Nelson Southern Link Investigation (SH6 Annesbrook Roundabout to SH6 Haven Rd Roundabout) Strategic Case

Andrew James
26 Oct 2015

Photo 1  Nelson South viewed from Grampians

Photo 2  Nelson, viewed from the air
## Approval

<table>
<thead>
<tr>
<th>PREPARED BY:</th>
<th>REVIEWED BY:</th>
<th>SUPPORT BY:</th>
<th>SUPPORT BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew James (NZTA)</td>
<td>Selwyn Blackmore</td>
<td>Highways and Network Operations Value Assurance Committee</td>
<td>Lyndon Hammond</td>
</tr>
<tr>
<td>Principal Transport Planner</td>
<td>Central Region Transport Planning Manager</td>
<td></td>
<td>Regional Manager Planning &amp; Invest</td>
</tr>
<tr>
<td>[JOB TITLE]</td>
<td>[JOB TITLE]</td>
<td>PROPOSAL SPONSOR</td>
<td>P&amp;I CASE MANAGER</td>
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**EXECUTIVE SUMMARY**


The purpose of this Strategic Case is to determine if there is a case for investment. This is done by agreeing the problems, benefits and key performance indicators relating to the investigation with the Transport Agency and its key partners. The Problems identified (along with their weightings in brackets) are:-

- **Congestion (70%)**: Congestion in peak hours on Nelson's two arterial routes result in travel delays.
- **Accessibility (30%)**: SH6 Rocks Road is a key walking and cycling route constrained by substandard infrastructure.

The potential benefits of successfully addressing these problems (along with their weightings in brackets) are:-

- Reduced journey times (35%)
- Contribute to Nelson and regional economic growth and productivity (35%)
- Improved community safety and wellbeing (15%)
- Improved tourism and recreation activities (15%)

Key findings of the analysis of evidence indicates that:-

- Peak hour volume to capacity ratios on Nelson’s two arterials range (Rocks Road (SH6) and Waimea Rd) from 83% to 95%, which confirms that there is traffic congestion in the peak hours.
- Typical peak travel delay on SH6 is around three minutes, and on Waimea Rd it is approximately seven minutes.
- Uncongested daytime travel speeds on SH6 is approximately 40km/hr, reducing to approximately 29km/hr northbound in the peaks.
- Uncongested daytime travel speed on Waimea Rd is approximately 47km/hr, reducing to approximately 22km/hr northbound in the peaks.
- There is evidence that walking and cycling numbers on Rocks Rd is constrained by substandard infrastructure.

An assessment of the anticipated Strategic Fit and Effectiveness in accordance with the Transport Agency Investment Assessment Framework has determined that the indicative profile is M/M/–.

The Strategic Case recommends the investigation progress to the Programme Business Case phase because the problems and benefits are supported by transportation evidence and the indicative profile (M/M/–) reaches the threshold for the investigation to proceed.
PART A – THE STRATEGIC CASE

1. INTRODUCTION

1.1 Purpose of the investigation


1.2 Purpose of the Strategic Case

The purpose of the Strategic Case is to determine the case for investment. It identifies the problems, benefits and key performance indicators relating to the investigation with the Transport Agency and its key partners. Further information on the Business Case approach is available here: http://hip.nzta.govt.nz/processes.

1.3 Background

State Highway 6 is classified as a regional strategic state highway because:

- freight volume is greater than 400 heavy commercial vehicles per day\(^1\);
- it services a population centre greater than 30,000; and
- there are more than 20,000 international travellers on the route annually.

SH6 travels through Nelson City from Queen Elizabeth II (QEII) Drive onto Rocks Road and along the waterfront. It progresses into the Tahunanui suburb until it meets Whakatu Drive at the Annesbrook Roundabout and continues south towards Richmond.

Improvements to SH6 from QEII Drive to the north and Whakatu Drive to the south have been completed, resulting in mostly free-flow conditions with travel speeds between 80 to 100km/h.

However, for the central section shown in Figure 1 (between the SH6 Haven Rd roundabout and the SH6 Annesbrook roundabout) traffic travels within 50km/hr posted speed limits and 40km/hr variable school speed zones along roads characterised as two lane urban arterials.

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\(^1\) HCV’s make up around 6% of all traffic, approximately 1,300 heavy vehicles per day
Traffic volumes on SH6 and the Waimea Rd route² are provided in Figure 2 below. The figure indicates that traffic volumes on:–
- SH6 have remained relatively constant over the last 10 years, and
- Waimea Rd have declined slightly since 2007 (although increasing in 2015).

Port Nelson freight tonnages are provided in Figure 3³ for import and export respectively. There is no indication of any significant growth occurring in recent years.

¹ The Waimea Rd route travels from the SH6 Haven Rd roundabout, along Haven Rd, Halifax St, Rutherford St and Waimea Rd before joining the state highway at the SH6 Annesbrook roundabout.

