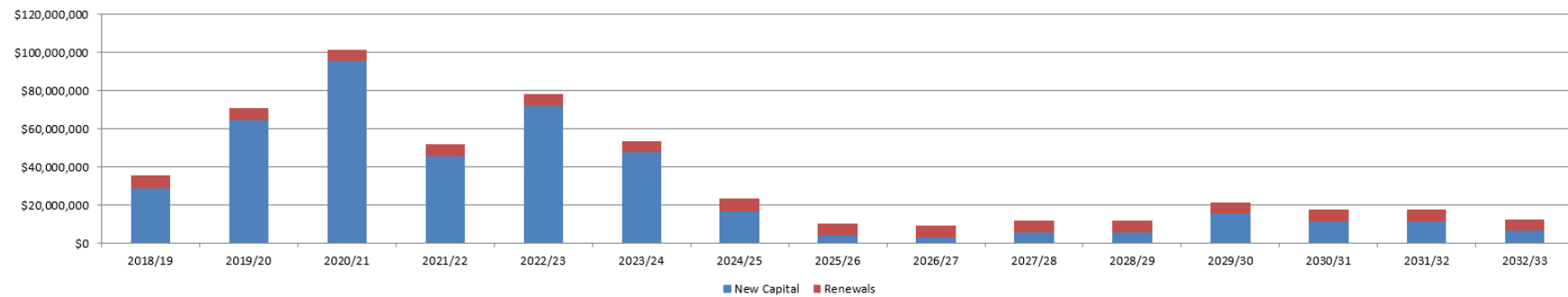**Figure 17 QLDC Transport Programme by NZTA Location inflated to Annual Plan Year**

Figure 18 QLDC Transport Programme by Activity inflated to Annual Plan Year

SECTION ONE - ASSET MANAGEMENT OVERVIEW

1.1 BCA AMP PURPOSE AND SCOPE

The purpose of this BCA AMP is to detail QLDC's approach for delivering transportation services, cost-effectively to achieve long-term strategic goals and delivering the level of service desired by the community.

Its scope covers QLDC inter-connected land transportation corridors. These corridors provide the community with safe and efficient access to their homes, schools, places of work, recreational areas and public services. These corridors also support the community's economic wellbeing by enabling the efficient movement of goods and services. The provision and maintenance of walkways, footpaths and cycle trails also assists our community to be active and healthy.

The principal outputs from this BCA AMP are:

- A description of the land transportation assets, activities and intended outcomes;
- Strategic assessment of service levels;
- Discussion on demand and operational changes;
- A proposed investment programme for the next 10 years;
- Identification of opportunities to improve business processes and asset management maturity;
- Continuous improvement and a prioritised performance plan.

The BCA AMP has been prepared based on what QLDC's professional engineers believe is required to adequately maintain and renew in a 'whole of life' manner, the (expanding) network. Any changes in funding levels required by the community through the Long Term Plan (LTP) process, will be captured in the LTP and used to inform subsequent annual revisions of the BCA AMP.

Changes to the planned investment programmes will be documented and described in alignment with QLDCs Risk Management Framework. This process will ensure the implications of changes in funding (increases or decreases) are clearly understood and captured in a consistent method, each year.

1.2 GOVERNING FRAMEWORK

A fundamental aspect of asset management is that it must align with the legislation and central government guidance of the day. Figure 19 illustrates QLDC's hierarchy of operational frameworks.

Figure 19 Governing Framework
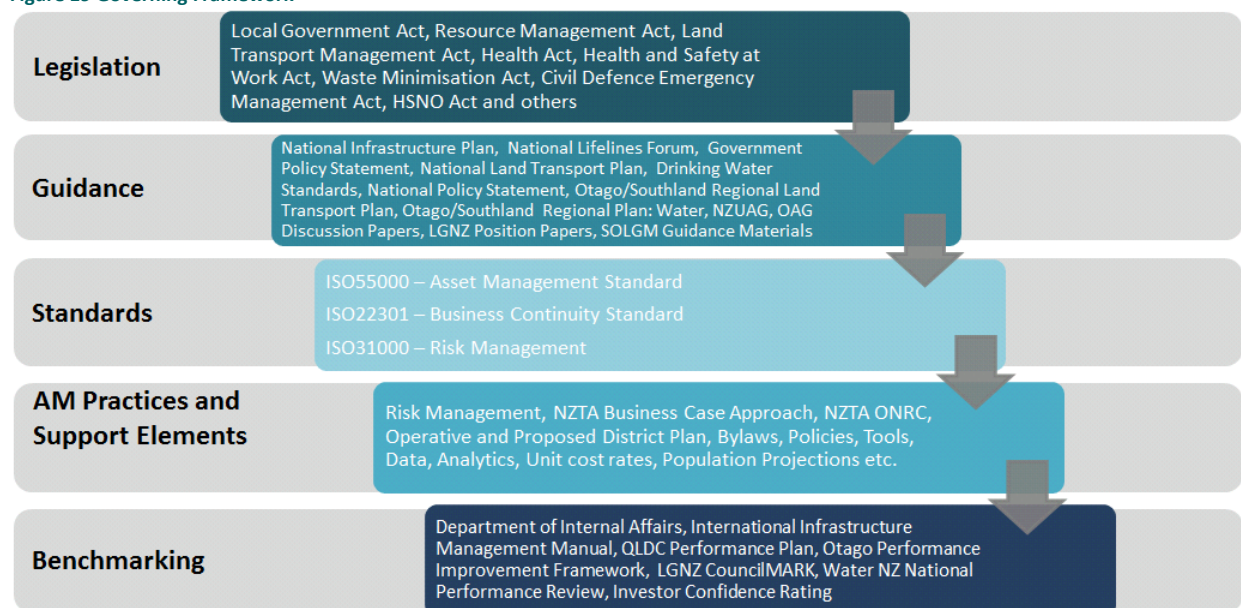
1.3   ASSET MANAGEMENT FRAMEWORK

QLDC's approach to implementing the above governing framework is illustrated in Figure 20 below. This approach has been developed to meet key legislative requirements and support robust AM practices. Legislated, stakeholder and community requirements, along with business performance information inform QLDC's Asset Management Policy and Infrastructure Asset Management Strategy (IMAS). The 30-year (design horizon) for the IAMS seeks to identify emerging issues for service delivery over the longer term. The strategic matters identified in the IAMS are investigated, analysed and scoped under the supervision of the Chief Engineer. These scoped interventions are submitted as better business cases (BBC) to the Asset Planning Manager for programming into the 10-year Asset/Activity Management Plans (AM Plans). AM Plans are to be reviewed and updated annually.

Figure 20 Asset Management Framework

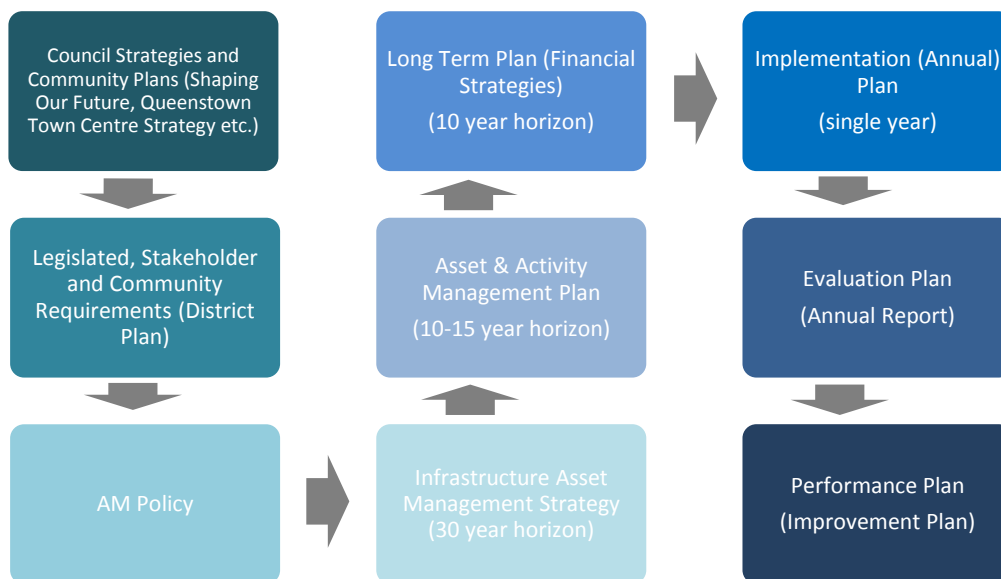The first 10-years of intervention programmes from the AM Plans are required to be consulted on with the community before being adopted into the Long Term Plan (LTP). The last 5 years of programmes identified in the AM Plans support a process to enable time for QLDC to investigate and gain an understanding of matters prior to community consultation and potential inclusion into the LTP.

The LTP sets out how QLDC and the community intend to balance competing priorities while delivering desired community benefits. The LTP outlines the strategic direction and responses (investments plans) for 10 years. The LTP is reviewed on a three year cycle.

The first year of the LTP programme is revised immediately prior to the planned year of implementation through an annual public consultation process to become the Implementation Plan (Annual Plan) for delivery.

QLDC reports on the progress and success of its investment and service delivery annually in its Evaluation Plan (Annual Report), which is published late in each calendar year. Improvement opportunities identified through all aspects of this process are captured in the Performance Plan and are used to inform programmed continuous improvement actions within the AM activities. The Performance Plan is monitored and reported to Senior Management on a quarterly basis.

1.4   ASSET MANAGEMENT OBJECTIVES

QLDC was established in 1989 as a local authority (having the functions, responsibilities and powers of a territorial authority). Over the past 15 years the District has seen considerable growth combined with legislative changes. QLDC has sometimes struggled to consistently deliver services that meet community needs in a financially sustainable manner. This was most notable when in August 2010 the Office of the Auditor General sighted QLDCs 2009 LTP as "not financial prudent". Since this time, QLDC has progressively sought to mature its AM approaches, including and emphasising the need to evaluate the lifecycle costs of all asset decisions to ensure future budgets accommodate foreseeable needs without imposing unsustainable liabilities on future generations.

QLDC's vision for AM is:

"To plan, acquire, operate, maintain, replace and dispose of assets over the long-term, to meet agreed service standards and the foreseeable future needs of our community in the most cost effective way."

The table below demonstrates how implementation of the IAMS and supporting AM Plans is expected to support delivery of the QLDC corporate objectives.

Table 2 Asset Management Supports Delivery of Corporate Outcomes

QLDC Long Term Plan 2018-2018 – Community Outcomes	Asset Management Objective
A strong and diverse economy	To deliver more efficient use and maintenance of existing infrastructure assets
Quality built environments that respond to the needs of the local community and respect the local character	
Effective, efficient infrastructure and community facilities	To best manage demand for new assets with better integration with the district plan, urban design and other non-infrastructure approaches
Protected world-class landscapes and natural environment with appropriate public access	
A vibrant and diverse cultural landscape that inspires, preserves and celebrates our heritage, arts and culture	To regularly measure and advance the maturing of our asset management practices
A resilient community with a good quality of living - inclusive of all	To continuously develop the capacity and capability of our staff in asset management and risk management
Sustainable growth management across the District	
A local council that demonstrates leadership, consults effectively and makes sound decisions. A local council that considers the district's partnership with mana whenua (people of the land)	To progressively improve the transparency and robustness (effectiveness) of investment decision making through evidence based investment (better business case approach)

The following summarises particular objectives and philosophies as to how QLDC manages its infrastructure assets:

➢ Replacement of existing assets: With the exception of critical assets (as identified under the QLDC Risk Management Framework) all assets will be operated under a run to fail model as they can likely be replaced with generic or off the shelf replacement parts with only minor disruption to customer services.

➢ Response to growth (or decline) in the demand for services: QLDC will measure, update and confirm demand for services on an annual basis to ensure future projections for services are based on best available information, and is able to take into account effectiveness of demand management programmes.

➢ Allowance for planned increases (or decreases) in service levels: QLDC will research, test and engage on the setting of service levels to best balance service efficiency and effectiveness, customer expectations, legal requirements and community affordability. Any significant service level change will be consulted on through the provisions of the Local Government Act (LGA).

➢ Provision of resilience of infrastructure assets by identifying and managing risks: As outlined in the NIP, QLDC has completed a natural hazard assessment across the district. This has been combined with latest generation asset criticality assessments. QLDC has a balanced programme of asset reinforcement, relocation and de-risking supporting its insurance and other financial provisions for risk management.

➢ As much as practicable, optimise and extend the effective life / capacity of existing infrastructure to reduce investment in new infrastructure. (i.e. make best use of what is already in place).

SECTION TWO - UNDERSTANDING & DEFINING REQUIREMENTS

ESTABLISHING STRATEGIC DIRECTION AND PROBLEM STATEMENTS

QLDC has created a Transportation Strategic Framework (TASF), which is an overview of the national, regional and local drivers and strategic priorities for QLDC. The TASF demonstrates the linkages from these drivers through to QLDC's Continuous and Improvement Programmes. These strategic drivers are crucial in defining the required outcomes for our customers.

The TASF (refer page 25) shows the linkage of the investment programmes to the national priorities as identified in the GPS and NZTA's Long Term Strategic View (LTSV), including the ONRC. Following through to the Otago Regional Transport Committee (ORTC) objectives and encompassing QLDC's community outcomes.

2.1 GOVERNMENT POLICY STATEMENT FOR TRANSPORT

The Government Policy Statement (GPS) is the Government's primary tool to communicate what it wants to achieve in land transport, and how it expects to see funding allocated across the likes of road policing, road safety promotion, State Highways, local roads and public transport. The Government's key priority in the 2018 GPS is economic growth and productivity; it also reaffirms the focus on road safety and increases the emphasis on value for money. 2018 has seen a specific mention of tourism as a fundamental contributor to economic growth and productivity. Queenstown is a recognised international and domestic tourism destination that supports economic growth across the southern part of the South Island. The District contributes 20% of the national GDP for tourism and as a consequence all transport activities must align and support this priority.

QLDC submitted on the GPS consultation in April 2017, strongly supporting the elevation of land transport investment being allocated to enable and support tourism and improving network resilience. Given the consistent and high rates of growth experienced in our district, QLDC proposes that along with Auckland, Queenstown is explicitly stated within the GPS 2018 as a high area of urban growth.

Consideration to the GPS priorities can be found throughout this BCA AMP, for specific details on the key GPS priorities for Safety, refer to ONRC Customer Outcomes (Section 2.12), Economic Growth and Productivity may be found in the Strategic Assessments (Section 2.17).

As of November 2017, the new Labour led Government has indicated potential changes to the draft GPS. QLDC feels they have put forward a robust programme which provides the best for the network and feels it will continue to show alignment to the new central Government direction.

2.2 NZTA LONG TERM STRATEGIC VIEW

This document is NZTA's view of the land transport system; the priority challenges and opportunities it faces; and the interventions needed to enhance it.

The LTSV seeks to show how NZTA will respond to current and future demands for access to social and economic activities; a system that is resilient to shocks, provide transport choices and is increasingly free of death and serious injury, a system that considers the environment and delivers value for money.

Queenstown has its own section in this document as an 'area of strategic focus' for NZTA as a growth centre identified in the NPS for Urban Development Capacity.

QLDC recognises and supports that NZTA's vision of a 'shared sector' approach is essential in addressing the issues and opportunities the land transport system faces. As investment partners, QLDC and NZTA must ensure long term planning and investment becomes aligned, delivering the right outcomes for its customers. QLDC, as part of the Queenstown Integrated Programme Business Case are working to develop and deliver a programme that address the high urban growth in the district. See Section 3.10 to how these programmes are building.

Figure 21 Long Term Strategic View

2.3 REGIONAL TRANSPORT COMMITTEE & REGIONAL LAND TRANSPORT PROGRAMME

QLDC is a member of the ORTC which works in alignment with Environment Southland, to provide a joint Regional Land Transport Program (RLTP).

The RLTP sets out the strategic direction for land transport in Otago and Southland, and list activities for the next three years (by NZTA and local authorities) which are recommended for funding from the National Land Transport Fund.

QLDC has been involved throughout the consultation process run by the joint RTC's to establish the strategic direction of this RLTP for the region. The agreed problem statements as shown in the TASF are:

➢ Sections of the network are increasingly vulnerable to closure from adverse events resulting in economic and social disruptions;

➢ Attitudes and behaviour together with inconsistent quality of routes in the region results in fatal and serious injury crashes;

➢ Inability to assess, plan and fund rapidly changing transport user demands in a timely way results in some poor investment prioritisation and decisions.

QLDC is confident the proposed investment transport programmes align with the RLTP and address the regional problems identified.

2.4 THE ROAD EFFICIENCY GROUP & ONE NETWORK ROAD CLASSIFICATION VISION

The Road Efficiency Group (REG) was established as a response to the Road Maintenance Task Force Report in 2012. REG aims to deliver increased efficiencies in roading management and to provide confidence to Central Government they are receiving value for money. REG's response fall into four main categories, all of which QLDC seeks to embed as shown within this BCA AMP:

➢ Smart procurement;
➢ Increased sector capability;
➢ Advanced asset management and improved data;
➢ One Network Road Classification (ONRC).

QLDC strove to embed the ONRC framework one year ahead of the nationally proposed timescales. The key driver of this self-imposed deadline is to better align with the renewal of its roading professional services and road maintenance contracts which became operative in October 2016.

Through early application of the ONRC framework and the BBC approach, QLDC is already aligning its strategic thinking with Treasury, Local Government New Zealand and its co-investor the NZTA.

QLDC strives for excellence and the ONRC and BBC approach is providing the opportunity to ensure evidence based investments are focused on customer outcomes and they are effective and efficient in delivering those outcomes.

➢ QLDC are focusing its investment on providing transportation outcomes, rather than on the traditional approach of focusing on inputs that prioritised the achievement of asset condition;

➢ QLDC are reconsidering what levels of service are fit-for-purpose for each classification, based on the ONRC nationwide guidelines;

➢ QLDC will assess the provision of transportation services based on the outcomes they enable our customers to achieve.

Successful implementation of the ONRC is expected to:

➢ Assist in delivering improved consistency and certainty about what services road users can expect on the different classes of road within the national road network;

➢ Assist Road Controlling Authorities (RCA's) with reviewing their provision of services to / against a nationally consistent set of customer level of service performance measures;

➢ Assist RCA's with preparing their funding application to the NZTA for their maintenance programmes;

➢ Ensure improved long term value for money.

2.5   NATIONAL POLICY STATEMENT ON URBAN DEVELOPMENT CAPACITY

The NPS enables central government to prescribe objectives and policies for matters of national significance, which are relevant to achieving the sustainable management purpose of the Resource Management Act 1991 (RMA). In particular; ensuring urban environments can meet demand and provide choices to meet the needs of people, communities and future generations for a range of dwelling types, locations, working environments and places to locate businesses; robust evidence processes to inform planning decisions; and urban environments that can respond to the changing needs of people, communities and future generations. This NPS stipulates that closer working relationships between planning and infrastructure providers occur. To this end QLDC, has formulated the QLDC NPS Project Team across the organisation, including Planning and Development, Property and Infrastructure, Corporate Services and Finance to ensure that requirements are met.

2.6   NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT

The NPS for Freshwater Management provides direction on how local authorities should carry out their responsibilities under the RMA for managing fresh water. The Government has announced a plan to improve New Zealand's waterways so that 90% are 'swimmable' by 2040. At the moment, 72% are considered safe to swim in, most of the time. Improving our lakes and rivers will take time and there is more we need to do in the years ahead to make it happen. The Clean Water package is an important step in achieving our goal of better water quality for New Zealanders.

## Transportation Activity Strategic Framework (TASF)

2.7 STRATEGIC ASSESSMENT

QLDC have introduced the concept of 'The Big Three influencing factors in the 2018 LTP. The map below describes what we plan to achieve over the next ten years. The map also represents the relationships and interactions we have with the community and our natural environment.

Figure 22 Strategic Map
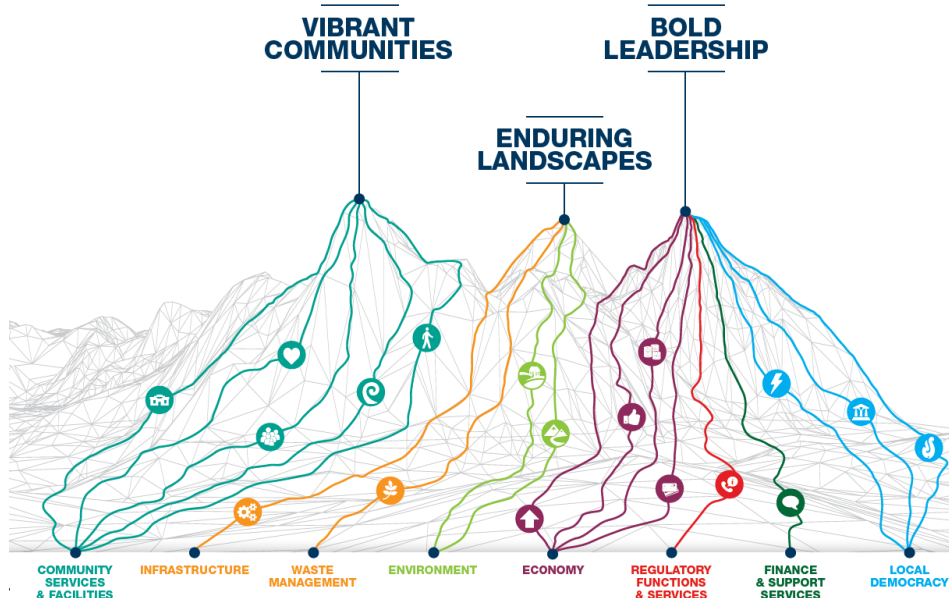
It is QLDC's responsibility to manage the community infrastructure assets in an efficient and effective way to best support a resilient community where environmental sustainability and low impact living is highly valued. Good custodianship of these assets requires that QLDC monitors and understands implications of changes in its business-operating environment. The following have been identified as the most significant challenges affecting core infrastructure:

- Growth
- Natural environment
- Legal and Political
- Built environment
- Economy

These challenges are covered in detail in the IAMS however this BCA AMP will focus on the factors that need to be taken into consideration when managing the Transportation activities. The BCA AMP will explore the strategic response to those which have the most impact on delivering QLDC's high priority customer outcomes.

The following strategic assessments intend to clearly define the problems, benefits and consequences identified within each influencing challenges above. These assessments will draw a direct relation to the customer outcomes and benefits achieved by addressing these issues. This represents QLDC's reasonable best endeavours to capture all issues/evidence.

QLDC have identified three overarching key strategic responses in response to the regional problem statements above. These will lead to our individual responses in the below assessments:

1. Collect data and information to identify, optimise and socialise LoS policy settings developed through the BCA (i.e. trading affordability, customer expectations and benchmarking);
2. Identify, understand, apply and socialise current best practice for optimising life of assets;
3. Long term growth predictions are determined and considered in the BCA for all activities.

Throughout these assessments there may be different responses required dependent on the LoS lead by the road classification, current best practice and accounting for growth.

2.7.1 Rapid Growth

Strategic Assessment - Rapid Growth

Strategic Context

The District is entering its third population growth spurt of over 7% per annum with predictions of 7+% per annum for the next 7 to 10 years. The extent and speed of this growth means the community is facing numerous opportunities but is also faced with challenges. An increase in productivity means a thriving economy however; this also leads to lack of affordable housing, education and health facilities at capacity. Transport is at the heart of accessing and delivering these services across the District and region and increased population leads to traffic growth, changes in land use and urbanisation has increased our asset base which is putting pressure on QLDCs current capacity to maintain the network.

QLDC strives to address the issues stemming from rapid growth whilst protecting the liveability of our district.

Issues:

- Population growth - more people more journeys more impact
- Residential growth places increased pressure on the existing network
- Reduction in liveability of the District
- Affordability reduces options for employment and changes in residential choice of location
- Visitors are less familiar with the network, driving conditions, misconception over NZ journey times with a focus on the destination rather than the challenges of the journey
- Perceived safety issue with visitor drivers and their interactions with other road users
- Growth in tourism, specifically self-drives and improving tourist routes through the visitor driving programme and the use of wayfinding e.g. signs, lines etc.
- Traffic growth leading to increasing congestion and travel time reliability issues
- Recreational growth for outdoor activities such as cycling leading to more vulnerable road user interaction
- High profile destination for events brings short periods of intense visitation i.e. marathons, triathlons, War Birds
- No seasonal peaks or shoulder seasons as traffic intensity is year round
- Network capacity is consumed before infrastructure can be constructed
- Construction growth and development is placing pressure on QLDC as an organisation (continuity, capability and capacity of resourcing)
- Increased construction traffic is placing more heavier vehicles on the network
- An increased risk of discharge and contaminants off the road into stormwater and potentially water supplies
- Land use change and urbanisation leads to changing demographics and therefore changing customer expectations

Consequence of the issues if no investment made:

- Residential dissatisfaction with liveability
- Increased complexities in management of the network
- Need for coordination between agencies (QLDC, QAC, NZTA, ORC) to align responses and act quickly
- Provision of more and differing styles of traffic facilities i.e. signs, line markings, barriers may have to increase to support visitor drivers
- Communication mechanisms, technology and sources may need to change to include travel times, road availability and driving conditions
- Required to provide cross regional advice on amenity stops and facilities to support safe and enjoyable travel decisions
- Requirement to understand consumption and capacity of infrastructure
- Develop non-infrastructure solutions such as demand management
- Visitor experience may be decreased due to tension with locals stemming from road use interaction
- Urbanites moving into rural parts of our district have differing expectations of the implications of unsealed roads, e.g. dust
- Increased development compounds residential and commercial growth
- Increased development of retirement villages may need supporting public transport services and will see an increase in families making visitor journeys
- Demographic change-under 5's increasing: growing pressures on school transport and out of school activities along with more demand for walking and cycling facilities
- Increased congestion during drop-off and pick-up locations and increased safety risks in schools zones can discourage walking and cycling

Strategic Assessment - Rapid Growth

- Increasing asset base for maintenance purposes
- More demand for public transport as customers require multi modal choices
- Demographic change at both ends of age scale – a growing elderly population and growing pre-school to high school age students

Areas experiencing growth (e.g. Wanaka and Shotover Country) have seen an increase in complaints about tradesman travelling too fast (either above the posted speed limit or too fast for conditions). This is often a result of a lack of awareness in the vicinity of a school environment. This issue is a community problem which will need to be addressed through education and communication between QLDC, schools and the surrounding communities

Current Responses (Business-as-usual)

- Population projections are reviewed and updated annually and becoming more robust and standardised throughout QLDC
- Minor Improvements programme address safety issues and minor gaps in LoS
- Visitor driving programme to facilitate travel time reliability, wayfinding and amenity through minor improvements programme
- Work programme of strategies and business cases to address large gaps in LoS
- Working with strategic partners (NZTA, QAC and ORC) on projects such as the QITS and Public Transport to ease congestion and improve travel times through Frankton to Queenstown Town Centre
- District Plan review introduces a new Strategic Chapter to set out the over-arching strategic direction for the management of growth, land use and development in a manner that ensures sustainable management of the Queenstown Lakes District's special qualities
- Use of technology to understand and react to growth issues such as a web camera on the Crown Range summit and Blip tracks sensors to understand travel choices, conditions and travel time
- Future growth and land use change is continually assessed and integrated into all transport activities to avoid a repeat of current situation where solutions are reactive rather than planned. Moving to 'Right Thing, Right Time, Right Place, Right Value' e.g. re-invigoration of the Wanaka Transport Strategy following previous NZTA lack of support. QLDC is now looking at growth and trying to avoid the situation that occurred in Queenstown
- Moving to better transport planning, so availability of infrastructure drives land use change, rather than development leading to reactive provision of infrastructure
- Infrastructure team are exploring early potential locations available for development in the Wakatipu Basin where there are easy and affordable solutions for expanding existing infrastructure
- Exploring collaboration and learning with Tauranga City Council, particularly around their Growth Strategy
- QLDC has appointed an Economic Development Manager in response to the need for QLDC to develop plans for delivering objectives of the Economic Development Strategy and encouraging development of a Regional Economic Strategy
- QLDC Housing Taskforce to investigate new ways of addressing housing availability and affordability in the district
- QLDC School Safety Coordinator is working closely with the school community and Police to implement, where possible, safety programmes which reinforce safe walking, cycling, scootering and bussing. Eight primary schools in the District are implementing travel plan activities with the support of QLDC. e.g. promoting the walking school buses and kea crossing in Wanaka Primary school has partially eased congestion on Ironside Drive at pick up/drop off times. Remarkables Primary School implemented a "safe meet spot" project. Continuing to promote these activities can help ease congestion and road safety concerns
- QLDC are programming infrastructure works where possible to address road safety issues or support safe routes to school. Working with developers on building a road connecting Partridge Rd to St Ninian's Rd enabling students living near Lachlan Rd area to walk, bike or scooter to school. Opportunities such as working with Upper Clutha Tracks trust for the Hawea River Trail are providing active travel choices for schools

Strategic Assessment - Rapid Growth

Planned Improvement Responses

Status quo will not address the current situation, therefore a programme of improvements are being set out

- Processes around Maintenance, Operations and Renewals are being developed and are covered in the Network Management Plans (Appendix 2)
- IIMM Performance Plan is being developed to capture and ensure that actions are undertaken and ideas are not lost. This performance plan is monitored and reported on to QLDC Executive Team quarterly
- QLDC will continue to programme infrastructure works where possible to address road safety issues or support safe routes to school
- QLDC School Safety Coordinator continues to work with, educate and support the school communities to implement safety programmes
- Better liaison with Ministry of Education

Evidence – Population

The population of the greater Queenstown Lakes District is projected to increase by over 50% from 29,700 in 2013 to a forecast 50,600 in 2043. Of this growth, most of it is expected to occur in the Queenstown/Frankton/ Lake Hayes/Arrowtown/ Speargrass Flat area. Under the revised 2017 medium-high population growth projections, the District's population is expected to increase by 102% to 66,355 by 2048.   Resident population growth in the District has typically been around 4.1% per year since 1996. However since the 2013 Census, the resident population has grown from 28,800 to 32,400 – a 12.5% increase in 2 years. This rate of growth is high when compared to most other towns in New Zealand.

Figure23 Historic & Projected Population 1980 to 2060 (ref: Statistics NZ & Rationale
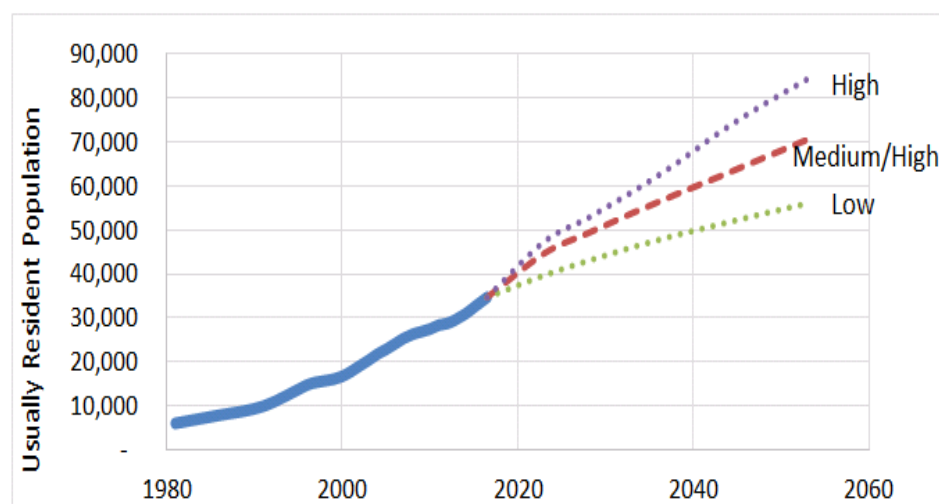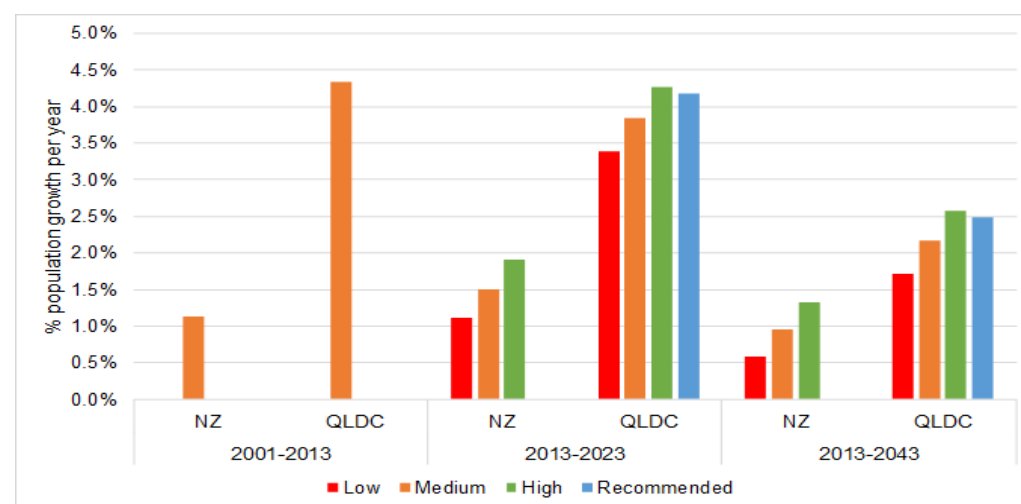

Figure 24 National & Local % Growth (ref: Statistics NZ & Rationale Growth
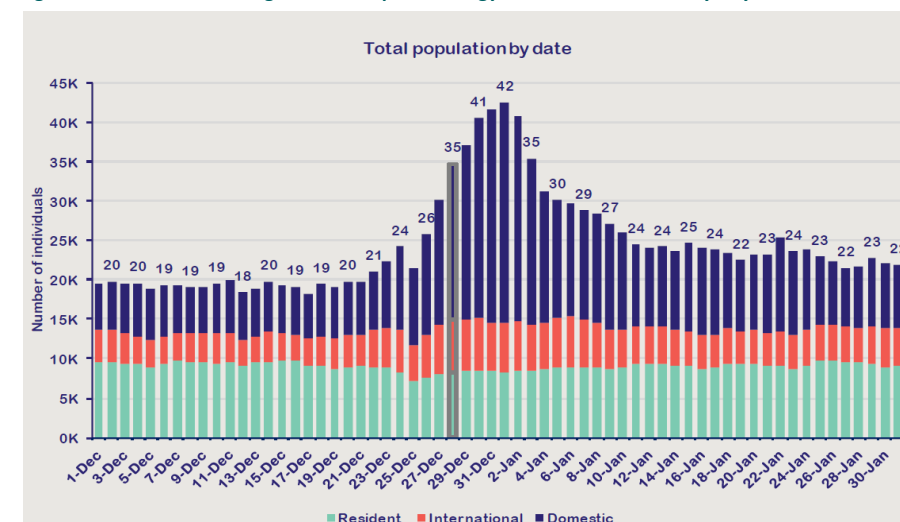
Strategic Assessment - Rapid Growth

Figure 25 Queenstown Integration Transport Strategy – Tourist Growth Projections

Queenstown Lakes District is identified in the NPS on Urban Development Capacity as one of five high growth urban areas in New Zealand, along with Auckland, Tauranga, Hamilton and Christchurch.

In Wanaka alone, the population peaks December 31st and January 1st. Christmas day experience a trough on number of individuals. There were 35K individuals on the 28th December, Visitors numbered 20LK domestic and 7K international visitors. These were combined with 8K residents.

**Figure 26 Queenstown Integration Transport Strategy – Number of Visitors By Day**

Strategic Assessment - Rapid Growth

Evidence – Demographic Change

Figure 27 & 28 Queenstown Lakes District Demographic Projections 2018 and 2048
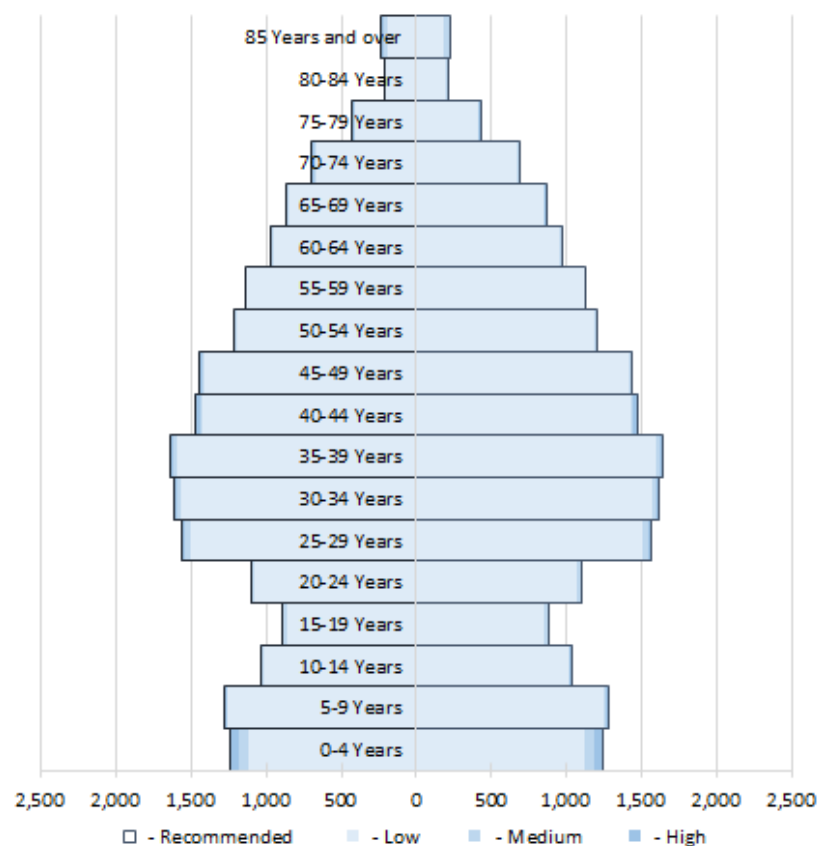
The 2017 population growth projections highlight not only the increasing overall population but demographic change at both ends of the scale. A projected shift in the age profile shows a significant aging population as a proportion of our resident population. Numbers of residents over 60 years of age will increase from 8% to 10% over the next 30 years.
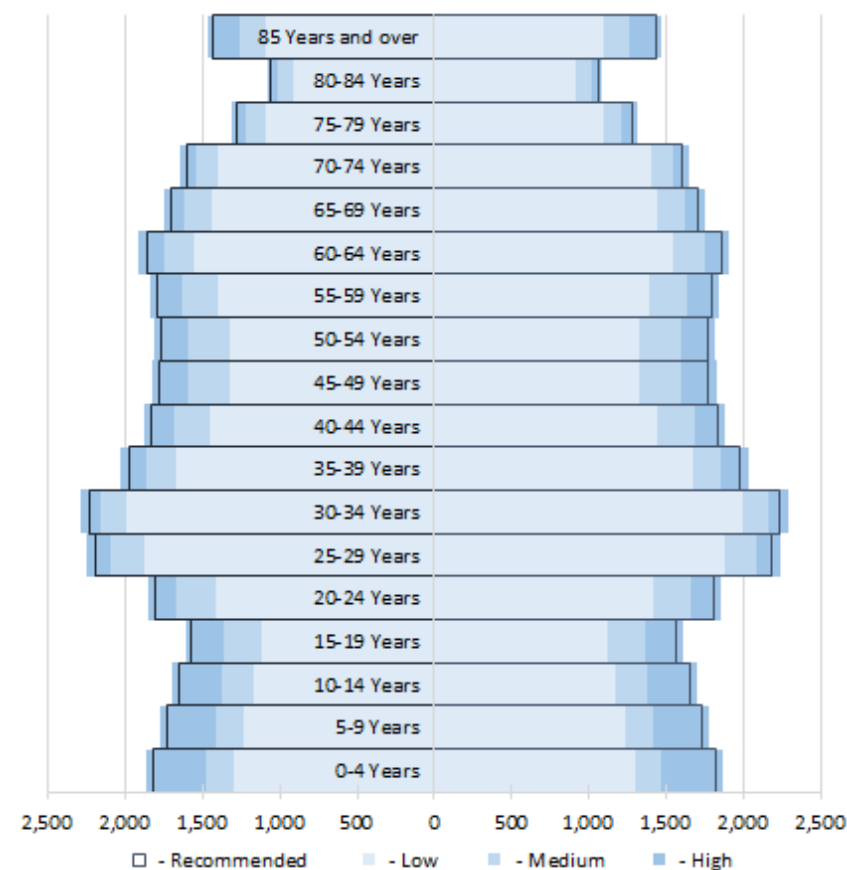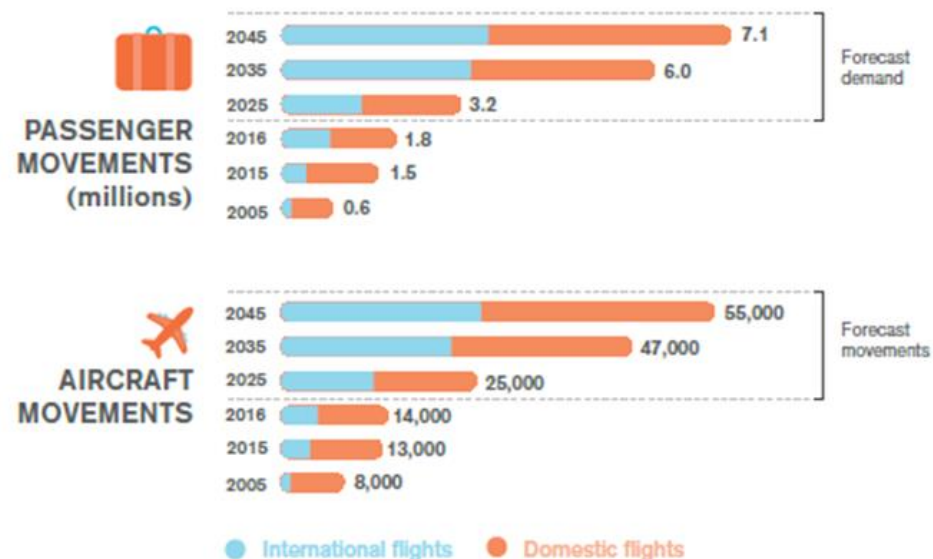
Strategic Assessment - Rapid Growth

Evidence – Visitor Growth

**Figure 29 Queenstown Airport Corporation Master Plan Options 2017**

MBIE has predicted visitor arrivals into New Zealand to grow at 5.4% per annum, reaching 4.5 million visitors in 2022 from 3.1 million in 2015. Queenstown's reputation as an international destination has led the rise in the NZ tourism economy.   Queenstown Airport Corporation has released its growth figures for end June 2017 with an overall 15% increase on the previous year's record: 12% for international passengers and 16% for domestic passengers.

Evidence – Employment Growth

Infometrics (New Zealand independent economic forecaster) has reported Queenstown Lakes District was New Zealand's top performing territorial authority during 2016, with employment expanding by 10.3% over the March 2016 year. This growth was almost four times the 2.7% rate of employment expansion seen nationally.

It is estimated the number of jobs in the Queenstown side of the District grew by 11% over the March 2016 year, while job numbers over the hill in the Wanaka area climbed 8.6% over the same period.
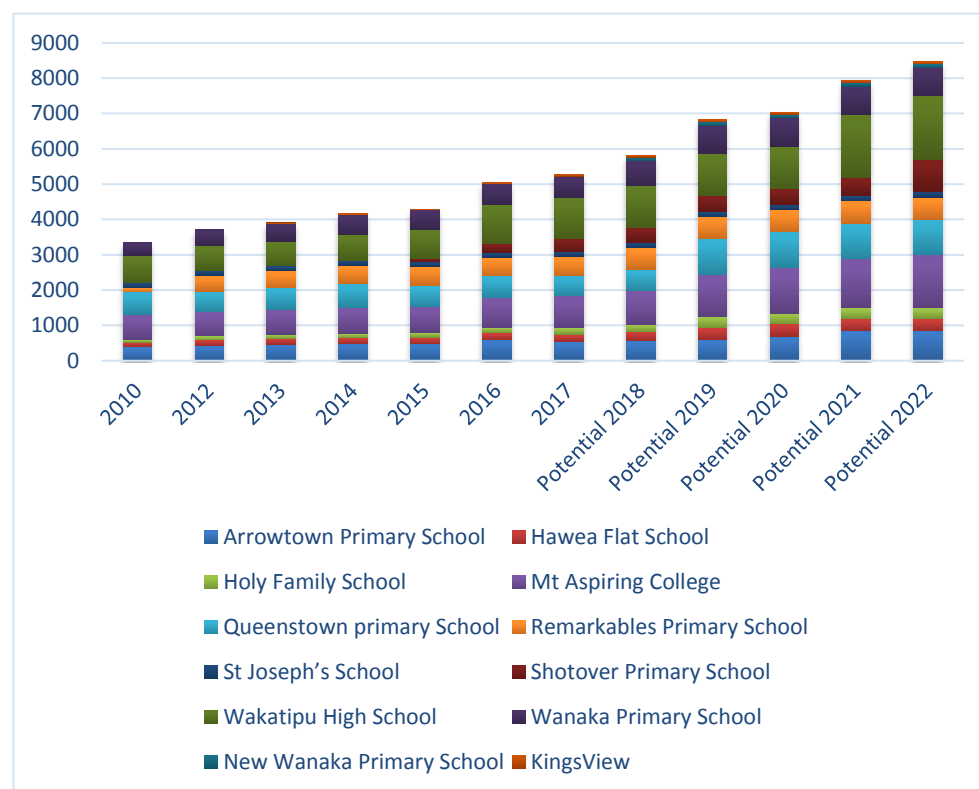
Figure 30 Employment Growth 2001 – 2016 (Infometrics)
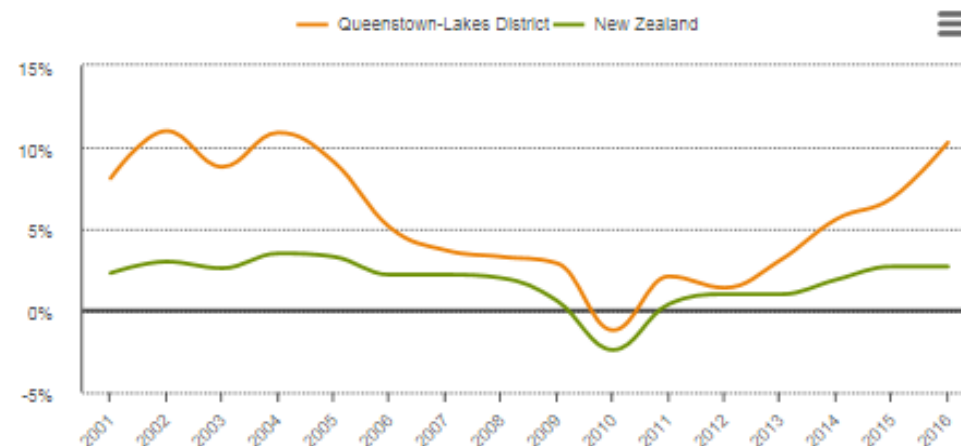
Strategic Assessment - Rapid Growth

Evidence – School Roll Growth

Figure 31 School Roll Growth 2010 to 2022

- Arrowtown Primary School
- Hawea Flat School
- Holy Family School
- Mt Aspiring College
- Queenstown primary School
- Remarkables Primary School
- St Joseph's School
- Shotover Primary School
- Wakatipu High School
- Wanaka Primary School
- New Wanaka Primary School
- KingsView

Another significant age change is residents under the age of 5 years. In 2016 the District had the fastest growing population aged zero to 5 years in New Zealand. Schools are reaching capacity, in response; the Ministry for Education (MOE) has announced major/increased investment in the region for new schools. The MOE nationally aims for school occupancy at 85%, this 85% does not count rooms built by schools from their own funds. Remarkables School currently sits at 89% capacity within a year of opening. The Queenstown Lakes District is at least 97% of capacity. Wanaka's Mt Aspiring College is sitting at 103%. Increases in pre-school and child care facilities are increasing. Uptake in pre-school and the number of child care facilities are increasing which indicates primary school capacity will take the follow on. These increasing numbers create challenges around the schools to manage congestion and road safety which can impact on active travel choices such as biking and walking.

Increases in developments such as the HIF where potentially 2,000 houses will be constructed near Ladies Mile and will be in the zone for Shotover Primary. Strong advice suggesting these will be taken up by young families (as seen at Lake Hayes Estate and Shotover Country), this will undoubtedly have a large effect on growth patterns at nearby schools and may result in the need for more schools being built.

Increased numbers of children leads to greater numbers driving (the ratio is often around 65% in higher traffic areas), leading to congestion, reduced visibility and sightlines, illegal parking, making it difficult for children to cross roads safely and for kids to walk/bike to school. There is definitely a link between increased traffic volume and discouraging walking/cycling. Perceptions of safety (for parents) change and they feel it is less safe and do not want children to walk/cycle. Conversely separated shared path infrastructure that is continuous and connected between home and school will result in greater walking/cycling numbers especially if the children are aged 9+.

http://www.radionz.co.nz/news/national/292717/schools-pushed-to-limit-by-roll-growth

Strategic Assessment - Rapid Growth

Evidence – Traffic Growth SH

Figure 32 NZTA Traffic Count Growth 2014-2016

Site	Location	2014	2015	% growth	2016	% growth
ID 00600947	Cromwell	3523	3886	10.3	4434	14.1
ID 00600970	Gibbston - before Gibbston Back Rd	3561	3868	8.6	4406	13.9
ID 00600980	Swiftburn - past Swiftburn Culvert	4260	4580	7.5	5287	15.4
ID 00600984	Crown Range on Arrow River Bridge	6645	6625	-	8318	25.6
ID 00600988	East of Strains Rd	9102	9733	6.9	11390	17
ID 00600991	Shotover - before Lower Shotover Rd	12110	12622	4.2	14062	11.4
ID 00600994	Frankton - north east of junction	17910	19654	9.7	23468	19.4
ID 00600996	Junction - Airport - betweem SH6&6A & Airport	17723	19180	8.2	19212	0
ID 00600997	North of Humphrey St	8303	9054	9.1	9987	10.3
ID 00690997	Between Southberg Ave & Bridge	7113	7626	7.2	8640	13.3
ID 00600999	South of Peninsula Rd	4049	4506	11.3	5605	24.4
ID 00601000	Remarkables after skifield	3476	3910	12.5	4768	21.9
ID 00601005	Between Jacks Point & Lakeside Estate	2399	2520	5	3085	22.4
ID 06A00001	Frankton - Telemetry Site 90	19811	21472	8.4	23925	11.4
ID 06A00006	Stanley St - Millenium Hotel	16467	17402	5.7	17829	2.5

The growth in population and visitor numbers is supported by traffic count evidence from the NZTA. On the key State Highway corridors, there has been an up to 25% increase on the number of vehicles visiting the District in the past 12 months. This current rate of growth will potentially lead to a doubling of traffic every 5 years. When considering the historic response to growth the new capacity of any upgraded corridors could be consumed well before physical works are actually completed.

In line with population growth and growth in visitor numbers, it is anticipated that there will be an increase in freight task over time, particularly growth in the movement of manufactured and retail goods, construction materials and waste. The Frankton Business Park will likely provide the hub for the construction and commercial activities to support Queenstown's future growth, and remain the focus for heavy vehicle movements into Queenstown.

In addition to an increase in visitors there has been a change in tourist travel mode choice, with increasing self-drive tourists (facts from RCA Forum 2017). This has led to an increase in customer concerns around congestion, travel time reliability and safety.

Evidence – Traffic Growth – Local Roads

From NZTA QITS Report:

> "Residential, job and traffic growth has been rapid and is projected to continue."

Figure 33 Tourism Industry Aoteoroa – Tourist Driving Choices 2016

New Zealand a driving destination

	2016	
	Overseas Visitors	**% of Total Visitors**
Total Self Drive	2,155,016	69%
Rental Car	1,281,796	41%
Private Car	902,791	29%
Rental Campervan	162,780	5%
Private Campervan	29,868	1%
Motorcycle	18,208	0.5%

Strategic Assessment - Rapid Growth

Figure 34 Queenstown Integrated Transport Strategy Projected Traffic Growth Flows October 2016

From NZTA QITS Report:

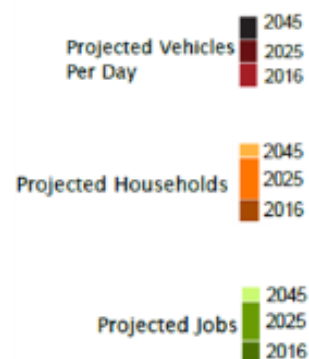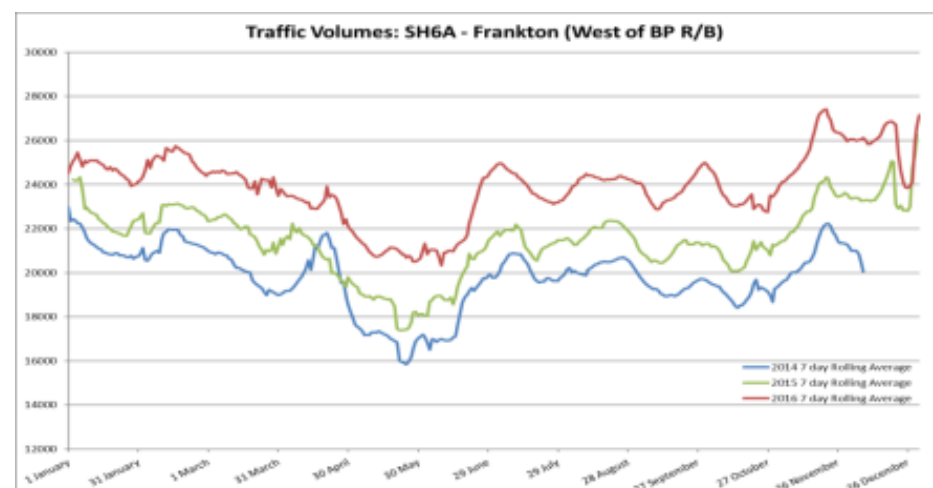"Annual Average Daily Traffic growth rate for 2016 was 17%."

Figure 35 NZTA Traffic Volumes: SH6 – Frankton (West of BP R/B)

Strategic Assessment - Rapid Growth
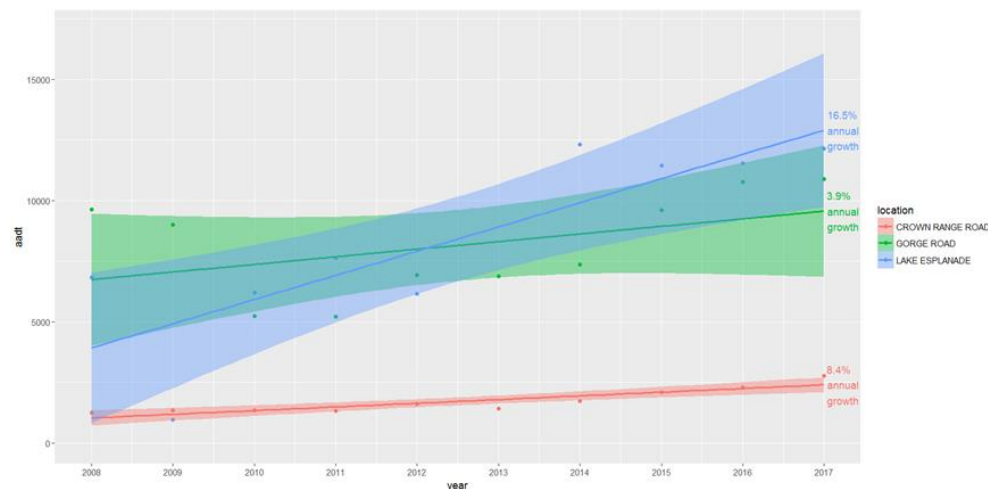
Figure 36 Local Traffic Growth 2008-2017

Figure 37 Anticipated Future Level of Service

There has been a marked increase in the activity occurring in the QLDC local road corridor. This impacts from a traffic management perspective as works often place constraints on a network already under pressure and increases safety risk, as well increased excavations impacting the structural integrity of the infrastructure (pavements and surfaces).

Strategic Assessment - Rapid Growth

Evidence – Corridor Access

Local roads have also shown growth across the network, estimated AADT growth from our three permanent sites ranged from 3.9% to 16.5% / year.

