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# Part C - Implementing the Preferred Network

## 12. FINANCIAL CASE

The financial case for the preferred network has been based on implementing the network in a staged approach, with the cost estimates being produced in accordance with SM014. It has been prepared on the basis of NZTA guidance and relevant expectations. Delivery of the WATN is significant in terms of scale, with an indicative 10-year programme being identified for delivery. The financial case presents cost estimates for a first work programme (Package 1) to be delivered between 2018-2024 to align with the two National Land Transport Programme (NLTP) funding periods within this timeframe. Remaining routes identified through this SSBC that are to be delivered post-2024 (Package 2) will be subject to further reassessment at a later stage regarding economic assessment and financial affordability. Delivery of Package 1 is considered financially affordable, with a (rounded) cost estimate of \$39.64m targeting the National Land Transport Programme (NLTP) periods up to 2024.

### 12.1. Programme Delivery and Maintenance Costs

#### 12.1.1. Approach

Cost estimates were developed through:

- Costing exercises conducted by quantity surveyors;
- Observations on-site;
- Pricing schedules from previous projects of a similar type; and
- Cost estimates provided by QTT.

Table 46 shows the source and scale of capital, operation and maintenance costs over the life of the project.

**Table 46: Source of capital**

COST SOURCE	COST DESCRIPTION
Physical works	<ul style="list-style-type: none"> <li>• Site Clearance</li> <li>• Pavements</li> <li>• Fencing</li> <li>• Traffic Signs and Road Markings</li> <li>• Road Restraint Systems (Vehicle and Pedestrian)</li> <li>• Piling and Embedded Retaining Walls</li> <li>• Drainage and Service Ducts</li> <li>• Special Structures - Bridges</li> <li>• Lighting</li> <li>• Landscape and Ecology</li> <li>• Earthworks</li> </ul>
Preliminaries	<ul style="list-style-type: none"> <li>• Materials/ formation testing allowance</li> <li>• Temporary Works</li> <li>• Services Risk</li> <li>• Access During Works (Public &amp; Contractor)</li> <li>• Environmental Compliance</li> <li>• Contractors Preliminary and General (P&amp;G) - 15%</li> <li>• Temp Traffic Management</li> </ul>
Pre-implementation fees	<ul style="list-style-type: none"> <li>• Consultant Fees - DBC/ Detailed Design</li> <li>• NZ Transport Agency Managed Costs</li> </ul>
	<ul style="list-style-type: none"> <li>• Consultant Fees - Procurement/ Construction Monitoring</li> </ul>

COST SOURCE	COST DESCRIPTION
Implementation fees	<ul style="list-style-type: none"> <li>Consenting</li> </ul>
	<ul style="list-style-type: none"> <li>NZ Transport Agency Managed Costs</li> <li>Land Purchase</li> </ul>
Maintenance and operation (40-year maintenance period)	<ul style="list-style-type: none"> <li>Surface refurbishment (every 20 years)</li> <li>Cleaning</li> <li>Bridge inspections (where applicable)</li> </ul>

### 12.1.2. Assumptions

The financial case makes the following assumptions when determining the financial viability of the preferred network:

- Estimates are based in 2019 NZDs;
- No allowance for future inflation;
- Estimates have an assessed +/- 30% contingency;
- A 15% property/land acquisition contingency has been applied to property estimates;
- A 40-year maintenance period;
- Annual maintenance: \$2 per m of facility. Recurrence: yearly
- Resurfacing: \$40 per m<sup>2</sup> of sealed facility. Recurrence: 20 years
- Bridges: 0.2% of capital costs. Recurrence: yearly after year 10

### 12.1.3. Package 1 (2018-2024) - Programme Costs

The preferred routes identified as part of Package 1 (2018-2024) have an expected capital estimate (inclusive of property costs but excluding maintenance) of \$39.64m. This estimate reflects rounded element components for each route. Please refer to the DBE Project Estimate forms within the Cost Estimate Report (Appendix J) for precise route estimates.

Cost estimates have been presented to reflect a staged approach to delivery to align with NLTP funding periods:

- The total capital cost of implementing routes between 2018-2021 (Stage 1) is \$13.63m; and
- The total capital cost of implementing routes between 2021-2024 (Stage 2) is \$26.01m.

Table 47 details the base estimate project costs associated with implementing Package 1 routes.

A cost estimate report has been produced detailing the full breakdown of costs for each route in Appendix J.

**Table 47: Package 1 - Programme Costs**

COST SOURCE	TOTAL COST
<b>Stage 1 (2018-2021)</b>	
<b>Pre-implementation</b> (Design, Consultancy fees, NZTA/QLDC managed costs)	\$978k
<b>Implementation</b> (Physical works, Consultancy fees, NZTA/QLDC managed costs, Consenting)	\$11.28m
<b>Property</b>	\$1.28m

Stage 1 Rounded Base Estimate Costs*:	\$13.63m
<b>Stage 2 (2021-2024)</b>	
<b>Pre-implementation</b> (Design, Consultancy fees, NZTA/QLDC managed costs)	\$2.55m
<b>Implementation</b> (Physical works, Consultancy fees, NZTA/QLDC managed costs, Consenting)	\$22.97m
<b>Property</b>	\$240k
Stage 2 Base Estimate Costs*:	\$26.01 m
<b>Package1 – Total Base Estimate Costs*:</b>	<b>\$39.64m</b>

\*Reflects a rounded net estimate. Refer to the Cost Estimate report (Appendix J) for precise breakdowns.

#### 12.1.4. Package 2 (2024-2030) - Programme Costs

As highlighted earlier in the Financial Case, this SSBC presents the financial affordability and associated cost estimates for a first packages of work targeting delivery by 2024 to align with the current and subsequent NLTP funding period. The NZ Transport Agency has indicated that they envisage subsequent routes targeting delivery post-2024 to be subject to reassessment in regard to financials, economic viability, and demand.

The preferred routes identified as part of Package 2 (2024-2030) have an estimated overall capital cost (excluding maintenance and operation) of \$93.78m.

The full cost estimates for the entire preferred network (Packages 1 & 2) are outlined in the Cost Estimate report in Appendix J.

#### 12.1.5. Ongoing maintenance and operating costs

Implementation of Package 1 routes will result in additional assets requiring ongoing maintenance. The ongoing maintenance costs have an estimated range of between \$10k to \$500k depending on route. This is due to a variety of factors including route length, treatment types, and the expected trips generated. The NPV maintenance costs for Package 1 are outlined in Table 41.

The maintenance cost estimates assume that constructed trail will need to be specifically maintained and that the on-road sections will be maintained under existing roading contracts. Therefore, no allowance has been made in the trail maintenance estimates for on-road sections.

Maintenance of the preferred network is likely to be undertaken by a lead organisation. The process in which this is facilitated will be confirmed at the next stage of design. A proposed approach to future maintenance of the preferred network is outlined in section 14.3 – Roles and Responsibilities.

#### 12.1.6. Property/Land Costs

The preferred components of Package 1 (Stages 1 and 2) minimise the impact on property and established developments where possible. However, routes identified within Package 1 have been assessed to affect an estimated 60 properties.

Estimated compensation has been assessed in accordance with the Transport Agency's cost estimation manual (SM014). Gross property acquisition costs are estimated to be \$1.55m (inclusive of a 15% contingency).

## 12.2. Funding Arrangements

The proposed funding splits and commitments have been agreed between project partners at a series of workshops through development of this SSBC. This business case seeks to secure funding for the active travel network through the National Land Transport Fund (NLTF) and local contributions from the Long Term Plan (LTP) with a 51% Funding Assistance Rate (FAR) for walking and cycling activities. Table 48 outlines the proposed 10-year funding profile along with proposed investment allocations between project partners for the WATN. Individual programme components correspond to the technical drawings presented in Appendices O and P.

The NZ Transport Agency has indicated that there is an indicative NLTF allocation of approximately \$15m for the 2018-2021 period and a 'placeholder' allocation of \$35m for the 2021-2024 period. It is likely that this project will be seeking approval for pre-implementation in 19/20 for Stages 1 and 2 programme components with construction starting from 20/21 and finishing in 23/24. For funding approval, the project would be subject to the national prioritisation process, which is based on results alignment and BCR and summarised in Table 41 and Table 45. Based on the assessment within this SSBC, this project sits very high on the priority list for funding.

For this project, there are no alternative funding sources such as public/private partnerships (PPP). Therefore, no additional reporting is required.

