[15] TRANSPORT ASSESSMENT

QUEENSTOWN CABLE CAR

Queenstown Cable Car Referral Application

Transport Report

Prepared for:

Southern Infrastructure

October 2025

Revision schedule

Rev	Date	Description	Prepared by	Quality Check	Approval
1	18/07/2025	Draft	Matt Soper	Alan Kerr	Alan Kerr
2	01/08/2025	Version 2	Matt Soper	Alan Kerr	Alan Kerr
3	06/08/2025	Version 3	Matt Soper	Alan Kerr	Alan Kerr
4	11/08/2025	Version 4	Matt Soper	Alan Kerr	Alan Kerr
5	14/08/2025	Version 5	Matt Soper	Alan Kerr	Alan Kerr
6	10/09/2025	Version 6	Matt Soper	Alan Kerr	Alan Kerr
7	22/10/2025	Final	Matt Soper	Alan Kerr	Alan Kerr

Disclaimer

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1 Introduction

1.1 Overview

Queenstown attracts over 3 million visitors per year and is home to around 55,000 permanent residents[1]. However, in recent years the pace of Queenstown's growth[2] has resulted in a transport network that frequently experiences congestion and is unable to accommodate both current and future demands.

To help improve journey time reliability, local government partners - NZ Transport Agency (NZTA), Otago Regional Council (ORC), Queenstown Lakes District Council (QLDC) – are delivering the Queenstown Arterial Route (Stage 1)[3] and have increased bus frequencies along key routes[4].

The overall performance of the transport network is however inherently linked to the efficiency of the connection between the Airport, Frankton, and Central Queenstown. The fundamental issue is that SH6A provides the only direct connection between these centres, and the environmental constraints on either side of this corridor means that there is not enough space to widen the road[5].

In the last five years, two major studies have investigated this problem - the Queenstown Business Case[6] (2020) and the Queenstown Public Transport Business Case[7] (2024). Both studies drew the same conclusion that investment in both online and offline public transport is the only way to deliver the increase in capacity needed to meet Queenstown's long-term transport needs.

Southern Infrastructure (Cable Car) Limited (SIL) seeks to construct and operate the Queenstown Cable Car between the Airport, Queenstown and Ladies Mile. It seeks that the Minister refer the project into the Fast-track Approvals Act 2024 (FTAA) process to obtain the necessary resource consents and other approvals. This report supports the **Referral Application** and provides a description of the anticipated and known adverse traffic effects of the proposal upon Queenstown's transport network.

Purpose of this report

This report provides a concise summary of the positive and adverse transport effects that we expect would be delivered by the Queenstown Cable Car; with a focus on its contribution to resolving existing congestion problems and future-proofing the transport network for expected growth.

A more detailed assessment of effects will form part of an Integrated Transport Assessment (ITA) that would be included as part of a future substantive application for approvals under the FTAA.

1.2 Queenstown Cable Car proposal

1.2.1 Cable Car Network

The proposal is for a cable car (gondola) system that will have a person-carrying capacity of up to 3,000 passengers per hour in each direction along two different lines - the **Airport to Centre Line** and the **Ladies Mile Line**. Two alternative routes for part of the Ladies Miles Line are being explored by SIL and both are being progressed as part of the Referral Application.

The proposed network map for the Queenstown Cable Car is shown as Figure 1.

Note that the **Airport to Centre Line** and the **Ladies Mile Line** are two independent lines – i.e. people boarding at Ladies Mile and looking to disembark at the Town Centre would need to physically transfer at either Lake Johnson or Frankton Bus hub (depending on the preferred route for the Ladies Mile Line).

[1] https://www.qldc.govt.nz/community/population-and-demand/

[2] The Queenstown-Lakes district population increased 22.1 percent to reach 47,808 people in 2023 (up from 39,153 in 2018) – StatsNZ

[3] https://www.qldc.govt.nz/your-council/major-projects/queenstown-town-centre-arterial/

[4] https://www.orc.govt.nz/your-council/latest-news/news/2025/may/qt-bus-frequency-changes-underway-from-1-july/

[5] Without incurring a cost that is very likely to be unaffordable to the Partners

[6] https://www.qldc.govt.nz/media/jundqt0n/5ab-queenstown-business-case-summary-report.pdf

[7] https://www.orc.govt.nz/your-council/plans-and-strategies/transport-plans-and-policies/queenstown-public-transport-business-case/