Figure 38 Processes CAR's / TMP's
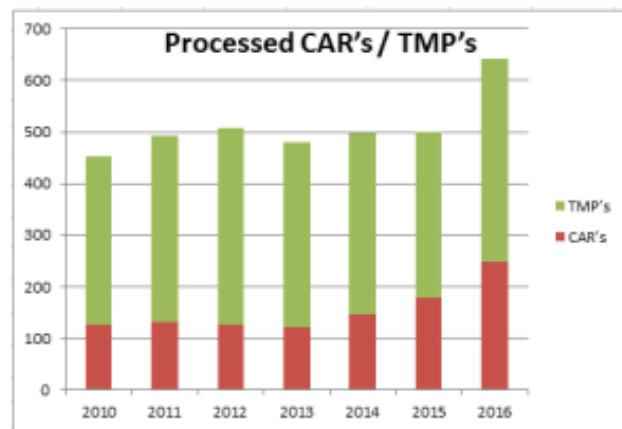
Figure 39 Processed Overweight & HPMV Permits
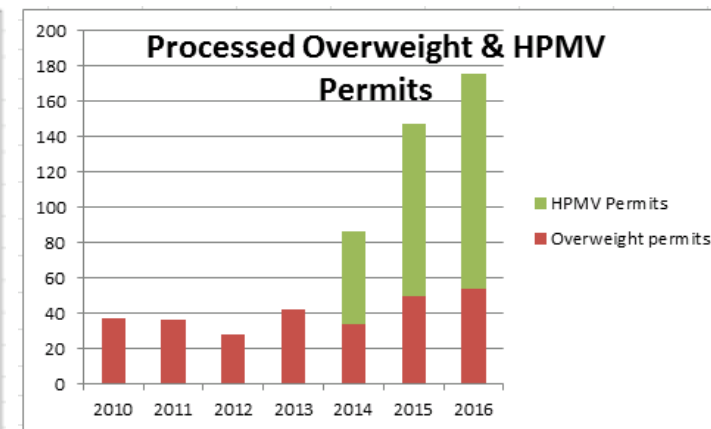
Evidence – Traffic Growth – Cycle Track

QLDC offers cycling as a selling point for the District with "great rides" locally such as Alps to Ocean and various Queenstown Trails. There has been an increase in usage in trails, on both recreational trails as well as those used for commuting, such as Frankton Track. As active modes are encouraged, there is an expectation this trend will continue.

Figure 40 QLDC Annual Trail Usage
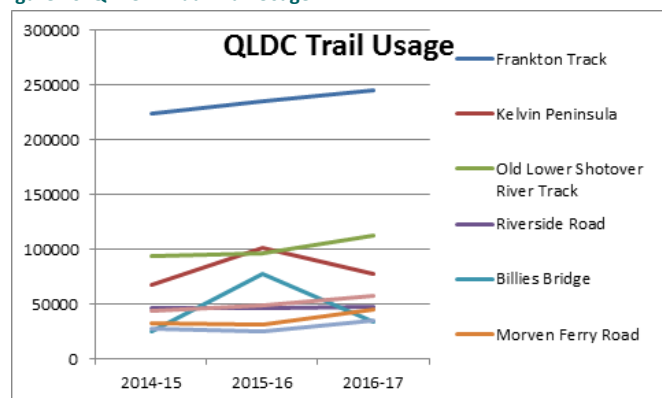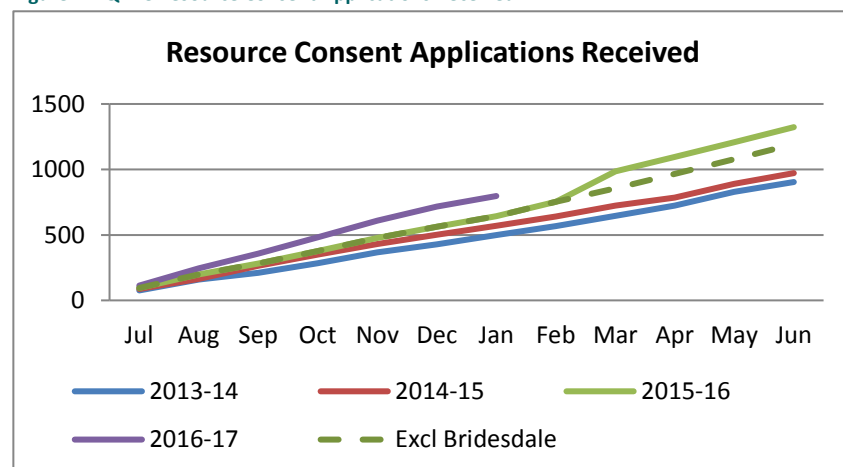

Figure 41 QLDC Trails

Strategic Assessment - Rapid Growth

Evidence – Development Growth

Figure 42 QLDC Resource Consent Applications Received

Resource Consent Applications Received

Last Financial Year trend against previous financial years:
The number of applications received at the end of **2015-2016** represents a:
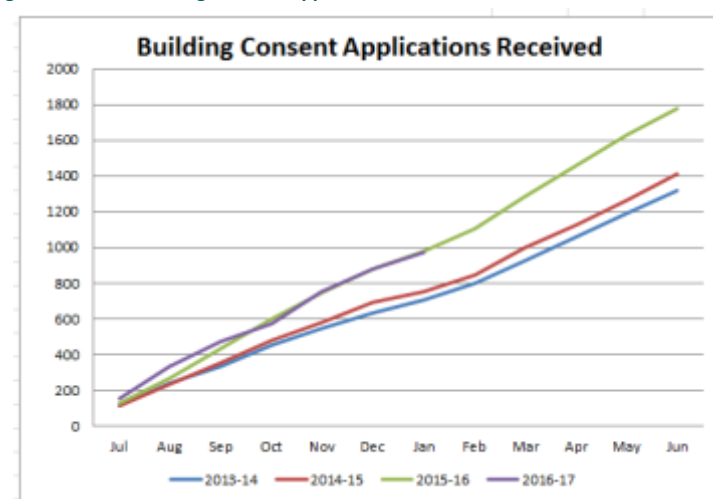* 23% increase on last year (2014-2015)
* 32% increase on two years ago (2013-2014)

Forecasting Current Financial Year against previous financial years:
If the first two quarters of the current financial year are doubled to model the complete current financial year we would get the following trends:
* 20% increase on last year (2015-2016)
* 48% increase on two years ago (2014-2015)
* 59% increase on three years ago (2013-2014)

Figure 43 QLDC Building Consent Applications Received

Building Consent Trending

Last Financial Year trend against previous financial years:
The number of BC applications received at the end of **2015-2016** was 1778.
This represents a:
* 26% increase on last year (2014-2015)
* 35% increase on two years ago (2013-2014)

Our ability to process these consents within the statutory timeframes has deteriorated in 2015-2016. The year on year average for % completed on time has decreased from 96% in 2014-2015 to 73% for 2015-2016. While factors such as the 2016 International Accreditation New Zealand remediation have contributed to this drop in performance, the underlying fundamentals relate to a lack of departmental capacity to meet the increasing levels of market demand.

Strategic Assessment - Rapid Growth

Figure 44 QLDC Resource Consent Engineering Reports
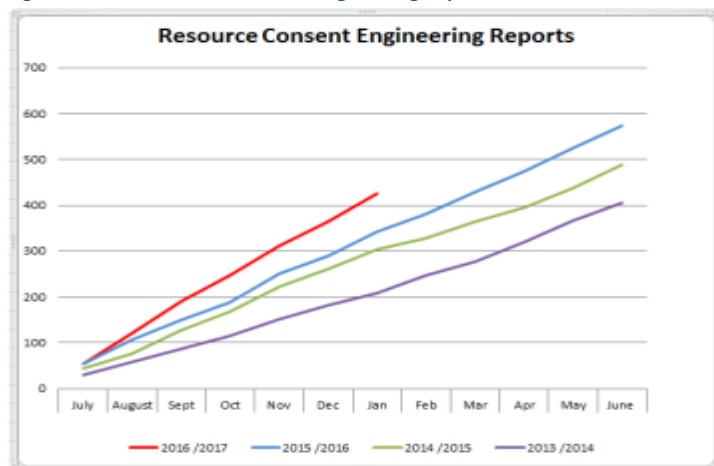
Resource Consent Trending

Last Financial Year trend against previous financial years:
Resource Management Engineering Report requests are up 25% YTD from same period in 2015-16. These increases are occurring at a rate of 25% year on year since 2013.

These increases directly impact engineering detailed design assessments (Engineering Acceptance) and subdivision inspections which have increased at a similar rate and been complicated by more detailed forms of development.

Evidence – Tourism Growth

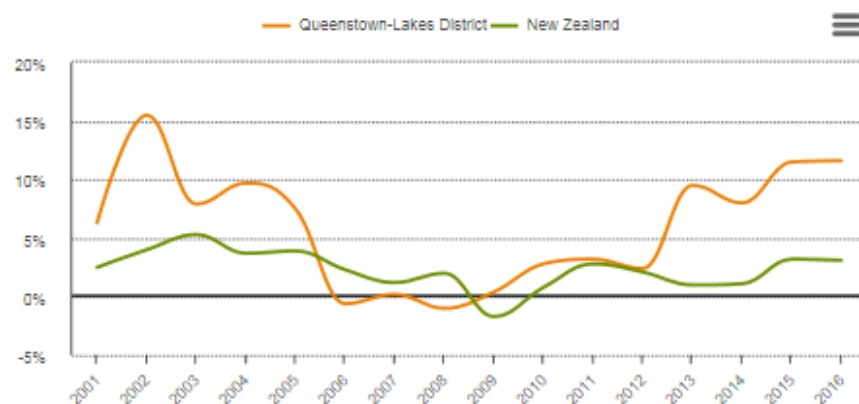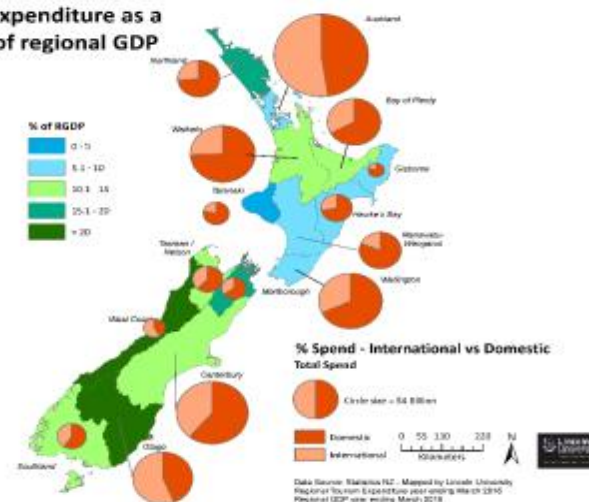**Figure 45 Tourism GDP growth in Queenstown-Lakes District and New Zealand (Infometrics)**

Figure 46 Tourism Industry Aotearoa Regional tourism's GDP contribution March 2016

2.7.2 Challenging Natural Environment

Strategic Assessment - Challenging Natural Environment

Strategic Context

- **Topography**: The Queenstown Lakes District covers a total area of 9,357 km² and includes a number of significant lakes (Lake Hāwea, Lake Wakatipu, and Lake Wanaka). The district is world-renown for its unspoiled natural environment and commerce-oriented tourism, especially adventure and ski tourism and has New Zealand's highest public sealed alpine pass. The natural environment of the Lakes District consists of a variety of systems including rivers, lakes, basins, wetlands, bush remnants, uplands and shorelines.

- **Geology:** Queenstown Lakes District is a geologically unstable area given the proximity to the Alpine Fault and various other (moderate) faults through the District situated within the Southern Alps, part of the Pacific Ring of Fire. Uplift has been most rapid during the last 5 million years, and the mountains continue to be raised today by tectonic pressure, causing earthquakes on the Alpine Fault and other nearby faults.

- **Climate:** The climate is cold with snow and ice year-round at the highest points, as one of the coldest places in New Zealand with an average temperature of 10.7°C ranging from - 10°C to 35°C with ground frosts over 130 days per year. The clear winter days have a low average rainfall of 636mm per year and create a unique climate within New Zealand. It is expected the climate will become less predictable, winters and summers may become colder and warmer. Average temperatures have increased by 0.7°C over the past 50 years and are expected to increase by 0.9°C within the next 30 years. It is expected that soils will dry out and irrigation will be less effective. The District is a semiarid climate (all day sun, good drainage and little traffic) to lake side/swamp (damp, poor drainage, little sun, heavy frosts, heavy traffic).

Issues:

- Physical restrictions of landscape due to mountains, valleys and lakes limits usable land, alternative routes are limited, narrow lanes and limited passing lanes/opportunities
- Remote settlements
- Network vulnerability due to natural hazards such as the seismic activity from the Alpine fault, (from Lifelines) Cardrona and land instability such as landslides and rock falls
- Lake level and valleys prone to flooding and alluvial re-direction i.e. Kinloch
- Sections of the network are impacted by thermal variation
- Increased urbanisation and growth may deteriorate the natural environment
- Changing weather patterns which may be less predictable i.e. projected increases in the frequency and size of storm events, daytime temperatures, increased wind and decreases in snow days
- Dryer conditions may result in higher risk for wild fire events
- Dangerous trees – species chosen for their autumnal colours such as poplars, but vulnerable to internal rot, not visible to the eye, risk of failure in high winds
- An increasing issue with discharge and contaminants off the road into stormwater and potentially water supplies

Consequence of the issues if no investment made:

- Limited resilience, restricting permanent and temporary alternative route options
- Increased costs (e.g. labour, transportation of goods and materials)
- Increased programming of reactive works i.e. environmental and winter maintenance
- Increase rates of deterioration of our road surfaces, reducing their longevity i.e. freeze/thaw issues resulting in short pavement lives
- Raw water quality will become more polluted, both naturally (lake snow/algae/turbidity) and an increase in development and/or changes in urban run-off and other contaminants from road run-off (metals – zinc, copper and hydrocarbons)
- Customers unable to complete journeys leading to economic and reputational impacts on the seasonal tourist activities (e.g. snow sports, biking and hiking) and local business
- A constrained seasonal period for construction can increase costs, reduce construction/treatment options and require more coordination
- Increased wind will mean greater rates of evaporation, which means irrigation will become less effective, this will lead to a potentially higher per capita consumption of water. This is a positive in light of the transportation network as dryer roads may last longer
- Increased wind will exacerbate dust issues on unsealed roads

Strategic Assessment - Challenging Natural Environment

Current Responses (Business-as-usual)

- Provision of winter maintenance activities through the Maintenance Contract such as gritting, grit clearing, Calcium magnesium acetate (CMA) application, snow clearing. Further detail can be found in the current Winter Maintenance Plan (refer Appendix 1)
- Provision of communication and education to help customers make sensible decisions about travel plans (use of print, QLDC webpage, email, radio, social media, chain fitting courses) planned web cams
- Provision of traffic services such as guard rails, lights and signs to mitigate risks of crashes
- Informing customers of delays and risks involved. Information is provided to emergency services, accommodation providers and the general public
- Provisions of vegetation control and cleaning facilities
- Provision of resilience activities, land stability, and addressing dangerous trees
- Proactive maintenance is prioritised, Maintenance Management Plan (MMP) describes QLDC focus e.g. developing crack sealing programmes and heavy maintenance
- QLDC is an active member of the Otago Lifelines Project
- QLDC are currently undertaking a roading criticality project. This follows the exercise undertaken for 3Waters to look at pipe criticality from liquefaction and land instability. Roading is aligning with this methodology and integrating with the NZTA approach
- Understanding the environment our customers face assists QLDC to mitigate the risks and consequences using a Safe system approach

Planned Improvement Responses

Status quo will not address the current situation, therefore a programme of improvements are being set out

- Increase usage of CMA
- Trial CMA to replace grit in a discreet discrete area
- Speed Limit Reviews – commencing 2017 - seeking to provide optimal speeds to support both safety and economic productivity
- Focus on creating drainage renewal Forward Works Programme (FWP), refer to Appendix 3. To protect and extend pavements lives
- Changes to our drainage systems to protect from washouts and surface flooding
- Developing emergency response and resilience plans. Coordinating these with neighbors, regional and NZTA SH
- The actual extent and severity of these changes will be investigated progressively in order to best manage existing infrastructure, plan and phase new infrastructure to ensure good quality services is affordable to the community
- Continuing to monitor freeze days and their effect of road substructure failures
- Installation of new technology to increase weather event and road condition awareness (i.e. Crown Range Webcam and Weather Station)
- Explore impact of growth in Airbnb and the impact of communications and how engage with visitors i.e. how do Airbnb users receive weather information normally sent to hotels – are traditional methods still suitable?
- Lifelines project – ensure linkages with project are maintained and work collaboratively
- Integrate a scaled LoS and socialize expectations to customers
- QLDC will review policies to understand and mitigate these risks which may involve policy change for example, scorched earth policies on verge maintenance, increased irrigation in parks and open spaces.
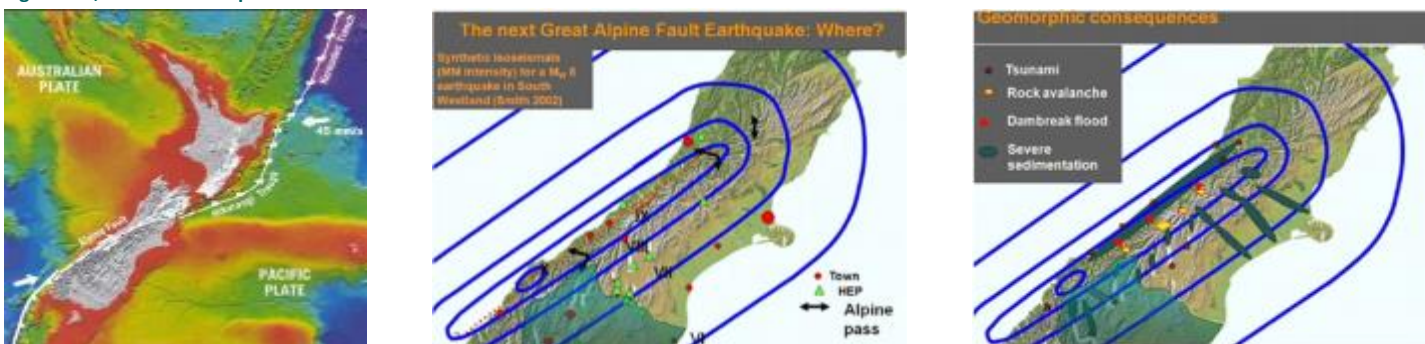
Strategic Assessment - Challenging Natural Environment

Evidence – Topography

Figures 47, 48, 49 & 50 District Views

Evidence – Geology

Figures 51, 52 & 53 The Alpine Fault

REFERENCE: http://www.orc.govt.nz/Information-and-Services/Natural-Hazards/Great-Alpine-Fault-Earthquake/

In additional to the Alpine Fault in the northwest of the District, the three main areas of local faulting are the Hollyford, the Moonlight Fault System and the Nevis-Cardrona Fault System.

Return periods for these and other fault systems in or adjacent to the District are thought to be in high 1000s to 10s of 1000s of years. Sections of faults in these systems tend to be approximately 50 km in length – longer than the fault sections that ruptured in Canterbury earthquake sequence that began in September 2010.

The Alpine Fault, immediately to the North West of the District, has an estimated return period of approximately 300 years, with the most recent significant event being in 1717. The length of fault that could rupture in a major Alpine Fault event would likely be at 400 km, resulting in an emergency generated 100s of times more powerful than the recent Canterbury quakes, of over magnitude 8.

Strategic Assessment - Challenging Natural Environment

Figures 54 & 55 Active Faults in the District

Evidence – Climate

Figures 56, 57, 58 & 59 The District in Winter

The Ministry for the Environment* predicts the following longer term changes in the Districts climate:

- Temperatures are likely to be around 0.9˚C warmer by 2045, compared to 1990.

 * REFERENCE: HTTP://WWW.MFE.GOVT.NZ/CLIMATE-CHANGE/HOW-CLIMATE-CHANGE-AFFECTS-NZ/HOW-MIGHT-CLIMATE-CHANGE-AFFECT-MY-REGION/OTAGO

Strategic Assessment - Challenging Natural Environment

- Otago is expected to become wetter, particularly in winter and spring where average annual rainfall is likely to increase by 12 per cent by 2090. Seasonal projections indicate that winter rainfall is likely to increase by 29 per cent by 2090.

- The number of storms is expected to increase in winter and decrease in summer. The intensity of these storms is likely to increase in winter and decrease in summer.

- The frequency of extreme winds is likely to increase by between 2% and 5 % in almost all regions of New Zealand in winter, and decrease by a similar amount in summer.

- Significant decreases in seasonal snow are projected for the Otago region. The duration of snow cover is also likely to decrease, particularly at lower elevations. The District is likely to see a shift towards increasing rainfall instead of snowfall as snowlines rise to higher elevations due to rising temperatures.

Figures 60*, 61*** & 62** Global & National Temperatures Warming**
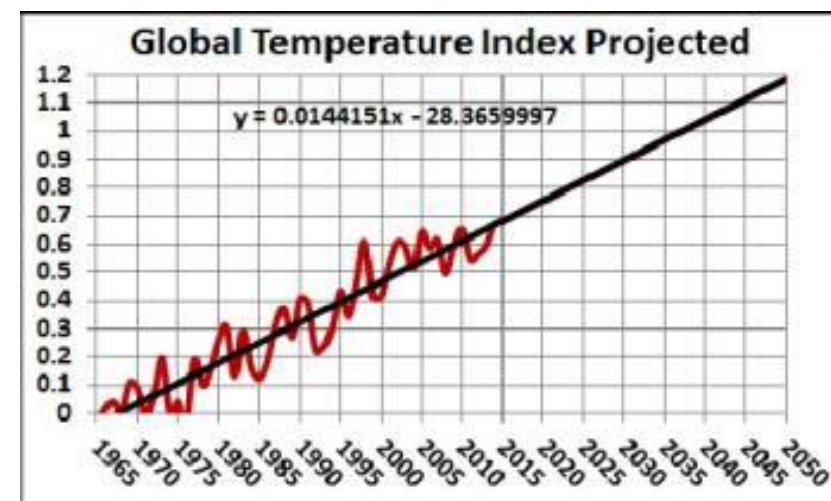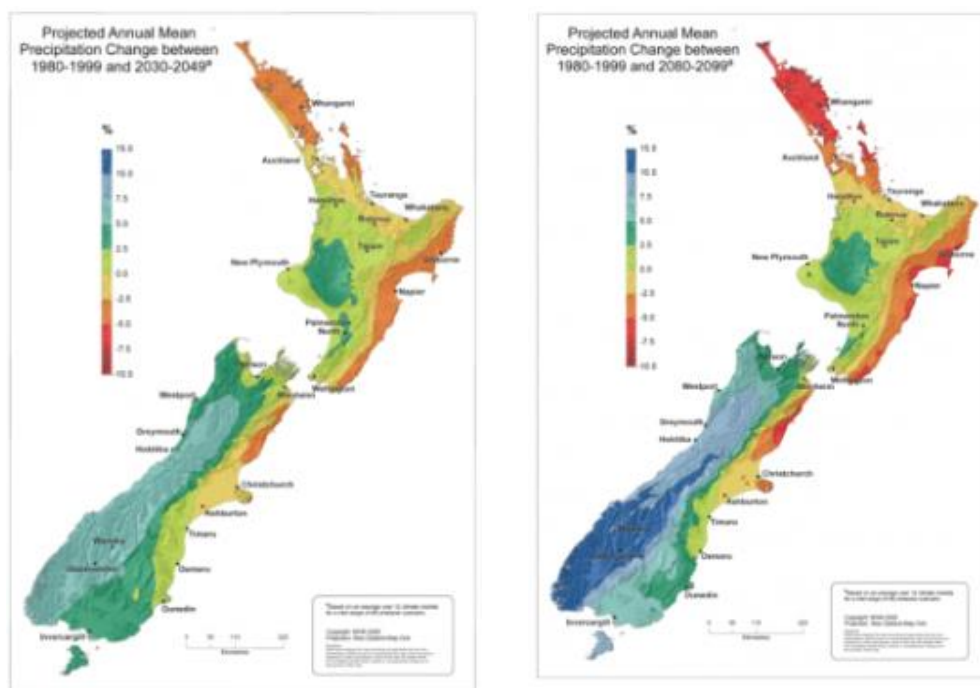
** REFERENCE: HTTP://WWW.ROPERLD.COM/SCIENCE/GLOBALTEMPERATURE_GLOBALWARMING.HTM

*** REFERENCE: HTTPS://WWW.NIWA.CO.NZ/OUR-SCIENCE/CLIMATE/INFORMATION-AND-RESOURCES/CLIVAR/SCENARIOS

2.7.3   **Variable Legal Political Environment**

Strategic Assessment - Variable Legal / Political Environment

Strategic Context

- **Central Government** - political focus can have a major impact on the strategic direction of QLDC e.g. focus on freight or encouraging self-drive tourism.
- **Local Governance** – 3 yearly cycle can impact direction of policies.
- **Government Policy Statement (GPS) on Transport** - the addition of tourism to the GPS, rather than a focus on just freight provides impetus for tourism focus infrastructure changes and the importance of the districts tourism to the national economy.
- **National Policy Statement (NPS) on Urban Development Capacity**– Recognition of Queenstown as a high growth area and impetus for planning and infrastructure team to work together.
- **Housing Infrastructure Fund (HIF)** - Central Government's recognition of the growth in certain parts of New Zealand and the District through making $1 billion available to assist high growth councils to advance infrastructure projects important to increasing housing supply. QLDC has secured $50 million – 3,200 houses. Two new greenfield sites (Quail Rise South and Ladies Mile) on the Frankton Flats and an extension of the Kingston township.
- **Ministry of Business, Innovation and Employment (MBIE) Tourism –** Regional Mid-sized Tourism Facilities Grant Fund and the new Tourism Infrastructure Fund.

Issues:

- Central Government Election may impact the GPS
- Political focus may change and not align to existing strategies, guidelines and LTP
- Expectations of delivery to customers through changing political environment, lack of agility to respond may not meet the needs of the local community and businesses

Consequence of the issues if no investment made:

- Positively, political change in direction can provide governance and financial benefits through additional funding sources such as the HIF
- Focus on freight movements may change strategies for infrastructure by encouraging vehicles to carry increased capacity and tonnage which will require the roading network to be assessed in terms of accessibility e.g. priority to reinforce structures particularly where the current bridge stock is restricted by size or weight
- Dissatisfaction with service delivery

Strategic Assessment - Variable Legal / Political Environment

Current and Planned Improvement Responses (Business-as-usual)

Status quo will not address the current situation, therefore a programme of improvements are being set out.

- Housing Infrastructure Fund - The HIF applications need to consider transport and housing planning in an integrated way. I.e. Active and multi-modal transport infrastructure that would be required to support new housing. HIF applications have been approved and planning and scoping is being progressed.
- MBIE Tourism – exploring opportunities for further investment (Maximise the take up of new and additional Central Government funds)
- Central Governance show strong lobbying to align local needs and strategies with National and Regional decision makers. Mayor and CEO building strong relationships
- Strategic planning improving to consider governance requirements
- Staff maintain an up-to-date understanding of political environment, industry awareness and legislation
- NPS on Urban Development Capacity - Closer department working and alignment between Planning and Infrastructure in response to the NPS
- Close engagement with the Regional Transport Committee

Evidence of Central Government Interest

Figures 63, 64, 65 & 66 Central Government in Queenstown

Queenstown's "exceptional circumstances" to attract Government funding

DEBBIE JAMIESON
Last updated 17:21, May 24 2017

Tourism Minister Paula Bennett and Queenstown Lakes Mayor Jim Boult go walkabout in Queenstown.

Tourism Minister Paula Bennett has promised Queenstown special access to Government funding and resources to cope with the overwhelming costs of tourism due to its "exceptional circumstances."

The funds are outside of the previously announced $102 million tourism infrastructure fund

No visitor levy but other sweeteners possible - Steven Joyce

DEBBIE JAMIESON
Last updated 17:24, April 26 2017

Finance Minister Steven Joyce and Clutha Southland MP Todd Barclay in Queenstown.

Finance Minister Steven Joyce has all but ruled out a visitor levy in this year's budget but indicated other sweeteners are on their way for small towns struggling to cope with large numbers of tourists.

Speaking to the Queenstown Chamber of Commerce Joyce said he had always been reluctant to impose a visitor levy because it can't always be assumed that visitor numbers will continue growing at the same level.

"We are still a really small percentage of tourism worldwide and we're also a pretty long flight from most of the world. So we are a relatively high cost destination in world terms."

Strategic Assessment - Variable Legal / Political Environment

Prime Minister Bill English visits $22 million Kawarau Falls Bridge construction site in Queenstown

DASHA KUPRIENKO
Last updated 16:19, February 16 2017

NZTA's Southern Business Unit Manager Ian Duncan with Prime Minister Bill English at the Kawarau Falls Bridge construction site on Thursday.

Transport Minister Simon Bridges opens new road, addresses Queenstown traffic 'frustrations'

RHYS CHAMBERLAIN
Last updated 15:55, November 3 2016

Queenstown Lakes District mayor Jim Boult, left, and Transport Minister Simon Bridges turn the first sod of dirt of the Eastern Access Road in Queenstown on Thursday.

Evidence of Political Change (Central & Local Government)

Figures 67 & 68 Central Government Elections

Local Elections 2016
YOUR VOTE
YOUR COMMUNITY

NZ GENERAL ELECTION 2017

Strategic Assessment - Variable Legal / Political Environment

Evidence of Central Government direction

Figures 69, 70 & 71 The GPS, NPS & HIF
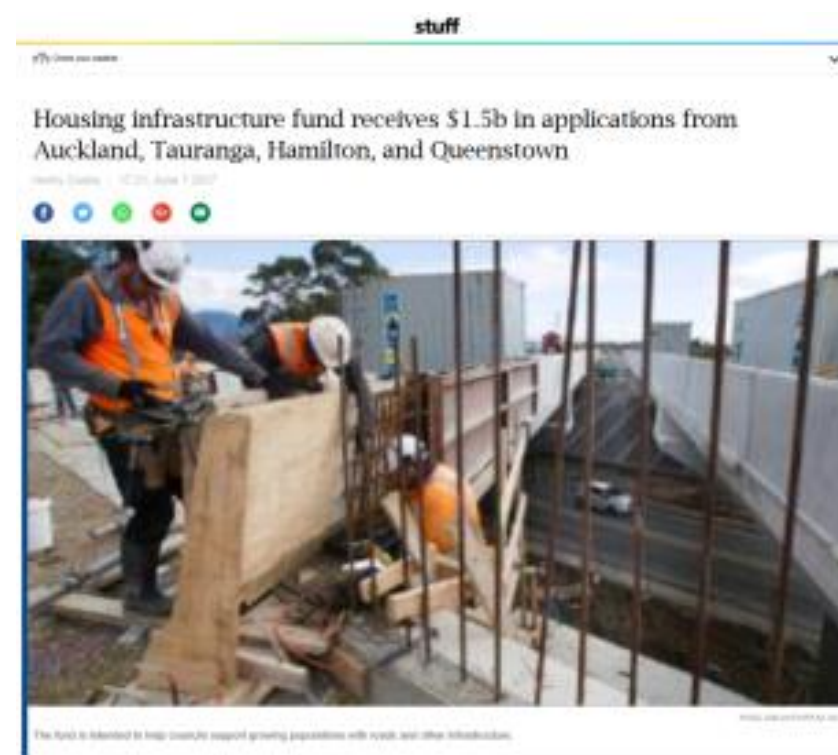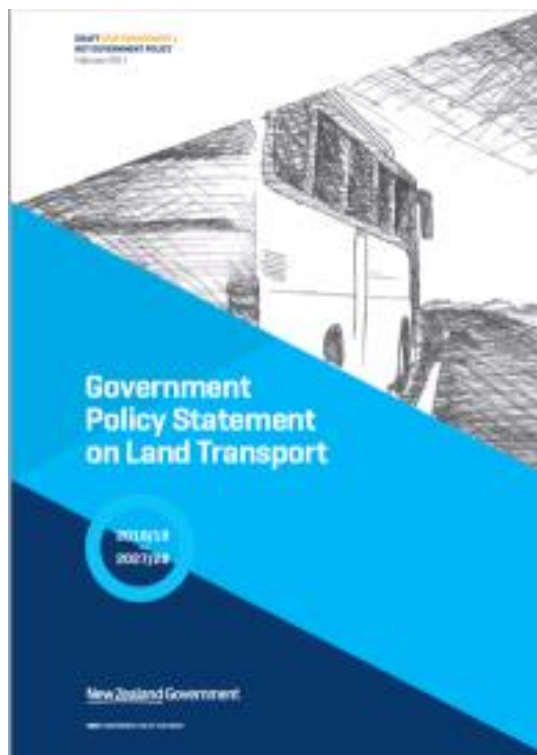
2.7.4 Demanding Built Environment

Strategic Assessment - Demanding Built Environment

Strategic Context

The term built environment refers to network infrastructure and assets that provide the setting for community activity. This can range from buildings and parks to whole subdivisions and towns and includes the supporting infrastructure, such as water supply, waste water, stormwater, roads, energy and telecommunications.

Infrastructure is installed in tranches however, it is required to be replaced over time to maintain affordability of the investment. There are a number of issues which affect the performance of the assets and the ability to renew them, these are discussed throughout the document. The local climate conditions and elevation shortens the construction period. Topographic and seismic conditions, combined with seasonal changes may also accelerate deterioration of assets.

Planning & Development

Operative District Plan (ODP): Made operative 10 December 2009, sets how QLDC will manage the environment and what activities you can do as of right, what activities you need resource consent for, and how certain activities may be carried out.

Proposed District Plan (PDP): A review is under way to produce a plan which is easier to use and reduce the number of rules and limits on your freedom to develop, balanced with providing reasonable protection of important things such as sunlight, privacy and landscape values. The Transport Chapter is up for review in 2017, and introduces ONRC classifications.

Land Development and Subdivision Code of Practice (CoP): Ensures that land development and subdivision infrastructure is designed and constructed utilising best practice the QLDC.

Land Use Changes – urbanisation/ intensification of housing.

State Highways

Nearly all journeys in the District utilise the 870km of Local Roads and 232km of State Highways, and from a customer viewpoint there is little distinction between the two networks.   As the backbone of the transport system, the State Highways is where we see the key pinch points, congestion and issues with travel time reliability. State Highways act as our strategic marker for impacts into local roads.

The extent to which the demand for the local roads might increase (or decrease) due to external circumstances (e.g. increased use of a strategic road as a result of development elsewhere or decisions made by another agency – e.g. the impacts and timing of proposed improvements to the State Highway network by the NZTA).

Queenstown's transport issues are largely on the State Highways network whilst in Wanaka local roads cause a bigger issue during summer.

Utility Networks – all utility networks need to expand to meet development growth in the District.

Issues:

Planning & Development

- Infrastructure expansion is being led by development requirements
- A timing disconnect between the update of the Transport Chapter in the PDP and the NPS for Urban Development Capacity of land use change is problematic as it may result in an inability to direct where appropriate land use change should occur
- Pressure on capacity/resourcing is impacting QLDC's ability to enforce compliance monitoring of development.
- Unrealistic expectation of delivered LoS e.g. new subdivisions are built with bespoke/ornate street furniture and asphalt road surfacing to make them attractive for buyers which are potentially expensive to maintain and renew going forward.   QLDC will renew assets with the lowest whole of life cost options which may

Consequence of the issues if no investment made:

Planning & Development

- Disparate infrastructure that is expensive and complex to maintain (seen especially in street lighting)
- Potential non-compliance with District Plan, strategies and standards
- Customers have high expectations of the provided infrastructure level of service, which is not viable long term
- The extent to which current and future road users may require (and be prepared to pay for) a higher (or lower) LoS than that which is being provided now
- Change to land use is occurring due to significant residential development

Strategic Assessment - Demanding Built Environment

- include chip seal. This in turn can bring a change in customer experience with increased noise, roughness – less suitable for children using scooters or bike.
- The ODP has a landscaping focus but does not outline ongoing servicing. The environmental and landscape preferences of developers may not support/enhance long term pavement life. Provision of drainage options and tree shading may impact winter ice frost/heave.
- Monitoring Report Aug 2012: majority do not fully reflect latest best practice and the variety of transport related council and community strategies that have been produced since the District Plan was made operative
- Transport strategies do things that the PDP doesn't do and likewise strategies don't come into play all that much in day to day RMA work
- Development is placing pressure on our protected landscapes. Particularly Outstanding Natural Landscapes (ONL) and Outstanding Natural Features (ONF)
- Forward planning is restricted by the large cost of investment required to provide infrastructure prior to development
- No shared vision for the District means that each development operates in a silo, leading to lack of comprehensive delivery of infrastructure
- There is no provision in the ODP for hotel developments to provide parking, especially in town centres

State Highways

- Dependence of the transportation system on the State Highway network means impacts and timing of proposed improvements to the State Highway network by NZTA affects local roads
- Complexities between the interactions of networks e.g. coordination of work programmes and delegations
- Public confusion over which organisation is responsible for delivering roads in the District

Utility Networks

- Lack of ability to coordinate utility network provider forward works plans with internal work programmes
- Infrastructure will deteriorate and be damaged by third parties as well as natural hazards. Reviews will need to be undertaken as to post event functionality of facilities, this may require upgrading of buildings and structures that are expected to operate post a natural hazard event
- Impact of utility excavations on the life of the roading assets – can reduce life, let in water etc.

- Lack of understanding of the impact of land use change in terms of type of demand (e.g. residential, commercial, light or heavy industrial) – increases allowable density, enabling greater infilling

State Highways

- QLDC is required to communicate and co-ordinate with State Highways
- Lack of control to address particular transport issues
- Criticism of QLDC to provide solutions to transport issues

Utility Networks

- Road being constantly ripped up –costs of reinstating / asset impact
- Impacts on customers from disruption and journey times
- Timing of provision of the identified requirements might be affected by the intentions of other infrastructure service providers, or able to be integrated with them - e.g. the NZTA (State Highways); the various utility providers (power, water supply, wastewater, storm-water, and telecommunications)
- Amenity aspect impacted due to multiple trenches in the roads

Strategic Assessment - Demanding Built Environment

Current Responses (Business-as-usual) Planned Improvement Responses

Status quo will not address the current situation, therefore a programme of improvements are being set out

Planning & Development

- District Plan Review introduces a new strategic Transport Chapter to set out the over-arching strategic direction for the management of growth, land use and development in a manner that ensures sustainable management of the Queenstown Lakes District's special qualities
- The new Transport Chapter needs to ensure that there is alignment with all the transport policies, it should help manage changes to town centres and their implications for the roading network
- District Plan Review – enabling intensification to address demand
- Proposed District Plan due to be Operative end 2018
- QLDC Land Development and Subdivision Code of Practice was reviewed and updated to comply with NZS4044
- Subdivision and the resultant development enable the creation of new housing and land use opportunities, and is a key driver of the District's economy. QLDC will support subdivision that is well designed, is located in the appropriate locations anticipated by the District Plan with the appropriate capacity for servicing infrastructure and integrated transportation
- Provision of supporting strategies and design codes which include technical direction for developers on infrastructure e.g. Southern Light
- Engage and socialise expectations around LoS
- NPS on Urban Growth - working group, various action plans
- 2018 Future Growth Strategy – Wanaka update to 2020
- Continual review and development of the QLDC Dwelling Capacity Model (DCM). The DCM is used for evidence in hearings and reporting requirements in regards to the NPS
- The HIF applications have considered transport and housing planning in an integrated way. i.e. active and multi-modal transport infrastructure that would be required to support new housing. In 2017 detailed business cases are being developed 3-waters and transport. The transport portion will be delivered alongside NZTA
- Planning are encouraging Public Transport by 'live & work" to reduce demand

State Highway

- Working closely with strategic partners (NZTA, QAC and ORC) on projects such as the QITS and Public Transport
- To facilitate this collaboration a new governance group has been formed which consists of QLDC, NZTA, QAC, and ORC – this group aims to ensure a coordinated and effective programme is delivered for the District
- State Highways and QLDC Liaison meetings are held regularly and scope is being expanded

Utility Networks

- Better organisation of forward works programmes through Corridor Management, re-instigate regular meetings with utility providers
- Better coordination with utilities when planning rehabilitations and new schemes, e.g. provision of ducting for undergrounding
- Better inspection of utility excavation and monitoring of reinstatements, maximizing defect liability warranties
- QLDC need to take the lead in having a shared vision to deliver infrastructure across developments. Possibly through the CoP 4404:2010

Strategic Assessment - Demanding Built Environment

Evidence of Planning & Development
Figures 72, 73 & 74 QLDC's Operative & Proposed District Plan

Volume 1 Operative District Plan

Volume 2 Proposed Changes (to th...

Volume 3 Operative District Plan...

Evidence of Subdivision & Development
The need to forecast carefully where subdivision and development is likely to occur; plan well ahead for how the future land use will be best served from the community transport point of view, and programme the work to meet the identified needs at the most optimum time.

Evidence of Planning and Development - Housing Infrastructure Fund (HIF).
QLDC has secured $50 million – 3,200 houses in central government's new HIF. Two new greenfield sites (Quail Rise South and Ladies Mile) on the Frankton Flats and an extension of the Kingston township.

Ladies Mile
The proposed Ladies Mile medium density residential development could provide a further 1,000 residential dwellings for the district. It includes provision for public transport infrastructure and will improve existing capacity and safety of the access into Lakes Hayes Estate and the LoS on State Highway 6.

Quail Rise

The Quail Rise South project will enable construction of up to 1,100 residential dwellings in close proximity to Frankton Flats. The development includes a new road linking Ferry Hill Drive to the roundabout at the junction of SH6 and Hawthorn Drive, and pedestrian/cycleway access beneath SH6.

Strategic Assessment - Demanding Built Environment

Kingston

It is proposed to bring forward the provision of 3 Waters infrastructure schemes to Kingston. This will enable the development of Special Zoned land and other sites within Kingston township, allowing approximately 950 more houses. Benefits include affordable housing for the district and improved public health for the existing community. The roading portion will be delivered by the developer.

Evidence of Utility Works

An example is the BP round about in Frankton, Queenstown – water main upgrades were undertaken prior to Delta obtaining funding for the undergrounding of cabling and having to rip up road again

Figures 75 & 76 Hawthorn Drive roundabout construction and Delta Poles

2.7.5   Challenging Economy

Strategic Assessment - Challenging Economy

Strategic Context

QLDC is a District with a thriving economy which is strongly driven by tourism, both domestic and international.   A rapidly rising residential population has driven development, which is providing a booming construction industry. Subdivision and the resultant development enables the creation of new housing and land use opportunities, and is another key driver of the District's economy.

Queenstown Lakes has experienced very strong economic (GDP) growth over the last decade (over double the New Zealand average), with population and visitor growth providing the main stimulus. Visitor and lifestyle-related industries (accommodation, food services, rental services and recreation services) and property and service industries (construction and construction services, general professional services, health services, real estate) have grown strongly. GDP per capita has not grown as fast. Employment has grown very strongly but estimated labour productivity in the District is well below the national level and earnings from salaries and wages are relatively low. Median income from all sources is, however, relatively high, likely reflecting that a high proportion of income is from investment and self-employment.

As a key selling point for New Zealand's Tourism Industry, the district has a large impact on the National Tourism Economy.

Issues:

Size and location

- QLDC does not have the range of opportunities and has to rely on the broader regional, national and international environment to provide resources, talent and investment

- The District is also distant from markets for goods and services and other urban centres. Distance increases transport and trade costs. When combined with the small local market, local businesses will struggle to achieve the same economies of scale as those in the same industries in larger markets, which constrains their productivity performance (and hence constrains profitability and incomes)

Concentration of industry

- A dominance on the visitor economy means that the District is one of the least diversified economies in New Zealand

Housing affordability and cost of living

- The District has relatively high house prices. This is due to a combination of population growth and the second home market that have pushed up demand; and higher building costs (due to location related higher transport cost for materials, as well as high demand for a limited supply of local construction labour) and higher land costs

Pressure on infrastructure

- The growing resident and, in particular, the visitor population is placing pressure on infrastructure and the District's ability to adequately fund maintenance and improvements. The Economic Futures Taskforce report concluded that although current infrastructure is generally adequate for the existing population, the infrastructure network struggles at peak tourism periods

Consequence of the issues if no investment made:

- QLDC continue to host a wide range of community and commercial events as an investment in the community through arts, community and sports events. It's an investment in direct economic benefit to our District

- High living costs such as high housing, good and services

- Risk of fluctuations due to the global economy – seen in the Global Financial Crisis (GFC)

- Pressure on all infrastructure: road congestion, water supply, waste water treatment, parks and reserves, and toilets

- Central Government directive is the expectation to see benefits from tourism –using the roading network to provide a better experience for the tourists

Strategic Assessment - Challenging Economy

Current Responses (Business-as-usual) Planned Improvement Responses
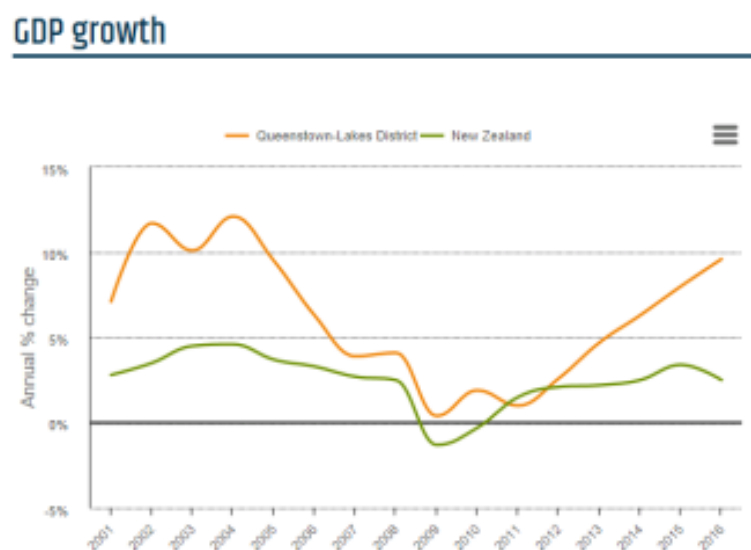
Status quo will not address the current situation, therefore a programme of improvements are being set out

- QLDC investment in events in the district. In total QLDC currently commits $843,000 annually to events, inclusive of Christmas and New Year's Eve events. In the latest round, $583,500 of funding was approved to be allocated to 17 major events planned for the Queenstown Lakes District in the next 12 months
- QLDC supports subdivision that is well designed, is located in the appropriate locations anticipated by the District Plan with the appropriate capacity for servicing infrastructure and integrated transportation
- Following the work done by the Shaping Our Future forum, and in consultation with stakeholders, QLDC commissioned the Draft Economic Strategy in 2015
- QLDC has appointed an Economic Development Manager role in response to the need for QLDC to develop a plan for delivering the objectives of the Economic Development Strategy

Evidence- below has been determined from Regional Economic Studies
http://www.qldc.govt.nz/assets/Uploads/Council-Documents/Strategies-and-Publications/Queenstown-Lakes-Economic-Development-Strategy-Consultation-Document.pdf

Figures 77 Queenstown & New Zealand Gross Domestic Product

Figures 78 Industry proportion of 2016 Gross Domestic Product
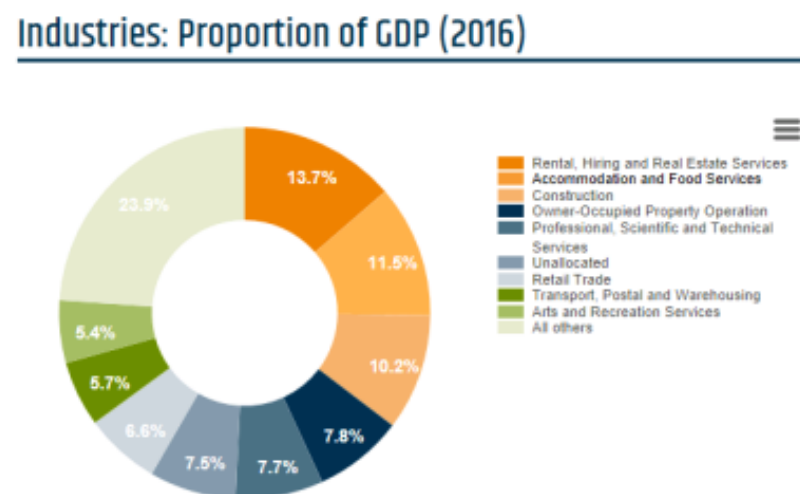
Strategic Assessment - Challenging Economy

Figures 79 Queenstown & New Zealand Self-Employment Rate 2016

Self employment rate, 2016

Figures 80 Queenstown Lakes District and New Zealand's Tourism GDP

Tourism GDP growth in Queenstown-Lakes District and New Zealand

Figures 81 Queenstown & New Zealand Housing Affordability

Housing affordability (higher is less affordable)

Figures 82 Queenstown Lakes District and New Zealand's Tourism Share of GDP

Tourism share of total GDP

Strategic Assessment - Challenging Economy

Evidence – From NZTA from Queenstown Integrated Transport Strategy Programme Business Case:

- Tourism is New Zealand's most significant export industry with $14.5 billion in international tourism expenditure, representing 20.7% of New Zealand's total export earnings (year ending May 2017)
- Queenstown is a world-renowned travel destination, marketing New Zealand's tourism offering to the world
- Queenstown attracts around two million visitors every year
- Queenstown is second only to Auckland for international visitor value by expenditure, and represents 13 %of the national total
- Total tourism expenditure in Queenstown is more than $2 billion per year
- The tourism industry contributes more than 20 %of Otago's regional GDP

DEFINING AND MEASURING LEVELS OF SERVICE

2.8   ONRC AND THE ROAD EFFICIENCY GROUP

The One Network Road Classification (ONRC) was designed to standardise the performance of our roads throughout New Zealand, aiming to address historical inconsistencies, and promote economic growth. The ONRC involves categorising roads into eight categories based on the functions they perform as part of an integrated national network.

Figure 83 ONRC Road Classifications
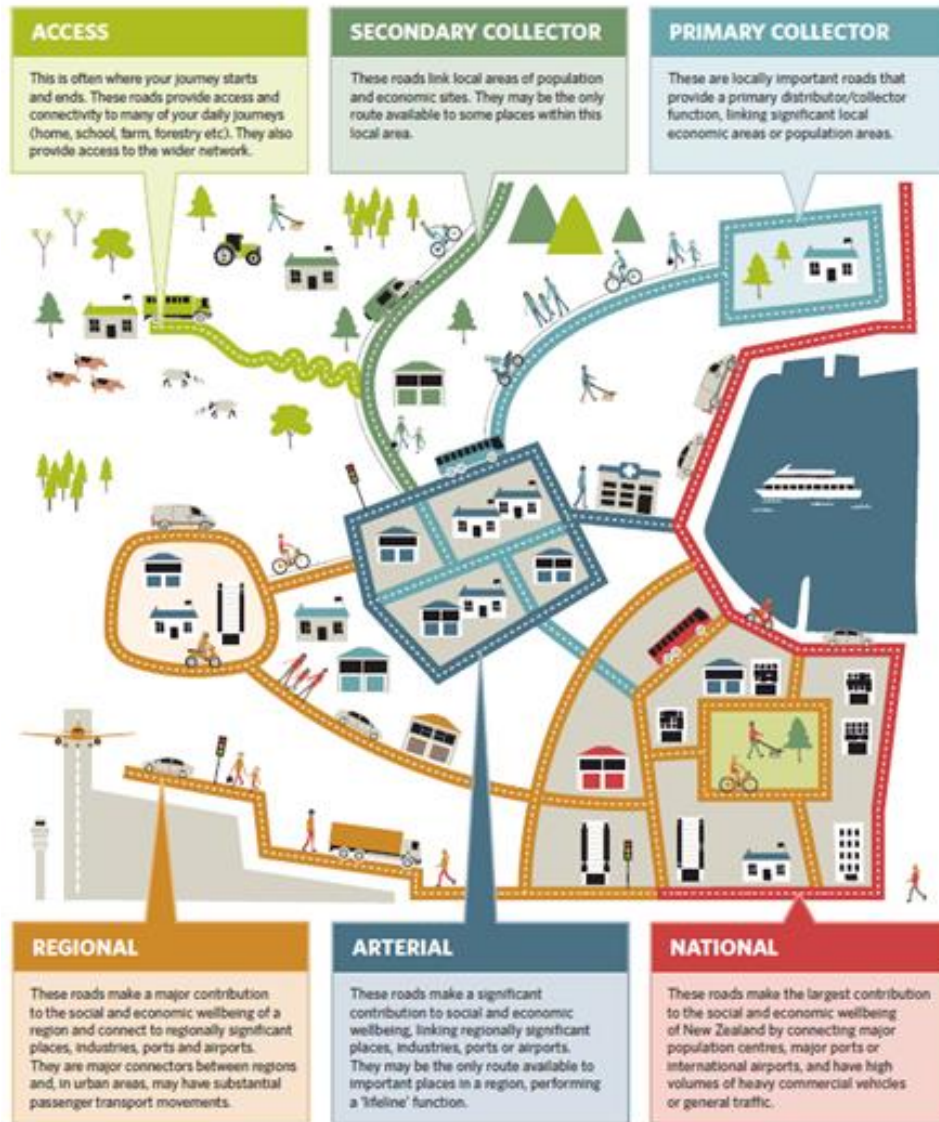
This approach to classification reflects a more customer focused approach to service delivery. The ONRC framework will help local government and the NZTA to plan, invest in, maintain and operate the road network in a more strategic, consistent and affordable way throughout the country. The ONRC also defines the nationally expected fit for purpose LoS for each road classification to better enable delivery of value for money.

The ONRC is providing an opportunity to benchmark QLDC against the rest of New Zealand. QLDC are seizing the chance to showcase the region as an innovative leader in the provision of transportation solutions by taking a proactive and challenging approach to implementation.

2.9   ONRC PERFORMANCE FRAMEWORK

The ONRC will allow QLDC's performance and costs of providing outcomes to be more readily compared against peer networks and the country as a whole. It will improve the ease with which elected members and the community can assess the need for and appropriateness of the investment proposed.

Significant changes to the LGA 2002 came into effect on December 5, 2012. The role of local government is now to: '*Meet the current and future needs of communities for good quality local infrastructure, local public services, and performance of regulatory functions in a way that is most   cost-effective for households and businesses.*'

Local authorities must guarantee a certain and defined level of service to their customers for a specified cost ensuring "value for money". Specifically we need to be able to answer "are we delivering the right level of service at the right cost?". It is in the interest of local authorities to offer adequate services to the community because it increases the understanding and hence the willingness of the various consumers to pay for them. As such, transparent cost recovery of transportation services cannot be achieved without a certain guaranteed service level. The ONRC Performance Framework consists of:

Figure 84 ONRC Performance Framework

These measures are reported for each road classification throughout New Zealand to compare (over the short and long term) how well the Customer Outcomes are being delivered and at what cost. QLDC are continuing to develop and improve these measures, improvement actions sit within our Performance Plan.

A Performance Reporting Tool has been developed which directly accesses data from each Local Authority RAMM database. Outputs of this tool are explored in Section Two and provide an overview of how QLDC has performed.

2.10 ONRC CLASSIFICATIONS

2.10.1 Original Classification Process

In 2014 the classification process was carried out. The moderation process was undertaken and where NZTA queried classifications QLDC adopted a conservative approach, mainly due to a lack of strong evidence. A key example of this was setting the Crown Range Road and Cardrona Valley Road as Primary Collector rather than Arterial.

2.10.2 Reviewing Classifications

Data Improvements: As part of the on-going evidence based approach to transportation management, QLDC have undertaken a concerted effort to review traffic data as the base for the classifications. This has included:
  ➢ Installing permanent traffic counters: Crown Range, Lake Esplanade, Gorge Road
  ➢ Reviewing the count programme (underway mid 2017)
  ➢ Ensuring up-to-date traffics estimates are held (underway mid 2017)
  ➢ Regularly updating and utilising the traffic capacity models

Economic Network Plan: The ENP (Section 2.13) has been used to test the ONRC classifications.   It enables a better understanding as to how the transport network supports economic development. For QLDC specifically, it highlights roads on the QLDC network which while they may have lower traffic volumes, they may have a wider impact on the local (and national) economic community, particularly tourism.

2.10.3 Sub- classification of access and low volume access roads

QLDC has 357km of unsealed roads within the Access and Low Volume Access classifications. Due to the sizable network percentage in these categories, QLDC has adopted the approach taken by Central Otago, Dunedin CC and Waitaki in utilising a further sub classification of the Access and Low Volume Access Roads. This will enable further prioritisation and management and Level of Service realisation.

Some of QLDC's unsealed network is increasing in traffic volumes, particularly areas which access Crown Estate land such as Department of Conservation (DoC) National Parks. This raises questions on the QLDC strategy for dealing with these roads as in some areas (DoC) do not want to increase the capacity at the end of the road or they want the access roads to reflect the 'back country' nature of the environment. However there are safety issues which need to be addressed and this sub-classification will hopefully assist with understanding the LoS issues.

Table 3 Sub-classification of Access and Low Volume Access Roads

ONRC	Traffic Volume	Sub classification	Sub Classification Definition	QLDC roads - example	Length (km)
Access Road	>50 vpd	Major	More than 50 vehicles per day and have a higher than normal percentage of heavy vehicles or higher use alternative through routes. Significant tourist route.	Skippers Rd	
		Intermediate	Through roads which form part of a route which services an area, service significant horticultural, farming or industrial activities, are higher volume gravel roads in lifestyle block areas, are part of school bus routes, or other activity of importance to the community.		
Access Road Low Volume	<50 vpd	Minor	Provide access to more than three houses or are used as an alternative through route by a number of properties.	End of Skippers Rd, Branches Rd	
		Lane	Provide access to three or less houses. While these roads may be a through route there are alternative higher classification routes available and they are generally only used as access to farmland or by residents of three or less houses.		
		Track	Back Country Tracks service land use beyond dwellings and buildings and provide high country access.	Macetown Road	
		Total			**357**

2.10.4 Pavement Classification and Intervention Strategy

QLDC have adopted a Pavement Classification based on the Downer IMMS approach (IMMS Section 3.1). This is a sub segmentation of our carriageway network which considers ONRC as the initial classification, but then segments and aligns further into pavement classifications depending on how those sections would be treated going forward. It aligns sections based on similar performance, environmental factors, and construction. These classifications form the basis of our f-groups for dTIMs and are based on the Downer IMMS Section 3.1. "The road classification (hierarchy) articulates the expected LoS, however it is in the classification of the pavements where we articulate the risk."