³ Data provided by Nelson Port, 14 April 2015. Tonnage includes bulk and containerised freight.
2. STRATEGIC CONTEXT

2.1 Organisational overview

The Transport Agency is responsible for operating, maintaining, renewing and improving the state highway network. The state highway within the study area has been highlighted by the Government as being of particular regional importance to contributing to the Government’s strategic direction which is:-

To drive improved performance from the land transport system by focusing on:

- Economic growth and productivity,
- Road safety, and
- Value for money.

The Government Policy Statement expects the Transport Agency to take a lead role in securing integrated land transport planning that contributes to the government’s overarching goal of “growing the New Zealand economy to deliver greater prosperity, security and opportunities for all New Zealanders.”

The relevant Government, Transport Agency, and Nelson City Council organisational strategies are identified in Appendix C.

2.2 Previous investigations

2.2.1 The Southern Link

In July 2000 Transit New Zealand, the predecessor of the Transport Agency, lodged a Notice of Requirement stating “the designation for the Southern Link is needed…to complete the final link between Queen Elizabeth II Drive and the northern end of the Whakatu Drive (Stoke Bypass).” The location and Nelson Resource Management Plan status of the “Southern Link” is shown in Figure 4 as a dashed blue line, which highlights a “proposed principal route.” In 2004, the Environment Court declined the Notice of Requirement due to social severance, the proximity of the route to schools, air quality degradation and a lack of evidence that the route would improve safety and efficiency.

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4 Accelerated Regional Roading Package, Ministry of Transport, July 2014
6 Southern Link Environment Court decision, clauses 6, 7 & 14, 2004
7 Extract from The Nelson Resource Management Plan Urban Road Hierarchy Map, ref A2.1
2.2.2  The Nelson North to Brightwater Strategic Study, April 2008

The purpose of this combined Nelson City Council, Tasman District Council and NZ Transport Agency study was to identify present and future transport needs along the wider Nelson – Richmond urban area. Due to a number of factors including the division in the community with regards to the roading options in Nelson, the final outcome from the study was inconclusive. The subsequent 2009 Nelson Regional Land Transport Strategy, however, stated that the future need for the Southern Link be monitored.

2.2.3  The Arterial Traffic Study, June 2011

The Arterial Traffic Study was commissioned by Nelson City Council and the NZ Transport Agency to “determine the best transport configuration between Annesbrook and the QEII / Haven Road roundabouts that would improve the city as a whole”. The study determined that no options would qualify for NLTF funding, and that the existing arterial transport configuration be retained. The Nelson City Council rejected retaining peak hour clearways on the existing arterials as a future option and agreed that the Southern Link Corridor should be protected as a future transport corridor. The study recommended further investigation be undertaken to improve walking and cycling along Rocks Rd.

2.2.4  Rocks Rd walk/cycle investigation project

The Rocks Rd walk/cycle investigation commenced in 2014. However, a preferred option has yet to be identified. It is noted that the preferred option will need to balance safety, access, amenity and affordability to enable the corridor to function as best it can while accommodating state highway traffic.

2.3  Funding

2.3.1  Regional Land Transport Plan 2015–2021

The Regional Land Transport Plan sets out the region’s land transport objectives, policies, and measures for the next 10 financial years. The plan identifies that Nelson has about $16 million of regional funds available. The Transport Agency has advised that the allocation of these funds will be undertaken at the completion of this investigation.

2.3.2  Accelerated Regional Roading Package

This investigation forms part of the Government’s Regional Accelerated Regional Roading Package for the state highway to be investigated using the Crown’s Future Investment Fund. No construction funding has been allocated to the project.
### 3. KEY PARTNERS

The Transport Agency is the lead agency for the Nelson Link Investigation Project. It has developed this Strategic Case with the assistance of the following key organisations:

<table>
<thead>
<tr>
<th>Partners</th>
<th>Knowledge areas – relationship to the strategic case</th>
</tr>
</thead>
</table>
| **New Zealand Transport Agency, represented by Wellington region Highway Manager, Neil Walker and Regional Manager Planning and Invest, Lyndon Hammond** | • Lead agency responsible for developing this strategic case  
 • Investor in land transport systems  
 • Provider and operator of the state highway network  
 • Regulator of access to and use of the land transport system |
| **Nelson City Council (NCC), represented by Mayor and Regional Transport Committee member, Rachel Reese and Works and Infrastructure Committee Chair and Regional Transport Committee Chair, Eric Davy** | • Investigation’s study area is within NCC unitary territory  
 • Strategic transport planning for the region  
 • Provision and operation of local road network  
 • Unitary authority – plans for and manages the effects of the use and development of land |
| **Tasman District Council represented by Engineering Services Chair and Regional Transport Committee Chair, Trevor Norriss** | • Transport linkages between Tasman District, Nelson’s central business district, and Port Nelson are vital for the economic growth and productivity of the Top of the South region  
 • Strategic transport planning for the Tasman region  
 • Provision and operation of local road network  
 • Unitary authority – plans for and manages the effects of the use and development of land |
| **Automobile Association(AA), represented by Nelson District AA Council Chair Allan Kneale** | • Promoting, facilitating and protecting the interests of motor vehicle owners |
| **Road Transport Association NZ (RTA), appointed by members to be represented by Ed Solly** | • Association representing road transport operators and the Heavy Haulage Association |
| **NZ Police, represented by Team Leader Road Policing, Tasman, Grant Andrews** | • Important role in roads safety – enforces the traffic laws  
 • Contributes towards the Government’s Safer Journeys Strategy and safe system approach |
| **Nelson Chamber of Commerce, represented by Chief Executive Officer Dot Kettle** | • Advocate for businesses in the region |
4. STRATEGIC ASSESSMENT