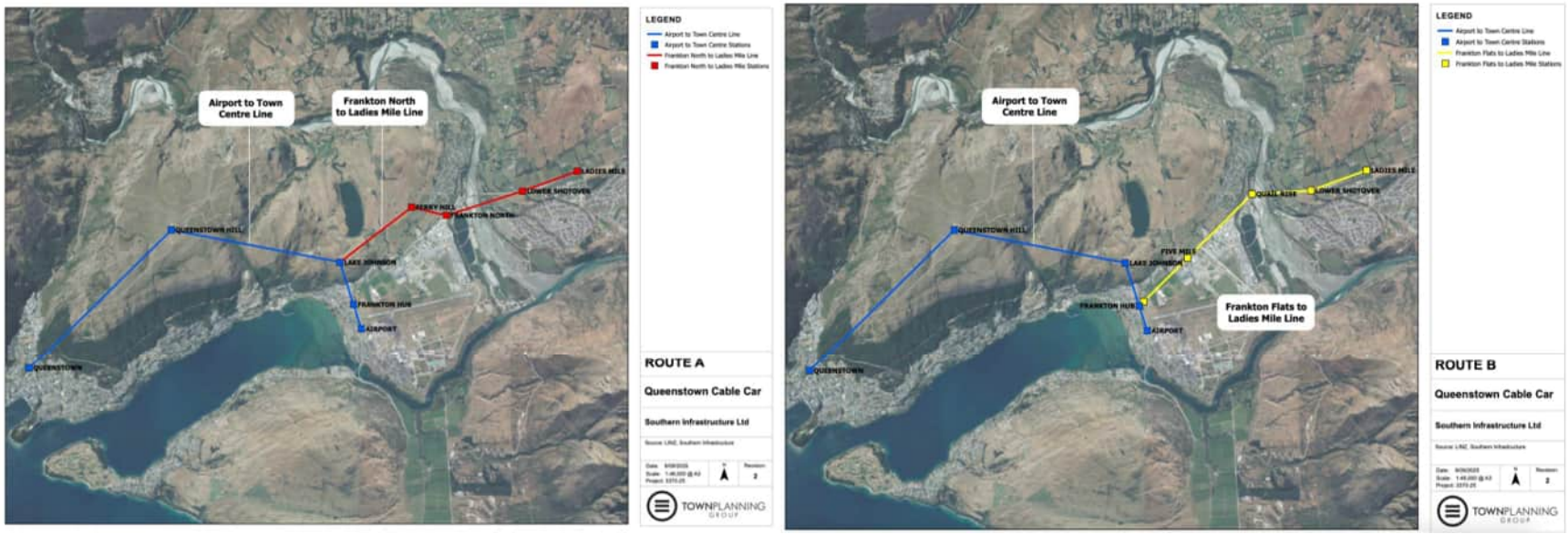

Figure 1: Queenstown Cable Car – Network Map (Route options A and B)

1.2.2 Ladies Mile Line

The Ladies Mile Line provides a connection out to Ladies Mile residential growth area. SIL are currently exploring two alternative routes:

- **Route A:** Lake Johnson - Ferry Hill - Frankton North - Lower Shotover – Ladies Mile
- **Route B:** Frankton Bus Hub – Five Mile - Quail Rise - Lower Shotover – Ladies Mile

Table 1 presents the stations that would be included for the two alternative routes.

Table 1: Ladies Mile Line – Station Locations for Alternative Routes

	Route A	Route B
Lake Johnson Interchange between the Ladies Miles and Airport to Town Centre Lines (for Option A).	✓	✗
Frankton Bus Hub Interchange between the Ladies Miles and Airport to Town Centre Lines, as well as local bus services (for Option B). Includes a pedestrian bridge over SH6 to facilitate interchange to Ladies Mile Line (Option B).	✗	✓
Ferry Hill will function as the core maintenance and logistics station for the whole cable car network in option A. ORC have included it on the long-list of sites for a new electric-bus hub which can be accommodated alongside the cable car providing shared services and infrastructure between the two transport systems[8]. The Bus Hub is also in scope for this FTAA application.	✓	✗
Five Mile Connection to the Five Mile Shopping Centre and Queenstown Central Shopping Centre	✗	✓
Frankton North Connection to employment areas along Glenda Drive and potentially will connect to two new cycleway/pedestrian routes that SIL are likely to develop as part of the project in partnership with the Queenstown Trails Trust.	✓	✗
Quail Rise will function as the core maintenance and logistics station for the whole cable car network in option B. This would also include a new electric-bus hub which can be accommodated alongside the cable car providing shared services and infrastructure between the two transport systems[9]. The Bus Hub is also in scope for this FTAA application.	✗	✓
Lower Shotover	✓	✓
Ladies Mile	✓	✓

1.2.3 Airport to Town Centre Line

The Airport to Town Centre line includes the following stations:

- **Queenstown Airport** - located to the west of SH6, connected to the airport via a pedestrian bridge.
- **Frankton Hub** - located at the existing Frankton bus hub, to the west of SH6.
- **Lake Johnson** – an interchange between the Airport to Town Centre and the Ladies Mile Line (if Route A is preferred).
- **Queenstown Hill** - located on Queenstown Hill.
- **Queenstown Town Centre** - located on the QLDC Boundary Street carpark in the CBD.

[8] The core purpose of the Ferry Hill Station is a) to allow the cable car to avoid crossing over or under the 110kV Transpower network; and b) to provide a dedicated station for maintenance and operations activities (inc. storage of gondola cabins, spare parts, specialist equipment etc.).

[9] The core purpose of the Ferry Hill Station is a) to allow the cable car to avoid crossing over or under the 110kV Transpower network; and b) to provide a dedicated station for maintenance and operations activities (inc. storage of gondola cabins, spare parts, specialist equipment etc.).

2 Transport context

2.1 Journey times between the Airport/East and Town Centre

In 2024, Queenstown's airport welcomed around 1.2 million people[10], which means that visitor numbers into the Airport now exceed those seen before the Covid-19 pandemic[11].

For those travelling the 7.4km into Queenstown's town centre via SH6A, there are only two choices:

- Private vehicle – taxi or rideshare, shuttle service, rental cars or locals picking family or friends up.
- Public transport – Orbus Bus[12] which operates at 15 or 20 minute frequencies by time of day.

The issue is that there is only one practical route into town[13], and journey times between the Airport and the town centre (in both directions) are slow during the morning and afternoon peak periods.

The graph below[14] shows the average daily traffic along SH6a and how it has increased over time. Previous business cases have indicated that these volumes will continue to increase into the future (limited by the capacity of the road) and this will be investigated further in the substantive application.

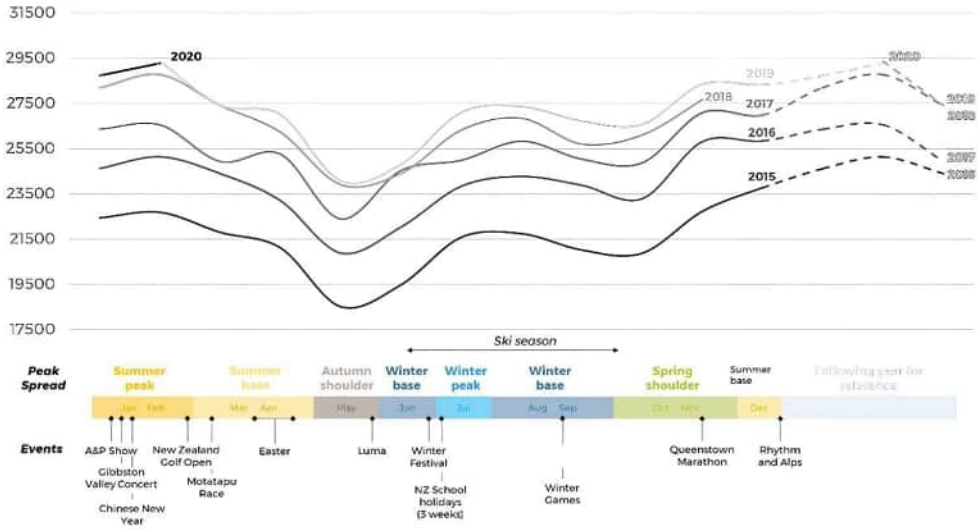

Figure 2: Seasonal traffic profile along SH6A (2020 data)

Figure 3 provides analysis of TomTom travel speed data for August 2024, which demonstrates where the slowest parts of the network are during the PM peak.