To be able to manage an asset through its life cycle we need to understand the context within which it exists including the inputs that affect performance and therefore the operational risk. How we apply a pavement strategy and associated tactical responses will depend on the operational risk of the pavement section. It is an expectation that to meet the funding cap, more risk will be taken where that risk can be suitably managed with little impact on customers. We will use pavement classification risk as a factor in deciding strategy assignment, treatment timing and treatment selection for "renewals and routine maintenance activities."

2.11 ONRC EXPECTED CUSTOMER LEVELS OF SERVICE

For each road classification within each ONRC outcome QLDC customers can expect a varying level of service. It is expected that these levels of service will change over time as QLDC develops a better understanding of the outcome and how we can deliver it.

REGIONAL ROADS	
Urban Example: Frankton Road (BP Roundabout?)	Rural Example: Kawarau

Purpose	The only Regional Roads in Queenstown Lakes District are State Highways which are the responsibility of the New Zealand Transport Agency. The State Highway forms the backbone of the District's transport network, proving the main entry points to the District. Connecting international and domestic visitors to Queenstown Airport and the connecting the South to Invercargill, Te Anau Milford via SH6 and North to Christchurch via SH8A/8. As the key corridors, these Regional Roads make a major contribution to the social and economic wellbeing of a region and connect to regionally significant places, industries, ports or airports. They are also major connectors between regions and in urban areas may have substantial passenger transport movements.
What can you expect?	**Width**: At least two lanes, some areas of four lane **Surface**: Sealed **Signage & Markings:** Line marking (centreline and edge marking) likely to be present. Clear directional signing of key routes **Bridges:** minimal single lane bridges (e.g. Luggate Red bridge, Albert Town bridge)

Outcome expectations	Safety	Road standards should be fairly consistent although they may need to adjust between urban and rural in topography and alignment, neighboring access etc. Footpaths may be in urban areas, but road users may have to share the road space with others such as cyclists. Higher speeds will be in place, depending on assessed level of risk. Lower if mixed use, high intersection density, schools, shopping, concentrations of active road users. In urban areas travel speeds depend on assessed level of risk and recognise mixed use, schools, shopping strips and concentrations of active road users.
	Resilience	These routes generally have a high level of resilience, but, may be unavailable during severe weather events or emergencies. These roads will have a moderate priority for addressing once higher class road are open. A high priority for QLDC Clearance of incidents affecting road users will have a high priority. Road users may be advised of issues and incidents.
	Accessibility	Direct land use is allowed from Primary Collectors and will be common in rural areas.
	Amenity	Users can expect high level of comfort, infrequent roughness. Aesthetics of adjacent road environment reflects journey experience needs of both through traffic and active road users. Amenity outcomes of active road users are mostly provided with additional space in urban areas and in some rural areas.
	Reliability	Generally consistent travel times with some exceptions in urban heavy peak times, holidays during major events or during moderate weather events

REGIONAL ROADS	
ARTERIAL ROADS	
Example: Lucas Place, Frankton	Example: Lake Esplanade, Queenstown

Purpose	QLDC have a number of these roads which predominantly perform a link function between places. These roads make a significant contribution to social and economic wellbeing, link regionally significant places, industries, ports or airports and may be the only route available to some places within the region (i.e. they may perform a significant lifeline function). In urban areas they may have significant passenger transport movements and numbers of cyclists and pedestrians using the road.
What can you	**Width**: 5-9 m, **Surface**: Sealed **Signage & Markings**: Line marking (centerline and edge marking) likely to be present.

Outcome expectations	Safety	Most of the roads have a speed limit of 100 km/h. Travel speeds are assessed on level of risk, and a range of reduced speed limits are in place, particularly in urban areas and the small communities located throughout the corridors where there is mixed use, high intersection density, schools, shopping, and concentrations of active road users. Long stretches of road providing passing opportunities.
	Resilience	Highest priority is given to these roads. Route is nearly always available except in major weather events or emergency event and where no other alternatives are likely to exist. Clearance of incidents affecting road users will have a high priority.
	Accessibility	Some land use access restrictions for road users, both urban and rural. Traffic on higher classification roads has priority over lower classification roads.
	Amenity	Good level of comfort, occasional areas of roughness, but may notice longer areas of roughness, potholes or cracking compared to Regional. Aesthetics of adjacent road environment reflects journey experience needs of both road users and land use. Urban roads reflect urban fabric and contribute to local character. Some separation of road space for active road users for amenity outcomes in urban areas. Aesthetic issues such as litter, roadside vegetation and graffiti will be addressed.
	Reliability	Generally consistent travel times with some exceptions in urban heavy peak times, holidays during major events or during moderate weather events

PRIMARY COLLECTOR ROADS	
Urban Example: Camp Street, Queenstown	**Rural Example:** Crown Range Road

Purpose	These are locally important roads that provide a primary distributor/collector function, linking significant local economic areas or areas of population. They may be the only route available to some places within the region and in urban areas they may have moderate passenger transport movements and numbers of cyclists and pedestrians using the road.	
What can you expect?	Width: 5-9 m Surface: Sealed Signage & Markings: Line marking (centerline and edge marking) likely to be present. Safety guidance will be provided at high-risk locations.	
Outcome expectations	Safety	Drivers should be aware that road standards may be variable and they may need to adjust to topography, weather, alignment, neighboring access etc. Footpaths may be in urban areas, but due to potentially narrower widths, road users should be prepared to share the road space with others such as cyclists. Travel speeds depend on assessed level of risk and recognise mixed use, schools, shopping strips and concentrations of active road users.
	Resilience	Route is nearly always available except in major weather events or emergency event and where no other alternatives are likely to exist. These roads will have a moderate priority for addressing once higher class roads are open. A high priority for QLDC. The Crown Range, a key Primary Collector provide resilience for the SH6.
	Accessibility	Direct land use is allowed from Primary Collectors and will be common in rural areas.
	Amenity	Moderate level of comfort and surface faults will be addressed where they could compromise the pavement, asset life, of safety. In rural areas this could mean more roadside vegetation where it does not compromise safety. Aesthetics of adjacent road environment reflects journey experience needs of all road users and adjacent land use. Urban roads reflect urban fabric and contribute to local character. Similar to arterials, aesthetic issues such as litter, roadside vegetation and graffiti will be minimized, but in general, the road corridor will reflect the landscape. Specific provision where active road users present - clean, safe and secure [lighting, reasonable cycle numbers, accessible parking facilities].
	Reliability	Generally consistent travel times except where affected by other road users (all modes) or weather conditions.

SECONDARY COLLECTOR ROADS	
Urban Example: Ardmore Street, Wanaka	**Rural Example:** Gladstone Road, Hawea

Purpose	Similar to Primary Collectors, these roads provide a secondary distributor/collector function, linking local areas of population and economic sites and may be the only route available to some places within this local area. They typically link communities with populations of between 250–2000 people.
What can you expect?	**Width**: 5-9 m **Surface**: Sealed pavement surface **Signage & Markings**: Line marking (centerline and edge marking) can be expected to assist customers to navigate the network. Variation may occur between urban and rural primary collectors.
Outcome expectations	**Safety** — Road users will need to be vigilant on these roads. Variable road standards and alignment. Urban areas will often be of mixed-use environments including pedestrian and cyclists. Rural environments will likely be dark at night without any street lighting. Road user safety guidance (signage, markings hazard identification) will be provided at high risk locations, but otherwise rural roads will often be without any, markings of edge marker posts. In certain cases, roads will be single lane and opposing traffic will need to cooperate to share the road space. Travel speeds depend on assessed level of risk and recognise mixed use, schools, shopping strips and concentrations of active road users.
	Resilience — These routes generally have a high level of resilience; Route is nearly always available except in major weather events or emergency event and alternatives may exist. These roads will have a moderate priority for addressing once higher class road are open. A high priority for QLDC.
	Accessibility — Direct land use is allowed from Primary Collectors and will be common in rural areas.
	Amenity — Moderate level of comfort, longer areas of roughness. Surface faults will be addressed where they could compromise the pavement, asset life, of safety. In rural areas this could mean more roadside vegetation where it does not compromise safety. Aesthetics of adjacent road environment reflects journey experience needs of all road users and adjacent land use.
	Reliability — Travel times may vary as a result of other road users (all modes), weather conditions or the physical condition of the road.

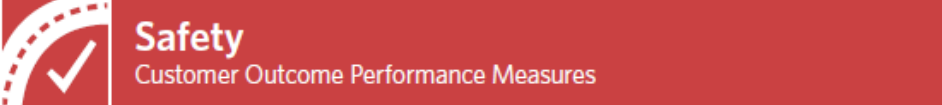## ACCESS ROADS

Urban Example: Cedar Drive, Kelvin Heights

Rural Example: Glenorchy-Paradise Road, Glenorchy Access)

Purpose	This is where your journey will begin and end. These are the lowest classifications of road and their primary purpose is to connect the network to a place. To provide access and connectivity to your daily journeys (home, school, store, neighbors). Residential streets and rural roads. *A large proportion of the network by length*
What can you expect?	**Width**: 3-7 m **Surface**: Sealed or unsealed- Lower traffic likely to be unsealed **Signage & Markings:** Line marking (centerline and edge marking) may or not be present. Safety guidance will only be provided at high-risk locations.

Outcome expectations	Safety	Road users will need to be vigilant on these roads. Variable road standards and alignment. Urban areas will often be of mixed-use environments including pedestrian and cyclists. Rural environments will likely be dark at night without any street lighting. Road user safety guidance (signage, markings hazard identification) will be provided at high risk locations, but otherwise rural roads will often be without any, markings of edge marker posts. In certain cases, roads will be single lane and opposing traffic will need to cooperate to share the road space.
	Resilience	Weather events may make routes unavailable and use of access roads will be restored once other priority roads have been attended to first. Alternatives may not exist. Road user information will have a lower priority.
	Accessibility	The main function of these roads is to provide access to properties and connectivity to the wider network.
	Amenity	These roads will typically offer the lowest level of comfort compared to all higher classifications. This could include rough roads and unsealed surfaces. Road side amenity will be maintained primarily for safety. E.g. sight lines maintained (if present) and edge markers visible (if present). Aesthetics of adjacent road environment strongly reflects land use and place function.
	Reliability	Travel times may vary as a result of other road users (all modes), weather conditions or the physical condition of the road.

LOW VOLUME ROADS

Urban Low Volume Example: Churchill Street Kingston

Rural Low Volume Example: Coal Pitt Road, Gibbston

Purpose	This is where your journey will begin and end. These are the lowest classifications of road and their primary purpose is to connect the network to a place. To provide access and connectivity to your daily journeys (home, school, store, neighbors)
What can you expect?	Width:3-7 m Surface: Sealed or unsealed Low volume likely to be unsealed otta Signage & Markings: Line marking (centerline and edge marking) may or not be present. Safety guidance will only be provided at high-risk locations.

Outcome expectations	Safety	Road users will need to be vigilant on these roads. Variable road standards and alignment. Urban areas will often be of mixed-use environments including pedestrian and cyclists. Rural environments will likely be dark at night without any street lighting. Road user safety guidance (signage, markings hazard identification) will be provided at high risk locations, but otherwise rural roads will often be without any, markings of edge marker posts. In certain cases, roads will be single lane and opposing traffic will need to cooperate to share the road space.
	Resilience	Weather events may make routes unavailable and use of access roads will be restored once other priority roads have been attended to first. Alternatives probably do not exist. Low volume road user information will have the lowest priority.
	Accessibility	The main function of these roads is to provide access to properties and connectivity to the wider network.
	Amenity	These roads will typically offer the lowest level of comfort and may include extended areas of roughness and unsealed surfaces (on rural roads).. This could include rough roads and unsealed surfaces. Road side amenity will be maintained primarily for safety. E.g. sight lines maintained (if present) and edge markers visible (if present). Aesthetics of adjacent road environment strongly reflects land use and place function.
	Reliability	Travel times may vary as a result of other road users (all modes), weather conditions or the physical condition of the road.

2.12 ONRC CUSTOMER OUTCOMES

The ONRC framework has seven Customer Outcomes: resilience, travel time reliability, accessibility, amenity, safety, optimal speeds and efficiency. Section 2.11 explores the expected customer experience is in each classification for each of these outcomes.

Early on in our ONRC journey QLDC decided to follow the NZTA business case approach to review the ONRC Customer Outcomes of resilience, travel time reliability, amenity, accessibility, safety and cost efficiency as District wide strategic business cases. QLDC undertook a series of ILMs to explore the current state of the customer outcomes (2015-2016), to identify significant problems and the benefits of their resolution. This process brought together the key stakeholders and investment partners. Each sharing an understanding and ownership of the scale and significance of the problems, the outcomes sought and the benefits desired from any investment. It was a key early step in changing the conversation to outcome based investment and provided some robust conversations and learnings. These were taken through to the long list options in most outcomes. It was decided not to follow these through to programme business cases as the cross relationship of activities across the outcomes meant that translating to NZTA work categories was seen as less efficient. However, they have created a useful base to explore what outcome driven success looks like and the issues that QLDC face in its network management. As the BCA AMP matures, it is expected that the transition to outcome based investment will drive and enable an iterative conversation to take place.

2.12.1 Safety

Priority Safety	Safety Customer Outcome Performance Measures	
Safety – How road users experience the safety of the road		
GPS Objective	Road Safety - A land transport system that is a safe system, increasingly free of death and serious injury	
RLTP Objectives	**Problem** Attitudes and behaviours, together with inconsistent quality of routes in the two regions, result in fatal crashes and serious injury	**Benefits** Improved safety and reduction in the social impact of fatalities and injuries
ONRC Objective	To reduce the likelihood of crashes occurring and the consequences if they do.	
QLDC Objective	To ensure our road users safely complete their travel plans through progressively reducing the likelihood of crashes occurring and reducing the consequences if they do.	
How will we provide it?	• by maintaining sight lines and identifying hazards • by promoting safe road use • By providing safe road • By providing forgiving roads and roadsides	
Summary	Based on the ONRC approach, the Queenstown Lakes District has a relatively low road safety problem. There appears to be no consistent pattern of serious and fatal crashes across the District. There is possible anecdotal evidence of distracted driver, speed, and poor decision making resulting in crashes. In addition, weather and road configurations appear to result in increased crashes – i.e. Arthur's Point, Arrow Junction and Crown Range roads. There is also a perceived safety issue-surrounding tourist or visiting drivers to the district. There is a need for QLDC to be more responsive to addressing community concerns regarding road safety (i.e. lowering speed limits and addressing risks to school pupils on bikes etc.).	
QLDC ILM by ONRC Outcome	A facilitated investment logic mapping (ILM) workshop was held on 27 July 2015 with key stakeholders to gain a better understanding of the issues with regard to land transport safety in the District. This drew on the experience and knowledge of the participants to identify and agree the following key problems that are detailed on the Investment Logic	

Priority Safety	Safety Customer Outcome Performance Measures		
	Map below. The problems have are ranked with a percentage that indicates the relative scale of the problem as it relates to addressing Land Transport Safety in the District. **Stakeholders involved:** QLDC (Planning, Operations, Strategy, School Travel) Councillors, NZTA (SD&D), NZ Police, Accident Compensation Corporation, Regional Tourism organisations (Destination Queenstown, Lake Wanaka Tourism)		

Problems Identified in the ILM	**Problems Identified in the ILM**	**Key Findings in the Strategic Case**	**Conclusions**
	Problem 1: Information is complex, unreliable and open to interpretation meaning risks are not fully understood and our responses are inconsistent. (50%)	**Pressure**: Disparate approaches to road safety by the key stakeholders based on each organisation's information has meant disjointed and non-optimal approaches to addressing land transport safety in the District. **State:** Each organisation collects and interrogates its own available data. All of the data sources have not been brought together to ensure a holistic approach is developed. **Response:** Develop an information store of all land transport safety data available.	**Response**: By having the one information store that all organisations can interrogate, responses will be better aligned and allowing better and more appropriate responses by the right people at the right time.
	Problem 2: Our transport system and driving practices have not adapted to travel growth, meaning our travel practices are becoming less safe. (30%)	**Pressure**: Concerns are being raised about safety in the District, especially in relation to the visitor experience. **State:** Incidents of bad driving practices appear to be increasing through the Police *555 service. **Response:** As above.	**Response**: By having a better understanding of all land transport safety incidents, particularly the location or types of incidents, the better the responses of all organisations.
	Problem 3: Negative perceptions about driving in our District is reducing our attractiveness for visitors/residents, impacting our brand. (20%)	**Pressure**: Concerns are being raised about safety in the District, especially in relation to the visitor experience. **State:** Reports in the media, including on social media, are increasingly highlighting crashes and incidents involving tourists. **Response:** As above.	**Response**: By having a more complete information store of land transport safety incidents, better targeted programmes will enable these incidents to be reduced.

Benefits of Investment	A second ILM workshop was held on 3 August 2015 to identify the benefits that will accrue from addressing these problems. The percentages from above were distributed to each benefit as an indication of how much each benefit addressed each problem, to come up with a percentage for each benefit that indicates the relative strength of the benefit towards addressing the problems and therefore Land Transport Safety. Benefit One: Reduction in deaths, serious injuries and incidents. (20%) Benefit Two: Increased level of safety on our transport system. (50%) Benefit Three: Improved perceptions of user safety. (30%) The benefits will contribute to: • the achievement of the QLDC community outcome: A safe and healthy community that is strong, diverse and inclusive for

Priority Safety	**Safety** Customer Outcome Performance Measures

	people of all age groups and incomes. • the achievement of the long term council outcome of: High performing infrastructure and services that: ▪ meet current and future user needs and are fit for purpose; ▪ are cost-effectively & efficiently managed on a full life-cycle basis; ▪ are affordable for the District. At a broader level, the benefits will contribute to the national focus on an improved performance with regard to road safety as stated in the Government Policy Statement on Land Transport.

ONRC CLoS Customer Impact and Network Performance Measures

Customer Outcome 1: the number of fatal and serious injuries on the network	
	QLDC are trying to understand lead indicators due to lower numbers of S&F. We are trying to identify at risk sites based on lower severity crashes and evidence of non CAS recorded accidents such as skid marks and broken fences. **Access and Low volume:** Too little data to be statistically reliable for crashes Primary Collector not showing a decreasing trend, however, low network percentage, but high VKT percentage. Overall is showing a decreasing trend.

Priority	Safety — Customer Outcome Performance Measures

Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre)

Safety Customer Outcome 2 Comparative - Collective Risk
The total number of reported serious injuries and fatalities per kilometre each year on the network.

The Collective Risk ranges are:

Low is <= 0.039

0.04 <= Low-Medium <=0.069

0.07 <= Medium <=0.10

0.11 <= Medium-High <= 0.189

High > 0.19

Road and roadsides are being maintained in such a way as to ensure that people feel safe driving them
Arterial- has a crash sample of less than 65km, risk calculation mab be distorted due to small sample size

Priority	Safety — Customer Outcome Performance Measures

Traffic light over view of safety measures

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Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume)

Personal risk is reliant on dividing the number of fatal and serious injuries by the vehicle kilometres travelled. QLDC has not recently had confidence in its traffic estimate data, so have been undergoing the process of improving traffic count data. This includes implementing the RAMM Traffic Estimation Tool and due to initial issues with the Traffic Estimation Tool, exploring opportunities to utilise the Traffic Capacity Model to calculate estimates.

Priority	Safety	**Safety** Customer Outcome Performance Measures

Safety Customer Outcome 3 Comparative - Personal Risk

The total number of reported serious injuries and fatalities by traffic volume each year on the network.

Financial Year: 2015/16
RCAs: Thames Coromandel, Rotorua, Tasman, Central Otago, Dunedin City Council, Queenstown Lakes, Southland, Timaru
Classifications: Primary Collector, Secondary Collector, Access, Low Volume
Urban/Rural: Urban, Rural
* RCAs chosen (shown above) may not show if they have no data for the selections in this report.

Classification		RCA	Earliest Reported Crash Date	Last Reported Crash Date	Personal Risk per 100M VKT
Primary Collector	❓	Central Otago	14/12/2005	21/10/2012	5
		Dunedin City Council	21/01/2006	27/11/2015	11
		Queenstown Lakes	19/06/2005	4/03/2015	1
		Rotorua	26/12/2005	27/05/2015	10
		Southland	3/05/2005	19/05/2014	4
		Tasman	4/09/2005	20/06/2015	4
	❓	Thames Coromandel	8/04/2006	8/05/2015	6
		Timaru	9/03/2006	12/06/2015	4
Secondary Collector		Central Otago	1/11/2005	31/05/2015	14
		Dunedin City Council	20/01/2006	15/01/2016	17
		Queenstown Lakes	11/09/2005	13/02/2015	5
		Rotorua	12/01/2006	17/11/2013	12
		Southland	16/04/2005	1/08/2014	9
		Tasman	10/10/2005	29/08/2015	8
		Thames Coromandel	23/02/2006	28/12/2015	10
		Timaru	10/12/2005	20/12/2014	6
Access		Central Otago	22/08/2005	15/08/2015	11
		Dunedin City Council	16/01/2006	11/12/2015	18
		Queenstown Lakes	2/09/2005	21/12/2014	7
		Rotorua	30/01/2006	6/02/2015	9
		Southland	22/05/2005	24/09/2014	11
		Tasman	19/10/2005	28/06/2015	6
		Thames Coromandel	7/12/2006	31/12/2015	11
		Timaru	4/11/2006	5/10/2014	9
Low Volume		Central Otago	21/09/2005	1/02/2013	18
		Dunedin City Council	22/06/2006	15/09/2015	30
		Queenstown Lakes	28/08/2005	21/10/2012	7
		Rotorua	2/11/2005	13/03/2013	30

This measure is limited to Rural Sections only.

The Personal Risk ranges are:

Low is <= 4

4 < Low-Medium <=4.9

5 <= Medium <=6.9

7 <= Medium-High <= 8.9

High > 9

Technical Output 1: permanent hazards	In Performance/Improvement Plan to be developed
Technical Output 2: temporary hazards	In Performance/Improvement Plan to be developed • QLDC require traffic management to comply with and managed in accordance to the NZTA Code of Practice for Temporary Traffic Management.

Priority **Safety**	**Safety** Customer Outcome Performance Measures	
	• QLDC targets to audit six sites per month. Probably not making that at the moment with internal resource issues, however external resources are being brought in to assist with this. Previously a manual process to review CARs, the implementation of the RAMM CAR Manager is helping have better oversight of current CARs. • Audit officer role within the Operations team is supporting the Corridor Engineer, although this is a vacant post in October 2017.	
Technical Output 3: sight distances	In Performance/Improvement Plan to be developed	
Technical Output 4: loss of control on wet roads.	 **Safety Technical Output 4 – Loss of Control on Wet Roads** **The number of reported serious injuries and fatalities (DSI) attributable to loss of driver control on wet roads, each year on the network.** Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural Year: 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 * There are 6 data validation errors, see below for details.	
	This measure supports a process QLDC had already started to introduce to understand - the District's risk around skid resistance and wet weather crashes. "The NZTA Maintenance Guidance for Local Roads targets "adequate skid resistance", QLDC are striving to understand what this means. Low crash numbers do not provide robust trends to identify if there a skid problem. Mean rainfall is low across most of the District, majority of loss of control accidents occur in winter on ice or grit. With precipitation predicted to increase over the coming years, this is something QLDC will monitor.	

	Safety Customer Outcome Performance Measures

	What are we doing about Skid Resistance? SCRIM surveys were first undertaken in 2016 and was driven by the NZTA T10 Skid resistance process. QLDC undertook a risk based approach and carried out SCRIM on our higher class road, (arterial, and primary and secondary collector roads with some higher priority/risk related Access roads. This process developed further following a second survey in 2017. SCRIM data feds into the prioritisation process for the reseal programme. QLDC have started to develop a policy on dealing with Skid Resistance. Addressing issues around curve advisories to reduce speeds on risk areas is underway and will be delivered through the Low Risk/Low Cost programme. A key aspect of this programme will be better utilising the ability to reduce speed limits on a temporary basis, without undue delays.
Criticality Technical Output 5: loss of driver control at night	**Safety Technical Output 5 - Loss of Driver Control at Night** **The number of reported serious injuries and fatalities (DSI) attributable to loss of driver control at night, each year on the network.** Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural Year: 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 * There are 5 data validation errors, see below for details.

Priority Safety	**Safety** Customer Outcome Performance Measures

Technical Output 6: intersections	**Safety Technical Output 6 - Intersections**
	The number of reported serious injuries and fatalities (DSI) at intersections each year on the network.
	Financial Year: 2016/17
	RCA: Queenstown-Lakes
	Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume
	Urban/Rural: Urban, Rural
	Year: 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17
	* There are 6 data validation errors, see below for details.

DSI Counts	Arterial	Primary Collector	Secondary Collector	Access	Low Volume	Total	% of crashes
2011/12			1			1	7.14
2012/13		2		1		3	20
2013/14			1			1	3.03
2014/15			1	1		2	16.67
2015/16		1				1	6.67
2016/17			2			2	16.67
Trend (Change in DSI per year)							
Queenstown-Lakes District Council	0.00	-0.09	0.14	-0.06	0.00		

Technical Output 7: hazardous faults	In Performance/Improvement Plan to be developed
Technical Output 8: cycle path faults	In Performance/Improvement Plan to be developed

Priority Safety	Safety — Customer Outcome Performance Measures

| Technical Output 9: vulnerable users | **Safety Technical Output 9 - Vulnerable Users**
The number of reported serious injuries and fatalities (DSI) involving vulnerable users on the network.

Financial Year: 2016/17
RCA: Queenstown-Lakes
Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume
Urban/Rural: Urban, Rural
Year: 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17
Under Development Currently the data is based on information in the Vehicle Type which indicates that a Vulnerable User has been involved. However, this is not the full story as CAB has a flag specifically for indicating Vulnerable Users. At this time, the Vulnerable User information is not available in the Crash data recorded in RAMM (which is the source of data for this report). Once the data is available in RAMM, this report will be modified to make use of it.
* There are 5 data validation errors, see below for details. |

DSI Counts ❓	Vehicle Type	Arterial	Primary Collector	Secondary Collector ❓	Access	Low Volume ❓	Total	% of crashes
2011/12	Bicycle				1		1	7.14
	Moped			1			1	7.14
	Motor Cycle				1		1	7.14
2012/13	Bicycle		2		1		3	20
	Motor Cycle		3				3	20
2013/14	Bicycle			1			1	3.03
	Motor Cycle		3	2			5	15.15
2014/15	Bicycle		2		1		3	25
	Motor Cycle		2		1		3	25
2015/16	Bicycle		8				8	53.33
	Moped			1			1	6.67
	Motor Cycle		4				4	26.67
2016/17 ❓	Motor Cycle		2		1		3	25

Technical Output 10: roadside obstructions.	In Performance/Improvement Plan to be developed
Communities at Risk Register	**COMMUNITIES AT RISK REGISTER 2017** QLDC's relatively low number of serious and fatal crashes can make it statistically unreliable to pick up trends in crash type or locations. An example is shown below which shows regional analysis of the Communities at Risk categories, in this instance of Cyclists, QLDC risk has fluctuated considerably.

Priority			

Safety

Safety
Customer Outcome Performance Measures

CYCLISTS	CDC	CODC	DCC	QLDC	WDC	GDC	ICC	SDC	MEAN
2009	47	59	20	18	31	60	8	50	
2011	63	53	4	20	35	60	14	57	19
2013	63	34	5	24	37	64	20	70	45
2014	64	30	5	20	45	65	18	70	18
2015	55	21	14	13	58	63	6	70	32
2017	58	42	17	8	44	65	1	69	18
Risk	Very low	medium	High	High	Very low	Very low	Very High	Very low	

The risk register has highlighted that we may have a potential trend developing in 'Older Road users 75+'. This will be something that QLDC will monitor.

OLDER ROAD USER 75+	CDC	CODC	DCC	QLDC	WDC	GDC	ICC	SDC	MEAN
2009	No data	No data	No data	No data	No data	No data	No data	No data	No data
2011	23	70	3	33	15	67	5	34	31
2013	4	64	3	44	31	70	16	48	30
2014	5	68	3	41	42	71	2	57	33
2015	7	69	2	9	39	66	5	58	33
2017	16	70	1	8	24	67	14	34	33
Risk	High	Very low	Very High	High	Low	Very low	Very High	Very low	

https://nzta.govt.nz/assets/resources/communities-at-risk-register/docs/communities-at-risk-register-2017.pdf

New Safer Journey Risk Assessment Tool	The NZTA now provide maps of high-risk roads and intersections with the analysis based on their associated high risk guides. This analysis takes into account each road's ONRC. nzta.abley.com/megamaps

This geospatial viewer replaces and enhances the existing Speed Management Framework tool by offering a number of additional features. These are:
The addition of 5 new high risk datasets to help RCAs in developing their road safety programmes within their Activity Management Plans for 2018-21 and beyond:

- o High risk intersections
- o High risk motorcycling routes
- o High risk local rural roads
- o High risk local urban arterials
- o Corridors with high risk curves

This tool has reduced the amount of analysis QLDC has to complete to understand the road safety risks within the District. With this desk top exercise complete, council only needs to review those roads identified as high risk: the rural section of Gorge Road; and Crown Range Road both generally and specifically for motorcycles. There have been two motorcycle related fatalities in the last 5 years

Safety
Customer Outcome Performance Measures

There are no intersections or urban roads that have been identified as high risk.

MapHub	MapHub highlights a potential risk area on Gorge Road, Queenstown. There has been safety guardrail improvements, a recent rehab and reseals have improved surface conditions particularly skid issues and addressing the wandering goat issue that was causing some problems.
Other avaliable tools	Aust Roads Safety Engineering Tool Kit Economic Evaluation Manual
Urban KiwiRAP	www.roadsafetyrisk.co.nz Website shows risks on 'out-of-context curves and high-risk motorcycle sites.
Key Network Gaps / Issues	QLDC have identified some gaps which will be addressed through our Performance Plan - Data issues: traffic estimates –affects VKT - Lack of up-to-date Road Safety Strategy / Action Plan - Do we understand the issues; our ILM indicated that we do not really. This will be further explored through the update to our Road Safety Action Plan - Disjointed staffing approach/structure for responsibility No nominated 'safety' person in organisation, safety audits, safety plans and Long Term Plans. Capacity and capability issue. No one assessing the network - apart from– school travel plans - Safety issues with higher volumes on unsealed roads – do not have an active seal extension programme. What triggers these changes?
Strategic Responses	QLDC have identified three overarching key strategic responses which lead our individual responses, especially those through the Maintenance , Operations & Renewals programme: 1. Collect data and information to identify, optimise and socialise service level policy settings developed through the BCA (i.e. trading affordability, customer expectations and benchmarking) 2. Identify, understand, apply and socialise current best practice for optimising life of assets 3. Long term growth predictions are determined and considered in the BCA for all

Priority	Safety — Customer Outcome Performance Measures	
	activities	
Current and planned Responses	• **Safe Systems approach:** QLDC has adopted the 4 pillars of the Safe System approach to road safety focusing on: Road and roadsides; Vehicles; Road Use and Speeds. It is predicated on the acceptance that people make mistakes and are vulnerable and that responsibility is shared to strengthen all parts of the system. • **National Visitor Driving Project:** QLDC is part of the governance group and working group. The purpose of this project is to improve road safety for, and of, visiting drivers, while maintaining New Zealand's reputation as an attractive and safe tourist destination. • **Southern Road Safety Influencing Group.** QLDC is on the joint Otago and Southland regional Road Safety Influencing Group that reports to the regional Road Transport Committee. This group is working on a Regional Social Movement to build public understanding of road risk resulting in safer choices by communities and individuals**.** • **Local NZTA & QLDC approach:** QLDC is working closely with the local state highway to address local issues and provide a consistent driving experience between the state highway and local roads. • **Road Safety Education Programme:**To promote Safe Road use working with schools to ensure children are safe when choosing active modes to school and identifying when council can do more to ensure the safety of school children. Road safety promotion will also continue to address the number of new drivers on the Council's road each year – tourists, itinerant workers, and our young adults starting to drive. A focus on motorcycle safety will also be included in future road safety promotion activities (not included yet). • **Minor Improvements Programme**: school crossings (Kea Crossing Wanaka), Remarkables School), Curve Advisories, No Passing Lane. Focussed on our higher risk rural roads and tourist routes such as the Crown Range. • **Maintenance, Operations & Renewals Network Management Plans**: Ensuring safety is considered in how we operate our network, from dealing with environmental maintenance issues such as vegetation and sight lines to winter maintenance strategies QLDC's continuous programme are built to ensure that we address safety through each of the work categories/assets e.g. Barriers, signs, pavement & surfacing, drainage • **Review Curve advisories:** QLDC has identified high-risk curves and is applying a higher level of service than would be typically found across the country due to the higher percentage of tourist drivers in the District.	
Current and planned responses	• R**eview no passing lines:** QLDC has identified areas where no passing line may imp[raovce safety and is applying a higher level of service than would be typically found across the country due to the higher percentage of tourist drivers in the District. • **Speed limit review:** Reviewing the speed limits following the new Speed Management guidance. Utilising temporary speed reductions where appropriate to address engineers or community concerns. • **FWP - Skid Resistance:** SCRIM surveys were first undertaken in 2016 and was driven by the NZTA T10 Skid resistance process. SCRIM data feeds into the prioritisation process for the reseal programme. QLDC have started to develop a policy on dealing with Skid Resistance. • **Road Safety Action Plan / Strategy**: on work programme to be developed.	

Priority	Safety	**Safety** Customer Outcome Performance Measures
		• **Transport Planning:** QLDC's approach to strategic planning is improving and is future proofing, mode changes – safer for vulnerable users • **Seal extensions**: QLDC is trying to develop a better understanding of safety issues surrounding higher volume unsealed roads. Roads such as Ballantyne Road where traffic is increasing and crash numbers appear to be increasing. This is a growing community concern. Time delays between evidence of crashes and interventions can be frustrating for the community. How do we manage risk? Associated issues when considering sealing these roads; changes in road environment - increased speeds – consider need for additional lines, lights, signs and drainage. • **Business Cases**: Access to Crown Estate, understanding the pressures from those customer accessing Crown/DoC land. DoC is under pressure from growing numbers so are not keen to improve access roads as may increase visitor numbers. • **Special Purpose Roads Corridor Studies:** Substantial review of the Glenorchy SPR road and the Crown Range SPR is being carried out 17-19, this will include a safety focus with the aim to maximise the programme before the SPR funding is reduced.

2.12.2 Resilience

<table>
<tr><td rowspan="2" style="text-align:center">Priority</td><td style="text-align:center">Mobility - Resilience</td><td colspan="2">Resilience
Customer Outcome Performance Measures</td></tr>
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colspan	**The availability and restoration of road function when there is a weather or emergency event (unplanned), whether there is an alternative available and the road user information provided.**

GPS	**Safety**: Enabling customers to make informed decisions on whether to travel and precautions to take to minimise risks by providing accurate information on **resilience** issues and travel hazards, particularly related to weather events. **Economic growth and productivity:** Reducing travel delays for local commuters and freight movements, and avoid reputational damage for the visitor market. In the case of the tourism economy, providing **resilient journeys** and information to ensure good access to reach tourist attractions, accommodation and Queenstown airport. **Value for money**: Clearly defined and communicated service levels provide the framework to enhance the efficiency and effectiveness of our investment.

RLTP Objective	**Problem:** Parts of the network are vulnerable to closure from adverse events resulting in economic and social disruptions, of which there is increased recognition	**Benefits:** Improvement in the performance and capability of the transport network, and network resilience

ONRC Objective	• To minimise possibility of journeys being impacted by unplanned weather and emergency events through the provision of robust routes or viable alternatives. • Where journeys are affected by unplanned events, to reduce the impacts where possible by informing the customer with up to date and reliable information. • Provide consistent and reasonable travel times that are predictable for the classification of the road
QLDC Objective	To minimize possibility of journeys being impacted by unplanned weather and emergency events through the provision of robust routes or viable alternatives and to provide consistent and up to date information to customers
How will we provide it	• by providing the customer confidence to make the journey through robust routes and viable alternatives • by being prepared to respond • by providing consistent and up to date information to customers

QLDC ILM by ONRC Outcome	Problems Identified in the ILM	Key Findings in the Strategic Case	Proposed Strategic Response
Problems Identified	**Problem 1:** We don't understand the value of providing different levels of resilience, meaning we may not be delivering value for money. (40%)	**Pressure:** Our economic activity relies heavily on our network being functional during mild and major weather events, particularly during winter. **State**: We have yet to embed the value that resilience provides to our customers in our decisions to optimise the level of investment in resilience. We do not have specific customer levels of service targets for resilience measures	**Response**: Establish the level of resilience for classifications and key journeys to guide the level of investment. This will support the maintenance intervention framework to deliver the agreed service levels.

Priority	Mobility - Resilience	**Resilience** Customer Outcome Performance Measures		
		Problem 2: Expectations are greater than we can deliver, resulting in dissatisfaction at having to make unsafe journeys or cancel journeys. (35%)	**Pressure**: Journey reliability is important to our customers who, anecdotally, have grown to expect high levels of resilience that cannot viably be provided on all occasions. Customers are demanding immediate communication to adjust transport decisions, and increasingly expect information as soon as changes occur (via mobile devices, GPS, radio etc.). **State**: The most common resilience threats are due to snow and ice, particularly during peak visitor periods. The frequency of these means that winter maintenance programmes are in place on vulnerable areas, but resilience failures still occur on these routes and across the wider network when weather events are widespread. The occurrence of other resilience issues (e.g. due to other environmental events or crashes) are less frequent and of more targeted consequence. They are more likely to be restricted to higher classification and inter-District routes. Alternatives do exist but they are not necessarily deemed viable however. Local Roads and State Highway information is independently provided via media/social media.	**Response**: Establish the level of resilience for classifications and key journeys to guide the level of investment. This will support the maintenance intervention framework to deliver the agreed service levels. **Response**: Develop a network resilience plan for the District and for the region where key journeys are at risk. This must include customer communications plan.
		Problem 3: The location of critical services, supplies, and infrastructure leave us unnecessarily vulnerable to the effects of events. (25%)	**Pressure**: We are dependent on vulnerable routes for the supply of food, fuel and resources from outside the District. Poor network resilience during a major event may impede critical services from providing disaster response and recovery support and business continuity (fuel, food). **State**: Current emergency response plan prioritises critical routes (particularly targeted at snow clearing/ice gritting).	**Response**: Develop an Emergency Response Plan by assessing all existing lifelines and resilience plans across networks.
Benefits of investment		Benefit One: The network is managed to minimise the impact to journeys and their value to the District. Benefit Two: Customers are well informed to make good travel decisions.		

Priority	Mobility - Resilience	**Resilience** Customer Outcome Performance Measures		
		Benefit Three: Critical services and supplies remain available to the District during and after significant events. The benefits of improved resilience outcomes will contribute to the achievement of the QLDC community outcomes and objectives, particularly related to economic development aspirations, effective and efficient infrastructure and sustainable growth management. At a broader level the benefits will contribute to the three priorities of the **Government Policy Statement** on Transportation (GPS) in the following ways: 1. **Safety**: Enabling customer to make informed decisions on whether to travel and precautions to take to minimise risks by providing accurate information on resilience issues and travel hazards, particularly related to weather events. 2. **Economic growth and productivity:** Reducing travel delays for local commuters and freight movements, and avoid reputational damage for the visitor market. In the case of the tourism economy, providing resilient journeys and information to ensure good access to reach tourist attractions, accommodation and Queenstown airport. 3. **Value for money**: Clearly defined and communicated service levels provide the framework to enhance the efficiency and effectiveness of our investment.		

Programme Options	
ONRC CLoS	Customer impact and Network peformance
Customer Outcome 1: the number of journeys impacted by unplanned events.	In Performance/Improvement Plan to be developed
Customer Outcome 2: the number of instances where road access is lost	In Performance/Improvement Plan to be developed
Key Network Gaps / Issues	QLDC have identifed some gaps which will be addressed thorugh our Performance Plan. 1. Need an agreed CLoS (benchmarking with peers to establish appororiate level) 2. Establish 'Resilience' customer levels of service that are likely to specify:

Priority	Mobility - Resilience	**Resilience** Customer Outcome Performance Measures		
		• What number of journeys impacted by unplanned events is acceptable? • What is the appropriate level of risk mitigation on roads where there is no viable alternative access, if it were to be closed by an unplanned event? • What is the acceptable delay on each classification due to planned/unplanned events? • What is the acceptable time and medium to advise customers of delays? • How do each of these vary by the level of risk to our customers, specifically the classification of road? • How will this influence the years of our LTP? 3. Develop better understanding/ evidence bse of risk to service levels 4. Understand cost of closing the roads per day – Cardrona? 5. What influence does the Media/social media have through its reporting –scare mongering? 6. Crown Range resilience programme –this defered in the end- what is progress? Defer the planned resilience investment of $1.65m (Project 6380) on the Crown Range in year 2 but continue with investigations on the site in question and reinstate the project if risks become unacceptable. 7. Get a better understanding of customer communications and how this influence journey choice – include in customer satisfaction questions. 8. QLDC has been liaising with NZTA on the Mobility as a Service (MAAS) 9. Explore treatments and technologies to facilitaite recovery and communciations with customers		
Strategic Responses/ Initiatives		Communications team works closely with QLDC staff especially Operations to communicate to customers in advance of known closures, as well as reactive to incidents and weather events. This is particuly demonstrated through the winter mainteniance planning, but same principles are applied for events etc. However, little is known about how this influences customer journey choice. **Travel Time** • key journey approach – capturing TTR data. Utilsing TOM TOM, Google, BlipTrack, Qrious data **Public Transport** • Public transport being developed thorugh ORC & NZTA as part of QITS Resilience & modal shift • More focus on proactive maintenance • Understanding Road Criticality Section 3.10 • Develop a Network Resilience Plan. This is a collective plan and mangement framework to enable better network management. Root cause analysis will be developed on key routes and alignment with NZTA. • A discussion is commencing with NZTA to integrate the NZTA Resilience framework throuhg the Joint Resilience Operating Policy https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/resilience-project/resilience-evaluation-process/ • Develop Emergency Response Plan. QLDC Winter Maintenance Plan provides information of priorities and exisiting response mechanisims. • Road closure data is now captured into RAMM and used to populate the ONRC PMRT. •		

2.12.3 Travel Time Reliability

Priority — Mobility - Travel Time Reliabilkity	**Travel Time Reliability** — Customer Outcome Performance Measures

The availability and restoration of road function when there is a weather or emergency event (unplanned), whether there is an alternative available and the road user information provided.

GPS Objective	A land transport system that addresses current and future demand for access to economic and social opportunitie A land transport system that is resilient	
RLTP Objectives	**Problem:** Parts of the network are vulnerable to closure from adverse events resulting in economic and social disruptions, of which there is increased recognition. -Inability to assess, plan, fund and respond to changing mobility user demands in a timely way results in some poor investment prioritisation and decisions, and inadequate future-proofing	**Benefits:** -Increased customer voice, connectivity, accessibility and modality shifts. -Regional improvements, economic development, productivity and connectivity -Improvement in the performance and capability of the transport network, and network resilience
ONRC Objective	• To minimize possibility of journeys being impacted by unplanned weather and emergency events through the provision of robust routes or viable alternatives. • Where journeys are affected by unplanned events, to reduce the impacts where possible by informing the customer with up to date and reliable information. • Provide consistent and reasonable travel times that are predictable for the classification of the road	
QLDC Objective	The travel time to reach my destination is predictable and acceptable.	
How will we provide it?	• by providing the customer confidence to make the journey through robust routes and viable alternatives • by being prepared to respond • by providing consistent and up to date information to customers	
Summary	Many journeys in the District combine the use of the 870km of Local Roads and 232km of State Highways, and from a customer viewpoint there is little distinction between the two 'networks'. The existing TTR issues within District may not be significant in terms of network investment demands, but anecdotally it is a growing source of customer dissatisfaction. There is also a future risk of increased TTR issues due to the heightened demands on the network due to the growing resident population, greater visitor numbers and land-use changes (subdivision and new commercial developments). The primary existing TTR issues are anecdotally identified as: • Delays caused by congestion in Frankton Flats and Queenstown CBD; • Site specific planned events, e.g. road works or social/sporting events, • Weather related events that can occur anywhere across the District, with particular risk in the winter when journey reliability for tourist customers is high.	
QLDC ILM by ONRC Outcome	A facilitated investment logic mapping (ILM) workshop was held on 17/08/2015 with key stakeholders **Stakeholders involved:** QLDC, NZTA (SD&D), HNO), ORC, Connectabus	

Priority	Mobility - Travel Time Reliabilkity	Travel Time Reliability Customer Outcome Performance Measures		

Problems Identified in the ILM	Problems Identified in the ILM	Key Findings in the Strategic Case	Proposed Strategic Response
	Problem 1: We are not adequately informing customers on travel time leading to inefficient transport decisions. (10%)	**Pressure**: Increasing customer demands for information to adjust transport decisions based on journey time. Growing use of mobile devices and GPS provides for increased information flow. **State**: Information is currently provided by media/social media. Local Roads and State Highway info presented independently. Situation is changing quickly with high demand growth and very few alternatives. We do not have a method of measuring if the information provided is influencing behaviour.	**Response:** 1. Establish Level Of Service targets for all stakeholders.
	Problem 2: The management of the transport system is not making best use of network capacity. (20%)	**Pressure**: Demand at bottlenecks exceeds capacity at peak times. Risk that future will further increase congestion, lengthening travel times and variability. **State:** Current capacity is exceeded at known hotspots. Heavy reliance on private motor vehicles. No viable route or mode alternatives exist in hot spots (so Public Transport is unable to offer any TTR benefit over private cars).	**Response:** Address via Queenstown Town Centre Strategy and the Frankton Flats Strategy
	Problem 3: We don't prioritise alternatives meaning there is no incentive to mode shift. (30%)	**Pressure**: Mode shift to reduce private vehicle use is in congested areas is being inhibited by lack of attractive/viable options. **State:** Current capacity is exceeded at known hotspots. No viable route or mode alternatives exist in hot spots. Public Transport - Existing network does not allow for prioritisation of buses, so they are unable to provide a TTR advantage. Cycling – cycleways exist but unattractive for commuters due to distance, access, safety, winter conditions, etc.	**Response:** Establish Level Of Service targets for all stakeholders.
	Problem 4: Travel time reliability is not considered in land use planning decisions leading to worsening travel times and more infrastructure. (40%)	**Pressure**: Land-use changes creating increased demand beyond network capacity. **State:** TTR is not considered in spatial planning decision framework. Much of the land around hot spots has been zoned meaning the problem is already set to worsen.	**Response:** Integrate TTR service levels into land use planning decision making framework.

Benefits of Investment	Benefit One: Customers are well informed to make better decisions. (20%) Benefit Two: Our network is managed to maximise effective capacity (20%) Benefit Three: Private vehicle demand reduced through use of alternatives (35%) Benefit Four: Travel time reliability will be considered in land use planning decisions (25%) The benefits will contribute to achieving the QLDC community outcomes and objectives, particularly related to economic development aspirations, effective and efficient infrastructure and sustainable growth management.

Priority	Mobility - Travel Time Reliabilkity	**Travel Time Reliability** Customer Outcome Performance Measures
		At a broader level the benefits will also contribute to the three priorities of the **Government Policy Statement** on Transportation (GPS) in the following ways: 1. **Safety**: Timely and accurate information on travel hazards, particularly related to weather events, to assist customer decisions on whether to travel and precautions to take. This is especially relevant to the high numbers of winter visitors to the District. 2. **Economic growth and productivity:** Reducing travel delays and variability in travel time, or when they occur, enabling customer decision-making to minimise the effects. This affects local commuters, freight movement and the journeys of visitors (particularly in peak seasons) to reach tourist attractions, accommodation and Queenstown airport. 3. **Value for money**: Maximising the effectiveness of the existing infrastructure. In general there is sufficient capacity across the entire existing network; however congestion bottlenecks exist within the Frankton Flats and Queenstown CBD due to the geography and legacy infrastructure.
Customer Outcome 1: the number of journeys impacted by unplanned events.		In Performance/Improvement Plan to be developed
Customer Outcome 2: the number of instances where road access is lost		In Performance/Improvement Plan to be developed
Key Network Gaps / Issues		QLDC are in early days of collecting and TTR data, this is being done in conjunction with NZTA and is utilising BlipTrack blue tooth technology. We are creating an initial baseline of evidence to establish levels of service, quantify the scale and nature of the problem and to measure performance changes. We don't truly understand the nature of the problem a. **Understand the Level of Service:** What is the acceptable travel time for key routes in 'normal' conditions? What is the acceptable delay due to planned/unplanned events? What is the acceptable variability of travel time? What is the acceptable time lag to advise customers of delays? Where is the appropriate place to advise customers of alternative routes? b. **Informing customers before and during travel.** It is necessary to establish how accurate, timely and appropriately the current information delivery is. What proportion of customers know this information exists and what proportion make use of it to inform transport decisions? What type and proportion of journeys benefit from information (some have no alternative routes to choose)? How do the needs of differ between customer groups/journey types (e.g. winter visitors vs local commuters vs freight vs PT)? c. **TTR data within the network:** Existing Google Maps data is publicly available. It requires manual recording an analysis and the accuracy of travel time/delays needs to be verified. This data only shows main routes and can confirm current issues but

Priority Mobility - Travel Time Reliabilkity	**Travel Time Reliability** Customer Outcome Performance Measures
	doesn't show historic trend. This data is used by many customers on a daily basis, so reflects the information they are currently receiving. d. **Traffic Volumes:** Traffic count data is available from periodic samples on an Average Annual Daily Traffic basis. However this does not provide data by the hour of day/season or by vehicle type (light/heavy) that can indicate journey purpose. Additionally it does not capture alternative modes. e. **Speed data:** Traffic flow/speed is not currently measured. f. **Current LOS on the routes within the network:** What are the current and predicted LOS on the routes within the network? Where are the LOS failures (or are we over-delivering on some routes)? What numbers and types of journeys are being affected by the LOS failure? E.g. local commuters, tourist movements, freight movements, time-critical journeys vs discretionary. How does this vary by season, time of day, or customer/journey type? g. **Future demand:** Modelling data exists to forecast the scale of future demand changes and capacity issues h. **Active modes:** Understanding and promoting active mode current demand and in which locations i. **Spatial plans:** To integrate consideration of TTR level of service impacts into the spatial planning decision making framework.
Strategic Responses	• Integrated Transport Planning between stakeholder Agencies (NZTA, ORC, QAC) • Communication with customers • Understand key journeys within District o QTN to Frankton (Morning Commuters and Airport commuters) o QTN to Coronet (tourists) o QTN to ATN (morning commuters) o QTN to Cardrona (tourists) o QTN to Wanaka o Cromwell to QTN o Dunedin to Frankton (Av gas) o Wanaka to Cardrona o Frankton to Milford o QTN to GY o QTN to Christchurch (Food and Supplies) o Wanaka to Christchurch (food and supplies) o Jacks Point to Frankton (Skiers and future locals) o Invercargill to Frankton (holiday commuters)
Initiatives: curent and planned responses	• **Winter traffic** – better 'live' information (message boards at bottom of Crown Range/Riverbank Road), better 'fit chains now' indication, 'If it's slippery here, it'll be 10x worse at the top – fit chains now' 'If you're slipping on way up, you won't be stopping on the way down' billboards, provide mobile/web links for info to winter drivers (via ski field conditions report/ rental car companies). • Wider District monitoring of travel time using Blip Track. • Pedestrian movements/counts and modelling being developed through Queenstown Town Centre Master planning

2.12.4 Amenity
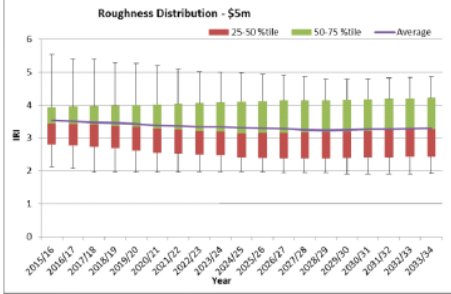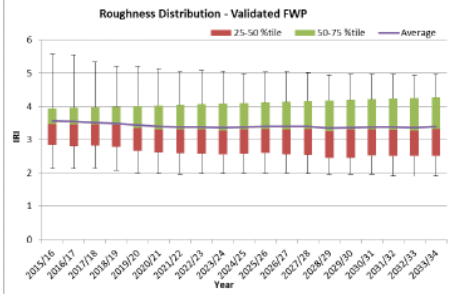
Prioirty	Amenity	**Amenity** Customer Outcome Performance Measures		

Travel Quality - The level of travel comfort experienced by the road user **Travel Aesthetics - The aesthetic aspects of the road environment (e.g. cleanliness, convenience, security) that impact on the travel experience of the road users in the road corridor**				
GPS Objective	A land transport system that addresses current and future demand for access to economic and social opportunitie A land transport system that is resilient			
RLTP Objectives	**Problem:** Parts of the network are vulnerable to closure from adverse events resulting in economic and social disruptions, of which there is increased recognition. -Inability to assess, plan, fund and respond to changing mobility user demands in a timely way results in some poor investment prioritisation and decisions, and inadequate future-proofing		**Benefits:** -Increased customer voice, connectivity, accessibility and modality shifts. -Regional improvements, economic development, productivity and connectivity -Improvement in the performance and capability of the transport network, and network resilience	
ONRC Objective	Provide a comfortable and pleasant travel experience that supports the economy			
QLDC Objective	When using our roads, the important service aspects for our customers is that they receive: • An appropriate level of comfortable ride and a pleasant travelling experience, and; • that active road users (walking and cycling) have confidence to make journeys (Clean, Safe, Secure).			
How will we provide it?	• By maintaining road roughness • By maintaining the aesthetic value of the road environment • By providing adequate lighting			
Summary	Our network is a mixture of urban and open roads. The majority of our higher classification (collector and above) roads are classed as rural. These roads serve a purpose of 'linking' places or townships. Over 72% of customer journeys are made on these roads. This means that travel quality will be of high importance on these roads, as operating speeds are generally above 70km per hour. Travel experience remains important on known tourist routes. The lower classification roads are largely urban, meaning that the 'access' and 'place' function is an important customer expectation. Corridor aesthetics and ability to safely access places is a higher priority for customers on all modes.			
QLDC ILM by ONRC Outcome	A facilitated investment logic mapping (ILM) workshop was held on 17/08/2015 with key stakeholders **Stakeholders involved:** QLDC, NZTA (SD&D), ORC, Connectabus			
ONRC CLoS	**Amenity** – Customer Outcome Performance Measures			
Customer Outcome 1: Smooth Travel Exposure (STE) – roughness of the road (% of travel on sealed roads which are	In Performance/Improvement Plan to be developed • QLDC are in the process of updating the traffic counts – this impacts the VKT which will impact these figures			

Prioirty	
Amenity	**Amenity** Customer Outcome Performance Measures

smoother than a defined threshold)	**Amenity Customer Outcome 1 - Smooth Travel Exposure (STE)** The percentage of travel on roads smoother than the specified threshold for each classification. Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural * There are 5 data validation errors, see below for details.
Customer Outcome 2: peak roughness	**Amenity Customer Outcome 2 - Peak Roughness** The 85th and 95th percentile roughness of your roads. Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural * There are 6 data validation errors, see below for details. High peaks Urban has quite a spread
	Amenity – Technical Output Performance Measures

Priority		
Amenity	**Amenity** Customer Outcome Performance Measures	
Technical Output 1: roughness of the road (median and average)	**Amenity Technical Output 1 - Roughness of the Road (Average)** **The average roughness of your roads.** Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural * There are 6 data validation errors, see below for details. 	
Technical Output 2: aesthetic faults	**Amenity Technical Output 1 - Roughness of the Road (Median)** **The median roughness of your roads.** Financial Year: 2016/17 RCA: Queenstown-Lakes Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural 	
Strategic Response	When using our roads, the important service aspects for our customers is that they receive: • An appropriate level of comfortable ride and a pleasant travelling experience, and; • that active road users (walking and cycling) have confidence to make journeys (Clean, Safe, Secure). We manage this by specifying the level of travel quality customers should expect <u>on each classification</u> of road. **Roughness** Road users judge the performance of a road primarily by its ride quality. From a user's point of view, rough roads mean discomfort, decreased speed, potential vehicle damage and increased	

| Priority | | | Amenity
Customer Outcome Performance Measures |
|---|---|---|---|
| Amenity | | | vehicle operating cost.

From a Council point of view roughness is an important performance indicator that has wide-ranging applications. It is used:

• As a key indicator of cost (i.e. roughness reflects the level of investment in road design, construction, maintenance and renewals);
• As a key indicator of pavement condition and deterioration;
• As a maintenance decision driver in deterioration modelling such as dTIMs.

Road roughness is measured by a special-purpose vehicle travelling down both the outside lanes of a length of road. The rougher the road, the higher the NAASRA counts per lane kilometre. A NAASRA count of greater than 150 typically indicates a road which is becoming a concern in terms of its roughness and the number of complaints likely to be generated.

