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NZTA Contract 2018235 – Technical Note # 36

Application of Intelligent Transport Systems (ITS) in Queenstown

30 August 2020

1. Introduction

With traffic increasing steadily in the Queenstown area, an effective management approach is required to optimise the network in the short term, as well as maximise the benefits from the planned transport interventions in the longer term. This management function can be effectively achieved through the comprehensive implementation of an Intelligent Transportation System (ITS).

Intelligent Transportation System technologies can advance transportation safety and mobility through integrating different digital infrastructure into a comprehensive system that can realise efficiencies, enhance convenience, safety and environmental benefits by optimising the traffic system in real time and providing information to road users.

ITS system components can range from traditional red light camera systems, through to electronic toll collection, ramp metering, traffic signal coordination (including public transport priority measures) and transport information systems. Like many aspects of the digital environment, ITS capabilities are also continually expanding and evolving, as such, the digital ecosystem will also need to be adaptable and responsive to change, particularly as vehicle to vehicle and vehicle to infrastructure systems are implemented. **Error! Reference source not found.** shows how sensors could be deployed to identify when pedestrians are on a crossing and the information can be relayed through to the signals, extending phase time, or to vehicles warning of the potential safety issue.

The successful implementation of ITS supports the investment objectives of the Frankton to Queenstown and Queenstown Town Centre Business Cases and help realise the mode shift required to keep the transport network operating effectively and efficiently.

This technical note summarises some of the key ITS elements and their role in supporting network management activities.

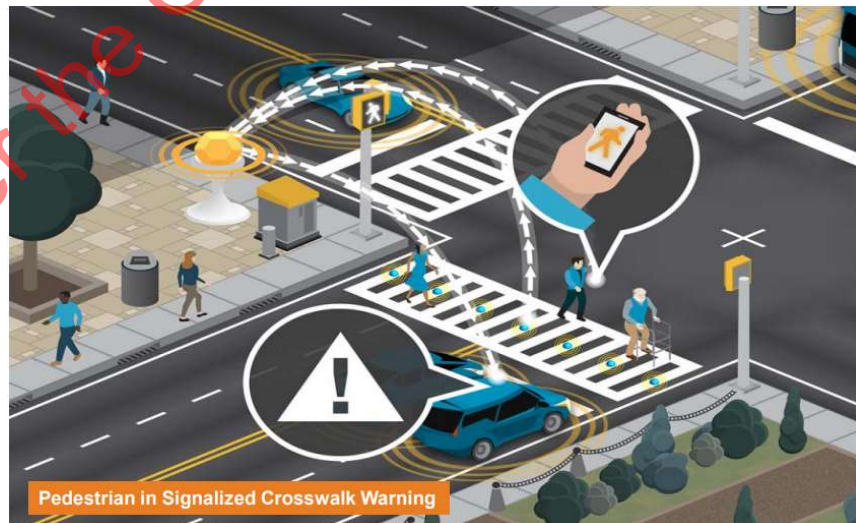


Figure 1 Example of V2I communications connecting pedestrians (Source DOT)

As a continually developing area however, this list is not conclusive, and should evolve.

2. ITS Technologies

While three categories of ITS technologies are generally identified; Directly deployable technologies by the road controlling authority; secondary technologies used by travellers such as in-vehicle navigation systems; and automated technologies integrated by vehicle manufacturers, this assessment has focused on those that may be directly deployable by Waka Kotahi, Otago Regional Council or Queenstown Lakes District Council to achieve the system objectives. Table 1 (overleaf) identifies a range of ITS technologies that may be applicable in the area.

Research conducted by Austroads¹ identified that there are few studies that conclusively evidence the costs and benefits of ITS systems, where available, they did find that benefits significantly outweighed the costs and that low-cost technologies can also be beneficial.

3. Transport Operations Centre

The oversight and management of a deployed ITS system at a road controlling authority level is undertaken by a Transport Operations Centres (TOCs). TOCs have a number of functions, which can be grouped within four key functions²:

- Optimisation
 - Monitor, collect and store traffic data
 - Develop demand management strategies
 - Use ITS assets, such as parking cameras, CCTC and VMS, to influence traffic flow,
 - Provide advice on where infrastructure/systems should be implemented, e.g. traffic signals
 - Work with contractors to maintain and enhance network capacity
 - Support councils with public transport initiatives
- Real time information
 - Monitor traffic, event and weather information
 - Provide up-to-date traffic information to customers through electronic
 - mediums Plan special routes for emergency and goods vehicles
 - Use roadside assets to inform customer journeys
- Incident management
 - Collect, filter and classify incident notifications from a variety of sources
 - Initiate, plan and implement appropriate responses to incidents
 - Manage contracts with external contractors
 - Coordinate response teams, including emergency services
 - Redirect traffic to minimise disruption and further incidents
 - Support the response to civil defence events
- Planned network activities
 - Work with councils to plan the road network for events
 - Liaise with contractors to support road work activities
 - Liaise with event organisers
 - Plan and implement alternative routes
 - Process applications and communicate event information to customers
 - Place signs and signals to alert passengers on the network

¹ AP-R570-18 Benefits of Safety and Traffic Management Technologies

²Traffic Operations Centres (Deloitte 2017)

Table 1 ITS Technologies & Potential Benefits

Area	Purpose	Example	Potential Benefits
Crossings	Pedestrians/Cyclists	Pedestrian activated flashing beacons	Reduction in crashes involving pedestrians by alerting drivers to pedestrians.
		Pedestrian user-friendly intelligent crossings	- Reduction in crashes involving pedestrians as detection technology is used to adjust the length of the pedestrian signal phase. - Improved traffic flow during low-pedestrian periods.
Intersection	Intersection management	Adaptive traffic signal control	- Crash reductions through dynamic coordination of traffic signals due to changing traffic conditions - Reduction in public transport travel times
		Rural intersection warning	Reduced speeds on approach
On-Road	Delineation	Illuminated pavement markers	Enhanced visibility and reduction in run off road or crossing centreline crashes
	Enforcement	Parking management	Dynamic enforcement to better match demand with supply.
Roadside	Data collection	Wireless data collection	Real time data capture for monitoring and planning purposes
	Road management	Infrastructure collision warning systems	Improved detection and diversion of over-dimension vehicles.
		Integrated corridor management	Deliver coordinated and integrated network management, including incident response and planned event management.
		Lane use management systems	Improved network flow through advanced lane management and driver communication.
		Smart work zones	Reduction in risk at work sites through using driver communication systems e.g., variable message signs, to improve driver knowledge and behaviour.
	Signs	Variable message signs	Reduction in travel speeds or network travel times through providing real time information to drivers.
	Speed enforcement	Driver feedback signs	Reduction in travel speeds and crashes/crash severity

3.1 Benefits

Deloitte's 2017 report for the New Zealand Transport Agency *Traffic Operations Centres* found the benefits of a successfully implemented TOC accrue from improved organisational and operational outcomes as well as providing an enhanced customer experience.

These can be evidenced as:

- More efficient and effective operating model that aligns to journeys/outcomes
- Improved decision making, faster responses
- Operational excellence – moving from function to outcome focused
- Better situational awareness and planning through data, information and intelligence sharing
- Improved relationships building trust and alignment
- Removing duplication to deliver better value for money
- Improved integrated customer journey information and reliability
- Improved safety and reduced delay through faster and more effective responses
- Improved customer travel experience and satisfaction
- Transport choice for customers is improved

The research also identified that the most significant benefits of TOCs relate to travel time, congestion and reliability cost savings. TOCs also assist in reducing crash, emissions and vehicle operating costs.

As part of their research, Deloitte calculated benefit- cost ratios for the three operating New Zealand TOCs as shown in Table 2.

Table 2 Total TOC Benefit Cost Ratio (Source Deloitte)

	Auckland	Wellington	Christchurch
Total Benefits (\$m)	\$126.24	\$35.11	\$64.54
Total Costs (\$m)	\$24.70	\$9.94	\$7.78
Benefit- Cost Ratio	5.11	3.53	8.3

The report also noted that these figures were considered conservative, and based on overseas comparisons, a much higher BC ratio was likely in reality.

3.2 Implementation

Currently, the Wellington TOC (WTOC) is responsible for signal operations in 80% of New Zealand's land area, including Queenstown. Due to the significant costs of running a TOC, it is recommended that the WTOC continues to oversee Queenstown traffic operations. This maintains economy of scale and also helps to ensure there are qualified and trained staff available at all times.

For comparison, if a dedicated TOC was to be considered, operational costs for a system comprising 24 controlled intersections with additional support would likely require at least 3-4 dedicated staff to provide 24 hour, 7 day a week coverage that would incur a salary cost, including overheads in excess of \$400,000 per year. Additional costs would include ongoing system maintenance, software and firmware upgrades, including the technical expertise to deliver the requirements.

In addition to the direct financial implications, there are also elements related to maintaining the expertise and broad capabilities which can be much better resourced and delivered through a larger TOC.

To ensure WTOC are equipped to operate and optimise Queenstown's signalised traffic system, it is essential that a thorough Network Operating Plan (NOP) is prepared for the Queenstown area. A NOP enables the prioritisation of transport modes across the whole road network and is developed through engagement with key stakeholders and the wider community. The outcome being a clear understanding about which modes have priority in which parts of the network and therefore how movement and place functions and be properly integrated and supported. This would provide the required information about network functions so that WTOC can prioritise traffic accordingly.

There are opportunities to further improve network management with a more dynamic system. This should include virtual priority and real-time parking management. Virtual priority involves detecting certain modes or routes and enabling more green signal time for these vehicles. As part of the Frankton to Queenstown State Highway 6A upgrades, virtual priority has been recommended for key intersections such as Marina Drive.

Depending on the overall scale of the expanded TOC support required, WTOC have indicated that this could be undertaken under the existing Memorandum of Understanding with additional charges being levied if required to appropriately resource any significant changes or projects.

4. Recommended Technologies

As noted earlier, ITS technologies are evolving rapidly and this assessment does not seek to address all options. However, three key technologies are recommended for consideration and implementation.

4.1 SCATS Priority Engine Software

SCATS (the Sydney Coordinated Adaptive Traffic Systems) is a traffic control system that optimises traffic flow in real time and is widely used in New Zealand. SCATS technology uses sensors to detect traffic and algorithms to adapt traffic signal timings in response to unexpected conditions and predict traffic patterns, resulting in reduced congestion³.

WTOC already uses SCATS for signals in Queenstown and it is understood that there is sufficient capacity to widen the scope of SCATS in Queenstown.

Currently, SCATS detects vehicles at the limit line of approaches to signalised intersections. There is opportunity to improve this using the SCATS Priority Engine software package, which can enable modal optimisation for public transport, emergency vehicles and freight vehicles. SCATS Priority Engine can improve timetable reliability and reduce journey time for public transport, reduce response time in emergencies and prioritise freight in off-peak periods⁴. Additional on-street infrastructure and GPS capability would be required to enable detection of vehicles by type or lane. This may include induction loops on intersection approaches, infrared detectors and spatially referenced lane marking. For example, GPS beacons can be installed in buses, detectors in the network can identify buses in advance of a signalised intersection and the signal timing can be optimised to prevent buses from having to stop at the intersection.

Maintenance costs would be the most significant cost associated with adding additional signalised intersections.

The use of the Priority Engine Software is considered essential for the delivery of the public transport priority along SH6A to maintain service reliability and an enhanced customer experience. It should be implemented at all signalised intersections that support public transport movements throughout the network, and any other locations where demand, such as high freight movements, would be of benefit. The 'virtual' priority that the system would afford has been included in the modelling scenarios as part of the business case assessment.

4.2 Variable Message Signage

Variable Message Signage (VMS) is a key element of ITS as it can provide real time information and navigational advice to drivers. This can include delays and incident reporting, travel time

³ <https://www.scats.nsw.gov.au/>

⁴ <https://www.scats.nsw.gov.au/scats-priority-engine>

advisory and encouraging people to use alternative routes or modes such as public transport. VMS can also be expanded to support parking management systems and related activity.

While relocatable VMS signs have been deployed previously in Queenstown too assist with traffic management, it is recommended, permanent, fixed signs be introduced at appropriate locations throughout the network.

It is recommended that any VMS systems considered for deployment be scoped in conjunction with the operating TOC as system integration will be essential e.g., Dynac drivers for SCATS.

Some examples of VMS are provided in Figure 2. From left, they show hazard alert, parking availability and cycle congestion guidance.



Figure 2 Examples of VMS

Initial locations for the introduction of permanent VMS signs could include:

- State Highway 6 on the approach to the Park and Ride locations
- State Highway 6 on the approach to the SH6/SH6A intersection (Frankton PT Hub)
- State Highway 6A on the approach to the town centre
- Gorge Road/ Hallenstein Street (southbound)

As the name implies, variable messaging can be provided in response to different conditions. The aforementioned have been identified as they are key driver decision points and can inform travellers about:

- Travel times to key locations and any delays in the network for both private vehicles and public transport
- The availability, location and cost of available parking in the network
- Advance notice of planned network disruption e.g., Queenstown Marathon etc.

Through providing this information informed modal choices can be made, improving the customer experience.

4.3 Advanced parking and kerbside management

To achieve mode shift and support the investment objectives of the Business Cases, the significant activation of the public realm is proposed. This involves expanding and improving pedestrian areas, which requires a reduction in on-street parking. It is important that the remaining parking is managed to prioritise usage, for example for deliveries/loading and mobility parking. To achieve this, smart parking management is required.

Parking management, alongside dynamic kerbside, systems typically comprise a combination of infrastructure and technology, which can include sensors (in-pavement or pole mounted), variable message signs, dynamic pricing, and enforcement cameras and can include customer focused applications for mobile devices.

Due to the compact nature of the town centre, as well as the proposed overall reduction in on-street parking, it will be feasible to provide complete coverage of the historic core and any adjacent areas depending on identified demand as the town centre proposals are implemented. The overall objective would be to realise the aims of the 2019 Queenstown Parking Strategy and ensure parking remains at optimal occupancy levels for each area.

4.4 Costs

Detailed costings are not available due to the further work that is required in determining and procuring the respective technologies. Initial estimates for the recommended technologies above are:

- SCATS Priority Engine Software: \$30,000 - \$50,000 for set up with annual operating costs of \$3,000 - \$5,000 per year.
- Variable Message Signs: VMS signs vary in price depending on size and the number of lines they are capable of displaying. Current costs are between \$90,000 and \$120,000 per sign and an expectation that at least six signs would be required and deployed along SH6 and SH6A in both directions.
- Parking and kerbside management: There are a number of variable to be considered with regard to a parking/kerbside management system, not least the number and distribution of car parks/ length of the kerb for inclusion which make cost estimates difficult. Initial research has indicated \$300,000 - \$500,000 could provide a comprehensive system for the historic core, but more scoping is required as this assessment is technology agnostic, and the technology is developing rapidly. This will have to be undertaken alongside the Council's parking strategy development.

5. Alignment with Investment Objectives

Investment Objective		Alignment
Efficiency	Provide more efficient and reliable access for people and goods that: a) sustainably manages high growth b) reduces reliance on private vehicle travel	High: The implementation of an integrated ITS system will improve traffic flow through optimising network operation under normal conditions and enable public transport priority to be implemented increasing the attractiveness of public transport and the overall customer experience.
Resilience	Is adaptable to change and disruption	High: Active network management, enabled through the deployment of ITS will enable rapid response to any network disruption. This can range from improved information via VMS signs, through to active control of flows.
Amenity	Enhances the liveability and quality of the natural and built environment	Moderate: Network congestion increases emissions and negatively impacts the environment. Through smoothing traffic flows, a more pleasant and attractive environment will result.
Safety	Enhances safety with a goal of Vision Zero	Moderate: Driver frustration from congested networks can result in poor driving behaviour which increases the risk of negative outcomes. Active network management will minimise the risk of this occurring, as well as enhancing response times in the event of incidents, which can improve injury outcomes.

6. Summary

The benefits of implementing an ITS system are well understood. Expanding on the current approach and technologies in the Queenstown area would support the programme objectives. A

comprehensive ITS could manage and prioritise network demands while providing information to road users in real time. This would support the mode shift required for Queenstown, and ensure the network operates as effectively as possible.

The following is therefore recommended:

- A Network Operating Plan should be produced to inform network management requirements.
- That the Wellington Transport Operations Centre continues to provide TOC services to Queenstown
- That SCATS Priority Engine software and supporting infrastructure is introduced to enable virtual priority
- That permanent Virtual Message Signs are installed at key inbound and outbound locations on the SH6 & SH6A network
- That a dynamic parking and kerbside management system is introduced to optimise town centre operations.

Prepared by:

s 9(2)(a)
QTC Team Lead

Reviewed By:

s 9(2)(a)
Project Director

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NZTA Contract 2018235 - F2Q SSBC & QTC DBC

Technical Note # 30

13 July 2020

High Capacity Public Transport for Queenstown

1. PURPOSE OF PAPER

The purpose of this paper is to outline recent developments with public transport in Queenstown; current challenges and how the network would need to grow to meet projected future demand, and the potential for various forms of High Capacity Public Transport (HCPT) to meet this demand.

