

NZUP GOVERNANCE GROUP

NZUP Queenstown Package Update

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In Confidence

Purpose

This briefing provides you with an update on the NZUP Queenstown Package and covers the recent review of scope, budget, programme, minimum viable projects, and risks. A map of the study area is appended.

Recommendations

We recommend the NZUP Governance Group:

- **Provides guidance** on whether Waka Kotahi should be looking at rescoping the programme of works to the baseline budget, seeking a budget increase, or both.

Key Points

- A scope change associated with the Frankton North rezoning and an increase in P&G costs are significant cost items that will push the total project cost higher than the baseline budget (\$115.0 m baseline vs \$177.4 m advanced cost estimate, April 2022). This includes escalation and contingency.
- The Frankton North rezoning will require new signalised intersections, corridor widening, and further land acquisition to manage additional demand, estimated to cost an extra \$23.2 m (which is included in the \$177.4 m advanced cost estimate)
- The baseline budget was set on a traditional delivery model, not an Alliance model, and the extent of the Alliance set up and model costs, particularly around management, were not foreseen. Waka Kotahi has cost obligations in this regard which are more proportional to the delivery programme as opposed to scale of physical works. Presently, the critical elements are being progressed at a design development, land acquisition, consenting, and detailed community engagement phase. Over time, the Alliance management costs equate to around \$10,000 – \$14,000 per day (Waka Kotahi pays less than this now, but this will increase through the course of the engagement)
- Property is the key programme risk with the timing of resolution uncertain, the key issues being alignment of the road opposite Howards Drive, Pet lodge, golf course/BP access, and marina access
- An early works Target Outturn Cost (TOC), circa \$8.0 m, is on-hold pending resolution of confirming priority projects
- Kā Huanui a Tāhuna (the Alliance) has been instructed by the Project Steering Committee to continue pre-implementation works for the full NZUP programme of works, and 30% of design work will be complete by August 2022. Pricing of that design undertaken by both the Alliance and an Independent estimator is due 31 October 2022,

with reconciliation of the two prices due by 16 December 2022.

Background

The Queenstown Transport Business Case (QTBC) was completed in November 2020 and endorsed by the Way to Go (W2G) partners (Queenstown Lakes District Council, Otago Regional Council and Waka Kotahi) in early 2021. It comprises a suite of transport measures focussed on sustainably managing high growth and reducing reliance on private vehicle travel.

Crown Infrastructure Partners (CIP) funding was secured in June 2020 for stage 1 of the arterials and street upgrade works. NZUP funding was secured for Queenstown (Baseline Report prepared February 2021), which includes:

- a) SH6A corridor improvements (targeted bus lanes at critical sections and virtual priority primarily focussed on key intersections, which will be signalised with bus priority/pre-emption)
- b) SH6 Frankton to Ladies Mile Corridor improvements (bus priority and intersection improvements)
- c) Grant Road to Kawarau Falls Bridge improvements incorporating Frankton Bus Hub and significant upgrade to the SH6/SH6A intersection, which is the key node in the network for controlling traffic and includes improved access to an upgraded bus hub.

In December 2020, the Alliance was established to deliver the CIP and NZUP Queenstown works, through the signing of an Interim Programme Alliance Agreement. For Waka Kotahi the focus through 2021 was approval of the business case by the Waka Kotahi Board; and the production and issue to the Alliance of the Minimum Requirements. Concurrently the Alliance progressed with geotechnical testing and production of Land Requirement Plans, and re-assessment (modelling) of land use change implications on the business case design. The land acquisition agent formally commenced the acquisition processes. This enabled in December 2021 an invitation to the Alliance to prepare a TOC proposal for full delivery of the NZUP Queenstown Package. Preparation of a mini TOC for an early and enabling works package has also been undertaken.

At a presentation to the Governance Group in November 2021, it was noted that a construction end date and costs would be updated by mid-2022, once geotechnical, survey and a 30% design are complete, and land acquisition and consenting requirements are better understood.