Figure 3: Travel speeds heading into Queenstown

[10] https://www.queenstownairport.co.nz/facts-figures
[11] Arrivals into Queenstown Airport in 2019 = 1,782,260 vs 2024 = 1,276,013
[12] Run by Otago Regional Council
[13] Aside from the long 30km detour route via Arthurs Point (via Domain Road)
[14] Exert from the Queenstown Business Cases

The data shows an average speed of around 10-15kph for the sections closest to the Airport and the town centre. However, the issue is not just the speed of the journey, but the uncertainty of how long the journey will take. This is particularly critical for people who have a flight to catch. In peak times, a journey that usually takes 20 minutes can take up to 33 minutes and previous business case analysis demonstrates that this is expected to deteriorate further as more people live in and visit Queenstown.

In addition to the congestion experienced on SH6A, the SH6 corridor between the SH6/SH6A intersection and Lake Hayes Estate (to the east) is also congested with the bridge over the Shotover River a significant capacity constraint. Figure 4 shows the variability of travel time in 2024 and 2028 for the journey between Lakes Hayes Estate and Queenstown.

Previous modelling shows that even with just a few years of traffic growth, the **already unreliable journey times could more than double**. The scale of delays that are currently being seen only at peak periods are expected to be experienced throughout most of the day by 2028.

These results demonstrate the need for additional capacity in the transport network.

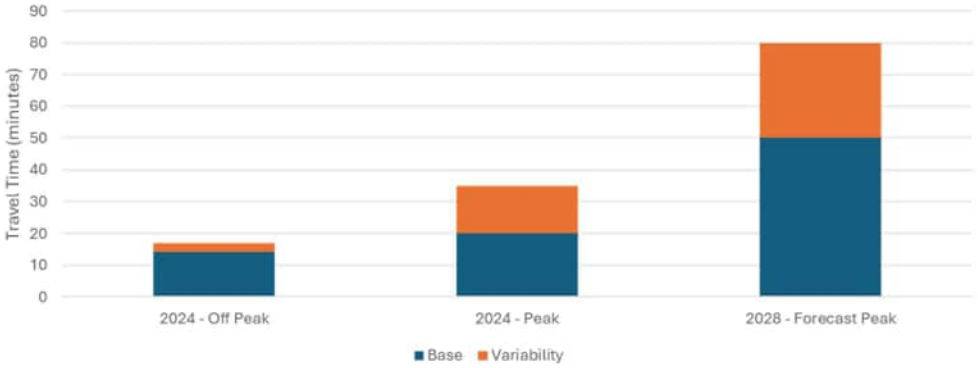

Figure 4: Travel time variability (Lake Hayes Estate to Queenstown) – 2024 vs 2028

In response to the congestion issues, NZTA is currently undertaking a $250m upgrade of the SH6/SH6A intersection (the "BP roundabout")[15]. This is just one of several improvements included in the preferred programme of the Queenstown Business Case[16] - as shown in Figure 5.

It can be seen from the business cases' indicative programme, that construction of certain activities has not been completed within the originally desired timeframes. Our understanding is that none of the activities identified in Figure 5 with "funding sought" (e.g. Arterials – Stage 2) have yet received funding.

The impact of the cable car on the performance of the wider transport network, including traffic modelling, will be further investigated as part of the Substantive Application. Previous modelling undertaken for earlier business case projects has indicated that the cable car will reduce demand on both the traffic network and the local bus network.

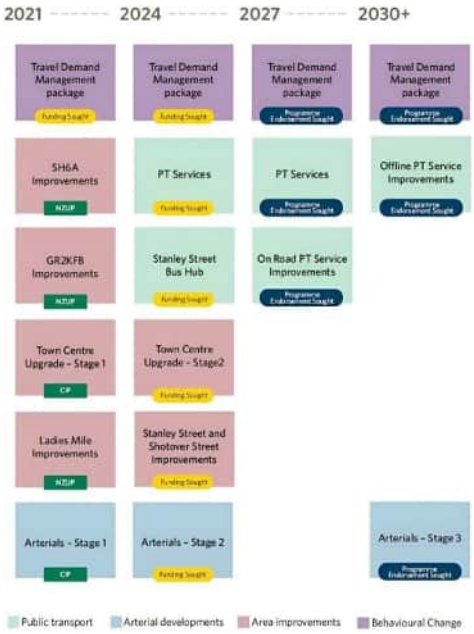

Figure 5: QT Business Case – Preferred Programme

[15] https://www.nzta.govt.nz/projects/queenstown-package/

[16] https://www.qldc.govt.nz/media/jundqt0n/5ab-queenstown-business-case-summary-report.pdf

2.2 Growth in visitors and residents

Growth in visitor numbers and the resident population lead to increased demand for travel and increased pressure on the transport network.

2.2.1 Visitors

Figure 6 provides the historic and forecast passenger movements between 2015 until 2032.

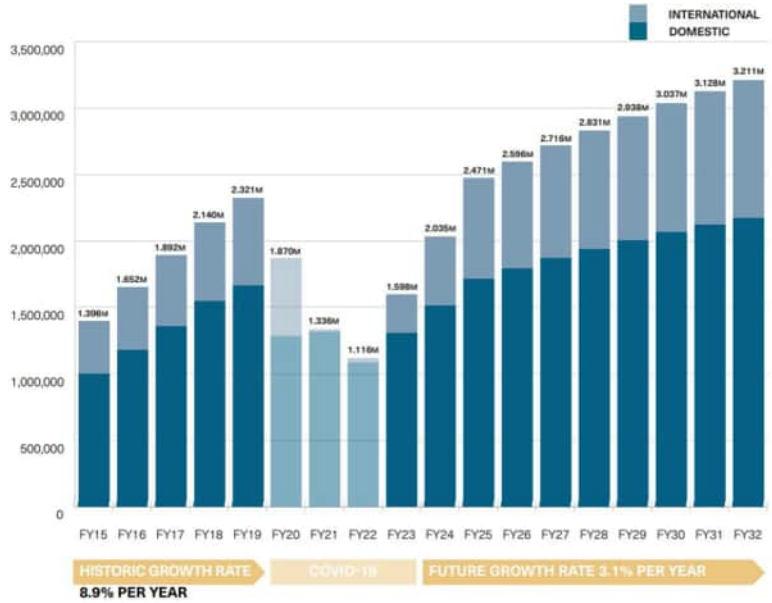

Figure 6: Forecast growth of arrivals into Queenstown[17]

The forecasts shows that passenger numbers arriving/departing Queenstown Airport are already exceeding pre-pandemic levels. Queenstown Airport expects this growth in visitor arrivals to continue, and by 2032 it estimates a total of 1.6 million arrivals (3.2 million total movements), up from 1.2 million last year - representing a growth rate of 3.1% per year.

