



*Tahunanui Cycle Network Investigations*

# **Investigation of Possible Options Delivery 1**



*Tahunanui Cycle Network Investigations*

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# Investigation of Possible Options

## Delivery 1

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# Contents

<b>Executive Summary .....</b>	<b>1</b>
<b>Introduction.....</b>	<b>4</b>
<b>1 Background of the Project.....</b>	<b>4</b>
<b>2 Goals for the Preferred Solution .....</b>	<b>5</b>
<b>3 Required Output of this Report .....</b>	<b>5</b>
3.1 Delivery 1.....	5
3.2 Delivery 2 .....	6
3.3 Delivery 3 .....	6
<b>4 Methodology .....</b>	<b>6</b>
4.1 Existing Environment/Data Collection .....	6
4.2 Key Issues and Constraints .....	6
4.3 Option Development.....	7
4.4 Option Evaluation .....	7
4.5 Option Recommendations .....	7
<b>5 Existing Environment/Data Collection.....</b>	<b>7</b>
5.1 Key Destinations within Tahunanui .....	7
5.2 Pedestrian and Cycling Activity .....	8
5.3 Population .....	11
5.4 Existing Infrastructure along the Route .....	11
5.5 Road Hierarchy and Level of Service .....	17
5.6 Other Proposed Projects along the Corridor.....	25
<b>6 Key Issues and Constraints .....</b>	<b>26</b>
6.1 Introduction .....	26
6.2 NCC List of Protected Buildings, Places and Objects .....	26
6.3 NCC List of Heritage/Notable Trees .....	26
6.4 Community Issues.....	26
6.5 Existing Issues/Squeeze Points .....	27
6.6 Issues Noted that are Outside of Scope .....	28
<b>7 Opportunities/Option Development.....</b>	<b>29</b>
7.1 Option Development Process.....	29
7.2 Long list of Options Considered.....	31
<b>8 Evaluation.....</b>	<b>39</b>
<b>9 Recommendations .....</b>	<b>44</b>

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9.1	Recommended Shortlist Options.....	44
9.2	Options from Long List to be discarded .....	46
<b>10</b>	<b>Conclusion .....</b>	<b>47</b>
	<b>Appendix A – Cycling Activity Map .....</b>	<b>48</b>
	<b>Appendix B – Engagement Summary and Consultation Register .....</b>	<b>49</b>
	<b>Appendix C – All options identified at key stakeholder meeting.....</b>	<b>55</b>
	<b>Appendix D – Tahunanui Cycleway proposal prepared by the Tahuna Holiday Park and the Tahuna Business Association .....</b>	<b>59</b>

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# Executive Summary

This report documents Deliverable 1 of the project: Tahunanui Cycle Network Investigation. Opus International Consultants Ltd (Opus) was commissioned to undertake this work by the Nelson City Council (NCC). The brief was aimed at finding a viable option to close the key missing link in the cycle network once the Rocks Rd walking and cycling facility is constructed. Currently there are no cycle facility connections between the southern terminus of the Rocks Rd on-road cycle path, the southern terminus of Railway Reserve and the northern terminus of the Whakatu Drive shared paths at Annesbrook roundabout nor the Richmond-Nelson coastal shared path ending at the Bolt Road/Quarantine Road roundabout.

The object of this project was to identify and investigate the options for routes to complete this link and recommend a single solution so that consenting, design and land purchase can proceed.

The goals for the project are set out in the Detailed Brief as:

- Increased cycle use especially during peak hours
- Decreased cycle crash numbers in the suburb of Tahunanui
- Provide a link between Rocks Road, Annesbrook and the Airport
- This feasibility study shall recommend a single network solution that is fundable, consentable and buildable.

This project was conducted in the following stages:

- Existing Environment/Data Collection/Key Stakeholder Workshop
- Identification of Key Issues and Constraints
- Option Development
- Option Evaluation
- Option Recommendations

Through the process of the project a total list of potential options was reduced down to 10 options and then further reduced down to four options for Council consideration for further evaluation in the next stage of this project. The options were evaluated using the following groupings:

- Potential commuter routes (includes school and work)
- Potential recreational/tourists routes
- Potential cross routes

The four routes recommended for further evaluation (plus two cross route connections) are:

- Option 1: Tahunanui/Annesbrook Drive – Commuter Route (suitable for the following cyclists: strong and fearless, enthused and confident and a small number of interested but concerned)
  - » Route: Rocks Rd Walking and Cycling Facility /Tahunanui Dr/Annesbrook Dr

- 
- Option 2: Muritai St/Pascoe St/Whakatu Dr Underpass – Commuter and School Route (suitable for the following cyclists: strong and fearless, enthused and confident and over half of the interested but concerned)
    - » Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Parkers Rd/Pascoe St/Merton Place/Blackwood Street (through existing connection via Merton Way)/across Jenkins Creek/around Mitre 10 site (Nelson Junction)/Whakatu Dr Underpass
  - Option 4: Roto St/Bolt Rd – Commuter/Tourist/Recreational and School Route (suitable for the following cyclists: strong and fearless, enthused and confident and over half of the interested but concerned)
    - » Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Beavans Way/Roto St/Parkers Rd/Bolt Rd/Airport Cycleway (Trent Drive)
  - Option 6: Tourist/Airport Route Recreation/Tourist and route suitable for cyclists to gain confidence. (suitable for the following cyclists: strong and fearless, enthused and confident and the interested but concerned)
    - » Rocks Rd Walking and Cycling Facility /Beach Rd/Golf Rd/Parkers Rd/Awatea Place/around the edge of the golf course/Bolt Rd/Airport Cycleway (Trent Drive)
    - » Variation: Instead of using Awatea Place/around the edge of the golf course could use Otterson St and link onto Bolt Rd via Golf Haven Way
  - Cross link: Whakatu Dr Underpass /Blackwood St/Bolt Rd – Access for Commuters to Industrial Area. (suitable for the following cyclists: strong and fearless, enthused and confident and over half of the interested but concerned)
    - » Whakatu Dr Underpass/ Around Mitre 10/ Across Jenkins Creek/ Blackwood Street (through existing connection via Merton Way)/Merton Pl/Pascoe St/Vivian Pl/new connection through Vaughn Whiting Builders Ltd yard/Rotherham St/Bolt Rd
  - Cross link: Green St – School and Community Cross link (suitable for the following cyclists: strong and fearless, enthused and confident and the interested but concerned)
    - » Green St (from SH6 through to Golf Rd). This link will need to include connections to and from Tahunanui School via Muratai St upgrades.

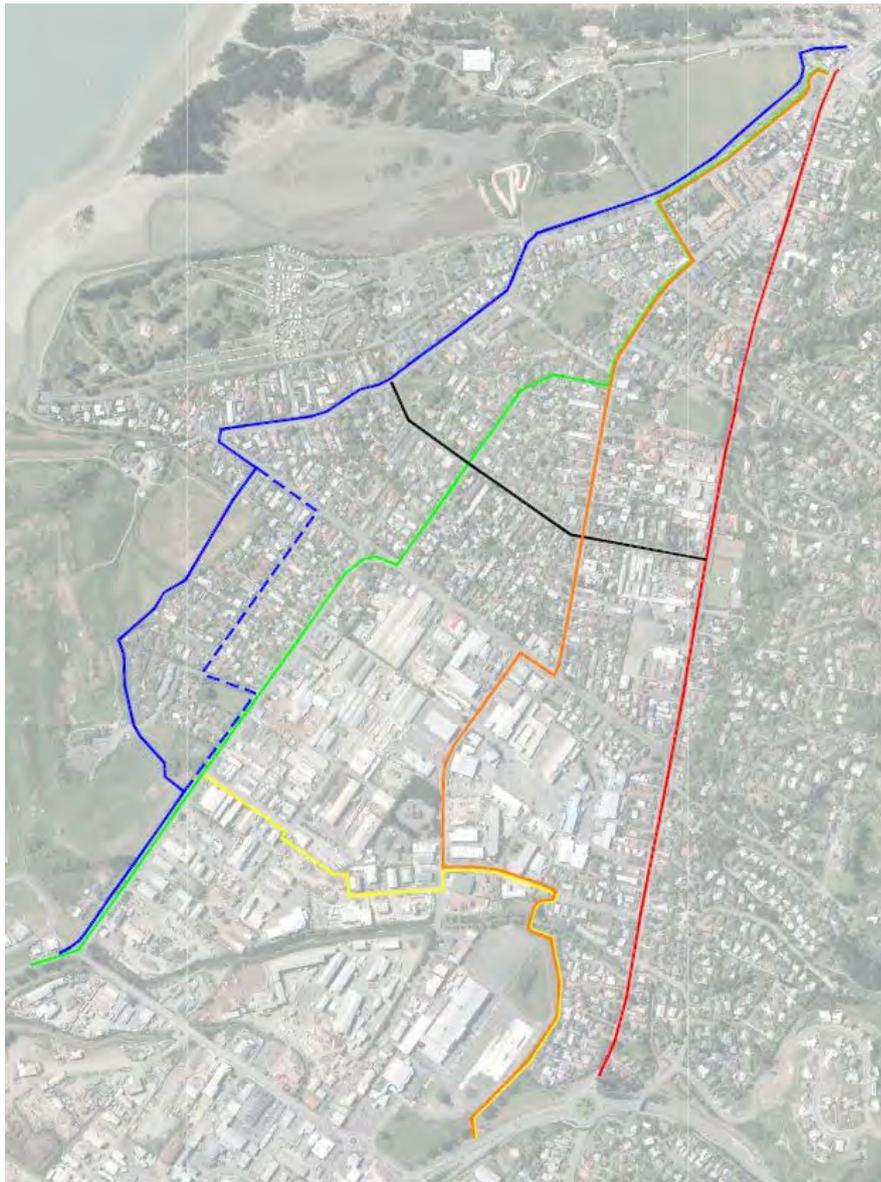


Figure 1: Four Routes for Further Evaluation

# Introduction

## 1 Background of the Project

NCC commissioned Opus International Consultants to investigate and develop a single preferred solution for the Tahunanui cycle network. The brief was aimed at finding a viable option to close the key missing link in the cycle network now and when the Rocks Rd walking and cycling facility is constructed. Currently there are no cycle facility connections between the southern end of the Rocks Rd on road cycle path, the Rail Reserve and Whakatatu Drive shared paths at Annesbrook roundabout nor the shared path ending at the Bolt Road and Quarantine Road roundabout. The object of this project was to identify and investigate the options for routes to complete this link and recommend a single solution so that consenting, design and land purchase can proceed. The study area is indicated in Figure 2 below.

It is intended that the identification of a feasible/appropriate cycle route(s) connecting the southern end of the Waterfront/Rocks Rd walking and cycling facility and the Annesbrook area will provide funding estimates for the 2015/16 budgets.

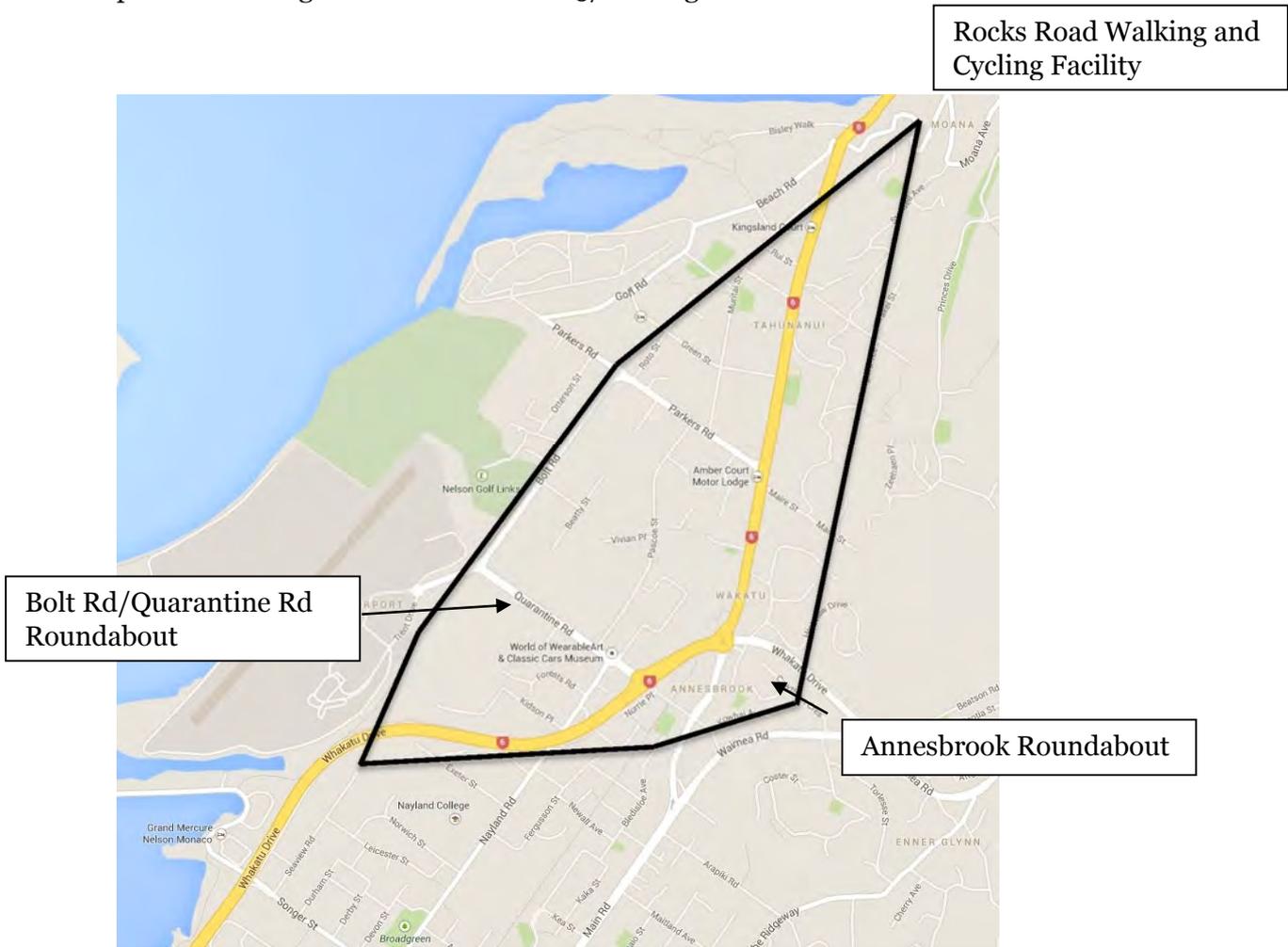


Figure 2: Extent of Tahunanui Cycle Investigation

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## 2 Goals for the Preferred Solution

The goals for the project are set out in the Detailed Brief as:

- Increased cycle use especially during peak hours
- Decreased cycle crash numbers in Tahunanui
- Provide a link between Rocks Road, Annesbrook and the Airport
- This feasibility study shall recommend a single network solution that is fundable, consentable and buildable

It is noted that in order to increase cycle use during peak hours there is a need to:

- Target solutions that will encourage people who are not confident cyclists to cycle
- To provide direct commuter routes for confident cyclists, and
- Provide routes that are attractive and safe for children

## 3 Required Output of this Report

This project is undertaken in three stages:

- Delivery 1: Development of the Long list of Options
- Delivery 2: Development of the Short list of Options
- Delivery 3: Development of the Single Option

This report represents Delivery 1 of this project. The scope for Delivery 1 is as follows:

### 3.1 Delivery 1

Long list of Options with recommendations to NCC for review. This shall include all routes identified as viable options, advantages and disadvantages, options for different cycle facility standards along each route, identification of issues on each route (including land issues, squeeze points and resource consent issues), opportunities, options for level of service for cyclists and recommendations of which options to be developed further. The Consultant will undertake preliminary consultation with key affected stakeholders to identify feasibility of each recommended option. Key stakeholders at this stage will include Nelson Airport, Tahunanui Beach Holiday Park, Tasman Cycle Trails Trust and Bicycle Nelson Bays.