**Table 48: Proposed Funding Arrangements**

NLTP PERIOD	PROGRAMME COMPONENT	PARTNER LEAD	TOTAL CAPITAL COST	FUNDING COMMITMENTS		
				QLDC	NZTA	THIRD-PARTY
<b>Stage 1</b>						
2018-2021	A2 - Shotover Bridge to SH6	NZTA	\$2.59m	\$0	\$2.59m	\$0
	A3/A4 - SH6 to Frankton Track including Marina Safety Improvements	NZTA	\$1.2m	\$0	\$1.2m	\$0
	A5/A7 - Jack' Point to Frankton including Frankton connection south upgrade	NZTA	\$9.59m	\$0	\$9.09m	\$500k
	A8 - Lake Hayes Estate to Frankton - DESIGN COST ONLY	QLDC	\$250k	\$250k	\$0	\$0
<b>Sum-Total:</b>			<b>\$13.63m</b>	<b>\$250k</b>	<b>\$12.88m</b>	<b>\$500k</b>
<b>Stage 2</b>						
2021-2024	B2 - Fernhill to Queenstown	QLDC	\$4.2m	\$2.1m	\$2.1m	\$0
	B3 - Frankton Track LoS improvements including Park Street Greenway	NZTA	\$6.6m	\$0	\$6.6m	\$0
	C2 - Brecon Street - DESIGN COST ONLY	QLDC	\$685k	\$343k	\$343k	\$0
	C3 - Park Street - DESIGN COST ONLY	QLDC	\$620k	\$310k	\$310k	\$0
	C5 - Arthurs Point to Queenstown LoS improvements	QLDC	\$8.3m	\$4.15m	\$4.15m	\$0

NLTP PERIOD	PROGRAMME COMPONENT	PARTNER LEAD	TOTAL CAPITAL COST	FUNDING COMMITMENTS		
				QLDC	NZTA	THIRD-PARTY
	C7 - Lake Hayes Estate to Shotover Bridge	QLDC	\$1.6m	\$0	\$1.6m	\$0
	A8 - Lake Hayes Estate to Frankton - PHYSICAL WORKS	QLDC	\$4m	\$3.5m	\$0	\$500k
Sum-Total:			\$26.01m	\$10.45m	\$15.15m	\$500k
Package 1 Total Programme Costs:			\$39.41m	\$10.54m	\$27.87m	\$1m

## 12.3. Project Revenues and Third-party Contributions

No revenue streams have been identified from the operation of the preferred network. Therefore, no detailed analysis for project revenues has been undertaken.

There are potential minor contributions to the WATN as outlined in Table 49 below.

**Table 49: Potential Third-Party Contributions**

THIRD-PARTY	SCOPE	POTENTIAL CONTRIBUTION
Remarkable Ski Field	There is potential for a financial contribution to be made by Remarkables Park Ltd to contribute to the proposed pedestrian/cyclist bridge across the Kawarau river for route A8. Upgraded power facilities are required to the ski field and there is the option to provide such services via the new bridge.	\$0.5m. Moderate probability of funding. Additional engagement with stakeholder will be required at pre-implementation stage.
Utilities Services Providers	There is potential for a financial contribution to be made by utilities service providers for the proposed pedestrian/cyclist bridge across the Kawarau river for route A7.	\$0.5m. Moderate probability of funding. Additional engagement with stakeholder will be required at pre-implementation stage.

## 12.4. Financial Risk

An assessment of risks associated with funding and cost has been undertaken to identify the major areas of financial risk for the project. A Risk Register summarising the main findings of this analysis, as well as other risks associated with the project, is attached in Appendix M.

The five areas of highest financial risk are outlined in Table 50 below.

**Table 50: Identified Financial Risks**

RISK TITLE	RISK COST RANGE APPLIED (\$M)
A lack of available funding for WATN resulting in a lower cost design leading to poorer outcomes and the need for a greater level of maintenance.	\$0.5m-\$2m

RISK TITLE	RISK COST RANGE APPLIED (\$M)
Lack of competent, available contractors and resources to deliver the WATN leading to additional resourcing and an increase in programme costs.	\$0m-\$1m
Collecting detailed ground survey information (LiDAR) will require additional funding and time allocated prior to pre-implementation phase. Timely sourcing of survey data is required to avoid delay to detailed design phases and construction.	\$0.1m-\$0.5m
There is a threat that the consenting process causes opposition from the public and private organisations during pre-implementation. There is a threat that this adds unforeseen costs to programme delivery.	\$0.1m-\$1.5m
Competing funding priorities will lead to under-resourcing, threatening routes delivered in later funding periods.	n/a
Unforeseen construction challenges may drive up costs, extend timeframes or reduce product quality.	\$0.5m-\$5m

## 12.5. Affordability and Cash Flow

The expected estimate for Package 1 is estimated to be \$39.64m. This is a large and complex project which is anticipated to be delivered over a 10-year time horizon. The staging of the project provides the flexibility to deliver the project within the affordability constraints of the National Land Transport Fund (NLTF).

In the short term, funding needs to be identified and allocated for routes up to the 2024 period for NZTA allocations to be confirmed and approved. Table 51 summarises the WATN project costs proposed for each NLTP funding period. Table 52 summarises the expected estimates and cashflow over a 5-year profile showing proposed funding commitments between project partners.

**Table 51: Expected Costs by NLTP Funding Period**

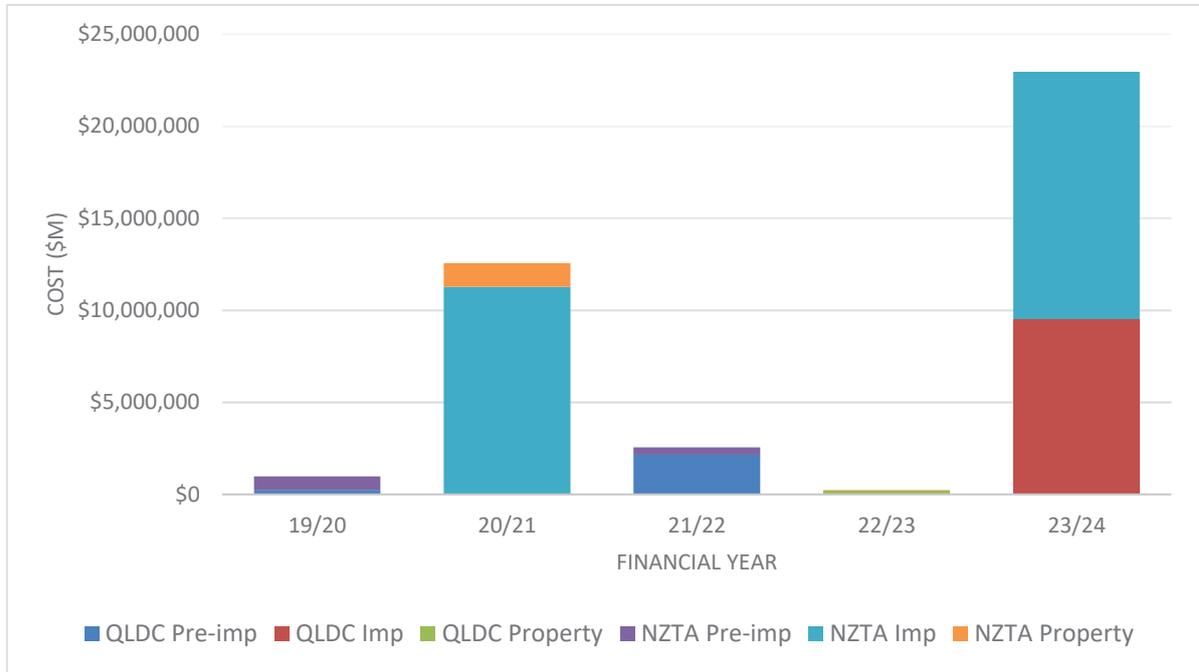
NLTP FUNDING PERIOD	PRE-IMPLEMENTATION COSTS	IMPLEMENTATION COSTS	PROPERTY COSTS	TOTAL
2018-2021	\$978k	\$11.28m	\$1.28m	\$13.54m
2021-2024	\$2.55m	\$22.97m	\$240k	\$25.76m

**Table 52: Preferred Network Cashflow Summaries**

FINANCIAL YEAR	QLDC			NZTA			TOTAL COST (\$M)
	Pre-imp	Imp	Property	Pre-imp	Imp	Property	
19/20	\$243k	\$0	\$0	\$735k	\$0	\$0	\$978k
20/21	\$0	\$0	\$0	\$0	\$11.28m	\$1.28m	\$12.56m
21/22	\$2.15m	\$0	\$0	\$403k	\$0	\$0	\$2.55m

22/23	\$0	\$0	\$205k	\$0	\$0	\$35k	\$0.24m
23/24	\$0	\$9.52m	\$0	\$0	\$13.44m	\$0	\$22.96m

Figure 62: Package 1 - Cashflow Summaries



## 13. COMMERCIAL CASE

The commercial case outlines the proposal in relation to the shortlisted options outlined in the economic evaluation. The commercial case for the preferred network involves consideration of network delivery including its attractiveness to the market, affordability of delivery for the preferred network, and associated implications. The commercial case is underpinned by property and consenting strategies for the project. Procurement of professional design services and construction contractors will be undertaken by QLDC and NZTA for the relevant work packages funded by each partner outlined in section 12.2.