It is worth noting that airport arrivals are not the only source of visitor arrivals. Large numbers of visitors travel to Queenstown by car from elsewhere in the South Island.

2.2.2 Land development

In addition to tourism growth, land development continues to progress apace, evidenced (in part) by the fact that nine Queenstown Lakes projects were listed for fast-track development under the FTAA. This list includes the following developments which will add new homes:

- **Homestead Bay**[18] – approximately 2,800 residential allotments, an approximately 1,100 square metre commercial retail precinct, and associated features such as parks, trails, and native revegetation.
- **Silver Creek**[19] – approximately 1,050 dwelling units.
- **Coronet Village**[20] – approximately 780 residential dwellings, supporting infrastructure (including a transport hub, a mountain bike facility, and a restaurant, and enable the potential development of two schools), a new gondola at the existing Coronet Peak Ski Area and a depot and education facilities for Te Tapu o Tāne.
- **Mt Iron Junction Housing Scheme**[21] – approximately 263 high-density residential dwellings, a childcare centre, a retail building, a restaurant, a service station, and parks.
- **Gibbston Village**[22] – approximately 900 residential dwellings, an approximately 2.4 hectare commercial area, and enable the potential development of a school.

[17] https://www.queenstownairport.co.nz/media/1.%20Hero/qac-10-year-strategic-plan-fy23-32-digital-version.pdf
[18] https://www.fasttrack.govt.nz/projects/homestead-bay
[19] https://www.fasttrack.govt.nz/projects/silver-creek
[20] https://www.fasttrack.govt.nz/projects/coronet-village
[21] https://www.fasttrack.govt.nz/projects/mt-iron-junction-housing-scheme
[22] https://www.fasttrack.govt.nz/projects/gibbston-village

- **Flint's Park Urban Intensification**[23] – approximately 500 residential dwellings, a neighbourhood mixed-use centre, and an automated cable way to access the residential development on the lower slopes of Slope Hill.

QLDC is also advancing a variation to the Proposed District Plan (PDP) which would increase urban density throughout most of the urban areas within the district[24]. This includes Frankton, Queenstown and along the SH6A corridor – i.e. all areas within the catchment of the proposed cable car. Much of the recent residential growth in the area has occurred to the east of the Shotover River (Ladies Mile, Lake Hayes Estate and Shotover Country) and this has contributed to the increase in traffic volumes on the Shotover bridge.

Figure 7 provides a graph from QLDC that shows the forecast growth in residential population[25]. Analysis of earlier forecasts undertaken as part of the business case work has indicated that Queenstown's growth has typically followed (or even outstripped) high growth projections. Investment in the transport network has struggled to keep pace with this. Without investment in public transport, the increase in residential population will translate directly into more car-based trips.

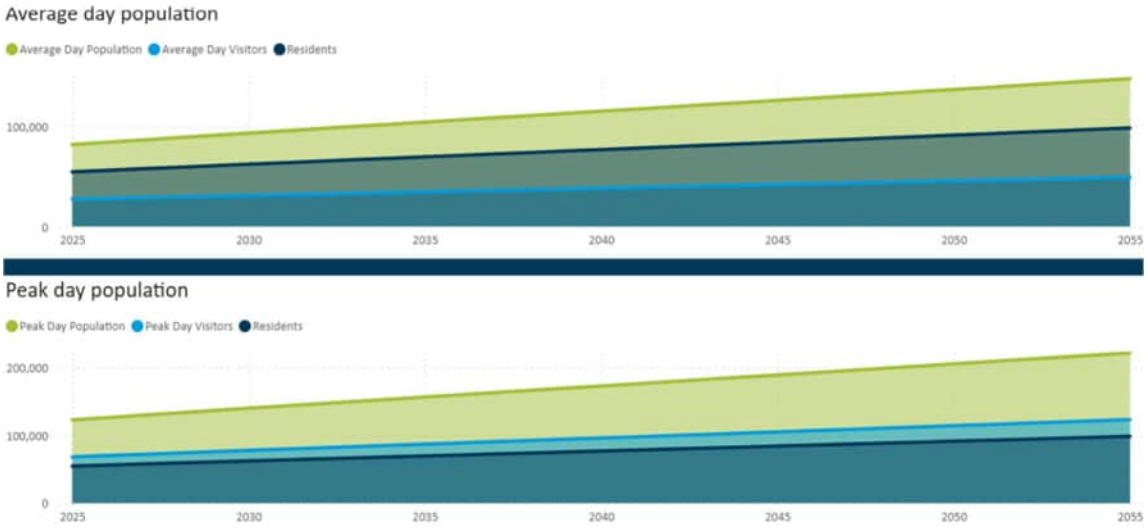

Figure 7: Forecast growth in residential population for Queenstown Lakes

2.3 Mode shift

Growth in visitor and resident numbers is leading to increased demand upon the transport network. Currently, much of this demand relates to private motor vehicles - however the network does not have the capacity to sustain this level of growth in car traffic, and a shift to alternative modes will be required.

2.3.1 Current issue

SH6 and SH6A are already experiencing long delays during peak periods, and by the early 2030s these key corridors are expected to be over capacity for much of the day[26]. Increasing the number of people that can travel along these corridors can either be done by physically adding capacity to the network (by widening the road), by encouraging people to use higher occupancy vehicles or by introducing an alternative offline corridor.

Transport modelling suggests that 40% of all trips between Frankton and the Queenstown Town Centre at peak times will need to be on alternative modes to private vehicles by 2028 and 60% by 2048 if the high levels of congestion and major delays are to be avoided[1].