The scope for Delivery 2 and 3 are as follows: These will be covered in subsequent reports:

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## 3.2 Delivery 2

Following this report will be Delivery 2 listing the Short list of Options, including a recommendation of a preferred solution for NCC to review. This report will comprise of preliminary drawings including cross sections, demonstrating the feasibility and constraints of the options. These can be based on aerial photographs with sufficient detail to enable impacts on road and lane widths, parking, property etc. to be clearly detailed. Gradient issues will also be considered.

## 3.3 Delivery 3

A Single Option draft report will be completed, capturing any changes required on developed short listed option following community engagement and NCC review.

# 4 Methodology

This project was conducted in the following stages:

- Existing Environment/Data Collection
- Identification of Key Issues and Constraints
- Option Development
- Option Evaluation
- Option Recommendations

## 4.1 Existing Environment/Data Collection

Information on the number of users and potential users in the study area have been collected so that we can calculate growth and usage. We have also looked at the performance of the study area to gain a clear picture of the issues and options along the route, this also included crash data over the past five years. Sources of information include:

- NCC Aerial Photographs (Top of the South Maps)
- NCC Traffic Count Data
- NCC Cycle Count Information
- NCC Intersection Turning Count Surveys
- NCC Crash Data (0800 Cycle Crash)
- NZTA State Highway Traffic Count Data
- NZTA CAS Crash Data Base
- Key Stakeholder Workshop (Design Charrette)
- 2013 Census Data

## 4.2 Key Issues and Constraints

Information from the data collection phase, the key stakeholder workshop, and the project teams walk/drive and cycle within the area was used to determine the key issues, constraints and

opportunities for the Cycleway Network Study Area. A Level of Service (LOS) methodology was developed to assess the current LOS within the network.

### 4.3 Option Development

Ten options were identified using the information from the two previous stages. Some options were discarded at this stage as being outside the scope of this project. The options were all developed to a LOS B or A standard.

### 4.4 Option Evaluation

Criteria were developed to assess the ten options. The criteria utilised both the project goals and additional project specific criteria.

### 4.5 Option Recommendations

The final section of the report provides recommendations as to the options that should be taken forward for further assessment.

## 5 Existing Environment/Data Collection

The Cycleway Network Study Area passes through a number of different road environments ranging from multi-lane high volume arterial routes with high heavy vehicle frequencies to low volume suburban roads with medium heavy vehicle frequencies. Land use in the study area is typically residential and industrial. However there are some significant retail, educational, commercial and recreational facilities in, or adjacent to the Network Area. These facilities are substantial generators of trips for all modes. Detailed information on the existing environment is provided below.

### 5.1 Key Destinations within Tahunanui

Key Destinations within the study area are indicated below:

Destination	Address
Airport	Trent Dr
Tahunanui Primary School	69 Muritai St
Nayland College	166 Nayland Rd
Broadgreen Intermediate	193 Nayland Rd
Golf Course	38 Bolt Rd
WOW	Cadillac Way
Proposed Development (Retail Outlet facility, Quarantine Rd)/Mitre 10/Speights Ale House	99 Quarantine Rd
Tahuna Industrial Area	Bolt Rd / Pascoe St
Churches (St Stephens, Presbyterian, Destiny)	61 Tahunanui Dr 35 Muritai St 75 Pascoe St

Destination	Address
Preschools (Little Footsteps, Tahunanui Kindy, Tahuna Community Centre, Paulas preschool, Paula's tiny tots.)	150 Tahunanui Drive, 53 Muritai St 61 Muritai street, 112 Parkers Road 89 Parkers Road
Abbeysfield retirement area	200 Hardy St
Tahuna Beach Recreational Area	Beach Rd
Comprehensive housing (being built)	Corner Golf Rd and Green St
Tahuna Holiday Park	70 Beach Rd
Tahuna Motels (Tahunanui Dr, Annesbrook Dr and Golf Road)	19 Beach Rd, 23 Beach Rd, along Muritai St, 80 Tahunanui Dr, 44 Tahunanui Dr, 178 Tahunanui Dr 52 Tahunanui Dr, 121 Tahunanui Dr, 190 Annesbrook Dr, 24 Golf Rd 11 Golf Rd, 36 Golf Rd, 26/30 Golf Rd, 71 Golf Rd, 69 Golf Rd
MedLab / Tahuna Pharmacy, Tahuna Medical Centre	11b Tahunanui Dr 23 Tahunanui Dr
Suburban Club	168 Tahunanui Dr
623 on the Rocks / The Sands Complex	623 Rocks Rd
Tahuna food outlets	6-42 Tahunanui Dr
Proposed development along Beach Rd (Wakatu Inc)	Beach Rd
Tahuna sports fields	Beach Rd
End of Rocks Rd on-road cycle lane	623 Rocks Rd
End of Rail reserve cycle lane	268 Annesbrook Dr
End of Coastal Route (near Airport)	Kidson Pl
Destinations external to study area, using Tahuna as through route	Nelson City (via Beaton Rd or Rocks Rd), Stoke / Richmond (via coastal path or railway reserve)

Table 1: Key Destinations

## 5.2 Pedestrian and Cycling Activity

### 5.2.1 Census 2013 Cycle to Work Activity

Data from the 2013 Census population on the number of people over the age of 15 years old who indicated that they cycled to work on Census day was obtained via NCC and is provided below. A map depicting the cycling activity within the study area can be found in Appendix A.

<b>2013 Cycle Census Data – Cycle to Tahuna</b>		
Area of Usual Residence	Workplace Address	Cycled to work
Stoke	Tahuna	84
Tahuna	Tahuna	48
Nelson Central	Tahuna	39
Nelson North	Tahuna	6
<b>Total NELSON</b>	Tahuna	189
Richmond	Tahuna	27
<b>Total TASMAN</b>	Tahuna	36

**Table 2: Cyclists to Tahuna**

<b>2013 Cycle Census Data – Cycle from Tahuna</b>		
Area of Usual Residence	Workplace Address	Cycled to work
Tahuna	Stoke	21
Tahuna	Tahuna	48
Tahuna	Nelson Central	51
Tahuna	Nelson North	0
	<b>Total NELSON</b>	120
Tahuna	Richmond	6
Tahuna	<b>Total TASMAN</b>	15

**Table 3: Cyclists from Tahuna**

Data from the 2013 Census also indicated that 6033 people work within the Tahunanui Area. With approximately 50% of the total land within the study area occupied by industrial activities we can assume that a large proportion of the people working in Tahunanui will be working within the Industrial Zone. Although not in the original scope, to provide a preliminary test of cycling demand within the industrial zone a phone call to two major industrial employers in this area suggests that there are already a number of cyclists commuting to the Industrial Zone with one employer providing a cycle shed because of the high demand.

### **5.2.2 Cycleway Traffic Volumes and Growth 2010 – 2014**

Table 1 below shows seven hour count volumes for the feeds into the study area, this is to only provide a snap shot of the cycle flows and direction has not been considered at this stage. The counts were undertaken in February each year. The February counts were used as they are the summer peak cycle numbers which represent the high season counts that the cycle facility should be designed to accommodate. Growth percent is from 2010 to 2014.

Two Way Cycleway Volumes 7 Hour Count – February 2010 to February 2014						
Location	2010	2011	2012	2013	2014	Growth*
Railway Reserve Stoke	405	399	440	458	421	4.0%
Whakatu Drive – Shared Path	137	195	258	161	244	78.1%
Rocks Road	286	450	251	323	320	11.9%
Railway Reserve - Bishopdale	276	330	437	275	274	0%
Waimea Rd - Bishopdale	146	66	154	160	143	0%

Table 4: Cycle Traffic Volumes for February of each year

\*Growth is calculated between 2010 and 2014

### 5.2.3 School Cycling Activity in and around the Study Area

The following data has come from the Nayland Cluster Report (August 2010) which focussed on schools in and around the Study Area, the school Travels Plans and the benefits of these Plans.

#### *Nayland College*

1449 students were enrolled at the time of the study. Out of these, 358 students completed the survey from year 9, 10 and 11. The results of the study found:

- 62% of students walk or cycle to and from school
- 24% of students travelled by car
- 13% of students travelled by public transport

Out of the students surveyed 76% rated their journey as safe or very safe. They also found that more students would bike or walk to school if they lived closer or had less equipment to carry. It should be noted that the school roll has dropped significantly since the time of survey, the current roll being approximately 1,100 students.

#### *Concerns that were raised involved:*

- Better cyclist and car cooperation on the roads was required
- More cycle and walking options needed to be available with better facilities
- Slower speeds around the schools and crossings required

#### *Broadgreen Intermediate*

Over 500 students enrolled at the time of the study. Out of the school 458 students completed the survey from year 7 and 8.

- 77% of students walk or cycle to and from school
- 16% of students travelled by car
- 7% of students travelled by public transport

Out of the students who walked or cycled to school, 81% thought their journey was safe or very safe. Students thought their journey could be made safer by having less cars, cars travelling at lower speeds, and wider footpaths. Concerns raised were very similar to the results from Nayland College.

### *Tahunanui Primary School*

This school is outside of the Nayland Cluster Study Area, therefore detailed data is not available, however, this school is an important destination in Tahunanui. Approximately 350 students are enrolled, year 1 through to year 6. One of the teachers conducted a quick survey of the whole school on Tuesday 2<sup>nd</sup> April 2014 and found the following:

- 5% of students cycled to school
- 34% of students walked to school
- 20% of students rode their scooters to school
- 41% of students travelled by car

A member of the Tahunanui Primary School staff attended the stakeholder workshop and provided inputs into the proposed routes.

## 5.3 Population

Population projections are taken from the NCC Nelson Population Projections, November, 2012 p8.

<b>Tahunanui</b>			
	2011	2036	2061*
Population	5,300	5,740	5,450
Population change		+440	-290
Proportion of population aged 65 and over	14%	30%	36%
Number of households	2,320	2,720	2,600
Household change		+400	-120

**Table 5: Tahunanui Population Statistics**

*\*Projections for later years and for areas with small populations are subject to greater uncertainty.*

The population projections indicated that the growth between 2011 and 2016 of 400 people (8% growth) will be concentrated in the Tahuna Hills, the figures include developments in Tasman Heights and Greenhill.

## 5.4 Existing Infrastructure along the Route

### 5.4.1 Connecting Cycle Infrastructure

The Rocks Rd Walking and Cycling facility is envisaged to be the premium tourist cycle path connecting the Nelson CBD with Tahunanui, Richmond and beyond. The full potential use of this route is not expected to be achieved until an appropriate contiguous cycle route is provided from the southern point of Rocks Rd connecting with the rail reserve corridor at Annesbrook and/or the shared path alongside Whakatu Dr or the shared path near the airport. Because the details of the Rocks Rd facility have not yet been decided (i.e. route along the seaward side, the landward side, or a combination of both), further route investigation will be needed to ensure that a safe and consistent network join is achieved.

The existing shared path along the railway reserve from Stoke is utilised by both commuter and recreational cyclists.

The Great Taste Trail currently follows the coastal shared path alongside Whakatu Dr, crosses over Quarantine Rd via the pedestrian refuge then links up with the cycling facility along the eastern section of Whakatu Dr, up Beatson Rd and joining the Railway Reserve shared path to Nelson City over Bishopdale Hill. Once a suitable facility is provided through Tahunanui and Rocks Rd, it is expected that this would be a more scenic / desirable / flatter route for cyclists travelling to Nelson City.

Heading north, the coastal shared path alongside Whakatu Dr branches off just north of Monaco, skirts around the south eastern boundary of the airport and ends at the Bolt Rd / Quarantine Rd / Trent Rd roundabout. From here an on road cycle path continues along Bolt Rd and ends at the Bolt Rd / Parkers Rd roundabout. No cycle facility exists between here and Rocks Rd.

#### 5.4.2 Existing Cycling Infrastructure within the study area

- Cycle lanes on Bolt Rd
- Cycle lanes on Muritai St
- Cycling connection through Blackwood Street
- Crossing point on Quarantine Rd and small section of cycleway on Footpath by Nayland Road

#### 5.4.3 Accident Data within the Study Area

Crash data has been extracted for the 5 year period between 2009 and 2013 from NZTA's Crash Analysis System (CAS) and 3 year period between 2011 and 2013 from NCCs o800 CYCLE CRASH records. As cycle crashes are generally under-reported actual rates are likely to be higher.

The tables below show the number of cyclist and pedestrian crashes within the study area that have been reported in CAS and o800 CYCLE CRASH systems.

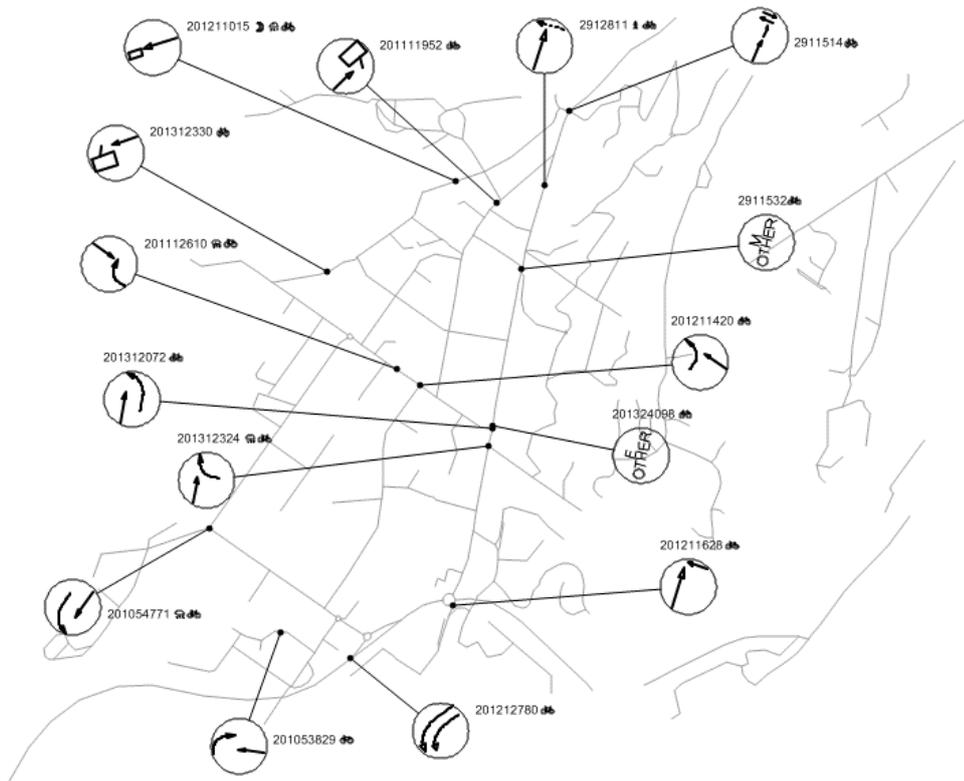
<b>CAS Crash Data Summary 2009 to 2013</b>					
Crash Severity	Number of Cycle Crashes	Number of Affected Persons	Number of Pedestrian Crashes	Number of Affected Persons	Number of Other Crashes
Fatal	0	0	0	0	1
Serious	5	5	4	5	7
Minor	9	11	8	8	38
Non - Injury	4	4	2	2	235
<b>Total</b>	<b>18</b>	<b>20</b>	<b>14</b>	<b>15</b>	<b>281</b>

Table 6: CAS Crash Data

<b>o800 CYCLE CRASH Data Summary 2011 to 2013</b>	
Crash Severity	Number of Cycle Crashes
Fatal	0
Serious	0
Minor	2
Non - Injury	3
<b>Total</b>	<b>5</b>

**Table 7: NCC Crash Data**

Also shown below is the CAS crash summary map of the area, this shows the cyclist crashes in the area and location. Of note is the concentration of crashes along SH 6.