4.1 Defining the transportation problem/opportunity

An Investment Logic Mapping (ILM) workshop was held on 7 October 2015 with the key organisations, supported by additional Transport Agency representatives, RTA representatives and an independent facilitator to finalise the problems, benefits and key performance indicators.

The additional Transport Agency and RTA representatives who attended were:
- Mark Owen, Regional Performance Manager, Highways and Networks Operations
- Andrew James, Principal Transport Planner, Highways and Networks Operations
- Derek Nees, RTA
- John Bond, Area Executive, RTA
- Chris Ballantyne, Transport advisory sector leader, AECOM

Mark Young was the appointed independent accredited facilitator and transport advisory sector leader Chris Ballantyne from AECOM was an observer representing the investigation’s professional services consultant.

The workshop attendees identified the following key transportation problems and assigned their respective proportional weighting (in brackets) qualitatively after identifying the main problem causes and consequences.

**Congestion (70%):** Congestion in peak hours on Nelson's two arterial routes result in travel delays.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 45,000 vpd on 2 two lane arterials through residential areas</td>
<td>• Freight travels outside of peak times to avoid costly delays, reducing productivity and increasing commodity cost to the tidal port.</td>
</tr>
<tr>
<td>• Little spare road capacity in either directions (particularly in peaks and at different times in summer holidays)</td>
<td>• Public Transport delays in peaks are impacting on patronage.</td>
</tr>
<tr>
<td>• Peak hour delays and consequentially side street access delays.</td>
<td>• Delays are constraining economic growth – production costs increased.</td>
</tr>
<tr>
<td>• No alternative route for HPMV's.</td>
<td>• Tourist potential undermined by inadequate capacity.</td>
</tr>
<tr>
<td>• Increasing population and growth in Nelson and Tasman will increase congestion pressures.</td>
<td>• Business investing in Tasman or outside the region instead of Nelson City.</td>
</tr>
<tr>
<td>• Freight travels outside of peak times to avoid costly delays, reducing productivity and increasing commodity cost to the tidal port.</td>
<td>• Delays will increase as region grows.</td>
</tr>
</tbody>
</table>

**Accessibility (30%):** SH6 Rocks Road is a key walking and cycling route constrained by substandard infrastructure.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Large trucks beside on-road cyclists.</td>
<td>• Tourist and amenity potential undermined by substandard facilities.</td>
</tr>
<tr>
<td>• Substandard cycle lanes and narrow footpath (especially by restaurants).</td>
<td>• Increasing conflict between pedestrians, cyclists, vehicles and trucks on SH6.</td>
</tr>
<tr>
<td>• The narrow Rocks Rd corridor means its expensive to improve walking and cycling corridors for pedestrians and cyclists.</td>
<td>• Great Taste Cycle Trail route over railway reserve rather than scenic Rocks Rd</td>
</tr>
</tbody>
</table>
The Investment Logic Map is attached as Appendix A.

4.2 The potential benefits of investment

At the final investment logic mapping workshop, the workshop attendees identified the potential benefits of successfully investing in the study area to address the problems with respective proportional weighting (in brackets), shown in Table 1 below:

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced journey times (35%)</td>
<td>This benefit captures the potential to reduce peak hour travel times and increase peak hour roading capacity. This relates to the congestion problem.</td>
</tr>
<tr>
<td>Contribute to Nelson and regional economic growth and productivity (35%)</td>
<td>This benefit captures the potential to improve peak hour roading capacity improving the movement of people and freight through the project area. This relates to the congestion problem.</td>
</tr>
<tr>
<td>Improved community safety and wellbeing (15%)</td>
<td>This benefit captures the potential to reduce walking and cycling deaths and serious injuries from crashes. This relates to the accessibility problem.</td>
</tr>
<tr>
<td>Improved tourism and recreation activities (15%)</td>
<td>This benefit captures the potential to complete, to a safe and acceptable standard, the strategic cycle network along SH6 Rocks Rd, and thus increase walking and cyclist usage. This relates to the accessibility problem.</td>
</tr>
</tbody>
</table>

Table 1 Potential benefits

The Benefit Map is attached as Appendix B.
4.3 The key performance attributes and measures

For each benefit, the workshop attendees selected relevant key performance indicators from the Transport Agency’s “Investment performance measurement,” September 2014, as identified in Table 3 below.