[23] https://www.fasttrack.govt.nz/projects/flints-park-urban-intensification
[24] https://letstalk.qldc.govt.nz/proposed-urban-intensification-variation
[25] https://www.qldc.govt.nz/community/population-and-demand/
[26] Queenstown Business Case

2.3.2 Recent improvements to public transport

The role of public transport in fixing Queenstown's transport problems is well recognised by NZTA, ORC and QLDC; and in 2017 Queenstown launched a new bus service called Orbus, featuring a flat $2 fare for all routes within the Wakatipu Basin.

Since the scheme was introduced, there has been a 2-3% per annum increase in bus patronage[27]. This indicates that some people living and visiting Queenstown are willing to use public transport if there are good incentives to do so. However as indicated by QLDC's 2024 Quality of Life Survey[28]/[29], it is not only the cost of a bus fare, but also service frequency and reliability that are major barriers when it comes to encouraging mode shift[30].

2.3.3 Opportunities to encourage mode shift

Investment to increase public transport service frequency is part of the overall solution. However, when it comes to public transport reliability, the issue is that buses will generally be stuck in the same congestion as cars and then encounter further delays stopping at bus stops.

Traditional alternatives to creating mode shift would be investment in active modes or introducing a ferry service.

There remains a place for investment in these modes as part of an integrated transport network; however:

- Most people arriving at the airport will have luggage (and often ski equipment) and very few people (aside from potentially airport staff) would choose to travel to the airport by bike.
- A potential ferry service was investigated as part of the Queenstown PT Business Case but was discounted as being a long-term solution for several reasons. Most notably, the additional capacity provided by new ferry services would fall far short of what Queenstown's transport network requires.

To improve journey time, additional space for buses would need to be created – but as noted earlier, the fundamental issue is that Queenstown's geography dictates that there is not enough width to build more capacity along SH6A. Even if very significant land acquisitions were contemplated, grade changes from the hills to the lake would necessitate very substantial earthworks and or engineered structures to construct additional road width.

Realistic opportunities to make the bus journey time quicker and more reliable are therefore very limited. Consequently, this means that there is likely to be a ceiling as to how much mode-shift (and congestion reduction) can be achieved by investing purely in road-based transport in the long term.

2.4 Proposed transport upgrades

The preferred programmes of both the Queenstown and Queenstown PT business cases identified a package of works that captured infrastructure changes, bus service upgrades and travel demand management initiatives. The expectation was that with all these improvements packaged together, the network could future-proof for growth in the short-to-medium term.

The key issues in the delivery of these recommended programmes of works are:

- Funding is currently highly constrained. The government focus is currently on the delivery of the multi-billion-dollar Roads of National Significance (RoNS)[31] programme.
- Recent road upgrade projects being delivered by NZTA and QLDC in Queenstown (Arterial Road[32] and the BP roundabout upgrade[33]) have exceeded the original budgets.
- Even if the recommended programme of works were fully funded, more would need to be done to deliver the necessary long-term capacity the Queenstown transport network needs (this was acknowledged in the original business case).

This means that the recommended programme of works that were identified in the business cases is unlikely to be delivered within the originally targeted timeframes, if it is completed at all.

Moreover, given the continued rapid growth of Queenstown, the works would still be unlikely to deliver the capacity now required for the long-term. The previous business case indicated that an offline solution would be required anyway by the mid-2030s.

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[27] Between July 2024 and March 2025, passenger numbers on public transport in Queenstown rose by 3% to 1,489,729 trips.

[28] www.qldc.govt.nz/media/5nmpxn4y/quality-of-life-survey-2024-full-report.pdf

[29] A total of 1,709 responses from 11,030 invited residents

[30] Only 19% of people believe that public transport was reliable, compared to 32% in 2018. Similarly, only 19% considered public transport frequency to meet their needs, compared to 40% of people in 2018.

[31] https://nzta.govt.nz/planning-and-investment/roads-of-national-significance/

[32] https://www.stuff.co.nz/nz-news/350179597/queenstown-councils-bypass-budget-blowout-again

[33] https://www.odt.co.nz/regions/queenstown/250-million-bill-queenstown-roundabout

3 Transport effects

3.1 Integration with Queenstown's transport network

Figure 8 provides a representation of how the proposed Queenstown Cable Car could integrate with the existing public transport[34]. It shows that interchange between bus and cable car could be provided at:

- Queenstown Town Centre (Airport to Town Centre Line)
- Frankton Bus Hub (Airport to Town Centre Line and Ladies Mile Line Option B)
- Queenstown Airport (Airport to Town Centre Line)
- Five Mile (Ladies Mile Line - Option B)
- Frankton North (Ladies Mile Line - Option B)
- Quail Rise (Ladies Mile Line - Option A)
- Lower Shotover (Ladies Mile Line - Options A/B)
- Ladies Mile (Ladies Mile Line - Options A/B).

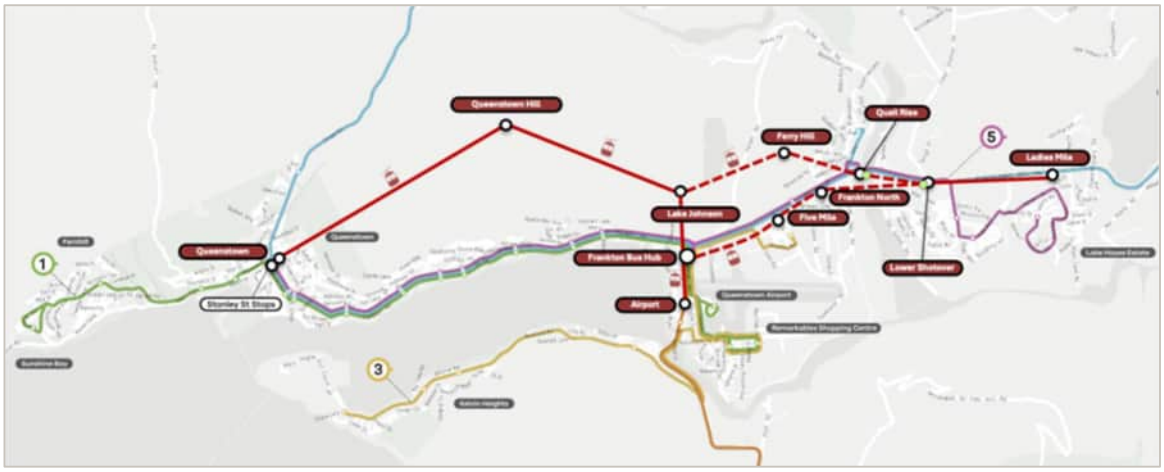

Figure 8: Integration of the Queenstown Cable Car with the Existing Bus Network

The proposed cable car would also integrate with the active modes network, providing direct connections to core pedestrian and cycle routes in both Queenstown and Frankton (along with potential future mountain bike opportunities on the Queenstown Hill).