Because of awareness of various changeable cost influences, the Alliance were instructed to undertake a review of the business case cost estimates in light of subsequent cost influences. The outcomes of the review have been reported to the NZUP Queenstown Project Steering Committee and are reported in this briefing paper.

Financial Management

Baseline Budget

The baseline budget was set at \$115 m, and was based on QTBC estimates which had a parallel estimate prepared by Bond CM. Costs were reconciled with a 0.6% difference with Bond CM having the slightly lower estimate.

The business case estimates were based on a traditional delivery model, not an Alliance model.

Baseline cost review (March 2022)

A review of the NZUP Queenstown baseline budget indicates that costs are likely to increase from \$115.0 m (baseline) to \$177.4 m (advance business case cost estimate, April 2022) - a difference of \$62.4 m.

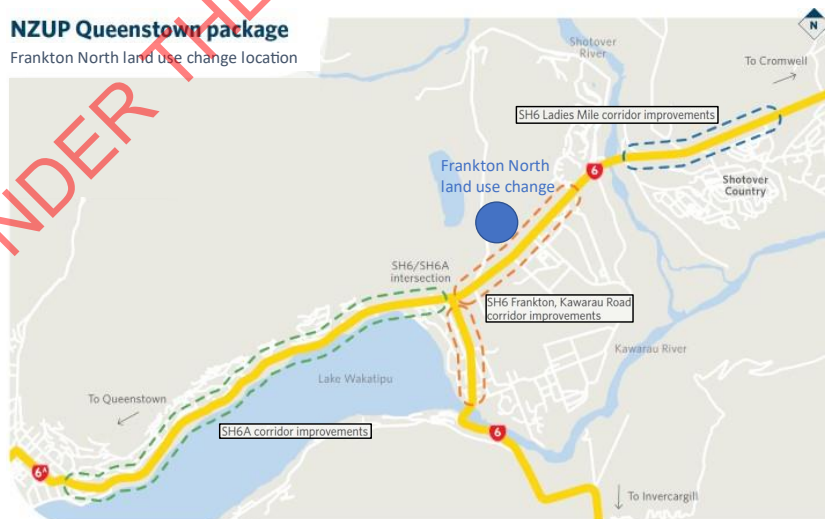
A cost breakdown comparison of the key changes presented in Table 1.

Table 1: Comparison in NZUP Baseline cost and advanced updated business case cost

	Cost area	NZUP Baseline cost	Advanced updated business case cost - inc Frankton North scope change	Difference
1	Waka Kotahi indirect costs ⁱ	\$9.56 m	\$15.95 m	\$6.39 m
2	Waka Kotahi direct costs ⁱⁱ	-	\$3.42 m	\$3.42 m
3	Alliance Management TOC ⁱⁱⁱ	-	\$18.30 m	\$18.30 m
4	Property ^{iv}	\$15.85 m	\$24.53 m	\$8.68 m
5	Design	\$4.51 m	\$8.62 m	\$4.11 m
6	Construction	\$80.56 m	\$94.17 m	\$13.61 m
7	Construction management	\$4.52 m	\$4.42 m	-\$0.10
8	Escalation (P50)	Included above	\$7.96 m	\$7.96 m
	Total	\$115.00	\$177.37	+\$62.37 m

Note:

- i. Waka Kotahi indirect costs include core costs applied within TIO, NZUP PMO cost contribution, contingency contribution, Business Case costs, Alliance programme and set up costs
- ii. Waka Kotahi direct costs for the baseline are included in design and construction costs
- iii. Alliance costs is a sub-set of total P&G costs. Total P&G represents 26% of full programme delivery costs
- iv. Property costs are \$4.5 m increased land costs, \$3.2 m Frankton North scope change, \$1 m arterials stage 1 to be invested as highway.
- v. Project contingency costs (P50) are estimated at an additional \$19.8 m (+\$4.0 property contingency, +\$15.8 m project contingency).