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>INVESTMENT KEY PERFORMANCE INDICATOR</th>
<th>MEASURE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced journey times (35%)</td>
<td>Decrease peak hour travel times</td>
<td>Rocks Rd and Waimea Rd average travel speed in peak hours</td>
<td>Rocks Road and Waimea Road average travel speed</td>
</tr>
<tr>
<td></td>
<td>Increase peak hour capacity</td>
<td>Rocks Rd and Waimea Rd peak hour volume to capacity ratio</td>
<td>Ratio of traffic volume to capacity</td>
</tr>
<tr>
<td>Contribute to Nelson and regional economic growth and productivity (35%)</td>
<td>Increase freight throughput</td>
<td>Throughput – freight value by mode</td>
<td>Freight throughput</td>
</tr>
<tr>
<td>Improved community safety and wellbeing (15%)</td>
<td>Decrease walk/cycle crashes</td>
<td>Rocks Rd and Waimea Rd walk/cycle crashes</td>
<td>Walk / cycle crashes – deaths and serious injuries</td>
</tr>
<tr>
<td>Improved tourism and recreation activities (15%)</td>
<td>Increase Spatial coverage for cycles and paths</td>
<td>Percentage contribution to completion of strategic cycle network</td>
<td>Percentage contribution to completion of the strategic cycle network</td>
</tr>
<tr>
<td></td>
<td>Increased cyclist and walker numbers</td>
<td>Rocks Rd number of walkers and cyclists / day</td>
<td>Rocks Rd cyclists and walkers</td>
</tr>
</tbody>
</table>

Table 2 Relevant Key Performance Indicators

4.4 Consideration of benefits and KPI’s

The ILM workshop attendees took the selected investment KPI’s, measures, and descriptions from the Transport Agency’s investment performance measures, all measures that the Transport Agency funds.

The last two benefits may be not considered directly related to transport. A review of these benefit statements (and associated transport KPI’s) will be required at the start of the Programme Business Case.

While baseline and target indicators were agreed for some of the measures (refer Appendix B) from information provided at the workshop, many of the baselines and targets were left incomplete. Further analysis of these will be required in the Programme Business Case.
4.5 Status of the existing evidence base

This section provides an analytical review of the problems based on existing evidence.

4.5.1 Congestion problem

“Congestion in peak hours on Nelson’s two arterial routes result in travel delays” (70%).

4.5.1.1 Congestion

A Transport Agency definition\(^8\) of congestion is “where the volume to capacity ratio exceeds 80% for 5 days per week over at least a 1 hour time period that affects at least 1.5 km of a route”.

In November 2014 the Agency installed a travel monitoring system throughout the Nelson and Richmond main arterial network that collects the journey time of vehicles with discoverable Bluetooth devices between installed sensors. The sensors assign a value to the signal which subsequently provides journey times between sensors. Within the investigation study area there are 4 sensors installed at approximately either end of each arterial route that provide a large data set of travel times for analysis. This analysis\(^9\), in terms of average 15minute travel time, volume to capacity\(^10\) ratio and levels of service\(^11\) is provided for each arterial in each direction, in Figures 5 to 8 below.

![Figure 5 SH6 into Nelson](image)

![Figure 6 SH6 towards Richmond](image)

The key points from Figures 5 and 6 are:-

<table>
<thead>
<tr>
<th>SH6</th>
<th>Measure</th>
<th>AM Peak (northbound)</th>
<th>PM peak (southbound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel time (minutes)</td>
<td>worst avg 15min period</td>
<td>11</td>
<td>10.8</td>
</tr>
<tr>
<td>Volume/Capacity ratio</td>
<td>worst avg hour</td>
<td>95% (7.45 to 8.45)</td>
<td>91% (16.30 – 17.30)</td>
</tr>
<tr>
<td>Level of service</td>
<td>worst avg 15min period</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

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\(^8\) Refer Glossary, NZTA Planning and Investment Knowledge Base

\(^9\) Data shown gathered between April to June 2015

\(^10\) Capacity determined from highest 15min observed volume in any 15min period from actual tube count data, determined as 1,368 vehicles per hour(vph) on SH6 northbound, 1,032vph on SH6 southbound, 1,785vph on Waimea Rd northbound and 1,774vph on Waimea Rd southbound

\(^11\) Level of service thresholds based on Table 5.2, Austroads Guide to Traffic Management Part 3: Traffic Studies & Analysis (2013), based on travel speeds, where A is excellent and F is poor.
The key points from Figures 7 and 8 are:

<table>
<thead>
<tr>
<th>Waimea Road</th>
<th>Measure</th>
<th>AM Peak (northbound)</th>
<th>PM peak (southbound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel time (minutes)</td>
<td>worst avg 15min period</td>
<td>12.8</td>
<td>10</td>
</tr>
<tr>
<td>Volume/Capacity ratio</td>
<td>worst avg hour</td>
<td>83% (7.45 to 8.45)</td>
<td>91% (16.30 to 17.30)</td>
</tr>
<tr>
<td>Level of service</td>
<td>worst avg 15min period</td>
<td>E</td>
<td>C</td>
</tr>
</tbody>
</table>

The evidence presented above indicates peak hour volume to capacity ratios between 83% to 95%, confirming traffic congestion in the peak hours on Nelson’s two arterial routes.