**Figure 3: CAS Cycling Crash Map**

CAS Cycling Accident Details		
Crash Location	Crash Details	Injury
Beach Road, 120m west of Waikare St	Westbound intoxicated cyclist hit parked vehicle	Serious
Bolt Road, intersection with Quarantine Road	Southbound cyclist sideswiped by left turning van	No injury
Cycle path, 100m north of Quarantine Road	Southbound cyclist crashes into traffic sign while avoiding another cyclist	Minor
Forests Road, 160m west of Nayland Road	Westbound cyclist riding on footpath hit van exiting/entering private driveway	No injury
Golf Road, 140m south of Green Street	Southbound cyclist hit opened car door	Minor
Muritai Street, 20m south of Waikare Street	Northbound cyclist hit opened car door	Minor
Parkers Rd, intersection with Pascoe Street	Truck failed to give way to Westbound cyclist	Minor
Parkers Road, 50m south of Beatty Street	Southbound cyclist riding on footpath hit vehicle exiting/entering private house	Serious
SH6, 10m north of Parkers Road	Northbound cyclist hit debris on road	Minor
SH6, 200m north of Rui Street	Northbound cyclist hit unseen pedestrian crossing the road	Serious
SH6, 300m north of Green Street	Northbound cyclist riding on footpath hit manoeuvring van	Minor
SH6, intersection with Beach Road	Northbound cyclist struck rear of vehicle which had nose-to-tailed with vehicle in front	Minor
SH6, intersection with Maire Street	Northbound van sideswiped cyclist merging from the left	Serious
SH6, intersection with Parkers Road	Northbound cyclist sideswiped by left turning car	Minor
SH6, intersection with Whakatu Drive	Southbound truck collided with cyclist travelling in same direction	Serious
SH6, intersection with Whakatu Drive	Northbound car failed to give way to cyclist	Serious

**Table 8: CAS Cycling Accident Details**

Of the 16 cycling crashes recorded in CAS eight are noted to have occurred along SH6. The crash severity along SH6 being three serious and five minor injury within five years indicate that cyclists are at risk of personal injury along this high speed corridor. This grouping of serious and minor injury crashes is significant and indicates a cycle black spot corridor. There is a pattern of five of these crashes at intersections. This crash pattern would indicate that a cyclist safety improvement measure is needed along this corridor and at intersections.

### 5.4.4 Volumes in Study Area

Table 2 below shows two-way traffic volumes in the Study Area to provide a snapshot of traffic flow. The traffic volumes have been calculated from surveys carried out over one week period in by L & M Traffic Data Ltd. The traffic volumes represent 2013 unless otherwise stated.

Two Way Traffic Volumes - 2013							
Location	AM Peak (0700 – 0900)	Inter Peak (1400 – 1600)	PM Peak (1600 – 1800)	AADT (Two ways)	% Heavies (class 4+)*	AADT (Two ways heavies )	HPMV Route
SH6/Tahunanui Drive (Nov, 2013)	NB, 1,798 SB, 1,196	NB, 1,447 SB, 1,695	NB, 1,730 SB, 1,944	19,645	8.1%	1591	Yes
Quarantine Road (May, 2013)	EB, 377 WB, 544	EB, 631 WB, 518	EB, 742 WB, 483	1007	6.9%	69	Yes
Bolt Road (May, 2013)	NB, 359 SB, 270	NB, 467 SB, 313	NB, 498 SB, 315	663	11.8%	78	From Quarantine Rd to Golf Haven Way
Parkers Road East (east of Bolt Rd) (May, 2013)	EB, 178 WB, 249	EB, 347 WB, 341	EB, 336 WB, 289	587	9.6%	56	No
Parkers Road West (west of Bolt Rd) (May, 2013)	EB, 139 WB, 191	EB, 261 WB, 271	EB, 299 WB, 259	450	3.2%	14	No
Muritai Street (May, 2013)	NB, 350 SB, 239	NB, 451 SB, 388	NB, 475 SB, 270	676	11.5% (buses only)	78	No
Golf Road (May, 2013)	NB, 115 SB, 97	NB, 191 SB, 241	NB, 182 SB, 236	348	2.5%	9	No
Rawhiti Street (Feb, 2010)	EB, 22 WB, 47	EB, 30 WB, 67	EB, 17 WB, 37	59	4.9%	3	No
Beach Road (May, 2013)	NB, 213 SB, 68	NB, 179 SB, 189	NB, 192 SB, 238	336	3.8%	13	No
Pascoe Street Nelson (May, 2013)	NB, 435 SB, 338	NB, 431 SB, 574	NB, 297 SB, 492	799	7.8%	62	Parkers Rd to Orion St (currently land locked by no access to Parkers Rd)

**Table 9: Traffic Volumes**

**NB = North Bound/ SB = South Bound/ EB = East Bound/ WB = West Bound**

\* Includes vehicles from the size of light 4 wheel trucks and up

## 5.5 Road Hierarchy and Level of Service

### 5.5.1 Road Hierarchy Map



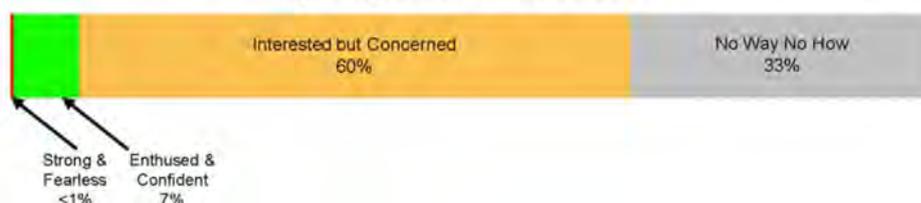
Figure 4: NCC Road Hierarchy Map

### 5.5.2 Level of Service

To ensure that a consistent approach to evaluating the cycling Level of Service (LOS) was taken a guideline was developed to assist both with assessing existing provisions as well to aid in indicating the type of treatments at both intersections and along route sections that should be undertaken to raise the LOS for a particular section of road. The LOS parameter guideline rates cycle facility provision from LOS A through to LOS E and is split by different facility level of: Arterial and Principal Roads 10,000 plus vehicles/day, Collector Roads/Industrial 2,000 to 10,000 vehicle/day and Local road. The LOS guideline is provided on the next page.

Once developed the Level of Service Guideline was assessed using Gellers', 2009<sup>1</sup> types of transportation for cyclists and categorised as to the type of cyclist that each level of service would attract. Geller identified four types of cyclists by proportion of the population in Portland, USA. Splitting cyclists into the types of cyclists is useful as it suggests that the biggest gains in getting more people to cycle is to implement provisions for the "interested but concerned" segment of society. Note that this guideline has been developed using specialist cyclist engineering design judgement and has not been tested via user perception surveys (or other testing) with the Nelson population.

#### Four Types of Transportation Cyclists in Portland By Proportion of Population



Further definition of the different groups is provided below:

**“Strong & Fearless:** A group of people who will travel by bicycle regardless of the conditions. The cities that provide the most hostile cycling environments still see around 0.8% of all trips made by bicycle, and the users in that group are considered strong and fearless.

**Enthused & Confident:** The next group of the population requires some space on the carriageway, and where that is made available either informally (for example by wide kerbside lanes) or formally (for example by painted cycle lanes), they will be prepared to travel by bicycle. People in this group may be prepared to mix with motorised traffic to some extent. Where a bicycle network is aimed at the enthused & confident, the maximum uptake of cycling may result in a cycling mode share of 8% to 10%.

**Interested but Concerned:** The next group (and largest proportion) of the population require increased safety through measures such as physical separation from motorised traffic before they are prepared to travel by bicycle, or allow their children to go by bicycle. People in this group may only be prepared to mix with motorised traffic where the traffic volumes and traffic speeds are low. Where a bicycle network caters for the Interested but Concerned, maybe two thirds of the population are prepared to go by

<sup>1</sup> <http://www.portlandoregon.gov/transportation/article/237507>

*bicycle, at least some of the time, and these environments will accommodate the previous two categories. Some of the people in this group may not think of themselves as cyclists, but would take up cycling if the conditions are right (the physical environment) and when they see other 'non-cyclists' starting to use bicycles for some trips (the social environment).*

**No way No how:** *The remainder of the population would not use a bicycle regardless of the physical or social environment; it is simply not something they would entertain. No effort should be taken to convince this group to take up cycling, as they are unlikely to be receptive to it."*

Road Length Level Of Service						
LOS/Caters for	Arterial and Principal Roads 10,000 plus vehicles/day		Collector Roads/Industrial 2,000 to 10,000 vehicles/day		Local Road	
<b>A</b> Caters for <ul style="list-style-type: none"> <li>Strong and Fearless,</li> <li>Enthusied and Confident</li> <li>Interested but Concerned (majority)</li> </ul>		Off road cycle path or shared facility parallel to arterial route, well signed suitable to all users. Provides facility attractive to both commuters and vulnerable users.  Or  Separated Bicycle Facility with wide grade separation or barrier separation from traffic		Off road cycle path or shared facility parallel to arterial route, well signed suitable to all users. Provides facility attractive to both commuters and vulnerable users.  Or  Separated Bicycle Facility with wide grade separation or barrier separation from traffic		Low volume local road with traffic calming and reduced speed zone at 30km/hour, low HCVs
<b>B</b> Caters for <ul style="list-style-type: none"> <li>Strong and Fearless,</li> <li>Enthusied and Confident</li> <li>A portion (~60%) of the Interested but Concerned</li> </ul>		On-road cycle lanes, meeting current guidelines standards of 1.5m width or 1.8m width past parked cars. Supplemented with conflict green paint. Signalised intersections have cycle boxes or cycle lanes.		On-road cycle lanes, meeting current guidelines minimum standards of 1.2m width or 1.5m width past parallel parking..		Low volume local road with easy gradient, wide traffic lanes, low HCVs and low levels of on-street parking, with street to street community connections well signed.
<b>C</b> Caters for <ul style="list-style-type: none"> <li>Strong and Fearless,</li> <li>Enthusied and Confident</li> <li>A portion (~30%) of the Interested but Concerned</li> </ul>		On-road cycle lanes, meeting current guidelines minimum standards of 1.2m width or 1.5m width past parallel parking		Wide traffic lanes, modest levels of parking, moderate traffic, cycle warning signs, low HCVs		Local roads with 6m lane widths or 40km/h speed restriction and/or some form of direct traffic calming like speed humps or tables.
<b>D</b> Caters for <ul style="list-style-type: none"> <li>Strong and Fearless,</li> <li>Enthusied and Confident</li> </ul>		Wide traffic lanes, modest levels of parking, moderate traffic, cycle warning signs		Narrow lanes, Heavy Parking, high traffic volume. High HCVs		Narrow lane widths moderate on-street parking, limited driveway visibility, low traffic volume
<b>E</b> Caters for <ul style="list-style-type: none"> <li>Strong and Fearless</li> </ul>		No facility, narrow traffic lanes, heavy parking, high speeds		Narrow traffic lanes heavy parking frequent turn over		Narrow lane widths heavy on-street parking, limited driveway visibility, high speeds.

**Intersection Level Of Service**

**This assessment of the attractiveness of the Level of Service is based on Opus Cycle Design Experts Judgement, this could be better refined through user-perception surveys of Nelson cyclists.**

Data	Arterial and Principal Roads 10,000 plus vehicles/day	Collector Roads 2,000 to 10,000 vehicles/day	Local Road		
<p>A</p> <p>Caters for</p> <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Interested but Concerned (majority)</li> </ul>		<p>Pelican or traditional signalised crossing point. Or Grade separated crossing facility like an over bridge or underpass.</p> 	<p>Zebra crossing point with hold bars with width for cyclists or Pelican or traditional signalised crossing point. Or Grade separated crossing facility like an over bridge or underpass.</p> 		<p>Give way priority crossing points on tables as per railway reserve stoke.</p>
<p>B</p> <p>Caters for</p> <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• A portion (~60%) of the Interested but Concerned</li> </ul>		<p>Zebra crossing point with hold bars with width for cyclists</p> 	<p>At grade crossing facility with refuge island, advance warning signs, enlarged median Island and Cycle hold bars.</p> 		<p>Slow speed zone table crossing points</p>
<p>C</p> <p>Caters for</p> <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• A portion (~30%) of the Interested but Concerned</li> </ul>		<p>At grade crossing facility with refuge island, advance warning signs, enlarged median Island and Cycle hold bars.</p> 	<p>Ramps hold Bars</p>		<p>Shared space zones with shared priority of different modes</p>
<p>D</p> <p>Caters for</p> <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> </ul>		<p>Ramps &amp; hold Bars , warning signs</p> 	<p>Ramps &amp; warning signs</p>		<p>Ramps, hold bars &amp; warning signs</p>

<p>E</p> <ul style="list-style-type: none"> <li>Strong and Fearless</li> </ul>		<p>Warning Signs or nothing</p>	<p>No Facility</p>	<p>No Facility</p>	<p>No Facility</p>	<p>No Facility</p>
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Table 11: Level of Service Parameter Guideline

### 5.5.3 Existing Cycling LOS within the network

Key sections of road within the study area have been assessed in terms of the cycling LOS. The results are provided below.

Existing Cycling Level Of Service		
Location	Level of Service	View
SH6/Tahunanui Drive HPMV Route	D (Arterial)	
Quarantine Road HPMV Route	C/D (Collector Rd)	
Bolt Road HPMV Route from Quarantine Rd to Golf Haven Way	C (Collector Rd)	
Parkers Road East (east of Bolt Rd)	C/D (Collector Rd)	
Parkers Road West (west of Bolt Rd)	C/D (Local Rd)	

Location	Level of Service	View
Muritai Street	B (Collector Rd) No Heavy vehicles allowed	
Golf Road	C (Local Rd)	
Beach Road	C (local Rd)	
Pascoe Street HPMV Route from Parkers Rd to Orion St (currently land locked by no access to Parkers Rd)	E (Industrial)	
Roto St	C (Local Rd)	

**Table 12: Existing Cycle Levels of Service**

## 5.6 Other Proposed Projects along the Corridor

Within the Tahunanui area, there are two land development projects as well as the provision for a walking and cycling facility along proposed to take place in the near future.