Note that this HCPT work is being undertaken to Indicative Business Case (IBC) level, and that operational aspects have only been taken to this level e.g. high-level operational costs. A Public Transport Services Operation Detailed Business Case (DBC) would be required to operationalise the service concept presented below and address the more detailed customer and operational challenges facing the current network.

2. CURRENT SITUATION

2.1 Patronage and Mode Shift

In November 2017, a new bus network was implemented in Queenstown, building on the previous Connectabus network, but with a much simpler network; expansion of frequent service to weekends on SH6A and to Fernhill; and very significant fare reductions with the implementation of \$2 fares on the GoCard, including a free transfer. A strong patronage response ensued and patronage in normal circumstances tripled from around ≈500,000 per annum to ≈1,500,000. Even though Covid-19 has had severe impacts on economic activity in Queenstown, patronage has already returned to around 60% of pre-Covid levels.

2.2 Fleet Size (bus and ferry) – current issues

The current fleet size is around 22 peak buses and 1 water taxi is currently required to provide the current service on Lake Wakatipu. As is typical for New Zealand urban areas, the buses have a wide front door (for wheelchair access); but narrow aisles, a 2x2 seating configuration; narrow rear doors and no or very limited provision for luggage. Each bus has a bike rack that can accommodate two bikes. However, demand for the bike racks sometimes exceeds demand, requiring people with bikes to wait for a subsequent service.

There are no significant issues with customers not being picked up, except around school finish times. Prior to the launch of the Lake Hayes Direct service, there were complaints of customers not being picked up at the Frankton Hub, but it is believed that the additional capacity has resolved this issue.

Key network coverage issues are requests from Arrowtown customers for a service to Queenstown Town Centre via Malaghans Road, avoiding chronic traffic congestion on SH6 East and SH6A. While bus stops were provided on Hawthorne Drive during its construction, there are currently no buses running on Hawthorne Drive between Remarkables Park and State Highway 6 East.

The ferries are water taxi style and are able to accommodate up to 30 passengers, most but not all of this inside. There are instances when these services struggle to meet demand, particularly on the final evening trips.

2.3 Customer Facing – current issues

While patronage has significantly increased, the current Queenstown network is not without its challenges:

Unreliability: High levels of traffic congestion which are variable by time of day; time of year; along with other impacts caused by crashes; road works; special events make it very challenging to run buses reliably.

There is limited bus and passenger capacity and customer amenity at the temporary **Queenstown Town Centre hub** on Stanley Street, presenting a less than optimal image for public transport.

There are severe conflicts at the **Frankton Hub** between urban services; Milford Sound buses; regional and long-distance buses; taxis, Ubers and general drop-offs. This, combined with low levels of customer amenity and operations split across both sides of SH6 South, makes this location a far from satisfactory bus hub.



Figure 1 Frankton Hub operational challenges April 2019

Numerous conflicts occur between urban services and ski, tour and Milford buses at key bus stops on SH6A (e.g. Millennium, Pounamu) where non-urban services have lengthy dwell times at peak periods. This means that urban buses can struggle to serve customers at these stops/ times.

There are **significant gaps in bus stop coverage**, especially on Frankton Flats. For example, there are no bus stops on SH6 East between the Frankton Hub and Hardware Lane.

There are significant pedestrian safety issues for customers crossing SH6A and SH6 East. While there are three pedestrian/cycle signalised crossings on SH6 South, there are no dedicated pedestrian crossing facilities, apart from median pedestrian refuges, on SH6A and SH6 East.

Significant trip and fall hazards for customers accessing, boarding and alighting buses in winter due to ice.

Bus stops generally provide shelter, but some are very exposed to wind and cold.

Sometimes, bike rack capacity is insufficient to meet demand, requiring a wait for a subsequent service.

Real time information was available from Trackabus pre-Covid and will be available again once the new electronic ticketing system goes live. However, there is no real time information at stops and hubs and limited customer awareness of the availability of Trackabus.

At Queenstown Airport, there is limited and poor presentation of bus information and across the **broader network** timetables require customers to already understand the network to be able to use it.

2.4 Service Improvements within the Current Fleet/Contract

In response to customer feedback during project engagement sessions in April 2020, the Otago Regional Council (ORC) has implemented a number of service improvements thus far in 2020.

- A Lake Hayes Direct service to Queenstown Town Centre, over an extended peak period, in January 2020.
- This Lake Hayes direct service has now been expanded to the whole span of service*.
- Extension of the Fernhill service to Sunshine Bay at all times*.

- Proposed elimination of the \$10 airport fare and reduction in all cash fares from \$5 to \$4*.

The * starred items are interim service changes that are yet to be finalised or trialled.

2.5 NZUP Programme

The \$90 million NZ Upgrade Programme for Queenstown includes significant infrastructure upgrades to support the Orbus bus network in Queenstown. Scope elements include a range of public transport projects on SH6 and SH6A, between Ladies Mile, Kawarau Falls Bridge and Queenstown town centre. Bus lanes will be built to prioritise travel by public transport on SH6 and bus priority on SH6A. These bus priority investments will be supported by a new bus hub on SH6 at Frankton.



Figure 2 NZ Upgrade Programme Queenstown Projects

These public transport infrastructure items would need to be supported by enhanced bus services that would use this infrastructure. But the bus service elements (services, fleet, depot and other supporting infrastructure) are not part of the NZUP programme itself. So while NZUP will provide significant travel time savings to bus customers and a much higher quality of customer amenity at the Frankton Hub, it will also generate a significant uplift in public transport demand which the current fleet would be strained to serve. It would make sense for public transport service improvements to go hand in hand with public transport infrastructure improvements.

2.6 Current Public Transport Limitations

The current Queenstown public transport contract expires in 2027. Services were contracted in 2017 to Ritchies with the reasonable expectation of seeing out the contract term who will have purchased and financed buses on this expectation. While there will be a bump in demand caused by organic growth as economic activity resumes in Queenstown with a further bump expected when the NZUP programme is complete in 2024, there is a variation mechanism in the current contract that would enable improved services to be provided. There are challenges around fleet, but for example, Wellington is acquiring significantly more electric buses which will free up some of its current diesel bus fleet. In spite of good pay by industry standards pay, sourcing and retaining bus drivers is a challenge, also experienced by many other New Zealand cities. A New Zealand-wide solution of an industry fair pay agreement or regional solutions of living wages for bus drivers would help with this, noting that tourism being a relatively low-wage sector with many earning close to the minimum wage in a high living cost community makes this part of a much broader issue for Queenstown and other tourism-focused economies.

A new public transport contract from 2027 provides the opportunity to deliver a “fit for Queenstown” solution that recognises the particular characteristics of a market where public transport needs to work equally well for commuters; visitors and a large itinerant workforce.

For ferries, a limited water taxi service operates on Lake Wakatipu between Queenstown Town Centre, Bayview, Frankton Marina and Kawarau Falls Village (the Hilton). The current operator has been pitching for public funding support and after completion of a Ferry DBC, ORC had agreed in principle to funding a basic level of ferry service. In addition, a further operator, KJet, has consent for a ferry operation, including on the Kawarau River, but has not approached ORC as yet regarding any public funding support.

3. FUTURE SITUATION – FORECAST PATRONAGE AND MODE SHIFT

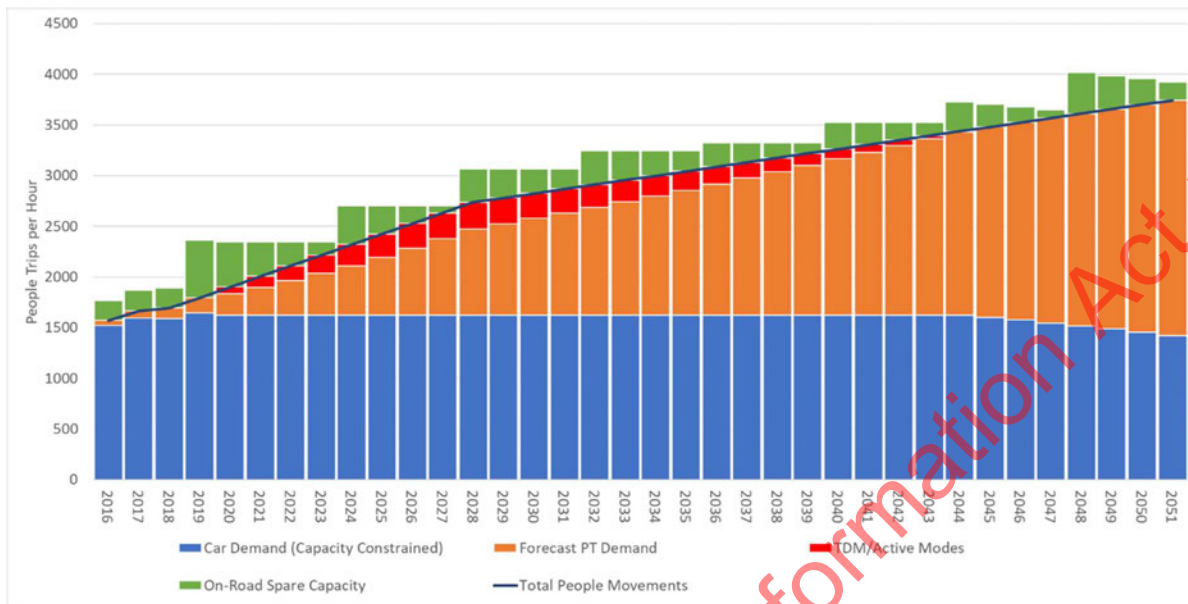


Figure 3 Forecast Patronage and Mode Shift

Figure 3 provides a simplistic overview of the growing transport demand along the SH6A corridor between Frankton and Queenstown. It is intended to illustrate when increases in service provision may be required to accommodate the growing patronage. In the figure above, blue represents car mode share and demonstrates that growth in vehicle demand is constrained by the capacity of the corridor; orange represents public transport demand; red represents the share of demand picked up by TDM and active modes and green represents capacity with double-decker or articulated buses up to 2039 and with bi-articulated buses or trackless trams thereafter. Note that the apparent drop in total demand post 2039 is due to the reduction in car volumes after this point.

The mode shift numbers are modelled outputs based on a typical generalised cost model with the price and availability of parking in Queenstown Town Centre being a significant lever to mode change.

It is important to note that this very significant mode shift is needed to keep all networks operating at an acceptable level. Put simply, if this mode shift does not occur, all networks will fail with car congestion at such extreme levels that makes even extensive public transport priority useless, creating a vicious circle incentivising further car use and ultimately constraining the economic growth of the region.

This is a level of mode shift never before attempted in New Zealand but as noted before it is the level of mode shift needed to keep all networks functioning at an acceptable level.

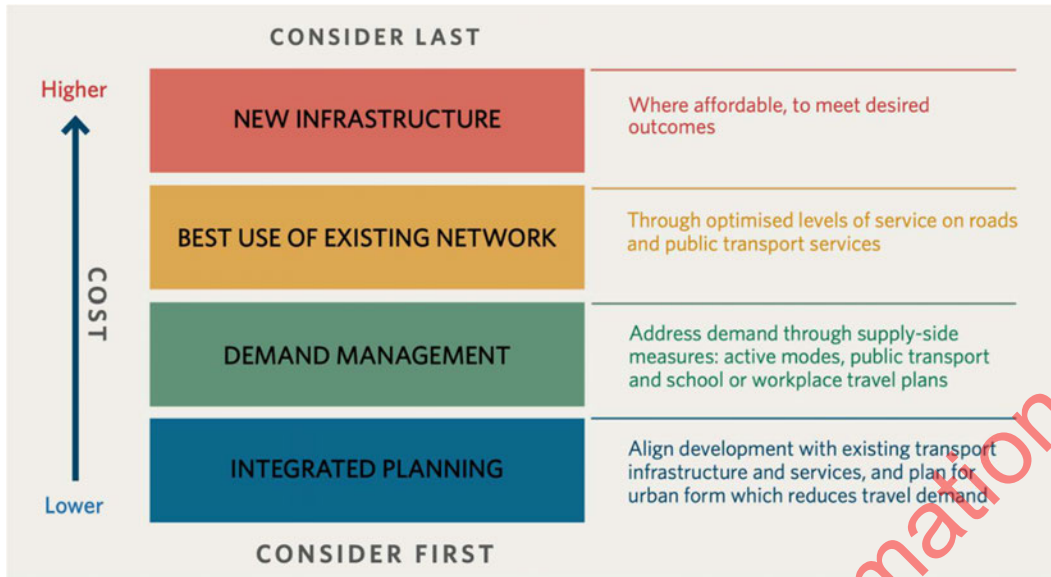


Figure 1 Waka Kotahi Intervention Hierarchy

As per the Waka Kotahi Intervention Hierarchy pictured above, this mode shift needs to occur through a combination of good **integrated planning** (e.g. with the Ladies Mile Masterplan and in the Southern growth area); **Travel demand management** where organisations like QLDC need to lead by example; **Best Use of Existing Network** in the form of staged upgrades of the existing Orbus network through to 2027, plus **New Infrastructure** in the form of the NZUP programme of infrastructure investments supported by a vastly enhanced "frequent to midnight" public transport network with six times the current network capacity; expansions and upgrades to the already extensive Queenstown Trails network and increased disposition to work from home where this is an option.

To achieve this level of mode shift requires all four pillars of the Intervention Hierarchy to work seamlessly together. Put simply, one pillar (for example, New Infrastructure) cannot do it on its own and if any one pillar fails, then that puts the whole programme at risk.

While this is undoubtedly a daunting challenge, Queenstown's sister city of Aspen, Colorado has over time achieved a similar level of mode shift.



QUEENSTOWN – BALANCING PLACE & MOVEMENT – A ROLE FOR TOD?

Stantec

Figure 2 Aspen Case Study

Aspen has many features in common with Queenstown: It has very expensive real estate and significant housing affordability challenges, resulting in many workers needing to commute long distances to jobs in Aspen. As a year-round resort destination, it has the same "insatiable desirability" that literally drives its transport issues. Growth in air services has in both cases been a key driver of visitor and population growth. And it has even similarly constrained access as Queenstown with one route in and out of the town centre.

It addressed its issues through:

Integrated Planning: The City of Aspen became a major workforce housing provider in its own right with a significant proportion of residents living in city-owned housing. The planned workforce housing development on the old Wakatipu High School site in Gorge Road is a good Queenstown analogy.

Travel Demand Management: All development applications in Aspen that generate significant trips are required to implement both extensive travel demand management measures and significant improvements to non-car modes of transport to mitigate their impact on the transport network.

Best Use of Existing Network is achieved through making the local public transit system free; extending its coverage and service span and integrating ski transport with the conventional public transport system.

New Infrastructure took the form of VelociRTA, touted as the first Rural BRT system, designed to provide a fast, frequent and attractive alternative to driving for the significant proportion of workers who lived outside of the core of Aspen. This was achieved through frequent service; high-quality, high-capacity buses; upgraded stops and stations and bus priority measures.

The net result of the combination of the above measures is that Aspen, one of the most affluent communities in the entire United States, achieves a 67.8% non-car driver mode share for commuting, which is higher than the 60% mode shift target called for in this business case process.

4. FERRY

Ferry has an important role to play especially to Kelvin Peninsula due to very significant travel time savings over road-based travel, noting that ferries often appeal to higher-income coastal communities. Challenges for ferry as mass transit are high vessel and operating costs; high crewing requirements (e.g. Maritime NZ requires 5 crew for a 200-seat ferry); and limited capacity and frequency. In Auckland, Waiheke and Devonport hit the sweet spot but elsewhere in Auckland work well as a niche service to coastal communities where they are time competitive with car. Kelvin Peninsula hits that sweet spot for ferry operation where a ferry journey is much faster than a car; can be economically operated; and serves affluent coastal communities with a high pre-disposition to use ferry.

As part of earlier work, a mass-transit ferry option was considered, providing frequent ferry service between Frankton Beach and the Steamer Wharf in Queenstown Town Centre. This was discounted through a MCA process due to several factors:

- High operating costs (around \$900 per hour per ferry) due to cost of the vessels (up to \$4 million each) and high crewing requirements (for example, a 200-seat ferry requires a minimum of 5 crew)
- Limited capacity (around 800 passengers per hour) which would not meet modelled demand.
- A significant transfer penalty as nearly all customers would be required to transfer due to its limited walk-up catchment.
- Significant land-use impact for ferry terminal and feeder buses at Frankton Beach conflicting with other aspirations of the Frankton Masterplan.
- Navigation challenges such as speed restrictions and conflicting traffic in the Frankton Arm.

The mass transit ferry option was ruled out through an MCA process at a technical workshop with project partner representation in Queenstown on the 2nd of August 2019.

As a result of this MCA, it was agreed that the ferry option could be dropped from further consideration as it had both high costs; significant issues; attracted very limited patronage and scored poorly against the investment objectives.

The MCA is appended at appendix 2.

5. Building on NZUP Programme with Road Based Public Transport

Business case work to date has identified that road-based public transport options, with the level of public transport priority planned to be delivered by the NZUP process, is sufficient in the medium term to meet the modelled level of demand for public transport in the Wakatipu Basin, including the ability to service

significant growth areas in Ladies Mile and south of the Kawarau River. This would be through a bus-based solution in increments of bus size from the current single-decker fleet to double-decker or articulated buses and later bi-articulated buses (or Trackless Trams). For the purposes of the business case narrative, this has been referred to as the "Bus Max" network and will deliver a step change in high quality, high capacity services across the Wakatipu Basin.