SH6: Hardware Lane to SH6A scope change (Frankton North)

Figure 1: Location of Frankton North land use change

In November 2020, at the conclusion of the QTBC, a District Plan review and an Environment Court order resulted in Frankton North land use changing from Rural General to Business Mixed Use, High Density and Medium Density Residential. This land use change underpins a forecast change in two-

way traffic volumes in 2028 into Frankton North of +1,778 vehicles in the am peak, +2,331 inter-peak and 2,344 in the pm peak, assuming a public transport mode share of 15%.

Waka Kotahi submitted on the provisions relating to Frankton North as part of the District Plan review, and further Submissions to those provisions, as well as attended and provided Evidence at the Hearing. Waka Kotahi did not oppose the Council Decisions relating to this. However, Waka Kotahi did become a party to some of the appeals as a Section 274 party. Consequently, Waka Kotahi attended Environment Court mediation and signed the Court Order.

An assessment of the land use change has been undertaken as part of the NZUP pre-implementation work. It demonstrates that the land use change will significantly impact the operation of the NZUP proposals at SH6/Hawthorne Drive and SH6/Grant Road. The NZUP proposal was for minor works and signalisation of the existing two roundabouts. Now a conventional signalised intersection is a preferred solution to manage the additional Frankton North demand. This will require approximately 2,230 m² of additional land, as more lanes and a wider corridor are needed to meet the operational outcomes for the network.

Cost has increased from the baseline by \$23.2 m through the expanded scope of construction work, Alliance delivery model costs and additional land required.

Table 2: Cost Comparison Breakdown for SH6 Hardware Lane to SH6/SH6A Intersection (BP)

Item	Baseline cost (from QTBC, Nov 2020)	Rescope (Mar 2022)	Comment
Alliance Indirect Cost (TOC 00) *	\$0	\$4,137,681	Pro-rated over the quantum of works (time-based in reality)
Original Land	\$5,200,000	\$7,805,500	Small additional parcel and land value increase
Additional Land	\$0	\$3,169,500	Hardware Lane to Hawthorne Drive
Design	\$1,097,000	\$2,571,424	Additional scope
CPS	\$1,011,000	\$1,317,546	Additional scope
Construction	\$16,969,880	\$28,443,278	Additional scope
Total	\$24,277,880	\$47,444,929	Difference \$23.2 m (excludes future escalation)

Alternative funding options have been considered but not explored in detail. There is currently no mechanism that would require landowners to contribute to the construction of the updated design through the District Plan Review rezoning process. There are, however, a couple of other options:

- The standard RMA approach whereby the development that results in effects that are greater than minor are required to mitigate those effects. This is essentially “the straw that breaks the camel’s back” approach and would become the responsibility of one of the five landowners within the rezoning. A test of reasonableness would need to be applied to this approach
- The Frankton North development was allocated Housing Infrastructure Funding (HIF) in 2018 (via QLDC), which included \$2.1 m for an underpass under SH6. A high-level assessment of the cost of adding a fourth leg to a conventional signalised intersection for Frankton North equates to between \$2.1-\$2.4 m. Given that the conventional signalised intersection negates the need for an underpass and the costs for providing for the fourth

leg are similar, a swap for the funding would seem reasonable (with the HIF funding recovered from the landowners as development progresses). This would need to be discussed and agreed upon by QLDC and MBIE.

Programme

An early works TOC has been prepared by the Alliance and issued to the Project Steering Committee. This TOC approval is currently on hold whilst the NZUP Queenstown Package budget is reviewed to avoid unnecessary spend on non-priority items given the cost increase risk from the baseline budget. This is likely to impact on a construction start for specific programme items.

Property remains a significant programme risk. Several properties will require the cooperation of QLDC to purchase land as these cannot be purchased under the Public Works Act. Key property challenges are at the pet lodge, road opposite Howards Drive, golf course/ BP access and marina access.

Minimum Viable Projects

Initial high-level thinking has been undertaken by Waka Kotahi on a reduced scope to achieve the priority of mode shift to non-car modes, safety, and access to some new housing. This is presented in Appendix B.

