

1 Memo

To Project Governance

From QSNP Team

Date 12/06/2026

Subject Queenstown Strategic Network Plan Optioneering Approach and Longlist

1 Purpose

This memo outlines the option development approach for the Queenstown Strategic Network Plan (QSNP). It explains how programme-level strategic approaches and strategy-defining fundamental interventions were identified, assessed and integrated, and how that process led to the preferred strategic direction.

2 Optioneering Philosophy

The optioneering process identifies a preferred Strategic Approach made up of activities to be prioritised and considered through future SHIPs and NLTPs. It combines a top-down qualitative assessment of **Strategic Approaches** against the plan's objectives with bottom-up testing of the fundamental interventions needed to make those approaches feasible. Value for money is considered at the strategic approach level, informed by feasibility, indicative cost and deliverability findings from the fundamental intervention testing.

The plan operates at a system level, but some strategic approaches depend on a small number of key enabling interventions that determine whether they are realistic. These are referred to as **fundamental interventions**. They were identified where demand/capacity analysis, previous investigations or stakeholder input showed that a corridor constraint could not be addressed through routine optimisation alone, and where the intervention materially affected the viability, cost, risk or value for money of one or more strategic approaches.

Table 1 summarises how these two workstreams were used together.

Table 1: Optioneering philosophy

What	Naming convention	How	Why
Top-down strategic assessment	Strategic Approaches	MCA-led approach to evaluate high-level strategic approaches against objectives and critical success factors.	To determine which strategic approaches best address the plan's objectives at a system level and provide a robust basis for decision-making.
Bottom-up technical analysis	Fundamental interventions	More detailed feasibility, affordability and effectiveness testing for projects critical to strategic approaches (e.g. new bridges).	To confirm that key components of potential strategic approaches are practical and broadly affordable, and to provide the evidence base for assessing value for money at the strategic approach level before progressing.

3 Strategic Framework

Similar to an [Investment Logic Map](#), the Strategic Network Plan uses a Strategic Framework to communicate the fundamentals of the plan in plain language on a single page. Figure 1 shows the Strategic Framework from Workshop 1 – Understanding the Challenge. The objectives and critical success factors form the basis of optioneering for the project.

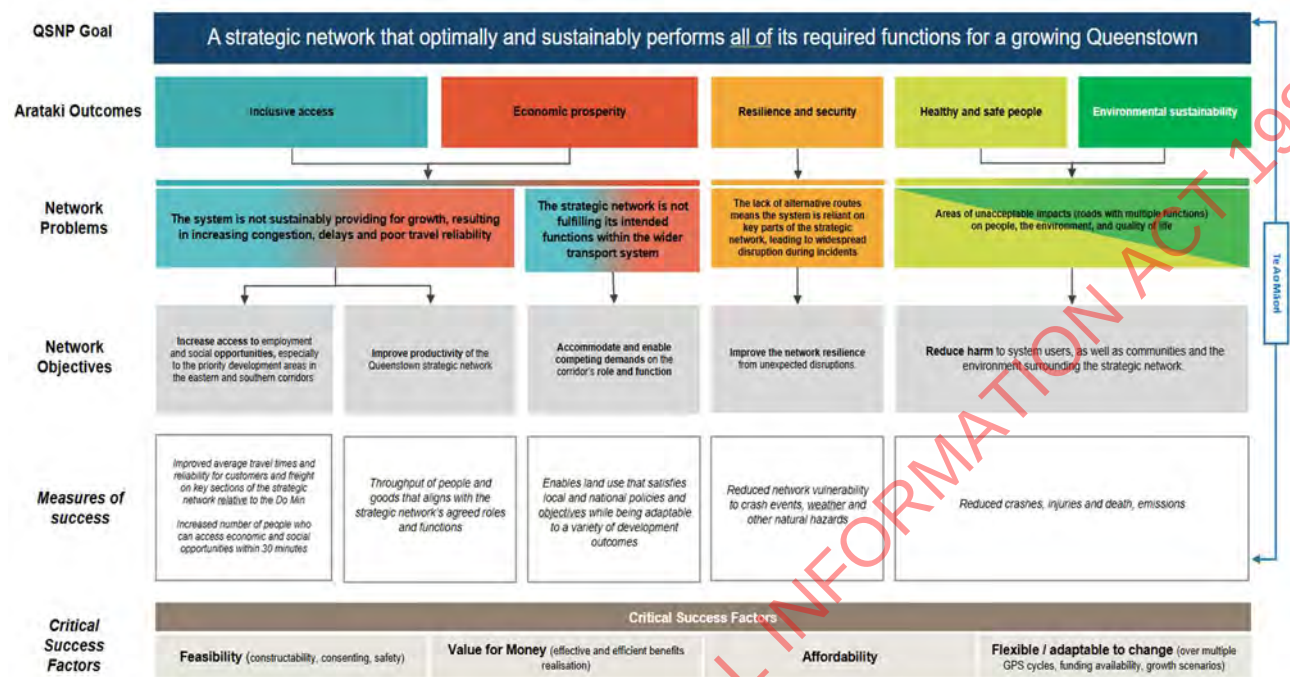


Figure 1: Strategic framework

In developing the strategic framework, we have deliberately not applied formal weightings to the problems, objectives or critical success factors. The QSNP is a long-term strategic plan intended to remain relevant beyond a particular political cycle, rather than a time-bound investment programme. Applying fixed weightings would imply a level of certainty about priorities that is not appropriate at this stage.

Although the criteria were not formally weighted, the assessment recognised that some considerations carried more practical significance than others. Strategic approaches were tested against the full set of objectives and critical success factors, then checked against different scenarios and sensitivity tests. This helped confirm whether the preferred approach remained robust under different assumptions, including greater emphasis on feasibility, affordability, value for money or uncertainty.

Weighting was therefore used as a robustness check, rather than as a way of predetermining the result. Where an approach depended on optimistic assumptions about cost, deliverability or behavioural response, that uncertainty was reflected in the MCA commentary and moderation.

3.1 Arataki Outcomes

The purpose of NZ Transport Agency Waka Kotahi (NZTA) is to contribute to an effective, efficient and safe land transport system in the public interest. Arataki supports this purpose by providing a stable long-term view of how the land transport system may need to change over time, while allowing for priorities and conditions to change. The QSNP strategic framework draws on Arataki outcomes to connect Queenstown's local network challenges with national transport direction.

This top-down framing is important because the QSNP is testing more than individual projects or bottleneck responses. It considers which strategic response best supports the intended long-term outcomes for access, productivity, resilience, safety and environmental sustainability.

In Queenstown, the strategic outcomes mean:

Inclusive Access – Queenstown needs a shift away from car dependency by improving transport options and mode choice for residents, workers and visitors. Reliable access to housing, jobs, education, essential services and tourism destinations is required so people can participate in social and economic life.

Economic Prosperity – Queenstown is highly reliant on activity in sectors related to tourism and population growth. Supporting economic prosperity requires improved travel time reliability on constrained corridors, particularly for access to the airport, town centre and key visitor destinations. This requires shifting more people into alternatives to private vehicles so scarce road space can support economically critical trips, freight, servicing and public transport.

Resilience and Security – Queenstown's transport network is constrained by mountainous terrain, critical bridges and limited alternatives to SH6 and SH6A. Improving network reliability, providing alternative ways to travel and reducing vulnerability to natural hazards and unplanned events are therefore critical.

Healthy and Safe People – Constrained corridors such as SH6 and SH6A carry high traffic volumes while also accommodating buses, cyclists, pedestrians and freight. This mix of modes in limited space increases conflict risk and reduces safety for vulnerable users. Reducing conflict points on corridors, prioritising safer travel and creating healthier options like walking, cycling and public transport is essential to deliver this outcome.

Environmental Sustainability – In Queenstown's environmentally sensitive setting, this requires enabling and encouraging mode shift away from private vehicles to public transport and active travel, and minimising the effects of constructing, maintaining and operating the transport system.

3.2 Objectives and performance indicators

Objectives translate the strategic framework into specific outcomes the plan is intended to achieve. They provide the basis for testing and differentiating between strategic responses. Performance indicators are not targets at this stage, but they provide direction for comparing how different responses perform. Table 2 identifies the QSNP network objectives and performance indicators.

Table 2: QSNP network objectives and performance indicators

Network Objective	Problem Addressed	Outcome Achieved	Importance	Performance Indicator
Increase access to employment and social opportunities, especially in the eastern and southern corridors	Sustained growth is increasing congestion, delays and poor travel reliability	Inclusive access, Economic prosperity	Improving access enables everyone to participate in economic and social life.	Increased number of people who can access economic and social opportunities within 30 minutes.
Improve productivity of the Queenstown strategic network	Sustained growth is increasing congestion, delays and poor travel reliability	Inclusive access, Economic prosperity	A more productive network enables more efficient movement of people and products.	Improved average travel times and reliability for customers and freight on key sections of the strategic network

				relative to the Do Min.
Accommodate and enable competing demands on the corridor's role and function	The strategic network is not fulfilling its intended functions	Inclusive access, Economic prosperity	Ensuring the network performs its intended role and can adapt to changing travel patterns, development and future growth.	Throughput of people and goods that aligns with the strategic network's agreed roles and functions. Enables land use that satisfies local and national policies and objectives while being adaptable to a variety of development outcomes.
Improve network resilience from unexpected disruptions	The lack of alternative routes leads to widespread disruption during incidents.	Resilience and security	Enables access to essential services and reduces economic and social disruption when incidents, weather events and natural hazards occur.	Reduced network vulnerability to crash events, weather and natural hazards
Reduce harm to system users, communities, and the environment surrounding the network	Mix of modes in limited space is increasing conflict and safety risk	Healthy and safe people, Environmental sustainability	Improved network efficiency, mode balance and corridor design will reduce conflict and improve safety outcomes while supporting liveability and environmental quality.	Reduced crashes, injuries, deaths and emissions.

3.3 Critical success factors

Critical success factors define what the strategic response must achieve in order to be credible in Queenstown's context. These factors were used alongside the objectives to distinguish between responses that were attractive in principle and those that could form the basis of a realistic long-term strategy. The critical success factors of the QSNP are included in Table 3.

Table 3: QSNP critical success factors

Critical Success Factors			
Feasibility (constructability, consenting, safety, property)	Value for Money (effective and efficient benefits realisation)	Affordability	Flexible / adaptable to change (over multiple GPS cycles, funding availability, growth scenarios)

The strategic framework, objectives and critical success factors provide the assessment basis for the optioneering process described in the following sections.

4 Future land use scenarios

Future land use assumptions provide the demand context for the optioneering process. The National Policy Statement on Urban Development 2020 (NPS-UD) requires councils to plan for growth and ensure the delivery of a 'well-functioning urban environment'. This includes providing for sufficient development capacity within plans to meet the needs of people, communities and future generations. One of the key requirements of the NPS-UD is for local authorities to prepare a Housing and Business Capacity Assessment (HBA) every three years. The HBA provides detailed information on demand and supply of housing and business land to assess whether capacity is sufficient to accommodate projected growth. The QLDC HBA uses the QLDC Demand Projections 2025, which recommend the "High Plus" growth scenario. This is based on Stats NZ High+ population projections with an additional local adjustment, reflecting recent trends where actual growth has exceeded previous forecasts.

Two future land use growth scenarios were agreed and assessed for the QSNP. The first reflected QLDC's High Plus growth scenario, including visitor numbers from QLDC forecasts and forecast growth from Wānaka via the Crown Range and from Cromwell and surrounds via the Kawarau Gorge.

The second scenario used the QLDC High Plus growth scenario plus Fast-track Approvals Act applications known at the time of analysis. This included listed projects in Schedule 2 of the Act, which had been identified as having significant regional or national benefits and did not need to lodge referral applications. Some of these proposals involve significant development within urban growth areas, while others are located in rural areas outside locations where urban development had previously been anticipated.

Both scenarios used average day population, which combines residents and visitors. Peak day population was not used because it has a very similar growth rate to average day population, meaning it did not provide a materially different sensitivity for this strategic assessment.

Scenario testing was designed to understand the broad scale and timing of the transport response required, rather than to predict future network conditions with precision. The largest source of uncertainty is the scale and spatial distribution of future land-use growth. Plausible outcomes range from relatively limited additional development through to a scale of housing growth that could almost double the number of dwellings in the Wakatipu Basin over time. Fast-track developments add further uncertainty because they are not necessarily bound by existing spatial planning assumptions,

and may occur in different locations, at different intensities or on different timeframes than anticipated through current council planning processes.

The assessment therefore concentrated on testing materially different land-use outcomes, including different spatial distributions of growth, rather than constructing a large number of scenarios from combinations of individual behavioural and operational assumptions. Variables such as vehicle occupancy, working-from-home rates, public transport uptake, Park & Ride effectiveness, school transport, visitor behaviour and future technology will affect the timing and severity of network pressures. However, assigning precise values to numerous variables would imply a level of forecasting confidence that is not available at this strategic stage. Changes in those assumptions are also small relative to the potential variation in the overall scale and location of growth. Testing many combinations would therefore add complexity without materially improving confidence in the strategic conclusions.

The analysis instead tested whether the broad strategic response remained necessary across the plausible range of land-use outcomes and used sensitivity testing to understand how the location of growth could affect individual corridors. The results indicate that the preferred strategic direction is required even under lower-growth outcomes, although slower growth may defer when some of the larger interventions are needed. The purpose of the analysis is therefore to identify the approximate scale of intervention, preserve appropriate future pathways and establish the triggers that should determine sequencing, rather than to define a fixed programme against a single forecast.

5 Demand forecasting

Demand analysis was undertaken to understand the scale and location of future movement demand on the strategic network, and to test whether the existing network form could continue to accommodate growth. This was important because the key issue for the QSNP is not simply whether congestion will worsen, but whether the network can continue to perform its strategic function as population, visitor and development pressures increase. Figure 2 identifies forecast demand and capacity at key strategic network constraints.