This network would enable the benefits of the NZUP investment in supportive infrastructure to last for a predicted 30 years as well as providing attractive sustainable travel options to current and planned growth areas over the same period. These benefits start to be realised from day 1 of the NZUP programme roll-out but endure over this extended time period.

The proposed Bus Max Network for Queenstown is made up of five bus routes and 1 ferry route:

1. Sunshine Bay to Lake Hayes Estate via Queenstown Town Centre and Frankton
2. Arthurs Point to Arrowtown via Queenstown Town Centre and Frankton.
3. Queenstown TC to Jacks Point via Frankton, Queenstown Airport and Remarkables Park.
4. Queenstown TC to Kelvin Heights Ferry linking to bus to Quail Rise via Frankton and Frankton Flats
5. Frankton Circular – linking all parts of Frankton to each other and the Frankton Hub.

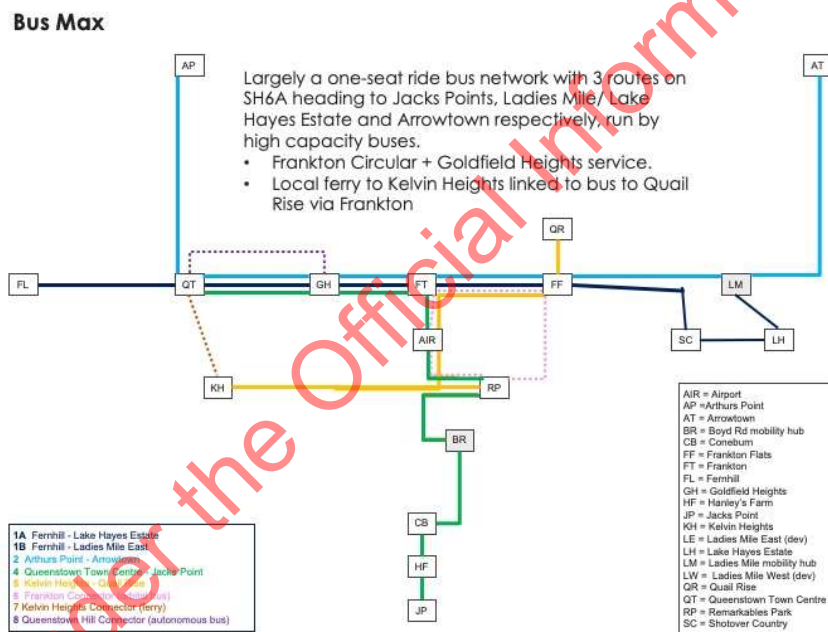


Figure 4 Bus Max Network Plan

Routes 1-3 intertime on SH6A to provide 3-4-minute peak; 5-minute all day service between Queenstown Town Centre and Frankton Hub – this means that getting between Queenstown and Frankton is as easy as 1 – 2 – 3.

Key Bus Max Network Principles:

- Connects all current and future nodes with capacity for growth
- Maximises one-seat rides to minimise end-to-end journey times
- Frequent to midnight (6am-midnight) on all routes
- Limited midnight to dawn service as Queenstown is a 24-hour-a-day visitor destination
- Connections where they add value at high quality hubs
- Efficient to operate and customer friendly

- Network designed to evolve over time – can be staged with increments of demand.
- Reflect master planning direction to the greatest extent possible
- High quality, high capacity vehicles and stops that encourage ridership and stimulate development along the key spines defined in the spatial plan.

A core principle is that the whole network is frequent 6am-midnight with overnight service midnight to dawn on routes 1-3 (each service every 30 minutes – inter-timed to create 10-minute overnight service on SH6A). This would be the 1st 24-hour network in NZ.

5.1 How the Bus Max Network will build up over Time

2020 – 2024 The existing Orbus network is still slowly recovering from the impact of Covid-19, noting that New Zealand's borders are currently closed, and Queenstown is heavily reliant on international visitors. It is currently at 60% of its pre-Covid-19 patronage levels. On normal timetable operation, there are 9 buses per hour at peak on SH6A between Frankton and Queenstown (4 from Airport/Remarkables Park; 3 from Lake Hayes Estate; 2 from Arrowtown) providing an estimated 360 seats per hour. While it is hard to predict Queenstown's rate of economic recovery (and noting that public transport in New Zealand cities has recovered much faster than previously anticipated), it is expected that the current fleet and timetable is sufficient for the next four years, noting that there has already been a 50% increase in peak capacity on SH6A since 2017 with the introduction of the Lake Hayes Direct service in January 2020.

Modelled Demand	Vehicle	Capacity Provided	Fleet Size	Opex Estimated
Current patronage	Standard bus	360 per hour	22	\$4,383,093

2024 – 2027 The public transport demand model shows that there would need to be a bump in service from 2024 to meet the modelled level of demand. The planned staged completion of the NZUP projects in 2023-2024 will lead to a significant step change in the amount of bus priority available on SH6 East, SH6 South and SH6A. While this enables the existing bus fleet to be more efficiently utilised and be significantly more reliable, it will also likely induce a significant increase in demand as the modal choice pendulum will have swung significantly in favour of public transport. The initial thinking is that this demand could be met with moving the current route 1 service (Sunshine Bay – Queenstown TC – Frankton – Airport – Remarkables Park) to a 10-minute frequency with some enhanced capacity buses (e.g. 57 seater single deckers or double-deckers). This assumption is sensitive to the phasing of growth, particularly in the southern growth area, where the current Jacks Point bus service terminates at Frankton Hub, requiring a transfer to complete a journey to Queenstown TC. One response, worthy of inclusion in a DBC investigation, would be extending Jacks Point service to Queenstown TC at this point, providing both more capacity on SH6A and a one-seat ride to Queenstown TC from the southern growth area.

While this can be implemented under the current Public Transport Operating Model (PTOM) through variation of existing bus contracts, it presents funding challenges for the community; and raises the question of allocation of costs and benefits as a lot of benefits fall on visitors who don't directly contribute except for fares e.g. Piopiotahi/Milford Sound and Rakiura/Stewart Island have visitor levies; similar proposals have been floated in Queenstown. How services are funded would be a key element of the financial case in any subsequent DBC work on PT services.

Modelled Demand	Vehicle	Capacity Provided	Fleet Size	Opex Estimated
487	Standard bus	873 per hour	27	\$13,177,351

2027-2030. The timing of a new public transport contract for the Wakatipu Basin would provide for a step change in the level of public transport service. Key elements of this are:

- A new fleet of either articulated and double-decker buses for the core routes, supported by single-decker buses for the Frankton Loop and the Kelvin Heights to Quail Rise service.
- A staged introduction of the three core services, each of which would run every 15 minutes to midnight and every 30 minutes overnight.
- The introduction of frequent ferry service between Queenstown Town Centre and the Kelvin Peninsula seamlessly linked to a frequent bus along the peninsula to Frankton, Frankton Flats and Quail Rise.

- The introduction of the Frankton Loop, providing frequent service stitching all of the parts of Frankton to one another and connecting to very frequent service (every 5 minutes) to and from Queenstown at the Frankton Hub.

This would provide capacity for 1,176 passengers per hour on SH6A on double decker buses and 1,411 on articulated buses.

This requires a very large step change in funding and significant infrastructure investment to support this. To achieve this date and to secure an appropriate level of funding – including making challenging choices about how-to best line up costs and benefits – requires work to get underway very soon. Just one example would be the requirement for a large, flat piece of land for the depot that is well connected to the state highway and minimises dead running for buses. Fleet acquisition is another element. A working assumption of an electric bus fleet from 2027 requires consideration of charging infrastructure and resolution of outstanding issues regarding double-decker electric buses of suitable capacity (dependent on vehicle choice). Similarly, with double-deck operation, significant clearance work is likely to be required on parts of the network to enable double-decker operation.

Modelled Demand	Vehicle	Capacity Provided	Fleet Size	Opex Estimated
848	Double-decker or articulated	1,176-1,411 per hour	35	\$23,840,986

2030-2039 Public transport modelling has shown that a further step change in capacity is required in 2030 to meet projected growth. The core element of this is an upgrade of the three core services to a 10-minute frequency for at least an extended peak period. This would provide for 18 buses per hour to run on SH6A between Frankton and Queenstown TC. This would provide capacity for 1,393 passengers per hour on SH6A on double decker buses and 1,671 on articulated buses.

The major financial implication of this is the additional fleet requirement at this point and the additional opex to provide the higher level of service.

Modelled Demand	Vehicle	Capacity Provided	Fleet Size	Opex Estimated
1,060	Double-decker or articulated	1,393-1,671 per hour	39	\$25,391,506

2039-2051 A key constraint of bus-based options is that performance starts to significantly degrade beyond around 18-20 vehicles per hour. Beyond this point, there is significant bunching where multiple buses arrive at stops at the same time and buses "bunny hop" each other along the route. A frequency of 3-4 minutes at peak means an average wait time for customers on SH6A on random arrival of 90-120 seconds in the peak and 150 seconds at other times. Adding additional frequency beyond this point adds marginal if any benefit to customers as increased frequency is more than counter-balanced by decreased reliability which makes customer journeys slower.

With that in mind, the best way to add capacity once double-decker or articulated buses run out of capacity is to provide a higher capacity vehicle. At this point bi-articulated buses would be required. This would provide capacity for 150-170 passengers (in event mode) per vehicle. The illustration below shows such a vehicle. This would provide capacity for 1,802-2,500 passengers per hour, noting that a key element of opex, bus drivers, does not change under bi-articulated bus operation. Also, of note is the date a fleet upgrade is required is interdependent on the previous choice of double-decker or articulated buses as the latter provides more capacity and hence could meet demand for longer.

Modelled Demand	Vehicle	Capacity Provided	Fleet Size	Opex Estimated
1,539-2,322	Bi-articulated or trackless tram	1,802-2,500 per hour	34-50	\$26,563,421 to \$39,063,855



Figure 5 Proposed Brisbane Metro Bi-articulated Bus

6. Offline Public Transport

As noted previously, the business case work to date has identified that on-road public transport can meet the expected demand until around 2051. Previously, off-line HCPT options had been explored such as a gondola option. While the gondola option provides a number of attractive features such as hyper-frequency (<30 seconds between gondola cabins), capacity and a great visitor/ customer experience, on-road public transport options can feasibly be implemented under current public transport operational and procurement frameworks and are the best option to maximise the value from the \$90 million NZUP investment in supporting public transport infrastructure.

Given that the on-road public transport options are expected to have sufficient capacity for 30 years, then it is suggested that consideration of an off-line system be put on hold and reviewed in 2028 based on updated forecasts at the time and other factors at that time such as travel behavioural change and technology.

Another challenge with the gondola is that it does not fit well into the current legislative and public transport procurement processes but could be delivered by the private sector for its tourism benefits. In that event, it would be worth considering whether there was merit in public investment in any public transport benefit that this might deliver.

7. Frankton Hub

The Frankton Hub will be the one place on the entire Wakatipu Basin public transport network where everything connects as every service passes through this hub at some point on its journey. It also connects well to the active mode networks such as the Frankton Trail and is close to significant trip attractors such as the Queenstown Events Centre and retail opportunities in Old Frankton and on the Frankton Flats. As such, getting the Frankton Hub right is absolutely crucial to delivering all other public transport elements.

There are four critical success factors for the Frankton Hub:

1. It needs to work well for public transport customers
2. It needs to work well for public transport operations
3. Given its gateway location, it needs to present a great image for both public transport and for Frankton and Queenstown
4. It needs to be a part of its urban realm, not apart from the urban realm.

5. It needs to be the one place where urban buses connect with regional, tour, ski and Milford Sound buses to enable seamless bus to bus transfers.

There are good and poor examples of public transport facilities in regard to the above factors. The illustration below is of the New Lynn TOD, widely regarded as being a high-quality public transport hub that integrates well with the urban realm and supports and is supported by TOD.



Figure 6 New Lynn TOD, Auckland

While a Frankton Hub location around the intersection of SH6A and SH6 is optimal from an operational, customer and urban integration point of view, it presents challenges as this location is close, but not close enough, to Queenstown Airport. To address this, one of the bus max services will connect direct to the airport from the town centre (every 10 minutes peak; every 15 minutes other times) as well as Frankton Loop every 15 minutes. This means that there is a one-seat ride from the town centre to the airport at least four times an hour during airport operating hours and at least eight times per hour from the Frankton Hub. It is approximately a 10-12 minute flat walk between the hub and airport but if there were appetite for thinking more ambitiously about the airport connections, a possible international comparator would be the Billy Bishop Airport pedestrian tunnel/ travellerator that connects mainland Toronto to Billy Bishop Airport which is on an island. <https://www.billybishopairport.com/to-from/pedestrian-tunnel>

Some key issues that remain to be addressed at the Frankton Hub are:

- Should this provide a start-up point for Milford and regional/ long distance buses, fed by the high-frequency Bus Max services? (as current thinking provides well for these buses to stop to pick-up/ set-down but not to start their journeys at the Frankton Hub). This could address some town centre issues but would also have potential negative trade-offs for the town centre (such as encouraging visitors to stay in Frankton rather than the town centre).
- Double-decker versus articulated bus operation? This is a key project decision that needs to be made in advance of any subsequent DBC work as it will drive the design of the Frankton Hub.

8. TOD/ Wider Economic Benefits

The principles of transit oriented development (TOD) put transport and land use integration at their core. This is the distinction between whether transport serves land use or whether land use shapes and is in turn shaped by transport. As noted earlier in the paper, a fundamental building block of the programme is its tight integration with public transport and active mode supportive land use. For example, the Ladies Mile Masterplan process, just getting underway, is working in a transport context of congested car-based networks that are beyond capacity at peak times. This means that for Ladies Mile to be attractive for future residents, it needs to have local amenities such as schools, parks, local shops and community social infrastructure within easy walking and cycling distance supported by high-capacity public transport linking it to retail, social, recreational and employment opportunities in Frankton and Queenstown.

The achievement of TOD is a key aspiration of the emerging Spatial Planning process but will require significant changes to current planning controls to enable it and a shift in market economics away from car-oriented developments in order to be actually implemented.

It is important to understand that high quality public transport and active mode choices are a key pre-requisite for TOD but are not a guarantor of its success in its own right. Wider economic benefits can be achieved in developments around transit hubs but not in a planning context that is simultaneously facilitating or even requiring car-oriented developments. In the end, it is a combination of a supportive planning context; favourable economic conditions; public sector skin in the game and patient private or private money to enable TOD to happen.

9. Capex and Opex Requirements

The opex required to operate this network rises to \$13,177,351 in 2024 in a step change designed to meet the demand from the implementation of the NZUP programme. The first stage of the Bus Max network in 2027 sees an increase to \$23,840,986 with the full Bus Max roll-out on the initial fleet (double-decker or articulated bus) taking it to \$25,391,506. This provides enough capacity to around 2039. At this stage, bi-articulated buses would provide for a step change in capacity with an initial estimated gross opex cost of \$26,563,421, rising in stages to \$39,063,855 for a fleet that would meet modelled demand until 2051.

Of note is that this is gross opex and farebox revenue is netted off this network. **If modelled patronage is achieved, assuming a continuation of \$2 fares, there would be a very high farebox recovery ratio, significantly reducing the net cost to support this network.** Also, important to note that the transition from double-decker or articulated bus to bi-articulated bus or trackless tram only modestly increases opex as the biggest element of opex, driver wages, do not change.

Some indicative work has been done on capex items, the largest of which would be for the bus fleet. For example, a full fleet for the full rollout of Bus Max in 2030 is estimated at \$46 million, including the standard 12% spares ratio. While bi-articulated buses are more expensive, fewer are needed to transport the same number of customers so the opex and capex implications are comparatively modest. A critical capex item is a depot location on flat industrially zoned land of a suitable size to store a large bus fleet. Depot location and operation is normally an operator responsibility and cost under the Public Transport Operating Model (PTOM). Electric bus operation may also have cost implications in terms of charging infrastructure. This normally takes place in depots overnight and is typically incorporated into opex.

10. Implementation Considerations

The bus max model can be implemented under current New Zealand legislative and public transport procurement processes but requires a considerable step-up in both capex and opex over current levels of public transport in the Wakatipu Basin. Double-decker and articulated buses are both authorised to operate on roads in New Zealand (but see notes below) while bi-articulated buses do not currently operate in New Zealand.

Some key implementation considerations and issues for consideration as part of a Detailed Business Case are:

- Institutional frameworks and division of responsibilities and accountabilities.
- Double-decker buses may require considerable investment in clearance works such as power and light poles, street trees and other intrusions into the road right-of-way.
- Vehicle axle weights and loadings may be a challenge particularly on lower volume local roads. This is particularly the case where electric bus batteries are at the rear of the bus.
- Articulated buses may have tracking and vertical clearance issues. Clearly, careful vehicle choice would be needed to avoid this issue.
- Ownership of fleet and infrastructure is as yet undetermined. Public fleet ownership would be a big upfront cost but would significantly reduce ongoing opex (as currently bus fleets capital are funded through opex). Conversely, funding the fleet through opex would spread the cost over a longer period but would require bank finance to support this.
- Funding considerations in term of how to align costs and benefits. At present, the ratepayers of the public transport service area and the National Land Transport Fund pay roughly equal shares of the public funding requirements. But many of its benefits accrue to international visitors and considerably increased funding requirements are likely to put a significant burden on ratepayers.