This needs further refinement and views of QLDC and Otago Regional Council sought on project prioritisation. The initial assessment suggests that an investment of circa \$140 m would be required to deliver priority items at the SH6/SH6A intersection, SH6A North Frankton, and Howards Drive roundabout.

Partners and Stakeholders

The NZUP Queenstown programme of works has been well publicised within the community, with recent media coverage in the Otago Daily Times, Lakes bulletin and Queenstown app.

W2G, a collaborative partnership with QLDC and ORC to address the transport challenges in Queenstown, are aware of the NZUP cost and programme challenges and prioritisation work being undertaken. Any scope change would need to be carefully managed.

Engagement with directed landowners continues, including on scope which is outside the minimum viable projects (as outlined above).

Iwi is another project partnership and has membership on the Project Alliance Board.

Other projects

A Road to Zero feasibility study has been completed, the scope covering widening of SH6 at Ladies Mile for a wire-barrier. The Project Steering Committee has conditionally approved the interventions outlined in the feasibility report. The conditions are that the SIP works shall only proceed where there is a commitment to building the Howards Drive roundabout, and SIP works are integrated with the NZUP programme of works.

Key Risks & Opportunities

There is a risk of the overall NZUP Queenstown Package cost exceeding the Baseline P50 of \$115 m. Contributing factors include, but are not limited to, a change in Frankton North zoning requiring different intersection forms and widening than outlined in the baseline report, and P&G costs namely due to an Alliance model being progressed.

The Queenstown Package is still at a relatively early stage of the project lifecycle, and cost estimates will be better understood as they progress through the design stages. A 30% design is to be complete in August 2022, with the Alliance and Independent Estimator completing their pricing by 31 October 2022. There may still be unforeseen costs as more detail progresses through the consenting, property acquisition, design, and construction stages.

There are uncertainties regarding the programme timeframes – the key risk being property. The programme will be better understood once the 30% design is complete. Opportunities need to be explored for how the Alliance can fast track works.

Key risks in not progressing the preferred option of signalised intersections at SH6/Hawthorne Drive and SH6/Grant Road are:

- Once the Frankton North area has developed, the main SH6 Hawthorne Drive intersection will become congested, impacting the network's operational performance and efficiency, including for public transport. It should be noted that landowners are already submitting resource consent applications for development
- If the business case option progresses under the Alliance, a further upgrade in the future will come at a higher cost (simply through escalation). The sunk cost would be approximately \$6 m from completing the business case works that need to be reconstructed
- The main risk in progressing the preferred option is the cost and whether additional funding is available on top of the NZUP baseline amount. Alternatively, the preferred option would need to be prioritised against other elements of the programme, potentially reducing the overall effectiveness of the NZUP Queenstown package.

By the nature of the W2G Partnership and Alliance, the project team has developed close working relationships to collaboratively develop the proposals to achieve the QTBC outcomes. The Alliance Project team are requested to continue to plan for the full scope of works. However, there is a risk that if further funding is not secured, then there could be abortive work, or key parts of the programme will not be able to be delivered.