### 13.1. Procurement Approach

This section sets out a high-level approach to procurement. More detailed procurement plans are envisaged to be developed as part of future project stages when funding and cashflows have more certainty. To enable the project to move forward promptly this section does however include more detail on the suggested next stages of procurement for professional services and Stage 1 and Stage 2 physical works (Package 1).

The NZ Transport Agency's *Procurement Manual* identifies the obtainment of the greatest economic, social and environmental benefits for the lowest overall cost as key criteria for an effective procurement delivery model. Delivery of the entire WATN (Packages 1 and 2) is significant in terms of scale, with a number of proposed routes to be delivered over a 10-year period. Implementation of the overall project will require careful planning and execution to ensure its commercial success.

The QLDC procurement strategy has an overall emphasis on “value for money”<sup>30</sup>.

The commercial case is based on specific strategic outcomes and benefits, against which procurement options are assessed. The key considerations for procurement are as follows:

- The need for suitably skilled and experienced professional service providers given the scale and complexity of the project;
- Ensuring sufficient market competition to deliver value for money;
- Achieving clarity around scheme costs so that the project can be delivered with the available funding;
- Minimising further costs with respect to scheme design by ensuring whole of life value and appropriate quality;
- Obtaining contractor experience and input into the construction programme and design details to ensure project delivery is robust, achievable, incorporates innovation and sustainability;
- Obtaining contractor input into risk management and appraisals to capitalise at an early stage on opportunities to reduce risk associated with delivery and implementation; and
- Consideration for the procurement strategies of similar recent procurements such as the Christchurch Major Cycle Route programme.

Based on the funding splits identified in section 12.2, procurement approaches for pre-implementation and implementation phases have been identified for the two delivery partners (QLDC and NZTA).

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<sup>30</sup> Sourced from: <https://www.qldc.govt.nz/assets/Uploads/Council-Documents/Strategies-and-Publications/QLDC-Strategy-for-the-Procurement-of-Transport-Infrastructure-Services.pdf>

### 13.1.1. Approach to Delivery – Implications for Procurement

As detailed in section 10.4 (implementation approach), the scoping and staging of particular routes in regards to construction will determine the viability of different approaches to procurement. Whilst the initial package for delivery by 2024 is estimated to be \$40m, a smaller scope package of routes has been identified for delivery by 2021 (Stage 1) with an estimated total of \$13m. These routes have been largely prioritised on the basis that they are ‘quick wins’, low complexity, and target specific LoS issues on the existing network. All routes being constructed as part of Stage 1 are being delivered by NZTA as the sole delivery agent. In Package 1, the majority of the larger and more complex construction projects are within Stage 2 (2021-2024) with routes intended to be delivered by both delivery partners.

To better align with the funding constraints of the NLTP, costs associated with pre-implementation and implementation phases have been separated for some routes. As part of Package 1, this relates to routes A8, C2, C3.

### 13.1.2. Christchurch Major Cycle Route programme procurement

Similar recent procurement exercises, specifically the Christchurch Major Cycle Route (MCR) programme, have been considered in the evaluation of a preferred procurement approach.

The MCR project procured two professional services consultant teams and a panel of six physical works contractors consisting of three ‘Tier 1’ and three ‘Tier 2 contractors’.

For professional services, the Council engaged with the consultants indicating there was too much work for one consultant and a collaborative team approach was required. The Council subsequently awarded two work packages to the top two consultant teams. The remainder of the projects were then negotiated with the two teams based on performance, appropriate resources, and professional fees.

The physical works contractors were advised that three Tier 1 and three Tier 2 contractors would be engaged once designs were ready for pricing. Tier 1 were the larger contractors that could manage larger scale more complex projects, such as challenging traffic management requirements, and signalised intersections. Tier 2 contractors were smaller companies working on lower risk greenfield type projects with works in parks and reserves and/or low volume streets. Tier 1 projects were typically split into \$5M packages and Tier 2 projects up to \$1M.

### 13.1.3. Pre-implementation Procurement Options

NZTA guidance advises the use of the following procedures in the procurement of professional services:

- Direct appointment
- Lowest price conforming
- Purchaser nominated price
- Price Quality Model
- Quality based

Table 53 outlines the proposed procurement approach to pre-implementation for QLDC and NZTA.

**Table 53: Proposed Pre-implementation Procurement Approach**

PARTNER ORGANISATION	PROPOSED APPROACH
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<p>QLDC NZTA</p>	<p>It is recommended that QLDC and the NZ Transport Agency procure its professional services provider for their relevant work packages during the pre-implementation phase through its standard procurement processes. In this case this would be using a Transport Agency approved procurement Price Quality Model approach. Given the nature of the key risks; particularly those relating to stakeholders, Iwi and the existing public and community interest in the existing trail network, it is recommended that a high weighting is placed on quality to manage price/ quality trade-offs and attract the right suppliers to the project. A focus on quality is also appropriate in incorporating innovation and sustainability into design.</p> <p>For the procurement of Stage 1 detailed design, it is recommended to engage a single consultant due to the size of the Stage 1 routes. This would enable consistency, quality design, and constructor inputs for innovation and sustainability and allow specialists to participate as sub-consultants.</p> <p>For future stages, the Stage 1 arrangement could incorporate performance incentives, or a different approach could be considered such as the Panel arrangement described above for the Christchurch MCRs programme. This may provide a more flexible approach and ability to adapt to the market conditions at that time.</p>
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### 13.1.4. Implementation Procurement Options

As stated above, more detailed procurement plans are to be developed as part of future project stages.

The delivery partners have several options for procurement as outlined in NZTA’s Procurement Manual. Three approaches for procurement and delivery are potential solutions to deliver value for money, each of which has its own benefits and risks:

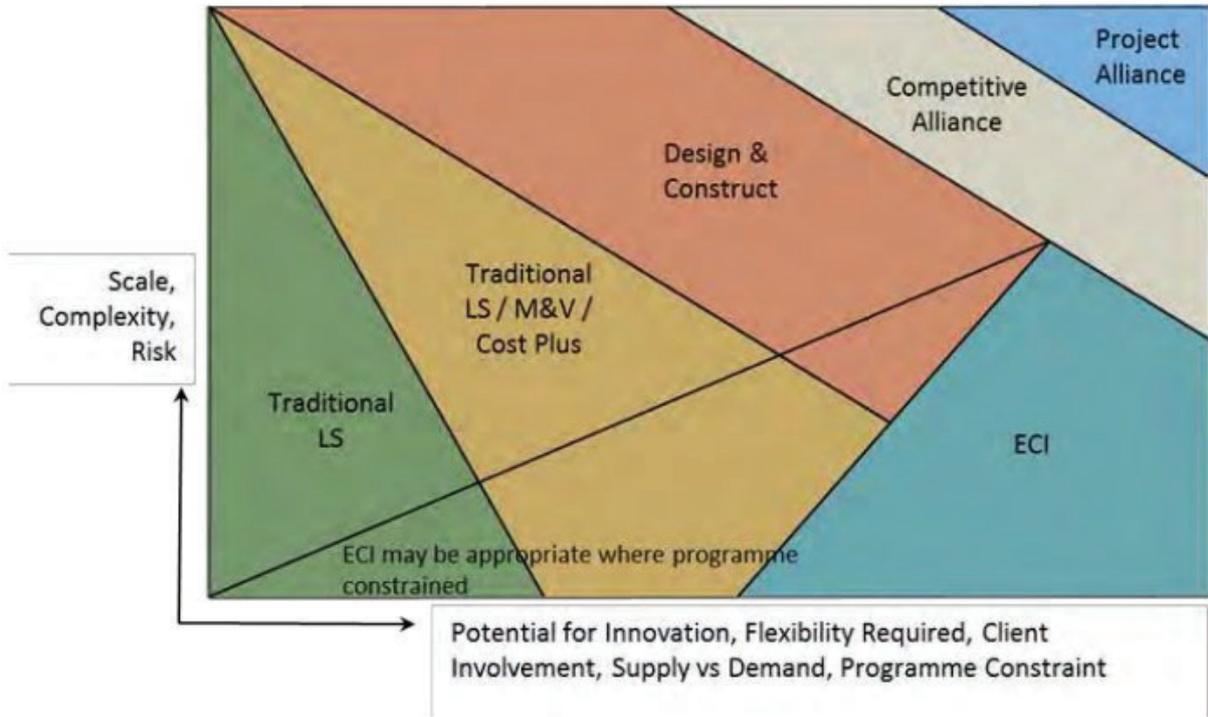
- Staged – traditional;
- Design and build; and
- Supplier panel.