- A large format retail centre ('Nelson Junction') is proposed on the currently vacant site neighbouring Mitre 10 Mega on the corner of Whakatu Dr and Quarantine Rd. The developers obtained resource consent for a bulk retailing centre of some 30,000 square metres in area in 2008. Due to the difficult market conditions, and the very large scale of this project, a time extension application for their consent was granted in 2013, extending the development period to 2023 if required. In a newspaper article last year, the developers stated that work is likely to commence on this project in 2014. Once complete, this will be the biggest large-format retail centre in the upper South Island, so it is likely to be a major destination in the area.
- The Wakatu Incorporation have long planned the development of the Ocean Lodge site which runs between Beach Rd and Muritai St. The company first proposed development of this land back in 2008, but have since altered their concept plans to create a 'seaside village' including a two cafes, a combination of office and retail spaces with a centralised communal green space. This is seen to become a community hub area for Tahunanui and is likely to be a popular destination for local residents as well as people outside the immediate Tahunanui area.
- NCC and the New Zealand Transport Agency have engaged Opus International Consultants to investigate options for a walking and cycling facility along Rocks Rd. It is unclear at this stage which side of the road the Rocks Rd walking facility will be located on. As the Rocks Rd project progresses it will be important to ensure that routes proposed in this project connect onto this proposed facility in a cohesive, safe way.

## 6 Key Issues and Constraints

### 6.1 Introduction

This section provides the background of the Key Issue and Constraints that were considered in the development of the options.

### 6.2 NCC List of Protected Buildings, Places and Objects

- MS25: Tahunanui Drive Kainga Site – Behind Tahunanui Pharmacy (Important early site). Due to this site's location well clear of SH6, it is highly unlikely that any cycling facility construction alongside Tahunanui Drive would affect it.

### 6.3 NCC List of Heritage/Notable Trees

- *Agathis Australis* (Common name: Kauri) – 33 Beach Road (Ocean Lodge / Wakatu Village development). The tree is located well within the site, therefore any alterations to Beach Rd would not affect it.
- *Phoenix Canariensis* (Common name: Canary Island Palm) – Tahunanui Drive / Beach Road Corner (KFC). This tree may need to be considered in the design of any cycling facility along Beach Rd should earthworks be required (Options 2, 3, 4 and 5).
- *Phoenix Canariensis* (Common name: Canary Island Palm) – Tahunanui Library Gardens. This tree may need to be considered in the design of any cycling facility along Beach Rd should earthworks be required (Option 6).
- *Metrosideros Robusta* (Common name: Rata) – 44 Tahunanui Drive. This tree may need to be considered in the design of any cycling facility along Tahunanui Drive should earthworks be required (Option 1).

### 6.4 Community Issues

The community issues were identified through the stakeholder workshop. The key issues identified are:

- Safety for school children
- Cross and through routes
- Desire for a recreational route from the business community
- Desire for a safe/scenic route between the airport and Rocks Rd
- The effects of through traffic on local areas, in terms of safety, noise, pollution, severance of the community by SH6

## 6.5 Existing Issues/Squeeze Points

Existing issues/squeeze points within the study area were identified through the stakeholder workshop, local knowledge of the project team and drive/walk and cycling through the study area. The following issues were identified:

### 6.5.1 SH6 (Tahunanui Drive / Annesbrook Drive / Whakatu Drive)

- Annesbrook Drive – not much room to fit a cycleway along road, conflict with parked cars and numerous driveways
- Douglas Rd Intersection – on road widths are tight, may need seal widening
- Maire Street Intersection – small shoulder between lane and kerb line
- Tahunanui Drive – a lot of parking spaces and blind accessways
- Outside Tahunanui School – Steep banks up Tosswill Rd, no shoulder between kerbs
- Muritai Street intersection – busy intersection no room for cyclist next to parked cars
- Bisley Ave Intersection – Lights turning bays take up most room, need more room. Cars don't tend to stop for pedestrians or cyclists if they have a green light
- Bisley Ave / Rocks Rd traffic lights aren't triggered by cyclists (i.e. when southbound cyclists are waiting to turn right onto Beach Rd)
- Narrow strip of Tahunanui Dr, constraints on landward side between Rui St to the Bowling Club
- Inconsistent on road cycle markings
- No crossing points at all between Tahunanui School and Annesbrook roundabout
- Lack of direct cycle link from SH6 to Whakatu Dr (southbound)
- Heavy traffic and many parked cars make this road hazardous
- Lack of obvious walkway / cycleway signage directing people off SH6 to link up with railway reserve via overbridge
- School pedestrian crossing dangerous as some vehicles are not inclined to stop even when the crossing is manned

### 6.5.2 Bolt Road / Parkers Road West / Golf Road / Beach Road

- Parkers Rd / Bolt Rd – Roundabout possible pinch point
- Parkers Rd West – narrow road width, small footpath area, on road parking
- Golf Road – no markings for on road parking, may not be wide enough for cycle lane
- Beach Rd – no shoulder room for cycleway in parts, may need to remove parking in areas
- Bisley Walk Intersection – busy intersection, need more room for crossing

### 6.5.3 Quarantine Road / Pascoe Street / Muritai Street / Parkers Road East

- Quarantine Rd – Roundabout and footpath area needs upgrading
- Quarantine Rd – Very busy road with large portion of heavy vehicles, traffic likely to increase more once new retail complex is built
- Quarantine Rd / Pascoe Street – Intersection very busy, hard to cross for cyclists.
- Pascoe Street – Busy street with heavy vehicles and no marked on road parking, narrow areas in places, sight distances not good due to road alignment and hill over Jenkins Creek
- Parkers Rd – Intersections are busy, hard place to cross for cyclists. Currently no crossing facilities at all.
- Muritai Street – 10 Bus stops and on road parking, lots of access ways, width is ok
- Parkers Rd / SH6 intersection very dangerous. Many lanes of traffic, heavy vehicles turning, cycles don't fit in the pedestrian refuges, big trucks drive their wheels up onto the refuges. Trucks / vehicles are looking for a 'gap' when exiting Parkers Rd onto SH6, not looking for cyclists. Suggested solution would be to signalise the intersection which would increase safety for pedestrians and cyclists, and reduce traffic delay

## 6.6 Issues Noted that are Outside of Scope

Within the stakeholder workshop a number of issues were raised that concern areas adjacent to the study area and or outside of the scope of this project. These issues are recorded for NCC below:

### 6.6.1 General comments

- Study should be multi-modal as designs should consider pedestrians and scooters etc.

### 6.6.2 Other existing issues

- The 'humpback' bridge along the shared path at the airport is difficult to negotiate (high, narrow and sometimes slippery)
- Nayland Rd – Runs through industrial area with heavy vehicles
- Nayland Rd pedestrian crossing is dangerous due to vehicles failing to stop for children
- No good, dependable link under Whakatu Dr to the back of Nayland College. The existing underpass / culvert has major flooding issues and low head room
- Erosion issues along edge of Tahuna Holiday Park, and also along the Golf Club sea frontage
- Need to find safer option for hillside cyclists to avoid using SH6 (i.e. finding a route from Maire St through to Douglas Rd to provide a direct link to the railway reserve)
- Blind corners on shared path overbridge at Annesbrook Roundabout, Nayland Rd overbridge and Whakatu Drive underpass by Mitre 10 Mega

## 7 Opportunities/Option Development

### 7.1 Option Development Process

Option development began during the stakeholder workshop. Participants were asked to create routes where they felt were most logical and indicate areas that could be improved. From these routes a review was undertaken and routes that were outside of the scope of this project were removed (principally routes to the east of SH6 and routes that were considered undesirable for safety reasons). A full set of options (in tabular and map formats) are provided to the Council in Appendix B.

The Option Development process then considered the data collected in the proceeding sections of this report (e.g. accident locations, trip generators and destinations etc.), as well as consideration of the project goals as are set out in the table below.

Project Goals and Relevant Project Details	
Project Goals from Detailed Brief	Project Aspects/Opportunities
Increased cycle use especially during peak hours	Looking to attract new cyclists as those people who are already cycling will continue to cycle. New cyclists are likely to be less confident than the existing cyclist and therefore require a safer environment for them to consider cycling.
Decreased cycle crash numbers in Tahunanui	The highest concentration of cycle accidents are on Tahunanui Drive/SH6. This is principally a commuter/confident cyclist through route. It provides a very direct link, which cannot be replicated within the study area. These cyclists are unlikely to move to a less direct route. Vehicle traffic along this route is the highest level within the study area and given future growth external to Tahunanui traffic volumes on this route is likely to increase.
Provide a link between Rocks Road, Annesbrook and the Airport	There are no clear links between these three destinations/links that provide for all cyclists due to the different needs of different cyclists, for example: <ul style="list-style-type: none"> <li>• Confident commuters and sport cyclists seek out direct routes that will not slow them down. If a route slows their trip (by not being direct or having to share with pedestrians or make frequent stops they will seek out another more direct route even if the has a lower safety level.</li> <li>• Non-confident cyclists will only use a route if they are afforded a higher level of protection/safety by way of either a greater level of separation from traffic.</li> <li>• Tourists and recreational cyclists will seek out a scenic route and in this area tourists/local businesses would like a scenic, semi-direct, safe route to/from the Rocks Rd area to the Airport.</li> </ul>

	It is accepted that the network of routes will provide different routes that are suitable for the different users above.
This feasibility study shall recommend a single network solution that is fundable, consentable and buildable.	Routes that do not meet an initial screen for being fundable, consentable and buildable were discarded. Note a more detailed screen for this goal will be utilised in the next phase of this project.

**Table 13: Project Goals**

The following best practice documents were utilised in the development of the routes:

- NCC Land Development Manual 2010
- AUSTRROADS Part 13, Pedestrians, 1995;
- Cycling Aspects of AUSTRROADS Guides, 2014;
- AUSTRROADS Urban Road Design: Guide to the Geometric Design of Major Urban Roads;
- LTNZ – Pedestrian planning and design guide, 2007;
- RTS 14 – Guidelines for facilities for blind and vision-impaired pedestrians; and,
- RTS 4 – Guidelines for Flush Medians.

## **7.2 Long list of Options Considered**

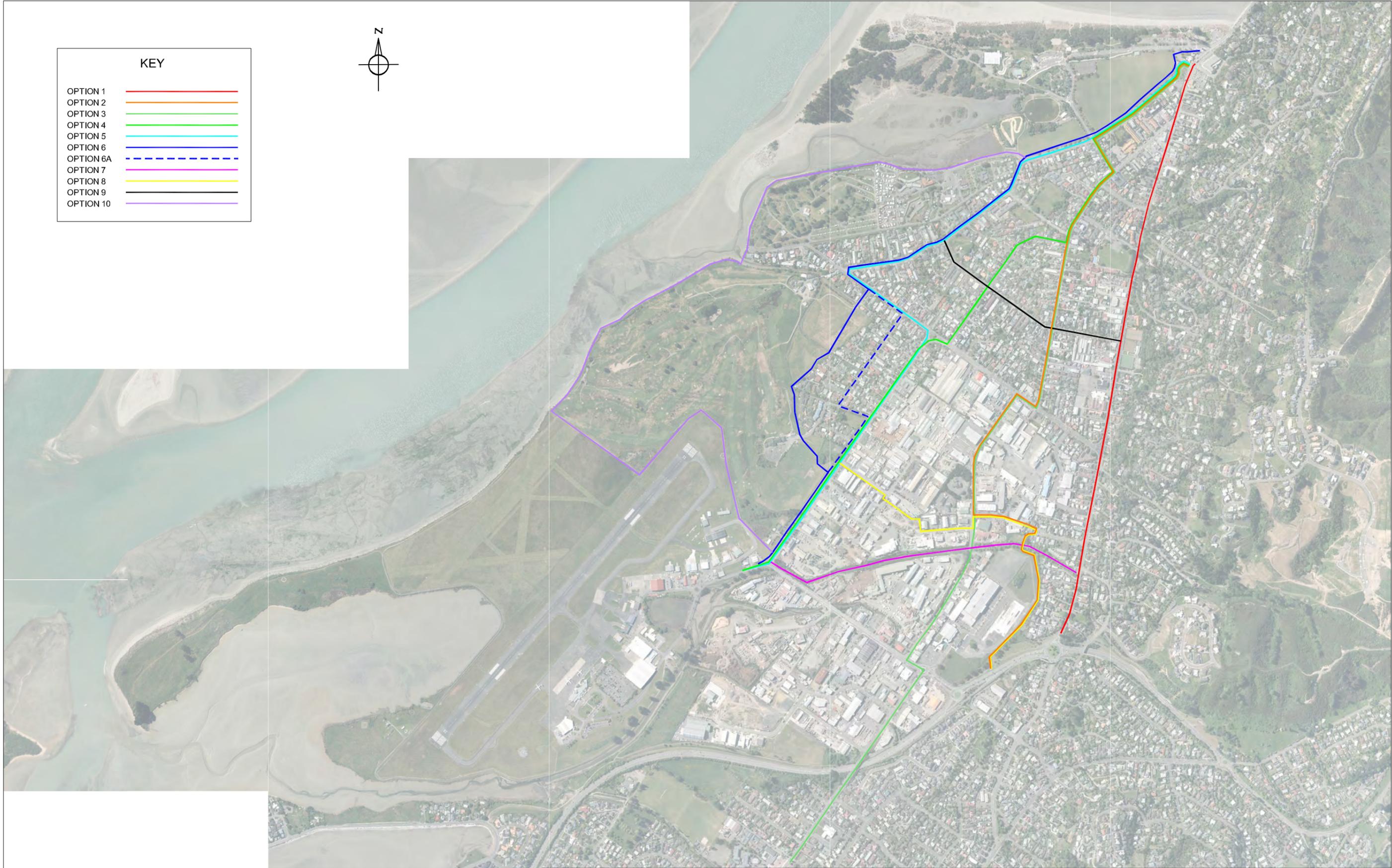
Figure 5 on the following page shows the ten routes that are put forward to the Council for consideration.

**KEY**

OPTION 1	
OPTION 2	
OPTION 3	
OPTION 4	
OPTION 5	
OPTION 6	
OPTION 6A	
OPTION 7	
OPTION 8	
OPTION 9	
OPTION 10	



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Revision	Amendment	Approved	Revision Date

  
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Project		NELSON CITY COUNCIL TAHUNANUI NETWORK CYCLEWAY OPTIONS	
Drawn		Revision Date	
SWA			14.05.2014
Project No.		Scale	
5-G2093.00		1:6000 (A1)	
Sheet		Revision No.	
10 OPTIONS			
Sheet No.	Revision		
2			

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The following tables provide a summary of each of the ten routes. Key advantages and disadvantages for each route are listed in Section 8.