AM PEAK HOUR		Volume/Capacity Ratio (Zero PT mode share)						
Network Pinch Point	Direction	2025 BASE	2035		2045		2055	
			LOW	HIGH	LOW	HIGH	LOW	HIGH
Frankton Road	Westbound	0.88	1.15	1.63	1.49	1.98	1.81	2.32
	Eastbound	0.80	1.05	1.34	1.32	1.58	1.45	1.72
Shotover Bridge	Westbound	1.10	1.45	2.31	1.82	2.64	1.97	2.86
	Eastbound	0.64	0.81	1.28	0.99	1.44	1.15	1.64
Kawarau Falls Bridge	Northbound	0.80	1.31	2.21	1.67	2.71	2.09	3.06
	Southbound	0.37	0.67	1.07	0.85	1.29	1.02	1.43
Total Matrix	-	-	-	-	-	-	-	-
INTERPEAK HOUR		Volume/Capacity Ratio (Zero PT mode share)						
Network Pinch Point	Direction	2025 BASE	2035		2045		2055	
			LOW	HIGH	LOW	HIGH	LOW	HIGH
Frankton Road	Westbound	0.82	1.10	1.46	1.38	1.73	1.60	1.96
	Eastbound	0.81	1.07	1.41	1.35	1.67	1.55	1.89
Shotover Bridge	Westbound	0.74	0.96	1.54	1.19	1.74	1.33	1.94
	Eastbound	0.78	1.01	1.59	1.24	1.79	1.40	2.00
Kawarau Falls Bridge	Northbound	0.45	0.79	1.28	0.99	1.54	1.22	1.74
	Southbound	0.41	0.71	1.17	0.89	1.41	1.10	1.58
Total Matrix	-	-	-	-	-	-	-	-
PM PEAK HOUR		Volume/Capacity Ratio (Zero PT mode share)						
Network Pinch Point	Direction	2025 BASE	2035		2045		2055	
			LOW	HIGH	LOW	HIGH	LOW	HIGH
Frankton Road	Westbound	1.02	1.38	1.76	1.72	2.07	1.93	2.29
	Eastbound	0.94	1.24	1.78	1.57	2.13	1.89	2.46
Shotover Bridge	Westbound	0.85	1.09	1.60	1.34	1.82	1.51	2.06
	Eastbound	1.21	1.61	2.50	1.99	2.83	2.21	3.11
Kawarau Falls Bridge	Northbound	0.57	0.98	1.57	1.23	1.89	1.49	2.10
	Southbound	0.79	1.27	2.16	1.59	2.61	2.01	2.96
Total Matrix	-	-	-	-	-	-	-	-

Figure 2: Forecast demand and capacity at key strategic network constraints

The analysis used the supporting demand-capacity work to translate future land use and population assumptions into corridor demand at the key constraint points on Frankton Road, Shotover Bridge and Kawarau Falls Bridge. It focused on how demand would load onto the strategic network, the extent to which the network could continue to operate acceptably under that demand, and the scale of mode shift and intervention that would be required to maintain network function.

Accordingly, the demand forecasts are interpreted as indicative tests of the scale and location of future pressure, rather than precise predictions of traffic volumes, mode share or the year in which individual interventions will be required.

At key constraint points, forecast demand under a do-minimum network is well above the practical capacity of the existing road network, in some cases approaching three times capacity in the peak direction by the end of the period. In practice, a network cannot operate in that state in a stable way. As conditions deteriorate, people change behaviour: some trips are retimed, rerouted, combined or not made, destinations and travel choices adjust, and some activity is suppressed or displaced. The analysis therefore quantifies the order of magnitude of the gap between future demand and what the current system can accommodate, rather than suggesting those exact levels of over-capacity demand would appear unchanged on the network.

The modelling found that, under a do-minimum network, all three strategic pinch points deteriorate materially over time, with severe congestion emerging by 2035 and worsening thereafter. Frankton Road is the most critical system bottleneck because it is already close to capacity for much of the day and has the least practical scope for widening. The analysis also showed that the scale of future demand at the two SH6 river crossings is substantial, and that simply adding road

capacity at one part of the network does not resolve the wider problem because additional traffic is ultimately funnelled back toward downstream constraints, particularly SH6A and the Frankton urban area.

A key finding is that maintaining acceptable operation over time requires a substantial increase in people-moving capacity rather than vehicle-moving capacity. In practical terms, this means very high public transport mode shares on the main corridors, supported by demand management and targeted network optimisation. The analysis provides the core evidence for the plan's strategic direction and for retaining higher-capacity public transport options as part of the future network response.

The analysis also indicates that infrastructure and public transport improvements alone are unlikely to deliver the full level of behavioural change required. Even with substantial improvements to public transport capacity and reliability, some form of demand management is likely to be needed to influence when, where and how people travel, and to protect scarce corridor capacity for trips that are harder to shift. Within the range of demand management tools available, time of use charging or another form of road pricing is the most direct, scalable and readily implementable lever for influencing network-wide vehicle demand at constrained times and locations, subject to enabling legislation progressing as expected. This is consistent with existing transport literature, which identifies road pricing as one of the most effective demand management tools because it applies a clear price signal to scarce road capacity, can be targeted by time and location, and can be implemented without major infrastructure.

This also explains why apparent corridor-level demand for additional general traffic lanes does not, by itself, justify four-laning corridors such as Ladies Mile or the Southern Corridor. In some sections, internal-corridor demand may be high enough to suggest a need for additional road capacity if considered in isolation. However, that capacity would still be constrained by downstream strategic bottlenecks, including the Frankton urban area, SH6A and river crossings. Without corresponding system-level capacity, such as an additional southern crossing and associated downstream network changes, four-laning would be expected to feed more traffic into already constrained parts of the network and quickly become blocked. The strategic response therefore prioritises alternative means of travel, particularly public transport, active mode access and demand management, to increase people-moving capacity without simply increasing vehicle demand at fixed constraints.

The demand analysis indicates that intervention is already warranted, while also highlighting the need for a staged response because the scale of change required cannot be delivered through a single project or funding cycle.

6 Previously considered programme options

6.1 Previous business cases

The QSNP builds on a substantial history of endorsed business cases, investigations and studies in Queenstown. It reviews that work, fills gaps, and tests whether earlier directions remain aligned with current problems, objectives and priorities. The main previous business cases and their relevance are summarised below:

- Queenstown Integrated Programme Business Case, endorsed/supported by NZTA Board in 2017 and the basis of the programme that has been in delivery since then. To be tested/reconfirmed in SNP
- Queenstown Transport Business Case (combination of SSBC and DBC), endorsed by NZTA Board in 2021, became the investment case for the NZUP Queenstown Package some of which is currently being delivered
- Queenstown Public Transport DBC, endorsed by NZTA Board in 2024. Key part of the Do Minimum for the SNP, which will test whether changes or expansion of the PT network are required
- Wakatipu Park and Ride SSBC, not progressed to NZTA Board decision due to community opposition. Will inform investigation of Park and Ride fundamental interventions as part of the SNP

6.2 Programme options previously tested

Table 4 summarises the programme-level options assessed in these earlier business cases. For more detail on the composition of each programme option, refer to Appendix B. Full longlists are provided in the original business cases.

Table 4: Previous programme options

Queenstown Integrated Programme Business Case (QITPBC)	Queenstown Transport Business Case (QTBC)
• Optimisation • Demand Management • Infrastructure • Balanced • Travel Demand Management • Quick Wins • Mobility as a Service • Do Maximum	• Do Nothing • Optimise Existing • Do Minimum + Rapid Targeted Interventions • Queenstown Town Centre Masterplan Preferred • Public Transport Friendly • Get About with Ease • Urban Hub • Cars Not Needed • Private Vehicle Friendly

6.3 Key findings from previous business cases

In the **QITPBC**, stakeholders chose Balanced as the basis for shortlist assessment. Four variants were then taken forward – Infrastructure Focus, Active Modes Focus, PT Focus and Active Modes and PT Focus – with the Balanced Public Transport and Active Modes Focus programme ultimately selected as the Recommended Programme.

In the **QTBC**, the programme approach adopted for the longlist phase was used mainly to identify option themes preferred by stakeholders before detailed corridor-by-corridor optioneering was undertaken at a more granular level. Stakeholder scoring of the shortlist programmes indicated a clear preference for non-car-focused programmes, after which detailed option development and assessment was undertaken on the component parts of the best performing programme themes.

Earlier modelling found that maintaining a functioning network on the core corridor would require a major shift away from private vehicle travel, with 40% of peak-hour trips on SH6A needing to be by non-car modes by 2028 and 60% by 2048. The same work found that neither infrastructure nor public transport improvements alone would be sufficient to keep demand within practical capacity. The most effective programmes therefore combined public transport, supporting infrastructure and demand management.

Appendix B summarises the previous programme options and provides traceability to earlier longlists and scoring outputs. The QSNP does not repeat the full technical record from those business cases, but uses their endorsed conclusions as the starting evidence base and retests them where the growth, land use or network context has changed.

- Widening the roads included in scope to provide additional general traffic capacity was repeatedly found to be a weak primary response. Earlier business cases tested road-led options and found that additional capacity would still feed into the network's most constrained downstream sections, particularly SH6A, limiting wider system benefit. On SH6A specifically, full widening was assessed as having very high cost and impact, including around 169 affected properties and approximately 77 outright acquisitions, with property acquisition costs alone estimated in the order of \$200 million, alongside significant geotechnical, retaining wall and construction disruption risks.
- High-capacity public transport emerged as the only realistic way to cater to forecast growth at a system level. Previous modelling found that 40% of peak-hour trips on SH6A would need to be by non-car modes by 2028, rising to 60% by 2048, if the corridor was to remain functional. This is why earlier work consistently concluded that the scale of demand on the main corridors could not be accommodated through incremental optimisation or general traffic expansion alone, and why PT-led programmes performed better in option assessment.
- Dedicated PT corridors were also found to be difficult to deliver in a fully separated road-based form on the existing corridors. Similar to general traffic widening, previous investigations identified affordability, space constraints, property effects and constructability challenges on SH6A and other constrained sections. Earlier analysis found that virtual priority could achieve a substantial share of the public transport benefits of full priority

at a small fraction of the cost, which is why later work focused more on staged bus priority, selective priority measures and future offline public transport opportunities rather than full corridor-wide surface segregation.

- Small-scale or policy-focused programmes were not considered sufficient on their own, but neither was public transport alone. Previous business cases found that optimisation, demand management and other lower-cost measures can improve performance and form part of the response, while still falling short of the scale of change needed to address forecast growth. Modelling also showed that car demand remained above practical capacity for most options even with public transport interventions, which is why earlier work converged on an integrated response rather than any single intervention type.
- Highly restrictive car-light options such as 'Cars Not Needed' were not supported as a realistic standalone strategy. While stakeholder scoring in the QTBC showed a strong preference for non-car-focused programmes and confirmed that car-focused solutions would not achieve the investment objectives, earlier work also found that highly restrictive approaches were difficult to reconcile with Queenstown's dispersed settlement pattern, visitor economy and diverse trip-making needs, including freight and servicing, trades, emergency access, tourism movements and household travel patterns. While elements of demand management remain relevant, the previous business cases did not support a strategy that assumed most private vehicle use could be removed altogether.

6.4 Relevance to QSNP optioneering

The options evaluated in the QTBC were themselves an evolution of those developed for the QITPBC. For example, 'Balanced Active Modes and PT Focus' broadly evolved into approaches such as 'Get About with Ease' and other PT-led variants. The strategic approaches considered for the QSNP continue this progression, but with refinements to reflect the greater level of detail and understanding now available.

For completeness, QTBC programme options were re-assessed as part of QSNP optioneering. Several were refined or expanded to reflect the increased detail now available on network constraints, growth patterns and delivery issues. The QSNP therefore carries forward the strongest underlying themes and retests them within a more explicit strategic framework.

Travel demand management, parking management, pricing, visitor-facing transport, land-use integration and active mode improvements are not treated as discarded themes. They are carried forward as supporting elements within Optimise Existing, Balanced Multi-Modal and public transport-led approaches, rather than as standalone strategic approaches. This reflects earlier findings that these measures are important for reducing pressure on constrained corridors but are unlikely, on their own, to provide the scale of strategic capacity required.

7 Optioneering

This section explains the optioneering process. It describes how strategic approaches were developed, how fundamental interventions were tested, and how the two workstreams were integrated through the MCA. The outcomes of that process are reported in Section 8.

7.1 Optioneering framework

Optioneering for the QSNP applies traditional business case methods in a strategic plan context, combining programme-level assessment with targeted testing of strategy-defining interventions.

7.1.1 Process

The optioneering process is summarised below and in Figure 3.

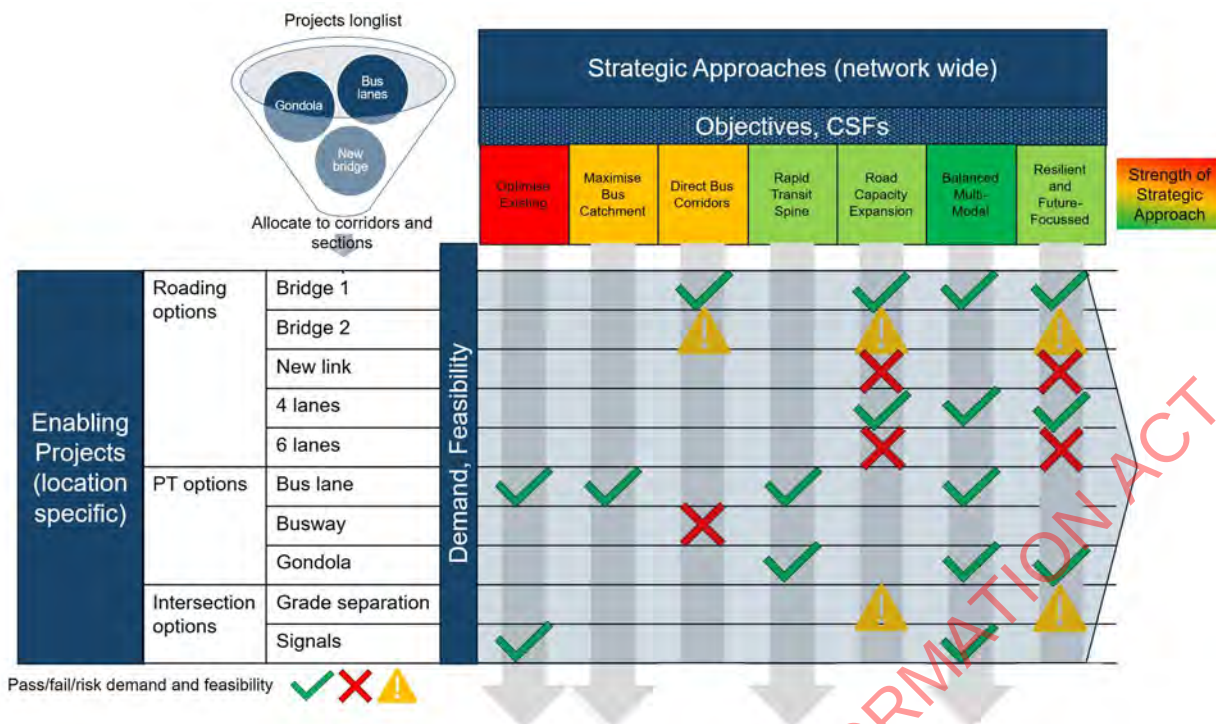


Figure 3: Optioneering process

- **Initial Sifting Process (Strategic Approaches)**
 - Longlist potential strategic approaches based on intervention hierarchy, previous studies and stakeholder input
 - Confirm whether previously omitted approaches remain omitted or should be re-tested
 - Score remaining approaches against objectives and critical success factors agreed in the strategic framework
 - Initial assessment of risks and uncertainties and any other impacts
- **Demand/capacity and Feasibility Analyses (Fundamental interventions)**
 - Longlist potential fundamental interventions based on intervention hierarchy, previous studies and stakeholder input
 - Use network demand analysis from Understanding the Challenge phase to inform capacity analysis of bottlenecks to determine scale of required interventions
 - Based on scale of solutions identified in capacity analysis, test feasibility of specific projects for each constraint
- **Integration and assessment**
 - Allocate fundamental interventions to relevant strategic approaches for each corridor and section (refer to Network Roles and Functions)
 - Consider feasibility of strategic approaches based on constituent fundamental interventions (are there viable combinations of fundamental interventions for each strategic approach?)
 - Evaluate remaining strategic approaches through detailed MCA against objectives and critical success factors (effectiveness), with feasibility, indicative cost and affordability findings from fundamental interventions informing assessment of efficiency and value for money at the strategic approach level

The two workstreams answered different but complementary questions. The top-down workstream tested which strategic approaches best respond to the plan's objectives and critical success factors at a system level. The bottom-up workstream tested the scale of capacity uplift required at key constraints and which fundamental interventions could realistically provide it.