The key observations from this data are:
1. On average, our roads are smoother than the provisional national targets. Our lowest volume rural roads (average roughness rating of 85) are significantly smoother than target of 140 and are even smooth compared to the 90 target for National High Volume Roads such as Auckland's busiest motorways.
2. We have little differentiation of ride quality levels between the higher and lower trafficked classifications. The differentiation of service levels by classification is a key element of the ONRC in delivering fit for purpose road maintenance.

We have a large spread of roughness measurement within each classification (standard deviation). This indicates that our service is not being delivered consistently within like classifications. It may also be an indicator of data quality issues.
Lighting
• Updated Southern Light Strategy. This now provides a Stratgey as well as a Technical Speciaification to support new developments
• Explore the state of lighting in the District – a BBC PoE has been entered
LED upgrades are underway |
| | | | QLDC's annual spend on road maintenance and renewals is just over $12 million (excluding non-subsidised activities). Road pavement maintenance and renewal makes up over $7 million of this which also has the biggest influence on ride quality. |
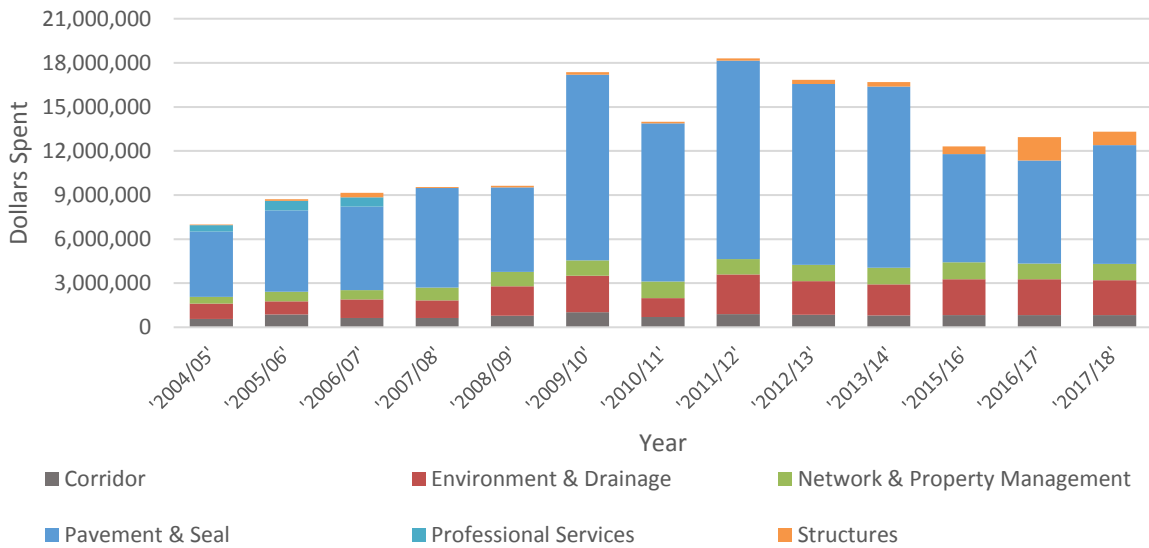
Prioirty	Amenity	Amenity — Customer Outcome Performance Measures
		Roughness: The future roughness trend is similar for all scenarios with validated FWP leaving slightly more TLs with high roughness reading compared to others. The marginal differences between dTIMS scenarios and validated FWP can be due to the fact that the validated FWP is based on actual inspection and is able to consider the impact of utility services on roughness values in assigning the appropriate treatments whereas dTIMS can only rely of RAMM roughness data. **Figure 5 Roughness distribution for $5m scenario** **Figure 6 Roughness distribution for validated FWP** The roughness will remain at very good level in rural areas by all scenarios. Urban area will continue to have sections with high roughness readings and require more attention to meet the ONRC roughness requirements. An analysis on the effect of utility services and other characteristics of urban area on roughness can be undertaken to better manage the impacts. It is apparent that the network is overall in a good condition, with fairly young pavements. The network therefore has capacity to generally deteriorate; the associated risk is that pavements may start showing accelerated failure as deterioration continues. Similar finding was also indicated in the last analysis.
Key Network Gaps / Issues		QLDC have identifed some gaps which will be addressed thorugh our Performance Plan
Initiatives curent and planned		• Roughness is now captured using HSD data is now undertaken tied in to the State Highway appraoch and benefitting from aligning with timings and data provision, Lower class roads have been addressed using a cheaper and more accessibly tehcnology. • Aesthetic faults … trialled using the new ONRC inspection tool within RAMM

2.12.5 Cost Efficiency
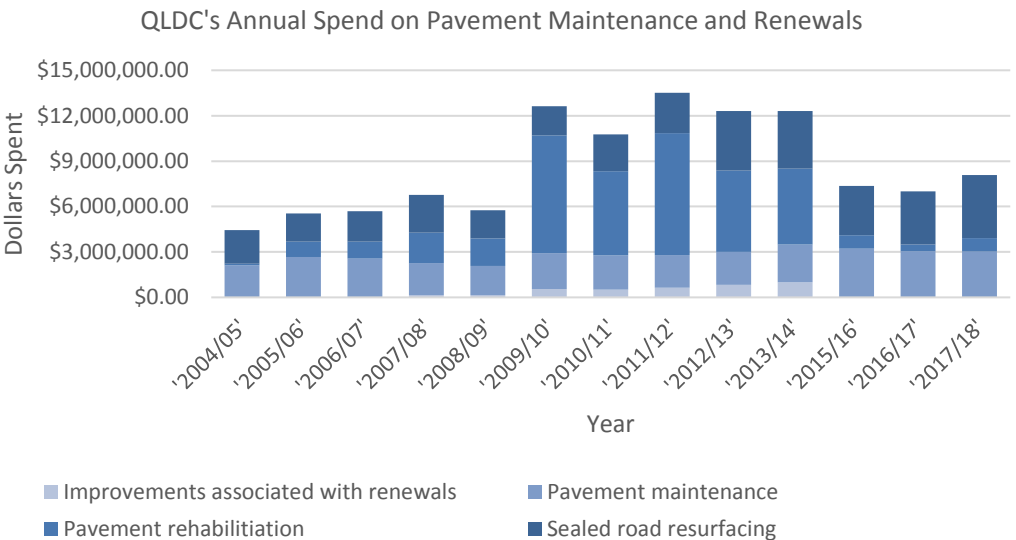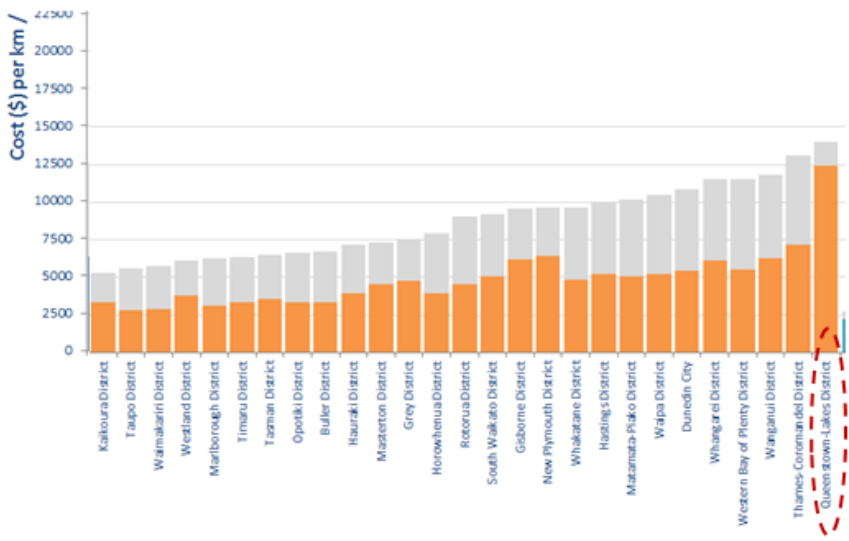
Cost Efficency	**Cost Efficiency Performance Measures**	
Value for Money and whole of life costs will be optimised in the delivery of affordable customer levels of service.		
GPS Objective	**Value for money:** A land transport system that delivers the right infrastructure and services to the right level at the best cost	
RLTP Objectives	**Problem:** Inability to assess, plan, fund and respond to changing mobility user demands in a timely way results in some poor investment prioritisation and decisions, and inadequate future-proofing	**Benefits:** Communication, technology, innovation and improved capability of people - optimisation of systems. Enhanced value for money of transport investments
ONRC Objective	Assurance that the work we do is necessary, is co-ordinated and is delivering value for money.	
QLDC Objective	A land transport system that delivers the right infrastructure and services to the right level at the best cost	
How will we provide it?	Demonstrating the work we do is timed to minimise cost while delivering customer outcomes. This means our existing infrastructure is maintained to maximise the benefits available whilst ensuring we minimise the service risk to customers. Work is not done too early nor is it done too late.	
Summary	QLDC's annual spend on road maintenance and renewals is just over $12million dollars (excluding non-subsidised activities). Pavement maintenance is the biggest cost with recent increases in Environmental (snow clearing) & Drainage remaining comparatively minor amounts.	
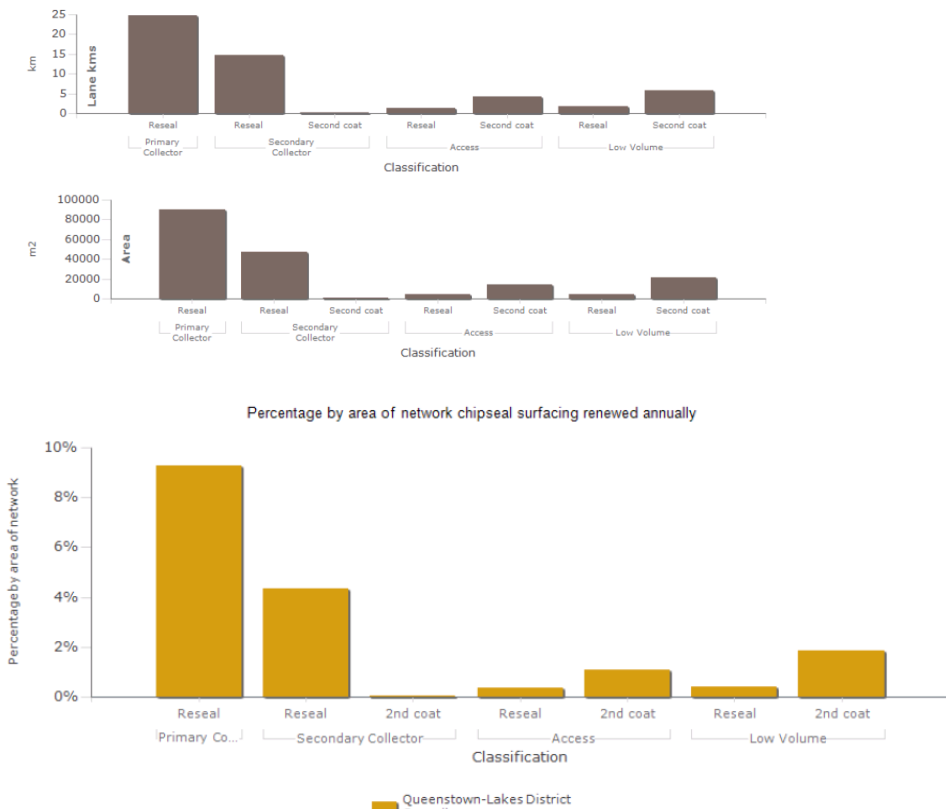
QLDC Total Annual Spend on all Roading Maintenance, Operations and Renewals

Pavement maintenance is further detailed below and includes all renewals. There has been a considerable reduction in pavement renewals compared to the previous six years.

| Cost Efficiency | ⌁$ | **Cost Efficiency Performance Measures** |

QLDC's Annual Spend on Pavement Maintenance and Renewals

Legend:
- Improvements associated with renewals
- Pavement maintenance
- Pavement rehabilitiation
- Sealed road resurfacing

| **Key Questions** | 1. What service level did the customer receive from this investment and what future material risks to these service levels is there?
 2. Of the work we did do, was it the right treatment? and
 3. Was it at a good price? |

Value for money is a priority in the current GPS, but there is no generally agreed framework for how to assess value for money. One potential option is to benchmark against peers.

The NZTA comparison of peer group costs suggests the Queenstown Lakes network is a high cost network although this is based on historic data. QLDC have undertaken a concerted effort to review and reduce expenditure and costs for the Queenstown Lakes network have declined in recent years – particularly for resurfacing and rehabilitation. Work has included reviewing where certain work should be recorded, e.g. professional services. Further detail in value for money can be found at an activity class level in the PBC/Network Management Plans. Work is underway to better understand certain activities; QLDC have approached NZTA to assist with reviewing winter maintenance practices as this is where benchmarked costs are particularly high. QLDC have identified that understanding our costs is a key improvement activity and this will be tracked through our Performance Improvement Plan.

Cost Efficiency	**Cost Efficiency Performance Measures**

By looking solely at seal and pavement expenditure we exclude the skewing effects of large unsealed networks and the effects of other variables such as drainage, corridor management, environmental work, network management, etc. A simple assessment indicates that QLDC has been investing very heavily to maintain their pavements. There has been work recently to reduce recent heavy investment. Is this enough though? Even with the recent 40% reduction in pavement maintenance, our network costs remain very high compared to metropolitan networks with much greater vehicle demand profiles. Why is this and is this acceptable?

Is it reasonable that cities such as Dunedin, Wellington and Christchurch are lower in costs than us on a per km or assets and on a per vehicle basis? Is it acceptable that customers from Queenstown effectively pay a 60% premium to receive the same customer service outcome when they drive on QLDC roads? Do they even know that this is the case?

The BCA AMP explores many of these questions and further financial analysis is required.

Efficiency 2 - Chipseal Resurfacing (Length & Area

Cost Efficiency 2 - Chipseal Resurfacing (Length & Area)
The sealed road chipseal resurfacing undertaken over the previous year by classification.

Financial Year: 2016/17
RCA: Queenstown-Lakes
Urban/Rural: Urban, Rural
Year: 2016/17
* There are 5 data validation errors, see below for details.

Percentage by area of network chipseal surfacing renewed annually

QLDC are spending the most investment in their higher class roads, it is good to see that the lower classes are getting seconds coats which has not been the case historically

Cost Efficiency	**Cost Efficiency Performance Measures**
Efficiency 2 - Chipseal Resurfacing (Cost & Avg Life)	**Cost Efficiency 2 – Chipseal Resurfacing (Cost & Avg Life)**
	The total cost and life achieved of chipseal resurfacing undertaken over the previous year.

Financial Year: 2016/17
RCAs: Thames-Coromandel, Tasman, Central Otago, Dunedin City Council, Queenstown-Lakes, Southland
Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume
Urban/Rural: Urban, Rural
Year: 2015/16
* There are 90 data validation errors, see below for details.

Chipseal resurfacing cost per lane km

Chipseal resurfacing average life achieved
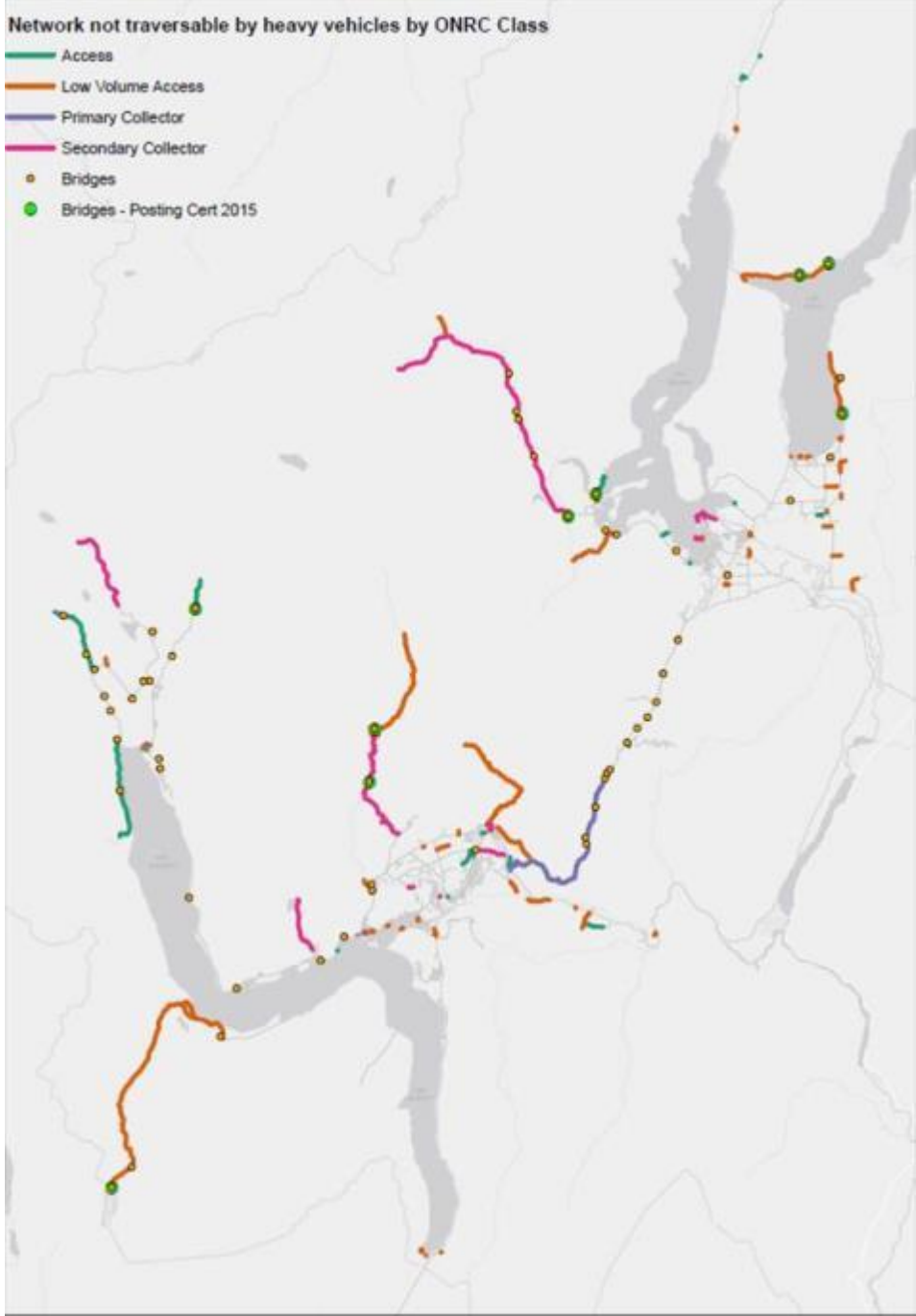
Cost Efficiency	**Cost Efficiency Performance Measures**

Cost Efficiency 3 - Asphalt Resurfacing (Cost & Avg Life)	**Cost Efficiency 3 - Asphalt Resurfacing (Cost & Avg Life)** **The total cost and life achieved of asphalt resurfacing undertaken over the previous year.** Financial Year: 2016/17 RCAs: Thames-Coromandel, Tasman, Central Otago, Dunedin City Council, Queenstown-Lakes, Southland Classifications: High Volume, National, Regional, Arterial, Primary Collector, Secondary Collector, Access, Low Volume Urban/Rural: Urban, Rural Year: 2014/15 * There are 90 data validation errors, see below for details. Asphalt resurfacing cost per lane km Asphalt resurfacing average life achieved
	When looking at recent years QLDC are showing a much more cost effective comparision in peergrouping.
Cost Efficiency 4 - Unsealed Road Metalling	In Performance/Improvement Plan to be developed
Key Network Gaps / Issues	QLDC have identifed some gaps which will be addressed thorugh our Performance Plan. • Issues around high cost network. Certain activities have high cost when benchmarking with peers. QLDC are continuing to try and determine causes and address where possible
Strategic Response	QLDC are striving to improve data and knowledge of network. Follow best practice. To explore treatements and technologies to provide best whole of life costs. To evaluate differentiated levels of service.
Initiatives curent and planned responses	• Various audits and benchmarkings to better understand the issues • Collaboration and joint working especially with NZTA and CODC • New procurement supports better efficiencies. QLDC is becoming a much smarter buyer.

2.12.6 Accessibility

Accessibility
Customer Outcome Performance Measures

The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	
GPS Objective	**Economic growth and productivity:** A land transport system that addresses current and future demand for access to economic and social opportunities A land transport system that provides appropriate transport choice **Value for money:** A land transport system that delivers the right infrastructure and services to the right level at the best cost
RLTP Problem Objective	• Sections of the network are increasingly vulnerable to closure from adverse events resulting in economic and social disruptions • Inability to assess, plan and fund rapidly changing transport user demands in a timely way results in some poor investment prioritisation and decisions
ONRC Objective	Ease of access to and through the network
QLDC Objective	Accessibility is about the ease of access that people have to be able to reach key destinations and the transport networks available to them, including land use access and network connectivity.
How will we provide it?	• By providing adequate traffic facilities for finding our way • by providing infrastructure that allows users to perform their roles
Summary	This is a significant consideration for Queenstown Lakes District where growth is placing increased pressure on accessibility of the transport network. Over the last several years, considerable effort has gone into responding to transport and accessibility issues in the Queenstown District. This has involved development of strategies, collaboration between agencies, growth planning, and investment in roads, including HPV bridges , public transport, and walkways/cycleways. Key stakeholder and community engagement has occurred throughout most of these processes, however there is limited information to understand customer experience and how this has changed over time.
QLDC ILM by ONRC Outcome	A facilitated workshop of key stakeholders took place in April 2016 to discuss the Accessibility outcome. **Stakeholders involved:** QLDC, NZTA (SD&D), ORC, Regional Tourism organisations (Destination Queenstown), Queenstown Airport Corporation, DC, Queenstwon & Wanaka Chamber of Commerce.

Problems Identified in the ILM	**Problems identified in ILM**	**Key findings in the Strategic Case**	**Proposed Strategic Response**
	Problem: Tourism is not recognised as a primary economic driver for transport, leading to investment uncertainty and lack of commitment.	Tourism recognised as key part of growth but has not been a major consideration when prioritising investment in the roading network i.e. impact on tourism and economy if we don't do it.	**Response**: Partnership and collaboration. Shared vision and outcomes. Dedicated resources. Drive coordinated and timely investment and implementation. Advocacy to explore other sources of funding and investment.
	Problem: Customer experience is not understood, meaning we could be investing in the wrong things and missing opportunities to manage demand.	Some customer perception information available but difficult to benchmark over time to understand cumulative impact of investment (or lack of) in the transport	**Response**: Strong collective understanding of customer experience and expectations of the transport network, and process in place to benchmark this over time. This will help inform

Accessibility
Customer Outcome Performance Measures

	network.	investment decisions and understand investment outcomes.
Problem: Delayed investment in transport infrastructure is impacting on customer experience and customer cost, with ongoing deterioration.	Considerable effort has gone into developing a strategic response to the transport network however implementation of this and investment decisions are not achieving the required outcomes.	**Response**: Partnership and collaboration. Shared vision and outcomes. Dedicated resources. Drive coordinated and timely investment and implementation. Advocacy to explore other sources of funding and investment.

Benefits of Investment	Benefit One: Transport infrastructure delivered on time to meet customer needs. Benefit Two: Improved influence on customers and tourism demand management. Benefit Three: The investment process is efficient and effective. The benefits highlight the influence that an accessible transport network has in achieving broader objectives and outcomes for the District. In particular, the QLDC community outcomes of sustainable growth management, effective and efficient infrastructure that meets the needs of growth, and a strong and diverse economy. **GPS Benefits** • **Economic growth and productivity**: Reducing travel delays and variability in travel time, or when they occur, enabling customer decision-making to minimise the effects. The affects local commuters, freight movement and the journeys of visitors (particular in peak seasons) to reach tourist attractions, accommodation and Queenstown Airport. • **Value for money:** Maximising the effectiveness of the existing infrastructure. In general, there is sufficient capacity across the entire existing network, however congestion bottlenecks exist within the Frankton Flats and Queenstown CBD due to the geography and legacy infrastructure. Growth will further exacerbate this congestion.
ONRC CLoS Customer Impact and Network Peformance	

Accessibility	**Accessibility** Customer Outcome Performance Measures	
Customer Outcome 1: proportion of network not available to: **a. Class 1 heavy vehicles** **b. 50MAX vehicles**	 In Performance/Improvement Plan to be developed	
Technical Output 1: Wayfinding	In Performance/Improvement Plan to be developed	
Key Network Gaps / Issues	QLDC have identifed some gaps which will be addressed thorugh our Performance Plan • Limited customer feedback – mainly through RFS and annual ratepayers. Misses vistor feedback • Historically, not integrated with other stakeholder, although less of an issue now	

Accessibility
Customer Outcome Performance Measures

Initiatives curent and planned responses	**Current** • Better strategic approach – coordination with partners to align strategies and programmes. E.g. QITS: NZTA, ORC, QAC, • Growth statistics and projections are monitored and reviewed annually • Developing the Transport Model from a 2-step to 3-step which integrates other travel modes such as PT and walking / active modes. • Developing understanding of customer user choices through technology, Bliptrack, MAAS. **Planned / Future** • Annual customer survey to build a picture over time of customer perceptions of transport network accessibility and mode choice. This will track the impact of big investment decisions on the customer experience and expectations from the transport network. • Better Monitoring progress of strategy implementation and effectiveness. Opportunity to review or reprioritise delivery as required. • Better use and development of transport model • Further collaboration

2.13 ECONOMIC NETWORK PLAN

When considering resilience, the ONRC focuses on disruption of journeys but not the value of the journeys. QLDC has developed an Economic Network Plan (ENP) with assistance of MWH (now Stantec) to identify the value of journeys. The QLDC model is based on that developed for Southland; however the QLDC version focuses on the flow of tourism earnings. The ENP is a tool that combines the standard measures typically used with transport decisions, integrating economic data, geographic databases and modelling tools to visually present a robust rationale for making expenditure decisions. This is an asset management approach that considers the needs of a road against the cost of meeting that need. At the core of the ENP is economic data that measures the role of the roading network in providing economic income, it facilitates a wider approach across the roading network to understanding customer needs when considering a transport investment programme. It enables a better understanding as to how the transport network supports economic development. For QLDC specifically, it highlights roads on the QLDC network which while they may have lower traffic volumes, they may have a wider impact on the local (and national) economic community, particularly tourism. Figure 85 provides a good example of economic importance versus traffic volumes. In this case, although the Haast-Makarora highway is low volume, the economic importance of it to tourism exceeds that of the much higher volume Auckland Harbour Bridge.

The ENP provides an alternative view to reviewing the network, rather than the often-backward looking, bottom up asset preservation methodology, it is a top down and forward looking approach which supports QLDC meet GPS priorities and customer outcomes.

Figure 85 Haast Highway versus the Auckland Harbour Bridge

2.13.1 How does the ENP work?

The ENP maps NZ export earnings linked to the supply chain that passes through the Queenstown-Lakes District. For international tourists, it is the export revenue which was earned across NZ from persons passing over a point on the route e.g. if 30.5% of international tourists to NZ passed at some stage of their journey across point A, then the economic value pinned to point A would be 30.5% of NZ tourism revenue (being $2.5 billion in June year 2014/15 and the sum linked to Queenstown Lakes international visitors in that year). It is important to note that this does not mean that point A generates $2.5 billion of NZ's international tourist income (i.e. it is not the District's earnings at that point) but rather that point A was part of the network that supported $2.5 billion of international tourist income. One reason for using the national earnings for international tourism was to provide an export revenue statistic for a road that is consistent and directly comparable with export revenue from other sectors using the road (e.g. from dairy or forestry activity, as below).

The ENP has been used to compare the classification of the ONRC categories.

2.13.2 What are the benefits of the ENP?

➢ The national default for assigning value to roads is based on traffic volumes. By national standards the QLDC network is low volume. The national value of our networks revolves around the international tourists using the network and their positive economic impact on NZ

➢ The ENP assists to prioritise maintenance expenditure on roads – greater range of LoS across the road network

➢ Prioritise projects in QLDC's transport FWP - we are prepared to accept greater risk of failure for lower value roads

2.13.3 What does it tell us?
Some analysis that has been undertaken using the ENP.

Figure 86 Annualised Whole of Life Cost (WLC) per lane km
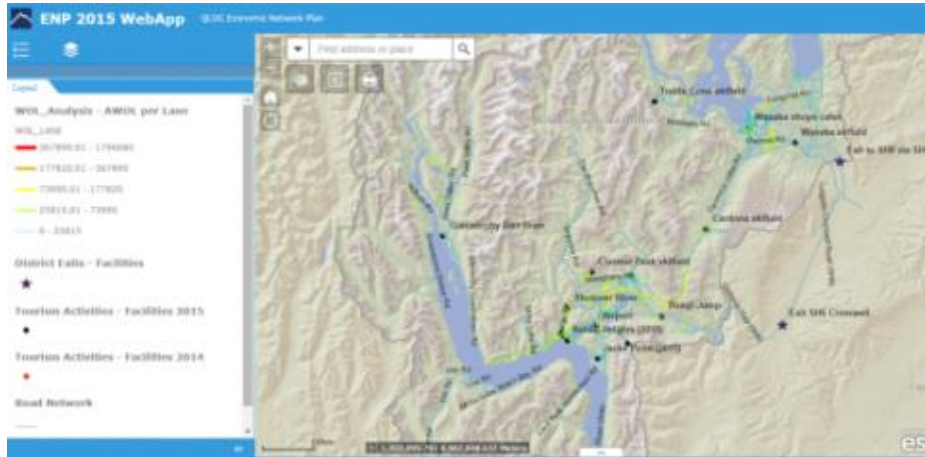
Figure 87 Heat Map showing Annualised Whole of Life Cost (WLC) per lane km
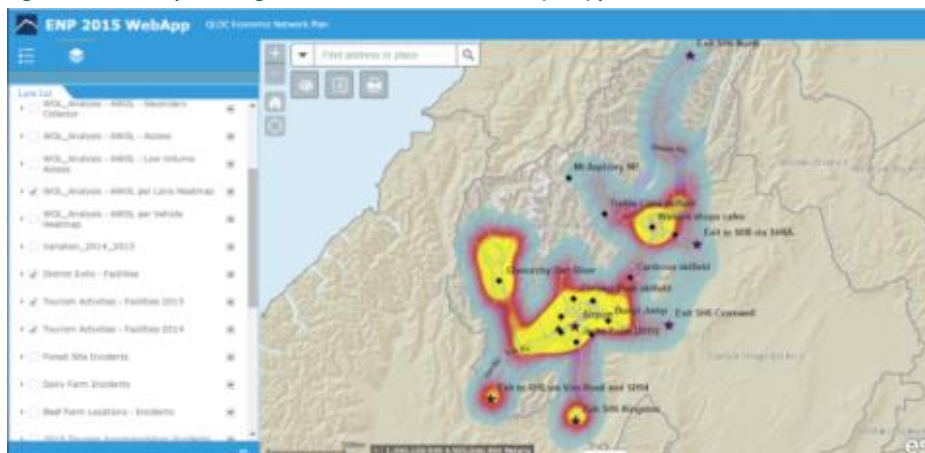
Figure 88 Heat Map showing Annualised Whole of Life Cost (WLC) per lane km
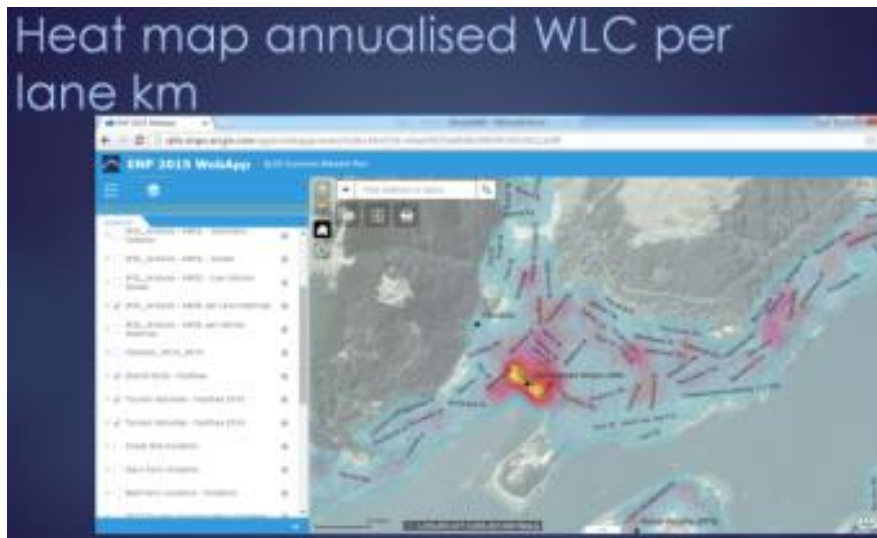
2.14 COMMUNITY OUTCOMES, GOALS AND PERFORMANCE MEASURES

In light of the LGA changes, QLDC's key outcomes are based on core functions: infrastructure; community facilities and services; regulatory services; the environment; the economy; local democracy; and financial support and services.

These outcomes influence QLDC's short, medium and long term priorities, along with the measures set to assess the performance of QLDC towards those outcomes. QLDC issues its Annual Report in October each year; this is where QLDC and the community can monitor progress towards achieving Community Outcomes.

QLDC has reviewed its current performance measurement framework by referencing a range of measures used across New Zealand so that a more direct comparison of our performance with that of other local authorities can be made. We have been working with other Otago local authorities to adopt a standard set of performance measures for the region from 2016/17.

Local authorities are required to incorporate mandatory performance measures developed by the Department of Internal Affairs (DIA) in the development of their 2018–2028 LTP. QLDC have adopted these measures for infrastructure and have been reporting against them in Annual Reports since 2015/16.

Targets for all performance measures will be set for the first three years, and are based upon current or 'baseline' performance. The QLDC measures will be confirmed late 2017 for inclusion in the 2018-21 LTP. The table below provides details of the measures.

Table 4 Performance Measures - QLDC LTP 2018-2028

Performance Measure
High performing core infrastructure services:
The annual change in the number of fatalities and serious injury crashes on the local road network
Average quality of ride on a sealed local road network, as measured by the Smooth Travel Exposure Index
% of sealed network that is resurfaced annually
% of local footpath network that is part of the local road network that falls within the LOS or service standards for the condition of footpaths
% of customer service requests responded to within a specified timeframe
Improved traffic flows on arterial routes
Increased journey time reliability
Percentage of residents and ratepayers who are satisfied with the bus service (cost, reliability, accessibility)

2.15 COMMUNITY EXPECTATIONS

Figure 89 Consultation on Queenstown Masterplan

QLDC is becoming a more customer focused organisation, to this end we are striving to understand the requirements of the Community to provide robust evidence in decision making. This is achieved through better consultation with the community, and engagement with ratepayers and customers. QLDC are developing a transport specific survey and the recent work on the Queenstown Master Plan has demonstrated this new approach.

2.15.1 Request for Service (RFS)

Customer interaction is largely recorded through our Customer Management System (TechOne). Request for Service are recorded, actioned and monitored at a corporate level and a councillor level.

QLDC have worked to integrate the Customer Service System with our RAMM asset management system, which enables the roading contractors to receive almost immediate notification of requests and to be able to provide response and action back to the customer service team.

The QLDC internal roading team received 106 general enquiries for service in July 2017 compared to 29 in July 2016. A significant volume of these are requests for new infrastructure i.e. new streetlights, traffic calming, no parking lines, kerb and channel etc. An existing Operations and Maintenance team vacancy has been filled which is improving performance in this area, however this is offset by the significant uplift in volume.

The chart below shows an overview the Request For Service received between 2014-2017. Further detail of individual categories can be found in the Network Management Plans (Appendix 2)

Figure 90 Overview of total RFS Count
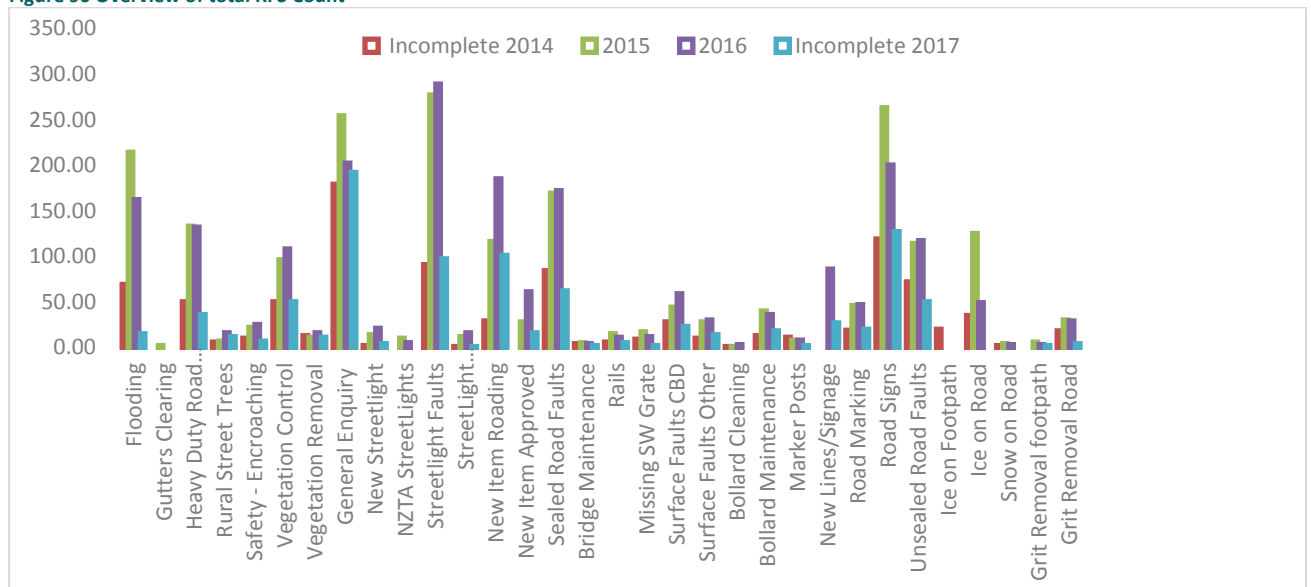
*In July 2014 QLDC moved its Customer Request System from NCS / KBase to Technology One, this has led to a difficulty to aligning RFS categories over time.

2.15.2 Stakeholders and Consultation

QLDC's stakeholders are 'any party having an interest in anything at all that QLDC is or isn't doing relating to the provision and management of an effective and efficient network of roads in, and the provision of sufficient public transport works for, the Queenstown-Lakes District.' The key stakeholders and our philosophy of engagement are listed in 5.

Table 5 Key Stakeholders

Stakeholder	Philosophy of Engagement
NZTA – System Design & Delivery (SD&D) & State Highways	As a co-investor NZTA plays an important role in the management and direction of the roading network. QLDC collaborates with NZTA to achieve a customer-focused delivery across one transportation network.
Senior Management and Elected Members	Working to ensure QLDC has accurate data for evidence based decision making as well as leading a committed and co-ordinated effort across all sections of an organisation in terms of asset management.
Internal Staff	QLDCs approach is to co-ordinate the education, communication, and awareness of asset management processes in the transportation sector.
Supply Partners and Service Providers	Strong relationships are formed on a shared philosophy of delivering value for money for our customers. Specifically, professional services that are focused on developing investment programmes that increase productivity for our customer. Physical works providers that are delivering fit for purpose LoS and are innovating. Continuing to build awareness and understanding of AM processes across QLDC's external partners.
Automobile Association (AA)	Engage with AA to further foster the customer and journey oriented approach
Collaborative Partners	Partnership with delivering services such as neighbouring, regional and local councils, emergency (NZ Police/Fire/Ambulance) and civil defence authorities, and Department of Conservation. Working with other network providers that utilise the roading corridor for service provision such as electricity, gas, telecommunications and water.
Customers	Engage with customers to communicate the cost to deliver services and where the k focus of spending should be and how can achieve required outcomes including a safe, resilient, reliable, and environmentally aesthetic network. Customers include: All road users All adjoining property owners Local ratepayers and residents associations Local businesses
NZ Film Association	Permits for filming to support the arts

2.15.3 Communicating with Stakeholders

A requirement of the ONRC is the need to improve asset management practices over the next 12 months in order to meet the needs of strategic planning for investment. Designed to improve the communications and ensure successful implementation of the ONRC, QLDC, in November 2016, developed a Strategic Communications Plan to identify key messages, audiences and communication channels. It highlights where and why QLDC needs to work closely with other RCAs and stakeholders to change existing culture towards one that is more collaborative and more customer focused as opposed to technically focused. This requires a strong commitment to supporting change and a communications strategy is required to engage stakeholders towards driving change. A link to this Strategic Communications Plan can be found in Appendix 1.

QLDC has adopted a combination of email, social media, radio messaging and websites to inform the travelling public about changing road conditions which may disrupt their travel plans. Disruptions include snow and ice

in winter; storm damage; road works; crashes and police operations. QLDC has also relaunched its text alert system. Specific channels are:

> Road report email list (4,450 recipients, sent daily 6.30am in winter and as required at any time);
> QLDC Facebook page (14,881 followers);
> QLDC Twitter feed (2,969 followers);
> Community text alerts (list of 1,564);
> Community Facebook pages, chosen to match the location of the disruption);
> Breakfast radio – The Hits, More FM, Radio Wanaka, Radio Glenorchy;
> QLDC website;
> Queenstown traffic web cameras (link to Stanley St and Ballarat St signals via NZTA website);
> Crown Range weather station and webcam.

QLDC entered its popular Winter Road report into the LGNZ Community Engagement Award. This was recognised with a 'Highly Commended" from the judges. It has been seen as very positive recognition that QLDC has found a new innovative way to inform, engage, and communicate with multiple communities in the way they want to be communicated with. Keeping this service going is a joint effort across a number of teams. Attached is the YouTube link to the promotional video for LGNZ:
 https://www.youtube.com/watch?v=Ne5_MZ1MQv4

QLDC also participated in a crowdsourcing information trial with NZTA over winter 2015 to gauge the benefit of information contributed by the travelling public to help people make good travel choices during times of disruption.

A process to measure and report on the time taken to receive notifications and alert/action to the public is currently being developed and is an action in the Performance Plan.

2.15.4 Draft Disability Policy

QLDC is aiming to support and advocate for a more inclusive and diverse community, to this end QLDC has developed a Draft Disability policy which it hopes to adopt by May 2018.   The aim of this policy is to guide QLDC and our community to be consistently responsive to the needs of those less able living in and visiting our district.

2.15.5 QLDC Annual Residents Survey 2016/17

QLDC strives to deliver an affordable LTP with a strong focus on efficiency and value. QLDC demonstrates accountability by seeking annual feedback from residents about their performance over that year. This feedback helps QLDC to understand what they're doing well and where they might improve. Since 1995, QLDC has been conducting annual satisfaction surveys as a way to assess residents' needs and satisfaction with Council services.

The 2016/17 satisfaction with infrastructure measures remains largely similar to previous years. Satisfaction is highest with wastewater, which has also increased significantly this year. Satisfaction with street cleaning and sealed roads have also increased this year, while satisfaction with water supply and footpaths remain similar to last year's results. Satisfaction with street lighting and unsealed roads has decreased this year although these changes are not statistically significant. Notably, respondents aged under 34, those who own a holiday home in the area, or residents who are non-ratepayers in the area appear to be more satisfied with infrastructure.

Parking appears to be an issue for a number of respondents, with almost half mentioning parking as a service that the Council needs to improve. Further to this, unsatisfied results are high amongst respondents in relation to the suitability of the parking arrangements provided for the amount of traffic in both Queenstown and Wanaka. Satisfied results have decreased significantly this year for parking enforcement. Notably, parking appears to be a bigger issue for respondents aged under 34 and those from Queenstown or Frankton. Consideration should be given to how to improve parking in all areas of the District.

The summary below shows this year's satisfied result for each measure associated with infrastructure, as well as the percent change from 2016's results.

Figure 91 2016/17 Percentage Change In Satisfaction With Infrastructure

WATER SUPPLY	66%	INCREASED 1%	
WASTEWATER	73%	INCREASED 7%	
STREET CLEANING	69%	INCREASED 3%	
FOOTPATHS	58%	INCREASED 1%	
SEALED ROADS	63%	INCREASED 4%	
UNSEALED ROADS	48%	DECREASED 3%	
STREET LIGHTING	53%	DECREASED 2%	
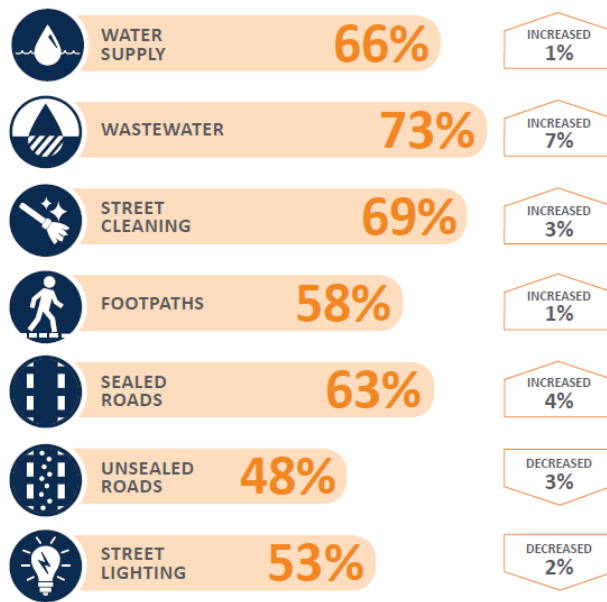
The town being an easy place to spend time is the measure with the highest satisfaction levels amongst both those who visit Wanaka and Queenstown regularly. Satisfaction with the layout, availability of public transport, traffic levels, and parking arrangements is relatively lower within both towns.

Figure 92 2016/17 Town Satisfaction Summary

Town Satisfaction Summary

QUEENSTOWN   WANAKA

	QUEENSTOWN	WANAKA
THE TOWN IS AN EASY PLACE TO SPEND TIME	54%	68%
THE TOWN LAYOUT WORKS WELL FOR BOTH PEDESTRIANS AND CARS	25%	30%
THERE IS ENOUGH PUBLIC TRANSPORT AVAILABLE IN TOWN	18%	10%
GENERALLY, TRAFFIC LEVELS ARE ACCEPTABLE IN THE TOWN	12%	21%
THE PARKING ARRANGEMENTS ARE SUITABLE FOR THE AMOUNT OF TRAFFIC IN THE TOWN	9%	15%
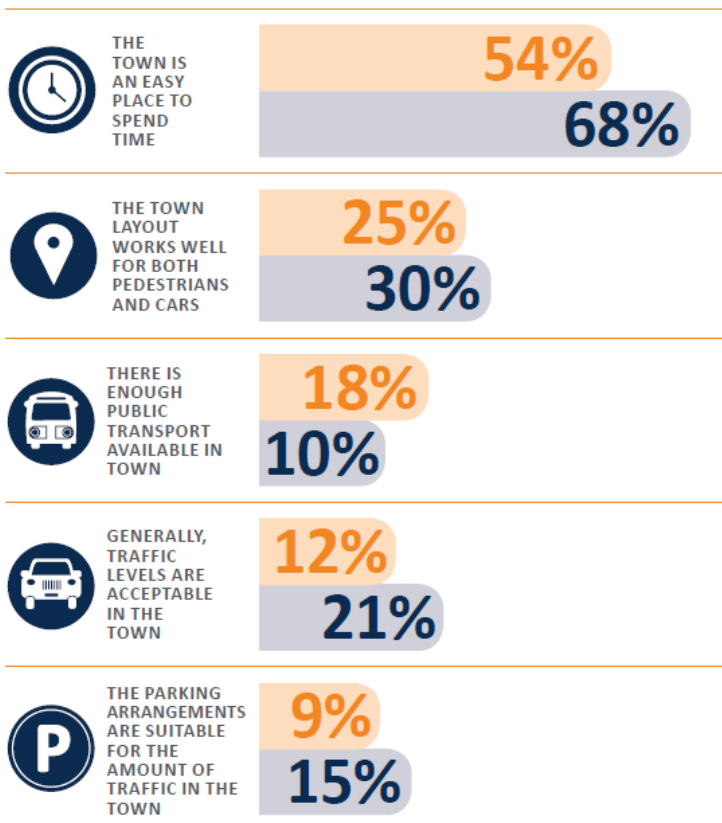
Highlighted below are results that are statistically significantly higher than the total result.

Figure 93 2016/17 Infrastructure Area Differences

No statistically significant differences noted.

Satisfied with water supply (78%).

RURAL*

Unsatisfied with water supply (41%), wastewater (24%), and unsealed roads (31%).

HAWEA

KELVIN HEIGHTS / ARTHUR'S POINT / LAKE HAYES

WANAKA

Unsatisfied with water supply (39%), footpaths (26%), and unsealed roads (30%).

GLENORCHY

ARROWTOWN

QUEENSTOWN / FRANKTON

Unsatisfied with footpaths (27%).

Satisfied with water supply (79%), footpaths (67%), and sealed roads (68%).

* Includes Makarora, Luggate, Kingston, and Gibbston.

SECTION THREE - LIFECYCLE PLANNING

3.1 INTRODUCTION

Lifecycle asset management is about considering all asset management options and strategies to deliver the agreed level of service and to inform decision-making for asset renewal, replacement, upgrades and disposal. With a move to activity management rather than just asset management this now includes focusing on the outcomes and benefits achieved through this planning. Effective lifecycle planning is about making the right investment at the right time to ensure that the asset delivers the desired level of service over its full-expected life, at the minimum total cost.

The QLDC network is a mixture of urban and open roads, with the majority of higher classification (collector and above) roads classed as rural. They serve a purpose of link roads between places or townships. Over 72% of customer journeys are made on these roads. This means that travel quality will be of high importance on these roads, as operating speeds are generally above 70km per hour.

The lower classification roads are largely urban, representing the access and 'place' function. Risks to travel quality are lower on these roads as speeds are lower. Emphasis on aesthetics will be greater however and on active modes.

3.2   NETWORK STATISTICS

QLDC maintains a diverse range of transportation assets, a summary of which can be found below in Table 6. A programme is being undertaken of asset corrections and updates, the data below may change over the next 12 months.

Table 6 ONRC Classification by Length and Demand

	Arterial		Primary Collector		Secondary Collector		Access		Low Volume		Total	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Network Length (km)	0	5.9	22	117	58	138	76	157	103	169	259	587
	5.9		139		196		233		272		**846**	
	1.0%		16.0%		23.0%		27.0%		33.0%		100%	
Customer Demand *Vehicle km's Travelled (millions)*	15		133		88		33		15		287	
	5.4%		46.6%		30.9%		11.6%		5.4%		100%	

Table 7 Asset Details

Type	Sub Type	Sub Quantity	Total
Road pavement (Km)	Sealed	489	
	Unsealed	357	846
Bridges & Structures (No)			97
Drainage	Culverts (No)	4,526	
	Catch pits & Sumps (No)	3,287	4,813
Stormwater Channelling (km)			3,017
Footpaths (Km)			231
Markings (Road Delineation) (Km)			821
Street Furniture & Minor Structures (No)			1,151
Railings (M)			10,138
Signage (No)			8,914
Streetlights (No)			3,350
Traffic Facilities (edge marker posts) (No)			5,260
Parking Meters (Multi-space type)(No)			37

Data on the achieved life of surfaces is set out on pages 14-18 of Appendix 2a. The achieved lives are acceptable for a low volume network.

3.2.1   Seal Age

The following figures show QLDC has a good achieved life for chipseals sitting above or within the peer groupings. However chipseals appear to not be achieving the expected life. This may be due to the fact AC is often used in a more challenging environments such as the Crown Range which is steep and undergoes extreme winter weather events and freeze / thaw. QLDC recognise these lives are not ideal and will be exploring the data in more detail to understand any underlying issues and to ensure appropriate treatments are undertaken.

Figure 94 Chipseal – Average Life Achieved 2016/17
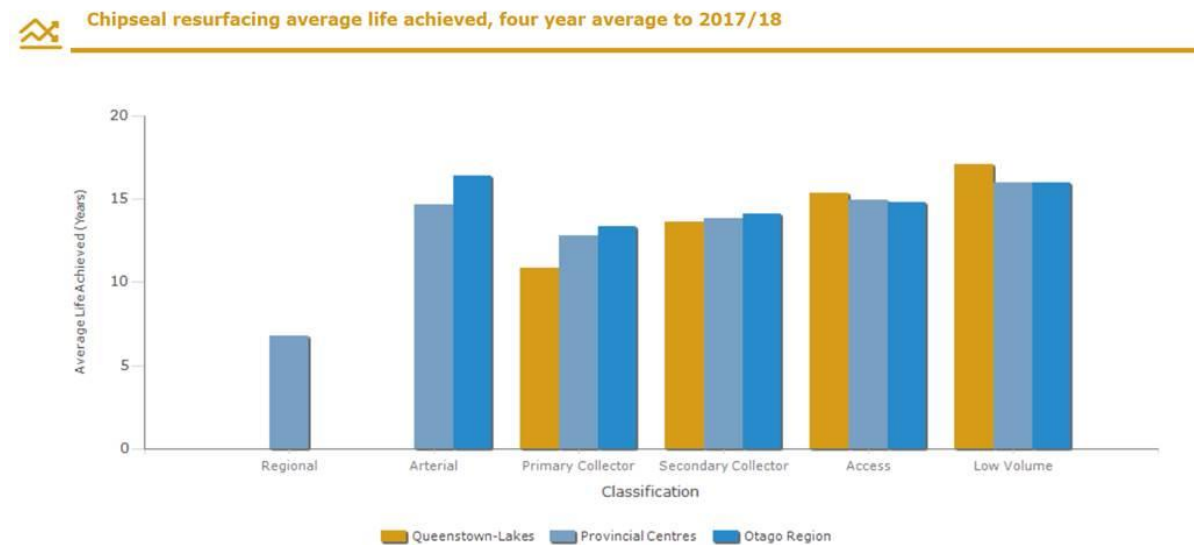
Figure 95 Asphalt – Average Life Achieved 2016/17
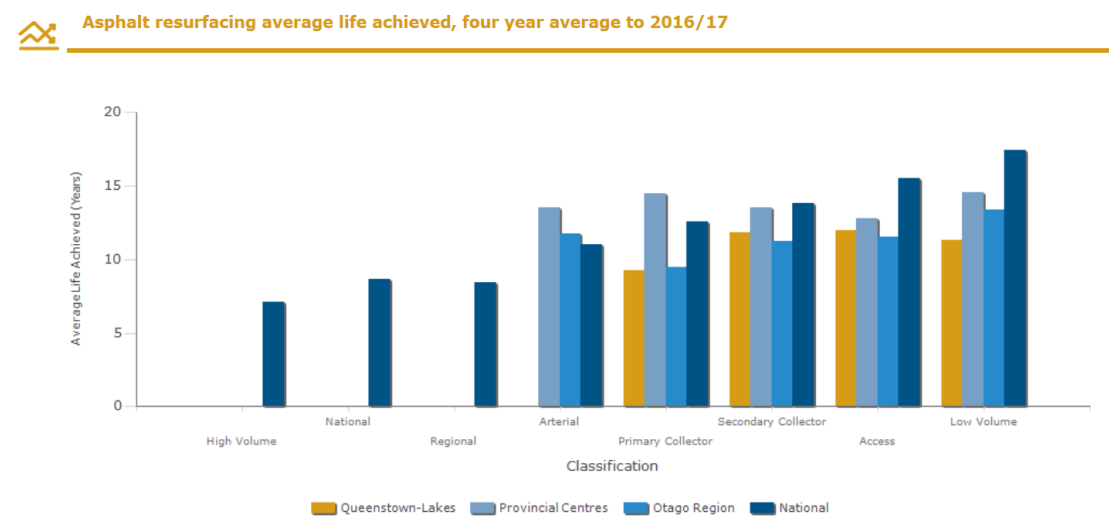
3.3   NETWORK MANGEMENT

4.3.1   Organisation Restructure

In response to various factors, including a report in 2013 from the Office of the Auditor General, in which QLDC were cited as an example of bad asset management, QLDC underwent a large organisational change. It was identified that planning and asset management need to improve, and this lead to a restructure within Property and Infrastructure.   An activity based matrix approach was developed which brought together staff who undertook similar roles across different discipline. This enables cross pollination and sharing with a key focus in removing planning staff away from operational and reactive works, freeing time for forward thinking and planning. Contract management is a key area where this has seen benefits; there has been a move to using a standardised contract form NZS3917 across all contracts, which assists better contract management across all portfolios as staff can build better understanding of the contract form. For further information on procurement and contract management and the results of the REG Smart buyer assessment refer to Section Five Asset Management Enablers. Table 8 identifies the structure format.

Table 8 QLDC Property & Infrastructure Structure

General Manager (Property & Infrastructure)				
3 Waters	Asset Planning	Operations & Maintenance	Project Delivery	Strategy and Performance
Transport				
Parks & Open Space				
Solid Waste				
Property				

4.3.2   Organisational Background /Context

To give context to the restructure there were underling issues which supported the need for change.

➢ QLDC did not have the confidence from NZTA; we were seen as a high risk and unrealistic.   Concerns with perpetual turnover of staff in the past has led to a lack of continuity and longevity with a material reduction in corporate knowledge and the over reliance on consultants.   While it is unlikely there will be a huge change in the demographic and transient nature of staff, to counter this at a Corporate level, QLDC are trying to retain staff by becoming a more attractive employer and to develop and document processes, focus on data and systems rather than a reliance on internal knowledge and craft.