4.5.1.2 Travel delays

The average peak hour travel times delay for each route is shown below, using the data shown in Figures 5 to 8.

<table>
<thead>
<tr>
<th>Route</th>
<th>Slowest travel time (minutes)</th>
<th>Uncongested daytime travel time (minutes)</th>
<th>Typical peak travel delay (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH6</td>
<td>11</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Waimea Rd</td>
<td>12.7</td>
<td>5.3</td>
<td>7.4</td>
</tr>
</tbody>
</table>

This indicates that typical peak travel delay is around three minutes on SH6, and it is approximately seven minutes on Waimea Rd.

Travel delays can be considered in terms of travel time or travel speeds. Travel times are useful in comparing journey times along a route, but travel speeds are a better measure for comparing travel delays across routes of different lengths. Analysis of the Bluetooth data for travel speed\(^\text{12}\), is shown in Figures 9 to 12 below.

\(^{12}\) Travel speed is calculated by converting travel times by the distance between sensors. On SH6 this is 5.5km, and on Waimea Rd 4.2km.
Figure 9  SH6 into Nelson

For the first calendar quarter of 2015 the key points from Figures 9 and 10 are that average journey speed drops from around 40km/hr in the daytime off peak to:

- 31km/hr northbound in the AM peak (Fig 9), and
- an average of 29km/hr southbound in the afternoon over a prolonged period (from 3pm to 5:30pm) (Fig 10).

Figure 11  Waimea Rd into Nelson

For the same time period, the key points from Figures 11 and 12 are:

- average northbound journey speed in the AM peak hour drops from around 47km/hr in the daytime off peak to 22km/hr (Fig 9),
- Southbound in the afternoon, average journey speed drops at around 3pm and again at 5:30pm, averaging 32km/hr between 3pm and 4pm.

Further analysis of the figures shows that during school holidays, Waimea Rd journey times are less congested, although delays are still evident on SH6 in the inter-peak and afternoons.

The evidence presented above indicates that travel delays are occurring on Nelson’s two arterial routes. Uncongested daytime travel speed on State Highway 6 is approximately 40km/hr, reducing to approximately 29km/hr northbound in the peaks. Uncongested daytime travel speed on Waimea Rd is approximately 47km/hr, reducing to approximately 22km/hr northbound in the peaks.
Further analysis of traffic count data was undertaken to check that the evidence determined above wasn’t particular to the months analysed. Two-way traffic volume counts are portrayed in Figures 13 and 14 below from October 2014 to June 2015 with March 2015 highlighted. These figures indicate that there isn’t any significant difference between the months analysed and other times which confirms that the evidence above is a representative sample for this analysis.

4.5.2 Accessibility problem

“SH6 Rocks Road is a key walking and cycling route constrained by substandard infrastructure” (30%).

4.5.2.1 SH6 Rocks Rd is a key walking and cycling route

In June 2015 the Transport Agency announced support for Nelson’s Coastal Route as part of the governments Urban Cycleway Programme, announced in 2014. The route is shown in Figure 15 below and includes the Haven Rd, Wakefield Quay and Rocks Rd sections of SH6. When completed, the coastal route will replace the current inland route alignment of the Great Taste Trail, linking Nelson to Richmond, shown in Figure 16.

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13 Mon–Thur average for first week of every month
Support from the Councils, government and residents for this route is evidence that the route is key to Nelson's walking and cycling network.

4.5.2.2 Walking and cycling is constrained by substandard infrastructure

State Highway 6 along the Rocks Rd waterfront to Tahunanui has on road cycle lanes although only half of these comply with the minimum width requirement\(^{14}\) of 1.5m. None comply with minimum width recommendations past parked vehicles of 1.8m\(^{15}\). Also, nearly two thirds of the seafront footpath is below the minimum 2m width requirement\(^{16}\).

The Rocks Rd Cycle and Walking Investigation has predicted that, given compliant infrastructure, pedestrian and cyclist usage could double. Nelson City Council has been collecting cycle count data for the last 15 years at various locations on the strategic cycle network. The growth in users over that period can be seen in Figure 17 below, although it has not increased to the same extent as other key routes having compliant facilities, such as the Stoke railway reserve or the Bishopdale railway reserve routes. This reaffirms the initial findings of the Rocks Rd Cycle and Walking Investigation.