### 7.2.1 Option 1: Tahunanui/Annesbrook Drive

<b>Option 1: Tahunanui/Annesbrook Drive (2006m)</b>	
Route	Rocks Rd Walking and Cycling Facility /Tahunanui Dr/Annesbrook Dr
Designed for	Confident commuter, sport and recreational cyclists moving within Tahunanui and/or connecting with either Rocks Rd/Whakatu Drive/Railway Reserve
Upgraded LOS	<p>B</p> <p>Caters for the following cyclist types:</p> <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• A small portion of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of parking in places</li> <li>• Narrowing of median in places</li> <li>• Painting of new cycleway markings</li> <li>• upgrade of nine intersections (including detection of cyclists)</li> <li>• Provision of safe crossing points</li> <li>• Narrowing of footpath/grass berm in places</li> <li>• Adjusting bus stop areas</li> <li>• Improved signage for the route</li> <li>• If pedestrian refuge at Parkers Rd is retained it needs to accommodate cycles</li> </ul> <p>This would require removal of some parking and adding cycle lane markings on both sides of the road. In some areas there is the width to move the kerb over to keep some parking facility. Note that there are some narrow points that would need to be designed for. It may be possible to reduce the width of the flush median in some of these sections (where the facility to make a right turn is not needed).</p>

### 7.2.2 Option 2: Muritai St/Pascoe St/ Quarantine Rd Underpass

<b>Option 2: Muritai St/Pascoe St/Whakatu Dr Underpass (2788m)</b>	
Route	Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Parkers Rd/Pascoe St/Merton Place/Blackwood Street (through existing connection via Merton Way)/across Jenkins Creek/around Mitre 10 site (Nelson Junction)/Whakatu Dr Underpass
Designed for	Confident sport, commuter and recreational cyclists. Also suitable for confident children and older cyclists. Connecting the Rocks Rd area with the Whakatu Dr underpass.
Upgraded LOS	B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Over half of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Narrowing of Median in places</li> <li>• Painting of new cycleway markings</li> <li>• Upgrade of 12 Intersections</li> <li>• Narrowing of footpath in places</li> <li>• Adjusting bus stop areas</li> <li>• New cycleway Bridge</li> <li>• New off road path</li> <li>• Four New road crossings</li> </ul>

### 7.2.3 Option 3: Muritai St/Pascoe St/Nayland Rd

<b>Option 3: Muritai St/Pascoe St/Nayland Rd (3388m)</b>	
Route	The beginning of this route is the same as Option 2 above up to Merton Place. From Merton Place the route continues along Pascoe St.  Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Parkers Rd/Pascoe St/Quarantine Rd/Nayland Rd
Designed for	Confident sport, commuter and recreational cyclists. Also suitable for confident children and older cyclists. Connecting the Rocks Rd area with Nayland Rd.
Upgraded LOS	B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Over half of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Narrowing of Median in places</li> <li>• Painting of new cycleway markings</li> <li>• Upgrade of 19 Intersections</li> </ul>

	<ul style="list-style-type: none"> <li>• Narrowing of footpath in places</li> <li>• Adjusting bus stop areas</li> <li>• possible upgrade of road bridge</li> <li>• Six new road crossings</li> </ul>
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#### 7.2.4 Option 4: Roto St/Bolt Rd

<b>Option 4: Roto St/Bolt Rd (2546m)</b>	
Route	Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Beavans Way/Roto St/Parkers Rd/Bolt Rd/Airport Cycleway (Trent Drive)
Designed for	Confident sport, commuter and recreational cyclists. Also suitable for confident children and older cyclists. Connecting the Rock Rd area with the Airport/Whakatu Drive Shared Path
Upgraded LOS	A / B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Over half of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Narrowing of Median in places</li> <li>• Painting of new cycleway markings</li> <li>• Upgrade of 4 Intersections</li> <li>• Narrowing of footpath in places</li> <li>• Adjusting bus stop areas</li> <li>• Three new road crossings</li> <li>• Upgrade of roundabouts</li> <li>• Upgrade bolt road to shared path</li> </ul>

#### 7.2.5 Option 5: Beach Rd/Golf Rd/Bolt Rd

<b>Option 5: Beach Rd/Golf Rd/Bolt Rd (2831m)</b>	
Route	Rocks Rd Walking and Cycling Facility/Beach Rd/Golf Rd/Parkers Rd/Bolt Rd/Airport Cycleway (Trent Drive)
Designed for	Confident sport, commuter and recreational cyclists. Also suitable for confident children and older cyclists. Connecting the Rock Rd area with the Airport/Whakatu Dr Shared Path.
Upgraded LOS	B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Over half of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> </ul>

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	<ul style="list-style-type: none"><li>• Painting of new cycleway markings</li><li>• Upgrade of 8 Intersections</li><li>• One New road crossings</li><li>• Upgrade of roundabouts</li></ul>
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### 7.2.6 Option 6: Tourist/Airport Route

<b>Option 6: Tourist/Airport Route (2763m)</b>	
Route	Rocks Rd Walking and Cycling Facility /Beach Rd/Golf Rd/Parkers Rd/Awatea Place/around the edge of the golf course/Bolt Rd/Airport Cycleway (Trent Drive)  Variation: Instead of using Awatea Place/around the edge of the golf course could use Otterson St and link onto Bolt Rd via Golf Haven Way
Designed for	Generally caters for all users both confident sport and commuter cyclists, along with children, elderly and recreational users
Upgraded LOS	A /B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Painting of new cycleway markings</li> <li>• Upgrade of 4 Intersections</li> <li>• New off road path from Awatea Place through to the Airport Cycleway</li> <li>• Four New road crossings</li> <li>• New cycleway bridge or culvert</li> <li>• Land purchase required</li> </ul>

### 7.2.7 Option 7: Jenkins Creek

<b>Option 7: SH6/Jenkins Creek/Bolt Rd (1102m)</b>	
Route	This option would create a cycle-way along the length of Jenkins Creek. This would require an off-road cycle facility being constructed.
Designed for	Generally caters for all users both confident sport and commuter cyclists, along with children, elderly and recreational users. Provides a connection between SH6 and Bolt Rd/Airport area.
Upgraded LOS	A

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Changes required	<ul style="list-style-type: none"><li>• Council own the majority of the land straddling Jenkins Creek. However, at the Bolt Rd end of the creek, there are two parcels of land that Council are not listed as the owner (one is listed as a Utility Reserve, so could well be managed by Council anyway). Council would either have to purchase this land, or alternatively seek approval from Fulton Hogan to create an easement over Pt Lot 2 DP 6330, Title NL6C/1352.</li><li>• Creation of a new off-road path</li><li>• Amenity lighting, careful treatment of entrapment/hiding spots and maximising visibility from adjoining properties/roads</li></ul>
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### 7.2.8 Option 8: SH6/Blackwood St/Bolt Rd

<b>Option 8: SH6/Blackwood St/Bolt Rd (1013m)</b>	
Route	SH6/Blackwood St/Merton Pl/Pascoe St/Vivian Pl/new connection through Vaughn Whiting Builders Ltd yard/Rotherham St/Bolt Rd
Designed for	Generally caters for all users both confident sport and commuter cyclists, along with children, elderly and recreational users. Provides a connection into the Industrial area for commuters from SH6 and Bolt Rd
Upgraded LOS	A/B Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Over half of the Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Painting of new cycleway markings</li> <li>• Upgrade of 3 Intersections</li> <li>• Narrowing of footpath in places</li> <li>• Two New road crossings</li> <li>• Land purchase required</li> <li>• Amenity lighting, careful treatment of entrapment/hiding spots and maximising visibility from adjoining properties/roads</li> </ul>

### 7.2.9 Option 9: Green Street

<b>Option 9: Green St (730m)</b>	
Route	Green St (from SH6 through to Golf Rd). This link will also include connections to and from Tahunanui School via Muratai St upgrades.
Designed for	A Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Interested but Concerned</li> </ul>
Upgraded LOS	Generally caters for all users both confident sport and commuter cyclists, along with children, elderly and recreational users. Provides a connection between SH6 and Golf Rd.
Changes required	<ul style="list-style-type: none"> <li>• Removal of Parking in places</li> <li>• Painting of new cycleway markings</li> <li>• upgrade of 4 Intersections</li> <li>• Road widening or narrowing in places</li> <li>• Traffic calming installed</li> <li>• Widening of footpath in places</li> </ul>

### 7.2.10 Option 10: Scenic Recreation Route

This route has been previously investigated by the Tahuna Holiday Park and the Tahuna Business Association. Their full report forms Appendix D.

<b>Option 10: Scenic Recreation Route (4062m)</b>	
Route	Rocks Road Walking and Cycling Facility/Beach Rd new off-road facility/around the Tahuna Campground/around the outside edge of the Golf Course/Along existing walking path/Bolt Rd
Designed for	Generally caters for all users both confident sport and commuter cyclists, along with children, elderly and recreational users. Note that this route would be good for new cyclists to improve their skill level.
Upgraded LOS	A Caters for the following cyclist types: <ul style="list-style-type: none"> <li>• Strong and Fearless,</li> <li>• Enthused and Confident</li> <li>• Interested but Concerned</li> </ul>
Changes required	<ul style="list-style-type: none"> <li>• Land purchase required</li> <li>• New cycleway bridge</li> <li>• New off road path</li> <li>• Upgrade of one intersection</li> <li>• Possible erosion control required</li> <li>• Consideration of CIPTed measures</li> </ul> <p>This option would require new off-road facilities for the whole length of the route and would require a new bridge.</p>

## 8 Evaluation

To allow for further evaluation the list of 10 routes are evaluated against each other by groupings of the user type that they are suitable for. The following groupings are used:

- Potential commuter routes (includes school and work)
- Potential Recreational/Tourists Routes
- Potential cross routes

The advantages and disadvantages of each of these routes was then compared to determine routes that should be further investigated.

### 8.1.1 Potential Commuter Routes (includes school and work)

	Option 1: Tahunanui/Annesbrook Drive	Option 2: Muritai St/Pascoe St/Whakatu Dr Underpass	Option 3: Muritai St/Pascoe St/Nayland Rd	Option 4: Roto St/Bolt Rd	Option 5: Beach Rd/Golf Rd/Bolt Rd
Route	Rocks Rd Walking and Cycling Facility /Tahunanui Dr/Annesbrook Dr	Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Parkers Rd/Pascoe St/Merton Place/Blackwood Street (through existing connection via Merton Way)/across Jenkins Creek/around Mitre 10 site (Nelson Junction)/Whakatu Dr Underpass	Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Parkers Rd/Pascoe St/Quarantine Rd/Nayland Rd	Rocks Rd Walking and Cycling Facility /Beach Rd/Waikare St/Muritai St/Beavans Way/Roto St/Parkers Rd/Bolt Rd/Airport Cycleway (Trent Drive)	Rocks Rd Walking and Cycling Facility/Beach Rd/Golf Rd/Parkers Rd/Bolt Rd/Airport Cycleway (Trent Drive)
Key Advantages of this Route	<ul style="list-style-type: none"> <li>Reduce the crash rate on this road (note: this section has the highest cycle crashes within the study area)</li> <li>Provide direct connect for commuter cyclists</li> <li>Would not require resource consent unless significant earthworks are required around the Winns Lane / Tosswill Rd area (landward side)</li> </ul>	<ul style="list-style-type: none"> <li>Uses existing cycle facility along Muritai St</li> <li>Good connectivity for Stoke schools (connects with the railway reserve)</li> <li>Reduces use of Pascoe St (which has a high percentage of heavy vehicles)</li> <li>Provides access into Nelson Junction development and to the industrial area</li> </ul>	<ul style="list-style-type: none"> <li>Direct route from residential area in Tahuna with Nayland Schools (this is the route that children moving on from Tahuna Primary School are encouraged to use)</li> <li>Direct route into the Industrial area from both north and south</li> <li>Uses existing cycle facility along Muritai St</li> <li>No consent issues anticipated for on road route as no major earthworks would be required and all works would be within the existing road boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Increased safety as are mostly using lower volume roads</li> <li>Direct route into the Industrial area off Bolt Rd</li> <li>Direct route from Rocks Rd to the airport</li> <li>Uses existing cycle facility along Bolt Rd</li> </ul>	<ul style="list-style-type: none"> <li>Increased safety as are mostly using lower volume roads</li> <li>Connects the Tahuna Campground and multiple tourist accommodations to the network</li> <li>Avoids the heavy use areas of Parkers Rd</li> <li>Direct route into the Industrial area off Bolt Rd</li> <li>Uses existing cycle facility along Bolt Rd</li> <li>No consent issues anticipated as no major earthworks would be required and all works are likely to be within the existing road boundaries</li> </ul>
Key Disadvantages of this Route	<ul style="list-style-type: none"> <li>Highest traffic volume road within the study area (due to being SH6), HPMV route and high level of heavy vehicles</li> <li>Cyclists will still have to contend with poor visibility of some access ways</li> <li>Will require removal of some on-road parking outside some business and homes which could be contentious</li> <li>Route connection to Whakatu Dr southbound requires cyclists detour over SH6 making this direction less direct (commuter cyclists have been observed using the Annesbrook Roundabout) (may be addressed by better signage and design).</li> </ul>	<ul style="list-style-type: none"> <li>Need to provide crossing points on Parkers Rd</li> <li>Requires a bridge over Jenkins Creek (cost disadvantage)</li> <li>Resource consent would most likely be required to build a bridge over Jenkins Creek, however no major issues are anticipated</li> <li>Requires approval from Nelson Junction development, however this could be seen in a positive light as it would provide a safe way for staff and customers to cycle to and from the site</li> <li>High bus volume and concentrated number of bus stops (which result in conflicts across the cycle lane)</li> <li>Should some parking need to be removed, consultation with affected parties may be required</li> <li>Uses Pascoe St which has limited sight distances due to the road alignment, is an HPMV route and has a high proportion of turning vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Need to provide crossing points on Parkers Rd</li> <li>High bus volume and concentrated number of bus stops (which result in conflicts across the cycle lane) on Muritai St</li> <li>High bus volume and concentrated number of bus stops (which result in conflicts across the cycle lane)</li> <li>Uses Pascoe St which has limited sight distances due to the road alignment, is an HPMV route and has a high proportion of turning vehicles.</li> <li>Cyclists will have to cross busy intersection at Quarantine Rd (note there are limited options for addressing this crossing point due to proximity to the roundabout at Whakatu Drive/Quarantine Rd</li> <li>Quarantine Rd is an HPMV route with a high traffic count which is likely to increase with the new Nelson Junction Retail Complex is built</li> <li>Should some parking need to be removed, consultation with affected parties may be required</li> </ul>	<ul style="list-style-type: none"> <li>Bolt Rd is an HPMV route and contains a high percentage of heavy vehicles.</li> <li>Need to navigate the Parkers Rd/Bolt Rd roundabout</li> <li>Beavans Way is very narrow in part, therefore land acquisition would most likely be required</li> <li>Link between Beavans Way and Roto St is owned by Housing New Zealand Limited, and the existing easement is a 'right of way on foot', therefore further land acquisition or alteration of the easement would be required</li> <li>Should some parking need to be removed, consultation with affected parties may be required</li> <li>High bus volume and concentrated number of bus stops (which result in conflicts across the cycle lane)</li> </ul>	<ul style="list-style-type: none"> <li>Bolt Rd is an HPMV route and contains a high percentage of heavy vehicles</li> <li>Not a direct route</li> <li>Requires removal of parking along the route</li> <li>Need to navigate the Parkers Rd/Bolt Rd roundabout</li> <li>Should some parking need to be removed, consultation with affected parties may be required</li> </ul>