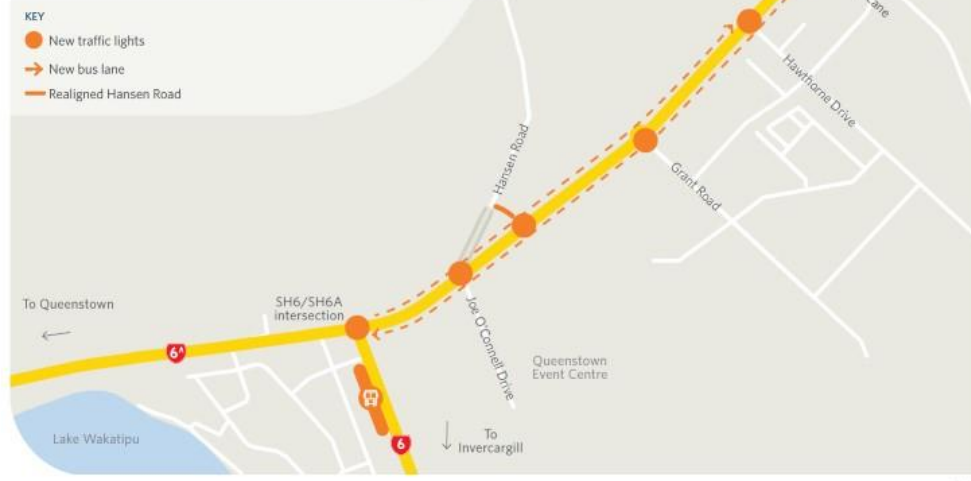
An early works package TOC has been presented from the Alliance in March 2022 for circa \$8.0 m. The Project Steering Committee has asked for this early works package to be put on hold until overall costs are reviewed and priority projects are better understood, to avoid any regretful spend on non-priority projects. This may delay the construction start of some projects.

APPENDIX A: STUDY AREA AND REPRESENTATION OF FULL BASELINE SCOPE OF WORKS

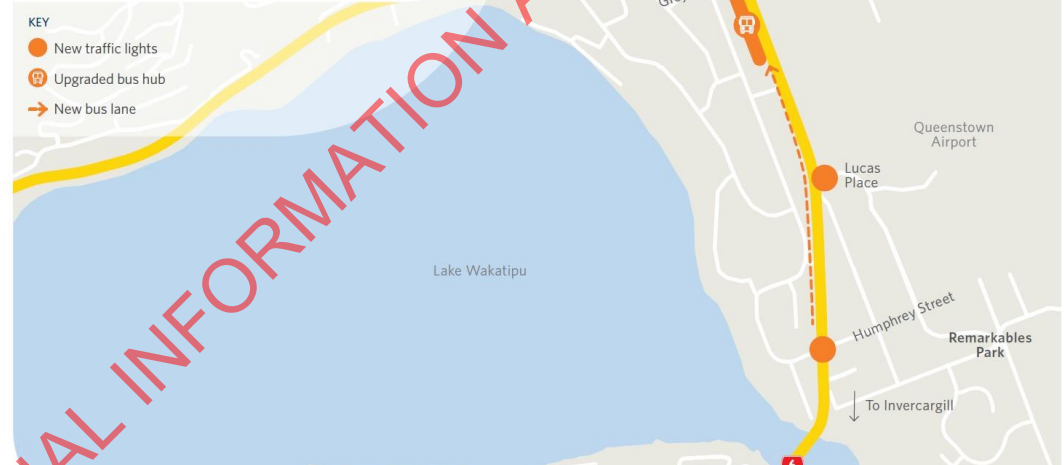
NZUP Queenstown package overview



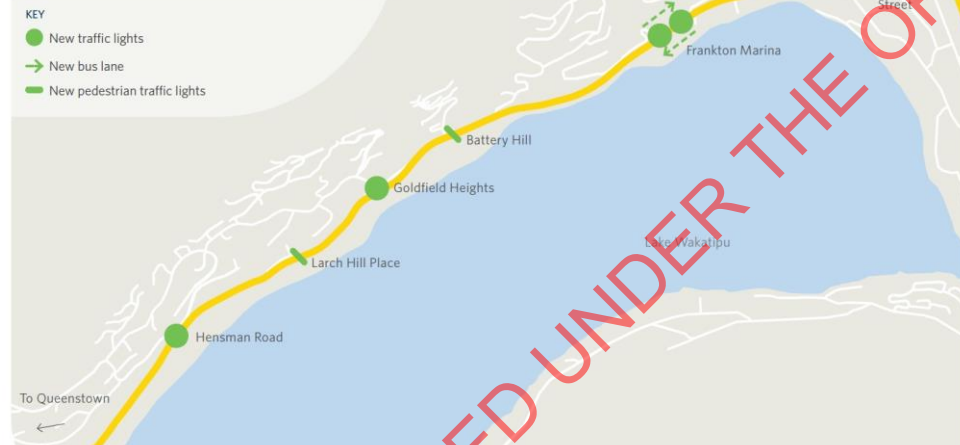
NZUP Queenstown package SH6 Frankton corridor improvements (Hardware Lane to SH6/SH6A intersection)