\(^{14}\) NZ Supplement to the AustROADS guide to traffic engineering practice Part 14: Bicycles, Sept 2008

\(^{15}\) Rocks Rd cycle and walking investigation report, July 2014

\(^{16}\) Land Development Manual, Nelson City Council
In summary, there is evidence to support that SH6 has substandard walking and cycling infrastructure and it is constraining walking and cycling demand on this route.

Accessibility problem summary:
- There is evidence to confirm that walking and cycling numbers on Rocks Rd are constrained by substandard infrastructure.

Figure 17  Nelson’s historic cycle growth

17 Graph from NCC’s submission for UCF funding, June 2015
5. **ANTICIPATED STRATEGIC FIT AND EFFECTIVENESS**

An assessment of the anticipated Strategic Fit and Effectiveness has been undertaken in accordance with the Transport Agency’s Investment Assessment Framework and the indicative profile would be M/M\(^{18}\).

**STRATEGIC FIT ASSESSMENT\(^{19}\)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Assessment</th>
</tr>
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</table>
| A medium rating for strategic fit may be given where the activity applies best practice planning and processes including adopting a coordinated approach with relevant stakeholders; AND | - The investigation is being undertaken in accordance with the Transport Agency’s Business case approach.  
- This Strategic Case ILM process involved representatives from the Transport Agency’s key partners, including Nelson City Council, Tasman District Council, the Automobile Association, the Road Transport Association, the Nelson Chamber of Commerce and the NZ Police.  
- The Bluetooth data presented in this Strategic Case demonstrates a significant change in the perception of the actual transport performance on the two Nelson arterial routes to that observed in previous plans and strategies.  
- The congestion problem statement is rated 70% which means that it will be the priority focus for the investigation.  
- The investigation will consider the latest Stats NZ demographic projections and employment data, and data provided from NCC and TDC. |
| Is focused on significant change in actual or predicted transport demand or performance, and its drivers such as changes in industry, population, technology, energy and climate, where these changes are not accounted for in existing strategies and plans; AND | - The investigation will consider all options.  
- The investigation will consider options to optimise the existing network capacity, including programmes that consider methods to increase walking, cycling and public transport patronage.  
- The investigation will consider options that manage and mitigate the adverse environmental effects from land transport.  
- The investigation will consider options to improve the efficiency of freight supply to the port. |
| ensures:-  
- Integration of modes, transport and land use planning and other infrastructure planning  
- Making better use of existing transport capacity, including services and infrastructure  
- Managing adverse environmental effects from land transport; AND | - The investigation will consider all options.  
- The investigation will consider options to optimise the existing network capacity, including programmes that consider methods to increase walking, cycling and public transport patronage.  
- The investigation will consider options that manage and mitigate the adverse environmental effects from land transport.  
- The investigation will consider options to improve the efficiency of freight supply to the port. |
| considers:-  
- wider transport network performance and capability  
- safety  
- value for money  
- environmental and public health outcomes. | - This Strategic Case is addressing problems between Whakatu Drive and QEII Drive in Nelson but is modelling and analysing existing and future growth of the wider network performance and capability of the Nelson Tasman region.  
- The investigation options will be considered using a number of criteria, including safety, environmental and public health outcomes.  
- The efficiency assessment profile will be determined in the subsequent investigation phases and confirmed at the detailed business case phase. |


## EFFECTIVENESS ASSESSMENT\(^2^0\)

<table>
<thead>
<tr>
<th>Component</th>
<th>Explanation</th>
<th>Assessment</th>
<th>Rating</th>
</tr>
</thead>
</table>
| Outcomes focused| • The degree to which the problem, issue or opportunity, supported by evidence, is significant enough to warrant further development  
• Consistency with levels of service in an appropriate classification system                                                                 | • The problem statements are supported by robust evidence and are significant enough to warrant further investigation  
• The State Highway level of service targets weren’t fully identified in this Strategic Case, but will be considered in greater detail in the investigation. | High (conditional on appropriate targets)                                                  |
| Integrated      | • Consistency with the current network and future network plans  
• Consistency with other current and future activities  
• Consistency with current and future land use planning  
• Accommodates different needs across modes  
• Involvement of, or consultation with, appropriate stakeholders in developing the strategic case | • The investigation will model current and future activities and land use plans.  
• The investigation will consider all options.  
• The key stakeholders identified in the Strategic Case have collaborated in the development of this Strategic Case. | Medium                                                                                     |
| Correctly Scoped| • The degree of fit as part of an agreed strategy or business case  
• Is of an appropriate scale in relation to the issue/opportunity  
• Covers and/or manages the spatial impact (upstream and downstream, network impacts)  
• Mitigates any adverse impacts on other results  
• Funding application is tailored to relative size, impacts and complexity, and confirms the problem | • This investigation will address the problems identified by the Transport Agency and it’s key partners and determine the right level of investment to match the potential benefits  
• The scale of this investigation, particularly in respect to the technical aspects (such as air quality, noise, amenity, geotechnical and modelling) will be undertaken to a level of detail that will satisfy business case assessment criteria, stakeholder engagement best practise, funding criteria, and planning and consenting requirements.  
• The investigation will consider the upstream and downstream impacts of the preferred option on the network.  
• The relevant business case phases will identify, consider, and where necessary, mitigate adverse impacts in accordance with the Agency’s Environmental and Social Responsibility Policy.  
• Funding to undertake investigation is provided through the governments Accelerated Regional Roading Package. | High (conditional on the extent of funding required) |
| Affordable      | • Is affordable through the lifecycle for                                                                                                                                                                   | • The investigation will consider and                                                                                                                                                                        | High                                                                                     |