➢ QLDC had become reliant on consultants and this had led to a limited working corporate knowledge of the condition of our roads and what investment was required to achieve outcomes.

➢ QLDC underwent a period of heavy investment around 2011/2013 and since 2014 there has been a considerable reduction in the baseline percentage (reseals now at about 7 % baseline). This has been heavily guided with input from NZTA's RAPT process and a rigorous approach to data collection and data driven programmes, dTIMs has been particularly developed and data inputs much improved.

➢ Rehabilitations have been heavily reduced over last few years and QLDC need to ensure this level of investment is sustainable, currently on a 50-year return basis which is about base preservation of around 2%. Working on developing better programmes through understanding the pavements better (network FWD and Multi-Speed Deflectometer (MSD) surveys) and aligning/integrating dTIMS and Geosolve's mechanistic models

➢ Developing in house ownership of the FWP process – less reliance on professional services (refer to Appendix 3) plans to develop further with the Asset Engineer role.

4.3.3   Data Management Collection

Over the last 2-3 years QLDC have made some major improvements in data collection and updating of its asset register (RAMM). Further items of improvements are noted in the Performance Plan in Section Six.

➢ Large effort to improve data inputs and processes and document these processes.

➢ Move from visual surveys to repeatable machine surveys i.e. High Speed Data (HSD), SCRIM, Network FWDs, MSDs and better oversight of Inspection data (All Faults).

➢ Commenced audit of historic records i.e. rehabs, reseals, new developments, historic FWD and test pits
➢ Drawing on NZTA RAPT process for better field validation of programmes.
➢ Utilising Downer IMMS to identify gaps in process and how to fill those gaps.
➢ Developing use/skills in Juno viewer for analysis and field validation.
➢ Commencement of discussions with 3Waters to receive test pit data where currently, good records are not held.
➢ The HSD is now being used for multiple activities showing good value for money. Two years of surveys is creating deterioration curves to be used in dTIMs and drainage renewals. Geometry is being used to review no passing lane marking and curve warning signs and to undertake slope corrections on our steep roads. Also utilising videos for asset data updates for signs and lines.

4.3.4   Maintenance Contract Performance Management

As part of the Roading Maintenance Contract Renewal in 2016, QLDC developed a performance framework to support the transition to the ONRC. See Appendix 7. This framework is supported by the Roading Network Maintenance Contract KPIs. These KPIs are on the Contract, so can be impacted by both the Contractor and the Principal. The focus is to ensure that the contractor ensures QLDC performance doesn't let the side down to get better, collaborative outcomes between client and contractor.

4.3.5   Utilising technology to assist in network management

QLDC have been developing IT solutions to assist with network management
➢ Integrating RAMM with our Enterprise RFS system Techone enables 'Requests For Service' to be entered by QLDC Customer Service team, entered in the corporate system and the data is automatically transferred to RAMM where it can be almost instantly received by the maintenance contractor. This also works in reverse, so once RFS have been addressed, any actions can be sent back to Techone.
➢ Integrating RAMM with our Enterprise Finance system. Monthly maintenance contract claims are entered into RAMM and can now be easily transferred to the QLDC finance system.
➢ Exploring options to more easily access RAMM data by having a seamless link into our Corporate GIS system.

4.3.6   Wards and Special Purpose Roads

The District's assets are managed within four NZTA Wards:

Table 9 NZTA & QLDC Ward Structure

WARD	Description
Wanaka	based on electoral boundary
Wakatipu	based on electoral boundary
Glenorchy Special Purpose Road:	Defined in the NZ Gazette 18 June 1992 as '*The section of public highway from Twelve Mile Creek on the Queenstown Glenorchy Road through Glenorchy and over the Dart River to Routeburn'.* It has a total length of approximately 63 kilometres.
Crown Range Special Purpose Road:	Defined in the NZ Gazette 18 June 1992 as '*the section of public highway previously part of No 89 State Highway from its conjunction with Crown Terrace Road at Route Position 0/4.78 at the foot of the Crown Range to the Cardrona Hotel at Route Position 16/9.71 in the Cardrona Valley*'. It has a total length of approximately 21 kilometres.

4.3.7   Special Purpose Roads – Transition to Local Roads

Glenorchy Road and Crown Range Road became Special Purpose Roads (SPRs) in the early 1990's. The key function of SPRs was intended to provide access to Crown Estates such as Mt Aspiring National Park, as key tourist destinations, acknowledging that Crown Estate does not pay rates. The high funding assistance rates reflect their previous status when they were 100% funded by Central Government.   Under the 2014 Funding Assistance Review, NZTA decided to do away with SPRs. Section 4.3 (Table 34 and 35) shows the gradual lowering of the funding assistance rate from 2018-23 to match the standard Local Road FAR of 51%. QLDC have concerns over the decrease of the SPR due to a low rate payer base in these as well as both SPRs are sitting in challenging environments. QLDC will be focusing on minimising the risk of future maintenance costs through the transition process. Corridor studies are being undertaken on both SPRs to understand the current state and to develop potential programmes.

QLDC will look at options for alternative funding arrangements:

➢ Absorb the additional cost as a District wide strategy for important tourist routes;
➢ Explore NZTA targeted enhanced funding rates e.g. for Glenorchy and Precipice Bridge, (South Wairarapa example);
➢ Liaising with local stakeholders for a supported rate (ski fields, DoC);
➢ Possibilities of toll roads;
➢ Changes to LoS to reduce demand/costs/risks. This could include restricting opening hours of the road, lower winter maintenance, reverting surface type. As LoS is not well understood, the continued monitoring and analysis will be undertaken.

3.4   CONSENTS

Further to the legislation discussed in Section One and Two, the primary driver of transportation statutory requirements is driven by compliance with the RMA.

For transportation purposes, QLDC holds consents in the areas:

➢ To extract gravel for roading purposes;
➢ To apply CMA to the roads during winter;
➢ Maintaining bridges and culverts.

Consent compliance is maintained as follows:

➢ The Council shall comply with the RMA and the conditions of resource consents that apply;
➢ The Council is responsible for applying for new resource consents that are due to expire. In some instances a new resource consent may be applied for well in advance of the expiry date where current and projected demands require an increase in the rate of abstraction and/or an alteration to an existing designation;
➢ The Council shall gather and collect data required by the resource consent conditions and complete reports as required;
➢ The Council shall report the monitoring results to Otago Regional Council to demonstrate compliance with resource consent conditions.

A number of consents will be expiring within the next NLTP period, and QLDC will be reviewing the longer term approach to aggregate resourcing, ensure sustainable access to suitable aggregate, with a view to minimising risk and future costs.

Tables 10 and 11 report all current QLDC consents in relation to Transport:

Table 10 Current QLDC Roading Maintenance Consents

General Roading Maintenance Consents			
RM12.474.01	Expires: 15/02/2033	Various roads throughout the Queenstown Lakes District Council region	To discharge calcium magnesium acetate (CMA) to land in a manner that may result in CMA entering water for the purpose of de-icing roads during winter conditions
RM12.242	Expires: 1/02/2048	Matukituki River from Raspberry Creek confluence to Lake Wanaka, midpoint approximately 13 kilometres north west of intersection of Treble Cone Skifield Access Road and Wanaka Mount Aspiring Road, Wanaka. Von River from its north branch confluence to the stock bridge, midpoint approximately 6 kilometres south west of the intersection of Mount Nicholas €"Beach Bay Road and Von Road, Kinloch Rees River from McDougalls Creek confluence (nztm2000 1240150e 5037200n) to Lake Wakatipu (nztm2000 1234600e 5023800n), Glenorchy Dart River from Scott Creek confluence (nztm2000 1229700e 5033200n) to Lake Wakatipu (nztm2000 1233800e 5024300n), Kinloch	To erect structures and disturb the bed of rivers for the purpose of undertaking bank protection works

To discharge contaminants to water for the purpose of constructing bank protection works

To divert water within the bed of rivers for the purpose of constructing bank protection works |
| 2008.21 | Expires: 1/02/2020 | Various roads throughout the Queenstown Lakes District Council region | To extend, alter, replace and reconstruct culverts and disturb the bed of various watercourses for the purpose of road widening and realignment |
| 2008.212 | Expires: 1/02/2020 | Various roads throughout the Queenstown Lakes District Council region | To discharge contaminants to various watercourses
For the purpose of bridge and culvert works and clearing of alluvium and debris from around structures |
| 2008.436 | Expires: 1/02/2020 | Various roads throughout the Queenstown Lakes District Council region | To extend, alter, replace and reconstruct bridges and disturb the bed of various watercourses
For the purpose of road widening and realignment |
| 2008.437 | Expires: 1/02/2020 | Various roads throughout the Queenstown Lakes District Council region | To disturb the bed of various watercourses
For the purpose of clearing alluvium and debris from around structures |

Table 11 Current QLDC Gravel Extraction Consents

Gravel Extraction Consents			
RM14.327.01	Expires: 1/12/2019	Sawyer Burn, approximately 6 kilometres east of the intersection of Meads Road and Makarora-Lake Hawea Road (State Highway 6), Hawea	To disturb the bed of Sawyer Burn for the purpose of extracting up to 5,000 cubic metres of gravel
2009.354	Expires: 1/12/2019	True right bank of the Matukituki River, approximately 850 metres northeast of the Wanaka-Mount Aspiring Road bridge over the leaping burn, Wanaka for a distance 500 metres downstream.	To disturb the bed of the Matukituki River for the purpose of extracting up to 15,000 cubic metres of gravel per year
2009.344	Expires: 16/11/2019	True right bank of the Matukituki River, upstream of its confluence with Wishbone Creek, Wanaka.	To disturb the bed of the Matukituki River for the purpose of extracting up to 5,000 cubic metres of gravel per year
2008.658	Expires: 5/05/2019	True left bank of the Shotover River for a reach of approximately 130 metres, approximately 6 kilometres northwest of the intersection of Skippers Road and Coronet Peak Road, Queenstown Lakes District	To disturb the bed of the Shotover River For the purpose of extracting up to 2,500 cubic metres of gravel per year
RM12.162	Expires: 4/10/2047	An unnamed tributary of the Von River, approximately 9 kilometres southwest of the intersection of Von Road and Mt Nicholas-Beach Bay Road, Queenstown	.01 To disturb the bed of an unnamed tributary of the Von River for the purpose of maintaining the stream in a channel .02 to discharge contaminants, being silt and sediment, to an unnamed tributary of the Von River for the purpose of maintaining the stream in a channel .03 to divert an unnamed tributary of the Von River for the purpose of maintaining the stream in a channel

PROGRAMME BUSINESS CASES

The following sections introduce the Continuous and Improvement Programme Business Cases. The figure below provides an overview of QLDC's subsidised transportation programmes

Figure 96 Overview of Programmes 2018-2012
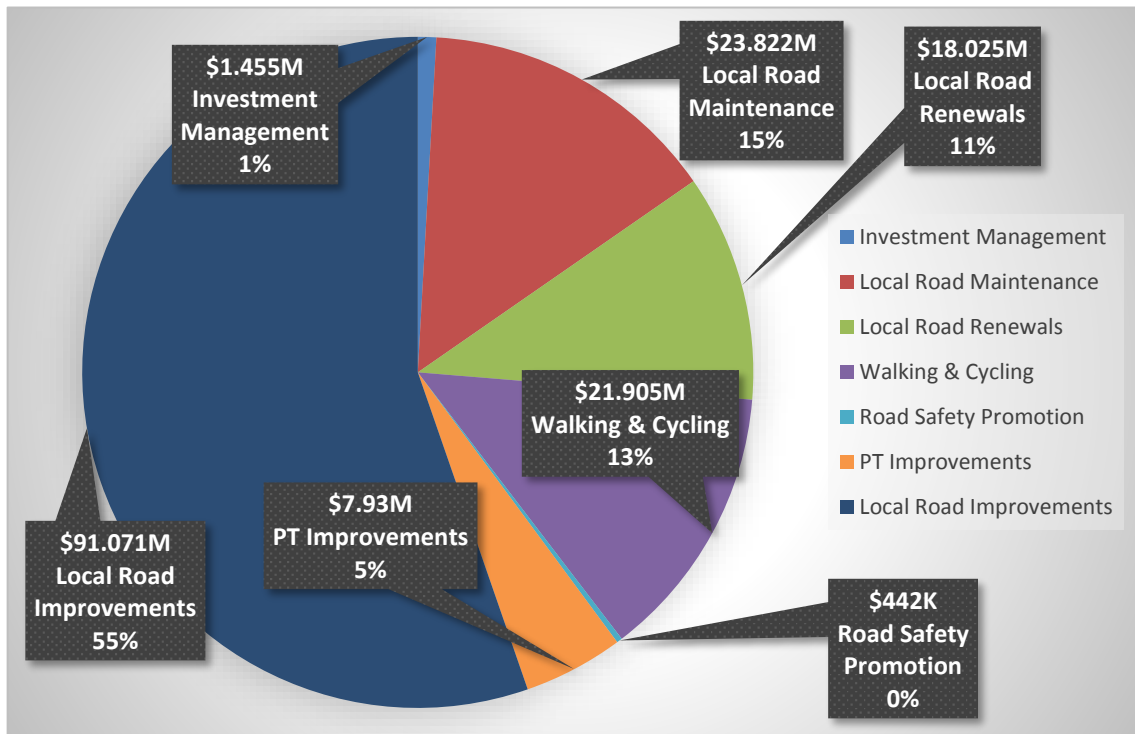
CONTINUOUS PROGRAMME BUSINESS CASE

3.5   INTRODUCTION

The QLDC BCA AMP provides context for both Improvement and Continuous Programmes, the Continuous Programme consists of the Local Road Maintenance Programme. The objective of the Local Road Maintenance Programme is to support delivery of transport services to QLDC customers at the lowest possible whole of life cost whilst providing for unprecedented growth and demand, meeting GPS and LTSV objectives. QLDC must build data and systems to better understand the challenges of the district and look to optimise network management and delivery through application of best practice and considering growth predictions in all activities and providing a value for money service.

3.6   WHAT ARE PROBLEMS FOR MAINTENANCE, OPERATIONS AND RENEWALS?

In developing its Maintenance, Operations and Renewals (MO&R) Programme Business Case, QLDC undertook an ILM style workshop to identify what the key issues are in the District. This day and half long workshop was facilitated by external consultant Chris Olsen and involved the following key stakeholders: QLDC (Asset Planning, Maintenance & Operations, Strategy & Performance), Downer (Maintenance Contract Manager, National Asset Engineer), Fulton Hogan (Reseals Contractor).

The workshop identified problem statements, benefits and responses required to deliver a robust M,O & R programme for the District. The outputs from the detailed workshop sessions, along with QLDC evidence and analysis can be found in the Network Management Plans (Appendix 2). These issues were captured in four problem statements and strategic responses developed.

Figure 97 Investment Logic Map for the Continuous Programme
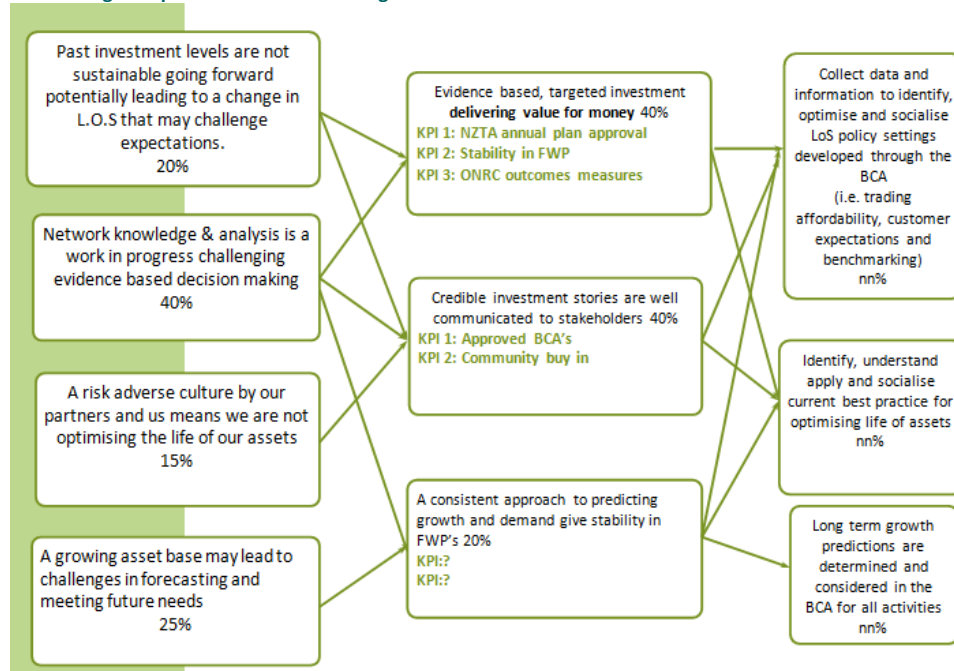
Priorities on where the main focus of the Continuous PBC should be were defined on a risk basis. This risk took the form of the biggest spend or where peer benchmarking shows QLDC to be offering a potentially higher LoS than NZTA would want to co-invest in or where the strategic case showed significant increased impact on the network. To develop a better understanding of the Continuous PBC, QLDC has combined a Work Category and Customer Outcome approach. Summaries of the Network Management Plans can be found in Section 3.8 where they have been grouped by NZTA Activity Class and Work Category. The detailed PBC can be found in Appendix 2 for Network Management Plans (NMPs). It is recognised that these PBCs are not fully complete and development of these form part of the improvements in the Performance Plan. These NMPs are closely linked to Section 2.12 which explores the ONRC outcomes and in the next generation of our AMP it is envisaged that these will be integrated.

Through ILM process QLDC identified the key responses to our issues must be driven by improving data and analysis in order to provide and socialise LoS into Business as Usual (BAU), whilst always being cognitive of the impact of growth.

Throughout the ILM process various ideas were discussed and explored:

> More analysis is required to get a better understanding of LoS at each classification level;
> Where should we focus funding on the network;
> Understanding investment level by asset – it was identified that the value of our footpath asset was very substantial, and this is potentially not being given suitable priority;
> Identifying LoS discrepancies/ gaps to prove the case for funding;
> Ensuring the BCA AMP aligns with maintenance activities and doesn't become a paper weight, but instead becomes a living document providing a continuing perspective on our network and direction on what we want for the district;
> Historically, all assets (with the exception of the sealed pavement network) have been run to failure, i.e. not for optimal asset preservation. This is a strategy that QLDC wants to understand and address where appropriate;
> Budgets have been driven by contract not outputs;
> QLDC has progressed and matured considerably from where they were 3 to 6 years ago, but still have a long way to go.

3.7   CONTINUOUS PROGRAMME - OPTION APPRAISAL

QLDC have undertaken an option appraisal on the proposed investment versus a 'do nothing' approach. These are explored in more detail through our Strategic Assessments and in our M,O&R programme business case.

Table 12 QLDC Options Assessment

Option	Option 1: Do nothing – no investment	Option 2: Proposed investment - Preferred Option
Outcome	**Consequences / implications / risks**	**Benefits**
Overview of Local Road Maintenance Programme	• Massively decreased customer satisfaction, reflected in increased Requests for Service. This leads to reduced confidence in council services. • Not funding a maintenance programme in QLDC will impact the National Tourism economy and the reputation of NZ Inc. Visitors often come to NZ based on the perception of Queenstown. Queenstown has a high profile internationally and from central government and expectations are high that customers receive a good safe experience. • Safety likely to decrease with probable increase of accidents, and the severity of those accidents • Less cost efficiency as we wouldn't be protecting the integrity of our asset, leading to higher cost treatments Consequences of QLDC issues/challenges can also be found in the strategic assessments Section 2.7.	• Maintain customer service satisfaction at existing levels and halt current trend of increasing dissatisfaction • Increase network knowledge by focusing on data to build evidence based decisions and programmes. Turn data into information through better analysis • Develop resilient network knowledge and systems to support on-going organisational knowledge • Ensure current safety levels are maintained and avoid any increases in crashes and minimize severity where possible • Continue to tension cost efficiency by developing better whole of life costings and treatment options. Following industry best practice
Resurfacing	Not funding a renewal cycle will severely reduce the whole of life costs for our surface assets. With the server conditions of our district and increasing traffic volumes, it will lead to a drastic loss in level of service, both in comfort, safety and cost efficiency.	The proposed programme shows a level of investment which protects our asset base and ensure that we keep on top of deterioration and roughness, ensuring an open and comfortable network that supports the tourist economy of New Zealand. QLDC has previously overinvested in this area and the last couple of years have drastically reduced investment. QLDC feel the slight increase in budget from the last NLTP cycle shows a growing confidence that we are investing at the right level.
Environmental maintenance	A reduced level of service hinders the ability to move around the district. This could be less gritting/CMA in winter leading to growing dangerous conditions and less accessible roads. This will affect tourist and residents and impact economic activities.	Continue to provide an accessible network that meets safety and amenity levels of service. Vegetation control and winter maintenance levels are appropriate for the road class, criticality and economic requirements of the district.
Network and asset management	QLDC past history of lack of network understanding could return if investment of resilient systems and data capture are in place to protect our high staff turnover.	Understand and monitor our network growth, in term of numbers, but also usage. Robust systems to protect organisational knowledge.

Option	Option 1: Do nothing – no investment	Option 2: Proposed investment - Preferred Option
Outcome	Consequences / implications / risks	Benefits
	It is vital the QLDC continue to monitor our high growth and the impact of the growth as growth provides a high risk to our levels of service, and our asset base.	
Metalling	Level of service will deteriorate and parts of network may become inaccessible and/or less safe, especially for those customers who are not familiar with the driving conditions, such as tourists.	Supports the level of service for resilience and accessibility on the unsealed network.
Unsealed pavement maintenance		Investing in longer term solutions such as Otta seals better WoL costs by achieving good lives
Sealed pavement maintenance	Level of service will drop leading to increased Requests for Service, which leads to a more reactive and less cost efficient approach	Early intervention will enable appropriate cheaper treatment to be applied (preventative maintenance) , enabling a lower low network in the longer term.
Rehabilitation	Continued deterioration of the network, especially in our high risk areas where we have challenging conditions	Protect the integrity of our pavements and the investment already made to the network
Drainage (maintenance & renewal)	Reduced or no expenditure on drainage will have a massive impact on the achieved lives of the QLDC surface and pavements. With increasing precipitation in our district, drainage is under increasing pressure and this impacts the whole of life costs.	Better focus on drainage in this upcoming NLTP is enabling us to better understand our drainage needs, better programme of works will help us achieve better pavement and surface lives on our network.
Traffic services (maintenance & renewal)	Decreased safety, lower amenity and wayfinding for visitor drivers	Road marking has not previously been well delivered, leading to issues with safety and regulatory issues. The proposed programme will ensure that traffic management in our busy urban centres can be enforced and that road marking and edge marking provide a safe environment for our road users, especially those who are not used to the rural alpine conditions.
Structures (maintenance & renewal)	Bridge stock will deteriorate and maintenance and renewal costs will increase	Enable to be proactive in preventative maintenance and start to build a renewal programme
Operational traffic management	Limited demand management does not support our network capacity issues, leading to customer dissatisfaction and adding to congestion.	Assist to develop understanding of traffic movements and formulate strategies for travel demand management. Providing better information to customers to support decision making.

3.8   CONTINUOUS PROGRAMME BUDGET DEVELOPMENT

This plan signals an overall increase in the budgets for the Local Roads Maintenance Programme.

When comparing the funding application approved for 2015-18 RLTP with our request for the 2018-21 RLTP, there is actually only a 2.1% increase in local roads.   This increase looks more substantial when comparing the 2015-18 claimed amounts. This occurred when QLDC reconciled the LTP with the RLTP 2015-18, QLDC elected to go with the lower local number and hence a lower claimed rate. This was due to a new team being in place and a lack of understanding of what the network required. QLDC wanted to show that we were prepared to not over invest.

We believe that setting out the business case in this plan, supported by robust evidence, represents an important step in engaging the wider community and our business partners for the next stages.

The investment level of the Continuous Programme has been developed based on:
 ➢ Our Strategic Assessment (2.7) which indicates the impact on our network of the economic context of our market place.
 ➢ The CPI. The procurement of the new roading maintenance contract reflects market place increase. QLDC have budgeted for a CPI increases over the term of the contract, however the Contractor's option to take this increase may impact on possible contract extensions.
 ➢ Some efficiencies through an innovative contractor. Placing more responsibility and self-determination on the contractor with significant Key Performance Indicators (KPI), encourages the Contractor to deliver efficiencies through best practice. Renewals are not included in the Maintenance contract and not guaranteed to the maintenance contractor, this is seen as a motivation to do well in operations.
 ➢ Other efficiencies through a collaborative approach with the contractor using a Target Cost Contract. The new contract has seen significant savings and efficiencies achieved through moving to a Target Cost contract form and through improved collaboration with the Contractor. The combination of the Target Cost plus Provisional Sum has been less than what was paid in the last two years – and is only 9 months into the contract – after an entire year, the savings would be more substantial. NZTA do not directly see the savings as this has been absorbed through the unsubsidised expenditure.
 ➢ What the network is costing to run. Previously a large amount of costs have been unsubsidised and QLDC are reallocating to reflect actual costs. This includes reassigning work categories and a re-adjustment of what is unsubsidised and subsidised.
 ➢ Some extra funding in new categories such as making provision for emergency works and for operational maintenance shows a maturing network as traffic signals, web cams and weather stations are introduced as well as exploring CCTV for traffic counting.
 ➢ Better and increasing understanding of the network and its needs - the asset management approach is maturing and now provides more data driven escalation. Network and Asset Management is certainly under more demand and it is anticipated these costs should reduce once knowledge of the network and its demands are better understood.
 ➢ QLDC's unprecedented growth has resulted in massive physical growth and in actual demand on the network. Section Two – Strategic Assessment Rapid Growth (2.7.1) explores the issues, problems and consequences that growth brings as well as responses being undertaken and planned
 ➢ Better alignment of claims with NZTA categories. Improved transparency and better understanding of the claim process and where money should be allocated.
 ➢ A re-adjustment of where costs are allocated. This is especially seen in Network and Asset Management which now includes the contract network management costs e.g. routine inspections and patrols, joint inspections, programming, reporting, plans implementation and compliance. Previously this was allocated as a percentage split across the asset categories.
 ➢ Additional dedicated staff to track internal time with the capability to maximise subsidised money.
 ➢ A significant increase in QLDC's capability and capacity to deliver programmes to meet budgets.

The programme case aims to show that the balance of activity within the budget bid is optimal for the objectives set out in the strategic case. The following table outlines the main work categories.

Table 13 Local Road Maintenance Investment Comparison

Work category	Work Category Name	Annual average 2015-18 NLTP	Forecast Annual average 2018-21	Percentage increase
111	Sealed pavement maintenance	1,185,000	1,294,333	9.2%
112	Unsealed pavement maintenance	392,333	606,000	54.5%
113	Routine drainage maintenance	451,000	659,833	46.3%
114	Structures maintenance	121,167	168,500	39.1%
121	Environmental maintenance	1,360,000	2,065,333	51.9%
122	Traffic services maintenance	714,000	869,333	21.8%
123	Operational traffic management	-	96,087	
124	Cycle path maintenance	11,000	37,000	236.4%
131	Level crossing warning devices	-	-	
140	Minor events	-	72,150	
151	Network and asset management	1,600,667	2,072,333	29.5%
211	Unsealed road metalling	1,237,167	1,357,667	9.7%
212	Sealed road resurfacing	1,998,333	2,030,667	1.6%
213	Drainage renewals	584,333	599,000	2.5%
214	Sealed road pavement rehabilitation	895,000	1,000,333	11.8%
215	Structures component replacements	153,875	437,833	184.5%
221	Environmental renewals	-	360,000	
222	Traffic services renewals	97,600	223,083	128.6%
	Total	**10,801,475**	**13,949,487**	**29.1%**

Table 14 Local Road Maintenance Investment Comparison

Three Year Allocation Comparison	$ 2015-18 NLTP	$ 2018-21 Proposed	$ Change
Investment management	$330,000	1,455,000	1,125,000
Road safety promotion	$60,000	442,000	382,000
Walking and cycling improvements	0	21,905,250	21,905,250
Public transport	0	7,930,000	7,930,000
Maintenance and operations	17,505,500	23,822,710	6,317,210
Renewal of local roads	14,898,925	18,025,750	3,126,825
Local road improvements	17,930,883	91,071,700	73,140,817
Total	**50,725,308**	**164,652,410**	**113,927,102**
Average Annual Allocation	**16,908,436**	**54,884,137**	**37,975,701**

3.9 SUMMARIES BY NZTA FUNDING CATEGORIES – CONTINOUS PROGRAMME

Activity Class and Work Category summaries, further detail can be found in Appendix 2 - Network Management Plans. QLDC requests funding to support the activities below in recognition of the following.

Table 15 Investment Management

Work Category		Summary
002	Transport model development	Transport monitoring - In response to the dramatic growth in the District, QLDC will be ensuring that the traffic model is consistently aligned with population projections, traffic growth and network changes. Developing road safety strategies – this is a gap in understating the risk around road safety. Transport strategies and plans (including District Plan review).
003	Activity management planning improvement	QLDC is striving for maturing asset management; a key component is taking internal ownership of the activity management plan documentation. This budget contributes to inputs within the AM Plan and facilitates the on-going AM maturity into BAU. This category funds the AMP Performance Improvement plan and the update to the Road Safety Action Plan. Due to the extreme growth, QLDC has a particular focus on population projections, which are undertaken annually to validate projections in a changing environment. AM maturity and Investor Confidence Rating (ICR) assessments are also carried out annually. In addition this budget supports individual activity planning such as developing the Southern Lighting Strategy and other more local network optimisation.
004	Programme business case development	NZTA possibly utilising budget for Walking and Cycling PBC.

Table 16 Road Safety Promotion

Work Category		Summary
432	Promotion, education and advertising	QLDC works closely and aligns with NZTA System Design and Delivery and Land Transport Safety Strategy campaigns and initiatives across the region and the South Island. QLDC focuses mainly on the "at risk communities" identified by the NZTA. A variety of methods are used to communicate to target audiences, specifically: • A kiosk at the airport targeting visitor drivers; • Short advertisements at cinemas targeting young drivers; • Rear of bus advertisements and signs targeting all drivers; • Newspaper advertisements targeting locals; • Sponsoring prizes (driving lessons) at "Drive To Survive" workshops for high school students; • Winter messages on window ice scrapers.

Table 17 Local Roads Maintenance

Work Category		Summary
111	Sealed pavement maintenance	Working closely with Downer in the new maintenance contract to improve programming and develop a robust Maintenance Management Plan (MMP) which is closely linked to the FWP. Utilising Downer's Information Management Maintenance System (IMMS) and collaboratively developing MMP specific to our contract and network. Following NZTA's RAPT process has supported this move. There has been a conscious increase in preventative / proactive maintenance; the programme of crack sealing, seal patching has substantially increased over last couple of years. Better focus has also been placed ensuring patch repairs have second coats. QLDC are applying a strategy of increased heavy maintenance regime to prolonging asset life. There are concerns that this is not working in extreme parts of the network, but is successful as a whole.

Work Category	Summary
	Historically underspent in 111 as budget has been required to support the Environmental Maintenance. This has been corrected

Increased focus on drainage maintenance and renewals 113 because QLDC believe that addressing drainage deficiencies in our network will lead to longer achieved pavement and surface lives. |
| 112 Unsealed pavement maintenance | Dust suppression is an emerging issue in QLDC, we are developing a strategy on how to manage this issue. Exploring treatment selection and options.

QLDC has some extremely difficult areas of unsealed roads with limited access to good AP40M4 metal, Vonn Rd and Skippers Rd which are isolated and narrow restricting machinery size. Availability of aggregate pits and ownership/maintenance of consents are ongoing issues (QLDC, Ministry of Primary Industries (MPI) and ORC). |
| 113 Routine drainage maintenance | Current levels of funding sufficient. This may change once the renewals programme has been developed.

Mud tank clearance has been removed from roading contract into the 3-Waters contract to Veolia. The reasoning is that Veolia monitor the overland flowpath which then went to into the mudtanks for Downer to manage, then back to Veolia's management once through the pipe. This gives Veolia oversight of the whole process and they have the incentive to empty correctly. |
| 114 Structures maintenance | Robust structures inspection programme in accordance with NZTA S6 2015. Maintenance is undertaken under the Road Maintenance Contract (who also undertake visual inspections). Some issues in procuring hardwood members and decking planks. Emerging issue is to look at proactive / preventative maintenance – steel members (painting over waterways (ORC consent issues) i.e. water blast/sand blast are not within current budget scope

Lack of completeness around ownership of minor structures in the road reserve, i.e. retaining walls, access bridges.

Increased liability on structural engineering for retaining walls. Issues around cattle stop cleaning. |
| 121 Environmental maintenance | **Winter maintenance**

Key factor in the district as major factor in supporting local economy through resilience and safety.

Crucial to understand environmental assumptions (Strategic Assessment section 2.7.2). Largest proportion of 121 is on winter maintenance. Peer group benchmarking shows QLDC as a high cost TLA however when the comparisons look at environmental conditions this is not so extreme. When looking at high cost winters, this is directly related to number of frost days recorded by NIWA.

New contract KPI which is based on type of winter assists with delivery and target cost in a difficult situation.

Cost of CMA is increasing as explore reduced grit usage. QLDC are developing knowledge and use of technology such as investing in Crown Range weather station.

Vegetation management

Important element in customer safety and visibility of hazards. New contract has new sub-contractor. Increased focus on data collection and management

Exploring potential move of urban vegetation management to Parks & Reserves Contract. Community feedback has shown a desire to increase LoS in regards to urban and rural road side litter removal. |
| 122 Traffic services maintenance | Impact of line marking from winter maintenance especially gritting. New contract is exploring roading marking data is being reviewed, processes developed to capture existing data and new.

Currently re-marking urban and all arterials bi-annually and remaining network annually. This is not achieving the required standards. |

Work Category	Summary
	Lighting - engaging new contractor in collaboration with NZTA and CODC in terms of procurement and management
	LED upgrade programme is looking for efficiencies in lighting maintenance.
	Disparate and bespoke lighting infrastructure leads to maintenance issues i.e. bollards are extremely difficult to replace and wide variety of street lighting poles and luminaires – new strategy should alleviate this going forward
	New energy contract signed in 2017 along with impact of LED programme on power costs – expect progressive reduction as transition to LED.
	Signage and safety around schools (MOE) active signage i.e. Remarkables School is consented for 700 pupils but is now at 900. Roads are not designed for this i.e. pickups/buses
123 Operational traffic management	New category for QLDC shows a maturing network as traffic signals, web cams and weather stations are introduced as well as exploring CCTV for traffic counting. New development at Five Mile will see the introduction of the first local road traffic signals.
124 Cycle path maintenance	Years 2 & 3 will increase due to more maintenance requirements as the Walking and Cycling strategies develop and as we see modal shift transition occurs. Transition of Kawarau Falls Bridge to QLDC may influence this.
140 Minor events	Following advice from NZTA QLDC are making provision for up to one event. I thought there were 17 events mentioned
141 Emergency works	Potential request for new unsub budget for high wind events – awaiting feedback from NZTA.
151 Network and asset management	Instability of staff, lack of continuity and longevity, more reliant on data rather than craft/internal knowledge. Understanding a network with so much growth and complexity. Diverse customer base with such a large international and domestic visitor base. Unpredictable network, in spot light, pressure to respond to change and new ideas from politicians and local businesses, e.g. investment in foam stabilised bitumen treatments.
	QLDC has been focusing on developing data, systems, people and processes to build evidence based understanding of our network, from physical defects to understanding our outcomes. Data collection has been enhanced and 2017 was the second year of collecting HSD. This HSD is now being used for multiple activities showing good value for money. Two years of survey enables deterioration curves to be used in dTIMs and for drainage renewals. Geometry being used to review no passing lane marking and curve warning signs as well as asset data updates for signs and lines. Monitoring and moving into analysis.
	Perpetual turnover of staff in the past has led to a lack of continuity and longevity with a material reduction in corporate knowledge and the over reliance on consultants. While it is unlikely there will be a huge change in the demographic and transient nature of staff, to counter this at a corporate level, QLDC are trying to retain staff by becoming a more attractive employer and to develop and document processes, focus on data and systems rather than a reliance on internal knowledge and craft.
	Exploration of analysis tools such as ENP and Qrious data.
	Annual surveys for Parking Occupancy and BlipTrack travel time reliability.
	EL Capo, Promap, organisation maturing to be more process driven.
	Contract costs – the procurement of the new roading maintenance contract reflects market place increases. Commenced October 2016. Refer to procurement Section 5. A re-adjustment of where costs are allocated now includes the contract network management costs such as routine inspections and patrols, joint inspections, programming, reporting, plans implementation and compliance. Previously this was allocated as a percentage split across the asset categories.
	Business unit charges - Service level Agreement
	For recovering internal time now have a signed Professional Services and an agreed multiplier. Costs are calculated on a timesheet system. Historically were not capturing /recovery. Now more robust internal systems for time sheeting.

Work Category		Summary
211	Unsealed road metalling	Metalling, grading, dust suppression. Otta seal, need to develop treatment strategy for Otta sealing come to end of life. Downer working on 3 -10 year metalling programme. Annual condition assessment of all unsealed assets to better predict and understand useful life of running course. Currently QLDC does not allocate budget for unsealed pavement renewals therefore this may affect the metaling programme

Roads are monitored by the maintenance contractor through grading regime and customer complaints. |
| 212 | Sealed road resurfacing | QLDC had some high renewals rates around 2011-13. Although this was filling a previous under investment there has been a lot of criticism around this. For the last couple of years QLDC have been developing dTIMs (collecting data, understanding deterioration and treatment selection better) and working closely with NZTA RAPT tours, building internal capability. This has led to a reduction down to about baseline of 6%, QLDC need to understand if this is sustainable, potentially not reflective of long-term expectation – all being monitored. There has been a big effort to improve data inputs and processes. High Speed data, SCRIM, FWD, surface defects (Downer All faults). Developing processes, drawing on NZTA RAPT process, utilising the Downer IMMS to identify gaps in process and how to fill those gaps. Developing use/skills in Juno viewer for analysis and field validation. Bettor focus on tackling birthday seals.

Developing in house ownership of the FWP process – less reliance on professional services. Plans to develop further with a new Asset Engineer role. |

Table 18 Local Roads Maintenance/Renewals

Work Category		Summary
213	Drainage renewals	QLDC is taking a holistic approach to drainage and surfacing road renewals.

QLDC has traditionally been very reactive in terms of drainage renewals and are now developing a FWP approach to drainage. This consists of an asset data review, taking a treatment length (TLs) approach to the drainage asset which allows a more targeted treatment programme.   These TLs will be condition rated and will undergo an algorithm which assesses the environment (rainfall, soil type) and various defect data (all faults, MSD and HSD deterioration curves). Prioritisation will look at risk and consequences, using ONRC, pavement classification groups.

QLDC are trying to develop annual length of drainage renewals. Local SH are around 7% in Southland and 3-4% for Central Otago so QLDC is likely to sit somewhere in the middle.

Drainage condition rating (initially culverts, but developing side drains) to better inform renewals programme. Historically some culverts were undersized. |
| 214 | Sealed road pavement rehabilitation | Reduction over last few years, need to ensure is sustainable, currently on a 50 year return basis which base preservation 2%.

Developing better rehab programmes through an improved dTIMs (network FWDs and MSD) data is enabling a better understanding of pavement strength. Working with Geosolve and Opus to align and improve dTIMs and Geosolve model. |
| 215 | Structures component replacements | Robust inspection programme for structures, however this has not previously driven renewals. This is a key risk and we are working to develop it. Increased focus required for minor structures e.g. guardrails where we are seeing increased level of strikes to guard railing – repair/replace not within current budget scope. Current issue with the majority of guard railing on Crown Range requiring lifting/re-founding.

Potentially some issues with cattle stop renewals. |
| 221 | Environmental Renewals | Renewal of catch fences provided for protection of the carriageway that portion off the road devoted particularly to the use of travelling vehicles, including shoulders that portion of the carriageway outside the traffic lanes. . From slip material. Renewal of any special treatment of run-off from the road to maintain water quality.

This is an emerging issue due to NPS Freshwater Management. |
| 222 | Traffic services renewals | Better understanding of roading asset will ensure audit of renewals are value for money. |

Work Category	Summary
	Sign replacement manufacturers recommended every 7 years (intense UV in District).
	Majority of lighting within the District does not meet current specification. Focus has been on LED upgrades and data collection to better inform future renewals programme.

IMPROVEMENTS - PROGRAMME BUSINESS CASE

3.10 INTRODUCTION

The Improvement Programme Business Case reflects the proactive approach QLDC is taking to address a step change in the LoS bought about by the rapid level growth. The evidence demonstrated in this BCA AMP, and within strategies and business cases shows how the implementation and delivery of this programme will bring transformative change to the transportation system in the District.   These programmes show how QLDC and investment partners are aligning to meet NZTA's Long Term Strategic View and to support the objectives of the GPS for Transport.

The district's historically reactive approach to transport planning has allowed land use to lead infrastructure development to address growth rather than a forward thinking, integrated programme of planned infrastructure leading the direction and locations of development and land use change.

QLDC historically had a large number of strategies and in addition was an early adopter of utilising the Treasury Business Case framework.   This labyrinth of documentation had resulted in a complex and disjointed number of documents, strategies, strategic cases and programmes. As QLDC develops as an innovator in infrastructure planning, it is taking active steps to integrate the planning approach to achieve an effectively integrated, multi-modal transport network that reflects a step change in the LoS the customer experiences.

The QLDC TASF as discussed in Section Two identifies the Improvement Programmes and business cases which are in progress (approved by NZTA) or currently being developed or identified as a future strategic programme. This framework also includes BBCs not being driven/owned by QLDC in order to show the extent of the works occurring in the district by various stakeholders.

The District's strategic transport needs were reviewed in 2014, and this produced a suite of strategies (Strategic Business Cases). These have changed since their original configuration and are now reflected in Figure 98. These changes are accompanied by the formation of a strategic partnership designed to optimise the efficiency in the forward planning transport projects. Partners with QLDC are currently NZTA, ORC and QAC.

Figure 98 QLDC Transport Strategy Review Strategic Case
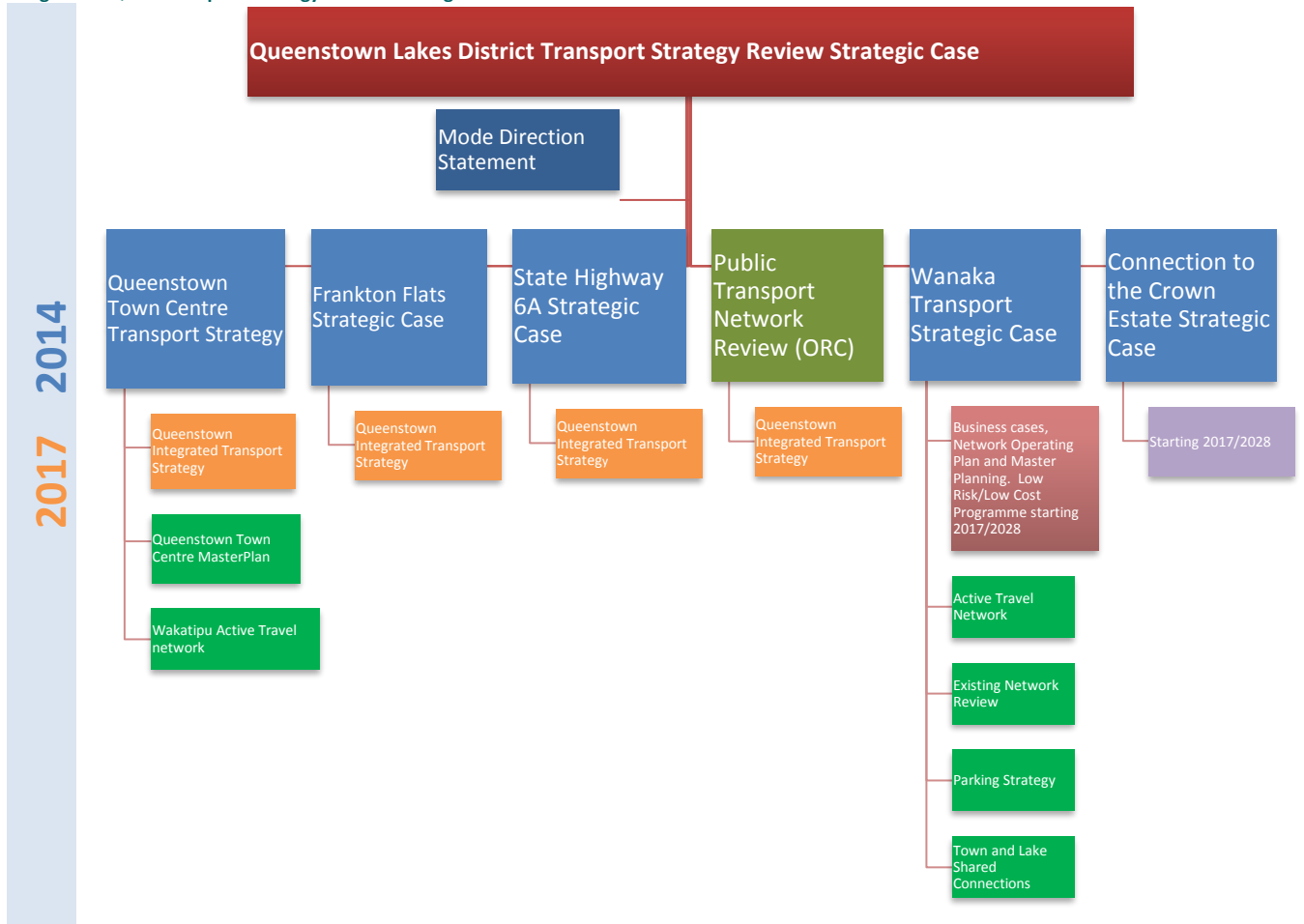
4.10.1 Queenstown Focus

QLDC's strategic focus has been to work with these transport partners. There has been a significant overlap with projects considered under the Queenstown Town Centre Transport Strategy, State Highway 6A, Frankton Flats and the Regional Council's Public Transport Network Review. Whilst initiating a combined approach in the town centre that integrates livability, transport and property projects into a spatial framework under the Queenstown Master Plan.

Due to the success of the Queenstown Master Plan process, it is intended to replicate this process in other areas including Frankton.

4.10.2 Wanaka Focus

Although Wanaka does not yet have the problems of Queenstown, there is a growing awareness that it is also undergoing massive growth. QLDC and the Community want to ensure that challenges are addressed before they become problems. The transport system needs to support economic growth and ensure Wanaka provides an attractive, healthy, safe and sustainable environment for residents and visitors. With a population (6,471 in 2013) expected to double over next 15 years, there is limited public transport, heavy reliance on cars, an increasingly disconnected roading network and with growing economic importance from visitors/tourists, QLDC are focusing on forwarding planning and intends to replicate the master planning approach used in Queenstown supported by a Network operating Framework and Plan.

4.10.3 Emerging Communities

The strategies for the District's smaller townships and their transport needs will be developed through a business case. QLDC consider it important that these townships are connected and integrated fully into the district through multimodal networks.

4.10.4 Holistic Capital Works Programme - Delivery

Over the next 10 years and beyond, QLDC is facing its largest and compounding complex infrastructure capital works programme. The issues described in this BCA AMP are relevant across all infrastructure portfolios and include:

- $200 million to bring water supply quality up to standard over the next 10 years;
- $10 million for increased wastewater treatment capacity;
- Delivery of HIF;
- Internal projects such as Project Connect (one Council building).

The immensity of the programme places immense pressure on QLDC from a financial perspective and a capacity to deliver as well as coordinating with external agencies and stakeholders, e.g. NZTA, ORC, QAC. Pressure may also be placed on the regional ability to deliver not just the QLDC programmes, but a carry on impact in neighbouring areas.

QLDC are exploring options and mechanisms to address around the risk of capacity to deliver intended programmes.

- Approaching the supply chain early in the procurement process to find the most appropriate method to get the best value for projects. I.e. packages of works and timings.
- Grouping similar projects together to incentivise the supply chain by increasing potential value. i.e. a programme around multiple 3-waters reservoirs
- Reviewing the Build, Operate, Manage, Transfer models
- Maximising good rates by having longer contract periods and potential extensions.

From a transport perspective the first 3 years of the LTP will be focused on enablers to facilitate delivery such as consents, land purchase and scoping and design.

QLDC are planning and prioritising delivery of the HIF programme to build a skill set and internal capacity to ensure productivity and skill is available for delivering the bigger items on the QITS programme.

3.11 IMPROVEMENT PROGRAMME OVERVIEW

Table 19 Queenstown Integrated Transport Strategy (QITS)

Queenstown Integrated Transport Strategy (QITS)	
The QITPBC grew out of a review of the Wakatipu Transportation Strategy 2007 begun in late 2013. There was a need to consolidate multiple business cases underway, including in Frankton and Queenstown Town Centre, and to provide confidence to investors that the transport programmes of the investment partners and other activities are closely aligned. As well as providing the programme business case, the QITPBC provides QLDC with a strategic direction for the Queenstown and Frankton town centre.	
Problem	The scale and magnitude of the problems facing the Queenstown and Frankton area, requires the careful integration and alignment between respective agencies to ensure funding acquisition to successfully deliver the programme and investment objectives. Key Problems: - The significant growth in visitors, residents and vehicles, leads to increasing trip unreliability and worsening customer experience across the network (67%) - Car dominance and associated congestion is affecting the liveability and attractiveness of the area (33%)
Benefit	The main benefits of QITPBC relate to improved network performance and customer levels of service for all travel options, as well as improved liveability and visitor experience. Investors and stakeholders have identified Key Performance Indicators which can be tracked to monitor progress. Key Benefits: - Improved network performance and customer experience for all modes - Improved liveability and visitor experience

Queenstown Integrated Transport Strategy (QITS)	
Recommended Programme	The recommended programme seeks to address problems through a mix of infrastructure, public transport and behavior change measures. Key activities include: ➢ Making public transport an attractive and viable alternative to the private car through improvements to service provision and the introduction of bus priority, park and ride and a Mass Rapid Transit corridor between Queenstown and Frankton exploring options such as light rail, gondola ➢ Altering cost, provision and management of parking across the area to support the goals of reducing private vehicle usage, and encouraging greater use of public transport ➢ Completing key infrastructure projects for vehicular and active modes, including a new town centre arterial to facilitate economic growth, better provision for public transport and access for pedestrians, and removing unnecessary vehicle movements in the most congested areas of the town centre ➢ Exploring Mass Rapid Transport options such as light rail, gondola

Figure 99 Queenstown Integrated Transport Strategy Study Area

Table 20 Queenstown Master Plan

Queenstown Town Centre Masterplan
The Queenstown Lakes District Council is leading a multi-disciplinary team to identify and address the challenges facing the Town Centre through the development of a Masterplan that will coordinate a set of integrated projects to achieve this vision: *"Supporting a thriving heart to Queenstown, now and into the future".* The Town Centre Masterplan Programme brings together a set of other business cases to describe an integrated investment story. These town centre business cases and frameworks are focused on: • Town Centre Arterial Routes. • Public and Passenger Transport Facilities. • Parking. • Spatial Framework and Public Realm. • Community and Civic Facilities.

Queenstown Town Centre Masterplan

Problem	ILM Problems: ➤ Limited cultural & historic references, ad hoc development & poor maintenance undermines both the aesthetic appeal, and people's experience, of the town centre -35%. ➤ As the town rapidly grows, town centre amenities increasingly focus on visitors, thus undermining the feeling of authenticity, and locals' sense of belonging - 20%. ➤ Limited options to easily access the town centre across a range of transport modes is creating congestion & frustration for visitors, & stopping residents coming to town - 35%. ➤ Unconstrained growth in visitor numbers is placing demands on town infrastructure, with negative flow-on impacts on locals and the environment - 10%.
Benefit	ILM Benefits: ➤ People enjoy spending time in town, because the built environment complements the natural environment, referencing local history & culture - 30%. ➤ Queenstown has a liveable, thriving & authentically NZ town centre, where visitors and locals freely mix 25%. ➤ Improved access to the town centre for all - 30%. ➤ Increased commercial activity, without major negative impact on the environment or residents' enjoyment - 15%.
Recommended Programme	Here is a brief summary of what the preferred programme can deliver: ➤ New town centre arterials from Melbourne Street to One Mile Roundabout, which enables the town centre to grow, public and passenger transport to have better access and town centre parking to be developed around the town centre fringes. ➤ Improved parking supply and management through the introduction of new parking buildings on the town centre fringes, expansion of the town centre paid parking area, development of new park and ride facilities, introduction of parking management technology and demand management to optimise occupancy levels. This project supports greater uptake of public transport. ➤ A new 6-8 bay public transport hub on Stanley Street, which supports the growth in bus services and forecast passenger increases, while supporting improved arrangements for passenger transport (which includes coaches, tourist operations and taxis). ➤ Development of wharf facilities to support waterborne transport. ➤ A programme of public realm improvements that aim to enhance the visitor and local experience in the town centre through enhancing streets and lanes, improving connections between attractions and celebrating Queenstown's unique heritage and culture. ➤ Introduction of technology to better manage and connect people with public transport and parking options. ➤ Improved walking and cycling routes and facilities in the town centre, supporting the uptake of active transport and integrating with wider networks. ➤ Marketing communications campaigns to better educate people on transport options.

The Improvement Programme will also see a review of the existing Wanaka Transport Strategy and will use the valuable insights used in the Wakatipu focused strategies. Other programmes of work and projects will materialise through the BBC process, and linking them to higher strategic cases will ensure they are robust and interrelated. New areas for strategies will be explored, to capture transport networks that are more District wide, and these will build on the existing strategies.

Table 21 Wanaka Transport Strategy

Wanaka Transport Strategy	
	The Wanaka Transport Strategy will be reviewed on a three yearly basis, starting in 2018 / 2019 - as background evidence on the economic and development growth is being collected and monitored.
Problem	Key Problems: ➢ Increasing transport demand from residents and visitors are leading to parts of the network increasingly not being fit for purpose (45%) ➢ Conflicting expectations of residents and visitors of the transport network will increasingly lead to negative experiences for users (35%) ➢ Key tourist routes are vulnerable to road closures which impacts on visitor numbers to Wanaka (20%)
Benefit	Key Benefits: ➢ Improved user experience of transport network ➢ Increased safety ➢ Improved reliability of key tourist routes
Recommended Programme	The Wanaka Transport Strategy is currently proceeding with lower level projects, being a mixture of business cases and the Minor Improvements Programme. Key themes will be: ➢ A review of the existing road network (to ensure that imminent growth is catered for) ➢ Parking strategy ➢ Active travel network ➢ Town Centre shared space and connections to and along the lakefront
Funding	QLDC is currently seeking approval for the Wanaka Transport Strategy, as of August 2017 NZTA have not approved a PBC for Wanaka. QLDC intends to fund a number of smaller projects under the Low Risk/Low Cost category. QLDC are intending to undertake a Network Operating Plan which will feed into a Wanaka Masterplan of which a PBC would then develop.

Table 22 Connection to Crown Estate

Connection to Crown Estate	
	An anticipated strategy to address the access to the Crown Estate has been held in abeyance, following indications from key stakeholders that a situational change was imminent. This will be reviewed in 2017 / 2018 and either progressed or removed from the programme.
Problem	Key Problems: ➢ Connection to the Crown Estate is an essential part of the tourism activity as volumes of visitors increase. Unavailability or safety issues impact adversely on tourism and the New Zealand economy ➢ The Council receives no rates income from the Crown Estate (the National Park) that is generating much of the traffic that is using these roads. The roads themselves are largely unsealed, making them unsuitable for growing traffic volumes and visitors who are used to driving only on sealed roads

The focus of these transport strategies is to address the identified problems within each strategic area, in an integrated manner. Key activities in the Queenstown Integrated Transport Strategy, being the most significant joint programme, are indicative of the intended direction (paraphrased):

➢ Making public transport an attractive and viable alternative to the private car through improvements to service provision, and the introduction of bus priority, park and ride.

➢ Altering cost, provision and management of parking across the (geographic) area to support the goals of reducing private vehicle usage, and encouraging greater use of public transport.

➢ Completing key infrastructure projects for vehicular and active modes, better provision for public transport, access for pedestrians (and cyclists) and removing unnecessary vehicle movements in the most congested areas.

Looking forward, as future strategies are identified or reviewed, QLDC will strive to look for innovative approaches, and will acknowledge and provide for new technologies and behaviours as they emerge. QLDC is committed to being an innovator in its transport planning approach. New improvement projects on the horizon are:

Table 23 Alternate Routes and Crossings Strategy

Alternate Routes and Crossings Strategy
➢ Is intended to identify those alternative routes to our existing main arterials and the choke points that exist.   ➢ This work will re-examine or investigate alternatives to the State Highway 6A corridor and other opportunities on the four main approaches, from Kingston, Cromwell, Glenorchy and by water.   ➢ Simultaneously we need to consider whether we will need additional crossing points, bridges or tunnels, or new locations for these over the next 10 to 30 years.   ➢ The idea is to plan as far ahead as possible, including possible early designations.

Table 24 Emerging Communities

Emerging Communities
➢ Will look at the District's smaller townships and their transport needs. Glenorchy, Kingston, Cardrona are examples of where we need to consider networks for all modes so that they are truly integrated into the District.