### 8.1.2 Potential Recreational/Tourist Routes

	Option 6: Tourist/Airport Route	Option 10: Scenic Recreation Route
Route	Rocks Rd Walking and Cycling Facility /Beach Rd/Golf Rd/Parkers Rd/Awatea Place/around the edge of the golf course/Bolt Rd/Airport Cycleway (Trent Drive)  Variation: Instead of using Awatea Place/around the edge of the golf course could use Otterson St and link onto Bolt Rd via Golf Haven Way	Rocks Road Walking and Cycling Facility/Beach Rd new off-road facility/around the Tahuna Campground/around the outside edge of the Golf Course/Along existing walking path/Bolt Rd
Key Advantages of this Route	<ul style="list-style-type: none"> <li>• Increased safety as are mostly using lower volume roads</li> <li>• Connects the Tahuna Campground and multiple tourist accommodations to the network</li> <li>• Avoids the heavy use areas of Parkers Rd</li> <li>• Avoids the area of Bolt Rd that doesn't easily allow for an off-road cycle path to be created</li> <li>• Avoids the Bolt Rd/Quarantine Rd Roundabout</li> <li>• Connects local pre-schools on Parkers Rd</li> <li>• Direct route into the Industrial area off Bolt Rd</li> <li>• New off-road facility along Beach Road has a high level of</li> <li>• Includes an off road section (along edge of golf course)</li> </ul>	<ul style="list-style-type: none"> <li>• Increased safety through provision of an off-road route.</li> <li>• Would be an attractive tourist and recreational cyclist route.</li> </ul>
Key Disadvantages of this Route	<ul style="list-style-type: none"> <li>• Not a direct route</li> <li>• Requires removal of parking along the route</li> <li>• Need to cross Parkers Rd southbound</li> <li>• An easement would be required over Nelson Airport land (title 433838) in order to get from Awatea Place to Nelson Golf Club land.</li> <li>• Resource consent may be required to construct a cycleway on Golf Club land. Subject to Council classification of the activity (e.g. if Council consider this to be an 'informal recreation activity' within the Open Space Recreation Zone then it would be a permitted activity and no consent would be required)</li> <li>• For the Route Variation - easement would be required for cycling access along Golf Club boundary connecting with Bolt Rd. Involves negotiating with Golf Club</li> <li>• For the Route Variation - Golf Haven Way consists of three separate land parcels owned by the Nelson Golf Club, and multiple individuals. The existing easement is a 'right of way on foot' so may need to be altered to include provision for cyclists.</li> <li>• Should some parking need to be removed, consultation with affected parties may be required</li> </ul>	<ul style="list-style-type: none"> <li>• Not a direct commuter or school connection</li> <li>• Construction of the bridge would require resource consent</li> <li>• Requirement for land acquisition at 161 Parkers Rd in order to construct a bridge to link to Golf Course (potentially a big issue as it appears that there is not enough room to construct bridge even with land acquired)</li> <li>• Resource consent may be required to construct a cycleway on Golf Club land. Subject to Council classification of the activity (e.g. if Council consider this to be an 'informal recreation activity' within the Open Space Recreation Zone then it would be a permitted activity and no consent would be required)</li> <li>• Erosion issues at the end of Parkers Rd and along the front of the Golf course and Holiday Park</li> </ul>

### 8.1.3 Cross Routes

	Option 7: SH6/Jenkins Creek/Bolt Rd	Option 8: SH6/Blackwood St/Bolt Rd	Option 9: Green St
Route	This option would create a cycle-way along the length of Jenkins Creek. This would require an off-road cycle facility being constructed.	SH6/Blackwood St/Merton Pl/Pascoe St/Vivian Pl/new connection through Vaughn Whiting Builders Ltd yard/Rotherham St/Bolt Rd	Green St (from SH6 through to Golf Rd). This link will include connections to and from Tahunanui School via Muratai St upgrades.
Key Advantages of this Route	<ul style="list-style-type: none"> <li>Increased road safety as route is not on road</li> <li>Provides a scenic cross route connection</li> <li>Could potentially be cost effective to undertake when a stream upgrade is scheduled in future</li> </ul>	<ul style="list-style-type: none"> <li>Provides a key link through the industrial area between SH6 and Bolt Rd</li> <li>Increased safety through upgrades and providing cyclists with a cycling space</li> </ul>	<ul style="list-style-type: none"> <li>Uses existing local roads</li> <li>Would not require very many infrastructure upgrades</li> <li>Provides a direct connection between SH6 and Golf Rd</li> <li>Would be utilised by children attending Tahunanui school children as it links to Muritai St</li> <li>No consent issues anticipated as no major earthworks would be required and all works would be within the existing road boundaries.</li> </ul>
Key Disadvantages of this Route	<ul style="list-style-type: none"> <li>Potential decreased personal safety as the route will not be in an area where users can be seen*</li> <li>Potential issues regarding personal safety as the route is not observable from residential properties or a road.</li> <li>Would require southbound cyclists crossing SH6 to join Jenkins Creek</li> <li>Potential consent issues if creation of cycleway involved significant earthworks within the stream bed</li> <li>Part of the stream is not owned by Council (section near airport end is owned by Fulton Hogan NL6C/1352)</li> <li>Potential safety issues for westbound cyclists joining the road network at the Bolt Rd / Quarantine Rd roundabout</li> </ul>	<ul style="list-style-type: none"> <li>Potential decreased personal safety as the route will not be in an area where users can be seen*</li> <li>Permission would need to be sought by the owners of the Industrial land (all three land parcels are owned by Whiting, Fitchett and Millar), and an easement for public access would be required.</li> <li>Goes through heavy vehicle high use area of Pascoe St, Vivian Pl and Rotherham St (However, any route that goes through the industrial area will encounter similar constraints)</li> <li>Should some parking need to be removed, consultation with affected parties may be required</li> </ul>	<ul style="list-style-type: none"> <li>Should some parking need to be removed, consultation with affected parties may be required</li> </ul>

\*There is potential for decreased personal safety on these routes as there is little or no passive surveillance in this non-residential area – particularly outside of business hours. Design of a route through these areas would need to address issues of personal safety via careful use of: amenity lighting, removal of entrapment/hiding spots and maximising visibility of cyclists from adjoining properties and roads.

### 8.1.4 Summary of upgrades required for each of the options

Evaluation of the upgrades required for each of the 10 routes were recorded in Table 15 below. Note that these attributes are for the entire route. The key attributes recorded include:

- Provision of a connected link for different users
- Safety for different users
- Attractiveness of the route
- Likely loss of parking
- Likely land purchase requirements
- Resource consent needs
- Consultation effort required

Evaluation Criteria		Route Option									
		1	2	3	4	5	6	7	8	9	10
Connected – link origins and destinations without detours or delays in a legible continuous manner	Attract people interested in cycling but not confident and suitable for children				✓	✓	✓✓	✓	✓	✓✓	✓✓
	Provide for commuter cyclists	✓✓	✓✓		✓	✓	✓	✓	✓✓	✓✓	
	Provide for recreational cyclists				✓	✓	✓✓	✓✓	✓	✓✓	✓✓
	Provide for tourists				✓	✓	✓✓	✓	✓	✓	✓✓
Safe – not give rise to road safety or personal security concerns	Attract people interested in cycling but not confident and suitable for children				✓	✓	✓✓	✓✓	✓✓	✓	✓✓
	Provide for commuter cyclists	✓✓	✓✓	✓✓	✓	✓	✓✓	✓	✓✓	✓✓	
	Provide for recreational cyclists				✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓
	Provide for tourists				✓	✓	✓✓	✓		✓	✓✓
Attractive – in terms of built and natural environment and the interaction with other road users		✓			✓	✓	✓✓	✓✓		✓✓	✓✓
		1	2	3	4	5	6	7	8	9	10
No loss of parking		✓✓	✓✓	✓✓	✓	✓	✓	✓✓	✓	✓	✓✓

No land purchase / easement negotiations required		✓✓		✓✓		✓✓				✓✓	
No requirement for resource consent		✓✓		✓✓	✓✓	✓✓	✓		✓✓	✓✓	✓
Low consultation effort required		✓	✓	✓✓		✓✓				✓✓	

**Table 14: Evaluation criteria**

## 9 Recommendations

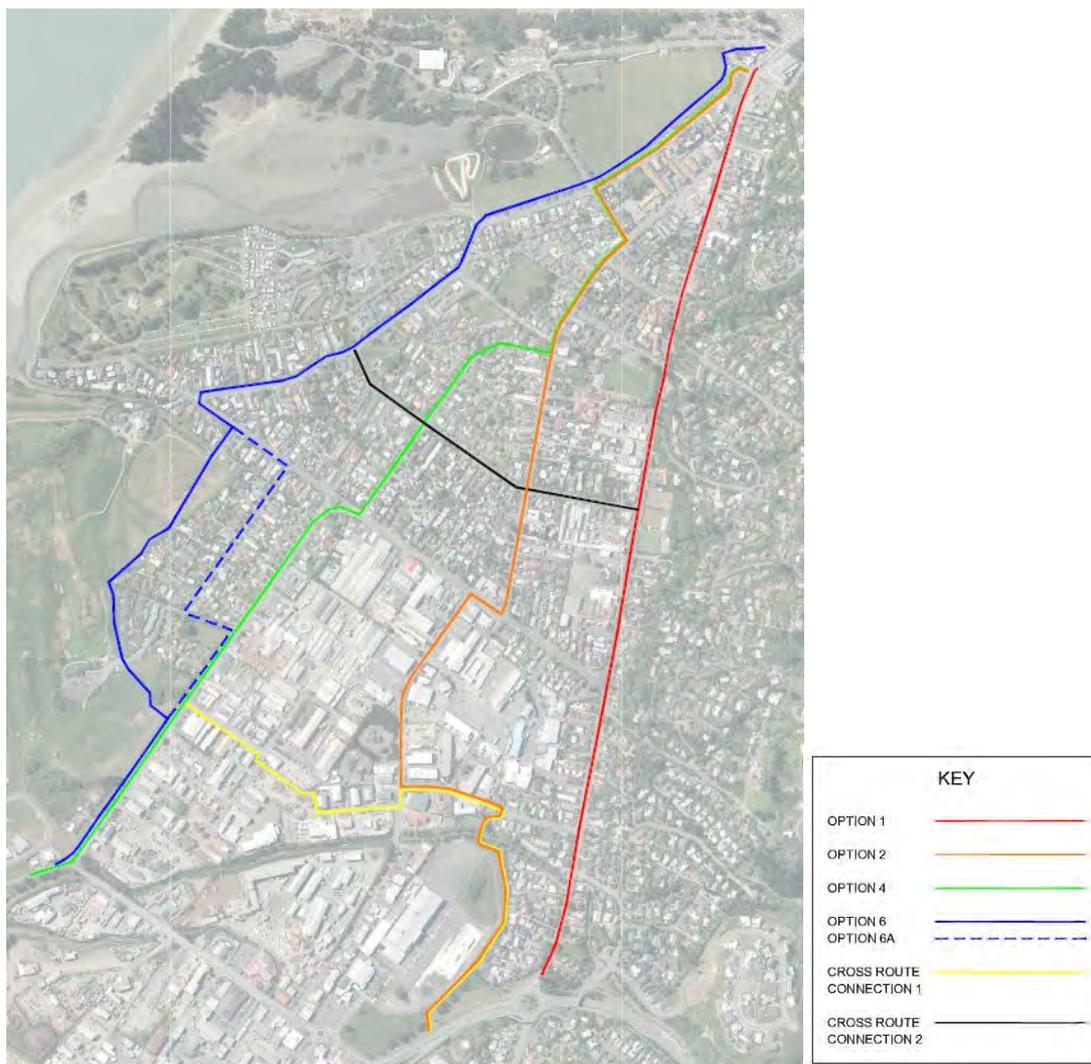
Completion of the initial investigation of possible options has confirmed the need for both a network of cycle routes within the study area and ones to link as a continuation of the proposed Rocks Road walking and cycling facility, the Rail Reserve, the Whakatu Drive cycle paths at Annesbrook roundabout and the shared path at Bold Road and Quarantine Road roundabout.

### 9.1 Recommended Shortlist Options

The shortlisted options for the project are:

- Option 1
- Option 2
- Option 4
- Option 6

These are depicted on the next page:



The key reasons for the selection of the above options are as follows:

#### **Option 1 - Commuter Route / SH6**

- Meets one of the key project goals of reducing accident rates in Tahunanui as the facility will be designed with safety in mind (note this section has the highest cycle crashes within the area).
- Provides a direct connection for commuter cyclists and connectivity within the route along SH6.

#### **Option 2 - Commuter and School Route / Muritai St / Pascoe St / Whakatu Dr**

- Good connectivity for the schools
- Reduces the use of Pascoe St (which has a high percentage of heavy vehicles)
- Provides access into the Nelson Junction Development and to the Industrial area

#### **Option 4 – Commuter, Recreational and Tourist Route / Roto St / Bolt Rd**

- Provides the most direct route between Rocks Road and the airport of all of the options
- Connects airport to residential and accommodation area and the Coastal cycleway between the Airport and Richmond
- Provides good connectivity of residential Tahuna to the school, beach and airport
- Parts of this route are also suitable for recreational cyclists

### **Option 6 - Recreational/Tourist Route (Route suitable for cyclists to gain confidence)**

- Increased safety as are mostly using lower volume roads, provides connectivity in the residential area
- Connects the Tahuna Holiday Park and multiple tourist accommodations to the network, as well as the beach
- Avoids the heavy use areas of Parkers Rd
- Direct route into part of the Industrial area off Bolt Rd
- No consent issues anticipated as no major earthworks would be required and all works are likely to be within the existing road boundaries

### **Cross links**

In conjunction with the above through route options that meet the study brief, it is recommended that Options 8 and 9 be considered as part of the above options as they provide valuable cross links through the Tahunanui area.

### **Option 8 - Southern end of Tahunanui crosslink (Blackwood St)**

- Chosen over the Jenkins Creek option as it provides better access into the Industrial area for commuters. It is noted that this route will not be as attractive as Jenkins Creek and if the Jenkins Creek route was developed at the same time as a stream upgrade the cost of the route would be a lot lower than if one was created independent of the an upgrade. Has increased personal safety than Jenkins Creek due to the proximity to Roads from which people can be observed.

### **Option 9 - Northern end of Tahunanui crosslink (Green St)**

- Provides a safe cross link between SH6 and other potential through routes, and improved connectivity within the residential area and to Tahunanui School via Muratai St.

## **9.2 Options from Long List to be discarded**

The options recommended to be discarded are:

- Option 3
- Option 5
- Option 7
- Option 10

The key reasons for the rejection of the above options are as follows:

### **Option 3 – Commuter/School Route along Muritai St / Pascoe St to Nayland Rd**

- Safety concerns along the length of Pascoe St has limited sight distances due to the road alignment, has a high percentage of heavies, is an HPMV route and has a high proportion of turning vehicles.
- Safety concerns regarding the crossing point on Quarantine Rd. Due to the close proximity of this crossing point to the roundabout at Whakatu Drive/Quarantine Rd there are limited options for improving this crossing point without building an overpass.

### **Option 5 - Commuter Route along Beach Rd / Golf Rd / Bolt Rd**

- Route not as direct as Option 4

- Follows the full length of Bolt Rd which has safety concerns

#### **Option 7 - Cross Route along Jenkins Creek**

- Route 8 was chosen over the Jenkins Creek option as it provides better access for commuters into the Industrial area. It is noted that this route will not be as attractive as Jenkins Creek and if the Jenkins Creek route was developed at the same time as a stream upgrade the cost of the route would be a lot lower than if one was created independent of the an upgrade. If this option was progressed it would require measures to ensure personal safety is designed for due to the lack of any residential properties or nearby roads that provide surveillance of the area.