Table 54 provides an assessment of these delivery models against the characteristics of WATN and considering NZTA guidance through the *Procurement Manual* has been undertaken to determine the appropriate delivery model and to ensure consistency with national guidance. Procurement options can be assessed on the severity of scale and risk against the potential for innovation and flexibility required (Figure 63). WATN is assessed to be low on both axes favouring a traditional, separated detailed design and construction approach.

WATN’s defining characteristics and market appeal are to a number of factors including:

- The scale of the active travel network identified as Package 1 is estimated to be \$39.64m;
- Staged delivery provides flexibility in the future if funding constraints arise;
- Despite potential environmental constraints and access issues on some routes, project delivery overall involves relatively low construction complexity and should be reasonably attractive to the market for suitably experienced contractors;
- Work packages can be tendered in a way to ensure consistency in construction, which is generally more attractive to contractors;
- The majority of risks associated with delivery lie in the planning, design and stakeholder engagement phases, which will continue to be owned by QLDC and the NZ Transport Agency; and
- Implementation will involve generally well-defined engineering challenges and does not involve significant traffic management to keep the network operating effectively.

Figure 63: Delivery model selection diagram



WAKATIPU ACTIVE TRAVEL NETWORK CHARACTERISTICS		STAGED – TRADITIONAL	DESIGN AND BUILD	SUPPLIER PANEL
<b>Scale</b>	Large (Package 1 & 2) In excess \$130m for entire network Staged delivery	+	++	++
<b>Complexity</b>	Low level of complexity in relation to construction Environmental and topographic constraints are higher	++	++	++
<b>Innovation potential</b>	Limited opportunities for innovation mostly focussed around some constructor inputs into design details and sustainable use of recyclable materials	++	++	++
<b>Timing and urgency of the activity</b>	Stage 1 routes are aiming for construction by 2021 and have a higher urgency Detailed design required for stage 1 works in 2020 to align with current NLTP period	++	+	-
<b>Supplier market conditions</b>	Strong local supplier market due to high growth in region	++	-	++
<b>Risk profile</b>	Low risks associated with construction. Medium risks related to land acquisition and lwi. Risks associated with detailed design due to lack of detailed LiDAR and topographical data Medium level of risk associated with traffic management around town centre works and Frankton to Queenstown connection	+	-	+

**Table 54: Delivery model evaluation**

### 13.1.5. Proposed Implementation Procurement Approach

The initial preference is to adopt a Traditional approach to procurement of construction services for Stage 1 routes (2018-2021) with opportunities to utilise lessons learnt from Stage 1 and consider a Supplier Panel for routes being delivered post-2024 (Package 2). A traditional method is appropriate for the immediate projects in the 2018-2021 NLTP period given the complexity, innovation opportunities, low risk and the need for prompt delivery. This procurement should incorporate some constructor involvement or review in the design development and in the consideration for sustainability (in particular use of recycled materials).

A supplier panel for Stage 2 should be considered as an individual procurement approach may not provide an efficient procurement process for works packages over this significant portfolio.

A Design and Build (D&B) approach is generally used for large complex projects and was ruled out as the WATN routes within Package 1 are reasonably small in scale, low risk, and are well defined. Therefore, it is viewed that a D&B approach will not provide significant value for money benefits over a traditional approach.

A supplier panel model was viewed as inefficient for routes targeting delivery prior to 2024 given the short construction timeframes required. However, a Supplier Panel may be considered for the subsequent NLTP periods.

Table 55 outlines the approach to procurement of implementation services, with further rationale provided of its advantages over other methods.

**Table 55: Proposed Implementation Procurement Approach**

PARTNER ORGANISATION	PROPOSED APPROACH
QLDC NZTA	<p>The recommended approach for QLDC and NZTA is to use a traditional staged approach to the procurement of construction services for routes within Stage 1 (2018-2021) of Package 1. A traditional delivery model will allow the project to begin construction as early as possible and will therefore meet the targeted 2018-2021 NLTP timeframe for delivery. It will also allow for a higher level of involvement from QLDC and the NZ Transport Agency.</p> <p>In the development of detailed procurement plans during the pre-implementation stage for Stage 1, further consideration should be given to how the \$13m capital costs will be packaged to suit the local supplier market and ensure value for money. It should also consider using a Price Quality and three-stage procurement process (Expression of Interest, Statement of Interest and Ability, Request for Tender) with prequalified contractors. If the local suppliers are not well represented on NZTA’s prequalification register then consideration should be given to open tendering.</p> <p>For routes being delivered in Stage 2 of Package 1 there is the opportunity for QLDC and NZTA to use a shared supplier panel in procurement of construction contractors once formal delivery relationships have been established as part of Way to Go. This approach has the following benefits:</p> <ul style="list-style-type: none"> <li>• Supplier panels can be established to ensure that there is a broad mix of experience and skills to draw from;</li> <li>• Construction work can be tendered based on geographic basis which is potentially more attractive under a panel approach;</li> </ul> <p>It is noted that it would be beneficial to engage construction expertise to inform the design process with regards to innovation and sustainability. It may also be beneficial to procure on-road, off-road, and town centre works in separate packages to suit the range of capability in the local supply market.</p>

## 13.2. Commercial Opportunities

Early engagement with land owners and commercial businesses has highlighted opportunities for third-party contributions to development and construction. Table 56 outlines the commercial opportunities that have been identified with some work packages.

**Table 56: Identified Commercial Opportunities**

ROUTE	ITEM	NOTES
A7 Jack’s Point to Frankton	Proposed Kawarau bridge (Kawarau Falls) -	The District Plan is currently being reviewed, with mediation is expected to occur in November – December 2019. One of the matters arising is utilities and capacity for growth in the area.

ROUTE	ITEM	NOTES
	opportunity for funding	<p>There are several appeals to the Jacks Point zoning which include several development opportunities (i.e. Coneburn, Hanley Farm). There are schematic plans in place for a utilities corridor across the river and several utilities providers have indicated they would consider the laying of cables/ pipes if a trench is dug and/or river traverse is established. The relevant utilities providers are:</p> <ul style="list-style-type: none"> <li>• Rockgas</li> <li>• Aurora</li> <li>• Powernet</li> <li>• Chorus</li> <li>• Potential QLDC Water and Wastewater pipes</li> </ul> <p>Timing is likely to be driven by the developers however, it is understood that QLDC have presented the schematic plan to approvers with a hope that the corridor would be established in 2022. Utilities providers have indicated that they would prefer this to happen sooner and that 2021 would be a more appropriate target. There is support for a cycleway/ walk bridge to be incorporated on top of the services and it is proposed that some funding for the bridge will be contributed by service providers.</p>
A8 Lake Hayes Estate to Frankton	Proposed Kawarau bridge (Lake Hayes Estate) - opportunity for funding	<p>There is an opportunity for part-funding of the proposed new pedestrian/cycle bridge opposite the Lake Hayes Estate and forming part of the A8 route (Lake Hates Estate to Frankton). Discussions with the Remarkables Park Ltd have highlighted their requirement for additional or thicker electricity cabling across the river to support greater power needs at the ski field. It is envisaged that construction of the proposed briefed could occur at a similar time and that the relevant cabling can be incorporated into bridge construction.</p>
A3/A4 State Highway 6 to Frankton Track	Level of service improvements along Ladies Mile	<p>Housing Infrastructure Fund (HIF) funding has been approved for the proposed Ladies Mile residential development located east of Frankton along both sides of Ladies Mile (SH6), between the Shotover River and Lake Hayes. The development would result in approximately 579 residential units plus a mixed-use retail and commercial precinct, parks and reserves, walking and cycling trails, creation of additional footpaths and bus stops through the development.</p> <p>Capacity and safety issues for Howards Drive have been highlighted as part of the project, which is the only access to the Lake Hayes Estate residential development. Development down Stalker, Lower Shotover and Tucker Beach Rds requires corridor and access improvements. There is an opportunity for the infrastructure improvements associated with the Ladies Mile HIF project to contribute to the proposed LoS improvements of routes A3/A4. Specifically, the underpasses that cross SH6 which is required to service the north side of the highway on Ladies Mile will be funded through the Ladies Mile Housing Infrastructure Fund.</p>
A2 Shotover Bridge to State Highway 6	Connectivity between Jim's Way/Quail Rise and SH6	<p>The upzoning of the area around the Quail Rise development has enabled HIF funding for construction and development of additional roads and connections within the area. Quail Rise South is a proposed residential development located on the flat land bordering the existing Quail Rise residential area and SH6. The existing Quail Rise residential area is accessed via the SH6 and Tucker Beach Road intersection and is bounded by SH6 to the</p>