Opportunities to optimise the PT network

The project provides an opportunity to optimise the existing bus network. For example, the bus network could be reconfigured to a "spoke and hub" style where buses operate on routes that connect outlying areas (spokes) to more central locations (Queenstown town centre and Frankton Hub).

It also presents a presents a wider opportunity for Otago Regional Council (ORC) to expand its bus network without significant investment:

- **Replace buses along SH6A with the cable car.** Currently Routes 1, 2 and 5 travel the 6.5km section along SH6A between the town centre and the Frankton Bus Hub. With the cable car in place, some buses[35] could be redeployed because this route is largely being covered by a cable car that offers a similar journey times and far higher frequencies. The redeployed buses could be used to increase frequencies on other routes, or cover new growth areas.
- **Remove Route 5.** The cable car will effectively cover the residential catchment currently being served by Route 5, with stations at Ladies Mile and Lower Shotover. This presents the opportunity to further redeploy buses elsewhere on the network.
- **Refine Route 3.** If the cable car runs along the Frankton Flats (Route option B) via Five Mile, this presents a further opportunity to refine Route 3. With the cable car in place, people could transfer at the Frankton Bus Hub.

[34] https://www.orc.govt.nz/your-council/latest-news/news/2017/november/queenstown-s-new-bus-service-unveils-route-map/

[35] Some bus services with the ability to stop will need to be retained along Frankton Road to cater for the residential and hotel catchments.

Following discussions with NZTA, ORC and QLDC, a public transport network plan will be developed as part of the substantive assessment.

3.2 Positive effects

3.2.1 Overview

The Queenstown Cable Car presents the opportunity to generate a number of transport benefits at a regional level. Table 2 provides a high-level summary of the core benefits. These will be explored further and quantified as part of the Integrated Transport Assessment that would form part of a future substantive application process.

Table 2: Positive transport impacts of the Queenstown Cable Car

	**Reducing journey times** Previous business cases have established that widening SH6A or duplicating the Shotover Bridge to create more lanes (either for traffic or buses) is not likely to be an affordable alternative for NZTA or local government partners. However, SH6A and sections of SH6 are already operating at capacity during peak periods and growth means within the next 5 years it is likely that sustained congestion will be experienced throughout the day. The proposed cable car system could transport up to 3,000 passengers per hour in each direction. In terms of the potential capacity enhancement, this is broadly equivalent to an additional two lanes in each direction along the State Highway. The cable car will: • Reduce the number of vehicles on the road, and consequently the level of congestion that is being experience. This will benefit all road users. • For some journeys, the quickest (end-to-end) route will be via cable car[36]. The cable car will therefore improve the performance of the state highway corridor; and in many respects "buys more time" for local Partners to make other transport improvements that were identified in the Queenstown Business Case. However, the Queenstown Cable Car alone will not necessarily address all of the congestion issues. It remains likely that the cable car will need to form part of a package of improvements, as outlined in the Queenstown Business Case, to resolve long-term congestion issues. **Improving reliability** The cable car also offers people far more certainty regarding how long their journey will take – which is estimated at being 22 minutes between the Airport and Town Centre (excl. walking/queue times). The network also extends out to Ladies Mile and offers people with a frequent and reliable service between this large residential area and the major employment areas in Frankton and the Town Centre. This extension provides an opportunity to reduce traffic entering the Frankton Flats before it crosses the Shotover River. Modelling undertaken to support previous business cases has shown that this bridge is operating at or close to capacity for large periods leading to congestion and delay. NZTA TMS data also demonstrates high levels of growth in traffic (30% over the last five years) on the approach to this bridge and ongoing development to the east will see this growth continue. The Ladies Mile Line will add significant capacity to the crossing over the Shotover River.
	**Reduced construction impacts** The alternative options for improving congestion would likely focus on further investment to upgrade existing roads. However, such improvements are likely to have longer construction durations in comparison to the cable car (approximately 18 months). The construction works to upgrade the intersections and Bus Hub in Frankton is anticipated to take four years to complete[37]. It can be seen from recent upgrades to existing roads in Queenstown that online roading improvements often require long construction periods and the impacts can be widespread. The direct transport impacts are increased delay and reduced accessibility (due to road closures or turning restrictions). Given that much of the cable car system would be constructed offline, any disruption to the transport network during construction is likely to be lower in comparison to the alternatives.
	**Economic benefit of improved transport in Queenstown** Queenstown is a key national tourist destination, but the continued problems associated with transport in Queenstown will continue to detract from positive visitor experience and economic productivity. More directly, Queenstown is facing continued congestion on its transport networks, impacting the efficient movement of people and freight. Adding additional capacity to the network and providing congestion relief would translate to an economic benefit.

[36] Including consideration of walk time, time to park/pay for a vehicle etc.