Strategic approaches were developed first as high-level, outcomes-focused concepts, without being tied to particular projects. At the same time, fundamental interventions were identified from demand and capacity analysis at specific bottlenecks, without assuming any preferred strategic approach. For example, where analysis identified a need for additional cross-river capacity, the bottom-up workstream generated and tested a range of possible interventions, such as a new bridge, tidal flow, bus priority or an offline public transport alignment.

The workstreams were then integrated by mapping fundamental interventions to the strategic approaches they could support and reassessing those approaches in light of feasibility, cost, risk and capacity findings. This integrated assessment determined which approaches were both strategically strong and realistically achievable.

7.1.2 Network roles and function

Network Roles and Functions, based on a more granular use of ONF principles, were used as a practical bridge between the strategic framework and corridor-level option testing. They helped define what each corridor and section of the network needs to do in the future, including its relative role for strategic movement, local access, public transport, freight, active modes, place function and resilience. This informed both the identification of fundamental interventions and the assessment of whether those interventions reinforced or undermined the intended role of each part of the network.

For example, interventions that simply added general traffic capacity into corridors with constrained downstream capacity were tested for both their capacity effect and their alignment with the intended strategic function of those corridors. Public transport, demand management and targeted road interventions were assessed for their ability to strengthen the intended person-movement, access and resilience functions of the network.

7.1.3 Inputs and assumptions

Optioneering for the project used a set of inputs and assumptions as summarised in Table 5.

Table 5: Optioneering inputs and assumptions

Input/Assumption	Parts of the Input/Assumption
Network context	Current network characteristics, volumes, PT patronage, Network Roles and Functions, modal priorities and known constraints (bridges, intersections, gradients, corridor widths, property, topographical and geotechnical limitations). Includes committed and underway infrastructure from previous business cases.
Demand forecasts and scenarios	Land use scenarios as described in Main Report: Low, High and spatial growth sensitivity tests, including higher growth in selected parts of the basin, based on QLDC's Spatial Plan and Housing and Business Assessment, themselves based on Stats NZ projections. Total trip demand based on agreed land use scenarios and trip generation rates observed in Queenstown. Scenario testing focuses on materially different land-use growth scales and spatial distributions. Behavioural, operational and technology assumptions are not independently varied through a large scenario matrix because these uncertainties are less significant than the plausible variation in land use and cannot be forecast with comparable confidence at this strategic stage. Their effect is addressed through conservative interpretation, trigger-based sequencing and later project-level testing.
Network performance and capacity parameters	Observed and modelled performance, mainly expressed as V/C ratios, with some mode-share modelling. Known or assumed network capacities applied to identify performance gaps. Capacity shortfalls determine the scale of uplift required, informing fundamental interventions.

Assumptions

No fixed future funding envelope is assumed for the plan period.

Affordability is assessed qualitatively against plausible national, regional and local funding pathways (based on recent historical funding) rather than against a predetermined budget.

A full four-stage model is currently being built for the Queenstown Lakes District. The previous strategic model is now substantially out of date and was not considered appropriate for the Strategic Network Plan. The QSNP therefore relies on demand forecasting, observed network performance, agreed capacity assumptions and scenario testing. This is appropriate for a strategic plan focused on identifying a broadly proportionate network response to known and forecast challenges, with more detailed modelling, economic appraisal and design confirmation to follow through later project development.

7.1.4 Do Minimum

The Do Minimum scenario refers to interventions needed to keep the existing transport system operating as a legitimate and maintainable reference case, rather than implying that unsafe or non-compliant operation would be accepted. These typically include committed activities and essential renewals or compliance-related upgrades. In Queenstown, maintaining an uncongested operational level of service would require substantial additional investment, likely more than any recommended programme, so that definition was not used as the reference case for this strategic assessment.

For the QSNP, the Do Minimum is therefore defined as maintenance, operations and committed improvement projects only, with no additional capacity upgrades assumed. This provides a clearer and more proportionate reference case for comparing strategic approaches. Because this plan does not include detailed transport economic appraisal, the effect of this Do Minimum definition is limited to the comparative optioneering assessment.

For clarity, this means that the Frankton Intersection and Bus Hub Improvements (FIBHI) project will be included, but the Frankton Flats Network Improvements (FFNI) will not, despite being included in the NLTP as a Possible activity. A key objective of the QSNP is to determine whether the current programme (the Queenstown Package) remains the best approach and whether the FFNI remains a priority project.

7.1.5 Affordability in a strategic plan context

In this Strategic Network Plan, affordability means whether an activity or package appears broadly capable of being funded through plausible national, regional and local investment pathways over time. The plan does not assume a fixed future funding envelope or committed budget, but tests the scale and type of investment needed to make different strategic approaches viable and considers whether that investment appears realistic given foreseeable funding pathways, including recent Crown, NLTP, LTP and public transport investment.

Future funding decisions will be made through later NLTP, regional and local budgeting processes. For that reason, affordability is assessed qualitatively and comparatively, with the aim of distinguishing approaches that appear broadly realistic within likely funding pathways from those that would require a material change in funding availability, delivery timing, scope, partnership contribution or financing.

Recent partner investment plans and Queenstown delivery experience provide a practical benchmark for interpreting what is reasonable at this strategic level. QLDC's 2024–2034 Long Term Plan confirms a district-wide capital programme of about \$2.4 billion over ten years, while also highlighting significant rates pressure and a near-term focus on essential three-waters infrastructure. QLDC's transport asset management planning indicates that the next three years of transport capital expenditure are constrained and focused on protecting existing assets, key pre-implementation activities, travel demand management and planning for future transport needs. ORC's 2024–2034 Long Term Plan process identified about \$194 million of proposed Queenstown public transport investment over ten years, including more frequent services, fleet electrification, on-demand services and retention of the ferry service.

These figures provide scale context, not a funding envelope for the QSNP. Recent Queenstown projects indicate the broad order of investment that has been delivered under current funding settings. Smaller safety, active mode and localised improvement activities have generally sat in the single-digit to low tens of millions. Larger town-centre, public

transport and state highway packages have generally sat in the tens to low hundreds of millions, with the largest recent priority packages requiring significant programme prioritisation and partner funding. Lower-cost interventions are therefore more likely to fit within conventional funding pathways, while interventions in the low hundreds of millions require stronger staging, prioritisation and partner alignment. Interventions in the high hundreds of millions or above would likely require bespoke funding and financing, clear staging and a strong value-for-money case. The ratings below are comparative and do not imply that funding is currently available.

Table 6: Scoring affordability in the MCA

Affordability risk rating	Indicative scale	Interpretation	Queenstown delivery precedent / rationale
Lower affordability risk	Generally below approximately \$50 million.	Generally capable of being progressed through conventional NLTP, RLTP and local government funding pathways, subject to normal prioritisation and approvals. May still require sequencing or coordination, but does not indicate a material affordability barrier at the strategic level.	Comparable to smaller safety, active mode, optimisation, bus stop or localised improvement activities. Recent examples include the SH6/Tucker Beach Road underpass and slip lane at about \$6–7 million and the Pūāhuru/Jims Way walking and cycling bridge at about \$12.6 million.
Moderate affordability risk	Approximately \$50–150 million.	Potentially achievable, but likely to require clear prioritisation, coordinated partner funding, staging and delivery over one or more investment cycles.	Comparable to activities that can be affordable when packaged, staged or jointly funded, but where delivery depends on alignment between NZTA, QLDC, ORC and programme partners. Recent examples include the Kawarau Falls Bridge replacement at about \$21–22 million and the Queenstown Town Centre Street Upgrades at about \$57 million.
High affordability risk	Approximately \$150–500 million, or complex multi-component packages.	Difficult to achieve through conventional funding pathways alone. Would likely require significant staging, substantial partner contributions, programme-level prioritisation, alternative funding or financing, or major scope refinement before progression could reasonably be contemplated.	Recent Queenstown projects show that interventions in this range often require active scope and cost management, Crown support, partner funding or staged delivery. Queenstown Town Centre Arterial Road Stage 1 reached about \$128 million after cost escalation, while the SH6/SH6A Frankton Intersection and Bus Hub Improvements are being delivered as a roughly \$250 million priority package. These examples illustrate the scale at which conventional funding pathways become more challenging and programme prioritisation becomes central to deliverability.

Very high affordability risk	Approximately \$500 million or above.	Unlikely to be achievable through conventional funding pathways alone. Would likely depend on a material step change in funding availability, alternative funding and financing arrangements, significant external contributions, major staging or changes in scope.	Applies to major network-shaping interventions whose scale is beyond recent local delivery precedents. Interventions materially above the recent \$128–250 million Queenstown delivery examples would likely need a bespoke funding and financing strategy, staged delivery pathway, clear national or regional prioritisation and a strong value-for-money case before being considered realistically affordable.
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7.1.6 Value for money in a strategic plan context

For this Strategic Network Plan, value for money is considered at a broad strategic level rather than through detailed economic appraisal. The plan compares strategic approaches and identifies which are most likely to provide a robust and proportionate response to the identified transport challenges, leaving project-level investment cases and benefit-cost ratios for later phases.

For this plan, value for money was assessed by comparing the scale of problem each approach could plausibly resolve against the indicative cost, complexity, risk, operating implications and deliverability requirements needed to achieve that outcome. This included considering whether an approach could materially address the original problems of poor access, declining network productivity, constrained corridor capacity, resilience and mode shift, or whether it would deliver only localised benefits, for example, despite a high level of investment.

The assessment therefore focuses on how much of the identified problem an approach could reasonably resolve, and at what strategic cost and risk. A strategic approach may perform poorly on value for money where it depends on very high-cost, high-risk or complex interventions to achieve relatively limited system benefit, particularly where benefits are likely to be constrained by downstream bottlenecks, limited catchment, weak mode-shift potential or poor integration with the wider network.

No detailed economics have been undertaken for the QSNP. Detailed economic evaluation, including quantified benefits, monetised costs, operating cost implications and formal benefit-cost ratios, will need to be developed through subsequent business cases once preferred interventions are better defined and the scale, timing, costs and benefits can be assessed with greater confidence.

7.2 Top-down assessment (Strategic Approaches)

7.2.1 Identification of strategic approaches

Potential strategic approaches were developed with a system-level perspective using the intervention hierarchy, previous studies and stakeholder input. They included programme options tested in the QITPBC and QTBC, as well as new approaches reflecting current forecasts and challenges.

There were several potential ways to categorise the Strategic Approaches. The chosen grouping needed to offer clear differentiation between approaches while still capturing the full range of plausible options. The main grouping frameworks considered are summarised in Table 7.

Table 7: Strategic approach groupings

Grouping	Example Strategic Approaches
Outcomes	Inclusive access; Economic prosperity; Resilience and security; Healthy and safe people; Environmental sustainability

Objectives	Access; Productivity; Roles and functions; Resilience; Reduced harm
Mode	Optimisation; Road-based; Bus-based; Offline public transport; New connections
Time Horizon	Short-term; Medium-term; Long-term
Scale of Investment	Small investment; Medium investment; Large investment

The mode grouping was adopted because it gives stakeholders clearer choices and makes impacts, trade-offs, feasibility and cost profiles more explicit than outcome or objective-based groupings. It also provides a clearer line of sight to the intervention hierarchy, Network Roles and Functions, and bottom-up fundamental interventions.

Strategic plans would typically remain mode-agnostic at this stage and focus on outcomes. In Queenstown, the relative simplicity of the network and the amount of previous investigation provide enough evidence to test broad modal pathways in more detail. For offline public transport specifically, the plan remains deliberately technology-agnostic. Several proposals and concepts exist that use slightly different technologies and delivery models, and the appropriate technology, alignment, station configuration and operating model would need to be confirmed through later business case and project development phases. This approach enables more efficient decision-making while avoiding premature commitment to a specific technology.

7.2.2 Status of previously tested approaches

Testing in previous studies ruled out various approaches, as summarised in Table 8. Trackless trams and light rail remain excluded because the constraints identified in previous assessments have not changed. Water-based options were retained only for high-level testing because they may serve niche movements, but are unlikely to provide a core strategic capacity response. Road-based options were re-tested where growth and land use changes could affect their role further out in the network.