- Frankton Hub is likely to be on crown land and the requirements of NZUP for investment on crown-owned assets imply that the New Zealand government may need to own the hub, at least initially.
- Depot site and ownership due to the requirement for a large, flat, industrially zoned site with easy access to the public transport spine network (to minimise dead running)
- Infrastructure such as charging for electric buses and whether this is depot-based, on-road or a combination of the two as well as the timing of charging and its power drain.
- The southern Bus Max route assumes the availability of a spine road linking Coneburn, Hanleys Farm and Jacks Point which puts those communities within walking distance of public transport.
- The assumption that traffic generation from Ladies Mile's does not negatively impact the operation of the Bus Max network through Ladies Mile.

11. Decision Sought

Board to note context of this paper is an input to a proposed Detailed Business Case on public transport services and infrastructure to address the range of detailed issues needed to move HCPT towards implementation.

Board to approve that off-line PT to SH6A (e.g. a gondola) is parked and reviewed in 2028.

Board to advise how to progress PT operational aspects to the next level of detail given fleet requirements and step change is fundamental to capitalising on infrastructure investment and achieving mode shift. This is in terms of progressing to a PT service operation DBC and also whether it should fit under W2G given W2G current mandate does not cover construction or operations.

12. Appendix 1

Public Transport Development Pathway Opex				
Year	Modelled Demand	Capacity Provided	Fleet Size	Opex required
2024	487	873	27	\$13,177,351
2027	848	1,176	35	\$23,840,986
2030	1,060	1,393	39	\$25,391,506
2039	1,539	1,802	34	\$26,563,421
2044	1,802	2,090	42	\$32,813,638
2051	2,322	2,500	50	\$39,063,855
Gross opex (fare revenue is netted off this); uninflated costs in 2020 \$; opex estimates 2039 onwards assume +20% opex for bi-articulated bus operation. Costs are for the whole Wakatipu Basin bus network.				

13. Appendix 2 High Capacity PT Options MCA

Public Transport Network Options Multi-criteria Analysis						
	Do Min	Bus Max	Trackless Tram	Trackless Tram Max	Gondola	Ferry
Can Achieve significant mode shift	1	2	2	3	2	1
Sustainably manage growth	-3	3	2	3	3	1
Resilience - Network Events	0	1	0	1	3	2
Resilience - Natural Hazards	-1	0	-1	-1	1	2
Reliability	-2	3	1	3	3	3
End to end journey time	-1	3	2	3	2	1

Towards Vision Zero	0	2	1	2	3	3
Modal Integration	1	3	2	2	1	-2
	Do Min	Bus Max	Trackless Tram	Trackless Tram Max	Gondola	Ferry
Operational Flexibility	-1	2	0	2	0	2
Affordable (capex)	2	-2	-1	-3	-2	0
Affordable (opex)	3	2	3	3	1	-2
Resident/Visitor experience	-2	1	2	3	1	1
Urban design and development	-3	3	2	3	1	0
Environmental Impact	-3	1	1	1	2	-3
Access for local communities	-2	3	2	2	1	-1
Construction impacts	3	-1	-3	-2	3	3
Alignment with Masterplan and spatial plan	-3	1	1	2	3	-1

Prepared by:

s 9(2)(a)

Lead – Transport and Land Use Integration

Reviewed By:

s 9(2)(a)

Project Team Leader

Appendix C13 Consenting Strategy

Queenstown Town Centre Non-Arterials

Released under the Official Information Act 1982

Queenstown Town Centre – Detailed Business Case – Social and Environmental Responsibility Screen/Preliminary Consenting Strategy

1 Summary

We have undertaken a preliminary scoping of the Queenstown Town Centre Non-Arterials project and identified the following Resource Management Act approvals are required:

- Alteration of Designation
- Outline Plan(s)

Other Approvals potentially required:

- Resource consent for any drilling associated with geotechnical investigations
- Resource Consent under the NES National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
- Archaeological Authority.

2 Introduction

The following RMA Approvals Strategy identifies (at a high level) the relevant statutory approvals required for the Queenstown Town Centre Non-Arterials Project and identifies the key issues that will need to be addressed in obtaining any statutory approvals.

In a general sense the project consists of works along existing non-arterial roads within the central Queenstown area, with the exception of a length of SH6A beginning at the intersection with Dublin Road at its eastern end and extending to the intersection with Beach Street at its western end.

The non-arterial roads within the ambit of this project are as follows:

- Dublin Street heading north-east off SH6A to the intersection of Dublin Street and Hallenstein Street, then north-west along Hallenstein Street as far as its intersection with Gorge Road
- Gorge Street heading north from its intersection with Stanley Street as far as the intersection with Hallenstein Street
- Man Street from the intersection with Stanley Street west and south as far as the intersection with Brecon Street
- Camp Street from its intersection with Man Street heading east as far as the intersection with Earl Street
- Rees Street from its intersection with Man Street and Brecon Street heading east as far as the intersection with Queenstown Mall
- SH6A/Stanley Street from the intersection with Dublin Road to the south-west, through the intersections with Sydney Street, Coronation Drive, Athol Street, Shotover Street/Gorge Road, Man Street.

The project area includes mostly Council-owned land (aforementioned local roads), but also through small areas of private land. In addition to this general route, various improvements are required on parts of the adjoining road network at intersections.

Other elements of the project are likely to consist of:

- Adjustments to current street layouts/pavement markings etc
- Pedestrian and cyclist infrastructure
- Landscaping / streetscaping
- Lighting

- Works adjacent to historic structures
- Earthworks.

Note: This project complements the Queenstown Town Centre Arterials Preliminary Consenting Strategy..

3 Planning Context

The planning context applying to the proposed Queenstown Town Centre Non-Arterials Project route is summarised below:

3.1 Proposed Queenstown Lakes District Plan – Relevant Provisions

3.1.1 Zoning and Overlays

The proposal affects land zoned:

- Queenstown Town Centre
- Business Mixed Use

3.1.2 Designations

Two existing Council designations are within the non-arterial footprint:

Identifier	Notation
561	QLDC – Recreation Reserve
215	QLDC – Local Purpose Reserve (Community Centre)

3.1.3 Protected Features

The following protected features may be affected by the project as identified in the PDP:

Identifier	Protected Trees
147	2 x <i>Sequoiadendron giganteum</i> (Stanley St / Ballarat St intersection)
150	<i>Sorbus acuparia</i> (Stanley St / Coronation Dr intersection)
11	<i>Ulmus glabra 'horizontalis'</i> (Camp St / Church St)
148	<i>Fraxinus excelsior</i> <i>Acer pseudoplatanus</i> (Camp Street between Church Street and Earl Street) <i>Ulmus procera</i>
Identifier	Historic Heritage
68	Glenarm Cottage, 50 Camp Street, Queenstown. (No HNZPT Classification)

3.2 Regional Plan – Water for Otago Relevant Provisions

Horne Creek flows through the town centre and is listed in Schedule 1A of the Regional Plan – Water for Otago and has the following Natural Values associated with it:

- Absence of aquatic pest plants;
- Trout spawning habitat
- Juvenile trout rearing area
- Unimpeded access to creek mouth
- Trout present in lower reaches

Lake Wakatipu is listed in Schedule 1A of the Regional Plan – Water for Otago and has the following Natural Values associated with it:

- Large body of water supporting a variety of species
- Absence of aquatic pest plants
- Juvenile trout and salmon rearing area
- Presence of significant riparian vegetation
- Eels, trout and salmon present
- Rare fish and invertebrates present
- Outstanding Natural Feature and Landscape.

4 Statutory Approvals – Resource Management Act

4.1 Queenstown Lakes District Council

4.1.1 Designation

Designation is the preferred method of seeking statutory approval for the project given the advantages it offers the requiring authority and relationship to the Public Works Act 1981. This could include land required for construction purposes only that could then have the designation subsequently uplifted.

An amendment to Designation 561 (QLDC – Recreation Reserve) at the corner of Henry and Stanley Streets (north side) will be required to obtain space for bus stops, etc. associated with the new public transport hub proposed on the south side of Stanley Street.

In addition, a new designation over Queenstown Town Centre-zoned land on the south side of Stanley Street will be required to create the public transport hub. This land is in private ownership. As the Queenstown Lakes District Council (QLDC) is the owner of that land it will need to be designated 'For Use in Connection with Road'.

As with Designation 561, an amendment to Designation 215 (QLDC – Local Purpose Reserve (Community Centre), located at the corner of the intersection of Stanley and Ballarat Streets, will be required to acquire a sliver of the recreation reserve to enable the required widening of State Highway 6A. This reserve is presently used only as a public car park.

Whether sufficient detail is incorporated into any notice of requirement to avoid the need for a subsequent Outline Plan (s176A) to be submitted should be considered and will be dependent on how far design has progressed.

4.1.2 Resource Consent

Resource consent may be required for some enabling or investigative works, in particular geotechnical works, ahead of the designation process, however this has not been scoped at this early stage.

4.1.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

Depending on the findings of a DSI / PSI, resource consent may be required under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS).

4.2 Otago Regional Council

4.2.1 Regional Plan – Water for Otago

Horne Creek passes beneath Queenstown Mall north of Camp Street via a culvert. This section of the mall currently has a concrete surface and is to be resurfaced with cobblestones. This will not require any consents under the Regional Plan: Water for Otago. It is noted that discharge of stormwater from a road is a Permitted Activity under 13.B.1.9 of the Plan. There will be no change to the discharge of stormwater from this section of the mall as a result of the resurfacing works.

4.2.2 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken it is unlikely resource consents will be required for any discharges to air.

4.3 Statutory Approvals – Other

4.3.1 Heritage New Zealand Pouhere Taonga Act 2014

Horne Creek has been identified as being important to Tangata Whenua. Aukaha have previously stated that Horne Creek was associated with the Pā site, Tāhuna. The Pā itself is situated at Earl Street, some 600 metres south east of the Project area. However, the whole creek was probably utilised as a māhika kai for inland bird species by Kai Tahu prior to European arrival.

Queenstown was initially settled in the 1860s by Europeans during the gold rush and had extensive pre-1900 human activity.

It is possible, though unlikely, that the resurfacing of the mall above Horne Creek may necessitate that an Archaeological Authority be obtained.

4.3.2 Reserves Act 1977

Neither of the reserves on the north side of Stanley Street / SH6A from which strips of land is required to enable widening of State Highway 6A are governed via reserve management plans. Therefore, there are no restrictions on the proposed works arising from the Reserve Act 1977.

5 Key Effects for Consideration

In progressing the necessary approvals for the project under the RMA the following effects will need to be assessed and methods proposed to avoid, remedy or mitigate any environmental effects (the below effects headings are taken from the Social and Environmental Responsibility Screen developed by the Transport Agency).

Effect	Comment
Natural Environment	Whilst the non-arterial roads are within a highly urbanised setting, there is one natural feature that may potentially be affected, namely Horne Creek. Horne Creek is known to support populations of the native fish koaro and is identified as being habitat for trout spawning
Cultural and Historic Heritage	- The Queenstown Town Centre includes multiple known archaeological sites. No specific assessment of the proposed works in this regard has been undertaken. - Horne Creek has been identified as being important to Tangata Whenua. Aukaha have previously advised that Horne Creek was associated with the Pā site, Tāhuna. The Pā itself is situated at Earl Street, some 600 metres south east of the Project area. However, the whole creek was probably utilised as a māhika kai for inland bird species by Kai Tahu prior to European arrival. - Only one item of heritage significance - Glenarm Cottage) was considered to be potentially affected by the proposal. However, it is now clear after further assessment that Glenarm Cottage would be able to remain in its current location, as the footprint of the project can entirely avoid the historic cottage.

Effect	Comment
	- Several listed trees are located along the route that have specific protection under the District Plan. However, none of the proposed works involve intrusion into the root protection zones (RPZ) of the trees - No QLDC street trees will require removal.
Human Health	- The non-arterial road works will only introduce an increased level of noise along the proposed route during the initial construction phase, with the exception of the area in proximity to the proposed public transport hub, which will be noisier as a result of higher levels of foot traffic and the operation of buses. However, there is nothing to suggest that traffic noise levels along the balance of the existing non-arterial routes will be greater once the works are complete. - The addition of the public transport hub on Stanley Street will likely result in both a reduction in air quality through increased levels of vehicle emissions, and an increase in traffic noise, mostly from the operation of bus services along a section of Stanley Street. - There will be only minor changes to the current lighting environment along the majority of the non-arterial routes, but nothing suggests that light spill will increase as a result of the proposed works, the only exception being in close proximity to the proposed public transport hub. There will likely be increased lighting in and around the public domain along the PT hub's frontage. Bus headlights will also create light-spill, with properties potentially affected by vehicle head lights from new directions. - There are a multitude of sensitive receivers adjacent to or in close proximity to the route including: residential properties and visitor accommodation.
Social	- The project will also require the acquisition of private land, at the Hallenstein Street / Gorge Road intersection and at the intersection of Gorge Road and Henry Street. Also, a strip of land (approximately 1.4m wide) will need to be acquired from the Manawa Community Centre site (currently used only as a Council car park) to widen SH6A. - Community cohesion will need to be considered with the alteration of several intersections and the disruption, albeit only temporary, resulting from the proposed road works. - Access to properties during construction will also be affected.
Landscape and Urban Design	The project offers multiple opportunities to enhance existing urban character.

6 Technical Assessments

In terms of matters identified in through the Social and Environmental Responsibility Screen the following technical assessments will be required as the project advances. Note that there may be other Council projects advanced concurrently that may address some of these issues (i.e. Project Manawa). Understanding the necessary mitigation in a number of areas (particularly noise) is considered critical.

- Archaeological/Heritage Impact Assessment.
- Arboricultural Assessment for those protected trees in proximity to the route.
- Cultural Impact Assessment (potentially – may be avoided through engagement with Iwi)
- Noise impact assessment – current and future noise environment, mitigation.

- Potential Social/Recreational Impact Assessment associated with the loss of part of the Manawa Community Centre site (despite this site being used only for public car parking at present).
- Preliminary Site Investigation / Detailed Site Investigation with regards to potentially contaminated sites along the non-arterial route.
- Landscape/Urban Design Assessment with regards to the impacts of the project on the existing streetscape, as well as potential impacts on Outstanding Natural Landscapes.
- Lighting Impact Assessment (both in terms of street-lighting but also in relation to the light spill from vehicles).

Additional to this, other likely technical assessments required include:

- Geotechnical assessment – retaining structures, cuts and fills.
- Economic assessment (economic benefits of the project)

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PROJECT MANAGER

s 9(2)(a)

PROJECT TECHNICAL LEAD

s 9(2)(a)

PREPARED BY

s 9(2)(a)

18/06/2020

REVIEWED BY

s 9(2)(a)

18/06/2020

APPROVED FOR ISSUE BY

s 9(2)(a)

18/06/2020

DUNEDIN

Level 3 John Wickliffe House, 265 Princes Street, Dunedin 9016

TEL +64 3 477 0885, FAX +64 3 477 0616

REVISION SCHEDULE

Rev No.	Date	Description	Signature or Typed Name (documentation on file)			
			Prepared by	Checked by	Reviewed by	Approved by

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Queenstown Town Centre Arterials – Social & Environmental Responsibility Screen / Preliminary Consenting Strategy

1 Summary

We have undertaken a preliminary scoping of the Queenstown Town Centre Arterials project and identified the following Resource Management Act approvals are required:

- Alteration of Designation;
- Outline Plan;
- Resource Consents from the Otago Regional Council for works associated with the construction of a new crossing of Horne Creek and works in the bed of Lake Wakatipu.

Other Approvals potentially required:

- Resource consent for any drilling associated with geotechnical investigations;
- Resource Consent under the NES National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health; and
- Archaeological Authority.

2 Introduction

The following RMA Approvals Strategy identifies (at a high level) the relevant statutory approvals required for Queenstown Town Centre Arterials Project and identifies the key issues that will need to be addressed in obtaining any statutory approvals.

The strategy should be read in conjunction with the following attachments:

- 310201227-01-001-C010-C014 Rev B_combined_SE SCREEN MARKUP.pdf
- Arterials Stg3 QTC Masterplan Thompson St link preferred option_SE SCREEN MARKUP.pdf
- QTC Masterplan Arterials Stg3 Design_SE SCREEN MARKUP.pdf

In a general sense the project consists of a new arterial road being constructed along the following streets in central Queenstown, commencing at the SH6A / Melbourne Street intersection, along Melbourne Street, through Council owned land to Henry Street, veering south adjacent to the Council buildings on Gorge Road, through the site of the Memorial Hall, continuing along Man Street and then Thompson Street, before veering left at the existing Thompson Street turning head, through a mixture of private, Council and Crown land to connect with the a relocated Fernhill roundabout. In addition to this general route various improvements are required on parts of the adjoining road network at intersections.

Other elements of the project are likely to consist of:

- Upgrading / closure of side streets;
- Large retaining structures / cuts / fills;

- Pedestrian and cyclist infrastructure;
- Landscaping / streetscaping;
- Lighting;
- Demolition of buildings;
- Removal of vegetation including at least one protected tree;
- Works adjacent to historic structures;
- Potential for 3 waters / utilities upgrades as part of the project;
- Construction of a new crossing over Horne Creek;
- A new roundabout at the Fernhill end of the project;
- Placement of an embankment in Lake Wakatipu.