Table 25 Improved Transport Links to Conservation Areas

Improved Transport Links to Conservation Areas
➢ The Department of Conservation has a desire to promote their lesser, well used areas, balanced with a need not to over populate them or reduce the "wilderness" experience by providing sealed roads too far.

Table 26 Wanaka Airport Master Plan

Wanaka Airport Master Plan
➢ QLDC is entering into a long term lease and management arrangement with QAC, which is a council controlled trading organisation. The lease will be structured to incentivise investment by QAC in Wanaka Airport to enable the Airport to meet the projected growth in the District's air services over the next decade or longer. QAC are in the process of developing a Master Plan and Strategy to meet the rapidly developing needs of the community, tourism operators, scheduled airlines and the Wanaka Warbirds airshow and museum.

Table 27 Active Travel Network

Active Travel Network
➢ QLDC approach to active travel is covered in a number of existing strategies and PBC's. Wakatipu – active links within the QT Town Centre and Frankton are being introduced through the QITPBC. Links to more satellite area such as Jacks Point will be addressed separately.   ➢ Wanaka –has a large community focus and input. Active links will be addressed through the Network Operating Plan, the Master Plan and through the low risk/low cost programme.

3.12 SUMMARIES BY NZTA FUNDING CATEGORIES - IMPROVEMENTS

Table 28 Road Improvement

	Work Category	Summary
321	New traffic management facilities	Explore potential to procure VMS boards i.e. Gorge Road, Malaghans Road. QITS and Queenstown Master Plan utilising ITS technologies through an Operations Centre.
322	Replacement of bridges and other structures	Looking at the options for addressing growth demands on Edith Cavell Bridge, Precipice Creek Bridge, Narrows Half Bridge and possibly pedestrian bridges to support active modes. To be developed.
323	New roads	Items with the QITS programme and HIF. To be developed.
324	Road improvements	Items with the QITS programme and HIF. To be developed.
332	Property purchase - local roads	Items with the QITS programme and HIF. To be developed.
341	Low Risk/Low Cost	QLDC has a robust internal policy and prioritisation process for Low Cost/Low Risk improvement projects. All potential projects are entered into a user defined table in RAMM, given a weighted score and ranked. (See appendix for Policy). Projects are identified through various means including Requests for Service. The Wanaka Community Board contributes to developing the Wanaka ward programme in accordance with the Policy. Larger projects in 2016/17 programme have included the Crown Range webcam & weather station, Mt Roy's carpark Road Safety improvements – particularly supporting the visitor driving programme and addressing minor deficiencies in safety and lighting Bigger projects include Bennett's Bluff, seal widening Kane Road Associated improvements with rehabs Supports strategic implementation, where approval has not been granted for a programme business case e.g. Wanaka Transport Strategy, the Low Risk/Low Cost category will support these improvements. NZTA's project cost amendment moving from $300K to $1M will enable QLDC to maximise the improvements utilising this activity. QLDC acknowledges the risk of a potentially disjointed programme and intends to work with NZTA and the community to align strategy and implementation.
357	Resilience improvements	Dangerous trees –work in stage two being worked through. Further studies required. Rees Bridge Explore potential land stability issues above and below the Crown Range Road. Monitoring of known geological faults and slips i.e. Bennett's Bluff, James Road Boulder Bank

Table 29 Walking and Cycling

	Work Category	Summary
451	Walking facilities	Strategies and programmes developed through the Improvement programme
452	Cycling facilities	Strategies and programmes developed through the Improvement programme

Table 30 Public Transport

	Work Category	Summary
531	Public transport infrastructure, major renewals and minor improvements	• Water Taxi /Ferry Infrastructure and • Park and Ride facilities

Table 31 New Traffic Management Facilities

	Work Category	Summary
321	New traffic	QITS and Queenstown Town Centre Master Planning are developing a

| management facilities | instigating an Intelligent Transport System (ITS) |

3.13 OVERALL IMPROVEMENT PROGRAMME FOR 2018/21

The tables below represents the submission made to the RLTP as of November 2017. There are currently a large number of revisions occurring due to ongoing refinement and integration of this programme. This will be updated when the programme has been adopted.

The following tables (as titled in the Proposed variations of the Otago Southland Land Transport Plans 2015-2021 (full document)) includes projects put forward by QLDC, and also those form NZTA and ORC which involve the Queenstown lakes district.

Table J Transport Planning Projects – Otago, Activity Class 1

Item No	Organisation Name	Project Name	Project Description and Objective	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
8	ORC	Otago Regional Public Transport Plan 2018 - 21	A statutory plan required by the LTMA. A review of the 2014 RPTP as a result of the release of the 2015-18 RLTP, and preparation of a new one in 2017. We will: comply with the requirements of the LTMA, transition bus services to PTOM, optimise bus services in the Wakatipu Basin to ensure value for money, efficiency and effectiveness of this public transport network.	2015	2024	$1,415,469	$156,924	$87,079	$171,396	N/a	N/a
9	ORC	Regional Land Transport Planning Management 2018-21	Develop, deliver and manage the Regional Land Transport Programme, including (1) investigating key strategic issues and developing investment priorities, including completion of the Otago Southland road safety strategy, (2) monitoring implementation of the RLTP and regions' road safety strategy through aggregation and analysis of data, (3) liaison with approved organisations about implementing the RLTP and regions' road safety strategy, and (4) responding to any requests to vary the RLTP.	2018	2028	$4,888,433	$378,741	$400,000	$429,500	N/a	N/a
11	ORC	Regional Public Transport Planning	Ongoing review requirements of the Regional Public Transport Plan	2018	2027	$1,348,828	$147,522	$119,429	$147,953	N/a	N/a
13	QLDC	Crown Estate Programme Business Case	Crown Estate Programme Business Case	2019	2019	$200,000	$0	$200,000	$0	N/a	N/a
14	QLDC	Queenstown Alternate Routes & Crossings Programme Business	Investigation into Wakatipu Alternate Routes and Crossings; improved network performance and levels of service for all travel options including improved liveability and visitor experience	2018	2018	$200,000	$200,000	$0	$0	N/a	N/a
15	QLDC	Queenstown Integrated Transport PBC	Queenstown Integrated Transport PBC	2018	2018	$300,000	$300,000	$0	$0	N/a	N/a

Item No	Organisation Name	Project Name	Project Description and Objective	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
16	QLDC	Road Safety Action Plans	On-going management & development of the transport activity management road safety action plan.	2018	2020	$100,000	$50,000	$25,000	$25,000	N/a	N/a
17	QLDC	Transport Modelling	Transport monitoring - In response to the dramatic growth in the District, QLDC will be ensuring that the traffic model is consistently aligned with population projections, traffic growth and network changes. This includes developing multi modal options.	2018	2020	$120,000	$40,000	$40,000	$40,000	N/a	N/a
18	QLDC	Wanaka Integrated Transport PBC	Reviewing network connections and movements through the town and surrounding areas to optimise transport efficiency and multi modal options. Includes reviewing origin and destinations of key tourist routes, key links with SH, town centre e.g. Haast, Crown Range and Wanaka Airport.	2020	2020	$400,000	$0	$0	$400,000	N/a	N/a

Table K Road Safety Projects – Otago, Activity Class 2 - Road Safety

Item No	Organisation Name	Project Name	Project Description and Objective	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
24	QLDC	Road Safety Promotion 2018-21	To reduce the likelihood of crashes occurring and the consequences if they do and to ensure our future road users are safe.	2018	2020	$442,000	$144,000	$148,000	$150,000	N/a	N/a

Table L Walking and cycling – Otago, Activity Class 3

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
29	NZTA	Wakatipu Walking/Cycling Network Improvements	Walking and cycling facilities adjacent to SH6 including improvements to connections for residential areas of Shotover Country/Lake Hayes estate, Jacks Point/Henley Downs and the Wakatipu trails. Upgrading of the existing Frankton track connecting Frankton to Queenstown as a safe alternative to SH6A on road cycling	2018	2018	$11,286,000	$0	$0	$5,643,000		N/a
				2019	2019	$513,000	$513,000	$0	$0		N/a
				2020	2020	$513,000	$0	$513,000	$0		N/a
				2018	2026	$820,800	$0	$0	$820,800		N/a
30	QLDC	Queenstown Town Centre Pedestrianisation	Queenstown Town Centre Pedestrianisation	2018	2027	$3,632,000	$0	$1,044,000	$0		N/a
				2018	2022	$37,142,000	$3,896,000	$0	$9,191,000		N/a
31	QLDC	Wakatipu Active Travel Network	Walking and cycling facilities including improvements to connections for residental areas of Shotover Country/Lake Hayes estate, Jacks Point/Henley Downs and the Wakatipu trails.	2019	2023	$1,738,000	$842,000	$84,000	$216,000		N/a
				2018	2018	$17,207,000	$0	$6,574,000	$58,250	$	N/a

Table M Public Transport Services – Otago, Activity Class 4

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
32	NZTA	SH6 Park and Ride Facilities	The Queenstown Integrated Transport PBC has identified park and ride facilities as being complimentary to the transport improvements in the Wakatipu basin. These will need to be located adjacent to new areas of residental development where servicing the entire area by public transport is inefficent.	2018	2018	$513,000	$513,000	$0	$0		N/a
				2019	2019	$513,000	$0	$513,000	$0		N/a
				2020	2021	$7,592,400	$0	$0	$3,796,200		N/a

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
33	ORC	Low cost / low risk improvements 2018-21		2018	2020	$4,378,184	$1,516,592	$1,825,796	$1,035,796		N/a
35	ORC	Public Transport Infrastructure Improvements	This is part of the programme business case for the preferred programme of improvements.	2018	2020	$31,735,120	$10,000,700	$10,607,916	$11,126,504		1
36	ORC	Public Transport Programme 2018-21	The operation of the Public Transport Networks defined in the regional Public Transport Plan 2014 and its addenda.	2018	2020	$0	$0	$0	$0	N/a	1
				2018	2020	$1,815,731	$630,051	$591,694	$593,986	N/a	1
				2018	2020	$0	$0	$0	$0		1
				2018	2020	$2,978,524	$991,553	$992,519	$994,452		1
				2018	2020	$200,330	$66,690	$66,755	$66,885		1
				2018	2020	$708,860	$235,980	$236,210	$236,670		1
				2018	2020	$5,471,867	$1,771,975	$1,848,147	$1,851,745		1
37	ORC	Public Transport Programme of Improvements	This is part of a Programme Business Case. RLTP Objective 4.6	2016	2024	$25,684,301	$1,633,768	$3,533,994	$3,331,403	N/a	1
38	ORC	Wakatipu Basin Public Transport	Part of a programme business case	2017	2020	$9,694,188	$2,639,835	$2,556,986	$2,386,549	N/a	1
39	ORC	Wakatipu Public Transport Further - Small Ferry Service	Queenstown Integrated Programme Business Case	2018	2027	$13,560,000	$60,000	$1,200,000	$1,200,000	N/a	1
40	ORC	Wakatipu Public Transport Hub Imp Support	Improved customer experience and attractiveness of Public Transport	2020	2021	$1,500,000	$0	$0	$750,000		1

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
41	QLDC	PT Improvements Stage Two - Hubs	A new Public and Passenger Transport hub in Queenstown Town Centre, nominally on Stanley Street.	2021	2021	$1,787,347	$0	$5,225,000	$0		N/a
			A new Public and Passenger Transport hub in Queenstown Town Centre, nominally on Stanley Street.	2022	2022	$17,175,000	$0	$0	$0		N/a
42	QLDC	Park and Ride Transport Services	The provision of parking facilities at appropriate locations. Connecting to major PT Hubs Queenstown and Frankton, located at Arrow Junction and Jacks Point.	2018	2018	$300,000	$300,000	$0	$0		N/a
			The provision of parking facilities at appropriate locations. Connecting to major PT Hubs Queenstown and Frankton, located at Arrow Junction and Jacks Point.	2019	2021	$2,700,000	$0	$1,000,000	$1,000,000		N/a
43	QLDC	Water taxi service/ferry network	Investigation and implementation of water based infrastructure to support water transport.	2018	2024	$4,635,000	$100,000	$0	$0		N/a
				2020	2023	$1,064,000	$0	$0	$305,000		N/a

Table N Maintenance and Operations of Local Roads – Otago, Activity Class 8

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
49	QLDC	Maintenance, Operations and Renewals Programme 2018-21	The Local Roads Maintenance Programme looks to support delivery of transport services to QLDC customers whilst providing for unprecedented growth and demand. QLDC must build data and systems to better understand the challenges of the district and look to optimise network management through application of best practice and considering growth predictions in all activities and providing a value for money service.	2018	2020	$33,517,500	$10,667,500	$11,003,600	$11,687,250	N/a	N/a
				2018	2020	$4,704,510	$1,370,420	$1,706,920	$1,483,470	N/a	N/a
				2018	2020	$4,073,000	$1,854,000	$1,062,750	$1,012,550	N/a	N/a

Table P Local Roads Improvements – Otago, Activity Class 12

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
61	QLDC	Ballantyne Road Seal extensions	Ballantyne Road Seal extensions	2018	2018	$2,100,000	$2,100,000	$0	$0		1
62	QLDC	Crown Estate access Glenorchy Roads	Crown Estate Access Glenorchy Roads	2020	2020	$300,000	$0	$0	$300,000		N/a
63	QLDC	Crown Estate access Mt Aspiring	Crown Estate Access Mt Aspiring	2020	2020	$100,000	$0	$0	$100,000		N/a
64	QLDC	HIF - Ladies Mile	Housing Infrastructure Fund. The proposed Ladies Mile residential development is located east of Frankton along both sides of Ladies Mile (SH6) between the Shotover River and Lake Hayes.Access improvement from State Highway	2018	2018	$500,000	$500,000	$0	$0		1
				2021	2021	$5,600,000	$0	$1,400,000	$4,200,000		
65	QLDC	HIF Quail Rise to Hawthorne Drive	Housing Infrastructure Fund. The Quail Rise South project borders the existing Quail Rise residential development and SH6. The road will link Ferry Hill Drive to the roundabout at the intersection of SH6 and Hawthorne Drive.	2018	2018	$600,000	$600,000	$0	$0		1
				2019	2019	$400,000	$400,000	$0	$0		
				2021	2022	$6,600,000	$0	$1,600,000	$5,000,000		
66	QLDC	Improvements to existing road network - Lakeview development	Optimise existing transport links and multi modal accessibility to town centre	2020	2020	$415,000	$185,000	$230,000	$0		1
				2019	2021	$2,280,000	$0	$780,000	$1,000,000		
67	QLDC	Low cost / low risk improvements 2018-21	Local Road Network	2018	2020	$9,103,000	$2,434,000	$3,226,000	$3,443,000	N/a	N/a

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
68	QLDC	Low cost / low risk improvements 2018-21	Special Purpose Roads	2018	2020	$1,815,000	$792,900	$626,700	$395,400	N/a	N/a
69	QLDC	Mt Aspiring Road Widening	Mt Aspiring Road Widening	2018	2019	$5,000,000	$2,500,000	$2,500,000	$0		1
70	QLDC	Queenstown Town Centre Arterial	A new town centre arterial will improve access and efficiency particularly for public transport and to facilitate access to a new town centre public transport hub and provides access to plan change 50 area. The development of the new town centre public transport hub is an integral part of this project. This will be a joint activity with NZTA and ORC.	2018	2021	$8,781,000	$250,000	$2,352,000	$250,000		1
				2021	2024	$145,724,000	$0	$0	$15,510,000		
				2019	2019	$31,634,000	$0	$16,337,000	$18,297,000		
71	QLDC	Queenstown Traffic Management Facilities	Queenstown traffic management facilities. Consolidation of services, information and technologies to manage and operate intelligent traffic systems. Part of masterplanning	2018	2018	$30,000	$20,000	$10,000	$0		1
				2019	2023	$7,945,000	$1,910,500	$1,764,500	$675,500		
72	QLDC	Shotover River Bridge (Arthurs Point) Duplication	Additional crossing in vicinity of Edith Cavell bridge for all modes.	2020	2020	$50figure0,000	$0	$0	$500,000		2

Table Q New and Improved Infrastructure State Highways – Otago, Activity Class 13

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
75	NZTA	Accelerated LED Renewals for SH Street Lighting	Replace existing lighting with LED	2018	2018	$951,102	$951,102	$0	$0		N/a
77	NZTA	ITS Improvement Programme	Introduction of intelligent transport systems across the transport network (both rural roads and urban areas) to provide customers with near real-time information	2018	2020	$6,584,540	$857,601	$2,213,178	$3,513,761	3	2
78	NZTA	Ladies Mile Corridor Improvements	Capacity and safety issues related to Howards Drive which is the only access to the Lake Hayes Estate residential development. Development down Stalker, Lower Shotover & Tucker Beach Rds require corridor and access improvements. Further population growth predicted for the area.	2017	2018	$2,154,600	$307,800	$0	$0	3	1
				2020	2020	$5,130,000	$0	$0	$5,130,000	3	
				2018	2018	$256,500	$256,500	$0	$0	3	
				2019	2019	$256,500	$0	$256,500	$0	3	
				2020	2020	$1,026,000	$0	$0	$1,026,000	3	
79	NZTA	Low cost / low risk improvements 2018-21		2018	2020	$62,400,000	$20,800,000	$20,800,000	$20,800,000	N/a	N/a

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
				2019	2019	$153,900	$0	$153,900	$0	3	
				2020	2020	$2,052,000	$0	$0	$2,052,000	3	
82	NZTA	Queenstown Town Centre Arterial	A new town centre arterial will improve access and efficiency particularly for public transport and to facilitate access to a new town centre public transport hub and provides access to the area covered by plan change 50. The development of the new town centre public transport hub is an integral part of this project. This will be a joint activity with QLDC (50/50 funding split).	2018	2018	$1,539,000	$1,539,000	$0	$0		1
				2019	2019	$1,539,000	$0	$1,539,000	$0		
				2020	2022	$32,832,000	$0	$0	$9,234,000		
				2020	2020	$6,156,000	$0	$0	$6,156,000		
83	NZTA	SH6A Corridor Improvements	Corridor improvements to relieve congestion and ease access from side roads.	2018	2018	$513,000	$513,000	$0	$0		1
				2019	2019	$718,200	$0	$718,200	$0		
				2020	2021	$11,080,800	$0	$0	$5,540,400		
				2020	2020	$3,078,000		$0	$3,078,000		

Table R Regional Improvements – Otago, Activity Class 20

Item No	Organisation Name	Project Name	Project Description	Start Year	End Year	Total Cost All Years	Cost 2018/19	Cost 2019/20	Cost 2020/21	Regional Priority 2015/18 RLTP	Regional Priority 2018/21 RLTP
	NZTA	Nevis Bluff Rockfall Protection	Ongoing work by Opus under NMM contract but capital project required. International peer review recommends staged physical catch fences.	2018	2018	$102,600	$102,600	$0	$0	1	1
86	NZTA	Nevis Bluff Rockfall Protection		2018	2018	$205,200	$205,200	$0	$0	1	1
	NZTA	Nevis Bluff Rockfall Protection		2019	2020	$10,260,000	$0	$5,130,000	$5,130,000	1	1

MANAGING RISK & RESILIENCE – QLDC RISK FRAMEWORK

3.14 INTRODUCTION

QLDC has reviewed and updated its Corporate Risk Management Framework (RMF) in accordance with ISO 31000. The RMF has been rolled out across QLDC at a corporate level and is in the process of being embedded at an operational level. QLDC's Audit and Risk Committee provides guidance on the effectiveness of the QLDC's RMF, internal controls, legislative and regulatory compliance, external audits and financial reporting.

The RMF provides clear guidance on the classification of risk likelihood and consequences. Consequences are considered using PESTLE, ie. across political, economic, social, technical, legal and environmental dimensions.

QLDC has developed a risk register containing a set of strategic and operational risks, each of which have been assessed for their likelihood and consequences both before and after the mitigations and controls in place are considered. This list provides guidance to the organisation as to the materiality of key risks and the importance of mitigations and controls.

QLDC is moving to better integrate formal risk assessments into its asset decision making. The end result of this integration will be each investment decision being based on a consistent, robust and quantitative assessment of risk.

To mitigate risk, QLDC will:

➢ Establish and deliver maintenance and renewal service standards that preserve critical assets, mitigate risk and meet the desired service outcomes based on this RMF;

➢ Not accept the transfer of third party assets, unless minimum acceptable quality standards are met as set out in the QLDC Land Development and Subdivision Code of Practice;

➢ Prioritise and proactively inspect and protect its assets and their performance;

➢ Insure all critical assets for loss, damage and public indemnity;

➢ In the event that an asset can no longer be maintained in a safe condition, it shall be retired from service and any foreseeable hazards to the community are mitigated;

➢ Perform hazard loss modelling.

Further information on QLDC's Risk Management framework and processes can be found in the IAMS.

3.15 CRITICAL ASSETS

Critical assets can be defined as those that "are especially significant to societal wellbeing and therefore merit priority attention by utilities in emergency response and recovery" they are also defined as those which have a "high consequences of failure" for example, a transport route may be critical because it carries high volume of traffic, or if it is the only route to a hospital.

While there are a variety of frameworks for assessing criticality in different asset classes and industries, it is generally understood that a critical asset is one whose consequences of failure, or interruption of service, are very high. While a focus on assets is important, we also need to consider the events that lead to interruption of service (which may occur across a group of assets). Importantly for QLDC's criticality assessment, the Corporate Risk Management Framework contains guidance on how to assess the consequence of a particular event.

In the roading context, criticality is an important component of a key level of service: resilience. While resilience is the ability of the network to recover following an event, the criticality of the assets in question will drive the level of desired resilience (Hughes and Healy, 2014).

QLDC recently began its application of a first generation criticality assessment to its roading infrastructure. This approach is involves working closely with NZTA and contractors and the process is intended to be generational, inevitably, there will be endless opportunities for future refinements, but our near-term objective is to apply a

credible framework and obtain some experience in using it for decision making, rather than perfecting the framework.

4.15.1 Asset criticality process

Below is the process used to develop a "first generation" set of criticality scores for each asset. This was achieved through a series of workshops with Subject Matter Experts (SMEs). The participants consisted of representatives from NZTA and QLDC Asset Planning, Operations and Maintenance and Downer, the roading maintenance contractor.

Figure 100 QLDC Asset Criticality Process

	1. Develop listings	2. Apply PESTLE	3. Calculate
What it entails	Brainstorming all the things that can go "bad"	For each failure mode/event, evaluate consequence by applying QLDC's PESTLE scoring framework. Do not consider mitigations at this point; this is raw consequence. Consider the role that asset size plays in PESTLE score	Apply the PESTLE scores to each specific asset in the network. Individual assets may have multiple failure modes (and therefore PESTLE scores); the highest PESTLE score becomes the criticality score
Outcome	List of failure modes, and asset categories they apply to (streetlights, pavements etc)	A list of PESTLE scores for each failure mode/event, and by asset size	Criticality score for each asset in the district
Workshop	Workshop #1	Workshop #1	Workshop #2

The first workshop was designed to break the QLDC network down into routes, using the ONRC categories (arterials, primary collectors, secondary collectors). This allowed us to start with a relatively small number of likely critical routes (arterials – Lucas Place/Hawthorne Roundabout, Lake Esplanade, Fernhill Rd, Beach St), potentially even supplemented with SH6/Frankton Rd. This does not preclude an asset-based approach in the future.

Initially, for a given route, we discussed and agreed the PESTLE scores for a high-consequence event (major accident, earthquake). As we considered the different arterial routes, we began to see where generalisations occurred, and where the score is situation specific (within the general ONRC category).

A second workshop reviewed the QLDC approach and a change in direction was agreed. This change emerged following further research on NZTA's current recommendations on the criticality process. Advice was sort from James Hughes the author of the NZTA paper and a simplified assessment was carried out.

AECOM

Review of methods to determine criticality of roading networks

3.16 HERITAGE ASSETS

NZTA are in the process of reviewing the Heritage Asset Management Guidelines. Although this is an early draft it is QLDC's intentions to adhere where possible to these guidelines.

QLDC have identified Heritage assets in the District Plan, examples of transportation heritage assets are:

Table 33 Heritage Assets

Skippers Road	The Mace Town Road
Edith Cavell Bridge	Ballarat Street Bridge
Horne Creek Bridge	Kawarau Falls Bridge
Kawarau Gorge Suspension Bridge	Skippers Bridge
Old Shotover Bridge	Luggate Red Bridge

Figure 101 Skippers Bridge

Figure 102 Ballarat Street Bridge

Figure 103 Edith Cavell Bridge

SECTION FOUR - FINANCIAL MANAGEMENT

4.1 INTRODUCTION

Over the next 10 years and beyond, QLDC is facing its largest and compounding complex infrastructure capital works programme. The issues described in this BCA AMP are relevant across all infrastructure portfolios and include:

> ➢ $200 million to bring water supply quality up to standard over the next 10 years;
>
> ➢ $10 million for increased wastewater treatment capacity;
>
> ➢ Delivery of HIF;
>
> ➢ Internal projects such as Project Connect (One Council building).

The immensity of the programme places immense pressure on QLDC from a financial perspective and a capacity to deliver as well as coordinating with external agencies and stakeholders, e.g. NZTA, ORC and QAC. Pressure may also be placed on the regional ability to deliver not just the QLDC programmes, but a carry on impact in neighbouring areas.

QLDC are exploring options and mechanisms to address around the risk of capacity to deliver intended programmes.

> ➢ Approaching the supply chain early in the procurement process to find the most appropriate method to get the best value for projects. I.e. packages of works and timings.
> ➢ Grouping similar projects together to incentivise the supply chain by increasing potential value. i.e. a programme around multiple 3-waters reservoirs
> ➢ Reviewing the Build, Operate, Manage, Transfer models
> ➢ Maximising good rates by having longer contract periods and potential extensions.

From a transport perspective the first 3 years of the LTP will be focused on enablers to facilitate delivery such as consents, land purchase and scoping and design.

At point of submission the Capital Investment Programme is indicative due to the complexities of multi-agency and multi-programme overlaps (QITS and Queenstown Town Centre Master Planning).

All capital and operational expenditure in this document is inflated to annual plan year only.

The Local Road Maintenance Programme may see some minor amendments however, QLDC deem this programme will deliver the outcomes as outlined in this BCA AMP.

4.2 REVENUE AND FINANCING POLICY

Section 102(4) (a) of the Local Government Act 2002 requires each council to adopt a Revenue and Financing Policy. This Policy must state QLDC's policies in respect of the funding of both capital and operational expenditure.

Further information can be found in QLDC's Revenue and Financing Policy. A summary of how operational and capital expenditure will be funded, based on the 2018-28 Long Term Plan, is in the following section.

4.3 FUNDING SOURCES

QLDC sources around 50% of its funding for transportation projects and expenditure from NZTA. Through the National Funding Assistance Review (FAR), NZTA have signaled that they will be reducing the funding available to QLDC progressively over the next 10 years. After 10 years, NZTA have signaled a levelling out of funding. It is possible that LoS (i.e. quality of roads or acceptable levels of congestion) will have to change as QLDC seeks to deliver its roading programme with reduced NZTA funding.

The FAR review was finalised in June 2017. Tables 34 and 35 below show NZTA FAR for the 2018-2023 NLTP and QLDC's 2018-2028 LTP.

QLDC is also looking at other options where by the ownership of special purpose roads such as the Crown Range and the road to Glenorchy would be moved from QLDC to NZTA. Although this would save QLDC money in

maintenance, it may also result in changes to the LoS (i.e. quality of roads or number of closure days) on those roads.

Table 34 NZTA Funding Assistance Rates - Local Roads 2018-23

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Local Roads (Wakatipu & Wanaka)	51%	51%	51%	51%	51%	51%

Table 35 NZTA Funding Assistance Rates - Special Purpose Roads 2018-23

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Maintenance & minor improvements	Other Improvements	Minor & other improvements	Maintenance
Glenorchy Special Purpose Road	91.83%	83.67%	75.50%	67.33%	59.17%	51%	100%	75%		
Crown Range Special Purpose Road	83.50%	77.00%	70.50%	64.00%	57.50%	51%			100%	90%

Other funding sources are Central Government, regional council grants and local authority revenue. The costs are recorded under the headings listed, and funded from the sources shown, in Table 36.

Table36 Funding Sources

WORK	QLDC (in addition to NZTA subsidy)
MAINTENANCE	• After any available user charges and/or operating revenue by two targeted rates levied differentially in Queenstown / Wakatipu / Arrowtown Wards and in Wanaka. • Petrol Tax • ORC Grants • Parking Meters Receipting • Traffic Management Notices.
RENEWALS	The depreciation provision and then by two targeted rates levied differentially in Queenstown/Wakatipu/Arrowtown Wards and in Wanaka.
GLENORCHY SPECIAL PURPOSE ROAD	By two targeted rates levied differentially in Queenstown/Wakatipu/Arrowtown Wards and in Wanaka.
CROWN RANGE SPECIAL PURPOSE	By two targeted rates levied differentially in Queenstown / Wakatipu / Arrowtown Wards and in Wanaka.
NEW CAPITAL	The full cost of growth, if possible by Development Contributions. If not possible the balance and other works by loan (external or internal) and/or then by two targeted rates levied differentially in Queenstown/Wakatipu/Arrowtown Wards and in Wanaka. Also the value of vested assets.
MANAGEMENT OVERHEADS	By two targeted rates levied differentially in Queenstown / Wakatipu / Arrowtown Wards and in Wanaka.

4.4 FUNDING RISKS

QLDC has identified several financial challenges that are explained in and managed in its Risk Register. The significant risks are:

- ➢ Insufficient NZTA or QLDC funding to meet the levels of service;
- ➢ Funding sources for the repair of damage caused to roads by natural hazard events (including climate change).

Other financial risks that QLDC is managing (or may potentially need to manage in future) are:

- ➢ Fraud and corruption;
- ➢ Inadequate management of contract retentions and of potential claims for cost escalation or other contract variations;
- ➢ Excessive tender prices (or no tenders submitted);
- ➢ Contractor non-performance (or company failure);
- ➢ A 'sensitive expenditure ' issue occurs;
- ➢ Large ongoing QLDC liabilities resulting from NZTA reducing FAR for Special Purpose Roads
- ➢ Substantially increased QLDC liabilities due to reduced Emergency works FAR
- ➢ Poor project cost estimation
- ➢ Poor forward financial forecasting/budget formulation;
- ➢ Poor general financial management.

4.5 BCA AMP FINANCIAL ASSUMPTIONS

The following general assumptions have been made in preparing the BCA AMP forecast:

- ➢ The extent to which the New Zealand Transport Agency (NZTA) will subsidise QLDC road costs will be as forecasted;
- ➢ Subdividers and developers will contribute towards QLDC's costs by paying development contributions at the levels and times forecasted;
- ➢ The depreciation provision will be as forecasted;
- ➢ QLDC will fund depreciation only relating to its share of roading funding. The component attributable to the NZTA is excluded;
- ➢ An extraordinary major event such as a natural hazard will not occur;
- ➢ Government legislative, regulatory, or policy changes will not cause higher QLDC costs;
- ➢ Actual project costs will be as forecasted on a cumulative basis;
- ➢ Minimal costs will be carried forward from year to year – all projects will be paid for in the year in which they are programmed;
- ➢ No unforeseen significant asset failures will occur (or other unexpected costs be incurred);
- ➢ QLDC will be able to obtain all designations for new or widened roads (and acquire all necessary properties), and all required resource consents, in a timely manner;
- ➢ The extent to which new transportation assets will be vested in QLDC will be as forecasted.
- ➢ Low maintenance and construction cost escalation

4.6 ASSET VALUATION

Transport assets are valued every three years for QLDC's financial statements in accordance with the Public Benefit Entity International Public Sector Accounting Standard 17, Property Plant and Equipment (PBE IPSAS 17). The transportation asset information for the 2016 valuation has been complied in a fixed asset register for financial reporting purposes.

Figure 104 summarises the assets as valued by BECA Projects NZ Limited (Beca) as at 1 July 2016.

Figure 104 Asset Values

Transport valuations as at 1 July 2016 for asset types are as follows: Values are in NZD and exclude GST.

Asset	Replacement Cost	Depreciated Replacement Cost	Accumulated Depreciation	Annual Financial Depreciation
Bridges and Bridge Culverts	50,024,483	25,053,961	24,970,522	472,438
Drainage	24,757,406	16,476,358	8,281,048	439,077
Footpath (including base)	33,039,321	13,728,513	19,310,808	1,024,769
Minor Structure	4,080,191	1,496,981	2,583,210	146,392
Railing	6,351,114	1,597,225	4,753,889	377,325
Retaining Wall	15,358,756	13,116,934	2,241,823	243,927
SW Channel	48,290,674	34,396,042	13,894,631	645,944
Sign	4,233,778	1,295,430	2,938,348	279,122
Street Light	13,690,593	7,223,414	6,467,179	547,615
Traffic Facility	550,038	482,711	67,327	11,070
Formation	160,188,491	160,188,491	-	-
Sealed Pavement Layers	109,410,512	82,204,422	27,206,090	1,095,978
Unsealed Pavement Layers	9,956,007	7,602,806	2,353,202	392,915
Surface	42,237,464	16,033,257	26,204,208	2,982,474
Total	522,168,829	380,896,544	141,272,286	8,639,047

The movement percentage between the 2016 valuation and the 2013 valuation can be seen in Figure 98.

Figure 105 Confidence assessments

Asset	Replacement Cost	Depreciated Replacement Cost	Accumulated Depreciation	Annual Financial Depreciation
Bridges and Bridge Culverts	6%	3%	10%	6%
Drainage	6%	2%	17%	3%
Footpath (including base)	14%	-8%	38%	-6%
Minor Structure	33%	-2%	68%	-7%
Railing	3%	-52%	68%	-8%
Retaining Wall	16%	86%	-64%	15%
SW Channel	10%	18%	-5%	10%
Sign	21%	-37%	102%	-4%
Street Light	19%	14%	27%	19%
Traffic Facility	-4%	-7%	25%	1%
Formation	1%	1%	NA	NA
Sealed Pavement Layers	-5%	-8%	3%	-13%
Unsealed Pavement Layers	4%	-6%	56%	-22%
Surface	21%	-5%	46%	23%
Total	5%	1%	16%	5%

5.6.1   Exclusions

The following were specifically excluded from the valuation:

The effect of the relevant provisions of the RMA or other legislation on any asset replacement.

➢ Service utility assets including pipes, poles or cabling servicing QLDC assets;
➢ Assets identified as privately owned and not owned by QLDC;
➢ Land under roads;
➢ Stormwater pipes and catch pits/sumps leads (valued separately as part of QLDC storm water assets);
➢ Intangible assets.

4.6.2   Depreciation (loss of service potential)

Depreciation is the extent to which QLDC's assets decrease in value each year - due to their use, age, obsolescence through technological and market changes, change in use, or neglect.

4.6.3   Depreciation Policy

Depreciation is calculated on a straight-line basis on property, plant and equipment other than land, at rates that will write off the cost (or valuation) of the assets to their estimated residual values over their useful lives. Land is not depreciated.

The useful lives and associated depreciation rates of the various classes of assets have been estimated generally based upon the New Zealand Infrastructure Asset Valuation & Depreciation Guidelines – Version 2. In specific

cases these have been modified for reasons explained in the valuation report.

The depreciation rates are applied at the component level and the depreciation sum is calculated on the remaining useful life of each component. Where the age or condition is unknown it is assumed the asset is half way through its useful life.

The residual value and useful life of an asset is reviewed, and adjusted if applicable, each financial year end.

4.6.4 Confidence

The depreciation confidence is as recorded for the revaluation. QLDC uses the International Infrastructure Management Manual (IIMM) rating system for data integrity and confidence. Further information on this can be found in the IAMS.

The overall confidence rating for the 2016 valuation is B. Confidence assessments are provided in the following figure:

Figure 106 Confidence Assessments

Asset	Confidence	Reason and Notes
Bridges and Bridge Culverts	A	Overall data completeness.
Drainage	B	There are 189 culverts and side culverts with no area.
Footpath (including base)	A	All footpaths have length, width, construction date and material type data.
Minor Structure	B+	Most bus shelters are missing their construction dates.
Railing	A	All railings have railing type, length and construction date.
Retaining Wall	B-	There are 32 retaining walls have no recorded length and 25 have no height.
SW Channel	A	All channels have length data and all but one have a construction date.
Sign	B+	Several signs with non-standard type.
Street Light	B-	Most street lights have no installation date.
Traffic Facility	B	Pavement markings were provided as a total lump sum cost based on QLDC's network maintenance contract.
Treatment Length	C+	Most treatment lengths have no construction date information for the various components. Many treatment lengths were missing their surfacing data, which have been assumed for this valuation.

4.7 BACKLOG (DEFERRED MAINTENANCE AND DEFERRED RENEWALS)

Backlog is the value of maintenance and renewal work that has not been done when it should have been – in order to meet the prescribed levels of service.

If maintenance and renewal work is not carried out at the optimum time in the asset lifecycle:
- ➢ The assets will deteriorate further
- ➢ The repair, renewal or replacement work that will have to be done later may be more extensive than it would have been if it had been carried out at the optimum time
- ➢ The cost of doing the work later may be more expensive (in real terms) than it would have been if the work had been carried out at the optimum time. A delay in road maintenance of 3 to 5 years can increase the required repair costs by more than six times
- ➢ (Until it is done) the annual cost of maintaining the asset may be more expensive than it would have been if the work had been done at the optimum time (e.g. the higher cost of repairing the road as more and more potholes appear as the road further deteriorates)
- ➢ The asset may not be able to continue to perform to its original design capacity or performance standard, or to deliver the specified levels of service, and, if the work continues to be delayed, may ultimately be unable to provide the required service altogether (e.g. the necessity to close a bridge because the lack of maintenance resulted in it now being structurally unsafe)

4.7.1   Monitoring the Backlog Trends

The sufficiency of QLDC's annual maintenance and renewal budget is determined by comparing the depreciation provision (the extent to which the assets are being 'consumed' or continuing to wear out every year) with the annual renewals and replacement expenditure.

If the two are 'in sync' over time the current state of the network is being maintained. If there is a gap the network is continuing to deteriorate (and the 'backlog' will have increased). If the renewals expenditure exceeds the depreciation provision the network is being improved.

Another way of ensuring a sustainable network (after any deferred maintenance and deferred renewals have been eliminated) is to require that not less than the annual depreciation provision (after taking into account the share of the cost of renewals that is funded by the NZTA) be funded annually and the proceeds be set aside and used only for renewals. This is the approach adopted by QLDC.

4.8   TOTAL EXPENDITURE

In addressing the key strategic issues, QLDC has a multi-million dollar Investment Programme on new and replacement infrastructure between 2018/19 and 2032/33.

Figure 107 Transport Capital & Operational Expenditure Inflated to Annual Plan Year
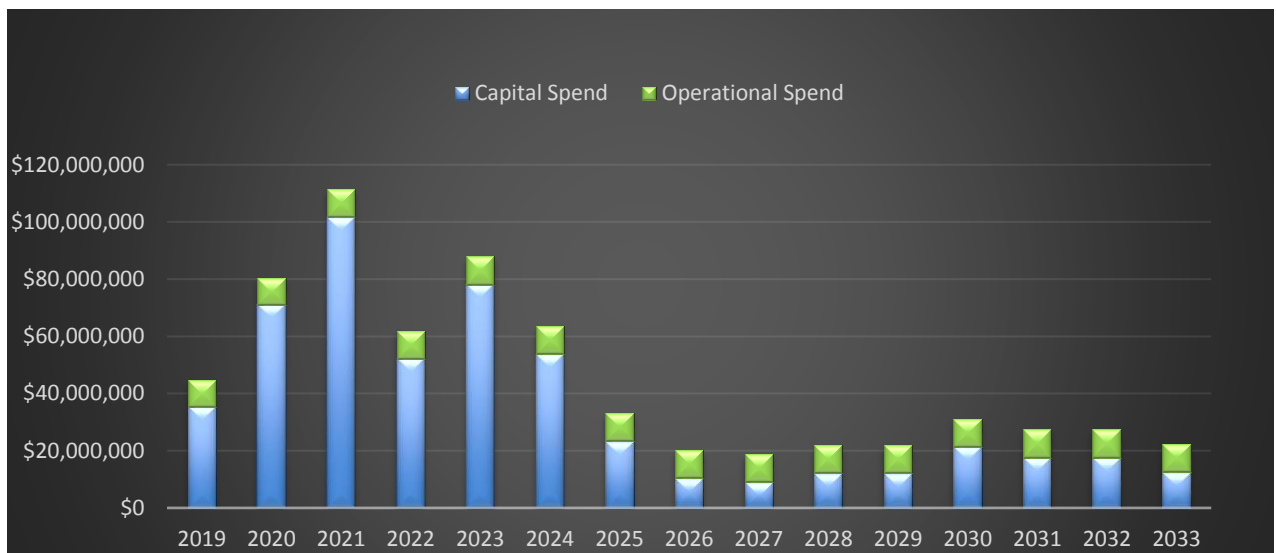
The graphs below provide a high level overview of the QLDC Capital Investment Programme. QLDCs Capital Works database enables us to review spend by driver, activity and location.

Figure 108 QLDC Transport Programme by Investment Driver to inflated to Annual Plan Year
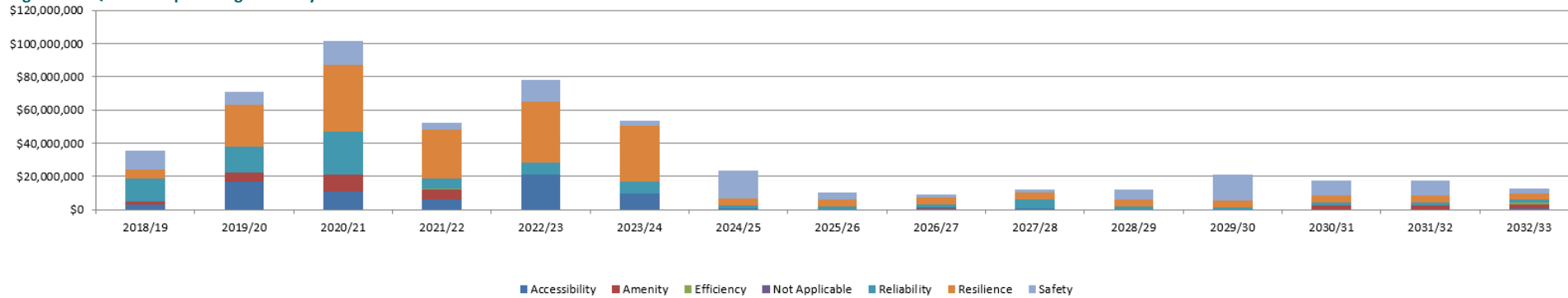
Figure 109 QLDC Transport Programme by NZTA Location inflated to Annual Plan Year
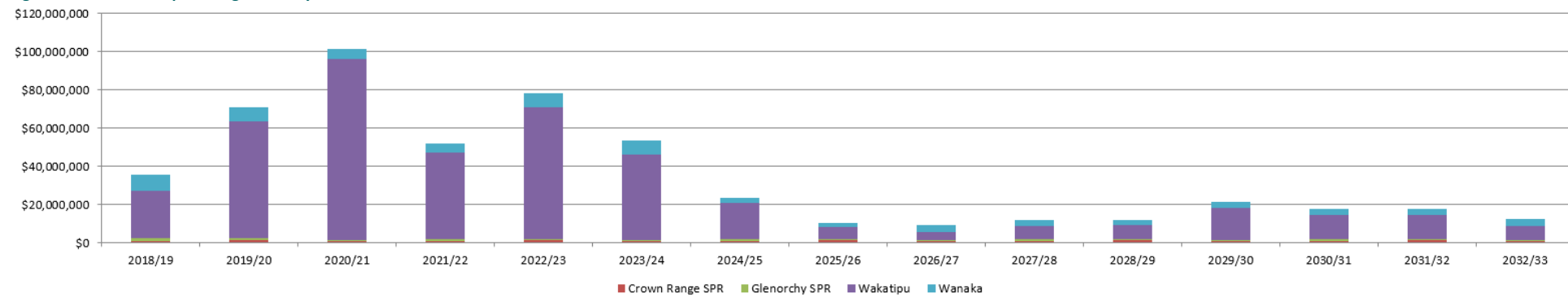
Figure 110 QLDC Transport Programme by Activity inflated to Annual Plan Year
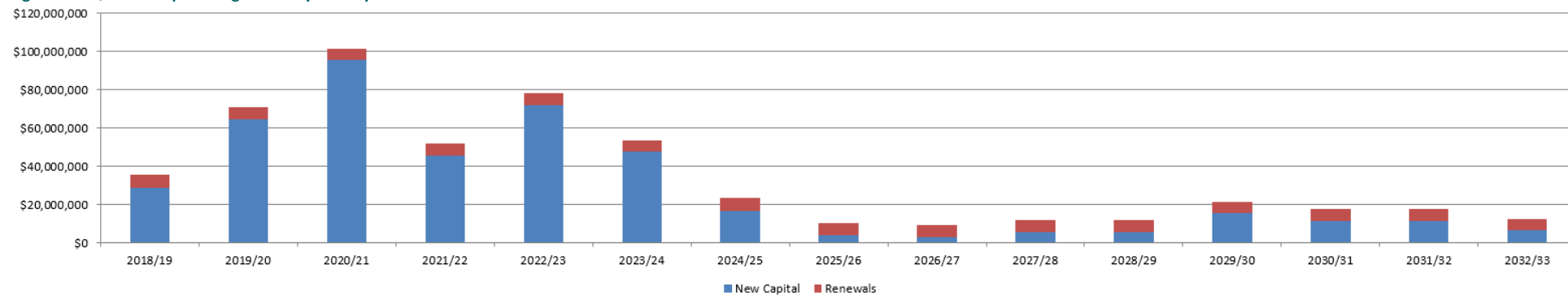
4.9 CAPITAL EXPENDITURE

Figure 111 shows the expected expenditure inflated to annual plan, year-on-year up to 2032/33. It is important to note, due to the size of the programme the years 1 to 3 is being developed in detail. Years 4 to 10 has limited detail and anything beyond year 11 needs further understanding.

Figure 111 Infrastructure Capital Expenditure Projections
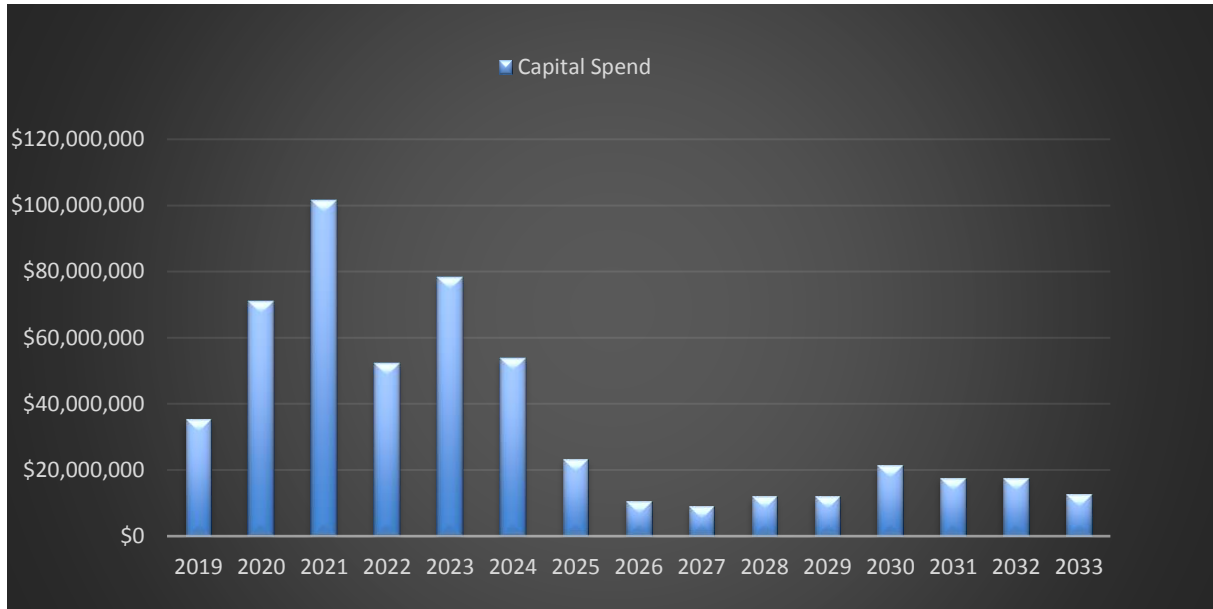
Figure 112 Infrastructure Capital Expenditure Drivers
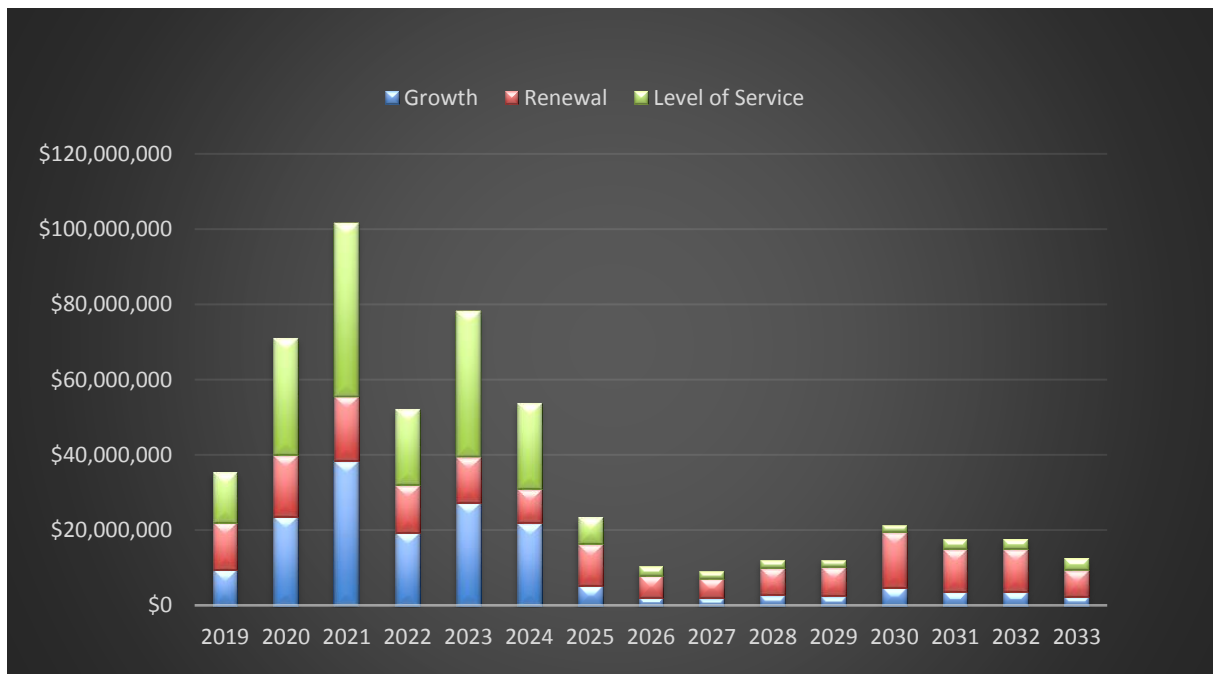
Table 37 shows the current capital investment programme (subsidised and unsubsidised) for the next 30 years for transportation projects with a values of over $5M.

Table 37 Transportation Projects over $5M

Project Name	Total from Start Year	Cost from Start Year to End Year	Project Start Year	Project Completion Year
Crown Range SPR - Minor Improvements	$5.3M	$2.2M	2016/17	2044/45
Wanaka Mt Aspiring Road Widening and Drainage	$5M	$5M	2016/17	2019/20
Shotover Bridge (Arthurs Point) duplication	$39.6M	$39.6M	2020/21	2031/32
Shotover Park Limited Land Exchange	$6.4M	$6.4M	2039/40	2041/42
Wakatipu Walking/Cycling Improvements	$49.2M	$49.2M	2018/19	2035/36
Queenstown Parking Improvements	$48M	$48M	2018/19	2023/24
Queenstown Town Centre Pedestrianisation	$49.5M	$49.5M	2018/19	2025/26
Queenstown Town Centre Arterial	$148.8M	$148.8M	2018/19	2023/24
Hansen Road to Hawthorne Drive link	$38.3M	$38.3M	2035/36	2036/37
Water taxi/ferry network infrastructure	$6.1M	$6.1M	2018/19	2024/25
PT Improvements Stage 2 - Hubs	$25.5M	$25.5M	2019/20	2022/23
Wanaka Parking Improvements	$11.3M	$11.3M	2019/20	2023/24
Public Realm Upgrades	$15.9M	$15.9M	2020/21	2032/33
HIF Quail Rise to Hawthorne Drive	$7.8M	$7.8M	2018/19	2020/21
HIF Ladies Mile	$6.3M	$6.3M	2018/19	2020/21
Improved access Lake Hayes reserve (Widgeon Place)	$18.9M	$18.9M	2026/27	2038/39
Travel Management Queenstown	$5.5M	$5.5M	2018/19	2023/24
Lakeview Development - Road & Public Realm	$5.9M	$5.9M	2018/19	2021/22
Civic Heart	$10.9M	$10.9M	2018/19	2020/21
Wanaka Town Centre Masterplan	$26.6M	$26.6M	2021/22	2037/38

4.10 OPERATIONAL EXPENDITURE

Operational expenditure has not been inflated. For the 10 year period is shown in Figure 113, years 11 to 15 are expected to remain at similar levels year on year beyond 2028.

Figure 113 Transport Operational Expenditure
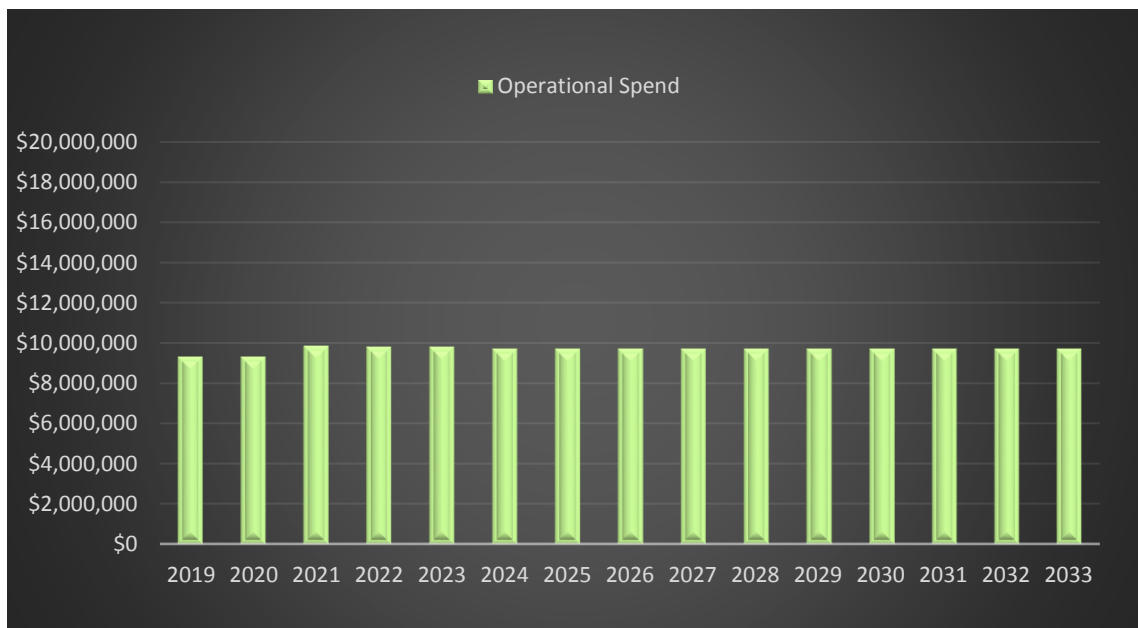
4.11 KEY ASSUMPTIONS, CONFIDENCE AND RELIABILITY

Improvements to public transportation patronage and use of cycle trails, combined with education programmes could go some way to ensuring QLDC's roads continue to deliver current levels of service. Diversification of transport options is a key tool in managing congestion (user demand) at peak times of the day. Other options such as increases to local funding may also provide an alternative, however this solution would need to be well understood and consulted on with the community ahead of any such decision.

There is a degree of uncertainty around the conditions that may be placed on the resource consents for any new roading project and the levels of investment in stormwater treatment that might be required in the future. This may impact on future costs and revised timings for scheme delivery. It is important that QLDC put forward robust arguments during consenting processes to ensure that the construction and operation of a new road best balances environmental outcomes with community affordability.

4.12 INVESTMENT ASSESSMENT FRAMEWORK

QLDC have developed their land transport activities to align with NZTA's new (draft issued 10 March 2017) Investment Assessment Framework (IAF). The IAF looks for a good evidence and alignment with the GPS, Regional Transport Plan, Council's Long Term Plan and Activity Management Plans to support the business case for investment. QLDC has developed its TASF (Section Two) to show alignment between all the strategic drivers and the BCA AMP provides an assessment of the results alignment and Cost-Benefit Appraisal of transport-related problems and opportunities for Queenstown Lakes District Council.