<table>
<thead>
<tr>
<th>All parties</th>
<th>Identify lifecycle costs for the Agency and local authority and practicable contribution combinations available for the options from available funding sources.</th>
<th>(conditional upon the funding profile of the preferred outcome)</th>
</tr>
</thead>
</table>
| **Timely** | • Delivers enduring benefits over the timeframe identified in the justified strategy or business case  
• Provides the benefits in a timely manner  
• There is a demonstrated urgency in the need to provide a solution to the problem, issue or opportunity | • Relevant time bound KPI’s will be specified in the investigation.  
• The investigation will consider the need and timing of that need.  
• The urgency to respond is relative to government policy, given effect to by the Agency in their outcomes, goals and objectives. |
| **Confidence** | • Manages current and future risk for results/outcomes  
• Manages data deficiency risks and identifies information gaps that will need to be addressed in the next business case | • The investigation will incorporate sensitivity and risk analysis in determining the preferred outcome. |
| **Overall** | **Assessment based on lowest rating of all components** | **Medium (with conditions)** |
6. KEY TRANSPORTATION FINDINGS, CONCLUSIONS, AND NEXT STEPS

This Strategic Case reflects the direction provided by the ILM workshop attendees. This transportation review of evidence confirms that the two problems identified are fully supported, resulting in an indicative assessment profile of M/M. Table 3 summarises the key findings of the Strategic Case.

<table>
<thead>
<tr>
<th>Problems identified in the ILM</th>
<th>Key findings in the Strategic Case</th>
<th>Considerations for next steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion in peak hours on Nelson's two arterial routes results in travel delays. (70%)</td>
<td>Peak hour volume to capacity ratios on Nelson's two arterial range from 83% to 95%, which confirms that there is traffic congestion in the peak hours. Typical peak travel delays on State Highway 6 is around three minutes, and on Waimea Rd it is approximately seven minutes. Uncongested daytime travel speed on SH6 is approximately 40km/hr, reducing to approximately 29km/hr northbound in the peaks. Uncongested daytime travel speed on Waimea Rd is approximately 47km/hr, reducing to approximately 22km/hr northbound in the peaks. There is evidence to confirm that walking and cycling numbers on Rocks Rd are constrained by substandard infrastructure.</td>
<td>Analysis of the future years' growth, and the impacts this will have on the transport network. An understanding of the outcomes in terms of the arterial network target level of service. Review and complete baseline and target indicators.</td>
</tr>
<tr>
<td>SH6 Rocks Road is a key walking and cycling route constrained by substandard infrastructure. (30%)</td>
<td></td>
<td>Outputs from the Rocks Rd walk/cycle investigation. Review benefits statements. Review and complete baseline and target indicators.</td>
</tr>
</tbody>
</table>

Table 3 Summary of key findings

National Land Transport Funded activities assessed as having medium strategic fit and medium effectiveness should progress to at least the Indicative Business Case phase21.

The recommendation from this Strategic Case is that the investigation should progress to the Programme Business Case phase because the problems and benefits are supported by transportation evidence.

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APPENDIX A – INVESTMENT LOGIC MAP

NZTA

Determining the Central Transport Corridor Through Nelson (SH6 Annesbrook Roundabout to Haven Rd Roundabout)

INVESTMENT LOGIC MAP

Programme

PROBLEM

Congestion (70%)

Congestion in peak hours on Nelson’s two arterial routes result in travel delays

Accessibility (30%)

SH6 Rocks Road is a key walking and cycling route constrained by substandard infrastructure.

BENEFIT

Reduced journey times (35%)

KPI1: Decrease peak hour travel times
KPI2: Increase peak hour capacity

Contribute to Nelson and regional economic growth and productivity (35%)

KPI1: Increase peak hour capacity
KPI2: Increase freight throughout

Improved community safety and wellbeing (15%)

KPI1: Decrease walk/cycle crashes

Improved tourism and recreation activities (15%)

KPI1: Increase spatial coverage for cycles & paths
KPI2: Increase cyclist & walker numbers

Testing Problem Statements...

1. Is it clear what the problem is that needs to be addressed, both the cause and effect?
2. Is there a correlation between what is broken and the consequence?
3. Is there sufficient evidence to confirm both the cause and effect of the problem?
4. Is it a compelling call to action and something we care about?