3 Planning Context

The planning context applying to the proposed Queenstown Town Centre Arterials route is summarised below:

3.1 Proposed Queenstown Lakes District Plan – Relevant Provisions

3.1.1 Zoning & Overlays

The proposal affects land zoned:

- High Density Residential
- Queenstown Town Centre
- Active Sport and Recreation
- Informal Recreation
- Land at the Fernhill end of the route is within an Outstanding Natural Landscape overlay.

3.1.2 Designations

A number of existing Council designations are within the arterial footprint:

Identifier	Notation
210	Queenstown Recreation Reserve
235	Recreation Reserve
240	Recreation Reserve (James Clouston Memorial)
248	Recreation Reserve
527	Civic Offices

3.1.3 Protected Features

The following protected features may be affected by the project as identified in the PDP:

Identifier	Protected Trees
195	Sequoiadendron giganteum (Henry St / Ballarat St intersection)
198	Cedrus deodara (Lake St / St intersection)
199	Ulmus glabra 'horizontalis' (adjacent to Templeton Way)
Identifier	Historic Heritage
18	Transit of Venus Site, 8 Melbourne Street, Queenstown (No HNZPT Classification)
68	Glenarm Cottage, 50 Camp Street, Queenstown. (No HNZPT Classification)
96	Queenstown Powerhouse, One Mile (No HNZPT Classification)
102	St Joseph's Roman Catholic Church, 41 Melbourne Street (HNZPT Category 2 Classification, Listing 2340)
220	Rifle Butt, Lake Wakatipu foreshore (No HNZPT Classification)

3.2 Regional Plan – Water for Otago Relevant Provisions

Horne Creek is listed in Schedule 1A of the Regional Plan – Water for Otago and has the following Natural Values associated with it:

- Absence of aquatic pest plants;
- Trout Spawning Habitat
- Juvenile Trout rearing area
- Unimpeded access to creek mouth
- Trout present in lower reaches

Lake Wakatipu is listed in Schedule 1A of the Regional Plan – Water for Otago and has the following Natural Values associated with it:

Large body of water supporting a variety of species;

- Absence of aquatic pest plants;
- Juvenile Trout & Salmon rearing area
- Presence of significant riparian vegetation;
- Eels, Trout & Salmon present;
- Rare fish and invertebrates present; and
- Outstanding Natural Feature & Landscape.

4 Statutory Approvals – Resource Management Act

4.1 Queenstown Lakes District Council

4.1.1 Designation

It is assumed that designation is the preferred method of seeking statutory approval for the project given the advantages it offers the requiring authority and relationship to the Public Works Act 1981. This could include land required for construction purposes only that could then have the designation subsequently uplifted.

Whether sufficient detail is incorporated into any notice of requirement to avoid the need for a subsequent Outline Plan (s176A) to be submitted should be considered and will be dependant on how far design has progressed.

4.1.2 Resource Consent

Resource consent may be required for some enabling or investigative works ahead of the designation process, however this has not been scoped at this early stage.

4.1.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

Depending on the findings of a DSI / PSI resource consent may be required under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS).

4.2 Otago Regional Council

4.2.1 Regional Plan – Water for Otago

A new bridge or culvert across Horne Creek will be required. Also work at the Fernhill end of the alignment will require works in the bed of Lake Wakatipu. The following is a precis of potential consents required under the Regional Plan: Water for Otago:

Activity	Rule	Activity Status
Pre Construction		
Investigative Drilling (of land, not in bed)	14.2.1.1	Permitted
Investigative Drilling (of dry bed)	13.5.1.9	Permitted
Construction		
Diversion of Water – Temporary	12.3.4.1(i)	Discretionary
Temporary Structures	13.2.3.1	Discretionary
New Structure – Bridge, embankment	13.2.3.1	Discretionary
Construction discharges other than sediment	12.C.2.2	Restricted Discretionary
Alteration of Bed	13.5.3.1	Discretionary
Post Construction		
Use of a Structure	13.1.1	Permitted
Diversion of Water – Permanent (new abutments)	12.3.4.1(i)	Discretionary

Activity	Rule	Activity Status
Discharge of Stormwater from a Road	13.B.1.9	Permitted
Repair, maintenance, extension, alteration, replacement or reconstruction of a structure.	13.3.1	Permitted

4.2.2 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken it is unlikely resource consents will be required for any discharges to air.

4.3 Statutory Approvals – Other

4.3.1 Heritage New Zealand Pouhere Taonga Act 2014

Horne Creek has been identified as being important to Tangata Whenua. Aukaha have previously stated that Horne Creek was associated with the Pā site, Tāhuna. The Pā itself is situated at Earl Street, some 600 metres south east of the Project area. However, the whole creek was probably utilised as a māhika kai for inland bird species by Kai Tahu prior to European arrival.

Queenstown was initially settled in the 1860s by Europeans during the gold rush and had extensive pre 1900 human activity.

Given the above factors an Archaeological Authority will be necessary for the project.

4.3.2 Reserves Act 1977

Land required for the project includes part of the Recreation Ground, subject to the Queenstown Recreation Reserve Management Plan 2006. Changes to the size of the Recreation Ground as a consequence of the project may require changes to the Reserve Management Plan. It is noted some of the buildings at the Recreation Ground are outside of the land formally gazetted as reserve.

There is also reserve land at the Fernhill end of the alignment.

5 Key Effects for Consideration

In progressing the necessary approvals for the project under the RMA the following effects will need to be assessed and methods proposed to avoid, remedy or mitigate any environmental effects (the below effects headings are taken from the Social and Environmental Responsibility Screen developed by NZ Transport Agency Waka Kotahi).

Effect	Comment
Natural Environment	Whilst the setting of the arterials is urban there are two natural features that will be affected being Horne Creek and Lake Wakatipu. Horne Creek is known to support populations of the native fish koaro and is identified as being habitat for trout spawning. Lake Wakatipu also has considerable value both from a habitat and landscape perspective. Lake Wakatipu is also subject to the Kawarau River Water Conservation Order (1997).
Cultural and Historic Heritage	- The Queenstown Town Centre includes multiple known archaeological sites. No specific assessment of the route in this regard has been undertaken. - Horne Creek has been identified as being important to Tangata Whenua. Aukaha have previously advised that Horne Creek was associated with the Pā site, Tāhuna. The Pā

Effect	Comment
	itself is situated at Earl Street, some 600 metres south east of the Project area. However, the whole creek was probably utilised as a māhika kai for inland bird species by Kai Tahu prior to European arrival. Lake Wakatipu also has similar values and is also a Statutory Acknowledgement under the Ngāi tahu Claims Settlement Act 1998. - The setting of 3 items of heritage significance (Transit of Venus Site, St Joseph's Church and Glenarm Cottage) will be affected by the proposal. It is unlikely Glenarm Cottage would be able to remain in its current location given the proximity of the footprint of the project. 3 listed trees are located along the route that have specific protection under the district plan. Other QLDC street trees will also require removal.
Human Health	- The arterials will introduce an increased level of noise along the proposed route, both through construction and then once operational. Given the zoning of the adjacent land (certainly for the eastern portion as high density residential the number of individuals subject to levels of increased noise is considerable. There will be a commensurate reduction of noise levels along the existing State Highway, though it should be noted (more recent) buildings along the existing State Highway would have been designed with the existing noise environment in mind. - The arterials will also likely result in a reduction in air quality along the arterial route, through increased levels of vehicle emissions. As above, a commensurate reduction along the existing State highway would be expected. - The arterials will also require a change to the current lighting environment along the route, along with increased light spill from vehicle lights. - There are a multitude of sensitive receivers adjacent to or in close proximity to the route including: residential properties, visitor accommodation, St Joseph's Church, St Joseph's School, Plunket, childcare centre.
Social	- The Queenstown Memorial Hall – built as a memorial to soldiers who served in World War 1 and World War 2, will need to be demolished to facilitate the project along with the rugby and squash club buildings. The social values to the RSA community associated with these buildings are potentially significant, and will need to be addressed. - The project will also require land currently part of the recreation ground. Again, the social values of the community with regards to the recreation ground will need to be addressed. - Severance / community cohesion will need to be considered with the closing of several intersections. - Access to properties also impacted.
Landscape and Urban Design	The project offers multiple opportunities to enhance urban character / urban realm.

6 Technical Assessments

In terms of matters identified in through the Social and Environmental Responsibility Screen the following technical assessments will be required as the project advances. Note that there may be other Council projects advanced concurrently that may address some of these issues (i.e. Project Manawa). Understanding the necessary mitigation in a number of areas (particularly noise) is considered critical.

- An ecological assessment will be required with regards to the activity in proximity to/within Horne Creek & Lake Wakatipu.
- Archaeological / Heritage impact assessment
- Arbourn cultural assessment on those Protected Trees in proximity to the route or to be removed as part of the project.
- Cultural Impact Assessment (potentially – may be avoided through engagement with Iwi)
- Noise impact assessment – current and future noise environment, mitigation.
- Social / Recreation Impact assessment associated with the loss of Memorial Hall / Sports Club Buildings / part of Recreation Ground, as well as any community severance issues. Consultation on these matters is considered essential.
- Preliminary Site Investigation / Detailed Site Investigation with regards to potentially contaminated sites along the arterial route.
- Landscape / urban design assessment with regards to the impacts of the project on the existing streetscape as well as impacts on Outstanding Natural Landscapes.
- Lighting impact assessment (both in terms of streetlighting but also in relation to the light spill from vehicles).

Additional to this, other likely technical assessments required include:

- Hydraulics – with regards to the new Horne Creek Crossing
- Transportation Impact Assessment – with regards to the impacts of the project on the wider transportation network. This would include accessibility, walking and cycling.
- Geotechnical assessment – retaining structures, cuts & fills.
- Economic assessment (economic benefits of the project)

Prepared by:

s 9(2)(a)

Technical Principal – Planning

Reviewed by:

s 9(2)(a)

Deputy Team Lead

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FRANKTON TO QUEENSTOWN SSBC AND QUEENSTOWN TOWN CENTRE DBC SINGLE STAGE BUSINESS CASE CONSENTING STRATEGY

PREPARED FOR THE WAKA KOTAHĪ NZ TRANSPORT AGENCY

July 2020



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QUALITY STATEMENT

PROJECT MANAGER

s 9(2)(a)

PROJECT TECHNICAL LEAD

s 9(2)(a)

PREPARED BY

s 9(2)(a)

REVIEWED BY

s 9(2)(a)

APPROVED FOR ISSUE BY

s 9(2)(a)

DUNEDIN

Level 3 John Wickliffe House, 265 Princes Street, Dunedin 9016
TEL +64 3 477 0885, FAX +64 3 477 0616

REVISION SCHEDULE

Rev No.	Date	Description	Signature or Typed Name (documentation on file)			
			Prepared by	Checked by	Reviewed by	Approved by

Waka Kotahi NZ Transport Agency

Frankton to Queenstown SSBC And Queenstown Town Centre DBC

Single Stage Business Case Consenting Strategy

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1. Executive Summary

The Frankton to Queenstown, Frankton and Ladies Mile Transport Business Case encompasses 46 discrete locations, each of which has its own specific consenting requirements. A number of these locations relate to the New Zealand Upgrade Program (NZUP). In each location the Waka Kotahi NZ Transport Agency (Waka Kotahi), as a requiring authority, has a designation over part or all of the land involved with the proposed works. This strategy identifies the consenting requirements associated with all of those locations based on the information available at this preliminary stage.

As provided for by Section 175 of the Resource Management Act 1991 (the Act), the Operative and Proposed QLDC District Plans, State Highways 6 and 6A are designated for 'State Highway Purposes'. Appendix 1A (Roads) .2 (New Zealand Transport Agency) contains the following description:

"to control, manage and improve the state highway network, State Highways No 6, 6A and 84 including planning, design, research, construction and maintenance relating to all land within the designation. Such activities may also involve, but not necessarily be limited to, realigning the road, altering its physical configuration, culverts, bridges and associated protection works."

Table 1 below identifies:

- The particular site/package of work
- The 'planning headlines' for each site
- A 'traffic light' system that identifies – at a glance - the planning complexity of each site (red = complex, amber = some challenges, green = straightforward).

Table 1-1: "Traffic Light" table

REF	Location	Planning Headlines	Complexity
1	SH6 McDowell Drive pedestrian/cycle underpass	• Requires potential alteration to designation and outline plan • Possible additional land requirement	
2	SH6 Howards Drive roundabout	• Requires potential alteration to designation and outline plan (additional land for drainage may be required)	
3	SH6 Howards Drive pedestrian/cycle underpass	• Requires potential alteration to designation and outline plan (additional land for drainage may be required)	
4	Ladies Mile westbound priority bus lane	• Requires potential alteration to designation and outline plan (additional land for drainage may be required)	
5	SH6 Stalker Road pedestrian/cycle underpass	• Requires potential alteration to designation and outline plan (additional land for drainage may be required)	
6	SH6 Hawthorne Drive Intersection	• Requires alteration to designation • Requires outline plan <u>Note:</u> Land is required to be taken on all four quadrants of the intersection	
7	SH6 Frankton-Ladies Mile to SH6/6A Intersection priority bus lane	• Requires alteration to designation • Requires outline plan	
8	SH6/Grant Road Intersection	• Outline plan waiver	
9	SH6/Hansen Road intersection	• Requires alteration to designation • Requires outline plan	
10	SH6/Joe O'Connell Drive intersection (Events Centre)	• Requires alteration to designation • Requires outline plan	
11	SH6/6A intersection	• Requires new designation • Requires alteration to designation • Requires outline plan	
12	Old Frankton/ Frankton Village	• Outline plan waiver	

REF	Location	Planning Headlines	Complexity
13	Frankton Hub	- Requires new designation - Site subject of existing QLDC designation, which has priority - Displacement of recreational land	
14	SH6 Kawarau Road (Ross Street to Kawarau Falls Bridge)	Outline plan waiver	
15	SH6/Lucas Place	- Requires alteration to designation - Requires outline plan	
16	SH6/Humphrey St Intersection	Outline plan waiver	
17	Humphrey Street Link (SH6 to Lucas Place)	Notice of Requirement required for new Humphrey Street link	
18	SH6A/McBride Street Intersection	Outline plan waiver	
19	SH6A Yewlett to SH6/6A priority bus lane	Outline plan waiver	
20	SH6/6A to Marina intersection	- Requires alteration to designation - Requires outline plan - Land required for the new western intersection, plus some minor widening east of Sugar Lane and between Sugar Lane and the new intersection.	
21	SH6A Frankton to Queenstown shared path	- Requires alteration to designation - Requires outline plan - Potential land requirement	
22	SH6A/Marina Intersection	Outline plan waiver	
23	SH6A Marina to Perkins Road priority bus lanes	Outline plan waiver	
24	SH6A/New Marina/Perkins Road Intersection	- Requires alteration to designation - Requires outline plan	
25	SH6A Middleton Road eastbound bus stop	Outline plan waiver	
26	SH6A/Battery Hill Intersection	Outline plan waiver	
27	SH6A/Goldfield Heights intersection	Outline plan waiver required <u>Note:</u> there is a protected gum tree (Council Ref. 240) on NW corner of intersection	
28	SH6A Goldfields eastbound bus stop	Outline plan waiver	
29	SH6A Goldfields Heights priority bus lane	Outline plan waiver	
30	SH6A Larch Hill Place to Goldfields Heights priority bus lane	Outline plan waiver	
31	SH6A Larch Hill Place intersection	Outline plan waiver	
32	SH6A Hensman Road Intersection	Outline plan waiver	
33	SH6A Oaks Club pedestrian signals	Outline plan waiver	
34	SH6A Oaks Club eastbound bus stop	Outline plan waiver	
35	SH6A Pounamu eastbound bus stop expansion	Outline plan waiver	
36	SH6A Suburb Street to Frankton/Stanley Street intersection priority bus lane	- Requires alteration to designation - Requires outline plan - Land requirement	
37	SH6A Dublin Street intersection	Outline plan waiver	

The following Consenting Strategy identifies (based on the information at hand) the relevant statutory approvals required to facilitate the above components of the overall project.

2. Planning Context

The Operative and Proposed Queenstown Lakes District Plans are the principal relevant documents in this instance. We have undertaken a high-level review of the Plans and have not examined the objectives and policies of these documents.

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3. Alterations to Designations

3.1 Summary

Other than outline plan waivers, the largest sub-group within Table 1-1 above is the requirement for alteration to a designation along with submittal of an outline plan.

Some components of the wider upgrade programme involve greater alteration to their designation than others, often in terms of whether significant changes to traffic flow or direction of travel are involved. In such instances, rather than applying for an outline plan waiver an outline plan will be provided to ensure the territorial authority is fully aware of the scope of the proposed changes and is able to request changes before construction commences. As there are no hard and fast criteria for determining on which side of the divide a component should fall, discretion has been applied, and a conservative approach in favour of providing an outline plan taken where doubt exists.