ROUTE	ITEM	NOTES
		south and the Shotover River to the north and east. HIF funding will enable construction of a new road linking Ferry Hill Drive to the newly formed roundabout at the junction of SH6 and Hawthorne Drive. Opportunities may exist to utilise HIF funding to provide connectivity between the proposed Quail Rise development works and the construction of the A2 alignment. Specifically, the section of Route A2 that runs along the north side of SH6 is likely to be either entirely constructed or part-funded by developers. The underpass that will cross SH6 in the vicinity of Hawthorne Drive is to be funded from the Quail Rise Housing Infrastructure Fund.

### 13.3. Risk Allocation and Transfer

Generally, risk is allocated to the party best resourced to manage and influence that risk, subject to value for money considerations. In the pre-implementation phase, it is expected that the majority of the technical risks associated with obtaining statutory approvals will be transferred to the professional service providers on award with the exception of the risks discussed further in the Management Case. The transfer of risk for detailed design and implementation phases will be determined in those phases. Risk Management is further discussed in the Management and Financial Cases.

The key risks for implementation of the recommended WATN at this time are detailed in Table 57. With the benefit of identifying the immediate threats to the project, key risks have also been identified for routes being delivered in the 2018-2021 period (Package 1 Stage 1). These are outlined in Table 58. A more thorough overview of the project risks as they relate to each route is outlined in the Risk Register as Appendix M.

Table 57: Key Risks Identified for WATN

RISK	DETAIL
<b>Property/land purchase</b>	There is a risk that property and land required to progress construction does not fit within the timescales for construction. This is a shared risk between QLDC and NZTA. This risk is mitigated through completion of an effective property acquisition strategy and early engagement with land owners.
<b>Insufficient ground survey data</b>	Poor or insufficient ground LiDAR data has been identified in the project area. Sufficient time and funding will need to be allocated to this process prior to pre-implementation phase.
<b>Funding risk</b>	There is a threat that the project does not obtain funding for future stages. This risk increases uncertainty for stakeholders and property owners. Without this funding commitment, implementation timing is not able to be confirmed. This risk can be mitigated by being clear with stakeholders that implementation funding at this time is not yet confirmed.
<b>Technical challenges</b>	There is a large threat that poor ground conditions and terrain result in additional land requirements to allow for flatter slopes or may require more expensive construction solutions. This can be mitigated by undertaking further ground investigations at the detailed design stage.

<b>Project costs</b>	There is a risk that project costs increase further at the next stage of design, where construction costs may change. Current control for this risk is to undertake revised cost estimates on indicative alignment and to better understand future project scope once robust ground models have been obtained.
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**Table 58: Immediate Risks Identified for Package 1 Stage 1 (2018-2021)**

ROUTE	RISK
A2 - Shotover Bridge to SH6	<ul style="list-style-type: none"> <li>Private landowners may not be accepting of land easement for the WATN and there is a threat that this will lead to poor connectivity</li> <li>Threat that the level crossing of SH6 does not provide a level of safety for pedestrians or cyclists using this crossing</li> <li>The existing alignment of Tuckers Beach Road is narrow and there is a pinch point which requires widening to allow for shared pathway to be integrated adjacent to the corridor</li> </ul>
A3 - SH6 to Frankton Track	<ul style="list-style-type: none"> <li>Safety risks for pedestrians and cyclists at the Gray Street/ SH6 intersection</li> <li>The proposed concept layout for newly formed roadway and campground has been provided by QLDC and may be subject to change as the design stages progress</li> <li>Public concerns and complaints about proposed design adjacent to Frankton commercial centre</li> </ul>
A7 - Jacks Point to Frankton	<ul style="list-style-type: none"> <li>Landowners unwilling to provide access across property for proposed pathway</li> <li>Threat that the Archaeological assessment identifies material artefacts on the site of the bridge location</li> <li>The path is isolated from public roads, residential areas and could present a perceived threat to social safety along the route.</li> </ul>
A8 - Lake Hayes Estate to Frankton	<ul style="list-style-type: none"> <li>Path and bridge causes disruption and potential impacts on this culturally significant Maori settlement area.</li> <li>The path is isolated from public roads, residential areas and could present a perceived threat to social safety along the route.</li> <li>Time delays due to land negotiations</li> </ul>

## 13.4. Payment Mechanisms

Payment mechanisms may be used to provide incentives to suppliers to achieve value for money over the length of the contract. This provides an incentive mechanism for suppliers, linking the value of work completed to a risk/reward framework. The following mechanisms could be used by QLDC and NZTA:

- **Fixed fee basis:** purchasing of goods and services according to a fixed fee.
- **Milestone payment basis:** making payments to the contractor based on key milestones and deliverables.

For Stage 1 projects targeting delivery prior to 2021, it may necessary to use bonus payments and liquidated damages for non-delivery. These mechanisms should be considered during pre-implementation phases.

## 13.5. Contractual and Other Issues

Contract management will be undertaken in accordance with the obligations set out in the relevant contracts and in accordance with QLDC and NZTA policies and procedures. The responsibility for managing delivery under the contract as well as supplier relationship management will be undertaken by the Project Manager, who will be responsible for developing a contract and relationship management plan in consultation with the successful supplier.

The supplier's performance will be reviewed in accordance with contract conditions, ensuring that all appropriate milestones, performance indicators and agreed deliverables are achieved. Quality standards and key performance indicators will be negotiated in each contract. Payment will be based on the supplier's successful completion of milestones as detailed in the contract.

## 13.6. Schedule

An indicative schedule has been produced for Package 1 Stages 1 and 2 programmes given the short timeframes to meet 2018-2024 NLTP funding periods. Following internal approvals by QLDC and NZTA and completion of a tendering period, it is envisaged that a designer can be appointed for pre-implementation by late 2019 or early 2020.

Critical components for successful delivery include ensuring ground survey LiDAR data is collected and provided prior to the pre-implementation phase. It would also be prudent to engage early on with landowners at this stage to identify any risks or issues that may delay implementation phases.

It is envisaged that pre-implementation for both Stages 1 and 2 can be delivered in parallel within the 2018-2021 NLTP period to take advantage of cost efficiencies and ensure that implementation phases for Stage 2 routes can begin immediately following approval of funding.

Assuming property purchase and/or land easement is completed satisfactorily, sufficient ground survey information has been taken, alongside funding and statutory approvals, physical work may commence for Stage 1 works by mid to late 2020. It is envisaged that physical works for Stage 2 would begin mid-2023 and finish in 2024.

Table 59 outlines an indicative delivery timeframe for delivery of Package 1.

Table 59: Indicative delivery schedule for Package 1

BRIDGE STAGE	2019				2020				2021				2022				2023				2024			
	Q3	Q4	Q1	Q2	Q3	Q4																		
Financial Year Quarter																								
Council approvals																								
NZTA approvals																								
RfP																								
Tendering period & evaluation																								
Appoint designer																								
Land entry agreements for survey																								
Survey																								
Early landowner engagement																								
Detailed design																								
Land/property acquisition																								
Consenting																								
Engagement																								
Construction																								

Stage 1
Stage 2

## 13.7. Property Strategy

A property strategy has been undertaken to facilitate the identification of property and land acquisition required to develop the preferred network. The strategy provides the evidence and case for the acquisition of either fee simple or easements over identified parcels of land for development of routes identified for Package 1 within the delivery strategy.