Table 8: Previously tested approaches

Approach / Mode	Status	Reason
Trackless trams & light rail	Ruled out	High capital costs, complex consenting and construction, disruption on constrained corridors, efficiency and safety issues with single lane options
Water-based options (ferries, amphibious buses)	Taken forward for further testing in bottom-up assessment	Potential niche role, but limited capacity/mode shift potential, high operating costs, weather and lake-condition reliability risks, and weak integration with the main origin-destination patterns. Taken forward only to confirm whether any core strategic role remained.
Bus-based high-capacity PT	Retained	Most feasible short- to medium-term solution; scalable via frequency and vehicle size
Offline public transport	Retained	Potential for resilience and additional capacity through a separated public transport corridor; complements the bus network despite consentability, commercial and integration challenges.
Road-based options	Reconsider	Prohibitive costs and property impacts on SH6A, plus misalignment with sustainability objectives. However, growth and land use

		changes mean road capacity could be feasible further out in the network
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7.2.3 Strategic approaches for evaluation

While the Strategic Approaches are system-level concepts rather than defined programmes or projects, each was assessed using a consistent set of intervention types and delivery assumptions. All Strategic Approaches were assessed on the basis of the following common assumptions:

- 30-year end-state rather than a staged delivery plan. Components of some Strategic Approaches may represent possible staging options.
- All approaches assume basic maintenance and operations.
- Public transport services are assumed to continue at current levels. The scale and form of public transport provision differs by approach.
- Walking and cycling are not treated as standalone Strategic Approaches, but are included as enabling interventions where they materially support access, particularly for short trips or access to public transport. Active modes remain an important part of all relevant strategic approaches. They are most effective for short local trips, town centre movement and first/last-mile access to public transport, and can reduce pressure on the wider network by removing some short car trips from constrained corridors and centres. However, active modes are not expected to provide the scale of strategic corridor capacity required to address forecast demand on SH6A, the Shotover Bridge or the Kawarau Falls Bridge. They are therefore treated as essential supporting interventions, rather than as a standalone strategic approach.
- Some interventions, such as intersection optimisation, limited bus priority, parking management, stop upgrades and similar local measures, appear across multiple approaches as routine supporting interventions. These are assumed to be developed later where required and are not the primary basis on which approaches are differentiated. Approaches are instead differentiated by their fundamental interventions and primary mechanism for delivering capacity.

Table 9 identifies the primary differentiator (the main mechanism by which the approach responds to the problem), the common elements assumed across multiple approaches (non-distinguishing features), and the distinctive elements that are specific to that approach and materially shape its performance, cost and feasibility.

Table 9: Strategic approaches for evaluation

Strategic Approach	Primary differentiator	Common elements assumed across multiple approaches	Distinctive elements specific to this approach	What is specifically not relied on	Indicative cost
Do Nothing	Reference case only.	Existing maintenance and operations. Completion of already committed projects.	No material change in network capacity, mode priority or network structure beyond committed activities.	Any new optimisation, demand management, modal shift or capacity intervention.	Lower affordability risk
Optimise Existing	Improve performance of the existing network without materially	Maintenance and operations; walking and cycling where they support safety or local access; local optimisation measures	Demand management, network and signal optimisation, ITS, and targeted low-to-moderate upgrades intended to	Major new infrastructure, step-change PT capacity, or network-	Lower affordability risk

	changing network structure.	that may also appear in other approaches.	extract more performance from current assets.	wide road expansion.	
Maximise Bus Access	Maximise how many people and places can conveniently access the bus network.	Maintenance and operations; walking and cycling for PT access; local optimisation; routine bus stop and interchange improvements that could also support other PT-led approaches.	Expanded bus coverage, more extensive service reach, Park and Ride, interchange improvements and larger fleet, with a focus on access and catchment rather than fast trunk movement.	Continuous corridor-wide bus priority, offline public transport, or major road capacity expansion.	Moderate affordability risk
Maximise Bus Directness	Improve bus speed and reliability on the main corridors.	Maintenance and operations; walking and cycling access to stops; routine stop upgrades and other supporting PT measures that may also occur in other PT-led approaches.	Continuous or near-continuous bus priority on strategic corridors, including bus lanes, queue jumps, signal priority and more direct higher-capacity bus services.	Broad geographic coverage as the main objective, offline public transport, or major general traffic expansion.	Moderate affordability risk
Offline public transport spine	Provide a step change in people-moving capacity through offline public transport.	Maintenance and operations; feeder/supporting bus services; walking and cycling for first/last-mile access; local access measures and Park and Ride that may also support other PT-led approaches.	Offline public transport, feeder bus network, hub-and-spoke structure, stronger node-based land-use integration and a strategic reliance on separated public transport capacity rather than surface-running priority alone.	Trackless tram/light rail, or network-wide road widening.	High affordability risk
Road Capacity Expansion	Accommodate growth primarily by increasing general traffic capacity.	Maintenance and operations; some local optimisation or supporting modal measures where necessary, but not as the defining mechanism.	Road widening on key arterials, new road links and crossings, intersection capacity upgrades and parking provision, with general traffic capacity as the primary response to growth.	Demand management or PT as the primary capacity solution.	Very high affordability risk
Balanced Multi-Modal	Combine multiple mechanisms so no single	Maintenance and operations; walking and cycling for short trips and PT access; routine	Targeted PT upgrades, offline public transport, selective road and intersection upgrades at	Network-wide road widening or reliance on a single	High affordability risk

	mode or intervention type carries the whole response.	optimisation and supporting local measures that are also present in other approaches.	critical constraints, demand management and staged interventions combined deliberately to spread risk and retain flexibility.	technology or corridor solution.	
Resilient and Future Focussed	Prioritise redundancy and alternative connections to improve incident tolerance.	Maintenance and operations; some supporting optimisation and local improvements where needed, but these are not what distinguishes the approach.	New connections, additional crossings and route redundancy intended primarily to improve resilience and incident recovery, even where these come at high cost and do not maximise mode shift.	PT-led capacity uplift or demand management as the primary strategic response.	Very high affordability risk

The indicative cost column should be read consistently with the affordability framework in Section 7.1.5. The MCA spreadsheet shows a clear affordability-risk gradient across the approaches. Optimisation has lower affordability risk but limited strategic effect. Bus-based approaches sit in the moderate affordability risk range because they rely mainly on service expansion, priority measures, stops, hubs and Park & Ride. Offline public transport and the Balanced Multi-Modal approach sit in the high affordability risk range because they require larger enabling infrastructure and programme coordination. Road-focussed or resilience-led approaches sit in the very high affordability risk range because they depend on multiple major structures, corridor widening, new links and associated property, environmental and construction risks.

7.2.4 Time horizon

Strategic approaches were assessed over a 30-year timeframe using the agreed demand scenarios. Each approach is therefore framed as a long-term end-state for comparison, with staging and enabling steps considered later in the process. This provides a like-for-like basis for assessment while allowing early bus priority, corridor protection, demand management and other pathway-preserving measures to be considered through subsequent sequencing and investment decisions. The scenarios are used primarily to test whether the long-term strategic direction changes, rather than to assign precise delivery years to individual activities. Where the same intervention is required under different growth outcomes, the main difference may be when it is needed. Sequencing should therefore respond to observed demand and performance triggers rather than being fixed solely to forecast dates.

7.2.5 Initial sifting process

The strategic approaches described above were taken through an initial sieve based on NZTA's Early Appraisal Sifting Tool (EAST). At this stage, appraisal was high level and based on qualitative judgement from subject matter experts and stakeholders. Evaluation focused on the expected outcomes and impacts of the conceptual approaches, such as the extent to which additional road lanes would provide more capacity for cars and freight. It did not seek to define project-level capacity, such as the number of additional vehicles that could be carried by a specific bridge. The aim was to compare likely outcomes, impacts, constraints and robustness under uncertainty, rather than to determine a preferred approach.

Approaches were retained or omitted on the basis of performance against objectives and critical success factors established in the Strategic Framework, in accordance with the principles of the EAST (consistency with objectives, scale of expected benefits, indicative affordability, deliverability risks and alignment with problem). Risks, uncertainties and interdependencies were also considered. As noted above this includes, for example, modes such as trackless trams and

light rail, where prior investigations identified significant cost, consentability and constructability challenges and where no new evidence suggests these issues have changed.

The output of the initial sifting process was a set of strategic approaches that represent a broad range of plausible ways of achieving identified objectives and are sufficiently distinct to enable meaningful evaluation in subsequent stages. These shortlisted approaches form the basis of the more detailed assessment and integration process that follows, including alignment with fundamental interventions, feasibility testing and the full multi-criteria assessment.

The full initial sift is retained in the project assessment record and is summarised in this memo through the strategic approaches carried forward, the options not progressed in Section 8.10, and the all-options longlist in Appendix A. The purpose of this memo is to explain the logic and key decisions from that process rather than reproduce every workshop worksheet or scoring sheet in full.

7.3 Bottom-up assessment (Fundamental interventions)

The bottom-up assessment examines demand requirements at specific parts of the network and the feasibility of the resulting fundamental interventions. At this stage, interventions are tested for demand fit, feasibility, indicative cost and deliverability, with value for money assessed through the strategic approaches they enable rather than as standalone projects.

7.3.1 Identification of fundamental interventions

For the purposes of this plan, an intervention was treated as fundamental where it met one or more of the following identification criteria:

- it addressed a corridor or section constraint that materially limited network performance or future growth
- it was capable of providing the scale of capacity or functional uplift required to keep a strategic approach viable
- it was strategy-defining, in the sense that without it a strategic approach would no longer be realistic
- it carried enough cost, risk, property impact, constructability or consenting complexity to materially affect option selection at the strategic plan level

An initial longlist of potential fundamental interventions was developed for each corridor and section, drawing on the intervention hierarchy, previous studies and stakeholder input. This longlist was intentionally broad and included a number of recurring community-raised concepts. The purpose at this stage was to identify potentially relevant interventions before more detailed testing.

The longlist was also checked against the intended network role and function of each corridor so that interventions were not assessed solely on whether they added capacity, but on whether they supported the future function required of that part of the network. This helped distinguish between interventions that could provide a useful local effect and those that were capable of supporting the broader strategic role required of the corridor.

Unlike the Strategic Approaches, which were identified and evaluated using qualitative, outcomes-based assessment, fundamental interventions were identified through a combination of demand and capacity analysis, previous investigations, network roles and functions, stakeholder input and concept-level feasibility assessment. The method is set out below:

1. Identify bottlenecks on each corridor and section of the network using demand analysis and known network performance issues to determine where forecast growth cannot be accommodated within the existing system.
2. Define the scale and nature of the problem by assigning capacities to relevant bottlenecks and comparing against projected demand. This established the level of capacity or functional uplift required.
3. Group the longlist of plausible interventions by constraint.
4. Test the grouped longlist to identify intervention types that could plausibly provide the required uplift, using a first-pass capacity test to determine which interventions were capable of addressing the identified gap.
5. Undertake feasibility testing for interventions that could plausibly meet the required uplift, including high-level consideration of physical constraints, constructability, property, consenting and affordability issues.

7.3.2 Corridor and section longlists

Applying the method above produced grouped longlists of plausible fundamental interventions for each corridor and section of the network. These longlists are set out below and show the intervention types initially considered before capacity testing, feasibility assessment and integration with the Strategic Approaches.

7.3.2.1 Eastern Corridor (SH6 Arrow Junction to Walnut Lane)

- Arrow Junction intersection changes/upgrades
- Intersection controls
- Speed management
- Park & ride
- Bus frequency/capacity uplift

7.3.2.2 Eastern Corridor (SH6 Ladies Mile – Walnut Lane to Shotover Bridge)

The main constraint on this section is the Shotover Bridge¹, which has been observed to have a capacity in the order of 1,400 veh/hr. As such the following options were considered for fundamental interventions:

- Additional Lower Shotover River crossing
- 4-laning
- Tidal flow lanes
- High-occupancy vehicle lanes (T2/T3)
- Intersection controls
- Speed management
- Park & ride
- Bus priority
- Bus frequency/capacity uplift
- Offline public transport investigation

7.3.2.3 SH6 Frankton-Ladies Mile Highway (Lower Shotover River Bridge to SH6/6A intersection)

The north Frankton section has multiple capacity constraints but the critical one was found to be the SH6/Hawthorne Drive intersection. The following options were considered for fundamental interventions:

- Upgrade to grade-separated interchange
- New grade-separated interchange at Hawthorne Drive
- Full Queenstown Business Case programme
- Frankton Flats network improvements
- 4-laning
- Traffic calming
- High-occupancy vehicle lanes (T2/T3)
- Tidal flow
- Time-based heavy vehicle bylaws
- Bus lanes
- Water based public transport/infrastructure
- 4-laning Hawthorne Drive
- Parking controls

7.3.2.4 SH6 Kawarau Road (SH6/6A intersection to Kawarau Falls Bridge)

- Upgrade to grade-separated interchange

¹ For simplicity we refer to the bridge as the capacity constraint. In practice, capacity is dictated by a combination of the merges, intersections and gradients either side of the bridge itself.

- Full Queenstown Business Case programme
- Frankton Flats network improvements
- 4-laning
- Traffic calming
- High-occupancy vehicle lanes (T2/T3)
- Tidal flow
- Time-based heavy vehicle bylaws
- Bus lanes
- Water based public transport/infrastructure

7.3.2.5 Southern Corridor (SH6 Kingston Road - Kawarau Falls Bridge to Drift Bay)

- Additional Kawarau River crossing
- Intersection improvements
- Speed management
- High-occupancy vehicle lanes (T2/T3)
- Tidal flow
- Intersection controls
- Bus service and quality uplift
- Bus priority measures
- Park & ride

7.3.2.6 Frankton Road SH6A (SH6/6A Intersection to Melbourne Street)

- Queenstown Business Case SH6A upgrades
- Bus priority measures
- Bus stop upgrades
- Offline public transport investigation
- Offline public transport

7.3.2.7 Stanley/Shotover Streets SH6A (Melbourne Street to Steamer Wharf)

- Shotover/Stamley improvements
- Transport hub
- Signalised intersection optimisation
- SH6A bus priority

7.3.2.8 Wider-Wakatipu Basin

- Arthurs Point Crossing Upgrade
- New Route around the back (north side) of Queenstown Hill
- Alternative route upgrades (Lower Shotover/Malaghans/Gorge Roads)
- New route along the northern base of The Remarkables (near Chard Farm Road)
- Time of use charging scheme
- Queenstown Town Centre private vehicle restrictions
- Supply-based parking charging
- Water-based transport infrastructure
- Queenstown Town Centre upgrade programme
- Offline public transport investigation/route protection
- Offline public transport
- Gorge Road upgrades
- Arterials Stage 2 and 3

7.3.3 Screening method for commonly raised interventions

The initial sift tested longlisted interventions that are commonly raised through stakeholder and community discussions and therefore required explicit consideration. The purpose was to determine, at a strategic plan level, whether these options were likely to be effective, broadly feasible and proportionate, or whether they should be set aside before more detailed assessment.

Options were screened where high-level testing identified disproportionate cost, consenting, constructability or disruption risk, weak strategic fit, limited network purpose or little likelihood of materially addressing the relevant network constraint. Some options were retained for niche, supporting or future investigation roles but not carried forward as core strategic interventions. The outcomes of this sift are reported in Section 8.7, with the full longlist of options provided in Appendix A.