3.2 Relevant RMA Provisions

Pursuant to s181(1) of the Resource Management Act 1991 ('The Act') a requiring authority for the purposes approved under s167 may at any time give notice in the prescribed form to a territorial authority of its requirement to alter a designation.

Pursuant to s176A of the Act, an outline plan of the public work, project, or work to be constructed on designated land must be submitted by the requiring authority to the territorial authority to allow the territorial authority to request changes before construction is commenced.

4. Enabling Works

Several of the components of the NZUP will require enabling works that fall outside the scope of this report. These enabling works do, however, have potential impacts on the wider project, so are outlined here to provide a fuller context of the potential limitations on project delivery and completion outside of the strictly defined consenting requirements. The components that fall into this category are as follows:

- SH6 Frankton-Ladies Mile to SH6/6A Intersection refer Section 12
- SH6/Hansen Road refer Section 13
- Frankton Hub (Frankton Golf Centre) refer Section 16
- SH6/Humphrey Street refer Section 18

In all three cases, the works involve the undergrounding of overhead power lines from the Aurora substation on Frankton Road.

5. Outline Plan Waivers

Pursuant to Section 176A(2) of the Resource Management Act, a territorial authority may waive the requirement for an outline plan. A requiring authority is able to request such a waiver if it believes that an outline plan is not necessary. While there are no criteria within s176A(2) for determining whether to waive the requirement for an outline plan, a territorial authority may consider a number of factors, including the anticipated level of effects that the proposed work or project may have and whether the proposal or work would be a permitted activity and would meet any relevant performance standards of the underlaying zone.

In such instances all works are able to be undertaken within land owned by the NZTA (i.e. there is no need to acquire adjoining land), with all works falling within the area subject to the designation. For the purposes of this assessment, the works for which an outline plan waiver is considered applicable are those that involve minor works such as traffic light signalisation, introduction of traffic islands and other calming measures, pedestrian crossings and bus lanes, etc., and particularly where there will be no change to the direction of traffic flow or to connectivity of transport modes. Given there are no established criteria for when a waiver is appropriate, a subjective assessment must be made based on the specific factors that exist for each discrete component of the project.

A substantial proportion of the proposed upgrade program is considered to fall into this category, as listed in Table 5-1 below. A description of the works involved are provided for each discrete works component of the wider NZUP project:

Table 5-1: Outline Plan Waivers

Reference No.	Work description
9 SH6/Grant Road intersection	Signalise existing roundabout with some moderate geometric changes (all within designation area) and bus priority measures. Four lanes on SH6 between Hawthorne Drive and Grant Road will become two traffic lanes with two bus lanes (outside lanes).
13 Old Frankton/Frankton Village	Traffic management/calming measures introduced to prevent north-south through-trips between Ross Street and Gray Street.
15 SH6 Kawarau Road (Ross St to Kawarau Falls Bridge)	Minor works through this section, relatively modest intersection works, addition of northbound priority bus lane and improved pedestrian/cycle crossings on SH6 (to reduce severance).
17 SH6/Humphrey St intersection	Signalise intersection to future-proof for possible four-leg intersection to connect to Boyes Cres and down to the lake (ferry access). Signalised primarily for pedestrian and cycle access across SH6.
19 SH6A/McBride Street intersection	Signalise intersection, including imposition of ban on movements to/from McBride Street.
20 SH6A Yewlett Crescent to SH6/6A intersection bus lane	Addition of eastbound priority bus lane on approach to SH6/6A intersection from Yewlett Crescent.
23 SH6A/Marina intersection	Improvements to signalised Marina intersection. (Note: Existing Marina intersection being signalised 2019/20 LCLR)
24 SH6A Marina to Perkins Road bus lanes	Eastbound and westbound bus lanes created by widening from Marina to Perkins Road.
26 SH6A/Middleton Road eastbound bus stop	New bus-stop eastbound just east of Middleton Road intersection.
27 SH6A/Battery Hill intersection	Signalised pedestrian crossing to provide improved pedestrian/cycle connectivity to PT and bus priority measures and some associated intersection control.
28 SH6A/Goldfield Heights intersection	Signalise existing intersection to provide improved pedestrian/cycle connectivity to PT, bus priority measures, access and intersection safety.
29 SH6A Goldfields Heights eastbound bus stop	Increase capacity of bus stop to cater for PT, regional, tourist and ski buses.
30 SH6A Goldfields Heights bus lane	Create eastbound priority bus lane by widening existing road.
31 SH6A Larch Hill Place to Goldfields Heights bus lane	Create eastbound bus lane between Larch Hill and Goldfield Heights
32 SH6A/Larch Hill Place intersection	Signalised pedestrian crossing to provide improved pedestrian/cycle connectivity to PT and bus priority measures and some associated intersection control.

Reference No.	Work description
33 SH6A/Hensman Road intersection	Signalise existing intersection to provide improved pedestrian/cycle connectivity to PT, plus bus priority measures and access / intersection safety.
34 SH6A Oaks Club pedestrian signals	Signalised pedestrian crossing to provide improved pedestrian connectivity to PT, plus bus priority measures.
35 SH6A Oaks Club eastbound bus stop	Addition of new bus stop (eastbound) opposite Oaks Club.
36 SH6A Pounamu eastbound bus stop expansion	Expand existing eastbound bus stop outside Pounamu Apartments.
39 SH6A/Dublin Street intersection	Signalise existing intersection to provide improved pedestrian/cycle connectivity to PT, bus priority measures, access and intersection safety.

6. SH6/McDowell Drive Pedestrian/Cycle Underpass

6.1 Summary

We have undertaken a preliminary scoping of the SH6 pedestrian/cycle underpass component of the programme (potentially as part of the Ladies Mile Master Planning, or some other programme, i.e. non NZUP) and identified that the following Resource Management Act approvals may be required:

- Alteration to Designation (new pedestrian/cycle underpass)
- Outline Plan

6.2 Introduction

Land is required to undertake the following project at the site:

- a) Construction of a new pedestrian/cycle underpass

There is currently a T-intersection where SH6 meets McDowell Drive. The proposed pedestrian/cycle underpass would pass diagonally beneath the intersection in a southwest to northeast direction. This is intended to improve efficiency of movement and enhance safety for all modes of transport in this location.

6.3 Operative Queenstown Lakes District Plan

6.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural General

6.4 Proposed Queenstown Lakes District Plan

6.4.1 Zoning and Overlays

The proposal affects land zoned:

- Wakatipu Basin Rural Amenity
- Rural

6.5 Designations

In addition to the State Highway 6 designation in the Queenstown Lakes District Plan, the land at the southwest corner of the intersection of McDowell Drive, SH6 and Crawford Place, where the underpass is proposed, is designated (Ref. 304) under both the Operative and Proposed District Plans specifically for 'Recreation Reserve including Pedestrian/ Cycle Under-pass', for which the QLDC is the requiring authority. There is a difference in terminology for the underlying zoning across the two plans, which does not affect the designation. The designation for this land is as follows:

<u>Operative District Plan</u>	Recreation Reserve
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<u>Proposed District Plan</u>	Informal Recreation
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6.6 Statutory Approvals

6.6.1 Designations

The pedestrian/cycle underpass will need to be authorised by way of alteration to the existing State Highway designation.

The land at the northeast corner of the intersection has a Wakatipu Basin Rural Amenity zoning under the Proposed District Plan and is in private ownership. The alteration would involve the extension of the area covered by the SH6 designation. It is possible that some of this land will need to be acquired to enable the Waka Kotahi designation to be amended.

The land at the southeast corner of the intersection has a Rural zoning under the Proposed District Plan and is in private ownership. However, as the underpass would cross the intersection from southwest to northeast it is not anticipated that the proposal would involve any extension of the State Highway designation in that direction.

As the Council reserve (Designation 304) provides for a pedestrian/cycle underpass, no alteration to the designation that applies to the Council-owned reserve to the southwest of the intersection will be required.

It is possible that acquisition of the privately-owned land at the northeast corner of the intersection may not necessarily be required, depending on whether the NZTA and the landowner enter an agreement to use the land as desired or the Queenstown Trails Trust chooses to acquire the land.

6.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The majority of the earthworks required to be undertaken are beneath the road and are thus exempt from consent pursuant to Rule 25.5.7.1 of the proposed QLDC District Plan. It is also anticipated that the maximum depth of cut outside the road will be less than 2.4m and thus exempt from consent pursuant to Rule 25.5.15.1 of the Plan.

It is noted that the Queenstown Trails Trust has an unresolved appeal (Ref: ENV-2019-CHC-026) which, if allowed, would make any volume of earthworks associated with the formation of publicly accessible cycle and walking trails exempt from resource consenting requirements, i.e. effectively a permitted activity.

The land at the southeast corner of the intersection has a Rural zoning under the Proposed District Plan and is in private ownership. However, as the underpass would cross the intersection from southwest to northeast it is not anticipated that the proposal would involve any earthworks on that land.

6.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

6.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

6.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

6.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

6.9 Other Statutory Considerations

6.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

7. SH6/Howards Drive Roundabout

7.1 Summary

We have undertaken a preliminary scoping of the SH6/Howards Drive roundabout component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new roundabout)
- Outline Plan

7.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new roundabout at the intersection

There is currently a T-intersection where SH6 meets Howards Drive. The proposed four-leg roundabout is intended to improve efficiency and enhance safety for all modes of transport in this location. It will also provide safe and efficient access to the proposed park & ride site and land to the north of SH6 for proposed development.

7.3 Operative Queenstown Lakes District Plan

7.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Lifestyle
- Shotover Country Special Zone
- Unformed Roads
- Building Restriction Area

7.4 Proposed Queenstown Lakes District Plan

7.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural
- Rural Lifestyle
- Shotover Country Special Zone
- Unformed Roads

7.5 Designations

The only designation present at this location is the SH6 designation.

7.6 Statutory Approvals

7.6.1 Designations

The proposed roundabout will need to be authorised by way of alteration to the existing State Highway designation. This is required for drainage purposes.

The land at the northwest, northeast and southeast corners of the intersection has a Rural Lifestyle zoning under the Proposed District Plan and is in private ownership. There is also a sliver of Rural zoned land directly abutting the east side of Howards Drive, between the road and the Rural Lifestyle zone. The alteration to the SH6 designation in this location would involve the extension (for drainage purposes) of the designation. It is possible that land will need to be acquired in combination with the alteration. The land at the intersection's southwest corner is zoned Rural, overlain by the Shotover Country Special Zone – Activity Area 5a Open Space – State Highway. That land is also in private ownership. Acquisition of a portion of that land may also be required.

7.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks associated with the roundabout will be undertaken wholly within the extended designation area and so fall within the scope of the State Highway designation.

7.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

7.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

There is a verified HAIL site (Ladies Mile Pet Lodge - storage tanks or drums for fuel, chemicals or liquid waste) abutting the northeast corner of the intersection but given the proposed works to establish a roundabout around the existing road intersection will involve only a minor incursion into the surrounding land, it is highly unlikely that land previously used for the storage of contaminants will be disturbed.

7.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

7.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

7.9 Other Statutory Considerations

7.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

8. SH6/Howards Drive Pedestrian/Cycle Underpass

8.1 Summary

We have undertaken a preliminary scoping of the SH6 Howards Drive pedestrian/cycle underpass component of the programme (likely Housing Infrastructure Fund (HIF) as part of the Ladies Mile Master Planning and development) and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new pedestrian/cycle underpass)
- Outline Plan

8.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new pedestrian/cycle underpass

The proposed pedestrian/cycle underpass will pass beneath the new roundabout proposed at this intersection (refer Section 6 above for further detail).

8.3 Operative Queenstown Lakes District Plan

8.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Lifestyle
- Shotover Country Special Zone

8.4 Proposed Queenstown Lakes District Plan

8.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural
- Rural Lifestyle
- Shotover Country Special Zone

8.5 Designations

The only designation present at this location is the SH6 designation.

8.6 Statutory Approvals

8.6.1 Designations

The proposed pedestrian/cycle underpass will need to be authorised by way of alteration to the existing State Highway designation.

The land at the southeast corner of the intersection has a Rural Lifestyle zoning under the Proposed District Plan and is in private ownership. There is also a sliver of Rural zoned land directly abutting the east side of Howards Drive, between the road and the Rural Lifestyle zone. The land at the intersection's southwest corner is zoned Rural, overlain by the Shotover Country Special Zone – Activity Area 5a Open Space – State Highway. That land is also in private ownership. Acquisition of a portion of that land may also be required.

As with the associated roundabout, the alteration to the SH6 designation in this location would involve the extension of the area covered by the designation, for drainage purposes.

8.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The majority of the earthworks required to be undertaken are beneath the road and are thus exempt from

consent pursuant to Rule 25.5.7.1 of the proposed QLDC District Plan. It is also anticipated that the maximum depth of cut outside the road will be less than 2.4m and thus exempt from consent pursuant to Rule 25.5.15.1 of the Plan.

It is noted that the Queenstown Trails Trust has an unresolved appeal (Ref: ENV-2019-CHC-026) which, if allowed, would make any volume of earthworks associated with the formation of publicly accessible cycle and walking trails exempt from resource consenting requirements, i.e. effectively a permitted activity.

8.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation. The details for the pedestrian/cycle underpass will be integrated into the outline plan to be submitted for the associated roundabout (refer Section 6 above).

8.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

As described above in Section 6.6.4 there is a verified HAIL site (Ladies Mile Pet Lodge – storage tanks or drums for fuel, chemicals or liquid waste) abutting the northeast corner of the intersection but given the proposed works will involve only a minor incursion into the surrounding land, it is highly unlikely that land previously used for the storage of contaminants will be disturbed.

8.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

8.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

8.9 Other Statutory Considerations

8.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

9. Ladies Mile Westbound Bus Lane

9.1 Summary

We have undertaken a preliminary scoping of the Ladies Mile westbound bus lane component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new bus lane)
- Outline Plan

9.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new westbound bus lane on the south side of Ladies Mile

The proposed bus lane is to be located between Howards Drive to the east and Stalker Road to the west. The alteration to the SH6 designation in this location would involve the extension of the area covered by the designation, for drainage purposes.

9.3 Operative Queenstown Lakes District Plan

9.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Lifestyle
- Shotover Country Special Zone

9.4 Proposed Queenstown Lakes District Plan

9.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural
- Shotover Country Special Zone

9.5 Designations

The only designation present at this location is the SH6 designation.

9.6 Statutory Approvals

9.6.1 Designations

The proposed bus lane will need to be authorised by way of alteration to the existing State Highway designation. This is required for drainage purposes.

9.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks required to form the bus lane will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

9.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

9.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

9.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

9.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

9.9 Other Statutory Considerations

9.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

10. SH6 Stalker Road Pedestrian/Cycle Underpass

10.1 Summary

We have undertaken a preliminary scoping of the SH6/Stalker Road pedestrian/cycle underpass component of the programme (potentially as part of the Ladies Mile Master Planning and development, or some other programme, i.e. non NZUP) and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new pedestrian/cycle underpass)
- Outline Plan

10.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new pedestrian/cycle underpass

The proposed pedestrian/cycle underpass will pass to the east of the new roundabout proposed at this intersection.

10.3 Operative Queenstown Lakes District Plan

10.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Lifestyle
- Shotover Country Special Zone

10.4 Proposed Queenstown Lakes District Plan

10.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Lifestyle
- Shotover Country Special Zone
- Building Restriction Area

10.5 Designations

The only designation present at this location is the SH6 designation.

10.6 Statutory Approvals

10.6.1 Designations

The proposed pedestrian/cycle underpass will need to be authorised by way of alteration to the existing State Highway designation.

The land on the south side of SH6 to the east of Stalker Road is within the Shotover Country Special Zone under the Proposed District Plan and is in private ownership. The land to the north of SH6 has a Rural Lifestyle zoning under the Proposed District Plan and is in private ownership. Acquisition of a portion of these areas may be required.

10.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The majority of the earthworks required to be undertaken will be beneath the road and are thus exempt from consent pursuant to Rule 25.5.7.1 of the proposed QLDC District Plan. It is also anticipated that the maximum depth of cut outside the road will be less than 2.4m and thus exempt from consent pursuant to Rule 25.5.15.1 of the Plan.

It is noted that the Queenstown Trails Trust has an unresolved appeal (Ref: ENV-2019-CHC-026) which, if allowed, would make any volume of earthworks associated with the formation of publicly accessible cycle and walking trails exempt from resource consenting requirements, i.e. effectively a permitted activity.

10.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

10.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

10.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

10.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

10.9 Other Statutory Considerations

10.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

11. SH6/Hawthorne Drive Intersection

11.1 Summary

We have undertaken a preliminary scoping of the SH6/Hawthorne Drive roundabout component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new roundabout)
- Outline Plan

11.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new roundabout at the intersection

There is currently a T-intersection where SH6 meets Hawthorne Drive. The proposed four-leg roundabout is intended to improve efficiency and enhance safety for all modes of transport in this location. It will also provide safe and efficient access to the proposed park & ride site and land proposed for development to the north of SH6. To this end, a fourth leg will need to be added to the intersection.