The Property Strategy provides greater detail around land/property acquisition and is detailed in Appendix N.

### 13.7.1. Affected Properties

The proposed alignment of routes being delivered as part of Package 1 (Stages 1 and 2) affect an estimated 60 properties. In respect to the property acquisition cost estimates, the following assumptions have been made:

- For Routes A2, A3, A7 and A8 in Stage 1 Package 1, and for Route C6 in Stage 2 of Package 1, it is assumed that only Easements will be acquired for the trail (except one property on Route A7 where the Fee Simple may be required where that landowner owns land underlying Coneburn Special Housing Area and adjacent to it).
- For Route C5 in Stage 2 of Package 1, it is assumed that Fee Simple will be required as the trail adjoins the existing road.

### 13.7.2. Costs

Estimated costs relating to land acquisition are estimated to be \$1.55m. At the detailed design stage the property requirements will be looked at more critically to properly determine what land or interest is definitively required for the project and the cost estimate will be modified accordingly.

### 13.7.3. High Risk Properties

Most properties acquisitions are of minimal nature comprising narrow strips of land and can be resolved via simple fee purchase or easements. However, a high-level assessment of property acquisition risks has highlighted the following high risk properties associated with delivery of Package 1 routes detailed in Table 60:

**Table 60: Package 1 - High Risk Properties**

ROUTE COMPONENT	RISK DETAIL
A2 - Shotover Bridge to SH6	The property owner located at the end of Jim's Way may not be accepting of land easement for the WATN behind their property and there is a threat that this will lead to poor connectivity
A7 - Jacks Point to Frankton	Landowner who owns land underlying Coneburn Special Housing Area and adjacent to its may not be accepting of land easement/purchase for the WATN and there is a threat that this will lead to poor connectivity
A8 - Lake Hayes Estate to Frankton	Path and bridge causes disruption and potential impacts on this culturally significant Maori settlement area.

The Property Strategy strongly recommends early engagement with these affected landowners as soon as land requirements are finalised at detailed design phase to ensure that implementation phases can be delivered on time and in proposed budgets.

## 13.8. Consenting Strategy

A consenting strategy has been prepared in accordance with the 'New Zealand Transport Agency Consent Strategy Approvals and Pathways Guide'. Key features of the preferred network requiring specific consideration in the consenting strategy are fully detailed in Appendix O.

# 14. MANAGEMENT CASE

The management case addresses what needs to be done and by whom, setting out the planning required to ensure successful delivery, effectively coordinate change and manage project risks. This section considers the arrangements necessary to realise benefits and allocates project governance, roles and responsibilities. Implementation of the WATN will be developed and delivered by the key partners and stakeholders including W2G and QTT.

## 14.1. Governance and Management

Over the next 10 years, the investment partners (QLDC, NZTA, QTT) are collectively seeking to deliver a significant scale of investment in the WATN. The scale of WATN demonstrates a real need to work in a highly integrated way to achieve the vision for the active travel network and ensure that network is a success. The existing partnerships between QLDC, ORC, NZTA and QTT through Way to Go represent a unique opportunity to integrate the coordination and future management of the WATN.

### 14.1.1. Partner and Stakeholder Engagement

A workshop with project partners and stakeholders was held on 6<sup>th</sup> August 2019 to identify, amongst other things, the key objectives and criteria for governance, highlight any challenges, and agree a potential approach to future trail governance. This workshop identified several common themes for establishing an effective governance approach:

- Establishing a shared vision, mutual trust and a clear understanding of each other's roles and responsibilities;
- Coordinated management to ensure that trail users experience clear and consistent signs, good information and access to a network of trails that provide variety, enjoyment and challenge.
- A governance body at trail level that has a clear strategy, leadership and direction.
- Having a dedicated resource to maintain and develop the WATN.
- Involvement of local and regional councils in the management structures.
- Clear roles and responsibilities of the project partners, and clarity about partners' commitment to long-term funding.
- On-going marketing and promotion of the WATN through construction stages to promote the network to the wider community and regionally.

Given the short timeframes for pre-implementation and implementation for routes targeting delivery within the 2018-2021 NLTP period, it was agreed that a proposed governance approach should reflect the different priorities within the short and long-term and be responsive to any challenges or risks that arise through pre-implementation and implementation phases.

### 14.1.2. Short-term Management/Delivery (2018-2021)

In order to facilitate delivery and successful outcomes for routes in the short-term (Stage 1), it is envisaged that routes will be delivered and managed under the normal mechanisms within each partner organisation. In practise, this approach allows for separate delivery and management of trails between QLDC, NZTA, and QTT based on the routes and trails that each funding partner is delivering. It is envisaged that collaboration in pre-implementation stages will be undertaken between the partner organisations to achieve cost efficiencies and ensure consistency in delivery. For WATN, this may take the following approach:

- QLDC, NZTA, and QTT deliver and manage their own respective trails that each partner is funding.
- A steering group or other similar entity is established to provide advice and assist with coordination and communication.

- QLDC, NZTA, and QTT may choose to have Memorandum of Understanding (MOUs) or other agreements to coordinate ongoing management.
- It is envisaged that no exclusive funding exists for governance of WATN.

### 14.1.3. Long-term Management/Delivery (2021+)

Over the long-term, it is envisaged that more formal relationships will need to be established between QLDC, NZTA, and QTT as more of the WATN is completed. This will allow for more effective collaboration of activities, including maintenance and ongoing marketing of the WATN. This could be carried out in in different ways, including:

- Development and implementation of an MOU between QLDC, NZTA, and QTT to manage the WATN. Each partner may still maintain responsibility for their own trails but is directed by the overarching MOU and steering group.
- Development of an MOU between QLDC, NZTA, and QTT for one partner to take overall lead in governance and management of the WATN. A steering group committee provides an overarching decision-making body with representatives from W2G and QTT.
- An extension of the existing Trust model that exists currently with QTT. Internal and external funding is to be provided to QTT with the purpose of overall governance and management of the completed WATN. QTT would require staff and other resources and have a board that includes representatives of the various trail managers.

Table 61 below provides a comparison of the strengths and weaknesses of each approach and what its implications are for WATN.

**Table 61: Comparison of Governance Approaches**

MODEL	APPLICATION TO WATN	STRENGTHS	WEAKNESSES
Agency Management	Separate management and delivery of routes by QLDC, NZTA, and QTT based on the respective routes being funded by each partner.	<ul style="list-style-type: none"> <li>• Easily understood</li> <li>• Allows elected members to make/ influence decisions</li> <li>• Responsibilities over trail governance are clear</li> <li>• Provide direct line of sight for community groups and local stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Inconsistent approach across Wakatipu</li> <li>• Difficulty in attracting capital against other priorities</li> <li>• Can lead to silo approaches</li> <li>• User groups deal with different agencies over similar issues</li> </ul>
Partnerships (MOU)	Development and implementation of an MOU to allow a lead partner responsibility of governance and management of WATN. This is likely to be either QLDC or QTT. Additional guidance and leadership will be provided through a steering group with representatives from Way to Go and QTT.	<ul style="list-style-type: none"> <li>• Simple to implement; not far from status quo</li> <li>• Brings some level of coordination and ownership of the framework</li> <li>• Allows for existing legislative powers to continue</li> </ul>	<ul style="list-style-type: none"> <li>• No guarantee of funding for implementation</li> <li>• No dedicated resources for overall implementation</li> <li>• Partners may choose not to follow other members</li> </ul>
Partnerships (one delivery agency)	An MOU is developed and implemented to provide overall governance and	<ul style="list-style-type: none"> <li>• Coordinated and consistent delivery</li> </ul>	<ul style="list-style-type: none"> <li>• One delivery partner may not have the physical</li> </ul>

	management responsibility to QLDC.	<ul style="list-style-type: none"> <li>• Funding committed to one agreed strategy</li> <li>• Dedicated resources</li> </ul>	<p>presence, local knowledge to address the challenges arising out of all routes</p> <ul style="list-style-type: none"> <li>• May not increase the funding required overall implementation of the entire network</li> </ul>
Partnerships (Trust)	QTT takes overall governance and management responsibility for WATN	<ul style="list-style-type: none"> <li>• Can attract funding external to traditional sources</li> <li>• Can be more commercial in approach</li> <li>• Brings in new and complimentary skills</li> <li>• Provides a single point of focus to the network</li> </ul>	<ul style="list-style-type: none"> <li>• Some stakeholders may not immediately see the benefits</li> <li>• Decisions made by a trust or board, not by officials or elected members</li> </ul>