[37] https://nzta.govt.nz/projects/queenstown-package/what-we-are-building/

	The economic impacts of the proposal have been documented in previous business cases and have been re-assessed by Anthony Byett – further information is included in his report.
	**Resilience** The physical constraints of the environment mean that the network is not resilient to disruption – SH6A is the main access corridor for Queenstown, and road crashes, slips or weather events that close one or more lanes have network wide implications. The cable car provides an alternative means of getting between the CBD, Frankton, Ladies Mile and Queenstown during such events. More generally, a public transport spine between the airport and CBD will provide additional resilience to the transport network along with meaningful choice and reliability whilst reducing transport related frustration.
	**Safety** The project will deliver some knock-on safety benefits to the network because of there being fewer vehicles on the road (and fewer frustrated drivers who are more likely to take risks).
	**Supports government policy** The Queenstown Cable Car proposal aligns strongly with the core objectives for all key national, regional and local transport policies - including but not limited to: • 2024 Government Policy Statement on Land Transport (GPS) • Emissions Reduction Plan 2026-30 • NZ National Adaption Plan • Otago Regional Land Transport Plan • Queenstown Land Transport Asset & Activity Management Plan 2024 34 • NZUP Projects – Queenstown Package This strong strategic alignment stems from the fact that the cable car will offer a new high-frequency, reliable, and low-emission transport option that integrates with existing bus networks and active travel networks. **Strong GPS alignment** The cable car proposal will strongly deliver upon the GPS priorities of: • Economic growth and productivity – quicker and more reliable journeys (for all road users) • Increased resilience – a new alternative route between Ladies Mile, the Airport and the CBD • Improved safety – fewer vehicles contributing to fewer road crashes • Value for money – increase revenue through bus fares (farebox revenue), better whole of life cost and reduce road maintenance
	**Accessibility** The cable car will be clearly visible from the ground, and the cable car network itself is very simple with a small number of major stops. This means that is will be easy to find, and easier to navigate than alternative modes of transport – particularly for those who do not speak English. The cable car will have level access and the cabins (like those seen on the existing Queenstown Gondola) will easily accommodate wheelchairs.

3.2.2 Regional benefits

Freeing up capacity on SH6 and SH6A will facilitate regional journeys to key locations such as the airport, high school and hospital (all of which have large catchment areas) and between parts of the region (trips between Cromwell and Kingston, for example, or between Wanaka and Invercargill).

The significant regional transportation benefits are:

- A reduction in congestion and journey times.
- An improvement in journey time reliability.
- Reduction in road maintenance costs.

3.3 Anticipated and known adverse effects

3.3.1 Permanent effects

From a transport perspective, there are very few adverse permanent effects associated with the Queenstown cable car proposal. This is because the project does not require any form of reallocation of road space (e.g. removing a general traffic lane to introduce a bus lane), which means that negative impacts to other modes would be either nil or minimal. Those choosing to drive, bike, walk or take the bus would receive knock-on benefits from the cable car as a result of a reduction in congestion.

The cable car network also integrates with the walking and cycling network. Further mode shift to public transport will also create some added health benefits, as the majority of people will walk or cycle (from their home or place or work) to access the cable car stations.

The project does not directly divert funds away from other projects nor does it necessitate change to the existing public transport services[38].

The main impact would be the closure of Ross Street (if required). Should this access need to be closed, there are alternative routes onto McBride Street both to the north (Grey Street) and south (near to Boyes Crescent).

3.3.2 Temporary effects

The main adverse effects of the project would likely be limited to temporary construction impacts; as part of the construction of the cable car stations. During this time, there would be a localised increase in heavy (construction) vehicles and potentially a need for traffic management measures to be deployed. However, these effects could largely be mitigated with Temporary Traffic Management (TTM). Much of the project however would be constructed offline; outside of the SH6 and SH6A road corridors.

3.4 Electric-bus hub (Ferry Hill or Quail Rise)

3.4.1 Context

Ferry Hill or Quail Rise stations are proposed to be the core maintenance and logistics stations for the Queenstown Cable Car (depending on the chosen alignment of the Ladies Mile Line).

These stations would be the points where the primary electrical supply would be fed to and is where the containerised battery back-up Battery Energy Storage System (BESS) system would be located. Their proximity to the Frankton Grid Exit point makes it a potentially suitable location for charging electric vehicles. For this reason, the ORC has included these locations on the long-list of sites for a new electric-bus hub which can be accommodated alongside the cable car providing shared services and infrastructure between the two transport systems.

As noted earlier in this document, the Bus Hub is in scope for this FTAA application. However, it should be noted that ORC is considering having more than one depot to serve the Queenstown region. Conversely, if the cost is too prohibitive ORC may decide to retain the status quo[39].

3.4.2 Traffic impacts – Ferry Hill Station (Route A option)

Should Route A be progressed, the current concept design for the Ferry Hill Station incorporates 50 bus parks with charging provisions, plus 60 regular car parks (for staff). It is proposed that site access would be provided via the upgraded Trench Hill Road (included in QLDC designation for the new Quail Rise Reservoirs) and a connection onto SH6 at Hawthorne Drive[40].

The current site access is via Ferry Hill Drive and Trench Hill Road. For the purpose of this application, it has been assumed that this remains the means of access for the initial period of operation (first three years). After that point, a new link road (being delivered by QLDC) from Quail Rise to Hawthorne Drive is expected be completed. In terms of the transport impacts:

- Overall, vehicle movements to and from the site will be relatively modest given the size of the bus fleet and number of staff car parks proposed
- The expectation is that there would be up to x10 maintenance staff working at Ferry Hill during a typical weekday. In the context of traffic operations, the effects of this level of trip generation upon the local road network are likely to be negligible.
- It is expected that public use of the Ferry Hill station would be relatively low, with most residents of Quail Rise choosing to access the cable car network via the Frankton North station (as it would be closer). The primary purpose of the Ferry Hill station is as a storage, maintenance and charging depot. Traffic impacts as a consequence of cable car patronage are also expected to be minor.
- This proposal would result in a rerouting of buses from existing depots to the new charging point at Ferry Hill. This would add bus trips onto certain parts of the network (including SH6) at the start/end of different shifts. However, it would reduce bus trips on other parts of the network. The overall impact during peak periods is therefore expected to be low – as the start/end of shift patterns are unlikely to correspond with the AM (0700-0900) and PM (1600-1800) peak periods. There will be some localised effects that will be considered in more detail as part of the substantive application. Any small negative effects associated with additional bus movements are likely to be more than offset by the significant increase in public transport accessibility created by the cable car system.

[38] Knock-on costs of running the services could potentially be passed onto the customer

[39] which requires that the operators themselves supply a site as part of their bid

[40] Included within the Frankton North Structure Plan

- Once the road connection from Trench Hill Road to Hawthorne Drive is made, the performance of the SH6/Hawthorne Drive roundabout would be slightly impacted as a result of the aforementioned additional staff and bus trips. The offset is that traffic impacts on the local roads through Quail Rise would be removed.

These impacts will be tested further as part of the substantive application.