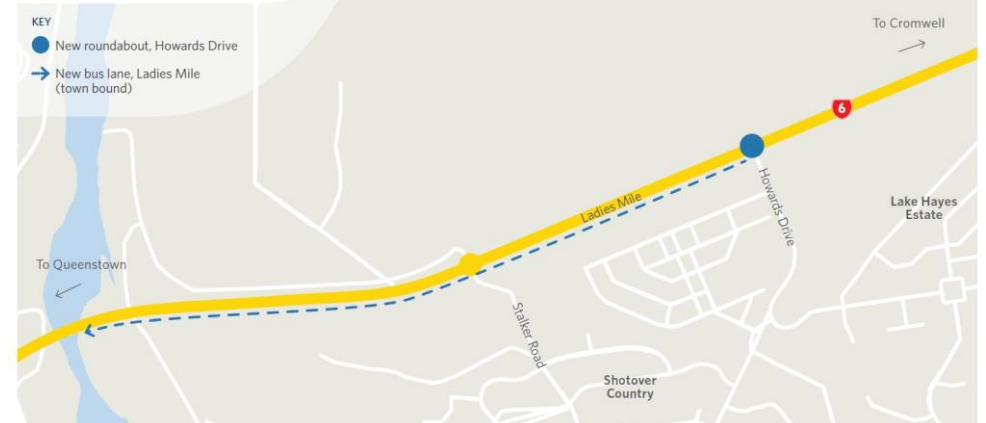
NZUP Queenstown package SH6 Frankton corridor improvements (SH6/SH6A intersection to Humphrey Street)



NZUP Queenstown package SH6A corridor improvements



NZUP Queenstown package SH6 Ladies Mile corridor improvements



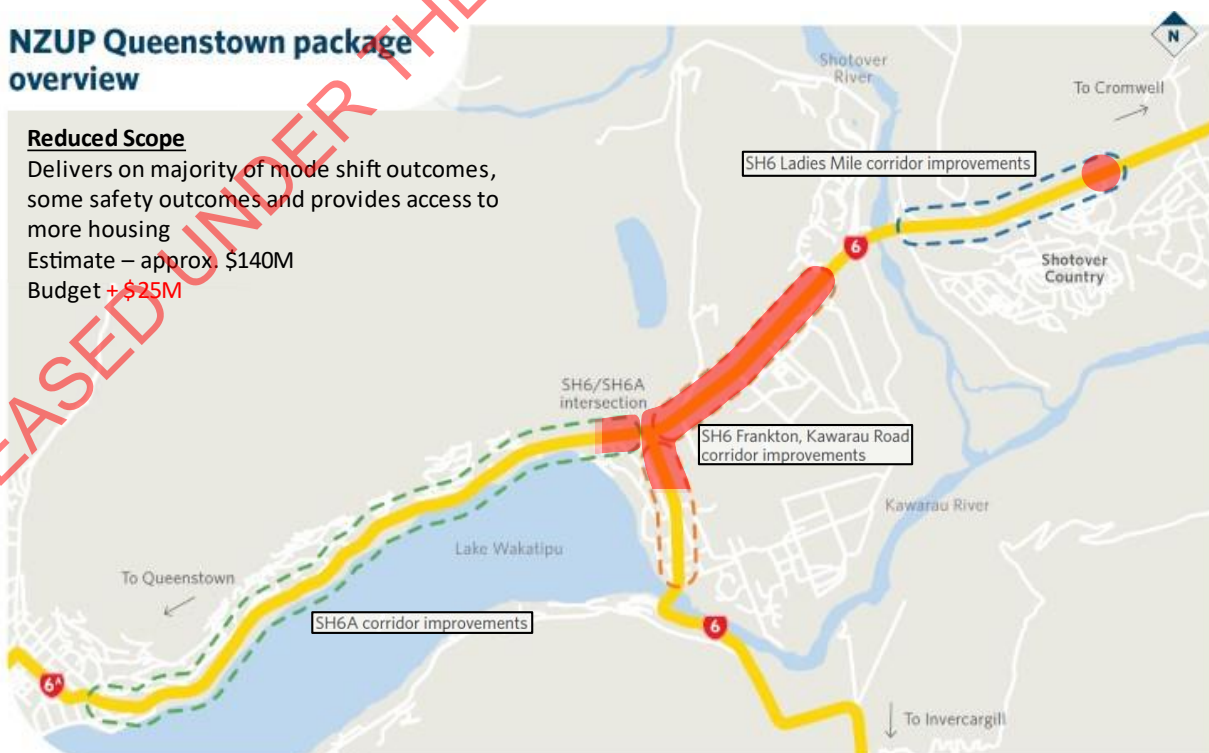
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APPENDIX B: MINIMUM VIABLE PROJECTS