## 14.2. Proposed Governance Approach

Based on the objectives identified by stakeholders along with an assessment of various trail governance approaches used in NZ, Figure 64 outlines a proposed governance structure for construction and ongoing trail management for Package 1 routes up to 2024 that will enable an integrated approach to trail management. This draws upon evaluation of the use, benefits, governance and management of the Great Ride trails in the New Zealand Cycle Trail conducted in 2016<sup>31</sup>. The proposed governance approach is based on close collaboration between the project partners at a steering group level in the short-term, particularly during pre-implementation phases where stakeholder, Iwi, and landowner engagement is critical. Implementation and construction of trails is delivered separately by the partner organisations, with input from the steering group. Maintenance and ongoing operation is delivered by one organisation, delivered under an MOU. The existing marketing arrangements of trails can be extended to cover WATN.

Figure 64: Proposed Governance Approach

<sup>31</sup> MBIE 'NZ Cycle Trail Evaluation Report 2016'

# Wakatipu Active Travel Network Steering Group



Pre-implementation



**Package 1**  
Stages 1 & 2  
Detailed design, consenting, property

Wakatipu Active Travel Network SSBC



Queenstown Trails Trust Trail Network  
Delivered under separate business case

Package 1 Stages 1 & 2 Complete  
**Wakatipu Active Travel Network**

Memorandum of Understanding



## 14.3. Roles and Responsibilities

Table 62 outlines the key roles and responsibilities for project partners in relation to future management of WATN.

Table 62: Organisation Key Roles and Responsibilities

	QLDC	NZTA	ORC	QTT	NOTES
Leadership and governance	X*	X*			QLDC and NZTA will provide overall leadership and governance for implementation of the WATN. While strong leadership is required, success relies on genuine cooperation between project partners. Without strong collaboration with QTT, there is a weakened management case.
Planning and research	X*	X	X	X	Facilitated by QLDC with involvement from all partners. W2G and QTT to meet quarterly to review progress. QTT would be encouraged to monitor levels of trail use (via tack counters or other means) and participate in research into visitor satisfaction with the trail network.
Access negotiation	X*	X*		X	A shared responsibility between QLDC and NZTA with wider input and assistance from QTT when required. Its envisaged that QLDC and NZTA would focus on the relevant trails they each partner is funding and delivering. Input and advice from QTT may be needed on routes that involve the QTT trail network. Council may also seek assistance from QTT on improvements to utility walking and cycling within residential areas. Where routes converge between local roads and arterial state highways, collaboration between QLDC and NZTA will be required.
Land acquisition	X*	X		X	Engagement with land and property owners will be led by QLDC. NZTA will be an essential partner in negotiations and acquisitions of land adjacent to or parallel to State Highways. In certain scenarios assistance may be required from QTT where existing relationships exist or work has already been undertaken to engage with property owners.
Marketing and information	X*		X	X*	Marketing and engagement activities should be led by QLDC with assistance from ORC and NZTA as key project partners. The QTT can play a key role in coordinating marketing and information on the trail network as well through continued publication of trail guides, maps, posters and website material.
Maintenance and operation	X*	X*			Trail maintenance is expected to be delivered by both NZTA and QLDC. It is envisaged that routes that fall within existing State Highway boundaries will fall into the maintenance schedules of NZTA and those that are within local road corridors will be led by QLDC. Maintenance for the rest of the network may be delivered by one lead partner organisation. A potential option is utilise the existing maintenance framework overseen by QLDC, either directly or through a maintenance sub-contractor. NZTA would remain as a co-investor in maintenance activities.

X\* indicates lead organisation

## 14.4. Ongoing Engagement

It will be important to ensure that engagement continues with the wider community, Iwi and stakeholder groups continues throughout pre-implementation and implementation phases of the project. The practices and steps outlined in Communications and Engagement Report in Appendix C provide a baseline for ongoing engagement for the project.

### 14.4.1. Mana Whenua

Mana whenua hold strong cultural associations within the Wakatipu Basin and have been active participants in identifying areas of cultural significance and informing design development. Mana whenua engagement is ongoing, facilitated by the project partners. Cultural recognition throughout the development of the WATN, including naming, is sought and will be explored in more detail during the detailed design phases.

### 14.4.2. Wider Community

Delivery of the WATN, combined with marketing initiatives, is expected to renew interest in the existing network of trails in the Wakatipu Basin amongst locals and visitors. This presents an opportunity to project partners to tell a coordinated story around development of the active travel network, how it complements the existing network of trails managed by QTT, how stakeholder engagement and the community has shaped its development, and how this approach will continue in later stages of the project.

## 14.5. Assurance and Acceptance

The final Business Case will be subject to internal reviews by key partners and stakeholders. Project assurance ensures that the projects acceptance criteria as developed by NZ Transport Agency are satisfied, as well as other criteria by QLDC, and that the project delivers on its stated benefits.

An independent Road Safety Audit will be carried out on the detailed design for each work package in accordance with the NZ Transport Agency's Road Safety Audit Procedures for Projects – Guideline (Interim release May 2013). Key stakeholders agreed a Road Safety Audit (RSA) was not required for this SSBC stage. The RSA exemption form is attached in Appendix P.

The key project assurance deliverables for the pre-implementation and implementation are set out in Table 63.

**Table 63: Project Assurances During Pre-implementation and Implementation Stages**

ITEM	COMPONENT	DESCRIPTION	OWNER
Funding	Approval from QLDC and NZ Transport Agency	Internal QLDC approval and NZ Transport Agency approval required	QLDC/NZTA
Safety audit	Detailed & post-construction design audit	Detailed Design Audit to be completed and issues resolved. Additional audits will be required if tenderers are required to submit designs with their tender. Post-Construction Safety Audit to be completed following completion of each stage of the Project.	QLDC/NZTA

ITEM	COMPONENT	DESCRIPTION	OWNER
System Optimisation Review		Preliminary Design and Detailed Design review to ensure that the design does not introduce significant or severe operational risks which could undermine the stated benefits of the project. Additional audits will be required if tenderers are required to submit designs with their tender.	NZTA
Property	Property/land acquisition complete	Internal approvals required and land/property owners' consent	QLDC/NZTA
Legal and planning review	Consenting review complete	Testing the robustness of the consenting strategy and the assessments in an RMA context to identify if there are any key weaknesses that would affect the ability to gain consents for the project	External consultant
Cost estimate peer review	Estimates check	Independent review by an external consultant to ensure consistent cost estimates.	External consultant
Economic evaluation peer review	Assessment of economic methodology and BCRs	Independent review by an external consultant to ensure robustness	External consultant
Detailed Design	Non-standard design elements	Elevated to System Design & Delivery – Operational Policy, Planning and Performance for initial approval	NZTA
	Innovative Solutions	System Design & Delivery to approve any new systems	NZTA
Tender Phase	Approval to advertise the tender	Internal NZTA (System Design & Delivery – Procurement) and QLDC approvals required	QLDC/NZTA
	Approval to award the tender	Internal NZTA (System Design & Delivery – Procurement) and QLDC approvals required	QLDC/NZTA
	Contractor appointed	Internal NZTA (System Design & Delivery – Procurement) and QLDC approvals required	QLDC/NZTA
Construction	Construction completed	Internal NZTA (System Design & Delivery – Procurement) and QLDC approvals required	QLDC/NZTA

## 14.6. Change Control and Issues Management

Risk management is an iterative process and should be developed alongside pre-implementation and implementation phases. Appropriate management lies in the assessment and level of impact a risk will impose on the project. Following workshops with stakeholders throughout development of the SSBC, the key outstanding risks associated with management and delivery of WATN are outlined in Table 64. It is evident that a large amount of unknowns could impact on project design and cost, and their magnitude is unknown at this point.

It is recommended that a change control and issues register shall operate as an addition to the Risk Register and track any merging issues that arise throughout the project life cycle. Change control and issues management will be undertaken in accordance with:

- NZ Transport Agency's Significance Policy;
- NZ Transport Agency's Corporate Risk Management Policy;
- QLDC's Risk Management Policy; and
- Specific conditions of the contract with suppliers/contractors.