Figure 114 Draft Investment Assessment Framework for the 2018-21 NLTP
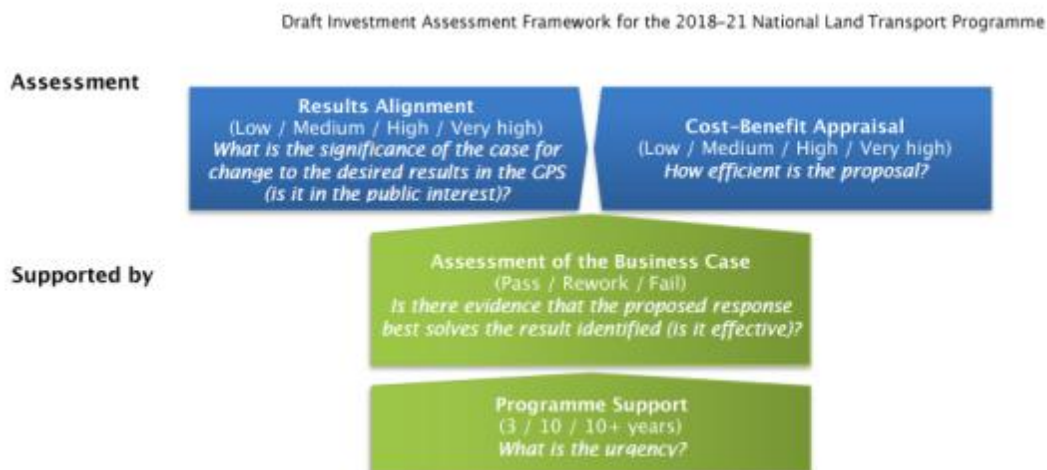
QLDC have undertaken an assessment of results alignment and Cost benefit appraisal in accordance with the draft IAF. It is acknowledged that a governmental change may impact this approach, but QLDC are confidence that appropriate progrmames have been put forward to address network needs.

4.12.1 Anticipated Results - Continuous Programme

The IAF states that the BCA AMP must demonstrate that the road maintenance programme scope, timing and delivery arrangements are economically efficient and represent value for money. QLDC demonstrate this throughout the BCA AMP which discusses the complexities and challenges that QLDC face. In addition the documents referred to in the Asset Management Enablers Section Five form part of the business case submission.

QLDC believe that the Continuous programme reflects an Enhanced programme investment.

Table 38 IAF and the Continuous Programme

Results Alignment	Rating is considered to be medium/high as it demonstrates that a step change in investment is required to re- balance previous NZTA investment levels which has been hidden/ skewed by local un-subsidised funding. This is required to continue to meet appropriate customer levels of service and the proposed programme addressees opportunities in delivering the right level of service to support the priority areas in the GPS. QLDC has high costs due to a combination of factors which create a complex network: geographic isolation, a challenging environment and intense growth. The NZTA LTSV identified the struggles QLDC face and as a key contributor to the National economy, supporting levels of service in QLDC is fundamental to delivering key GPS priorities and in delivering a number of ONRC customer outcomes, safety, resilience, accessibility, travel time reliability and amenity. With high population and visitor growth forecasts, the function of the network will be not able to meet expected demand. This inability to meet future traffic demands could have significant effects on the local environment and constrain the economic development of the region
Cost Benefit Appraisal	<u>Medium-high,</u> based on the cost efficiencies displayed in the ONRC summary report that are supported by the efficiencies displayed in the Programme Business Case

4.12.2 Anticipated Results - Improvement Programme

For Results Alignment, the new Very High rating criteria directly link to specific results in the draft GPS.

- Transport access required for housing development in high urban growth areas

Table 39 IAF and the Improvement Programme

Results Alignment	QLDC Improvement programme covers two main geographical areas. An assessment of the relevance and significance of Queenstown's current transport-related problems with the Government Policy Statement's land transport objectives indicate a <u>high</u> results alignment and strong case for investment. Queenstown's transport network is struggling to meet current demand, with poor travel time reliability on key corridors. Congestion compromises the ability of public and private enterprises, (that rely on the road network to function) to operate efficiently. With high population and visitor growth forecasts, the function of the network will be not able to meet expected demand. This inability to meet future traffic demands could have significant effects on the local environment and constrain the economic development of the region. The Queenstown Lakes area is a high growth urban area with its combined resident and visitor population exceeding 30,000. QLDC has been identified in the Lon Term Strategic View as a high growth area and in the NPS for Urban Growth Capacity. The assessment profile meets both the <u>medium</u> and <u>high</u> investment criteria resulting in a <u>HIGH</u> results alignment rating.
Cost Benefit Appraisal	Rating is considered to be Low -Medium, based on the cost efficiencies. Although QLDC feel the challenging and complex operating environment contributes to this.

SECTION FIVE – ASSET MANAGEMENT ENABLERS

5.1   BCA AMP APPROVAL PROCESS

The internal approval for the QLDC BCA AMP follows the QLDC BBC approval framework. The BCA AMP will be presented to the Property & Infrastructure 'Dragon's Den' Management Team, including the Property and infrastructure General Manager, who can challenge the authors on the content.

A key element in obtaining the approval for the BCA AMP has been the early engagement with key internal and external stakeholders. Rather than a document that sits on a shelf, the BCA AMP has been driven as a working document to support the case for funding, delivering real investment in QLDC transport activities.

5.2   SIGNIFICANCE

QLDC considers the roading network as a whole to be a strategic asset in terms of the Local Government Act 2002 Section 90(2). Strategic assets are those assets that are important to the long-term goals of Council, a failure of one of those assets will be detrimental to realising those goals. QLDC lists its strategic assets in the Significance & Engagement Policy.

The following will trigger the Special Consultation Process:

1.   Any decision that transfers or changes ownership or control of strategic assets to or from the Council is a significant matter;

2.   The sale or transfer of shareholding of any of the listed assets will trigger the Special Consultation Process;

3.   Long term lease of strategic assets (other than land).

QLDC is currently reviewing its Significance and Engagement Policy for inclusion in the 2018/28 LTP, this review is expected to be completed by late 2017.

5.3   EFFICIENTLY AND EFFECTIVELY PROCURE AND MANAGE

5.3.1   Procurement Strategy

In 2014 QLDC adopted the Strategy for the Procurement of Transport Infrastructure Services, which was lodged with NZTA.   This procurement strategy outlines QLDC's intentions for the procurement of transport infrastructure services and works, in accordance with the requirements set out in the Local Government Act. The strategy will be reviewed in 2018.

5.3.2   Improved Organisational Contract Management

A key benefit of the new QLDC organisational structure bringing skill bases and staff with similar roles together. This enables cross-pollenisation across the disciplines. Contract management is a key area where this has seen benefits; there has been a move to using the NZS3917 contract form across all contracts, which assists better contract management across all portfolios as staff understands the contract form better. Further discussion discussed in Section Three.

5.3.3   Road Maintenance Contract Renewal 2016

QLDC underwent its Road Maintenance Contract renewal in 2016. This was seen as an opportunity to move away from the NEC contract and adopt the standardised contract form NZS3917. The procurement process involved consultation and input from local contractors and NZTA to better understand the requirements of the contract and the network and how improvements could be made from the previous contract.

Further improvements:

➢   The inclusion of a senior manager governance group, which meets quarterly to oversee the performance of the contract – Core Governance Group;

> ➢ KPI's on the contract, not just the contractor. The focus is to ensure that the contractor ensures QLDC performance doesn't let the side down to get better, collaborative outcomes between client and contractor;
> ➢ Early warning process;
> ➢ Change to more collaborative contract;
> ➢ Retendering and moving to the new contract model gave greater clarity on the true cost of roading maintenance in the district;
> ➢ Although asset management is not within scope of the maintenance contract, contract facilitates better working agreements;
> ➢ Flexibility in contract to allow alignment with ONRC as we understand its impact and how to realise it within the Contract.

5.3.4 Reseal Contracts

Maximising good rates by having longer contract periods and potential extensions.

Quality assurance, not just on physical woks, but ensuring data delivery, monies potentially held back if not delivered.

5.3.5 Professional Services

QLDC is reducing the number of consultants used; however there are always areas where Professional Service Consults are required. These services are procured through a 'General Engineering Panel'.

5.3.6 Street Lighting Maintenance Contract

Lighting maintenance has been undertaken by Delta who has had the Maintenance contract since 2011. This is an NEC contract (CT11-17) and is due for renewal March 2018 having already been extended beyond the length of contract. QLDC are exploring a collaborative approach to the new contract and looking at regional benefits of integrating State Highway and Central Otago District Council. This contract will move to the standardised contract form and will have much more focus on data and asset management.

5.3.7 Capital Works

QLDC Projects are undertaken in line with the Capital Works Property and Infrastructure Capital Works Procedures Manual. The manual provides guidance on the systems and procedures required to deliver Capital Works Projects by QLDC. Although comprehensive, the extent to which the procedures are applied is determined on scale, value, complexity and risks associated with a project. Procurement is in line with Procurement Strategies.

5.3.8 Smart Buyer Assessment

The draft Investment Assessment Framework (IAF) requires QLDC to outline their procurement and smart buyer behaviour. QLDC's approach to procurement in the BCA AMP is covered through our organsiational structure, our asset management enablers and our procurement strategy.

QLDC acknowledge that to deliver efficient and effective programmer it is crucial to be a smart buyer of services and strive to adhere to the 'three Es'.

1. **Economy** – through securing (or supporting) the provision of products, materials and expertise at the quality, in the volumes and at the times and locations required, at the lowest price
2. **Efficiency** – through the processes used, including standard documentation and contracting forms selected for achieving best cost / quality and outcomes; and knowledge of the product / materials and supplier market applied
3. **Effectiveness** – taking opportunities for changing from traditional products and materials by maintaining support for innovation in the nature and characteristics of products and materials, and for a strong supplier market

QLDC has undertaken the Smart Buyer self-assessment; we undertook a historical assessment (2015) this captures the journey over the last couple of years, a current assessment (2017) and a desired future state (2019) self-assessment using the REG developed Smart Buyer Tool. This assessment has been based at the Property and Infrastructure Department level of the organisation and will be actioned bi-annually with improvements included in the Performance Plan and results published in future BCA AMPs.

QLDC's organisational change and approach to continual improvement and external audits is facilitating a much 'smarter' way of working. These improvements are reflected throughout the BCA AMP, captured through our responses and our Performance Plan.   These include: more collaborative working with NZTA, Otago Regional Council, our RCA peers and other transport providers (QAC). Better understanding of our costs, aligning and changing contract delivery models to more collaborative styles with high level governance engagement and enhancing understanding of non-price attributes. Better asset and data management and robust forward works programmes for whole of life value for money and clearer risk management.

To achieve the projected 2019 desired future state QLDC intend to work towards the goals indicated in the BCA AMP and work through the Performance Plan actions.

Figure 115 Smart Buyer Assessment Maturity

	2015	2017	2019
Rating	20	46	55
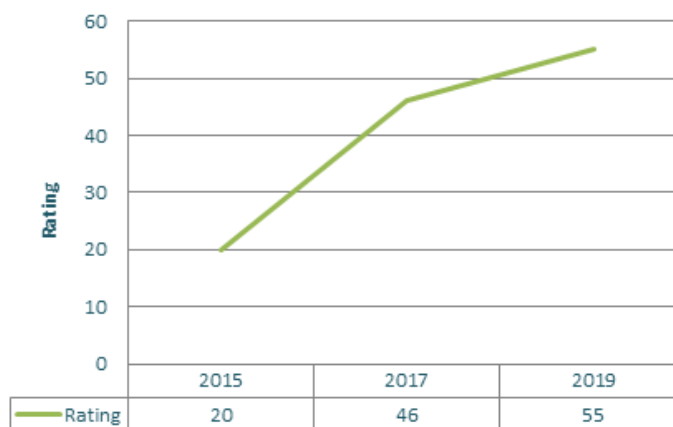
5.3.9   Investment Assessment Framework

QLDC have developed their land transport activities to align with NZTA's new (draft issued 10 March 2017) Investment Assessment Framework (IAF).   The IAF looks for a good evidence and alignment with the GPS, Regional Transport Plan, Council's Long Term Plan and Activity Management Plans to support the business case for investment.   QLDC has developed its TASF (Section Two) to show alignment between all the strategic drivers and the BCA AMP provides an assessment of the results alignment and Cost-Benefit Appraisal of transport-related problems and opportunities for Queenstown Lakes District Council. For the QLDC IAF self-assessment see Section Four.

5.3.10   Local Government Act Section 17a

The LGA was amended in August 2014, to bring in the Government's second phase of legislative reform to improve the operation, efficiency and effectiveness of local government. One of the new provisions in the amendment was the introduction of Section 17A – Delivery of Services.

This section requires Council to undertake reviews of the cost effectiveness of current arrangements for undertaking its activities, specifically looking at governance arrangements, funding arrangements and how each service is delivered, for example, contracted out, shared service, in house etc.

The Otago Mayoral Forum expressed support for a joint Otago review process to be undertaken, and in January 2016, the Otago Chief Executive Forum convened a Project Team to scope this work. The Project Team consists of a representative from each council, and its purpose has been:

> ➢ To consider the activities of each council and determine if there is an opportunity to undertake joint reviews, and
> ➢ To develop a two stage programme of work.

In regards to Land Transportation Services in Otago, the project plan was released in January 2017 using an adapted Better Business Case (BBC) five-case methodology.

Facilitated workshops are to be completed by mid-September 2017 reporting to the Mayoral Forum by December 2017. Final report to all Councils is due by March 2018.

5.3.11 Collaboration

Closer relationships are being developed between State Highway Operations and QLDC. Regular liaison meetings, NZTA providing advice and guidance through RAPTs and regular meetings. Early engagement and continued close working with NZTA (P&I) and been fundamental to building our BCA AMP and Continuous Programme.

➢ Regional workshops, shared learning as seen through LED procurement;

➢ Developing shared contractual approach to Street Lighting Maintenance between CODC and State Highways;

➢ Corridor Management and skill sharing is being explored between QLDC, CODC and State Highways;

➢ QLDC is coordinating joint workshops and training for utility operators;

➢ QLDC are developing relationship with the Office of the Auditor General to improve the 30 Year Strategy; and

➢ QLDC are working with CODC, DCC and NZTA to develop a nationally recognized touring rout between Queenstown and Dunedin via Central Otago.

The Central Otago Touring Route

"a distinctly different road trip"

➢ Exploring the potential of a Regional NZTA Procurement Strategy across Otago and Southland

➢ With the Department of Conservation beginning to take its place as a Road Controlling Authority, QLDC are keen to support and work with them to address the issues our district faces. There are already existing maintenance agreements in place for some of the unsealed roads accessing DoC destinations and the new DoC carpark at Roy's Peak on the Wanaka-Mount Aspiring Road is a great example of this collaborative working. Looking forward there will be a particular area of interest between our organisations and QLDC explore the strategic case for the access to crown estates.

➢ Internally within Property and Infrastructure, QLDC are working closer with 3Waters and Solid Waste, particularly around work programmes, monitoring of reinstatements and undertaking asset criticality/vulnerability assessments.

➢ Across departments, QLDC are working much closer with our Planning and Developemnt team to address the requirements of the National Policy Statement for Urban Growth and Capacity .

➢ QLDC are approaching the local supply chain early in the procurement process to find the most appropriate method to get the best value for projects. I.e. packages of works and timings.

5.4   POLICY AND SYSTEMS

QLDC's Asset Management Policy provides the overall direction to guide the sustainable management of QLDC's asset portfolio as a platform for service delivery. Together with the Infrastructure Asset Management Strategy (IAMS), it shows how QLDC intends to progressively improve and mature asset management across QLDC.

Critical to the management of transportation assets, and therefore service delivery to consumers, is the need to capture and update data on the network. Information is fundamental for establishing systems models, their calibration and planning future options.

Primary responsibility for maintaining and updating the asset register lies with QLDC. The authority for updating equipment within a facility has been delegated to the maintenance contractor. The contractor can update facility asset data, expired assets, relocate assets and add new assets.

There are a number of support elements (tools, systems and procedures) which complete best practice asset management. These are discussed further within the IAMS.

A key policy area for development involves developing and socializing policy setting for levels of service to establish levels where they currently don't exist and to test those that do exist.

5.5   BENCHMARKING

5.5.1   Asset Management Maturity - International Infrastructure Management Manual 2016

Benchmarking is a method by where local authorities can compare their performance to industry-accepted practice, standards or other guidelines. This helps gain context of how well a particular local authority is performing relative to its peers or the wider industry. Having a performance measurement process such as benchmarking for the operational performance of Council services is a fundamental part of public accountability.

As part of the continuous improvements in asset management practices, QLDC again undertook an Asset Management Maturity Assessment – based on the NAMS IIMM guidelines (International Infrastructure Management Manual). The review includes the activities of Transport, Three Waters, Property and Open Spaces Facilities. This was completed in December 2016, with the previous assessment held in December 2015. A further review is scheduled for late December 2017.

The 2016 review included achievements since 2015, and key areas of strength and opportunities for improvement for each activity.

Key observations in relation to the infrastructure activities of transport and three water are:

➢ Solid progress continues in the transport and three-waters activities with maturity across most functions moving into the 'intermediate' area. Notable improvements include:

  o Continued focus on reviewing projects in the CAPEX programme using the Better Business Case (BBC) framework. Confidence in the proposed solutions is growing. Improvements in CAPEX staging to allow more lead-in time for early planning stages is expected to improve delivery of the CAPEX programme.
  o It is evident that cross-functional relationships and processes in the Infrastructure and Planning unit are developing well, along with inter-departmental relationships (Planning and Finance).
  o Promapp is starting to be used to improve process documentation.
  o Information and models are improving to support a better understanding of levels of service (inflow/infiltration, unaccounted for water, traffic flows, etc).
  o Ongoing data improvements with staff commenting on increased confidence in, and use of, the asset data.
➢ While it is good that progress is being made against the AM improvements, it is also very positive to see previous improvements are being embedded into business-as usual practices. Investment and attention are required to maintain scores as well as improve them.

Figure 116 illustrates the 2012, 2015 and 2016 average scores for each AM function while Figure 117 compares the scores by AM function for each activity assessed.

Figure 116 2012 to 2016 Asset Management Assessment Average Scores

Asset Management Maturity 2016 - Average all activities
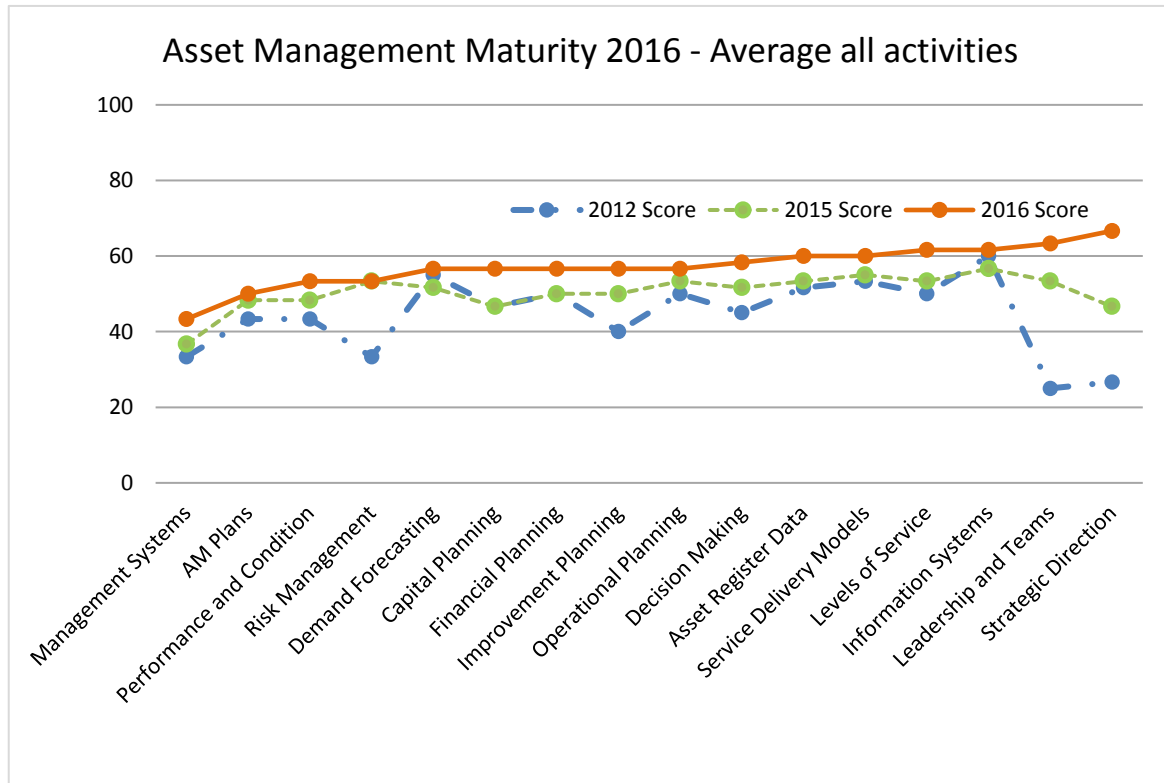
Figure 117 Scores by Asset Management Function

Asset Management Maturity 2016 - by Activity
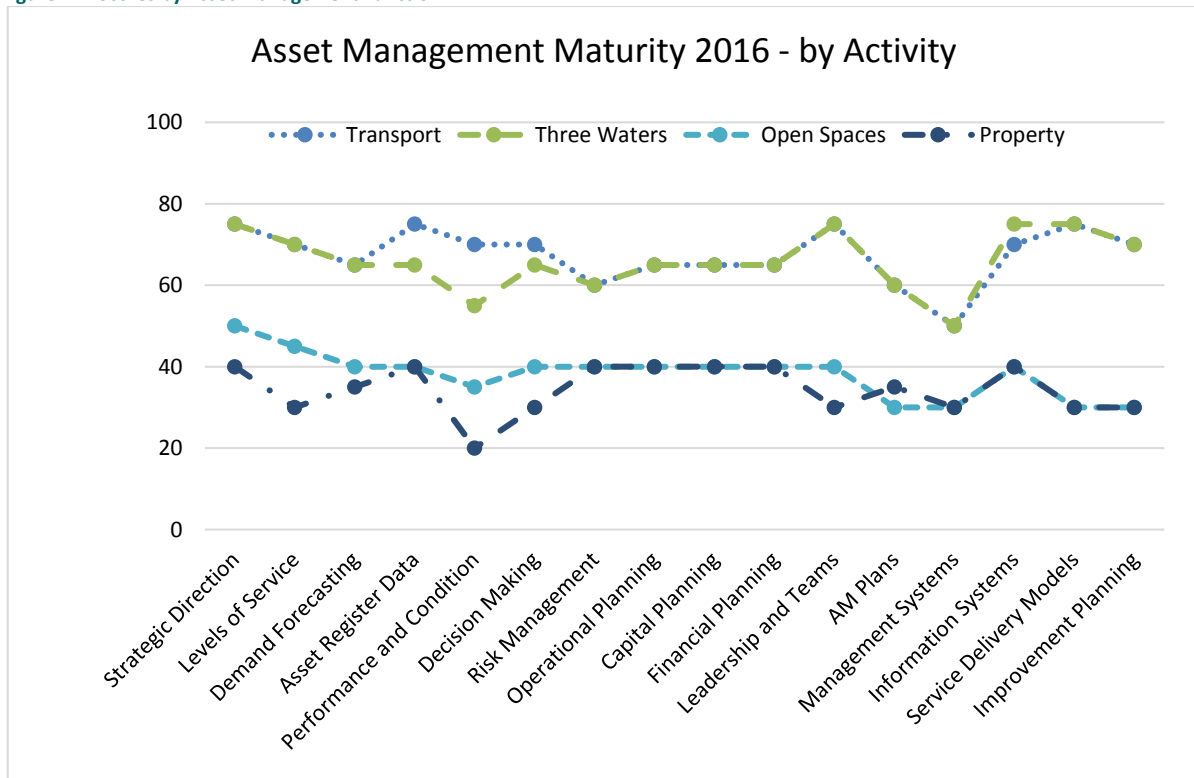
5.5.2   Investor Confidence Rating (ICR)

The Treasury is committed to robust and transparent stewardship of public funds. Owning the right assets, managing them well, funding them sustainably, and managing risks to the Crown balance sheet are all critical to public services being cost effective and high quality. The ICR is a two-yearly assessment of the performance of investment-intensive agencies in managing investments and assets that are critical to the delivery of NZ government services. The ICR provides an indication of the level of confidence that investors can have in an agency's ability to realise a promised investment result if funding was committed.

Following consultation with Treasury QLDC undertook an ICR self-assessment for 3-Waters and Transport and obtained a Confidence Rating of C. This indicates that QLDC is a maturing investor, but still needs to further develop some processes. QLDC are in discussions with Treasury to investigate how Local Government could formalise benchmarking through this scheme in the future.

5.5.3   Local Government Excellence Programme

Queenstown Lakes District Council was selected as a Foundation Council for the local government New Zealand standards programme. The new system outlined in the excellence programme lined up with QLDC's and the sectors strategic plans to lift the value of services to the community. The local government standards system will demonstrate and improve the value and services of councils by measuring qualitative and quantitative indicators across leadership, finance, service delivery and community engagement.

Through the programme, participating councils will be assessed every three years, given a standard from A to C, and the results publicised. Councils will discuss results with communities and use the assessments to plan improvements.

Key Learnings:

The assessment occurred over a two day period in September 2016, during the assessment discussions with staff and managers demonstrated there was a good sense of what the QLDC was and was not doing well, with a growing realisation through the two review days that QLDC needed a much stronger vision and direction. The management team appears well equipped to take up this challenge. There are key learnings from this review as follows:

➢ Planning: The point of inflection for a Council to change direction from being development led to planning led is difficult to pick, but with this Council clearly needs to move from facilitating developers interests to managing the needs of a small metropolitan community with substantial out-reach populations.

➢ Rates: This Council is a leading example of using targeted rates to better share the rate burden of a tourism based city.

➢ Emergency leadership: In emergency management, which is a material issue for this district, there is clear leadership in emergency planning that may be replicable elsewhere.

➢ Systems management: Prioritisation of management effort in improving utility asset management was beneficial to the Council's grading. In contrast, the previous lack of prioritisation of Council property management, although pragmatic, showed in a poor assessment. However, the incremental investment to improve that activity is less now that the core asset management skills and systems are established.

Rating:

Figure 118 CouncilMark Rating 2017
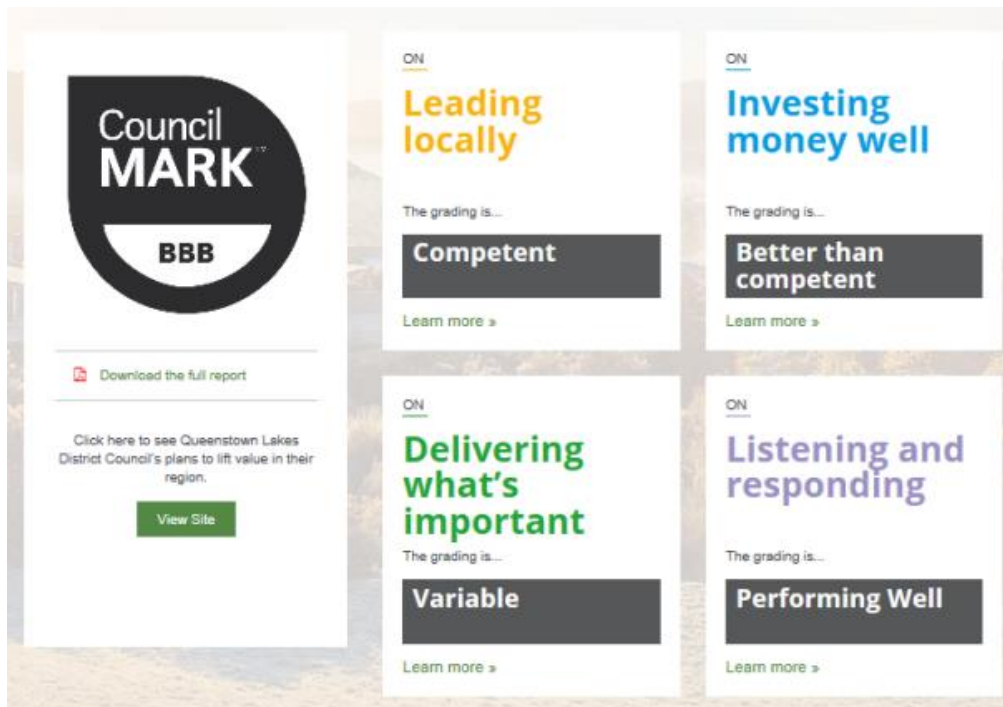
Overview:

➢ Queenstown Lakes District Council has managed past growth in a financially prudent manner and now needs to find a more proactive, forward view for its district in the face of continuing growth pressure.

➢ The Council attends to governance. It attends well to decision-making, actively manages the Chief Executive's contract and is continuing to develop its approach to risk management. Having two independent members on the Finance, Audit and Risk Committee (one being the chair) is good practice, and the committee itself is active.

➢ The Council has a financial strategy that is in line with its current reactive policy of managing for growth. It is prudent in the level of debt it takes on, and it makes full use of targeting and development contributions. Infrastructure for new suburbs is now funded to 85 per cent of costs, although this excludes community facilities.

➢ The Council has given priority to the three waters (drinking water, stormwater and wastewater), and it is now able to identify both the location and state of its pipes.

➢ The Council has identified and is using various channels for communicating with ratepayers.

The full report can be found here:
http://www.lgnz.co.nz/about-councilmark/participating-councils/queenstown-lakes-district-council/

5.6   AUDITS

5.6.1   NZTA Audits

Technical Audit 2013:

The last technical audit of QLDC was undertaken by the NZTA Performance Monitoring unit in March 2013.

The following recommendations regarding the management of the road network were identified in the Audit Review Technical Report.

Figure 119 NZTA Technical Audit 2013

Issue	Assessment	Risk[a]
Previous Audit Issues	Amber	low
Financial Management	Green	
Procurement	Green	
In-house Professional Services	Amber	low
Asset Management Plan & Land Transport Programmme	Green	
Databases	Amber	low
Network Management	Amber	low
Safety Performance	Green	
Multi-party Agreements	Green	

risk rating is only included for 'amber' or 'red' assessments.

Table 40 Recommendations & Reponses Technical Audit 2013

Q.	Recommendation	QLDC Response
1	That Queenstown Lakes DC implements a crack seal repair programme for asphalt surfaces.	Preventative maintenance such as crack sealing and crack filling has been integrated into routine maintenance with a particular focus over the last 12 months. (e.g. Fernhill Road was a trial site with a new product SuperSeal)
3	That the Queenstown Lakes District Council ensures that: a) Mandatory non-price attributes are included in future Request For Proposals (RFP)s, b) A statement about its quality assurance system requirements are included in every RFP, c) A disqualified tenderer's information is removed from the tender evaluation process, and The amount of the Supplier Quality Premium is confirmed during the tender evaluation process as the amount Council is willing to pay for a higher quality supplier.	QLDC accepts these recommendations. They are to be actioned in the upcoming review of the QLDC Capital Delivery Manual.
4	That Queenstown Lakes DC: a) appoints a specialist RAMM database manager to manage the database and produce accurate and timely reports; and b) puts in place a signed Transport Agency compliant agreement for the provision of in-house professional services.	a) Infrastructure Analyst (Transportation) appointed January 2015 b) a signed Transport Agency compliant agreement for the provision of in-house professional services has bene implemented
6	That Queenstown Lakes DC ensures that all attribute data in the database is timely, accurate and complete. Explore the opportunity to change the method of network condition rating to an instrumented vehicle.	• Cause of failure data missing – was never specified to be captured as part of previous contract. This is addressed in the new Contract, required to capture included to assist with Failure Mode Analysis – In addition there is stronger emphasis on Maintenance Intervention Strategy and implementing this into BAU. Failure is captured in

Q.	Recommendation	QLDC Response
		the fault type e.g. Surface: loss texture. RSL define 'failure' from 'yellow book' was considered to be • Network Condition rating undertaken using High Speed data including SCRIM undertaken 2016 • QLDC part of Geosolve project to assess the Traffic Speed FWD – half network undertaken early 2016, rest to follow. Already provided insights into drainage. • Exploring the GPR moisture surveys to see if can jump on the back of the HNO Coastal & Central Otago survey. Will initially target known areas of concern (e.g. Malaghans and Crown Range)
7	That Queenstown Lakes DC: a) collaborates with adjoining councils to form a team to validate the annual renewal programme; and b) adopts a more active network management approach to identify and address the issues raised during the field inspection.	a) NZTA RAPT process has been undertaken for the last 3 FWP programme years. Dtims undertaken and joint field validation undertaken with NZTA, QLDC and Contractor. Not across boundary yet, but agreed in principle to explore this with CODC. b) A more active network management approach is being applied. Working with Maintenance contractor to maximise the 'all-faults' system to identify and target programmes. New road maintenance contract brings MIS into BAU will assist us to undertake more preventative maintenance. **Addressing comments in findings** • Restructure in 2013/14 of the 'activity based' structure has introduced risk of disconnection between those who work on transportation elements. However a concerted effort has been made mitigate this potential risk and there are regular meeting of all the 'roading people' and strong communication channels. • Increase in heavy maintenance as dictated from the RAPT (e.g. Approach to Ardmore Street) • Road drainage: more proactive approach, looking at better FWP development for drainage. Developing better data to understand drainage (TSD survey & GIS analysis)
	Findings • Trees in a precarious position adjacent to the carriageway along the Glenorchy Road. Developer	**2016 Comments** • Dangerous tree programme developed. (delayed NZTA Approval)

Q.	Recommendation	QLDC Response
	• Wipe-outs that held water along the Kinloch Road.	• Better Business Case developed to address underlying problem and raise road above water table where possible.
	• Lack of adequate cross-fall on unsealed roads. This will lead to excessive potholing and customer complaints.	• Issue with un-cohesive materials. New contract has increased specification for grading. Audit Officer role has increased quality assurance on unsealed network.
	• Unsealed approaches to bridges were flat and potholed.	• Programme was developed to Otta seal bridge approaches –better performance seen since.
	• Greater use of slurry on sealed shoulders to provide a smooth surface for cyclists. This surface needs to be debris free.	• Where CAPEX projects interact with a defined cycle routes consideration is given to this treatment e.g. Malaghans Road
	• Overall cross-section shape was good on new projects though this was not the case with the Arthurs Point project. Shape here was poor and did not meet the design specification.	• Review of QLDC Capital Works Manual, enhancing design and MSQA.
	• Fords need to be more effectively monitored and maintained to ensure journey reliability.	• Better asset data capture and understanding. Part of general inspection programme.
	• Incorrect use of hazard markers on Mt Aspiring Road	• Contract audit officer in place – better monitoring
	• Asphalt patches had a poor ride. We appreciate that while most of these patches are temporary the quality issue remains and suggests a systemic issue of poor quality repairs that will negatively impact of the achieved life of the pavements.	• Contract audit officer in place – better monitoring

Investment Audit October 2016:

The last investment audit of QLDC was undertaken by the NZTA Performance Monitoring unit in October 2016.

The following recommendations regarding the management of the road network were identified in the Audit Report.

Figure 120 NZTA Investment Audit 2016

RISK ASSESSMENT

Q.1	Previous audit issues	Low
Q.2	Financial management	Medium
Q.3	Procurement	High
Q.4	Contract Management	Low
Q.5	Professional Services	Low

* Key to risk assessment – refer appendix B

Table 41 Recommendations & Reponses Investment Audit 2016

Q.	Recommendation	QLDC Response
2	That Queenstown Lakes District Council: a) ensures that only 30% of street cleaning cost is included in the monthly claims to the Transport Agency, and repay, on invoice, the Transport Agency's share of over claimed street cleaning expenditure	QLDC has sought clarification on Recommendation a) as below. QLDC is awaiting a response from NZTA before it can respond to Recommendation b).
3	That the Queenstown Lakes District Council ensures that: a) Mandatory non-price attributes are included in future Request For Proposals (RFP)s, b) A statement about its quality assurance system requirements are included in every RFP, c) A disqualified tenderer's information is removed from the tender evaluation process, and The amount of the Supplier Quality Premium is confirmed during the tender evaluation process as the amount Council is willing to pay for a higher quality supplier.	QLDC accepts these recommendations. They are to be actioned in the upcoming review of the QLDC Capital Delivery Manual.

5.6.2 Long Term Plan and Annual Reports Audits

QLDC uses external auditors (Deloitte on behalf of the Office of the Auditor General) to evaluate the quality and reliability of financial information reported in the Long Term Plan and Annual Reports. The below two points relating to infrastructure processes were raised by Deloitte during the 2017 audit process of the Annual Report.

Figure 121 Deloitte Audit 2017 - Roading Valuation

Rating:		Moderate
Ease of Fix:		**Medium**
Observation:	The Roading revaluation report provided by Beca noted the following: • Multiple management points were noted within the report including data inconsistencies.	
Risk:	There is a risk that assets are not able to be monitored due to data inconsistencies.	
Recommendations:	We recommend that the management points in the report by the valuer are reviewed and addressed or taken into consideration for the next valuation.	
Management Response:	QLDC accepts these recommendations. The recommendations by the valuer have been included within the QLDC Infrastructure Continuous Improvement / Performance Plan to be addressed. Given the rapid changes in growth related development assets being vested, QLDC will be looking to implement a system of annual valuations from July 2018.	

Figure 122 Deloitte Audit 2017 – Vested Assets

Rating:		Moderate
Ease of Fix:		Medium
Observation:	In the current year that some vested assets were not categorised in the correct year, with assets being capitalised in the current year in which should have been in the prior year and vice versa. We noted that the process has changed during the year to make this more efficient, however a large process had to occur during the audit by Infrastructure staff to understand the error and correct this in the annual report.	
Risk:	There is a risk that vested assets recorded are not recorded in the correct year.	
Recommendations:	We recommend to ensure that the improved process continues, and that checks are done by management to ensure that the new processes are going to achieve the previous issues.	
Management Response:	QLDC accepts these recommendations. With regards to roading assets, a change to the quantity and quality of roading data received through the subdivision process has already seen a marked improvement in vested asset data. This is supported by the Resource Management Engineering team holding back compliance sign off (224c approval) if the data is not provided. QLDC are working with its contractors to ensure that data is entered into the road asset management system in a timely and accurate manner to reflect the annual vested assets. In addition, a review of the overall QLDC subdivision process, and in particular, the sub-processes around the vesting of assets has been progressing for a number of months. This project is being led by the Knowledge Management Department. We expect this project to be completed by June 2018.	

5.7   ISO 55000

A high level assessment of QLDC's compliance with the requirements of the International Standard, ISO 55000:2014, was carried out during the 2015 AM Maturity Assessment.

Working towards ISO 55000 is being considered as a medium to long term goal, however, seeking full accreditation is likely to be resource intensive and unwarranted unless legislation or regulation imposes the requirement.

QLDC is, however, seeking to align AM practices with ISO 55000 requirements. To achieve this alignment, significant focus to is being given to the following areas:

➢ Documentation of processes and 'system interactions'
➢ Internal audit, review and improvement processes to be incorporated as 'business as usual' activities
➢ More detailed understanding of the asset management context and external and internal drivers, and how these translate into AM objectives ('line of sight' from corporate objectives to operational activities)

5.8   DATA CONFIDENCE

5.8.1   International Infrastructure Management Manual (IIMM)

QLDC uses the International Infrastructure Management Manual (IIMM) rating system for data confidence. Further information on this can be found in the IAMS.

The data in the RAMM database is regularly audited by NZTA in their capacity as co-sponsor of the council

investment programme. However, with the change to the One Network Road Classification (ONRC) system being rolled out by NZTA it has become apparent that the quality and quantity of information held with the databases will need to improve to meet the new 'evidence based investment decision' model which the ONRC requires. It is understood that the move to the ONRC approach, and not the current quality of the data which will have the greatest effect on the roading investment programme moving forward.

Figure 123 Overall Confidence of asset data

	Asset Condition	Asset Performance	Data Completeness	Overall Confidence of Asset data
Streetlighting				
Bridges & Structures				
Drainage Facilities				
Footpath				
Marking (Road Delineation)				
Street Furniture & Minor Structure				
Railing				
Retaining Wall				
Signage				
Traffic Facility				
Sealed Pavement- Surfacing				
Sealed Pavement- base course, sub base				
Unsealed Pavement				

A		*Highly Reliable Data based on sound records, procedures, investigations and analysis, which is documented properly and recognised as the best method of assessment.*
B		*Reliable Data based on sound records, procedures, investigations and analysis, which is documented properly but has minor shortcomings, for example the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.*
C		*Uncertain Data based on sound records, procedures, investigations and analysis, which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available*
D		*Very Uncertain Data based on unconfirmed verbal reports and/or cursory inspection and analysis. Dataset may not be fully complete and most data is estimated or extrapolated.*
N/A		*Data does not exist or is not relevant*

5.8.2   REG Data Quality Project

The REG data quality report for 2016/17 provides an overview of the data used by the ONRC Performance Measures Reporting Tool.   64% of QLDC's data appears to be at the expected standard for the reporting tool, however there are a number of improvements which need to be addressed and this forms part of the performance improvement plan.

Figure 124 Overall REG Data Quality 2016/17

Grade	Definition
Grade 1	Data quality to expected standard
Grade 2	Minor data quality issues present
Grade 3	Major data quality issues present
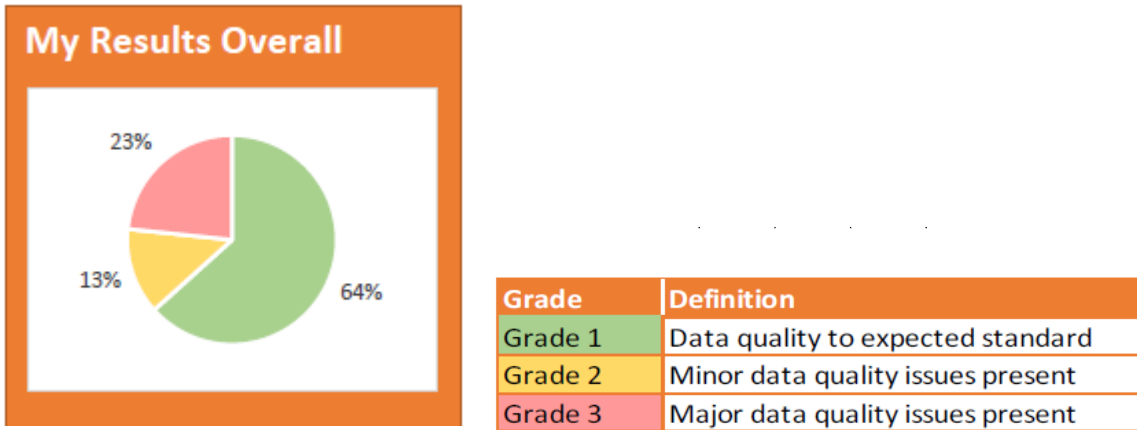
5.9   CHANGES IN TECHNOLOGY

QLDC understand that the world we live in is changing and as we strive towards providing integrated transport solutions we need to understand and start thinking about what changes are coming and the technology that will support these changes.

5.9.1   Intelligent Transport Systems (ITS)

The Ministry of Transport's Statement of intent envisages that Intelligent Transport Systems (ITS) are revolutionising transport globally, and these technologies offer some of the best prospects for improvements in safety, efficiency and environmental outcomes. Options are explored in the Intelligent Transport Systems Technology Action Plan 2014-18.
The Transport Agency Position Statement on Intelligent Transport Systems identifies specific investment areas for ITS and QLDC are striving to explore these methodologies. High priority ITS investment areas include:

➢   mechanisms for collecting quality data about the use of the network
➢   better-quality data to drive better operations, planning and investment
➢   more active network management
➢   mechanisms that enable the delivery of accurate information to travellers to promote smarter transport choices.

QLDC ITS **-** QLDC are exploring options for broader ITS management through the QITS programme and the Queenstown Master Planning. This is looking at options including an operations centre which monitors CCTV, webcam, traffic, parking and will be used for optimisation of the network.   This will include feeds into and from the Wellington Traffic Operation Centre (WToC) which currently monitors Traffic Lights on the state highway and shortly the local road traffic lights.

5.9.2   Crown Range Weather Station and Webcam

QLDC is installing a meteorological weather station and webcam at the summit of the Crown Range Road. This installation will fill a significant gap in timely and accurate weather information for the Crown Range and follows the One Network philosophy by adopting the approach used by State Highways. Increased user numbers and the need to ensure safe winter access across the Crown Range to Cardrona, Wanaka, and local commercial operators requires improved information for making safe and timely calls for travel planning and ensuring the road stays accessible.

Accurate data recording and graphing of precipitation, temperature, humidity, wind speed and direction is now common practice in alpine zones for public safety. This information enables administrators and technicians to make road and public safety decisions with accuracy beyond "seat of pants" methods by watching trends and responding to rapid changes.

The combination of local expertise, regional Met Service forecast and accurate local mountain information will provide public, road management and crews with the assurance they have the highest level of decision-making possible. The addition of the camera will allow road users to access visual data in making travel decisions. This has already been proven to be of significant benefit on the Milford Road.

Weather Station Benefits: Multiple user access to the weather station and camera would enable each user group to make pro-active decisions and avoid bottle-necks through an early warning capacity.

Technical Benefits: Weather data trends are one of the most beneficial tools especially with temperature change for road icing and wind for inclement driving in snow-storm conditions.
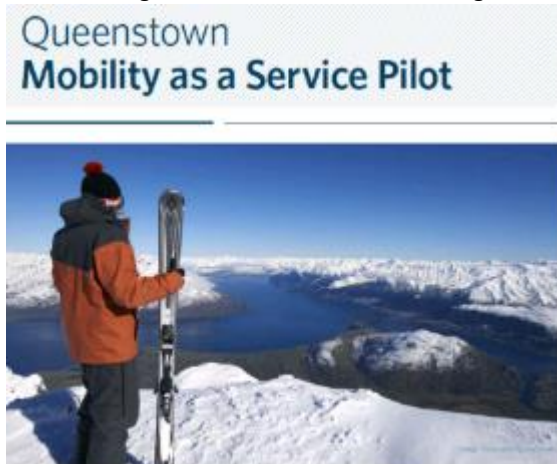
Emergency use: The value of having a network of weather station information through the region is vital for emergency services such as helicopter responses to mountain incidents both from Queenstown, Wanaka and Dunedin for urgent patient response.

5.9.3   Mobility as a Service (MaaS)

QLDC has been used as a test ground for Mobility as a Service, with a launch in Queenstown in August 2017.

Mobility as a Service offers an opportunity to change the way multi-modal transportation works together.

The goal of MaaS is to provide an alternative to a personally owned car, but still maintain the same level of service. Services need a place to operate in and customers need a place to transact with those services, i.e. there needs to be a marketplace. The Choice App is that marketplace.

It's goal is to provide a platform with optimised end-to-end journey planning, real time information, mode choices, payments and possibly packaged services (offered by the mobility service providers) all in one place.

Currently all open transport data exists but it sits on individual channels across many silos. What we've done is utilize gaming technology through a platform called Satori that takes all that data in those silos and brings it into a single, high speed, ultra-low latency, live data channel – the Mobility Marketplace.

What this means is that mobility service providers like taxi's, buses or ride share operators, can access the data in the marketplace and process it to optimise the offering to customers in real time.

Queenstown: To test the user experience in a commercial sense, two large scale mobility marketplace proof of-concept pilots will run, with the first launching in Queenstown in late August. The pilot is aimed at getting visiting tourists from Queenstown Airport to the town centre then from the town centre to the surrounding ski villages so they can spend more time enjoying Queenstown.
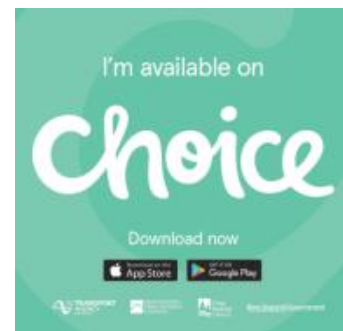
The impact visiting tourists are having on Queenstown Lakes District, alongside a growing population is putting extra pressure on the current transport system. Collaboration with local authorities and transport providers is crucial to the success of this pilot. Without doing this together the benefits won't be realised.

5.9.4   Developing Treatments / Material selections

QLDC is exploring the availability of developing and different treatment and technology's. A range of options are being explored

- ➢ Dust suppression
- ➢ Snow and ice treatment such as CMA / NAC instead of the traditional grit.
- ➢ SCRIM solutions
- ➢ Bitumen rejuvenators

5.9.5   New Data Collection Moisture Monitoring Surveys

QLDC are keen to continue to develop understanding our network and this involves collaboration with the State Highway Coastal Otago Contract and utilising the Moisture Monitoring Surveys.

5.9.6   Electric Vehicles (EVs)

Technology is making rapid changes to the way people connect, and the range of transport choices is increasing. QLDC is working with the New Zealand Electric Vehicle Club "Leading The Charge" and has held a community interactive promotional afternoon to highlight and inform Wanaka Community Board discussions are underway to determine charging point locations for Wanaka with installation due summer 2017. Queenstown will also be introducing charging points for the town centre over summer 2017.

QLDC is investigating an electric vehicle as an additional to the corporate fleet of vehicles.

5.9.7   Autonomous Vehicles (AVs)

NZ Transport Agency's Technology Action Plan states that "it is the use of fully autonomous or driverless vehicles that may have the greatest potential, in the long term, to revolutionise the concept of transport. Such vehicles could have profound implications for road safety and provide new opportunities for people to travel who currently are not able to (for example because of age or disability). Demographic changes in the future, with an increasing number of elderly people, will make this particularly important. They could also further increase the efficiency of the road network and reduce emissions by being programmed to drive in a highly efficient way."

In the context of the QITS PBC, AVs are likely to have a role in first mile/last mile public transport trips especially for parts of the network which may be difficult to service such as the hill suburbs. The integration of AV and public transport is already emerging through trials elsewhere in New Zealand and internationally.

Potential applications for AV trials with relation to the activities in the Recommended Programme include servicing hotels or other key destinations from the:

➢ Mass Rapid Transit hub
➢ Frankton ferry terminal
➢ Airport (including connection to park and ride)

5.9.8   Travel Time Monitoring

QLDC along with NZTA have invested in a system called Blip Track which picks up blue tooth sensors from cars. These sensors are at various locations along some parts of our network, both Local Roads and the State Highway. They use an anonymised algorithm to calculated journey times as well as look at origin and destinations - we can use this to understand journey choice.

The difference in journey time has been calculated from actual journeys made before and after the changes.

Potentially this information can be linked up to a Variable Message Sign (VMS) and provide customer with real travel time information such as time to the airport, or warning of traffic incidents which may cause delay.

5.9.9   Video Camera Counting

QLDC are exploring the use of video cameras along with artificial intelligence software for capturing and analyzing traffic and pedestrian movements. An initial exercise is being carried out to provide evidence for a local business case and the methodology is being developed to explore potential for wider counting. QLDC have had discussion with NZTA to try and maximize the video technology being used by NZTA and adapt it to the Queenstown Town Centre.

5.9.10   Metadata Standards

Land Information New Zealand is leading the development of national metadata standards for how we capture, describe and store data. These standards will mitigate inefficiencies in local government operations and decision making brought about by inconsistent data, low quality data, and non-capture of data across New Zealand.

Metadata Standards will increase transparency on infrastructure performance and ultimately influence investment levels nationally.

Metadata is data about data. It is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage data resources and knowledge. Therefore allowing the assessment of data confidence.

It is intended QLDC will be adopting these standards after review of the guidance material.

SECTION SIX – ASSET MANAGEMENT PERFORMANCE PLAN

QLDC's AM Performance Plan is a high level view of the key areas of improvement identified to enhance the asset management planning process within QLDC. Achieving this Performance Plan will align QLDC's asset management practices to the higher end of the "Intermediate" level as represented in the IIMM 2015 guidelines. QLDC is currently sitting in the lower "Intermediate" level.

Figure 125 International Infrastructure Management Manual (IIMM) AM Maturity Index (2015)

Aware	Minimum	Core	Intermediate	Advanced
0-20	25-40	45-60	65-80	85-100

Intermediate = reliable register of physical, financial and risk attributes recorded in an information system with data analysis and reporting functionality. Systematic and documented data collection process in place

Timelines for completion are assigned to the actions based on priority. The key focus is on process and data integrity; ensuring that processes to deliver the BCA AMP programme is defined, understood, implemented and resourced to deliver with the appropriate capability and asset information is robust, repeatable and reliable.

Status of the Performance Plan is reported to Senior Management quarterly, a more detailed Performance Plan used for this reporting can be found in the Appendix 5.

APPENDIX 1 – QLDC POLICIES, STRATEGIES AND SUPPORT ELEMENTS

The following documentation and support elements highlight QLDC's approach to AM practices and transportation services:

Asset Management Policy	..\..\..\Elements\AM Systems\AM Policy\AM Policy Jan 2016.docx
2018 Infrastructure Asset Management Strategy (IAMS) Draft	..\..\..\Elements\AM Systems\AM Strategic Plan\AM Strategic Plan Jan 16.docx
Asset Management Performance Plan	2015 AM Performance Plan - All Activities.xlsx
2015 30 Years Infrastructure Strategy	http://www.qldc.govt.nz/assets/Uploads/Council-Documents/Strategies-and-Publications/QLDC-Infrastructure-Strategy-2015-2045.pdf
QLDCs 2015/25 Long Term Plan	http://www.qldc.govt.nz/council-online/council-documents/council-community-plan-ltccp/
Better Business Case Framework	..\..\..\..\3_Investment\Business Cases\1000 - Process\BBC Implementation\BBC Outcomes Framework March2016.docx
Risk Management Framework	J:\KEEP\RISK\FINAL Risk Management Framework QLDC.docx
One Network Road Classification	..\ONRC WEB Double Page.pdf
QLDC Bylaws, Policies and Strategies	J:\KEEP\Policies Strategies Bylaws\List of Policies Strategies Bylaws.xlsx
2016 Population Projections	T:\Asset Planning\1_Policy & Standards\Elements\Population Projections\Final QLDC Growth Projections_2015_Recommended.xlsx
QLDC Land Development and Subdivision Code of Practice:	http://www.qldc.govt.nz/planning/resource-consents/qldc-land-development-and-subdivision-code-of-practice/
QLDC Transportation Strategies	http://www.qldc.govt.nz/council-online/council-documents/strategies-and-publications/transport-strategies/

APPENDIX 2 – NETWORK MANAGEMENT PLANS / MAINTENANCE PBS

Appendix 2 has been attached to TIO as a separate supporting document

APPENDIX 3 – LONG TERM PLAN PERFORMANCE FRAMEWORK 2018-28

High performing core infrastructure services: **Performance Measure**	Baseline as at June 2017	Year 18/19 Target	Year 19/20 Target	Year 20/21 Target	Year 27/28 Target
** The annual change in the number of fatalities and serious injury crashes on the local road network	15	To report a decrease on the previous year	To report a decrease on the previous year	To report a decrease on the previous year	
** Average quality of ride on a sealed local road network, as measured by the Smooth Travel Exposure Index	89%	>80%	>80%	>80%	>80%
** % of sealed network that is resurfaced annually	6.66%	<10%	<10%	<10%	<10%
** % of local footpath network that is part of the local road network that falls within the LOS or service standards for the condition of footpaths	Not reported	95%	95%	95%	95%
** % of customer service requests responded to within a specified timeframe	74%	>95%	>95%	>95%	>95%
Improved traffic flows on arterial routes	New measure	To report an improvement on the previous year	To report an improvement on the previous year	To report an improvement on the previous year	To report an improvement on the previous year
Increased journey time reliability	New measure	To report an improvement on the previous year	To report an improvement on the previous year	To report an improvement on the previous year	To report an improvement on the previous year
Percentage of residents and ratepayers who are satisfied with the bus service (cost, reliability, accessibility)	New measure	40%	45%	50%	60%

Agreed measures and targets for years 2018/19 to 2020/21 will be confirmed upon adoption of the 2018/28 LTP in June 2018.