3.4.3 Traffic impacts – Quail Rise Station (Route B option)

Should Route B be progressed, the current concept design for the Quail Rise Station incorporates 50 bus parks with charging provisions, plus 60 regular car parks (for staff). It is proposed that site access would be provided via Tucker Beach Road and the existing connection onto SH6 to the west of the Shotover bridge.

For the purpose of this application, it has been assumed that Tucker Beach Road remains the means of access for the site and no additional connectivity is anticipated.

In terms of the transport impacts:

- Overall, vehicle movements to and from the site will be relatively modest given the size of the bus fleet and number of staff car parks proposed.
- The expectation is that there would be up to x10 maintenance staff working at Quail Rise during a typical weekday. In the context of traffic operations, the effects of this level of trip generation upon the local road network are likely to be negligible.
- It is expected that public use of the Quail Rise station would be higher than what would be expected at Ferry Hill as it is a slightly more convenient location for the residents of Quail Rise. While this might generate a small amount of pick up/drop off traffic, it is anticipated that most people would walk or cycle to the station.
- This proposal would result in a rerouting of buses from existing depots to the new charging point at Quail Rise. This would add bus trips onto certain parts of the network (including SH6) at the start/end of different shifts. However, it would reduce bus trips on other parts of the network. The overall impact during peak periods is therefore expected to be low – as the start/end of shift patterns are unlikely to correspond with the AM (0700-0900) and PM (1600-1800) peak periods.
- There will be some localised effects that will be considered in more detail as part of the substantive application. Any minor negative effects associated with a relatively small number of additional bus movements are likely to be more than offset by the significant increase in public transport accessibility created by the cable car system.

These impacts will be tested further as part of the substantive application.

4 Approach to quantifying the transport effects

4.1 Integrated Transport Assessment

A more detailed assessment of effects will form part of an Integrated Transport Assessment (ITA) that would be included as part of a future substantive approvals application under the FTAA.

The ITA will provide a more quantified assessment, and will capture the standard requirements that align with QLDC and NZTA guidance [41/42]:

- An overview of the existing transport environment.
  - This will include a summary of the existing conditions (traffic volumes etc.) for surrounding streets; proposed future changes (NZTA/QLDC) to the network; and a review of road safety statistics.
- Estimates of the trip generation of the Cable Car
  - Including new trips and transferred trips from other modes (such as car and bus).
- Traffic impact assessment
  - Including the positive and negative impacts, and an assessment of how the proposal is likely to change how people travel around Queenstown.
- Assessment of the proposal against relevant national, regional and local government policies.
- Access assessment for each station, considering all modes (inc. walking and cycling).
  - This will include an assessment of the walking/cycling routes to the stations – for example between the Airport itself and the Airport Station.
- Parking assessment for each station
  - Including a review of the provisions for accessible and bicycle parking and servicing/loading.
  - This will also capture a review of the provisions for staff parking where applicable.

4.2 Approach to the assessment of effects

We expect that the following tools will be used for identifying and assessing the scale of actual and potential transport effects associated with the Cable Car:

- Transport modelling
  - Patronage Forecasting using the Public Transport Model (WSP) that was used as part of the Queenstown Public Transport Business Case. This will be used to establish some initial patronage forecasts for different growth scenarios.
    - These forecasts will capture (at a high-level) transfer of demand to the cable car where it is providing a faster journey time when compared to alternative modes (such as bus). The uniqueness of this project means that there will be additional patronage uplift associated with (a) the journey being more reliable; (b) the journey being more enjoyable; and (c) non-commuting purposes (purely used as a means of sightseeing)
  - Intersection modelling (e.g. SIDRA) for intersections close to cable car stations where there is going to be a notable change in the interactions between vehicles, pedestrians and buses.
- Station queue assessment
  - Assessment of demand and potential queue management for stations – this is likely most critical for the Airport Station, where there may be sudden surges in demand following the arrival of each plane service.
- Safety review
  - To be informed by a review of recent crash data, and an assessment of potential safety risks associated with the proposal. This is likely to focus on the safety for people walking/cycling to the stations, and potential for the cable car to act as a visual distraction to drivers.
  - The positive impacts of the proposal will also be reported; using outputs from the strategic transport model to inform the likely reductions in traffic.

[41] https://www.nzta.govt.nz/assets/resources/integrated-transport-assessments/docs/integrated-transport-assessments.pdf

[42] https://www.nzta.govt.nz/assets/resources/research/reports/422/docs/422.pdf

4.3 Approach to identifying mitigation measures

SIL have engaged with key stakeholders including QLDC, ORC and NZTA in relation to the referral application and we expect this will continue whilst the Substantive Application is being developed. This engagement will allow the project team to understand the requirements and concerns of stakeholders.

The identification of any necessary mitigation measures will take an evidence-based approach to understand the scale of issues; to then establish an appropriate right-sized response. Mitigation needs to cover both the temporary (during construction) and permanent effects of changes to the transport network.

As part of the Substantive Application, SIL will work with project partners (ORC, QLDC and NZTA) to further explore the above opportunities and to identify an optimised bus network that integrates with the cable car network.

5 Summary

This report supports the Referral Application for the proposed Queenstown Cable Car and provides an overview of the anticipated and known positive and adverse transport effects of the proposal.

From a transport perspective, the permanent impacts of the proposal are likely to be significantly positive. The cable car enables additional capacity to be added to Queenstown's transport network, which is already experiencing congestion during peak periods. Visitor arrivals into Queenstown Airport are now higher than pre-pandemic levels, and continued growth in both visitors and residents is expected.

By providing people with a new, high frequency and reliable form of public transport, it would be expected that the proposal would encourage mode shift from private cars to the cable car. Reduced demand for using the roads will deliver benefits to all road users, including reduced delays and improved road safety. The cable car would also make the transport network as a whole more resilient, with an alternative route between Ladies Mile, the Airport and Queenstown Town Centre being provided if, for example, there is an issue that results in delay along SH6 or SH6A (e.g. a crash or slip).

The main adverse transport effects are likely to be limited to the construction phase, relating to where construction interfaces with the existing network. It is anticipated that these impacts would be limited in geographic extent and duration (particularly when compared to impacts associated with SH6 BP Roundabout improvements) and would be manageable.

The traffic impacts of the Ferry Hill/Quail Rise Stations and associated Bus Hubs are expected to be minor.