11.3 Operative Queenstown Lakes District Plan

11.3.1 Zoning and Overlays

The proposal affects land zoned:

- Frankton Flats B
- Rural Lifestyle Zone

11.4 Proposed Queenstown Lakes District Plan

11.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural Zone

11.5 Designations

Other than the SH6 designation, a number of sites in the vicinity that may be affected by the project are also designated:

Designation	Site	Requiring Authority	Purpose
370	SH6/Hawthorne Drive intersection	Waka Kotahi	State Highway Purposes
371	Eastern Access Road and Road 2, Frankton Flats	QLDC	Roading Purposes

11.6 Statutory Approvals

11.6.1 Designations

The proposed roundabout will need to be authorised by way of alteration to the existing State Highway designation.

The land abutting the north side of SH6 has a Rural zoning under the Proposed District Plan, whilst the land to the east and west of Hawthorne Drive, on the south side of SH6, is zoned Frankton Flats B Special Zone. This land is in private ownership. The alteration to the SH6 designation in this location would involve the extension of the area covered by the designation on all sides of the intersection and, land will, therefore, need to be acquired in combination with the alteration.

It is possible that works to establish a signalised pedestrian crossing will occur outside of the Designation 370 area, crossing into the Designation 371 area to the south. However, it is anticipated that all, or the great majority of the works, i.e. the proposed new roundabout, will be undertaken within the 370 designation.

11.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks associated with the roundabout will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

11.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

11.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

There is an Unverified HAIL site ('Persistent pesticide bulk storage or use, including sports turfs, market gardens, orchards, glass houses or spray sheds') associated with the abutting Frankton Flats subdivision to the southeast of the intersection. However, given that there has been significant disturbance and major development – mainly commercial - of this land, it is highly unlikely that the relatively minor works required to create a new roundabout in the location of the existing road intersection will result in any disturbance of any contaminated soil.

11.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

11.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

11.9 Other Statutory Considerations

11.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

12. SH6 Frankton-Ladies Mile to SH6/6A Intersection

12.1 Summary

We have undertaken a preliminary scoping of the SH6 Frankton-Ladies Mile to SH6/6A Intersection component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (priority bus lanes, pedestrian and cycling infrastructure)
- Outline Plan

12.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of new westbound and eastbound priority bus lanes on Ladies Mile
- (b) Provision of new pedestrian and cycling infrastructure on both sides of Ladies Mile

The proposed works are located between Hawthorne Drive to the east and the intersection of State Highways 6 and 6A to the west. The alteration to the SH6 designation in this location would involve extending the area covered by the designation on both sides of SH6.

12.3 Operative Queenstown Lakes District Plan

12.3.1 Zoning and Overlays

The proposal affects land zoned:

- Special Zone
- Frankton Flats
- Rural General
- Building Restriction Area

12.3.2 Protected Features

The following Protected Features that may be affected by the project are identified in the Operative District Plan:

Identifier	Feature	Comment
47	Frankton Cemetery Walls and Gates	The gates face SH6. Will need to be protected

12.4 Proposed Queenstown Lakes District Plan

12.4.1 Zoning and Overlays

The proposal affects land zoned:

- Frankton Flats B
- Community Purpose – Golf Course
- Rural
- Community Purpose -Cemetery
- Local Shopping Centre
- Lower Density Suburban Residential
- Business Mixed Use
- Building Restrictions

12.4.2 Historic Heritage

The following Historic Heritage feature(s) that may be affected by the project are identified in the Proposed District Plan:

Identifier	Feature	Comment
47	Frankton Cemetery Walls and Gates	The gates face SH6. Will need to be protected

12.5 Designations

Other than the SH6 designation, a number of sites in the vicinity that may be affected by the project are also designated:

Designation	Site	Requiring Authority	Purpose
370	SH6/Hawthorne Drive intersection	Waka Kotahi NZ Transport Agency	State Highway Purposes
84	SH6/Grant Road intersection	Waka Kotahi NZ Transport Agency	State Highway Purposes
29	Queenstown Events Centre (includes Frankton Golf Course)	Queenstown Lakes District Council	Multi-Purpose indoor and outdoor recreation, cultural and conference complex
338	Frankton Substation	Aurora Energy Limited	Electricity Substation and Ancillary Purposes
160	Frankton Cemetery	Queenstown Lakes District Council	Cemetery Reserve

12.6 Statutory Approvals

12.6.1 Designations

The proposed works will need to be authorised by way of alteration to the existing designation(s)/new designation(s). This is because there is designated land on both sides of Frankton Road/Ladies Mile, most notably the Frankton electricity substation (Designation 338) on the north side of the road, and the Queenstown Events Centre, which includes the Frankton Golf Centre (Designation 29) on the south side of SH6. The implications of the proposed works in terms of existing designations are discussed in detail in Section 16 below. In summary, however, the presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities in respect of this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

12.6.2 Resource Consents

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks required to form the bus lane and pedestrian/cycle facilities will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

Conceivably, resource consent may be required for some enabling or investigative works ahead of the designation alteration process; however, this has not been scoped at this early stage.

12.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

12.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

12.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

12.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

12.9 Other Statutory Considerations

12.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

13. SH6/Hansen Road Intersection

13.1 Summary

We have undertaken a preliminary scoping of the SH6/Hansen Road intersection component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (signalised intersection, priority bus lanes)
- Outline Plan

13.2 Introduction

There is currently a T-intersection where SH6 meets Hansen Road. It is proposed to relocate the intersection to the east to provide an offset from the existing intersection of SH6 and Joe O'Connell Drive. At present, Hansen Road and Joe O'Connell Drive are directly opposite one another across SH6.

Priority bus lanes are also proposed to be constructed on either side of SH6 between Grant Road and the SH6A.

The changes proposed are intended to improve efficiency and enhance safety for all modes of transport in this location and should be viewed in conjunction with the closely related works proposed at the SH6/Joe O'Connell Drive intersection (refer Section 14 below).

Land is required to undertake the following project at the site:

- (a) Construction of a relocated and signalised intersection offset from the proposed new signalised intersection with Joe O'Connell Drive (refer Section 14 below).
- (b) Construction of new priority bus lanes on both sides of SH6 between Grant Road and SH6/6A intersection.

13.3 Operative Queenstown Lakes District Plan

13.3.1 Zoning and Overlays

The proposal affects land zoned:

- Frankton Flats Zone
- Low Density Residential Zone
- Rural General Zone
- Designation Area
- Building Restriction Area
- Protected Tree (Ref. 206 – now removed)
- Protected Feature (Ref. 47 – Frankton Cemetery walls and gates)

13.4 Proposed Queenstown Lakes District Plan

13.4.1 Zoning and Overlays

The proposal affects land zoned:

- Business Mixed Use
- Shotover Country Special Zone
- Community Purpose Zone
- Rural Zone
- Local Shopping Centre Zone
- Building Restrictions
- Open Cemetery

13.5 Designations

In addition to the State Highway 6 designation in the Queenstown Lakes District Plan, two sites in the vicinity that may be affected by the project are also designated:

Designation	Site	Requiring Authority	Purpose
29	Queenstown Events Centre (including Frankton Golf Centre)	Queenstown Lakes District Council	Multi-purpose indoor and outdoor recreation, cultural and conference complex
338	Frankton Substation	Aurora Energy Limited	Electricity substation

13.6 Statutory Approvals

13.6.1 Designations

The proposed intersection and bus lanes will need to be authorised by way of alteration to the existing State Highway designation.

The land abutting the north side of SH6 where it is proposed to relocate the intersection is zoned Business Mixed Use under the Proposed QLDC District Plan. This land is in private ownership. The alteration to the SH6 designation in this location would involve the extension of the area covered by the designation on the north side of the intersection and land will, therefore, need to be acquired in combination with the alteration. Along with the relocated intersection, Hansen Road will need to be significantly realigned.

The creation of new bus lanes will require land to be acquired on both sides of SH6. As discussed in detail elsewhere in this report in relation to other locations, there are some implications for the works in terms of the status of existing designations. In summary, however, the presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities – in this case QLDC (south side) and Aurora Energy (north side) – on this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

13.6.2 Resource Consents

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks associated with the relocated intersection and new bus lanes will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

Conceivably, resource consent may be required for some enabling or investigative works ahead of the designation alteration process; however, this has not been scoped at this early stage.

13.6.3 Outline Plan

An outline plan(s) will also need to be submitted for the proposed works associated with the alterations to the designations.

13.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

There is a HAIL site (Frankton Substation) on the north side of SH6. It will need to be determined whether the works will require a permit under the NESC.

13.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

13.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

13.9 Other Statutory Considerations

13.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

14. SH6/Joe O'Connell Drive Intersection (Events Centre)

14.1 Summary

We have undertaken a preliminary scoping of the SH6/Joe O'Connell Drive Intersection (Events Centre) component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (signalised T-intersection)
- Outline Plan

Land is required to undertake the following projects at the site:

- (a) Construction of a signalised T-intersection.

14.2 Introduction

The project consists of the establishment of a signalised T intersection at Joe O'Connell Drive (Events Centre). This component of the NZ Upgrade Program should be viewed in tandem with the closely related relocation of the existing intersection of SH6 and Hansen Road (refer Section 13 above).

Whilst most of the proposed work can be undertaken within the existing State Highway designation, small areas will be required from the Events Centre and the Grant family, who own land on the north side of SH6.

14.3 Operative Queenstown Lakes District Plan – Relevant Provisions

14.3.1 Zoning and Overlays

The proposal affects land zoned:

- Queenstown Airport Designation

14.3.2 Designations

State Highway 6 is designated in the Operative Queenstown Lakes District Plan. The Queenstown Events Centre (includes Frankton Golf Course) may also be affected by the proposed works:

Designation	Site	Requiring Authority	Purpose
29	Queenstown Events Centre (includes Frankton Golf Course)	Queenstown Lakes District Council	Multi-Purpose indoor and outdoor recreation, cultural and conference complex

14.4 Proposed Queenstown Lakes District Plan

14.4.1 Zoning and Overlays

The proposal affects land zoned:

- Local Shopping Centre
- Business Mixed Use
- Community Purpose Zone

14.5 Protected Features

The following Protected Features that may be affected by the project are identified in the Operative and Proposed District Plans:

Identifier	Feature	Comment
47	Frankton Cemetery Walls and Gates	The gates face SH6. Will need to be protected.

14.6 Designations

State Highway 6 is designated in the Operative Queenstown Lakes District Plan. There is also a designated site in the vicinity that may be affected by the project, as shown below:

Designation	Site	Requiring Authority	Purpose
29	Queenstown Events Centre (includes Frankton Golf Course)	Queenstown Lakes District Council	Multi-Purpose indoor and outdoor recreation, cultural and conference complex

The proposed works will require land to be acquired on the south side of SH6. As discussed in detail elsewhere in this report in relation to the adjoining Frankton Hub, there are some implications for the works in terms of the status of existing designations. In summary, however, the presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities on this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy. This component of the works is best understood with reference to the more detailed comments provided in Section 16 below, which relates to the proposed Frankton Hub.

14.6.1 Resource Consents

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks associated with the signalling of the intersection and new bus lanes will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

14.6.2 Outline Plan

An outline plan(s) will also need to be submitted for the proposed works associated with the alterations to the designations/new designations.

14.6.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

14.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

14.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

14.9 Other Statutory Considerations

14.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has identified an archaeological site less than 150 metres from the north eastern extent of the project area near the base of Ferry Hill. It is possible Maori archaeological sites exist within the project area. This issue is addressed in more detail in Section 16.8.1 below, as this component of the overall work is closely related – both in terms of physical location and technically – to the proposed Frankton Hub project.

15. SH6/6A Intersection

We have undertaken a preliminary scoping of the SH6/6A Intersection component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new roundabout);
- Outline Plan

The works associated with this component of the NZUP are a wholly contained subset of the works associated with the Frankton Hub, as described in detail in Section 16 below. The proposed new roundabout at the intersection of SH6 and SH6A is one of the two major components of the wider Frankton Hub project. However, as the works required to establish the roundabout may be funded from separate public monies and undertaken at a different time to the wider hub works, the two have been assessed separately within this report.

In the interests of avoiding unnecessary repetition, the consenting requirements of the SH6/6A roundabout works are not provided here but may be understood by reference to Section 16 below.

16. Frankton Hub (Frankton Golf Centre)

16.1 Summary

We have undertaken a preliminary scoping of the Frankton Golf Centre (Frankton Domain) component of the NZ Upgrade Program ('NZUP') and identified that the following Resource Management Act approvals are required:

- Notice of Requirement for a new Designation (Public Transport Hub)
- Alteration to Designation (new roundabout)
- Outline Plan(s)

16.2 Introduction

Land is required to undertake two major projects at the site:

- b) Construction of a new public transport hub and
- c) Construction of a new roundabout.

The land is currently part of the Frankton Golf Centre and is designated in the Proposed Queenstown Lakes District Plan (Designation 29) as it contains the Queenstown Events Centre, associated playing fields and facilities, as well as land occupied by the Frankton Golf Centre.

16.3 Operative Queenstown Lakes District Plan

16.3.1 Zoning and Overlays

The proposal affects land zoned:

- Rural General
- Low Density Residential
- Corner Shopping Centre

16.3.2 Designations

Both State Highway 6 and 6A are designated in the Operative Queenstown Lakes District Plan. There are also a number of designated sites in the vicinity that may be affected by the project:

Designation	Site	Requiring Authority	Purpose
4	Queenstown Airport – Approach and Land Use Control	Queenstown Airport Corporation Limited	Height restrictions to protect approach / take off surfaces.
29	Queenstown Events Centre (includes Frankton Golf Course)	Queenstown Lakes District Council	Multi-Purpose indoor and outdoor recreation, cultural and conference complex
155	West of SH6 (Kawarau Road)	Queenstown Lakes District Council	Recreation Reserve
160	Frankton Cemetery	Queenstown Lakes District Council	Cemetery Reserve

16.3.3 Protected Features

The following Protected Features that may be affected by the project are identified in the Operative District Plan:

Identifier	Feature	Comment
47	Frankton Cemetery Walls and Gates	The gates face SH6. Will need to be protected

16.4 Proposed Queenstown Lakes District Plan

16.4.1 Zoning and Overlays

The proposal affects land zoned:

- Rural
- Low Density Suburban Residential
- Local Shopping Centre

16.4.2 Designations

In terms of the Proposed District Plan there are no major changes to any of the designations/protected features that will impact in any significant manner on the project. There are some land zoning changes proposed in the vicinity of the site. The surrounding zoning is a mixture of Local Shopping Centre, Low Density Residential and Rural General.

A number of sites in the vicinity that may be affected by the project are also designated:

Designation	Site	Requiring Authority	Purpose
4	Queenstown Airport – Approach & Land Use Control	Queenstown Airport Corporation Limited	Height restrictions to protect approach / take off surfaces.
29	Queenstown Events Centre (including Frankton Golf Centre)	Queenstown Lakes District Council	Multi-purpose indoor and outdoor recreation, cultural and conference complex
155	West of SH6 (Kawarau Road)	Queenstown Lakes District Council	Recreation Reserve
160	Frankton Cemetery	Queenstown Lakes District Council	Cemetery Reserve

16.4.3 Protected Features

The following Protected Features that may be affected by the project are identified in the Proposed District Plan:

Identifier	Feature	Comment
47	Frankton Cemetery Walls and Gates	The gates face SH6. Will need to be protected

16.5 Designations

Both the roundabout and public transport hub will need to be authorised by way of alteration to the existing State Highway designation(s)/new designation(s). In addition to the usual RMA tests the Transport Agency will be subject to in terms of Part 8 of the RMA, the key planning restriction identified in this case is the existing designation(s) held by the QLDC over the site. In simple terms this gives the QLDC 'priority' but does not preclude the NZTA from lodging a notice of requirement for a public work on QLDC-designated land. The presence of the QLDC designations is also not a barrier *per se* to the QLDC confirming the designation of the land (it is not uncommon to have 'overlapping' designations). However, unless the QLDC designation over the land is uplifted the NZTA cannot undertake any activity without the written approval of the QLDC. Early consultation with QLDC over this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

The key section of the RMA is Section 177 (relevant section underlined):

S 177 - Land subject to existing designation or heritage order

- 1) *Subject to sections 9(2) and 11 to 15, where a designation is included in a district plan, and the land that is the subject of the designation is already the subject of an earlier designation or heritage order:*
 - a) *the requiring authority responsible for the later designation may do anything that is in accordance with that designation only if that authority has first obtained the written consent of the authority responsible for the earlier designation or order; and*
 - b) *the authority responsible for the earlier designation or order may, notwithstanding section 176(1)(b) and without obtaining the prior written consent of the later requiring authority, do anything that is in accordance with the earlier designation or order.*
- 2) *The authority responsible for the earlier designation or order may withhold its consent under subsection (1) only if that authority is satisfied:*
 - a) *that, in the case of an earlier designation, the thing to be done would prevent or hinder the public work or project or work to which the designation relates; or*

- b) that in the case of an earlier heritage order, the thing to be done would wholly or partly nullify the effect of the order.

16.5.1 Outline Plan

An outline plan(s) will also need to be submitted for the proposed works associated with the alterations to the designation/new designation. The outline plan can form part of the Notice of Requirement or be submitted at a later date once the design is suitably advanced, depending on how advanced the design is when the amendment application is lodged with Council.

16.5.2 Resource Consent

Resource consent may be required for some enabling or investigative works ahead of the designation process; however, this has not been scoped at this early stage.