7.3.4 Capacity analysis

The demand-capacity analysis confirms the scale of the challenge at the network's key constraints. Under the growth assumptions tested, district average day population is forecast to increase from 81,660 in 2025 to 147,518 in 2055, with Whakatipu Ward increasing from 56,230 to 96,095 over the same period.

All three principal constraints are forecast to operate well beyond capacity as demand grows in the Do Minimum. In the 2055 high-growth scenario, zero public transport mode share would result in volume/capacity ratios of around 2.46 on Frankton Road, 3.11 on Shotover Bridge and 3.06 on Kawarau Falls Bridge. This confirms a structural inability for the existing network to absorb forecast growth, rather than marginal congestion. Maintaining acceptable network performance will require substantial mode shift and targeted capacity interventions.

7.3.5 Feasibility of fundamental interventions

To support optioneering and ensure that the Strategic Approaches under consideration were achievable, a concept-level engineering feasibility assessment was undertaken for a small number of strategy-defining interventions – 'fundamental interventions' (e.g. a new bridge for a road-focussed Strategic Approach).

The assessment focused on identifying key engineering constraints, constructability risks, property and environmental considerations and order-of-magnitude costs at a level appropriate for a strategic plan. It tested whether key strategy-defining interventions appear technically feasible in broad terms and provided enough confidence for comparative strategic assessment. It did not define preferred alignments or design solutions, and no detailed design, site investigation or geotechnical testing was undertaken. The intent was to identify potential fatal flaws, highlight material risks and support comparative assessment of affordability, deliverability and strategic fit.

An initial constraints review identified key physical and operational limitations across the Queenstown network, including steep topography, river and floodplain constraints, geotechnical risk, utility corridors, planning controls and aviation height restrictions around Queenstown Airport. These constraints materially influence the interventions that can be realistically delivered.

The detailed constraint analysis is retained in the project technical record. Table 10 provides the summary findings used for this memo, with intervention-specific constraints reflected in later assessment commentary where they affected feasibility, affordability or value for money.

Table 10: Road intervention feasibility

Fundamental intervention	Indicative cost range (P50 / P95)	Strategic role	Key points
Second Shotover River crossing	~\$180–265m	Provides additional cross-river	Technically feasible, but constructability risk driven by river environment, geotechnical uncertainty and property

		capacity into Frankton.	impacts. NOTE: later demand analysis found downstream SH6A constraint makes this intervention ineffective.
Second Kawarau River crossing	~\$380–565m	Unlocks alternative access from the Southern Corridor into South Frankton.	High cost and complexity, driven by floodplain conditions, deep foundations and significant property requirements. Unlike other major road interventions, it changes network structure and trip distribution rather than simply adding capacity into an already constrained downstream corridor. Its benefits are still dependent on complementary network changes and broader multi-modal measures.
SH6 / Hawthorne Drive grade separation	~\$60–85m	Removes a critical operational bottleneck in Frankton.	Comparatively lower cost but subject to live-network construction risk, staging complexity and coordination with adjacent development and NZUP works. NOTE: later analysis found this wasn't required because the second Shotover crossing was not taken forward.
Remarkables Route (new east–west connection)	~\$1.4–2.1b	Provides a new strategic route bypassing Frankton.	Technically feasible in principle but extremely high cost and risk. Significant geotechnical, environmental and consenting challenges, including landslide-prone terrain, major earthworks, floodplain bridge construction and stormwater management mean affordability and deliverability are highly uncertain at a system level.

The evidence base is deliberately uneven because different intervention types were at different levels of maturity. Major road-based interventions were assessed in more detail because they involve significant structures, property, live-network construction and environmental risks that could create early fatal flaws. Offline public transport was assessed at a higher strategic level because the key unresolved matters are not only engineering issues, but also technology choice, commercial model, ownership, regulation, operating model, station locations, integration with the bus network and funding structure. This means the assessment supports the strategic role of offline public transport and the need to preserve and further investigate a pathway, but it does not confirm a preferred technology, alignment, delivery model or investment decision. Exploratory work undertaken through the Queenstown Business Case found no fatal flaws for offline rapid transit in terms of property, consenting and engineering, but further business case work is required to bring the evidence base to a comparable level of detail.

The assessment confirmed that the projects are technically feasible in principle, but with significant variation in risk, complexity and cost. Across the major road-based interventions, delivery risk is consistently driven by geotechnical uncertainty, river and floodplain construction conditions, property requirements, consenting complexity, live-network construction staging and the need for substantial temporary works. Many of the projects are also interdependent, meaning the value and configuration of one intervention depends on how others are resolved. Indicative cost ranges reflect this uncertainty and highlight where some options carry substantially higher delivery and affordability risk than others.

The outputs of the concept engineering assessment were used directly to inform the initial option sift and support the Multi-Criteria Analysis through feasibility, constructability and affordability inputs. Where the evidence base was less developed, this was reflected as uncertainty rather than treated as a confirmed benefit or fatal flaw.

Further investigation and design development will be required through subsequent business cases before any investment decisions are made.

The next phase should therefore focus on resolving the evidence imbalance between the major road interventions and offline public transport. In particular, it should confirm the feasible offline public transport options, identify the preferred

technology and alignment, test patronage and operating assumptions, assess integration with the wider bus network and town centre, refine capital and operating costs, and develop the commercial, funding and governance model before any investment decision is sought.

7.4 Option integration

The top-down and bottom-up workstreams were brought together through the MCA so each strategic approach could be assessed against both strategic effectiveness and practical delivery conditions.

The top-down assessment identified which approaches best aligned with the objectives and critical success factors. The bottom-up assessment then tested whether the fundamental interventions needed to support those approaches were feasible, affordable and capable of addressing the relevant network constraints.

Fundamental interventions were assigned to relevant strategic approaches based on their functional alignment with the strategic approaches and the intended Network Roles and Functions for each corridor and section. For example, projects that enhance general traffic capacity were aligned with road-based approaches only where that additional capacity supported the intended network role, whereas projects delivering dedicated transit priority, offline PT capacity, access improvements or resilience benefits were allocated to the relevant public transport-led or multi-modal approaches where they strengthened the required person-movement, access or resilience function.

Bottom-up findings were then used to refine the strategic approaches where delivery risks, affordability constraints or value-for-money issues affected the credibility of the response. Approaches with material risks, but no fatal flaw at this strategic stage, were retained for more detailed consideration.

In some cases, more than one enabling project or delivery model was technically feasible and capable of providing the required uplift for a strategic approach, such as a segregated bus priority corridor or an offline public transport spine. The integration process retained these alternatives where further business case work is needed before selecting a specific delivery mechanism.

1. Multiple feasible options were retained during integration to avoid prematurely locking in a single delivery mechanism before full project development.
2. The MCA scored the strategic approach based on the outcome that could be achieved, rather than the specific technology or delivery mechanism that enabled it, ensuring consistency with the strategic nature of the plan.
3. Where different enabling project types resulted in materially different feasibility risks, costs or deliverability constraints, this was reflected in the Feasibility, Affordability, and Value for Money criteria within the MCA.
4. Approaches were not ruled out simply because they relied on an enabling project that carried risk; instead, approaches were refined unless a project presented a *fatal flaw* (e.g., unconsentable, unaffordable, or physically impossible). Approaches with risks but plausible mitigations were retained.
5. Where a strategic approach has multiple potential fundamental interventions for the same constraint, these were identified as requiring resolution in a future business case.

This approach keeps the plan flexible and aligned with later business case phases, where technology choices, corridor design and mode-specific requirements will be confirmed.

7.4.1 Investment framing for strategic approaches

Investment scenarios were not used to pre-sort strategic approaches into fixed funding envelopes. The assessment first identified the fundamental interventions required to make each approach viable, then considered whether that scale of investment appeared plausible within foreseeable national, regional and local funding pathways.

This distinction helped the MCA identify approaches that appear broadly achievable through conventional staging and prioritisation, and approaches that would require a material change in funding, financing, scope or delivery model. Inclusion of an intervention within a strategic approach does not imply a funding commitment; future investment decisions will be made through subsequent business cases and investment planning processes.

7.4.2 Multi-criteria analysis

Each strategic approach was evaluated through an MCA using NZTA guidance, qualitative judgement from the project team and stakeholders, and evidence from the demand, capacity and feasibility work. Fundamental interventions informed the assessment through their implications for feasibility, scale, indicative cost and deliverability, while project-level value-for-money assessments were left for later phases.

7.4.2.1 Evaluation criteria

The evaluation criteria translate the objectives and critical success factors into a practical scoring tool. They test effectiveness at the system level and incorporate feasibility, indicative cost and deliverability insights from the fundamental-intervention work.

The strategic approaches were tested against the following MCA criteria:

1. **Access to employment and social opportunities (Objective)**
Assesses how well the approach improves reliable, equitable access across key origins and destinations (residential, employment, education, retail, health, recreation, airport, tourism attractions). Considers network coverage as well as first/last-mile implications.
2. **Improvement of network productivity (Objective)**
Considers travel time, reliability and throughput at the system level. Uses demand/capacity findings at key bottlenecks to corroborate plausibility (e.g. whether identified fundamental interventions can deliver the needed uplift).
3. **Alignment with network roles and functions (Objective)**
Tests alignment with agreed Network Roles and Functions. This considers whether each approach strengthens the intended role of each corridor and section, including strategic movement, local access, public transport priority, freight, active modes, place function and resilience, and whether it avoids reinforcing functions that are inconsistent with the future network role.
4. **Resilience to unexpected disruptions (Objective)**
Assesses redundancy and incident tolerance (e.g. alternative routes or off-line capacity).
5. **Reduced harm to system users and communities (Objective)**
Assesses crash risk reduction and health co-benefits (e.g. mode shift potential to active/PT-led approaches), at a level proportionate for a strategic plan. Also considers likely emissions and urban environment impacts.
6. **Feasibility (Critical Success Factor)**
Uses bottom-up feasibility insights to assess constructability, construction/disruption management, property requirements and likely consenting risk of fundamental interventions.
7. **Affordability (Critical Success Factor)**
Assesses whether the scale of investment required for each strategic approach appears broadly realistic within foreseeable national, regional and local funding pathways. This criterion is informed by order-of-magnitude costs and affordability findings for the fundamental interventions required to enable each approach.
8. **Value for Money (Critical Success Factor)**
Considers at the strategic approach level the proportionality of expected system-level benefits to the indicative costs, risks, operating implications and complexity of the fundamental interventions required to make that approach viable. It tests how much of the original problem an approach can plausibly resolve, including growth support, mode shift, productivity, access and resilience, relative to the scale and risk of investment required. It also considers whether those interventions effectively address the relevant constraint or whether benefits are limited by downstream bottlenecks, weak catchments or poor integration.

Detailed economic evaluation is not undertaken at this stage. Instead, the MCA integrates effectiveness with a high-level assessment of efficiency and value for money, informed by the scale, cost, risk and deliverability of the fundamental interventions each approach depends on. Benefit-cost ratios, quantified economic benefits and more detailed operating cost implications will need to be developed through the next phase of business case work.

7.4.2.2 Scoring system

The scoring system used for the MCA is shown in Table 11. Difficulty differentiating between strategic approaches in the EAST was noted by some stakeholders, so a 7-point scale was adopted rather than the 4-point scale used in the EAST. The MCA was scored by the NZTA project team and then moderated by the whole project team and stakeholders at Workshop 3.

Table 11: MCA scoring scale

Score	Descriptor	Explanation
+3	Strongly Positive	Clear, material contribution to the objective/CSF.
+2	Positive	Meaningful positive contribution with manageable risks; expected to support objectives/CSFs with minor uncertainties.
+1	Slightly Positive	Small but positive effect; benefits are evident but limited in scale or confidence.
0	Neutral	Little to no effect on the objective/CSF; neither improves nor worsens performance.
-1	Slightly Negative	Small but negative effect, or minor risks that could detract from objectives/CSFs.
-2	Negative	Likely to detract from objectives/CSFs or introduce notable risks or performance issues.
-3	Strongly Negative	Materially conflicts with objectives/CSFs.

8 Option assessment

This section brings together the MCA, demand and capacity analysis, feasibility testing and value-for-money assessment to identify the preferred strategic direction for Queenstown's long-term network.

8.1 Overall assessment findings

Overall, the assessment found that Queenstown's transport challenge is systemic and well beyond the scale that can be addressed through incremental changes alone. Forecast growth substantially exceeds the practical capacity of the constrained network, particularly at Frankton Road, Shotover Bridge and Kawarau Falls Bridge, meaning the long-term response needs to reduce reliance on private vehicle movement through the same limited corridors.

Road-led approaches performed poorly because broader increases in general traffic capacity would tend to shift or concentrate demand rather than resolve the most constrained downstream sections of the network, particularly SH6A. Selected road interventions may still have a supporting role where they improve local access, resilience or network structure.

Public transport-led and multi-modal approaches performed better because they provide a more credible pathway for increasing person-moving capacity within constrained corridors. Bus-based improvements provide meaningful short- to medium-term benefits, while offline public transport offers the stronger long-term pathway where surface bus operations become constrained by corridor capacity, town centre kerbside space and live-network reliability.

Visitor vehicle demand, including rental car use, remains a specific challenge that is unlikely to be resolved through infrastructure and service improvements alone. The likely effect of visitor-facing public transport, stronger first and last-mile connections, parking management and targeted demand measures is partial and uncertain, and requires more detailed evaluation in the next phase of project development.

8.1.1 Multi-criteria assessment findings

An initial MCA was prepared by the project team based on earlier workshop outcomes and technical analysis. It was then used as the basis for structured review and refinement with project partners and technical specialists. Several refinements were made through this process to better reflect Queenstown's constraints, delivery risks and long-term uncertainties:

- Shift from direct capacity to system constraints: The assessment placed greater emphasis on the fixed capacity constraint on SH6A. Approaches relying primarily on increasing road capacity elsewhere in the network were downgraded, reflecting the risk that benefits would be constrained or dissipated by downstream bottlenecks.
- Distinction between "offline" and "live network" delivery: Offline public transport was differentiated from road-based works delivered within the live network. This led to improved constructability and disruption scores for offline public transport, and more conservative scoring for road-heavy options delivered in constrained corridors.
- Greater emphasis on adaptability and staging: through the workshop, long-term flexibility was identified as more critical than initially scored. Approaches that lock in car-dependent outcomes or require irreversible, large-scale infrastructure were scored lower than approaches that support staging, scaling and easier adaptation as growth and funding conditions change.
- More conservative view of delivery and sequencing: Scheduling scores were moderated across all options to reflect interdependencies between the state highway, local road and public transport networks, and the need for coordinated delivery rather than assuming rapid implementation.
- Clearer affordability moderation: affordability and value for money were tested against the scale of the fundamental interventions each approach relies on. The MCA spreadsheet identifies bus-based approaches as lower cost but capacity constrained, offline public transport as strategically effective but higher cost, and road-led approaches as very high cost with benefits constrained by downstream bottlenecks. This distinction was used to moderate options that are technically feasible but unlikely to be proportionate or fundable as a primary strategic response.