Testing Benefit Statements...

1. Can the benefits/KPIs be attributed directly to solving the problem?
2. Are the benefits of high value to the organisation or its customers?
3. Are the KPIs SMART and provide strong evidence benefits have been delivered?

The story so far in a nutshell...

Nelson’s 2 arterial routes (SH6 Rocks Road and Waimea Road) can get heavily congested and the current state highway (SH6 Rocks Road) does not fully support all road users.

This is resulting in travel delays on the 2 arterial routes and cyclists/pedestrians being deterred from using Rocks Road.

Any investment by NZTA would potentially result in benefits of reduced journey times, improved community safety and support for regional growth and recreational plans.

MY Note 1

NZTA: Lyndon Hammond, Neil Walker, Andrew James
Facilitator: Mark Young
Accredited Facilitator: Yes

MY Note 2

NZTA reconfirmed strategic case process to focus on transport related problems/evidence.
APPENDIX B – BENEFITS MAP
APPENDIX C – ALIGNMENT TO EXISTING ORGANISATIONAL STRATEGIES

Table 5 below identifies the high level organisational strategies of the Government, the NZ Transport Agency and Nelson City Council that relate to this investigation project.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Organisational Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZ Transport Agency</td>
<td>Statement of Intent, South Island Freight Plan, National Business Cases, National Infrastructure Plan, National Land Transport Plan</td>
</tr>
<tr>
<td>Nelson City Council (Regulatory Authority Objectives)</td>
<td>Nelson Resource Management Policy Statement and Plan (under review as the “Nelson Plan”)</td>
</tr>
<tr>
<td>Nelson City Council (Regional Transport Objectives)</td>
<td>Transportation Asset Management Plan, Regional Land Transport Plan</td>
</tr>
</tbody>
</table>

The Government Policy Statement\(^\text{22}\) expects the Transport Agency to take a lead role in securing integrated land transport planning that contributes to the government’s overarching goal of “growing the New Zealand economy to deliver greater prosperity, security and opportunities for all New Zealanders.”

The Transport Agency’s purpose is to “create transport solutions for a thriving New Zealand.” The desired outcomes are:

- Effective – Move people and freight where they need to go in a timely manner;
- Efficient – Deliver the right infrastructure and services to the right level at the best cost;
- Safe and Responsible – Reduce the harms from transport; and
- Resilient – Meet future needs and endure shocks.

The Transport Agency’s role includes promoting integrated land use and multi-modal transport planning with resource planners and local government, for an increasingly optimised transport network that runs well and reliably. The Transport Agency needs to negotiate the right balance between transport outcomes and other social, community and economic outcomes.

The Transport Agency’s Statement of Intent articulates that our goal for the transport network involves integrating land uses, transport networks, and the various modes, services and systems to deliver a seamless and safe ‘one network’. Consequently, it is important when considering any state highway transport network that the regional policy objectives are addressed. The long term organisation goals and medium term objectives that relate to this Strategic Case are identified in Table 1 below.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrate one effective and resilient network for customers</td>
<td>Integrate land uses and transport networks to shape demand at national, regional and local levels.</td>
</tr>
<tr>
<td></td>
<td>Integrate national and local transport networks to support strategic connections and travel choices.</td>
</tr>
<tr>
<td></td>
<td>Improve freight supply chain efficiency</td>
</tr>
<tr>
<td>Shape smart, efficient, safe and responsible transport choices</td>
<td>Implement the Safe System approach to create a forgiving land transport system that accommodates human error and vulnerability.</td>
</tr>
<tr>
<td></td>
<td>Incentivise and shape safe and efficient travel choices using a customer-focused approach.</td>
</tr>
<tr>
<td>Deliver efficient, safe, responsible and resilient highway solutions for customers</td>
<td>Greater resilience of the state highway network</td>
</tr>
<tr>
<td></td>
<td>Deliver consistent levels of customer service that meet current expectations and anticipate future demand</td>
</tr>
<tr>
<td></td>
<td>Provide significant transport infrastructure.</td>
</tr>
<tr>
<td>Maximise effective, efficient and strategic returns for New Zealand</td>
<td>Align investment to agreed national, regional and local outcomes and improve value for money in all we invest in and deliver</td>
</tr>
</tbody>
</table>


Policies that are implemented in a local government context have the potential to influence the demand scenario and the capacity of local roads and state highways, for example parking and public transport policy. It is important for transport projects and policies to be planned and then implemented not in isolation, but collaboratively between all levels of government and relevant stakeholders to ensure the transport task aligns with desired urban form objectives.

Should the Nelson Plan review prioritise urban intensification over urban sprawl; encourage higher density clusters around key centres such as the Central City, Victory, Tahunanui and Stoke; and plan for efficient transport networks that enable ease of access between these centres, then the findings from this investigation will be of critical importance to that Plan.