#### **Option 10 - Recreation / Tourist Route around Holiday Park and Airport**

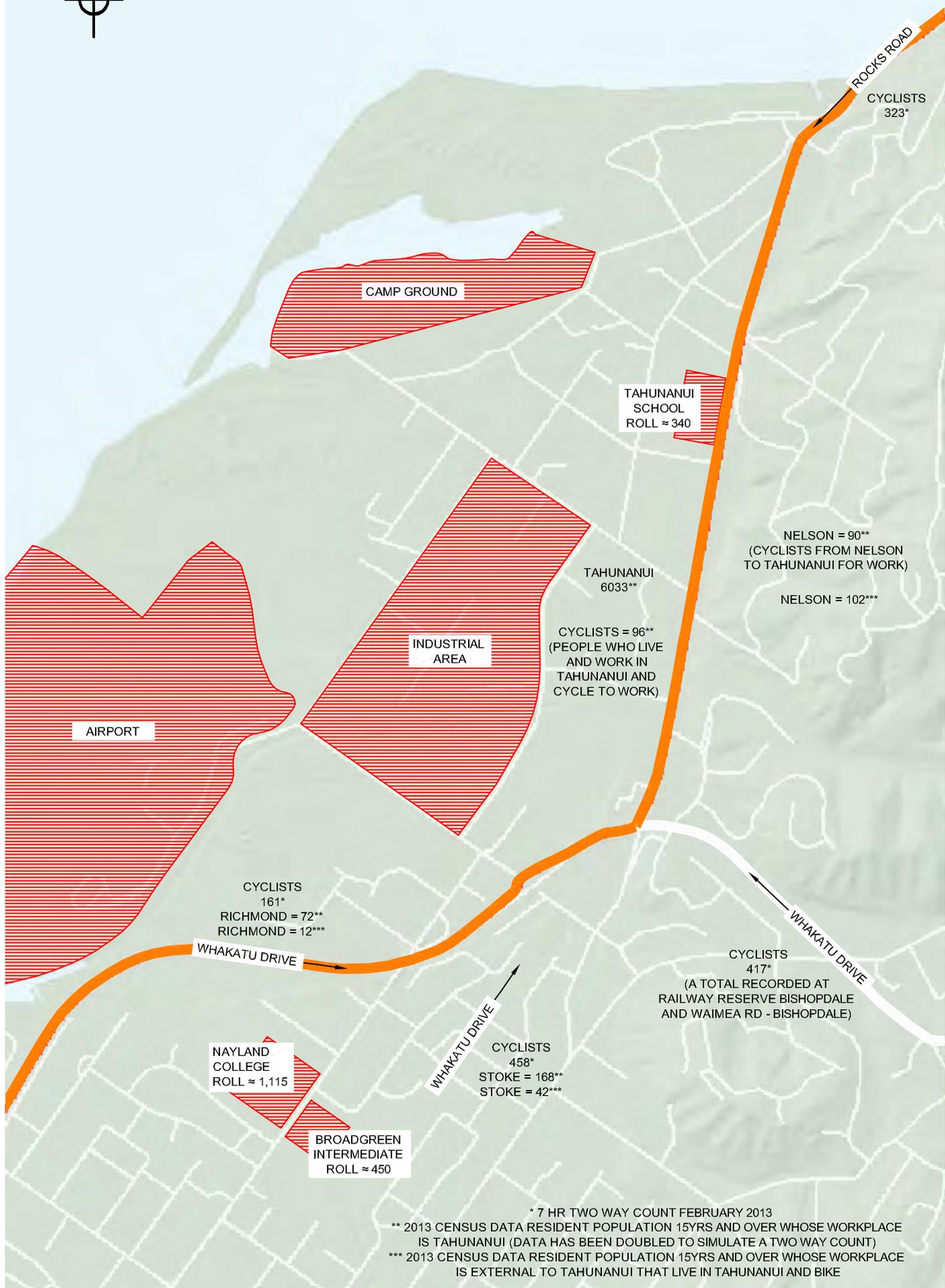
- Doesn't meet the project brief of being a connection and would likely be expensive. Potentially major issues with constructing a bridge and getting access around airport land.

## **10 Conclusion**

Based on the investigations completed for this report, we recommend that the four options of 1, 2, 4 and 6 with additional route connections of 8 and 9 be taken forward to further investigation in Delivery 2 of this commission.

## **Appendix A – Cycling Activity Map**

# GENERATOR MAP



\* 7 HR TWO WAY COUNT FEBRUARY 2013  
 \*\* 2013 CENSUS DATA RESIDENT POPULATION 15YRS AND OVER WHOSE WORKPLACE IS TAHUNANUI (DATA HAS BEEN DOUBLED TO SIMULATE A TWO WAY COUNT)  
 \*\*\* 2013 CENSUS DATA RESIDENT POPULATION 15YRS AND OVER WHOSE WORKPLACE IS EXTERNAL TO TAHUNANUI THAT LIVE IN TAHUNANUI AND BIKE

## **Appendix B – Engagement Summary and Consultation Register**

## Engagement Summary

Key Stakeholders were invited to attend a workshop on Monday 17<sup>th</sup> March. We had a great response with a total of 27 people participating (details of who attended are included in the Consultation Register below). The purpose of the workshop was to identify the demand areas, existing issues and potential routes, and seek feedback on the five options already identified by Council (feedback detailed in Appendix B). Many of the stakeholders that attended had in depth knowledge of this area, and made a valuable contribution to this investigation.

The Tahunanui Industrial area was identified as a key demand area as there are many people commuting to and from a large number of businesses here. Because of the limited roading network (there is no roads running through the area, only a number of 'no exit' roads off Bolt Rd, Quarantine Rd, Parkers Rd and Pascoe St), there is often no direct route for commuters. Cyclist numbers were obtained from some of the larger businesses in the area (Fulton Hogan and Southpine and potential routes were investigated).

### Demand

The Tahunanui area has a number of destination points such as the recreational facilities at Tahuna Beach, and areas where many commuters travel to and from such as the Industrial area and the Tahuna businesses. A full list of these demand areas are listed on page 6 of this report.

There are also a number of destination points beyond the Tahunanui area where users are travelling from or through this area to reach Stoke Schools and Richmond to the south and Rocks Road / waterfront / Nelson City to the north.

### Desire Lines

The Tahunanui residential catchment area is large, and is separated by Tahunanui Drive (SH6). Residents from the Tahuna Hills are more likely to link up with the Railway Reserve, and residents from the western Tahunanui area may link up with the Railway Reserve, Whakatu Dr shared path or the airport shared path to get to their destinations to the south.

There are at least three types of cyclists in this area. The commuters who generally wish to travel the most direct route (some are likely to travel this route no matter what facility is provided, others would prefer a safer, less direct route); the children travelling to and from schools in Tahunanui and Stoke; and, the recreational cyclist who is most likely to use an off road scenic route.

Feedback from key stakeholders was that the new route needed to be direct, safe (separate cycle lane), attractive, accessible for all, linking popular destinations, serves both locals (more direct for commuters) and visitors (more attractive routes).

### Existing issues

#### SH6:

- Tahunanui Dr will always be the key commuter route, no matter what facilities are available, so the best way to decrease accidents is to provide a separate cycle facility (shared path), and provide crossing points across SH6 to access the path
- Rocks Road / SH6 traffic lights currently a big safety issue (cars don't tend to stop for pedestrians or cyclists, especially when turning)
- Student movements – vulnerable, sometimes have poor judgement when crossing roads
- Narrow pinch points, especially on landward side (e.g. from Rui Street to Bowling Club)
- Inconsistent cycle facilities, some marked, some wider sections etc.
- No crossing points on SH6 between school pedestrian crossing and Annesbrook overbridge

- 
- Lack of direct link from Annesbrook Dr to western side of Whakatu Dr (travelling toward Stoke)
  - Tahuna School crossing point dangerous (some cars not willing to stop, even when teachers have their signs out)
  - Difficult for southbound cyclists to turn right into Muritai St
  - Heavy traffic, and many parked cars along SH6 makes it dangerous
  - Difficult intersections e.g. Parkers / Muritai, Parkers / SH6, Parkers / Pascoe, Quarantine / Nayland and Quarantine / Pascoe
  - Parkers Rd / SH6 intersection very dangerous. Many lanes of traffic, heavy vehicles, cycles don't fit in the pedestrian refuges, big trucks drive their wheels up onto the refuges. Trucks / vehicles are looking for a 'gap' when exiting Parkers Rd onto SH6, not looking for cyclists. Suggested solution would be to signalise the intersection which would increase safety for pedestrians and cyclists, and reduce traffic delay
  - Links onto SH6 from Tahuna Hills are dangerous (especially Maire St as it's very steep)
  - HPMV route, lots of industrial driveways and truck movements between Parkers Rd and Douglas Rd
  - Lack of obvious walkway / cycleway signage directing people off SH6 to link up with road reserve via overbridge

*Stoke Schools area:*

- Nayland Rd pedestrian crossing very dangerous
- No good link under Whakatu Drive to back of Nayland College – the existing underpass / culvert has major flooding issues, low head room

*Muritai Street:*

- At southern end of Muritai St, very dangerous to cross Parkers Rd
- 10 bus stops along this street, not good mix with cyclists

*Parkers Road:*

- No safe crossing points at all.
- Intersection with SH6 most dangerous, with concerns at Pascoe St / Muritai St intersections as well

*Other:*

- Driver behaviour in front of all schools (not looking / not stopping for children crossing)
- Industrial area is difficult to get through as there are no direct routes
- Humpback bridge at airport is difficult (high and narrow and slippery)

## Consultation Register

<b>Businesses and Agencies</b>			
<b>Organisation</b>	<b>Name</b>	<b>Details of consultation</b>	<b>Comments</b>
NZTA	Andrew James	17/03/14: Attended workshop	
Opus (NZTA Consultant)	Andy High	19/03/14: Discussions with Lea. Follow up discussion with Jo.	A review of the existing road markings could take place to assess whether improved cycling facilities could be accommodated
NZ Automobile Association Nelson District	Alan Kneal	17/03/14: Gavin Calder attended workshop on behalf of AA	
Bicycle Nelson Bays	John-Paul Pochin	17/03/14: Attended workshop	
Nelson Tasman Cycle Trails Trust	Stuart Hughes, Administrator Marika Kingan	17/03/14: Stuart attended workshop	
Nelson Marlborough District Health Board	Bronwyn White	Invited to the workshop, but was unable to attend	
Nelsust	Peter Olorenshaw	17/03/14: Attended workshop	
NZ Fire	Graeme Daikee	Invited to the workshop, but was unable to attend	
NZ Police	Jennie Richardson	Invited to the workshop, but was unable to attend	
Road Transport Association of NZ	Derek Nees	Invited to the workshop, but was unable to attend	
SBL Group Ltd	Tony Cumming	Invited to the workshop, but was unable to attend	
St John Ambulance	Matt Wilkenson	Invited to the workshop, but was unable to attend	
Tahunanui Business Association	John Gilbertson	17/03/14: Attended workshop	
	Rob Stevenson	17/03/14: Attended workshop	
Nelson Airport Ltd	Kaye McNabb	Invited to the workshop, but was unable to attend	Provided feedback via email. Very opposed to any cycle track running through Airport land due to operational restrictions involved.

<b>Organisation</b>	<b>Name</b>	<b>Details of consultation</b>	<b>Comments</b>
Nayland College	Diane Holland	Invited to the workshop, but was unable to attend	Provided current roll numbers
Broadgreen Intermediate	Paul Johnstone or Cate Gully	Invited to the workshop, but was unable to attend	Provided current roll numbers
Nayland Primary	Janice Gulbransen	Invited to the workshop, but was unable to attend	
Tahunanui Primary	Jane Tambisari	17/03/14: Attended workshop	Carried out survey of how all the children travelled to school on Tuesday 1 <sup>st</sup> April 2014
Tahunanui Campground	Ann Cumpstone, Geoff Barnes	17/03/14: Both attended workshop	
Nelson Golf Club		Invited to the workshop, but did not attend	
Nelson City Council	Marg Parfitt, Rueben Peterson, Gary Alsop, Kayleen Goldthorpe, Sue McAuley	17/03/14: Attended workshop	
Nelson City Council	Rueben Peterson	17/03/14: Attended workshop	
Wakatū Incorporation	Mike Ingram	17/03/14: Attended workshop	
Fulton Hogan		David phoned	Have around two staff that commute via cycle
Southpine		David phoned	Around 16-20 staff commute via cycle. This mode of transport is encouraged and a bike shed was built to accommodate them

<b>Resident Groups</b>			
<b>Organisation</b>	<b>Name</b>	<b>Details of consultation</b>	<b>Comments</b>
Tahunanui Residents Association	Lee Corlett	19/03/14: Lea met with Lee and sought feedback	Main issue is lack of safe crossing points across Parkers Rd, Quarantine Rd for children travelling to Stoke schools
Youth Council	Carla Lindey + Tane	17/03/14: Attended workshop	
Nelson Residents Association Inc	Ken Meredith	17/03/14: Attended workshop	
Tahunanui Community Centre	Joy Shackleton	17/03/14: Attended workshop	

<b>Other Groups</b>			
<b>Organisation</b>	<b>Name</b>	<b>Details of consultation</b>	<b>Comments</b>
Accessibility for All	Krista Hobday	17/03/14: Attended workshop	
Positive Aging Forum	Gail Collingwood	17/03/14: Attended workshop	
Road Safety Nelson Bays Inc	Mark Preston-Thomas	Invited to the workshop, but was unable to attend.	They have a meeting planned for 6 <sup>th</sup> May
Get Moving	Chris Allison	17/03/14: Attended workshop	
Cycle Strategy	Derek Shaw	17/03/14: Attended workshop	
Motel Association (and Tahuna Business Association)	John Gilbertson	17/03/14: Attended workshop	
Iwi	Barney Thomas	Invited to the workshop, but was unable to attend	
Tahuna residents with prior concerns	Jeff and Sandy Edwards	Invited to the workshop, but was unable to attend	
Other	Hugh Briggs	17/03/14: Attended workshop	

## **Appendix C – All options identified at key stakeholder meeting**

### All options identified at the Stakeholder Workshop – Monday 17<sup>th</sup> March 2014

Option	Advantages	Disadvantages	Identification of issues (land issues, squeeze point, consent issues, opportunities, level of service)
<b>1a.</b> Beach Rd, Golf Rd, Parkers Rd, Bolt Rd, Quarantine Rd	Fairly simple / affordable if it was all on-road. Bolt Rd already has cycle line. Good, direct link from Airport cycle path to Rocks Rd avoiding SH6. Could attract commuters, therefore decreasing crashes on main route. Cyclists could use existing refuge outside The Sands to link through Abel Tasman carpark to Beach Rd	Beach Rd, Golf Rd, Bolt Rd is used as a 'rat run' for vehicles On-road cycle paths are 'not enough' Volume and speed of traffic along Quarantine warrants a separate cycle lane (not on-road)	Definitely the easy option as no land issues, consent issues. Could be all on-road, would cost a lot more to have separate, off-road cycle facilities, but there may be room? Cyclist would need to negotiate Bolt Rd / Parkers Rd roundabout, but this is probably the safest point to cross Parkers Rd. Plenty of room down Bolt Rd for two way traffic on western side. Would require improvements at Quarantine Rd / Bolt Rd roundabout
<b>1b.</b> Beach Rd, Golf Rd, Parkers Rd then divert to off-road path around edge of Golf course linking up to Bolt Rd around half way along	Green space, off road section around Golf course		Same as above plus: Would need easement over Golf course land
<b>1c.</b> Beach Rd, Golf Rd, then straight across Parkers, through a driveway through golf course, link to Bolt Rd			Same as above plus: Easement over NL4A/14
<b>1d.</b> Beach Rd, Golf Rd, Parkers Rd, Otterson St, Golf Haven Way, Bolt Rd	Avoids the Parkers Rd / Bolt Rd roundabout	Southbound cyclists would have to cross Bolt Rd by Golf Haven Way, and Parkers Rd at Otterson St intersection	Would need to negotiate crossing the Golf Club easements to link Golf Haven Way and Otterson St
<b>1e.</b> Once the path reached Bolt Rd, make it shared (both directions) on seaward side, crossing Trent Rd at western end to link directly with existing cycle path	Avoids the Bolt Rd / Quarantine Rd roundabout		
<b>2a.</b> Use Muritai St as part of the network with clear connections at either end. Using Beach Road via Waikare St at northern end, and Quarantine Rd	Fairly direct route.	Cyclists would have to contend with 10 bus stops.	Big issue at the southern end of Muritai St – need to provide a safe crossing point across Parkers Rd. Big issue at Quarantine Rd, no adequate crossing point from Pascoe St
<b>2b.</b> Beach Road (via Wakatu land ) Ocean lodge to Muritai St			
<b>2c.</b> Beach Rd, Muritai St, Beavens Way, through HNZN driveway to Roto St, Parkers Rd (briefly), Bolt Road			Beavens Way currently very narrow, would need to be widened and improve signage (difficult to find), and improve crossing Muritai St (cyclists unlikely to 'go backwards' to cross at school crossing
<b>2d.</b> Muritai, Parkers Rd, Pascoe St, Quarantine Rd			No crossing facilities at all for Parkers Rd Pascoe St not a good place for cyclists No adequate crossing provision at Quarantine Rd Tight space to get cycle lane built Heavy traffic This is the route that children are advised to use to reach Broadgreen and Nayland College
<b>2e.</b> Muritai St, straight across Parkers, through Industrial area,	Fairly direct route, with good amount of off-road path		Issues as above plus: Obtaining easements through Industrial Area