**   DIA Metric 2018

APPENDIX 4 – GLOSSARY OF TERMS

3Waters	Wastewater, Stormwater & Water Supply	MMP	Maintenance Management Plan
AADT	Average Annual Daily Traffic	MOE	Ministry for Education
AM Plans	Asset/Activity Management Plans	MPI	Ministry of Primary Industries
AM	Asset Management	MSD	Multi Speed Deflectometer
ATN	Arrowtown	MSQA	Management Serveillance and Quality Assurance
AVs	Autonomous Vehicles	MWH	Now called Stantec
BAU	Business As Usual	NAMS	New Zealand Asset Management Support
BBC	Better Business Case	NIP	National Infrastructure Plan
BCA AMP	Business Case Approach Activity Management Plan	NIWA	National Institute of Water & Atmospheric Research
CAPEX	Capital Expenditure	NLTP	National Land Transport Program
CAR	Corridor Access Request	NMP	Network Management Plans
CAS	Crash Analysis System	NPS	National Policy Statement
CCTV	Closed Circuit Television	NZS	New Zealand Standards
CEO	Chief Executive Officer	NZTA	New Zealand Transport Agency
CMA	Calcium Magnesium Acetate	ODP	Operative District Plan
CODC	Central Otago District Counci	ONL	Outstanding Natural Landscape
LDS CoP	Land Development and Subdivision Code of Practice	ONRC	One Network Road Classification
CPI	Consumer Price Index	OPEX	Operational Expenditure
DCM	Dwelling Capacity Model	ORC	Otago Regional Council
DIA	Department of Internal Affairs	ORTC	Otago Regional Transport Committee
DoC	Department of Conservation	P&I	Property & Infratructiure Team (QLDC)
dTIMs	Deighton Total Infrastructure Management System	PDP	Proposed District Plan
El Capo	QLDC Capital Works Database	PESTLE	Political, Economic, Social, Technical, Legal and Environmental
ENP	Economic Network Plan	PMRT	Performance Measure Reporting Tool
EV	Electric Vehicles	PoE	Point of Entry
FAR	Funding Assistance Rates	PT	Public Transport
FWP	Forward Works Programme	QAC	Queenstown Airport Corporation
GDP	Gross Domestic Product	QITS	Queenstown Integrated Transport Strategy
GFC	Global Financial Crisis	QLDC	Queenstown Lakes District Council
GIS	Geographic Information Systems	QTN	Queenstown
GPR	Ground Penterating Radar	RAMM	Road Assessment & Maintenance Management
GPS	Government Policy Statement	RAPT	Road Assessment & Prioritisation Tour
GY	Glenorchy	RCA	Road Controlling Authorities
HIF	Housing Infrastructure Fund	REG	Road Efficiency Group
HSD	High Speed Data	RFP	Request For Proposal
IAF	Investment Assessment Framework	RFS	Request For Service
IAMS	Infrastructure Asset Management Strategy	RLTP	Regional Land Transport Program
IANZ	International Accreditation New Zealand	RMA	Resource Management Act 1991
ICR	Investor Confidence Rating	RMF	Risk Management Framework
IIMM	International Infrastructure Management Manual 2015	SCRIM	Sideway-Force Coefficient Routine Investigation Machine
ILM	Investment Logic Mapping	SD&D	System Design & Delivery Team(NZTA)
IMMS	Information Management Maintenance System	SH	State Highways (NZTA)
IPWEA	Institute of Public Works Engineering Australiasia	SHA	Special Housing Areas
ISO	International Organisation for	SME	Subject Matter Expert

	Standardisation		
ITS	Intelligent Transport System	SPR	Special Purpose Road
KPI	Key Performance Indicator	TASF	Transportation Activity Strategic Framework
LED	Light Emitting Diode	TIF	Tourism Infrastructure Fund
LGA	Local Government Act 2002	TL	Treatment Length
LGNZ	Local Government New Zealand	TSD	Traffic Speed Deflectometer
LoS	Level of Service	TTR	Travel Time Reliability
LTP	Long Term Plan	UV	Ultra Violet
LTSV	Long Term Strategic View	VKT	Vehicle Kilometers Travelled
M,O & R	Maintenance, Operations & Renewals	WK	Wanaka
MaaS	Mobility as a Service	WToC	Wellington Traffic Operations Centre
MBIE	Ministry of Business, Innovation & Employment		

APPENDIX 5 – QLDC PERFORMANCE PLAN 2018-21

									Transport					
Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
Understanding and Defining Requirements														
IIMM 2.1	Strategic Direction	1.3	Value for Money	General Asset Management	30	60	75	90	1. Review AM Policy & IAM Strategy	Mar-18	Polly	High		Not Started
		3.14	Value for Money	Network AM					2. Confirm annual or 3 yearly valuations - then follow up valuation recommendation for corporate policy on valuing heritage assets	Jun-18	Finance	Medium		Not Started
		n/a	Value for Money	General Asset Management					3. Research Australasia AM practices	Mar-18	Polly	High		Not Started
		1.4	Value for Money	General Asset Management					4. Ensure alignment with Council direction (e.g. LTP, Community Outcomes, Big Five)	Jun-20	Polly	Medium		Not Started
		1.2	Value for Money	General Asset Management					5. Research and update Governing Framework Govt Direction and TASF (e.g.. NIP, GPS, NPS, LTSV, RLTP, District Plan)	Nov-18	Polly	Medium		Not Started
		2.7.1	Travel Time Reliability	Network AM					6. Monitor and update status of QLDC Working Group for Travel to Work Plans	Dec-17	Simon Leary	Low		On Track
		2.12.1	Value for Money	Sealed Roads					7. Develop Skid Resilience Policy for QLDC network	Dec-17	Ali T	Medium		On Track
		Appendix 2	Value for Money	Environmental Maintenance					8. Winter maintenance - Develop LoS Policy (Compare DCC, CODC) to highlight Los for customers	Jun-17	Alit T/ John / Downer	Medium		Not Started
		Appendix 2	Amenity	Unsealed Roads					11. Update dust suppression policy – from oiling policy	Dec-17	Ali T	Low		Not Started
		n/a	Value for Money	General Asset Management					12. Continued engagement with Elected Members and Snr Managers	On-going	All	High		On Track
		n/a	Value for Money	General Asset Management					13. Define and document AM System scope	Nov-18	Polly / Ali T	Low		Not Started
		2.7.4	Value for Money	General Asset Management					14. Adoption of Land Development & Subdivision Code of Practice	Dec-17	Polly	Medium	Scheduled for adoption December Council	Slight Delay
		Appendix 2	Value for Money	Lighting					15. Adoption of Southern Light Strategy & Technical Specifications	Mar-17	Polly / Ali T	Medium		Completed
IIMM 2.2	Levels of Service	2.7.1	Safety	Minor Improvements	60	60	70	90	1. Ensure Low Cost Low Risk (Minor Improvements) Programme is addressing safety issues and gaps in LoS	Jul-18	Andrew E	High		On Track
		2.7.2	Value for Money	Network AM					2. ONRC measures are challenging our current LoS against the suggested ONRC targets. Ongoing development of understanding of level of service and cost trade-off through analysis. Develop and socialise differentiated LoS by road class to Councillors	Jul-18	Myles / Ali T	High		On Track
		2.14	Value for Money	General Asset Management					3. DIA reporting to be robust, repeatable, accurate and auditable, including 1/2 yearly reporting to GM	Aug-18	Polly	High		Not Started
		2.15.2	Value for Money	General Asset Management					4. Workshops to educate Councillors ONRC and REG objectives	Aug-17	Polly / Ali T	Medium		Completed
		2.7.2	Value for Money	Environmental Maintenance					5. **Winter maintenance** - Link & compare winter LoS priorities to ONRC Can we get more refined benchmarking? Lindis Pass & Desert road? DCC? Winter maintenance - Benchmarking cost for winter activities (Dunedin, SH, Lindis, Milford). Okakune – Ruapehu, Warren Furlong. Explore the costs through ONRC classes	Jun-18	Alit T/ John / Downer	Medium		Not Started
IIMM 2.3	Demand Forecasting	2.7.1	Value for Money	Network AM	55	55	65	80	1. Enhancement of traffic monitoring programmes. Traffic counts and explore other mechanisms for collection. Counts on unsealed roads	Dec-17	Ali T	Medium		On Track
		2.7.1	Value for Money	Transport Planning					2. Possible Transport Model platform change targeted	Dec-18	Ali T	Low		Not Started
		2.7.1	Value for Money	General Asset Management					3. Update population projections to include economic forecasts & distribute corporate wide for LTP usage	Jun-18	Polly	High		Not Started
		2.7.1	Value for Money	Transport Planning					4. **Traffic model** updates scheduled. (Annual population figures, network changes), develop pedtrian element: camera counting, model review	Aug-18	Ali T	Medium		Not Started
		2.7.2	Value for Money	General Asset Management					5. Explore impact of growth in Airbnb and the impact of communications and how engage with visitors i.e. how do Airbnb users receive weather information normally sent to hotels – are traditional methods still suitable?	Jun-18	Polly	Medium		Not Started
		2.7.2	Value for Money	General Asset Management					6. Align with Tony P and his BBC for access to Crown estates. Develop relationship with DoC and how managaing access and shared maintenance agreements	Jun-18	Ali T / Tont P/ DoC	Medium		Not Started

Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
IIMM 2.4	Asset Register Data	3.2	Value for Money	General Asset Management	60	60	70	80	1. Above ground asset rolling program of data capture by maintenance contractor	On-going	Ali T / Downer	Medium		On Track
		3.2	Value for Money	Lighting					2. Street Lighting - inventory data improvements - ensure these are built inot the LED upgrade	Mar-18	Ali T	Medium		On Track
		3.2	Value for Money	General Asset Management					3. RAMM asset data included in QLDC Data Warehouse	Dec-18	Ali T / Knowledge	Low		Not Started
		5.7	Value for Money	General Asset Management					4. Annual review of data confidence and ratings (held in AMP)	Nov-18	Polly / Ali T	Low		Not Started
		3.2	Value for Money	General Asset Management					5. Improving data structures and reporting from RAMM	Dec-18	Ali T	Low		Not Started
		3.2	Value for Money	Network AM					6. Continuous review of new RAMM update sheet process from CoP	Dec-17	Ali T	Medium		On Track
		3.2	Value for Money	General Asset Management					7. Contribute to Corporate Project on capturing the vested assets and subdivision process	Dec-17	Ali T	Medium		On Track
		3.2	Safety	Environmental Maintenance					8. Vegetation control - No Spray Register: The ownership of the no-spray register requires some clarification & map spraying areas. Vegetation control - Further work is required to explore how the programme may be impacted by the predicted higher rainfall. Growth patterns of vegetation species	Jun-18	Ali T / Downer	Low		Not Started
		3.2	Value for Money	General Asset Management					9. Data improvements - follow up actions from data improvement strategy, REG Data Quality reports/project	Dec-18	Ali T	Medium		On Track
		General	Value for Money	General Asset Management					10. Develop Database Operations Manual for RAMM. Integrate it with the vested asset process. OPUS	Dec-18	Ali T	Medium		On Track
		General	Safety	General Asset Management					11. Review apporach to analysing safety data. Copare CAS & RAMM.					
		3.2							12. Check RAMM remaining lives, are these getting updated?	Dec-18	Ali T	Medium		Not Started
IIMM 2.5	Performance and Condition	3.3.3	Value for Money	Network AM	60	60	70	80	1. Reviewing the condition survey that has been undertaken recently with a view to get additional surveys in particular high speed data and FWD/SCRIM testing	Mar-18	Ali T	Medium		On Track
		Appendix 2	Value for Money	Bridges & Structures					2. Bridge criticality assessments based on defended methodologies (1st Gen) & (2nd Gen)	Dec-18	Ali T	Medium		Not Started
		Appendix 2	Value for Money	Bridges & Structures					3. Enhancing the bridge inspection and data collection process by direct data input into RAMM. Requirements for retaining walls inspection currently under clarification	Sep-17	Ali T	Medium		Completed
		Appendix 2	Value for Money	Footpaths & Cycling					4. Footpath condition data collection and Level of Service to be developed (DIA & ONRC reporting measures). Link into Tony Pickards Active Travel Network work.	Jun-18	Ali T / Tony P	High		Not Started
		3.2	Value for Money	General Asset Management					5. Develop better process to capture costs when using Lump sums?	Dec-18	Ali T / Downer	Medium		Not Started
		2.12	Value for Money	General Asset Management					6. Ensure capability to report on all relevant ONRC measures	Jun-18	Ali T	High		On Track
		Appendix 2	Value for Money	Network AM					7. Review long term approach to future otta treatments. Develop best practice, someone to attend to Low Volume roads conference. Talk to other unsealed roads – RCA forum working group ? Jaime cox, martin taylor Dust suppression. This is co-ordinated around the renewals program to reduce establishment costs and improve productivity	Jun-18	John O	Medium		On Track
		2.14	Value for Money	General Asset Management					8. Review and adopt new KPI's for LTP	Jun-18	Polly	Medium	With ELT for sign off	On Track
		2.7.2	Value for Money	Environmental Maintenance					9. Explore NIWA - Rain intensity distribution? Impact on drainage etc. Talk ot Mark B about sttormwater managmnet plans and interaction with roading drainage?	Dec-18	Ali T / Mark B	Low		Not Started
		Appendix 2	Value for Money	Bridges & Structures					10. Retaining walls: review ownership data and review inspection process	Dec-18	Ali T	Medium		Not Started
		2.14	Value for Money	Network AM					11. Annual customer survey to build a picture over time of customer perceptions of transport network accessibility and mode choice. This will track the impact of big investment decisions on the customer experience and expectations from the transport network.	Jan-18	Polly / Ali T	Medium		Not Started
		General	Value for Money	Network AM					12. Formalise decision on RAMM Condition Rating versus All faults and its input into the TSA. Converting All faults. (Downer), agree with NZTA that this is OK	Jan-18	Ali / Downer / Gordon	Medium		Not Started
		General	Value for Money	Network AM					13. Review TSA process and ensure is implemented	Jun-18	Ali T	Medium		On Track
		General	Value for Money	Network AM					14. Ensure data collection process in place for all data required for the PMRT	Feb-18	Erik B	High		On Track

Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
Lifecycle Decision Making														
IIMM 3.1	Decision Making	1.3	Value for Money	General Asset Management	60	70	70	80	1. Review BBC framework	Mar-18	Susan	Medium		Not Started
		1.3	Value for Money	General Asset Management					2. Decision making processes for CAPEX projects and OPEX programmes to be developed and applied (BBC Checklist)	Mar-18	Alison H	Medium		On Track
		2.13	Value for Money	General Asset Management					3. Further development of the ENP to consider local components	Dec-17	Ali T	High		Slight Delay
		3.5	Value for Money	Network AM					4. Following NZTA's RAPT process for optimised forward works programming	On-going	Ali T	High	on going - process implemented	Completed
		3.5	Value for Money	General Asset Management					5. Develop prioritisation techniques to analyse maintenance works programme (Downer)	On-going	Downer	Medium		Not Started
		General	Value for Money	Network AM					6. Continue work with Geosolve to explore the mechanistic modeling for rehabs and its alignment with dTIMS	Mar-18	Ali T / Opus / Geosolve	Medium		On Track
		5.3.8	Value for Money	Network AM					7. Ensure additional (2 minimum) staff members are NZTA accredited Tender Evaluators	Jun-18	Erin	Medium		Not Started
		5.3.1	Value for Money	Network AM					8. Chase REG to secure support for Regional Transport Strategy via Procurement Group (Chris Olsen/Erik barnes)	Jun-18	Erin	Medium		Not Started
IIMM 3.2	Risk Management	3.12	Value for Money	General Asset Management	40	60	60	80	1. Incorporation of risk analysis in decisions as BBC implemented	Jun-18	Myles	Medium		Not Started
		3.12	Value for Money	General Asset Management					2. Running internal seminars on Risk Management framework - which leads to common language and further embedding with our contractors	Jun-18	Stephen B	Medium		Not Started
		2.12.1	Safety	Transport Planning					3. Develop Road Safety / Action Plan	Jun-18	Myles L	Medium		Not Started
		2.12.1	Safety	General Asset Management					4. Disjointed staffing approach/structure for responsibility No nominated 'safety' person in organisation, safety audits, safety plans, long term plans. Capacity and capability issue. No one assessing the network - apart from– school travel plans	Mar-18	Peter H	High		Not Started
		3.12	Resilience	General Asset Management					5. Develop a better understanding and evidence base around resilience on our network - understand the cost of both closures and effects of communications i.e.. social media scare mongering	Dec-18	Polly / Ali T	Medium		Not Started
		2.7.2	Resilience	Network AM					6. Complete Criticality project and update wider P&I team	Mar-18	Stephen B / Ali T	High		On Track
		2.7.2	Resilience	Network AM					7. Review requirement for, and potential develop Emergency Response & Resilience plans - co-ordinate with stakeholder partners	Dec-18	Ali T / John O / Downer	Medium		Not Started
		2.7.2	Resilience	Network AM					8. Ensure Otago Lifelines Project is communicated to wider P&I team	Jun-18	Myles	Medium		On Track
		2.7.2	Resilience	Network AM					9. Develop Network Resilience Plan - liais with NZTA. Focus on high priority routes, ONRC & criticility	Jun-18	Ali T	Medium		Not Started
		2.7.2	Safety	Network AM					10. Review intersections, review/create RAMM intersection data,					
IIMM 3.4	Capital Planning	4	Value for Money	Network AM	50	50	65	80	1. Continued refinement and developing reports from El'Capo	Jun-18	Alison H	Medium		On Track
		4	Value for Money	General Asset Management					2. Migration of external Project Funding database into Tech 1	Dec-17	Susan	High		On Track
		Appendix 2	Value for Money	Lighting					3. Programme for LED upgrades to rest of district	Dec-18	Ali T / Andy T	Medium		Not Started
		2.7.1	Travel Time Reliability	Transport Planning					4. Increased liaison and communication with Ministry of Education	On-going	Tony P	Medium		On Track
		Appendix 2	Value for Money	Bridges & Structures					5. Develop bridge & structures renewals programme	Dec-18	Ali T / John O	Medium		Not Started

Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
IIMM 3.3	Operational Planning	3.5	Value for Money	General Asset Management	50	60	65	80	1. Familiarise Operational team with Operational Planning section of IIMM	Dec-17	Polly	Medium	Task Owner review meeting scheduled for end October	On Track
		3.5	Value for Money	General Asset Management					2. List processes to document for development in ProMapp (in relation to item 3 below)	Jun-18	John O	Medium		Not Started
		3.5	Value for Money	General Asset Management					3. Develop QLDC documentation to align with Downer IMMS (O&M manual) - address and document any gaps	Jun-18	John O	Medium		Not Started
		3.5	Value for Money	General Asset Management					4. Document audit and review processes (align to Network Management Plans)	Jun-18	Ali T / John O	Medium		Not Started
		3.5	Accessibility	Network AM					5. Corridor Access Requests - liaise with State highway and CODC to hold Utility Meeting	Mar-18	Myles / Tony F / Ali T	Medium		On Track
		2.12.1	Safety	Unsealed Roads					6. Explore growing perception of safety issues on higher volume unsealed roads - don't have an active seal extension programme. What triggers these changes?	Mar-18	Andrew E	Medium		Not Started
		2.12.1	Safety	Network AM					7. Review no passing lines: QLDC has identified areas where no passing line may improve safety and is applying a higher level of service than would be typically found across the country due to the higher percentage of tourist drivers in the District	Dec-17	Andrew E	Medium		On Track
		2.12.1	Safety	Network AM					8. Review Curve advisories: QLDC has identified high risk curves and is applying a higher level of service than would be typically found across the country due to the higher percentage of tourist drivers in the District	Dec-17	Andrew E	Medium		On Track
		3.5	Accessibility	Network AM					9. Corridor Access Requests -align general conditions and provide training on process	Mar-18	Myles / Tony F / Ali T	Medium		On Track
		3.5	Accessibility	Network AM					10. Corridor Access Requests - support Corridor Engineer with additional resources and review opportunity for more permanent support	Mar-18	Myles / Tony F / Ali T	Medium		On Track
		2.10.3	Value for Money	Network AM					11. Utilise ONRC sub-classification to assist with LoS differentiation	Jun-18	Ali T / John O / Downer	High		Not Started
		5.8	Travel Time Reliability	Network AM					12. Reviewing technology options to better inform travelling public i.e. variable message signs	Jun-18	Ali T / Tony P	Medium		On Track
		2.7.2	Safety	Network AM					13. Communicate and report Speed Limit Review status to wider P&I team	Mar-18	Andrew E	High	clarifying requirements	Slight Delay
		2.7.2	Value for Money	environment Maintenance					14. Review general usage of CMA and consequences of 2017 trial of extra usage. Explore new CMA type products -ensure sustainability and perofrmance	Apr-18	Erin M / John O	Medium		On Track
		2.7.2	Value for Money	Drainage					15. Confirm drainage renewals FWP approach, document th eDowner IMMS process confirm on-going nature of process.	Mar-18	Ali T	Medium		On Track
		2.7.1	Safety	Network AM					16. Continue to work with School travel Coordinator to address road safety issues and support safe routes to school	On-going	Andrew E	Medium		On Track
		2.7.2	Safety	Environment Maintenance					17. Update QLDC Winter Maintenance Plan	Apr-18	John O	High		Slight Delay
		3.5	Value for Money	Sealed Roads					18. Finalise Maintenance Management Plan. Pavements and dangerous trees - link to MMP – inspections & prioritisation	Jun-18	Ali T / John O / Downer	Medium		Not Started
		Appendix 2	Safety	Environment Maintenance					19. Progress of dangerous tree programme	Mar-18	John O / Tim	Medium		On Track
		3.5	Resilience	Resilience					20. Progress of crown range and Glenorchy land stability	Mar-18	Andy T	Medium		On Track
		Appendix 2	Accessibility	Bridges & Structures					21. Undertake bridge screening for changes to VDAM	Aug-17	Ali T	Medium		Completed
		3.5	Resilience	Network AM					22. Development of emergency response plans for major scenarios	Jan-19	John O	Medium		Not Started
		2.7.2	Value for Money	Environment Maintenance					23. Monitoring of preventative maintenance to ensure best value is being achieved	Jun-18	Andrew E	Medium		Not Started
IIMM 3.5	Financial Planning	4	Value for Money	General Asset Management	50	50	65	80	1. Ensure Tech 1 OPEX and CAPEX is up-to-date for inclusion in AMP	Oct-17	Alison H	High		On Track
		4.12	Value for Money	General Asset Management					2. Review how to integrate NZTA Investment Assessment Framework within BBC framework and Tech 1	Jun-18	Myles /Ali H / Ali T	Medium		Not Started
		4	Value for Money	General Asset Management					3. Create promapp for OPEX charting for inclusion in AMP sections	Jun-18	Alison H	Medium		Not Started
		4.6	Value for Money	Network AM					4. Review decision to undertake Asset Valuation annual or 3 yearly review	Jun-18	Myles / Ali T / Finance	Medium		On Track
		4	Value for Money	General Asset Management					5. Review OPEX forecasts and NZTA funding following contract re-tender	Jun-18	Alison H	Medium		On Track

Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
Asset Management Enablers														
IIMM 4.1	Leadership and Teams	2.7.5	Value for Money	General Asset Management	30	65	75	80	1. Liaise with QLDC Economic Development Mgr and ensure alignment between departments	Mar-18	Polly / Ali T	Medium	Formation of DAWG (Data Analysis Working	On Track
		1.2	Value for Money	General Asset Management					2. Liaise with Planning & Development team and ensure alignment and communication is happening between departments (i.e. NPS & CoP)	Mar-18	Ulrich	Medium	On-going	Completed
		3.3.1	Value for Money	General Asset Management					3. Consider bringing GIS & spatial reporting capability and capacity into AM team	Jun-18	Myles	Low		Not Started
		3.3.1	Value for Money	General Asset Management					4. Continue to resource a dedicated AM team	Jun-18	Myles	Medium		On Track
		2.15.3	Value for Money	General Asset Management					5. Ensure feedback from national and Regional groups, national Visitor Driving project and Southern Road Safety Influencing Group to wider P&I team	Mar-18	Andrew E	Medium		On Track
		5.3.11	Value for Money	General Asset Management					6. LGA Section 17a - ensure communication on progress is delivered to wider P&I team	Mar-18	Myles	Medium		On Track
		5.3	Value for Money	Transport Planning					7. Ensure reporting lines to ensure oversight of the Integrated Transport Governance Group	Mar-18	Tony P	Medium		On Track
		5.3	Value for Money	Transport Planning					8. Ensure distribution of minutes from State Highways liaison meetings	Mar-18	Ulrich	Medium		On Track
			Value for Money	General Asset Management					9. Confirm Parks & Reserves asset split and mangement	Dec-18	Myles / Erin	HIgh		Not Started
IIMM 4.2	AM Plans	3.4	Value for Money	General Asset Management	50	55	60	80	1. Annual reporting on consents for update in AMP	Oct-18	Polly / Jen M	Medium		Not Started
		2.7	Value for Money	General Asset Management					2. Review and update Strategic Assessments	Oct-18	Polly / Ali T	Medium		Not Started
		1.2	Value for Money	General Asset Management					3. 2nd Generation workshop to determine AMP structure and condensing	Apr-18	Polly / Ali T	High		Not Started
		2.10 - 2.12	Value for Money	General Asset Management					4. Integrating ONRC framework within the Transportation AMP	Nov-18	Polly / Ali T	High		Not Started
		4	Value for Money	General Asset Management					5. Improved analysis of condition / performance / risk information in deriving major projects and programmes.	Oct-20	Myles	Medium		Not Started
		Appendix 2	Value for Money	General Asset Management					6. Address Murray Gimlett peer review comments particularly around the PBCs and benchmarking: sealed roads, unsealed roads, environmental maintenance. & MAPHub safety maps.	Dec-17	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					7. Address LGNZ Peer ReviewPhase 1 - some minor changes & cosmetic edits	Dec-17	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					8. Address NZTA feedback:	Dec-17	Polly / Ali T	Medium		Not Started
		Exec Summary	Value for Money	General Asset Management					9. Finalise Executive Summary	Dec-17	Polly / Ali T	Medium		Not Started
		Appendix 2	Value for Money	General Asset Management					10. Address LGNZ Peer ReviewPhase 2 - some structural changes suggested and further development of the PBC/NMP	Dec-17	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					11. Check data / statistics consistencies	Dec-18	Ali T	Medium		Not Started
		Appendix 2	Value for Money	General Asset Management					12. Continue to develop PBC/Network management plans. Look to integrate more clearly into main AMP document	Dec-17	Polly / Ali T	Medium		On Track
		General	Value for Money	General Asset Management					13. Review communication strategy to socialise the AMP, governance, internally, contractors	Dec-17	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					14. Review problem statements	Dec-18	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					15. Create an 'At Glance' Amp' network document to provide to councillors and new infrastructure staff - similar to CODC type document	Apr-18	Polly / Ali T	Medium		Not Started
		General	Value for Money	General Asset Management					16. Link actual progrmame items to the LTSV - rather than just 'wider programme'	Dec-17	Ali T	Medium		Not Started
		New 4.13	Value for Money	General Asset Management					17. Further develop negative effects from 2018 LTP	Dec-18	Polly / Ali T	Low		Not Started

Reference	Section	BCA AMP Section	Outcome	Activity	2012 Score	2015 Score	2016 Score	Appropriate Target	QLDC Response	Delivery Timeframe	Owner	Priority	Implementation as at end September 2017	Sept 2017 Status at a glance
IIMM 4.3+A A134:Y 162	Management Systems	5.6	Value for Money	General Asset Management	35	40	50	80	1. Review process documentation supporting AM and ensure IS055000 alignment in terms of language and content	Oct-20	Polly	Medium		Not Started
		General	Resilience	General Asset Management					2. Follow up Business Continuity Plans	Jun-18	Polly	Medium		Not Started
		General	Value for Money	General Asset Management					3. Explore what we could learn from ISO 4401:2017 Collaborative business relationship management systems -- Requirements and framework. Could this assit internally and with contractors - take the same approach to 55000?	Jun-18	Polly / Ali T	Medium		Not Started
IIMM 4.4	Information Systems	5.8	Travel Time Reliability	General Asset Management	60	70	70	80	1. Continue partnership with NZTA and stakeholders in MaaS project and 2nd roll out	Jun-18	Tony P	Low		On Track
		2.7.2	Value for Money	Sealed Roads					2. Monitor weather using new webcam and weather station data to monitor freeze days and their impact on road sub-structure	Oct-18	Ali T / Downer	Medium		Not Started
		3.3.1	Value for Money	General Asset Management					3. On-going RAMM training undertaken for relevant staff	On-going	Ali T	Medium		On Track
		5.8.9	Value for Money	General Asset Management					4. Review Treasury's Metadata guidelines and develop/adopt for QLDC. Align with Austroads data standards	Oct-20	Ali T	Medium		On Track
		2.13	Value for Money	General Asset Management					5. Continue to refine ENP and carry out analysis between years	Dec-17	Ali T	Medium		On Track
		3.13	Value for Money	General Asset Management					6. Integration of Hanson & RAMM databases will not occur. What will happen is the ability to provide analytics on critical asset overlaps	Jun-18	Stephen B	Medium		Not Started
		2.5	Value for Money	General Asset Management					7. Obtain updates on Dwelling Capacity Model project	Jun-18	Mark B	Medium		On Track
		5.8	Value for Money	Network AM					8. Consider CCTV or other technology platforms for Pubic transport and QT Master planning traffic monitoring	Jun-18	Polly / Ali T / Tony P	Medium	Awaiting adoption of LTP submission	On Track
IIMM 4.5	Service Delivery Models	5.3.9	Value for Money	General Asset Management	70	70	75	80	1. Adopt annual running of the Investor Confidence Rating to demonstrate service delivery effectiveness and opportunity for improvement	Mar-18	Polly / Myles	Low		Not Started
		5.3	Value for Money	General Asset Management					2. Develop a measure to demonstrate investment is becoming less volatile	Oct-20	Myles	Medium		Not Started
		5.3.1	Value for Money	General Asset Management					3. Update and review Strategy for Procurement of Transport Strategy and submit to NZTA	Mar-18	Polly	Medium		Not Started
		5.3.6	Value for Money	Lighting					4. Review collaboration on Street Lighting Maintenance Contract Renewal with State highway and CODC	Jan-18	John O	Medium		Slight Delay
		Appendix 2	Value for Money	Bridges & Structures					5. Review delivery of bridge inspections. Go to market and look for a 2 year plus 2	Nov-17	Ali T	Medium		On Track
		Appendix 2	Value for Money	Environmental Maintenance					6. Winter maintenance - Can NZTA provide an external auditor to review Downer's approach to grit strategies / interventions (John Jarvis)	Jun-18	Erin M / Ali T / Gordon	Medium		Not Started
		General	Value for Money	General Asset Management					7. Continue to integrate asset management into operations	Jun-18	Ali T / John O	High		Slight Delay
		General	Value for Money	General Asset Management					8. Integrate ONRC into Road Maintenance Contract. Change Contract specification to ONRC categories	Jun-18	Ali T / John O	High		Slight Delay
		General	Value for Money	General Asset Management					9. Explore regional delveiry of Low Risk Low Cost through NZTA shared Procurement. Tony S, Graham Hall, Chad Barker	Dec-17	Ali / Gordon	High		Not Started
		General	Value for Money	General Asset Management					10. Explore Regional Procurement Strategy. Check circular. Myles to explore with 17a meetings?	Dec-17	Polly / Myles / Gordon	Medium		Not Started
		General	Value for Money	General Asset Management					11. Review regional capacity and capability to deliver QLDC and partner programmes.	Dec-17	Peter H	High		Not Started
IIMM 4.6	Improvement Planning	5.5	Value for Money	General Asset Management	40	60	70	90	1. Annual AM maturity assessment	Dec-17	Polly	Low	Assessments scheduled for November 17	On Track
		5.6	Value for Money	General Asset Management					2. Auditors report on the LTP - AM source data (by Deloittes)	Jun-18	Polly	High		Not Started
		5.6	Value for Money	General Asset Management					3. Potential NZTA Technical Audit	Jun-18	Polly / Ali T	Medium		Not Started
		6	Value for Money	General Asset Management					4. This Performance Plan is developed and prioritised	Dec-17	Polly	High		Completed
		6	Value for Money	General Asset Management					5. Performance Plan is formally / regularly monitored with reporting to Snr Management and Elected Members	Quarterly	Polly	Medium	Updating for September	On Track
		6	Value for Money	General Asset Management					6. Communicate and socialise Performance Plan with task owners	Nov-17	Polly	Medium	Task Owner review meeting scheduled for end October	On Track
		6	Value for Money	General Asset Management					7. Check consents which are due. Review longer term approach to aggregate resourcing, ensure suatainable access to suitable aggregate	Nov-17	Polly	Medium	Task Owner review meeting scheduled for end October	On Track

APPENDIX 6 – ONRC MEASURES AT A GLANCE

A work in progress - completed for October

	no data	ok	warning	investigate / high risk	Statistically un-reliable
	⚪	🟢	🟡	🔴	(hatched)

Outcome				Date: August 2017	Arterial	Primary Collector	Secondary Collector	Access	Low Volume	LoS Gaps, Issues and Differences identified.	Proposals to address the issues
				% Network Length	1%	16%	23%	27%	33%		
				% VKT							
Safety	Customer Outcome	1	Number of fatal and serious injuries on the network		🟢	🟡	🟢	(hatched yellow)	(hatched green)		Too little data to be statisically reliable for Access and Low volume road crashes	
		2	**Collective risk** (fatal and serious injury rate per kilometre)		(hatched yellow)	🟢	🟢	🟢	🟢	**Arterial**- has a crash sample of less than 65km, risk calculation maybe distorted due to small sample size	
		3	**Personal risk** (fatal and serious injury rate by traffic volume)		(hatched yellow)	🟢	🟡	🟢	🟢	**Arterial**- has a crash sample of less than 65km, risk calculation maybe distorted due to small sample size	
	Technical Ouput	1	Permanent hazards								Performance improvement action to get data in PMRT - in RAMM but need some work
		2	sight distances								Performance improvement action to get data in PMRT - in RAMM but need some work
		4	Loss of control on wet roads..		🟢	🟢	🟢	(hatched green)	(hatched green)	Too little data to be statisically reliable for Access and Low volume road crashes. One recorded loss control on wet road crash since 2011/12.	Monitor crashes and continue to assess skid resistence and texture issues
		5	Loss of driver control at night		(hatched green)	🟡	(hatched green)	(hatched green)	(hatched green)	Too little data to be statisically reliable for all classes except for secondary collectors. Primary Collectors shows an increasing trend, but this is only from 2 crashes to 1.	
		6	Intersections		(hatched green)	(hatched green)	(hatched yellow)	(hatched green)	(hatched green)	Too little data to be statisically reliable for all classes	
		7	hazardous faults								Performance improvement action to get data in PMRT - in RAMM but need some work
		8	cycle path faults								Get data in PMRT - in RAMM but need some work
		9	vulnerable users		(hatched green)	🔴	(hatched green)	🟢	(hatched green)	Primary Collector and Access only classes with enough data. Primary clearly needs further investigation	
		10	roadside obstructions.								Get data in PMRT - in RAMM but need some work
TTR	Customer Outcome	1									Performance improvement action to get data in PMRT - in RAMM but need some work

A work in progress - completed for October

Legend:
- no data (grey)
- ok (green)
- warning (amber/yellow)
- investigate / high risk (red)
- Statistically un-reliable (hatched)

Outcome			Date: August 2017	Arterial	Primary Collector	Secondary Collector	Access	Low Volume	LoS Gaps, Issues and Differences identified.	Proposals to address the issues
Amenity	Customer Outcome	1	STE	warning	ok		high risk	warning	Our renewal programmes are not driven by roughness, although it is one of the measures used in dTIMS to deteriorate condition. Access roads have a higher level of roughness compared to our peers and national groups. Arterials contribute a low % of the network.	
		2	Peak Roughness/ Ride comfort	warning	ok	warning	warning	high risk	The majority of high roughness pavements are on low traffic roads- mainly in the urban areas. These roads tend to have low speed and predominantly light vehicles, therefore not casuing a huge wear and tear. The lower traffic speeds and numbers does not necessarily indicate pavement "failure", and may not be considered uncomfortable by users. These streets are expected to continue to perform satisfactorily for many years with the only maintenance being a reseal when the existing seal becomes worn or brittle.	
	Technical Output	1	Average Roughness	ok	ok	ok	warning	warning		
		1	Median Roughness							
		2	Aesthetic Faults							Performance improvement action to get data in PMRT - in RAMM but need some work
Accesibility	Customer Outcome	1a	The proportion of each road classification that is not accessible to Class 1 Heavy Vehicles							Performance improvement action to get data in PMRT - in RAMM but need some work
		1b	and 50MAX vehicles.							Performance improvement action to get data in PMRT - in RAMM but need some work
	Technical Ouput	1	number of instances where the road is not marked in accordance with national standards RTS-2 and MOTSAM and the Traffic Control Devices manual.							Performance improvement action to get data in PMRT - in RAMM but need some work
Cost Efficiency	Efficiency Measure	2a	Chipseal resurfacing quantity - lane km	ok	ok	ok	ok	ok		Performance improvement action to get data in PMRT - in RAMM but need some work
		2b	Chipseal resurfacing quantity - m2	no data	ok	ok	ok	ok		Performance improvement action to get data in PMRT - in RAMM but need some work
		3a	Asphalt resurfacing quantity - lane km		ok					Performance improvement action to get data in PMRT - in RAMM but need some work
		3b	Asphalt resurfacing quantity -m2							Performance improvement action to get data in PMRT - in RAMM but need some work
		5b	Average life achieved - surfaces	stat. unreliable	ok	ok	ok	ok	data issues arterials?	Performance improvement action to get data in PMRT - in RAMM but need some work
		7	Chipseal Resurfacing ($)							Performance improvement action to get data in PMRT - in RAMM but need some work
		7	AC Resurfacing ($)							Performance improvement action to get data in PMRT - in RAMM but need some work
		8	Routine Maintenance ($)						Issue with report? access roads pretty high lives. Arterials high - check -short lengths? VKT issues	Performance improvement action to get data in PMRT - in RAMM but need some work

APPENDIX 7 – ROAD MAINTENANCE CONTRACT - PERFORMANCE FRAMEWORK (ONRC)

Overarching Principle: Value for Money and whole of life costs will be optimised in the delivery of affordable customer levels of service.

ONRC Service Level Outputs - For contract transition information only so the tenderer can reasonably price and struture their RFP			ONRC Service Level Intervention Points by Classification - For contract transition information only so the tenderer can reasonably price and struture their RFP						Maintenance Contract Technical Specifications (TS)		
Our Promise to the Customer	**Technical Performance Measure**		**Transition information for tenderer**	**Arterial**	**Primary collector**	**Secondary collector**	**Access**	**Access (Low Volume)**	**Asset Intervention / Defect**		**Deficiency Trigger**
The reason we intervene.	ONRC PM Reference	**Measure Description** (The 'techincal outputs' delivered through the maintenance work)							**Contract TS Reference**		(When to intervene)
				Safety How road users experience the safety of the journey							
We will warn you about hazards on your trip.	Safety - PM1	Road Permanent Hazards and Delineation - Permanent hazards are identified and mitigated in a consistent and fit for purpose manner so that a road user's expectation about the standard of these are a major factor in his or her ability to negotiate the road environment safely (RTS 5/MOTSAM)	Deficiency triggers are to be developed during 2 year transition to ONRC and are likely to be supported by visual guidelines. This will rely on the accurate network performance monitoring to be collected by the tenderer.	Specific warning provided for all out of context and critical hazards 0 deficiencies per section (Mtce. G)	Specific warning signs and out of context hazards. 0 deficiencies per section (Mtce. G)	Specific warning signs and out of context hazards. 0 deficiencies per section (Mtce. G)	Generic warning signs and out of context hazards. Max. 3 deficiencies per section (Mtce. G)	Generic warning signs and out of context hazards. Max no. of deficiencies not specified per section (Mtce. G)	TS 19	Vegetation Control (Signs and Hazards)	
									TS 20	Signs	As per TS
									TS 21	Sight rails	As per TS
									TS 22	Pavement Marking	As per TS
			Reporting	Report no. of faults.	Report no. of faults.	Report no. of faults.	Report no. of faults.	Report no. of faults.			
	Safety - PM2	Temporary Hazards Identified - COPTTM (including Local Road Supplement) requirements implemented at every work site and temporary hazard as soon as practical		Report % of Audits 'Acceptable' from criteria	Report % of Audits 'Acceptable' from criteria	Report % of Audits 'Acceptable' from criteria	Report % of Audits 'Acceptable' from criteria	Report % of Audits 'Acceptable' from criteria	TS XX	Temporary Traffic Control	As per TS
			Reporting	As above	As above	As above	As above	As above			
	Safety - PM3	Sight Distances - (including hazard warning devices) are not obscured by vegetation or by unauthorised obstructions (advertising signage, etc.)		Always complies	Always complies	Always complies	Mostly complies	Mostly complies	TS 19	Vegetation Control (Visibility)	As per TS
									TS 21	Sight rails	As per TS
			Reporting	10% quarterly sample	5% quarterly sample	5% quarterly sample	5% quarterly sample	5% quarterly sample			
We will maintain the current roads and roadsides in safe condition	Safety - PM8	Surface Faults - Number of maintenance related faults (such as rutting / depressions, shoving, potholes, corrugated length, edge break (in lane), bleeding, detritus (in lane), ponding water) that are likely to affect driver behaviour, e.g. requiring a reduction in speed or evasion.		Urban - 2 deficient locations per 1km Rural - 3 deficient locations per 10km	Urban - 3 deficient locations per 1km Rural - 4 deficient locations per 10km	Urban - 3 deficient locations per 1km Rural - 6 deficient locations per 10km	Urban - 3 deficient locations per 1km Rural - 8 deficient locations per 10km	Urban - 4 deficient locations per 1km Rural - 10 deficient locations per 10km	TS 4	Potholes	As per TS
									TS 5	Edge Break	As per TS
									TS 7	Surface Deformation	As per TS
									TS 8	Heaves/Shoves, Bleeding	As per TS
									TS 9	Utility Service Covers	As per TS
									TS 10	Unsealed Potholes	As per TS
									TS 11	Unsealed Surface and Shape	As per TS
									TS 15	Street Cleaning (for Hazards)	As per TS
			Reporting	Quarterly Sample - 10% of Network.	Quarterly Sample - 5% of Network.	Quarterly Sample - 5% of Network.	Quarterly Sample - 5% of Network.	Quarterly Sample - 5% of Network.			
	Safety - PM10	Footpath Faults - Percentage of network falling within the level of service or service standard set by the RCA's relevant document. (DIA Measure)		TBC					TS 24	Surface Hazards	As per TS
			Reporting	TBC							
	Safety - PM11	Cyclepath Faults - Number of maintenance related hazards (such as detritus, ponding water, potholes, broken glass) on cycleways requiring evasive action by rider.		4 deficient locations per 1km					TS 24	Surface Hazards	As per TS
			Reporting	TBC							
	Safety - PM12	Surface Friction - Areas with surface friction deficiencies are identified and remedied appropriately and efficiently.		Comply	Comply	Comply	Comply	Comply	TS 7	Surface Deformation (Ponding)	As per TS
									TS 8	Flushing, Bleeding	As per TS
									TS 15	Street Cleaning	As per TS
									TS 18	Frost, Ice, Snow Gritting and Clearance	As per TS
									TS 19	Vegetation Control (Road Edge)	As per TS
			Reporting								
	Safety - PM14	Traffic restraining devices - such as bridge side rails, guardrails, wire rope barriers and crash cushions are maintained in an effective operating condition.		Always effective	Always effective	Always effective	Always effective	Always effective	TS 19	Vegetation Control (Guardrails)	As per TS
									TS 21	Guardrails and Handrails	As per TS
			Reporting	Report no. of faults in a 10% quarterly sample	Report no. of faults in a 5% quarterly sample	Report no. of faults in a 5% quarterly sample	Report no. of faults in a 5% quarterly sample	Report no. of faults in a 5% quarterly sample			

Overarching Principle: Value for Money and whole of life costs will be optimised in the delivery of affordable customer levels of service.

ONRC Service Level Outputs - For contract transition information only so the tenderer can reasonably price and struture their RFP			ONRC Service Level Intervention Points by Classification - For contract transition information only so the tenderer can reasonably price and struture their RFP						Maintenance Contract Technical Specifications (TS)		

Our Promise to the Customer	Technical Performance Measure		Transition information for tenderer	Arterial	Primary collector	Secondary collector	Access	Access (Low Volume)	Asset Intervention / Defect		Deficiency Trigger
The reason we intervene.	ONRC PM Reference	Measure Description (The 'techincal outputs' delivered through the maintenance work)							Contract TS Reference		(When to intervene)
	Safety - PM15	Roadside Obstructions - Roadside safety zones are maintained free from unauthorised obstructions and the development of new hazards.		No unauthorised roadside obstructions while maintaining the current standard of roadside safety zone.	No unauthorised roadside obstructions most of the time while maintaining the current standard of roadside safety zone.	Usually no unauthorised roadside obstructions while maintaining the current standard of roadside safety zone.			TS 19	Vegetation Control (Roadside encroachment)	As per TS
			Reporting	10% quarterly sample	5% quarterly sample	5% quarterly sample	5% quarterly sample	5% quarterly sample			

Resilience
The availability and restoration of road function when there is a weather or emergency event (unplanned), whether there is an alternative available and the road user information provided

Our Promise to the Customer	ONRC PM Reference	Measure Description	Transition information for tenderer	Arterial	Primary collector	Secondary collector	Access	Access (Low Volume)	Asset Intervention / Defect		Deficiency Trigger
We will carry out mitigation to avoid route closure where appropriate.	Resilience - PM1	A Plan for Resilience - Network Resilience Maintenance, Monitoring and Prioritised Improvement Plan in place and actionable.	The Plan for Resilience is to be developed in collaboration with QLDC during the transition period, using the accurate network operating and asset performance data collected. This will influence activities such as the maintenance and operating plan for winter, drainage, bridge and structures.	Plan is in place and operational, including implementing preventative actions, to mitigate against moderate scale events and above that will interrupt customer journeys. Improvement plan identifies areas of significant vulnerability and criticality, combined with monitoring regime. Improvement plan should also include proactive intervention procedures for regular events (crashes, snowfall, ice, heavy rain etc.) as well as capital improvement programme.		Plan is in place and operational, including implementing preventative actions, to mitigate against significant scale events that will interrupt customer journeys. Improvement plan identifies areas of significant vulnerability and criticality and/or procedures for responding to any incidents and keeping customers informed.			-	Winter Maintenance and Operating Plan	As per TS
									TS 2	Traffic Counting	As per TS
									TS XX	Temporary Traffic Control	As per TS
									TS 14	Drainage	As per TS
									TS 18	Frost, Ice, Snow Gritting and Clearance	As per TS
									TS 17	Structures, Bridges	As per TS
									TS 19	Vegetation Control (Roadside encroachment)	As per TS
									TS 25	Fire Preparedness	As per TS
										Network Management	To be developed during transition
	Resilience - PM2	Proactive Maintenance - Number of events where journeys are lost or impacted due to loss of road function through proactive maintenance not taking place.	A reporting measure for monitoring the success of the resilience and response plans	No.	No.	Reporting not required	Reporting not required	Reporting not required	-	Network and contract peformance monitoring	As per TS
			Reporting	As defined in Resilience Plan to be developed.							
We will ensure we are Prepared for Emergencies and Incidents that could disrupt travel.	Resilience - PM4	A Response Plan - An Emergency Procedures and Response Plan is in place and actionable.	A Response Plan is to be developed in collaboration with QLDC during the transition period, using the accurate network operating and asset performance data collected. This will also influence the communications plan and emergency works specifications.	Plan is in place and operational. The plan, reflective of breadth, scale, likelihood and consequence of event and lifeline considerations, details plans for prioritisation for restoration of passage and access depending on classification and route criticality. It includes for continuity of essential needs until access is restored.		Plan is in place and operational. Plan reflects lower classification and is reflective of breadth, scale, likelihood and consequence of event and lifeline considerations. It details plans for continuity of essential needs and for people to be prepared until access is restored.			-	Communications	As per TS
									TS 23	Emergency Works	As per TS
									-	Network Management	To be developed during transition
			Reporting	As defined in Response Plan to be developed.							
We will inform you of changes in Route Availability and Travel Choice.	Resilience - PM5	Informed of Route Availability Prior and On-Route - Information is to be made available to customers via effective mediums, as stated in the Response Plan, for customers and stakeholders (e.g. emergency services) prior to and during their journey within x minutes of QLDC being informed of changes in travel conditions, restoration time, route choice and/or estimated restoration time.		60 minutes	60 minutes (or as appropriate by QLDC Comms)	60 minutes (or as appropriate by QLDC Comms)	As appropriate by QLDC Comms	As appropriate by QLDC Comms		Communications Plan	To be developed during transition
			Reporting	As defined in Response Plan and Communications Plan to be developed.							

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Our Promise to the Customer	**Technical Performance Measure**		**Transition information for tenderer**	**Arterial**	**Primary collector**	**Secondary collector**	**Access**	**Access (Low Volume)**	**Asset Intervention / Defect**	**Deficiency Trigger**
The reason we intervene.	ONRC PM Reference	**Measure Description** (The 'techincal outputs' delivered through the maintenance work)							**Contract TS Reference**	(When to intervene)
			Travel Time Reliability The consistency of travel times that road users can expect							
We will manage the impact of activities and demand on the network	TTR - PM1	Planned Activities - A process is in place to coordinate planned activities and events minimising customer impact, taking into account road function and any changes in priority by mode that may occur		Process minimises disruptions to customers through restricting planned activities that have more than a minor effect on required flow capacity to off peak and low flow periods.	Process minimises disruptions to customers through coordinating network access for planned activities. Activities restricting required capacity flows create only moderate delays to customer journeys.	Process minimises disruptions to customers through coordinating network access for planned activities and maintaining access is not excessive for road users.			TS XX	Temporary Traffic Control (Events)	As per TS
			Reporting	As defined in Traffic Management Plan to be developed.						
	TTR - PM2	Traffic Management Coordination - Delays due to planned activities shall not exceed X% of the typical travel time for key journeys.		Compliance with a maximum of 10 minute or 10% delay in travel time for key journeys	Process can be a combination of restricting delays up to 1 hour and the customer shall be informed of those expected delays such that they can make an informed decision regarding their journey e.g. allow extra time.	Process can be a combination of restricting delays up to 1 hour then the customer shall be informed of those expected delays such that they can make an informed decision regarding their journey e.g. allow extra time.			TS XX	Temporary Traffic Control (Works)	As per TS
			Reporting	As defined in Traffic Management Plan to be developed.						
We will provide information on travel time to customers so they can choose when and where to travel	TTR - PM4	Inform on Route - Customers are informed within X minutes of a change in travel time exceeding 20min via appropriate mediums.		60 minutes	60 minutes	60 minutes	As Appropriate	As Appropriate	TS XX	Temporary Traffic Control (Works)	As per TS
										Communications	To be developed during transition
			Reporting	As defined in Communications Plan to be developed.						
	TTR - PM5	Informed Prior - Where planned delays exceed 20min, information is made available to customers at least X days beforehand via appropriate mediums.		30 days	10 days	10 days	10 days	10 days	TS XX	Temporary Traffic Control (Works)	As per TS
										Communications	To be developed during transition
			Reporting	As defined in Communications Plan to be developed.						
We will operate the network to maximise its effective capacity	TTR - PM6	Network/Corridor Operating Plan - Measure for large urban metropolitan centres only or high classification roads and key journeys where an outcome failure or risk to one exists. RCA's shall have a network/corridor operating framework in place to ensure operation of the network focusses on moving people and goods, balancing the competing demands for limited road space by time of day, link and place function.	A plan to maximise effective capacity is to be developed in collaboration with QLDC, if and when deemed necessary by QLDC. This will also influence the communications plan and traffic controls.	Comply Network operating framework demonstrates which road users typically have priority access to the network. Journey type priority may change during the day. Some prioritisation may occur to improve productivity dependent on road function e.g. designated high occupancy vehicle lanes, bus lanes, pedestrian priority at crossings. Increasing intersection density, schools, shopping. Active road users have separate space or physical separation sometimes.	Comply Network operating framework demonstrates mixed use environments with mixed access priorities by mode, place and time dependent on road function.	Reporting not required			TS XX	Temporary Traffic Control (Events, Congestion, Works)	To be developed during transition
									TS 2	Traffic Counting (Seasonal, Time of Day)	To be developed during transition
									-	Network and contract peformance monitoring	To be developed during transition
			Reporting	As defined in Communications Plan to be developed.						

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Our Promise to the Customer	**Technical Performance Measure**		**Transition information for tenderer**	**Arterial**	**Primary collector**	**Secondary collector**	**Access**	**Access (Low Volume)**	**Asset Intervention / Defect**		**Deficiency Trigger**
The reason we intervene.	ONRC PM Reference	Measure Description (The 'techincal outputs' delivered through the maintenance work)							Contract TS Reference		(When to intervene)
Amenity **Travel Quality** - The level of travel comfort experienced by the road user **Travel Aesthetics** - The aesthetic aspects of the road environment (e.g. cleanliness, convenience, security) that impact on the travel experience of the road users in the road corridor											

We will maintain the road environment and facilities that support an appropriate level of comfortable ride	Amenity – PM1	Peak Roughness - At least 95% of the sealed road network meets specified levels of ride comfort.	The specific deficiency triggers for maintaining ride quality will vary for those for maintaining safe roads and roadsides. These will be developed during the 2 year transition period and will rely on the accurate network performance monitoring to be collected by the tenderer.	Urban <= 130 NAASRA Rural < = 120 NAASRA	Urban <= 140 NAASRA Rural < = 120 NAASRA	Urban <= 140 NAASRA Rural < = 130 NAASRA	Urban <= 150 NAASRA Rural < = 150 NAASRA	Urban <= 170 NAASRA Rural < = 180 NAASRA	TS 4	Potholes	As per TS
									TS 5	Edge Break	As per TS
									TS 7	Surface Deformation	As per TS
									TS 8	Heaves/Shoves	As per TS
									TS 9	Utility Service Covers	As per TS
									-	Network and contract peformance monitoring	To be developed during transition
			Reporting	Report % of network	Report % of network	Report % of network	Report % of network	Report % of network			
	Amenity – PM3	Unsealed Road Peak Roughness - At least 95% of the unsealed road network meets specified levels of ride comfort.	This is an aspirational level of service with the method of measurement and reporting to be confirmed during the transition period.	NA	T.B.C - Likely SH's only		Provisional service level is: 180 NAASRA		TS 11	Unsealed Surface and Shape	To be developed during transition
			Reporting	Reporting not required	Reporting not required		Report % of length				
	Amenity – PM4	Unsealed Road Average Roughness - The average ride comfort level of the unsealed road network meets specified levels.	This is an aspirational level of service with the method of measurement and reporting to be confirmed during the transition period.	NA	T.B.C - Likely SH's only		Provisional service level is: 150 NAASRA		TS 11	Unsealed Surface and Shape	To be developed during transition
			Reporting	Reporting not required	Reporting not required		Report % of length				
We will maintain the road corridor compatible with the urban rural context and the road use experience	Amenity – PM5	Aesthetic Faults - No more than X defects per 5 kilometre sample length of aesthetic maintenance related faults (such as litter, damaged or non-functioning equipment or furniture, graffiti, vegetation, etc.) that are likely to detract from the customer's experience.	The specific deficiency triggers for maintaining travel experience will vary for those for maintaining safe roadsides. These will be developed during the 2 year transition period and will rely on the accurate network performance monitoring to be collected by the tenderer.	Complying with a maximum of 15 defects as per the visual guidelines per 5 km sample length			Aesthetic requirement to be set and maintained by RCA but no reporting is required		TS 15	Street Cleaning, Litter Removal	As per TS
									TS 19	Vegetation Control (Roadsides, Rest Areas)	As per TS
			Reporting	Report No.			TBC				

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Our Promise to the Customer	**Technical Performance Measure**		**Transition information for tenderer**	**Arterial**	**Primary collector**	**Secondary collector**	**Access**	**Access (Low Volume)**		**Asset Intervention / Defect**		**Deficiency Trigger**
The reason we intervene.	ONRC PM Reference	Measure Description (The 'techinal outputs' delivered through the maintenance work)								Contract TS Reference		(When to intervene)

Accessibility
The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity

We will provide Guidance so you can navigate your way around the network	Accessibility - PM 1	Signage and Guidance - When a sign is provided, it should be compliant with MOTSAM, RTS2 and the Traffic Control Devices Manual	The specific deficiency triggers for maintaining signage for wayfinding will vary for those for identifying safety hazards for instance. These will be developed during the 2 year transition period and will rely on the accurate network performance monitoring to be collected by the tenderer.	Standard to be developed by QLDC during transition period.	TS 20 — Signs — As per TS
			Reporting	To be developed during transition period.	

Value for Money and whole of life costs will be optimised in the delivery of affordable customer levels of service.
The Measures of Efficiency in delivering the CLoS Outcomes.

				Arterial	Primary collector	Secondary collector	Access	Access (Low Volume)		Asset Intervention	Deficiency Trigger
We will deliver optimised programmes that are affordable and efficient so that the cost of service delivery is reducing year on year.	Efficiency - EM 1 through to EM 5	Right Time - Quantities of Work undertaken for the financial year by classification.	These measures are for reporting only, both Council and Contractor performance in delivering efficient road maintenance. The purpose is to provide assurance that all work on the asset is co-ordinated across its lifecycle, that it is at the best price and that we are continually seeking improvement. This will rely on the accurate network performance monitoring to be collected by the tenderer.	Report achieved quantities for previous year, planned quantities for current year and requested quantities for proposed year for each classification						Network and contract peformance monitoring	To be developed during transition
	Efficiency - EM 6	Continuous Improvement in Asset Management - Average life achieved of pavement and of sealed surfaces renewed.		Pavement. No. Surfacing. No.	Pavement. No. Surfacing. No.	Pavement. No. Surfacing. No.	Pavement. No. Surfacing. No.	Pavement. No. Surfacing. No.		Network and contract peformance monitoring	To be developed during transition
	Efficiency - EM 7	Continuous Improvement in Asset Management - % of Planned work to reactive work.		To be developed in transition period	To be developed in transition period	To be developed in transition period	To be developed in transition period	To be developed in transition period		Network and contract peformance monitoring	To be developed during transition
	Efficiency - EM 8 - EM 13	Best Price - Cost of Service provision.		Report actual costs for previous year, planned costs for current year and requested costs for proposed year by classification. Lane km by classification and network vehicle km travelled calculated by Asset Register for each classification						Network and contract peformance monitoring	To be developed during transition
			Reporting	As above							