Each issue should be logged in an issues register by the appointed external project manager and should be updated by them throughout the construction lifecycle. A separate issues register should be completed for each individual work package. The issues register should include the following information:

- Title and description of the issue;
- Date raised;
- Status (Open, Escalated, Transferred to Risk Register, Resolved);
- Primary Impact Area for the issue;
- Delegated Authority for closing out the issue;
- Issue Ownership, i.e. a project issue or outside the project
- Supporting Program Growth issue;
- Level of significance (in accordance with NZ Transport Agency’s Significance Policy);
- Whether the issue requires transferring to the Project Risk Register;
- Remedial action proposed to address the issue; and
- Date that the issue has been resolved.

## 14.7. Risk Management Planning

Identifying the major risks of the project at this stage is important for the continued successful management and delivery of WATN. It is important to recognise however that risks are dynamic, with new and unknown risks presenting themselves in later stages of the project. Effective management lies in an assessment of their impact and identifying the project partner responsible for addressing the risk. Risk will be managed in accordance with Z/44 – Transport Agency Minimum Standard for Risk Management.

The Risk Register is included as Appendix M. This risk register is an overall WATN Risk Register and describes the critical risks associated with each route. At detailed design stage, each work package will require their own respective risk register.

The key threats, risks and opportunities identified to date are outlined in Table 64.

**Table 64: Key risks identified to date**

RISK	DESCRIPTION	RISK SCORE	OWNER	TREATMENT STRATEGY
Property/land acquisition	There are risks associated with the acquisition of land/property required for construction. Delays and communication breakdown may affect timely construction and delivery of the network. Costs associated with acquisition or easement may exceed estimates or contingency.	Medium	QLDC/ NZTA	Identify potential landowner crossing points for early engagement. Develop contingency routes where negative response received. Investigate landowner future development intentions. Where future land development intentions are proposed QLDC to enforce new rules/ easements for pathway alignments.
Funding constraints	Future funding constraints may limit or scale down future work packages associated with WATN or lead to poorer quality infrastructure and levels of service for users.	High	QLDC/ NZTA	Stage WATN delivery by identifying highest priority links to be implemented first. i.e. routes prioritised that enhance safety, connectivity, deliverability (BCR) and where planned infrastructure works could provide cost efficiencies.

RISK	DESCRIPTION	RISK SCORE	OWNER	TREATMENT STRATEGY
Change in Government policy	A change in government priority or focus through the GPS may move later work packages to a lower priority for funding	Low	NZTA	Continue to make the case for WATN priority.
Change in Council direction	A change in Council representation may represent a risk to future funding and delivery of some routes.	Medium	QLDC	Continue to show value and benefit for the community and positively engage with a wide range of representatives.
Stakeholder relationships	Insufficient availability of key personnel and/or involvement of the correct personnel or change in personnel during the process.	Low	W2G/QTT	Good documentation from business cases. Identify and align decision makers with hold points and externally; ensure expectations and prior involvement are defined and documented. Provide clear communications on timeframes, review stages and delivery
Procurement	Lack of competent, available contractors and resources to deliver the WATN leading to a lack of market competition.	High	QLDC/NZTA	Allowing for contingency in costing through risk adjusted estimates. Utilise market sounding activities to determine severity of risk.
Construction	Noise and vibration from construction activities (e.g. rock breaking, material compaction) in close proximity to residents and other stakeholders.	High	QLDC/NZTA	Identify likely areas of concern and consider design options to mitigate. Temporary activity managed through early engagement and advanced communications. To be addressed as part of construction contractor's contract and construction methodology.
Economic assessment	The economic assessment of the preferred network relies on assumptions that may not eventuate or are overly optimistic/unoptimistic in their assessment.	Medium	QLDC/NZTA	Prior engagement with key project partners to agree parameters. Sensitivity analysis of the economic assessment provides greater confidence that the assumptions used are reliable.

## 14.8. Safety in Design

A Safety in Design (SiD) workshop has been conducted with key partners and stakeholders to understand and accommodate best practice Safety-in-Design methods for pre-implementation and implementation phases of the project. SiD enables the designs team at pre-implementation to consider how best to eliminate, isolate, or minimise the potential risks of DSIs throughout implementation of the network. A SiD review has been completed on the recommended network, and the SiD risk elements are presented in Appendix Q.

As the design progresses into detailed design, route specific SiD registers will be required. A SiD workshop will be held at the 50% design stage during pre-implementation to review the actions agreed at the concept stage, and to review the design at that stage to identify any new risk elements.

Some of the key risks identified across the preferred network that are relevant for SiD are:

- The impact of continued trail use and growth on the network, particularly on primary routes that are likely to attract commuters such as Frankton to Queenstown, Jack's Point to Frankton, and

Lake Hayes Estate to Frankton. On shared paths cyclist congestion may contribute to reductions in travel time reliability and crashes. It is recommended that this is reflected in SiD and that the design of paths be reviewed against predicted future use.

- As further highlighted in section 10.3, the introduction and uptake of micromobility modes and devices in the region may lead to use of the active travel network by modes that were not considered and reflected in the design and mitigation of risks. A combination of new users and different infrastructure requirements have the potential to lead to increased safety risks. It is recommended that growth and trends in micromobility modes are monitored alongside implementation phases and, in response to growth, design changes are accommodated.

## 14.9. Cost Management

The financial management shall be undertaken in accordance with the relevant NZ Transport Agency and QLDC procedures. As a minimum the consultant/contractor shall provide the following information to the QLDC and NZTA Project Managers:

- Budgeted cashflow (baseline and risk adjusted baseline);
- Value of work completed in the preceding month and contract to date (including rates and quantities for all items not listed as “lump sum” or “each” within the contract);
- Forecast value of work completed and revised cashflow through to project completion; and
- Exception reports outlining the reasons for not meeting the financial targets.

## 14.10. Post-Project Evaluation Planning

### 14.10.1. Lessons learned

Periodic reviews to evaluate the lessons learned as the project progresses will be undertaken at agreed times throughout the respective contracts and as part of the close-out reports for each project. It will be the responsibility of the QLDC and NZTA Project Manager to ensure that these reviews are completed with the respective suppliers.

### 14.10.2. Post implementation monitoring

Table 65 sets out the potential post-implementation monitoring assessment to determine the benefits of the project. It is anticipated that this will continue to be refined as design and construction phases begin.

## 14.11. Next Steps

This SSBC will be subject to internal reviews and approvals by QLDC and NZTA, which are targeting approval later in 2019. Following satisfactory approval and a tender phase for detailed design, appointment of a design consultant is expected by late 2019 or early 2020. It is envisaged that implementation phases for Package 1 Stage 1 routes will begin in mid-2020. A more detailed overview of the delivery programme is provided in Table 59.

Table 65: Post implementation monitoring regime

ACTIVITY OBJECTIVE	KPI	OUTCOMES	POTENTIAL MONITORING REGIME	ACHIEVED BY
To achieve better safety and security for users of the Wakatipu trail network	Survey responses referencing safety/security issues on the active travel network.	A reduction of users referencing insufficient safety/security issues on the WATN by 75% from baseline	Queenstown Trails Trust user satisfaction survey of users conducted after 1 years of implementation of Package 1 routes	2029
	User experience and satisfaction with network facilities.	An increase in users reporting satisfaction with WATN facilities and infrastructure by 50% from baseline	Queenstown Trails Trust user satisfaction survey of users conducted after 1 years of implementation of Package 1 routes	2029
To achieve an integrated and active travel network within the Wakatipu Basin.	Daily average cyclists using WATN primary routes	Increase the daily average cyclist flows on WATN primary routes by 15% from baseline	Implementation of Eco-Counter cycle counts on all WATN primary routes post-construction. Monitoring to occur monthly for a 1-year period.	2029
	Daily average pedestrians using WATN primary routes	Increase the daily average pedestrian flows on WATN primary routes by 15% from baseline	Implementation of Eco-Counter cycle counts on all WATN primary routes post-construction. Monitoring to occur monthly for a 1-year period.	2029
To increase positive community and environmental effects	Quality and accessibility of facilities and infrastructure	Remove all poor and critical LoS ratings (D-F) across the WATN	On-site surveys and observations 1-year following implementation of Package 1 routes.	2029

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# Appendices