Option	Advantages	Disadvantages	Identification of issues (land issues, squeeze point, consent issues, opportunities, level of service)
linking with Jenkins Creek (briefly) with option to go around proposed Nelson Junction and onto rail reserve via Whakatu Dr underpass, or cross Quarantine Rd onto Nayland Rd (to Stoke Schools)	Would serve some workers at Industrial Area		Safety concerns – no passive surveillance Southbound cyclists have to exit SH6 onto Muritai (only for confident cyclists) Require agreement from owners of Nelson Junction site
<b>3a.</b> Alongside Jenkins Creek between Annesbrook Roundabout and Quarantine Rd / Bolt Rd Roundabout	Green space, off-road Serves commuters to industrial area Provides east-west link avoiding roundabouts Could detour around old Honda site, serving new retail development and linking to Whakatu Dr underpass	Safety concerns as there is no passive surveillance More of a link track, not for most users	Creek may need rezoning as a reserve (section alongside the creek owned by Fulton Hogan at western end)
<b>4a.</b> Route through / alongside Tahunanui Beach Reserve, Tahuna Holiday Park, Parkers Rd - Nelson Golf Club land (bridge required), Airport land and link with Bolt Rd	Scenic route, off-road Could take cyclists off main routes, therefore decreasing crashes Great Taste Trail connection Good for tourism Offsets dangerous Bolt Rd roundabout	Only would appeal for recreational cycling, not direct at all. Land access issues?	Airport has stated position regarding no vehicles (including cyclists) to use the airport walkway. Erosion at camp, around golf course too? May cross Golf driving range Construction of bridge between Parkers Cove and Golf Club may be a problem
<b>4b.</b> As above, but after the bridge, skirt along creek by Golf Club and behind houses along Parkers Rd, along edge of residential area and Golf Club	Avoids need to cross Airport land, but still is in green space, off road		
<b>4c.</b> No bridge option, turn down Parkers Rd at end of campground, Awatea Pl, skirt around golf course, link up with Bolt Rd			Need easement over Airport land at end of Awatea Place (title 433838), and arrange for easement over Golf course land on edge of residential area
<b>4d.</b> Tahunanui Reserve, Golf Rd, Green St, Roto St, Bolt Rd	More direct than around campground	Difficult manoeuvre westbound crossing Parkers Rd	
<b>5a.</b> The removal of some or all parking on Tahunanui Dr and the designation of on-road cycle lanes or widen one footpath to provide 3-4m wide shared path	OK for commuter cyclists Likely to be the most popular / well utilised route	Space is tight in places	Could have shared path or dedicated cycle lane May be controversial to remove parking along SH6 Big issues getting across road to avoid Annesbrook Roundabout – need more crossing points all along SH6 If there were to be a shared path (both directions), it needs to be on the landward side Could improve the connection from beach Rd to Tahunanui Dr retail area, it may provide a good parking area Facility providing for commuter cyclists may not be a good mix with children cyclists
<b>5b.</b> Use Blackwood St, across Jenkins Creek, around Mitre 10 site (Nelson Junction)	Avoids hills and roundabout Connects better to railway reserve underpass	Less passive surveillance Need Nelson Junction owners to approve	
<b>Potential route connections:</b>			
<b>1.</b> Alternative access to road reserve from Tahuna Hills. From Princes Dr, link to Zeehaen Place, via Abel Tasman Walkway to Maire St (listed on NCC Way2Go map).	Avoids SH6 altogether and links up with railway reserve	May require removing parking along Douglas Rd to make more room for cyclists	Would have to negotiate easement / purchase land from 63 Douglas Rd, and widen Abel Tasman Walkway to allow for bicycles? Parts of Douglas Rd are very narrow in parts at present

Option	Advantages	Disadvantages	Identification of issues (land issues, squeeze point, consent issues, opportunities, level of service)
Then continue track through 63 Douglas Rd, down to Gracefield St and straight onto the railway reserve.			
<b>2.</b> Tosswill Reserve improvement. Better signage (and addition to Way2Go links Nelson brochure) to direct cyclists from / to Tahuna Hills (Tosswill Rd) to SH6. Link listed in NCC Way2Go brochure.	Not so steep, more direct link to the south, avoid Tosswill Rd / SH6 intersection		
<b>3.</b> Centennial Road. Link potential cycle facilities between Golf Rd and Muritai St			
<b>4.</b> Improve link between Trent Road and the back of Nayland College		Existing underpass / culvert is not sufficient. Flooding issues, low height, not always usable	Difficulty in finding alternative crossing point across Whakatu Dr



**KEY**

- OPTION 1A
- OPTION 1B
- OPTION 1C
- OPTION 1D
- OPTION 1E
- OPTION 2A
- OPTION 2B
- OPTION 2C
- OPTION 2D
- OPTION 2E
- OPTION 3A
- OPTION 4A
- OPTION 4B
- OPTION 4C
- OPTION 4D
- OPTION 5A
- OPTION 5B
- CONNECTION 6A
- CONNECTION 6B
- CONNECTION 6C
- CONNECTION 6D

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Revision	Amendment	Approved	Revision Date



Project		NELSON CITY COUNCIL TAHUNANUI NETWORK CYCLEWAY OPTIONS	
Drawn		Revision Date	
SWA	3/4/14	ALL OPTIONS	
Project No.	Scale	Drawing No.	Sheet No. / Revision
5-G2093.00	1:6000 (A1)		1 /

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**Appendix D – Tahunanui Cycleway proposal  
prepared by the Tahunu Holiday Park and the  
Tahunu Business Association**

# Proposal for the Tahunanui cycle/walk trail



Prepared and Presented by:

Colin Reeves, Tahuna Holiday Park

John Gilbertson, Tahunanui Business Association

## Summary

Tahunanui is the primary centre of visitor accommodation for Nelson, and due to its stunning beach and associated amenities the area is a major destination for the region's visitors and residents. Despite this profile, Tahunanui does not have safe, off-road through-routes for walkers and cyclists.

Recreational and tourism cycle traffic through the Tahunanui area is predicted to increase significantly with the opening of the first stages of the nationally-rated Tasman Cycle Loop Trail. For these riders there is no clear or market-appropriate link to connect that trail to this area's beach, amenities and visitor accommodation, or to the coastal route into Nelson City.

The proposed trail/pathway develops a connection between Tahunanui and the existing cycle/walkway from Richmond to the Airport. It opens up the considerable potential of the estuary waterfront and it primarily uses existing land formation and track infrastructure at the perimeter of the Holiday park reserve, the Nelson Golf course and a section of the Airport walking track.

The proposed trail developments capitalise on work planned for other projects on this route, cutting track-building costs and future-proofing the area's potential for projected visitor and residential use.

This development is consistent with the Nelson City Council Cycle Strategy and with any options that might be taken under the Arterial Transport Study. The project also strongly complements the focus of the Heart of Nelson Strategy, and the Council's five core goals as applied in the 2009-2019 LTCCP.

## Context

Tahunanui operates as Nelson's hub for visitor accommodation, with the Council owned Tahunanui Holiday Park (the largest of its type in the Southern Hemisphere) hosting in excess of 185,000 guest nights, plus its mid size Conference/ function Centre, with the added bonus of its secure lockup facilities for cycles and Luggage. In addition there are 25 motels & lodges, and three backpackers offering a range of accommodation. The easily accessible and safe Tahunanui beach reserve is a popular destination for visitors and locals. In recognition of the area's amenity value Nelson City Council is in the process of extensive facility development behind the beach. This includes a series of joint cycling and walking pathways (the Council has allocated \$1.3M to this work in the 2009-2019 Community Plan, LTCCP).

The two current designated cycle routes heading south out of Nelson also feed into the Tahunanui environs. The inland route emerges at the Annesbrook/Tahunanui Roundabout, and the coastal route at the Tahunanui lights. The major Tasman Cycle Loop Trail will connect

with these routes at the south end of Tahunanui, and will bring with it considerable user numbers. The Ministry of Economic Development approved estimates have visitor numbers (not including local users) building to around 30,000 annually, and most of these are expected to use the more scenic Nelson-Mapua-Riwaka-Kaiteriteri coastal trail.



## The Challenge

The existing reserve pathways work well to link the BMX track and Tahunanui Holiday Park with the Lion's Playground zone and the Tahunanui waterfront area. However, there is no clear and market-appropriate link from the south, for recreational and cycle tourism riders, that provides a safe and scenic connection to: the beach; the area's amenities & visitor accommodation; and the coastal route into Nelson.

The Council map above shows the existing links between the trail facilities around the airport area and Monaco/Whakatū Drive Cycle-walkway (lower left) and the pathways, developments and facilities in the Tahunanui Recreation Reserve area (upper right). Note also the under-utilised Airport Peninsula Reserve above Monaco.

The current lack of a through-route appropriate for family and recreational riders undermines the city's opportunity to capitalise on the future flow of cycle tourists into the tourism hubs of Tahunanui and the Nelson CBD. As a result it compromises the potential economic return to Nelson commercial operators.

The estuary coast from Tahunanui's back beach through to the Monaco Peninsula is an untapped regional resource. There are scenic views across the Waimea Estuary to Rabbit Island, other smaller islands and a wide range of coastal bird-life. Despite the superb views from this route and its closeness to Nelson, much of this area is relatively inaccessible at present. As a result, those visitors and locals who seek an experience of the Waimea Estuary are

currently being drawn out of Nelson to Tasman.

Images Appendix.



(Note that any on-road cycle facilities developed to link the end of the Whakatu Bypass/Stoke railway Reserve cycle routes with Rock Rd as an outcome of the Arterial Transport Study will target commuting cyclists who will continue to use the roading network.)

## Assets and Advantages

Council cycle and pedestrian count data, from 2010 shows strong local demand for safe, off-road cycle/walkways. Moving to establish this critical 'missing link' in the city's network is an investment for future community growth in safe and accessible cycling and walking close to Nelson.

Developing this route — and at some point upgrading the Rocks Rd cycle ways — creates a complete Nelson Cycle Loop encompassing the Tahunanuni Beach and reserve area, the stunning estuary coast from Tahunanui beach through to and including a detour around the Monaco Peninsula, with a return to Nelson using the existing cycle way and recently sealed railway reserve. A sub-route running between the south boundary of the golf course and the airport allows for a smaller sub-loop and utilises the existing walking track.

This development also creates an accessible, varied and scenic activity for visitors who might not otherwise cycle, walk or otherwise linger in the area on their holiday, and

so retains their spending within the Nelson area. The proposed route connects with a number of cafes — the including that at the airport — local shops and the WOW centre as well as the BMX track, Holiday Park and Lion's Playground zone at Tahunanui.

Nelson City Council's approach to the estuary coast provides for work to be undertaken to protect existing community assets. The provision of a combined trail and seawall along the airport and golf course edge will protect these important community assets and will further protect the existing rock wall at the camp by removing the current cause of most of the damage (previously buried and now uncovered floating logs and stumps).

This development is an excellent vehicle for council to show good leadership in fulfilling its core goals: "people-friendly places, a strong economy, fun creative culture, healthy land, sea, air and water, and providing a welcoming, safe, inclusive, and healthy community" (2009-2019 LTCCP).

## Critical timing

The Holiday Park has already completed and established part of a rock wall protection along the back beach. Along the top of this rock wall is a well-formed track (see attached images in the Route Detail section below).

The Holiday park has recently been given consent to extend the existing Rock wall between the back beach and the Holiday park. Forming the cycle track along the top of this wall will require no additional consents or land acquisitions.

This proposal is being presented now to ensure that when this work is carried out provision is made for this cycle/walk trail.

# Route Detail (North to South)



- |   |   |
|---|---|
| 1 Train tracks Tahunanui Reserve                          | 25 Vista of Blind Channel Low tide                      |
| 2 Model's Pond Tahunanui Reserve                          | 26 Overlooking channel to the Richmond Ranges           |
| 3 BMX track Tahunanui Reserve                             | 27 Existing Security fence to Airport perimeter pathway |
| 4 Start of track Tahuna Camp entrance                     | 28 Metal drive into Peninsular Reserve                  |
| 5 Tahuna Camp Back beach boundaries                       | 29 Track into Peninsular Reserve                        |
| 6 by tiny Branje Google earth                             | 30 Stunning Beach to Monaco channel                     |
| 7 Existing plantings to Tahuna Camp Back beach            | 31 Waimai Estuary looking south to Saxton Island        |
| 8 Permanents boundary, proposed new rock-wall             | 32 Monaco town-ship                                     |
| 9 Seas have breached sand hills causing Major erosion     | 33 Estuary back beach to Peninsular Reserve             |
| 10 Existing rock retaining wall, with grass track         | 34 Sealed drive alongside south end of Airport          |
| 11 By david951 Feb 09 Google earth                        | 35 Sealed perimeter pathway beside Monaco estuary       |
| 12 Location of proposed bridge to Parkers Stream          | 36 Existing Security Gates to perimeter pathway         |
| 13 King tide water level Parkers Cove, Golf coarse side   | 37 Trent Bridge where proposed trail joins existing     |
| 14 Edge of Golf club fairway                              | 38 Existing cycle/walkway to Quarantine Road            |
| 15 Erosion to Golf coarse Fairway                         | 39 Horizontal fence section to main runway North end    |
| 16 Floating tree stumps that float & damage Rock-wall     | 40 Security fence Ch-Ch Airport                         |
| 17 Over-looking the Blind Channel to Rabbit Island        | 41 Vertical to Horizontal section Ch-Ch Airport         |
| 18 Looking south to Peninsular Reserve                    | 42 Horizontal section end of runway Ch-Ch Airport       |
| 19 Golf club Channel frontage looking north               | 43 Westside of runway boundary and golf course          |
| 20 Blind Channel end of existing north-walking track      | 44 North boundary airport and golf course               |
| 21 By Colin Southern Google earth                         | 45 North boundary of grass runway and golf course       |
| 22 By Colin Southern Google earth                         | 46 Junction of Perimeter & North end walkways           |
| 23 Existing grass Airport perimeter pathway looking north |   |
| 24 North end of grass runway                              |   |



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