16.5.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

It will be advisable to conduct a HAIL search with ORC and QLDC for the relevant land. Several activities in the area currently exist that are on the HAIL list – e.g. service station and substation.

16.6 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

16.7 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

16.8 Other Statutory Considerations

16.8.1 Archaeological Authorities

We have undertaken a preliminary review of known archaeological sites in the area and have identified there is an archaeological site less than 150 metres from the north eastern extent of the project area near the base of Ferry Hill. It is possible Maori archaeological sites exist within the project area. Additionally, Frankton has been occupied since the 19th century. Our advice is that further archaeological assessment is required, and it might be most appropriate to undertake a single assessment for the entire NZUP project. It may be, that given the extent of works, an archaeological assessment may be more appropriate than relying upon an Accidental Discovery Protocol.

16.8.2 Effects for Consideration

In progressing a Notice of Requirement for alteration to designation the following effects will need to be assessed and methods proposed to avoid, remedy or mitigate any environmental effects (the below effects are taken from PSF/13. A simple ranking of low/medium/high is given in terms of the degree of effect with respect to this project.

Effect	Comment	Ranking
Noise	Some changes to the local noise environment. Depending on the option taken may be beneficial to local residents (SH6 moved further away).	Low
Air Quality	Some minor localised changes	Low
Water Resources	No waterbodies in the vicinity of the site. Managing run-off during construction. New stormwater infrastructure will be included in the project mainly on SH6 from the existing roundabout to Kawarau Falls Bridge that will eventually drain to the lake via existing stormwater infrastructure.	Low

Effect	Comment	Ranking
Culture and Heritage	Presence of heritage feature at cemetery (and presence of cemetery itself). Potential to liaise with both KTKO and Te Ao Marama (crossover between Muruhuku (Southland) and Otakau (Otago)).	Low
Construction Effects	Particularly disturbance to existing businesses/activities in the area. Establishing what the effects in this regard are likely to be, and avoiding, remedying and mitigating these will be a critical element of the proposal.	High
Urban Design	May need to go before QLDCs UD panel. Multiple considerations.	Medium/High
Land Use and Transport Integration	Multiple current issues in this regard in this location. Some changes to Frankton bus hub will probably be required. Possibility of park and ride facilities.	High
Recreation	Potential loss of golf course, sports fields, changes to events centre access etc (both temporary and permanent effects in this regard).	High
Visual/Landscape	Not a potentially high value landscape. Some loss of open space and mature vegetation.	Low

17. SH6/Lucas Place

17.1 Summary

We have undertaken a preliminary scoping of the SH6/Lucas Place component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new roundabout);
- Outline Plan

17.2 Introduction

There is currently a three-leg roundabout where SH6 meets Lucas Place. It is proposed to replace and relocate the existing roundabout, with land potentially needing to be acquired from the adjoining site to the south, land presently used for airport parking by Go Rentals(Auckland) Ltd).

The changes proposed are intended to improve efficiency and enhance safety for all modes of transport in this location.

17.3 Operative Queenstown Lakes District Plan

17.3.1 Zoning and Overlays

The proposal affects land zoned:

- Airport Mixed Use
- Low Density Residential

17.4 Proposed Queenstown Lakes District Plan

17.4.1 Zoning and Overlays

The proposal affects land zoned:

- Airport
- Lower Density Suburban Residential

17.5 Designations

In addition to the State Highway 6 designation in the Operative and Proposed Queenstown Lakes District Plans, there are two areas of designated land in the vicinity that may be affected by the project:

Designation	Site	Requiring Authority	Purpose
2	Queenstown Airport and the surrounding airspace	Queenstown Airport Corporation Limited	Aerodrome Purposes.
164	McBride Street, SH 6, Frankton Sections 17 and 18 Block XII Town of Frankton, Section 24 Block VII Town of Frankton and Section 26 Block I Town of Frankton	Queenstown Lakes District Council Local Purpose	Local Purpose (Beautification)

17.6 Statutory Approvals

17.6.1 Designations

The proposed works will need to be authorised by way of alteration to the existing designation(s)/new designation(s). This is because there is designated land on the south side of the existing roundabout, used for airport car parking and to the west designated land set aside for beautification works.

The construction of a relocated roundabout will require land to be acquired. As discussed in detail elsewhere in this report in relation to other locations, there are some implications for the works in terms of the status of existing designations. The presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities – in this case QLDC (west side) and Queenstown Airport Corporation Limited (east side) – on this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

17.6.2 Resource Consents

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks associated with the relocated intersection will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

17.6.3 Outline Plan

An outline plan(s) will also need to be submitted for the proposed works associated with the alterations to the designations.

17.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

Given the proximity of the proposed works site to the airport it is possible that further investigation into the potential of the airport-designated land being contaminated should be undertaken, despite there being no such formal identification of the land as such in the ORC HAIL register.

17.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

17.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

17.9 Other Statutory Considerations

17.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

18. Humphrey Street Link (SH6 to Lucas Place)

18.1 Summary

We have undertaken a preliminary scoping of the Humphrey St Link (SH6 to Lucas Place) component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new road connection(s))
- Outline Plan

18.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a connection from Humphrey/Douglas St intersection to Lucas Place (and potential future connection into airport)

Presently Humphrey Street begins at its west end at the intersection with SH6 and terminates at its east end at a T-intersection with Douglas Street. It is proposed to extend Humphrey Street to the east to link with Lucas Place.

18.3 Operative Queenstown Lakes District Plan

18.3.1 Zoning and Overlays

The proposal affects land zoned:

- Airport Mixed Use
- Low Density Residential

18.4 Proposed Queenstown Lakes District Plan

18.4.1 Zoning and Overlays

The proposal affects land zoned:

- Airport
- Lower Density Suburban Residential

18.5 Designations

There is one area of designated land in the vicinity that may be affected by the project:

Designation	Site	Requiring Authority	Purpose
2	Queenstown Airport and the surrounding airspace	Queenstown Airport Corporation Limited	Aerodrome Purposes

18.6 Statutory Approvals

18.6.1 Designations

There is a narrow band of designated land (Queenstown Airport) at the east end of what is proposed to be a new road link between Douglas Street to the west and Lucas Place to the east.

The construction of a road link will require land to be acquired. As discussed in detail elsewhere in this report in relation to other locations, there are some implications for the works in terms of the status of existing designations. The presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities – in this case Queenstown Airport Corporation Limited - on this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy. Further to this, as the link will require land from the Fire and Emergency New Zealand, Implications of the need to relocate the Frankton Fire Station will require consideration and appropriate investigation.

Note: At this stage it is not known who would assume the Requiring Authority role in relation to the proposed road link.

18.6.2 Resource Consents

Resource consent will be required for the earthworks associated with this component of the programme should the proposed link not be designated to facilitate the works.

Conceivably, resource consent may also be required for some enabling or investigative works ahead of the designation process; however, this has not been scoped at this early stage.

18.6.3 Outline Plan

An outline plan will also need to be submitted should the extension be designated.

18.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

Given the proximity of the proposed works site to the airport it is possible that further investigation into the potential for site contamination should be undertaken, despite there being no such formal identification of the land as such in the ORC HAIL register.

18.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

18.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

18.9 Other Statutory Considerations

18.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

19. SH6/6A to Marina intersection

19.1 Summary

We have undertaken a preliminary scoping of the SH6/6A to Marina intersection component of the NZ Upgrade Program and identified that the following Resource Management Act approval(s) are required:

- Alteration to Designation
- Outline Plan

19.2 Introduction

Land is required to undertake the following project at the site:

- a) Construction of an on-road eastbound cycle lane
- b) Construction of a shared path on lake side of SH6A
- c) Shared path connection through camping ground to Frankton Track

Sections along this route were affected by the Frankton and Oak Tree landslides. This component of the overall programme should be viewed in conjunction with the closely related works proposed for the Frankton to Queenstown Shared Path (refer Section 20 below).

19.3 Operative Queenstown Lakes District Plan

19.3.1 Zoning and Overlays

The proposal affects land zoned:

- Low Density Residential

19.4 Proposed Queenstown Lakes District Plan

19.4.1 Zoning and Overlays

The proposal affects land zoned:

- Community Purpose – Campground
- Lower Density Suburban Residential
- Informal Recreation

19.5 Designations

State Highway 6 is designated in both the Operative and Proposed Queenstown Lakes District Plans. The Frankton Motor Park will also be affected by the proposed works:

Designation	Site	Requiring Authority	Purpose
154	Frankton Motor Park, Stewart Street. Part Section 14 DP 8296, Section 8-9 and Section 16- 17 Block XXIV Town of Frankton, Section 8, Section 10, Section 35 and Part Section 7 Block XXXI Town of Frankton and Section 46 Block XXI Shotover Survey District	Queenstown Lakes District Council	Recreation Reserve (Motor Park)

19.6 Statutory Approvals

19.6.1 Designations

SH6/Frankton Road and the Frankton Motor Park to the south of Frankton Road are designated areas along this route. The motor park designation comprises two separate areas: the main campground area abutting Lake Avenue, Frankton Beach Access and Shoreline Road; and residentially zoned land between Frankton Road and Stewart Street.

If the proposed shared path widening works cannot be accomplished wholly within the area covered by the two existing designation areas, the works will need to be authorised by way of alteration to the designation.

19.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. It is highly likely that the earthworks associated with the shared path widening will be undertaken within the existing designation area and thus will fall within the scope of designation.

19.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

19.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

19.7 Regional Plan – Water for Otago

Given the distance of the proposed works from Lake Wakatipu it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

19.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

19.9 Other Statutory Considerations

19.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

20. SH6A Frankton to Queenstown Shared Path

20.1 Summary

We have undertaken a preliminary scoping of the Queenstown Shared Path component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (widening of existing shared path)
- Outline Plan

20.2 Introduction

It is possible, though not likely, that small slivers of land will need to be required to undertake the following works:

- (a) Widening of existing shared path on the lake side of SH6A

20.3 Operative Queenstown Lakes District Plan

20.3.1 Zoning and Overlays

The proposal affects land zoned:

- High Density Residential
- Low Density Residential

20.4 Proposed Queenstown Lakes District Plan

20.4.1 Zoning and Overlays

The proposal affects land zoned:

- Lower Density Suburban Residential
- High Density Residential
- Informal Recreation

20.5 Designations

The only designation present at this location is the SH6 designation.

20.6 Statutory Approvals

20.6.1 Designations

If the proposed shared path widening works cannot be accomplished wholly within the area covered by the existing SH6 designation, the works will need to be authorised by way of alteration to the designation. This is the only designation present at this location, apart from where the Frankton Marina (Designation 165) abuts SH6A. Otherwise, the land abutting the south side of SH6A has either a Lower Density Suburban Residential or a High Density Residential zoning.

Due to geotechnical considerations, there is uncertainty in terms of the ability to widen the shared path to the minimum preferred 4.0m standard. It is most likely that a 3.0m standard will be recommended in instances where the greater width cannot be achieved, in which case all works could be undertaken within the existing designation area and no land acquisition from residential properties would be required.

20.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. It is highly likely that the earthworks associated with the shared path widening will be undertaken within the existing designation area and thus will fall within the scope of designation.

20.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

20.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS)

A HAIL search with ORC and QLDC will not be required for the relevant land. There are no activities on the land that are on the HAIL list.

20.7 Regional Plan – Water for Otago

Given the distance of the proposed works from Lake Wakatipu it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

20.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

20.9 Other Statutory Considerations

20.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

21. SH6A/Marina/Perkins Road Intersection

21.1 Summary

We have undertaken a preliminary scoping of the SH6A/Marina/Perkins Road intersection component of the NZUP and identified that the following Resource Management Act approvals are required:

- Alteration to Designation (new signalised intersection at west end of marina, bus priority lanes, access to marina from Perkins Road)
- Outline Plan

21.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of new signalised intersection
- (b) Construction of new priority bus lanes on Frankton Road
- (c) Creation of vehicular access to marina from Perkins Road

21.3 Operative Queenstown Lakes District Plan

21.3.1 Zoning and Overlays

The proposal affects land zoned:

- Low Density Residential
- Designation Area

21.4 Proposed Queenstown Lakes District Plan

21.4.1 Zoning and Overlays

The proposal affects land zoned:

- Informal Recreation
- Lower Density Suburban Residential

21.5 Designations

Other than the SH6 designation, the only other designated land in the vicinity of this component of the project is Frankton Marina Local Purpose Reserve (Designation 165). The QLDC is the requiring authority for this designated land.

21.6 Statutory Approvals

21.6.1 Designations

The proposed works will need to be authorised by way of alteration to the existing designation(s)/new designation(s). This is because of the abovementioned marina within the designation on the south side of Frankton Road.

As discussed in detail elsewhere in this report in relation to other locations, there are some implications for the works in terms of the status of existing designations. In summary, however, the presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities – in this case the QLDC – in respect of this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

21.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks required to form the bus lane will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

21.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

21.6.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

Whilst the Frankton Marina is a registered HAIL site (ORC – Hazardous Activities), due to the presence of “storage tanks or drums for fuel, chemicals or liquid waste”, the proposed works area is located far from the identified risk and there should be no consenting risk associated with the HAIL registration. The tanks are shown on the ORC online map as being located near the lake’s edge where they would be most convenient for refuelling. watercraft.

21.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

21.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

21.9 Other Statutory Considerations

21.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

22. Frankton Road/Suburb St to Frankton Road/Stanley Street Intersection Bus Lane

22.1 Summary

We have undertaken a preliminary scoping of the Frankton Road/Suburb Street intersection to the Frankton/Stanley Street intersection bus lane component of the NZUP and identified that the following Resource Management Act approvals are required:

- An Alteration to Designation (new westbound bus lane)
- Outline Plan

22.2 Introduction

Land is required to undertake the following project at the site:

- (a) Construction of a new westbound bus lane on the south side of Frankton Road, to allow buses to use Coronation Drive for priority access into the Stanley Street public transport hub.

Land will need to be acquired from the Shundi Hotel and QLDC to accommodate the bus lane.

22.3 Operative Queenstown Lakes District Plan

22.3.1 Zoning and Overlays

The proposal affects land zoned:

- High Density Residential

22.4 Proposed Queenstown Lakes District Plan

22.4.1 Zoning and Overlays

The proposal affects land zoned:

- High Density Residential

22.5 Designations

Other than the SH6 designation, the only other designated land in the vicinity of this component of the NZUP is Leary's Gully Water Pump Station (Designation 35), located at the confluence of Frankton Road, Dublin Street and Melbourne Street. The QLDC is the requiring authority for this designated land.

22.6 Statutory Approvals

22.6.1 Designations

The proposed works will need to be authorised by way of alteration to the existing designation(s)/new designation(s). This is because of the abovementioned pump station within the designation on the south side of Frankton Road.

As discussed in detail elsewhere in this report in relation to other locations, there are some implications for the works in terms of the status of existing designations. In summary, however, the presence of 'overlapping' designations – that is, a piece of land being subject to more than one designation simultaneously – is not an unusual situation and need not constitute an impassable barrier to confirmation of a new designation on the same land. Early consultation with the relevant requiring authorities – in this case the QLDC – in respect of this issue is recommended and will need to be undertaken in tandem with the property acquisition strategy.

22.6.2 Resource Consent

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks required to form the bus lane will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

22.6.3 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

22.7 Regional Plan – Water for Otago

Given the absence of watercourses in the vicinity of the site it is considered the provisions of the Regional Plan – Water for Otago will not create any significant consenting risk to the project (highly unlikely any resource consents will be required).

22.8 Regional Plan – Air for Otago

Under Rule 16.3.13.1.2 of the Regional Plan – Air for Otago the discharge of contaminants to air from road construction is a permitted activity – providing the discharge is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Provided suitable mitigation is undertaken (e.g. use of water tankers to suppress dust) no resource consents will be required for any discharges to air.

It is not anticipated that any resource consent will be required for this component of the wider project. The earthworks required to form the bus lane will be undertaken wholly within the extended designation area and so will fall within the scope of the State Highway designation.

22.8.1 Outline Plan

An outline plan will also need to be submitted for the proposed works associated with the altered designation.

22.8.2 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC)

There is a Verified HAIL site (Leary's Gully Landfill) where the existing pump station is presently located. Fill has previously been encountered on an adjacent property. It is possible, therefore, that further investigation may be required to ensure that the effects of any disturbance of land potentially contaminated by its former use as a landfill site are adequately addressed.

22.9 Other Statutory Considerations

22.9.1 Archaeological Authorities

A preliminary review of known archaeological sites in the area has not identified any archaeological sites on or in the near vicinity of the site. Given the small extent of the works, reliance on an Accidental Discovery Protocol may be both a sufficient and appropriate response.

23. Technical Assessments

In terms of the matters identified in the Social and Environmental Responsibility Screen the following technical assessments may be required as the project advances. Note there may be a need to undertake these in conjunction with other packages of work in the NZUP.

- Archaeological/Heritage Impact Assessment
- Land Contamination Assessment
- Urban Design Statement (particularly in relation to transport hub)
- Social/Recreational Impact Assessment (due to loss of golf course)

Dunedin

Level 3 John Wickliffe House, 265 Princes Street

Dunedin 9016

PO Box 13-052, Armagh

Christchurch 8141

Tel +64 3 477 0885

Fax +64 3 477 0616

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