Figure C1 illustrates the scope that could be undertaken within the \$115 m baseline budget. Refer to Table C1 for further detail.



Figure C2 illustrates the minimum viable projects to delivery priority items at the SH6/SH6A intersection, SH6A North Frankton, and Howards Drive roundabout. Refer to Table C1 for further detail.



Appendix A illustrates the full scope of works.

Table C1: Scope options

	SCOPE	BUDGET	OUTCOMES	RISKS
Do-Nothing	Continue with design, property acquisition and consenting on the full package from NZUP. Fund construction from NLTF over subsequent funding periods. Explore opportunities for developer funding for the elements that provide access to housing.	<\$30M	Outcomes are likely to be fragmented with no clear and coordinated delivery programme.	• Significant reputational risk as the community has expectations of delivery under NZUP. • Future PT services will be compromised without priority infrastructure. • Mode shift targets will not be achieved in a timely manner. • Access to new housing areas will be significantly delayed. • Safety outcomes will be significantly delayed.
Minimum Scope	Reduce scope to core elements on SH6 at Frankton (Grant Rd to Ross St) including the bus hub (refer to diagram below).	<\$115M	Short term impact on mode shift outcomes with improvements around the key node of SH6/SH6A and the Frankton hub. No housing access outcomes and minimal safety outcomes.	• Some reputational risk as the community has expectations of delivery of some key elements that would be omitted (eg, SH6A improvements and Howards Dr roundabout) • Future PT services will be compromised in the medium term with limited priority infrastructure. • Medium term mode shift targets will not be achieved. • Access to new housing areas will be significantly delayed. • Significant reduction in safety outcomes

	SCOPE	BUDGET	OUTCOMES	RISKS
Reduced Scope	Reduce scope to include most of SH6 improvements at Frankton (Hardware Lane to Ross St) including the bus hub and Howards Drive roundabout on Ladies Mile (refer to diagram below).	Modest increase in budget (approx. \$140M)	Medium term impact on mode shift outcomes with improvements along SH6 in Frankton including the bus hub. Full housing access outcomes and some safety outcomes.	• Modest reputational risk as the community has less expectation of delivery of the elements that would be omitted (eg, SH6A improvements) • Future PT services will be compromised in the medium to long term without the priority infrastructure on SH6A and Ladies Mile. • Medium to long term mode shift targets will not be achieved. • Reduction in safety outcomes. • Budget will be exceeded albeit with some opportunity for “value engineering”.
Full Package	As per the NZUP Baseline Report.	Significant increase in budget (approx. \$170M)	Long term impact on mode shift outcomes with improvements along SH6A and SH6 in Frankton and Ladies Mile including the Frankton bus hub. Significant impact on housing access and safety outcomes.	• Budget will be significantly exceeded.