These refinements grounded the assessment in realistic delivery conditions rather than theoretical performance alone. The final MCA summary is provided in Table 12.

Table 12: Final MCA summary

Strategic approach	Overall MCA performance	Key strengths	Key limitations
Balanced Multi-Modal	Strong – highest overall performer	Performs well across access, productivity and resilience objectives. Combines network optimisation, public transport, selective road capacity and demand management. Highly adaptable, stageable and resilient to uncertainty, with risks distributed	Delivery complexity and reliance on coordinated implementation across modes and organisations. Requires careful sequencing and integration to realise full benefits. Affordability risk is high overall, but is more manageable than road-led alternatives because investment can be staged across lower-cost optimisation and bus measures, targeted road interventions

		across multiple interventions rather than concentrated in few projects.	and later higher-capacity public transport components.
Offline public transport spine	Strong – high performing	Provides step-change capacity, reliability and resilience through offline public transport between key demand centres. Less constrained by live network bottlenecks than surface bus or road-based approaches. Strong productivity and mode-shift potential.	Higher upfront capital cost and commercial risk/uncertainty. Performance is dependent on high-quality integration across modes and strong first/last-mile provision. Affordability risk is likely to be high rather than moderate because the approach requires dedicated infrastructure, stations and supporting feeder network upgrades before the full benefits can be realised.
Maximise Bus Access / Maximise Bus Directness	Moderate	Delivers meaningful improvements over the Do Minimum, particularly for public transport users. Lower capital cost and more straightforward delivery than offline public transport or major road expansion.	Long-term effectiveness constrained by operation within an increasingly congested and space-limited surface network. Limited ability to address future demand at scale. Affordability risk is comparatively moderate, but the lower cost reflects a lower capacity ceiling and greater reliance on constrained road space.
Optimise Existing	Low–moderate	Effective as a short-term response, using demand management and targeted upgrades to improve performance of the existing network. Low cost and relatively easy to implement.	Insufficient to address the scale of forecast growth and demand over a 30-year horizon. Does not materially shift long-term capacity or resilience.
Road Capacity Expansion	Poor	Localised increases in capacity for general traffic and freight, and some resilience benefits through new links.	Benefits are constrained by fixed downstream bottlenecks, particularly SH6A, meaning broader road expansion would not resolve the core network problem. The approach also carries very high affordability risk due to major structures, corridor widening, property impacts, environmental effects, substantial disruption during construction and limited long-term adaptability.
Resilient and Future Focussed (road-led)	Poor	Improves network resilience by providing redundancy and alternative routes.	Similar limitations to Road Capacity Expansion: constrained effectiveness due to downstream bottlenecks, very high affordability risk, significant impacts, and low adaptability over time.

8.1.2 Value for money and affordability

Table 13 summarises the relative value-for-money assessment for the tested approaches. It compares the scale of problem each approach could plausibly resolve with the indicative cost, risk, complexity and deliverability required to

achieve that outcome. Detailed economics will be developed through subsequent business cases once preferred interventions are better defined.

Table 13: Value for money assessment

Strategic approach	Problem resolution	Indicative cost/risk	Value-for-money interpretation
Optimise Existing	Low to moderate. Improves short-term performance but does not resolve long-term capacity constraints.	Lower affordability risk.	Good early value, but limited strategic value as a standalone long-term response.
Bus-focused approaches	Moderate. Supports access and mode shift but remains constrained by surface network capacity over time.	Moderate affordability risk.	Good transitional value, but diminishing value if expected to solve the full 30-year demand task.
Offline public transport spine	High. Strongest response to Frankton–Queenstown capacity, reliability and mode-shift problems.	High affordability risk.	Potentially strong strategic value where demand justifies the scale of investment, subject to business case testing.
Balanced Multi-Modal	High. Addresses multiple original problems through staged mode shift, targeted road interventions, demand management and future offline PT.	High affordability risk, but stageable.	Strongest overall value-for-money position because benefits are broad, risks are spread and investment can be staged.
Road-led approaches	Low to moderate. Provides localised capacity or resilience benefits but does not resolve downstream constraints or strongly support mode shift.	Very high affordability risk.	Weak value-for-money position as a primary strategy because high cost and impacts are not matched by proportionate system-level benefit.

8.2 Road-focussed options

Road-focussed approaches do not provide the strongest strategic response because they do not resolve the downstream constraint on SH6A. Added road capacity can improve local corridor performance, access or resilience in specific locations, but broader road expansion would generally increase pressure through Frankton and on Frankton Road, providing only localised or temporary benefit.

The concept engineering assessment did not identify fatal technical flaws in the major road interventions assessed. However, technical feasibility was not enough to justify inclusion where the system effect, downstream constraints, affordability and strategic value for money were weak. For example, the Remarkables Route was technically feasible in principle but would require very high investment and still would not resolve the core network constraints.

8.3 Bus-focussed options

Bus-focussed approaches performed materially better than road-led options because they align more strongly with the plan's objectives and can improve access from eastern and southern growth areas at lower cost and with fewer adverse impacts than major new road infrastructure. They provide an important early and transitional capacity response.

However, bus-based options remain constrained by the physical network, particularly between Frankton and Queenstown. Where buses share road space with general traffic, they are exposed to the same fixed bottlenecks and growing congestion, limiting their effectiveness as a standalone 30-year response.

For the Shotover Bridge and Kawarau Falls Bridge constraints, the preferred implementation approach does not assume or recommend bus priority across the existing bridge structures in the near term. Priority treatments should focus on the approaches to and departures from the bridges, where buses can bypass the main queuing sections and where most of the operating benefit is expected to be achieved. Constructing dedicated new bridge structures, or materially widening existing bridge structures, solely to provide bus priority across the bridge decks would be expensive and would carry significant constructability, consenting and delivery risk for only a short section of additional priority. The strategy assumes that workable merge arrangements can be developed at the bridge approaches, subject to detailed operational testing through future project development. However, when these bridge structures are due for major renewal or replacement, the opportunity should be taken to incorporate bus priority or future-proofed public transport priority as part of the renewal scope, so long-term asset decisions support the preferred strategic direction rather than locking in the existing constraint.

8.4 Offline public transport options

Offline public transport options performed strongly because they provide a genuine step change in people-moving capacity while avoiding the main constraints of the live road network. The demand-capacity analysis found that they are the most credible long-term way of increasing capacity on the Frankton to Queenstown corridor once surface bus operations reach practical limits.

The plan does not specify a preferred technology, alignment or operating model. Offline public transport differs from water-based transport and road-based bus priority because it directly serves the highest-demand corridor, can be integrated with the wider public transport network, and is less constrained by road space, kerbside capacity and live-network reliability. The strategic case for protecting an offline pathway is that it could provide additional people-moving capacity where the existing corridor cannot practically be widened or operated efficiently with surface buses alone.

While offline public transport has affordability and delivery risks, its strategic value is in resolving an otherwise difficult capacity challenge without taking additional road space. Later business case work will need to test technology, alignment, operating cost, commercial risk, integration and benefit-cost performance before any investment commitment is made.

8.5 Demand management

Travel demand management is a core part of the preferred strategic approach because the scale of future demand exceeds what can realistically be accommodated through infrastructure expansion and public transport improvements alone.

In Queenstown, demand management should reduce avoidable pressure at the busiest times and locations, strengthen the effectiveness of public transport, and protect scarce road capacity for movements that are harder to shift. Time-of-use charging, or another form of road pricing, is the most direct network-scale lever tested, subject to scheme design, available alternatives, equity considerations and later policy and business case development.

Demand management will be most effective as part of a coordinated package. At this strategic plan stage, the exact mix of measures remains subject to later project development, but the direction is clear: parking management, access management, travel planning and real-time information should reinforce the main pricing lever, rather than being relied on to deliver the required mode shift on their own.

Visitor-specific measures will also need to be tested in the next phase, including rental-car, airport-transfer, accommodation-access and visitor-information interventions. These have not been resolved in detail through the QSNP because there is a significant data gap around visitor travel behaviour, with some of the most useful information held commercially by operators. General commuter-focused public transport improvements may not produce the same behavioural response for visitors, so these measures need targeted testing with the tourism, accommodation, airport and rental-vehicle sectors.

9 Preferred Strategic Approach

9.1 Preferred strategic direction

The assessment identified a balanced multi-modal approach as the preferred strategic direction. It combines high-capacity public transport, targeted road interventions, optimisation, active mode improvements and demand management, providing the best overall balance of strategic effectiveness, feasibility, affordability, staging flexibility and resilience to uncertainty.

The preferred direction provides the most proportionate response to the original problems by combining lower-cost early measures with targeted infrastructure and future high-capacity public transport. This gives the programme a clearer pathway for staging investment as demand, funding and delivery certainty increase, while avoiding over-reliance on either low-cost optimisation or very high-cost road expansion in locations where benefits would be constrained by downstream bottlenecks.

9.2 Developing the preferred approach

The preferred approach was developed by combining the findings of the strategic approach assessment with the assessment of fundamental interventions.

Interventions were included where they:

- supported the preferred Balanced Multi-Modal strategic direction
- addressed one or more identified network problems
- supported achievement of the network objectives
- were broadly feasible and deliverable
- represented reasonable strategic value for money

Interventions that provided limited strategic benefit, reinforcing downstream constraints or performing poorly on affordability or value for money were not included.

9.3 Selecting activities for the preferred approach

The activities identified in this plan are the preferred strategic activity package for implementing the balanced multi-modal approach. They are based on demand forecasting, previous business cases, high-level feasibility testing, network roles and functions and strategic option assessment. The plan provides confidence on the strategic direction and the activity types required to support it, while recognising that most activities need to be confirmed and refined through subsequent project development.

Later project development will confirm the preferred form, scale, alignment, staging, cost and delivery pathway for each activity before final investment decisions are made. The main exception is the Frankton Flats Network Improvements, which have already been developed through previous design and consenting processes and are confirmed by this assessment as the first required step.

9.3.1 Eastern Corridor

Corridor role: Protect the Eastern Corridor's regional movement role while providing access for major forecast residential growth in Ladies Mile without simply adding more traffic pressure into Frankton and SH6A.

Package of activities: Bus priority, bus service uplift, Park & Ride, selected intersection improvements and planning for future offline public transport.

Strategic rationale: The preferred package uses public transport and access management to move more people through the corridor without adding equivalent vehicle pressure into Frankton and SH6A. Bus priority and service uplift would allow public transport to carry a larger share of growth-related trips, while Park & Ride extends access for people

travelling from further east. Selected intersection improvements help manage safe and efficient access as development occurs, with future offline public transport retained as the longer-term step-change capacity option.

Contribution to objectives and outcomes: The package primarily supports access, network productivity, network roles and functions, and reduced harm. Bus priority, service uplift and Park & Ride improve access to employment, services and the wider public transport network for eastern growth areas, while increasing person throughput without adding equivalent vehicle demand at Shotover Bridge, Frankton and SH6A. Intersection, access and active-mode improvements support safer corridor operation and help the corridor retain its regional movement function as development occurs.

Omitted options: New Shotover crossing, widespread four-laning and general traffic expansion were not prioritised because additional vehicle capacity would ultimately feed into constrained downstream sections of the network rather than resolving the wider strategic problem.

9.3.2 Frankton

Corridor role: Maintain Frankton's role as the network's main convergence and interchange point, while balancing through movement, destination access, local circulation and public transport.

Package of activities: Frankton Flats Network Improvements, bus priority, active mode links, public transport interchange improvements and optimisation.

Strategic rationale: Frankton needs to be addressed early because it is the network's main convergence and interchange point. The selected package improves how the overall node operates, rather than focusing narrowly on a single vehicle movement. FFNI is included because it is already designed and consented, directly addresses the central network constraint, and provides the most certain first step. Bus priority, interchange improvements, active mode links and optimisation then support Frankton's wider role as the main interchange and distribution point.

Contribution to objectives and outcomes: The package primarily supports network productivity, access, and network roles and functions. FFNI, public transport priority, interchange improvements, active-mode connections and optimisation improve the operation of the network's main convergence point, enabling trips to be distributed more efficiently while balancing through movement, destination access, local circulation and interchange functions.

Omitted options: Standalone capacity expansion focused only on vehicle throughput was not prioritised because Frankton's performance is shaped by several interconnected constraints and competing access, interchange and through-movement functions. Options that improve only one movement would not resolve the wider network problem and could undermine Frankton's public transport and destination functions.

9.3.3 Southern Corridor

Corridor role: Support the Southern Corridor's combined regional movement role while accommodating substantial residential growth without adding traffic pressure to the Kawarau Falls Bridge and Frankton network.

Package of activities: Bus priority, service improvements, access management, intersection upgrades and an additional Kawarau crossing, subject to confirmation of feasibility, funding, land-use integration and value for money through future project development.

Strategic rationale: The preferred package improves public transport, manages access safely and preserves a pathway for an additional Kawarau crossing where it can provide broader system benefit. The crossing is retained because it could change network structure, improve resilience and redistribute demand in a way that the existing constrained corridor cannot. Its form, timing and scope will need to be resolved through later feasibility, funding, land-use integration and value-for-money testing.

Contribution to objectives and outcomes: The package primarily supports access, network productivity, resilience, and network roles and functions. Public transport priority, service improvements and access management support growth while reducing additional vehicle pressure on Kawarau Falls Bridge and Frankton. Retaining a pathway for additional Kawarau capacity supports longer-term resilience and could improve trip distribution by providing an alternative connection into Frankton, subject to future business case testing.

Omitted options: Park & Ride plays a lesser role than in the Eastern Corridor because the Southern Corridor is more contained and more directly served by corridor-based public transport. Road expansion solely to increase vehicle throughput was not prioritised because it would not, by itself, resolve the wider Kawarau Falls Bridge and Frankton constraints.

9.3.4 Frankton–Queenstown Corridor (SH6A)

Corridor role: Protect reliable person movement between Frankton and Queenstown on SH6A while still providing for visitor access, local access, servicing and trips on the corridor itself and to communities to the west.

Package of activities: Bus improvements, targeted priority, operational upgrades and future offline public transport.

Strategic rationale: The corridor's limited space is best used to support reliable person movement. Targeted bus priority, operational upgrades and bus improvements can improve reliability and capacity in the short to medium term, while future offline public transport provides the next step-change option once bus frequency, kerbside capacity and corridor reliability limits are reached.

Contribution to objectives and outcomes: The package primarily supports network productivity, access, and reduced harm. Bus improvements and targeted priority increase reliable person throughput within the existing corridor, while future offline public transport provides a pathway to accommodate long-term demand without the property, construction and environmental impacts associated with major road widening. The package also supports access to Queenstown, Frankton and western communities while recognising the corridor's constrained geometry and local access requirements.

Omitted options: Corridor widening and major road expansion were not prioritised because they would be costly, disruptive and difficult to deliver, while providing limited long-term benefit on a corridor where the core task is to increase reliable person movement. Those options also leave unresolved questions about access, servicing, town centre capacity and downstream constraints.

9.3.5 Town Centre

Corridor role: Support the town centre's access, place, public transport, visitor and servicing functions.

Package of activities: Public transport facilities, walking and cycling improvements, parking management and optimisation.

Strategic rationale: The town centre's future function is focused on access, interchange, walking and cycling, visitor activity, servicing and local movement. The selected package supports that role through public transport facilities, walking and cycling improvements, parking management and optimisation, while avoiding additional strategic through-capacity in streets that already have limited space and strong place functions.

Contribution to objectives and outcomes: The package primarily supports access, network roles and functions, and reduced harm. Public transport facilities, walking and cycling improvements, parking management and optimisation improve access to the town centre while supporting its destination, visitor, interchange and place functions. The package reduces reliance on additional private vehicle circulation in constrained streets and supports safer, more efficient use of limited town centre space.

Omitted options: Capacity-focused road interventions were not prioritised because they would conflict with the desired town centre function and would be unlikely to provide a durable network benefit. Additional vehicle capacity into the town centre would also be constrained by limited street space, parking supply, servicing needs and pedestrian activity.

9.3.6 Network-wide

Corridor role: Keep the strategic spine functioning as an integrated network by improving productivity, supporting mode shift, managing demand and preserving flexibility under uncertainty.

Package of activities: Demand management, time-of-use charging, public transport service improvements, governance, monitoring and active mode improvements.

Strategic rationale: The corridor packages need to be supported by network-wide measures that manage demand across the whole system. Demand management, public transport service improvements, active mode improvements, governance, monitoring and adaptive sequencing all strengthen the corridor interventions and help keep the programme flexible. Time-of-use charging is included as a direct tool for protecting scarce capacity, provided credible alternatives are available.

Contribution to objectives and outcomes: The package supports all five network objectives, particularly productivity, access and reduced harm. Demand management helps keep demand within available capacity, public transport and active-mode improvements provide realistic alternatives, and governance and monitoring allow the programme to adapt to changing growth, delivery and funding conditions. Time-of-use charging is expected to work alongside, rather than substitute for, those alternatives.

Omitted options: Reliance on infrastructure expansion alone was not prioritised because it would not provide enough flexibility or resilience for the range of plausible growth, funding and delivery scenarios. A single-mode or single-project response would also leave the wider strategy exposed if assumptions about growth, behaviour, delivery or funding changed over time.

9.3.7 Omitted activities and future refinement

The QSNP leaves detailed lane configurations, intersection forms and localised priority treatments to later project development. At this stage, broad option types were excluded from the preferred package where they were inconsistent with the strategic direction, performed poorly against network constraints, or were unlikely to provide a proportionate response.

Road-capacity-led options were generally set aside where they would feed additional demand into constrained downstream sections of the network. This was particularly relevant to the Eastern Corridor, where further road-based capacity would ultimately be limited by Shotover Bridge, Frankton and SH6A constraints.

High-occupancy lanes, adaptive lane operation, tidal flow, turn restrictions, signal priority, intersection controls and localised widening have not been ruled out as possible delivery tools. In many cases, they may be appropriate as part of later project development if they support the strategic transport task for the relevant corridor. However, they are not identified as the core strategic response in this plan where the main requirement is reliable public transport, increased person throughput, safe access management or a step-change in long-term capacity.

Major new road links and crossings were retained only where they could change network structure, improve resilience or materially improve trip distribution. The additional Kawarau crossing remains in the preferred package, subject to confirmation of feasibility, funding, land-use integration and value for money through future business case work. A second Shotover crossing, the Remarkables Route and a new route around Queenstown Hill were not progressed as core strategic interventions, as summarised in Table 14.

Table 14: Road intervention assessment

Intervention	Strategic role	System effect	Included in plan?
Second Kawarau crossing	Provides an additional access into Frankton from the Southern Corridor.	Enables a more balanced distribution of trips to Frankton and the town centre, reducing pressure on the existing Kawarau Falls Bridge and Frankton network.	Included – improves network structure, redistributes demand and supports the preferred multi-modal strategy, subject to confirmation of feasibility, funding, land-use integration and value for money through future project development.
Second Shotover crossing	Adds capacity into Frankton	Pushes additional demand into an already constrained	Not included – does not resolve the network's defining downstream constraints

	from the Eastern Corridor.	downstream corridor, with extra capacity ultimately blocked by queueing.	and would add traffic to already constrained sections of the system, meaning it would not support a strong strategic-approach-level value for money assessment given its cost and impacts.
SH6/Hawthorne Drive grade separation	Increases capacity at key node in Frankton.	Improves demand distribution through Frankton and reduces conflict at a critical local node.	Not included as a standalone activity – not required because the second Shotover crossing was not taken forward. Without that duplicated crossing adding substantial additional east-west traffic into Frankton, grade separation at Hawthorne Drive is not a strategy-defining intervention for the preferred approach.
Remarkables Route	Provides a new east-west link bypassing Frankton.	Serves a limited catchment for the scale of investment required. Does not resolve critical constraints in the existing network. Would require the second Kawarau crossing to be effective	Not included – cost and delivery risk are disproportionate to the strategic contribution it would make, it serves a limited catchment for the scale of investment required, and it does not resolve the core network constraints.

9.4 Why Frankton is the first step

Frankton Flats Network Improvements (FFNI) has been tested against updated demand forecasts, network roles and functions, previous business case findings and the preferred Balanced Multi-Modal strategic approach. That assessment confirmed FFNI as the first step primarily because Frankton is the central node of the network, where the eastern corridor, southern corridor, SH6A, the airport, major destinations and the public transport interchange all come together.

The Demand and Capacity Analysis shows that forecast demand is well above practical capacity at the main strategic constraints, and adding vehicle capacity in one location would tend to feed more traffic into constrained downstream sections, particularly Frankton and SH6A. The response therefore needs to increase people-moving capacity in the same space while actively managing demand, not simply providing more general traffic capacity.

This supports findings from previous Queenstown business cases. Those also found that car-focussed and Do Minimum approaches would not achieve the investment objectives, and that high-capacity public transport services, supporting infrastructure and demand management needed to work together. That work also identified Frankton as the central point in the public transport network and confirmed the need for bus priority, intersection control and interchange improvements through the node.

FFNI addresses the central bottleneck issue by changing Frankton from a series of roundabouts to a more controlled and connected system of signalised intersections, bus priority, access management and active mode crossings. This is necessary because forecast volumes are beyond what the existing roundabouts can reliably accommodate while also providing priority for buses and safe, legible crossings for pedestrians and cyclists. Intersection controls also allow general traffic to be metered onto constrained downstream sections, rather than simply pushing delay further into the network.

FFNI has by far the most cost, design and deliverability certainty out of all projects considered in the QSNP. It has already been substantially developed through previous business case, design and consenting processes, and it addresses a constraint that must be resolved under almost every plausible future strategy. It is needed whether the network later relies on a stronger bus system, offline public transport, further demand management or additional capacity

elsewhere. The first stage of the wider scope is already in delivery. On that basis, the QSNP confirms FFNI as the first enabling investment in the preferred approach.

9.5 Strategic options not progressed and matters for future testing

The assessment also identified approaches and interventions that should not be progressed as core responses. Rather than repeating the full assessment, this section records the main matters that remain relevant for future testing, staging or monitoring.

The options in Table 15 were tested because they are regularly raised in stakeholder and community discussions. They were not progressed as core strategic interventions where the assessment found that they were unlikely to be effective, feasible or proportionate at a strategic network level. Some may still have a niche, supporting, resilience or future investigation role.

Table 15: Testing of commonly raised options not progressed as core interventions

Intervention	Purpose	Status in this plan	Reason not taken forward
New road around the back of Queenstown Hill connecting Frankton Ladies Mile Highway with Gorge Road	Bypass existing Frankton–Queenstown corridor. Adds resilience through a new connection.	Not included	Very large-scale new road with high cost, major topographical, geotechnical, environmental and consenting risk, and a limited strategic role because it would not bypass Shotover Bridge or Frankton constraints. It does not resolve the plan's defining corridor constraints or provide a proportionate system-level response to forecast demand.
High-capacity ferries	Uses waterways to avoid road congestion without major new road works.	Not included as a core strategic intervention; possible niche role	Previous ferry business case work found that the strongest ferry proposition was a Frankton Arm service, while wider lake, Kawarau and combined services performed poorly in economic terms and required substantially higher subsidy. Ferries remain relevant for specific movements, particularly Kelvin Heights to the town centre, but the evidence does not support them as a scalable core network response. Their strategic role is limited by catchment, first and last-mile access, transfer penalties, weather and lake-condition reliability, operating cost, wharf and integration requirements, and weak alignment with the main high-volume origin-destination patterns.
Double-decking or tunnelling Frankton Road	Create a large step change in road capacity within a physically constrained corridor.	Not included	Extreme intervention with very high cost and major constructability, property, urban design and consenting risks, as well as severe disruption during construction. It would still direct additional demand toward constrained downstream destinations and is not an effective, proportionate or realistic response to the network problem identified in this plan.

Upgrading Malaghans Road / Arthurs Point Road / Gorge Road as strategic alternative route	Possible relief routes or substitutes for investment on main state highway corridors.	Not included as core strategic interventions	Demand/capacity testing shows the route has only limited ability to relieve the main strategic constraints. In the 2055 high-growth scenario, only around 600–800 vph are realistically forecast to use the alternative route, and after allowing for PT mode shift the remaining diversion potential is small. A 25% reassignment of residual car trips would equate to less than 100 vph, or only around a 5 percentage point reduction in v/c on Shotover Bridge. The route is therefore more valuable for resilience and redundancy than as a core strategic capacity intervention, particularly as most eastern corridor trips start or end in Frankton Flats rather than Queenstown town centre.
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9.5.1 Operating principles for strategic corridors

The preferred strategic direction needs to be translated into practical operating principles for each corridor. Detailed project and design decisions will be made through subsequent business cases and project development, while the principles below provide a consistent basis for how different parts of the network should function as demand grows.

- Prioritise movement of people over vehicles. Limited corridor space should be used to maximise the number of people moved.
- Align corridor performance with agreed roles and functions. Corridors should be managed to reflect their intended movement and access roles, reducing conflicts between incompatible functions.
- Support public transport as the primary mechanism for increasing capacity. Corridor design and operation should enable reliable, high-capacity public transport to operate effectively.
- Manage access to protect corridor function. Direct property access, side-road access and turning movements should be actively managed to balance accessibility with corridor performance.
- Design for staged delivery and adaptation. Interventions should support incremental improvements while preserving the ability to transition to higher-capacity or mode-separated solutions.

Table 16: Operating principles for the Queenstown strategic corridors

Corridor	Key priorities	Design and operating implications
SH6 Eastern and Southern Corridors	Prioritise throughput and reliability, especially for PT and freight Provide as much continuous PT priority as possible as demand grows Manage access and conflicting movements to reduce friction Promote Park & Ride Improve first/last-mile access Preserve ability to add step-change capacity over time	Treatments should increasingly favour corridor flow and PT performance over local access or intersection-by-intersection delay minimisation.
SH6A Frankton to Queenstown Corridor	Prioritise person throughput over vehicle throughput Treat surface road changes as interim measures Enable transition to offline public transport Manage access and turning movements to improve reliability	Focus on improving reliability rather than adding general traffic capacity. Treatments should support PT

		priority and network efficiency.
Frankton Urban Area	Prioritise PT movement through the network's main node Enable efficient distribution of trips within and across Frankton Balance movement and access Support interchange and land use integration	Design should prioritise overall system performance rather than individual movements, with PT, walking and cycling treated as core functions.

9.6 Triggers that may require a change in plan

Because the preferred direction will be delivered over multiple investment cycles, some contextual changes may require adjustments to sequencing, packaging or delivery pathways. The triggers in Table 17 identify decision-forcing signals that should prompt reconsideration of how the plan is implemented, while retaining the overall strategic direction unless new evidence indicates a materially different response is required.

Table 17: Decision-forcing triggers that may require a change in plan

Theme	Decision-forcing signals to monitor	Implications for intervention sequencing and strategy
Actual growth and land use	• Development occurring earlier, faster, at greater intensity or in areas other than assumed in the plan • Fast Track or unanticipated development materially changing corridor demand or travel patterns • Confirmation of major employment, education or activity centres outside assumed locations	• May require bringing forward growth-enabling or network-defining interventions • Supports earlier shift from reactive upgrades to network transformation • May alter relative sequencing between Ladies Mile and the Southern Corridor
Slower or lower-intensity growth	• Growth occurring more slowly, at lower intensity, or in locations that place less pressure on strategic constraints • Housing delivery remaining closer to current levels than higher-growth projections • Development uptake being delayed despite enabled capacity	• May allow major capacity interventions to be deferred where monitored network performance remains within acceptable thresholds • Changes timing rather than necessarily removing the long-term need to protect the preferred intervention pathway • Supports adaptive sequencing based on observed growth and performance rather than forecast dates alone
Public transport system capability	• Bus priority and service uplifts delivering diminishing benefits • Bus patronage growth outpacing the ability to add services without undermining reliability	• Signals an earlier transition from scaling the bus system to network transformation • Brings forward investigation or delivery of offline public transport • Triggers reconfiguration of the bus network around new spine services

	• Additional services no longer translating into proportional system capacity gains	
Private sector and alternative delivery models	• Delivery of a privately funded offline public transport connection between Frankton and Queenstown • Other commercially viable private transport proposals • Private initiatives that restructure travel demand (e.g. park-and-ride with trunk connection, ferry integration)	• Potentially brings forward transition to bus network transformation • Triggers a redesign of the bus network to optimise system capacity • Reduces reliance on SH6A and the town centre for public transport operations • Allows town centre and corridor works to focus more on access, place and safety rather than throughput
Funding, policy and institutional settings	• Availability of targeted funding streams (e.g. PT transformation, climate or resilience funding) • New statutory or planning requirements	• May change packaging, staging or delivery pathways (without altering underlying system needs) • Supports adapting sequencing to align with funding and policy settings while retaining strategic direction
Resilience and disruption events	• Major natural hazard events causing prolonged or repeated network failure • Temporary emergency measures becoming long-term operating conditions • Evidence that recovery times from incidents are increasing unsustainably	• Resilience-driven or replacement interventions may need to be prioritised irrespective of growth or congestion signals • May justify accelerating redundancy or mode-separated infrastructure outside the baseline sequencing

Monitoring will be critical to identifying when the triggers are being approached or met. In this context, monitoring should focus on the indicators that affect sequencing decisions. Project-level performance monitoring will continue to occur through investment cases and RLTP/NLTP monitoring frameworks, but the QSNP requires a higher-level programme monitoring process to test whether the overall sequence remains appropriate.

9.7 Land use integration

Well-integrated land use and transport planning is the most efficient and effective way to minimise transport problems. Locating residential growth where people can easily reach destinations by public transport, walking and cycling reduces the number and length of private vehicle trips that must be accommodated on constrained corridors. It also makes transport investment more productive by concentrating demand where high-capacity services and infrastructure can operate efficiently.

That principle remains important for Queenstown and NZTA, QLDC and ORC should continue to work together to promote transport-supportive growth through spatial planning, district and regional planning processes. However, the ability of these organisations to directly shape the timing, scale and location of growth is becoming increasingly limited. Growth is influenced by settings that are outside the control of infrastructure agencies and can change faster than infrastructure can be planned and delivered.

This plan therefore does not rely on a single assumed land use scenario or on perfect alignment between growth decisions and transport investment. The preferred approach needs to provide for realistic land use projections and remain adaptable where actual growth differs from current assumptions. This means protecting future options, using triggers to bring forward or defer activities, avoiding premature commitment to interventions that depend on one specific growth scenario, and prioritising investments that remain valuable across a range of plausible futures.

9.8 Indicative cost assessment

The preferred strategic direction is likely to require a capital programme in the order of approximately **\$1.4–2.6 billion** over the next 30 years. Ongoing public transport service operating costs are additional to this, currently planned at \$11m per year rising to \$25m per year as per ORC's Public Transport DBC. The figures presented in this section are high-level costings for individual activities, intended to provide a ballpark estimate of the scale of the preferred strategic direction. They are not project budgets, funding commitments, or upper and lower cost ranges, and should be read as rough order-of-magnitude estimates that will need to be refined through later project development.

The costs have been developed from a combination of previous business cases, ongoing delivery works, concept engineering estimates (from the QSNP Engineering Feasibility Assessment), the State Highway Investment Proposal process and professional judgement on the likely scale of interventions not yet developed to business case level. Relevant sources include the Queenstown Business Case, the Public Transport Business Case, QSNP Engineering Assessment and initial SHIP planning discussions. Costs will need to be refined through subsequent project development.

Table 18: Indicative cost scale of emerging preferred approach

Initiative	Indicative cost
Frankton Flats Network Improvements (FFNI)	\$200–300m
SH6A upgrades	\$100–150m
Ladies Mile Corridor improvements	\$25–75m
Southern Corridor capacity improvements	\$100–300m
Park & Ride facilities	\$20–50m
Arthurs Point crossing end-of-life replacement	\$60–80m
Additional Kawarau crossing	\$380–565m
Offline public transport spine	\$500m–1.0bn
Demand management, parking, optimisation, ITS and active mode links	\$50–100m
PT services*	~\$11m pa initially, rising to ~\$20–25m pa
Total capital programme (exc. PT services)	~\$1.4–2.6bn

* PT service costs are shown separately from the capital programme. They exclude any future operating, maintenance and renewal costs associated with an offline public transport system, which would need to be confirmed through the next phase of investigation and business case development. The Public Transport Business Case identifies preferred programme public transport services of about \$11.0 million per annum in the first implementation period, increasing to around \$20.5 million per annum in the 2027–30 NLTP period and \$23.25 million per annum in the 2030–33 NLTP period, with longer-term service costs dependent on the final service pattern and operating model.

Funding responsibilities and shares will depend on activity ownership, eligibility, funding-assistance rates, partner priorities, Crown or private contributions, and any alternative funding and financing arrangements developed through

later phases. The offline public transport system and second Kawarau River crossing are the most significant components of the preferred approach, potentially costing up to \$1.5 billion combined, but funding and delivery responsibilities need to be agreed in the next phase. Park & Ride, public transport operations, local road interfaces, parking, demand management and local network access measures are likely to involve a different mix of local, regional and national funding from state highway improvements. These matters require further development through subsequent business cases, investment planning and partner funding discussions.

These figures indicate the likely scale of investment required to deliver the preferred direction and should not be read as pre-commitment to scope, timing or funding shares. The preferred approach is materially more affordable and stageable than a road-led programme, although it still represents a substantial investment requirement. Further work will be needed to confirm the scope, cost, staging, funding allocation and affordability of each component through the next phase of project development.

10 Risks

The risks in Table 19 reinforce the need for a flexible, staged and system-led approach, rather than a fixed programme of works tied to a single delivery sequence.

Table 19: Key programme risks and plan responses

Risk	Description	Consequence if unmanaged	How the plan responds
Scale and affordability of investment	Required investment is large relative to the district's size and funding base, with uncertainty around future NLTP and local funding capacity	Delays to delivery; inability to progress multiple priorities concurrently; increased pressure on local partners	Prioritises enabling and no-regrets investments first; promotes staging and flexibility of large programmes; avoids locking in unaffordable solutions prematurely
Dependency on coordinated multi-agency delivery	Delivery relies on alignment between NZTA, ORC, QLDC and potentially the private sector	Stranded or low-value investment where infrastructure, service levels, demand management and local access improvements are not delivered together; for example, bus priority investment that does not translate into mode shift because service frequency, span or capacity is not increased.	Explicitly identifies dependencies; aligns sequencing with RLTP and business case processes; emphasises ongoing governance and coordination
Delivery in a highly constrained live network	Most works must be delivered on an already congested and geographically constrained network	Potentially unacceptable short-term performance deterioration; construction disruption; reputational and public confidence risk; impacts constructability increasing construction timeframe and cost	Favours offline or separated interventions where possible; stages delivery; prioritises early actions that improve reliability and resilience
Uncertainty in growth timing and distribution	Fast-tracked and market-led development increases uncertainty	Risk of under- or over-investment; infrastructure lagging behind realised growth	Uses flexible, trigger-based sequencing rather than fixed timelines; protects future options; links

	around when and where demand will occur		interventions to decision-forcing triggers
Reliance on public transport uptake and behaviour change	Strategy depends on unprecedented level of mode shift for NZ (though scale of problem is also unprecedented)	If uptake stalls, congestion and reliability issues persist, and investment may be wasted	Prioritises PT reliability and throughput over coverage; sequences services alongside infrastructure; frames demand management as optimisation, not a standalone solution
Private sector delivery uncertainty	Private delivery of transport solutions could accelerate benefits but timing and integration are uncertain	Risk of misalignment, delay, or sub-optimal system integration	Plan does not depend on private delivery, but is flexible to integrate aligned initiatives that support desired outcomes
Risk of locking in sub-optimal long-term outcomes	Premature large-scale road investments could entrench car dependence and reduce future flexibility	Reduced adaptability; constrained alternative outcomes	Avoids irreversible investments until demand certainty increases; prioritises adaptability, staging and system-wide benefits

1 Memo

Appendix A – All QSNP Longlist Options

Table A1: QSNP longlist options

Wakatipu Basin	
Option	Theme/Grouping
Arthurs Point Crossing Upgrade	Local Road Upgrades
New Route around the back of Queenstown Hill	Local Road/SH Upgrades
Alternative Route Upgrades (Lower Shotover/Malaghans/Gorge Roads)	Local Road Upgrades
New route along the base of The Remarkables (near Chard Farm Road)	Local Road/SH Upgrades
Time of Use Charging Scheme	Optimisation/Demand Management
Eastern Corridor	
Option	Theme/Grouping
New Shotover Bridge	SH Upgrades (Bridges)
4-Laning	SH Upgrades
Arrow Junction Intersection Changes/Upgrade	SH Upgrades
High-occupancy Vehicle Lanes (T2/T3)	
Tidal Flow	Optimisation
Intersection Controls	Optimisation
Speed Management	Optimisation
Park & Ride (Various Locations)	Public Transport
Bus Lanes/Priority	Public Transport
Bus Frequency & Capacity Uplift	Public Transport
Offline public transport	Public Transport
Offline public transport	Offline Public Transport

Frankton	
Option	Theme/Grouping
Full NZUP/QTBC Programme	SH Upgrades
Frankton Flats Network Improvements	SH Upgrades
4 Laning	SH Upgrades
Traffic Calming	SH Upgrades/Optimisation
Intersection Control (increased signalisation)	Optimisation
High-occupancy Vehicle Lanes	
Tidal Flow	Optimisation
Time-based Heavy Vehicle Bylaws	Optimisation
Bus Lanes	Public Transport
Water-based public transport/infrastructure	Public Transport
Offline public transport investigation/route protection	Public Transport
Cable Based PT Solution	Offline Public Transport
Frankton to Queenstown	
Option	Theme/Grouping
Frankton Landslide Remediation	SH Upgrades
NZUP SH6A Upgrades	
Bus Priority	Public Transport
Cable Based PT Solution	Offline PT
MRT Corridor Investigation/Route Protection	Public Transport
Town Centre	
Option	Theme/Grouping
Shotover/Stanley Improvements	SH Upgrades
Gorge Road Upgrades	Local Road Upgrades
Town Centre Upgrade Programme	Local Road Upgrades
Arterials Stage 2 and 3	Local Road Upgrades

Further Pedestrianisation	Walking/Cycling
Supply based parking charging	Optimisation
Signalised Intersection Optimisation	Optimisation
Private Vehicle Restrictions	Optimisation
Transport Hub	Public Transport
Waterbased transport infrastructure	Public Transport
SH6A Bus Stop Improvements	
SH6A Bus Priority	
MRT Corridor Investigation/Route Protection	Public Transport
Cable Based PT Solution	Offline PT
Southern Corridor	
Option	Theme/Grouping
Kawarau River Crossing	SH Upgrades (Bridges)
Remarkables Ski Field intersection upgrade	SH Upgrades
Intersection Improvements	SH Upgrades
Speed Management	Optimisation
High-occupancy Vehicle Lanes (T2/T3)	
Tidal Flow	Optimisation
Intersection Controls	Optimisation
Bus service and capacity uplift	Public Transport
Bus Priority	Public Transport
Park & Ride	Public Transport
Cable Based PT Solution	Public Transport

Appendix B – Previous Programme Options

Queenstown Integrated Programme Business Case (QITPBC)

Table B1 summarises the programme options assessed in the QITPBC.

Table B1: QITPBC programme options

Programme Option	Description
Do Minimum	No significant changes over what is currently planned. Key aspects include the Eastern Access Road, Interim SH6/6A upgrade, Public Transport improvements as a result of the network review, and Kawarau Falls bridge replacement.
Optimisation	Focuses on improving the use of the existing network. Public transport interventions are core to these improvements and include the introduction of bus priority along the SH6A corridor, the introduction of public transport hubs and park and ride services.
Demand Management	Focus on demand and usage patterns to relieve network pressure, through improvements to the productivity and demand aspects of the network. Key aspects include the pedestrianisation of the town centre, increased parking charges and public transport improvements. There would be no change to infrastructure provision.
Infrastructure	Supply side measures focus on 'building' infrastructure to address the constraints currently being faced in the network. The investments would encompass increasing network capacity for all modes, and new parking facilities.
Balanced	This programme includes a mix of productivity, demand and supply options, including the pedestrianisation of the town centre, supported by public transport improvements and increasing the capacity of the road network through selective road widening and parking facilities.
Travel Demand Management	Looks to change behaviour through increasing the provision for alternative modes e.g. improving cycle lanes as well as discouraging private car use through road user pricing.
Quick Wins	Focuses on investments that can be implemented within a two-year period. These are generally capital intensive and do not require infrastructure investments. This includes the widening and sealing of existing cycle trails rather than new links, and reducing public transport fares to enable the implementation of new services.
Mobility as a Service	Concentrates on those options which will provide a transport solution for consumers independent of privately owned vehicles. This includes a greater focus on public transport, cycling, car sharing and 'on-demand' services.
Do Maximum	Includes all initiatives for all alternative modes where practicable.

Figure B1 shows how the programme options were scored.

	Increase alternative mode share	Increase People Throughput	Improve Travel Time Reliability (General Traffic)	Improve Travel Time Reliability (Public Transport)	Improve Residents Liveability	Improve Visitor Experience
Do Minimum	1	1	-1	-1	1	0
Optimisation	1	1	0	1	1	0
Demand Management	1	1	0	0	1	1
Infrastructure	-1	1	1	1	1	0
Balanced 1	1	1	1	2	2	2
TDM	2	2	0	2	1	-1
Quick Wins	1	1	-1	0	1	0
Mobility as a Service	1	1	0	1	1	1
Do Maximum	2	3	2	3	3	2

Figure B1: QITPBC option scoring

Queenstown Transport Business Case (QTBC)

Table B2 summarises the programme options assessed in the QTBC. Note longlisting for QTBC went into a granular level of detail (e.g. bollards to prevent rat running, P&R Kelvin Heights Ferry) – these are summarised here for brevity.

Table B2: QTBC programme options

Programme Option	Included Projects	
Optimise Existing	• Bus priority (e.g. Coronation Drive) • Signal improvements • Localised road widening	• Footpath widening • Cycle network upgrades • Parking management (Historic Core & Lakefront)
Public Transport Friendly	• High-capacity bus services • Segregated PT lanes/routes • Enhanced PT stops (shelter, info)	• Trackless trams/light rail options • Ferry service upgrades • Bike stands & cycle facilities
Get About with Ease	• Bus rapid transit or light rail • Dedicated PT routes • Premium PT stops (toilets, cycle parking)	• Full cycle facilities on SH6A • Park & Ride • Active marketing for mode shift
Urban Hub	• Shared spaces & zones • Ballarat Street pedestrian corridor • Wayfinding system	• Street greening • Intensification of land use (QTC to F2Q corridor)
Cars Not Needed	• Pedestrianisation of Historic Core • Ban private vehicles in town centre • Reduce overall car parks	• Road pricing & limited access zones • Mobility as a Service (MAAS)